Creative

# DRAWings®

Where Embroidery Magic Begins...

# USER GUIDE...

# Creative DRAWings

## Version 5

## Embroidery Software Manual



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# Chapter 1 - Welcome to Creative DRAWings

## Introduction

**Creative DRAWings** is an embroidery software which will excite your creativity because it's **easy to learn** and **easy to use**! With only a few minutes of hands-on instruction, it's possible for anyone -- **regardless of skill level** -- to produce a high-quality design. It'll be clean of wild stitches and ready to be sewn out on your embroidery machine.

Almost any clipart or photo can be imported and be instantly converted into a flawless embroidery file. That's because **Creative DRAWings** is not static software which just converts images to stitches. The revolutionary and professional DRAWstitch® technology has been incorporated into **Creative DRAWings** to work the miracles that you'll see it perform – almost as fast as the blink of an eye.

**Creative DRAWings** is much more than a digitizing software. It's an interactive product which almost "thinks" for you and helps release your creativity. A big plus for **Creative DRAWings** is that it doesn't require you to keep buying expensive add-on digitizing packages as you advance in skill.

Instead of having to learn complicated production techniques, **Creative DRAWings** does most of the work for you – almost instantly! That's because **Creative DRAWings** is a wonderful new embroidery software created for home use at a very reasonable price, yet powerful enough for the professional shop. **Creative DRAWings** will allow you to file your digitized images in most of the world's most popular embroidery formats.

We want you to enjoy embroidering and not agonize over perplexing software programs that plague the sewing market today. We want you to really USE **Creative DRAWings**. Many embroidery programs are so frustrating because of their *"steep-learning curve."* The learning is almost endless, and you almost drown in the need for more software!

## Off to a FAST START

To demonstrate the *"low-learning curve"* of **Creative DRAWings**, here's a sample lesson in creating your first design:

1. **Creative DRAWings** opens up with the **New Design** dialog. Click on **Next.**
2. **Artwork source** box or dialog will appear. Click on **New graphic**, and then click on **Next.**
3. The **Fabric** dialog appears. Select your fabric choice and click on **Finish**.
4. A blank screen will appear: your creativity takes over here!
5. Click on **Create**, and then click the **Freehand Shapes** icon on the left side of the screen. *(An icon will identify itself if your mouse hovers over the icon a few seconds.)*
6. Draw a free-hand shape – like jagged sun rays -- and be sure to close the shape by joining the ends. A little white box will appear when the ends are joined. Click on Stitch to instantly preview your first embroidery design. Presto: Your free-hand design is ready to be stitched out in the correct color and matched to the available thread colors. You're on your way!
7. Now modify your design: click on the Create mode. Then below, click on the Edit Shape Nodes and stretch and pull on a node by holding your left mouse down. Click on Stitch. See how quickly your revamped design is changed to stitches? The nodes of an object are the tiny circles that are spread along an object's outline. The line between two nodes is called a segment. Moving an object's segments lets you make coarse adjustments to the

object's shape; while changing the position of its nodes lets you fine-tune the shape of the object.

8. All of the designing in **Creative DRAWings** is done with the tools which you will find within this Create mode. Almost any imported clipart or hand-drawn image can be designed and sewn out in this software.
9. When you are finished designing, click on the Stitch mode. You can modify the stitch types and select a specific fabric with the correct density, pull compensation, and underlay (stiffening material called stabilizer placed under fabric). The changes are made almost as fast as you can click, and they're accurate and clean -- ready to be sewn out.

See what we mean about **Creative DRAWings** being powerful, but not complicated?

With **Creative DRAWings** you can preview the embroidery image in 3D and print a full-color proof sheet, which will even count the stitches, tell you how much thread is needed, and what type of stabilizer to use.

Now, aren't you happy and thrilled that you have this powerful **Creative DRAWings** at your fingertips? Your embroidery machine will be happy, too, with clean, sharp, and exact sew-outs.

## What is new in Creative DRAWings 5

**Creative DRAWings 5** includes new features and enhancements that will make your work easier.

- **New Auto-border tool with Satin serial and Running stitch types**

  Add border to imported embroidery files or to multiple selected objects easily and decorate by choosing from hundreds of styles and patterns.

- **Manual embroidery sequencing with the use of Sequence manager**

  **Creative DRAWings** now has the ability to re-sequence objects manually by using the Sequence manager. By click and dragging objects on the Sequence manager, the stitches are recalculated automatically and new embroidery sequence is created based on the changes you make.

- **Print the artwork of the design you have created**

  With ***Creative DRAWings*** you have the ability to print any artwork you want on a special paper for textile printing and for promoting your company.

- **Export the designs to Quilt and to DXF file formats**

  Create designs easily and export them to your Quilt frame machine by using any of the available file formats.

- **Add new objects as clones**

  By using this option, any created duplicate of an object is marked as a clone of the initial object. If you reshape any of the clones all other clones are reshaped too creating unique and beautiful embroidery results

- **Open multiple designs in tabs**

  **Creative DRAWings**, now opens the designs in multiple tabs instead of multiple instances that helps you work faster and with less resources used.

- **New thread color palette**

  The new thread color palette can save you time and effort with its efficiency and usability.

- **Create embroidery designs by capturing images from the webcam**

  Use the webcam of your pc to capture images and convert them to Cross-stitch, Photo-stitch and standard embroidery or use it as backdrop image to create your embroidery design from scratch.

- **Improved embroidery image Export the 3D realistic embroidery preview to embroidery look image and use it for textile printing or for promoting your work.**

  Select “File>Export>To image…”. At the bottom of the dialog you will find the available options. Use .PNG files for transparent background.

- **Support for newer versions of .AI vector file format.**

  The importer of .AI vector files has been improved and now you can load newer versions of illustrator files.

- **Fully customizable workspace according your preferences. Adjust it once and lose no time while creating embroidery designs.**

  You can reposition the toolbars and dock able rollups by click and dragging them. Also at the end of each toolbar you have some options that allow you to select which tools you want to view.

- **Circular Array tool**

  Circular Array tool is a great way to create stylish design arrays easily, without losing the ability to edit the design. Any change you are making on a single object is automatically applied in the entire array.

- **Slow redraw - Embroidery machine simulation**

  With the slow redraw utility you can simulate the way the design will be embroidered without having to do that on the machine. Also you have the ability to simulate your machine speed and the movement of the needle carrier.

- **Rectangular Array/Kaleidoscope**

  With the advanced Rectangular array you have the ability to rotate and mirror the copies of the array without losing the ability to edit them and create easily unique designs. Also, you have the ability to create clones that will copy any transformation that you are doing on the source design.

- **Convert images to photo-stitch automatically**

  Convert any image you have to Photo-stitch with CMYK (Cyan, Magenta, Yellow and Key(Black)) colors automatically. A step by step wizard can convert your image to photo-stitch and give you a representation of it by combining four different layers of colored satin bars. The results are great with chromatic realism on the embroidery result.

- **Net fill embroidery type is added**

  With the Net fill you can create perfect laces and fill holes that where produced from cut fabric. It can be very useful for embroidery designs that are sewed on soluble material.

## Online resources

**More information about Creative DRAWings** including tutorials, demos and frequently asked questions are at the official site of **Creative DRAWings**: www.drawstitch.com/Creative.

## Creative DRAWings Help

Need more instructions? **Help** is at hand! Comprehensive information about the features in the software is displayed in the **Help** viewer provided by your operating system: Microsoft HTML **Help**. You can access information in any of the following four ways from the **Help** menu or by pressing **F1** shortcut key:

1. **The table of contents** enables you to see all of the information organized by subject. Click top-level entries to view subtopics.
2. **The index** allows you to look up specific terms or concepts in alphabetical order. Type is a word or phrase.
3. **Search** allows you to find any character string or word anywhere in the text of the **Help** system.
4. **Show help on** is another way to access help for a specific tool, area, or function in **Creative DRAWings**.

**Show help on** can be activated from the **Help** menu, or by clicking on the  icon in the standard toolbar or by pressing the **Shift+F1** shortcut key. When you activate **Show help on,** the mouse pointer turns to a pointer with a question mark. Click on any function you want in **Show help on** and the subject will be displayed.

## Creative DRAWings and Wings modular 5.00

Here's why **Creative DRAWings** is so powerful: It includes a portion of Wings modular, one of the world's leading professional digitizing embroidery software programs. The two programs communicate to give you professional results – even on the first try.

You can export **Creative DRAWings** designs for further editing into Wings' modular or open existing embroidery designs such as **.dst**. Wings' modular **Basic** module, is included in the **Creative DRAWings** package. It is a fully working Professional embroidering software split into modules. It includes 14 modules which are activated separately.

**Basic** module is the first and most important module because contains the basic parts of the software. **Basic** module includes the standard interface, scaling design capabilities, simple design editing, fully functional stitch editor, image database management and all supported floppy formats. It also includes many connection abilities that allow you to connect the software with your embroidery machine. You can read more about **Wings' modular** Basic module inside the **Basic module manual** that is also included or from the **Help > Contents** menu in the **Basic** module Contents tab book.

http://www.wingsmodular.com/

When you have created an embroidery design in **Creative DRAWings**, you can instantly call up Wings module from the menu File>Export>To Editor ** … or by pressing the shortcut key Ctrl+E and make any modifications you like. The original design in **Creative DRAWings** will remain unchanged for future use. *(** The > means "then click on" as in click mouse on File, then click on Export, then click on To Editor. This shortened version using > will be used in giving directions in this manual.)*

For more information about what exciting things you can do with the Wings software, refer to Wings module 5 Basic module manual.

## Creative DRAWings Samples

**Creative DRAWings** includes sample designs for you to work with and produce embroidery designs while you are learning the software. After installing the software, the designs will be copied into your hard disk so you have direct access to them. To find the designs, click on Start button, then position the mouse over Programs menu to open it, expand **Creative DRAWings** subfolder and select **Creative DRAWings** samples to open the samples folder. You will find 200 vector file designs with .cmx extensions that can be imported into **Creative DRAWings** and converted to stitches. Also, you will find 204 embroidery file designs with .ngs extensions that can be imported into **Creative DRAWings** and create new ones based on them. The stitch folders in .ngs files can be opened with the Wings' modular 5 software included in **Creative DRAWings**. The designs in .ngs files contain readymade embroidery designs. After saving them to the file format which your machine supports, you can embroider them directly with your embroidery machine. You can save them to the file format you want through **Creative DRAWings** or Wings' modular 5 software.

There are more designs in **.ngs** file format but they are located in the installations CD of Wings' modular software inside the **Designs** folder. There you will find nearly 3000 embroidery designs ready to sew out.

# Chapter 2 - Quick start

## Introduction

In this chapter we will learn how to create an embroidery design quickly, using the design of **Creative DRAWings** 5. By the end of this chapter you will be able to embroider a sample design, use an old stitch file to create a new embroidery design, convert a bitmap image (picture) to a finished embroidery piece and create a design from scratch by using the available tools. We will also present the available ways to import artwork from a Webcam snapshot or a Scanner device. In addition, you will become familiar with the working space of **Creative DRAWings**.

## Creating your first embroidery

This is a step-by-step tutorial to guide you in creating your first design with **Creative DRAWings**.

1. Start **Creative DRAWings 5** application by double clicking on shortcut icon 

that you will find on your Desktop.
2. **Creative DRAWings** application will open and the starting dialog named **New Design** will appear.

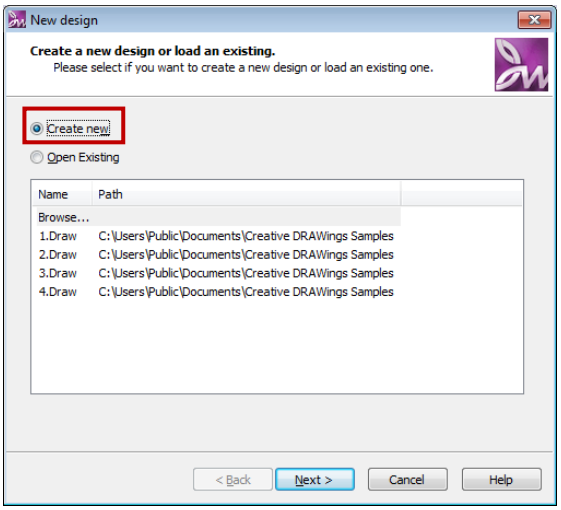



**Figure 2.1: Starting dialog**

3. Select the **Create new** option and click **Next>** button.
4. The **Artwork source** dialog will appear (Figure 2.2)
5. Select the **From File** option.
6. Click on the browse button  at the right to import the design you want to embroider.

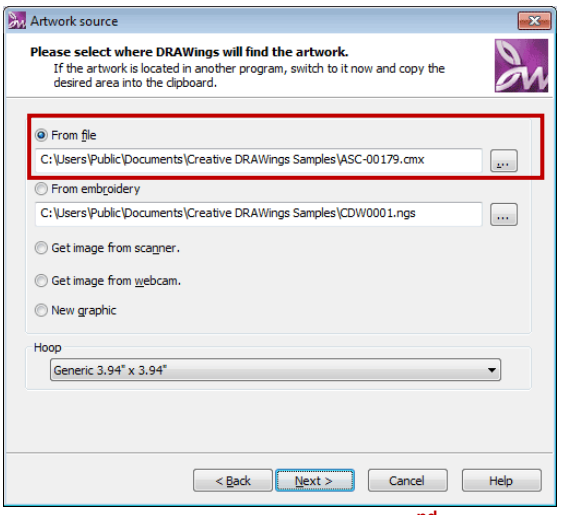



**Figure 2.2: Starting dialog - 2nd page**

7. The **Open** dialog box will appear (Figure 2.3) from where you can find the design you want to embroider.

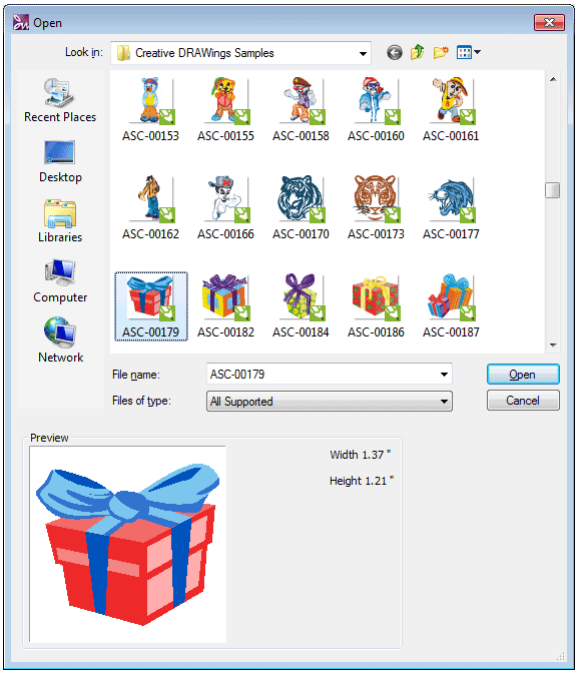



**Figure 2.3: Open design dialog**

8. Click on **My documents** folder at left side of the dialog.
9. Then find and double click on the **Embroidery designs** folder
10. Inside **Embroidery designs** folder you will find another folder called **Creative DRAWings samples.** Double click on it.
11. Inside the **Creative DRAWings samples** folder you will find ready-made **Vector** (clipart) designs that you can import into **Creative DRAWings** and convert them to stitches. You can select to embroider any of them but for our example we will use the **ASC_00179.cmx** file as it is shown in the Figure 2.3
12. Select it and click the **Open** button.

13. The **Artwork source** dialog will appear once more (Figure 2.2) with the design you have selected under **From file** field.
14. At the **Hoop** section of the same dialog, you can select the hoop which you will embroider your design on. If the hoop your machine supports does not exist in the list select one with similar dimensions. You can create your custom hoops easily inside **Creative DRAWings**. (Information on adding specific hoops will be covered later in the manual.)
15. After selecting the **Hoop**, click **Next>** to continue.
16. The **Fabric** dialog will appear (Figure 2.4). Expand the **Embroidery normal** category from the list at the left by clicking on the + icon next to it.
17. Select the **Fabric** similar with the one you will actually use to embroider the design. For example, select **Craft Fleece** fabric.

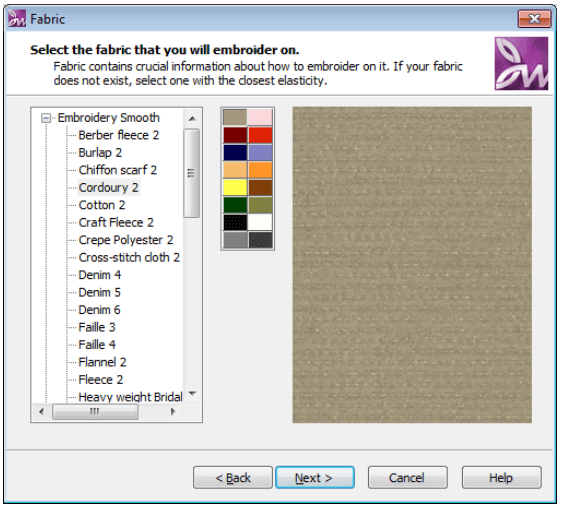



**Figure 2.4: Select fabric dialog**

18. After selecting the **Fabric**, choose the color from the list at the middle of the dialog. For example, select gray color.
19. Click **Next>** button to continue.
20. The **Color reduction** (number of threads) dialog (Figure 2.5) will appear where you can select the **Thread palette**.
21. Click on the arrow of **Palette** and the drop-down menu will show the threads available.
22. Select the brand-name threads you want to use by clicking on the list. For example, select **Gunold Poly** thread.
23. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold Poly** thread palette**.**

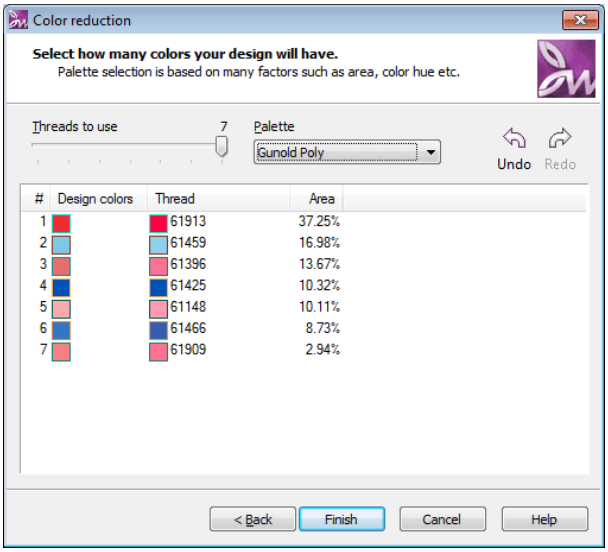



**Figure 2.5: Color reduction dialog**

24. In **Color reduction** dialog you can see that the design has 7 colors in **Threads to use**. You can reduce the number of colors in the design by moving the arrow to the left. Click **Finish** to end the process and convert the imported design to stitches.

25. The design will appear in the working area filled with stitches (Figure 2.6).

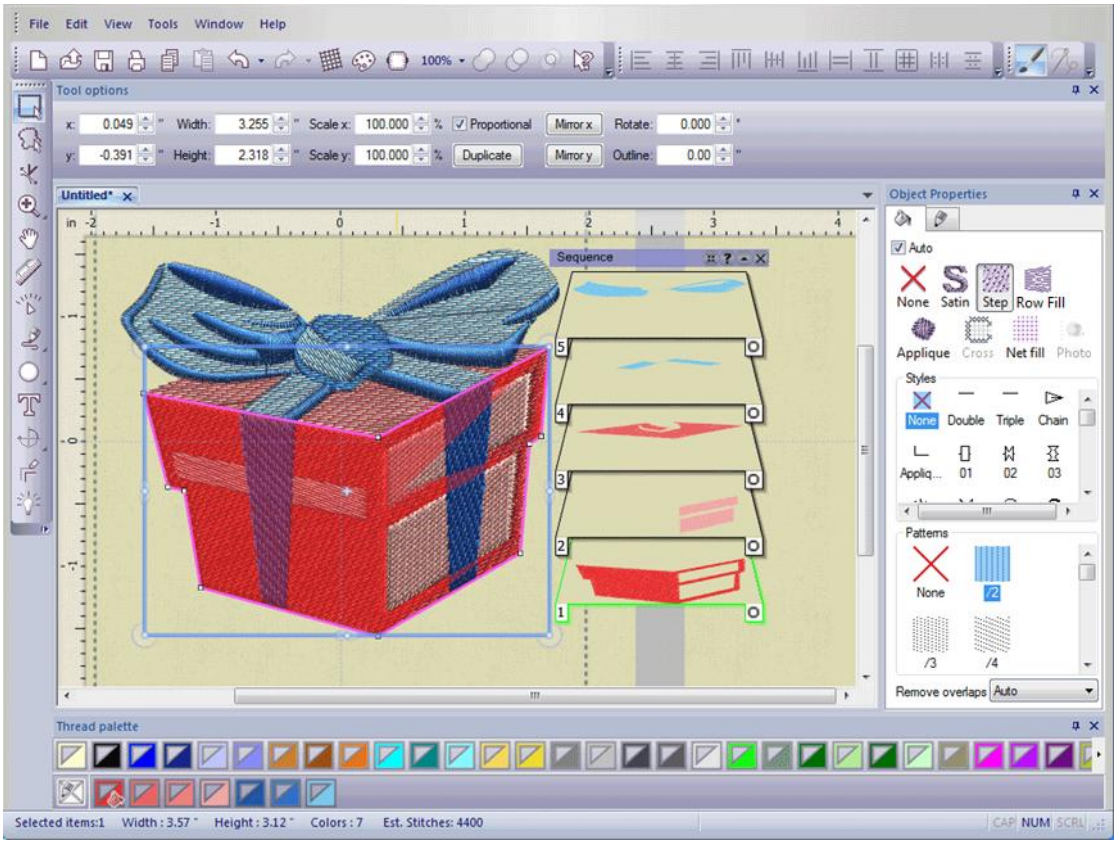



**Figure 2.6: The imported design converted to stitches**

26. Your **3D** design will be positioned at the center of the hoop which you selected from the starting dialog.

27. There are many available changes to do on the artwork or on the stitches of the design inside **Creative DRAWings** but we will not explain them now in this section. The design

which was produced here can be embroidered as is without any problem. The important thing right now is that you can see what this fantastic software can do by sewing out your first embroidery design.

28. Before embroidering, save your design to the embroidery file format which your machine supports. Select **File** menu, **Save as** option.

29. The **Save As** dialog will appear. Select a location to save all your embroidery files. For example, file to **My documents> Embroidery designs.** You can also save designs directly to a floppy disk or to your memory card.

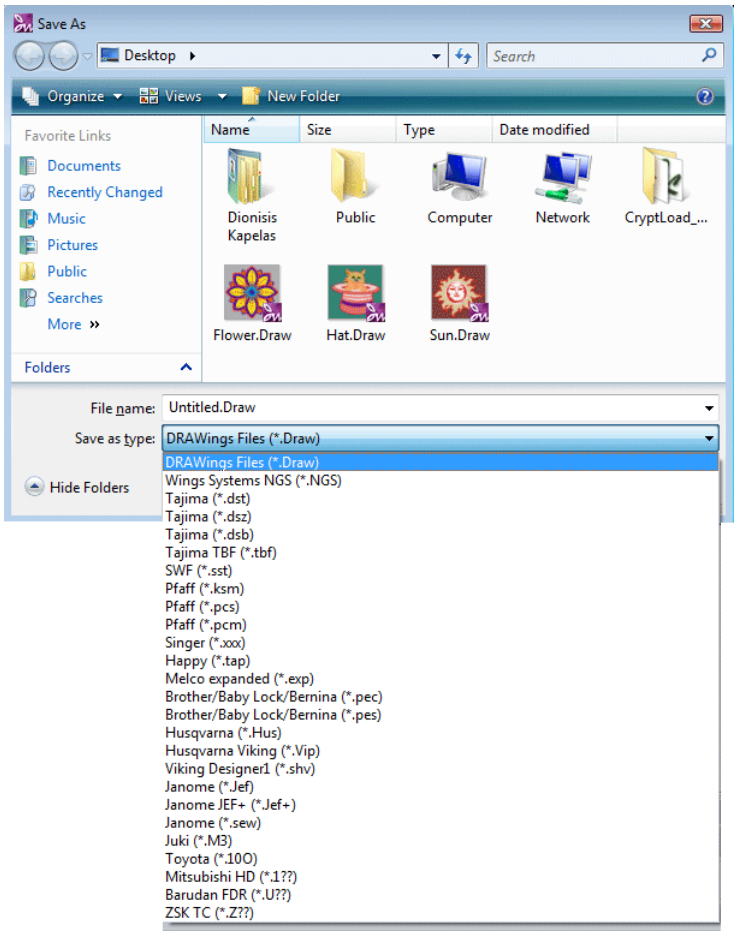



**Figure 2.7: Save As dialog box**

30. In the **File name** field, give your design a name. For example, type **My first Embroidery.**

31. Then click on the arrow of **Save as type** drop-down menu to view the available file-type options. Select any that your embroidery machine reads. For example, if you have **"Brother"** embroidery machine you have to select the **.pes** or **.pec** embroidery file format. Always remember to save your design in **.draw** file format before saving it to any embroidery machine's file format. This file format holds all design information that is necessary to re-use this design without any loss.

32. Once you are ready, click **Save**. The design will be saved in the location you chose with the name you gave to it. If you have saved the design directly to a floppy disk, a thumb drive, or to your hard drive, you are ready to download it to your embroidery machine's memory card and sew it out. Otherwise you have to:

A. Open Windows Explorer,

B. Browse to the location you saved it,

C. Right click on the file and from the right click menu expand the **Send to** submenu

D. Save to a 3.5 Floppy disk (A:) or to a thumb drive

E. Then the design can be downloaded to your embroidery machine's memory card to be sewn out. (Note: in big commercial machines, the file can be downloaded directly to the machine's memory.

33. After saving the design, make a printout so you can set the functions of the embroidery machine correctly and sew it out without any problem.

34. To do that, from **File** menu select **Print** option.

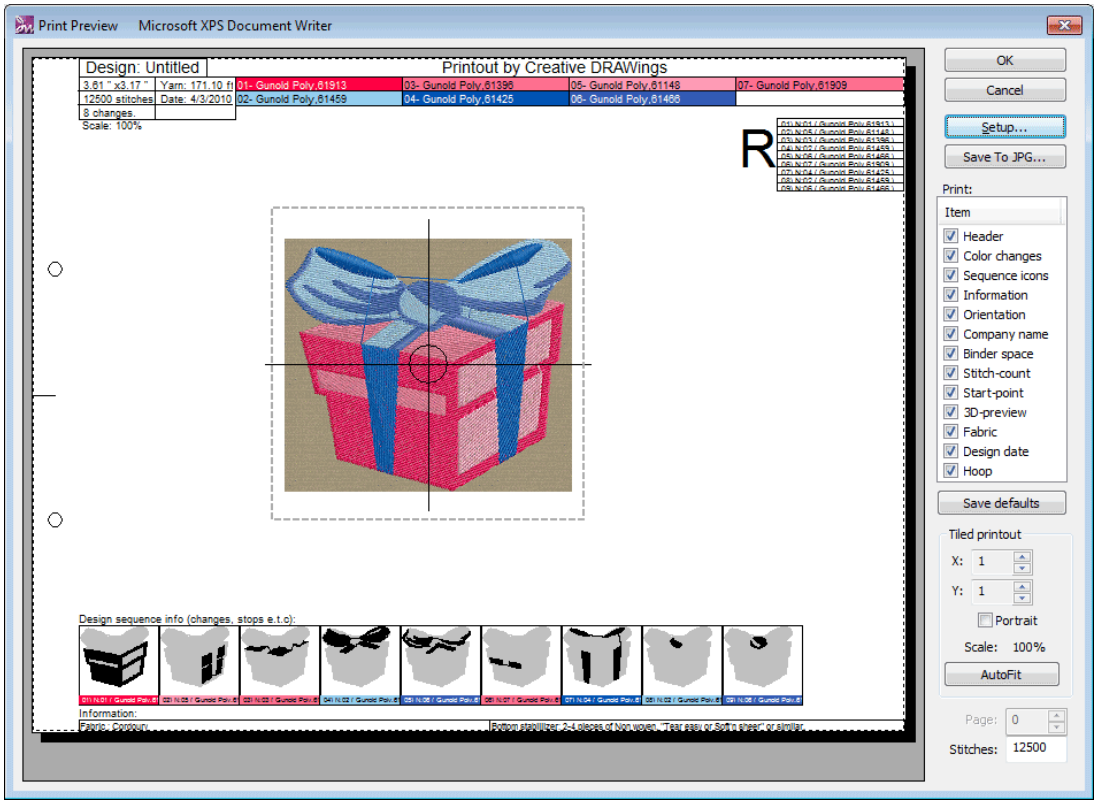



**Figure 2.8: Printout of the design**

35. The **Print preview** dialog of the design will appear where all the information you need is listed to embroider the design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or don't want to print it, you can save it as an image file and view it with the standard image viewer of Windows.

36. To save the **Printout** to as image file, you have to click on the **Save to JPG** button.

37. The **Save printout as** dialog will appear where you have to:

A. Specify the location you want the image to be saved.

B. Type the **File name** you want the image to have

C. Click on **Save** button**.**

D. You can view the saved image by double clicking on it.

38. All the information you need in order to embroider a design is listed in the **Printout,** including the embroidery design's sequence (1-2-3 order of sewing out), the color changes, the number of stitches, and much more useful information.
39. You are ready -- Download the file to your embroidery machine, use the **Printout** as your guide to set up your machine, and embroider the design you have just created.

## Scan a design and embroider it

Sometimes we may find a design in a magazine or a flyer which you would like to embroider but don't realize how easy it is to acquire the image. If your computer has a scanner installed, you can scan and import almost any design you want to embroider.

**Important:** The design which you desire to convert to stitches must be compatible for embroidery and must be able to be filled with stitches. Photos from your camera cannot be easily filled with stitches. Later, you'll learn to **Trace** your photos and then fill with stitches.

Follow these steps to convert a **Bitmap** (picture) images to an embroidery design with your scanner:

1. Turn on the scanner and place the image in it.
2. Open **Creative DRAWings** by double clicking on the desktop icon 

3. **Creative DRAWings** application will open and the starting dialog **New Design** will appear.

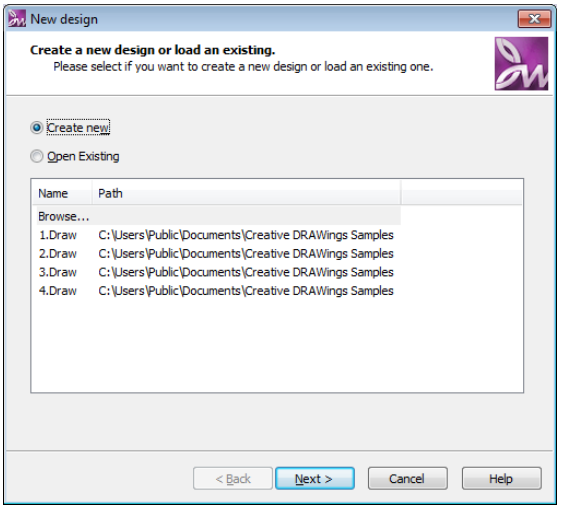



**Figure 2.9: Starting dialog**

4. Select the **Create new** option and click **Next>** button.
5. The **Artwork source** dialog will appear. (Figure 2.10)
6. Select the **Get image from scanner**.
7. At the **Hoop** section of the same dialog, you can select the hoop that you will embroider your design on. If the hoop your machine supports don't exist in the list, select one with similar dimensions. You can create your custom hoops easily inside **Creative DRAWings** later.

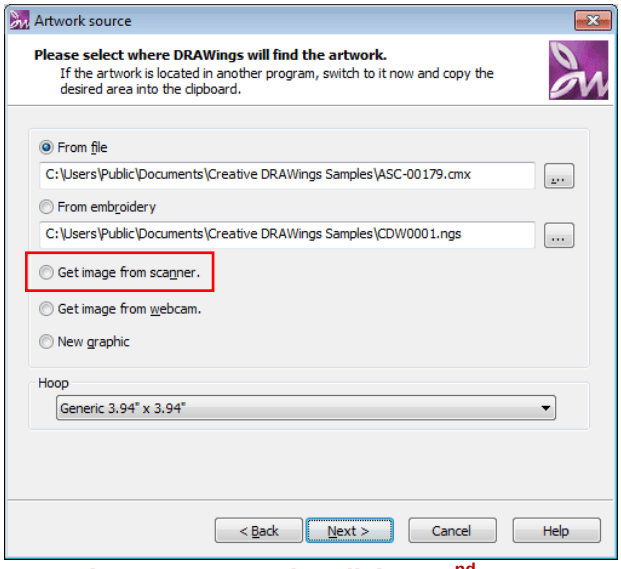



**Figure 2.10: Starting dialog - 2nd page**

8. Click **Next>** button to continue.
9. The **Image Scan** dialog appears.

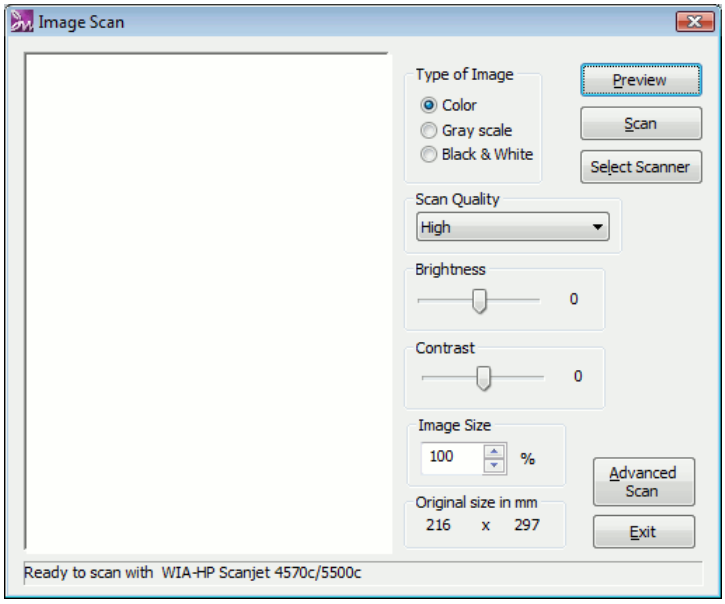



**Figure 2.11: Image scan dialog**

10. The **Image Scan** dialog helps you scan the image you want to embroider and import it into **Creative DRAWings**. If your scanner is correctly installed, all you have to do is press the **Preview** button.
11. The design will be scanned and the image will appear in **Preview.** You can specify the exact image to want to embroider in **Preview** by drawing a rectangle with your cursor. Only the area inside the rectangle will be embroidered.
12. If the design in the **Preview** is what you want to embroider, press the **Scan** button to continue.
13. Then you will be asked to save the design on your hard disk. The **Save As** dialog will appear.

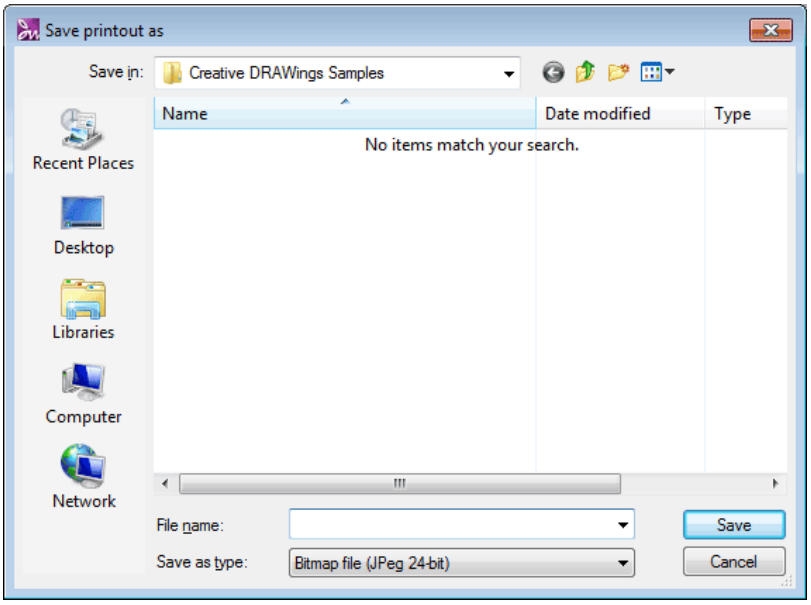



Figure 2.12: Save as dialog

14. Select **My documents** icon from the left side and then double click on the **Embroidery designs** folder.
15. In the **File name** field, type a name for your image.
16. Select **Save** button to save the scanned image. The scanned image is saved as bitmap image (like photo) with **.jpg** file extension.

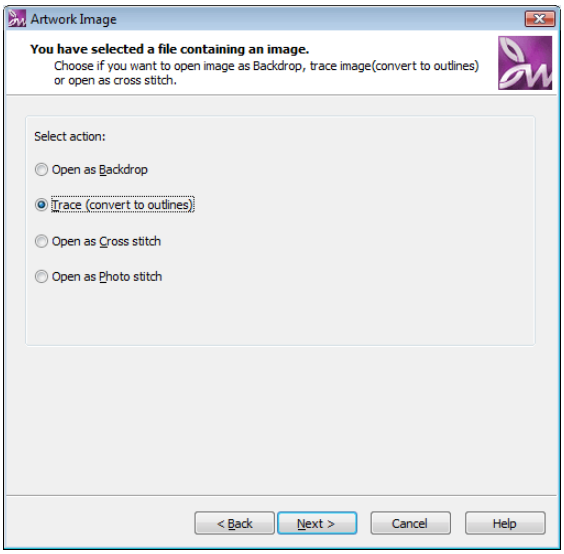



Figure 2.13: Artwork image dialog

17. The **Artwork Image** dialog will appear providing four conversion options.
    a. **Open as Backdrop:** This option can import the image into **Creative DRAWings** without any changes. The image is used as a reference to create an embroidery design from scratch. You select and draw freehand what objects you want in your design.
    b. **Trace:** This option will guide you to convert the **Bitmap** (picture) image that you are importing to a **Vector** (clipart) based image which will be filled with standard embroidery (Satin, Step, Satin serial or Running stitches). Tracing a **Bitmap** image is

not an easy procedure; therefore you must be careful with the images which you are tracing. They must be clear so that they can be actually embroidered. (Such image is the one that it is shown at Figure 2.14)

c. **Open as Cross stitch:** This option imports the image as it is and fills it with cross-stitches (X's). This is the easiest way to fill a **Bitmap** (picture) image with stitches and it is the best choice for images which cannot be embroidered with standard embroidery stitches.

d. **Open as Photo stitch:** This option will convert the imported image from scanner into a **Photo stitch** design.

18. In our example we will select **Trace** option and press the **Next>** button.

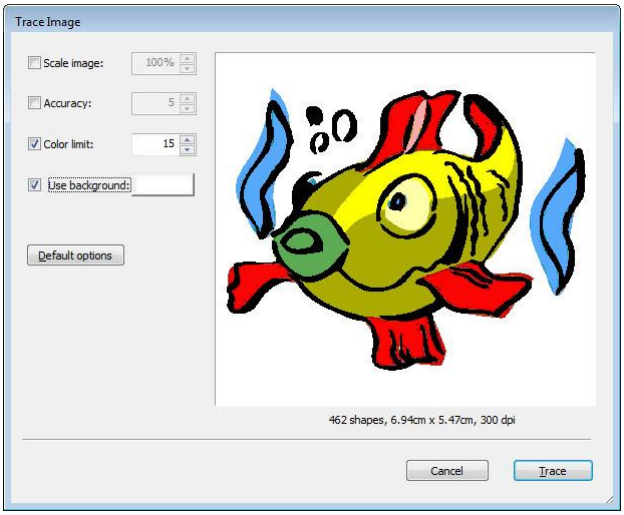



**Figure 2.14: Trace image dialog**

19. **Trace Image** dialog will appear with the scanned image. In the **Preview** area you can see how the result of the traced picture will look like. The **Vector** (clipart) design from tracing the scanned image is the same image you see in the **Preview** of the **Trace Image** dialog. What you see is what you get. And with **Creative DRAWings** it's what will be . . . when sewn out.

20. You can also adjust the traced result by changing the available options which are listed at the left side of the dialog.

    a. You can change the size of the **Trace** result by adjusting the **Scale image** option.

    b. You can set how exact the traced image will be to the scanned image by adjusting the **Accuracy** value.

    c. You can select the number of colors for your traced image by adjusting the **Color limit** value.

    d. And you can remove the background color that the scanned **Bitmap** images usually have by using the **Use background** option.

    e. Any changes you make to these options are automatically adjusted by **Creative DRAWings** and shown in **Preview**. We will learn of these options more in the next chapter.

21. Use the default options for this example and press the **Trace** button.

22. The **Fabric** dialog will appear (Figure 2.15). Expand the **Embroidery Normal** category from the list by clicking on the + icon next to it.
23. Select the fabric that is similar with the one you will actually use to embroider the design. For example, select **Craft Fleece** fabric.

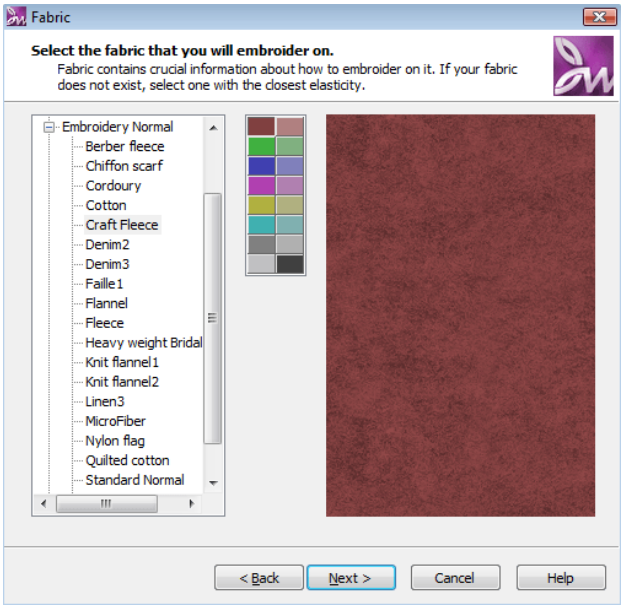



**Figure 2.15: Select fabric dialog**

24. After selecting the **Fabric,** choose the **Color** for your fabric from the boxes in the middle. For example, select gray color.
25. Click **Next>** button to continue.
26. The **Color reduction** dialog (Figure 2.16) will appear where you can select the **Thread palette** you will use.
27. Click on the arrow of the **Palette** drop-down menu and the available thread manufacturers will appear.
28. Select the brand-name thread you want by choosing it from the list. For example, select **Gunold poly**.
29. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold poly** in the **Thread palette**

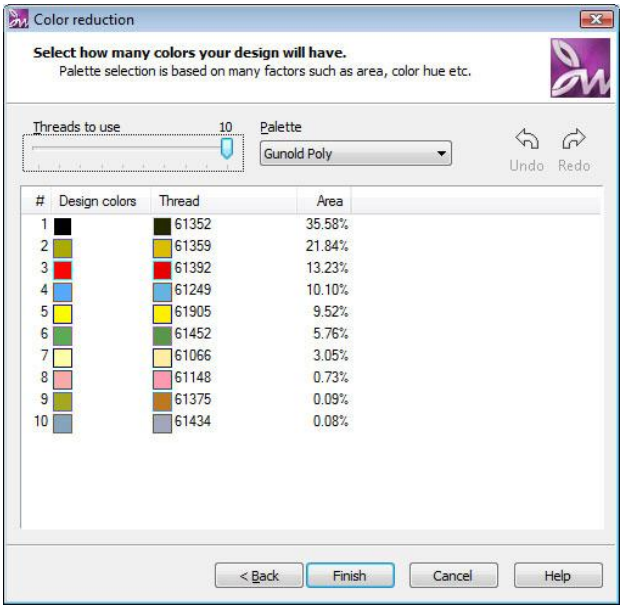



**Figure 2.16: Color reduction dialog**

30. In the same dialog you can see that your design has 10 different colors of thread. The number of colors can be reduced now by sliding the **Threads to Use** arrow to the left. Color reduction can also be applied later inside the software. The reduction of colors from 10 to let's say 8 won't affect the design much, but the embroidery time will be reduced. Take some time and use the slider of **Threads to use.** Finally click **Finish** to end the process and convert the imported design to stitches.

31. The design will appear in the working area filled with stitches (Figure 2.17).

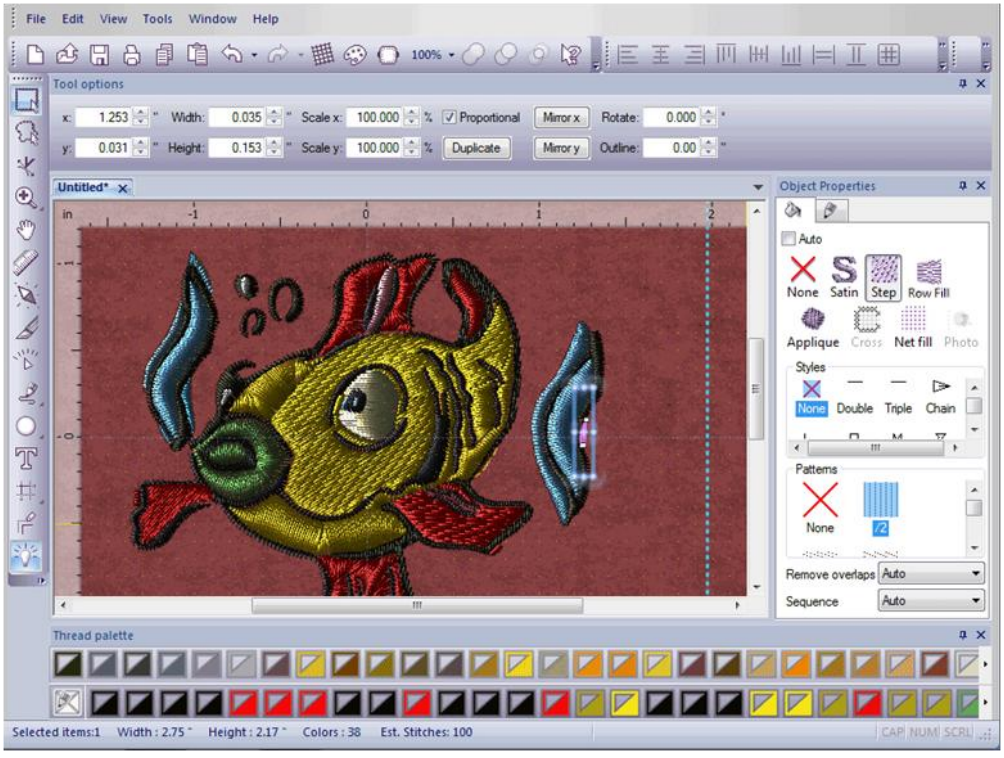



**Figure 2.17: The traced image converted to stitches**

32. The design will be positioned at the center of the hoop you selected in the starting dialog.

33. Many changes can be made in the design which was produced by scanning the Fish image. We will not take the time here to explain them, but we must say that the **Traced** design must be edited to increase its quality and to prepare it for embroidery. By increasing the quality of the **Vector** artwork you automatically increase the quality of the embroidery design.

34. When finished editing your design, you can proceed to the embroidering process. Save the design to any embroidery file format that your machine can read. Select from **File** menu the option **Save As.**

35. The **Save As** dialog will appear. Select a location to save all your embroidery files. For example, file to **My documents> Embroidery designs.** You can also save designs directly to a floppy disk or to your memory card.

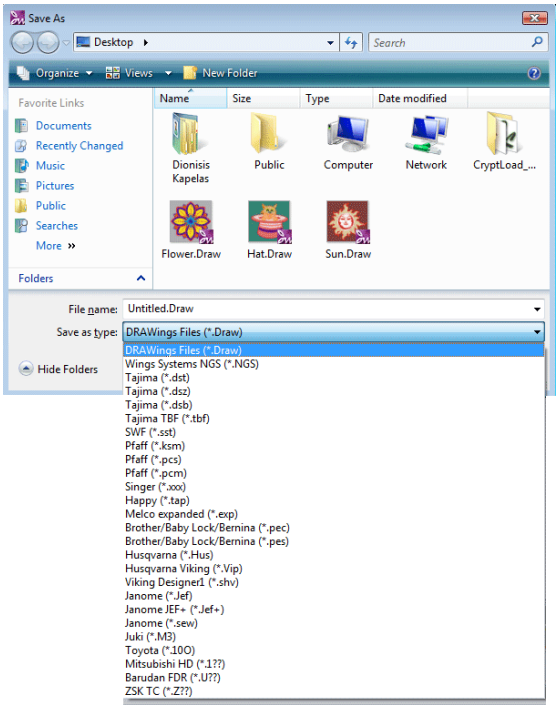



**Figure 2.18: Save As dialog box**

36. In the **File name** field, name your design file. For example, type **Mysecond Embroidery.**

37. In the **Save as type** box, click on the drop-down arrow to select an embroidery format for the saved design. You must always use the ones that are suitable for your embroidery machine. For example, if you have “Brother” embroidery machine you have to select the **.pes** or **.pec** embroidery file format.

Always remember to save the design in **.draw** file format before saving it to any embroidery machine’s format. This format holds all design information and can be used easily again and again to reproduce any embroidery machine file.

38. When finished with the design, click **Save**. The design will be saved in the location you chose with the name you gave to it. If you have saved the design directly to a floppy disk, a thumb drive, or to your hard drive, you are ready to download it to your embroidery machine’s memory card and sew it out. Otherwise you have to:

    A. Open Windows Explorer,

B. **Browse** to the location you saved it,

C. Right click on the file and from the right click menu expand the **Send to** submenu

D. Save to a 3.5 Floppy disk (A:) or to a thumb drive.

E. The design can be downloaded to your embroidery machine's memory card to be sewn out. (Note: in big commercial machines, the file can be downloaded directly to the machine's memory).

39. After saving the design, make a printout so you can set the functions on the embroidery machine correctly and then sew it out without any problem.
40. To do that, from **File** menu select **Print** option.
41. The **Print preview** dialog of the design will appear with all the listed information you need to embroidery the design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer.
42. To save the **Printout** to as image file, you have to click on the **Save to JPG** button.
43. The **Save printout as** dialog will appear where you have to

    A. Specify the location you want the image to be saved,
    B. Type the **File name** you want the image to have
    C. Click **Save** button.
    D. You can view the saved image simply by double clicking on it.

44. All the information you need is listed in the **Printout,** including the embroidery design's sequence (1-2-3 order of sewing out), the color changes, the number of stitches, and much more useful information.
45. You are ready -- Download the file to your embroidery machine, use the printout as your guide to set up your machine, and embroider the design you have just created.

## Get image from Webcam

Another way to acquire an image from a magazine or a flyer or from a drawing you have created on a page is by using any webcam that is attached on your pc. If your computer has a webcam installed (most modern laptops have a webcam already installed), you can capture a snapshot image and import almost any design you want to embroider.

**Important:** The design which you desire to convert to stitches must be compatible for embroidery and must be able to be filled with stitches.

Follow these steps to convert a **Bitmap** (picture) images to an embroidery design with your **Webcam**:

1. Start ***Creative DRAWings*** application by double clicking on shortcut icon that you will find on your **Desktop**.
2. ***Creative DRAWings*** application will open and the starting dialog named **New Design** will appear.

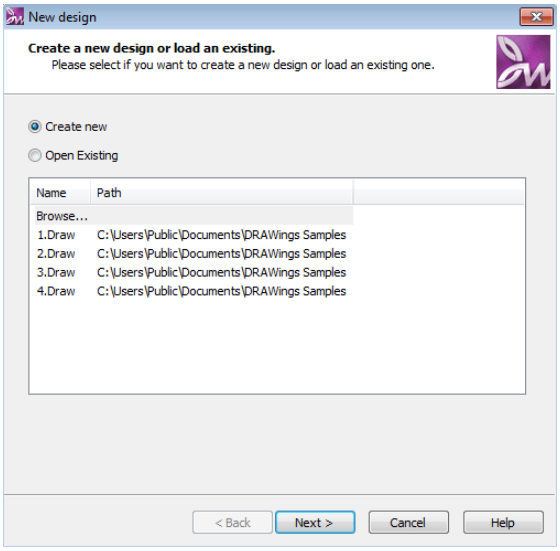



**Figure 2.19: Starting dialog**

3. Select the **Create new** option and click **Next>** button.
4. The **Artwork source** dialog will appear (Figure 2.20)
5. Select the **Get image from webcam** option.
6. At the bottom of the dialog you can select a Hoop to be used for the design. If you can find any Hoop that is compatible to your machine select one with similar dimensions. You can also create custom hoops easily.

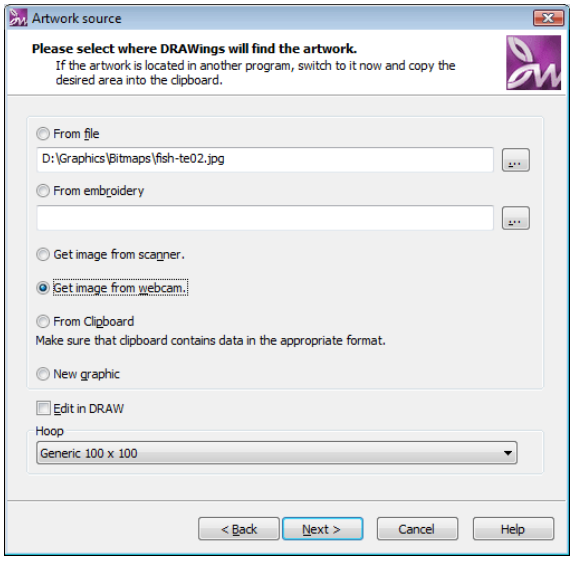



**Figure 2.20: Starting dialog - 2nd page**

7. Click **Next>** button to continue.
8. The webcam **Preview** dialog appears.

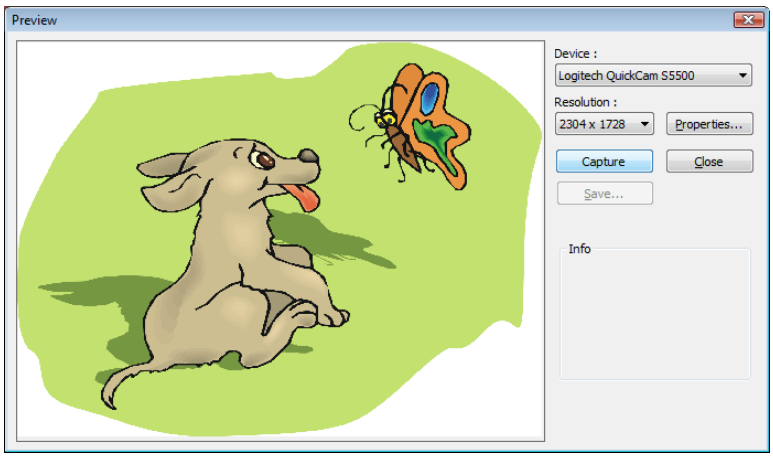



Figure 2.21: Image scan dialog

9. The webcam **Preview** dialog helps you capture the image you want to embroider and import it into ***Creative DRAWings***. If your webcam is correctly installed, all you have to do is press the **Capture** button and take a snapshot of the design you want.
10. The design will be captured and the image will appear in **Preview** area**.** You can specify the exact image to want to embroider (crop image) in **Preview** by drawing a rectangle with your cursor. Only the area inside the rectangle will be embroidered. We will leave it as it is.


Figure 2.22: Image scan dialog

11. If you are not satisfied with the image you captured you can click on the **Capture new** button and take a new snapshot.
12. If the design in the **Preview** is what you want to convert, press the **Save** button to continue.
13. Then you will be asked to save the design on your hard disk. The **Save As** dialog will appear.

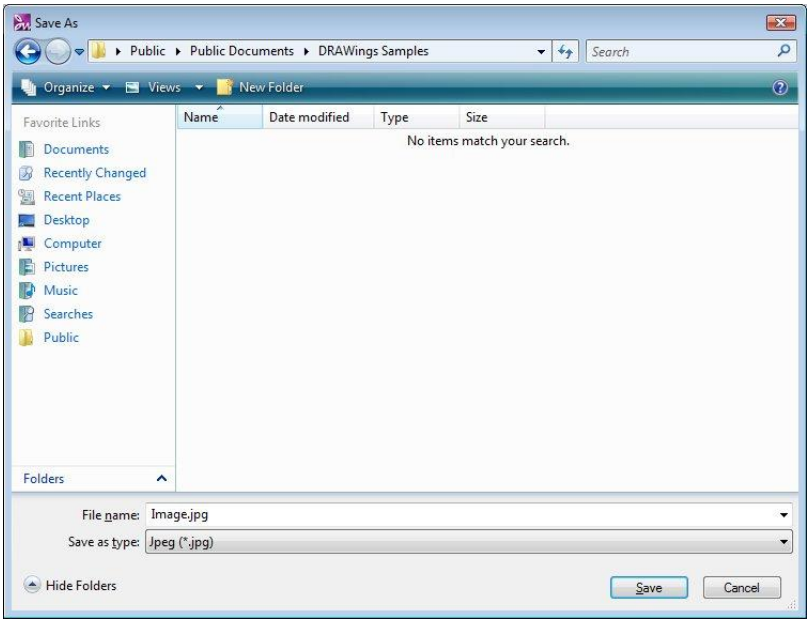



Figure 2.23: Save as dialog

14. Select **Documents** icon from the left side and then double click on the **Embroidery designs** folder.
15. In the **File name** field type a name for your image.
16. Select **Save** button to save the scanned image. The captured image is saved as bitmap image (like photo) with **.jpg** file extension.

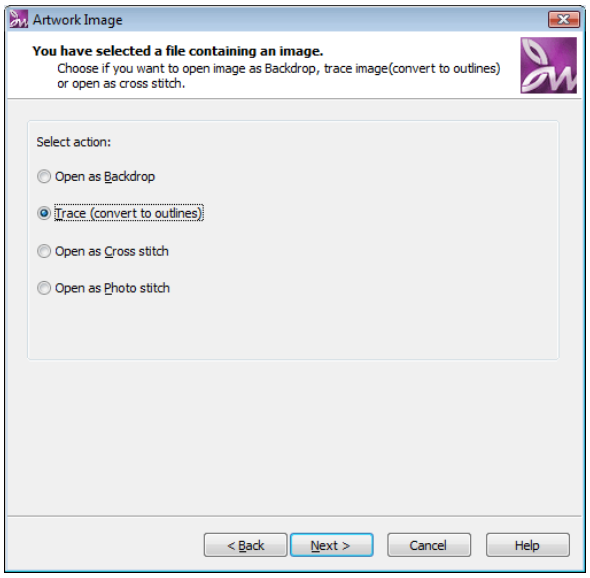



Figure 2.24: Artwork image dialog

17. The **Artwork Image** dialog will appear providing four options.
    a. **Open as Backdrop:** This option imports the image into ***Creative DRAWings*** without any changes. The image is used as a reference to create an embroidery design from scratch. You select and draw freehand what objects you want in your design.
    b. **Trace:** This option will guide you to convert the **Bitmap** image that you are importing into a **Vector** design that will be filled with stitches. Tracing a **Bitmap** image is not an

easy procedure; therefore you must be careful with the images which you are tracing. They must be clear and ones that can be actually embroidered.

c. Open as **cross stitch**, this option will convert the webcam snapshot into a cross stitch design.

d. Open as **photo stitch**, using this option you can convert the design into **Photo stitch** design.

18. In our example we will select the **Trace** option and press the **Next>** button.

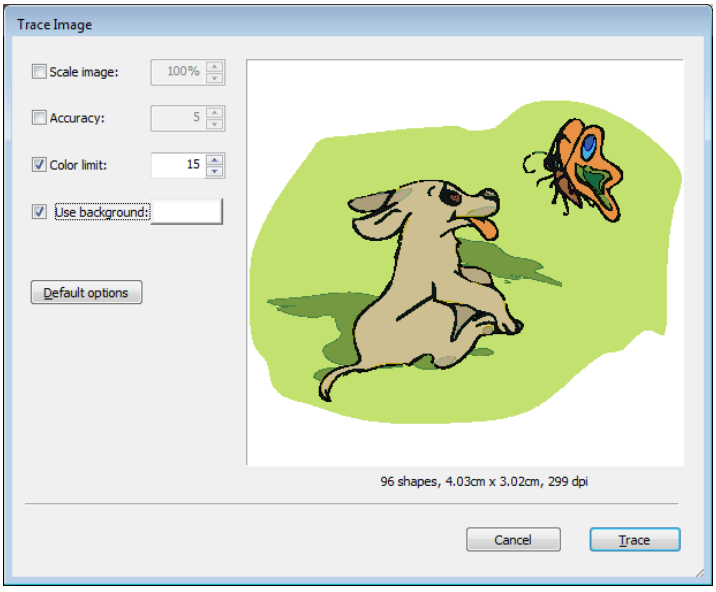



**Figure 2.25: Trace image dialog**

19. The **Trace Image** dialog will appear with the captured image imported. In the **Preview** on the right you can see what the traced result of the **Bitmap** (picture) image will look like. The **Vector** (clipart) design from tracing the scanned image is the same image you see in the **Preview** of the **Trace Image** dialog. What you see is what you get. And with ***Creative DRAWings*** it's what will be embroidered.

20. You can also adjust the traced result by changing the available options which are listed at the left side of the dialog.

a. You can change the size of the **Trace** result by adjusting the **Scale image** option.

b. You can set how exact the traced image will be to the scanned image by adjusting the **Accuracy** value.

c. You can select the number of colors for your traced image by adjusting the **Color limit** value.

d. And you can remove the background color that the scanned **Bitmap** images usually have by using the **Use background** option.

Any changes you make to these options are automatically applied and shown in the **Preview** area. We will refer to these option in more detail in the next chapter.

21. Change the **Color limit** to 15, and press the **Trace** button.

22. The **Fabric** dialog will appear (Figure 2.26). Expand the **Embroidery Normal** category from the list by clicking on the + icon next to it.
23. Select the fabric that is similar with the one you will actually use to embroider the design. For example, select **Craft Fleece** fabric.

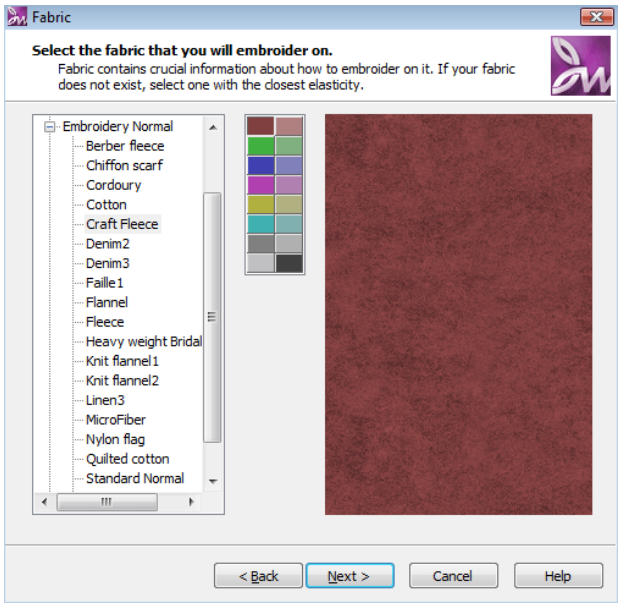



**Figure 2.26: Select fabric dialog**

24. After selecting the **Fabric,** choose the **Color** for your fabric from the boxes in the middle. For example, select gray color and Click **Next>** button to continue.
25. The **Color reduction** dialog (Figure 2.27) will appear to select a **Thread palette** to be used for the design.
26. Use **Palette** drop-down menu to review the available thread manufacturers and select one that you prefer. For example, select **Gunold Poly**.
27. The colors of the converted design will be automatically assigned to the closest thread color of the **Gunold Poly** in the **Thread palette**.

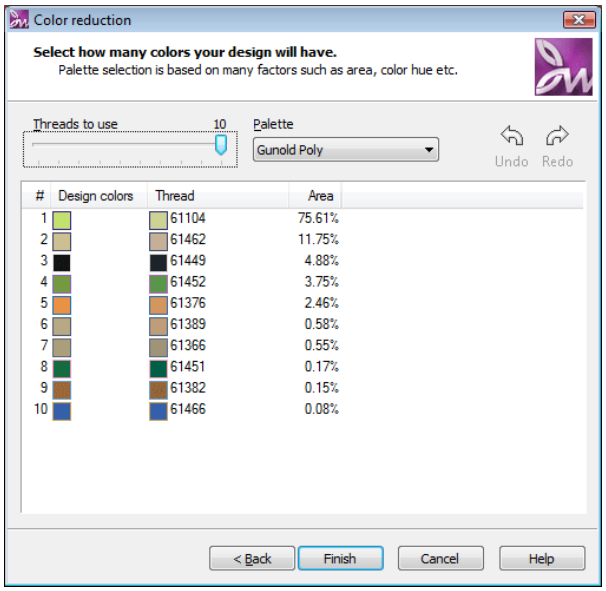



**Figure 2.27: Color reduction dialog**

28. In the same dialog you can see that your design has 10 colors of thread. You can reduce the available colors, using the **Threads to use** slider. Click **Finish** to end the process and convert the imported design into stitches.

29. The design will appear in the working area filled with stitches (Figure 2.28).

**Figure 2.28: The traced image filled with stitches**

30. The design will be positioned at the center of the selected hoop.

31. We can use the option **Backdrop -> Hide** from **View** menu to hide the backdrop that has been also imported, in order to work easier with the actual design.

**Figure 2.29: Remove unneeded objects and hide backdrop image**

32. Now we are ready to edit and save the design.

33. You can make a printout so that you can set the functions on the embroidery machine correctly and then sew it out without any problem.

34. To do that, from **File** menu select **Print** option.

35. The **Print preview** dialog of the design will appear with all the listed information you need to embroider the design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer.

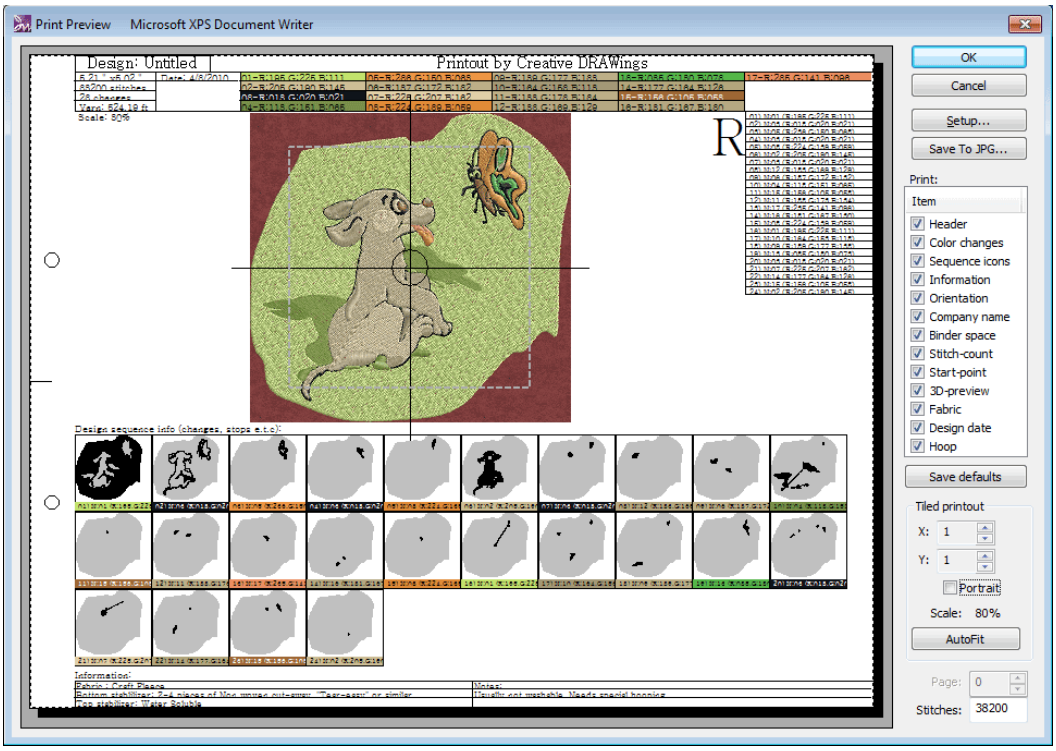



**Figure 2.30: Printout dialog box**

36. To save the **Printout** to as image file, you have to click on the **Save to JPG** button.

37. The **Save printout as** dialog will appear where you have to

    A. Specify the location you want the image to be saved,
    B. Type a **File name** you want the image to have
    C. Click on **Save** button.
    D. You can view the image you have saved by double clicking on it.

38. All the information you need is listed in the **Printout,** including the embroidery sequence the color changes, the number of stitches, and much more useful information.

39. You are ready – Load the file to your embroidery machine, use the printout as your guide to set up your machine, and embroider the design you have just created.

## Import a stitch file and embroider it

**Creative DRAWings** gives you the ability to import stitch files (**.dst, .pes, .hus, .M3, .ngs,** etc.) and work with them. You can change colors, move and slant stitch objects, add new embroidery objects by designing them from scratch, or copying and pasting them from a different source. You can also convert the **Stitch** objects into **Vector** (clipart) objects which will allow you to change their stitch types and shapes.

This is a step-by-step tutorial to guide you on importing a **Stitch** file inside **Creative DRAWings**, change colors, add text and produce a new embroidery design based on an old design.

1. Start **Creative DRAWings** application by double clicking on this shortcut icon 

on your Desktop.
2. **Creative DRAWings** will open with the starting dialog of **New Design**.

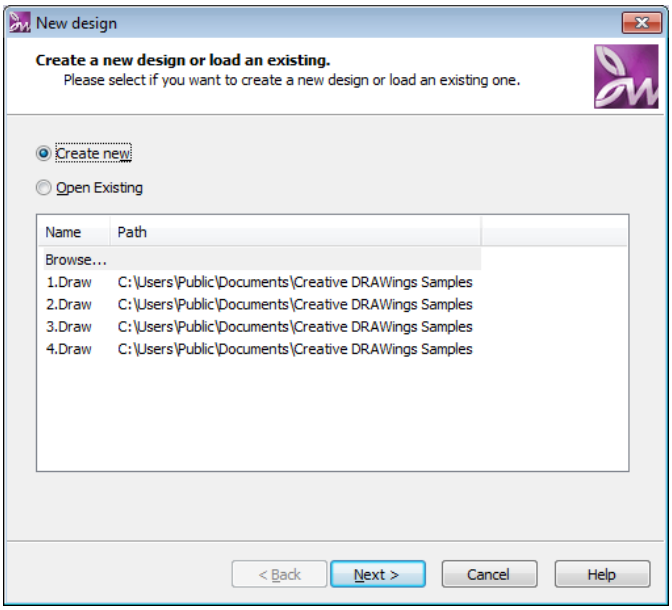



**Figure 2.31: Starting dialog**

3. Select the **Create new** option and click **Next>** button.
4. The **Artwork source** dialog will appear (Figure 2.32)
5. Select the **From Embroidery** option at the top of the dialog.
6. Click on the browse button  at the right to import the **Stitch** file design you want to embroider.

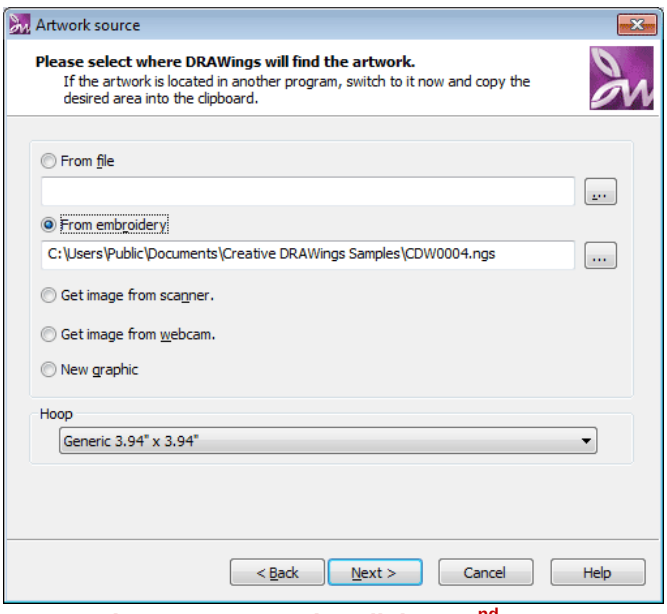



**Figure 2.32: Starting dialog - 2nd page**

7. The **Open** dialog box will appear (Figure 2.33) and you can find the design you want to embroider.

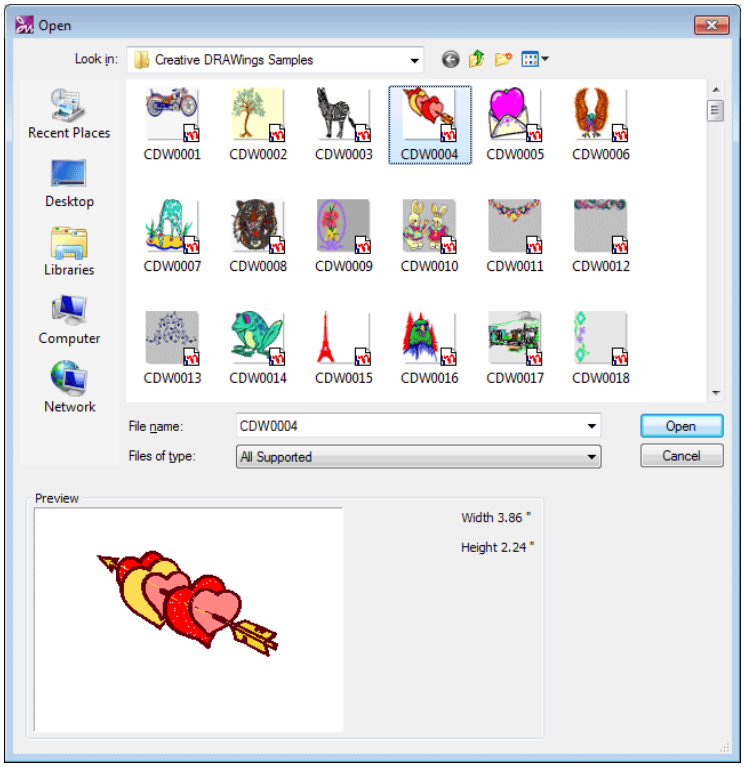



**Figure 2.33: Open design dialog**

8. Click on **My documents** folder at left side of the dialog.
9. Find and double click on the **Embroidery designs** folder.
10. Inside **Embroidery designs** folder, you will find another folder called **Creative DRAWings samples.** Double click to open it.
11. Inside the **Creative DRAWings samples** folder you will find **.ngs** stitch files which you can import into **Creative DRAWings**. You can import any of them, but for our example we will use the **CDW0004.ngs** file as it is shown in the Figure 2.34
12. Select it and click the **Open** button.
13. The **Artwork source** dialog will appear once more (Figure 2.32) with the design you selected under **From file** field.
14. At the **Hoop** section of the same dialog, you can select the hoop that you will embroider your design on. If no hoop that your machine supports exists in the list, select one with similar dimensions. You can create your custom hoops easily (Information on adding specific hoops will be covered later in this manual.)
15. After selecting the **Hoop**, click **Next>** to continue.
16. The **Fabric** dialog will appear (Figure 2.34). Expand the **Embroidery Normal** category from the list at the left by clicking on the + icon next to it.
17. Select the **Fabric** that is similar with the one you will actually use to embroider the design. For example select **Craft fleece** fabric.

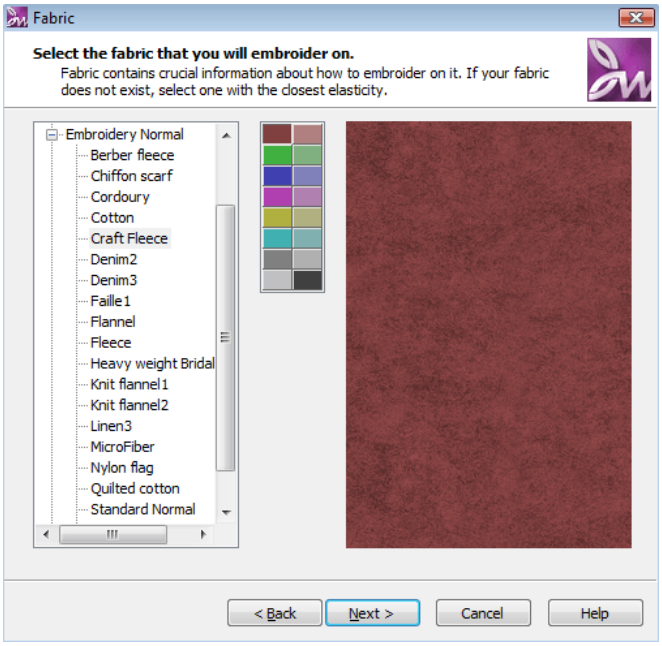



**Figure 2.34: Select fabric dialog**

18. After selecting a **Fabric**, choose a color from the list at the middle of the dialog. Click **Next>** button to continue.
19. The **Color reduction** (number of threads) dialog (Figure 2.35) will appear where you can select your **Thread palette**. Use Palette drop-down menu to select any of the available thread manufactures palette. For example, select **Gunold Poly** thread.
20. The colors of the design you are importing will automatically be assigned to the closest thread color of the **Gunold Poly** in the **Thread palette**.

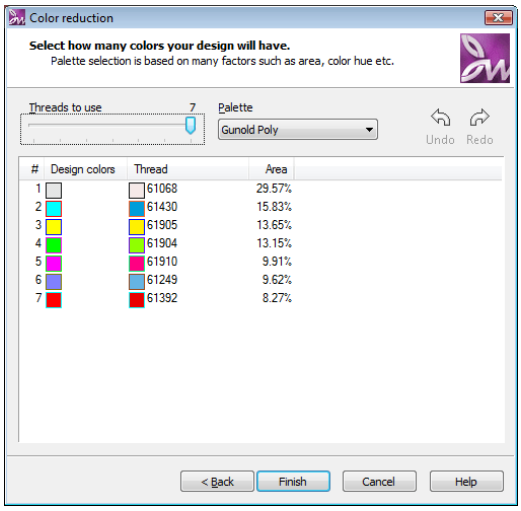



**Figure 2.35: Color reduction dialog**

21. In the same dialog you can also reduce the number of the design colors. Our design has 7 different colors of thread. The number of colors can be reduced now, or later inside the software. Click **Finish** to end the process and convert the imported design into stitches.
22. The design will appear in the working area filled with stitches (Figure 2.36).

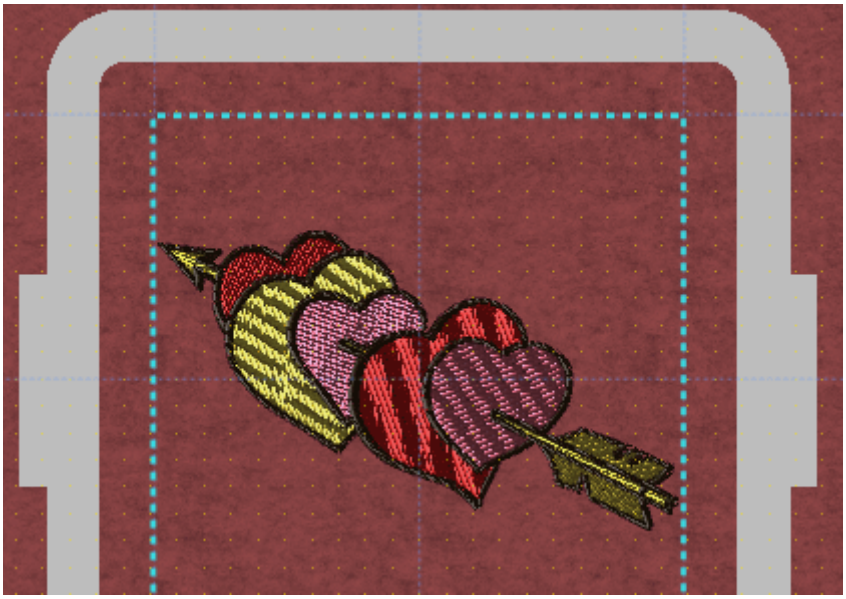


Figure 2.36: The imported design converted to stitches

23. We can change the colors of the hearts and add some text to the imported design. You can make many changes to the embroidery design, but we will not cover that in this tutorial. The available tools that **Creative DRAWings** includes are presented thoroughly in following chapters.
24. To change the color of each heart, select a heart by left clicking on it and then left clicking on the color you want from the **Thread palette** bar at the bottom of the screen. The **Thread palette** is split to two parts; the part on top where all the available colors of the **Gunold Poly** thread colors are listed and the bottom part where the 7 currently used colors on the design are listed.
25. Change the objects colors by following the steps above, and then produce the design shown in Figure 2.37
26. Now we will add some text to the design.
27. Activate the **Text tool** by left clicking on the  icon located on the **Tools** toolbar at the left side of the screen.
28. Left click on the position you want the text to be placed and a blinking line will appear which allows you to insert your text.

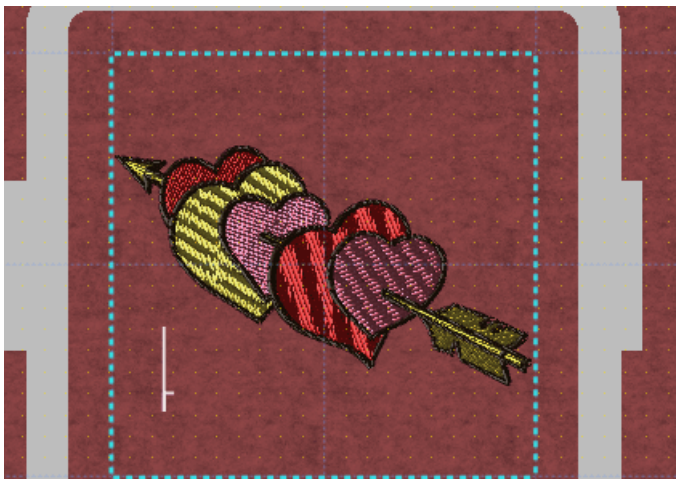


Figure 2.37: We changed the colors of the imported stitch file

29. Type “I love you.” You can change the Font by selecting a different one from the **Font name** drop-down menu on top of the screen. You can also change the **Font size** by typing its dimensions. (Figure 2.38). If you want the text to be **Bold** or **Italic,** click on one.

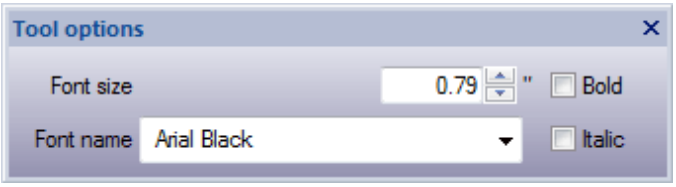



Figure 2.38: Tool options bar – Text options

30. For this tutorial, the options were made as shown in Figure 2.38. If you’ve been following this tutorial on your screen, left click on the **Rectangle selection** tool from Tools toolbar to confirm our changes.
31. Select the **Text** object by clicking on it.
32. Change its **Fill** color by clicking on the yellow color and set its **Pen** (outline) color to **None** by holding the **Shift** key pressed and left clicking on the None color icon. The **None** color icon will change to this and the Pen color will be removed from the Text object.
33. The design should look like Figure 2.39.

Figure 2.39: The design with some text added.

34. Now we are ready to embroider the design.
35. To proceed to the embroidery process you have to save the file to the embroidery file format your machine can read. To do that you have to select the **File** menu and then the **Save as** option. (Figure 2.40).

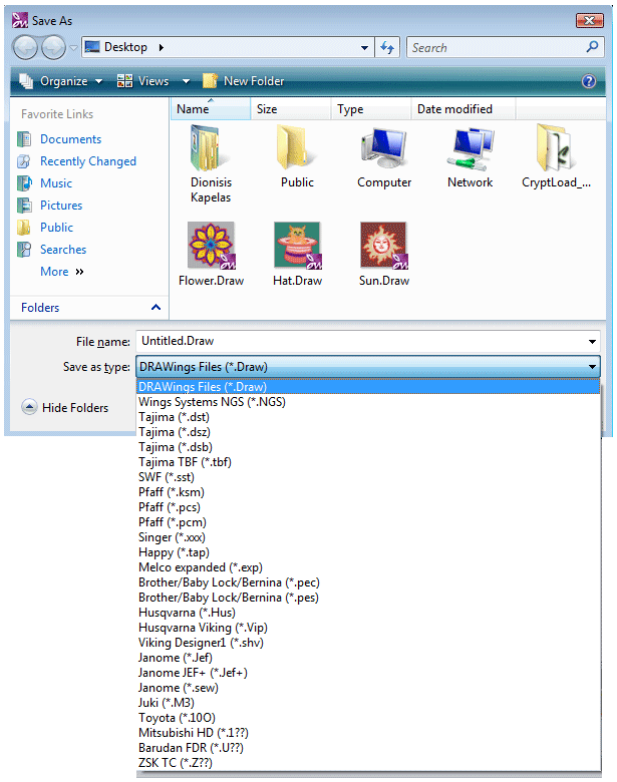



Figure 2.40: Save As dialog box

36. Use **Save as type** drop down menu to select one of the available embroidery type files to export the design. For example, if you have Brother Embroidery machine you have to select the **.pes** or **.pec** embroidery file format.
37. In the **File name** field that is located at the bottom of the dialog type the name you want the design to have. For example, type **MyEmbroiderydesign.**
38. Remember to save your design in **.draw** file format before saving it to any embroidery machine's format, because this is the file format which **Creative DRAWings** uses to store all design information.
39. When finished with the design, click **Save**. The design will be saved in the location you chose with the name you gave to it. If you have saved the design directly to a floppy disk, a thumb drive, or to your hard drive, you are ready to download it to your embroidery machine's memory card and sew it out. Otherwise you have to:
    a) Open a windows explorer,
    b) Browse to the location you have save it,
    c) Right click on it and from the right click menu expand the **Send to** submenu
    d) Save to a 3.5 Floppy disk (A:) or to a thumb drive

e) Then your design can be downloaded to your embroidery machine's memory card to be sewn out. (Note: in big commercial machines, the file can be downloaded directly to the machine's memory).

40. After saving the design, make a printout so you can set the functions on the embroidery machine correctly and then sew it out without any problem.

41. To do that, from **File** menu select **Print** option.

42. The **Print preview** dialog, offers all the information that is needed in order to embroider the design correctly. Press **OK** button to create the **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer.

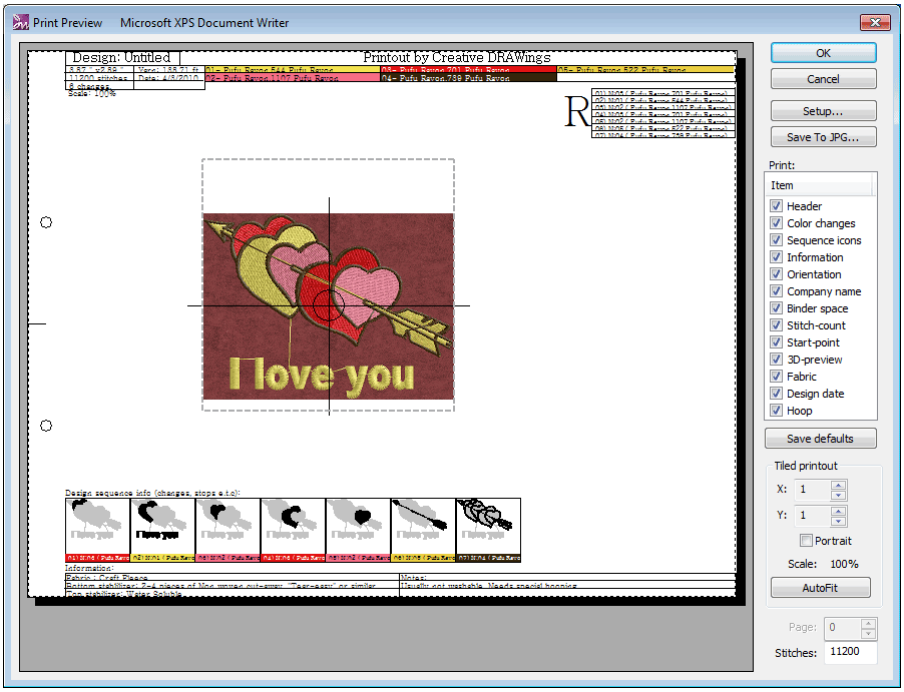



**Figure 2.41: Printout of the design**

43. To save the **Printout** to as image file, you have to click on the **Save to .jpg** button.

44. The **Save printout as** dialog will appear where you have to specify the location you want the image to be saved,

    A. Specify the location you want the image to be saved

    B. Type the File name you want the image to have

    C. Click on **Save** button

    D. You can view the image you have saved by double clicking on it.

45. All the information you need is listed in the **Printout,** including the embroidery sequence of the design (1-2-3 order of sewing out), the color changes, the number of stitches, and much more useful information.

46. You are ready. Download the file to your embroidery machine, use the printout as your guide to set up your machine, and then sew out the design you have just created.

## Create a design from scratch

**Creative DRAWings** provides the ability to create an embroidery design from scratch by using all available designing tools and your creativity. With the designing tools that the software includes you can create any embroidery design you want easily and quickly. In this section we will show you how to create a design step by step.

1. Start **Creative DRAWings** application by double clicking on shortcut icon 

that you will find on your Desktop.
2. **Creative DRAWings** application will open and the **starting dialog** will appear.

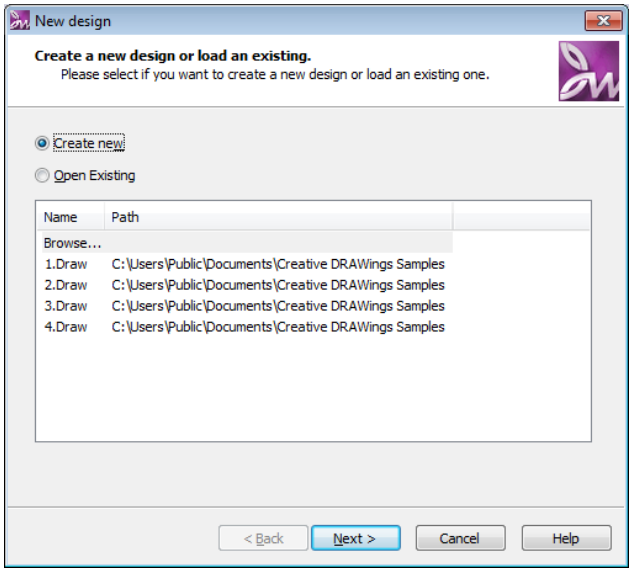



**Figure 2.42: Starting dialog**

3. Select **Create new** option and click **Next** button.
4. The **New design** dialog will appear (Figure 2.43)
5. Select the **New graphic** option that is located at the bottom of the dialog.

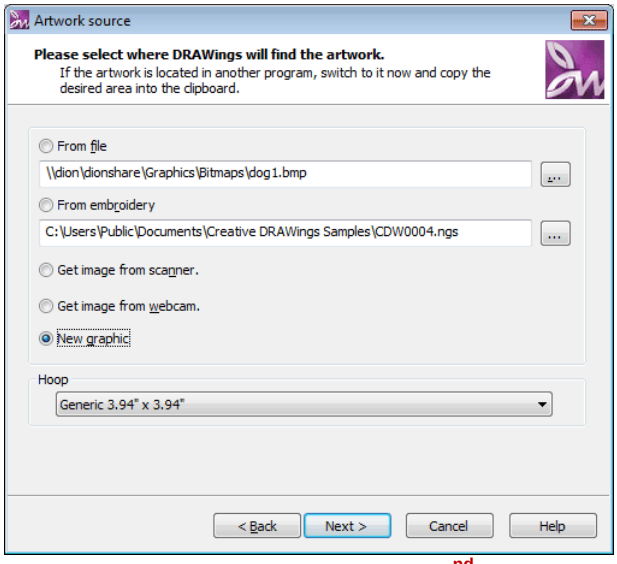



**Figure 2.43: Starting dialog - 2nd page**

6. At the **Hoop** section of the same dialog, you can select the hoop that you will embroider your design on. If the hoop your machine supports does not exist in the list select one with similar dimensions. You can create your custom hoops easily inside **Creative DRAWings**.
7. After selecting the hoop you want Click **Next>** button to continue.
8. The **Select Fabric** dialog will appear (Figure 2.44). Expand the **Embroidery normal** category from the list at the left by clicking on the + icon next to it.
9. Select the fabric that is similar with the one you will actually use to embroider the design. For example select **Craft Fleece** fabric.

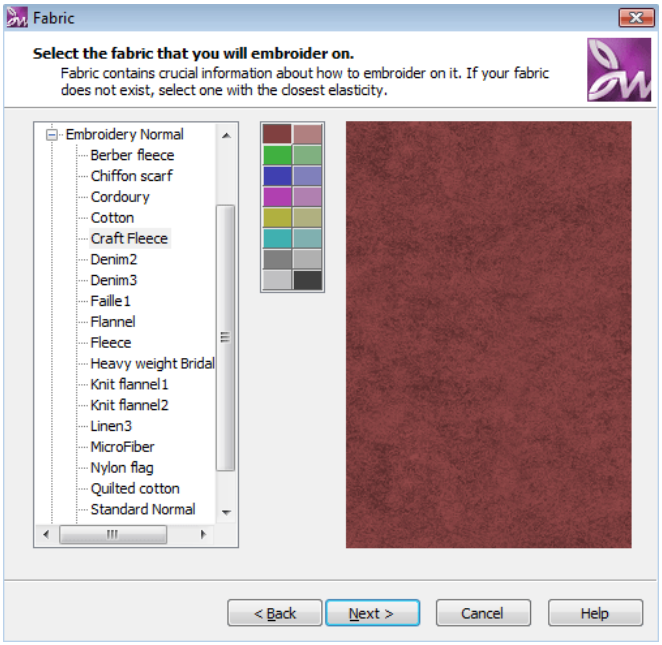



**Figure 2.44: Select fabric dialog**

10. Select a color for the fabric that your fabric has from the color list at the middle of the dialog. For example select **gray** color.
11. Click **Next>** button to continue.
12. The workspace will appear with the selected hoop at the center but without any design in it.
13. We will create a flower by using the available designing tools of **Creative DRAWings**. From the **Tools** toolbar that is located at the left side of the working space, and holds all the designing tools select the **ellipse** tool. The ellipse tool is above the **Text** tool. If a different shape is visible at that position, click on the small arrow at the bottom right of the icon to expand it and then select the ellipse tool that will appear.

14. With the **ellipse** tool selected, draw an oblong shape like a petal, by click and dragging with the mouse on the working area (Figure2.45).The oblong shape that you create will automatically be filed with **Satin** stitches and have a running outline. If the shape you created is big, it will be filled with **Step** stitches.
15. The shape will be filled with the default **Fill** color and the default **Outline/Pen** color. To change the **Fill** color you have to select the shape/object and **Left click** on the color you

want from the **Thread palette** toolbar at the bottom of the screen. To change the **outline/Pen** color you have to hold the **Shift** key pressed from the keyboard and then **left click** on the color you want.

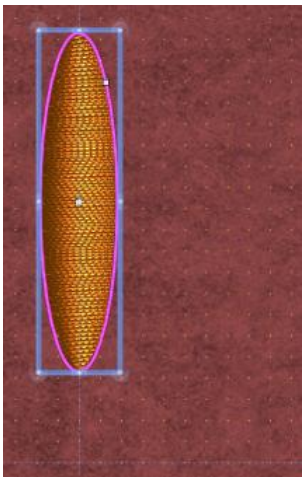
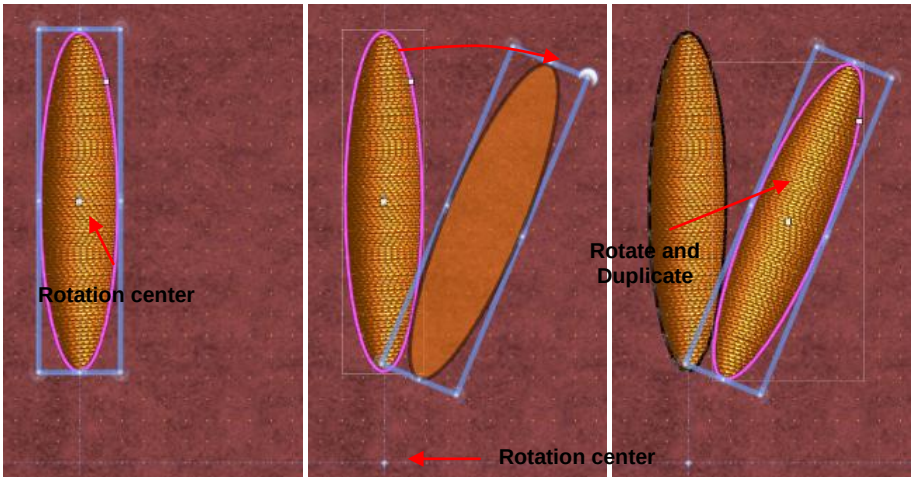


**Figure 2.45: Draw an oblong shape**

16. In our case we do not want the shape to have any outline/pen color. We will hold **Shift** key pressed and then click on the **None** color icon . The outline will be removed from the shape and the **None** color icon will change to icon, which means that our shape does not have any outline color.
17. Select the shape by clicking on it.
18. At the middle of the selected shape you will see a small cross. This is the rotation center of the design. Click and drag it to the bottom of the shape and position it outside of the shape. This will allow us to rotate the shape based on a different rotation center.




**Select shape – Move Rotation center– Rotate from top-right corner and duplicate**

19. Position the mouse on the top right corner until you see the rotation icon, which is a curved arrow.
20. Click and drag the clockwise and the object will start rotating. At the point that the original shape ends, **Right click** once while keeping the **Left click** pressed, to activate the **Duplicate** function. The cursor will change to this icon . When you are ready release

the left click to **Duplicate** the object. The duplicated object will appear at the position you rotated.

21. To avoid doing that again and again until you draw all petals of the flower, you can simply select the **Repeat last transform** option from the **Edit** menu. This option will redo your last transformation, based on the last inserted petal, as many time you want. The result is shown on Figure 2.46.

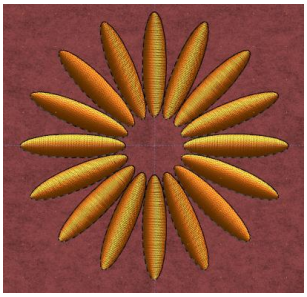


**Figure 2.46: Apply Repeat last transform option**

22. Now we will design the center of the flower.

23. Select the **Ellipse** tool, once more, from the **Tools** toolbar.

24. By click and dragging on the center of the petals, draw a circle. If you hold the **Ctrl** key pressed while dragging with the mouse diagonally, guidelines will appear that help you draw the shape based on them. By dragging based on the diagonal guideline you can draw a perfect circle. (Figure 2.47)

**Figure 2.47: Draw a circle – remove outline - change color**

25. If the circle you created is not exactly at the center of the petals you can move it by click and dragging it to the position you want.

26. Select the circle you created, change its color to **Yellow** and **remove its outline** by following the same procedure we described on 15 and 16 steps. (Figure 2.47)

27. Your flower is ready to be embroidered.

28. To avoid losing you work you have to save the design in .draw file format that makes it fully editable inside **Creative DRAWings**. To do that you have to select the **File** menu and then the **Save as** option.

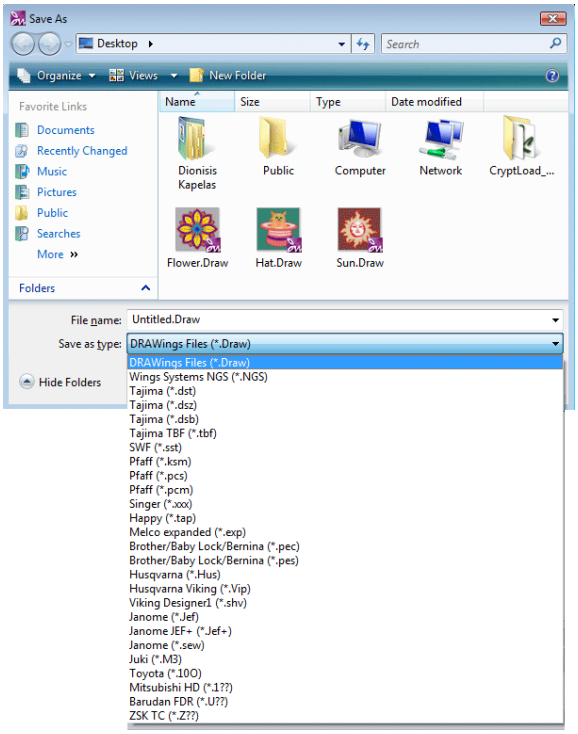



**Figure 48: Save As dialog box**

29. The **Save As** dialog will appear. Find the location you want the file to be saved. For example, inside the **Embroidery designs** folder that is located inside **My documents** folder. If you want you can save the design directly to your floppy disk or your memory card that your machine reads.
30. In the **File name** field that is located at the bottom of the dialog type the name you want the design to have. For example, type **Mydesign.**
31. Then click on the **Save as type** drop down menu arrow to view the available file type options. Select the **.DRAW** type which is the first on the list. The **.DRAW** file format is the file format that **Creative DRAWings** supports and holds your artwork together with your stitches. Click **Save** button to continue.
32. If you want to embroider the design you have to save it also to the file format your embroidery machine reads. For example, if you have Huqsvarna embroidery machine you have to select the **.Hus** or **.Vip** embroidery file format.
33. After saving the design, make a printout so you can set the functions on the embroidery machine correctly and then sew it out without any problem.
34. To do that, from **File** menu select **Print** option.
35. In appearing **Print preview** dialog we can find all necessary information in order to embroider the created design correctly. If you have a printer you can press **OK** button and make a **Printout** of the design. If you do not have a printer or you do not want to print it, you can save it as an image file and view it with an image viewer program.

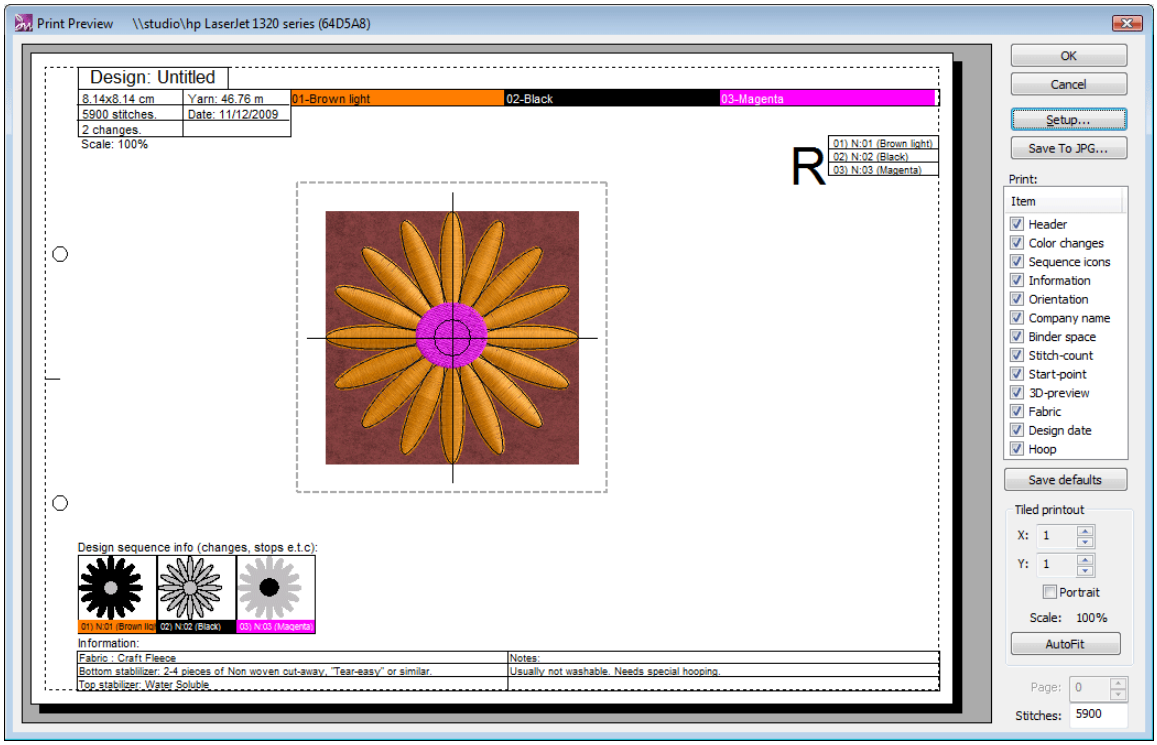



**Figure 2.49: Printout of the design**

36. To save the **Printout as image** file you have to click on the **Save to JPG…** button.
37. **The Save printout as** dialog will appear where you have to:
    - Specify the location to save the file.
    - Type a filename for the file.
    - Click on Save button
    - In order to view the saved image you have to simply double click on the created file.
38. All the information you need is provided in the Printout including the **Embroidery sequence** of the design, the color changes the number of stitches and many more useful information.

You are ready. Load the file to your embroidery machine, use the printout as your guide to setup your machine and embroider the design you have just created.

## Workspace tour

The main application window (Figure 2.50) consists of a variety of **menus**, **toolbars, wizards** and **dialog windows**. All these together with the design tabs are called a **workspace**. A workspace is any combination of the above components. The way that the workspace components and windows are placed is fully customizable. When opening the application for the first time all these tools are placed by default in a way to help you focus on your task (creating, editing and viewing designs). Make any arrangement on workspace components in order to have a workspace that matches your personal preferences. More information about customizing workspace will be provided later on this chapter. Some of the workspace components are available only in **Create** mode and some of them change inside **stitch** mode because they have dynamic contents.

### Introduction

Take some time using all the available workspace components. As you are getting more familiar with the tools and their usage you will improve your productivity. Let's take a look at the tools and their default placement. This is the main application window of ***Creative DRAWings***.

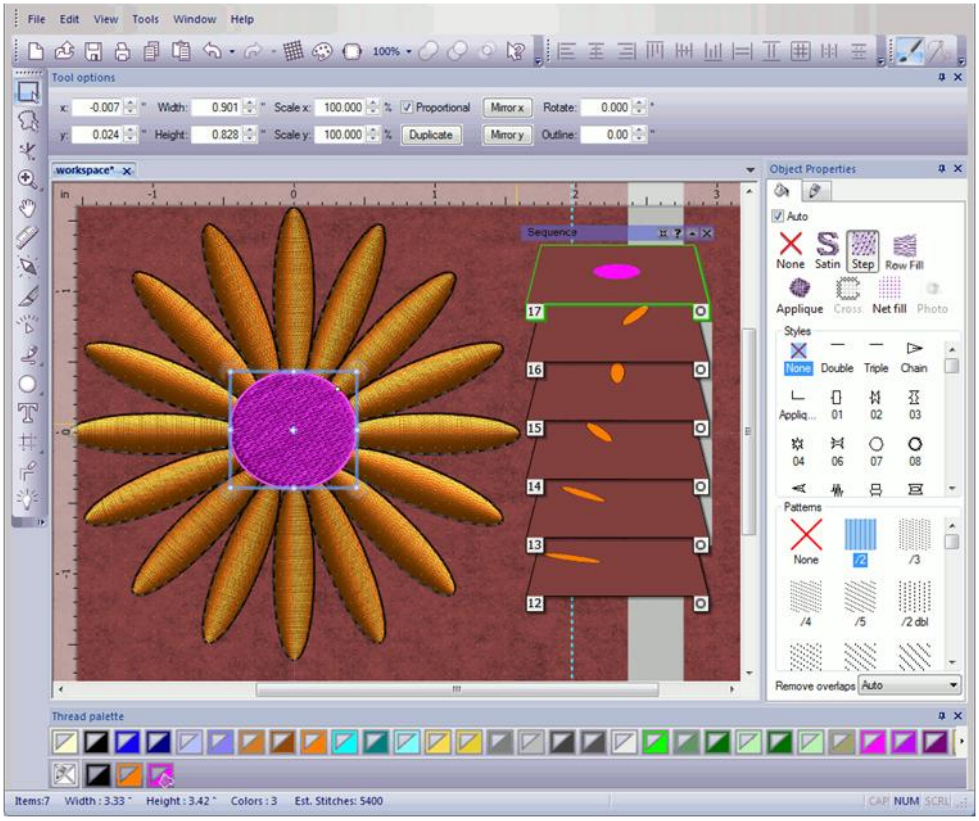


Figure 2.50: *Creative DRAWings* application window

## Start-up wizard

The application always starts with a wizard (Figure 2.51) prompting you to create a **New design** or load an existing. Use any of the provided options and follow the instructions and easily start a new design from scratch or based on various sources of artwork. You can also edit and reuse any of your existing designs.

1. Select **Create new** and then press **Next** to proceed.

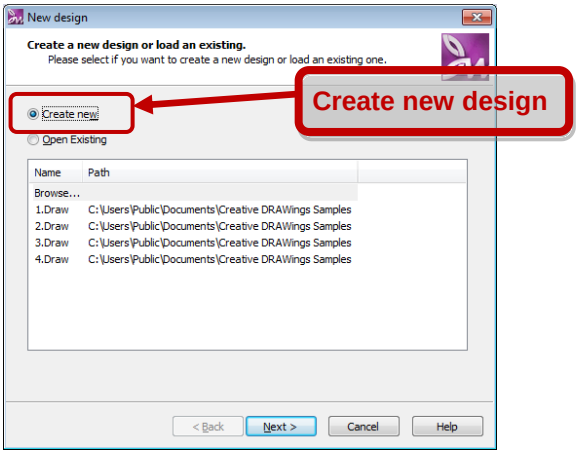



Figure 2.51: Step 1 Start-up wizard

2. Select any **artwork source**, a **hoop** for the new design and press **Next** to proceed.

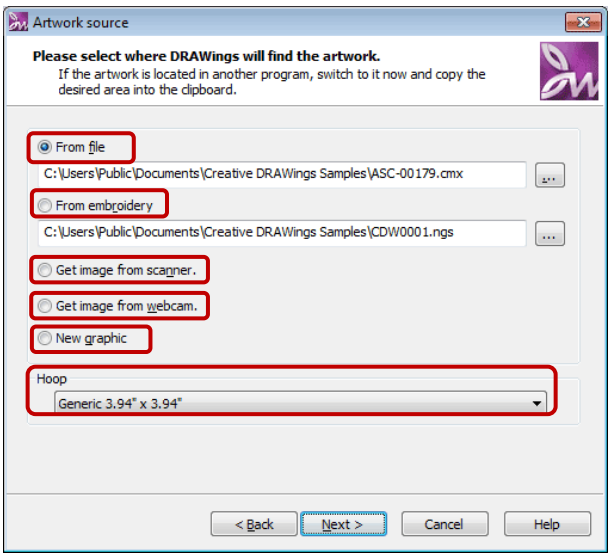



**Figure 2.52: Step 2 Start-up wizard select artwork source**

The usage and the customization of each artwork source will be described thoroughly into separate sections later on this chapter. In order to open a design select **Open existing** and then press **Browse** to locate your design. You can also open with a single click one from the list with recently used designs.

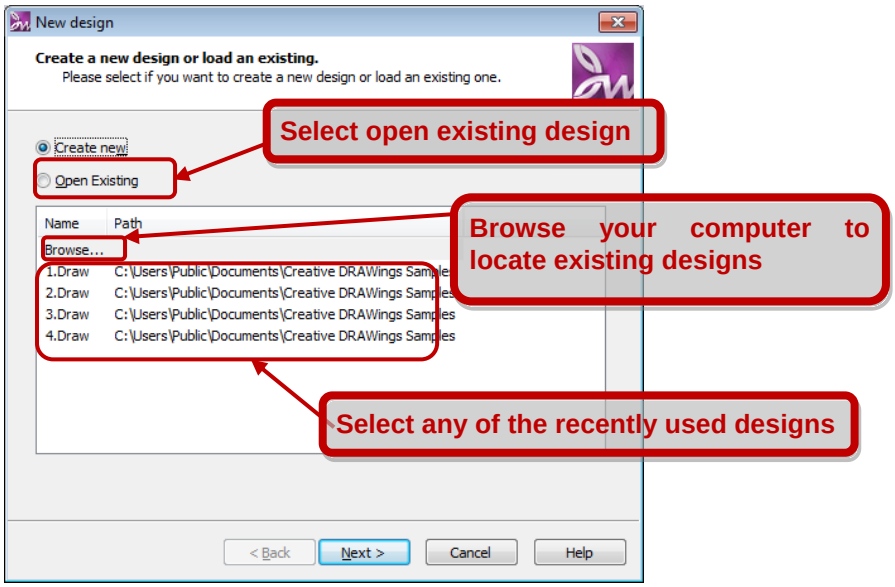



**Figure 2.53: Start-up wizard load existing design**

Follow the options of the wizard to create a new design or open an existing. At the final dialog of the wizard press **Finish**. The design area will appear blank, with an existing design or with a provided artwork.

## Workspace components

We will now describe the available workspace components and the ways to customize them. On the top area of the application window you can see the **Title** bar, the **Main Menu** bar, the **Standard** toolbar, **Draw-Stitch** toolbar and **Tool options** pane. On the left side of the application window you can see **Tools** toolbar**.** You can also see the **Thread palette** and the **Status bar** at the bottom area of the window. On the right side of the design area you can see **Object properties** pane. **Object properties** toolbar is a context sensitive bar because it provides properties for the object you have selected. Each object might have different properties depending

on its size and shape. While using the application there are also some transparent dialogs that appear on top of the design area. Let's take a closer look at all these components.

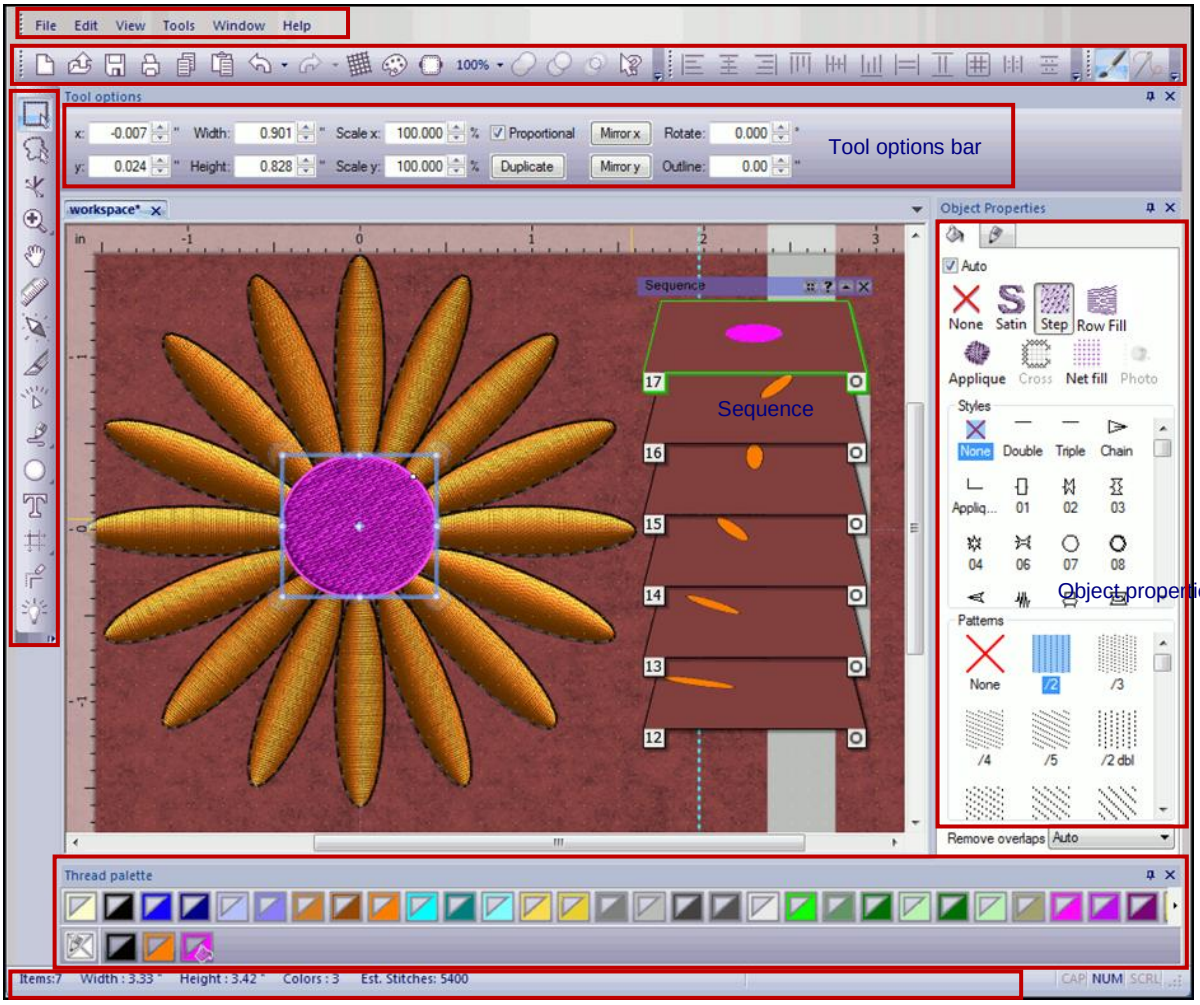



Figure 2.54: workspace components

## Main menu bar

Under the title bar is located the **Main menu** bar. This *bar* provides access to most of the commands that control the main functionality ***Creative DRAWings*.** It consists of several menus, click on any of them (for example, File, Edit, View, Tools) to see the included menu commands.

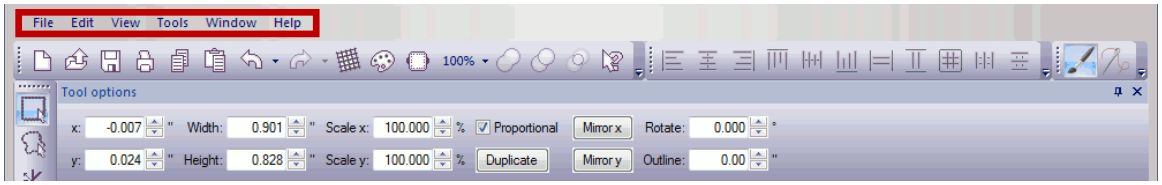


Figure 2.56: Main menu bar

## Icon Toolbars

In any windows application there are usually a number of icon toolbars. They have shortcuts to dialog boxes or actions. Click on any icon of the program's toolbars to see the performed action. You can also pause your mouse over any of the icons and a popup containing information about the action will appear.

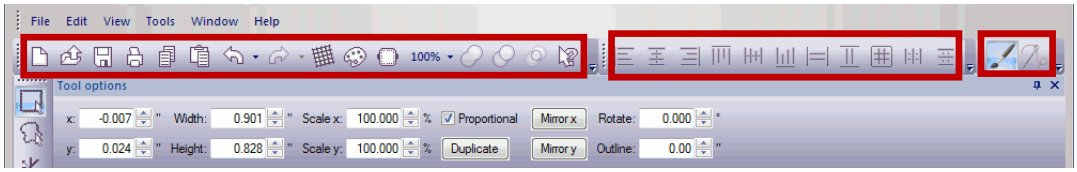



**Figure 2.57: Icon toolbars (Standard, Align and DRAW-Stitch bar)**

These 3 bars that are highlighted on the above figure are the **Standard**, the **Align** and the **Draw-Stitch** bar. In case that any of these bars is not visible you bring it up using the respective options of menu View ➔ Toolbars section. This way you can select which toolbars will appear on workspace and which will not. On above figure you can see all the icons toolbars enabled and appearing on the workspace.

1. **Standard toolbar,** this toolbar is a collection of buttons that serve as shortcuts for the basic functionality of the application. Most of these icons implement the same functionality in the majority of windows applications. If you are familiar to any windows application, you have used many times, tools such as **new design**, **open design**, **Save**, **Cut** or **Paste**. Besides these basic file operations, in Standard toolbar, you can select **zoom preset**, use **shaping tools** (Weld, Trim, and Intersect), Select **Fabric** and **Thread** manufacturer palette.

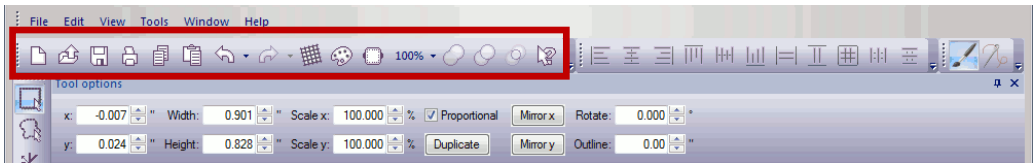



**Figure 2.58: Standard toolbar**

2. **Align bar,** this icon toolbar is located at the top area of the applications workspace and contains aligning, distributing and auto-sizing tools.

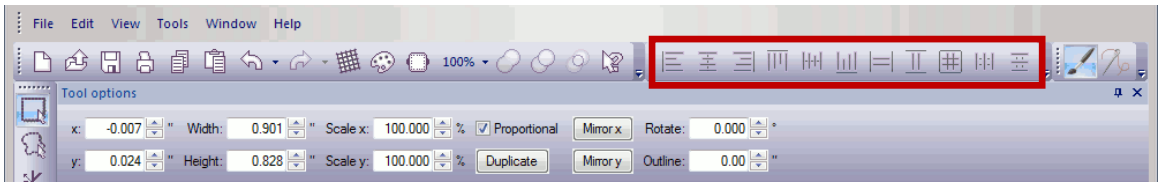
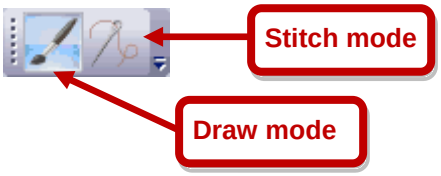



**Figure 2.59: Align bar**

3. **DrawStitch** bar, using this toolbar you can toggle between the available design modes. **Creative DRAWings** software has two important working modes, the **Create** and the **Stitch** mode. We can design anything we like in **Create** mode and Convert the design into stitches in **Stitch** mode. The **Create** mode is mainly for creating and editing the artwork. In **Stitch** mode you can convert the artwork to stitches and make the final adjustments. Different controls and options are available in any of the two modes. By pressing DRAW icon or by using **Ctrl+1** keyboard shortcut you enable Create mode. In order to switch to Stitch mode you must press **Stitch** icon or **Ctrl+2** keyboard combination.




4. **Tool options** pane is a context sensitive toolbar. Depending on the tool you have selected from the **toolbox** the property bar changes accordingly. It also contains controls that you

can use to change the properties of the selected object. Some of the available tools have extra parameters that appear on the **Tool options** toolbar, every time you select them.

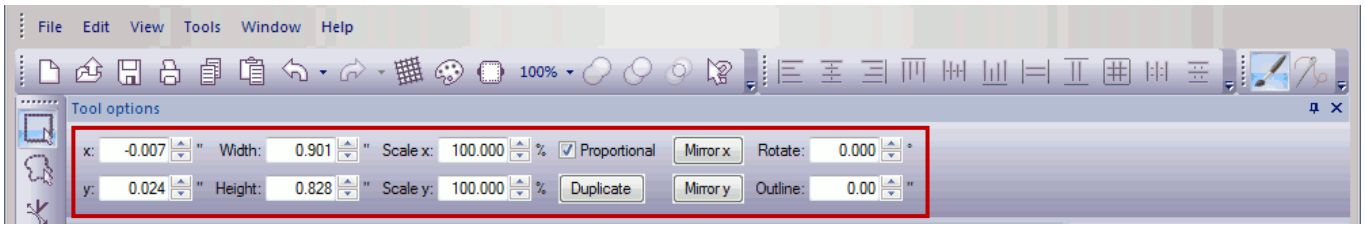



**Figure 2.60: Tool options pane**

5. **Tools toolbar,** this toolbar contains shortcuts for most of the viewing and designing tools. Selection modes (Rectangle and Lasso), **Edit shape nodes** mode, View port presets (Zoom in, Zoom back, Zoom all, Pan), Slow redraw, create **Freehand shapes** or **insert Shapes**, use **Text**, **Array** tool (Circular, Rectangular), **auto border** tool and Auto-sequence. The tools and their usage will be described later on a separate section each.

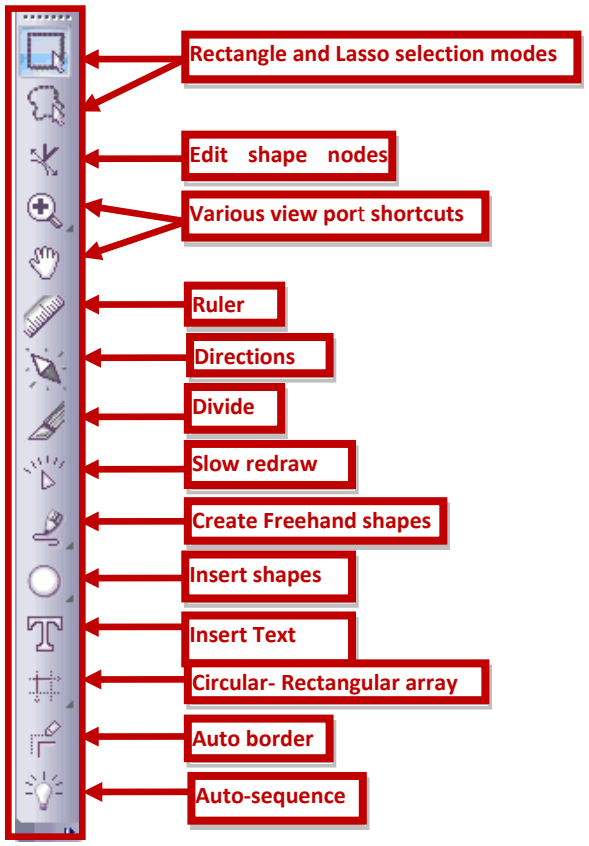



**Figure 2.61: Tools toolbar**

## Design area

The heart of ***Creative DRAWings*** software is the **design area**. All the tools, menus and functions exist to provide functionality useful during designing process. The design area is the rectangular area inside ***Creative DRAWings*** application window. This area is used for creating and editing designs. Any tool you are using from any toolbar affects the creation inside the design area. You can have many loaded designs in the same window. Every design has its own design area. Multiple designs are can be loaded in different tabs. By pressing on any of these tabs you can select which design you want to be visible. At the top and left side of the working area you will find the **Ruler** that can help you make precise changes to your design.

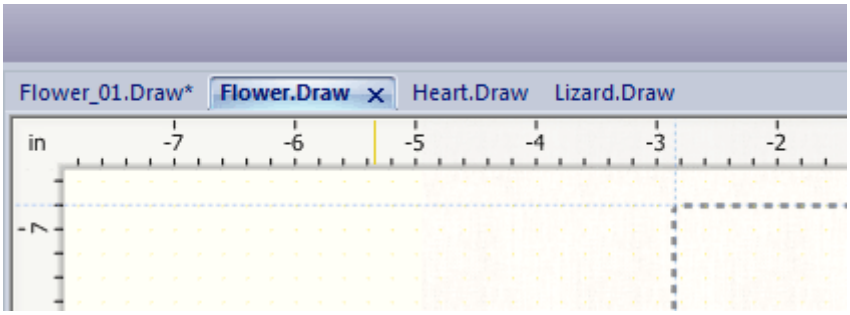



Figure 2.62: Design tabs

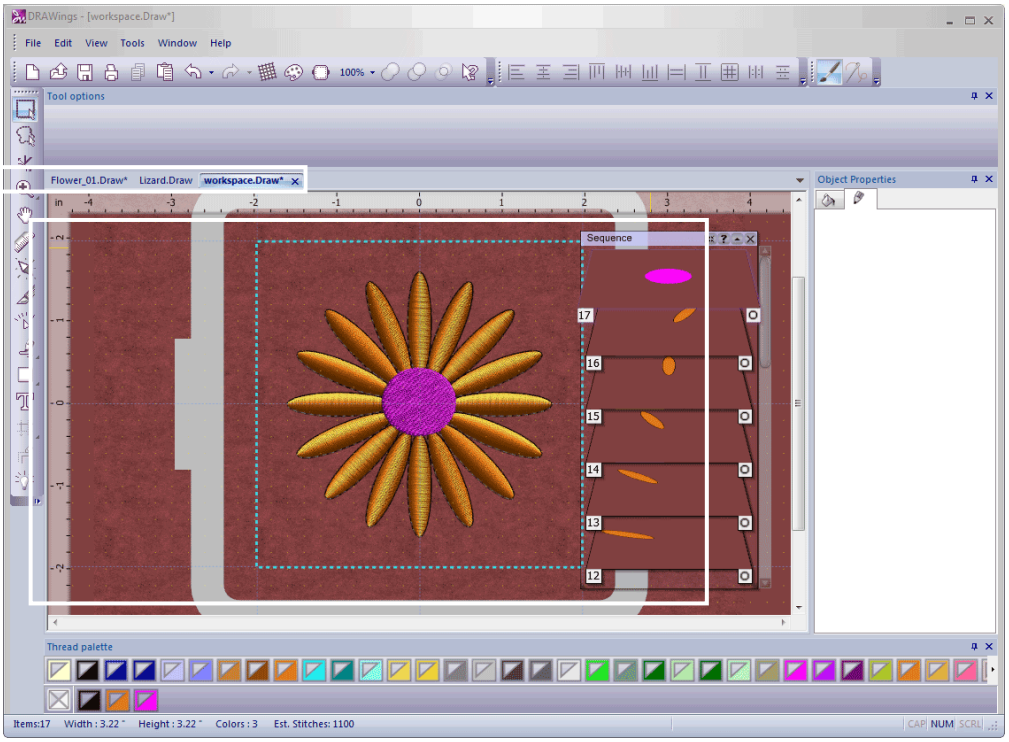



Figure 2.63: Design area and Design tabs

## Window handling

By pressing on the top of any tab you can select the active tab. Another way to select the design that you want to be active is by selecting from the dropdown list that exist on the right side of the design area. From the appearing list, select using your mouse one of the designs. Click on the design you like, the selected design will appear inside the design area.

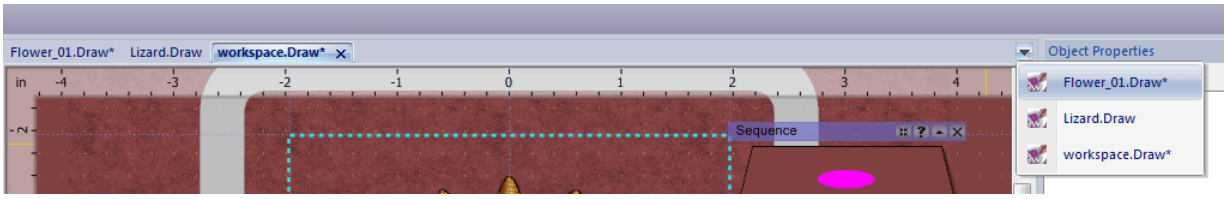



Figure 2.53: Select active design from list

## Context menus

The term **context menu** (shortcut menu or *pop-up menu*) is commonly used for menus which pop up when right clicking on an item inside the design area, offering a list of options. The available options vary depending on the context of the action and the item selected. For example different options appear when right clicking on a design object than when clicking on the same object in

**Edit shape nodes** mode. The available context menus of ***Creative DRAWings*** are hierarchically organized, allowing navigation through different levels of the menu structure.

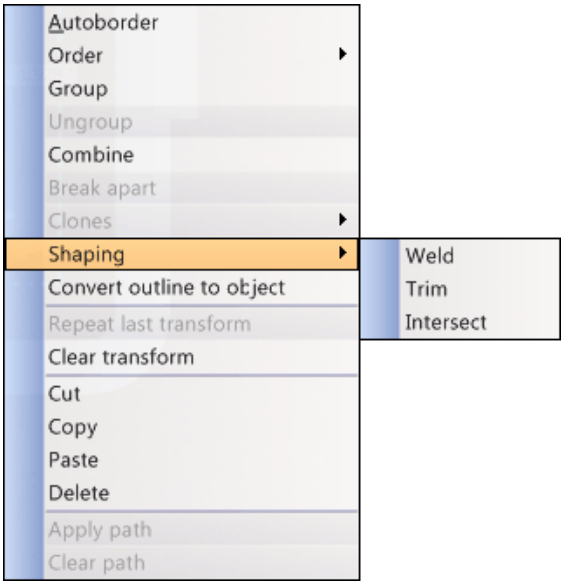



**Figure 2.64: context menus**

The context menu of the previous figure (Figure 2.64) is available only when right clicking on an object in object editing mode. Some of the applications functionality can only be revealed by specific context menus that are available inside the ***Creative DRAWings*** design area. This kind of logic separates the available actions for each type of object. Select any object, right click on it and select a function from the appearing menu, just like that you can perform a number of designing tasks.

## Thread palette

At the bottom of the screen we have the onscreen **Thread palette** bar from where you can select and set colors on the designs. You can either have RGB colors or colors from thread manufacturers' color palettes. The **Thread palette** is divided to two parts: available colors on the top area and the colors that are currently used in the bottom area. Thread palette is available only when using **Create** mode.

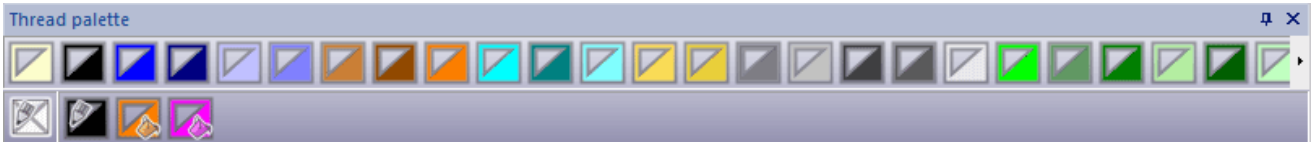



**Figure 2.65: Thread palette**

## Status bar

The status bar displays information about selected objects (such as Width, Height, and Number of stitches). It also displays information while transforming objects about angle etc, information that assist in more accurate transformations.

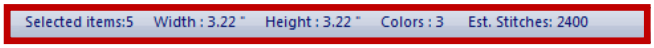



**Figure 2.66:Status bar**

## Floating dialogs

There are various dialogs that contain tools or visual assistance to be used while designing.

1. **Object properties**

The object properties pane contains all the properties that can be customized in the embroidery aspect of the design. It is consisted of two tabs **Fill** and **Outline** . You can view the **Object properties** pane both in **Create** and in **stitch** mode of ***Creative DRAWings***. Using the provided options you can change the stitch type of the design easily by just clicking on it. The **Object properties** pane contains all available parameters for each stitch type. You can see and change the parameters of selected objects. Just click on a parameter to change its value. When selecting an object the object properties pane, shows the properties of the selected object. Every stitch type has a different set of parameters. The available parameters and the proper way of affecting them will be described later on this manual, in a different section. If object properties window isn't visible you can activate it by selecting from **View** menu → **Toolbars** item and then sub item **Object properties**. You can also use the shortcut key Alt + Enter to show-hide the pane.

2. **Sequence manager**

   This tool provides a graphical representation of the embroidery sequence. There are signs to separate the different types of objects (Embroidery, appliqué). It is often needed to change this sequence, in order to improve embroidery quality. Any item you select on sequence manager gets selected on the working area. **Sequence** floating dialog can be opened in case that it is closed using **Sequence manager** option from the **View** menu, Toolbars section. The extra ability of this tool is that you can re-arrange the sewing order for the current design, and select an object. Therefore you can organize the sequence of embroidery production in the way you prefer.

There are also some floating dialogs that appear only to help us during design process. These dialogs are **Apply array**, **Set light source**, **Slow redraw**. More information about the usage of **Object properties**, **Sequence manager** and all other floating dialogs will be provided into separate sections.

## Customizing Creative DRAWings workspace

We have described the workspace components and the purposes that they serve. Spend some time using them in order to understand how they work. At first you must be trying to sort out which tools are important to you, in order to have them in first sight. You can rearrange workspace components in order to serve your personal preferences and make a version of the perfect working environment for you.

> ***DRAWings*** will remember the place that you last placed any workspace component.

Take in consideration that the screen space depends on the screen resolution. If you have a large resolution it means more available space. So first of all set the best resolution that fits to your screen. Start ***Creative DRAWings*** software, make a few shapes, use some properties, add more shapes, and view the design objects in sequence manager. If the design space is not enough and the tools are crowded you must organize available tools.

To give you complete control over the size and position of the elements in the workspace, ***Creative DRAWings*** lets you **move**, **resize**, **dock** and **auto hide** most of the workspace components and make visible only the elements that you want to view. You can **attach** or **dock** tool windows to make more space visible. You can also partially conceal tools as *tabbed documents* along the edge of the workspace and then switch back. The exact size and shape of the tools and windows depend on how you have configured your designing environment to look like.

## Using tool windows

Once a tool window is floating it has a title bar like the one in the following figure (figure 2.67). By double clicking on its title bar, it gets docked in the last position that it was docked. You can also close this tool window by pressing the close button in the upper right corner of the window. Double click on the title bar to undock the pane. You can also close it by pressing the **Close** button in the upper-right corner of the window. You can set the window in **auto hide** mode by pressing this pushpin . Finally by right clicking on the title bar you can select a state for the dialog (Floating, Docking, Auto hide, Hide).You can always open any closed window again later by selecting the appropriate command on the View menu.

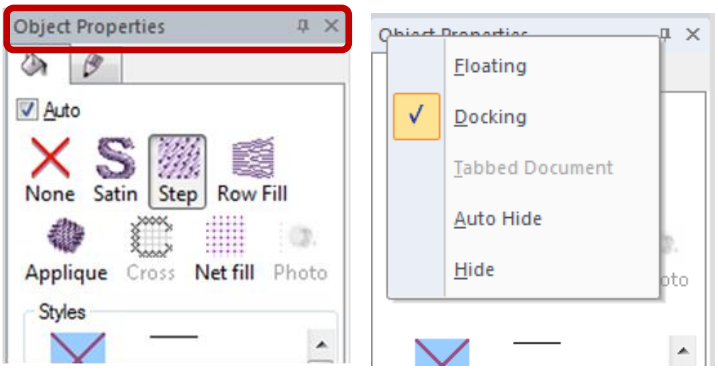



**Figure 2.67: Object properties window handling**

## Moving tool windows

To move one of the tool windows, simply click the title bar and drag it to a new location.

Move Object Properties tool window*:*

1. If the Object properties pane isn't visible, select from **View** menu, **Toolbars** item, **Object Properties** sub-menu item. Object properties pane will appear.
2. Double-click the title bar of **Object Properties** pane to display the pane as a floating (undocked) window.
3. Using **Object Properties** title bar, drag the pane to a new location inside the application window, but don't dock it. See how easily you can affect the position of the available tools.

## Resize tool windows

If you want to see more of a tool window, simply drag one of its borders to view more content.

Resize Object Properties pane*:*

Resize the **Object Properties** pane to have a better view of the available parameters. **Point your mouse** to the lower-right corner of the Object Properties window until the pointer changes to a **double-headed arrow** (the resizing pointer). **Drag** the lower-right border of the window down and to the right to enlarge the window. The same way, you can resize any tool window from any of its edges. You can work more quickly and with more clarity of purpose in a bigger window. Feel free to move or resize any tool window when you need to see more of its contents.

## Docking Tool Windows

Dockable windows are advantageous because they always remain visible. (They don't become hidden behind other windows.) If a tool window is floating over the design area, you can return it to its original docked position by double-clicking the window's title bar. (Notice that you can use the same technique to undock a docked window. Double-clicking a title bar works like a *toggle*, a state

that switches back and forth between two standard positions). You can also attach or dock a floating tool in a different place.

You can dock windows by using **docking guides**, as shown in the figure below. Docking guides are icons that appear on the surface of the application window when you move a window or tool from a docked position to a new location. Because the docking guides are associated with shaded, rectangular areas of the application window, you can preview the results of your docking maneuver before you actually make it.

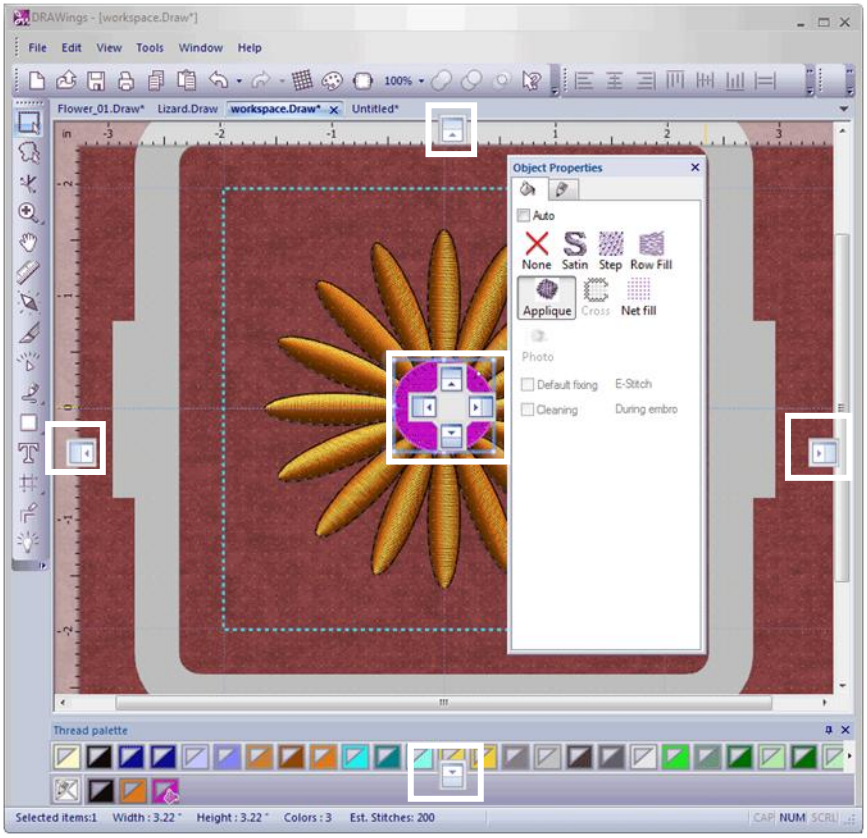
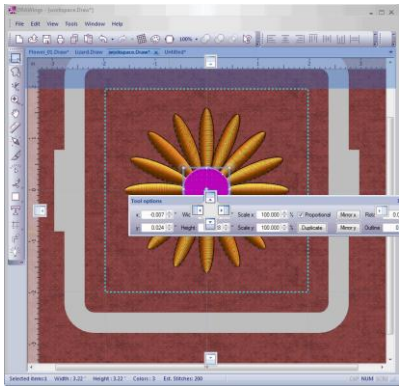
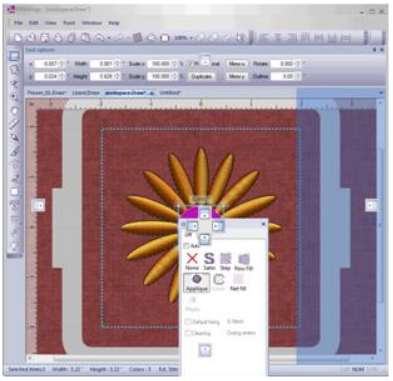



**Figure 2.68: Docking handles**

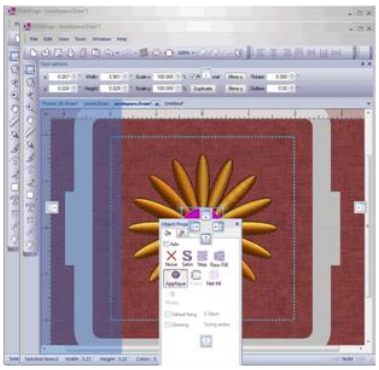
In case that you want to dock into a place where there other tools docked while you point over this control you can see how the control will be docked. Only then extra docking guides appear to help you decide how to place the window relative to the other docked window.



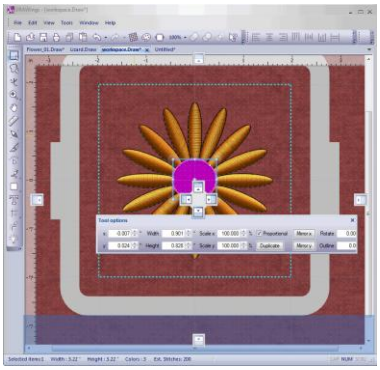
*Dock to the upper part*



*Dock to the right side*



*Dock on the left side*



*Dock on the bottom area*

Dock the Object Properties window

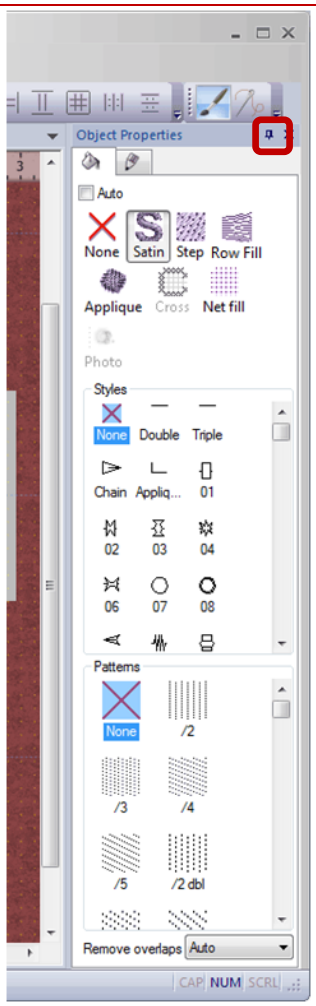
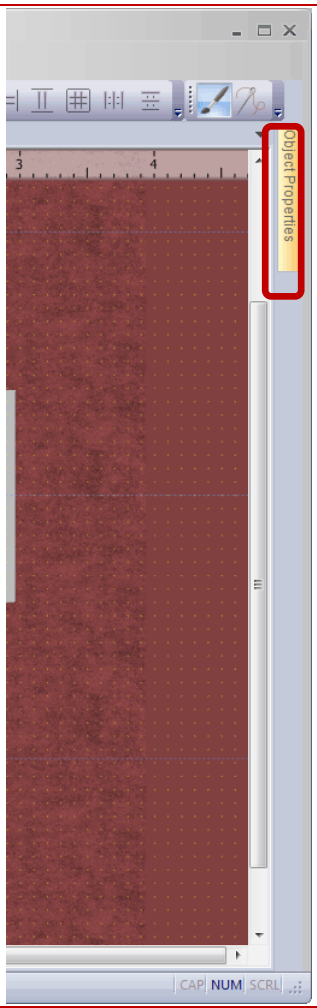
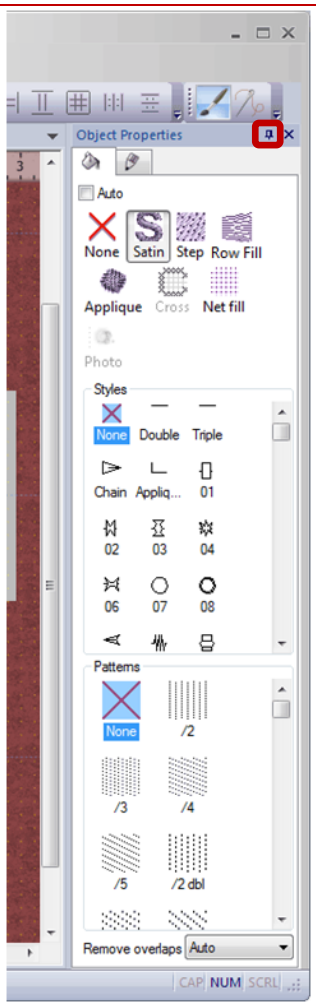
1. Verify that the Object Properties window (or another tool that you want to dock) is floating over the design area in an undocked position.
2. Drag the title bar of the Object Properties tool window to the top, bottom, right, or left edge of the design area. While dragging, take care to drag the mouse pointer over one of the docking guides (small arrows) on the edges of the **Creative DRAWings** window or the collection of four docking guides (called a *diamond guide*) in the center. As you move the mouse over a docking guide, the Properties window snaps into place, and a blue shaded rectangle indicates how your window will appear when you release the mouse button. There are several valid docking locations for tool windows, so you might want to try two or three different spots until you find the one that looks right to you.
3. Release the mouse button to dock the Object Properties window. The window snaps into place in its new home.
4. Try docking the object Properties window several more times in different places to get the feel of how docking works.

You can always adjust the size of docked windows by simply dragging one of its borders to view more content.

## Hiding Tool Windows (Auto hide)

If you want an option somewhere between docking and closing a window, you might try auto hiding a tool window at a side of the application window by clicking the tiny **Auto Hide** pushpin button on the right side of the tool's title bar. When you auto hide a window, you'll notice that the tool window remains visible as long as you keep the mouse pointer in the area of the window. When you move the mouse to another part of application window, the rollup slides out of view. To restore a window that you have auto hidden, click the tool tab at the edge of the application window or hold your mouse over the tab (You can recognize a window that is auto hidden because the pushpin in its title bar is pointing sideways.)

The benefit of enabling auto hide, of course, is that the process frees up additional design area while the hidden window is also quickly accessible.

| | | |
|---|---|---|
|  |  |  |
| Press the pushpin to go into **Auto hide** mode | **Object properties** pane is hidden on the side of the window and becomes visible only when you place the mouse over it. | **Object properties** rollup is viewable, you can press the pushpin once more to turn into docked mode again |

**Use the Auto Hide feature (Hide Object Properties tool window)**

1. Locate the **Auto Hide** pushpin button on the title bar of the **Object Properties** pane. The pushpin is currently in the **down**, or **pushed in**, position, meaning that the window is **pinned** open (Auto hide is disabled).
2. Click the **Auto Hide** button, Object Properties tool window slides off the screen and is replaced by a small tab named Object Properties at the edge of the application window. You can also use a right-click on the title bar and select **Auto Hide** in order to auto hide a tool window.
3. Hold the mouse pointer over this **Object Properties** tab (You can also click the tab if you like) and the Object Properties tool window immediately slides back into view.
4. Click elsewhere inside the application window and it will disappear again.
5. Finally, bring out the **object Properties** window again and then click the **pushpin** button on the title bar. Object Properties returns to its familiar docked position and you can use it without worrying about it sliding away.

Tool windows that have **Auto Hide** enabled temporarily slide into view when the window has focus. To hide the window again, select an item outside of the current window. Once the window loses focus, it slides back out of view.

# Chapter 3 - Working with files

## Introduction

This chapter describes how **Creative DRAWings** will open almost any type of file you wish to import. This is the secret of the powerful **Creative DRAWings**, almost any type of artwork can be imported and quickly converted into embroidery designs.

You can easily import clipart, edit them using **Create** mode, then convert them into an embroidery design using **Stitch** mode.

Another great feature is that you can import pictures and convert them immediately to **Cross stitch** or **Photo stitch** designs. Photos or printed pictures can be, converted to outlines **(vector artwork)**, **Cross stitch** or **Photostitch** designs ready to be embroidered. What used to take hours and hours to cross-stitch by hand *(making design by using X's)* takes seconds in **Creative DRAWings**. You can also automatically **Trace** the imported picture (bitmap) and convert it to a clipart (vector) design with stitches of your choice.

You can also import any stitch file that has been created using another embroidery program. This is a fantastic feature allowing you to give life to old designs. Just import your old design in **Creative DRAWings** and it's ready to be modified.

**Creative DRAWings** uses for created design the .**draw** file format. Any design you create must be saved first into that format in order to keep all design information. Then at any time you can redesign the file, change stitches, colors, and threads and then export it into a totally new embroidery file. Select an embroidery file format that your embroidery machine uses (**.sew .jef .pes .hus,** etc) and export the design. Stitch files created by **Creative DRAWings** can be embroidered by almost all home and commercial embroidery machines, including ones using **.dst**.

## Vector and Bitmap designs

**Creative DRAWings** can import and use as artwork **Vector** and **Bitmap** graphics. These graphic files can be converted into stitches or used as backdrops.

**Vector graphics:** Vector designs are created as collections of lines. Vector designs are images/drawings generated from mathematical descriptions that determine the position length and direction in which lines are drawn. They vector files types that can be recognized and used by eXPerience® are:

- Corel Graphics (*.CMX)
- Encapsulated Postscript (*.EPS)
- Enhanced windows metafile (*.EMF)
- Scalable vector graphics (*.SVG)
- Adobe Illustrator (*.AI)
- AutoCAD (*.DXF)
- Windows metafile (*.WMF)

All these types of files can be directly imported into **Creative DRAWings**, which recognizes and visualizes all mathematical descriptions that determine the position, length and direction in which lines-shapes are drawn. They can be converted directly into stitches or used as backdrop.

**Bitmap graphics**, which are mainly photographs, are saved in .bmp, .jpeg, .gif, or .jpg) files formats. **Bitmap graphics** (Images) are made of patterns of individual dots or pixels. The shapes

that they contain cannot be easily resized. The bitmap file formats that **Creative DRAWings** supports are as follows:

- Bitmap files (*.BMP,*.DIB,*.RLE)
- Jpeg file (*.JPG, *JPEG, *JPE,*JFIF)
- Gif file (*.GIF)
- Tiff file (*.TIF,*.TIFF)
- Png file (*.PNG)
- Icon file (*.ICO)
- Photoshop (*.PSD)

**Bitmap** graphics can be directly converted to "Cross stitch" or "Photostitch" embroidery design, or else they can be **traced**. This process turns the bitmap into a **Vector** design so it can be embroidered. We can also use it as a backdrop and design o top of it.

Now that you've learned that **Vector** means clipart and that **Bitmap** means a photograph or picture, we'll use the graphics terms of **Vector** and **Bitmap** as you familiarize yourselves with them.

There are more file formats which can include Vector and Bitmap graphics but you can only import by copying and pasting them or by importing them from the application you are using. This process of acquiring files from different graphics software will be described later on.

## Creating designs

As we have already mentioned in **workspace tour Creative DRAWings** starts with a wizard to help you create new designs, using various sources of artwork. We can create and handle many files at the same time. Every created or opened design opens in a new tab. When opening a new design, a new tab appears next to the previous and you can switch between them by clicking on their filename. You can also use **Ctrl+Tab** keyboard combination in order to move to the next tab or **Ctrl+Shift+Tab** to move to previous tab.

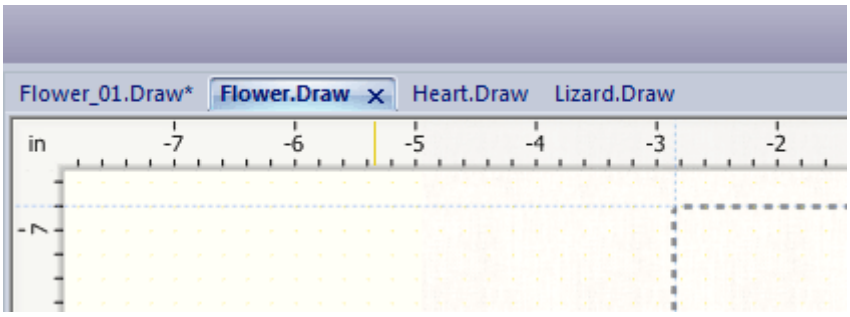



**Figure 3.1: Design tabs**

To create a new design in **Creative DRAWings,** choose from **File** menu > **New design** option.

You can also press **Ctrl+N** keyboard shortcut or the **new design** icon . A wizard named **New design** (Fig. 3.2) will appear, asking if you want to open a new design or open an existing one.

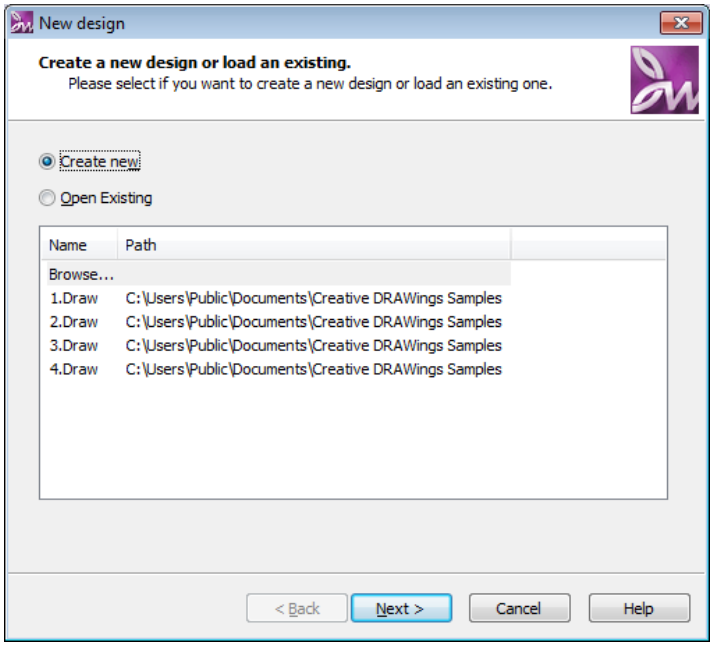



**Figure 3.2: New design dialog**

If you select to create a **new design** then artwork source dialog appears. In this dialog you have six possible options to acquire artwork.

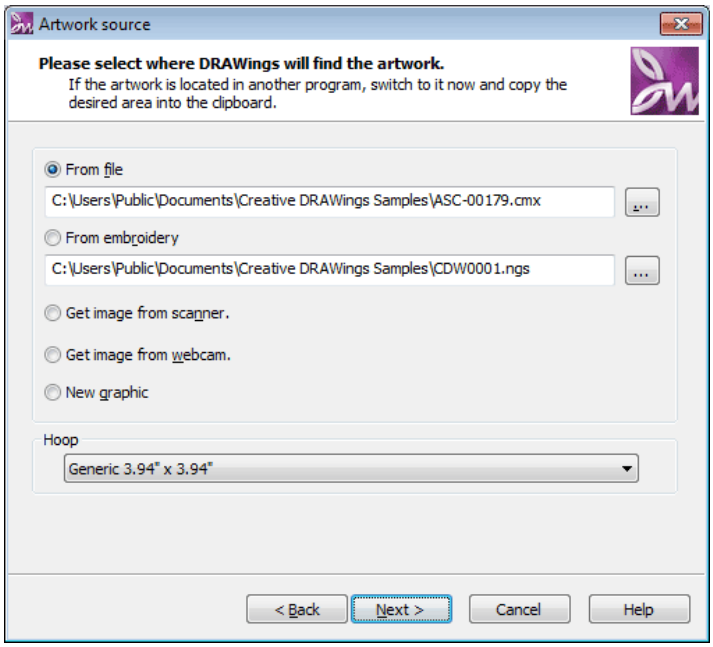



**Figure 3.3: Artwork source dialog**

First select an artwork source and at the end of the dialog you can select a **Hoop** to preview you design on. You can leave it as it is, or if you decide later you need another size of hoop, click on **Tool >Change hoop** to select the correct size. If you do not want a hoop, click **None** hoop. After you select a source of artwork, a hoop and the desired design mode you are ready to proceed.

## Artwork sources

- **From File**, use any Vector or Bitmap file as artwork for a new or an existing design.
- **From Embroidery**, import an embroidery file.
- **From scanner,** get image from scanner.
- **From webcam**, get snapshot from webcam.

- **From clipboard**, paste artwork data from many windows applications and convert directly into stitches.
- **From scratch**, use your inspiration to create a design from scratch.

## From file (Vector or Bitmap)

Using this option you can browse inside your computer, find a **vector** or **bitmap** design and use it as design artwork. Click on the icon to find the vector or bitmap design. The **Open** dialog box will appear, assisting you to select the file you desire. More information about supported vector or bitmap files is provided in section **Vector and Bitmap** files previously in the chapter.

### Bitmap files

If the selected file is a **Bitmap**, a dialog will appear providing various conversion options. There are four options as shown in the figure below: **Open as Backdrop**, **Trace** *(convert to outlines)*, **Open as Cross stitch** and **Open as photo stitch**. We will just refer to these options and we will describe them in detail later in this chapter.

- **Open as backdrop:** Using this option the selected bitmap will be inserted into the background of the new design so that it is used as guide to draw the embroidery design manually on top of it.
- **Trace** (Convert to outlines): This option will convert the **Bitmap** into vector outline and it will be filled with stitches.
- **Open as Cross stitch:** This option will convert the **Bitmap** design to a perfect Cross stitch embroidery design.
- **Open as Photo stitch**: Finally using this option we can convert the bitmap file directly into photo stitch.

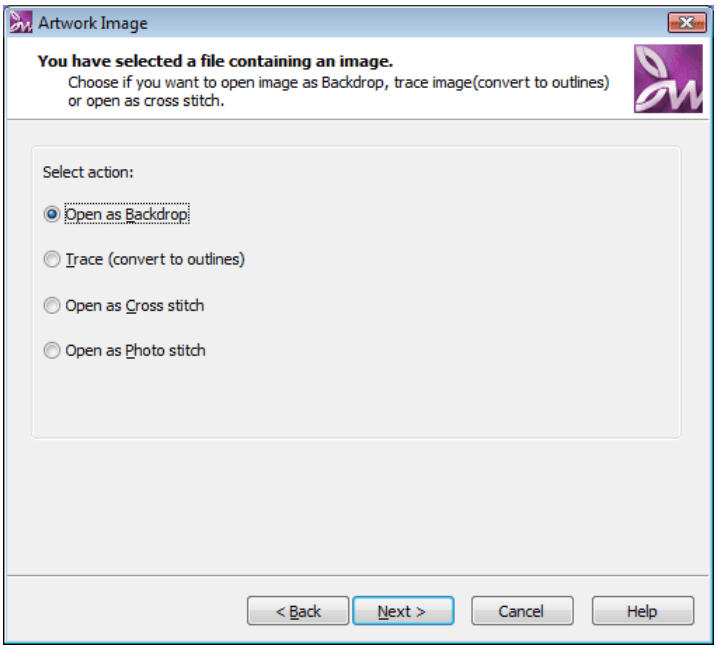



**Figure 3.4: Artwork image dialog**

Select one of the conversion options and click **Next**. **Select fabric** dialog will appear to choose a **Fabric** and a color for the fabric. Make your selections and click **Next>.**

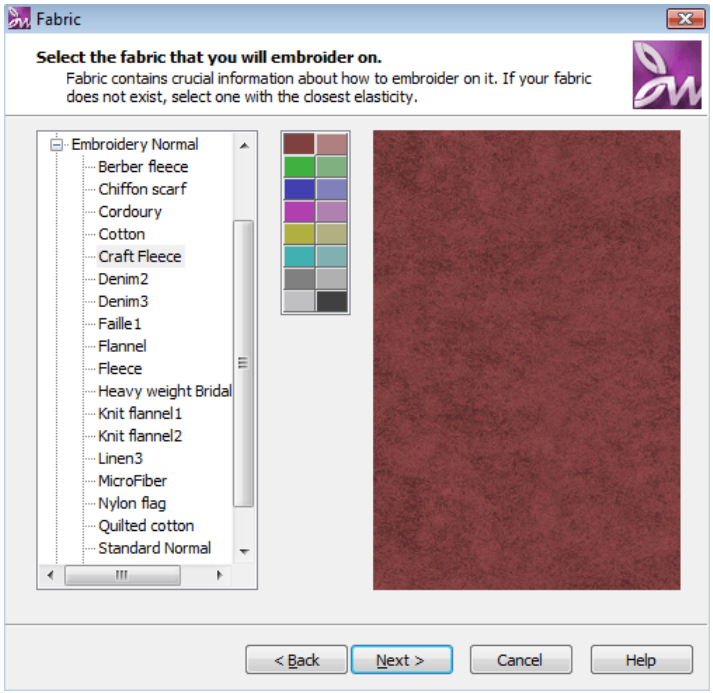



**Figure 3.5: Select Fabric dialog**

**Color reduction** dialog, will appear to select the number of **Threads** you want and the **Palette** of thread you prefer. Any change you make is previewed immediately on the screen behind the dialog box.

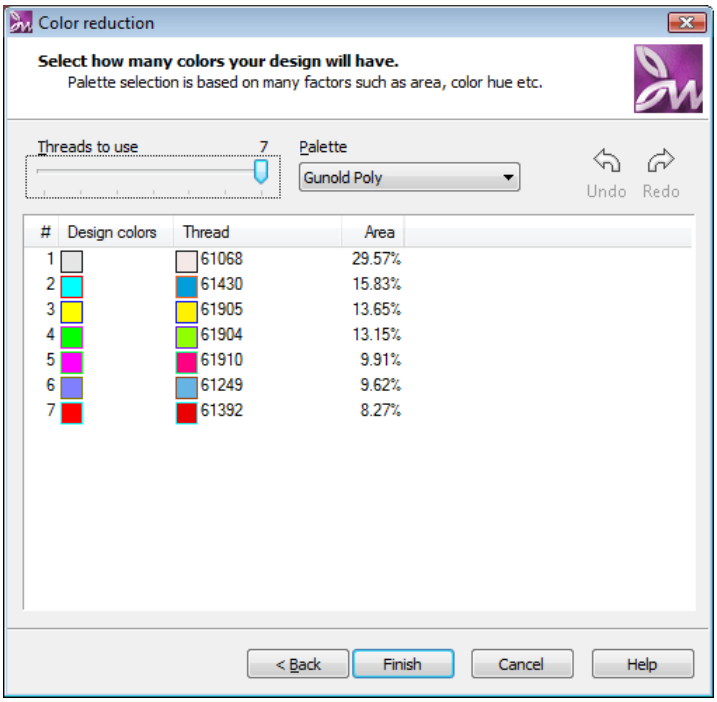



**Figure 3.6: Color reduction dialog**

You can reduce the number of threads from 7 to 4, for example, without changing the hue of the design drastically. Experiment by clicking on the arrow and moving it to different numbers of color threads. This dialog allows a complicated design of many threads to be reduced for easier sew-outs on a single-needle machine. Click on **Palette** and the dropdown menu offers a variety of thread manufacturers. Select Madeira Classic, for example, and you'll see the Madeira thread number listed. Your supplier stocks the Madeira thread by this number. Click **Finish** to continue.

**Creative DRAWings** window will appear and **Create** mode is enabled. where you can modify your embroidery design.

## From embroidery

With the **From embroidery** option you can import a stitch file format like ".ngs", ".dsz", ".pes"… inside **Create** mode of **Creative DRAWings** as it is and if you want convert them to Vector artwork. With this tool you can import your readymade embroidery designs, make any changes you want, add new artwork and embroider them again as new. To the imported embroidery design you can convert a part of it or the entire design to vector artwork, and then edit the artwork freely by using the available vector design editing tools.

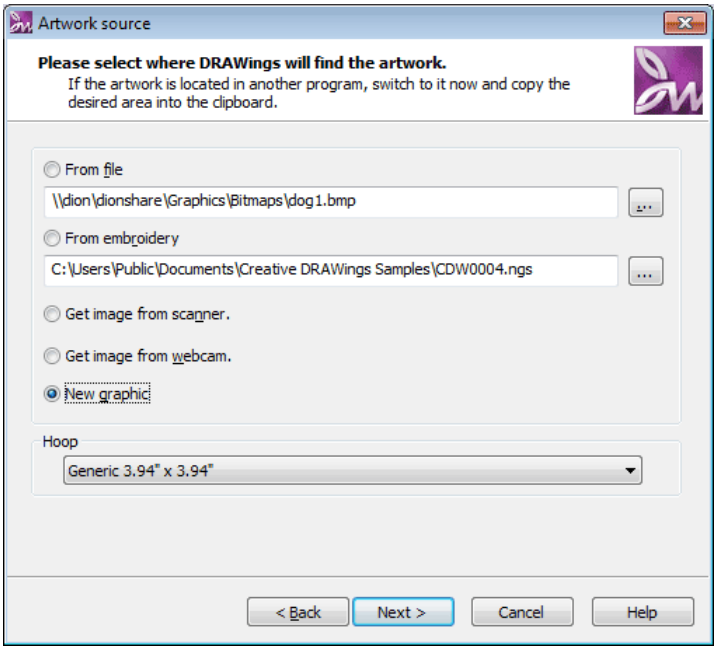



**Figure 3.7: Import from embroidery file**

Like other features of **Creative DRAWings Stitch** files can only be imported from the starting dialog of **Creative DRAWings**, which is **New design**. Select **Create new** and highlight **Browse,** then click the **Next.** When the 2nd dialog **Artwork source** (Fig. 3.6) opens, click on **From embroidery**, then click on the **Browse** icon. Go to your embroidery files and click on the design you want to import. You'll see your file listed under **From embroidery**. Now you're ready to import, so click on the **Next** . You will be asked to select the **Fabric** and the **Color** of it and click **Finish** to view the imported embroidery file.

You can read more about how to Import an embroidery file and if you want convert it to vector artwork later in this chapter.

## From scanner

With the **Get image from scanner** option, you can scan a design and import it into **Creative DRAWings**. The imported design is a bitmap image. It can be handled in the same way as bitmap images. Used as a **Backdrop**, **Traced** and filled with normal stitches (Satin, Step, Running stitches, etc.), or converted to a **Cross stitch** or **Photo stitch** design.

Place your image in the scanner and click **Next>**. The **Image scan** dialog will appear with several options. Through the **Image scan** dialog you can scan the design you want and make some adjustments. The available scanning options are described thoroughly later in this chapter. The dialog of the following figure will appear.

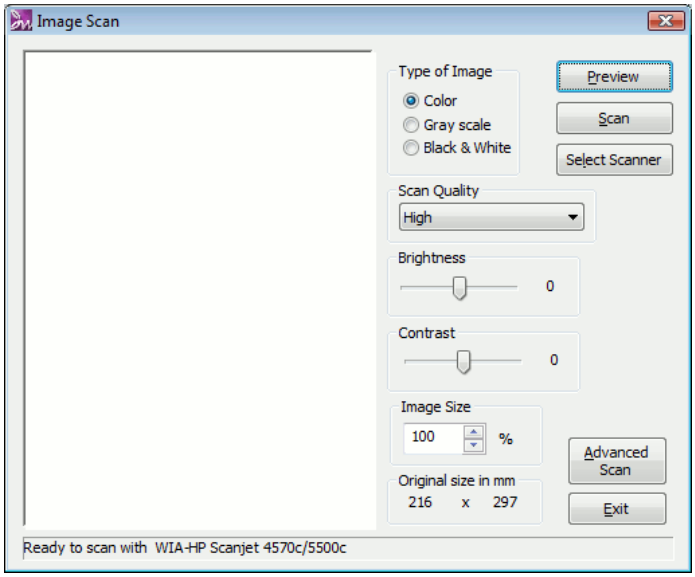



**Figure 3.9 Image scan dialog**

If you want to see your image before scanning, click on **Preview** mode. Each time you change an option from the **Image scan** dialog, you can preview it by clicking the **Preview** button for the updated image. When you're satisfied with the image, click the **Scan** tab. Your image will appear with a **Save as** dialog, asking where you want to save it -- in your files or on a disk. When the design is saved, the image is automatically loaded inside **Creative DRAWings**. You'll be asked how you want the image opened: as a **Backdrop**, converted to a **Vector** design in **Trace**, as a **Cross stitch** or as **Photo stitch**.

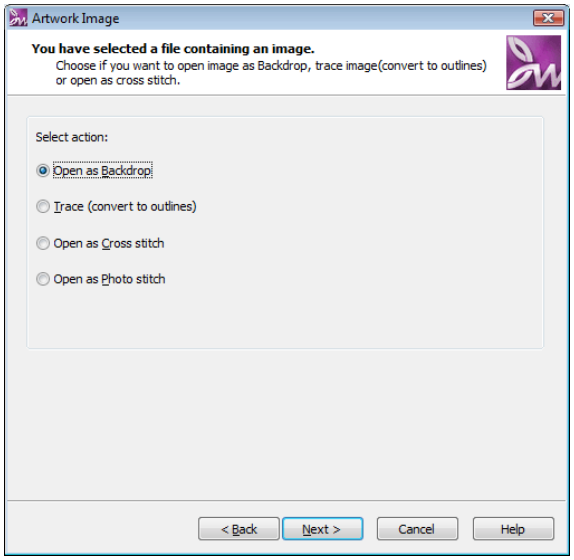



**Figure 3.10: Image scan dialog**

**Open as Backdrop** will import the **Bitmap** image as a blank backdrop so you can manually draw your embroidery design.

**Trace (Convert it to outlines)** will convert the **Bitmap** to a **Vector** design so it can be filled with normal stitches (Satin, Step, Row Fill, Running). There are more instructions on how to **Trace** a bitmap later in this chapter.

The **Open as Cross stitch** option will convert the bitmap design to a perfect cross-stitch embroidery design.

The **Open as Photo stitch** option will convert the bitmap design to a photo stitch embroidery design.

Select one of the three options, then click **Next>** button.

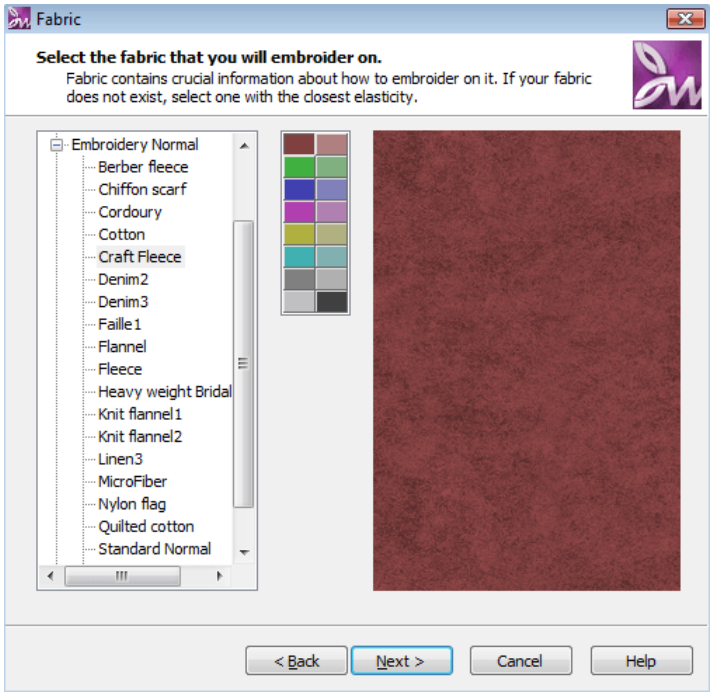



**Figure 3.11: Select Fabric dialog**

In the next dialog, **Fabric,** you can select the correct fabric and choice of color. Click **Next>.** The **Color Reduction** dialog will appear. Select how many colored threads you want and click **Finish**. If your design has 20 colors, you can reduce it to 10 without too much loss in contrast. The reduction eliminates 10 changes of threads and saves time if you have an embroidery machine with a single needle.

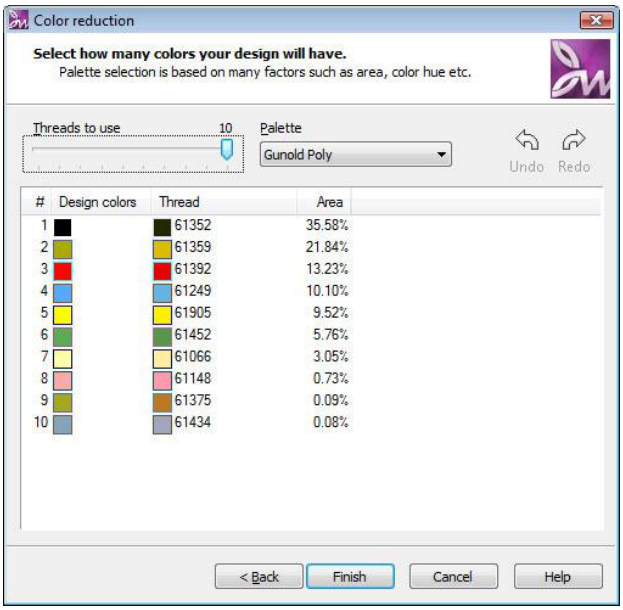



**Figure 3.12: Color reduction dialog**

As you make changes in the dialog box, you can see the image changing in **Preview.** When satisfied with your design, click **Finish**. **Creative DRAWings** window will open in **Stitch** mode, where you can further modify your embroidery design if you wish.

## From Webcam

With the **Get image from Webcam** option, you can take a snapshot with your webcam and import it to **Creative DRAWings** as a bitmap image. The imported bitmap image can be used as a **Backdrop** or opened in **Trace** and filled with normal outline stitches (Running, Satin Serial, Appliqué) , opened as cross stitch or photo stitch design.

Plug your webcam on the PC, select the **Get image from Webcam** option and click **Next**>. The webcam Preview dialog will appear with several options.

Through the webcam Preview dialog you can take snapshots of anything you want and make some adjustments to the image. The options and their functionality is described later on this chapter.

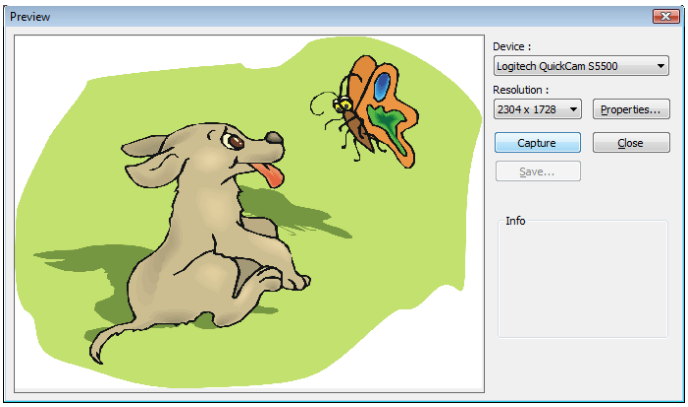



**Figure 3.15: Image scan dialog**

In the **Preview** area you will view live the picture of your webcam. You can make the adjustments on the webcam until you capture the snapshot image you want.

Each time you change image **Resolution** or **Properties** the live image changes accordingly. When you're satisfied with the image, click the **Capture** button. The image you captured will appear in the preview area showing you the result of your capture. If you do not like the snapshot you can take a new one by clicking once more on the Capture New button. The previous taken image will be lost and the camera will become live again, ready for a new snapshot. Once you are ready click again on Capture to take the picture. If you are satisfied click on the **Save**… button to save the image on your hard disk. When the design is saved, the image is automatically loaded inside **Creative DRAWings** prompting you to the import dialog. You'll be asked how you want the image to be opened: as a Backdrop, converted to a Vector design in Trace, opened as cross stitch or photo stitch.

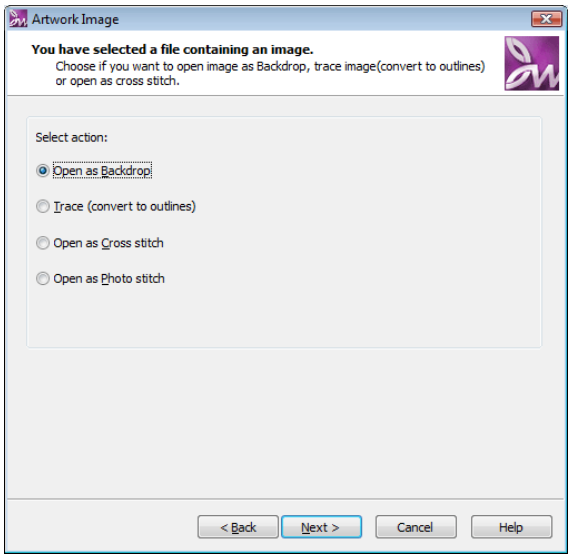



**Figure 3.16: Image scan dialog**

**Open as Backdrop** will import the **Bitmap** image as a blank backdrop so you can manually draw your embroidery design.

**Trace (Convert it to outlines)** will convert the **Bitmap** to a **Vector** design so it can be filled with normal stitches (Satin, Step, Row Fill, Running). There are more instructions on how to **Trace** a bitmap later in this chapter.

The **Open as Cross stitch** option will convert the bitmap design to a perfect cross-stitch embroidery design.

The **Open as Photo stitch** option will convert the bitmap design to a photo stitch embroidery design.

Select one of the four options, then click Next> button.

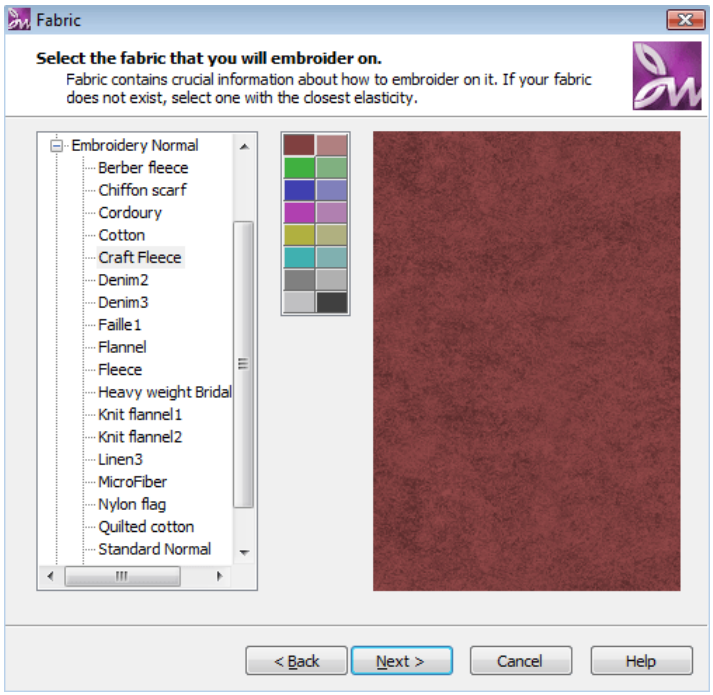



**Figure 3.17: Select Fabric dialog**

In the next dialog, **Fabric,** you can select the correct fabric and choice of color. Click **Next**>. The **Color Reduction** dialog will appear. Select how many colored threads you want and click **Finish**. If your design has 20 colors, you can reduce it to 10 without too much loss in contrast. The reduction eliminates 10 changes of threads and saves time if you have an embroidery machine with a single needle.

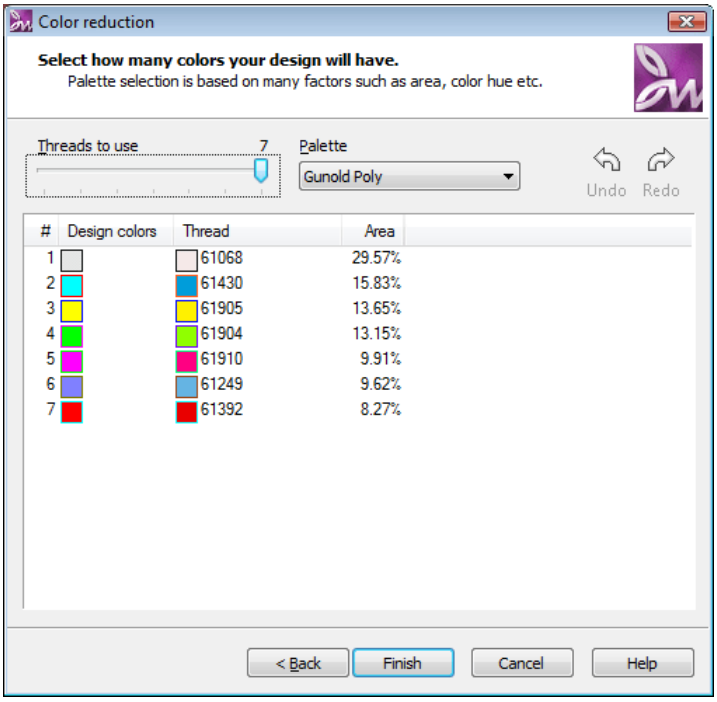



**Figure 3.18: Color reduction dialog**

As you make changes in the dialog box, you can see the image changing in Preview. When satisfied with your design, click Finish. **Creative DRAWings** window will open in **Create** mode , where you can further modify your embroidery design if you wish.

## New graphic

**New graphic** allows you to manually draw a design and edit it using **Create mode.** Click on **Next>,** which takes you to **Fabric** so you can select the correct fabric and color. Click on **Finish, Creative DRAWings** window will open in **Create** mode where you can manually create the design you want. When finished, click on **Stitch** or select stitches option from **View** menu and the design will instantly be transformed into embroidery stitches.

## Loading designs

The program allows you to open only **.draw** file designs. All the other vector / bitmap files have to be imported from the **From file** option that you will find in the starting dialog of the software or by copy and pasting it inside the **Create** mode of the software.

You can load an existing design in many ways. First by using **Open existing** option of **Create new design** dialog of the startup wizard. We can also press **Ctrl+O** keyboard shortcut once the main application window is loaded, and finally by pressing **Open** icon in main toolbar. We've already discussed **Create New** dialog, using this dialog we can select whether we will load a design or if we will open an existing**.** In **Open Existing**, you also get two options: **Browse** your files and disks for a design or you can click on a **List** of recently opened files. When you click on an existing **Creative DRAWings** file (**.draw**) it will open in a new design tab inside **Creative DRAWings** window.

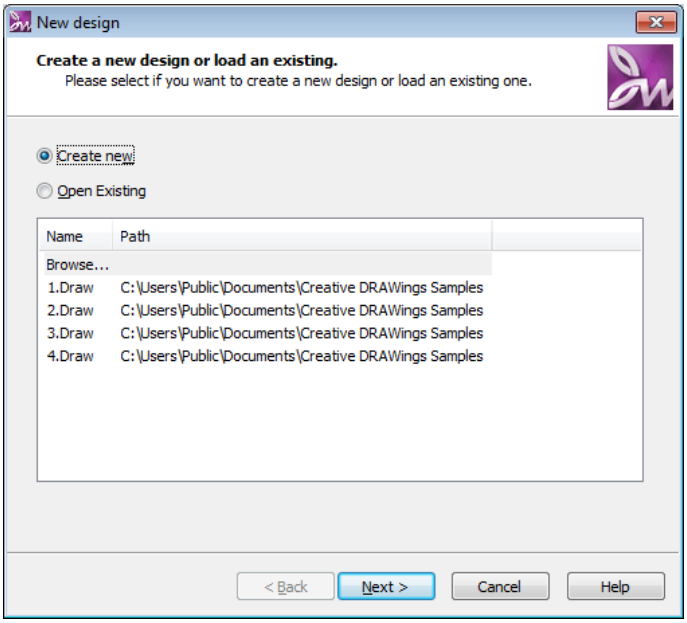



Figure 3.20: New design dialog

When you choose **Open Existing**, here's the step-by-step procedure to follow: You can either **Browse** your files and disks by clicking on **Next >** or open a **List** of recently opened designs by clicking on **Finish**. When you **Browse** a file, you'll see it in **Preview** at the bottom of the dialog. Click on **Open** tab and the design will appear in a new design tab.

In the starting dialog's **List**, you can view the last several **Creative DRAWings** files you have saved or recently opened. To open one of these files, double click on it or click the **Finish** tab. If the file name you want is not listed, select **Browse > Finish** and an **Open** dialog box will appear. After locating your file, click the **Open** tab and a new window will appear where you can modify your design, and then save it.

**Notice:** If a **Data Loss Warning** appears, this means that you are trying to open a **.draw** file that was created from a previous version of **Creative DRAWings** or DRAWings 4 embroidery software.

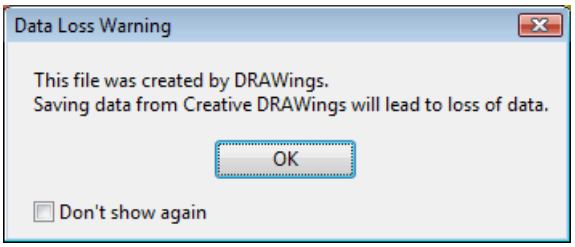



Figure 3.21: Data Loss Warning

If you attempt to open the design **Creative DRAWings** will try to open it inside **Create** mode but you might lose some information of the **.draw** artwork (that existed inside the old **DRAW** mode). Therefore, every time you want to open a **.draw** file from a previous version of **Creative DRAWings**, you should save it with a new file name so the original file to remain unchanged. By following this procedure, you will be able to work with different versions of **Creative DRAWings** and avoid losing your artwork.

## Open Dialog Box

Using **Open** dialog, you can load an embroidery design from your **.draw** file or import from a disk or the internet. This **Open** dialog -- a normal Microsoft Windows Explorer function – appears in any way we try to load a .draw design. The same dialog appears when selecting other sources of artwork. The same dialog appears but different files are supported in every operation.

When **Open** dialog appears on the top line you can see **Look in**: which has a drop-down menu of files to open any **.draw** file or a **Vector** design supported in your computer (in artwork source dialog). Click on the downward arrow to expand your selection. Every time you return to the **Open** dialog, the program will show the folder you last opened. To find a design, you have to select its location in **Look In**. If you have your files on a CD, click on the drive and you can bring in your .**draw** designs or even supported **Vector** designs.

Remember: All new imported designs are brought into **Creative DRAWings** through the **Look in** field.

***Example:***

Say you want to load a design in **C:\Designs\Women** directory.

Click on the **Look in** field and click on the **C:** hard-disk drive. The **Look in** field shows **C: <Name of the disk>** and the **File list** will show the contents of the hard disk **C:.**

In the file list, double click on the folder **Designs**. The **Look in** field shows Designs and the file list will show the contents of the **C:\Designs** folder.

In the file list double click on the folder **Women**. The Look in field shows **Women** and the file list will show the contents of the **C:\Designs\Women** folder.

Double click on the design you want to load. On the right side of the **Look in** field are two more buttons that help you change which folder you are searching through.

When you click on any file design, an image of the file will be displayed as a **Preview** at the bottom of the dialog box. This image helps you select the design you want without having to recall the file name or number.

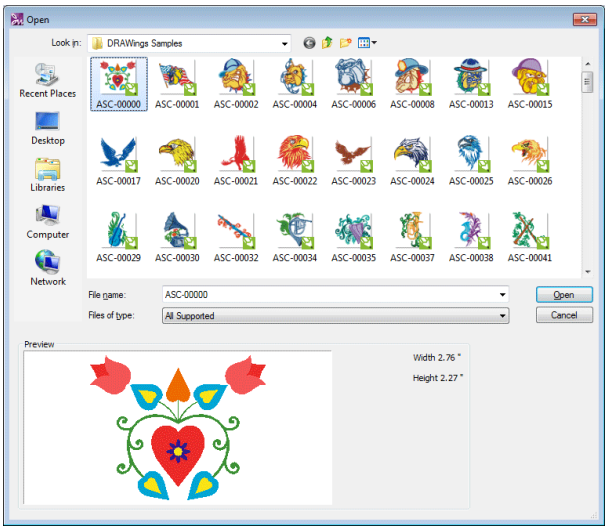



**Figure 3.22: Open dialog**

## Go to last folder visited

When you want to see previous files that you've opened, click on the back arrow, which is the left-facing icon on the right of **Look in**. Keep clicking until you return to the design you want. In the given example, when you are in the **C:\Designs\Women** and you press the back button, in the **File** list you will view the contents of the **C:\Designs** folder. The second time you will press the back button you will view the contents of the hard disk **C:** and the third time you'll see the contents of your designs directory.

## Up one level

Clicking on this **Up One Level** icon will take you back to the folder preceding the subfolder that your saved design opened in.

Example: Say your file open dialog shows **the C:\Creative DRAWings\designs** directory and you want to find a design which is in **C:\Creative DRAWings\men**.

Press the **Up one level** button and the **Look in** field will show the **C:\Creative DRAWings** directory.

In the **File list**, double click on **C:\Creative DRAWings\men**. The list shows the designs or the sub-folders that the current folder contains. Where you select your designs depends upon where you have saved them.

### Create new folder

With this button you can create a new subfolder in the current folder. When this button is pressed, a folder named **New Folder** appears in the **File list** area. The name of the folder remains highlighted allowing you to rename it by writing in a new title.

### View options

With this button you can specify the way that the sub-folders and the designs will be viewed in the **File list.** The possible options are:

**Thumbnails, Tiles, Icons**, **List**, and **Details.**

On every design you select from the **File list**, the name or number is written in the **File name** field. In the **Preview** box, you'll see your image. If you can't find the design you specifically wanted but know the name, just type it in and press the **Open** button.

In the **Files of type's** field you can select specific embroidery files names like **.jpeg** for example, and only those files will be visible in the **File List** area. If you want to see all the files, no matter the file type, you can select the **All Files** option. Click on the down arrow and you'll see the big list of files that **Creative DRAWings** will accept besides the default **.draw** files.

## Saving designs

When you create a design in **Creative DRAWings** you can save it in many different file formats. The standard saving format is **.draw** and it is the only format that **Creative DRAWings** can read and load and all design information is kept all other formats aren't lossless.. The other file formats which **Creative DRAWings** can open and convert to **.draw** are:

- Wings Systems (".ngs")
- SEF xp (".sef")
- Tajima (".dst", ".dsz", ".dsb")
- Tajima TBF (*.tbf)
- SWF (".sst")
- Pfaff (".ksm",".pcs", ".pcm")
- Singer (*.xxx)
- Happy (".tap")
- Bernina / Melco expanded (".exp")
- Brother/Baby Lock/Bernina (".pec", ".pes")
- Husqvarna (".hus")
- Husqvarna Viking (".vip")
- Viking Designer 1(".shv")
- Janome (".jef", ".sew")
- Janome JEF+ (".jef+")

- Juki(".M3")
- Toyota(".10O")
- QuiltCAD (*.hqf)
- PC Quilter (*.txt)
- Statler Stitcher(*.qli)
- Mitshubishi HD (".1??")
- Barudan FDR (".U??")
- ZSK TC(*.Z??)

Except from **.ngs**, these are mainly embroidery machine file formats. You can load them from any digitizing software that supports them or from the embroidery machine which will embroider your design. The **.ngs** is a powerful file format that can be processed from some of the leading digitizing software packets in the market (**eXPerience®, Wings' modular®).** Also all the formats can be opened with the powerful **Wings' modular,** which is included in this copy of **Creative DRAWings**.

With the ability to save designs in several formats, you can easily put them on a floppy disk or CD and then download them to your embroidery machine.

### Save As dialog box

The **Save As** dialog box is similar with the **Open** dialog box that we described previously. If you need more information about how to find your files through the **Save As** dialog box, refer to **Open** dialog box description.

To save a new **Creative DRAWings** design you must follow these steps:

1. Choose **File** > **Save As** or click on the **Save**  icon or click on the shortcut key **Ctrl+s**. The **Save As** dialog box appears. Click on the arrow in **Save in** to choose a location on your hard drive, or to a disk.
2. Give your design a **File name** and then choose **Type of File**, such as **.draw**. (Note: If you want to have access and edit your designs with **Creative DRAWings**, always save them in **.draw** format.)
3. Then click on **Save**. Any additional modifications you make to the design can be saved by simply clicking on **Save** or **Ctrl+S**. Your design will be added to the **File** list in the folder you selected to save it in, plus you can see the names of previous designs.

The **File** list area shows the designs that the current folder contains. If you click on a design, its name will appear in the **File name** field and information about that design can be viewed at the bottom of the **Save as** dialog.

## Export design

You can export any design you create in many **embroidery** formats, in **embroidery image**, to **quilt**, to a **vector** file to be used by another program. Another very powerful capability is that we can export the design to the provided editor.

### Export to editor

A portion Wings' modular is included together with **Creative DRAWings** to provide more editing and exporting capabilities. You can export your embroidery designs from **Creative DRAWings** to **Wings' modular** to make some simple modifications on the designs. Click on **File> Export> To**

**editor** or use the **Ctrl+E** shortcut keys. **Wings' modular** will open automatically with the exported design inside. There you can do more editing on the design and see how it will look embroidered. The options and capabilities of wings' modular are presented thoroughly in the manual that accompanies the software.

## Export embroidery image

In this chapter we will analyze the way that you can export the embroidery image of the design you have created. You can export the design you are viewing as viewed in **3D preview** of **Stitch** mode to four different image file formats. The embroidery images that will be produced can be used for graphics designing, envelop decoration, creation of birthday cards, brochure creation and generally advertising material that are based on embroidery or not.

In order to export the embroidery design to bitmap file you have to follow the steps below:

1. From **File > Export** select **To image…** option or press **Ctrl**, **Shift** and **E** shortcut keys (Ctrl+Shift+E) together from the keyboard.
2. The dialog that will appear is a standard **Save as** windows dialog from which you can browse and find the location you want to save the design,
3. Find the location you want the file with the embroidery effect to be saved,
4. Type the name you want the exported file to have in the **File name** field
5. Select the file you want to save the design from **Save as type** drop down menu. The options you have are Tiff (*.tif), PNG (*.Png), Jpeg (*.jpg, *.jpeg) and Bitmap (*.Bmp).
6. Click **Save** button and you are ready.

There are some more adjustments that you can do on the dialog window before exporting the design that will be described below. After making the adjustments you want (**DPI**, **Fabric** and **Backdrop** options), you can click the save button that will export the file in the location you have specified with the name you wanted.

### Change image resolution

You can adjust the resolution of the produced image by changing the **DPI** (Dot Per Inch) value.


**Figure 3.23: Set DPI value**

**Dots per inch**: measurement of the scanning resolution of an image or the quality of an output device. DPI expresses the number of dots a printer can print per inch, or that a monitor can display, both horizontally and vertically.

The resolution of an image is measured by the number of dots per Inch that it consists of when it is printed. The DPI value that you will choose affects the image quality. The DPI value that you can enter in the **DPI** field can vary from 60 to 600. Generally images that are created only to be displayed on computer monitors are 72 or 96 dpi and images that are created for the internet are 72 dpi. In addition images created for printing on desktop printers are between 150 to 300 dpi, while images for professional printers are usually 300 dpi or higher.

You can produce images with embroidery effect with the dpi resolution you prefer by simply adding the DPI value in the field. We propose for better embroidery effect results to set the dpi value more than 150 dpi. With resolution near to 160 dpi you will be close to the real dimensions of the design and you will get a proper representation of the embroidery effect by avoiding re-sampling the

original image. For textile printing it is better to use the highest possible resolution of 600 dpi for more realistic results.

**Include fabric option**

With the **Include fabric** option you can decide whether you want the exported image from **Creative DRAWings** to have fabric background or not. With a fabric background you could have a realistic preview of the design with the selected fabric. The preview will look very much alike to how the design will be embroidered on the actual fabric.

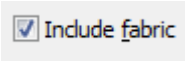



**Figure 3.24: Include fabric option**

If **Include fabric** option is selected, the fabric that was selected in the creation of the embroidery design will be added as a background in the exported image. The color and type of the fabric is the same with the one that was set in the embroidery design. According your fabric selection from the **Select Fabric** option of the standard toolbar you will get the respective fabric as background in your image. If **none** fabric is selected then only the color of the fabric will appear, without any actual fabric.

If they **Include fabric** option is not selected, the embroidery effect image will not have a fabric background. For **Bitmap, Jpeg** and **Tiff** files the background will be a solid black color and for **PNG** files will be transparent.

**Include backdrop option**

In some cases that we are digitizing based on a backdrop it would be very useful to export the design with the used backdrop. This way we can review the design in comparison to the design source in order to improve any aspect of the design we like.


**Figure 3.25: Include backdrop option**

If this option is selected the Backdrop that is included in the design will be exported to the image as seen on screen. In order to be able to export the backdrop, the desired backdrop must be visible in 3D preview. In any design we may have one or backdrops if we want to export the design to image we any of them we must first enable "Use in 3D preview" option of Backdrop properties dialog.

**Exported images**

The images that will be exported from **Creative DRAWings** can be used as artwork in various graphics designing projects. The embroidery image artwork can be used from embroiderers to present their work or promote it. They can print it on any fabric to visualize the actual size of their work or create brochures with their designs. It can be also used to make combinations of printed embroidery effect on a T-shirt together with actual embroidery. This is a new trend in the market that combines both embroidery and printing on garments.

In addition, embroidery images can be used also for decoration of envelops, birthday cards, business cards or any other graphics creation that could have embroidery look images on (view figures below).



**Figure 3.26:** Envelop decoration Birthday card decoration

Use your imagination and create the artwork you want with embroidery images that **Creative DRAWings** exports. Embroidery images of **Creative DRAWings** will enhance your work.

## Export Vector file

When you create a **Vector** design in the **Create** mode of **Creative DRAWings** you have the option to export it to a special folder and keep it as a **Vector** file. You can also save it as an embroidery file and to sew it out. The exported **Vector** file can be used for printing purposes or for creating combinations of embroidery and textile printing on garments.

To save your design as a **Vector**, you will save it in **Scalable Vector Graphics -- SVG** -- file by following these steps:

1. Select **File** menu,
2. Expand **Export** submenu,
3. Select the **To SVG** option. Another way to activate **To SVG** option directly is by pressing **Alt** and **E** shortcut keys (Alt+E) together from the keyboard.
4. The **Save As** dialog will appear
5. Type the name of the file in the **File name** field
6. Find the location you want the design to be saved
7. Click the **Save** button to save the design in **SVG** file format.

Once the **SVG** file is saved, you can edit it in any **Vector** design editor. The design can also be imported back into **Creative DRAWings** and edited in the **Create** mode a second time. By keeping the artwork separately, it's ready to use again if you need to create a similar embroidery design.

**Note:** Inside SVG files, only vector designs can be stored and not bitmap design. If you use a **Bitmap** backdrop to create the **Vector** design and try to export the bitmap to **SVG**, the **Bitmap** will be lost. Only **Vector** artwork will be saved.

## Export to Quilt - Dxf

***Creative DRAWings*** software has the ability to save files for **Quilt Frame** machines. You can create a design for quilting and once you are ready you can export it to **Quilt data** file that you can load and use to your Quilt Frame machine.

To **Save** the file do the following:

1. Select **File** menu
2. Expand **Export** submenu

3. Select the **To Quilt…** option. The Quilt **Save as** dialog will appear.
4. From **Save as type** area select **Quilt data.**

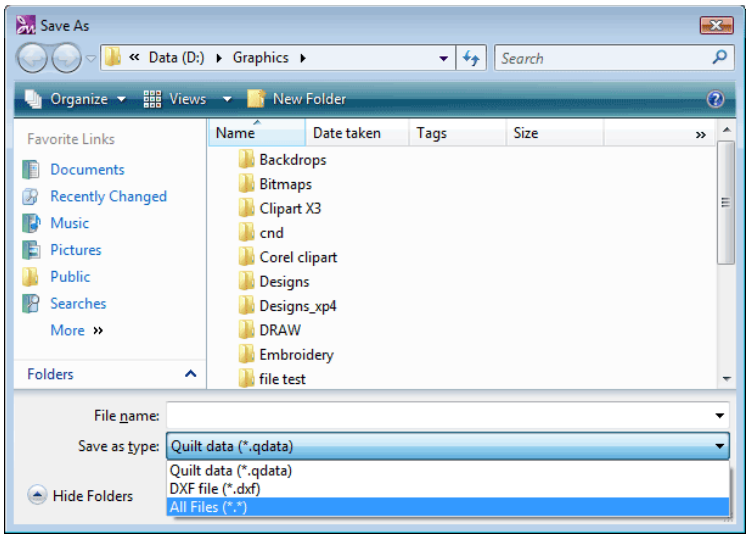



**Figure 3.27: Select location for Quilt data**

5. Type the name of the file in the **File name** field
6. Find the location you want the design to be saved
7. Click the **Save** button to save the design in **Quilt data (.qdata)** file format.

Now you can load the file to your **Quilt Frame** machine and start Quilting.

Using this export tool you can export your design to DXF (AutoCAD) format. This is a vector format that can be used for presentations or used in Laser cutters or Quilt machines. To export a design to (DXF) file format you have to follow the steps listed above but in Save as type section you must select **Dxf file.**

## Scanning images

Previously in the chapter we presented that we can import artwork through a connected scanner using **Get image from scanner** option of artwork source dialog. In this section we will analyze the options and capabilities Image scan dialog. Select the **Get image from scanner** option and click **Next>** button. The **Image scan** dialog will appear that allows you to scan an image.

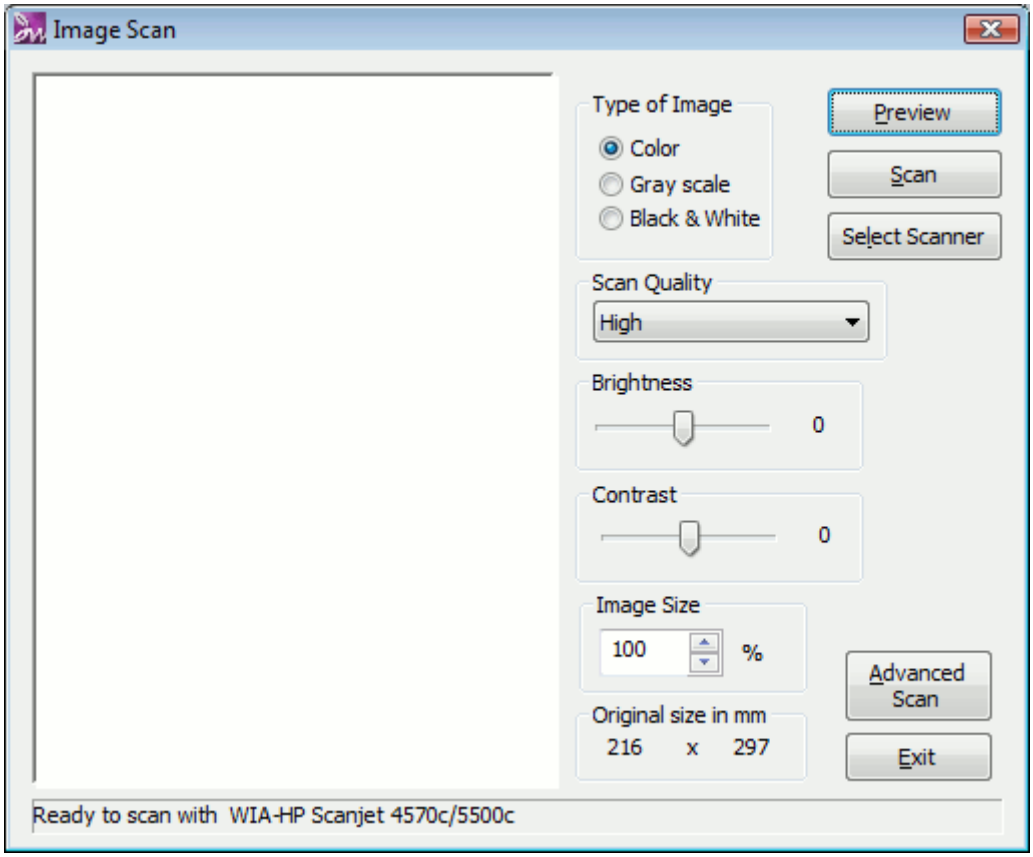
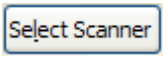


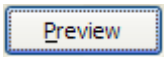

**Figure 3.28: Image scan dialog**

In the **Image Scan** dialog you can scan the design you want and make some adjustments from the options in the dialog or by checking preferences in the scanning software.

The options that are available in the **Image scan** dialog are the following:

- **Select scanner button** 


  With the **Select scanner** button, you can select the scanner you want to use. By clicking the **Select scanner** tab the **Select source** dialog appears where all the available scanners are listed. Select one and then click **Select** to continue or **Cancel** if you do not want to make any change. If there is no scanner installed or currently active, you will not see any scanner listed in the **Select source** window.

- **Preview button** 


  By clicking **Preview**, you can see the image you want to scan. Place your design in the scanner and press **Preview**. When the scan is finished, your design will appear in **Preview**. If you like what you see, press **Scan** tab to import your design. If you want to correct the design, then you can adjust the image in the options available. Press **Preview** again before you **Scan**.

- **Type of image**

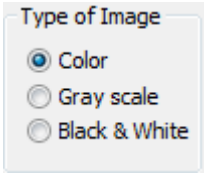



**Figure 3.29: Type of image**

With the **Type of Image** option, you can scan and import images in your choice of hues and shades: **Color**, **Gray scale**, or **Black & White**. By scanning in the **Color** option, the final image will look like the original design.

Your scanner will easily convert a color design into a **Gray Scale** or a **Black & White** design that can be imported by clicking on your choice. The **Gray Scale** will be filled with different tones of grays. By selecting the **Black & White** option the image will be scanned with more contrast. When you select any of the three scanning options, you can see what the scanned image will look like by clicking **Preview**.

- **Scan quality**

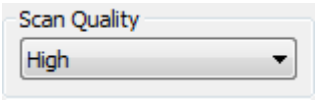



**Figure 3.30: Scan quality**

With the **Scan quality** option you can select the characteristics that you want your image to have. The **Scan** option is a drop-down menu with three different image options: **High**, **Medium** and **Low**. The three options mean exactly what they signify:

- **High** quality has the highest quality and the file size of the image will be the largest.
- **Low** quality has the lowest quality (but still very useable) and the file size is the smallest.
- **Medium** will produce an image quality between the other two.

Every time you select a different option you can see how it affects the scanned image by clicking the **Preview** button.

- **Brightness**

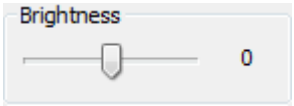



**Figure 3.31: Brightness**

With the **Brightness** option you can brighten the image, you can click and drag the track-bar to the right you can increase the brightness of the scan. Dragging the mark to the left decreases the brightness. You can also make fine adjustments in **Brightness** by using the arrow keys on your keyboard.

- **Contrast**

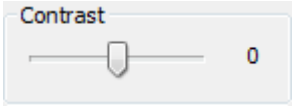



**Figure 3.32: Contrast**

With the **Contrast** option you can change the contrast of the image by clicking on and dragging the track-bar. Dragging the mark to the right increases the contrast and dragging it to the left decreases the contrast in the scan. You can also make fine contrast adjustments by using the arrow keys on your keyboard.

- **Image size**

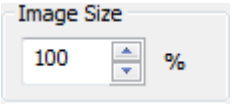



Figure 3.33: Image size

With the **Image size** option you can enlarge or reduce the image you are scanning. The initial value of the image size is 100%, which is its original size. You can enlarge the scanned image by typing a larger value (more than 100) to the **Image size** field or shrink it by typing a smaller value (less than 100) to the **Image size** field. You can also use the up and down arrows in the box to change the image value by 1% each time an arrow is clicked. Hold down on the arrow to change values faster. The enlargement or shrinkage of the image will be made in the final output of the scanned image.

- **Original size in mm**

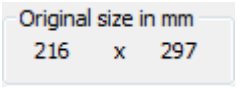
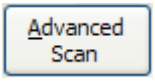



Figure 3.34: Original size in mm

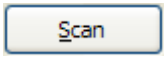
With the **Original size in mm** you can view the actual size of the image measured in millimeters. This option is not editable and its value changes automatically. The dimensions of the image are shown as **Width X Height** (e.g. 150 x 180). This value changes if you select to scan a specific area of the image you are previewing. The selected area on the **Preview** area will be the new size of the image.

- **Advanced Scan button** 

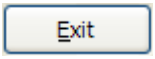

With the **Advanced Scan** tab you can use the default software of your scanner to import the image instead of using the scanner in **Creative DRAWings**. If you are accustomed to scanning with your printer's software, you can normally use it. To activate the default scanning software of your scanner, click on the **Advanced Scan** tab. Every time you scan from now on, your own scanner dialog will appear. Make your adjustments and press the **Scan** tab. Then you'll be asked to save the image to a file on your hard disk, which will allow the software to import it and automatically create a design inside **Creative DRAWings**. If you decide not to use the default scanning software, you can press the **Cancel** tab to exit and return to **Image scan dialog**.

- **Preview area**

By pressing the **Preview** you can decide if the image needs any adjustments prior to scanning it. Another useful feature of **Preview** is its ability to zero in on a specific portion of the image that you want to scan. This way you only scan the portion of the image you want to embroider. Select the portion you want to scan by making a rectangle selection on the **Preview** area. Click and drag the rectangle and this portion will automatically be prepared for scanning. If you want to deselect the rectangle you have selected, simply click once in **Preview**. Once you're satisfied with the image, press **Scan**.

- **Scan button** 


Pressing the **Scan** tab starts the scanning process, which will import the selected image into **Creative DRAWings**. The scanning will include the adjustments you have made on the **Image Scan** dialog. When completed, you will be asked to save the image to **Creative DRAWings**.

- **Exit button** 


  With the **Exit** tab you can close the **Image Scan** dialog and return to the **Artwork source** dialog and choose a different way to create an embroidery design.

Some of the above options might not be available to your scanner. If you see an option disabled, this means that this option is not supported from the driver of the scanner.

After scanning the image you will be prompted to save it as bitmap file on your hard disk. The image will be imported automatically inside **Creative DRAWings** prompting you for more actions.

## Capturing from webcam

**Creative DRAWings** software gives you the ability to capture snapshots from your webcam and convert them into embroidery. This is a unique and flexible feature that allows you to capture any image you want from the webcam of your PC and convert it in embroidery design. We have previously presented the whole procedure, at this point we will analyze in detail the options of the dialog that is used to get images from webcam.

Plug your webcam on the PC (if it is external), select the **Get image from Webcam** option and click **Next>**. The webcam **Preview** dialog will appear with several options. Through the webcam **Preview** dialog you can take snapshots of anything you want and make some adjustments to the image.

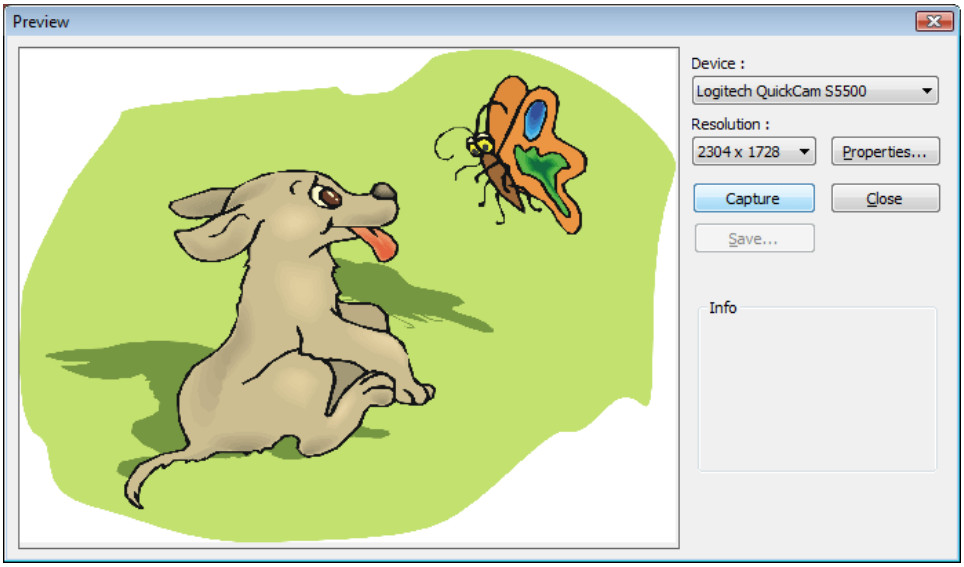


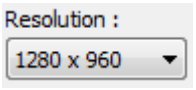

**Figure 3.35: Image scan dialog**

In the **Preview** area you will view live the picture of your webcam. You can make the adjustments on the webcam until you capture the snapshot image you want.

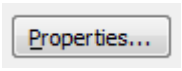
The options you can adjust are the following:

- **Device** 

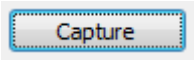

  From the **Devise** drop down menu you can select the Webcam of your pc. You might have more than one Webcams attached on your PC and you want to switch between them. To do that you have to click on the drop down menu and select the **Webcam Device** you want to use.

- **Resolution** 

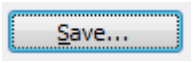

  From the **Resolution** drop down menu you can select the image size that your Webcam will capture. You can switch between the available resolutions by clicking on the drop down menu and selecting the one that meat your preferences. Higher resolution images include more details; therefore it is better to select the highest resolution from the dropdown menu to capture your images.

- **Properties** 

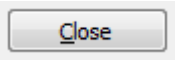

  By clicking on the **Properties…** button you can adjust the properties of you webcam. The properties of every webcam are not the same, therefore the option that you will see after clicking on the Properties… button, are based on your webcam's features. Please refer to the manual of your webcam for more information about adjusting these options. Usually the options that you can adjust are Brightness, Contrast, Saturation, Sharpness, White Balance and many more.

- **Capture** 


  By clicking the **Capture** button you can take a snapshot of the image that you are viewing in the preview of the webcam. The image will freeze allowing you to decide if you want to save it or not. If you do not like the captured image and you want to capture a new one you have to click on the **Capture New** button that will discard the previous snapshot and will allow you to take a new one. Once you are ready to make a new capture click once more on the **Capture** button and a new snapshot will be made.

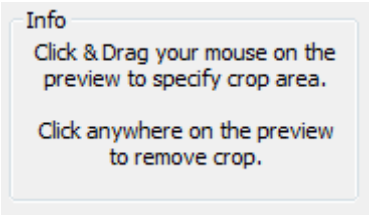
- **Save…** 


  If you are satisfied with the image you have captured, you can save it by clicking on the **Save**… button. You will be prompt to a **Save as** dialog(this is a standard **Save as** dialog of windows), where you can find a preferred location to save the captured image. The saved image will be automatically imported to the software ready to be converted.

- **Close** 


  By clicking on the **Close** button you can close the Webcam **Preview** dialog and select a different way to import a design into the software. The **Close** button closes the dialog and returns to the **Artwork source** dialog.

- **Info**


  Every time you are making an action in the Webcam **Preview** dialog the **Info** box shows useful information about the action that is taking place. It also shows information about extra actions that you can make in the dialog such as cropping the image you have captured.

The webcam **Preview** dialog gives you the ability to make the needed adjustments on the captured image and produce the result you prefer. If you are satisfied with the captured image

click on the **Save…** button to save the image on your hard disk. When the design is saved, the image is automatically loaded inside ***Creative DRAWings*** prompting you to the import dialog. You'll be asked how you want the image to be opened: as a **Backdrop** or converted to a **Vector** design in **Trace**.

**Cropping the captured image**

In the Webcam **Preview** dialog you have also the ability to crop the captured image and use only a part of it. This is very easy to do it by following the steps below:

1. From the webcam **preview** dialog make the appropriate adjustments and prepare the scene you will capture.
2. Once you are ready click on the **Capture** button to take a snapshot.
3. To **Crop** the captured image you can simply draw a rectangle area on the captured image by covering the area you want to keep. To draw the rectangle area you have to click and drag with the mouse on the captured image diagonally. While dragging you will view a rectangle to be drawn on the image with a light blue color.


**Figure:3.36 Crop area of captured image**

This will be the area of the image that will be kept if you save the design. The rest of the image will be discarded. If you want to define a different crop area you can draw a new rectangle that will be the new **Crop area** (The previous defined crop area will be automatically canceled).

4. If you are satisfied with crop area you can click on the **Save…** button to save the cropped image
5. After saving the cropped image it will be automatically imported in ***Creative DRAWings*** to be converted to stitches.

With the cropping option you do not need to straggle capturing exactly the area you want to convert to stitches but you have the ability to capture a general image and then keep only the area you need by simply cropping it.

## Importing bitmaps

Bitmap files can be imported into **Creative DRAWings** three different ways: They can be imported as bitmap Backdrop, can be Traced and imported as a Vector design, can be converted to Cross

stitch or Photo stitch design. All four ways are accessible from the starting dialog of **Creative DRAWings** software.

1. Select **Create new** option from the starting dialog,
2. click **Next>** button,
3. click on the  icon to find the bitmap design you want to import,
4. select **Open** button
5. click **Next>** button,
6. The dialog with the three options below will appear.

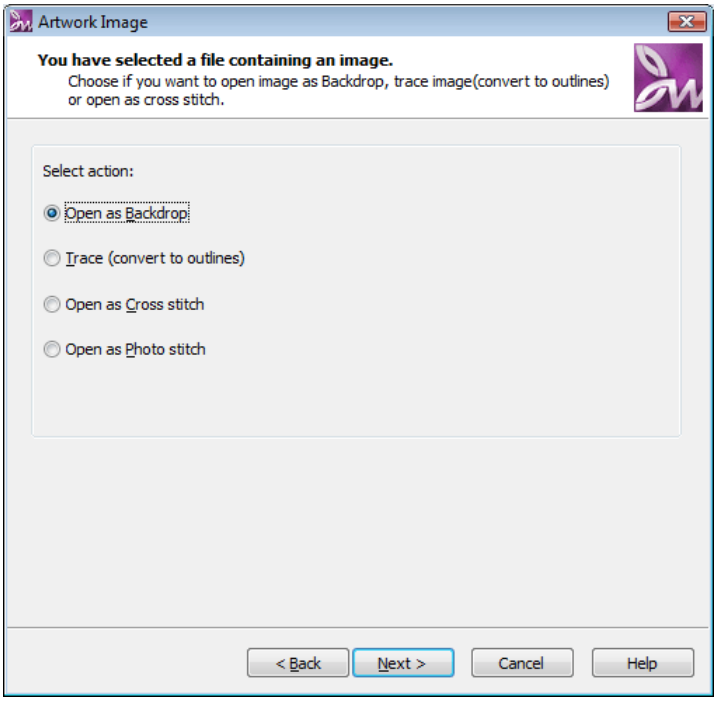



**Figure 3.37: Artwork Image dialog**

In this section we will describe the conversion options of bitmap files.

## Open as Backdrop

By opening **Backdrop** you can import a **Bitmap** image and use it as the guideline image to draw an embroidery design. This option is very useful for complex **Bitmap** images that cannot be easily **Traced** or you want to embroider a part of them. This option also allows you to create the design exactly in the way you want to be embroidered. Also, it is very useful to professional digitizers.

Select the option and click **Next>** to import it to **Creative DRAWings**. Select the **Fabric** and the color you want from the next dialog and click **Finish**.

The **Bitmap** image you imported will appear in the **Create** mode as a backdrop which can't be edited. You can import only one bitmap backdrop inside **Creative DRAWings**. If you want to import multiple backdrops you will have to use an image editor and make the multiple images a single image by combining them and then import the combined image as a backdrop into **Creative DRAWings** as a **.draw** file.

There are some useful options that you can use to handle the imported backdrop images. Those are located under the **Backdrop** submenu of **View** menu and are the following:

**Hide (Alt + 1)**

By clicking on **Hide** – or press **Alt + 1** shortcut key – you can hide the imported backdrop. The **Hide** option can help you view the embroidery design you have created without confusing it with the backdrop image at the back.

**Below embroidery (Alt +2)**

With this option checked you can make the backdrop visible and position it below the design you are creating. Whenever you import a **Bitmap** image as backdrop, **Creative DRAWings** automatically positions the image under the embroidery design. Also, another way to enable this option is by pressing the **Alt + 2** shortcut keys from the keyboard.

**Washed-out (Alt +3)**

With this option checked you can make the backdrop colors appear **Washed-out**. This means that the colors of the backdrop will have lighter tones. This is very helpful when you are trying to draw a shape that will have the same color with the backdrop image. Also, another way to enable this option is by pressing the **Alt +3** shortcut keys from the keyboard.

**Above embroidery (Alt + 4)**

With this option checked you can position the backdrop image to appear above the design you have created. This is very helpful. You'll be able to view the backdrop image and be able to design the objects that will be on top of larger objects you have already designed. Also, another way to enable this option is by pressing the **Alt + 4** shortcut keys from the keyboard.

## Backdrop Properties

The **Properties** option is available only if you have inserted a backdrop **Bitmap** in the working area. By selecting the **Properties** option from the **View** menu a 3D pop-up dialog appears on the working area with various options related with the already inserted backdrop.

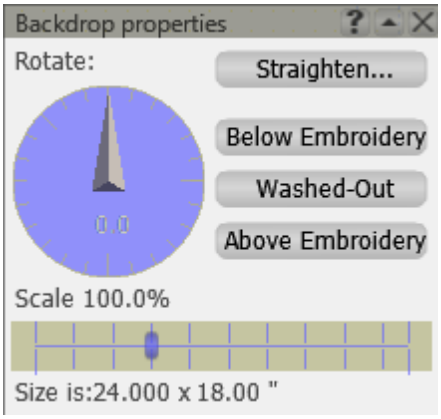



**Figure 3.38: Backdrop properties**

The **Backdrop Properties** dialog includes the following options:

- **Straighten,** using this useful option you can straighten a scanned bitmap. Select the **Straighten** option and view the cursor changing shape. To straighten your **Bitmap**, click the mouse twice to make two points which will become a virtual straight line that your design will adjust to. For example, if you make a diagonal straight line on the **Bitmap**, **Creative DRAWings** will rotate the **Bitmap** and turn the diagonal straight line into a horizontal straight line. You can apply the **Straighten bitmap** option as many times as needed to bring the backdrop bitmap to the straight position.
- **Scale bitmap,** using **Scale** track-bar you can change your **Backdrop Bitmap** proportionally. Drag the track-bar to the left to reduce the image and drag it to the right to enlarge the **Backdrop**.

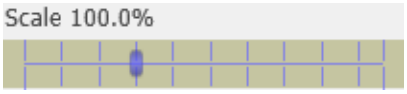



Figure 3.39: Scale backdrop

You can reduce the image to a minimum 50% from its initial size and enlarge the image with a maximum 300%. The scale tool is very useful in helping you change the size of the **Backdrop** image without the interference of any other software. Therefore, you do not need editing software for **Bitmaps** to adjust the size of your **Backdrops**.

- **Rotate bitmap,** using this tool you can rotate your image freely by clicking and dragging the indicator either way. This tool helps to straighten your backdrop image before starting to draw the embroidery design. The rotation circle always opens up at the zero position.

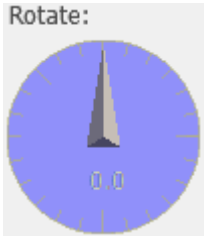



Figure 3.40: Rotate backdrop

This tool can help you straighter your backdrop image before starting drawing the embroidery design based on it.

- **Below embroidery:** By pressing this button you can make the backdrop visible and position it **Below the embroidery** you are creating. This option is enabled by default whenever you import a Bitmap image as backdrop and positions the image under the embroidery design. Also, another way to apply this option is by pressing the **Alt + 2** shortcut keys from the keyboard.

- **Washed-out:** By pressing this button you can make the backdrop colors appear **Washed-out**. This means that the colors of the backdrop will have lighter tones. This is very helpful when you are trying to draw a shape (with any of the available drawing tools) that will have the same color with the backdrop image. Also, another way to apply this option is by pressing the **Alt +3** shortcut keys from the keyboard.

  **Above embroidery:** By pressing this button you can position the backdrop image to appear above the embroidery design you have created. This is very helpful in order to view the backdrop image and be able to design the objects that will be on top of larger objects you have already designed. Also, another way to apply this option is by pressing the **Alt + 4** shortcut keys from the keyboard.

After adjusting your backdrop and you do not need the **Backdrop Properties** window to appear you can close the dialog by clicking on the close icon or minimize it by clicking on the minimize icon . The minimize icon will make Backdrop properties to disappear and leave the title bar to float on the working area.


Figure 3.41: Minimize backdrop properties dialog

If you need the **Backdrop properties** window again, click once on the minimized title bar and you're ready to make more adjustments.

## Trace (convert to outlines)

**Creative DRAWings** includes a powerful tool called **Trace** which allows you to convert **Bitmap** artwork into a **Vector** design. The **Vector** can then be converted into a normal embroidery design. Very important: Before converting the **Bitmap** into a Vector, save and rename the original for future use. By selecting the **Trace** option and clicking **Next>** the **Trace Image** dialog will appear.

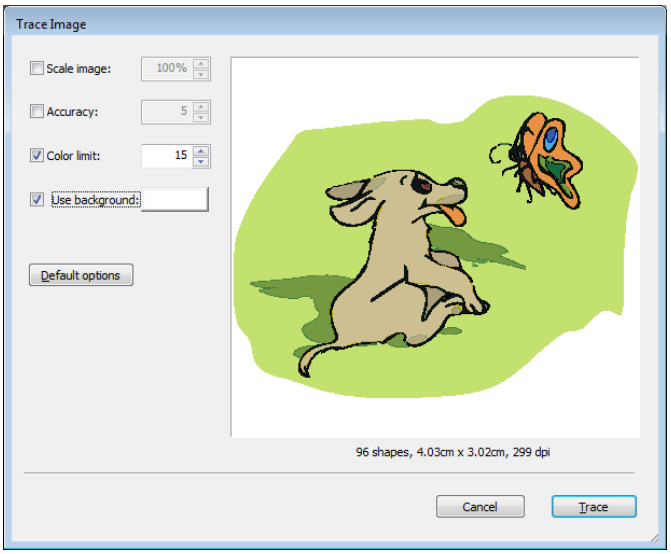



**Figure 3.42: Trace Image**

The **Trace Image** dialog box can be enlarged so the adjustments will be easier to observe. Click on box, hold down on the bottom right corner of it and pull diagonally to fill up the screen, or make as large as you want it. The **Trace** tab has some options that can help you produce the results you want. Those are:

## Scale image:

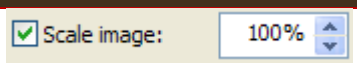



**Figure 3.43: Scale image**

The **Vector** design in **Trace Image** will always open at the default 100% -- the original size of the **Bitmap**. To enlarge or reduce the **Vector** size, click first on **Scale Image**, then type in a new value above or below the 100% option. You can also change the **Vector** image size by clicking on up-or-down arrows (hold down for a speedy change). No matter how you do it, the scaling will always be proportional to all dimensions of the design: A 35mm x 60mm design will become a 70mm x 120mm design while you're adjusting it in **Trace Image.** Any change in values is automatically changed in **Preview**.

## Accuracy:

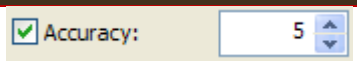



**Figure 3.44: Accuracy**

The **Accuracy** option lets you choose how much detail of the original artwork will be in your final embroidery design. Click on the box to edit this option, which will open with a default Value 5. If you want your embroidered design to appear as the artwork, click up to Value 8 – the highest degree of accuracy. A Note of Caution: Depending upon your design, a Value 8 may not produce results best for embroidering because of excessive details. On the other end of the **Accuracy** scale, a Value 1 option may not have enough details to please you. You'll find that the Accuracy value varies greatly among bitmap images, so you must try different **Accuracy** values to get the preferred result. Each time you change a value, you can see it in **Preview**.

## Color limit:

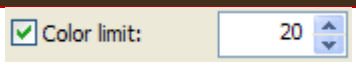



Figure 3.45: Color limit

The **Color limit** box gives you a choice of how many threat colors you want in your **Traced** image. Click on the box. It always opens with a value of the maximum number of colors, but there are several factors to be considered. If you have a 6-needle embroidery machine, you may want to change the Value 6 with six threads. The number of threads affects the way the **Bitmap** image will be converted to **Vector** design. In the **Preview**, you can view any value changes. Another Option: You can go ahead and create your vector design with 20 colors and then reduce the number inside **Creative DRAWings**. Having a file of all 20 colors gives you the option of later sewing your design commercially. Or . . . when you step up to your own big-time machine, you'll have the files ready!

## Use background:


Figure 3.46: Use background

With **Use background** option you can make the color/object that you will choose from the **Preview** area transparent. This is an easy way to remove a specific color/object from the **Bitmap** image. To edit this option, click the checkbox next to it. Move the mouse cursor over the **Preview** and it will automatically change to an eyedropper tool. The color that you will select from the preview area with the eyedropper tool will automatically become transparent and will fill the color tab next to the **Use background** option. Only one color object will become transparent from the design. You can make a different color transparent by selecting a different color with eyedropper tool from the design.

### Open as Cross-stitch

By selecting the **Open as Cross stitch** option, you can convert the bitmap image to a perfect **Cross stitch** design. The conversion is made automatically by clicking the **Next>** button in the dialog. The **Cross-stitch** will be created inside the design area, where you can make the adjustments.

In the **Create** mode of **Creative DRAWings** you cannot edit the actual bitmap image but you can resize and change the position of the Cross-stitch design. If you want to edit the actual bitmap image you have to use a Bitmap editing software and then import the edited bitmap back to **Creative DRAWings** to view the results. By editing the bitmap you can increase the quality of the embroidery result.

In the Create mode you can increase the detail of the cross-stitch design by increasing the size of the bitmap or decreasing the size of crosses. This will result in a high detailed cross-stitch design that will be closer to the actual image view. To increase the size of the bitmap inside **Creative DRAWings** you have to select the Cross-stitch design, and then resize it by click and dragging the corner handles of the bitmap or the handles at the middles of each side. The bitmap will be resized and the cross-stitches will be recalculated. By increasing the size of the bitmap you automatically increase the number of cross-stitches that will be placed on it; therefore the quality of the embroidery design.

You can also move the cross-stitch design and position it exactly in the location you want it to be. To do that you have to select the cross-stitch design and by click and dragging on it move it to the position you want it to be.

In the **stitch** mode of **Creative DRAWings** you can edit the cross-stitches by setting the **Cell size** of each cross-stitch, changing the number of times each cross-stitch will be embroidered and selecting which parts of the design you want to embroider and which not. All this options are located on the **Object properties** toolbar that appears at the right side of the application window. The same options are available in the Create mode, if **Stitches**, **3D preview** and **Object properties** options from **View** menu are enabled.

More about how to edit Cross-stitch designs you will find in the Embroidery transformations chapter.

**Important: Creative DRAWings** can import only **Bitmap** images that have been created with RGB (Red, Green, and Blue) colors. Any **Bitmap** that was created with CMYK (Cyan, Magenta, Yellow, and Black) will not convert properly.

## Open as Photo stitch

By selecting the **Open as Photo stitch** option, you can convert the bitmap image to a perfect **Photo stitch** design. The conversion is made automatically by clicking the **Next>** button in the dialog. The **Photo-stitch** will open inside **Creative DRAWings** where you can make the adjustments.

**Photo-stitch** is another alternative you have when it comes to filling bitmap images with stitches. It consists of 4 stitch layers that have different colors. Each thread color layer is one of the CMYK(Cyan, Magenta, Yellow and Black) color model. First the Magenta color is embroidered, then the Cyan color, the Yellow color follows and finally comes the Black color. These colors cannot be changed and you must use them exactly as they are embroidered, if you want to produce accurate Photo-stitch results.

In the **Create** mode of **Creative DRAWings** you cannot edit the actual bitmap image but you can resize and change the position of the Photo-stitch design. If you want to edit the actual bitmap image you have to use a Bitmap editing software and then import the edited bitmap back to **Creative DRAWings** to view the results. By editing the bitmap you can increase the quality of the embroidery result.

You can increase the embroidery result of the Photo-stitch design by adjusting the image contrast. By increasing the contrast of the image you will get thicker satin bars in the darker areas of the photos and add detail to the final embroidery. Also, some adjustments to the image size might needed to get more detail to your photo-stitch. To increase the size of the bitmap inside **Creative DRAWings** you have to select the Photo-stitch design, and then resize it by click and dragging the corner handles of the bitmap or the handles at the middles of each side. The bitmap will be resized and the Photo-stitch will be recalculated. By increasing the size of the bitmap you automatically increase the area that will be covered from the satin bars that will lead to detail increase.

The photo-stitch object gives you the ability to adjust the satin bars' **Width** and the **Density** of each satin bar for more accurate results. With the **Width** value you can set the distance that two satin bars will have between them and with the **Density** value you can set the density that each satin bar will have when it passes over dark areas. By adjusting those two values you can get more detailed photo-stitch results.

**Important: Creative DRAWings** can import only **Bitmap** images that have been created with RGB (Red, Green, and Blue) colors. Any **Bitmap** that was created with CMYK (Cyan, Magenta, Yellow, and Black) will not convert properly.

# Import embroidery files

One of the importing abilities, as we have already mentioned, is that we can import any embroidery design we like. **Creative DRAWings** will convert **Stitch** file formats like **.ngs** or **.dsz**

or **.pes** into **Vector** designs. Using this ability you can import your ready-made embroidery designs, convert them to **Vector** designs, make any changes you desire, and embroider them again.

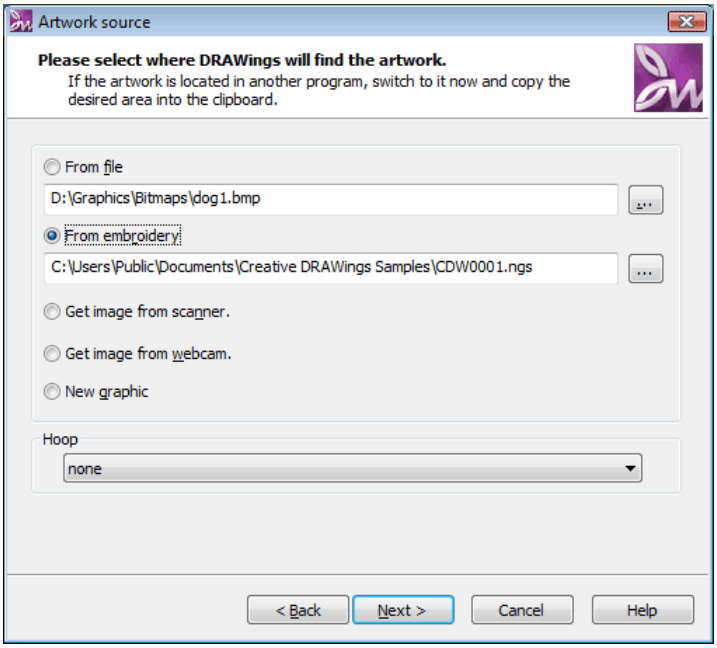



**Figure 3.47: Import from embroidery dialog**

In order to use this ability we must select **From embroidery** option, from the **artwork source** dialog of startup wizard. Select this option use **browse** icon to select an embroidery file to import.

you can import any supported embroidery file into **Creative DRAWings**. You can save it without changes, or you can create a new **.draw** file. You will be able to make some limited adjustments on the imported embroidery files, like adding new objects or text, and then save it as a new embroidery design.

You can only import an embroidery design from the opening dialog of **Create new** in **Creative DRAWings**. Make sure **Browse** is highlighted, then click **Next>**. In the next dialog **Artwork source**, select **From embroidery** option, and then click on the **browse** icon to reach the embroidery file you want to import.

From the standard **Open** dialog that appears, you can find the **Stitch** file you want to import and click the **Open** tab. You can import one of the following files:

- Wings Systems (“.ngs”)
- Tajima (“.dst”, “.dsz”, “.dsb”)
- Tajima TBF (*.tbf)
- SEF xp (".sef ")
- SWF (“.sst”)
- Saurer (*.SAS)
- Pfaff (“.ksm”,”.pcs”, “.pcm”)
- Singer (*.xxx)
- Happy (“.tap”)
- Melco expanded (“.exp”)
- Brother/Baby Lock/Bernina (“.pec”, “.pes”)
- Husqvarna (“.hus”)

- Husqvarna Viking (".vip")
- Viking Designer 1(".shv")
- Janome (".jef", ".sew")
- Janome JEF+ (".jef+")
- Juki(".M3")
- Toyota(".10O")
- Artista(*.art)
- QuiltCAD (*.hqf)
- PC Quilter (*.txt)
- Statler Stitcher(*.qli)
- Mitshubishi HD (".1??")
- Barudan FDR (".U??")
- ZSK TC(*.Z??)

The **Stitch** file you have selected will appear in the **From embroidery** import field. Click **Next>** to import your file in the **Create** mode. **Creative DRAWings** will prompt you to the next dialog to select the **Fabric** and **Color** for your design. Click **Finish** and view the imported embroidery design. If you want another file, click on the browse icon and select another **Stitch** file.

To the imported embroidery design you can change the colors of the objects, and make some simple transformations such as rotation, skew, move and delete objects.

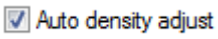



Figure 3.48: **Auto density adjust**

To apply **Auto density adjust** option you have to select the stitch object you want to resize (**Auto density adjust** will appear at the bottom of **Object Properties** toolbar), make sure that the checkbox of the option is checked and then resize the stitch object by dragging any corner handle. While dragging with the mouse, on the **Status bar** (is located at the bottom of the application) you can view the percentage of resize that you are making.

To be able to have full editing abilities you have to convert the stitch objects to vector objects that will give you the ability to make any changes you want on the design.

## Convert to Vector design

As we have already mentioned you can import your old embroidery files and convert them to vector designs. You can convert the entire embroidery designs or a part of them. You can import them as we have already mentioned in previous section. In this case after their conversion you can use them as a normal design and edit in **Create** mode of **Creative DRAWings**.

To convert the imported embroidery artwork to **Vector** design, select the entire design with **Ctrl+A** keys. Right click on the design and from the pop-up menu select the **Convert to Curves** option or press **Ctrl+Q** at the same time. The embroidery design will be automatically converted to fully editable **Vector** artwork which can be edited. You can also convert only an object or two. **Creative DRAWings** takes you one giant step beyond the normal **Convert to Curves** of software programs. Its new approach to imported embroidery allows you to have **Stitch** objects together with **Vector** objects in the same file. You can convert specific parts of the embroidery design to **Vector** artwork, make the changes in those objects, and then embroider them and keep the rest of the embroidery design unchanged. Choose **Stitch** objects in a design and convert them to **Vector** artwork. Select the artwork and from the right click menu, select the **Convert to Curves** option. This combination allows you to have **Stitch** and **Vector** objects in the same file.

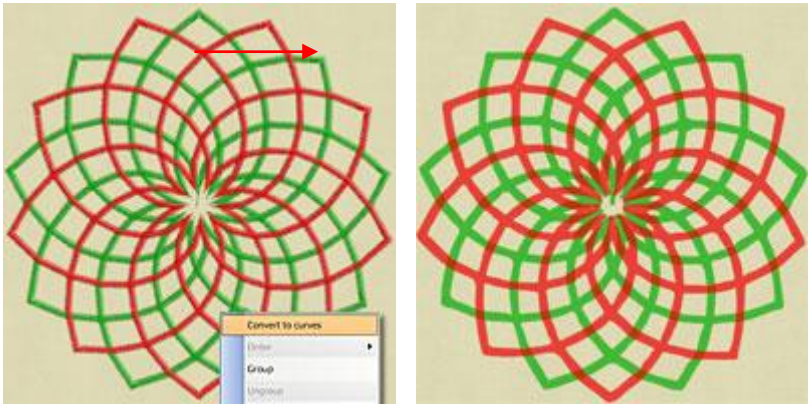


Figure 3.49: Embroidery file to Vector file

In such cases you may don't want to view both stitch and vector objects. You can disable **Stitches** option of **View** menu to temporary hide all stitch objects. You can also hide all vector artwork by disabling Outline design option of View menu. In this case if stitches option is enabled you can only see the available stitch objects. Using these View options you will be able to edit your **Stitch** and **Vector** objects easier.

The new produced **Vector** design is fully editable, which means you can make as many changes as you want on the design. You can add or remove objects or designs and give them stitches by clicking on the **Stitch** mode. The former **Vector** design will be filled with stitches ready to be embroidered again. By editing your imported embroidery files you can give life to your old designs. Your creativity is only limited by you -- not by **Creative DRAWings**.

## Import ngs embroidery file

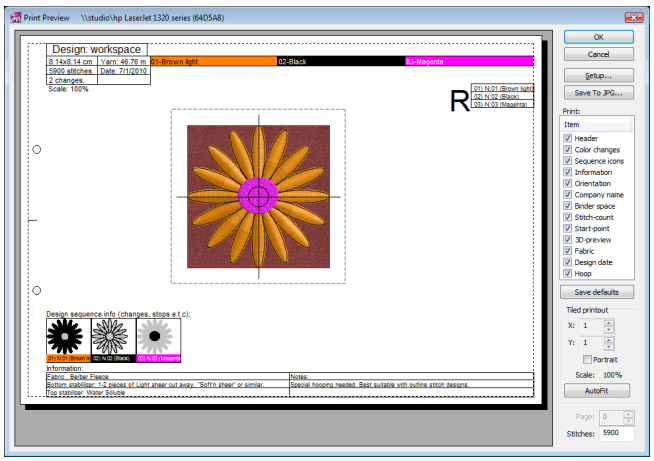
The reason **Creative DRAWings** is so powerful: the default ngs embroidery files of **Wings' modular** software is at your fingertips. The designer included much of the professional **Wings'** program into **Creative DRAWings**.

Besides stitch data, **ngs** files contain the outline data of the design. The most powerful embroidery file formats such as .**dst, .sst, .exp,** etc. can hold only stitch data and not outline data. This is important because outline data allow you to change the artwork and recalculate the embroidery result.

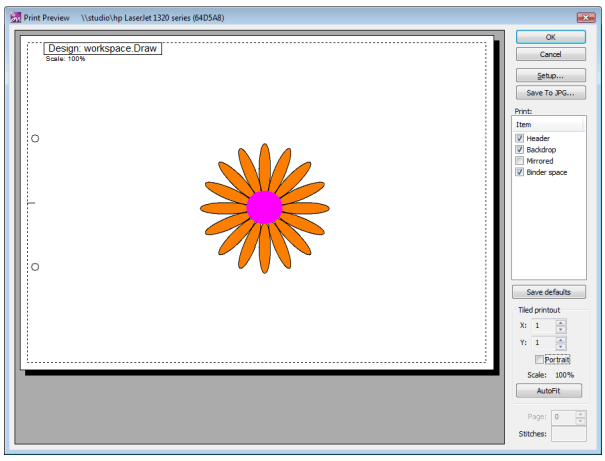
If you import an embroidery file inside **Creative DRAWings**, it will not have any outline data imported unless the file has an **.ngs** extension. The outline data of the imported ngs file will be automatically recognized from the software and will be imported as **Vector** data. Therefore, the **Vector** artwork of the embroidery design will be directly editable in the **Create** mode of **Creative DRAWings**. Some **ngs** files may only contain stitch data. This can happen if you open a **.dst** file for, example, which holds only stitch data and then save it as .ngs file format. For the ngs file to hold the outline data, it must be either be saved directly from **Creative DRAWings** or **Wings' modular** as a ngs file or it must be created inside **Wings' modular** from scratch.

## Printing

**Creative DRAWings** provides extensive options for printing your designs. You can print the design with together with much information that is useful for embroidery process or **Print the artwork** of the design in order see clearly the artwork without any other information.




Print design




Print artwork

## Print design

The printout of the design provides information needed to evaluate before sending a design for production or to a customer to see if this is what he likes. To print a design from your screen, press the **print** icon on the standard toolbar or from the menu File > Print option or press the **Ctrl + P** shortcut keys from the keyboard. The following dialog will appear, you can see a preview of the printout of a design.

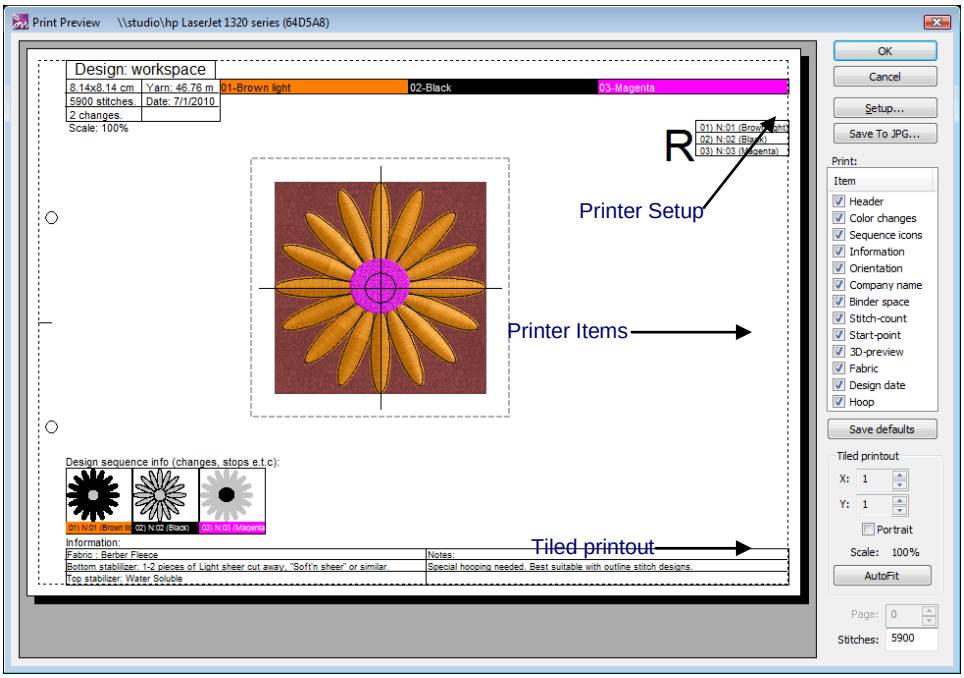



Figure 3.50: Creative DRAWings Printout

In **print preview** window, we can see a preview of the design together with provided information. On the right part we can see various customization of the printout. These customizations are:

- We can use **Setup** button in order to select and customize the properties of the printer that we are going to use.
- We can also use **Save to JPG** option in case that we don't want to print it, but we want to save it for later reference or to review on our computer monitor.
- In section **Print** we can select which parts we want to be visible. Click on any of the checkboxes in order to **enable/disable** visible items.

- If you want this selection of visible items to be the default for any design, you can use **save defaults** button.
- Finally in tiled printout section we can customize some aspects of the print, **number of pages**, **orientation**, **and scale**. We can also set number of stitches that we want to be visible on the print preview.

**Print items**

In this section of the printing dialog you can specify which information you want your printout to include. Every item of the printout can be enabled or disabled by clicking on the square on the left of its description. If the item is enabled the changes can be viewed on the preview area.

- **Header**

  The header is at the top of the page, showing the size, color changes, number of stitches, quantity of thread needed, the colors of the design, and their position.

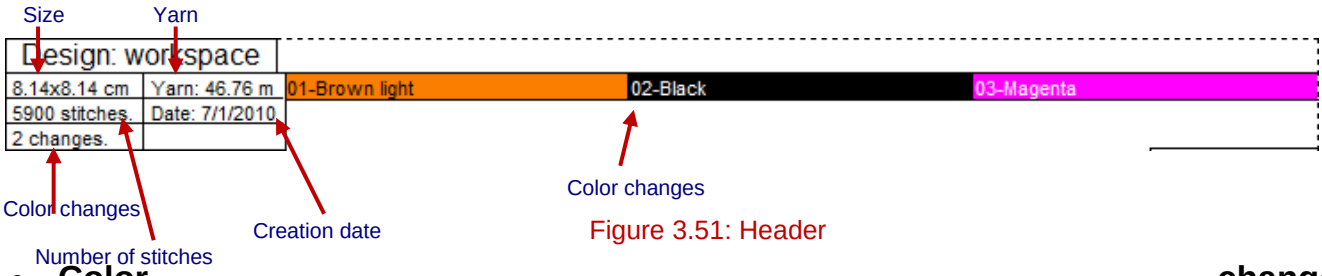



Figure 3.51: Header

- **Color changes**

  The box shows the sequence of the color changes. This information is really useful in case the design will be saved in a file format which uses “stop” instead of color-change command.

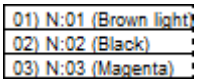



**Figure3.52: Color changes**

- **Sequence icons**

  The sequence icons are at the bottom of the page. They show parts of the design split with a special function like color change, appliqué, or stop. Also in the bottom of the icon you can view the name of the color that should be used, plus comments.

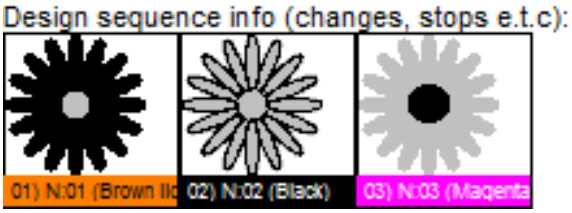



**Figure 3.53: Sequence icons**

- **Information**

  Information is at the bottom of the page. The information area lists and describes the components of your embroidery design. The information is sent from the program to the component presets you have selected.

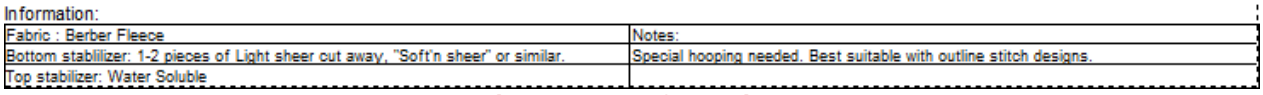



**Figure 3.54: Information**

- **Company name**

The company name, which is at the top of the printout, can be changed by using the Printing tab of the Tools > Options dialog.


Figure 3.55: Company name

- **Orientation**

  The orientation is the icon shown with the "R" character at the top right corner of the printout. This is important because it shows how the printed page should be put on the embroidery machine to identify the starting point of the design.


Figure3.56: Orientation

- **Binder space**

  This option makes the necessary margin (on the left side of the page) in case you want to put the printout in a folder.

- **Stitch count**

  The number of stitches in your design can be viewed at the header of the printout. This **Stitch count** is important for commercial use when the number of stitches is used to calculate the embroidery price.

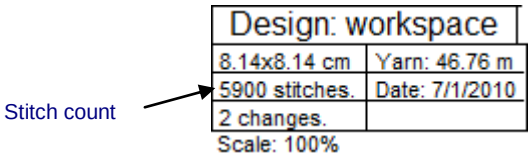



Figure 3.57: Stitch count location

- **Start point**

  This option shows or hides the starting point of the design, marked with the icon.

- **3D-preview**

  Displays the stitch design in 3D-preview mode.

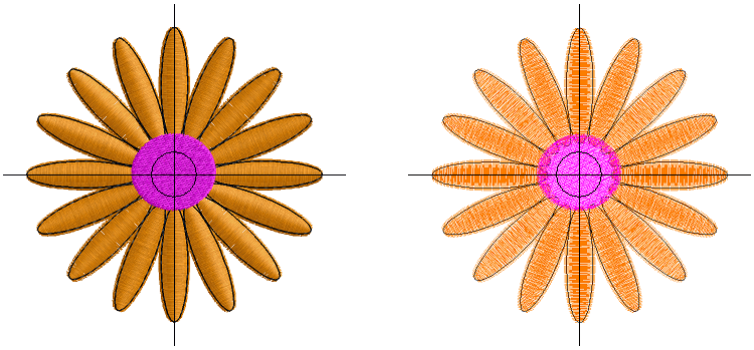


Figure 3.58: 3D-preview Enabled 3D-preview disabled

- **Fabric**

  Hides or Shows the fabric behind the design.

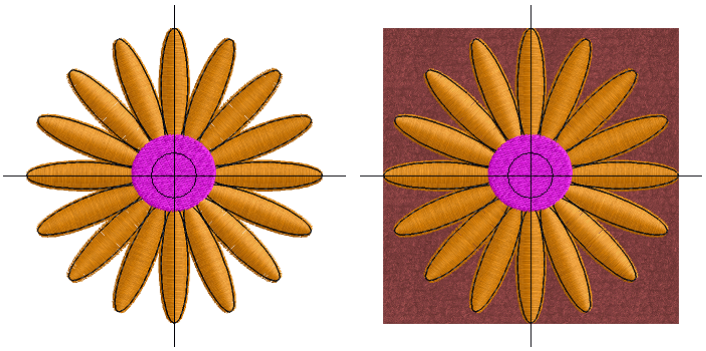


Figure 3.59: Without fabric – With fabric

- **Design date**

  The date that the design was created can be viewed at the top left of the printout.

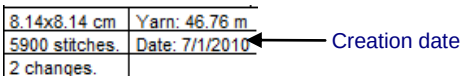



Figure 3.60: Design date location

- **Hoop**

  Hides or Shows the embroidering area (doted line) of the selected hoop with a dashed line around the design. If your design is position outside this line you will have problems embroidering the design on a hoop that has the same dimensions (You might damage your machine).

**Tiled printout**

This section manages the way that your design will be printed. When the printout dialog is called up, the first two fields indicate the number of pages needed for printing: '**X**' for horizontal and '**Y**' for vertical; the number of designs printed on each page can be changed by using the arrows on the right hand side or with the mouse wheel. The changes you make can be viewed on the print preview as you make them.

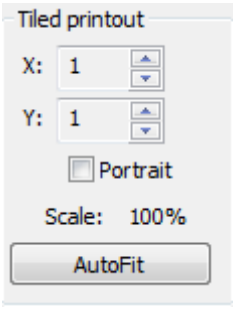


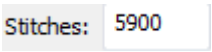

Figure 3.61: Tiled printout

The **Portrait** option specifies how the design is positioned on the page. If it is enabled, then the design is printed vertically as a portrait. If disabled, then the design is printed horizontally as a landscape.

The **Scale** field shows if the design will be depicted smaller than its actual size and the percentage of the reduction. The first time that the printing dialog is used, **Creative DRAWings** finds the best way to show the design in actual size with the least number of pages.

To automatically restore the parameters indicated at the beginning of this process you could click on the **AutoFit** tab. If your design is previewed in more than one page, you can print them, cut the border of the page, which is already marked, and tape them to have your design complete.

Finally at the bottom of the right area of Print preview dialog there is a control that you can use in order to set the number of stitches that you want to be viewable in the respective area of the printout. Click on the editable area and type the value you want to appear in Printout.




## Print Artwork

With ***Creative DRAWings*** you have the ability to print any artwork you want on a special paper for textile printing. Then you can iron the paper on the fabric and apply the design on the fabric. You can also combine textile printing with redwork embroidery and create unique and stylish designs on garments.

To print the artwork of the design you have created or imported inside ***Creative DRAWings*** you have to select the **Print Artwork** option from **File** menu. The **Print Preview** dialog will appear that includes all the options that you can adjust to prior printing the artwork.

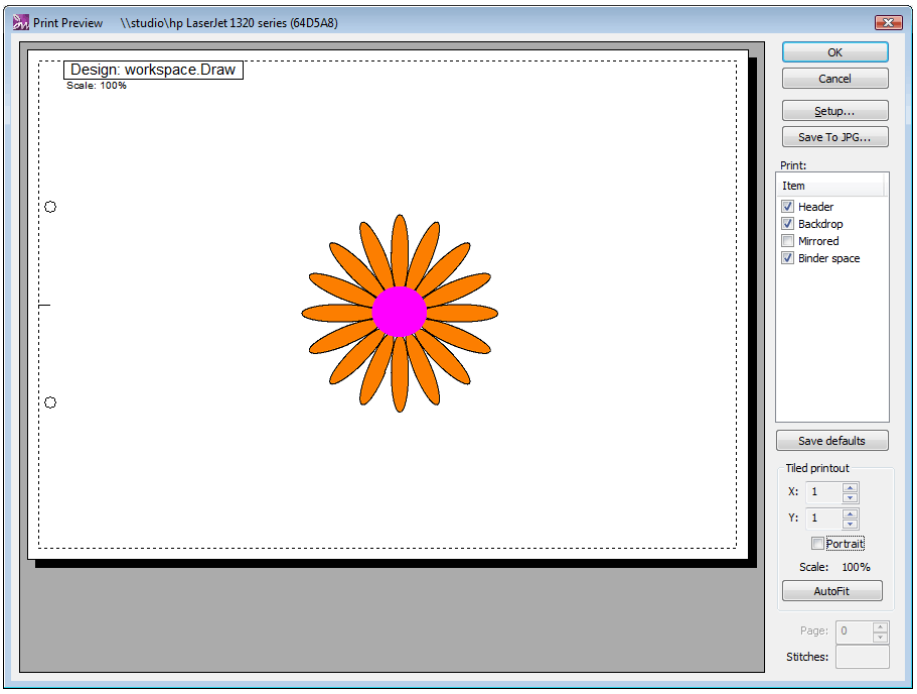



**Figure 3.62: Print artwork preview**

As we have described in previous section the printout and the visible items can be customized.

- Select a printer
- Save into JPG file
- Select printed items
- Customize orientation and number of pages.

The only addition is that you can create **Mirrored printouts easily. Mirrored** option allows you to make a Mirror of the artwork you want to print in order to make it proper for textile printing or any demonstration purpose.

Figure 3.63: Normal Printout  Mirrored Printout.

## Send option

With this option you can send a **.draw** file of **Creative DRAWings** by e-mail. Click on **File> Send**. When the **Send** option is selected, **Creative DRAWings** finds the default program that you use for e-mails and opens a new window. It saves the current design in the **.draw** format in your temporary directory, and inserts this **.draw** file as attached. Type in the e-mail address, add any text, and send it.

## Recently used file list

Click on **File** to find the list of designs that you recently opened. The lower half of the dropdown contains links to your last-accessed files. If you click on a link, the design will open in a new **Creative DRAWings** window and the opened file will be placed on the top of the recently used **File** list.

## Auto-backup mechanism

**Creative DRAWings** software has two security features to help you avoid losing your work from a possible systems crash. The first is the **Failure Recovery** feature and the second is the **Auto-backup** feature of the embroidery designs.

- **Failure Recovery:** This feature is activated automatically when an illegal operation is made in the software. Immediately the **Failure Recovery** tool is activated to baffle the termination of the program.

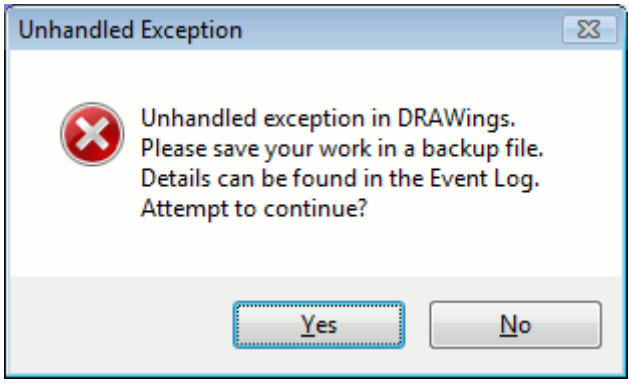



Figure 3.64: Failure Recovery dialog

When this **Failure Recovery** dialog box appears, click **Yes** and the software will continue functioning. If you click **No**, the **Creative DRAWings** software will be terminated immediately without asking you to save your design. If the **Failure Recovery** box appears while designing, it is better to save your design by clicking **Yes,** then restart **Creative DRAWings**. This mechanism secures your work.

- **Auto-backup:** Another feature that **Creative DRAWings** has to protect your valuable work is the **Auto-backup** feature. **Creative DRAWings** automatically saves your designs after every change. The **Auto-backup** works even if you have not saved your design at all. If the software locks up for whatever reason, your work will not be lost in most cases. When you open the software again, the designs before the lock-up will be recovered. This mechanism will protect you from losing your work.

**Note:** As another safety feature, always keep in mind the importance of saving your designs frequently.

# Chapter 4 - Make selections

## Introduction

In this chapter we will learn how to select objects in a design and how to modify them. To make changes in your embroidery design, select an object by clicking on it, and then applying the stitch type you prefer. The standard selection tools in are **rectangle selection** and the **lasso selection.** You can use the selection tools from **Tools** toolbar, using the mouse (click) and the functions in the edit menu.

## Select with mouse (click)

Complex embroidery designs consist of many objects, with each having different stitch types and colors. You can make changes in any object or portion of a design by clicking on it. If you have several of the same objects, hold **Shift** and you can make multiple object selections and give them the same colors and patterns.

If you accidentally cover a smaller object entirely with a larger object, it can easily be retrieved. **Creative DRAWings** will "dig up" objects buried under one or more objects. Instead of having to remove layers of objects in a frantic search, simply select the entire area of objects with your mouse (the cursor is the **Rectangle selection)**, hold down on **Alt** key, and left click on the highlighted area. If at first you don't see the object you want, continue to hold down the **Alt key** and click again and again. When the object you want appears, click on it and pull it off.


**Figure 4.1: Selection information rectangle**

Every time you select an object in the embroidery design, a selection rectangle appears that shows the current selected object. This is helpful for not losing your current selection when you have to work on a complex design. Also, whenever you pass the cursor over the selected object, the dimensions of the selection rectangle appear on each side.

## Rectangle selection

The **Rectangle selection** icon is the top one in the toolbar on the left side of your screen. With this default selection tool, you can make multi-object selections in **Creative DRAWings**. If you want to select a particular object in a design, click on that object. You can draw a rectangle around your entire design by clicking and dragging the mouse from the corner of the screen over your design. All the objects that are completely within this rectangle will be selected.

The whole design can also be selected by holding down the **Alt** key and dragging the **Rectangle** over just a small portion of your design. This is an easier way to select objects which are large and have irregular shape.

You can activate the **Rectangle Selection** tool by clicking on the icon of the standard toolbar. If the Rectangle selection tool is your default selection tool, you can activate it by pressing the **Space** bar.

**Note:**
**You can change the default selection tool from the Tools tab of the Options dialog box that is located under the Tools menu. You can set the Lasso tool as the default selection tool.**

## Lasso selection

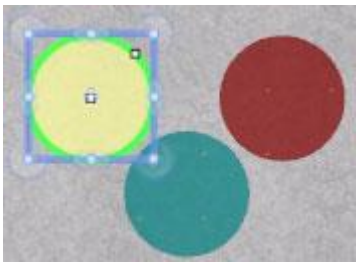
This Lasso tool is the top icon in the toolbar on the left side of your screen. Hold down on **Rectangle Selection** tool, and pull out to activate the **Lasso** tool. With this tool active you can make multi-design object selections. If you want to select an object in a design, click on it. You can also select by clicking and dragging the mouse on the screen to draw a freehand selection line around the objects of the design. All the objects that are completely within this area will become selected. By holding down **ALT** key, you can select most of a design by lassoing only a small portion of the design. The **Alt** key gives you power to select a design in a hurry without having to lasso the entire design. Once you create the **Lasso selection** all objects inside the lines will become selected.

You can activate the Lasso selection tool by clicking on the icon of the standard toolbar. If the Lasso selection tool is your default selection tool, you can activate it by pressing the **Space** bar.

**Note:** You can change the default selection tool from the **Tools** tab of the **Options** dialog box that is located under the **Tools** menu. Currently the default is the **Rectangle selection** tool but you can set the **Lasso** tool as the default selection tool.

## Invert selection

Using this option from the Edit menu, you can invert the object selection, select all **unselected objects,** and vice versa.



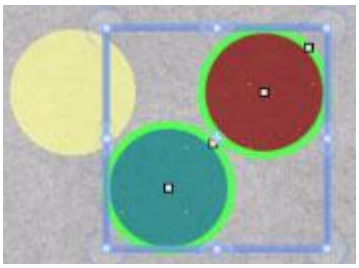


**Figure 4.2: Selection** **Invert Selection**

This option is useful when you want to select a larger portion of a design. Select a small object or group of what you don't want, then choose **Invert selection** to capture the larger portion. You've selected the portion you want in this reverse process.

## Select all

Using this option from the Edit menu, or by clicking the shortcut key Ctrl+A, you can select all the objects in the design.

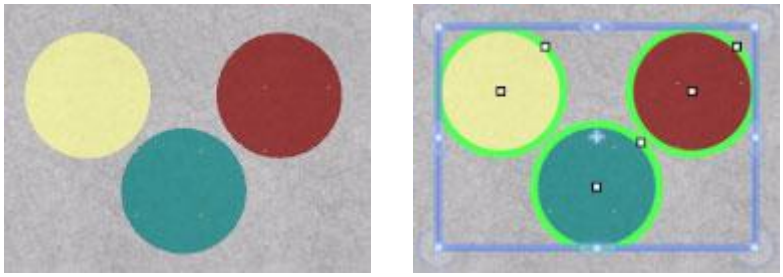


Figure 4.3: None selected Select all

This option is useful when you want to modify all the objects of your design at the same time. Any change will be applied on all selected objects at the same time.

## Select none

You can have none selections, whenever you click with your mouse on the fabric and outside of any design you have created. This function is the opposite of Select all function where you are selecting all the designs in the working area. It is useful when you want to clear your current design selections to make a new selection

## Select by stitch type

With this option you can make selections according to stitch types. Click on **Fill** or **Border/Pen** icon of **Object properties** toolbar and **Add to** your **selection** all embroidery objects of a specific stitch type. After making the selection you want, you can make any embroidery adjustments to your entire selection. All the changes that you will make will be applied in all selected objects.

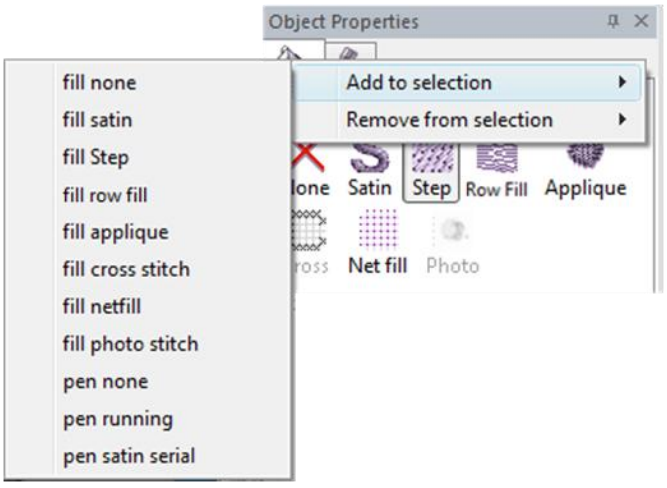



Figure 4.4: Select by stitch type

It is possible, also, to **Remove from** your **Selection** all objects of a specific stitch type by right clicking on **Fill** or **Border/Pen** icon of **Object properties** toolbar and selecting the stitch type you want to be removed. All objects of the selected stitch type will be automatically removed from your selection.

In addition, you can **Add**/**Remove** objects, of a specific stitch type, **to/from** your **selection** by right clicking directly on the stitch type in the **Object properties** toolbar. This option will add/remove all the object of the stitch type you have selected.

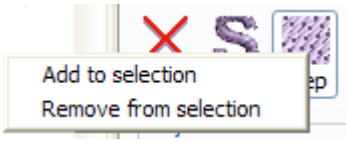



Figure 4.5: Add/Remove to/from selection

This selection tool will help you to make selections easier, especially to a big complicated object, and apply your embroidery changes to your entire selection.

## Select / View overlapping order of vector design

The **Stitch** or **Create** mode of **Creative DRAWings** includes the selection/viewing ability that **Creative DRAWings** has in the designing order of the **Vector** design. The order of objects sews out is nearly the same order as the objects were designed. If you have imported a ready-made **Vector** design, the order will be the nearly the same with the order the designer created the design. If you have created the design from scratch, the order will be nearly the same as the order of creation.

By clicking **Ctrl+Home, Ctrl+End, Tab** and **Shift + Tab** shortcut keys, you can navigate between the objects of the design. The shortcut key has the following functionality:

- **Ctrl+Home:** By pressing the **Ctrl**+**Home** key on the keyboard, the first object of the design will be selected. This object is the first of the vector design.
- **Ctrl+End:** By pressing the **Ctrl+End** key on the keyboard, the last object of the design will be selected. This object is the last of the vector design.
- **Tab:** By pressing the **Tab** key on the keyboard the next object of the design will be selected. If we have not made any selection, the first object of the design will be selected. Each time we press the **Tab** key a different object will be selected, which is the next in the designing order of the vector design. If we continue pressing the **Tab** key, we will continue changing objects, until we reach the last object of the design.
- **Shift + Tab:** By pressing the **Shift + Tab** keys on the keyboard the previous object of the design will be selected. If we have not made any selection, the last object of the design will be selected. Each time we press the **Shift + Tab** key a different object will be selected, which is the previous in the designing order of the vector design. If we continue pressing the **Shift + Tab** key, we will continue changing objects, until we reach the last object of the design.

This selection/viewing ability is very useful when you want to know how the vector design was created and make the needed adjustments to produce the embroidery sequence you prefer.

## Selections by color

Thread palette toolbar includes the ability to select objects by color. This option is very useful when you want to make a change to all objects that have the same color. You can select them and then make the change you want. You can change colors or stitch types to all objects, apply a different style or apply any other option you want. You can select object by Fill color, by Pen (outline) color or simply by color.

To select the objects by color you have to **right click** on the **color** you want from those that are listed on the **currently used area** and from the right click menu, expand the **Select by** submenu, select one of the three available selection options: **Fill color**, **Pen color** and **Any color**.

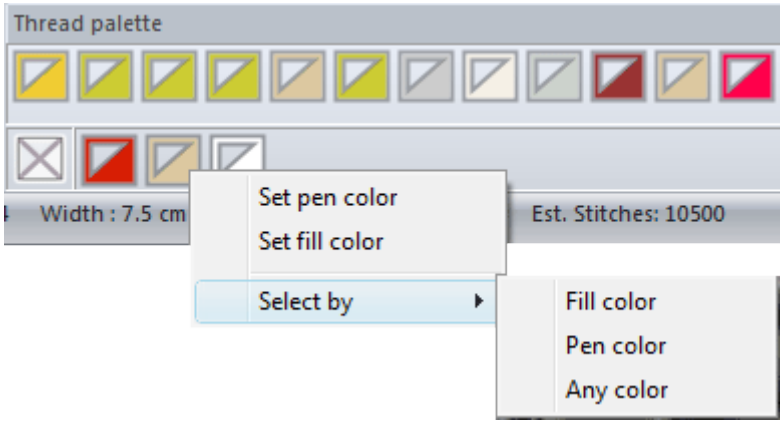



Figure 4.6: Select by color right click menu

If you select **Fill color** option, all objects that have the fill color you right clicked on will be selected.

If you select **Pen color** option, all objects that have the Pen (outline) color you right clicked on will be selected.

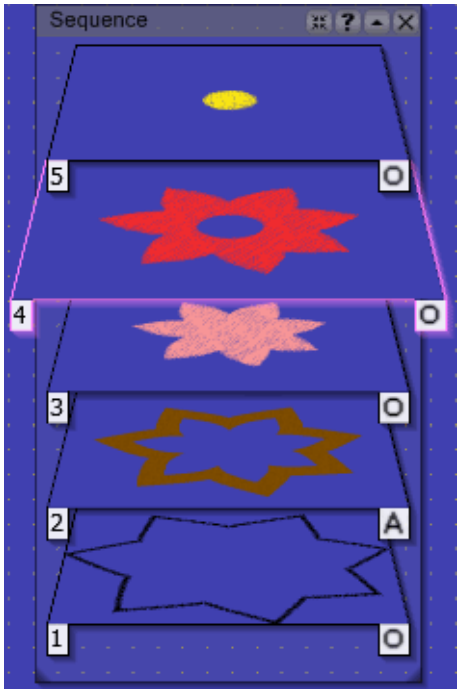
If you select **Any color** option all objects that have Fill or Pen (outline) color you right clicked on will be selected.

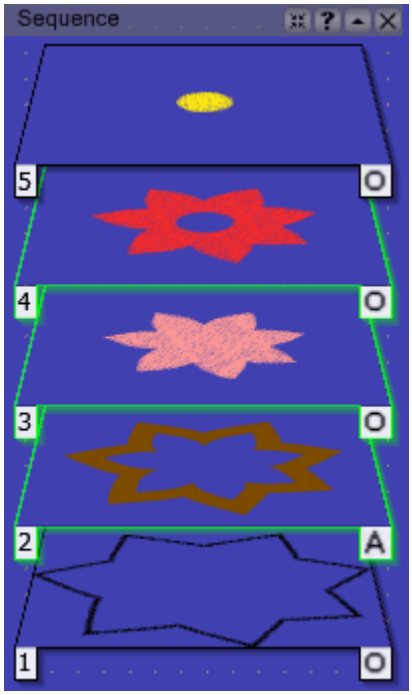
Any change you make on the selected objects, affects all objects.

## Selections in sequence manager

**Sequence manager** is a visual assistance tool that provides a graphical representation of the embroidery sequence. The functionality and capabilities of sequence manager are described later in this manual. At this point we will mention only the selection capabilities that it implements.

Place the mouse anywhere over any item of the **Sequence manager,** you can see an highlighted outline appearing around this item. The highlighted item looks like on top of the other items, revealing that it is currently selected. Click on any item and it gets selected. You can see the specific item selected in the design area with a highlight rectangle around it. We can also select multiple sequence items by holding Ctrl and clicking on the items to be selected.



1 sequence item selected Multiple sequence items selected

# Chapter 5 - View your designs

## Introduction

In this chapter you will learn the different ways to view your designs. You will learn how to Zoom your designs, Measure them or **Move** them around the design area. Also, you will learn how to change **View** modes in your designs. The default view mode is **3D preview**, but you can unclick 3D and you'll see only the stitches of the embroidery design or the outline of the **Vector** objects. In addition, you will learn how to add hoop and guidelines in the design together with how to enable and disable the **Grid** and the **Ruler** of the working area.

## Zoom in

By using this tool you can enlarge the portion of your design to check on details. Select the **Zoom** tool from the **Tools** toolbar and the cursor will become a magnifying glass. Then, click at the point from where you want the new view port to start and drag the mouse holding the left button. The area you marked will be the new view port. Also, you can activate the **Zoom** from the menu View > Zoom >In or by clicking the shortcut **Z**. Either way, the cursor will turn into a magnifying glass.

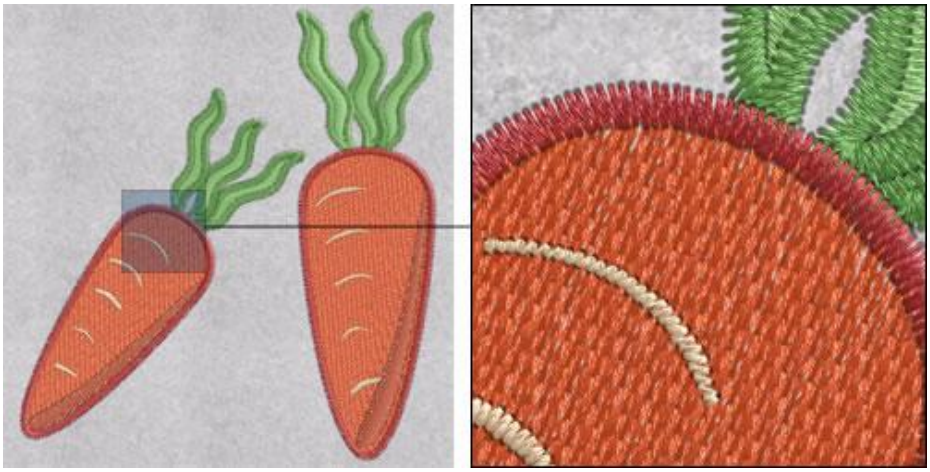


**Figure 5.1:** Rectangle Zoom area New view port

Another way to **zoom in** your design is by using your wheel mouse . If you click anywhere on the screen and rotate the wheel forward , you will see your design zooming in (getting larger).

## Zoom out

To **Zoom out** your design, use your mouse wheel . If you click anywhere on the screen and rotate the mouse wheel backwards , you will see your design zooming out (getting smaller).

Another way to **Zoom out** your design is to Zoom previous

## Zoom previous

Using this option you can get the previous **Zoom** view of your design. The new view port will be the same as it was before the last zoom-in. You can activate **Zoom previous** from the **Tools**

toolbar by click and drag on the **Zoom In** tool  and selecting the **Zoom Previous**  option. By doing that the Zoom Previous tool will become the current on Tools Toolbar and you can change it by following the same procedure. Another way that you can activate the Zoom Previous option is by selecting the View > Zoom >Previous option from the menu or by clicking the shortcut key F3. Another way to **Zoom previous** your design is to Zoom out.

## Zoom all 

Using this option you can view the whole design fitted into the visible screen. You can activate the zoom-all function from the standard toolbar, from the menu View > Zoom >All or by clicking the shortcut key F4. If you have a multi-functional keyboard, make sure that **F** keys are not locked.

## Actual size Zoom 

Clicking on this button in the standard toolbar, you can view the current design in actual size. Also by clicking on the arrow at the right of this icon, you can select one of the zoom presets. The zoom presets that you can choose from are 25%, 50%, 75%, 100%, 125%, 150%, 200%, 250%, 300%, 400%, 500% and 600%.

If you set the exact size of your monitor, from the **Monitor** tab of the **Options** dialog box under the **Tools** menu, every time that you will select the 100% of the zoom presets you will view the design in its actual size. You can also activate the **100%** zoom by pressing the **Shift + 1** shortcut keys.

## Hand tool (pan) 

This tool lets you move a design around your screen like you would move a paper around on a desk with your hand. You can activate the **Hand tool (pan)** function in **Create** or **stitch mode** from the **Tools** toolbar or by pressing the **H** shortcut key. The cursor will change to a hand like the one on the icon and you can use it by clicking and dragging on the screen. In stitch mode you have to click on the  icon that you will find on the **Tools** toolbar.

Another way to **Pan** the working area is by pressing the middle click of the mouse (or the mouse wheel). The mouse cursor will change to a four directional arrow  that shows that you can move the working area to all directions. To move the working area you have to move the mouse slowly to the direction you want. The view port will move, showing you the design to the direction that you are moving the mouse. To close the mouse pan tool, press once more on the middle mouse wheel.

## Measure tool 

The measure tool calculates the distance between any two points in the work area. You can activate the measure tool function from the **Tools** toolbar or by pressing the **F9** shortcut key. With this tool you will be able to measure any time you need to know the size of your embroidery design, or any portion of it.

## View 3D preview

You can enable **3D preview** option from View menu or by pressing **P** key on your keyboard. If the 3D preview selection is checked, the design will be visible in **3D**. By enabling 3D preview, you can have a realistic 3D preview of how the design will look like when it will be embroidered on the selected Fabric. The stitching style, the color of stitches and the way which the design will be

sewed give you the perception of a real embroidered result. In the **3D preview** the threads are much thicker than in the stitches view. The **3D preview** of the design can be enabled-disabled both in **Create** or **Stitch** modes.

**Figure 5.2: 3D preview mode**

If you are working in a close-up zoom, the stitches and the gaps between them may be displayed larger on the screen, but in reality the gaps are too fine to view them. In the **Preview** area, the **Fabric** and its **Color** can be changed from the Select fabric button on the standard **Toolbar** or from the menu Tools > Select fabric option. The only option that is not available in **3D** mode is stitch points view.

## View outline design

You can access **Outline Design** from View menu. With this option enabled, you can view the outline in the **Preview** when you deactivate **3D preview**.

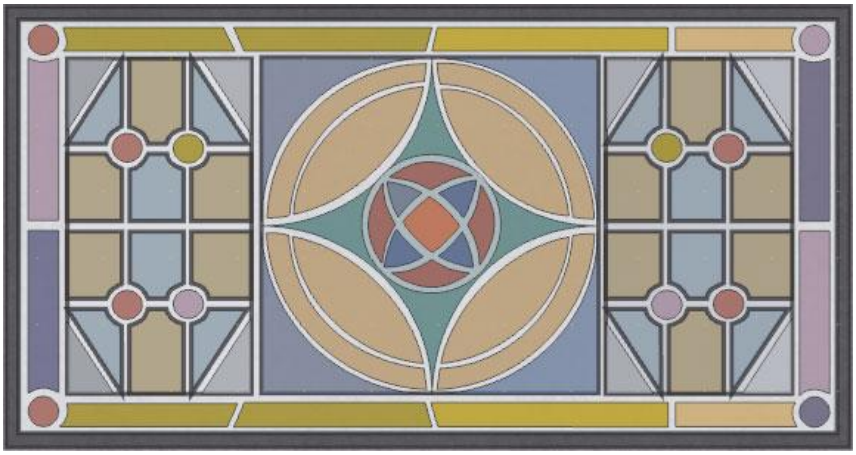


**Figure 5.3: Outline preview**

With the 3D preview option enabled, the outline will not be clearly visible because it will be located behind the embroidery design. The **Outline View** is useful when you want to change the **Vector** artwork of the design. This view also makes it easier to see all of the parts in the design and to make adjustments.

## View stitches

You can enable **stitches** option of View menu or by pressing **G** key on your keyboard. When this option is enabled, the **Stitches** of the design are visible.

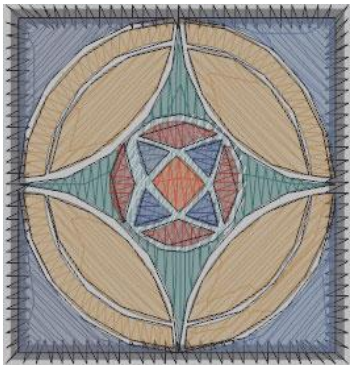


Figure 5.4: Stitches preview mode

With this option enabled in **Create** or **stitch** modes, you can view the direction, the density, and the style of stitches in the overall design. A change in the design has an impact on the way that the stitches will be placed. All the recalculations are automated, which means that no further action is required on your part. You can view the stitches of the design and edit the shape of the object at the same time.

## View Stitch points

You can enable Stitch points from View menu. While Stitch points is active, **3D preview** will be disabled. To activate this option you have to disable **3D preview** option first.

Figure 5.5: Thread penetration point view

Stitch points are the points where the machine's needle bores the fabric. With this view, you can distinguish the stitch length, density, and bore points.

## Thickness view

This option is very useful in order to create professional looking designs. Stitches that fall on top of other stitches don't create nice embroidery. We may intentionally want to let this happen in order to create a special effect. But in the majority of cases we want to know if more than one layer of stitches fall, one on top of the other, in order to prevent this.

You can enable this option by using the respective option of **View** menu. When this option is enabled **3D preview** is disabled. In order to return to the previous view of the design you must disable this option.

In Thickness view we can see the design items painted in various colors according to the embroidery that is placed on top of it. When only a layer of embroidery falls on a part, we can see this part with green color, 2 layers of embroidery-yellow color, 3 layers of embroidery-orange color and too many layers of embroidery-red color. This way we can easily find and correct all the areas that have too much overlapping stitches.

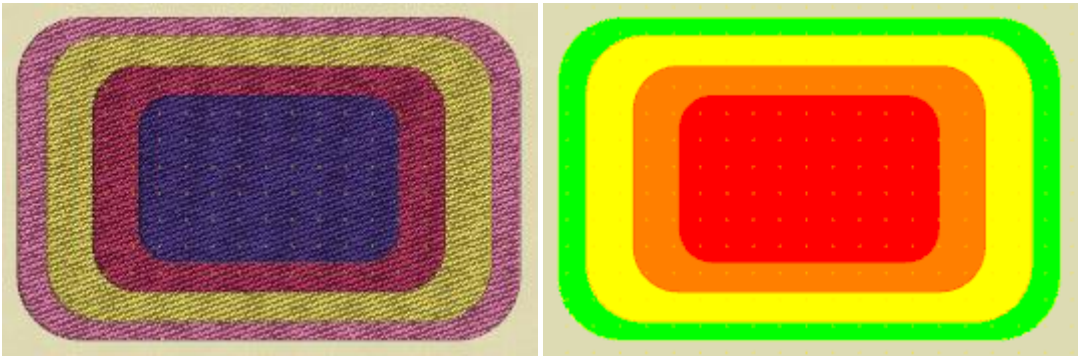


Figure 5.6: Overlapping objects Thickness View

## Set light source

You can activate Set light source from View menu. The **Adjust light** dialog will appear from where you can change the light source of the embroidery's 3D preview. The option of Set light source becomes available only if you are working in 3D preview mode (View➔Preview 3D). It is a 3D tool that gives you the ability to illuminate your design from different angles.

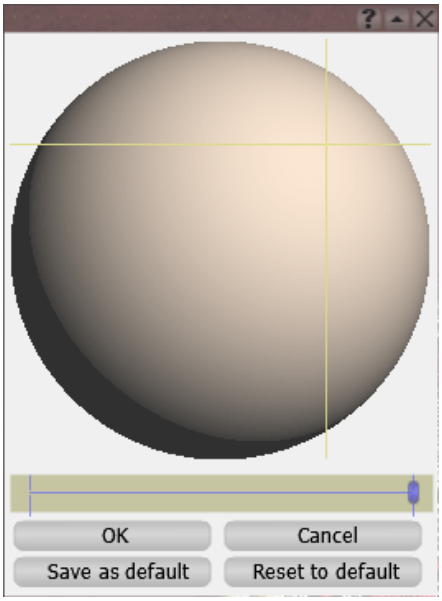



Figure 5.7: Light source globe

If you activate the Set light source, the Adjust light dialog will appear with a 3D ball in it. The light source changes by moving the crossed lines to the position you want the light to come from or by click and dragging on the ball to the position you want the light to be. The yellow crossed lines show where the new light source will be and the blue their initial position.

Another option that you can adjust in the dialog is the **Intensity** of the light that illuminates the threads. By click and dragging the **Intensity** bar to the left the light decreases and to the right the light increases. Select the amount of light you want to illuminate your embroidery designs and click **OK** button to apply the changes you have made to the dialog.

The best way to make the adjustment accurately is by having an embroidery design loaded prior activating the **Set light source** option. Any change you are making inside the **Adjust light** dialog it is immediately previewed on the design allowing you to make accurate adjustments.

We can also use **Save as default** option in order to save current light source as the default for every design. Once a default value is selected and saved as default it will be used for every new design. You can also use Reset to default in order to reset the light source to the default value.

## View Ruler

You can enable/disable Ruler from View menu. Check the **Ruler** selection in order for the Ruler to become visible around the working area.

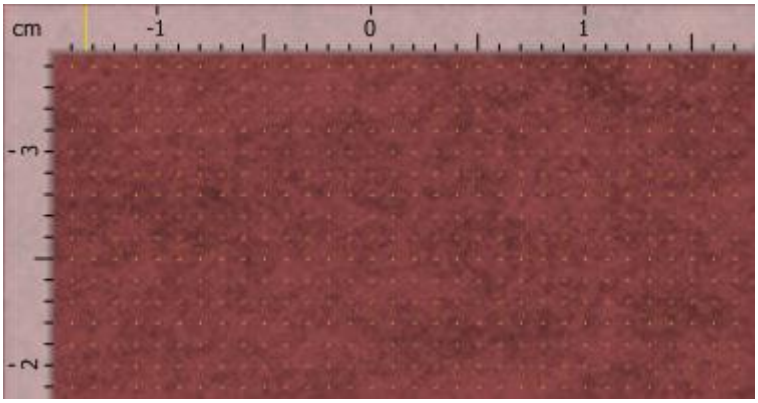



**Figure 5.8: Ruler**

The **Ruler** appears at the left and top sides of the working area. It is transparent and becomes solid only if you place the mouse on it. The ruler shows the values of virtual X and Y axes based on centimeter or on inch values. The 0 on X axis and the 0 on Y axis in the starting point of the axes. The values on the ruler are changing based on the zoom you are using to view the design.

The ruler can help you draw, size and align the objects precisely and create the design you want.

In case you select "US" measurement system, from Tool➔Options➔General tab the ruler will show information in **US**(inches) and not **Metric**.

## View Grid

You can enable-disable Grid from **Tools** menu. Check the **Grid** selection and it'll appear in the working area. The **Grid** appears as small symmetrical dots across the working area in vertical and horizontal lines. If you have the **Ruler** option enabled from the **View** menu, the horizontal lines will be aligned on the ruler values allowing you to draw, size, and align the objects precisely.

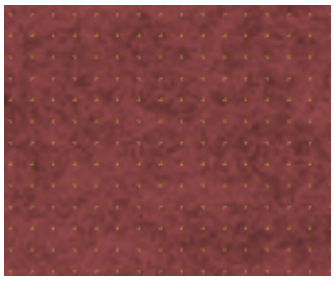


**Figure 5.9: Grid**

The values of the **Grid** changes with the values of the **Ruler** and both change with **Zoom in** or **Zoom out.** Therefore, it is better to have the **Ruler** option enabled while working with the **Grid**. Also, it is good practice to use **Zoom presets** (100%, 200%, etc.) while designing based on a **Grid** to create precise adjustments.

## View Hoop

When creating a design we may select to use a hoop to preview the design on or not. At any point we can change the selected hoop or add one using change hoop icon  or by using **Change Hoop** option from **Tools** menu.

In order to temporary hide the selected hoop we can enable-disable hoop option of view menu. If this option is deselected the hoop is not visible. If it selected then it is visible. In case this option is disabled it means that no hoop is selected for the design so you must select a hoop.

The **Hoop** in **Creative DRAWings** is very useful because it will make sure that the design which you are creating will fit on your embroidery machine hoop. There is a variety of hoops from which you can select and you can even add your own. More information about how to work with hoops you can find at Chapter 7 in the **Change hoop** section.

## View active designs (Windows)

**Windows** tool, is a supportive tool, located under Window menu, where you can view all the designs that are currently loaded. Some extra window handling and file saving functionality is also provided. By selecting Windows option of Window menu you activate the dialog that is shown in the following figure.

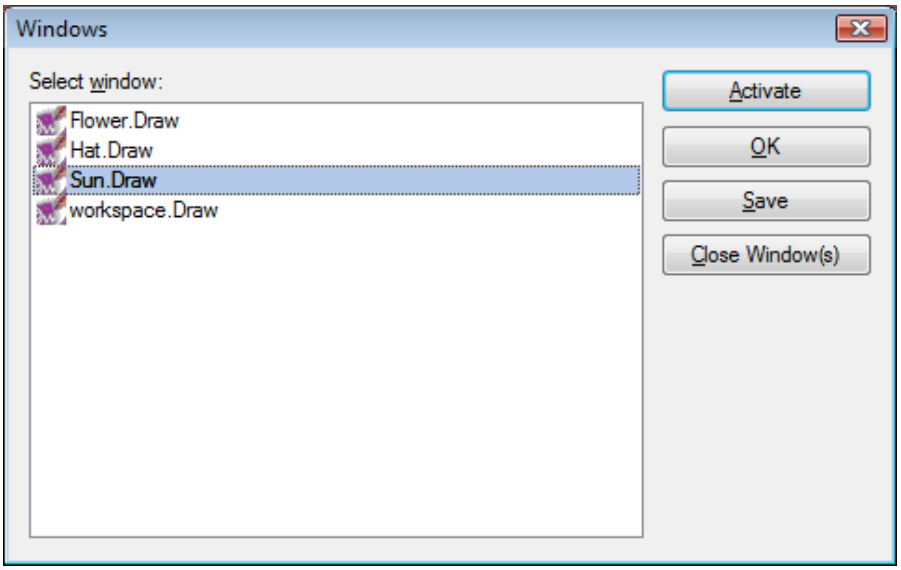



**Figure 5.10: Windows dialog**

In section **Select window** you can select any window that you like to be active. Highlight **workspace.draw** and then you have a number of choices provided. Make this design active by pressing **activate**. The dialog closes and the selected design is the active design in the design area.

You can also save loaded designs. Select any design from select window list, then press **Save** button. If the selected design has been previously saved, it will be saved into the same location, otherwise it will prompt you for a location to save.

Finally you can select to close designs. Select a design and by pressing Close you close the selected design. If the design hasn't been saved previously you will be prompted to Save or Discard the design.

In any of the above operation you can select more than one designs by pressing **Ctrl** and then by clicking one by one the designs that you want to select.

## Slow redraw (Shift+F11)

A very valuable step before turning on your embroidery machine in order to embroider for first time, any of your designs is a simulation like process. **Slow redraw** provides an automated way to simulate the embroidery process. Move through objects stitches and preview the placement of every stitch. It's a good chance to correct any detail on your design.

You can enter slow redraw mode by using **Shift+F11** keyboard shortcut or by pressing slow redraw icon on tools toolbar. While using **Stitch mode**, you can also use the arrow keys on your keyboard in order to navigate through objects-stitches. The **Right** and **Left** arrow keys are simulating the design **stitch by stitch** and the **Up** and **Down** keys object by object.

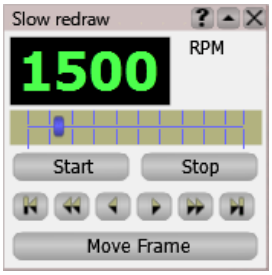



**Figure 5.11: Slow redraw dialog**

In order to start **Slow redraw**, press its icon on **Tools** toolbar. The following dialog appears on top of the design area.

**Slow redraw** dialog consists of 5 parts

- **Title bar**, provides window handles
- **Simulation speed** track bar, adjust simulation speed
- **Start-Stop** simulation
- **Move through objects-stitches**
- **Simulation view options**

We will describe each part and its description on the following sections.

**Title bar**, On the top of the dialog you can see its title bar. 

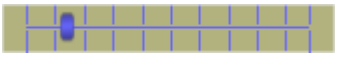
The **title bar** contains some controls to help manage the position and the size of the dialog. **Click and drag** on the title bar in order to move the dialog in any place you like.

**Help** , click on this icon the cursor turns into a question mark. Click on any of the components of the dialog and the available help about the control will appear.

**Minimize** , Press this icon to minimize the dialog. It stays at the same place but in minimized state. Press it again in order to view the dialog in full mode.

**Close** , Press on this icon to close the current dialog.

**Simulation speed**, On this part you can see and adjust the simulation speed. Click and drag this track bar to select the speed of the simulation.

| | |
|---|---|
|   | **The machine speed that you select on the track bar shown in numeric format.** |
|  | **Simulation speed track bar, Select the speed of the simulation. It looks like you are selecting your embroidery machines speed. Simulation speed can between 100 and 9900 RPM** |

## Start-Stop simulation

| | |
|---|---|
|   | **Start the simulation, if simulation has been stopped you can resume from where you have stopped.** |
|   | **Stop the simulation.** |

## Move through objects-stitches

In this part you can move through object-stitches using the navigation buttons  . These buttons help you to select the object or the stitch that you want.

| | |
|---|---|
|  | **Design start**, go to the first stitch of the design. |
|  | **Previous object**, go to the first stitch of the design. |
|  | **Previous stitch**, move to previous stitch. |
|  | **Next stitch**, go to next stitch |
|  | **Next object**, move to the first stitch of the next object |
|  | **Design end**, go to last stitch of design |

## Simulation view options

At the bottom part of the dialog you can select the view mode of slow redraw

| | |
|---|---|
|   | **Preview simulation with the frame moving, as it is in real embroidery process.** |
|   | **Preview simulation with the head of the embroidery machine moving.** |

## Using Slow redraw

Press **Start** button to begin the visual simulation. In case that no object-stitch is selected, the simulation will start from the start of the design. You can stop the simulation by pressing **Stop** button or press **Esc** key on your keyboard. After stopping the simulation, you can always start over and continue from the stitch you left the simulation.

Use the track-bar on the upper part of the dialog to adjust simulation speed. While using the track-bar you can see the selected speed above the track bar.

You can always use **move through object-stitches** buttons together with slow redraw tool in order to navigate through object/stitches.

Finally with the button at the bottom the dialog you can switch between **Move head** or **Move frame** mode. By default the dialog starts in **Move head** mode. When move head is pressed you can see the head of the embroidery machine moving along the design simulating the embroidery process. In case you select **Move frame**, the head stays at the same place and the design (Frame/hoop) moves in such a way in order to pass under the head to be embroidered.

# Add Guidelines

When you are creating a design in **Creative DRAWings** it is sometimes useful to add a guideline to help in aligning the objects. The three guidelines in **Creative DRAWings** are **Vertical**, **Horizontal,** or **Diagonal**. To make the lines visible, go to **View>** and check **Guideline options**. If the option is unchecked, the guidelines will not be visible on the working area.


**Figure 5.12: Guidelines menu**

## Horizontal Guidelines

To add a **Horizontal Guideline,** left click on the **Horizontal** ruler and drag a dotted line down to the position you want in your working area. You can also get a **Horizontal** line with a right click on the **Vertical Ruler> Add new guide> Horizontal Guideline.** The **Horizontal Guideline** will be inserted exactly in the position you right clicked on the **Ruler.** You can reposition your inserted **Horizontal Guideline** by clicking and dragging it to where you want it, or you can drag is back to hide behind the **Ruler**.

## Vertical Guidelines

To add a **Vertical Guideline,** left click on the **Vertical Ruler** and drag a dotted line over to the position you want. You can also get **Vertical Ruler** by right clicking on **Horizontal Ruler> Add new guide> Vertical**. The **Vertical Guideline** will be inserted exactly in the position where you right clicked on the **Ruler.** You can reposition the inserter **Vertical Guideline** by clicking and dragging it to the position you want, or you can hide it behind the **Vertical Ruler** again

## Diagonal Guidelines

To add a **Diagonal Guideline**, right click on the **Ruler** and when the pop-up **Add new Guide** appears**,** select **Diagonal** option. The **Diagonal Guideline** will be inserted exactly in the position where you right clicked on the **Ruler**. You can reposition the inserter **Diagonal guideline** by clicking and dragging it from the middle to the position you want. If you position the mouse over the diagonal guideline far from its center, the cursor will change to rotation icon allowing you to rotate the diagonal guideline by clicking and dragging it. The guideline will rotate by displaying the current angle next to the cursor.


**Figure 5.13: Diagonal Guideline during rotation**

If you hold the **Crtl** key pressed while rotating the guideline, it will snap on every **22.5°** to make precise rotation of the guideline.

## Guideline options

Guidelines have some options which are useful in creating and editing embroidery designs. You can adjust the **Guideline options** before or after adding lines on the working area. To adjust the **Guideline options,** right click on the **Ruler** and left click on one of the options: **Guidelines visible**, **Snap enabled, Lock guidelines.**

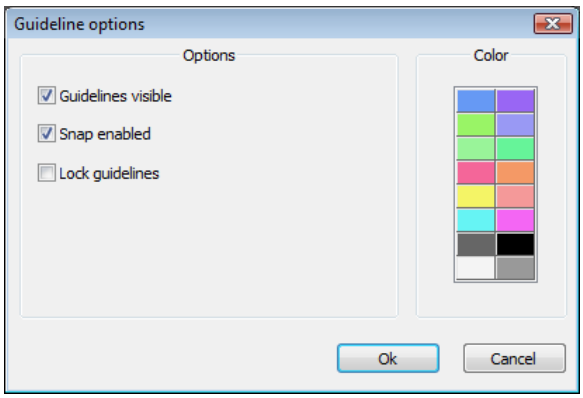



**Figure 5.14: Guideline options dialog**

From the **Guideline options** dialog, you can set the following options:

**Guidelines visible:** With this option, you can choose to have the guidelines visible or not. To make the guidelines visible, click **View> Guidelines visible**. To confirm the changes, press the **OK** button and the changes will be applied immediately.

**Snap enabled:** With this option, the objects of a design will align automatically to a guideline. To make your objects snap to the guidelines, check the **Snap enabled** option. By default the **Snap enabled** option is disabled. To confirm the changes you made press the **OK** button and the changes will be applied immediately.

**Lock guidelines:** With the **Lock guidelines** option, you can lock the guidelines. The accidental movements of guidelines will be avoided. If you keep the **Lock guidelines** option unchecked, you will be able to move or add guidelines on the working area. To confirm the changes you made press the **OK** button and the changes will be applied immediately.

Hoop guidelines are permanently locked and cannot be unlocked.

**Change Color:** From the **Color** list at the right side of the dialog you can select the color of the guidelines. If the color you prefer is not on the list, you can find it by double clicking on any color. A graduated color image will appear.

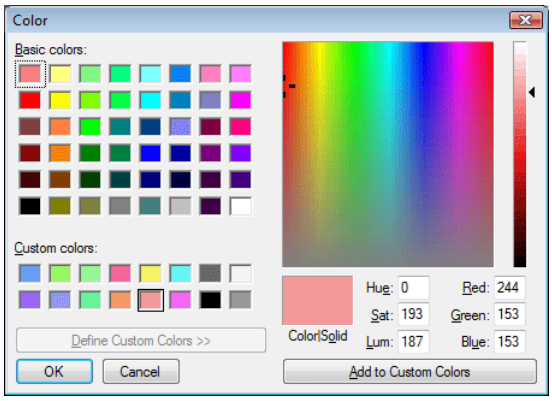



**Figure 5.15: Choose color**

Select the color you want and click on **OK** button to confirm your selection. The color you selected will take the place of the color you double clicked on the **Color** list. To confirm the changes you made press the **OK** button. The color of the guidelines, which will become the color you selected, is very useful when the **Fabric** color is similar with the color of guidelines.

## Working with guidelines

All inserted guidelines inside the software have snapping and aligning abilities that can be found very useful when you are designing inside ***Creative DRAWings***. All objects can snap on **Horizontal** and **Vertical** guidelines that you have placed on the working area while moving the objects towards them. This is very useful when you want to align the objects of the design to specific position and makes you life easier while designing. Also, it is possible to do the opposite and move the **Horizontal** and **Vertical** guidelines towards the objects and be able to snap on its edges/sides. Finally, the guidelines have snapping abilities based on the Grid of the working are that allows you to position them exactly where you want them.

The snapping and aligning abilities of the Guidelines are the following:

If you click and drag any **Horizontal**/ **Vertical** and **Diagonal** guidelines towards a selected object, they will snap on every control handle that the object has on its selection rectangle.

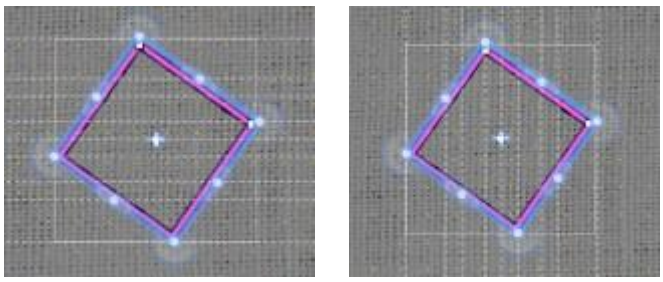


Figure 5.16: Guidelines Snap on Handles

If you hold the **Alt** key from the keyboard pressed while dragging **Horizontal** and **Vertical** guidelines, they will snap on every step of the **Grid**(if the Grid is enabled from **View>Grid** menu option).

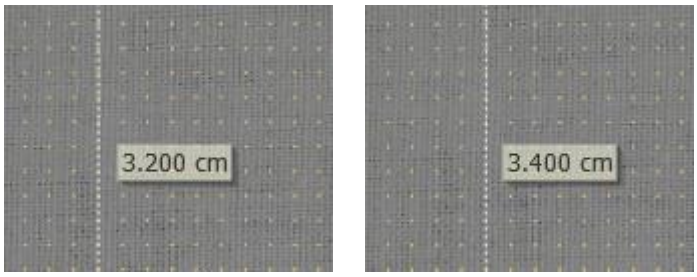



Figure 5.17: Guidelines will snap on every step of the Grid

If you hold the **Ctrl** key from the keyboard pressed while dragging **Horizontal** and **Vertical** guidelines, they will snap on every one millimeter movement.

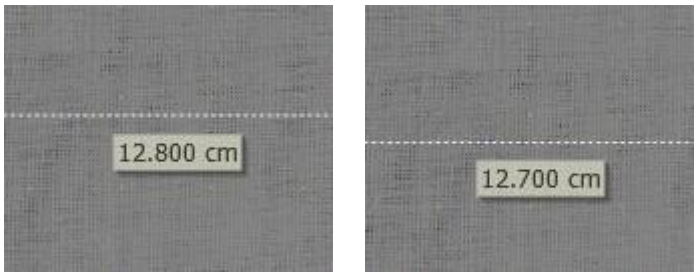



Figure 5.18: Guidelines snap on every one millimeter movement

Also, if you hold the **Ctrl** key from the keyboard pressed while rotating **Diagonal** guidelines, they will snap on every $22.5^{o}$ degrees.


Figure 5.19: Diagonal Guidelines snap on every $22.5^{o}$

Finally If you hold the **Shift** key from the keyboard pressed while dragging **Horizontal** and **Vertical** guidelines, all snapping abilities will be canceled. The guidelines will not snap at all and you will be able to move them freely.

All this snapping and aligning abilities can help you create perfect designs.

# Chapter 6 - Designing tools

## Introduction

In this chapter we will learn about the **Designing tools** of **Creative DRAWings** and how to use them to create **Vector** designs which can be converted into stitches. The designing tools can be found only inside **Create** mode of **Creative DRAWings**. The available **Designing tools** are the **Freehand** tool, the **Bezier** tool, the **Outline shape** tool (digitizing tool), the **Create** shapes tool, the **Text** tool and the **Insert symbol** tool. By combining these powerful designing tools you can create outstanding designs.

## Tools toolbar

The most important designing elements in **Creative DRAWings** are in the Tools toolbar at the left side of your screen (inside Create mode). You can change the toolbar's location by clicking and dragging it to a location you prefer.

All the designing tools of **Creative DRAWings** are found in these **Tools** icons. Several tools have fly-outs which are activated by clicking on the little black arrows on the icons. The tool which you click on will become active and will replace the previous option in the **Tools toolbar**. Four of the tools have extra icons on the fly-outs of the **Tools toolbar**.


**Figure 6.1: Tools toolbar**

The **Tools** toolbar changes according which design mode you are currently viewing. The **Tools** toolbar in the **Create** mode include all tools that are available in the **Stitch** mode and some designing tools (only inside **Create** to **stitch** mode combination). Some tools appear only if the **Stitches** (option **Stitches** form **View** menu is enabled) are visible on the design.

The available tool categories that exist on Tools toolbar are the following:

- **Selection tools**
- **Shape editing tool**
- **Zoom tools**
- **Stitch editing tools**
- **Measure tool**
- **Designing tools**
- **Shape insertion**
- **Text insertion**
- **Array tool**
- **Auto border**

In this section we will analyze only the designing tools that are available in the Tools toolbar such as **Designing** and **Shape insertion** tools.

## Drawing tools

On Tools toolbar there are three available designing tools. These are Create **Freehand** shapes, Create **Bezier** shapes and Create **Outline** shapes. Only one of the 3 tools can be active on the toolbar each time. Click and hold on the current tool icon  in order to view all items. While holding left key pressed, you can move the cursor on top of the tool that you want to select. Release the mouse and it is selected. The tool is now active; use it to design any shape you like. The selected tool has become the current one and you can use it to create the shape you want.

## Create Freehand shapes

With the Freehand tool  you can design **simple lines** or **complete shapes**. In order to create simple lines, select the freehand tool  or press the **F5** key. Now that the tool is active, click once on the working area. This is the starting point of the line. Click once more to define the end of the line. By following the same steps you can add more lines and create the design you want.

If you want you can continue the straight line you have created by inserting another straight line that will start from the start/end of the existing line. To do that you have to position the cursor over the ending/starting point of the existing line and see the cursor image changing. This change of the cursor informs you that you can continue designing a line from that point. Click to set the starting point of the line to be the same with the starting/ending point of the current line and then click on the position you want the line to end. By following the same steps you can continue entering straight lines at the end of the same shape and if you want make it a closed shape by connecting the last node with the first node.

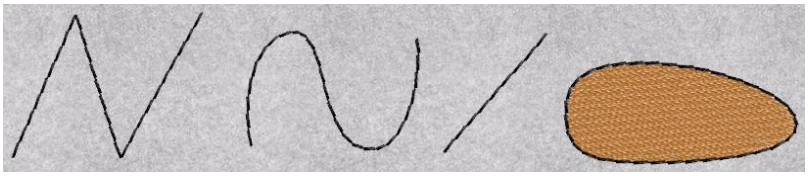


**Figure 6.2: Connected lines - Freehand curve - Straight line - Closed shape**

Using the **Freehand** tool you can also make freehand designs like those you are drawing on a piece of paper. To do that you have to click and drag with the mouse on the working area until you have created the shape you want. You can create a closed shape by click and dragging with the freehand tool and end at the same point you have started. A closed shape will be created with fill and outline color. If the design you have created does not have a fill color this means that it is an open shape (line art design) or its fill color property in **Thread palette** toolbar is set to none.

When you have finished one object you can continue creating the second one and so forth, but all of them will be part of the same object (all object will be joined/combined). This means that every shape you are creating without ending the designing process (by right clicking once) of the object will be member of the same object even if those objects are totally different. If you do not want them to be joined/combined you can select the objects with any selection tool and from the right click menu select **Break apart** option that will separate the designed objects.

If you want to create objects as different entities you have to create the first object with the Freehand tool and then right click once to end the creation of the first object. The created object will be highlighted and you will be able to continue by designing the second object. Important to remember is that whenever you want to end the creation of an object you have to right click once. To completely end the designing process with the **Freehand** tool you have to select any selection

tool from the Tools toolbar. In same way as with lines you can continue with another part on previous item by placing the mouse over the start-end point of the previous one. The cursor changes somehow to reveal that you can continue the shape.

The way that the Freehand tool works it is helpful to create holes inside the shapes you are creating. For example if you want to create a wheel shape you have to draw the outer circle and then draw the inner smaller circle.

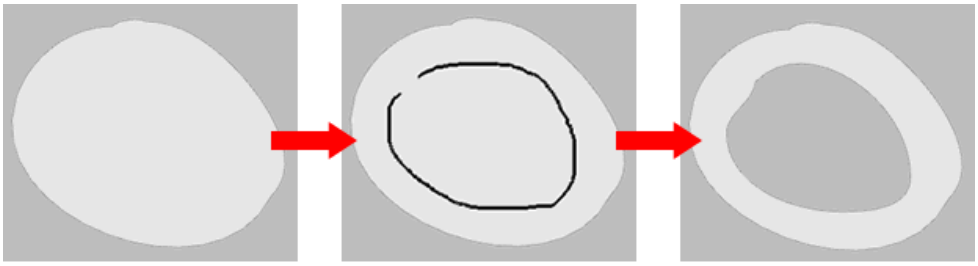


**Figure 6.3:** **Closed shape** **Design hole** **freehand hole created**

When the designing of the inner circle is finished, a hole will be created inside the bigger circle. This functionality is very helpful when you are drawing shapes over a bitmap backdrop.

While using **Freehand** tool to create a freehand shape you can hold the **Shift** key down to make the curves you are drawing smoother. This ability helps to make the design easier.

If you hold the **Ctrl** key pressed while drawing with **Freehand** tool, guidelines will appear on every 22.5 degrees of the X and Y axes. When you press the **Ctrl** key the object automatically moves/snaps on the closest guideline. While drawing, the object it will snap on the guidelines, allowing you to draw the curve object along the guidelines. The guidelines that appear have as center the point from where the freehand curve you are drawing starts.

If you hold the **Alt** key pressed while drawing with Freehand tool, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While drawing the curve object it will snap on the guidelines, allowing you to draw straight lines along the guidelines. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw a line to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

Also, when you select the **Freehand** tool, the **smoothness level** option appears on **Tools options** bar. With this tool you can set the smoothness level of the freehand artwork that you will create. The scale of smoothness level option is from 0 to 10 and can be adjusted by entering the value you want on the respective field or by using the increase/decrease arrows next to the field. If you set the smoothness level value to 0 the freehand curves that you will draw will have a lot of nodes and its curvature will not be so smooth.

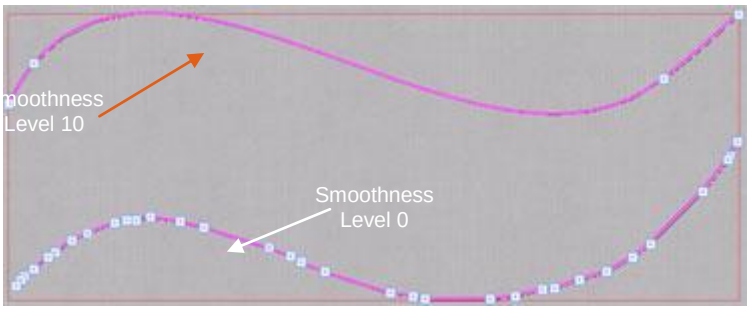



**Figure 6.4: Freehand – Smoothness Level**

On the other hand if you set the smoothness level value to 10 the freehand curves that you will draw will have the minimum nodes needed and its curvature will be smooth. Middle range values have average smoothing effect on the drawn curves. The **Smoothness level** options must be set before the creation of the curve you want to use.

Finally, while drawing a shape and you make a mistake, you can press the **Backspace** button from the keyboard and delete the last inserted section until the previous node. If you want you can delete more of the design by pressing the Backspace button again. You can continue drawing the shape from that point and finish the shape you want to create.

## Create Bezier shapes

With the **Bezier** designing tool  you can create shapes where you can handle better the curvature of each segment easier by adjusting the control handles of each inserted node.

To draw a curve you have to select the **Bezier** tool from tools toolbar or by pressing the **Shift + F5** shortcut keys from the keyboard, define the first node by clicking on the working area once, move the mouse to the position you want the second node to be placed and by click and dragging at that position you can define the second node and adjust the curvature of the segment by moving the control handles of the node. Release the mouse button to confirm the segment you have added and continue with the next one by following the same procedure.

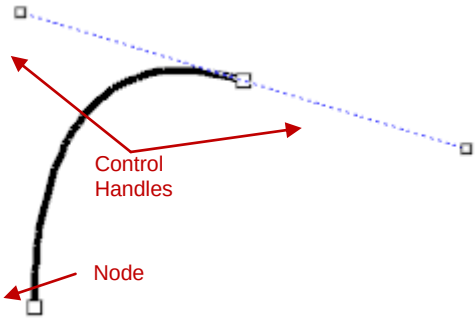



**Figure 6.5: Bezier tool**

If you want to add a straight line you have to define the first node or continue from an existing one and then the second node by clicking once more to the position you want. A straight line will be inserted connecting the two nodes. You can continue the shape by either inserting straight lines or curves.

You can create a closed shape by connecting the last node with the first node you have inserted.

While creating a shape you can **end** the design by **right clicking** once and continue with the next shape that will belong to the same object. This means that the first shape you have created together with the second shape that you will create will belong to the same object. This ability is very useful when you want to create embroidery designs, because it is really easy to create holes in any shape that will not be filled with stitches. For example if you want to create a wheel shape you have to draw the outer circle and then draw the inner smaller circle. When the designing of the inner circle is finished, a hole will be created inside the bigger circle. This effect is very useful also when you want to create a design based on bitmap backdrop.

If you have created such an object and you want to separate it to its sub-shapes you have to select it with any selection tool and from the right click menu select **Break apart** option. The complex object will be separated to its sub-objects and you will be able to edit them separately.

In addition, if you want each closed shape or line art shape you are creating to be a separate object you have to right click once to end the designing process of the closed shapes and twice for the line art shapes. After ending the first shape you can continue with inserting the second that will be a separate object. You can continue the same process and add more objects that will shape your design.

While inserting nodes with **Bezier** tool and you think you made a mistake you can delete as many nodes as you think you need to by pressing the **Backspace** form the Keyboard. Each time the Backspace is pressed the last node that was inserted is deleted. You can continue designing the object from the node you want.

Another useful ability that Bezier tool has is that you can move the position of the last inserted node during designing. To do that you have to hold the **Shift** key down after inserting the last node and while you are moving the control handles of the node, you can move the node to the position you prefer. By releasing the shift key you will be able to adjust the control handles of the node once more from its new position. All the adjustments must be made by keeping the left mouse click continually pressed.

If you hold the **Ctrl** key pressed while drawing with **Bezier** tool, guidelines will appear on every 22.5 degrees of the X and Y axes. When you press the **Ctrl** key the object automatically moves/snaps on the closest guideline. While drawing, the object it will snap on the guidelines, allowing you to draw the curve object along the guidelines. The guidelines that appear have as center the point from where the Bezier curve you are drawing starts.

If you hold the **Alt** key pressed while drawing with **Bezier** tool, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While drawing the curve object it will snap on the guidelines, allowing you to draw straight lines along the guidelines. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw a line to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

Finally, with the Bezier tool you can continue the line art you are creating from the first or last node. You can do that when you have created a line art/curve shape and you have right clicked once to end the creation of the shape (If you right click twice you end the designing process of the object, and you cannot continue the line art shape). To do that you have to position the cursor over the ending/starting point of the existing curve and see the cursor image changing.

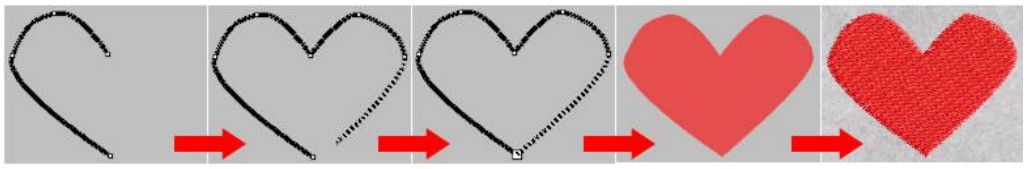


**Figure 6.6: First part - Second Part – Closing shape - Filled with color - Fill stitches**

This change of the cursor informs you that you can continue designing a curve from that point. Click to set the starting point of the curve to be the same with the starting/ending point of the current line/curve and then click on the position you want the line/curve to end. By following the same steps you can continue entering lines/curves at the end of the same line art shape and if you want make it a closed shape by connecting the last node with the first node.

## Create Outline shapes

The create **Outline** tool  (Digitizing tool) is based on the **Bezier** tool with the difference that the lines that you are creating are by default curve based. With the outline tool you can draw lines and curves by specifying their nodes and altering the curvature of their segments by adjusting their control handles.

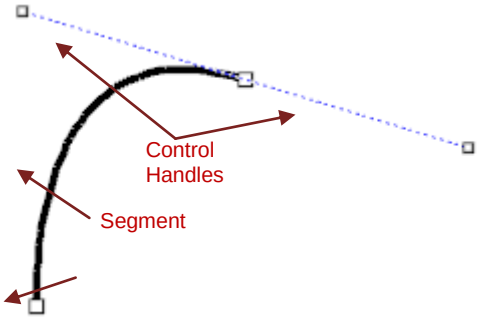



**Figure 6.7: Outline tool**

To **draw a curve** you have to select the **Outline** tool  from the Tools toolbar or by pressing the **Ctrl + F5** shortcut keys, define the first node by clicking on the working area once, move the mouse to the position you want the second node to be placed and by click and dragging at that position you can define the second node and adjust the curvature of the segment by moving the control handles of the node. Release the mouse button to confirm the segment you have added and continue with the next one by following the same procedure.

If you want to add a **straight line** you have to define the first node or continue from an existing one and then by holding the **Shift** key down, the second node by clicking once more to the position you want. A straight line will be inserted connecting the two nodes. You can continue the shape by either inserting straight lines or curves.

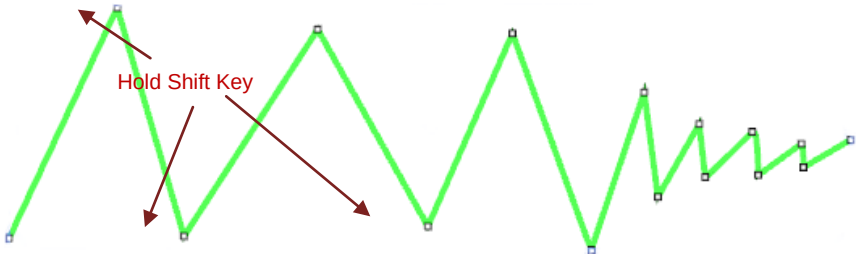



Figure 6.8: To draw straight lines hold **Shift** key pressed

You can create a closed shape by connecting the last node with the first node you have inserted.

While creating a shape you can end the design by right clicking once and continue with the next shape that will belong to the same object. This means that the first shape you have created together with the second shape that you will create will belong to the same object. This ability is very useful when you want to create embroidery designs, because it is really easy to create holes in any shape that will not be filled with stitches.

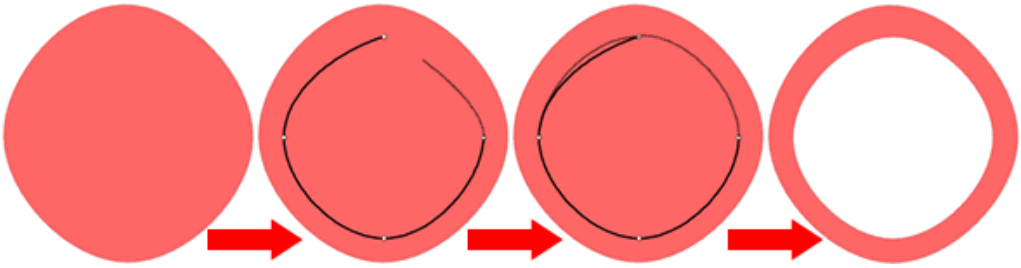


Figure 6.9: Closed shape - Design hole - Close hole shape - Hole created

For example if you want to create a wheel shape you have to draw the outer circle and then draw the inner smaller circle. When the designing of the inner circle is finished, a hole will be created inside the bigger circle. This effect is very useful also when you want to create a design based on bitmap backdrop.

If you have created such an object and you want to separate it to its sub-shapes you have to select it with any selection tool and from the right click menu select **Break apart** option. The complex object will be separated to its sub-objects and you will be able to edit them separately.

In addition, if you want each closed shape or line art shape you are creating to be a separate object you have to right click once to end the designing process of the closed shapes and twice for the line art shapes. After ending the first shape you can continue with inserting the second that will be a separate object. You can continue the same process and add more objects that will shape your design.

While inserting nodes with Outline tool and you think you made a mistake you can delete as many nodes as you think you need to by pressing the **Backspace** form the Keyboard. Each time the Backspace is pressed the last node that was inserted is deleted. You can continue designing the object from the node you want.

Another useful ability that **Outline** tool has is that you can move the position of the last inserted node during designing. To do that you have to hold the **Shift** key down after inserting the last node (If you press the Shift key before inserting the last node it will insert a Cusp node and draw a straight line) and while you are moving the control handles of the node, you can move the node to the position you prefer. By releasing the shift key you will be able to adjust the control handles of the node once more from its new position. All the adjustments must be made by keeping the left mouse click continually pressed.

If you hold the **Ctrl** key pressed while drawing with **Outline** tool, guidelines will appear on every 22.5 degrees of the X and Y axes. When you press the **Ctrl** key the object automatically moves/snaps on the closest guideline. While drawing, the object it will snap on the guidelines, allowing you to draw the curve object along the guidelines. The guidelines that appear have as center the point from where the Outline curve you are drawing starts.

If you hold the **Alt** key pressed while drawing with **Outline** tool, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While drawing the curve object it will snap on the guidelines, allowing you to draw straight lines along the guidelines. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw a line to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

Finally, with the Outline tool you can continue the line art you are creating from the first or last node. You can do that when you have created a line art shape and you have right clicked once to end the creation of the shape (If you right click twice you can end the designing process of the object, and you cannot continue the line art shape). To do that you have to position the cursor over the ending/starting point of the existing curve and see the cursor image changing. This change of the cursor informs you that you can continue designing a line from that point. Click to set the starting point of the line to be the same with the starting/ending point of the current line/curve and then click on the position you want the line/curve to end. By following the same steps you can continue entering lines/curves at the end of the same line art shape and if you want make it a closed shape by connecting the last node with the first node.

By using the available designing tools you can draw the embroidery designs you want, based on a backdrop bitmap or on your designing abilities.

## Insert shapes

From the tools toolbar you can select and insert shapes that will help you create embroidery designs easier. The available shape tools are Create Ellipses, Create rectangles, Create Pies, Create Stars, Create Polygons and Create **Trapezoids/Parallelograms**.

**Figure 6.10: Shapes fly out**

From the available tools only one can be active on the **Tools** toolbar each time. To view all the available shape tools click on the current shape tool and hold while moving the mouse over all available shape tools. The selected designing tool will become the current one and you can use it to insert the specific shape on the working area.

### Create Ellipses

The **Create Ellipse** tool allows you to design ellipses that will be filled with stitches. You can create any ellipse shape but also circles and complex shapes by combining elliptic shapes. To create an ellipse shape you have to select the **Ellipse tool** from the **Tools** toolbar or by pressing the **F7** shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the ellipse shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the circle. By click and dragging diagonally you can draw a **Circle.** Also, by click and dragging with the mouse based on the guidelines you can draw perfect oblong ellipses. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.

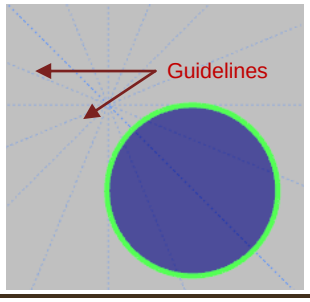


Figure 6.11: Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing an ellipse, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

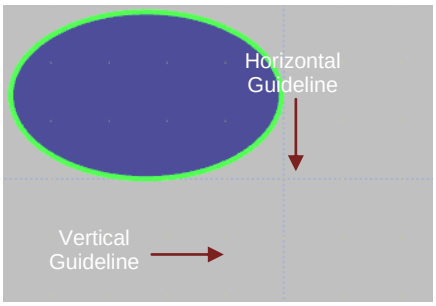



Figure 6.12: Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing an ellipse the center of the ellipse will change and become the point from where you started drawing the ellipse.

You can also use combination of keys that will have combined effect. For example, by holding both **Ctrl** and **Shift** key pressed while drawing an ellipse, the center of the shape will be the point from where you started drawing the shape (as well as the center of the guidelines) and the shape will be a Circle. This is helpful when you know the center of the design and you want to add a Circle that will have as center specific point.

There are some more editing abilities that ellipse tool has and they are available in **Node editing** mode . You can change an ellipse shape you have created by selecting it and then selecting the **Edit shape nodes** option from the **Tools** toolbar, to change to node editing mode. On the outline of the selected ellipse will appear two handles, one positioned on the middle of the ellipse and the second one on the top right border of the shape.

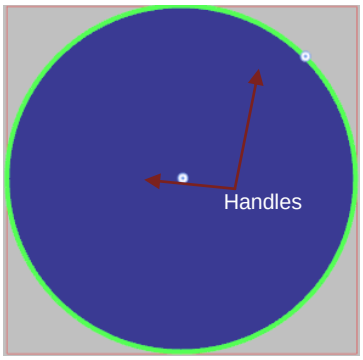



Figure 6.13: Hold Alt key - Horizontal and Vertical guidelines appear

By click and dragging the handle of the top right part of the ellipse you can change the size of the ellipse shape freely to all dimensions or based on guidelines by using the **Ctrl**, **Alt** or **Shift** keys (**Ctrl**, **Alt** or **Shift** keys has the same functionally that we described previously in this section). Also, by click and dragging the handle from the center of the shape you can change the position of the ellipse freely or based on guideline by using the **Ctrl** and **Alt** keys.

**Notice:** If you have converted the ellipse shape to curves by selecting the respective option of the right click menu, the Vertical and Horizontal handles will not be available in Node editing mode.

## Create Pies

The **Create Pie** tool allows you to design ellipses and pie shapes that will be filled with stitches. You can create any ellipse/circle shapes, pie shapes and complex shapes by combining them. To create an ellipse you have to select the **Pie** tool from the **Tools** toolbar or by pressing the **Shift+F7** shortcut keys from the keyboard and by click and dragging diagonally on the working space, draw the **Pie** shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the Pie. By click and dragging diagonally you can draw a **Circle** based Pie**.** Also, by click and dragging with the mouse based on the guidelines you can draw perfect oblong pie shapes. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.

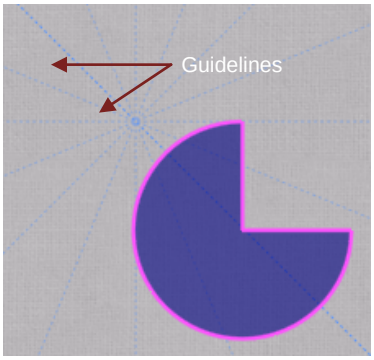



**Figure 6.14: Hold Ctrl key and guidelines will appear on every 22.5 degrees**

By holding the **Alt** key pressed while drawing a pie, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

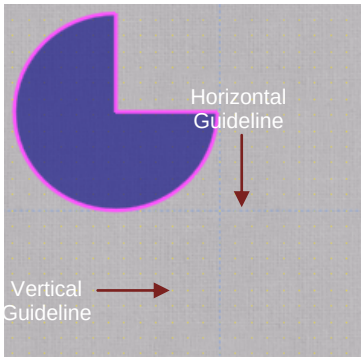



**Figure 6.15: Hold Alt key - Horizontal and Vertical guidelines appear**

You can also use combination of keys that will have combined effect. For example, by holding the **Shift** key pressed while drawing a pie the center of the ellipse will change and become the point from where you started drawing the ellipse.

By holding both **Ctrl** and **Shift** key pressed while drawing a pie, the center of the shape will be the point from where you started drawing the shape and the shape will be a Circle based pie. This is helpful when you know the center of the design and you want to add a Pie shape that will have as center a specific point.

You can change the shape of a pie object you have created by selecting it and then selecting the **Edit shape nodes** option from the **Tools** toolbar, to change to node editing mode. On the outline of the selected pie, four handles will appear, one positioned at the **center** of the design, one on the **Vertical** axis, one on the **Horizontal** axis and the other on the **top right corner** of the object.

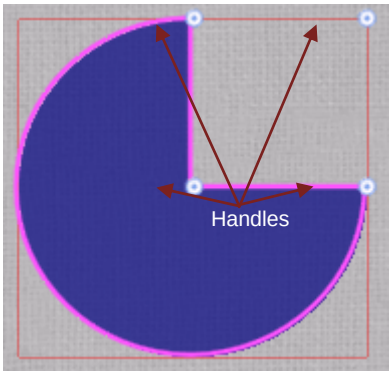



**Figure 6.16: Three Pie Handles**

By click and dragging the handle of the **Vertical** or **Horizontal** axes you can change the shape of the Pie. By dragging the handles to the right or to the left you can increase or decrease the opening of the Pie. You can use any of the two handles to do that. If you hold the **Ctrl** key while dragging a handle, the mouse will snap on every 22.5$^{o}$ degrees allowing you to make precise changes on the Pie shape.

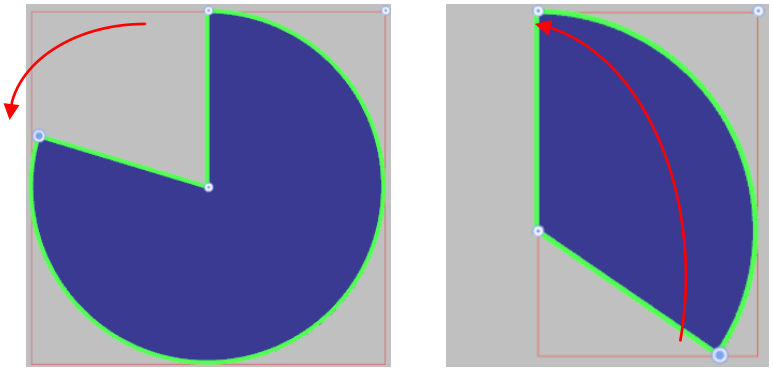


**Figure 6.17: Drag to left to close Pie shape - Drag to right to open shape**

By click and dragging the handle of the corner you can change the size of the Pie shape freely or based on guidelines by using the **Ctrl** or **Alt** keys (**Ctrl**, **Alt** keys has the same functionally that we described previously in this section). If you hold the **Shift** Key pressed during the resizing process the Pie will be resized proportionally and become a Circle or Pie based on a circle.

By changing the position of those three handles you can make precise changes on the size and shape of the pie you have created.

By click and dragging the handle that is located at the center of the design you can move the object to the position you want.

You can also define the starting and ending position of the Pie's angle by specifying them on the **Tool options** toolbar. If you select the Ellipse/Pie object in Node editing mode or in object editing mode, two options will appear on the Tool options toolbar related with the Pie object. Those options are the **Start angle** and the **Stop angle**.

With the **Start angle** 

you can define the starting position of the angle that the Pie is making based on virtual X and Y axes. The value of the Start angle is in degrees; therefore, if the Start angle value is 90 the starting position of the angle will be the top point of the pie, which is also the initial position of the Vertical handle (the same with 90$^{o}$ degrees on X and Y axes). You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also, you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

With the **Stop angle** 

you can define the ending position of the angle that the Pie is making based on virtual X and Y axes. The value of the Stop angle is in degrees; therefore, if the End angle value is 360 the starting position of the angle will be the top point of the ellipse, which is also the initial position of the handle (the same with 360$^{o}$ degrees on X and Y axes). The Stop Angle value changes, while changing the position of the **Horizontal** handle. You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

**Notice:** If you have converted the pie shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode.

## Create Trapezoids and Parallelograms

The **Create Trapezoids/Parallelograms** tool 
allows you to design rectangles and **Trapezoid/Parallelogram** shapes that will be filled with stitches. You can create rectangle/square shapes, **Trapezoid/Parallelogram** shapes and complex shapes by combining them. To create a **Trapezoid/Parallelogram shape** you have to create a rectangle shape first, on which the **Trapezoid/Parallelogram** will be based. To create a rectangle you have to select the **Trapezoids/Parallelograms** tool 
from the **Tools** toolbar or by pressing the **Shift + F6** shortcut keys from the keyboard and by click and dragging diagonally on the working space, draw the rectangle shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the rectangle. By click and dragging diagonally you can draw a **Square.** Also, by click and dragging with the mouse based on the guidelines you can draw perfect parallelepiped that you can convert to **Trapezoid/Parallelogram** shapes later. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.

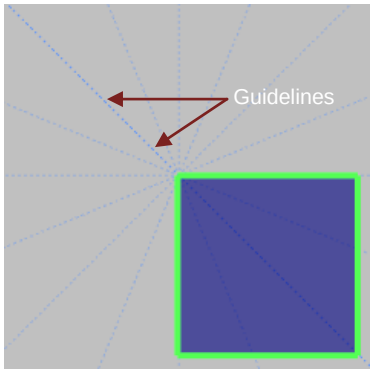



Figure 6.18: Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a rectangle, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

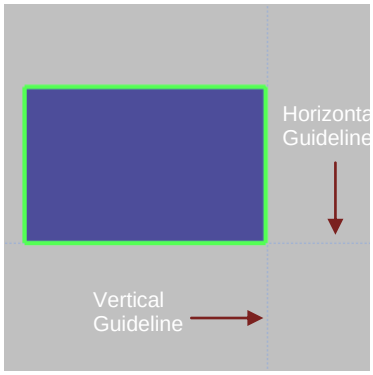



Figure 6.19: Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing a rectangle the center of the rectangle will change and become the point from where you started drawing the rectangle.

By holding both **Ctrl** and **Shift** key pressed while drawing a rectangle, the center of the shape will be the point from where you started drawing the shape and the shape will be a square. This is helpful when you know the center of the design and you want to add a Trapezoid/Parallelogram shape that will have as center a specific point.

There are some more editing abilities that Trapezoid/Parallelogram tool has and they are available in **Node editing** mode. You can change a rectangle shape you have created to Trapezoid/Parallelogram by selecting it and then selecting the **Edit shape nodes** option from the **Tools** toolbar, to change to node editing mode. On the outline of the selected rectangle will appear four handles, one positioned at the **center** of the design, one on the **top left corner** of the object, one on the **top right corner** of the object and one on the **bottom left corner** of the object.

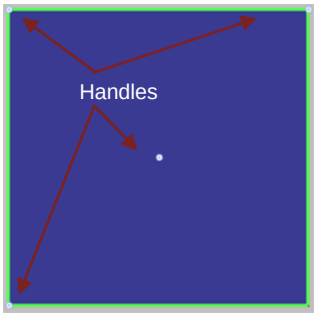



Figure 6.20: Four handles of Trapezoids/Parallelograms

By click and dragging the handle of the **top left corner** to the right, you can transform the rectangle to a **Trapezoid** shape. While dragging both top corners are moving towards to the center of the top side, creating a perfect Trapezoid. If you drag the top left handle until the middle of the top side you will create a triangle. Therefore with this tool you can create also triangle shapes.

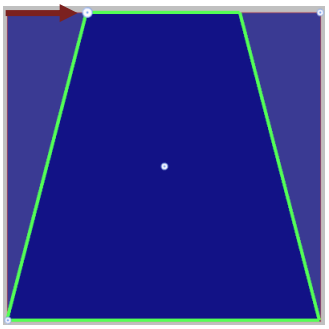
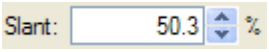


Figure 6.21: Drag top left corner handle to the right to create Trapezoid

You can also change the rectangle to Trapezoid by adjusting the **Slant** value from the **Tool options** toolbar. If you select the rectangle object in Node editing mode the **Slant** options 

will appear on the **Tool options** toolbar. Also, the same option will appear if you select the rectangle object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. By changing the slant value you can specify the percentage of distance that the top left corner will have from its starting position. The **Slant** is a percentage value that can take values from 0 to 100. The 0 value will have as result the rectangle to remain unchanged. The 100 value will have as result a triangle because the two corner handle will be positioned at the middle of the top side. Therefore, to create a Trapezoid you have to insert values from 0 to 100. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

By click and dragging the handle of the **bottom left corner** to the right, you can transform the rectangle to a **Parallelogram**. While dragging the handle both bottom left and top right corners are moving towards the opposite corners creating a perfect Parallelogram.

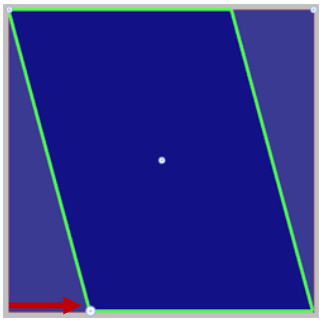


Figure 6.22: Drag bottom left corner handle to the right to create Trapezoid

You can switch between **Trapezoid** and **Parallelogram** by checking **Trapezoid** checkbox 

from the **Tool options** toolbar and the opposite to switch back to **Parallelogram**. If you select the Trapezoid object in **Node editing** mode the **Trapezoid** option 

will appear on the **Tool options** toolbar. Also, the same option will appear if you select the rectangle object in **Object editing** mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options.

By click and dragging the handle of the **top right corner** you can change the size of the Rectangle/Trapezoid/Parallelogram shape freely or based on guidelines by using the **Ctrl**, **Alt** or **Shift** keys (**Ctrl**, **Alt** or **Shift** keys has the same functionally that we described previously in this section). If you hold the **Shift** key pressed during the resizing process and shape is a rectangle, will be resized proportionally and become a square. If you hold the **Shift** key pressed during the resizing process the Trapezoid/Parallelogram will be resized proportionally based on the initial shape**.**

By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

**Notice:** If you have converted the Rectangle/Trapezoid/Parallelogram shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode but you will be able to edit the nodes of the shape directly.

## Create Stars

The **Create Star** tool  allows you to design Star shapes that will be filled with stitches. You can create any star shapes, complex shapes by combining them. To create a star you have to select the **Create Star** tool  from the **Tools** toolbar or by pressing the '**S**' shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the star shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a star, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the star. By click and dragging diagonally you can draw a **Star** with equal dimensions to all its rays**.** Also, by click and dragging with the mouse based on the guidelines you can draw stars with various shapes. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.

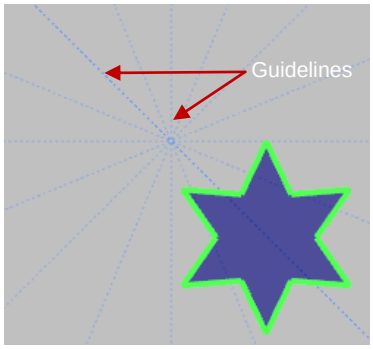



Figure 6.23: Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a star, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

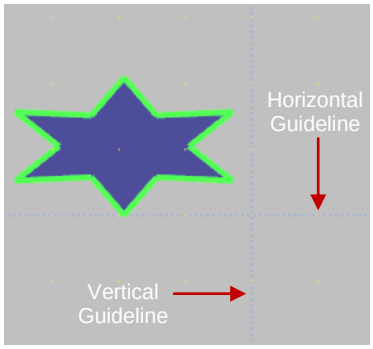



Figure 6.24: Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing a Star the center of the star will change and become the point from where you started drawing the star.

By holding both **Ctrl** and **Shift** key pressed while drawing a star, the center of the shape will be the point from where you started drawing the shape and the shape will be a perfect star. This is helpful when you know the center of the design and you want to add a Star shape that will have as center a specific point.

There are some more editing abilities that Star tool has and they are available in **Node editing** mode  . You can change a star shape you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected star will appear four handles, one positioned at the **center** of the design, one on the **Vertical** axis, one on the **top right corner** of the object and one between two rays at the top left quarter of the shape.

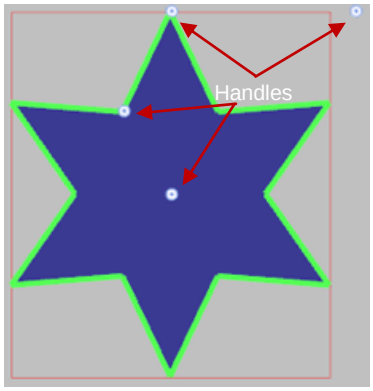



Figure 6.25: Four handles of Star objects

By click and dragging the handle of the **Vertical** axis you can change the angle of the star by rotating it clockwise (CC) or anti-clockwise (ACC). By dragging the handle to the right you can rotate the Star shape clockwise. On the other hand by dragging the handle to the left you can rotate the shape anti-clockwise. If you hold the **Shift** key while dragging, the mouse will snap on every 22.5$^{o}$ degrees allowing you to make precise rotations.

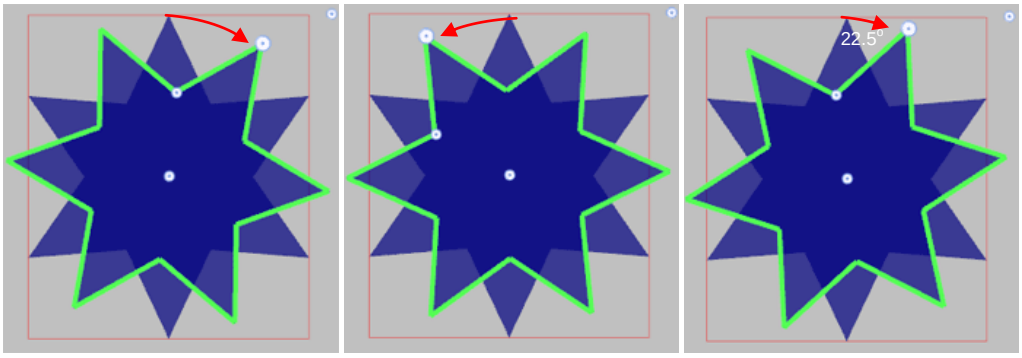



Figure 6.26: CC Rotation – ACC Rotation – Shift 22.5$^{o}$ snap Rotation

By click and dragging the handle of the corner you can change the size of the star shape freely. If you hold the **Shift** Key pressed during the resizing process the star will be resized proportionally and become a perfect star.

By click and dragging diagonally the handle between the two rays at the top left quarter of the shape you can change the size of all rays at the same time. Mainly you can change the distance of the ray (the base) from the center of the design.

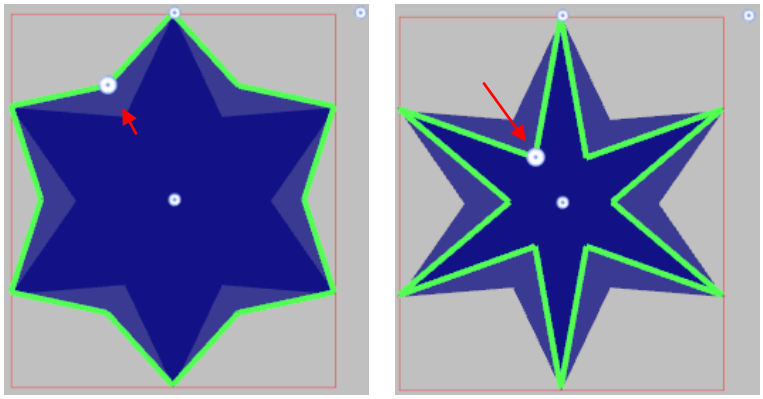


Figure 6.27: Change size of rays Increase depth – Decrease depth

By changing the position of those three handles you can make precise changes on the size and shape of the star you have created.

By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

You can also define the size of ray, the number of rays and the starting angle of the Star from the **Tool options** toolbar. If you select the star object in Node editing mode three options will appear on the **Tool options** toolbar related with the Star object. Also, the same option will appear if you select the star object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. Those options are the **Number of rays,** the **Ray size** and the **Start angle**.

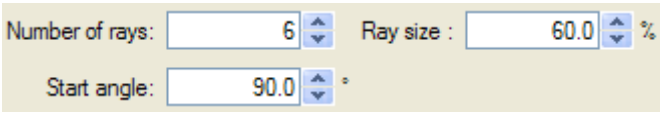
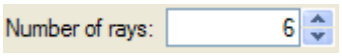



**Figure 6.28: Tool options - Number of rays, Ray size, Start angle**

With the **Number of ray's** 

value you can set the number of rays you want the selected star object to have. The default value of rays is 6; therefore when you insert a star shape on the working area, it always comes with 6 rays.

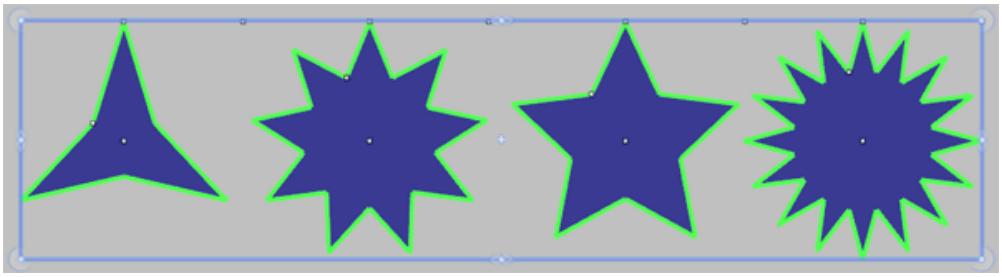


**Figure 6.29: 3 Rays – 9 Rays – 5 Rays – 16 Rays**

The minimum value of Number of ray's option is 3, because with less than 3 rays we cannot create a star object, and the maximum value is 16. You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

With the **Ray size** 

you can define the percentage distance between the center of the Star shape and the line that connects two sequential ray vertexes of the star. Therefore the 0 value is the center of the Star and the 100 value will be on the line that connects two sequential ray vertexes. If you set the Ray value to 100 the star will become a polygon. You can change the value of the filed by selecting the current value and typing a new one. Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively. By adjusting this value you can set the exact dimensions you want the star object to have.

With the **Start angle** 

you can define the starting position of the angle that the star is making based on virtual X and Y axes. The value of the Start angle is in degrees; therefore, if the Start angle value is 90 the starting position of the angle will be the top point of the ellipse, which is also the initial position of the handle (the same with 90$^{o}$ degrees on X and Y axes). You can change the value of the filed by selecting the current value and typing a new one.

Then press the **Enter** key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

**Notice:** If you have converted the star shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode.

## Create Polygons

The **Create Polygon** tool  allows you to design **Polygon** shapes that will be filled with stitches. You can create any polygon shape and complex shapes by combining many polygon shapes. To create a polygon you have to select the **Create Polygon** tool from the **Tools** toolbar or by pressing the '**Y**' shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the polygon shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a polygon, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you clicked and dragged to draw the **Polygon**. By click and dragging diagonally you can draw a **Polygon** with equal dimensions to all its sides**.** Therefore depending on its sides you can create a perfect hexagon a perfect pentagon and so forth. Also, by click and dragging with the mouse based on the guidelines you can draw different variations of polygons. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.

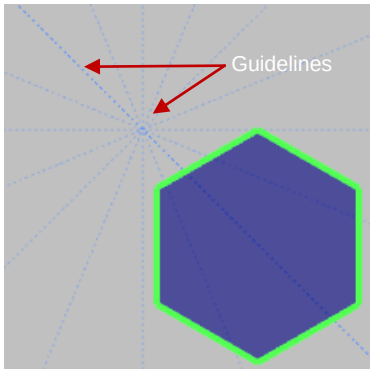



**Figure 6.30: Hold Ctrl key and guidelines will appear on every 22.5 degrees**

By holding the **Alt** key pressed while drawing a polygon, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

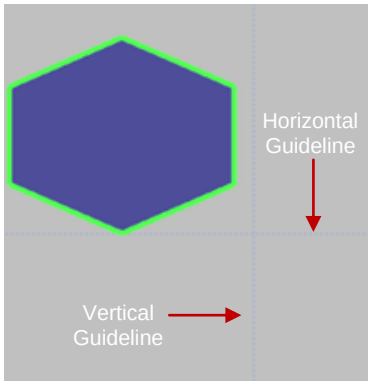



Figure 6.31: Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed while drawing a **Polygon** the center of it will change and become the point from where you started drawing the polygon.

By holding both **Ctrl** and **Shift** key pressed while drawing a Polygon, the center of the shape will be the point from where you started drawing the shape and the shape will be a perfect Polygon. This is helpful when you know the center of the design and you want to add a polygon shape that will have as center a specific point.

There are some more editing abilities that Polygon tool has and they are available in **Node editing** mode  . You can change a polygon shape you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the outline of the selected polygon will appear three handles, one positioned at the **center** of the design, one on the **Vertical** axis and one on the **top right corner** of the object.

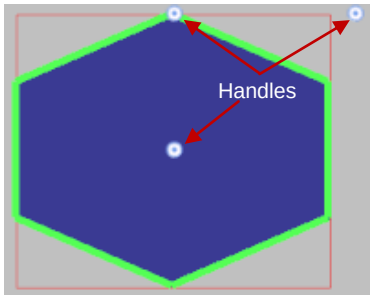



Figure 6.32: Three handles of Polygon objects

By click and dragging the handle of the **Vertical** axis you can change the angle of the polygon by rotating it clockwise or anti-clockwise. By dragging the handle to the right you can rotate the Polygon shape clockwise. On the other hand by dragging the handle to the left you can rotate the shape anti-clockwise. If you hold the **Shift** key while dragging, the mouse will snap on every 22.5$^{o}$ degrees allowing you to make precise rotations.

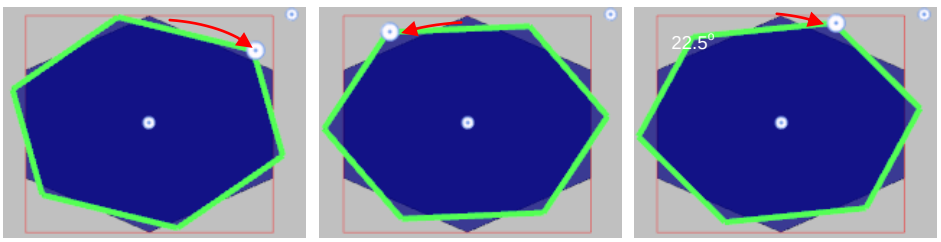



Figure 6.33: CC Rotation – ACC Rotation – Shift 22.5$^{o}$ snap Rotation

By click and dragging the handle of the corner you can change the size of the polygon shape freely. If you hold the **Ctrl** Key pressed during the resizing process the polygon will be resized proportionally and become a perfect polygon.

By changing the position of those two handles you can make precise changes on the size, shape of the polygon and rotate it also.

By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

You can also define the number of sides and the starting angle of the Polygon from the **Tool options** toolbar. If you select the polygon object in Node editing mode two options will appear on the **Tool options** toolbar related with the Polygon object. Also, the same option will appear if you select the polygon object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. Those options are the **Number of sides** and the **Start angle**.

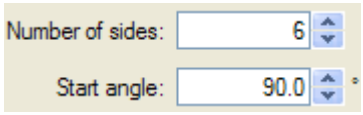
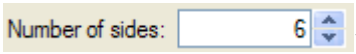



**Figure 6.34: Tool options - Number of sides, Start angle**

With the **Number of side's** 

value you can set the number of sides you want the selected polygon object to have. The default value of sides is 6; therefore when you insert a polygon shape on the working area, it always comes with 6 rays. The minimum value of Number of side's option is 3, because with less than 3 sides we cannot create a polygon object, and the maximum value is 16. You can change the value of the filed by selecting the current value and typing a new one. Then press the Enter key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

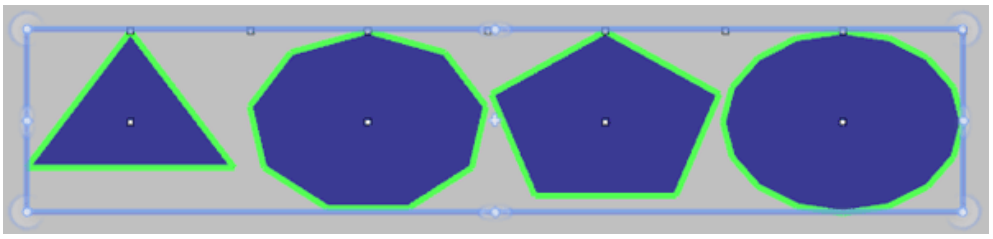


**Figure 6.35: 3 Sides – 9 Sides – 5 Sides – 16 Sides**

With the **Start angle** 

you can define the starting position of the angle that the Polygon is making based on virtual X and Y axes. The value of the Start angle is in degrees; therefore, if the Start angle value is 90 the starting position of the angle will be the top point of the polygon, which is also the initial position of the handle (the same with $90^{o}$ degrees on X and Y axes). You can change the value of the filed by selecting the current value and typing a new one. Then press the Enter key from the keyboard to confirm the new value. The change will be applied immediately on the shape. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

**Notice:** If you have converted the polygon shape to curves by selecting the respective option of the right click menu, the handles will not be available in Node editing mode.

## Create Rectangles

The **Create rectangle** tool allows you to draw rectangle shapes that will be filled with stitches. You can create any rectangle shape but also squares and complex shapes by combining rectangle shapes. To create an ellipse shape you have to select the **Rectangle tool** from the **Tools** toolbar or by pressing the **F6** shortcut key from the keyboard and by click and dragging diagonally on the working space, draw the rectangle shape you want. By releasing the mouse click the shape will be placed on the position you have designed it.

By holding the **Ctrl** key pressed while drawing a shape, guidelines will appear on every 22.5 degrees of the X and Y axes, with center the point you click and dragged to draw the rectangle. By click and dragging diagonally you can draw a **Square.** Also, by click and dragging with the mouse based on the guidelines you can draw perfect parallelepiped shapes. While drawing the object, it will snap on the guidelines, allowing you to draw the shape along the guidelines.

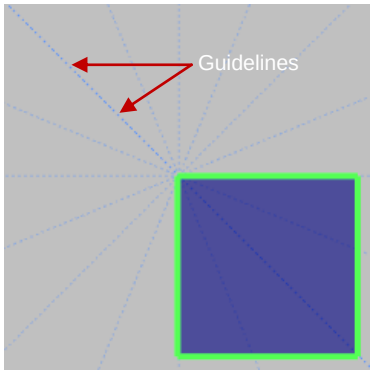



Figure 6.36: Hold Ctrl key and guidelines will appear on every 22.5 degrees

By holding the **Alt** key pressed while drawing a rectangle, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can draw the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

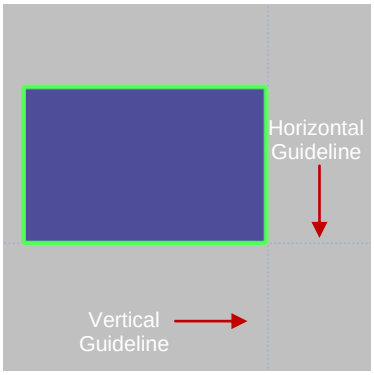



Figure 6.37: Hold Alt key - Horizontal and Vertical guidelines appear

By holding the **Shift** key pressed you can draw a rectangle from its center outward while drawing a rectangle. When you press the Shift key the center of the design changes and become the point from where you started drawing the rectangle.

By holding both **Ctrl** and **Shift** key pressed while drawing a rectangle, the center of the shape will be the point from where you started drawing the shape and the shape will be a Square. This is

helpful when you know the center of the design and you want to add a Circle that will have as center specific point.

There are some more editing abilities that rectangle tool has and they are available in **Node editing** mode  . You can round the corners of a rectangle or square you have created by selecting it and then selecting the **Edit shape nodes** option  from the **Tools** toolbar, to change to node editing mode. On the top side of the selected rectangle will appear three handles, one positioned on the left corner, one on the middle and one on the Right corner. By click and dragging the handle of the left corner you can round the corners of the rectangle.

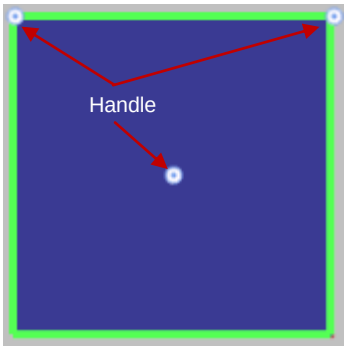



**Figure 6.38: Four handles of Rectangles**

By click and dragging the handle of the left corner you can round the corners of the rectangle. The roundness applies to all four corners of the rectangle.

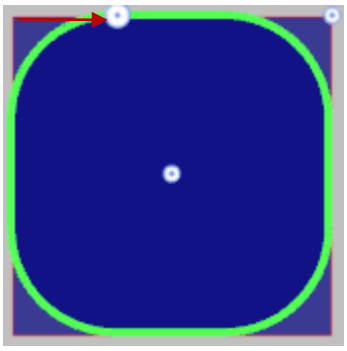


**Figure 6.39: Drag left handle to add roundness**

You can also define the **roundness** of the rectangle from the **Tool options** toolbar. If you select the rectangle object in Node editing mode the **Roundness** options 

will appear on the **Tool options** toolbar. Also, the same option will appear if you select the rectangle object in Object editing mode (when you make a rectangle\lasso selection) together with some other useful sizing and positioning options. By changing the roundness value you can increase the roundness of the rectangle's corners. The **Roundness** is a percentage value that can take values from 0 to 100. The 0 value will have as result normal corners and no roundness. The 100 value will have round corners to their full extend. Therefore, by giving a specific value you can produce the result you want. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively.

By click and dragging the handle of the **top right corner** you can change the size of the Rectangle shape freely or based on guidelines by using the **Ctrl**, **Alt** or **Shift** keys (**Ctrl**, **Alt** or **Shift** keys has

the same functionally that we described previously in this section). If you hold the **Shift** key pressed during the resizing process the shape will be resized proportionally and become a square.

By click and dragging the handle that is located at the middle of the design you can move the object to the position you want.

**Notice:** If you have converted the rectangle shape to curves by selecting the respective option of the right click menu, the handles of the top left and right corner of the rectangle will not be available in Node editing mode.

## Design tools' options

**Tool options** pane, provides immediate access to the properties of every object. Using the available controls we can customize the properties of every object. The pane is content sensitive; it shows the properties of the selected object. The same usability exists also while designing. Select a design tool and before you start designing, you can see a set of options appearing on tool options pane. These options can be customized either before using the tool or afterwards. Not all design tools have customizable options.

In case that the pane is not visible you can re-enable it by pressing **Tool options** option of menu **View➔Toolbars.** Whenever you select an object or a tool that has options such as Text tool the **Tools options** toolbar is updated to show the additional options that are available for the selected object or tool. There is a basic set of options that appears for all objects (figure). The standard options that will appear when you select an object are:

- The **X** and **Y** position of the object in the design area based on the **Ruler**
- The dimensions of the selected object (**Width** and **Height**)
- The **Horizontal - Vertical** scale of the object
- If Scaling operations will be proportional or not.
- Duplicate object.
- Mirror the object, based on the X or Y axis.
- Rotate the object.
- The **thickness** of the border.

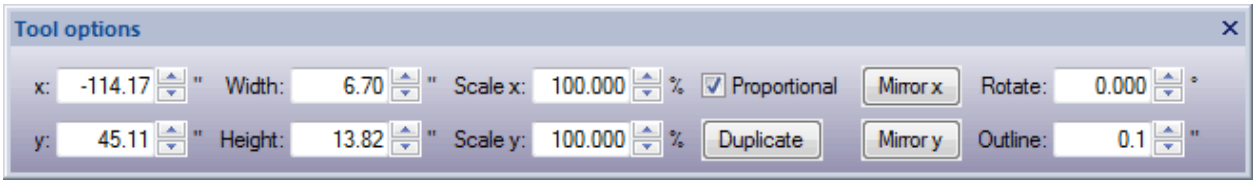
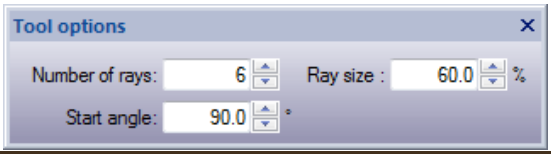
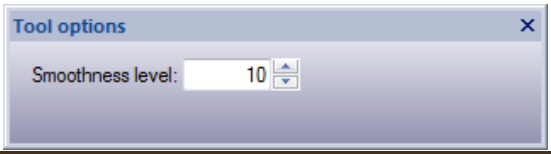



**Figure 6.41: Tool Options pane**

There are also some options that appear only for specific types of objects. If you create a free hand design or insert a star shape for example, you will view some extra options appearing on the **Tool options** toolbar. Each of these options contains numerical values that can be changed according to your needs. In this section we will discuss the standard options that appear for all objects. The special options that each design tool provides are analyzed separately in the section that describes any of the design tools.



Extra options for Star shape Extra options for freehand design

By changing the **X and Y values** you can reposition the object inside the design area. The X and Y axes are based on the X and Y rulers that exists on the Left and Top sides of the design area. The position of the selected object is calculated based on its center. Therefore any inserted value in the X and Y fields will define the position you want the center of the object to be located in the design area. In order to change these values, type the value you like in the respective fields and then press enter or click outside of the field. The change is automatically previewed in the design area. You can also use the arrows next to the fields to change the values.

By changing the **Width** and **Height** values you can change the dimensions of the selected object. The values represent the exact dimensions of the object and not the approximate dimensions that you are viewing on the selection rectangle whenever you select an object. To change the Width and Height values, you have to click inside the relative field and then type the value you like. Press **Enter** from the keyboard or click outside the field to confirm the value you have entered. Also you can increase or decrease the value by pressing the arrow buttons next to the field. In case that the option **proportional** is checked and you select to scale one dimension the program automatically adjusts the other dimension in order to keep the same analogy between the horizontal and the vertical size.

The next 2 fields (**Scale X-Y** (%))provide the capability to scale the object by a providing a percentage of scale according to the initial size. You can scale the object according to the X dimension or according to Y dimension. In case that the option **proportional** is checked and you select to scale one dimension the program automatically adjusts the other dimension in order to keep the same analogy between the horizontal and the vertical size.

**Duplicate object**, press this button and an exact duplicate of the object will be created slightly moved from the initial object.

**Mirror object,** the next 2 buttons can be used to Mirror the original object based on the Horizontal or Vertical axis. It is like flipping the object around a horizontal or vertical axis that is located on the horizontal or vertical center of the object.

**Rotate object,** using this filed you can set a number in degrees to rotate the selected object. Type a numeric value or use the arrows next to the field to specify one, press enter or click out of the control. The object is automatically rotated clockwise for the degrees that you have specified.

The last option you can adjust is the **Outline thickness**. By changing this value you can add an outline on the selected object or change the width of an existing outline. If the value of the Outline width field is 0 means that the selected object does not have a border. By changing the value to any value greater than 0, an outline will be added to the object with the specified width. You can change the value of the **Outline** thickness by highlighting the current value and then typing the new one. The old value will disappear and the new one with take its place once you press **Enter** key from the keyboard or click outside the field. The value change affects the outline of the selected object. Also you can increase or decrease the value by pressing the arrow buttons next to the field respectively. If you want you can remove the border of the selected object by changing the Outline thickness value to 0.

## Add new objects as clones

A very useful capability for making designs with repeated shapes is **Add new objects as clones**. You can enable this option using **Add new objects as clone's** option of **Edit** menu. When this option is enabled, any created duplicate of an object is marked as a clone of the initial object. If you reshape any of the clones all other clones are reshaped too.

You can create clones in various ways. The easiest way is by selecting one or more object and the press Duplicate button on **Tools options** pane.

The other way is, while moving or transforming any object (resize, rotate, slant) you can right click and create a duplicate of the original object. This object has been created, leaving the original object impact.

Let's make a brief example of how it this function works.

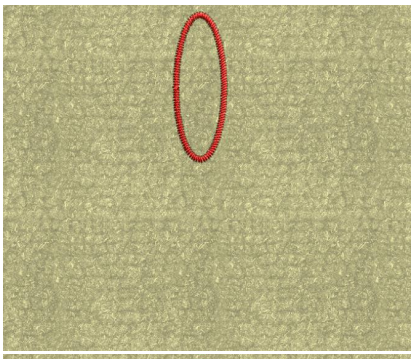
1. Create a new design by pressing new design icon
2. Press create ellipse tool
3. Click and drag on the design area, to create an ellipse
4. Now the newly created object is selected.
5. Enable **Add new objects as clone's** option of **Edit** menu.
6. Move the rotation center simply by click and drag it, in order to rotate the object relative to another point.

> The rotation center is a small cross that is located at the center of the object

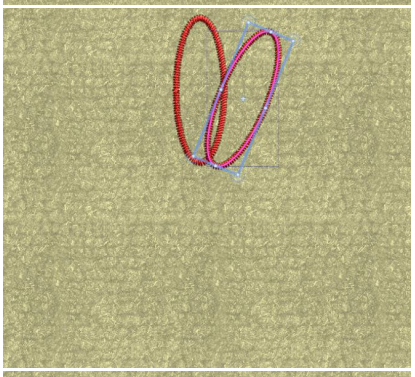
7. Place your mouse over the upper right corner, a rotate handle will appear.

> Notice the **highlighted rectangle** around the object. On the corners and at the center of the sides there are some highlighted bullets that can be used to transform the object.

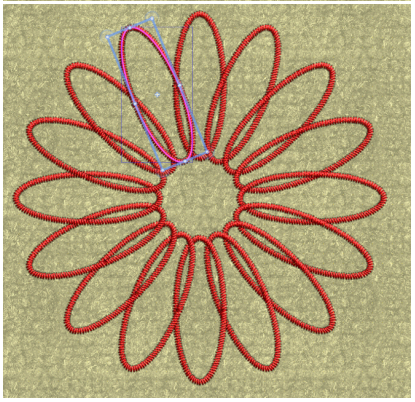
8. Click and drag to rotate the ellipse to the position you like, before you release the mouse Right click in order to create a duplicate.
9. Press **Ctrl+R** to repeat this transformation and create more clones
10. Once you have created the clones you like you can now take advantage of the clone editing.
11. You can now edit the shape of any clone (Node editing mode) and all other clones will be affected as well. This way you can improve the pattern in an aspect that you didn't imagine at first.



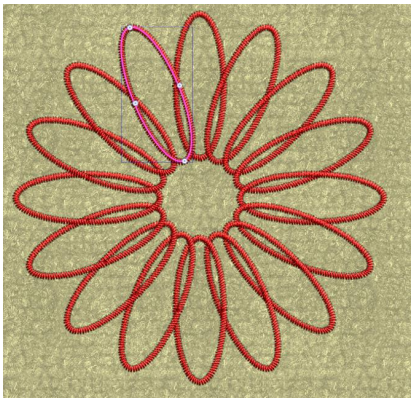
This is a created **ellipse**. Once you have created the ellipse make sure that **Add new objects as clones** of layout menu is selected.



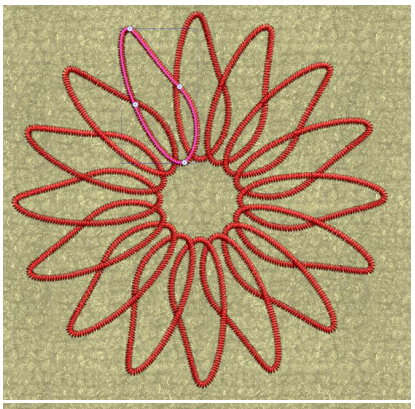
Use any of the transform handles that appear while an object is selected to transform it and by right clicking create a clone of the first object.



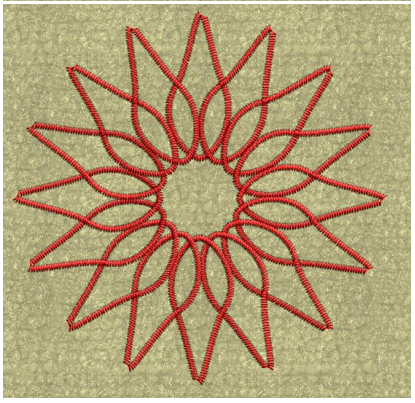
Create as many clones as you like by applying **Repeat last transform** option from "Edit" menu.



In **node editing** mode, select any of the clones. Reshape the object using **Edit nodes** mode, any change you make is immediately applied to all other clones



The flower like shape has changed



We have changed with a couple of clicks all these flower petals and created a different version of the flower.

Once you have created cloned objects you can access some extra functionality that is located on the right click menu, in order to better control these items.

**Select all clones**

You can select all clones by using **Select all clones** option of **Clones** submenu that appears when right clicking on any of the clones. Now you move all of them or apply a change on all of them.

**Detach from clones**

Another useful option is that you can select one or more of the clones and detach it from the other clones by selecting **Detach from clone's** option of **Clones** submenu that appears when right clicking on any of the clones. The detached clone will no longer inherit the changes that are applied to any of the clones. It is a normal object now.

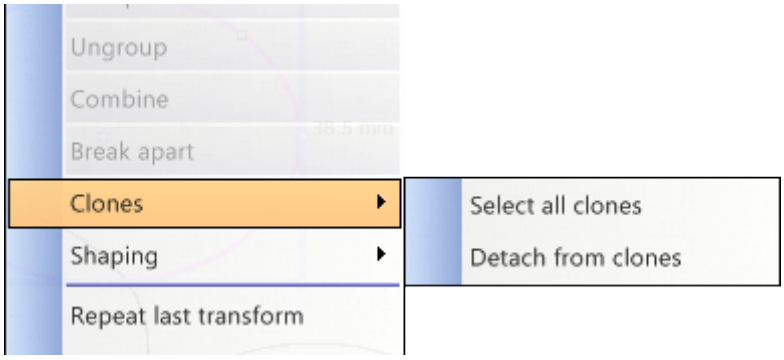



**Figure 6.42: Available clone management options**

## Array tool (Circular-Rectangular)

Using **Array tool** we can create **Rectangular** or **Circular** arrays. These arrays are clones of the whole design or of a selected portion. Basically we select one or more objects and by multiplying them along the design area we can create unique formations. An extension of this tool

is that it can be used together with object cloning. This means while applying the array we have the ability to mark these copies, of the original object, as **Clones**. In case that you need to reshape the initial object again, you can reshape it and all clones will be affected as well.

You can find both **Rectangular** and **Circular** array shortcut icons on **Tools** toolbar that is located on the left side of the application window.

Only one of them can be immediately accessed by a single click. The one that is available appears on the toolbar and can be used by a single click. In order to see both tools, **click and hold** on the icon. **Holding left key pressed, move your mouse** over the one that you want to use. Once it is highlighted, release the mouse and it is activated. The tool that has been selected is also visible on tools toolbar, in order to able to access it the next time by a single click. Once you have enabled the tool you must select one or more objects to be used for. Click on an object or click and drag with your mouse to make a selection of the desired objects. Once you select an object you can see virtual preview of how the array will be. You can also see a floating window that has appeared on top of the design area. While using array tool this dialog is always visible.

In case you have selected by accident an object, but you want to use the array tool on another you can press **select another shape** button and now you can select the object(s) for the array once more. When you are satisfied by the appearance of the array, press **Apply rectangular-circular array** button in order to apply the array.

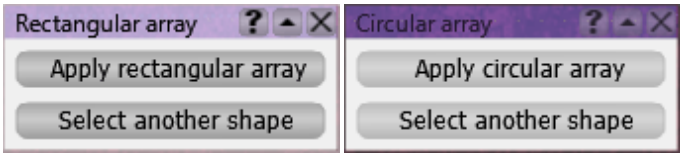



**Figure 6.43: Apply array dialog**

Before applying the array you can customize the number of copies, the orientation of copies and-or mirror some of the clones. The customizations can be done in 2 ways, visually by using the mouse and by numeric values by adjusting the respective options that appear on tool options pane. The available properties and the way to customize the array differ in **Rectangular** and **Circular** arrays so we will describe the procedure separately for each type.

## Rectangular array

As you can see on the figure below for rectangular arrays we can adjust:

- Number of Horizontal – Vertical copies
- Horizontal – Vertical spacing
- Clone objects if possible

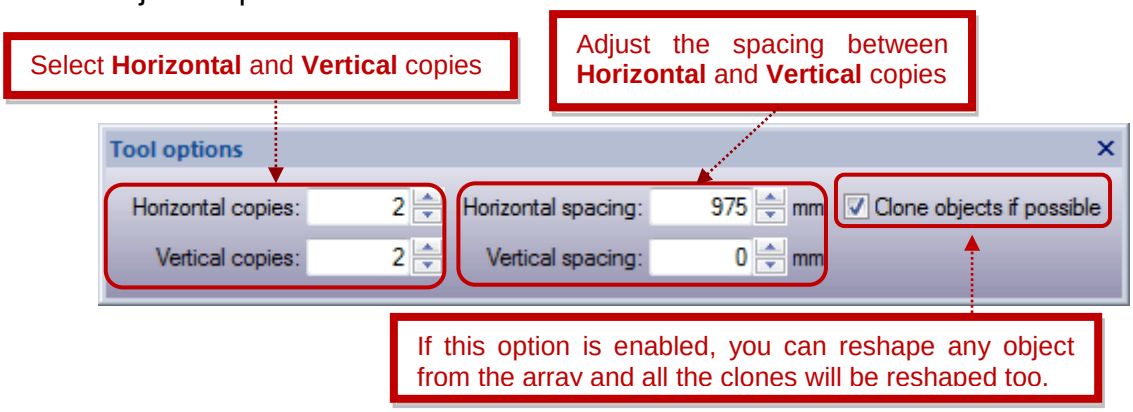



**Figure 6.44: Customize rectangular array**

You can also adjust the orientation of the copies and-or select the copies you want to be mirrored.

Number of Horizontal and Vertical Copies
In these two fields you can specify the number of copies that you want to be created in the horizontal axis and in the vertical axis.

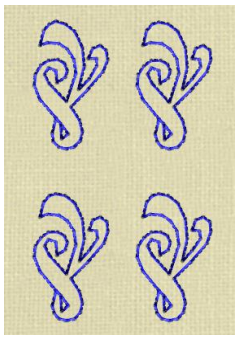
Horizontal and Vertical spacing
In this field you can specify the distance between the horizontal and the vertical copies of the array that will be created.

Clone objects if possible
If this option is enabled, the copies of the original object will be clones. This means that we can reshape them all together by simply reshaping one of them. This option can save us a lot of time and it is also a tool that can produce unique embroidery designs. Any shape transformation you make, on any of the cloned copies, is applied to all of them immediately.

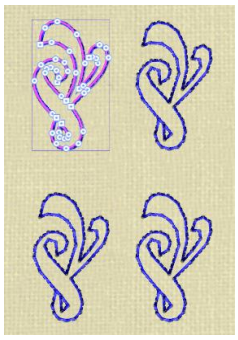
In order to change the shape of all objects you have to follow the steps bellow

1. Select any of the cloned objects.
2. Click on **Edit shape nodes** mode on **Tools toolbar** (F10 keyboard shortcut), to switch to **Edit Shape nodes** mode
3. Reshape the object by click and dragging the node segments to the direction you want.
4. The reshaping has been automatically applied to all clones.

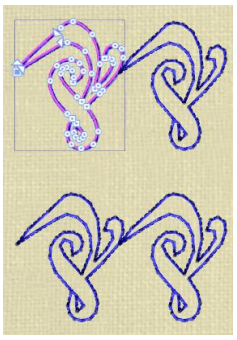
There is also the functionality to select all clones and to detach one or more clones. More information about Cloned objects can be found in **Add new objects as clones** section.



**An array with cloned objects**



Select any of the clones and select **Edit shape nodes** mode



**Edit the shape** of any clone and any clone will be reshaped too

In some cases while in **preview array** mode you can get carried away and think that you can use other tools or change design mode. The array hasn't been applied until you press **Apply array** button. Anyway if you by mistake try to select any other **design tool** or change **design mode** before you have applied the array, a warning about applying array will appear. At this point if you don't want to apply the array yet, select **No** and you are brought back to the state before the array. If you select **Yes** the array will be applied with its current configuration.

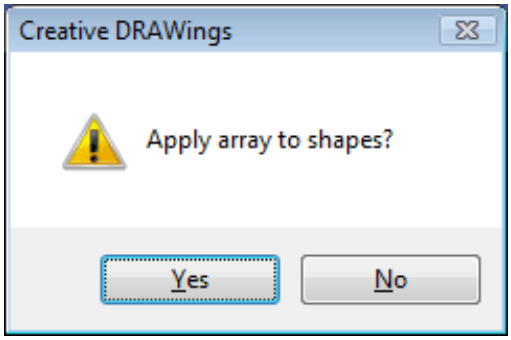
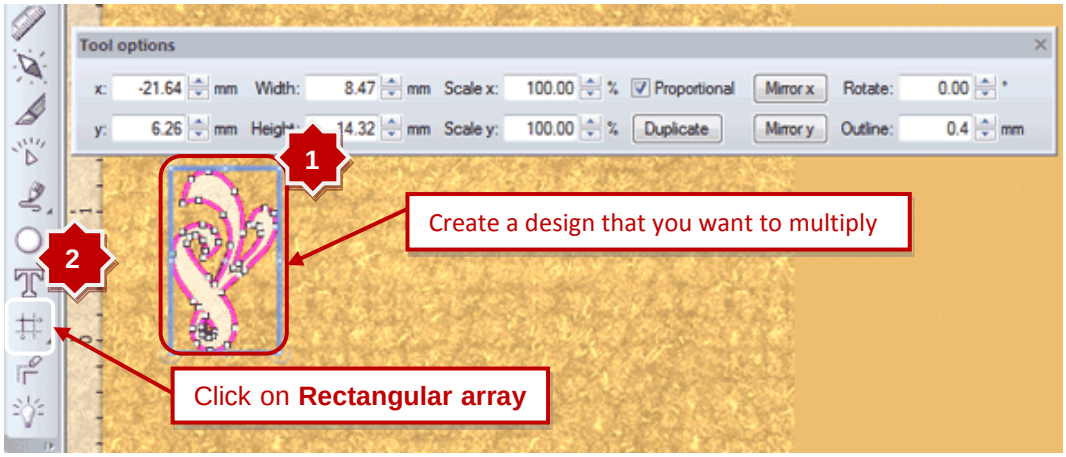


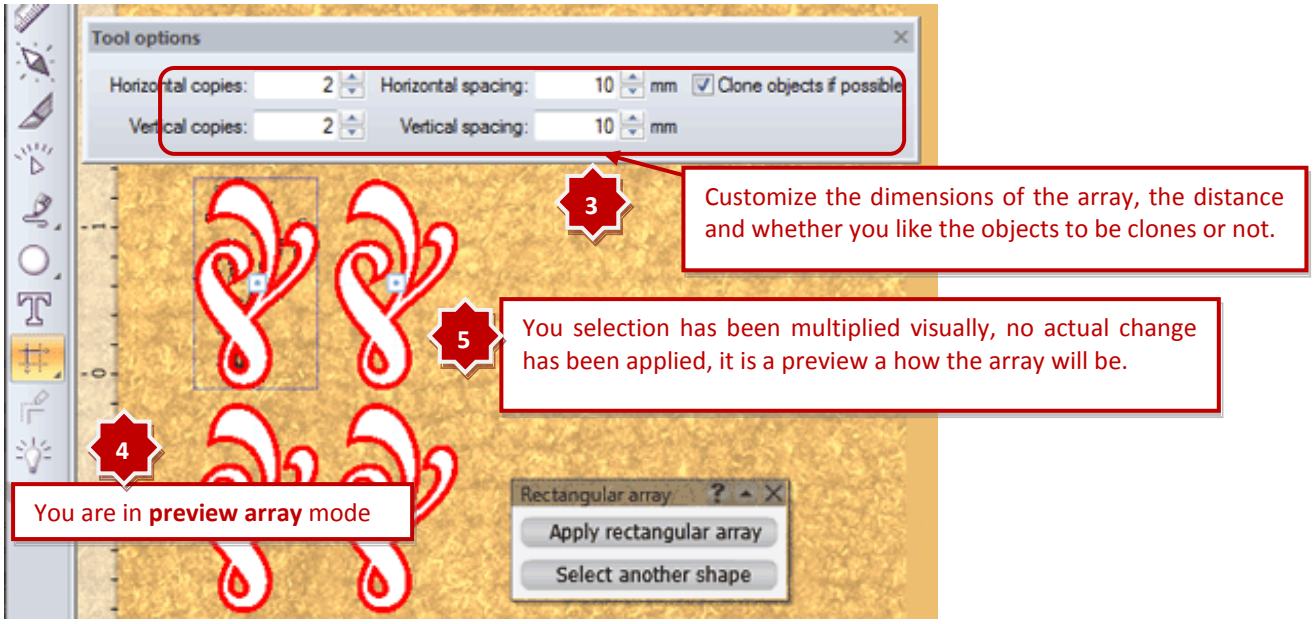

Figure 6.45: Apply array

## Using Rectangular array

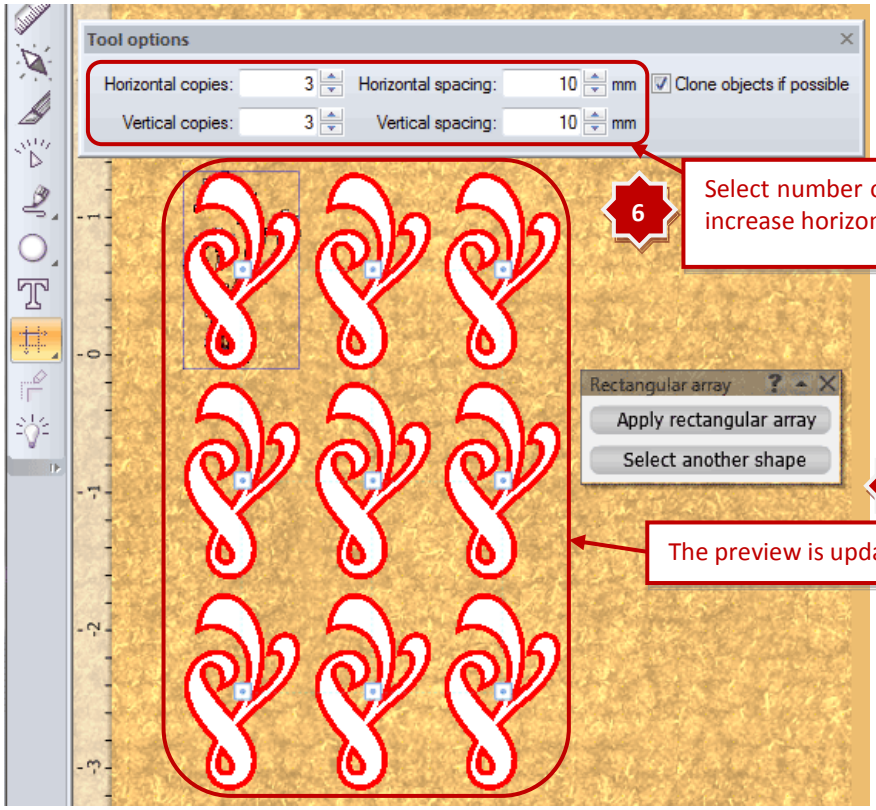
**Step 1.** Create a design to multiply and then press **Rectangular array**.




**Step 2**. You are in **preview array** mode, your selection has been multiplied, the array hasn't been applied yet, it is a just preview. Customize the dimensions and the distance for your array.



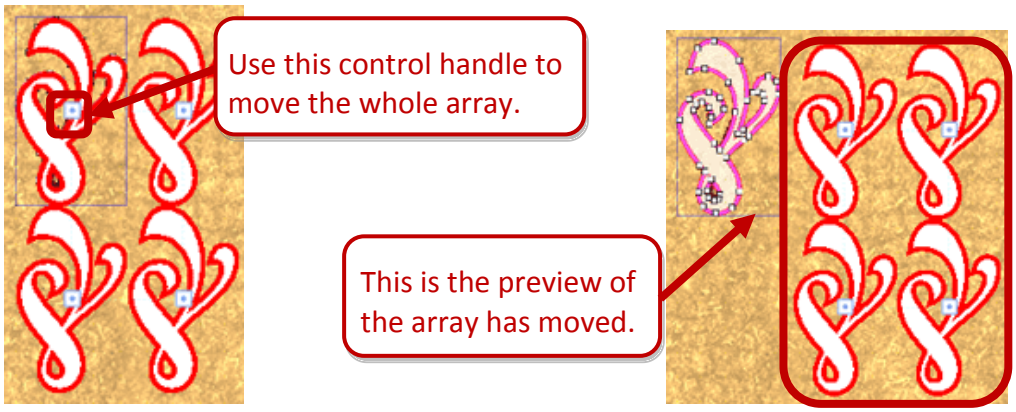

**Step 3.** Select number of horizontal and vertical copies. The preview is automatically updated




**Notice:**
The customizations of the **number of horizontal and vertical copies** and the **distance** between them can also be done using various mouse and keyboard combinations. The handles that appear on any of the copies, while in preview mode, can be used for this purpose.

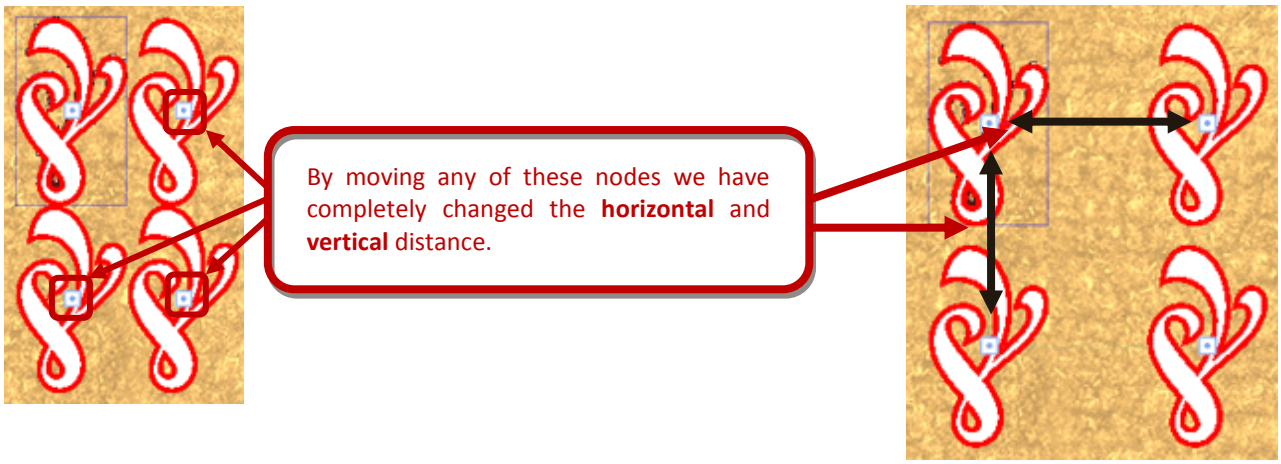
## Move array

The first upper **left copy** is actually the initial object. The control handle that is on top of it can be used to move the whole array to another place. Only the part that is visible on the preview will remain after we apply the operation.



## Change horizontal and vertical distance

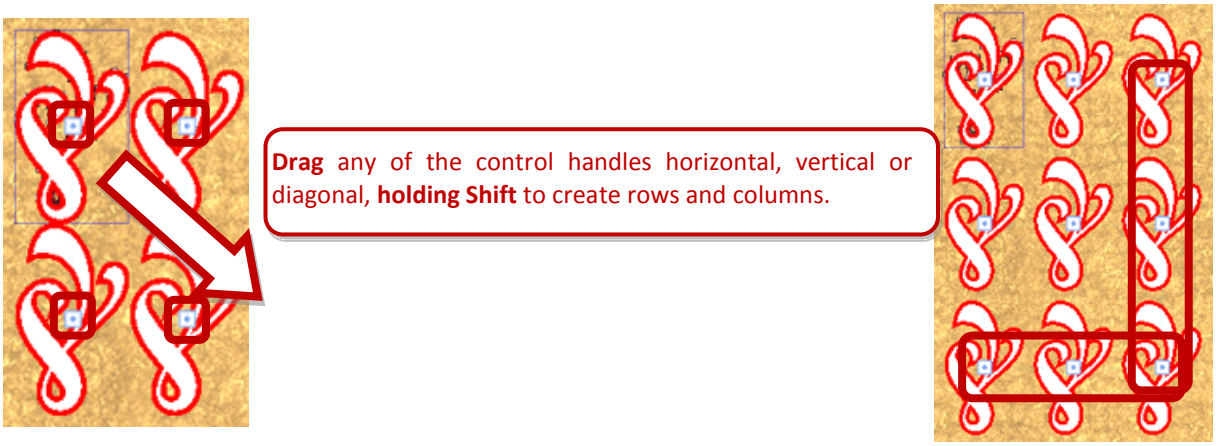
Move any of the control handles besides the top left one and you change the horizontal and vertical distance. See figure below.




If you hold **Ctrl key** while changing horizontal and vertical distance, the horizontal and vertical distance is kept the same.

## Change the resolution of the array

You can visually change the resolution of the array, the number of horizontal and vertical copies. Click and drag any of the control handles **holding Shift** and the number of horizontal and vertical copies changes immediately according to the direction you have dragged the mouse. The distance between the copies remains the same. Take this in consideration while dragging; you have to drag for a distance such as the distance between the copies, in order to create another **row** or **Colum**.

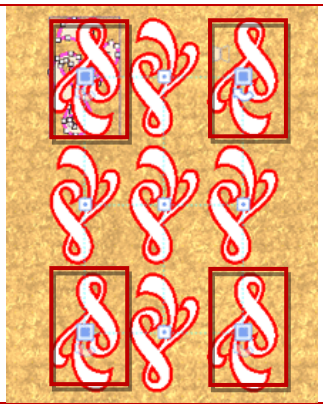



## Change the orientation of copies and create mirrored objects

A very nice way to create unique patterns in your designs is by using different orientation or use mirrored copies in arrays. If you place your mouse over any of the control handles these 2 handles appear  . These handles appear highlighted not only on the current clone but also on every 2 clones to any dimension (Horizontal-Vertical). It is like a 2x2 table pattern, the clone after the next of the clone horizontally and vertically is affected.

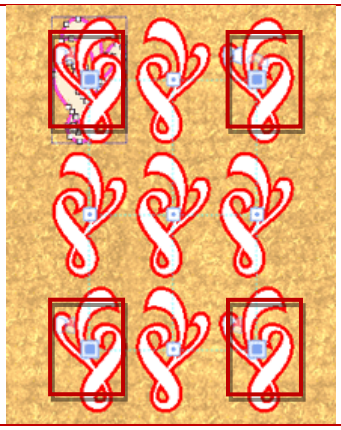
## Rotate copies

The first handle is a rotate handle  . Change the orientation of the clones with 90$^{o}$ degrees step. With a simple left click you rotate the clone 90 degrees. Click once more to rotate again.

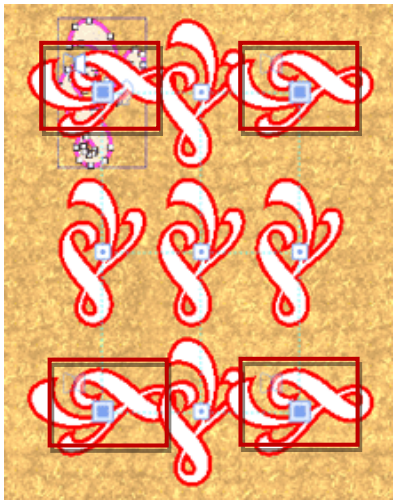
| | | |
|---|---|---|
|  |  |  |
| Place your mouse over any of the control handles; you can see all the affected copies with a highlighted handle over them. | Click once on the rotate handle and the copies are rotated 90 degrees | Click again and they are rotated again 90 degrees. |

## Mirror copies

Next to the rotate handle there is a mirror handle, place your mouse over it. On this copy and on all other affected copies the same handle appears highlighted. Click once to Mirror all these copies.

| | |
|---|---|
|  |  |
| **Place the mouse over any of the control handles, all the affected copies are highlighted too.** | **Left click once and all affected copies have been mirrored.** |

You can mirror any copy in any state. Rotate any copy and then apply mirror, now it is mirrored vertically. The mirror is applied based on the horizontal center of the selected object.

| | |
|---|---|
|  |  |
| **Place the mouse over any of the control handles,** | **Left click once and all affected copies have been** |

| | |
|---|---|
| all the affected copies are highlighted too. | mirrored. |

## Circular array

The **Circular array** tool, works in the same as the rectangular, creates copies of the initial design, but the copies are placed on an **arc-circle**, instead of a rectangle. Select one or more objects that you want to multiply and then press **Circular array** icon that is located on Tools toolbar. Once you press **Circular array** icon you can see a virtual preview of how the array will be. On tool options toolbar you can customize, as you can see on figure below, the properties of the array. A virtual circle is created and the center of the circle is automatically placed at the center of the circle. Later in this section we will present how to change the virtual center and the size of the circle.

- **Start-End** angle
- The **angle** between the copies
- The **number of copies**
- If the object will be **clones**
- The rotation that the clones will be applied.

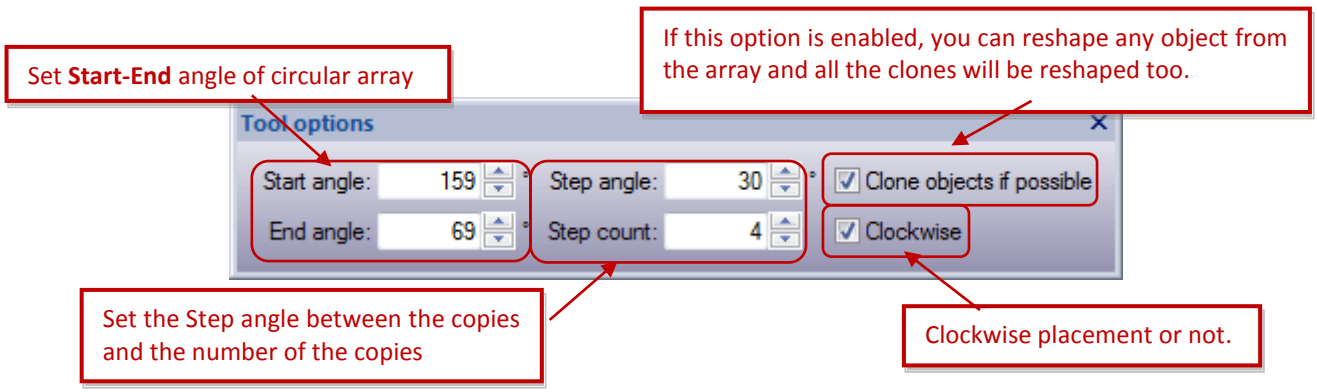



**Figure 6.46: Customize circular array**

**Select start/end angle**

With this option you can specify where the copies of the selected object(s) will be placed on the arc/circle. It is like selecting a part or whole circle to be filled with copies of the initial object. When setting **Start-End angle** the **Step count** option is also changing accordingly based on the size of the arc.

**Step angle**

In this field you can specify the **angle step** (degrees) that each copy of the circular array will be placed on. For example if you type $15^{o}$ degrees, every copy of the circular array will be placed on the arc with $15^{o}$ degrees between them, until the end of the specified "start/end angle". The **Step angle** that you will specify affects also the number of object/design copies that will be added on the **Circular array**. The **Step angle** and the **Step count** options are connected and the value specified in the first options affect the value of the second and the opposite. The valid values of Step angle option is from $0^{o}$ to $359^{o}$.

**Step count**

In this field you can specify the number of copies that you want to be placed in the circular array, between the specified **start-end** angles. For example if you set **Step count** to 5 copies, it will place 5 copies of the selected object(s) on the specified **start/end** angle by adjusting the **Step angle** accordingly. The **step count** that you specify affects also the angle step (degrees) that each copy of the circular array will be placed on. The **Step angle** and the **Step count** options are

connected and the value specified in the first options affect the value of the second and the opposite. Also the value of **Step count** from the size of "start/end angle" that you have specified.

**Clockwise**

With this checkbox you can specify if you want the circular array to be created clockwise or anticlockwise. If the **Clockwise** option is checked, (this is the default option) then the objects/designs will be placed on the circular array with clockwise order and the opposite if it is not.

**Clone objects if possible**

If this option is enabled, the copies of the original object will also be clones. This means that we can reshape them all together by simply reshaping one of them. This option saves us a lot of time and it is also a tool that can produce unique embroidery designs. Any shape transformation that you will make on any of the cloned objects/designs will be applied to all of them immediately.

In order to change the shape of all objects you have to follow the steps bellow

1. Select any of the cloned objects.
2. Click on **Edit shape nodes** mode on **Tools toolbar** (F10 keyboard shortcut), to switch to node editing mode
3. Reshape the object by click and dragging the node segments to the direction you want.
4. To view the changes you made applied on all objects, you have to click back to **Edit objects** option of **Modes** toolbar.

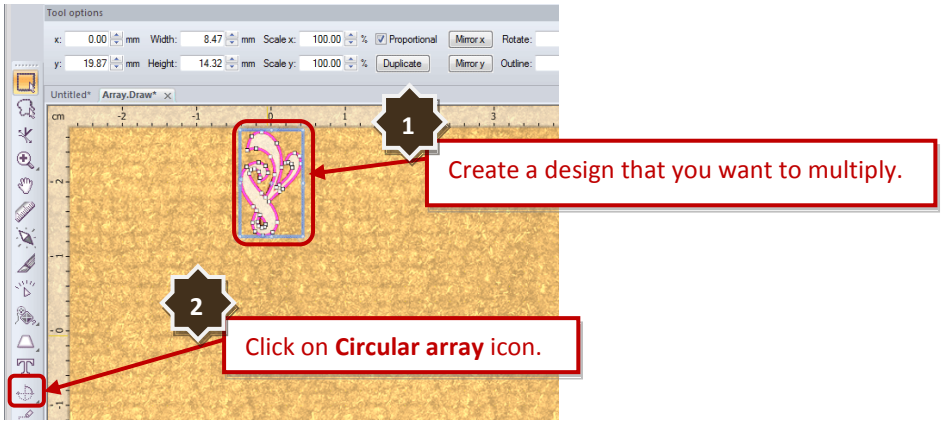
**An array with cloned objects**

Select any of the clones and select **Edit shape nodes** mode

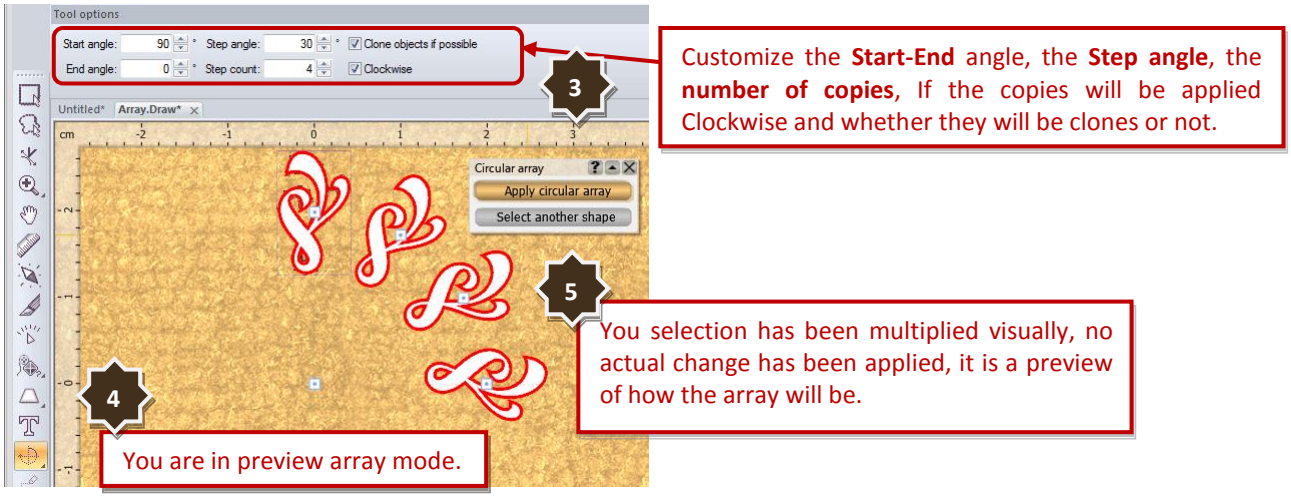
**Edit the shape** of any clone and any clone will be reshaped too

## Using Circular array

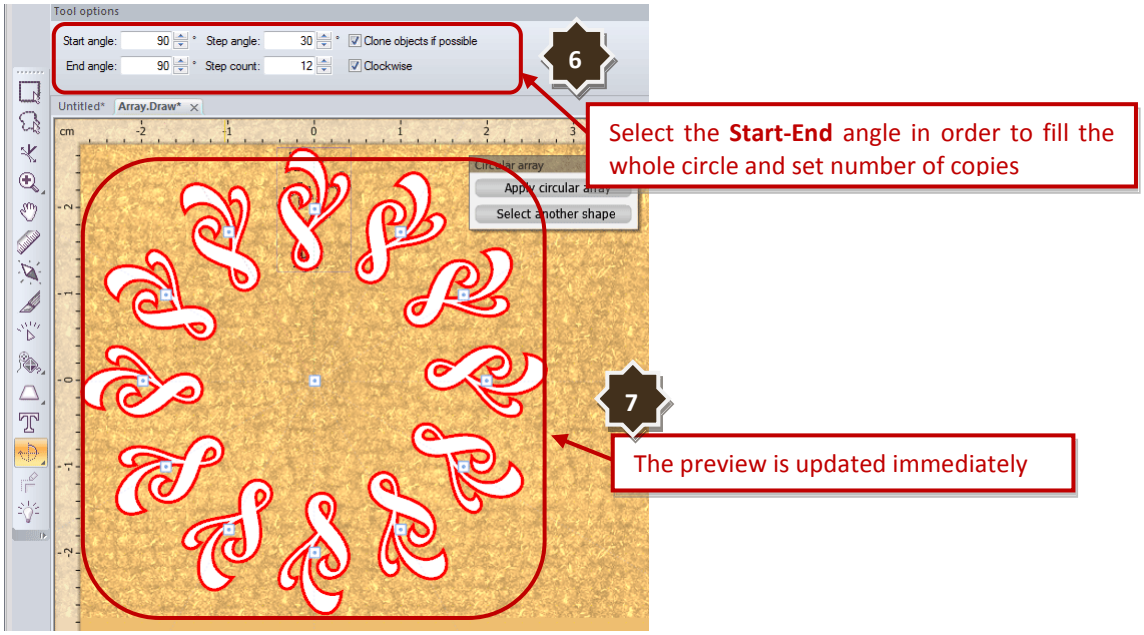
**Step 1.** Create a design to multiply and then press **Circular array** icon to enter Preview array mode.

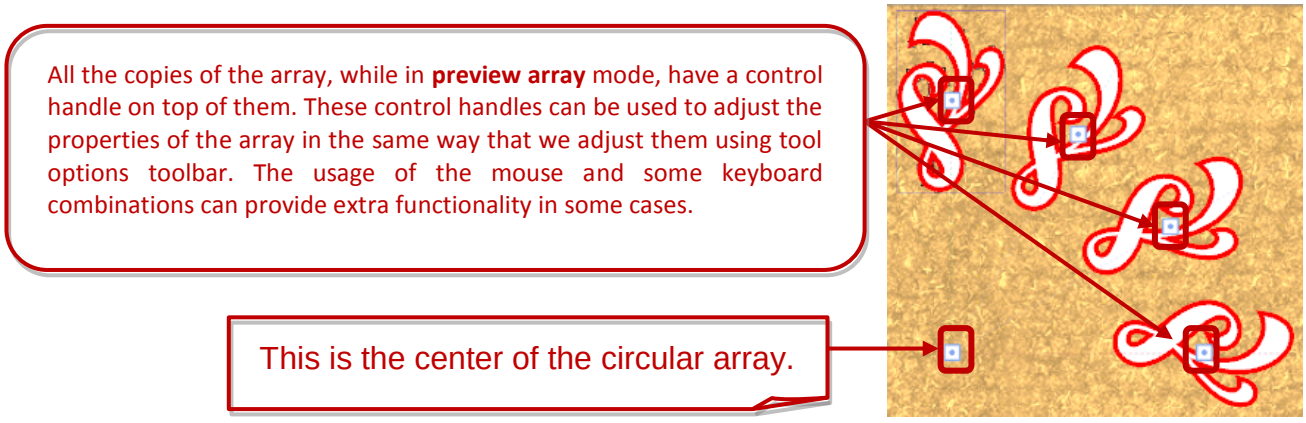



**Step 2**. You are in preview array mode, your selection has been multiplied, the array hasn't been applied yet it is a just preview. Customize the dimensions and the distance for your array.




**Step 3.** Select number of horizontal and vertical copies. The preview is automatically updated



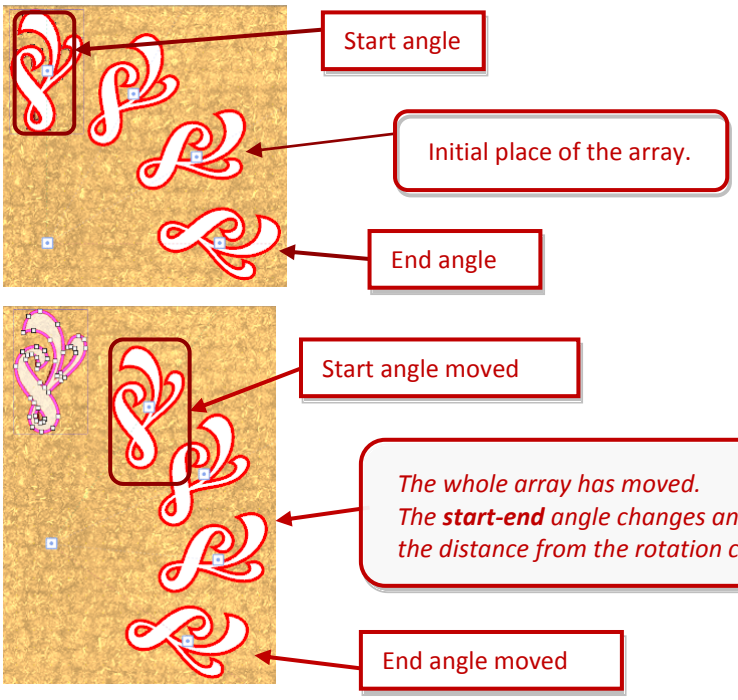




Let's make a brief description of the way that these mouse and keyboard combinations work. All the operations that we will describe below can only be used before we apply the array. The center of the array is by default on the center of the axis (0,0).

The first copy, that is actually the initial object, is placed on the **start angle**. It has a small rectangle around it, in order to be easily separated from the others. The control handle that is located on top of it is the only handle that can move the whole array to a new place.

## Initial object - node

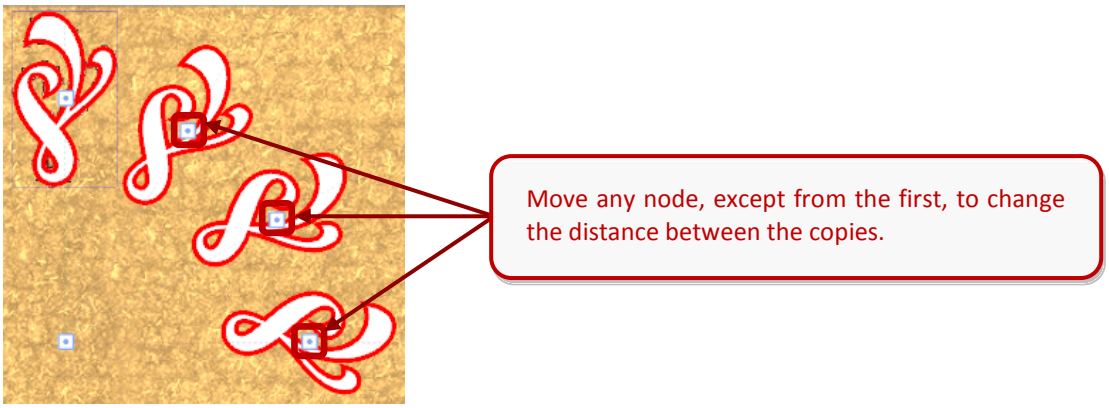
When moving this first node of the array, you can easily change the position of the arc-circle that the array will be applied on and the distance from the rotation center. The rotation of the initial object is the same; the only thing that changes is the placement of the arc.

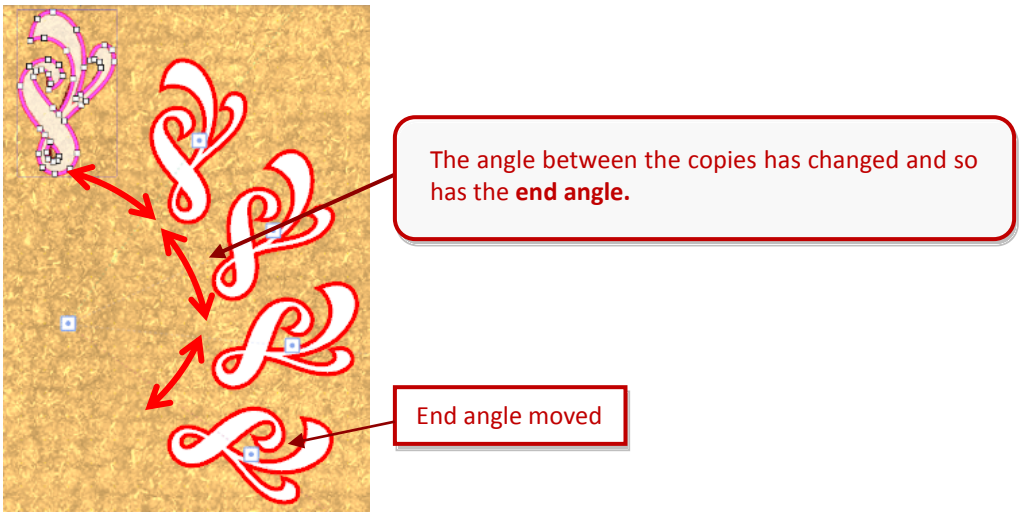



If we **Hold Ctrl** key while moving the first node, the movement of the array snaps on every 15 degrees. Hold **Alt** key and the movement snaps on the grid. If we **hold Shift** key, while moving the first node the arc doesn't change and only the distance from the rotation center.

## Change distance between copies (Angle)

In any movement of the first node the distance between the copies is left unchanged (Step angle). In case that we want to change the distance (Step angle) between objects we have to move any other node. If we move any other node the distance between the copies will change and the **end angle** will change accordingly, so that the same number of copies fits, with the new distance between the copies. The arc has changed so that the number of copies and the distance between them can fit on it. If we reduce the distance the arc will shrink too.



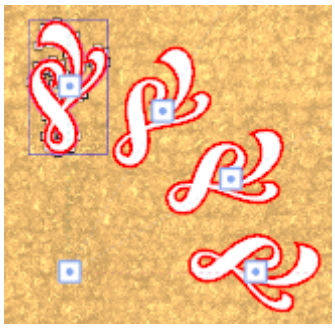

If we **Hold Ctrl** key while adjusting the distance between the copies, the distance snaps every 15 degrees. This is very assistive in having more accurate angle changing.

## Change number of copies

In any of the above cases the number of copies doesn't change only the angle between the copies. While changing the angle there is an easy way to leave the angle the same and based on this angle to increase or decrease the number of copies. Select any of the control handles, **hold Shift** key and move to the direction you like. Move your mouse circular and you we will see that copies are created on the circle towards the direction you are moving. If you move backward copies are removed. The distance between then doesn't change, it is the same as it was at the start of the operation. In reality while **holding Shift** you define with the mouse the arc that the array will be placed on. The start angle stays the same and moving your mouse you define the **end angle**. You must take in consideration that you must move the mouse clockwise or not according to what has already been selected for the array on tool options toolbar.

## Move array center

The rotation center of the array is by default set to the center of the axis (0,0). According to our design we may need to move the rotation center and its distance from our design in order to create the pattern we like for the array. If we move the array center we can see that the whole array is moved to a new position without changing the angle of arc or rotation of the items. When we press Apply array it will be placed in the position that is defined by the preview.

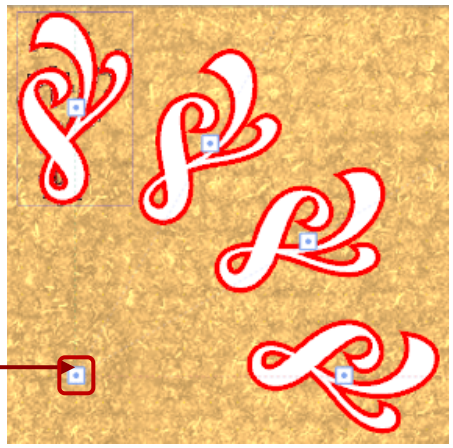


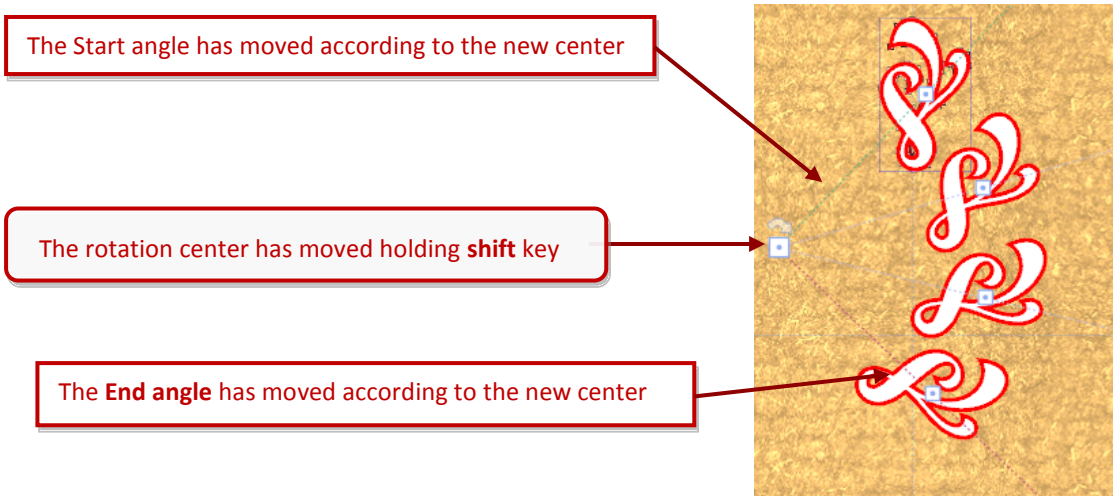
Initial array

**Moved array** (Holding Shift), the array is the same into a new position

If we move the center of the array **Holding Shift**, the position of the initial object and the size of the arc remain the same, but the rotation of the copies and the placement of the arc, changes according to the new center. While moving the rotation center we can also move it closer to the initial object. In order to move the rotation center, we have to hold **Shift** key while moving the rotation center node.

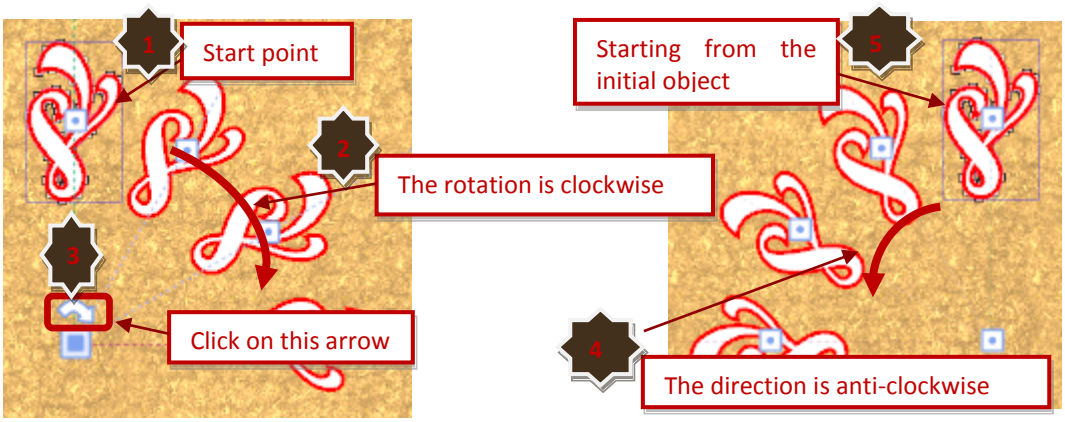
*Moving the rotation center we dynamically change the distance from the center, the position of the arc and the rotation of the copies.*




## Change the rotation

The direction that the array is created is usually clockwise. You can reverse this direction easily by leaving unchecked the **Clockwise** option on **tool options** toolbar. Another way to change the direction is by clicking on the round arrow that appears when placing the mouse over the rotation center. Click once and the direction of the array becomes anti-clockwise. Click once more and it is reversed once more.



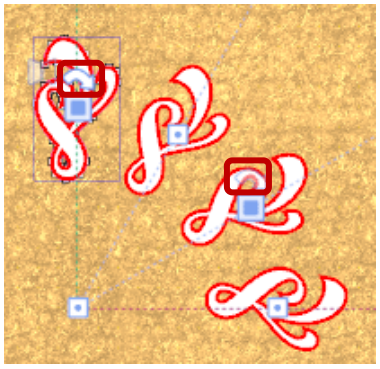

**Click on this small round arrow and the direction of the array is reversed.**

## Change the orientation of copies and create mirrored objects

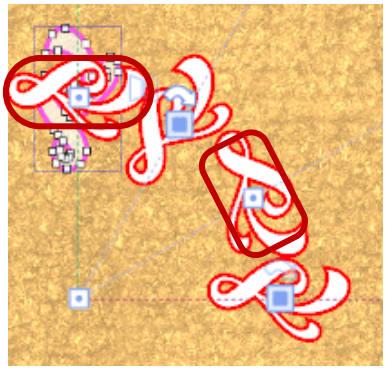
A very nice way to create unique patterns in your designs is by using different orientation or use mirrored copies in arrays. If you place your mouse over any of the control handles these 2 handles appear. These handles appear highlighted not only on the current clone but also on every 2 clones, It is like a x2 pattern, and on every 2 clones the one is affected.

## Rotate copies

The first handle is a rotate handle. Change the orientation of the clones with 90° degrees step. With a simple left click you rotate the clone 90 degrees. Click once more to rotate again.



Place your mouse over any of the control handles; you can see all the affected copies with a highlighted handle over them.

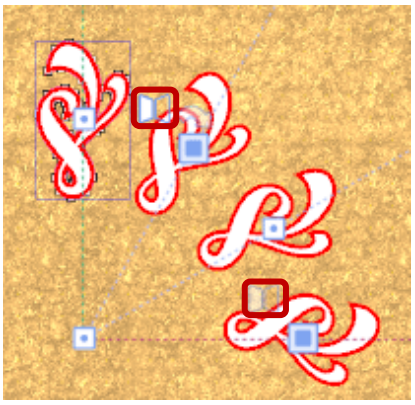


Click once on the rotate handle and the copies are rotated 90 degrees

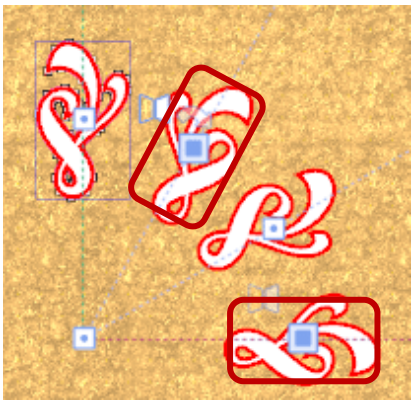
Click again and they are rotated again 90 degrees.

## Mirror copies

Next to the rotate handle there is a **mirror** handle, place your mouse over it. On this copy and on all other affected copies the same handle appears highlighted. Click once to Mirror all these copies.



Place the mouse over any of the control handles, all the affected copies are highlighted too.



Left click once and all affected copies have been mirrored.

You can mirror any copy in any state. Rotate any copy and then apply mirror, now it is mirrored vertically. The mirror is applied based on the horizontal center of the selected object.

These 2 copies have been rotated

We will mirror this rotated version

## Auto border

**Auto border tool** is a very useful tool for creating automatic borders. With this tool you can add a **running** or **satin** border to one or more objects in the design. In order to use Auto border tool you must first select one or more objects that you want to apply auto border. Then you can activate **Auto border** function in 3 ways:

- Press on **Auto border** icon that is located on tools toolbar
- Select the appropriate option of right click menu
- Use **Auto Border** option of **Tools** menu.

The following dialog box will appear.

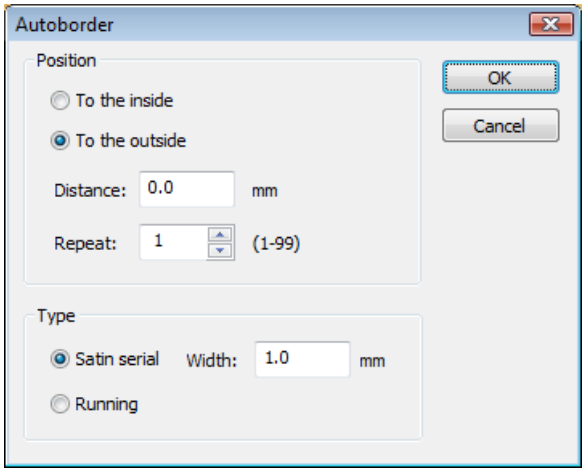
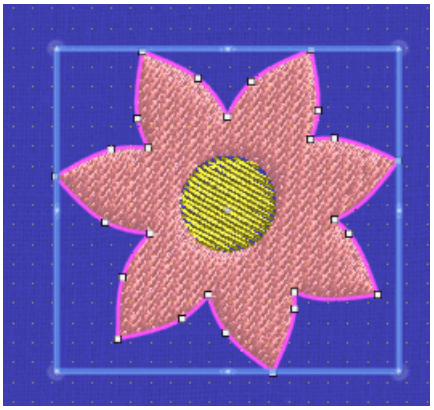



**Figure 6.47: Auto border and Cut dialog**

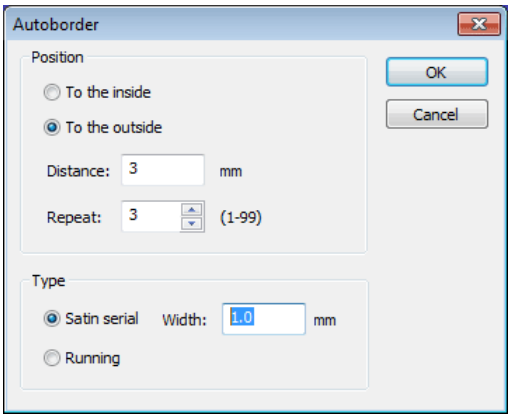
In **Auto Border** dialog box you can define the **Stitch type,** the **Position** and the **number of repeats** of the border.

- **Stitch type:** In this choice set you can define the stitch type of the **Auto border**. You can select between **Satin serial** and **Running** stitch type. For **Satin serial** you can also adjust the width you want the satin to have.
- **Position of border:** In this choice you can set the position you want the border to be placed. You can choose between **To the inside** and **To the outside**. Both options, if you do not enter a specific value in the **Distance** field, will be placed in the same position. The value that will be entered in the **Distance** field is in millimeters, defines the distance between the default position of the border and the new position, inside or outside the object, of the border.
- **Number of repeats:** in this field you can define a number of repetitions for the auto border. Any distance that you define in distance field will be the distance between the repetition of the auto border.

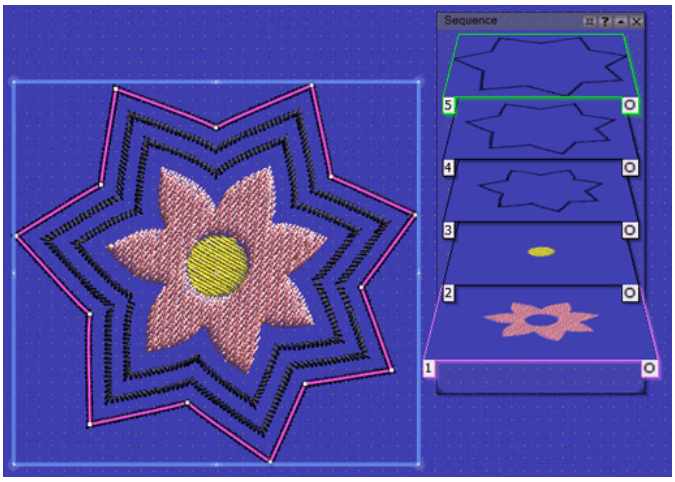
Let's see an example we have created the flower of the following figure.



We selected to create 3 satin border repeats in distance 3mm.




See these 3 created satin bars, in a distance from the initial flower.




Any insert auto border or any repetition is a separate object and can be handles and edited as any object. Edit it's shape, it's properties, transform and move in any way you like.

## Working with text

In this section we will analyze all the Text art abilities that the software has. Inside **Creative DRAWings** you can add text in different languages and convert them to stitches. **Creative DRAWings** supports most existing languages and allows you to create Text Art designs easily. All the fonts that are installed in windows are available and can be used inside **Creative DRAWings**. You can even copy and paste Text from any text editor inside **Creative DRAWings** and convert it to stitches.

### To add text

To insert text in the working area you have to select the **Text** tool from the **Tools** toolbar or by pressing the **F8** shortcut key from the keyboard and then click on the position you want the text to be placed on the working area. The Text cursor will appear waiting from you to type the text you want to convert to stitches. While the Text cursor is active you can even paste any text that it is copied on the clipboard. To paste the text you have to select the **Paste** option from **Edit** menu or by selecting the respective option from the right click menu. The pasted text will be inserted allowing you to edit it further. The small dash on the Test cursor shows the horizontal axis where the text will be placed and the direction of the text.

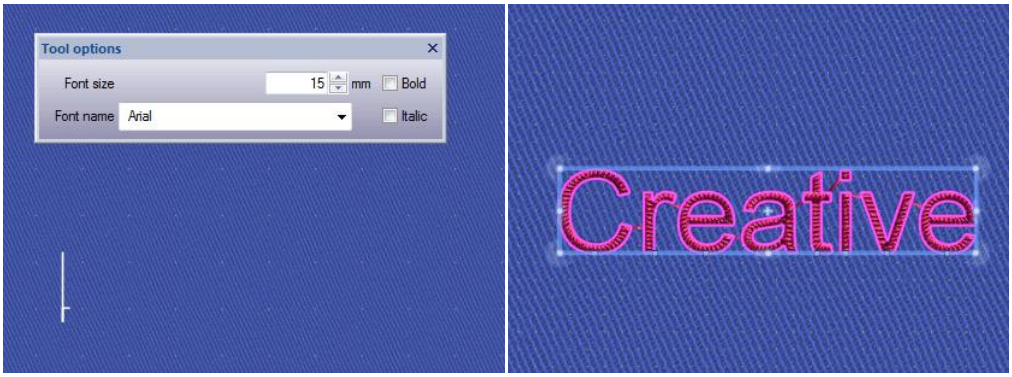



**Figure 6.48: Inserted text**

If you are writing from left to right the dash will be at the right side of the Text cursor. On the other hand if you are writing from Right to Left the Text cursor will be at the left side. While Text cursor is still active you can delete or type more text to the same Text object and make paragraphs by pressing **Enter** key from keyboard. To confirm the inserted text you have to select the **Selection tool** from the Tools toolbar or any other tool.

If you have the 3D preview of stitches enabled you will view the Text filled with stitches, otherwise you will view the vector artwork of the Text design.

## Selecting Text

**Creative DRAWings** Text tool works like an ordinary text editor and allows you to type and edit the inserted text similarly. Therefore the selection options you have, while working with text, are similar with those of an ordinary text editor. To edit the text of a Text object you have to select it and then select the **Text** tool from the tools toolbar. The Text object will become editable allowing you to select the text you want to edit. You can select the text you want to edit by using the mouse or by using the arrow keys or by using the **Ctrl + Home** and **Ctrl +End** keys from the keyboard.

To select the text by using the mouse you have to click on the position from where you want the selection to start and then select the characters by click and dragging with the mouse until the character you want. Then you can type a different text that will replace the specific selected characters.

To select the text by using the arrow keys, you have to click on the position you want the selection to start and by holding the **Shift** key pressed start pressing the arrow key that shows the direction where the characters you want to select are located. Keep pressing the arrow key until all the characters you want are selected. By holding both **Shift** and **Ctrl** keys from the keyboard pressed, you can select the text word by word. Each time that you will press the arrow key, a word will be selected instead of a character. Then you can type a different text that will replace the specific selected characters.

To select the text by using the **Ctrl +Home** and **Ctrl +End** keys from the keyboard you have to click on the position you want the selection to start and by holding the Shift key pressed, press the **Ctrl +Home** or **Ctrl +End** Key from the keyboard according the direction you want to make a selection. If you want to select the characters to the right, you have to press the **Ctrl +End** key from the keyboard. All characters between the cursor and the end of the line will be selected. If you want to select the characters to the left you have to press the **Ctrl +Home** key from the keyboard. All the characters between the cursor and the beginning of the text will be selected. Then you can type a different text that will replace the specific selected characters.

The selected text can be also copied, cut and deleted by selecting the respective options from the right click menu.

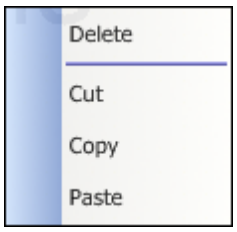



Figure 6.49: Right click menu options

## Change Font and Size

You can edit the Inserted Text easily by selecting the **Text tool** and then the Text object. The Text art object will become active with the Text cursor appearing between the letters of the Text object. While the text object is active you can change the **Font name** and the **Font size** from the **Tool options** toolbar. Also, you can make the text **Bold** or **Italic**.

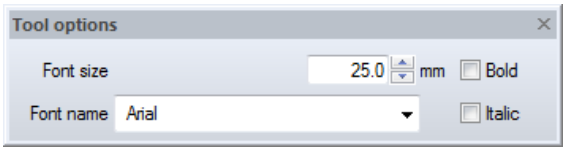



Figure 6.50: Tool options – Font size, Font name, Bold, Italic

To change the **Font name** you have to click on the drop down menu on **Tool options** and select the Font you want. The Font will change on the text allowing you to visualize how the embroidery will look like with a different font.

To change the **Font size** you have to select the value of the **Font size** field and type a new one. To confirm the change you have to press the **Enter** key from the keyboard. The size of the selected Text will change on the working area.

You have also the option to make the inserted text **Bold** or **Italic** (or Bold and Italic) by checking respective checkbox of **Tools options** toolbar. Any change it is directly applied on the inserted Text.

## Edit Text shape

In **Edit shape nodes** mode you can edit more the text objects. You have the ability to change the position of each Text character and create complex Text artwork.

Select the text art design and then click on the **Edit shape nodes** option from the **Tools** toolbar. In node editing mode at the bottom left of each character a handle appears that allows you to change the position of each character. To change the position of a character you have to click and drag its handle to a new position. You can continue and move any character to the position you want and create a text art design. The ability to change the position of each character is available only if the text object is not **converted to curves**. If the Text object has been converted to curves from the respective option of the right click menu or it was inserted as artwork, then you will not have the ability to change the position of each character in node editing mode. The characters will be treated as curve objects and not as Text objects.

Another way to separate the characters and deal with them as separate objects by converting the Text object to curves and then breaking the curve objects apart. To do that you have to select the text object, right click on it and from the right click menu that will appear select **Convert to curves** option. Then right click once more on the object and form the right click menu, select the **Break apart** option. The text object now is split to its characters and can be handled as any curve object.

## Text on path

With the text tool you can also add text on a path that you have created. The text that will be added on the path will follow its curvature and create a text art design. To add a text on path, first, you have to create the path you want the text to be placed on by using any of the drawing tools such as freehand or outline tools. Then you have to insert the Text that you want to be placed on the path on the working area by using the Text tool from the Tools toolbar. Make the needed adjustments on the text object by changing the Font size and type from the tool options bar to make it proper for placing it on the path you have created. Also, you can adjust the curvature of the path you have created in Node editing mode by clicking on the **Edit shape nodes**  from the Tools toolbar. Adjustments on both Text and curve objects can be made, also, after placing the Text on path.

Before applying the text on a path you have to make sure that the text is a text object and it is not converted to curves. Otherwise the Apply path option will not be available.


Figure 6.51: Apply path procedure

To place the text on the path you have to select them both by making multi selection, right click on them and from the right click menu select the Apply path option. The Text object will be placed on the path and follow its curvature. The two objects will become one but they can be edited separately. This means that you can edit the Text and the curve object as you did before applying the Apply path option.

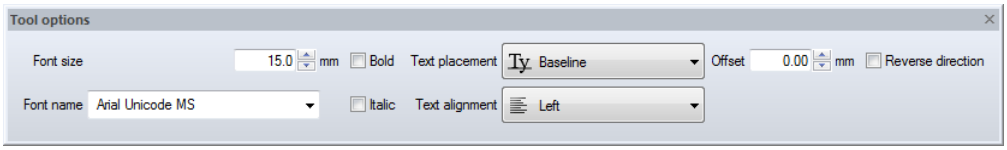



Figure 6.52: Edit text on a path

To edit the text that is on the path you have to select the Text on path object and select the **Text** tool from **Tools** toolbar that will make the Text editable. You can change the type, the size, the style (bold or italic) and add or delete text to the existing text object from the tool options bar. The additional option you have on Text on path objects is that you can change the **Text placement**, the **Text alignment**, the **Offset** and the **Direction** of the text on the path.

**Text placement:** You can change the text placement by selecting any of the four prefix text positions from the Text placement drop down menu of the tool options toolbar. The four options define the position that the path (curve) will have on the Text on path object and are the following:

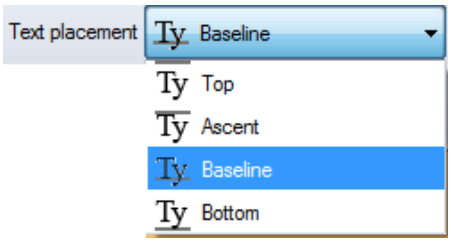



Figure 6.53: Text Placement

- **Baseline (Default):** The **Baseline** option is the default option and positions the text on the curve having characters such as small ‘g’ to expand under the curve.

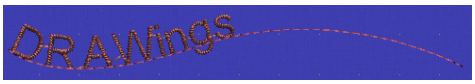



Figure 6.54: Baseline

- **Bottom:** The **Bottom** option positions the text over the curve completely. The curve (path) will be position at the bottom of the text. The characters such as small ‘g’ will be positioned over the curve completely.

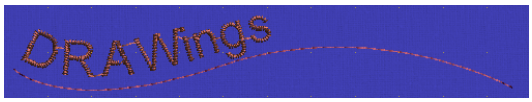



Figure 6.55: Bottom

- **Ascent:** The **Ascent** option positions the text exactly under the curve, having the capital letter or characters such as ‘h’, touching the curve from below. The curve line is positioned over exactly over the text.


Figure 6.56: Ascent

- **Top:** The **Top** option positions the text under the curve by keeping a small distance from the curve.


Figure 6.57: Top

**Text alignment:** You can change the **Text alignment** by selecting any of the three prefix text positions from the Text alignment drop down menu of the tool options toolbar. The three options define the alignment of the Text on a path or a shape object and are the following:

- **Left:** The **Left** option is the default option and sets the Text on path to start from the Left side of the path.


Figure 6.58: Left Alignment

- **Right:** The **Right** option sets the Text on path to start from the Right side of the path.


Figure 6.59: Right Alignment

- **Center:** The **Center** option centers the Text on the path.


Figure 6.60: Center Alignment

**Offset:** The **Offset** numerical field specifies the distance of the Text from its current position. The default offset value is zero and you can change it by either typing a new value in the field, and then press enter key from the keyboard to apply it, or use the arrow buttons next to the field to increase or decrease the current value. The **Offset** value can take positive or negative values and move the Text on the path accordingly.

**Reverse Direction:** When you place Text on a path or on a shape the text takes the direction of the path. If the path was drawn from left to right, then the Text will be also placed from left to right and over the path. On the other hand if the path was drawn from right to left then the Text will be also placed from right to left but will be positioned below the path.

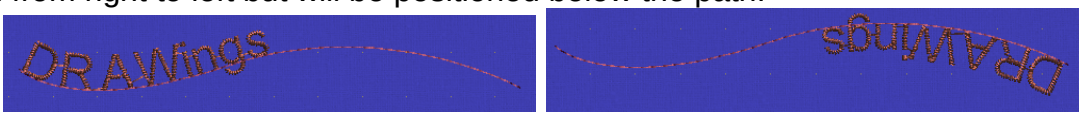



**Figure 6.61: Path right to left - Path left to right**

When the path or the shape was designed from right to left and the text you have placed on appears in the opposite way from what you expected, you can simply check the **Reverse direction** checkbox and the text will appear in the way you wanted to be.

You can also edit the **curve** that the text was placed one. To edit the curve (path) you have to select the **Edit shape nodes** option from the tools tab and edit its nodes. Any change you are making on the curve (path), affects also the way the Text is placed on the curve.

### Remove text from path

If you have Text placed on a path you can easily remove it by right clicking on it and selecting the **Clear path** option from the right click menu that will appear. The Text will be removed from the path (curve object) and will lose its curvature. The Text object will keep its attributes (Font type, size, style etc.) and it will position on a virtual straight line which is the default position of every text you are inserting on the working area.

The curve (path) object where the Text was placed on will remain as it was before applying the text on path option.


## Insert symbol

Inside **Creative DRAWings** you can also insert symbols that can be also converted to stitches (This option is available only inside **Create** mode). There are many symbols you can import in **Creative DRAWings** and convert them to stitches. Symbols are ready made artworks that have various shapes that also vary depending on the Font type you are using. Each font type includes its own list of symbols that are based on the artwork of Font.

To insert a symbol inside **Creative DRAWings** you have to select the **Insert symbol** option from **Tools** menu or press the **Ctrl** and **F11** shortcut keys (Ctrl+F11) together from the keyboard. The **Insert symbol** dialog will appear where all symbols of a specific font will be listed. You can

navigate yourself between the symbols by scrolling with the scroll bar at the right side of the dialog. Once you have found the symbol you want to use you have to select it and click the **Insert** button.

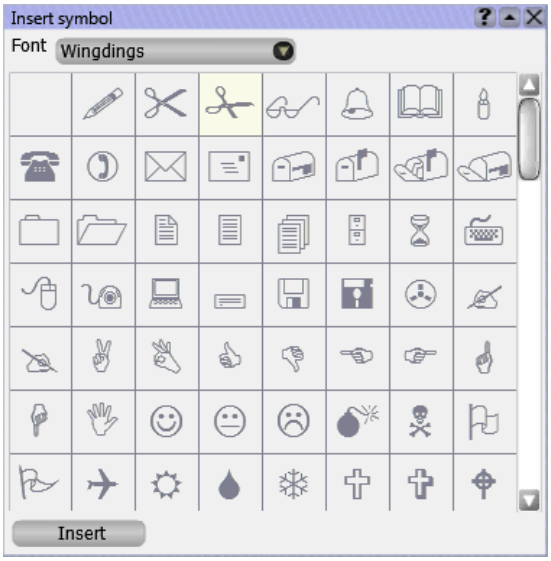



**Figure 6.62: Insert symbol dialog**

By clicking the **Insert** button the cursor changes to **cross,** allowing you to insert the selected symbol on the working area and the **Insert symbol** dialog disappears making more working space visible.

**Figure 6.63: Horizontal placement with 5,33 mm width – Placed on an angle with 5,33 width**

To insert the selected symbol on the working area you have to click and drag with the mouse specifying the width of the symbol and the angle you want to have from the horizontal axis. After releasing the mouse click the symbol appears on the working area with the default fill and outline colors and the **Insert symbol** dialog turned back on. You can insert as many symbols you want by following the same steps.

While dragging with the mouse useful information appear next to the cursor such as the **Width** and **Angle**. If you hold the **Ctrl** key pressed while dragging, the cursor will snap on every 22.5$^{o}$ degrees allowing you to insert the symbol on a specific angle.

You can also change the symbols list you are viewing by changing the **Font** type. On top of **Select Symbol** dialog you can view the current font that you are using. You can change the font by clicking on the current font and from the list that will appear select a different one. The symbols will change accordingly allowing you to insert new symbols on the working area.

If you want to close the **Insert symbol** dialog you have to click on the close icon . You can also minimize it by clicking on the hide icon . The minimize icon will make Backdrop properties to disappear and leave the title bar to float on the working area.


**Figure 6.64: Minimize backdrop properties dialog**

You can maximize the dialog by clicking once more on the show  icon.

# Chapter 7 - Transformations

## Introduction

In this chapter we will learn all available transformation tools that you have to change the objects of the designs. You will learn how to **reposition** objects how to **reorder** them and how to **duplicate** and **delete** them. Also, we will show you how to change the shape of the objects. You will learn object **sizing**, **skewing**, **rotating** and **mirroring** and some special functions such as **Trim**, **Intersection**, **Weld**, **Combine** and **group** that can be applies on multiple objects. Finally, we will learn how to use the **color manager** and adjust the colors of the objects.

## Positioning objects

In **Creative DRAWings** you can position the object by dragging them to their new position, by using the arrow keys from the keyboard and by specifying their horizontal and vertical position on the working area. The different ways to position an object can help you work easier and more precisely. These abilities are available only inside **Create** mode and inside the **stitch** mode.

### Move an object(s)

You can move an object or a multiple selection of objects by clicking and dragging them in their new position. By releasing the left mouse click the object(s) are placed in the position you want them to be. By zooming in the object you can make even more precise movements of objects.

If you hold the **Ctrl** key pressed while moving an object, guidelines will appear on every 22.5 degrees of the X and Y axes. While moving the object it will snap on the guidelines, allowing you to make accurate movements along the guidelines.

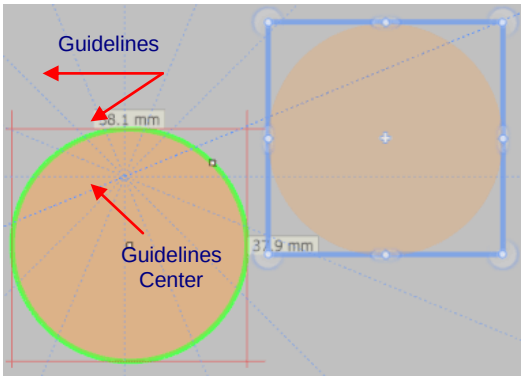



**Figure 7.1: Hold Ctrl key and guidelines will appear on every 22.5 degrees**

The guidelines that appear have as center the point you click and dragged to move the object. If you want to move the object by using the guidelines but based on its center, you have to move the center handle outside of the shape and then move the object by click and dragging the design from the center of the object while having the Ctrl key pressed.

If you hold the **Alt** key pressed while moving an object, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While moving the object it will snap on the guidelines, allowing you to make accurate movements along the guidelines.

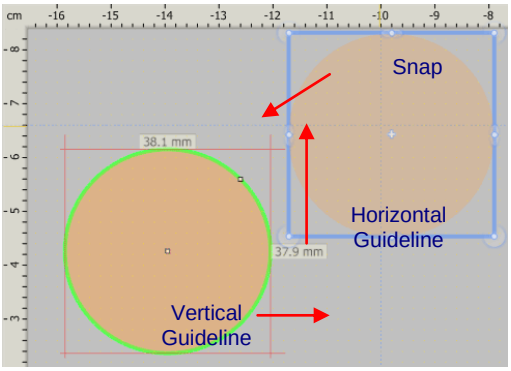



**Figure 7.2: Hold Alt key - Horizontal and Vertical guidelines appear**

When you press the **Alt** key the object automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can move the object to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled and the Grid enabled.

## Move a shape while drawing it

You can also move a shape object while drawing it. This is an ability that you have when you are inserting any of the readymade shapes (Ellipses or Rectangles) in the **Create** mode of **Creative DRAWings**. While drawing a shape (after selecting the respective tool) by click and dragging you can change its position by holding also the **right click** of the mouse pressed. The shape object will start moving, allowing you to reposition it. If you release the right click without releasing the left click also, the shape will stop following the movement of your mouse but continue changing the shape of the object you want to create. If you release both mouse clicks, the object shape will be positioned on the working area by having the shape you gave to it.

This is very useful because you can reposition the shape you want and place it exactly where you want it during the designing face, without having to do that afterwards.

## Move objects with arrow keys

The position of an object can be also changed by using the Arrow keys from the keyboard. To move objects you have to select them and then click on the arrow key that has the direction you want to move them. You can move the objects until you are satisfied with the position that objects have.

Every time you click on the arrow key, the object(s) moves 1mm to the direction of the arrow. If you hold the Ctrl key pressed and then press the arrow key, the object(s) will move 5mm to the direction of the arrow. Finally, if you hold the Shift key pressed and the press the arrow key, the object(s) will move 0,10mm to the direction of the arrow. By using the arrow keys and its combinations you can position the object(s) exactly in the place you want.

You can change the movement step (distance) of the arrow keys from the Tools tab of Options dialog that you will find under Tools menu. In the tools tab you will find the Selection movement step option, where you can define the distance you want the selected object to move every time you press the arrow keys. The value that you will enter will also change the movement of objects when you are holding the Ctrl key pressed. The movement of objects when you hold the Ctrl key pressed will be multiplied with the value you have defines in the Selection movement step. For example, if you have set the Selection movement step to be 3mm, the movement while holding the Ctrl key pressed will become 3mm multiplied with 5mm, which is the default movement, equals 15mm movement.

## Move an object with X and Y coordinates

Another way to change the position of a shape, which is also the most accurate one, is to move an object based on its X and Y coordinates. When you select an object its coordinates appear on the Tool options toolbar.

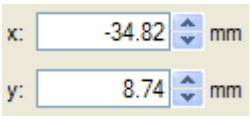



Figure 7.3: X & Y coordinates

**Tool options** is a proprietary toolbar that holds the options of the selected object. In order to change the position of the object you have to change its coordinates, X and Y and place new ones based on the ruler of the working area. From the Ruler you can find the exact portion you want the design to be placed and enter the respective values. The ruler is defining virtual X and Y axes and that is why you can enter negative numbers as values to X and Y fields.

## Aligning, distributing and auto-sizing objects

**Creative DRAWings** lets you precisely align objects in the design you are creating. You can align objects with each other, and position them exactly where you want them to be. It also, lets you distribute the objects automatically and make their sides appear at equal intervals vertically or horizontally. In addition, gives you the ability to automatically size the objects based on the dimensions of a specific object. All this options are accessible from the **Align toolbar** that can become visible by selecting the respective option from **View** menu. These abilities, also, are available only inside **Create** mode and inside the **stitch** mode that is combined with **Create**.

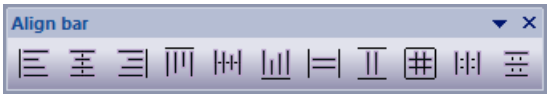



Figure 7.4: Align bar

The **alignment** and the **auto-sizing** of objects is made based on the last selected object or on the highlighted object (the highlighted object has magenta outline). If you make multiple selection of objects by holding the **Shift** key pressed each time you add an object to your selection the last object that you will select, will be the one where the alignment will be based on. If you make a lasso or rectangle selection, the highlighted object, with magenta outline, will be the one where the alignment will be based on.

For example: If you have three objects like those in the figure below and you make a rectangle or lasso selection, the one that will have magenta outline will be the object that the align bar tools will use to align/auto-size the other two objects. As you can see from the figure below the Triangle is the highlighted object. The highlighted object is automatically selected and there is no way to specify which one will be highlighted inside a rectangle/lasso selection.

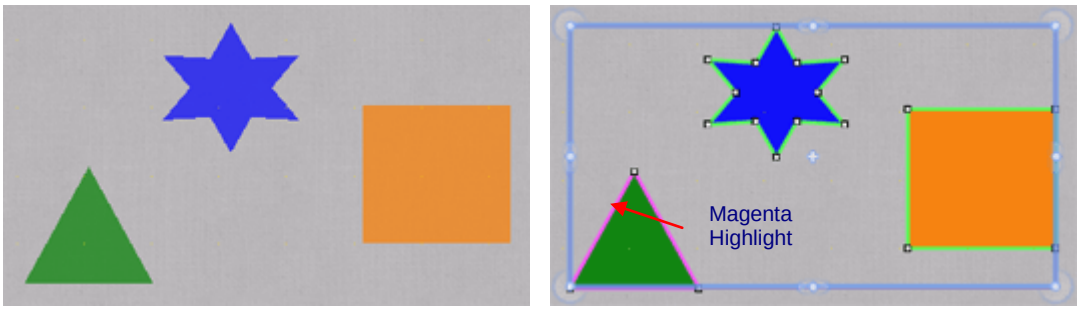



Figure 7.5: Rectangle / Lasso selection and the Highlighted object.

To specify the highlighted object you have to select the objects one by one while holding the **Shift** key pressed. Each time you click on an object, it will be added to your selection. The last object that you will select will be the object where the align bar tools will be based on.

Therefore, in our example, if we want the highlighted object to be the rectangle, we have to **select the triangle first**, hold the **shift** key down, then **select the star object**, keep the **Shift** key pressed and **select the rectangle object** which will be the highlighted one. View the figures below.

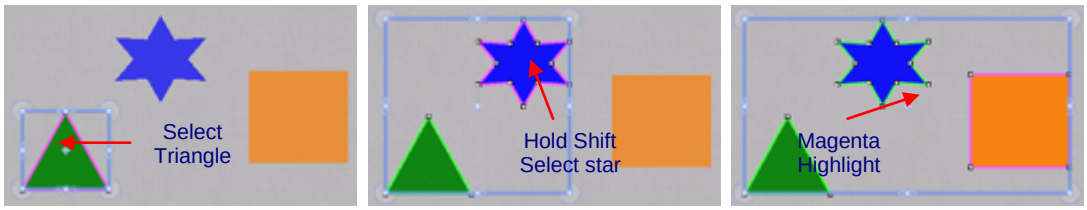



**Figure 7.6: Define the highlighted object by making a multiple selection**

Then you can apply any option from the **Align bar** based on the rectangle.

## Aligning objects

The first six buttons of the **Align bar** are the available **aligning options** of the software. By default the Align options are disabled and they become available only if you select two or more objects. If you select only one object the options will remain disabled. After selecting the objects you have to select the alignment option you want to apply on them based on the highlighted object.

The Alignment options you have are the following:

- **Align Left**  : To apply **Align Left** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Left** icon from the **Align bar** or by pressing the '**L**' shortcut key from the keyboard. The selected objects will be aligned left, based on the highlighted object.

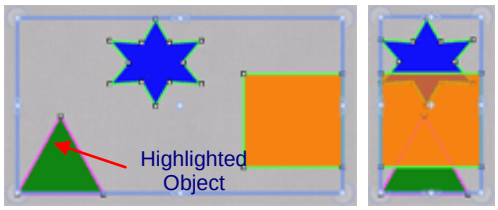



**Figure 7.7: Align left based on the Triangle**

- **Align Right**  : To apply **Align Right** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Right** icon from the **Align bar** or by pressing '**R**' shortcut key from the keyboard. The selected objects will be aligned Right, based on the highlighted object.

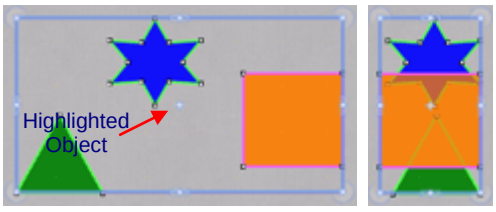



**Figure 7.8: Align Right based on the Rectangle**

- **Align Centers Vertically**  **:** To apply **Align Centers Vertically** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Center**

**Vertically** icon from the **Align bar** or press the '**C**' shortcut key from the keyboard. The centers of the selected objects will be aligned vertically (on the vertical axis), based on their center of highlighted object.

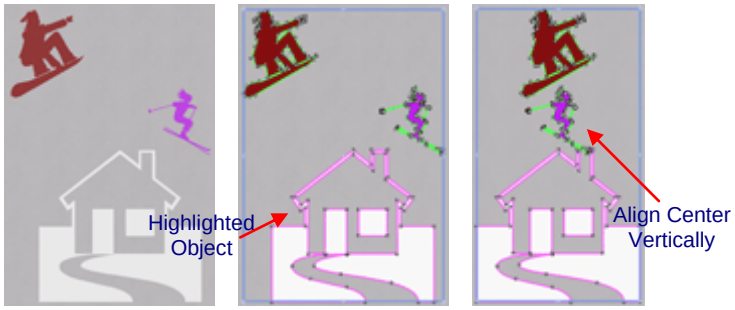



**Figure 7.9: Align Center Horizontally based on the House drawing**

- **Align Centers Horizontally** : To apply **Align Center Horizontally** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Center Horizontally** icon from the **Align bar** or press the '**E**' shortcut key from the keyboard. The selected objects will be aligned vertically, based on the center of highlighted object.

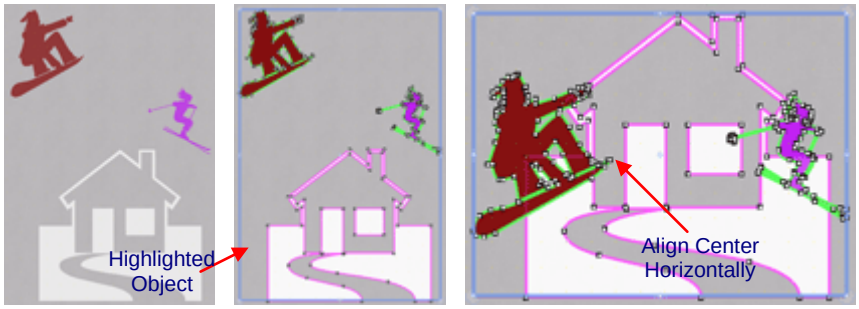



**Figure 7.10: Align Center Vertically based on the House drawing**

- **Align Top** : To apply **Align Top** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Top** icon from the **Align bar** or press the '**T**' shortcut key from the keyboard. The selected objects will be aligned Top, based on the highlighted object.

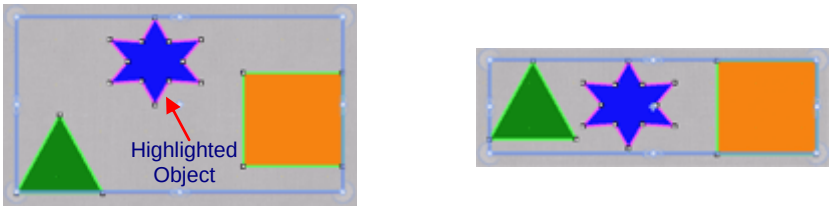



**Figure 7.11: Align Top based on the Star**

- **Align Bottom** : To apply **Align Bottom** option at list two objects must be selected. After selecting the objects you want to align click on the **Align Bottom** icon from the **Align bar** or press the '**B**' shortcut key from the keyboard. The selected objects will be aligned Bottom, based on the highlighted object.

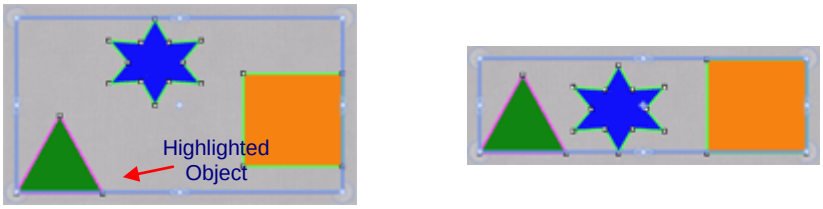



Figure 7.12: Align Bottom based on the Triangle

## Auto-sizing objects

On the align bar there are three available **Auto-sizing** tools. By default the **Auto-sizing** options are disabled and they become available only if you select two or more objects. If you select only one object the options will remain disabled. After selecting the objects you want to auto-size you have to select the sizing option you want to apply on them based on the highlighted object.

- **Make same width** : To apply **Make same width** option at list two objects must be selected. This option allows you to make the selected objects to have same width with the highlighted object that it is also included in the selection. After selecting the objects you want to have the same width, click on the **Make same width** icon from the **Align bar** or press the **Shift + W** shortcut keys from the keyboard. The selected objects will be resized and have the same width with the highlighted object.

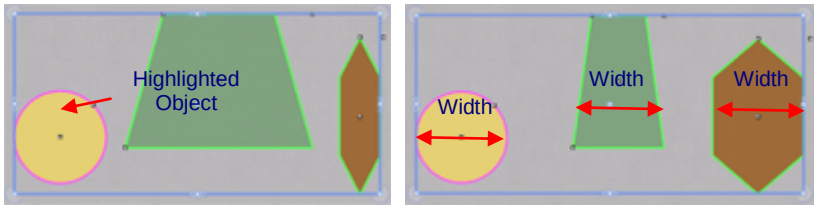



Figure 7.13: Make same width based on the Circle

- **Make same height** : To apply **Make same height** option at list two objects must be selected. This option allows you to make the selected objects to have same height with the highlighted object that it is also included in the selection. After selecting the objects you want to have the same height, click on the **Make same height** icon from the **Align bar** or press the **Shift + H** shortcut keys from the keyboard. The selected objects will be resized and have the same height with the highlighted object.

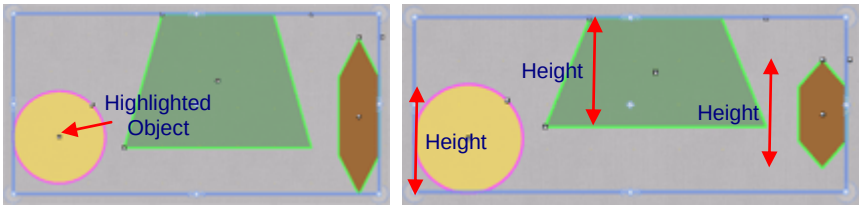



Figure 7.14: Make same height based on the Circle

- **Make same size** : To apply **Make same size** option at list two objects must be selected. This option allows you to make the selected objects to have same size with the highlighted object that it is also included in the selection. After selecting the objects you want to have the same size/dimensions, click on the **Make same size** icon from the **Align bar** or the **Shift**

**+ S** shortcut keys from the keyboard. The selected objects will be resized and have the same dimensions with the highlighted object.

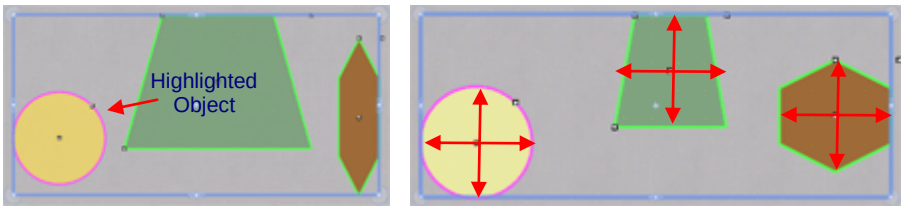



**Figure 7.15: Make same height and width based on the Circle**

## Distributing objects

On the align bar there are two available **Distributing** tools. By default the **Distributing** options are disabled and they become available only if you select three or more objects. If you select only one or two objects the options will remain disabled. After selecting the objects you want to make their sides appear at equal intervals vertically or horizontally, you have to select the distributing option you want to apply on them and it will be applied immediately. While distributing objects the highlighted object it is ignored because it does not affect the functionality of the options. The available distributing options are the following:

- **Equal horizontal spacing** : When this option is applied on the selected objects, the horizontal distance between objects becomes equal. Therefore this options places equal horizontal intervals between the selected objects. To apply this option, select the objects you want and then click on the **Equal horizontal spacing** icon from the standard toolbar or the **Shift + C** shortcut keys from the keyboard.

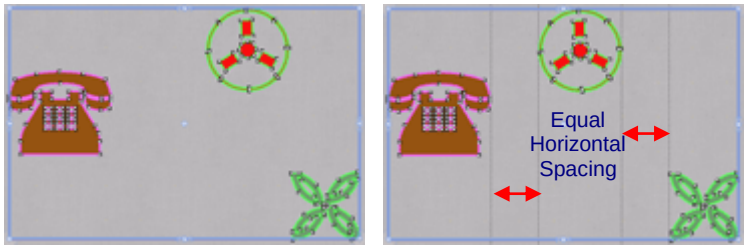



**Figure 7.16: Equal horizontal spacing between objects**

- **Equal Vertical spacing** : When this option is applied on the selected objects, the vertical distance between objects becomes equal. Therefore this options places equal vertical intervals between the selected objects. To apply this option, select the objects you want and then click on the **Equal vertical spacing icon** from the standard toolbar or the **Shift + E** shortcut keys from the keyboard.

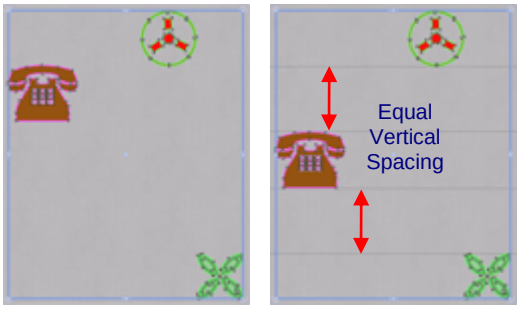



**Figure 7.17: Equal Vertical spacing between objects**

By aligning, distributing and auto-sizing objects you can create your designs even easier and quicker.

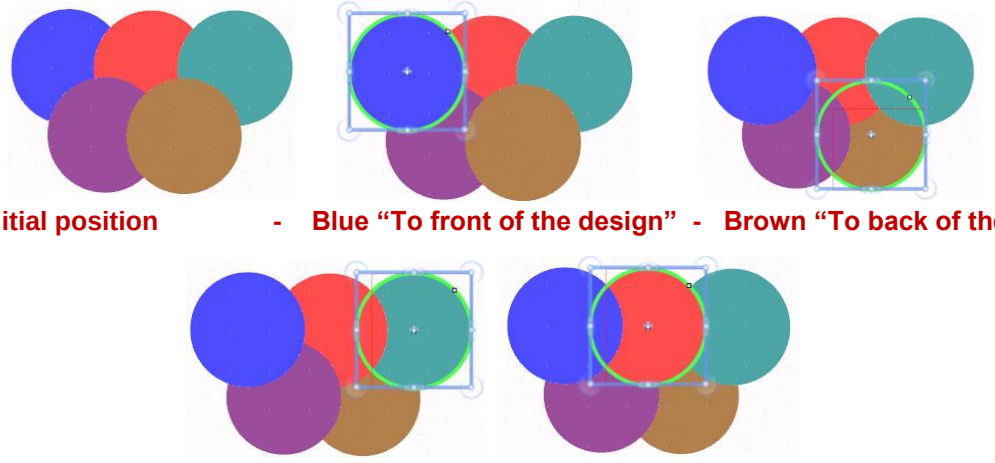
## Re-order objects

In the Create mode of **Creative DRAWings** you can change the order of objects. You can change their order by bringing one to front and send another to back. The re-ordering you are making is for the vector design mainly. The final embroidery sequence is only based on the design and it is not identical with the order that the vector design was created.

There are four available reordering options which are **To front one**, **To back one**, **To front of design**, **To back of design**. To apply any of the reordering options to the object(s) you have to select it and then right click on it in order the popup menu to appear. From the right click menu expand the **Order** submenu and select any of the four reordering options.

- **To front one:** With this option you can move the selected object forward one position. If the selected object is positioned at the top of the design then the **To front one** option will not be available. Another way to apply this option directly is by pressing **Page-Up** shortcut key (PgUp) together from the keyboard.
- **To back one:** With this option you can move the selected object behind one position. If the selected option is the last object of the design, this option will not be available. Another way to apply this option directly is by pressing **Page-Down** shortcut key (PgDn) together from the keyboard.
- **To front of the design:** With this option you can move the selected object(s) to be in front of all other objects of the designs. Another way to apply this option directly is by pressing **End** shortcut key (End) together from the keyboard.
- **To back of the design:** With this option you can move the selected object(s) to be behind of all other objects of the designs. Another way to apply this option directly is by pressing **Home** shortcut key (Home) together from the keyboard.

For example, in the figure below we have five circles; and the blue circle is at the lowest level, the red to the next level, the green to the next level, the purple to the next level and the brown at the top level. In order to change the order of the circles we have to select the blue one and from the right click menu select **Order > To front of the design** option.



**Initial position - Blue "To front of the design" - Brown "To back of the design"**

**Figure 7.18: Green "To back one" - Red "To front one"**

Immediately the circle at the lowest level goes to the highest level. We can do also the opposite by selecting another circle (Brown object) and from the right click menu select **Order > To back of the design** option.

This option sends the circle to the lowest level of the design. If we want to change an object one level, upwards or downwards we can do it by selecting the object (Green object) and again from the right click menu select **Order > To back one** option.

The green circle will be re-ordered under the red circle that is one level down. We can do the opposite to the red circle by bringing it one step forward. The red object will be positioned over the purple object and under the blue object

When we finish reordering the design we can go to the stitch mode to see how the embroidery design will look like or enable the **Stitches** option from the **View** menu inside the **Create** mode.

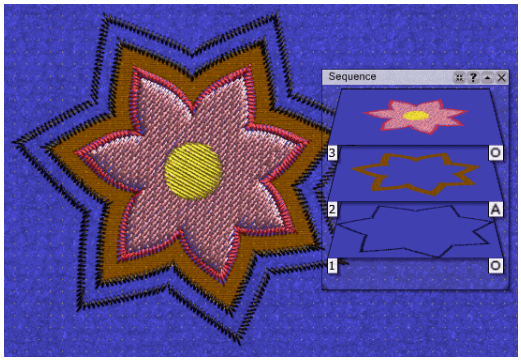
The reordering tools can help you create exactly the design you want to embroider.

## Sequence manager

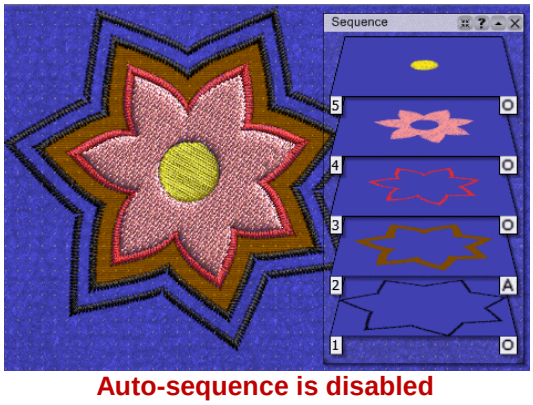
**Sequence manager** provides a graphical representation of the embroidery sequence and an easy way to change the embroidery sequence. Sequence manager is a transparent floating dialog that appears on top of the design area (Figure 7.18). All the design items are represented as icons of the items to be embroidered. All these items have a number, in the lower left corner, which reveals their position in the embroidery sequence. They also have an icon on the lower right corner to reveal the type of the item. You can see the icons and the type of the objects that they represent in the following table.

| | |
|---|---|
|  | **Normal stitch** objects(Running, Satin serial, Step, Row Fill) |
|  | **Imported Cross-stitch or Photo-stitch** |
|  | **Appliqué** objects |
|  | **Imported artwork** from stitch files |

As we can see in the following figure the first item to be embroidered is at the bottom of sequence manager and the last is at the top.




Auto-sequence is enabled




Auto-sequence is disabled

**Figure 7.19: Sequence manager floating dialog**

At this point we must mention that a very special tool of **Creative DRAWings**, the **Auto-sequence**. This tool affects the way that the design items can be viewed on sequence manager. When **Auto-sequence** is enabled the program automatically decides the sequence of all stitch objects, so you don't have any control of the sequence of the design items via sequence manager in this case. The only items that are separated are appliqué and imported stitch files. As you can

see on the figure above, when **Auto-sequence** is enabled, the first item is a normal stitch object, the second item is an appliqué object and at the end there is a normal stitch object. The program uses intelligent mechanisms and automatically decides the sequence of the stitch items which means that you don't have any kind of control in the order that they will be embroidered using sequence manager. When **Auto-sequence** is enabled you can easily separate normal stitch objects from appliqué objects or imported stitch files and change the ordering between them.

If you want to have full control of the ordering of all stitch objects you can disable Auto-sequence.

This can be easily done by pressing **Auto-sequence** icon on Tools toolbar. Once **Auto-sequence** is disabled all design items become separate icons on sequence manager. This can be clearly seen in figure 7.18. At the left part, where Auto-sequence is disabled, you can see that all design items have separate icons. In the right part where Auto-sequence is disabled every design item has a separate sequence item. By clicking and dragging any item you can change their order. You have the full control of the embroidery sequence all the intelligent mechanisms have been disabled.

More information about the usage and customizations of the **Auto-sequence** is provided in chapter Embroidery sequence.

## Re-sequence items

Using sequence manager you are able to easily see all the designs objects. When Auto-sequence is enabled all design items are organized into one sequence item and only appliqué or imported stitch objects are separated into different icons. This way you can separate, **appliqué** and imported stitch data from **normal stitch** objects and change the order between them easily in case that is needed.

As we can see on the following design, these 3 steps objects will be embroidered as shown n sequence manager. We have intentionally placed the pink object below the red one; the pink object is not visible at all now. We will move the red object to be embroidered first. See in figure 7.20 how the visible items and the how the appearance of the design has changed.

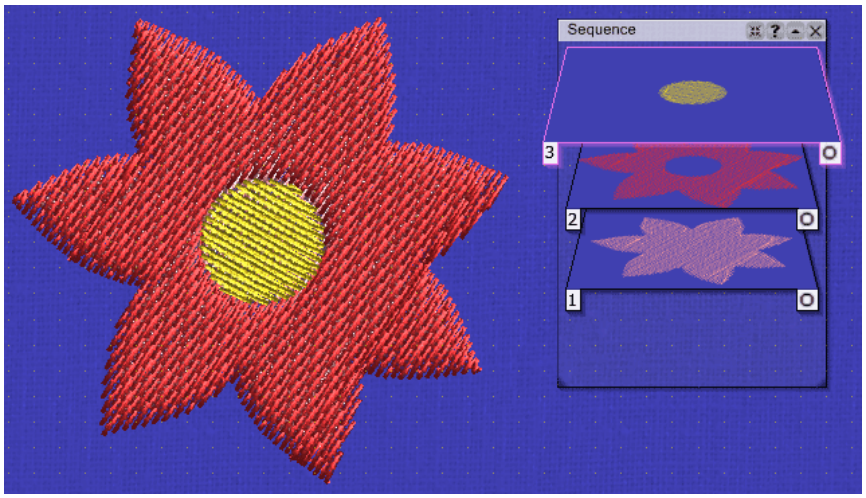



**Figure 7.20: Sequence manager**

Let's see how easily we can change this sequence. We will place the mouse over the red object, in sequence manager, so that it gets highlighted. Now click and drag the object to the lower part of sequence manager so that is placed before all stitch objects. Simply by click and drag you can move any sequence item. Now as you can see on the figure below how the appearance of the flower has changed. The pink object is on top of the red and it is now visible. We have also created a satin outline object with 2 repeats using auto border tool and placed after the appliqué object. More information about auto border tool is provided in a separate section.

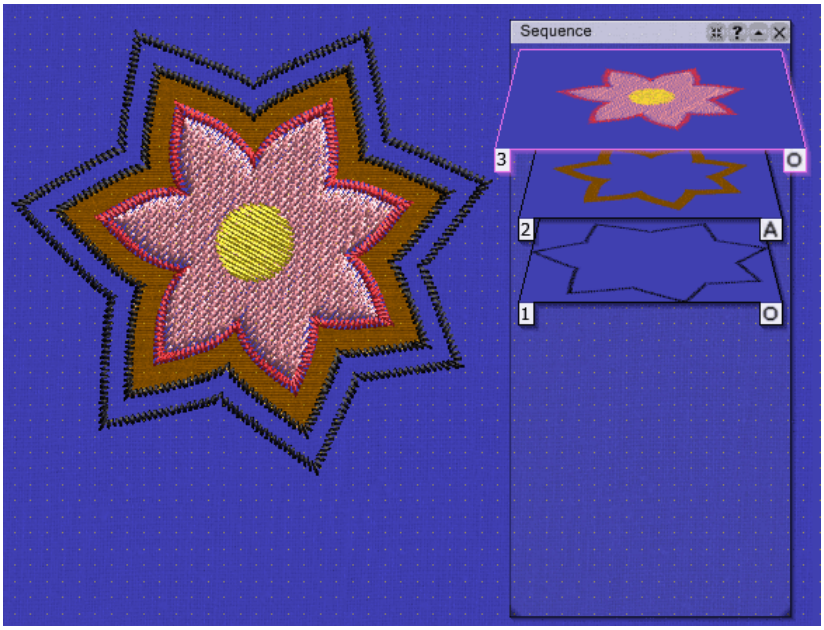
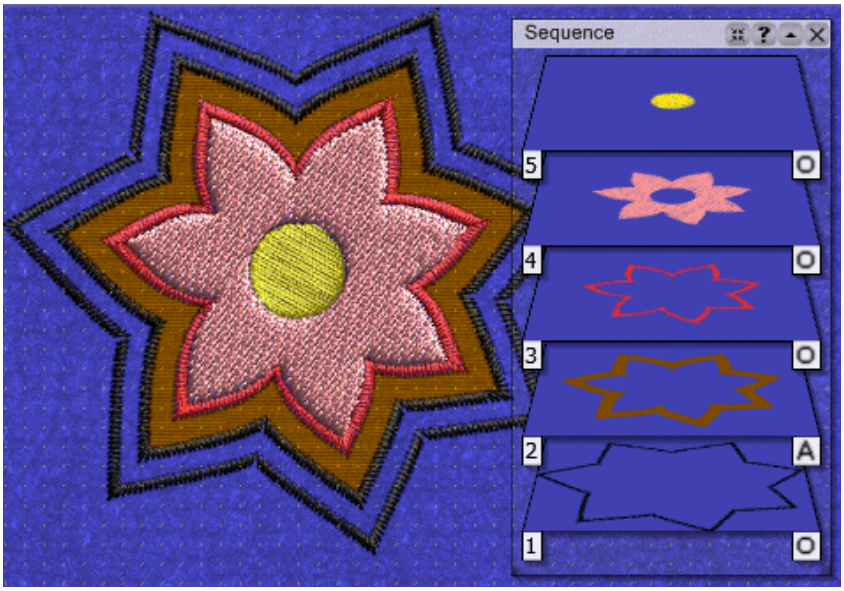



**Figure 7.21: Appliqué object re-sequenced**

If we disable the Auto-sequence all the design objects will be separated into sequence items. Now we must define the order of all objects in order to embroider them any way we like. In the same way, by clicking and dragging we can reorder all design objects. The only difference is that we can select more than one sequence items, by holding Ctrl key and clicking on the items that we want to select. This way we can change the order of more than one sequence items at once.

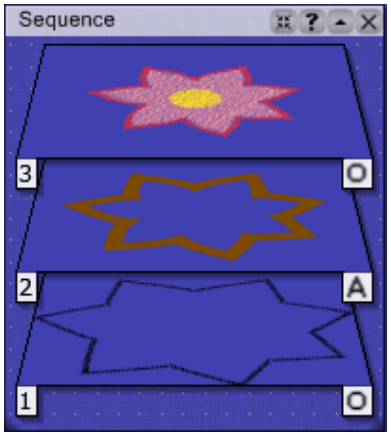



Sequence manager appears be default on the right area of the window on top of the design area. In case that it isn't visible or you have closed it by mistake you can always reactivate the sequence manager by selecting the respective option of **View** menu, Toolbars item. If you place the mouse anywhere over the **Sequence manager** you can see an outline appearing around it. Place your mouse over any item of the sequence and you can see it appearing like highlighted and on top of the other items, revealing that it is currently selected. If you click on any item of the sequence manager it gets selected and you can see it inside the design area with a highlight rectangle around it.

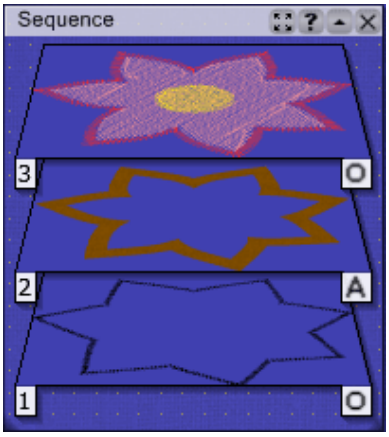
As we have already mentioned by click and drag you can move any sequence item up or down to change its place in the embroidery sequence.

The sequence manager window appears floating over the design area. Although you can select where it will be placed and you can easily customize its size.

You can also use this icon to select a view mode for sequence manager. You can toggle between two modes, one that shows the object with a best fit on the icon of sequence manager and one that show the actual size of the object into the design.




Icons with actual size

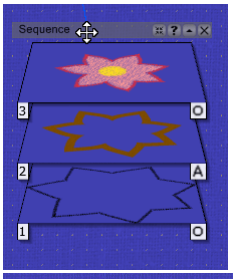



Icons in best viewable

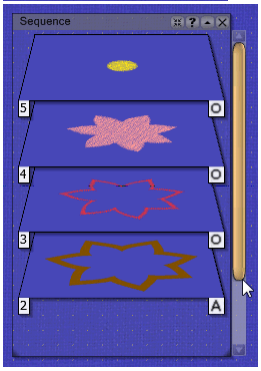
If you want to close the **Sequence manager** dialog you have to click on the **close** icon . In case that you have closed sequence manager you can reactivate it using the respective option of view menu. You can also minimize it by clicking on the hide icon . The minimize icon will make Sequence manager to disappear and leave its title bar floating over the design area. You can maximize the dialog by clicking once more on the show icon .


Figure 7.22: Minimize backdrop properties dialog

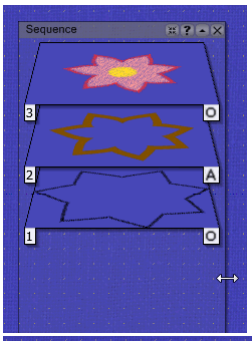
Place your mouse over the **title bar** of sequence manager and a **move handle** appears. Click and drag in order to place **Sequence manager** wherever you like.



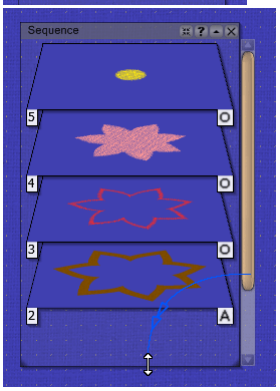

**Move sequence manager**
1. Place the mouse over its **title bar**
2. A **move handle** appears
3. Click and drag to move the sequence wherever you like.



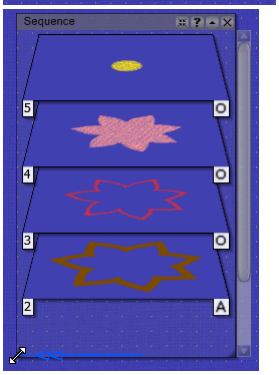

In case that not all sequence items can be seen with the current size of the window, a horizontal scrollbar appears.
Use this scrollbar to see al sequence items.




In order to have larger sequence icons and have a better view of sequence items you can resize vertically the window
Place your mouse over any of the horizontal edges, a resize handle appears. Click and drag towards any of the provided directions, the window is enlarged and the size of icons has changed accordingly.




In the same way you can change the height of the dialog.




You can also enlarge diagonally to both dimensions.

The extra ability of this tool is that you can re-arrange the sewing order for the current design, and select one or more objects in the design area. This way you can organize the sequence of embroidery production in the way you prefer.

We can also change the sequence of design items using **Order options** that appear on right click menu. These ordering options will be described in a separate section. In order to clearly watch the embroidery sequence you can use **slow redraw** tool.

## Duplicating and deleting objects

In **Creative DRAWings** you can **duplicate** and **delete** objects with various ways. There are menu options to do that, mouse combinations and keyboard shortcuts. We will learn all of them and you can use any that fits most, your designing style. The only objects that you cannot apply the duplicate and delete options are stitch objects. Also, **duplicate** and **delete** are available only inside **Create** mode and inside the **stitch** mode that is combined with **Create mode**.

### Cutting, copying and pasting

You can **Cut** or **Copy** an object or multiple objects to clipboard and paste them in the design area. The objects can come from any bitmap or vector designing application. You can copy or cut an object from another application and paste it in the Create mode of ***Creative DRAWings***.

You can **Cut** an object by selecting the respective option from the **Edit** or the **right click** menu and by pressing **Ctrl + X or Shift+Delete** keys from the keyboard. The selected object will be placed to the clipboard and will be removed from the working area. In order to make it appear again you have to paste it in the location you want.

You can **Copy** and object or multiple objects by selecting the respective option from the **Edit** or the **right click** menu and by pressing **Ctrl + C or Ctrl+Insert** keys from the keyboard. The selected object(s) will be copied to the clipboard but will leave the object unchanged. The copied object can be used as many times as we want by pasting it on the working area.

You can **Paste** an object only when you have anything inside the clipboard. If the clipboard is empty, the Pasting function is disabled. You can paste a design that it is on the clipboard by selecting the respective option from the **Edit** or the **right click** menu or by pressing **Ctrl + V or Shift+Insert** keys from the keyboard. The object(s) that were on Clipboard will appear on the working area without being removed from the clipboard. The items on clipboard will stay there until something else is placed. Remember that only the last item stored in the Clipboard will be pasted in the working area, all the previous will be lost.

## Paste special

With the **Paste special** option that you can activate from **Edit** menu you can specify how you want to paste items by selecting options in the **Paste Special** dialog box. The **Paste Special** dialog includes various options that you can adjust before pasting the object on the design.

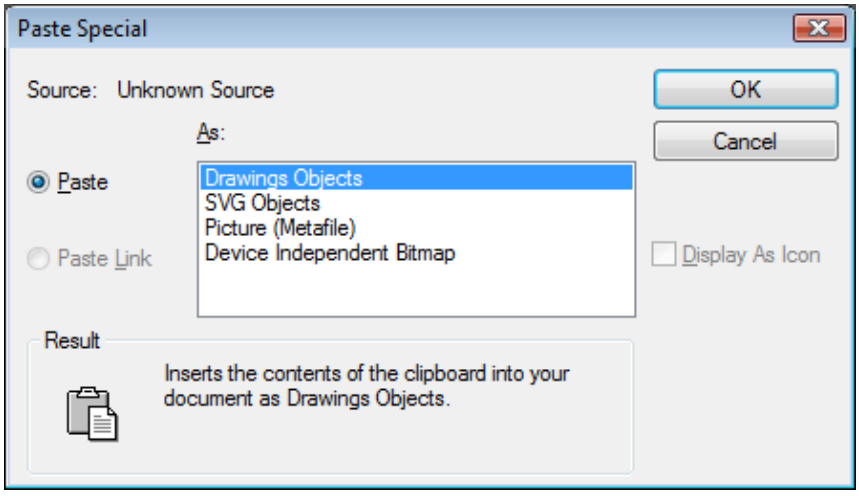



**Figure 7.23: Paste Special**

- **Source:** The **Source** field displays the format, path, and name of the file from which you cut or copied vector, bitmap or text artwork.
- **Paste:** The **Paste** option inserts or embeds the clipboard contents at the insertion point in the format you select in the **As** box.
- **Paste link:** The **Paste link** option inserts the clipboard contents and creates a link to the source file for the data. This is an advanced way of pasting objects inside **Creative DRAWings** it is available only when the **clipboard** contents come from an application that supports linking. Be sure to save the source file in the source application before you link it to **Creative DRAWings**.
- **Display as icon:** This option is available only if the contents of the clipboard support linking. The **Display as icon** option displays the linked or embedded object as an icon inside the software. To open or edit the object that was paste in the working area you have to double-click the icon.

- **Result:** In the **Result** area, you can view the effect of the selected options. Please read the description of each option carefully, because it will help you decide which on you will use.

Once you have decided the way you will paste the objects inside **Creative DRAWings** you click **OK** button to complete the paste.

## Duplicating a design

There is also a way to create duplicates of selected objects without using the clipboard and the **Copy**, **Paste** tools. In order to do that you have to select the object(s), click and drag it to the location you want to be placed, right click once without releasing the left click to activate the Duplicate function and then release the left click to insert the duplicated object. To understand that the duplicate function was activated you will see the cursor changing to  icon. When the duplicate function is enabled you can disable it by right clicking once more. The duplicate function is faster than Copy and Pasting and more precise because you duplicate the design exactly in the position you want it with two mouse clicks.

Another easy way to duplicate the selected objects is by clicking on the **Duplicate** button 

that appears on the **Tool options** bar. By clicking the **Duplicate** button the selected objects are automatically duplicated and are placed exactly over the source objects. When you duplicate objects they always appear selected which allows you to move them easily to a different location by click and dragging with the mouse. This is the easiest way to move duplicate design to a different location and separate them from the original ones. If you want them to be exactly over the source objects, you can simply deselect them and they will remain in place.

### Delete objects

To delete any selected object(s) you can either press the **Delete** key form the keyboard, or select **Delete** from the right click menu option. The selected objects will be removed from the design and can be recalled only by selecting the Undo from the standard toolbar.

## Sizing and skewing objects

In **Creative DRAWings** you can size and skew the objects proportionally by preserving their aspect ratio or by change their dimensions/shape in the way you want. You can change the size of the object by specifying the dimensions of the object or by changing the object directly. These abilities are available only inside **Create**.

### Size objects

When you select an object a selection rectangle appears around the shape. At the corners and at the middles of each side there are transformation handles that allow you to change the size of the object. If you position the mouse cursor exactly over the resize handles, the cursor will change to a two sided arrow that will show you the resizing directions. By click and dragging the transformation handles you can enlarge, shrink or stretch the object to the directions that the arrows show. If you click and drag the corner handle you can resize the object proportionally. On the **status bar** at the bottom of the screen you can view the percentage of resizing that you are making.

If you hold the **Ctrl** key pressed while sizing an object, the object will be sized proportionally and snap on every 25%. While sizing the object you can view the proportional change of the dimensions on the **Status bar** at the bottom of the application window. If you try to enlarge an object while holding the **Ctrl** key pressed, its size will increase with 25% step (125%, 150%, 175%

etc.). The same step appears when you shrink an object. This ability allows you to make accurate changes on the shape and produce the result you prefer. Also, if you drag a handle to the opposite direction, until you see the proportional change on the status bar reaches the -100%, you will have produce the exact mirror of the object.

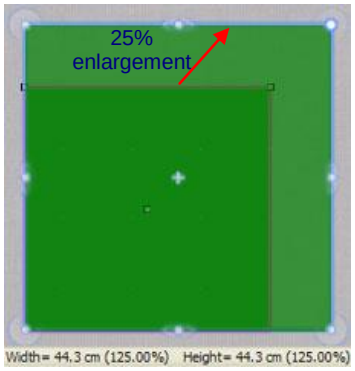



**Figure 7.24: Hold Ctrl key and proportionally resize with 25% step**

If you hold the **Shift** key pressed, while resizing the object from any corner handle, you can **Enlarge**/**Shrink** proportionally the design to all dimensions based on the initial center of the design.

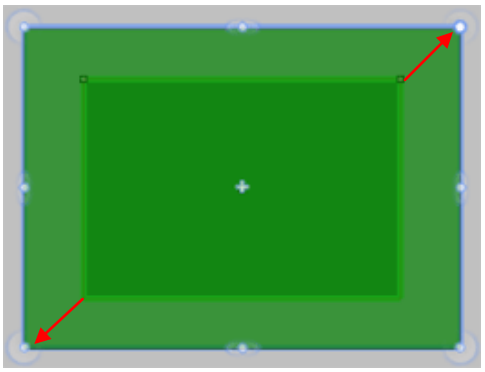


**Figure 7.25: Hold Shift key - Enlarge/Shrink proportionally the design**

By holding both **Ctrl** and **Shift** keys pressed, while resizing the object from any corner handle, you can Enlarge/Shrink proportionally the design to all dimensions based on the initial center of the design and keep the original shape at the same time.

If you hold the **Alt** key pressed while sizing an object from the corner handles you will be able to resize the object freely, without keeping any proportion of its initial shape.

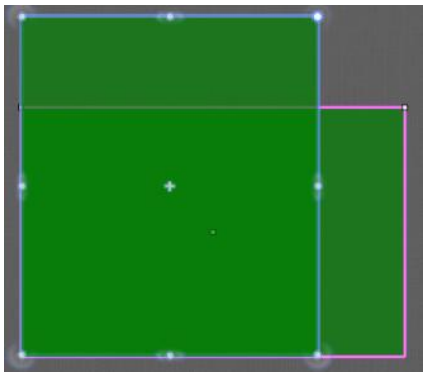


**Figure 7.26: Hold Alt key – resize the object freely**

Therefore, by holding the **Alt** key pressed while resizing you can not only resize the object but reshape it also.

The handles at the middle of each side can be used to **Stretch** the design to the directions that the arrows show.

If you hold the **Shift** key pressed, while resizing the object from any corner handle, you can Stretch proportionally the design to two dimensions based on the initial center of the design.

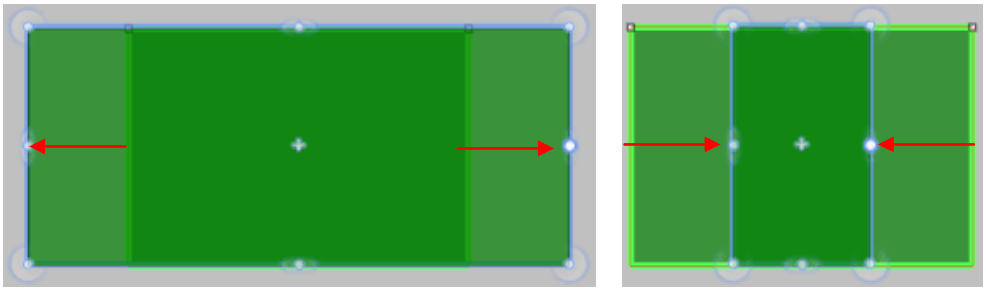


**Figure 7.27: Hold Shift key - Enlarge/Shrink proportionally the design**

Another way to resize an object is by specifying the exact dimensions you want to have on the **Tool options** toolbar. When you select an object all related options appear on the Tool options toolbar.

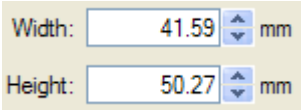



**Figure 7.28: Width and Height of the shape**

There are listed also the **Width** and **Height** of the object which you can change by inserting new ones. Select the values inside the field and then type the new value you want to have. Press enter to confirm the value or click outside the field. The change you made it is applied immediately on the object. This is a useful way to change the dimensions of an object or an entire design because you can do that precisely.

The same sizing abilities apply to Cross-stitch objects. You can select any Cross-stitch object and re-size it applying any method we described above. By changing the size of Cross-stitch objects you can increase or decrease the number of crosses in the design. More crosses in the design increase the quality of the cross-stitch embroidery result.

## Skewing objects

At the middles of each side there are transformation handles that allow you to skew the objects. If you position the mouse cursor near the handles, the cursor will change to a two sided half arrow that will show you the skewing directions. By click and dragging the transformation handles you can skew the object to the directions that the arrows show.

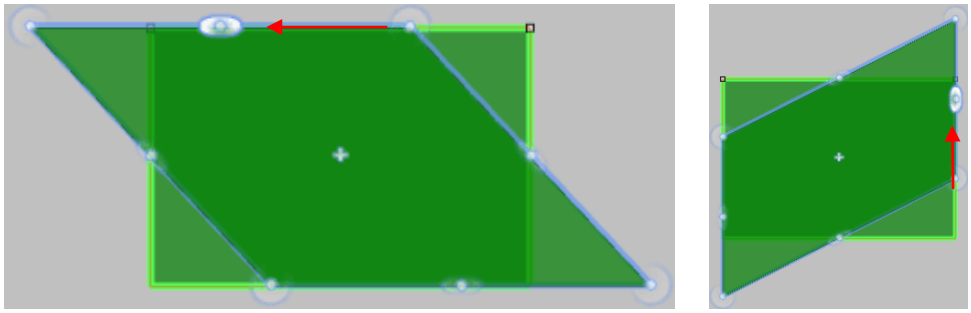


Figure 7.29: Skew horizontally and Vertically

By default the center of the design is located at the center of the object and all skewing transformations are made based on this. You can change the skewing center by click and dragging it to the position you want, even outside of the design. By positioning the center of the design outside of it you can skew the design based on the new center.

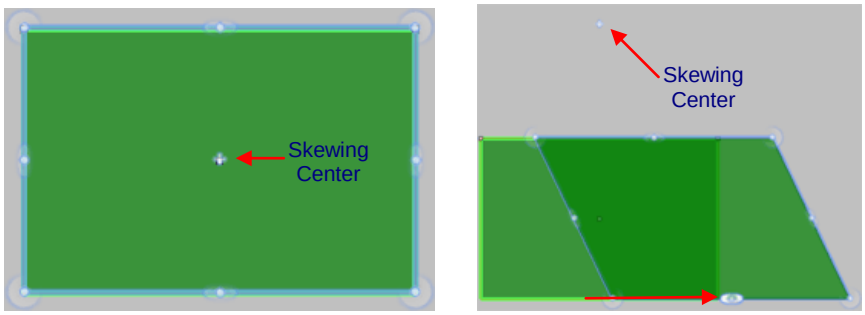



Figure 7.30: Skew based on Skewing Center

If you hold the **Shift** key pressed, while skewing the object, the center of the design will change automatically and will be positioned at the opposite side, based on which the skewing will be made.

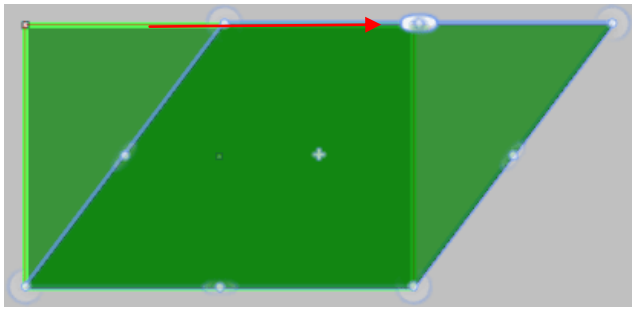


Figure 7.30: Hold Shift key - Skew based on the opposite side

## Rotating and mirroring objects

**Creative DRAWings** allows you to rotate and mirror the designs you are creating easily. You can rotate and mirror the design by click and dragging the rectangle selection handles to the position you want.

### Rotating objects

When you select an object a selection rectangle appears around the shape. At the corners there are transformation handles that allow you to rotate the object. If you position the mouse cursor the handles, the cursor will change to a semi-circle arrow that will show you that you can rotate the design. By click and dragging the transformation handle you rotate the design clockwise or

anticlockwise. The rotation of the design is made based on the center of the design. The rotation center of the design is by default at the center of the design but you have the ability to change its position. Select the rotation center and move it to position you want the rotation center to be. If you want you can move it outside of the design. Once you have moved the rotation center you can rotate the design based on the new rotation center.

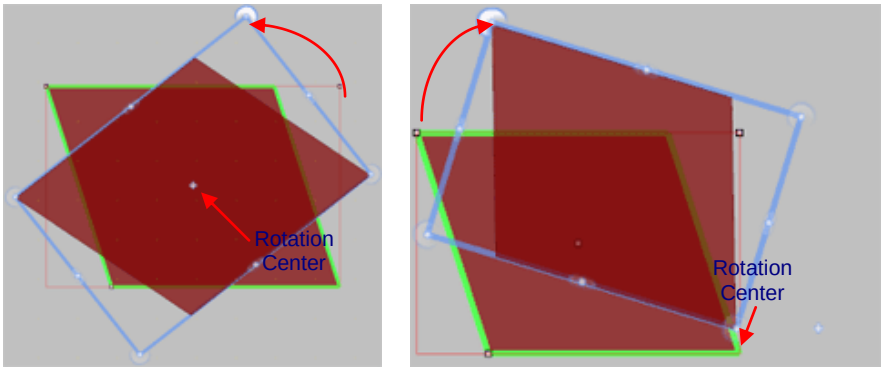



**Figure 7.31: Clockwise rotation – Anticlockwise Rotation with different rotation center**

If you hold **Ctrl** key pressed while moving the rotation center, guidelines will appear on every 22.5 degrees of the X and Y axes based on the position you have moved it from. While moving the rotation center it will snap on the guidelines, allowing you to make accurate movements along the guidelines. The guidelines that appear have as center the point you click and dragged to move the rotation center.

If you hold the **Alt** key pressed while moving the rotation center, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While moving the rotation center it will snap on the guidelines, allowing you to make accurate movements along the guidelines. When you press the **Alt** key the rotation center automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can move the rotation center to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

If you hold the **Shift** key pressed, while rotating the object, the center of the design will change automatically and will be positioned at the diagonally opposite rotation handle, based on which the rotation will be made.

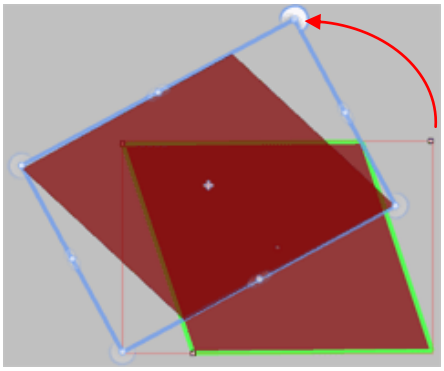


**Figure 7.32: Hold Shift key - Rotation based on the opposite rotation handle**

If you hold the **Ctrl** key pressed, while rotating the object, guidelines will appear on every 22.5 degrees of the X and Y axes based on the rotation center of the design. While Rotating the object, it will snap on the guidelines, allowing you to make accurate rotations along the guidelines. If you

have changed the rotation center of the object the guidelines will start from the new position of the rotation center.

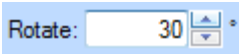



Figure 7.33: Rotate objects precisely

You can also rotate the objects you have created precisely by defining the exact rotation degrees on the Tool options toolbar. To do that you have to select the object you want to rotate, change the rotation center by dragging it to the position you prefer, type the exact degrees you want to rotate the design in the Rotate field from Tool options toolbar and press Enter key from the keyboard to apply the rotation. The object will be rotated the exact degrees you have defined.

The Rotate option can take values from 0o to 360o if you want to rotate the design anti-clockwise and from -0o to -360o if you want to rotate the design clockwise. Besides inserting the degrees

## Mirroring objects

Mirroring an object in **Creative DRAWings** is similar with resizing procedure. Select an object in order the rectangle selection handles to appear at the corners and on each sides. If you position the mouse cursor exactly over the resize handles, the cursor will change to a two sided arrow that will show you the resizing directions. In order to mirror the design you have to drag the transformation handle all the way to the opposite direction until the complete mirror of the design appear on the working area. According the mirroring you want to do, you have to drag the respective handle that will give you the mirroring you want. You can mirror the design **Vertically**, **Horizontally** and **Diagonally**.

**Horizontally**, by dragging the handles of the vertical sides to the direction you want the mirror to be made.

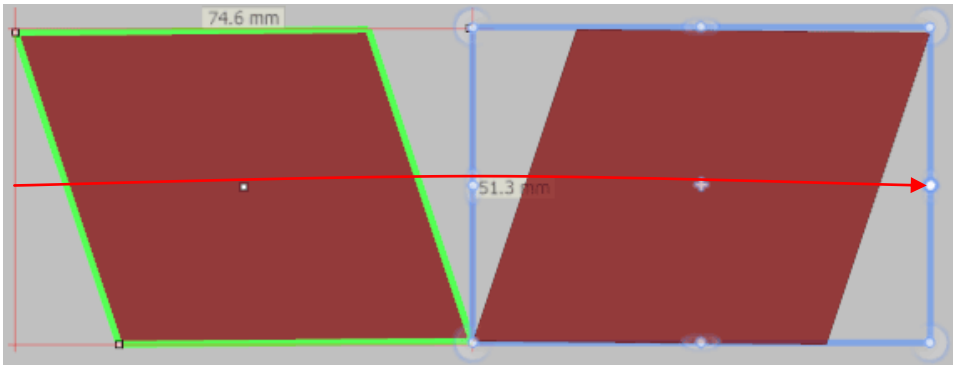



Figure 7.34: Mirror Horizontally

**Vertically**, by dragging the handles of the horizontal sides to the direction you want the mirror to be made.

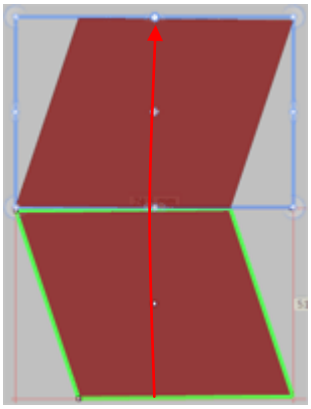


Figure 7.35: Mirror Vertically

**Diagonally**, by dragging the corner handles the direction you want the diagonal mirror to be made.

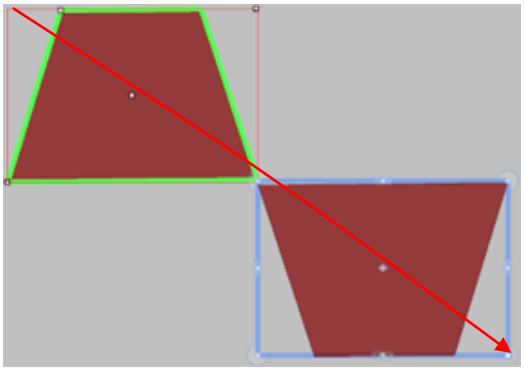


Figure 7.36: Mirror Diagonally

If you want in place mirroring of the object you have to hold **Shift** key pressed during the mirroring process. The object will mirror based on the center of the design and not on the opposite side/handle of the design.

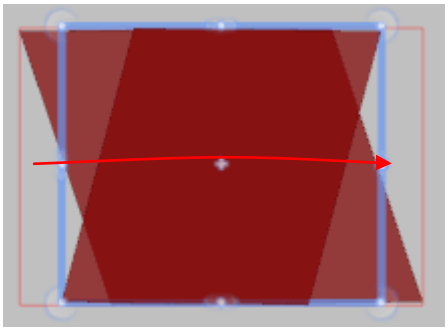


Figure 7.37: Mirror while holding shift key pressed

To all above cases, if you want to make accurate mirroring you have to hold the **Ctrl** key from the keyboard pressed during the mirroring process. By holding the **Ctrl** key pressed the mouse will snap on every 25% of the mirroring movement allowing you to make an identical object mirror. Because you are dragging the transformation handle to the opposite side of the object, the percentage movement starts from 100% (original shape), decreases with 25% step until 0, and then increases with negative values until -100% which is the perfect mirror of the object. The percentage changes are shown on the **Status bar** that is located at the bottom of the application window and the negative numbers show that you are in the Mirroring process.

Also, you can make accurate mirroring by changing the **Width** and **Height** values from **Tool options** toolbar. This can be done by inserting negative size values to the respective size fields.

To mirror the shape you want based on the vertical axis you have to insert a minus in front of the current **Width** value and then press **Enter** key. The shape will be mirrored horizontally by keeping the same dimensions. You can mirror the design horizontally to the preferred width by changing also (except the sign) the width value.

To mirror the shape you want based on the horizontal axis you have to insert a minus in front of the current **Height** value and then press **Enter** key. The shape will be mirrored vertically by keeping the same dimensions. You can mirror the design vertically to the preferred height by changing also (except the sign) the height value.

To mirror the shape diagonally you have to insert negative values on both **Width** and **Height** values of **Tools options** toolbar. The diagonal mirroring will be made in the position where the shape is located.

Another way to mirror the selected design accurately is by clicking the Mirror X and Mirror Y buttons that you will appear on Tool options toolbar.

To mirror the design vertically you have to select it and click on the Mirror X button. The design will flip and you will view its vertical mirror.

To mirror the design horizontally you have to select it and click on the Mirror Y button. The design will flip and you will view its horizontal mirror.

Use any of the above methods to mirror your designs and produce the result you want.

## Repeat transformation

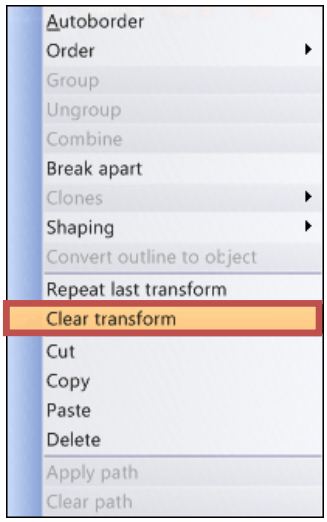
In **Creative DRAWings** you have the ability to **Repeat your last transformation** by using the respective option of the Right click menu. For example, if you have rotated an object you can repeat the last rotation as many times you want by selecting the Repeat last transform option from the right click menu or by pressing the **Ctrl+R** shortcut keys from the keyboard. The object will be rotated, by keeping the same rotation angle with the last made rotation, as many times as you used the Repeat last action option. This ability is available only inside Create mode of **Creative DRAWings**.

If you want to repeat your last transformation you have to select the object you want the last transformation you made to be applied. Then **Right click** on the object and select the **Repeat last transform** option from the popup menu. The last transformation you made will be applied to the selected object as many times as you used the **Repeat last transform** option. Every time you make a transformation it is automatically becoming the last transformation and this one will be used when the **Repeat last transform** option will be applied.

## Clear transform

Clear transform option of object editor context menu provides the ability to **Cancel** all the transformations that have been done to an object in object editing mode. This option of Object editing context menu appears when right clicking on any object that has been repositioned, resized, slanted, rotated or when any other transformation has been applied to it while you are in Object editing mode. The reverted transformations can be more than one. The object is reverted to

its initial state and position that it was designed. When applying **Clear transform** you are asked whether you like to keep distorted shape or not. This way you can make the present state of an object have no transformations. This is used when you like the current state of an object and you want to be able to recover this state in case you apply any transformations.




## Grouping objects

**Creative DRAWings** includes grouping tools that are very useful in the designing face of the embroidery. By grouping two or more objects the software treats them as a single unit. Any change you make on grouped objects is automatically applied to members of the group. A group in reality is a way to make a multiple selection of objects to be treated as one object.

These options are available only inside **Create** mode of **Creative DRAWings**.

### Group objects

In order to make a group you have to select the objects you want become one group by making a multiple selection of objects and from the right click menu select **Group** option or press the **Ctrl** and **G** shortcut keys (Ctrl+G) together from the keyboard. The selected objects will become one group and will be treated as one object.

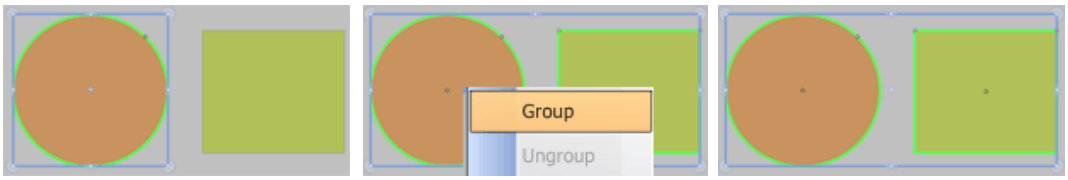



**Figure 7.38: Two separate objects - Select both objects and group them - Grouped objects**

### Add object to a Group

If you want, you can add more objects to a group. In order to do that you have to select the object(s) and then select the group of objects. From the right click menu select **Group** option and the object will be added to the group. If you want you can group multiple groups and make nested groups. To do that you have to select two or more groups of objects and from right click menu select **Group** option once more.

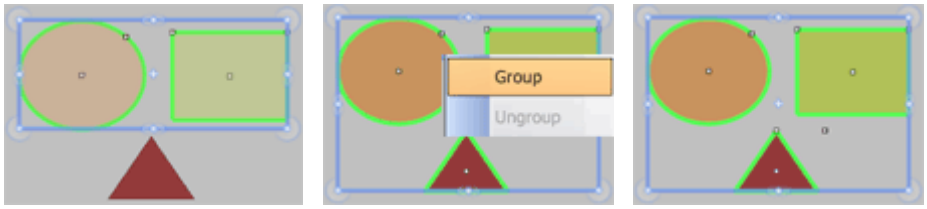



Figure 7.39: One group and one separate object – Add object to group - Grouped objects

## Delete an object form a Group

To delete an object from a Group you have to ungroup it first, by selecting the respective option from the right click menu, delete the object you want and then re-group the objects. This is the standard way you can delete an object from a Group.

## Edit an object form a Group

To edit an object from a Group you have to ungroup it first, by selecting the respective option from the right click menu, edit the object you want and re-group the object. This is the standard way to edit an object form a Group.

## Ungroup objects

In order to **Ungroup** a group of objects or nested groups you have to select it and from the right click menu select **Ungroup** option or press the **Ctrl** and **U** shortcut keys (Ctrl+U) together from the keyboard. The group of objects will break and all objects will be handled as separate objects. The nested groups will be separated to its sub-groups and will be handled as separate groups. You can continue ungrouping the sub-groups of the nested groups until all groups become separate objects.

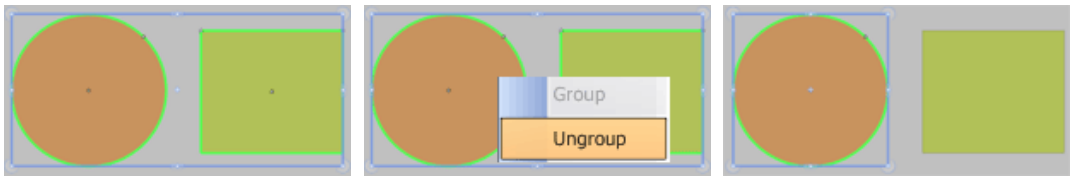



Figure 7.40: Grouped objects – Ungroup objects – Ungrouped objects

# Combining and breaking apart objects

Combining two of more objects has as a result a single object with common fill and outline attributes. You can **combine** two or more objects and create one that will have common attribute. If you want to separate combined objects to the objects that they consist of you can **break** them **apart** and edit them separately.
These options are available only inside **Create** mode of **Creative DRAWings**.

Figure 7.37: Combine overlapping objects – Combine objects that are not overlapping

To combine two or more objects you have to select them, **Right click** menu and from right click menu select **Combine** option or press the **Ctrl** and **L** shortcut keys (Ctrl+L) together from the

keyboard. The two objects will become one with common fill and outline attributes. If the objects are overlapping then the shape of the object that is above will become a hole in the shape below. This is the way how the overlapped objects are combined. This is very useful when you want to create holes inside an object. If the objects are not overlapping then the objects will have the common attributes but the combine option will not affect the initial shape of the combined objects.

If you want to separate a combined object to its objects you have to select the object, right click on it, in order the **Right click** menu to appear and from the right click menu select the **Break apart** option or press the **Ctrl** and **K** shortcut keys (Ctrl+K) together from the keyboard. The objects will be separated to its initial objects but will retain their common fill and outline attributes. If you have just combined the objects and you want them back as they where you have to **Undo** your last action by selecting the respective option from the **Edit** menu or by clicking on the **Undo** button from the standard toolbar.

Combined objects that are not overlapping in embroidery are connected with a Jump-stitch between them. Therefore whenever you see two objects that are far one from the other and they are connected with Jump-stitch, this means that they are combined.

## Intersection and Weld

**Creative DRAWings** includes two more editing tools that allow you to create irregular shapes. These tools are Intersection and Weld. You can Intersect or Weld almost every object, including shape objects and text objects. However you cannot intersect or Weld bitmap images that where imported as backdrops or where filled with cross-stitch stitches.

These options are available only inside **Create** mode of **Creative DRAWings**.

You can **Weld** two or more overlapping objects by selecting them and then selecting the respective option from the **Edit** menu or by clicking on the Weld icon from standard toolbar. The objects will become one with outline the perimeter of the objects that created the Weld shape.

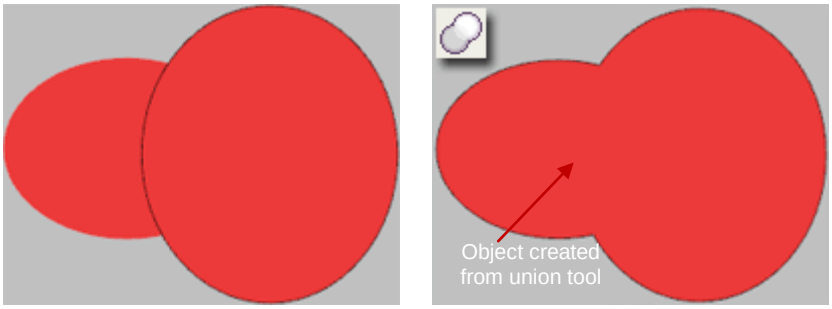



**Figure 7.41: Weld overlapping objects**

If you made a multiple selection of objects by selecting one object first and then the second object by holding the **Shift** key pressed, the new object will adopt the fill and outline properties of the last select object.

If you made a multiple selection of objects by making a **Rectangle** or **Lasso** selection, the new object will adopt the fill and outline properties of the object that is under the other objects in the order of objects.

You can Weld objects regardless if they are overlapping or not. If you try to Weld objects that do not overlap, you will have as a result a combined object. The objects will act as one object with

many sub objects with the same attributes. In order to separate such Weld objects to its sub-objects you have to select the **Break apart** option from the right click menu.

If you want you can, preview the Welding result by selecting the objects you want to **Weld** and then positioning the mouse over the Weld icon. The software will preview how the objects will look like after applying the Weld option on them. The red line that surrounds the two objects will be the outline of the object after applying the Weld option.

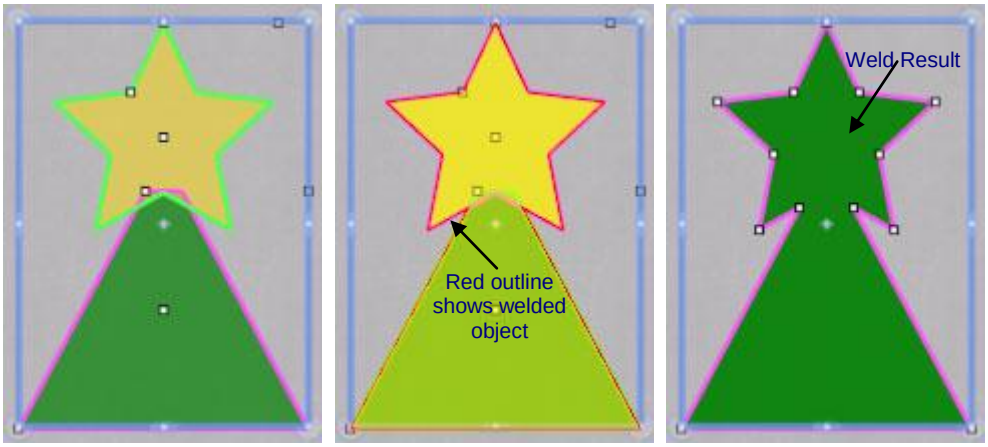



**Figure 7.42: Weld Preview**

After previewing the Weld option you can decide easier if you will apply it or not.

You can **Intersect** overlapping objects by selecting them and then selecting the respective option from the **Edit** menu or by clicking on the Intersection icon from standard toolbar. Intersect option creates an object from the area where the objects overlap. The shape that will be created from the intersection depend on the shapes of the objects you intersect.

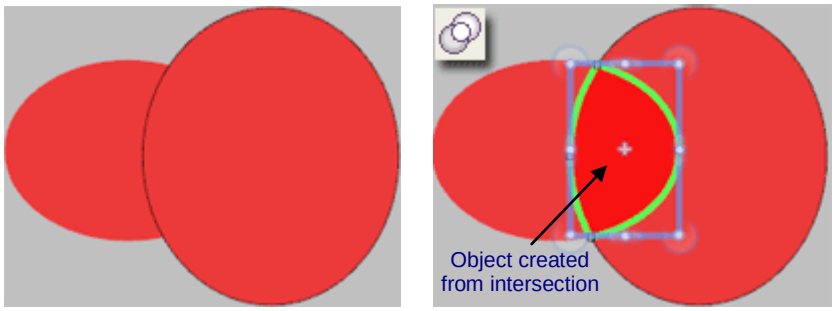



**Figure 7.43: Intersect overlapping objects**

If you made a multiple selection of objects by selecting one object first and then the second object by holding the **Shift** key pressed, the new object that will be created from the intersection will adopt the fill and outline properties of the last select object.

If you made a multiple selection of objects by making a **Rectangle** or **Lasso** selection, the new object will adopt the fill and outline properties of the object that is under the other objects in the order of objects.

If you want you can, preview the **Intersection** result by selecting the objects you want to **Intersect** and then positioning the mouse over the **Intersect** icon. The software will preview how the objects will look like after applying the Intersect option on them. The red line that surrounds the object shows the object that will be produced after applying the Intersect option.

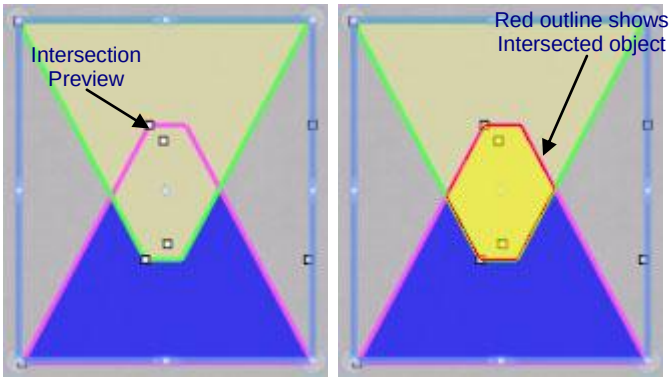



Figure 7.44: Intersect Preview

After previewing the Intersect option you can decide easier if you will apply it or not.

Both **Weld** and **Intersect** functions are helpful in the creation of irregular shapes that you can use to create the vector design you want.

## Remove overlaps

It is used mainly for .draw file designs that have area fill and you have opened them inside BERNINA software. With BERNINA software you can only create designs with outline stitches (Running, Satin Serial), but this functionality exits in case you open a design that have shape areas filled with stitches.

The remove overlaps option is located on the **Object properties** toolbar and it appears when you select an object filled with Satin, Step, Row Fill, Satin Serial or Running stitches.


This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always.** The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always.** When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

The advantage of this option is that it is applied automatically during the creation of the design without having to apply it manually. It will automatically decide which objects will trim and which not based on embroidery rules.

## Trimming objects

With the Trim  function you can create wholes inside objects or reshape them by removing parts of their shape. You can trim any object you want in a vector design but you cannot trim a bitmap image that it is imported in the design.

This option is available only inside **Create** mode of **Creative DRAWings**.

You can apply the **Trim** function only to objects that overlap partially or entirely. First you have to decide which object will be the one that will be trimmed (target object) and which object you will

use to apply the trimming (source object). Then you have to select the source object first and then the target object by holding the **Shift** key pressed, to add it to your selection. From **Edit** menu or from the right click menu under **Shaping** submenu, select the **Trim** option to apply it on the selected objects. You can also apply the Trim option by pressing the  icon from standard toolbar. The trim will be applied on the target object and the area that was covered from the source object will be removed from the target object. The trimmed object will have a new shape but will retain its fill and outline attributes. If you make a rectangle selection the objects you want to trim and then apply the **Trim** tool, the only shape that will be trimmed is the one at the bottom in the overlapping order of the objects. You can make as many trims you want on overlapping objects to create the vector design you want.

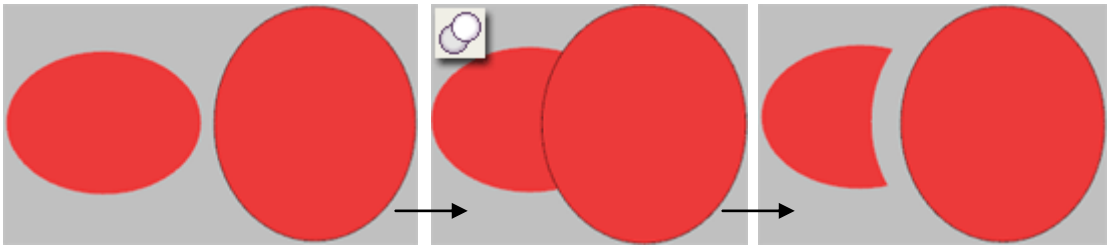


**Figure 7.45: Before trim – Apply trim tool on overlapping objects – Trimmed object**

If you try to **Trim** two objects that are not overlapping, nothing will happen. Trim option it only applies on overlapping objects. If you want you can make a multiple trim of a target object with many source overlapping objects. To do that you have to select the source objects first one by one by holding the **Shift** key pressed to add them to your selection. The last object that you will add to your selection must be the target object that will be trimmed. After applying the **Trim** option all the source objects will trim the target object.

If you want you can, preview the Trimming result by selecting the objects you want to **Trim** and then positioning the mouse over the **Trim**  icon. The software will preview how the trimmed object will look like after applying the Trim option. The red line that surrounds the trimmed object shows the object that will be produced after applying the Trim option.

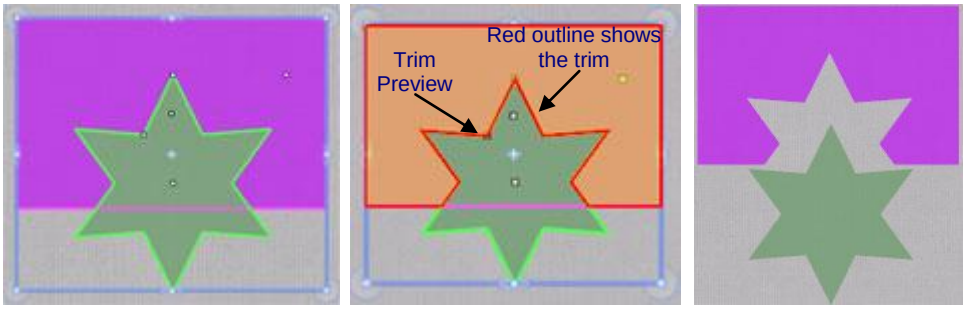



**Figure 7.46: Trim Preview – Star trims Rectangle object**

After previewing the Intersect option you can decide easier if you will apply it or not.

**Trimming** and **Remove overlaps** tools have similar functionality but not the same. **Creative DRAWings** with the **Remove overlaps** mechanism, removes the unneeded parts of the design from the final embroidery result but it is not removing the overlaps from the Vector artwork. Therefore, if you export the embroidery design to Wings' modular 2.50 (select File>Export>To editor…) you will view that the overlapping areas are removed automatically, but if you export the same design to SVG vector file (select File>Export>To SVG) you will view that the overlapping

areas are there as they were designed. On the other hand if you apply the **Trimming** function on the objects the embroidery result will be the same but the SVG vector artwork will differ. If you open the SVG file you will view that the objects you trimmed are remain there trimmed and not as they were before you apply the **Trim** tool. This is the main difference between **Trimming** and **Remove overlaps** tools. Trim tool alters the vector shape but **Remove overlaps** tool does not.

**Note:** If you apply **Trim** option on two objects, it is better to set the **Remove overlap** value of both objects to **Never** to ensure better embroidery results.

## Convert outline to Object

To all fill objects (objects that are filled with Satin, Step, Row Fill or Appliqué stitch type) can be added an outline easily by **left clicking** on the top left corner of the color you want the outline to have. The outline will be added around the object filled with Satin serial or Running stitch type but it will not be a separate object. Therefore you will not be able to reshape it separately. For this purpose the **Convert outline to Object** exists. This option allows you to covert the outline/border that is attached on an object to a separate object and handle it as a Fill or outline/pen object. If you convert the outline to a Fill object, you will be able to fill it with Step, Satin, Row Fill or Appliqué stitch type that it is not possible to do it otherwise. Also, you will be able to apply all kind of shape transformations on it.

If the outline thickness is smaller than 0.9mm and you apply the **Convert outline to object** option, the outline will be converted to **Running** or **Satin Serial** object and not to a Fill object. Therefore whenever you want to separate the outline from the object but keep the stitch type as **Running** or **Satin Serial** you have to set the outline thickness lower that 0.9mm.

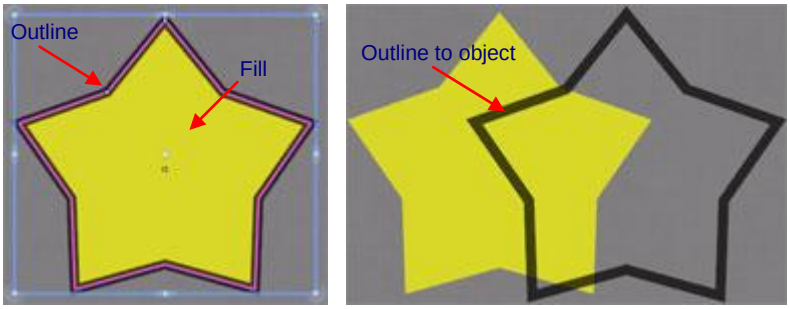



**Figure 7.47: Apply Convert outline to object option to star object**

To apply **Convert outline to object** option you have to select an object that has an outline and from **Edit** menu select the respective option. You can also apply the same option by pressing the **Ctrl**, **Shift** and **Q** keys (Ctrl+Shift+Q) from the keyboard after selecting the object you want to apply it. The outline will be separated from the fill object and can be handled as a different object.

## Undo

Using this option in the Edit menu, you can undo the very last action you took. You can also access the Undo function from the Standard toolbar by clicking on the icon. If you click the arrow next to the Undo icon, **Creative DRAWings** displays a list of the most recent actions you can undo. Click the action you want to undo, to take your design back to the state you want. When you undo an action, you also undo all actions above it in the list. If you decide to cancel the undo you made, click on redo function.

You can also change the undo level from **Tools > Options** in the **General options** tab.

## Redo

Using this option from the Edit menu, you can cancel the latest undo that you have performed. You can also access the Redo function from the Standard toolbar by clicking on the icon. If you click the arrow next to the Redo icon, **Creative DRAWings** displays a list of the most recent actions you can redo. Click the action you want to redo, to take your design to the state you want. When you redo an action, you also redo all actions above it in the list.

## Color management

In the **Create** mode of **Creative DRAWings** you can define the color you want the vector artwork to have and not the colors of the final embroidery. The colors of the final embroidery can be adjusted from the **Edit palette** dialog. This is happening because there is no limitation to the colors that you can use on a vector artwork, but there are limitations to the colors you can use on an embroidery design. The software has a limitation of 99 colors on the embroidery designs. But considering the max needles that your embroidery machine can support you have to make a choice about the final number of colors. You must always keep in mind this limitation whenever you use stitch mode. If you have a design with 20 colors but in Edit palette you have defined 8 colors (According to your embroidery machine needle carriers). Then in stitch mode you will see you design changing and using only the number of colors that are selected for embroidery.

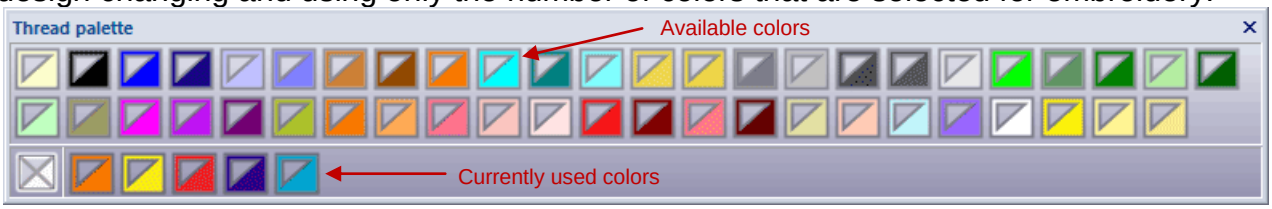



Figure 7.48: Thread palette

### Thread palette toolbar

The **Thread palette** toolbar is located at the bottom of the **Create** mode window and holds all the colors that you can use in the software. If it is not visible, you can make it visible by selecting the **Thread palette** option from **View** menu, Submenu **Toolbars**. The Thread palette toolbar has two color sections: the **available colors** and the **colors that are currently used**.

The **available colors** are the colors of the color palette that is currently selected for use. The available colors appear in the top area of **Thread palette** toolbar. By default if you haven't defined any thread manufacturer color palette, the RGB palette is loaded. You can change the default color palette and use a Thread manufacturer's color palette from the **Edit palette** dialog (we will explain it thoroughly later in this chapter).

There is also the **currently used colors** area, on the bottom part, where all the colors that are currently used are listed. If the design has seven different colors they will be listed at the bottom of the Thread palette toolbar.

Figure 7.49: Colors Used

As you can see any color icon is consisted of 2 triangles  , one on the upper left part and one on the lower right part. If you place the mouse on top of the upper left part of a color you can see a pen icon. This means that the selected color will be used for the outline of the object. If you place the mouse over the lower right part you will see a bucket icon revealing that the selected color will be used for the object fill.

For any object we select the colors (outline-fill) that are used for it are marked with icons in currently used colors are, in order to be able to see clearly the colors that are used for the object. If you select an object of the design the color that was used to be filled will be highlighted with a fill bucket on the currently used colors area. If the object has outline, also, the color of the outline will be highlighted with a pen icon.

The used colors can be reused to new created objects by selecting the object on the working area and then the color you want to be filed.

At the beginning of the currently used color palette there is a square, which is the empty/none color. If a selected object does not have a Fill color, then the **fill** bucker will appear inside the **None color** square. If the selected object does not have an **Outline** color then the pen icon will appear inside the **None color** square. Also, if you do not want an object to have a Fill or an Outline color, you have to select the object it and then click on both part of the none color square to remove the colors from the object.

The **Thread palette** toolbar is movable and resizable. You can change its position by click and dragging the **Title bar** to a new position. The toolbar will float on the working area and become resizable. You can change its dimensions and position on the software. You can keep it as a floating toolbar or you can position it back to its initial position by click and dragging it at the bottom of **Creative DRAWings** window.

## Color palettes

When **Creative DRAWings** opens the default color palette appears on the **Thread palette** toolbar in the **Create** mode. The default colors are RGB that can be used to color the shapes you will create or change the color of existing shapes.

Figure 7.50: Current Color Palette

There are more color palettes that we propose to be used when you are creating a design, which are the Thread manufacturer's color palettes and are located in the **Edit palette** dialog that you can access, if you select the respective button from the standard toolbar.


Figure 7.51: Palette drop down menu

In the **Palette** drop down menu are listed the color palettes of the major thread manufacturers as well as the default RGB (Red Green Blue) color palette. You can select the Thread palette you are using (the manufacturer of the threads you are using), to create the design you want based on the colors that actually exist. Select a thread palette and click **Ok** button to apply changes. The colors of the selected palette will now appear on the Thread palette toolbar allowing you to use them to fill with color the objects you have designed or you will design. By following this procedure you can be sure that the color you used on the design actually exist and can be found in the market.

## Change colors

Any object that you are creating in the **Create** mode of **Creative DRAWings**, without having selected a color before its creation, it is filled with a fill color and an outline color, which are the

default colors of the software. If you do not select any color and design an object, the created object will have the default **Fill** color and the default **outline** color.

If you select an object of the design the color that was used to be filled will be highlighted with a **Fill bucket** on the currently used colors area. If the object has outline or it is a line art design, the color of it will be highlighted with a **Pen** icon. The used colors can be reused to new created objects by creating the object and then selecting the color you want to fill it.

To **change Fill color** on an object you have to select it and then click on the lower right part of color that you like to use from the color palette or from the used colors. You can also **Right click** on the color and from the right click menu select the **Set fill color** option. The object will be filled with the selected color and the color will be added in the used colors area (if it is not already there). In addition, the color you have selected can be easily recognized from the **Fill bucket** icon that will have on it when it will be added in the used colors area.

To **change Outline color** of an object or the **color of a line art design**, you have to select it, hold the click on the left upper part of the desired color from the color palette or from the used colors. Also you can Right click on the color and from the right click menu that will appear select **Set pen color option**. The color you have selected will be added in the currently used colors area (if it is not already there) and it will have the **Pen** icon on it. The selected object will be colored with the new selected color.

If you want, you can change also the **default Fill** and **Outline** (line art design) colors or set the colors you want to use only for the specific design.

To change the **Default Fill** color you have to hold the **Ctrl** key pressed and **click** on the lower right corner of the color icon that you want to be the default one. The **Set default fill color** dialog appears with a fill bucket on the color you have selected. The fill bucket shows that you are currently adjusting the default fill color. The same dialog can be activated if you **Left click** on a color without having any object from the design selected. From the dialog you can select to make this color the default, for **Graphic objects** and for **Text objects.** Check the respective options and then select the **For every new design** option that will set this fill color to be the default for all the designs you will create from now on. Then click **OK** button to confirm the changes. You can change the default color any time you want, by followings the same steps.

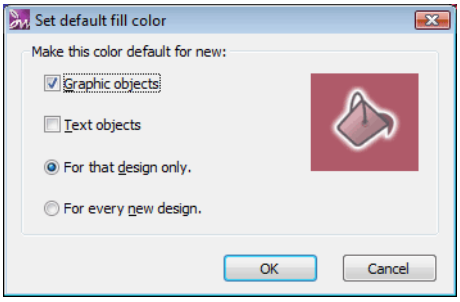



**Figure 7.52: Set default Fill color dialog**

To change the **Default Outline** color you have to hold the **Ctrl** pressed on the keyboard and **Left click** on the upper left corner of the color you want to be the default one. The **Set default pen color** dialog appears with a **Pen** icon on the color you have selected. The Pen icon shows that you are currently adjusting the default outline color. The same dialog can be activated if you hold **click** on a color without having any object from the design selected. From the dialog you can select to make this color the default, for **Graphic objects** and for **Text objects.** Check the respective options and then select the **For every new design** option that will set this outline color to be the default for all the designs you will create from now on. On this dialog you can also select a default pen width, by enabling the option **Set default width to** and then define a value in the

respective field. Then click **OK** button to confirm the changes. You can change the default color any time you want, by followings the same steps.

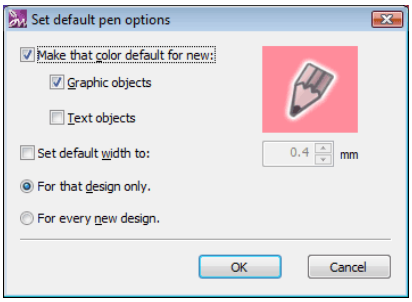



**Figure 7.53: Set default Outline color dialog**

If you do not want an object to have **Fill** or **Outline** color you can click on the **Empty/None color** box that it is located in the currently used colors area. To remove the fill you must click on the left lower corner and the **Fill** will be immediately removed and the none icon will change into . To remove the outline you must click on the upper left part of the none icon and the outline will be removed immediately. The icon of the None box will change into **this** .

## Editing default color palette (RGB)

The default color palette of **Creative DRAWings** is the RGB (Red, Green, and Blue). This color palette consists of 47 colors selected from all available colors as representatives. To this color palette you can add new colors, change the existing ones and delete them.

To **Add a new color** you have to **Right** click on the RGB color palette that is listed on the **Thread palette** toolbar and select the respective option.

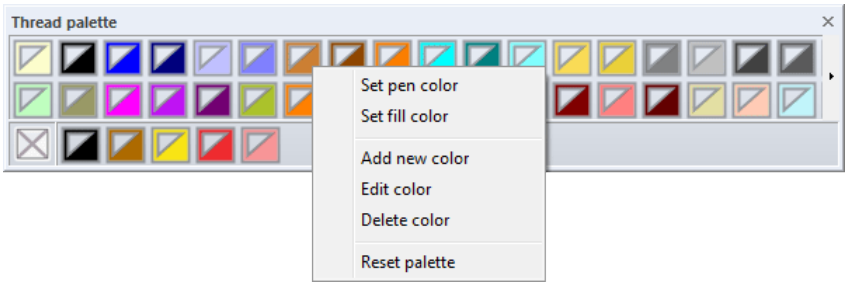



**Figure 7.54: Right click menu**

The **Color** dialog box will appear from where you can choose the color you want the new color to have. There are various ways you can choose a color from the **Color** dialog. You can choose a color by clicking on the respective one from the **Basic colors** list, or by clicking on the color rectangle where all possible colors are listed, or you can type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want.

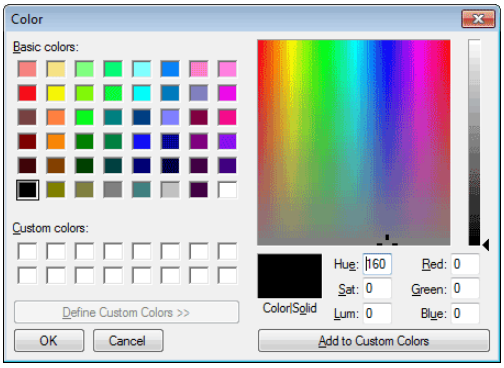



**Figure 7.55: Color dialog**

After choosing the color, you can set the name of the color in the **Color name** field or leave the suggested name and click **Ok** button to confirm your selection. The color you have chosen will appear at the end of the existing RGB color palette. The newly added color can be used normally.

To **Edit an existing** or newly added color you have to right click on the color and select the **Edit color** option from the right click menu. The **Color** dialog box will appear from where you can choose a different color or name for the color that you are editing. There are various ways you can change the color from the **Color** dialog. You can change the color by clicking on a different one from the **Basic colors** list, or by clicking on the color rectangle where all possible colors are listed, or you can type the exact code number of the color you want on the Red – Green – Blue / Hue – Sat – Lum fields and produce the color you want. If you want you can edit also the **Color name** by typing a new one in the respective field. When you finish you can click the **OK** button to confirm the changes or **Cancel** button if you want to discard the changes you made. The changes you made will be applied on the selected color and it will be ready for use.

To **Delete** an existing or newly created color you have to **Right click** on the color and select the respective option from the right click menu. The color will be deleted immediately.

**Important:** Be careful when you use the **Delete** function because you cannot **Undo** the deletion of a color.

If you want to Reset the RGB palette to its default status you have to right click on any color and select the **Reset palette** option. The color palette will return to its default status and all the changes you have made will be lost.

**Important:** All the above options are available only for RGB color palette.

## Selections by color

Thread palette toolbar includes the ability to select objects by color. This option is very useful when you want to make a change to all objects that have the same color. You can select them and then make the change you want. You can change colors or stitch types to all objects, apply a different pattern or apply any other option you want. You can select object by Fill color, by Pen (outline) color or simply by color.

To select the objects by color you have to **right click** on the **color** you want from those that are listed on the **currently used area** and from the right click menu select one of the three available selection options: **Select by Fill**, **Select by Pen** and **Select by color.**

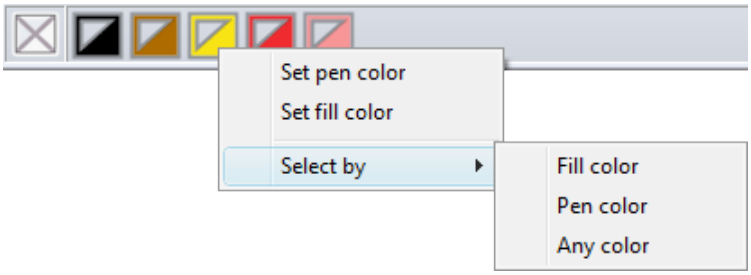



**Figure 7.56: Select by color right click menu**

To select the objects by color you have to **right click** on the **color** you want from those that are listed on the **currently used area** and from the right click menu, expand the **Select by** submenu, select one of the three available selection options: **Fill color**, **Pen color** and **Any color**.

If you select **Fill color** option, all objects that have the fill color you right clicked on will be selected.

If you select **Pen color** option, all objects that have the Pen (outline) color you right clicked on will be selected.

If you select **Any color** option all objects that have Fill or Pen (outline) color you right clicked on will be selected.

Any change you make on the selected objects, affects all objects.

## Imported vector designs

When you are importing vector designs inside **Creative DRAWings**, in the **Create** mode you can view the colors that they are filled with. The colors appear in the **currently used colors area** and you can change them as you wish. If the vector has many colors (over 20) they will all appear on the currently used colors area. As we have already mentioned, the software has a color limit of 99 colors that can be used on each design. You will understand this better when you will click on **stitch** mode and view that the colors are automatically reduced to 99. These will be the actual colors that will be used to fill the embroidery design. In order to view which colors were not used and were replaced from other existing ones, you have to open the **Edit palette** dialog window by clicking the respective option of **Tool** menu. There you will view which colors were replaced with which color. In **Edit palette** dialog  you can edit the colors and change their number with maximum limit of 20 colors. More about how to edit the color in **Edit palette** dialog you can read in the next section.

## Cross-stitch designs

The Thread palette toolbar does not have any use on Cross-stitch designs. The colors that are used to fill the cross-stitch designs are listed on the **Object properties** toolbar. In order to make them appear you have to change to stitch mode, select the cross-stitch and its options will appear on the object properties toolbar, from where you can edit the colors of the design. More information on how to handle cross-stitch colors your will find in the respective section of **Embroidery transformations** chapter.

After creating the design you want to embroider in the **Create** mode, you can click on the **stitch** mode and view how the final embroidery will look like. To avoid the automatic reduction of colors you have to reduce them yourself in the **Create** mode of **Creative DRAWings**. You have to count the **currently used colors** from the **Thread palette** bar and reduce them, by re-assigning colors to objects, to the number of **Thread colors** you want to use with a maximum of 20 colors. If the currently used colors are less than 20 then there will be no change on the colors when you will click on the stitch mode.

# Edit Palette

Vector designs may have hundreds of colors, something that cannot happen in embroidery designs. There are limited thread colors on the market, which means that not all RGB color variations are available. For this reason **Creative DRAWings** gives you the ability to set the number of threads that will be used and its color. The program automatically calculates and produces the thread colors that will be used with a limit of 20. The limit exists because most embroidery machines have from 1 to 20 needle carriers.

If your vector design has more than 20 colors when it turns to embroidery design, **Creative DRAWings** automatically reduces the colors to 20. Colors that cover the smallest area on the design are combined with other similar ones and replaced with the most representative one.

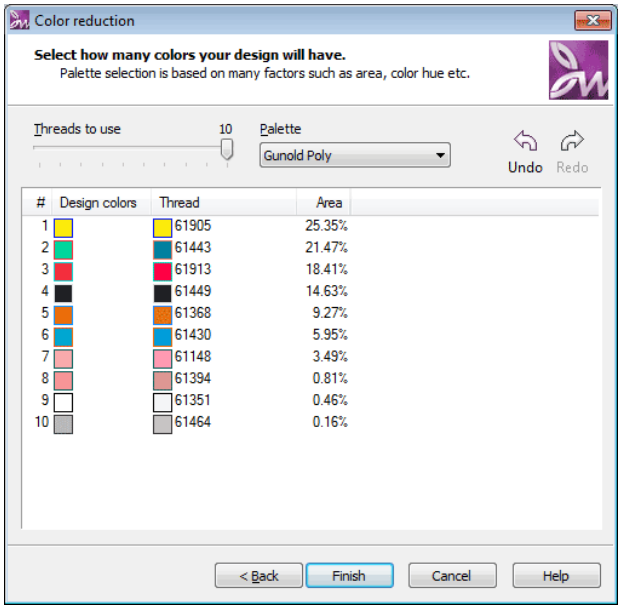



**Figure 7.57: Edit palette dialog**

You can change the thread colors from the Edit palette that you can access from menu Tools > Edit palette, or the shortcut key Ctrl+L or the standard toolbar by clicking the edit palette icon.

**Edit palette** option displays a dialog box window where you can adjust the number of threads you want to use, the color palette and which **design color** will be correlated with which thread color.

## Threads to use

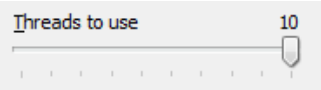
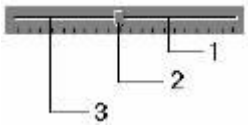



**Figure 7.58: Threads to use track bar**

This function has a track bar which shows the number of threads that will be used for the embroidery design. If you click and drag the track bar to the left side, you will reduce the number of threads in the design. If you do the opposite you will increase them until the initial point. The changes will be automatically calculated and will be previewed in the color reduction area.

Manual changes on threads number can be made only in the color reduction area.

### Track bar




**1. Click to increase three scale units.**

**2. Drag to move to the point you want.**

**3. Click to decrease three scale units.**

**Also you can change the value of the track bar by pressing the Left & Right arrows of the keyboard.**

## Palette


Figure 7.59: Palette drop down menu

In the drop down menu the color palettes of the major thread manufacturers are listed as well as the default RGB (Red Green Blue) color palette. You can choose one of them to change your current palette. Your changes are automatically previewed behind the dialog box for your convenience. For example, if you choose **Sulky** color palette all RGB colors will be assigned to their respective ones. All the changes could be viewed in the color reduction area and visualized behind the dialog box. Each color palette contains a number of thread colors that the specific manufacturer produces. In order to view those, select the manufacturer from the **Palette** and then double click on any colored square in the **Thread** list of the color reduction area. A dialog box window will appear where all colors are listed. You can also view which colors are currently used defined by a checkbox next to the color.

## Color reduction area

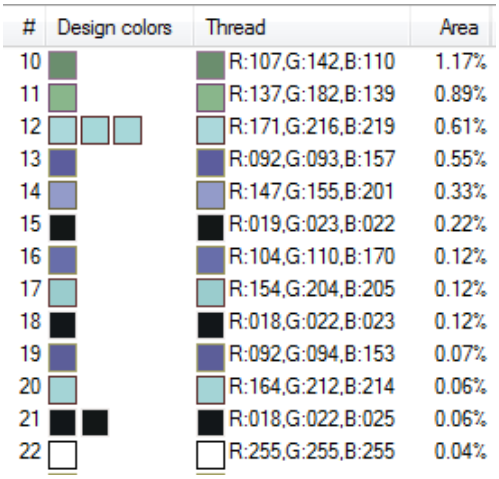



Figure 7.60: Color reduction area

The color reduction area contains all the information about the number of threads used, the vector design colors, the thread color used and the percentage of area that it covers. It also shows any changes that are made in the Palette and in Thread to use functions. In addition, you can make manual changes that will have an instant effect.

If your design has more than 20 colors or you have used the Threads to use function and reduced the number of threads in your embroidery design, the **Design colors** list in the color reduction area, will contain more than one color in each thread. This means that colors that cover the smallest area on the design are automatically put together with similar ones and replaced with the one that represents it from the **Thread** list.

Also, you can change the color position manually. Click and drag a colored square in the **Design colors** list, from one thread to another, and view how the thread color changes. Using the same procedure you can drag a color in the bottom of the color reduction area, where it says **Drag here for new color**, and add a new thread with the dragged color.

When you finish setting the color groups you can change the thread color. Double click on a colored square in the **Thread** list of the color reduction area. A dialog box window will appear where all thread manufacturers' colors are listed.

There you can choose another color and click OK. The thread color in the area changes. If you want to change back to the color you had before, you must double click on the color and, in the

dialog box, look for the color with the circle next to it. Select it and click OK to confirm your change.

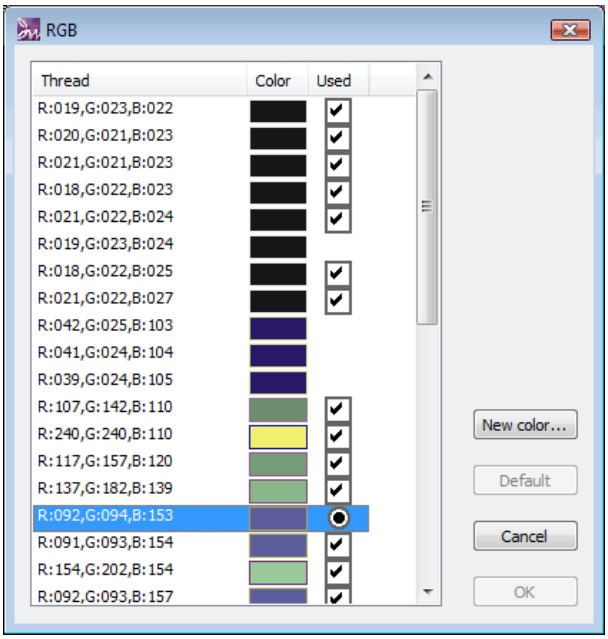



**Figure 7.61: Change color dialog**

If you have set a thread manufacturers' color palette, in the dialog you will see the names/numbers of the respective threads and you can choose exactly the thread you want. You can also navigate in the thread list by typing the name/number of the thread. According with the typed letters/numbers, the respective thread will be selected from the list. In addition, when you click on the list headers (**Thread**, **Color**, **Used**), the contents of the list will be reordered according the type on the list. Therefore, if you click on the **Color** list header, the colors will be listed according the color tone.

Color palettes from thread manufacturers have a fixed number of thread colors. The only palette that has infinite colors is the RGB palette. If you try to change any thread color in RGB palette, through the way we explained previously, you will see that in the color palette there are only the thread colors are used in the design. You can add more colors by clicking on the New color button and in the color dialog.

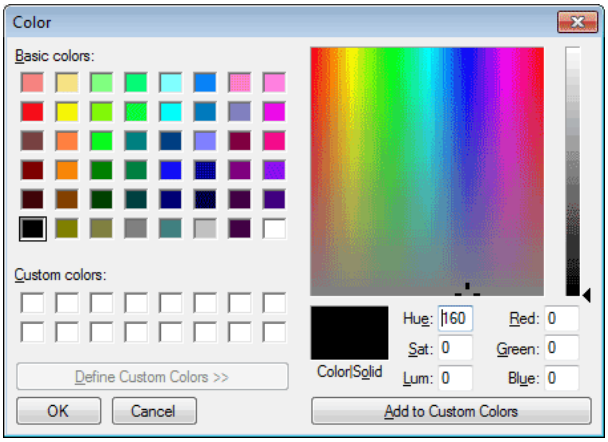



**Figure 7.62: Choose color**

Any changes in the Edit palette dialog box are automatically previewed in the embroidery design area behind the dialog box. In addition, every time you pass the mouse over a color in the dialog box, you can view in the design area which parts of the design this color fills. Click OK to confirm your changes.

Finally, in the **Edit palette** dialog, you can Undo any change you have made by clicking on the undo icon or click on the Redo icon to cancel the last Undo you have made.

## Change hoop

The hoop you have selected from the starting dialog can be easily changed from the Change hoop option. You can select a different one from the existing hoops or create a new one with custom dimension that will fit your needs. It is important to select the correct hoop in order to make sure that your design fits in your actual hoop that you will use to embroider it. If you select a larger hoop from the one that you will use your needle carrier might hit the hoop you are using with a minimum result a broken needle. Therefore you must always select the correct hoop and double check if the design fits in the hoop by using the Printout of the design.

If the hoop you have selected is not visible on the working area you have to enable it by selecting the **Hoop** option from the **View** menu. If the **Hoop** option is checked and the hoop is not visible, try to **Zoom out** with any of the available zoom tools or by using the mouse wheel.

To change the current hoop you have to select the **Change hoop** option from **Tools** menu or press the **Ctrl** and **H** shortcut keys (Ctrl+H) together from the keyboard. The **Change hoop** dialog will appear from where you can select to use a predefined hoop or a custom hoop that you will define.

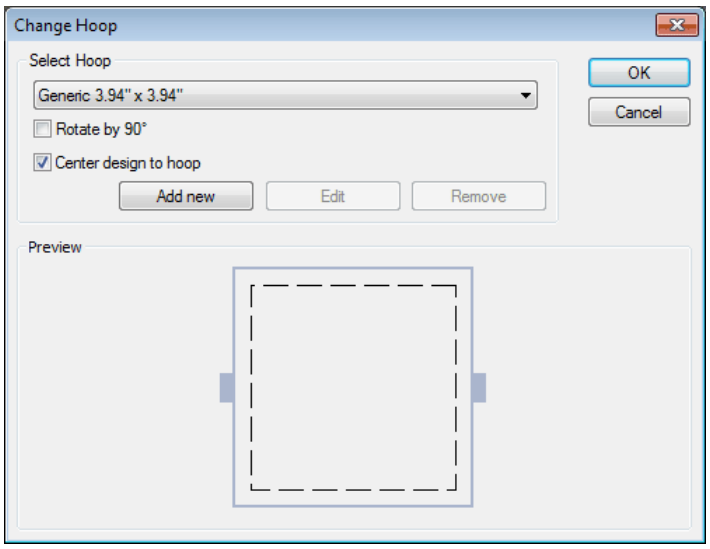



**Figure 7.63: Change hoop dialog**

- Select hoop

  From the **Select hoop** drop-down menu you can select any of the predefined hoops that the software includes or any of the custom hoops you have created and added to the software. To select the hoop you want to use you have to expand the drop down menu and select the hoop you want. You can select either predefined or custom hoops from the list. The selected hoop will be previewed on the **Preview** area of the dialog and will become the current hoop. To apply the hoop on the working area you have to press the **OK** button to confirm your selection and close the dialog. If you do not want to insert Hoop in the working area, you have to select the **None** option from the drop down menu. With the **None** option selected no hoop will be added and any existing one will be removed from the working area.

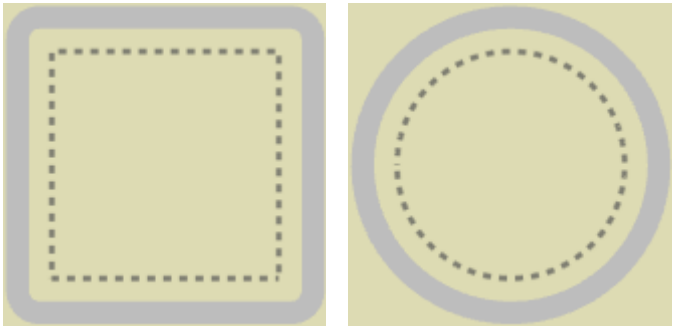


Figure 7.64: Generic Round hoop - Generic Oval hoop

Also you can **Rotate** the hoop you are using by 90$^{o}$ degrees by checking the respective option from the dialog. The hoop will be rotated and appear on the working area after pressing **OK** button. The way that you will create the design inside the hoop will be the same with the way that will be saved on the embroidery file and embroidered.

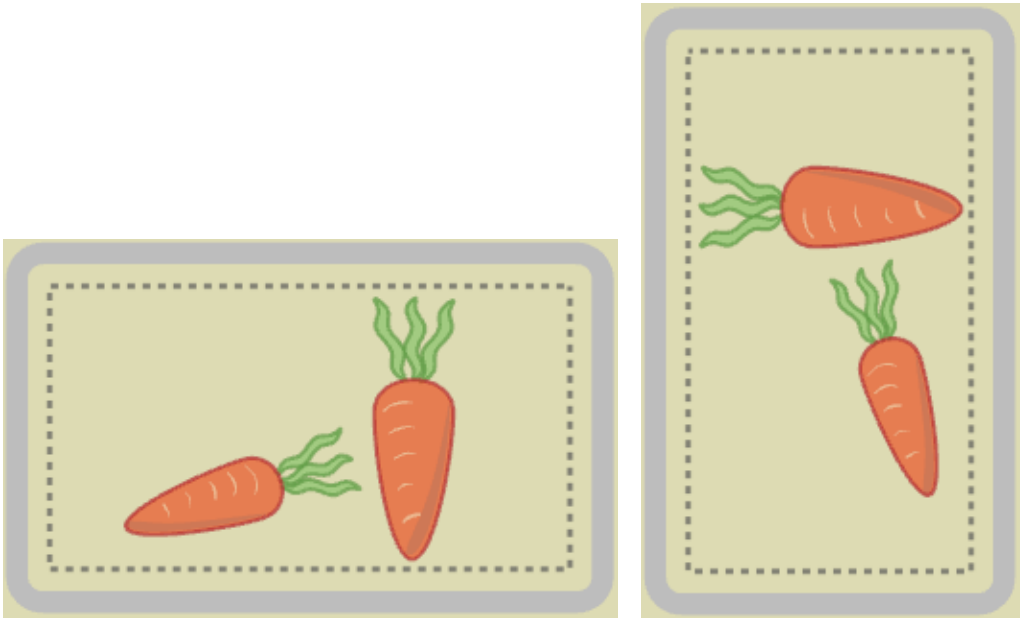


Figure 7.65: Rotated hoop – How it will be saved and embroidered

For example, if you rotate an oblong hoop in order the design to fit inside it, the final saved file will have the design rotated instead, in order to fit in the hoop.

If you want you can also remove custom hoops you have created from the **Select hoop** drop down menu by selecting it and clicking the **Remove** button. The hoop will be removed and it will no longer be available for use. The Predefined hoops cannot be removed. To add more customs hoops you have to click on the **Add new** button in the same dialog.

After selecting the hoop that you will use you have the option to centralize the design inside the hoop by checking the **Center design to hoop** checkbox. If you do not check this option, the hoop will be placed at the middle of the working area and the design you have created will remain at the position you have placed it before changing the hoop.

- Add New Hoop

By clicking on the **Add New** button the **Add new** dialog will appear where you have the ability to define a new custom hoop with the dimensions you prefer. The hoop that you will create will be saved in the **Select hoop** drop down menu, allowing you to reuse it as many times as you want. The dimensions that you will enter must be the dimensions that the manufacturer of the hoop gives for the specific hoop.

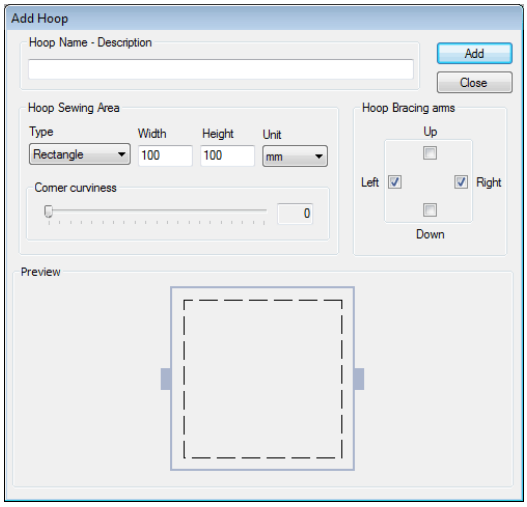



**Figure 7.66: Add hoop dialog**

To create a custom hoop you have to set the dimensions you want to have, the type of the hoop, the hoop bracing arms, the curvature of the hoop and then add it to the hoop list by pressing the **Add** button.

- **Hoop Name – Description**

  The first option you have is to type the **Hoop Name – Description** in the respective field. The name-description that you will type in this field will be the name that you will view in the **Select Hoop** drop down menu. If you forget to fill this field, you will be asked from the software to do so. It is good practice also to add always a description of the hoop (Oval, Rounded rectangle etc.) and the dimensions of it in the **Hoop Name – Description** field, in order to be easier for you to decide which one you have to use.

- **Type**

  From the **Type** drop down menu you can select the shape of the hoop you want to add. The options that you have are **Rectangle** and **Oval**. The selected shape is previewed in the **Preview** area allowing you to visualize how the hoop will look like. If you select the **Rectangle** option, the **Corner curviness** option will become editable allowing you to round the corners of the Rectangle hoop shape.

- **Corner curviness**

  The **Corner curviness** becomes editable only if you have selected the **Rectangle** option from the **Type** drop down menu. Many hoops have the shape of a rectangle with rounded corners and for this reason the **Corner curviness** option exists. The Corner curviness consists of a track-bar and a value field. By dragging the track-bar to the right, the corners of the rectangle that it is previewed in the **Preview** area start to become rounded and their roundness increases as long as you continue. The value field shows the percentage of roundness. The 0 value means that the rectangle has normal corners and not rounded and the 90 value means that it has rounded corners to their full extend. By moving the track-bar you can create the rounded hoop you want.

- **Width**

  In the **Width** value field you can insert the width of the hoop you want to use. The default value is 100 mm or the respective value in inches. You can change the value of the **Width** field by deleting the current value and inserting a new one. Any width

value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Width** value sets the width of the sewing area that it is shown with a dashed line inside the hoop.

- **Height**

  In the **Height** value field you can insert the height of the hoop you want to use. The default value is 100 mm or the respective value in inches. You can change the value of the **Height** field by deleting the current value and inserting a new one. Any Height value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Height** value sets the height of the sewing area that it is shown with a dashed line inside the hoop.

- **Unit**

  From the **Unit** drop down menu you can select the measure unit you want to use. The options that you have are millimeters (mm) and inches (inch). The selected Unit is automatically applied on the **Width** and **Height** values.

- **Hoop Bracing arms**

  At the **Hoop bracing arms** area you can set where the bracing arms are located on the hoop you are adding. To do that you have to check the checkboxes (Left, Right, Up, Down), where the bracing arms are located. For example, if the Hoop has one bracing arm at the Right and one at the Left, the Right and Left checkboxes must be checked. The preview of selected bracing arms is shown on the Preview area helping you to decide the correct ones.

After adjusting the options you can save the hoop by pressing the **Add** button that will add the hoop to the **Select hoop** drop down menu. After pressing the Add button a confirmations dialog will appear that will inform you that your hoop was saved successfully. Click **OK** to continue. To use the hoop you have created you have to expand the **Select hoop** drop down menu and press the **OK** button to apply it. The hoop you have created will become visible on the working area exactly as you designed it. The next time that your will open the **Change hoop** dialog you will find the hoop you have created selected in the dropdown menu with the name you gave to it. Also, it will become accessible from the **hoop** selection drop down menu of the starting dialog.

- Edit hoop

With the **Edit** button you can edit the custom hoops that you are inserting. The **Edit** hoop button is by default disabled and becomes enabled only if you select a custom hoop that you have added on the **Select hoop** drop down menu. If the hoop you want to edit is currently used you will not be able to edit it. You have to select a different hoop, apply it on the working area by clicking **OK** button on the **Change hoop** dialog and then open once more the **Change hoop** dialog to **Edit** the hoop you wanted.

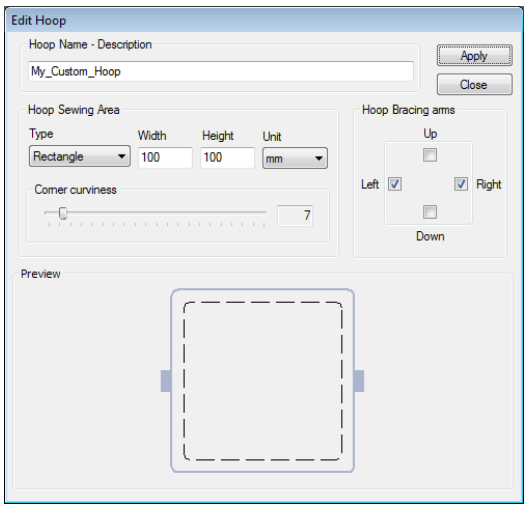



**Figure 7.67: Edit hoop dialog**

To edit a custom hoop you have to select it on the **Select hoop** drop down menu and then click the **Edit** button. The **Edit hoop** dialog will appear with the attributes of your hoop listed. You can edit the options of the hoop and save it by pressing the **Apply** button. A dialog will appear that confirms the changes you made and then you return back to **Edit hoop** dialog. You can continue editing the custom hoop or press the close dialog to end editing process.

The options you can change in the **Edit hoop** dialog are the following:

- **Hoop Name – Description**

  The first option you can edit the **Hoop Name – Description** option. You can change the name-description that the hoop will have by editing the respective field. The edited name will be added in the **Select Hoop** drop down menu. Do not forget to add a description of the hoop (Oval, Rounded rectangle etc.) and the dimensions of it in the **Hoop Name – Description** field, in order to be easier for you to decide which one you have to use.

- **Type**

  From the **Type** drop down menu you can change the shape of the hoop you have added. The options that you have are **Rectangle** and **Oval**. The selected shape is previewed in the **Preview** area allowing you to visualize how the hoop will look like. If you select the **Rectangle** option, the **Corner curviness** option will become editable allowing you to round the corners of the Rectangle hoop shape.

- **Corner curviness**

  The **Corner curviness** becomes editable only if you have selected the **Rectangle** option from the **Type** drop down menu. Many hoops have the shape of a rectangle with rounded corners and for this reason the **Corner curviness** option exists. The Corner curviness consists of a track-bar and a value field. By dragging the track-bar to the right, the corners of the rectangle that it is previewed in the **Preview** area start to become rounded and their roundness increases as long as you continue. The value field shows the percentage of roundness. The 0 value means that the rectangle has normal corners and not rounded and the 90 value means that it has rounded corners to their full extend. By moving the track-bar you can change the roundness of the hoop.

- **Width**

In the **Width** value field you can change the width of the hoop. You can change the value of the **Width** field by deleting the current value and inserting a new one. Any width value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Width** value sets the width of the sewing area that it is shown with a dashed line inside the hoop.

- **Height**

  In the **Height** value field you can change the height of the hoop you want to use. You can change the value of the **Height** field by deleting the current value and inserting a new one. Any Height value change is automatically previewed in the **Preview** area. Check the manufacturer's dimensions, to be sure that you are entering the correct ones. The **Height** value sets the height of the sewing area that it is shown with a dashed line inside the hoop.

- **Unit**

  From the **Unit** drop down menu you can change the measure unit you want to use. The options that you have are millimeters (mm) and inches (inch). The selected Unit is automatically applied on the **Width** and **Height** values.

**Preview**

In the **Preview** area you can view the hoop you have selected from the Exiting hoops and the custom hoops you are creating. The preview helps you visualize the available hoop and decide which one you want to use.

# Chapter 8 - Node editor

## Introduction

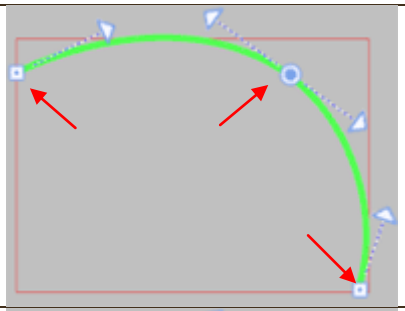
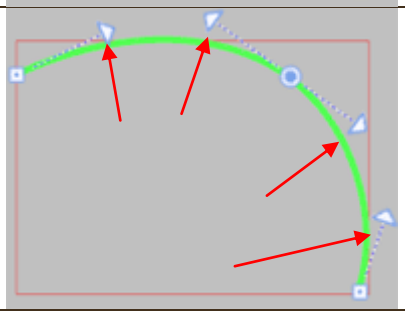
In this chapter we will analyze all the node editing abilities that **Create** mode of **Creative DRAWings** has. You will learn how to select, move, add, delete and split the nodes of a vector design. In addition, you will learn all the terminology that will help you to understand node editing better and how to use the functions of the node editor's right click menu.

All the options that are described in this chapter are only available inside **Create** mode.

## What is a node

There are two kinds of nodes. The **Smooth** nodes which are indicated with  icon and the **Cusp** nodes which are shown with the  icon. During designing the nodes that you are adding can be **Smooth** nodes or **Cusp** nodes according the tool you are using and the design you are creating. You can easily convert a **Smooth** node, to a **Cusp** node by selecting the respective option from the right click menu in node editing mode. Even if you did not create the design you wanted with your first try, you can adjust the shape you created later by changing the position of the nodes and their segments.

**Node:** The starting or connection point of a line or a curve segment. Any movement of a node affects the shape of the line or the curve segment.

| | |
|---|---|
|  | A node is the point indicated with the arrow in the drawing at the left. |
|  | A curve can be controlled by the control handles, which are indicated with the arrows in the drawing at the left. |

**Segment:** The line between two nodes is called a segment.

The nodes are connected between them with a line that is called segment. Moving an object's segments lets you make coarse adjustments to the object's shape; while changing the position of its nodes lets you fine-tune the shape of the object.

### Cusp nodes

**Cusp nodes** are called these that are shown with this icon  or with this icon  (when the node is selected). Usually cusp nodes are added to the design automatically at the corners of the design or when the curvature is changing. With cusp nodes you can change one segment of the node without affecting the other. This is useful when you want to make precise adjustments on one part of the design without affecting another.

### Smooth nodes

Smooth nodes are those that are shown with the  icon or with the  icon (when the node is selected). Usually smooth nodes are added to the design automatically at the middle of a curve or on the higher point of a curve. With smooth nodes you can adjust both segments of a node by moving the position of the control handle and changing its length. Smooth nodes are preferred on designs that will be converted to stitches.

## Curve objects

We can call a **Curve object**, any shape that we can draw inside **Creative DRAWings**. A curve object consists of segments and nodes that construct the shape of the each object. Most shape objects that are inserted (rectangles, ellipses etc.) together with the Text objects, are not curve object because they have special abilities when you are edit them in **Edit shape nodes** mode. On the other hand freehand lines, Bezier lines and outline lines are curve objects and their nodes/segments can be edited directly in **Edit shape nodes** mode.

To make an object a curve object you have to select it, right click on it and from the right click menu select the **Convert to curves** option or press the **Ctrl** and **Q** shortcut keys (Ctrl+Q) together from the keyboard. The object will be converted to a curve object that you can edit its nodes and segments in **Edit shape nodes** mode. Every time you convert an object to curve you must know that you cannot convert it back to a standard object. The only way to do that is to **Undo** your last actions, if you have converted it to curves recently.

## Edit shape nodes

Every shape that you are creating is consisted of a number of nodes and segments/lines. You can edit the nodes and the segments/lines to change the shape of the design you have created in node editing mode. The nodes of the object will become visible only if it is a curve object. To change to node editing mode, first you have to click on the **Edit shape nodes** icon  that you will find on the vertical toolbar (Tools toolbar) of **Create** mode or pressing the **F10** shortcut key from the keyboard, which will change the mode to node editing. The outlines of the selected objects are highlighted and you can see all existing nodes. In node editing mode you can change the shape of the selected object by using the mouse and by using the available options of right click menu.

### Select Node(s)

If you want to select a node, click on the node and it will become bigger and change color indicating that it is selected. In order to select more than one node, click and drag the mouse on the screen forming a rectangle or select the lasso tool and make a lasso selection. All the nodes contained within this rectangle will be selected.

By holding the **Ctrl** key down while you selecting nodes you can reverse the current status of the nodes. If they were selected they will become deselected and the opposite. The same functionality applies either on separate node selections or on rectangle selections.

By holding the **Shift** key down you can add more nodes on the current selection or make a new multiple selection. You can either add nodes to the current selection by clicking on the nodes you want to add or by making rectangle selections.

If you have selected more than one node you can move or delete them but you cannot change the tangents that are controlling them. To edit the tangents of the nodes you have to select a single node and adjust its tangents.

In addition, you can use the **Select All** or **Select polyline** options of the right click menu that we will describe later on.

## Move node(s)

To move specific nodes of the design you have to select them first by using any of the available methods (Lasso selection, Rectangle selection or single click selection). Then you have to click on any node that is included in the selection and drag the mouse to the point you want. The nodes will be moved to position you want them to be. If you want to move a single node you have to click and drag it to its new position with your mouse.

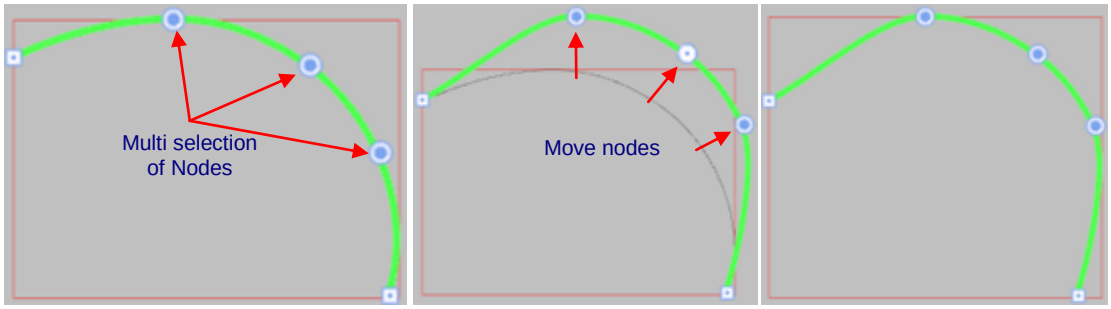



**Figure 8.1: Move multi nodes**

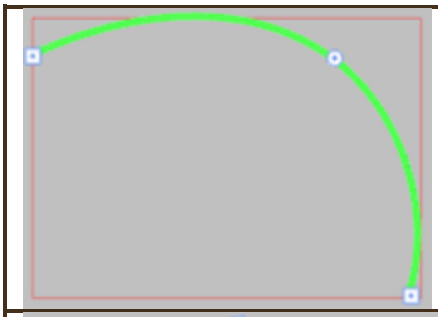
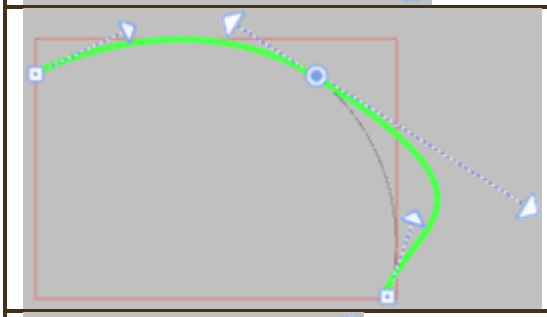
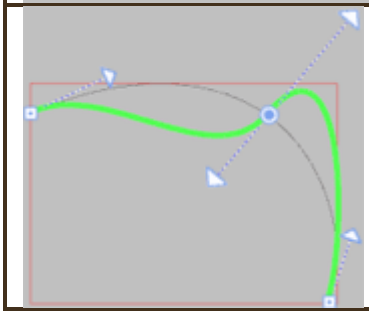
By moving the selected nodes all the segments that are attached to them are also changing.

If you hold the **Ctrl** key pressed while moving a node, guidelines will appear on every 22.5 degrees of the X and Y axes. While moving the node it will snap on the guidelines, allowing you to make accurate movements along the guidelines. The guidelines that appear have as center the initial position of the node.

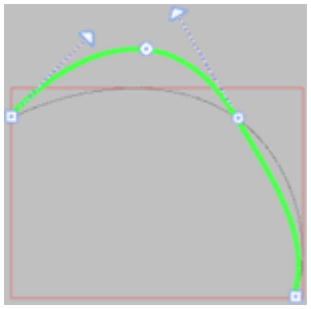
If you hold the **Alt** key pressed while moving a node, vertical and horizontal guidelines will appear on X and Y axes that will snap on the lineation of the Ruler when the Grid is enabled. While moving the node it will snap on the guidelines, allowing you to make accurate movements along the guidelines. When you press the **Alt** key the node automatically moves/snaps on the closest vertical and horizontal lineation of the ruler. From that point you can move the node to the position you want based on the ruler. The **Alt** key will work even if the ruler is disabled.

## Using control handles of a node

If you want to change a curve you can move, insert or delete one or more nodes. You can also edit a curve using the control handles of a node. The control handles of a node appear whenever you select a node. You can change the position of the control handle by click and dragging the control point (the arrow at the end of the control handle) to the position you want. The curve from the side of the control handle you are moving will change accordingly. By changing the direction and the length of the control handle, you can make precise coarse adjustments on the curve. For example:

| | |
|---|---|
|  | Normal Curve |
|  | By changing the length of the control handle. |
|  | By changing the direction of the control handle. |

Also the control handles of a curve can be changed by clicking on this curve and drag it on another point, as you can see in the following draw.

| | |
|---|---|
|  | The arrow shows the movement of the temporary node. The blue line shows the curve prior to the movement and the green line indicates its shape after the changes. |

## Add a node

While shaping objects in node editing mode you will need to insert an additional node inside a curve that will help you re-shape it easier. To insert a new node, right click on the point where you wish to insert it. The right click menu will appear with all the available option. If this is not the exact point that you wanted to insert it, you can click on another point of the curve. By selecting the **Add node** option from the **right click menu** a new node will be inserted in the position you wanted. Another way to add a node is by **double clicking** on the position you want the node to be added or position the mouse over the point you want the node to be added and press the **Num +** button form the keyboard to insert it. The new inserted node can be edited as any existing node. The new node that is inserted is always a smooth node. If you want to insert a cusp node you have to insert a Smooth node first and by right clicking on the node select the **Cusp node** option.

You can also add automatically a node between two nodes by selecting the node and pressing the **Num +** key from the keyboard. A node will be added at the middle of the curve segment before the selected node.

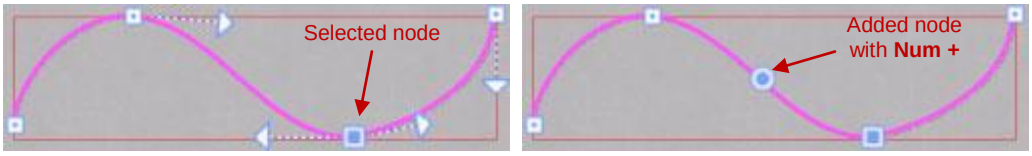



**Figure 8.2: Num + adds a node at the middle of previous segment**

You can also add automatic nodes to more than one selected nodes. To do that you have to select the nodes that are after the segment you want the automatic node to be added and press the **Num+** key from the keyboard. To all curve segments before the selected nodes, automatic nodes will be added.

## Delete a node

If you don't need a node you can delete it. First select the node(s) that you want to delete and then click the **Delete** key on your keyboard. You can also right click on the node you want to remove and select the **Delete node** option from the right click menu.

**Note:** If you delete one or more nodes of a curve, the shape of the object it might change.

## To line

If you have a curve and you want two nodes to be connected with a straight line, you can use the option **To line** from the right click menu. First you have to select the node, from which the line will start. Right click on the node and from the popup menu select the **To line** option. You can apply also the same option to more than one selected nodes.

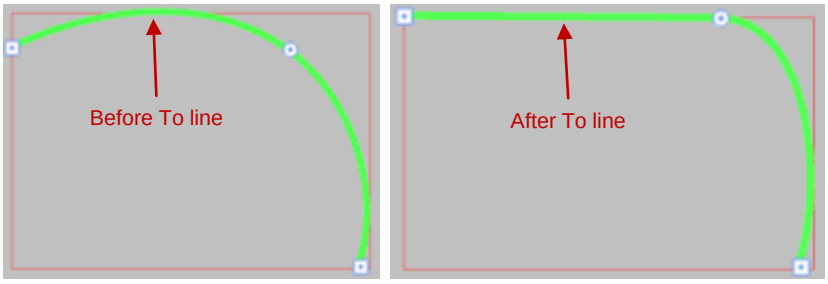



**Figure 8.3: Apply To line option**

This option changes the type of the selected node(s) and the next node(s) to cusp nodes.

You can also apply the **To line** option directly on the curve you want to convert. Right click on the curve you want and from the right click menu select the **To line** option. The curve will be automatically converted to a straight line.

## To curve

The **To curve** option is the opposite of the **To line** option. Therefore if the shape has two or more nodes connected with straight lines and you want to convert them to curve lines you have to use the **To curve** option from the right click menu. There are two ways to apply the **To curve** option. The first is to select the node that is before the line you want to convert to curve, right click on it and from the right click menu select the **To curve** option. The line next to the node will become a curve allowing you to change its shape. You can apply also the **To curve** option to multiple nodes, by following the same steps.

The second way that you can apply the **To curve** option on a line is by right clicking directly on the line and from the right click menu that will appear select the respective option. The line will become a curve and allowing you to re-shape it.

If you have applied the To curve option to multiple cusp nodes , the will automatically converted to smooth nodes .

## Select all and Select Polyline

With the **Select all** option you can select all nodes of an object and with the **Select Polyline** option you can select all nodes of a specific curve (or line or closed shape) of a complex object (combined objects).

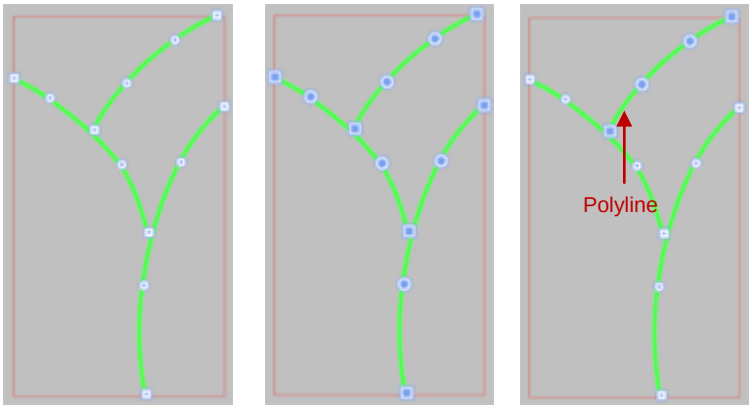



**Figure 8.4:** Nodes of Shape Select all nodes Select polyline

If you want to use Select all nodes of the object, first you have to select the object, change to **Edit shape nodes** mode from the **Tools** toolbar and select a node of a curve by clicking on it. Right click on the selected node and from the node editing menu select the **Select all** option. This option selects all nodes of the current object. You can use the same option through the **Edit** menu.

On the other hand, if you want to select all nodes of a single curve (or line or closed shape) that it is part of a complex object (combined objects) you have to select a node of the curve and then from the right click menu select the **Select Polyline** option. All nodes of the specific curve (or line or closed shape) with selected nodes will then be selected.

## Close outline

With this option you can connect two nodes with a line or by making them one node. You can close an outline that belongs to the same curve object such as line art designs or shapes with open outlines.

In order to close an open outline or make a line art design a closed shape you have to select the ending node of the object and right click on it. From the right click menu select the **Close outline** option and **Creative DRAWings** will connect the selected node with the starting node of the object with a line and make it closed shape. Then the object can be handled as a closed shape.

Another way to create a closed shape is to select the ending/starting node of an open shape or line art design and move it towards to the starting/ending node. When the ending node will reach the starting node they will be automatically connected and make the object a closed shape.

## Join nodes

If you want to connect the nodes of two different curves and make them a single curve you have to follow a different procedure.

**Note:** These nodes should be the first or the last node of each curve, but not necessarily the same type of node (curve or curve break). These nodes should be near each other and the two curves should be in the same section.

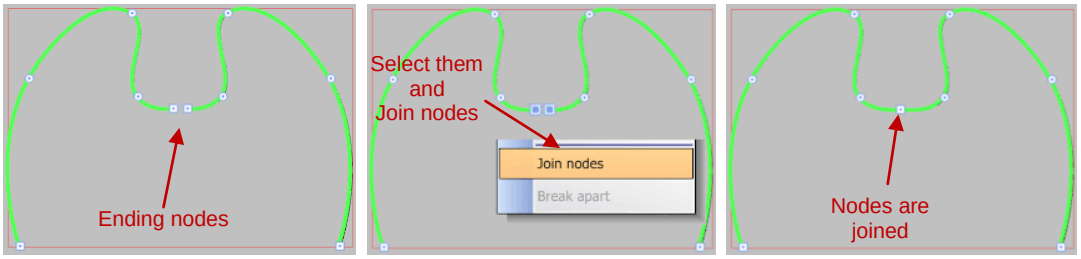



**Figure 8.5: Join nodes Select ending nodes and apply Join nodes Nodes are joined**

Click on the **rectangle selection** tool from the **Tools** toolbar in order to change to **Object editing** mode and then select the two curves you want to connect. Right click on the selected curve objects and from the right click menu select **Combine** option. The two curves will become one object with two sub sections (the two curves). Click on the **Edit shape nodes** to change to Node editing mode. Select the ending nodes of the two curves and right click on them. From the right click menu select the **Join nodes** option. The two nodes and curves will become one. The two objects will become one but not a close object. In order to make it a closed object you can try any of the two methods we described in the Close outline section above.

## Split outline

With this option of right click menu you can split the selected node or the current curve in two sections. If this function is applied on a closed shape it will become an open shape without fill color. If this function is applied on an open shape like a line art object it will be split in two line art objects.

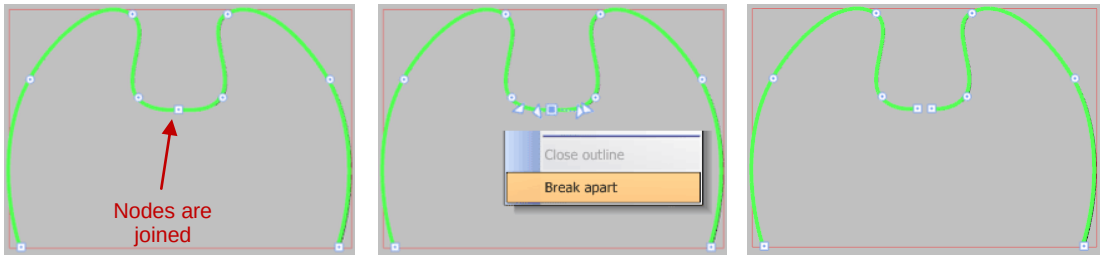



**Figure 8.6 Split outline Select node and apply split outline Nodes are split**

In order to split a node, you have to right click on the selected node and click on **Split outline** option. The selected node will become two nodes that belong to the same object but in two different sections, if the object was a closed shape, or in two open objects if the shape was a line art object.

In case that you have applied the **Split outline** option on a segment of a shape, the shape will be split and two separate nodes will be added. The split nodes that will be created can be joined again by moving the one node over the other. The two nodes will be automatically become one. For the same purpose you can also select both nodes and then from right click menu select **Join nodes.**

## Auto remove overlap


**Figure 8.7 Auto remove overlap checkbox**

The **Auto remove overlap** option appear on the **Tools options** toolbar inside **Edit shape nodes** mode, from where you can activate it. This option allows you to convert crossing curves inside an

object (object that looks like the 8 shape) to separate ones that can be handled as subsections of the same object.

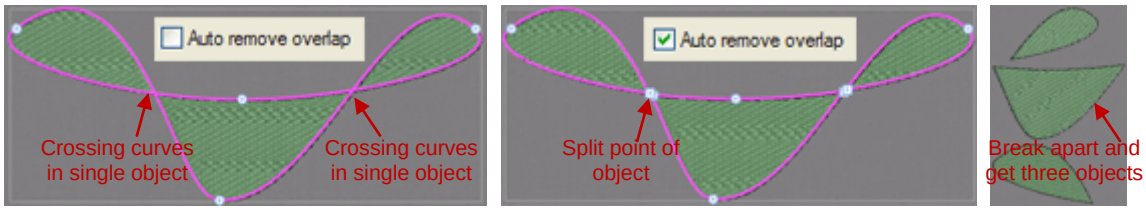



**Figure 8.8 Before removing overlaps – After removing overlaps – Break apart the object**

These objects can be created by editing the nodes of a shape in **Edit shape nodes** mode  , and then automatically remove overlaps by simply checking the **Auto remove overlap** checkbox. Once you check the **Auto remove overlap** button it remains checked. Therefore if you want to continue editing nodes without applying the option you have to uncheck the checkbox by clicking on it.

# Chapter 9 - Embroidery transformations

## Introduction

In this chapter we will describe all the stitch transformations that **Creative DRAWings** can perform. You will learn about Object Properties toolbar functionality, how you can adjust Design properties, how to change Fabric and how to add Divides and Directions.

Object properties toolbar contains all the stitch types that can be applied in the embroidery design. Stitch types like **Satin**, **Step**, **Row Fill**, **Appliqué**, **Photo stitch**, **Running** and **Satin Serial** are available for creating unique embroidery designs. Also, includes all the advanced stitch parameters that you can adjust according the needs of the embroidery design.

In addition, you can select the fabric and its color that you want to embroider your design on, from a large variety of fabrics and colors. This gives you a better visualization of how your embroidered design will look on your garment.

Finally, you can adjust the properties of your design by making optimization changes and adding useful comments.

## Stitch types – Embroidery types

The stitch types that **Creative DRAWings** includes are **Satin**, **Step**, **Row Fill**, **Running**, **Satin Serial, Photo-stitch**, **Cross-stitch**, **Appliqué** and **Netfil**. Satin, Step and Row Fill stitch types are used from the software to fill vector shapes with stitches. Appliqué and Net fill embroidery types are special types of embroidery that are used from the software to fill vector shapes with Appliqué and create Nets with stitches. Running and Satin serial stitch types are used to fill vector outlines and line art designs. Cross-stitch and Photo-stitch are used mainly to fill bitmap images. The same stitch types are used with the same or different names from the embroiderers around the world. To understand to which stitch types we refer with the names Satin, Step etc. we will analyze them for you.

### Satin stitch type

When the **Satin** stitch type is applied on any object, stitches are connecting two points from one side of the object to the other. These points are formed like closely arranged zigzag stitches along the shape of the object. Satin stitch type can be laid down at any angle and with varying stitch lengths. In **Creative DRAWings** small and oblong objects will be filled with Satin stitches.

Figure 9.1 Vector object

Satin fill

### Running stitch type

Running stitch type consists of one stitch between two points. It is used mainly for outlining, fine detail and complete designs. Also known as a walk stitch. In **Creative DRAWings** all line art designs and thin object outlines will be filled with Running stitches.

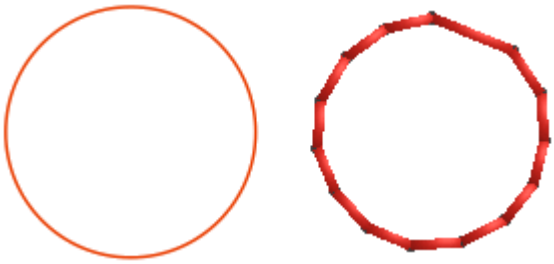


Figure 9.2: Thin outline object Running fill

## Satin Serial stitch type

Satin serial stitch type is applied on thick outline objects by forming closely placed zigzag stitches along it. It is generally used to fill borders and line art designs. In **Creative DRAWings** all thick line art designs and object outline will be filled with Satin Serial stitch type.

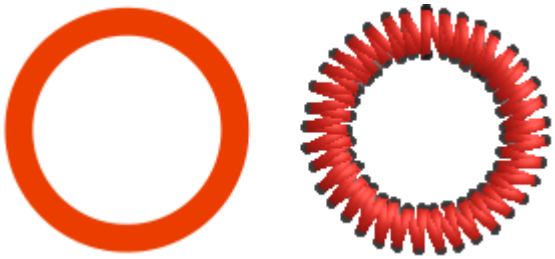


Figure 9.3: Thick outline object Satin serial fill

## Step stitch type

Step stitch type (or Fill stitch type or Tatami stitch type) is a series of Running stitches commonly used to fill large areas. Different fill patterns can be created by altering the angle, length and repeat sequence of the stitches. In **Creative DRAWings** the large objects in the vector design most of the times are filled with step stitches.

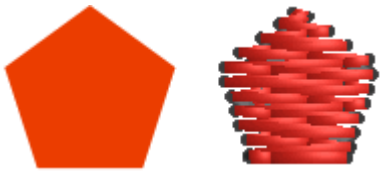


Figure 9.4: Vector object Step fill

## Row Fill stitch type

Row Fill stitch type is a fill stitch similar with step stitch type. It is longitudinal stitches from one side to the other that are vertical to the defined direction that it is automatically defined from the software. Row Fill stitch it is commonly used to fountain like shapes. In **Creative DRAWings** you have to select it in order to apply it on the shape you want.

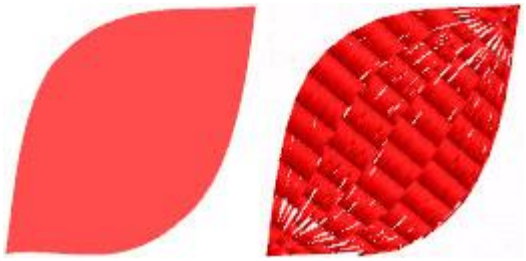


**Figure 9.5: Vector object Row Fill fill**

## Appliqué

**Appliqué** is an embroidery type that allows you to create Appliqué on fabric easily. It is a fill embroidery type therefore you have to draw a shape similar with the appliqué fabric you want to apply on the garment and fill it with a color. Then you can apply the appliqué embroidery type that will apply the needed sequence of actions in order the design to be embroidered properly. Appliqué embroidery type is a complex type that includes "Running stitches before" to mark the appliqué position, "Running stitches after" to hold the appliqué in place and the E-stitches or Zig-Zag to decorate and hold the appliqué.

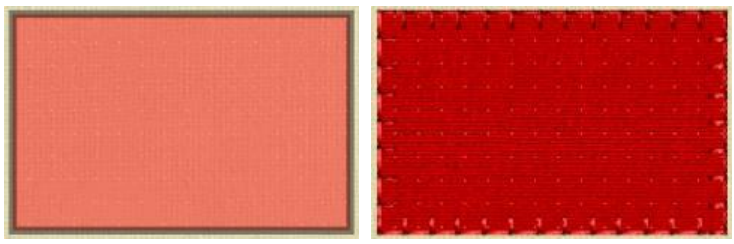


Figure 9.6: Vector object Appliqué embroidery type

## Cross-stitch embroidery type:

Each **cross-stitch** stitch consists of two running stitches that are crossed in between creating an '**X**'. Cross-stitches of different colors are shaping the image by creating a grid. In **Creative DRAWings** every imported bitmap image can be filled with the Cross-stitch embroidery effect look.

Figure 9.7: Bitmap image Cross-stitch fill

## Photo-stitch embroidery type

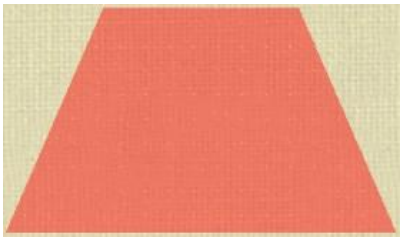
Photo-stitch is an embroidery type that automatically recognizes the graduation of colors of any backdrop image and sets fill stitches on it. The fill stitches are satin bars that cover the backdrop image area.

Actual Photo


Filled with Photo-stitch

## Net fill embroidery type

The Net fill embroidery type is a special fill type that adds two scan lines that are crossing with parallel equidistant running stitches. These two scan lines are forming a Net that can be used to create Laces and fill areas. It is a very useful embroidery type.



Vector object

Net Fill embroidery type

Figure 9.8:

## Select fabric

Fabric selection is not just an issue of previewing the design on the fabric. **Creative DRAWings** automatically adjusts, according to the selected fabric, various embroidery parameters. Embroidery quality depends on some of these parameters. Import quality factor is also how the fabric is stabilized in the frame of the embroider machine. **Creative DRAWings** suggests the appropriate backing materials for every fabric, in the printout of each design. In case that you don't want to preview the design on any fabric you can selecy the **none** option that exists in any of the fabric categories. In this case only the color that is select in fabric dialog will appear in the background of the created design.

The fabrics in **Creative DRAWings** are categorized in groups of embroidery types with different preset parameters:

**Embroidery smooth**, starting with Density 55 for normal thread No 40, with lighter underlay

**Embroidery normal**, starting with Density 40 for normal thread No 40

**Embroidery normal light**, starting with Density 40 for normal thread No 40, with lighter underlay

**Embroidery light**, starting with Density 55 for thick thread No 30.

**Embroidery Ultra light**, starting with Density 85 for thick thread such as wool

**Embroidery Heavy**, starting with Density 35 for thin thread such as metallic.

All the designs can be previewed on different fabrics. There are various colors and types of fabrics. When you decide to save your design, in order to embroider it on a garment, you must be sure that the fabric you have chosen in **Creative DRAWings** is the same with the one that will be embroidered. Otherwise the results may not be the expected. There are 50 fabric types in any color spread to different categories, from which you can select the appropriate one.

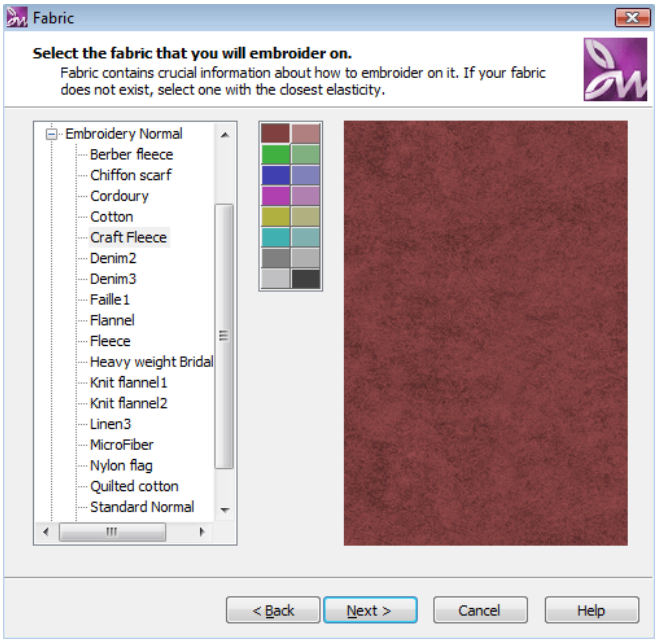



**Figure 9.9: Select Fabric dialog box**

This option can be accessed from menu Tools > Select fabric, from the shortcut key Ctrl+F or from the standard toolbar by clicking the select fabric  icon. Select fabric option prompts you to a dialog box window where you can choose the fabric type and color by clicking on them. Your selection is automatically previewed in the dialog box and behind it for your convenience. The fabrics are under the six categories that are available In order to view it, click on the + button at the left side of each category to be expanded.

The six fabric categories that are available are **Embroidery smooth, Embroidery Ultra Light, Embroidery Light, Embroidery Normal Light, Embroidery Normal** and **Embroidery Heavy.**

- **Embroidery smooth:** In this category you can choose between any of the fabrics that are listed. The embroidery that will be placed on these fabrics will be light and smooth. That is why the embroidery on the 3D preview will appear with low density. All the fabrics have specific internal embroidering parameters that needed for high quality embroidering. The embroidering parameters are adjusted to each fabric in order the embroidery that will be placed on to have smooth feel and keep the fabric soft.
- **Embroidery Ultra Light:** In this category you can choose between “Bridal Tulle”, “Waffle knit”, “Wool” and “Standard Ultra Light”. The embroidery that will be placed on these fabrics will be **Ultra light.** That is why the embroidery on the 3D preview will appear with low density. The first three fabrics have specific internal embroidering parameters that needed for high quality embroidering. The “Standard Ultra Light” fabric is not a specific fabric but can be used as an alternative for embroidering Ultra light on any fabric you want. The embroidery results of the “Standard Ultra light” settings will depend on the fabric.

- **Embroidery Light:** In this category you can choose a fabric between “Lycra lame”, “Sweat shirt knit”, “T-shirt knit2”, “Vinyl2”, “Wool Crepe” and “Standard Light”. The embroidery that will be placed on these fabrics will be **Light.** That is why the embroidery on the 3D preview will appear with low density. Each of these fabrics has specific settings in order to produce the best possible results if you embroider the design on the respective fabric. Be sure you have chosen the correct fabric from the fabric list. If you want to embroider a design with light settings in a fabric that is not included in the list, choose the “Standard Light” fabric that contains those settings. The embroidery results depend on the fabric that is used.
- **Embroidery Normal Light:** In this category you can choose a fabric between “Crepe Polyester”, “Denim1”, “Light weight bridal satin”, “Linen1”, “Panne velvet”, “Rayon”, “Rayon Sand washed”, “Sweater knit”, “T-shirt knit1”, “Towling”, “Vinyl1” and “Standard Normal Light”. The embroidery that will be placed on these fabrics will be **Normal** with a tension to **Light.** That is why the embroidery on the 3D preview will appear with normal density. Each of these fabrics has specific settings in order to produce the best possible results if you embroider the design on the respective fabric. Be sure you have chosen the correct fabric from the fabric list. If you want to embroider a design with **Normal Light** settings in a fabric that is not included in the list, choose the “Standard Normal Light” fabric that contains those settings. The embroidery result depend on the fabric that is used.
- **Embroidery Normal:** In this category you can choose a fabric between “Berber fleece”, “Chiffon scarf”, “Cordoury”, “Cotton”, “Craft Fleece”, “Denim2”, “Denim3”, “Faille1”, “Flannel”, “Fleece”, “Heavy weight Bridal satin”, “Knit flannel1”, “knit flannel2”, “Linen3”, “MicroFiber”, “Nylon flag”, “Quilted cotton”, “T-shirt knit3” and “Standard Normal”. The embroidery that will be placed on these fabrics will be **Normal.** That is why the embroidery on the 3D preview will appear with normal density. Each of these fabrics has specific settings in order to produce the best possible results, if you embroider the design on the respective fabric. Be sure you have chosen the correct fabric from the fabric list. If you want to embroider a design with Normal settings in a fabric that is not included in the list, choose the “Standard Normal” fabric that contains those settings. The embroidery result depends on the fabric that is used.
- **Embroidery Heavy:** In this category you can choose a fabric between “Burlap”, “Chenille”, “Cross-stitch cloth”, “Faille2”, “Fake fur”, “Linen2”, “Lycra bathing suit”, “Lycra workout clothes” and “Standard heavy”. The embroidery that will be placed on these fabrics will be **Heavy.** That is why the embroidery on the 3D preview will appear with high density. Each of these fabrics has specific settings in order to produce the best possible results, if you embroider the design on the respective fabric. Be sure that you have chosen the correct fabric from the fabric list. If you want to embroider a design with Heavy settings in a fabric that is not included in the list, choose the “Standard Heavy” fabric that contains those settings but the embroidery result depend on the fabric that is used.

You can change the color of the fabric by clicking on one from the list or by **double clicking** on a color from the list and select one from the color table. By clicking the **OK** button the selected color will replace the one that you double clicked on and will be previewed on the working area. If you want, you can continue changing colors until you find the one that will matches the fabric color you want to embroider your design on.

## Object properties

Object properties tool pane contains every embroidery design function of the program. It has two tabs **Fill** and **Outline** . If Object properties is not visible you can open it from the View menu or with the shortcut key Alt + Enter. You can view the Object properties tool pane both in Create or Stitch modes. With the options that are included you can change the stitch type of the design easily by just clicking on it.

## Fill

This tab contains every function that can be applied to the fill of a design. The functions are not visible until you select an object from a design or the whole design. When a vector design is embroidered for the first time, **Creative DRAWings** automatically puts fill stitches on it. That is why the Auto checkbox, at the top of the fill tab, is checked. When a change in the fill tab is made, the Auto becomes unchecked. You can check it again and restore the automatic created design from **Creative DRAWings**. This is very useful when you have made many changes to a design and you want to cancel all the changes you made by using the tool of Object properties toolbar and start again from the beginning.


Figure 9.10: Fill stitch type options

For designs that have only outlines or they are line art designs, the Fill option is not available. In the fill tab there are eight stitch type fills: None, Satin, Step, Row Fill, Appliqué, Cross-stitch, Netfil and Photo-stitch.

### *None*

When this option is applied, sets the fill area to be empty. All the fill stitches are removed from the design and only the border remains, if one exists. Whenever you don't want to embroider a specific fill area you can set its' fill to None and have the stitches instantly removed.

### Satin

This option, when applied, sets the fill area to be Satin. All the fill stitches will change to Satin, which is automatically calculated and produced in the program. You can change the feel of Satin by changing its Style and Pattern. There are many different styles and patterns that you can apply on any stitch design. Also, you have the ability to change Underlay, stitch Density and Compensation.

## Styles

The Styles area contains all the stitch styles that can be applied on the design. Style in **Creative DRAWings** is a way of movement from one point to another, which normally can be done by one stitch. Some styles when applied may not look good on the design. This happens because styles cannot fit correctly in all possible shapes.

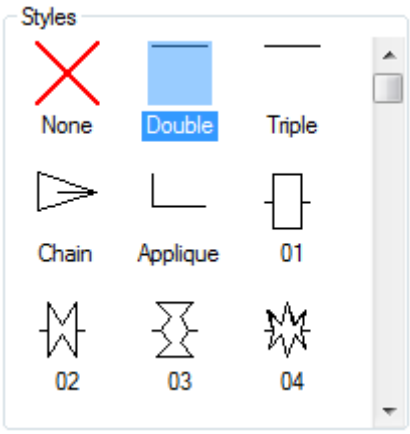



Figure 9.11 Satin Styles

Select the style you prefer by clicking on it and viewing it in your design. The none selection will restore the default satin type. Your selections are instantly displayed in the design area letting you experiment with your design. There are 325 styles that you can use to produce unique designs. The styles that are in film icon (for example: ) are a series of different styles in one.

## Patterns

The patterns area contains all the patterns that can be applied on the design. Patterns are shapes, created from stitches. You can make combinations between Styles and Patterns and produce your own designs. Some combinations when applied may not look good on the design. This happens because combinations do not always produce correct stitch results.

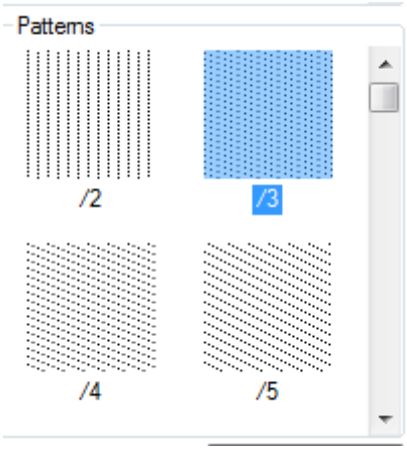



Figure 9.12: Satin Patterns

Select the pattern you prefer by clicking on it and viewing it in your design. The none selection will restore the default satin type. Your selections are instantly displayed in the design area letting you experiment with your design. There are 262 different patterns to apply to your design. If you want to view only the pattern you have selected and not a combination of styles, you must be sure that styles option is set to none. Otherwise you will view a pattern with a style in it.

There are also two more options that are very useful in customizing the way that the software will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

## Remove overlaps:

This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always.** The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always.** When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

**Creative DRAWings** uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create mode of **Creative DRAWings**. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

## Sequence:


With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically, the **Sequence** drop down menu has three options **Auto, To start** and **To end**. The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually, use the other two options. The **To start** option sets the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. When this is applied on an object of the embroidery design, it will be immediately become the last object that will be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created the way you prefer. This tool is really useful for embroidering hats and on delicate fabrics that need special care regarding the placement of objects on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, **Creative DRAWings** will decide automatically which one of those will be the first and which one will be last to be embroidered.

### Satin stitch type options

Also, there are three more options that can help you adjust the embroidery parameters of the design. As we have already mentioned in the **Select fabric** section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it and some of them are visible at the bottom of the **Object properties** toolbar. For Satin stitch type they are **Underlay, Density** and **Compensation.** These options can help you make useful adjustments on the design and produce the embroidery results you prefer.

## Underlay:

At the **Underlay** option it is shown the Underlay that it was automatically chosen from the software for the specific object. The underlay stitches are placed on the fabric in order to create the base for the cover stitches that will follow. The Underlay is important for the quality of the embroidery designs.

For **Satin** stitch type, the following underlay patterns are available:

| | |
|---|---|
|  Tacking | **Tacking** – If tacking is selected, there will be no underlay and the software will make running stitches in order to go from one position to another and cover the area with cover stitches. |
|  Single | **Single** - If single is selected, **Creative DRAWings** will make a single line with running stitches near the middle of the shape of the object and then cover this with cover stitches. |
|  Double | **Double** - If double is selected, **Creative DRAWings** will make running stitches following the shape of the object and position Double underlay near the edge of the outline. |
|  ZigZag | **ZigZag** - If zigzag is selected, **Creative DRAWings** will create a sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches. |
|  Cross | **Cross** - If cross is selected, **Creative DRAWings** will create a thicker sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches. |
|  Zigzag+ | **ZigZag+** - Is a combination of Zig-Zag and Double underlay. |
|  Cross+ | **Cross+** - Is a combination of Cross and Double underlay |
|  Netting | **Netting** - If netting is selected, **Creative DRAWings** will cover the area of the object with a thicker sophisticated ZigZag pattern, which automatically changes directions (according to the direction of the cover stitches) two times and then fills the shape with cover stitches. |
|  Netting+ | **Netting+** - Is a combination of Netting and Double underlay. |

## Density:


At the **Density** option it is shown the density that it was automatically chosen from the software for the specific object. The density changes according the fabric you have selected and it becomes visible on the preview of the design.

## Compensation:


At the **Compensation** option it is shown the compensation that it was automatically chosen from the software for the specific object. The **Compensation** changes the width of the satin object that

will be embroidered to avoid shrinking. The compensation value depends on the fabric you are using and the shape size. If you change fabric the compensation will change also. The compensation becomes visible only if you export the design by using the **To editor** option from the **File > Export** submenu.

### Step

This option, when applied, sets the fill area to be Step. All the fill stitches change to Step, which is automatically calculated. The Step type that was placed is the default. You can change **Steps** by changing its Style and Pattern. There are many different styles and patterns that you can apply on any stitch design. Also, you have the ability to change Underlay, stitch Density, Length and Compensation.

## Styles

The Styles area contains all the stitch styles that can be applied on the design. **Style** in **Creative DRAWings** is a way of movement from one point to another, which normally can be done in one stitch. Some styles, when applied, may not look good in the design. This happens because some stitch styles do not fit correctly in all shapes.

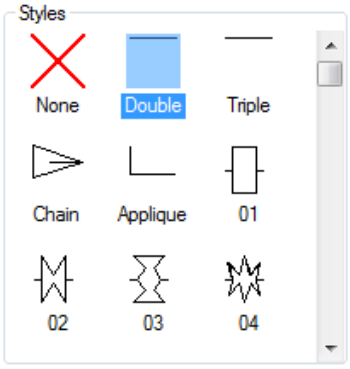



**Figure 9.13: Step Styles**

Select the style you prefer by clicking on it and view it in your design. If do not want any select none. The None selection will restore the default step type. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 325 styles that you can use to produce unique designs. The styles that are in film icon (for example:  ) are a serial of different styles in one.

## Patterns

The patterns area contains all the patterns that can be applied on the design. **Patterns** are shapes created from stitches. You can make combinations between Styles and Patterns and produce your own designs. Some combinations when applied may not look right in the design. This happens because combinations do not always produce correct stitch results.

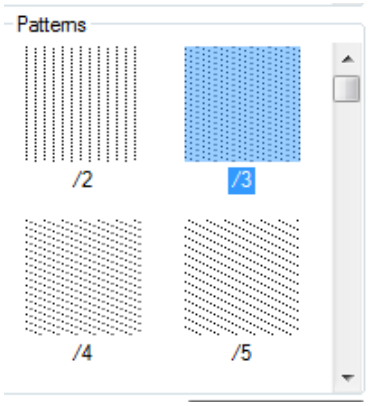



Figure 9.14: Step Patterns

Select the pattern you prefer by clicking on it and view it in your design. In step type you can't have **none** as a selection pattern. Step is based on patterns, which means that even if you don't select a pattern, **Creative DRAWings** will set the default for you. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 262 different patterns to apply in your design. If you want to view only the pattern you have selected and not a combination of styles, you must be sure that the **Style** option is set to none. Otherwise you will view a pattern with a style in it.

There are also two more options that are very useful in customizing the way that the software will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

## Remove overlaps:


This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses Artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is, also, possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always.** The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**, when it is applied on a specific object, it trims all the objects that overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

**Creative DRAWings** uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create part of **Creative DRAWings**. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

## Sequence:


With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. The **Sequence** drop down menu has three options **Auto, To start** and **To end**. **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible embroidering sequence results. In

order to change the embroidering sequence manually you have to use the other two options. The **To start** option sets the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first. Exactly the opposite for the **To end** option. Therefore, when it is applied on an object of the embroidery design, this will be immediately become the last object that will be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created in the way you prefer. This tool is really useful for embroidering hats, or on delicate fabrics that need special care regarding the way that the objects will be placed on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, **Creative DRAWings** will decide automatically which one from those that are set **To start** will be the first to be embroidered and which one from those set **To back** will be the last to be embroidered.

For example, if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, **Creative DRAWings** will embroider those that are set **To start** first, deciding automatically their embroidering sequence, then those (10) that remained set **To auto** and finally those that set **To end**, deciding automatically the order of those last 5.

Also, there are four more options that can help you adjust the embroidery parameters of the design. As we have already mentioned in the **Select fabric** section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it and some of them are visible at the bottom of the **Object properties** toolbar. For Satin stitch type they are **Underlay, Density, Length** and **Compensation.** These options can help you make useful adjustments on the design and produce the embroidery results you prefer.

## Step stitch type options

Also, there are four more options that can help you select the correct fabric for your embroidery design. As we have already mentioned in the **Select fabric** section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it. These presets are visible at the bottom of the **Object properties** toolbar, and for Step stitch type they are **Underlay, Density, Length** and **Compensation.** The values that are shown, are there, only for your information and to help you decide the fabric you will use. Below we will describe what each option shows.

## Underlay:


At the **Underlay** option it is shown the Underlay that it was automatically chosen from the software for the specific object. The underlay stitches are placed on the fabric in order to create the base for the cover stitches that will follow. The Underlay is important for the quality of the embroidery designs.

For **Step** stitch type, the following underlay patterns are available:

| | |
|---|---|
|  Tacking | **Tacking** – If tacking is selected, there will be no underlay and the software will make running stitches in order to go from one position to another and cover the area with cover stitches. |
|  Edging | **Edging** - If edging is selected, **Creative DRAWings** will make running stitches following the shape of the object and position Edging underlay near the edge of the outline. |

| | |
|---|---|
|  Packing | **Packing** - If packing is selected, **Creative DRAWings** will cover the area of the object with vertical running stitches (according to the direction of cover stitches) as the icon shows. |
|  Netting | **Netting** - If netting is selected, **Creative DRAWings** will cover the area of the object with running stitches at $45^{o}$ and $-45^{o}$ (according to the direction of the cover stitches) and then fill the shape with cover stitches. |
|  Packing+ | **Packing +** - Is a combination of Packing and Edging underlay. |
|  Netting+ | **Netting +** - Is a combination of Netting and Edging underlay |

## Density:


At the **Density** option it is shown the density that it was automatically chosen from the software for the specific object. The density changes according the fabric you have selected and it becomes visible on the preview of the design.

## Length:


In the **Length** numeric field you can view the length of every stitch in the step.

## Compensation:


At the **Compensation** option it is shown the compensation that it was automatically chosen from the software for the specific object. The **Compensation** changes the width of the step object that will be embroidered to avoid shrinking. The compensation parameter has to do with the tendency of a punching object to shrink in itself in the stitching direction. Also its value depends on the fabric you are using and the shape size. If you change fabric the compensation will change also. The compensation becomes visible only if you export the design by using the **To editor** option from the **File > Export** submenu.

### Row Fill

This option, when applied, sets the fill area to be Row Fill. All the fill stitches are changed to Row Fill, which is automatically calculated and produced from the program. The Row Fill type that was placed is the default. You can change **Row Fill's** feel by changing its Style and Pattern. There are many different styles and patterns that you can apply on any stitch design. Also, you have the ability to change the stitch Density and Length.

## Styles

The Styles area contains all the stitch styles that can be applied on the design. Style in **Creative DRAWings** is a way of movement from one point to another, which normally can be done by one stitch. Some styles when applied may not look good on the design. This happens because stitch styles cannot fit correctly in all possible shapes.


Figure 9.15: Row Fill Styles

Select the style you prefer by clicking on it and view it on your design. If do not want any select none. The None selection will restore the default Row Fill type. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 325 styles that you can use to produce unique designs. The styles that are in film icon (for example:  ) are a serial of different styles in one.

## Patterns

The patterns area contains all the patterns that can be applied on the design. Patterns are shapes, created from stitches. You can make combinations between Styles and Patterns and produce your own designs. Some combinations when applied may not look good on the design. This happens because combinations do not always produce correct stitch results.

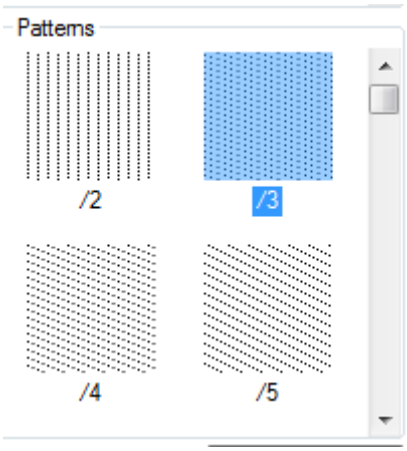



Figure 9.16: Row Fill Patterns

Select the pattern you prefer by clicking on it and viewing it on your design. In Row Fill type, like step, you can't have **none** selected. Step is based on patterns, which means that even if you don't select a pattern, **Creative DRAWings** will set the default for you. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 262 different patterns to apply in your design. If you want to view only the pattern you have selected and not a combination with styles, you must be sure that styles option is set to none. Otherwise you will view a pattern with a style in it.

There are also two more options that are very useful in customizing the way that the software will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

## Remove overlaps:


This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses Artificial Intelligence and it is applied only where necessary. The application of the

filter results in the reduction of stitches that will be placed on the fabric. It is, also, possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always.** The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always**, which when applied on a specific object, trims all the objects that overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

**Creative DRAWings** uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create part of **Creative DRAWings**. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

## Sequence:


With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically the **Sequence** drop down menu has three options **Auto, To start** and **To end**. The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually you have to use the other two options. The **To start** option set the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. Therefore when it is applied to an object of the embroidery design, this will immediately become the last object that will be embroidered. By using the **To start** and **To end** options you can change the embroidering sequence and embroider the design you have created in the way you prefer. This tool is really useful for embroidering hats or on delicate fabrics that need special care regarding the way that the objects will be placed on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, **Creative DRAWings** will decide automatically which one of those that are set **To start** will be the first to be embroidered and which one from those set **To back** will be the last to be embroidered.

For example, if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, **Creative DRAWings** will embroider those that set **To start** first, deciding their embroidering sequence automatically, then those (10) that remained set **To auto** and finally those that set **To end**, deciding automatically the order of those last 5.

## Row Fill stitch type options

Also, there are two more options that can help you adjust the embroidery parameters of the design. As we have already mentioned in the **Select fabric** section previously in this chapter, each fabric has different presets that affect the way the embroidery design will be placed on it and some of them are visible at the bottom of the **Object properties** toolbar, and for Row Fill stitch type they are **Density** and **Length.** These options can help you make useful adjustments on the design and produce the embroidery results you prefer.

## Density:


At the **Density** option it is shown the density that it was automatically chosen from the software for the specific object. The density changes according the fabric you have selected and it becomes visible on the preview of the design.

## Length:


In the **Length** numeric field you can view the length of every stitch in objects filled with Row Fill stitches.

## Appliqué

This option, when applied, sets the fill area to be **Appliqué**. All the area will be covered with a fabric, which has the same color as the one used in Create mode. The border will stay as it was surrounding the appliqué area. If the design does not have a border, the program will sew around the appliqué an E-stitch ( ⌞ ) in order to hold the appliqué on the fabric. If the object that you applied **appliqué** on it has a border, you can set a running style or satin serial stitches that will hold the appliqué on the fabric. New zig-zag styles are added in the running stitch type that can be used for holding single or double laser cut appliqué.

### For example:

Consider that we have an area (like the example in Figure 9.15) made in CorelDraw. As we can see, it has a Red color fill and a Black Hairline outline. When we press the **stitch** tab, the embroidery will look like Figure 9.16. **Creative DRAWings** will fill the area with step and the border with running. If the border of the object was thicker, **Creative DRAWings** would automatically decide one of the three options that it has (double, triple style (Bean Stitch) or satin serial) to create the border. Now, if we select the object in the **stitch** tab, then from the fill properties, select the **appliqué** function, the area will be covered with a fabric which has the same color (Red) with the one you used in Corel. The border will not change, which means that it will stay covered with running, as we can see in **Figure 9.17**.

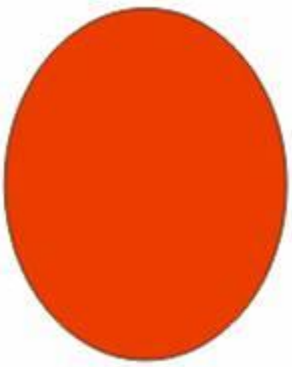


**Figure 9.17**

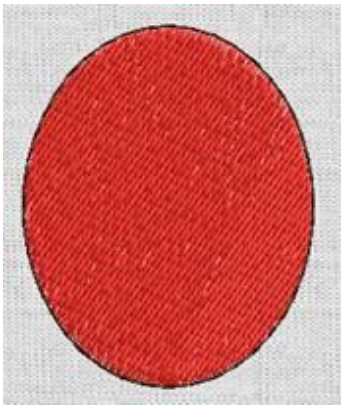


**Figure 9.18**

**Figure 9.19**

Each time an appliqué object is created, there is a standard procedure that it is followed for each appliqué object in order to be embroidered correctly on the fabric. The technique that **Creative DRAWings** uses to embroider the appliqué object needs interaction from the user during the embroidering process. In order to understand the procedure that it is followed, we will analyze how an embroidery machine will react when it will try to embroider the appliqué object.

First it will make the shape of the applique with running showing the area where the Applique must be placed. After that a jump stitch on top will be made and the machine will stop in order the appliqué to be placed on the fabric. Then the machine starts to sew running stitches creating the shape of the applique. A jump stitch on top will be made and the machine will stop (again) in order to cut the applique according to the shape. At the end the machine will make the border of the appliqué (E-stitch, Satin serial or Running) as it was selected. Then the machine will continue embroidering the rest objects. This is mainly the way you have to embroider the appliqué designs that you are designing inside **Creative DRAWings**. The same procedure must be followed to all objects that were assigned to appliqué.

You can also view/simulate the way the design will be embroidered Wings' modular. You can export the design to Wings' modular embroidery software by selecting the **To editor** option from the **File>Export** submenu. Wings' modular will open with the design imported. There you can view the exact embroidering sequence and simulate the way the design will be embroidered in the embroidery machine.

Finally there is an option that is very useful in customizing the way that the software will be embroidered. This is the **Sequence** option.

With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically, the **Sequence** drop down menu has three options **Auto, To start** and **To end**. **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually, use the other two options. The **To start** option set the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. Therefore, when it is applied on an object in the embroidery design, this will immediately become the last object to be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created in the way you prefer. This tool is really useful for embroidering hats, or on delicate fabrics that need special care regarding the way that the objects will be placed on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, **Creative DRAWings** will decide automatically, which one from those set **To start** will be the first to be embroidered and which one from those that you have set **To back** will be the last to be embroidered.

For example, if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, **Creative DRAWings** will embroider those that are set **To start** first, deciding automatically their embroidering sequence, then those (10) that remained set **To auto** and finally those that are set **To end**, deciding automatically the order of those last 5.

This is very useful because you can specify when the appliqué objects will be inserted on the fabric. Therefore you do not have to wait over the embroidering machine until it reaches the point where the appliqué has to be placed. You can order it to be embroidered at the start or at the end of the embroidering process. This will save you time and effort.

## Cross-stitch

Any (RGB) bitmap that is imported in **Creative DRAWings** can be immediately converted to a perfect embroidery design with cross-stitches. It is the easiest and quickest way to make cross-stitch embroidery designs. It is also possible to make combinations between normal embroidery (step, satin, Row Fill and appliqué) and cross-stitches. By combining stitch-types you can end up with unique designs that you could never make before. **Creative DRAWings** automatically

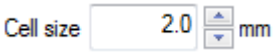
reduces the number of colors that the bitmap has. Therefore, in the stitch mode the maximum number of colors that the converted bitmap will have is 20.

In the created cross-stitch design it is possible to change the number of cross-stitch **Repeats**, the **Cell size** of the cross and the **Background** color.

## Repeats:


By changing the value of this cross-stitch option you can change the number of times that each cross-stitch will be embroidered. The bigger the number, the thicker the cross-stitch. The default value is 3 and it is the most suitable in most of the cases. There is an upper limit of 10 and a lower limit of 1. Therefore, the number of repeats must between those two limits.

## Cell size:




By changing this value you can change the size of the cross container. The value represents the side size of the cross container square. Each point represents one $10^{th}$ of mm, therefore, if you insert the value 20 in the field, this will mean that the side of the cross square will be 0,20cm or 0,082''. The default value of **Cell size** is 20.

Under the **Cell size** field there is some information about the cross-stitch grid that is useful for those that work with this kind of measurement. The **Grid is**: value shows the number of crosses per inch (ct). Therefore you can calculate easily the number of crosses in your design.

## Background:

The Background list of colors contains all the colors that the bitmap has. Each time you pass the mouse cursor over a color, in the preview area you can view which part of the design will be filled with which color. This is really helpful when you do not want a color to be embroidered. This color might be an extensive background color of the bitmap or a thread color that is the same with the fabric that you will embroider on your cross-stitch design.

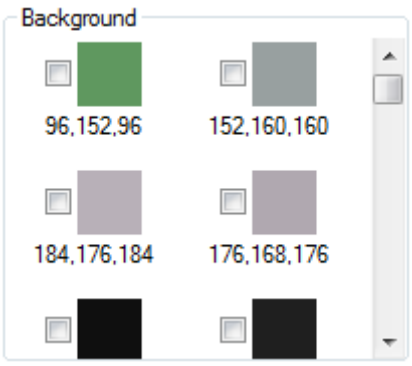



**Figure 9.23: Cross-stitch background**

For example, if you have a bitmap that has a white background and you want to embroider it on a white t-shirt, it would be better to check the white color's checkbox from the object properties toolbar and remove it completely.

There is a possibility, while you are over a color from the list, for it to appear inside an object that is filled with totally different color. This is happening because the bitmap images contain many

colors and in order for **Creative DRAWings** to reduce the number of colors, it groups them and assigns one that is similar to the group. Therefore, many colors might be represented with one color on the design. You can edit the group colors from the **Edit palette** option from the **Tools** menu.

## Photo-stitch

Any bitmap image that is imported in **Creative DRAWings** can be converted into Photo stitch design. In Photostitch embroidery type **Creative DRAWings** automatically recognizes the graduation of colors of any backdrop image and sets fill stitches on it. The fill stitches are satin bars that cover the backdrop image area. The parameters that you can adjust are:

**Width:** With this parameter you can adjust the width of satin bars that photo-stitch consists of.

**Starting density:** adjust the density of the satin bars that cover the backdrop image.

## Net Fill

This option when applied is sets the fill area to **Net Fill**. The Net fill embroidery type is a special fill type that adds two scan lines that are crossing with parallel equidistant running stitches. These two scan lines are forming a Net that can be used to create Laces. It is a very useful embroidery type that can produce great embroidery results. The Net Fill includes some more options that allow us to customize the way that will be applied on the selected object. These options are the following:

### Cell size:


With this option you can specify the size of each square side that the Net fill consists of. For example by setting the **Cell size** to be 2.0 mm all squares of the net will have 2.0 mm side size. The maximum value that the **Cell size** can have is 9.9mm and the minimum is 0.5mm. To change the value of the Cell size option you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the Cell size field and then by using the mouse wheel to change its value. The changes that you will make will be immediately applied on the design. By changing this value you can create a net with large squares or small squares according your preferences.

### Offset:


With this option you can specify the distance, inner or outer, you want the Net fill to be moved. For example: if you set the **Offset** value to 3mm the Net fill will increase its size by 3mm to all directions outside its original outline. On the other hand if you set the value to -3mm the Net fill will decrease its size by 3mm to all direction inside its original outline.

The maximum value that the **Offset** can have is 15.0mm and the minimum is -15.0mm. To change the **Offset** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the Offset field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design. By changing this value you can make adjustments on the **Net fill** size, which is really useful when you want to cover a hole and making sure that the net will be

embroidered on the fabric and not inside the hole. This option is very important for creating proper Net fills.

## Angle:

With this option you can change the Angle that the Net fill will be applied. For example: When the angle is set to $0^o$ degrees the **Net fill** will be aligned on the X and Y axes creating right angles. If you change the **Angle** value to $30^o$ degrees the **Net fill** will be rotated $30^o$ degrees anticlockwise and change completely its direction.

The **Angle** values that you can set are between $0^o$ and $360^o$ degrees. To change the **Angle** value you have to either click on the up and down arrows next to the field to increase or decrease its value or type the exact value you want and then press the **Enter** key from the keyboard. Another way to increase or decrease the value is by clicking inside the **Angle** field and use the mouse wheel to change its value. The changes that you will make will be immediately applied on the design.

By changing the **Angle** of the **Net fill** you can orientate it based on the shape that it is applied on. This ability allows you to produce better and more beautiful embroidery results.

There are also two more options that are very useful in customizing the way that the design will be embroidered. Those are the **Remove overlaps** option and the **Sequence** option.

## Remove overlaps:


This is an automatic filter which removes all overlaps between the objects of the vector designs. This filter uses artificial Intelligence and it is applied only where necessary. The application of the filter results in the reduction of stitches that will be placed on the fabric. It is also possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, **Auto**, **Never** and **Always.** The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible results on the design. When the **Never** option is applied on an object, the specific object will never trim the objects that overlaps. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is **Always.** When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

**Creative DRAWings** uses this tool to embroider your design more efficiently and effectively. But in order for this function to work well, avoid applying **trim** tool in the Create mode of **Creative DRAWings**. You must always use it with care or after the setting **Remove overlaps** option to **Never**.

## Sequence:


With this tool it is possible to change the embroidering sequence of the design. Specific objects of the design can be set to be embroidered at the start or at the end of the embroidering process. This gives you the ability to embroider the designs in the order you prefer. More specifically, the **Sequence** drop down menu has three options **Auto, To start** and **To end**. The **Auto** is the default option and the one that **Creative DRAWings** uses to create the best possible embroidering sequence results. In order to change the embroidering sequence manually, use the other two

options. The **To start** option sets the selected object to be embroidered first. This means that if it was to be embroidered fifth in the embroidering sequence, now will be embroidered first in the row. Exactly the opposite for the **To end** option. When this is applied on an object of the embroidery design, it will be immediately become the last object that will be embroidered. By using the **To start** and **To end** options, you can change the embroidering sequence and embroider the design you have created the way you prefer. This tool is really useful for embroidering hats and on delicate fabrics that need special care regarding the placement of objects on the fabric.

If you have set more than one object to be embroidered **To start** and more than one **To end**, **Creative DRAWings** will decide automatically which one of those will be the first and which one will be last to be embroidered.

For example if you have a design with 20 objects and you have set 5 to be embroidered **To start** and 5 other **To end**, **Creative DRAWings** will embroider those set **To start** first, deciding automatically their embroidering sequence, then those (10) set **To auto** and finally those set **To end**, deciding automatically the order of the last 5.

## Outline

This tab contains every function that can be applied to the outline of a design and in every line design. The functions are not visible until you select an object from a design. When a vector design is embroidered for the first time, **Creative DRAWings** automatically puts outline stitches on it. That is why the Auto checkbox, at the top of the outline tab, is checked. When a change in the outline tab is made, Auto becomes unchecked. You can check it again and restore programs initial outline design.

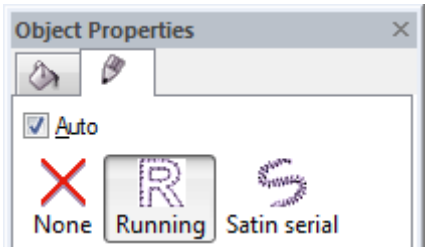



**Figure 9.24: Border outline stitch type options**

For designs that do not have a border the Outline option is not available. In the outline tab there are three embroidery type fills: **None**, Running and Satin Serial. Every time you select one, it is applied immediately to your stitch design.

### None

This option, when applied, sets the fill area to be empty. All the fill stitches are removed from the design and only the border remains, if one exists. Whenever you don't need to embroider a specific fill area you can set its fill to None and have the stitches instantly removed.

### Running

This option, when applied, sets the border outline of a design or a line design to Running. All the border and line stitches are changed to Running, which is automatically calculated and produced from the program. The Running type that was placed is the default. You can change **Running's** feel by changing its Thickness and Style. There are different thicknesses and Styles that you can apply on any stitch design. Also, you have the ability to change the stitch Offset and Length.

## Passes


Define the number of passes that running will make to create a line or border design. This way we can create thickness in running stitch. The minimum value is 1 (Single pass) and the maximum is 9 (9 passes). Any change in running thickness is not viewable in the 3D preview area but it is stored when the design is saved. When the design is embroidered, the option you have selected will be applied. You can also see the multiple passes using slow redraw.

## Styles

The Styles area contains all the stitch styles that can be applied on the design. Style in **Creative DRAWings** is a way of movement from one point to another, which normally can be done by one stitch. Styles, when applied, are placed on the border one after another. Appling different styles you can create unique embroidery designs.

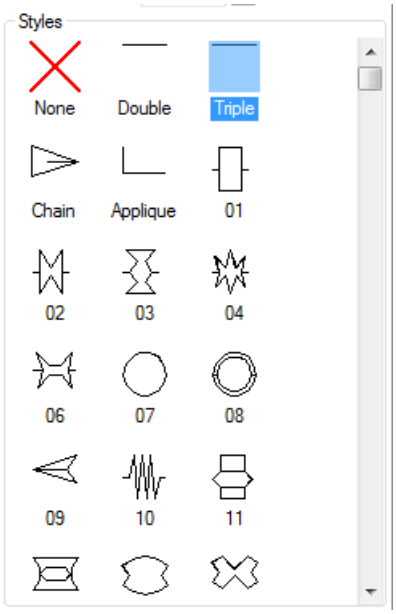



Figure 9.25: Running styles

Select the style you prefer by clicking on it and viewing it on your design. Your selections are instantly displayed in the design area letting you experiment with your embroidery design.

The first three styles  are automatically selected from the program and you cannot make any changes between them. Their selection depends on the border width and the only way to change them is by changing the border width of the vector design. All the other styles can be selected by clicking on them.

There are 325 styles that you can use to produce unique designs. The styles that are in film icon (for example:  ) are a serial of different styles in one.

Also, there one more parameters such as length and offset of running stitches that you can change according your needs. These options are located at the bottom of the **Object properties** toolbar.

## Length:


You can activate the Length option by checking the checkbox next to it. In the numeric field you can specify the length of stitches for the punching object that you are adding. Also you can adjust

length by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel  if there is one. Changes are instantly previewed on the design area and can be set by clicking outside of the length field.

## Satin Serial

This option, when applied, sets the border outline of a design or a line design to be Satin serial. All the border and line stitches are changing to Satin serial, which is automatically calculated and produced from the program. The Satin serial type that was placed was selected from the program and is the default. You can change Satin Serial's feel by changing its Pattern. As you can see in the figure below, there are different Patterns that you can apply on any stitch design. Also, you have the ability to change Underlay, offset, stitch Density and Compensation.

## Offset:


You can activate the **Offset** option by checking the checkbox next to it. In the numeric field you can enter the value of offset you want, with lowest value of -8mm and highest value 8mm. Also you can increase or decrease the offset value by clicking on the arrows next to the value or by clicking on the value and rotating the mouse wheel, if there is one. The value that you are inserting defines the exact distance you want the satin serial outline to have from its initial position. If the value is negative, satin serial object will make an inner offset and the opposite, if it is positive. The default offset value is zero and can be changed only from you. Any changes you are making on the offset value it is previewed on the design.

The measurement system of DRAWings in all **Object properties** parameters can only be metric.

## Patterns

The patterns area contains all the patterns that can be applied on the design. Patterns are shapes, created from stitches. You can apply patterns only in wide lines or border outlines. If you have a thin border, any change in patterns will not take effect.

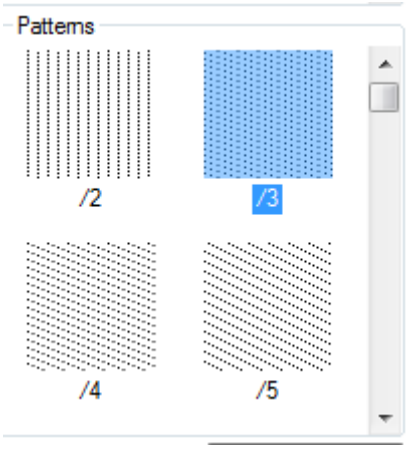



**Figure 9.26: Satin serial patterns**

Select the pattern you prefer by clicking on it and viewing it in your design. If you do not want any select none. None will restore the default satin serial type. Your selections are instantly displayed in the design area letting you experiment with your embroidery design. There are 262 different patterns to apply in your design.

Also, there are four more options that can help you adjust the embroidery parameters of the design. All four of them are located at the bottom of the **Object properties** toolbar,. and for **Satin serial** stitch type they are **Underlay, Density, Offset** and **Compensation.** Below we will describe how its option affects the embroidery design.

## Underlay:


You can activate the underlay option by checking the checkbox next to it. Click on the Underlay you want, and your change will be calculated and stored in the saved design. If you don't select an underlay manually, DRAWings will automatically select the appropriate one for you. Underlay is important for quality embroidery designs.

For **Satin** serial stitch type, the following underlay patterns are available:

| | |
|---|---|
|  Tacking | **Tacking** – If tacking is selected, there will be no underlay and the software will make running stitches in order to go from one position to another and cover the area with cover stitches. |
|  Single | **Single** - If single is selected, **Creative DRAWings** will make a single line with running stitches near the middle of the shape of the object and then cover this with cover stitches. |
|  Double | **Double** - If double is selected, **Creative DRAWings** will make running stitches following the shape of the object and position Double underlay near the edge of the outline. |
|  ZigZag | **ZigZag** - If zigzag is selected, **Creative DRAWings** will create a sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches. |
|  Cross | **Cross** - If cross is selected, **Creative DRAWings** will create a thicker sophisticated ZigZag pattern which automatically changes directions (according to the direction of the cover stitches) and then fill the shape with cover stitches. |
|  Zigzag+ | **ZigZag+** - Is a combination of Zig-Zag and Double underlay. |
|  Cross+ | **Cross+** - Is a combination of Cross and Double underlay |
|  Netting | **Netting** - If netting is selected, **Creative DRAWings** will cover the area of the object with a thicker sophisticated ZigZag pattern, which automatically changes directions (according to the direction of the cover stitches) two times and then fills the shape with cover stitches. |
|  Netting+ | **Netting+** - Is a combination of Netting and Double underlay. |

## Density:


You can activate the Density option by checking the checkbox next to it. In the numeric field you can specify the density of the satin serial stitches that you are adding. Also, you can adjust density by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel

 if there is one. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

## Compensation:


You can activate the Compensation option by checking the checkbox next to it. In the numeric field you can enter the value of compensation you want with lower bounder -0,3mm and upper bounder 2.0mm. Also you can adjust Compensation by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel if there is one. The entered value changes the width of satin serial stitch that will be embroidered. The default compensation value depends on the fabric you are using. If you change fabric the compensation will adjust automatically. Changes are instantly previewed on the design area and can be set by clicking outside the density field.

## Divide and Directions tools

In the **Tools** toolbar of **Creative DRAWings** when **create**, **stitch** mode is enabled, two more tools exist to help improve embroidery quality. These are **Divide**  and **Directions**  tools.

### Divide

With this tool is possible to **Divide** Satin objects and manage the way in which the outlines are split into satin bars. The objects are not increased but split to internal branches. This tool gives you the flexibility to customize the way Satin objects will be embroidered and create exactly the design you wants. In order to add a **Divide** line, click on  icon or press the **Shift + D** shortcut keys from the keyboard. Then click on the object you wish to divide (in order to select it). Click and drag from one side of the object to the other in order to specify the divide line. In order to delete the divide line you have created, just click on the '**X**' icon in the middle of the line. You can change any existing divide line by clicking and dragging the points of the line. The Divide line has green color in order to distinguish them from the directions lines that are red.

The Divide tool can be applied with the same procedure and on objects filled with Row Fill stitch type. Row Fill is a special stitch type that when you apply the Divide tool you must be careful and keep in mind its distinctiveness to avoid having strange embroidering results.

It is very useful also when you want to create Text art designs and embroider the design with a specific way. You can divide the satin characters and define exactly the way you want to be embroidered.

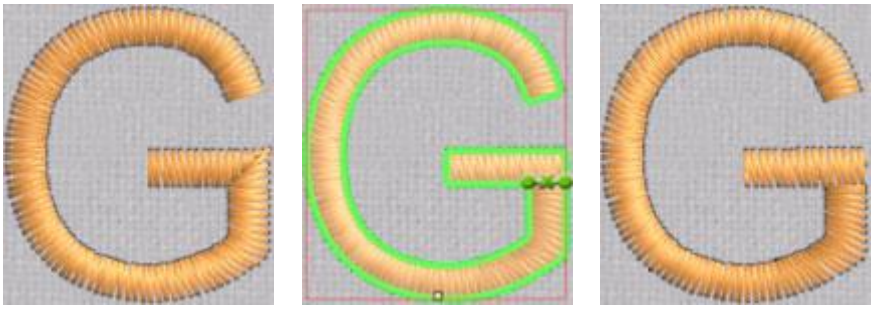
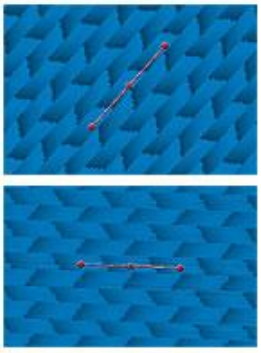


**Figure 9.27: Before divide – Apply divide tool – After divide tool**

You can activate the divide tool by clicking on the  icon of the **Tools** toolbar or by pressing the **Shift + D** shortcut keys.

## Directions

With this tool it is possible to change the direction of **Step**, **Satin** and **Row Fill** stitches until you are satisfied with the embroidery results. In order to add a direction first you have to click on  icon or press the '**D**' shortcut key form the keyboard. Then click on the object, which direction you wish to change (in order to select it). Click and drag in order to specify the direction of the stitches. To delete the direction you have created, just click on the '**X**' icon at the middle of the direction. You can change any existing direction by clicking and dragging the points of the direction.



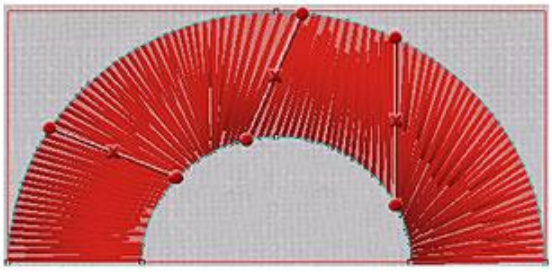


**Figure 9.28: Step Directions** **Satin Directions**

By changing Directions in a design you can organize also the embroidery tensions in a way that one object will negate the tensions of the other object and produce a perfect result.

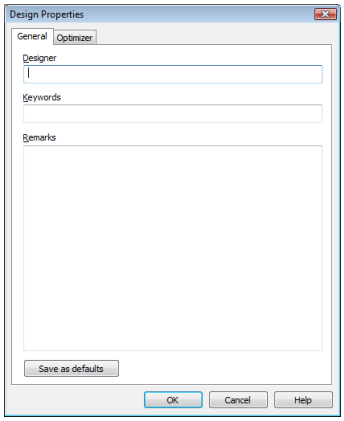
In Satin and Row Fill objects you can have more than one stitch directions that can help you produce the embroidery result you prefer. On the other hand in Step objects you can have only one Direction of stitches.

You can activate the directions tool by clicking on the  icon of the **Tools** toolbar or by pressing the '**D**' shortcut key.

With the combination of **Divide** and **Directions** tools you can create unique designs that can have many sub-objects as brunches and specific direction of stitches for each sub-object.

## Design Properties

Apart from the stitch changes that you can make in your embroidery designs, you can also adjust the properties of its design. You can add general information about the design and optimize the way it will be embroidered. You can access Design properties from menu File > Design properties. In the dialog box that will appear, you can adjust the properties in the General and Optimizer tabs.



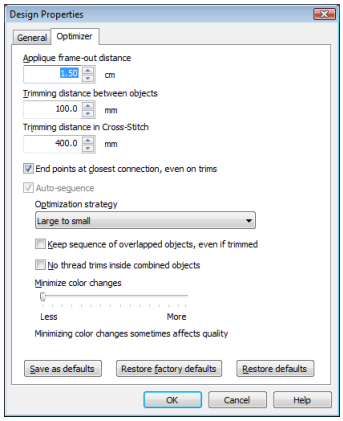




**Figure 9.29: design properties**

## General

In the general tab you can add information about the Designer's name, design Keywords, and any Remarks about the design.

- **Designer**
  In the Designer text field you can add information about the designer (Name, company, etc.). These fields are useful for record keeping.


**Figure 9.30: Designer text field**

- **Keywords**
  In the **Keywords** field you can add words that describe the current design. The keywords can be used only if you save your design in ".NGS" or ".DRAW" format.

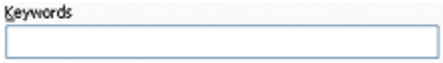
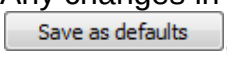



**Figure 9.31: Keywords text field**

The "NGS" file format can be opened from WINGS SYSTEMS Ltd digitizing programs, **eXPerience®** and **Wings' modular®**. These include a browser where keywords can be used as a filter in search option. If you are dealing with hundreds of designs it can be a vital function for quickly searching your database. Many people find it easier to write down a fixed list of options or keywords to allow multiple users to enter data in the same style into a common design database.

- **Remarks**
  In this text area you can add any remarks for your design. Any information about stitch type, color palette, fabric type and number of threads that was used in the design creation are useful for quick reference for anyone that might use it. Also you can add instructions relating to embroidery production.


**Figure 9.32: Remarks text area**

Any changes in the General tab can be saved as default, by clicking on the Save as default button 

, which means that every time you create a new design the already saved settings will be displayed.

## Optimizer

In this tab you can adjust Appliqué frame out distance, Trimming distance between objects, Trimming distance in Cross-stitch and Minimizing color changes. Also, can select Optimization strategy, and set the options End points at closest connection even on trims, keep sequence of overlapped objects even if trimmed, No thread trims inside combined objects. You have also the

ability to disable some optimization automations of the software that have to do with the embroidery sequence and re-sequence the embroidery design manually.

All options that you will find inside the Optimizer, refer to embroidery production process and are important for quality stitch output. The optimizer tab can be accessed, also, from Optimizer options of Tools menu or by pressing Ctrl+Shift+J shortcut keys (Ctrl+Shift+J) together from the keyboard.

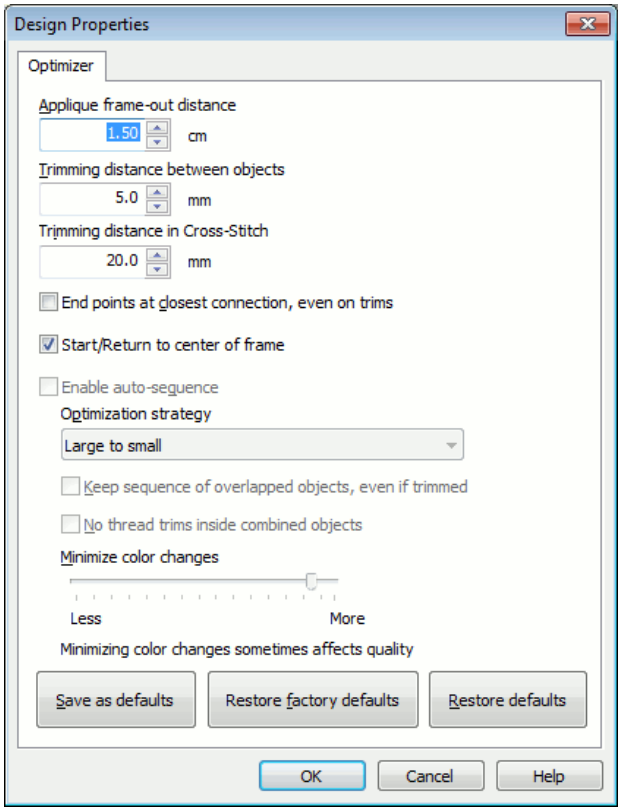



**Figure 9.33: Appliqué frame out distance**

The Optimizer options that you can adjust are listed below:

## Appliqué frame out distance

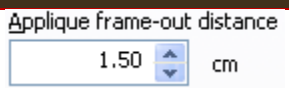



**Figure 9.34: Appliqué frame out distance**

This setting is important for designs that include appliqué. In production of embroidery designs with appliqué, there is a phase where the machine will stop, bring the frame out and ask you to add the appliqué in the predefined area. In that phase the frame movement the embroidery machine makes is defined as Appliqué frame out distance. By changing the value of this field, you are setting the frame out movement from its current position.

## Trimming distance between objects

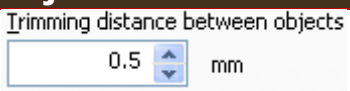



**Figure 9.35: Trimming distance between objects**

With thread trims between the objects of the embroidery design you get high quality of embroidery in longer time because every time the machine cuts a thread, it takes some time to start embroidering again.

On the other hand, without trims between the objects, you get high quality of embroidery in less production time. The jump-stitches are there to connect the object without cutting the thread. You can either cut the jump-stitches manually afterwards or keep them on the design. In cases where the objects are too close, jump-stitches are not a problem for most embroiderers but it is the best way of embroidering. It is also matter of embroidering style.

This setting is important for thread trimming in the embroidery production process. Setting the **Trimming distance between objects** you are setting the distance where the machine will make a thread trim. More specifically, if the objects are **combined** in Create mode  , ***Creative DRAWings***, in the **stitch button**, will connect those objects with a jump-stitch that will be visible on the 3D preview area. This jump-stitch will become a thread trim when the design is saved in an embroidery machine format and the thread trim distance is shorter than the jump-stitch distance. If the objects are **break apart** and the distance between the objects/shapes are longer than the value that you have set in **Trimming distance between objects** field, then there will be thread trims between the objects.

If the distance is shorter from the **Trimming distance between objects** and the objects are not combined there will be no thread trims in between.

## Trimming distance in Cross-stitch

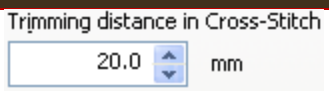



**Figure 9.36: Trimming distance in Cross-stitch**

This option handles the trimming distance between cross-stitch objects. In ***Creative DRAWings*** the cross-stitch designs are treated as one object. In the cross-stitch designs we can treat the thread colors that are filling the design as objects. Cross-stitch designs in most of cases have scattered crosses with the same color that makes the trimming calculations difficult. The **Trimming distance in Cross-Stitch** option gives you the ability to define the distance that you want a thread trim to occur between the color objects of the design. The trimming needs are different in different designs therefore you must be careful with the inserted value in this option.

## End points at closest connection, even on trims

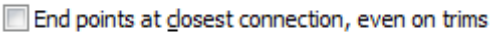



**Figure 9.37: Closest point checkbox**

This option is important for the way that the design will be embroidered. When the checkbox is checked, ***Creative DRAWings*** filters the entire design and finds the closest connection points between the objects, even if a trim is made. This option gives better rooting between objects and better flow of the embroidery. In addition, it gives fewer thread trims because the objects of the same color are connected from their closest point.

## Start / Return to center of frame

This option is useful for some embroidery machines that don't support Starting from or returning to the center of the design. In print preview we can see the point that the embroidery process will start from. When this option is enabled, this starting point isn't at the center of the frame.

## Auto-sequence

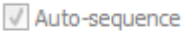


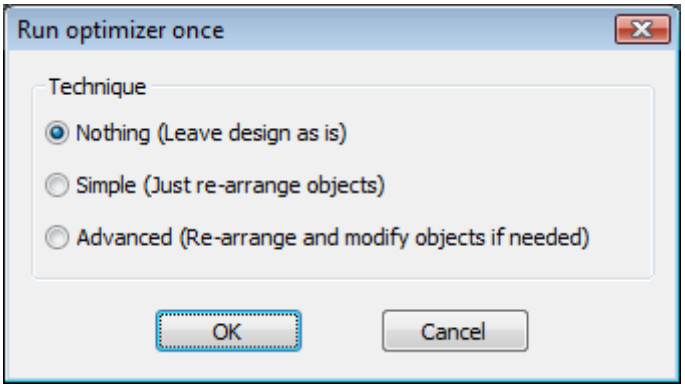
Figure 9.38: Enable auto-sequence checkbox

With this option you can enable or disable the Auto-sequence that is responsible for producing automatically the embroidery sequence of the design that you are creating. It is an intelligent system that takes under consideration many parameters, and tries to produce the best possible embroidery results. It makes everything easier by saving you time and effort.

This **Auto-sequence** option is enabled by default (checked). If you want to **enable** or **disable** the **Auto-sequence** the **Optimizer options** dialog you have to do it outside the **Optimizer options** dialog.

On the **Tools** toolbar that is located in the left side of the software you will find a button with a lamp  on it. When this button is pressed, the Auto-sequence is enabled and the opposite when it is not. Therefore if you want to enable or disable the Auto-sequence you can do it directly from this button. The same option can be also, found under **Tools** menu.

Whenever you disable the **auto-sequence** by clicking on the lamp  icon**,** the **Run optimizer once dialog** appears, that allows you to run the sequence optimizer only once or if you want not to run it at all and then give you the ability to re-sequence the embroidery design freely through the **Sequence manager**.




Inside the **Run optimizer once** dialog you have three options:

- **Nothing (Leave design as is)**
  By selecting this option and clicking **OK** button, the **Optimizer** will not be applied at all and the objects will appear on the **Sequence manager** exactly with the order that they have been designed. The **Optimization strategy** will not be applied and all the re-sequencing must be made from you though the **Sequence manager**.
- **Simple (Just re-arrange objects)**
  By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design, by making the appropriate changes and then all objects will appear on the Sequence manger. The produced embroidery sequence on the **Sequence manager** will depend on the settings you have selected inside the **Tools>Optimizer options** dialog.
- **Advanced (Re-arrange and modify objects if needed)**
  By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design but it will modify the objects if needed. This means that the **Fills** and **Outlines** will be separated and re-sequenced as different objects based on the selections of the **Optimizer.** More objects will appear on the Sequence manager that you will be able to re-sequence freely.

The four options that are becoming available inside the **Optimizer** dialog after enabling the option are the **Optimization strategy,** the **Keep sequence of overlapped objects even if trimmed**, the **No thread trims inside combined objects** and the **Minimize color changes**. All of them affect the way that the embroidery design will be embroidered. For more information on how each option affects the embroidery sequence of the design, read below.

Beside these options the **Auto-sequence** option affects also the way that the **Sequence manager** and the **Sequence** option are working. The **Sequence** option that is located at the bottom of **Object Properties** toolbar is disable automatically after disabling the **Auto-sequence** option and you cannot use it any more.

Similarly if you disable the **Auto-sequence** option the **Sequence manager** changes completely and removes all the automatic optimizations of the software. The **Sequence manager** changes to manual mode and all re-sequencing must be made from you manually. More information on how the Sequence manager works in different modes, refer to the respective section of chapter 7.

## Optimization strategy


**Figure 9.39: Optimization Strategy**

This tool is available only if the **Auto-sequence** option is enabled.

With this tool you can define the way that the objects of the embroidery design will be embroidered. It is like an automatic embroidering sequence creator. With this tool you can define the way/sequence in which the objects of the embroidery designs will be placed on the fabric. This tool is really important for embroidering hats which need to be embroidered from the center to right and left. Also, it is useful for delicate fabrics that need special care regarding the way that the objects will be placed on them. The embroidering options for defining the sequence of the objects are the following:

- **Top to bottom:** When this option is applied the objects of the design will be embroidered from top to bottom. This means that **Creative DRAWings** will change the embroidering sequence and will begin embroidering the objects/shapes that are at the upper most position in the design and will continue with direction to those that are at the lower position in the design.
- **Bottom to top:** This is the opposite of **Top to bottom** option. Therefore when it is applied on an embroidery design **Creative DRAWings** will change the embroidering sequence and will begin embroidering the objects/shapes from those that are located at the bottom until it reaches the top objects.
- **Left to right:** When this option is applied the objects of the design will be embroidered from left to right. This means that ***Creative DRAWings*** will change the embroidering sequence and will begin embroidering the objects/shapes that are at the left most position in the design and will continue with direction to those that are at the right most position in the design.
- **Right to Left:** This is the opposite of the **Left to right** option. Therefore when it is applied on an embroidery design ***Creative DRAWings*** will change the embroidering sequence and will begin embroidering the object/shapes from those that are located at the right most position in the design until it reaches the left objects.

- **Small to large:** When this option is applied ***Creative DRAWings*** orders the embroidering sequence from the smaller object of the design to the largest ones.
- **Large to small:** This is the opposite option of the **Small to large** option. Therefore when it is applied on a design the objects/shapes of the design will be embroidered from the larger ones to the smaller ones.
- **Inside to outside:** When this option is applied the objects of the design will be embroidered from inside to outside. This means that ***Creative DRAWings*** will change the embroidering sequence and will begin embroidering the objects/shapes that are at the middle of the design and continue with those that are at the outer positions of the design. This option is often used when embroidering designs on hats.
- **Outside to inside:** This is the opposite option of the **Inside to Outside** option. Therefore, when it is applied on a design the objects/shapes will be embroidered from the outer to the inner ones. ***Creative DRAWings*** will check the current sequence of the design and will make recalculation in order to create one you have selected.

**Important:** Any changes on the **Optimizer options** dialog, affects, also, the **Optimization strategy** option. Therefore, always keep in mind that a combination of **Optimizer's** options will be applied on the embroidery design and not only the selected **Optimization strategy**. With proper combination of options you can get the appropriate embroidery results.

## Keep sequence of overlapped objects, even if trimmed

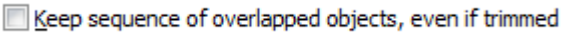



**Figure 9.40: Keep sequence of overlapped objects checkbox**

This option is available only if the **Auto-sequence** option is enabled.

This option is important for the embroidering sequence of the design. When this option is checked, all shapes of the vector design will be embroidered by keeping their overlapping order. This means that the order of the embroidery will follow the overlapping order of the vector design. By applying this option it will be possible to manage better the way that the design will be embroidered.

**Important:** Changes that you make on the overlapping order of the **Vector design** are calculated accordingly by the software. The overlapping order will not be followed as it is because more filters are applied on the design, which affect the embroidering sequence.

## No thread trims inside combined objects

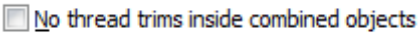



**Figure 9.41: No thread trims inside combined objects checkbox**

This option is available only if the **Auto-sequence** option is enabled and does not allow any thread trimming between combined objects. This option applies only to objects that are **combined** (not grouped).

In order to use this option properly you have to go to Draw mode  of ***Creative DRAWings***, select the objects you want to **combine** and apply the **Combine** option from the right click menu. The objects will become combined and react as one object, inheriting all the attributes of the last selected object. If you try to embroider the design in the stitch button  , you will view the combined objects (like text art objects) to be connected with a jump-stitch between them. With the **No thread trims inside combined objects** option checked, all combined objects will be embroidered with jump-stitches between them, even if you have set **Trimming distance between objects** option to shortest distance.

If you leave the value of **No thread trims inside combined objects** unchecked, all thread trims will be calculated normally.

**Note:** *Combined object:* An object created by combining two or more objects and converting them into a single curve object. A combined object takes on the fill and outline attributes of the last selected object.

## Minimize color changes

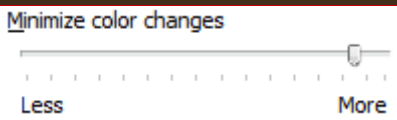
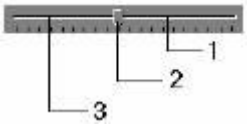



**Figure 9.42: Minimizing color changes**

This option is available only if the **Auto-sequence** option is enabled.

This option is important for limiting color changes in the embroidery production process. Color changes have to do with thread changes that the embroidery machine makes in order to embroider each stitch design object. With more color changes the embroidery design sequence is followed more accurately but the production process is longer. On the other hand with fewer color changes, the embroidery design sequence changes to fit the Minimizing color change settings but gives shorter production process. The alteration in the embroidery design sequence might produce inaccurate embroidery results, or might not. This depends on the embroidery design, embroidery machine and the fabric. You can adjust color changes through the use of the track bar.

*Track bar*




***1. Click to increase three scale units.***
***2. Drag to move to the point you want.***
***3. Click to decrease three scale units.***

***Also, you can change the value of the track bar by pressing the Left & Right arrows of the keyboard.***

Any adjustments you are making are for your current design. If you want your adjustments to be stored as default, click on the Save as default button Save as defaults in the Optimizer tab.

In case you have changed the default **Creative DRAWings** settings with your own and you want to restore them, you can click on the Restore factory defaults button Restore factory defaults

In case you have changed the settings of Optimizer and you want to return to your previous Saved as defaults settings, you have to press the Restore defaults button. This function will restore the last saved setting that you saved by clicking on the Save as defaults button.

# Chapter 10 - Embroidery sequence

## Introduction

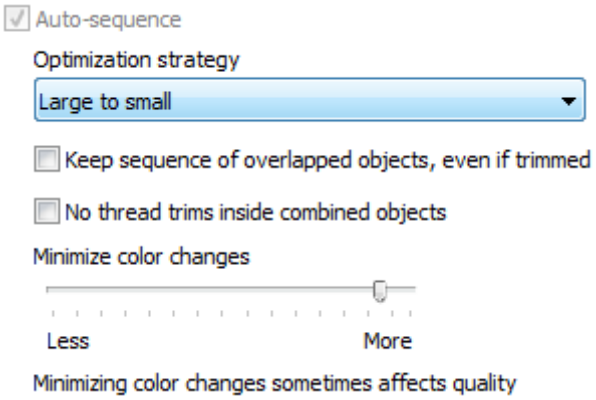
In this chapter we will analyze the tools that the software includes to adjust the embroidery sequence of the designs you are creating. **Creative DRAWings** software includes automatic and manual tools for producing the embroidery sequence. You can combine the different available tools and produce the embroidery results you prefer.

## Automatic Embroidery sequence

**Creative DRAWings** embroidery software includes an automatic sequencing mechanism that produces great results based on the sequencing options that you have set. There are three tools that are responsible for adjusting the automatic embroidery sequence. These tools are the **Auto-sequence** tool, the **Sequence** tool and the **Sequence manager**. With these tools you can adjust the automatic embroidery sequence that is produced from the software.

### Enable Auto-sequence

The **Auto sequence** tool  is located at the bottom of the **Tools** toolbar and by default is enabled. This means that any design that you are converting or creating from scratch will have its embroidery sequence automatically produced according your preferences. The **Auto sequence** tool has some options that you can adjust through **Optimizer options** dialog that you will find under **Tools** menu.




The **Auto-sequence** option is checked and all its options can be set to different values. The options that you can adjust are the **Optimization strategy,** the **Keep sequence of overlapped objects, even if trimmed,** the **No thread trims inside combined objects** and the **Minimizing color changes**.

- **Optimization strategy:** With this option you can define the way that the objects will be embroidered. It is an automatic embroidering sequence creator. With this tool you can define how the objects of the embroidery designs will be placed on the fabric. The embroidering options for defining the sequence of the objects are the following: **Large to small, Small to large, Left to right, Right to left, Top to bottom, Bottom to top, Inside to outside, Outside to inside.** All these options do exactly what their names specify on the objects of the embroidery design. Therefore based on how you want your embroidery design to be embroidered you have to select the respective **Optimization Strategy**.

- **Keep sequence of overlapped objects even if trimmed:** This option is important for the embroidery sequence of the design. When this option is checked, all shapes of the vector design will be embroidered by keeping their overlapping order. This means that the order of the embroidery will follow the overlapping order of the vector design. This filter has effect, even if you have tiny areas overlapping between objects and even if the software decides to add thread trims between them. If this option is unchecked the software will rearrange the objects to match better the **optimization strategy** and the other optimization options you have selected.
- **No thread trims inside combined objects:** This option, when it is checked, does not allow any thread trimming between combined objects. This option applies only to objects that are **combined** (not grouped) in the Designer mode  of ***Creative DRAWings***.
  With the **No thread trims inside combined objects** option checked, all combined objects will be embroidered with jump-stitches between them, even if you have set **Trimming distance between objects** option to shortest distance.
  If you leave the value of **No thread trims inside combined objects** unchecked, all thread trims will be calculated normally and will re-sequence the objects based on the selected **Optimization strategy** and the other optimization option you have selected(like the **Trimming distance between objects**).
- **Minimize color changes:** This option is important for limiting color changes in the embroidery production process. Color changes have to do with thread color changes that the embroidery machine makes in order to embroider each embroidery object. With more color changes the embroidery design sequence is followed more accurately but the production process is longer. On the other hand with fewer color changes, the embroidery design sequence changes to fit the Minimizing color change settings but gives shorter production process. This option will do its best to minimize the color changes but it cannot alter the overlapping order of the objects in order to make one color change for each color used. Also, the decisions that this option makes are related with the other optimizing tools such as the **Optimization strategy** option, **trimming distance between objects** option, the **Keep sequence of overlapped objects even if trimmed** option and the **Sequence** option from **Object properties** toolbar.

It is important to keep in mind that all optimizing options are related and the embroidery sequence is calculated based on all optimizing options and not only to a specific one. Whenever you set the optimization settings you have to consider how the change you are making will affect the embroidery sequence by keeping in mind all the other optimizer settings. You can view the results of the changes that you are making through the slow redraw functionality (you will find in the **Tool** toolbar) which is simulating the embroidering process of the design that you are creating.

## Sequence tool

The **Sequence** tool has the functionality to order specific objects or set of objects to be embroidered at the beginning or at the end of the embroidering process. The **Sequence** tool appears at the bottom of object properties toolbar whenever you select an object or a set of objects.

The **Sequence** option gives you three possible abilities: **To start**, **To end** and **Auto**. By default the **Auto** option is selected that lets the software decide the embroidering sequence of the design. If you want an object to change order and be embroidered first or last in the embroidering sequence

you have to use, respectively, **To start** or **To end** option. In case you have selected multiple objects and set them To start or To end a different procedure will take place. **Creative DRAWings** will manipulate the objects that, for example, are set To start, move them to the beginning of the embroidering sequence and decide automatically the order of those To start objects. Therefore, the objects you have set to be embroidered To start will be embroidered first but with the order that **Creative DRAWings** will decide based on the other settings that you have set on the **Optimizer options** dialog. The same will happen if you set multiple objects to be embroidered **To end**. The software will manipulate those objects and move them at the end of the embroidering sequence but the order will be automatically decided. The objects that remained with the default Auto sequence option will be embroidered after the To start objects and before the To end objects with order automatically decided by the software. Therefore, you can re-sequence the objects of the design by creating three groups: Those that will be embroidered first (To start), those in the middle (Auto) and those that will be embroidered at the end of the object. If you do not make any change on the sequence option, **Creative DRAWings** will automatically create the best possible embroidery sequence for you based on the other settings that you have set on the **Optimizer options** dialog.

Every time you want you can simulate the embroidery sequence of the design through **Slow redraw** tool and decide if you need to make more changes on the embroidery sequence. The **Sequence manager** bar cannot help you with the embroidery sequence when the **Auto sequence**  is enabled.

### Sequence manager - Auto

The **Auto-sequence**, affects the way that the items of sequence manger will be viewed. When Auto-sequence is enabled the program automatically decides the sequence of all stitch objects, so you don't have any control of the sequence of the design items via sequence manager in this case. All normal stitch  objects will be shown as one object on the Sequence manager and there will be no separation between its sub-objects. The only items that are separated are the Appliqué  , the Cross-stitch  , the Photo-stitch  and the imported stitch file  objects. These objects can be re-sequenced normally by click and dragging them to a new position on the sequence manager. This is allowed because these kind of objects are totally different from normal stitch objects and they need special care when they are embroidered.

The program is using intelligent mechanisms that automatically decide the sequence of the stitch objects and it does not give you any kind of control in the order that they will be embroidered through the **Sequence manager**.

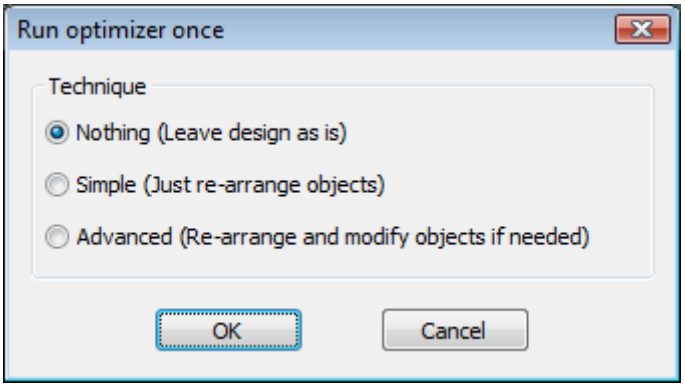
## Manual Embroidery sequence

**Creative DRAWings** embroidery software includes a manual sequencing mechanism that gives you the ability to re-sequence the design freely based on your preferences. The software by default uses the automatic sequencing option that is very useful for inexperienced users and for those who are not familiar with embroidery sequencing. To switch to manual mode you have to turn off the Auto-sequence  tool from **Tools** toolbar and the available options will appear.

### Disable Auto-sequence

If you want to disable Auto-sequence and use the manual way of setting the embroidery sequence of the design you are creating you have to click on the lamp  icon or uncheck the **Auto-sequence** option from the **Tools>Optimizer options** dialog.

Whenever you disable the **auto-sequence** by clicking on the lamp  icon**,** the **Run optimizer once dialog** appears, that allows you to run the sequence optimizer only once or if you want not to run it at all and then give you the ability to re-sequence the embroidery design freely through the **Sequence manager**.




Inside the **Run optimizer once** dialog you have three options:

- **Nothing (Leave design as is)**
  By selecting this option and clicking **OK** button, the **Optimizer** will not be applied at all and the objects will appear on the **Sequence manager** exactly with the order that they have been designed. The **Optimization strategy** will not be applied and all the re-sequencing must be made from you though the **Sequence manager** manually. Experienced users will find this very helpful and they will be able to do whatever they like without any automation. Although it is important to know that if you trace a bitmap image with many different colors you might end up dealing with thousands of objects that are very difficult to manage.
- **Simple (Just re-arrange objects)**
  By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design, by making the appropriate changes and then all objects will appear on the Sequence manger. The produced embroidery sequence on the **Sequence manager** will depend on the settings you have set in the **Auto-sequence** sub-section that you will find inside the **Tools>Optimizer options** dialog. This is very useful because the software will do the hard work for you by applying the **Optimization strategy** you prefer and leave you only minor sequence changes to make on the final embroidery result.
- **Advanced (Re-arrange and modify objects if needed)**
  By selecting this option and clicking **OK** button, the **Optimizer** will be applied once on the design but it will modify the objects if needed. This means that the **Fills** and **Outlines** will be separated and re-sequenced separately based on the selections of the **Optimizer.** More objects will appear on the **Sequence manager** that you will be able to re-sequence freely. The produced embroidery sequence on the **Sequence manager** will depend on the settings you have set in the **Auto-sequence** sub-section that you will find inside the **Tools>Optimizer options** dialog. The only difference with the **Simple** sequence option that is described above is that the **fill** and the **outline** objects are manipulated and rearranged separately for ultimate sequencing results. The only thing that you must keep in mind is that more objects will be produce that will make re-sequencing more difficult, especially on traced bitmap objects.

**Important:** Despite switching the embroidery sequence to manual, all options inside **Optimizer options** dialog which are not listed under the **Auto-sequence** option, will not be calculated from any of the above manual sequencing options, until you save the design to stitch file(.dst,.pes, etc.) or export the design to Wings' modular or use the slow redraw functionality to simulate the final embroidery result. This means that **Appliqué frame-out distance,** the **Trimming distance between objects,** the **Trimming distance in Cross-stitch** and the **End points at closest connection, even on trims** options will not be calculated while enabling or disabling Auto-sequence functionality.

## Sequence manager - Manual

To have full control of the ordering of all stitch objects you can disable Auto-sequence. This can be easily done by pressing **Auto-sequence** icon  on Tools toolbar. The **Run optimizer once** dialog will appear allowing you to select one of the two embroidery optimizing options or not optimizing the design at all. By selecting any of the three options and clicking **OK**, the Auto-sequence will be disabled and all design items will become separate icons on sequence manager. By clicking and dragging any item you can change its order. You have the full control of the embroidery sequence and all the intelligent mechanisms have been disabled.

If the design is coming from a clear vector artwork the objects will be few and you will not have problem re-sequencing the design. On the other hand if the design is coming from a traced bitmap the number of objects will vary from few, up to thousands that will be difficult to manage and handle. Therefore, you must be cautious on how to use the manual sequencing tool and you must always be prepared to manage large numbers of objects. For this purpose **Creative DRAWings** has many tools that allow you to select objects **by color** (outline, fill, or both) or **by stitch type** and make re-sequencing easier.

To Re-sequence objects from **Sequence** manager bar is very easy. The only thing you have to do is to select the object(s) you want to re-sequence by using any of the numerous selection methods that **Creative DRAWings** includes and then by clicking and dragging on the sequence manager move the object(s) to its new position. The result of the re-sequence will be visible directly on the working area. If you do not like the results or you think that you made a mistake, you can **Undo** (Ctrl+Z) the last action you made and try to re-sequence the objects once more.

It is important to remember that while re-sequencing, some objects might change as a result of the **Remove overlap** functionality that is applied automatically. The **Remove overlap** option that is located on the **object properties** toolbar removes unneeded parts of the design that are positioned underneath of other objects in order to reduce the embroidery stitch count and thickness. It does not remove them permanently like the **Trim** tool does, but it holds the artwork information until you save the design to stitch file (.dst, .pes, etc.) or export it to Wings' modular. Therefore, you might move a large object from the bottom of the design (that looks like a border/outline because of the Remove overlap functionality) and place it on top, but once you do that you find out that it changes to a large fill object that covers all the other objects. To overcome that you have to use the **Trim** tool first from the standard toolbar, in order to trim the bottom object and then re-order it. All these are automatically calculated when you are enabling the **Auto-sequence** functionality.

# Chapter 11 - Settings

## Introduction

In this chapter we will analyze all the options that **Creative DRAWings** have and how you can adjust 3D settings. In addition, you will learn about the Security key and how you can customize your working area.

## Options

There are several adjustments that can be made in **Creative DRAWings**. Most of them are in the Options dialog box which can be opened from the menu Tools > Options or from the shortcut key Ctrl+T. In the dialog box that appears you can adjust the properties in each menu tab.

### General

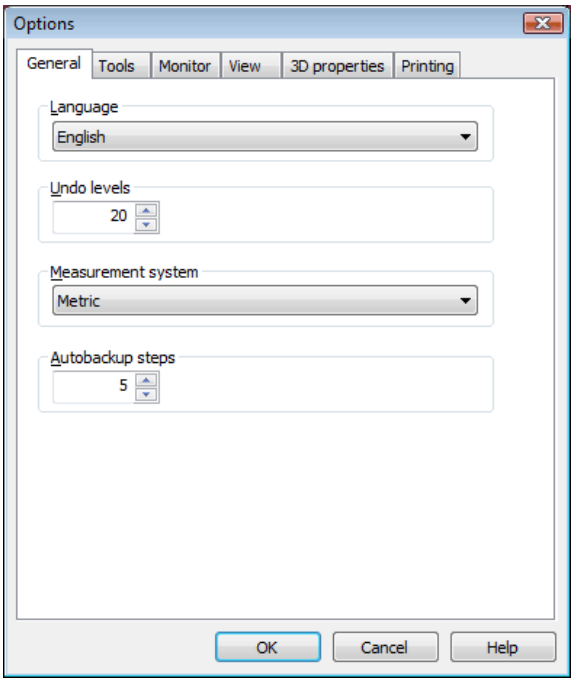



**Figure 10.1: General options**

In the General options tab you can adjust the Undo levels the Measurement system and select the Language you want to **Creative DRAWings** menus.

You can increase or decrease the programs Undo level according to your needs. Note that high undo levels acquire more systems memory.

In addition you can change the Measurement system of the program from Metric (mm) to U.S. (inches) and vice versa.

With the **Autobackup steps** option you can set after how many of your actions an autobackup will occur. For example, if **Autobackup steps** is set to 5, the software will take a backup every 5 changes you are making to your design.

### Tools

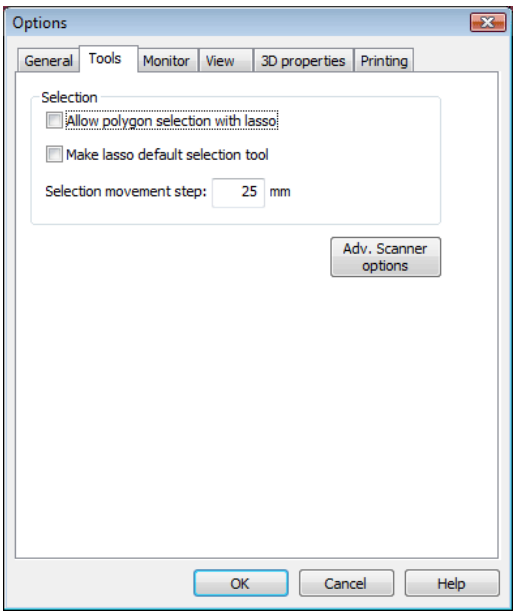



**Figure 10.2: Tools options**

In the **Tools** tab you can change some options of the lasso selection tool and the movement step of object.

If you check the **Allow polygon selection with lasso** you will activate and extra feature of **lasso tool**. This feature lets you draw straight-edged segments of a selection border. To draw a straight-edged selection border in your design, click with the lasso tool active where segments should begin and end trying to draw a polygon. When your last straight-edge of your selection reaches the beginning point then your selection polygon will be created activating all the design objects that surrounds.

If you check the **Make lasso default selection tool** option the lasso tool will become your default selection tool.

In the **Selection movement step** field you can specify the distance you want an object to be moved each time you press the arrow keys from the keyboard. The default step movement is 1mm.

## Monitor

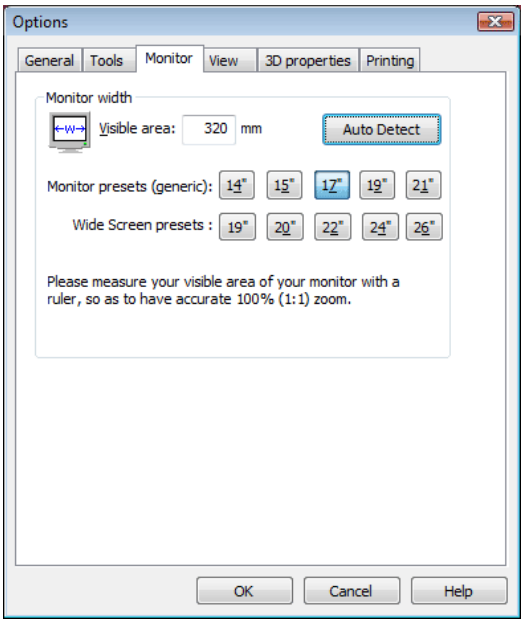


Figure 10.3: Monitor Options

In the Monitor tab you can define the actual width of your monitor. This is important if you want to view your stitch designs in their actual size when 100% zoom selection is clicked from the standard toolbar. In order to find your monitor's width you can measure the visible area with a ruler. The result of your measurement must be entered in the text field **Visible area** at the right metric format. Another way to define your monitor's width is by knowing the size of your monitor in inches, and simply clicking on the respective **monitor preset** size button. The program will automatically set your monitor's width. Finally using **Auto Detect** option the program will try to detect automatically the size of your monitor. In order to activate your changes you have to click Ok at the **Options** dialog box.

The next time you try to view your stitch design in 100% zoom, the size of your design will be the actual one.

## View

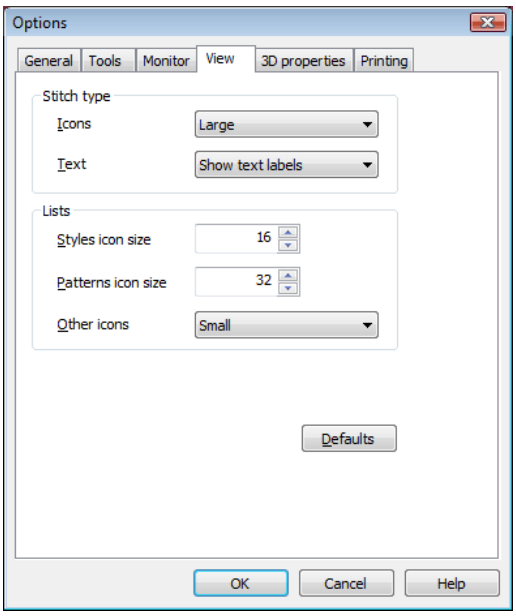



Figure 10.4: View Options

In the **View** tab you can adjust the way that you are viewing toolbars in **Creative DRAWings**. In the **View** tab you can change the **Stitch type** icons from the object properties toolbar and the **List** icons of styles, patterns and standard toolbar.

**Stitch type**

- **Icons:** From this drop down menu you can select if you want view the stitch type icons of the object properties toolbar small or large. In order to activate it you have to click on the drop down menu and select one the two options.
- **Text:** From this drop down menu you can select **Show text labels**, **Selective text on right** and **No text labels**. If you select the **Show text labels** option you will view the name of each stitch type under their icons in the object properties toolbar. If you select the **Selective text on right** option you will view the name of each stitch type at the right side of their icons. Finally, if you select the **No text labels** option each stitch type name will be removed. Therefore by making the preferred adjustments you can view the icons and their labels in the way you prefer.

**Lists**

- **Styles icon size:** In this numeric field you can specify the size of the **Styles** icons of the **Object properties** toolbar. The number of this field shows the pixel size of the icons. You can enter the exact size you want or you can adjust size by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel if there is one. The size of the Styles icon cannot be more than 64 pixels.
- **Patterns icon size:** In this numeric field you can specify the size of the **Pattern** icons of the **Object properties** toolbar. The number of this field shows the pixel size of the icons. You can enter the exact size you want or you can adjust the size by clicking the arrows next to the value or by clicking on the value and rotating the mouse wheel if there is one. The size of the Styles icon cannot be more than 128 pixels.
- **Other icons:** From this drop down menu you can view the other icons of the object properties toolbar **Small** or **Large**. In order to activate it you have to click on the drop down menu and select one the two options, click **OK** and restart **Creative DRAWings**.

Finally, there is the **Defaults** button that restores the default values in the **View** tab.

To apply all the adjustments you have made in the **View** in **Creative DRAWings** workspace, you have to click on the **OK** button of the **Options** dialog and restart **Creative DRAWings**. The next time that you will start **Creative DRAWings** all the changes you have made will take effect immediately.

## 3D properties

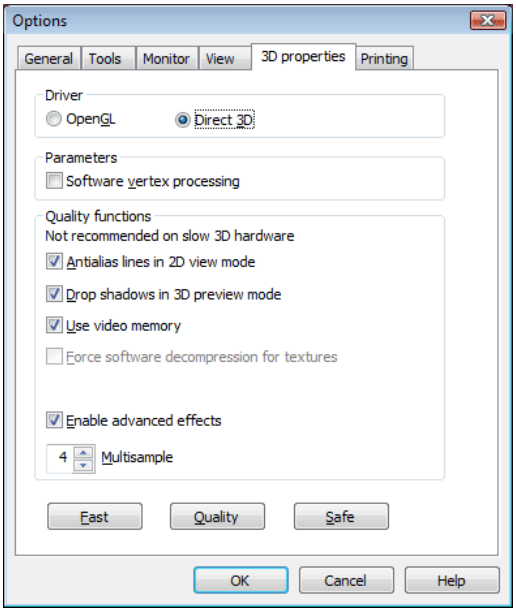



**Figure 10.5: 3D properties**

In the 3D properties tab you can adjust the 3D preview of your stitch design. You can define 3D acceleration Driver, 3D graphics parameters and 3D graphics quality. The options of this tab are very technical. The best way to adjust your 3D graphics is from the three preset buttons in the **Quality functions** section. You can choose between three 3D quality options: Fast, Quality and Safe.

- If you click the Fast button, your 3D quality will be set automatically to minimum. This means that you lose 3D quality but gain in program's speed.
- If you click the Quality button, your 3D quality will be set automatically to maximum. This means that you gain in 3D quality but lose in program's speed.
- If you click the Safe button, your 3D quality will be set automatically in the most reliable way. This means that you lose 3D quality but gain in program's speed and reduce compatibility problems with your graphics card.

In the same dialog there is also the **Enable thickness view** option that if is checked, activates the **Thickness view** option that can be enabled from the **View** menu.

Make your selection and click Ok to confirm your changes. The changes will be applied the next time that the program will start.

## Printing

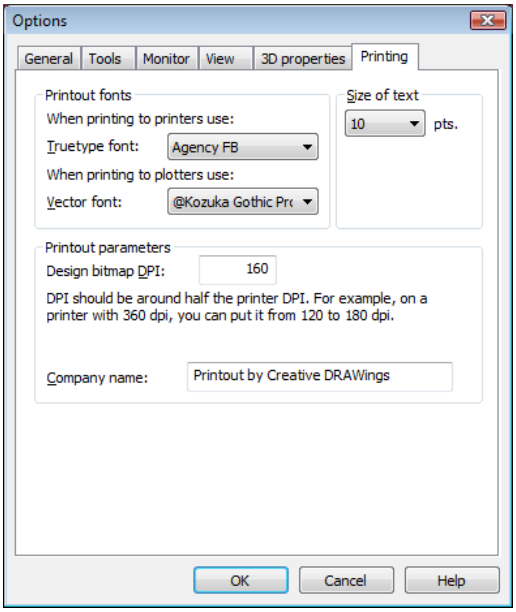



**Figure 10.6: Printing Options**

In the Printing tab you can adjust the **Printout fonts**, the **Size of text** and **Printout parameters**.

In the Printout fonts option you can define which True Type **font** the printer will use for printing and which Vector font the plotter for printing.

Also in the Size of text option you can specify the **size** of the fonts in the printout. Click on the drop down menu and select a size.

In the Printout parameters you can define the **DPI** (Dots Per Inch) of your design's bitmap and the Company's name. Defining the DPI of the design bitmap is important for the printout's quality. The DPI's value that must be placed in the Design bitmap DPI field should be around half the printers DPI. For example, on a printer with 360 dpi, you can set the value from 120 to 180 dpi.

In the Company's name field you can add the name of the company you want to view in your printout.

## Creative DRAWings 3D config

**Creative DRAWings** uses advanced 3D graphics to preview the embroidery designs that is why a good graphics card is a prerequisite for running it. Before you start working with **Creative**

**DRAWings** you can adjust the 3D properties, to be optimized for your system. Setting the 3D of the software is really important because there might be a case that **Creative DRAWings** would not start because of the current 3D settings.

**Creative DRAWings** 3D config can be found under **Start>All programs>Creative DRAWings** startup folder. The following dialog box will appear.

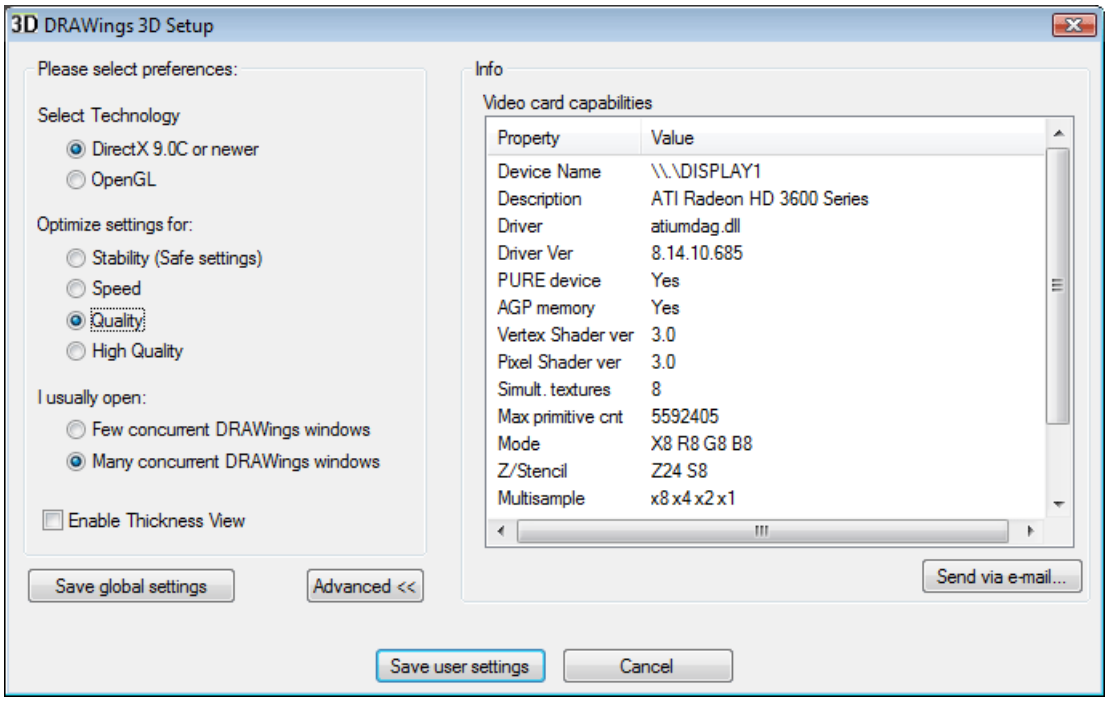



**Figure 10.7: Creative DRAWings 3D setup**

From the dialog you can **select the Technology** you want to use, **optimize the 3D settings** and view useful technical information about your graphics card.

- Select Technology: From this part of the dialog you can select between the two technologies that **Creative DRAWings** supports. **DirectX 9.0C or newer** option is the default 3D technology that **Creative DRAWings** uses and requires DirectX 9.0c or newer to be installed to your PC in order to work properly. In most of the cases this is the option that must be selected in order **Creative DRAWings** to produce high quality 3D preview.

  The other option you have is **OpenGL** that can be used only in graphics cards that supports it. In order to find out you have to select the **OpenGL** option and from the **Info** list that appears when you click on the **Advanced** button, check if the “Supports OpenGL” option from the “Property” list, has the “Value” **Yes**. OpenGL option can be used as alternative way of viewing 3D in **Creative DRAWings**. It is an option that we suggest to use it in case that your graphics card has problems with Direct3D graphics. In both cases you have to keep always the drivers of your graphics card up to date, by downloading them from the official site of their manufacturer. If you have a laptop computer you have to download the drivers for your graphics card from the official site of the laptop manufacturer.

- Optimize settings for: The options that are listed in this area has to do with the quality of the 3D preview of stitches in the **stitch** part of **Creative DRAWings**. The options are **Stability, Speed, Quality** and **High Quality**. By selecting **Stability**, the 3D preview of the software will be set at the lowest level of quality giving priority to performance. By selecting **Speed** the 3D preview of the software will be set at medium level of quality together with good performance. By selecting **Quality** the 3D preview of the stitch part of **Creative DRAWings**

will be set at good level of quality without affecting its performance. Finally, by selecting **High Quality** the 3D preview will be set to the best possible according to your graphics card.

The 3D settings that **Creative DRAWings** will select depend on the power of the graphics card you have installed in your computer. All the features of your graphics card are listed in the **Info** area that appears when you click on the **Advanced** button.

- I usually open: In this section of the dialog you can define how many instances of **Creative DRAWings** you are usually create. The instances of **Creative DRAWings** that you have open are connected directly with the power of your graphics card. If you have a good graphics card, you can have many instances of **Creative DRAWings** with **High quality** 3D preview. On the other hand, if you do not have a good graphics card you can open fewer **Creative DRAWings** instances.

  The **Few concurrent Creative DRAWings windows** option will keep the quality of 3D preview high in a way to allow you to open fewer **Creative DRAWings** instances. In contrast, the **Many concurrent Creative DRAWings windows** option will set an average quality to the 3D preview but will allow you to open many instances of **Creative DRAWings**. Select the one that fits to your everyday use of the software and let it choose your 3D settings.

When you finish setting 3D you have to click on the **Save User settings** button to confirm the changes you have made. By clicking on the **Save User settings** button, the 3D settings that you have selected will be applied only on the current Windows® user. If you click on the **Save Global Settings** button, the 3D settings that you have selected will be applied to all Windows® users. The next time that **Creative DRAWings** will start will have the new 3D settings running. If the software does not start you have to reduce the quality of 3D in **Creative DRAWings 3D setup**, **save** the **settings** and try again.

When you click the **Advanced** button the **Info** will appear where the “Video card capabilities” are listed. Those are technical information about the graphics card that is installed in your computer. The list with all the information can be sent via email by clicking on the **Send via e-mail** button.

If your graphics card has 128 Mb RAM and above with the latest drivers and the DirectX 9.0C or later installed, there will be no problem in working with **Creative DRAWings**.

## Security Keys

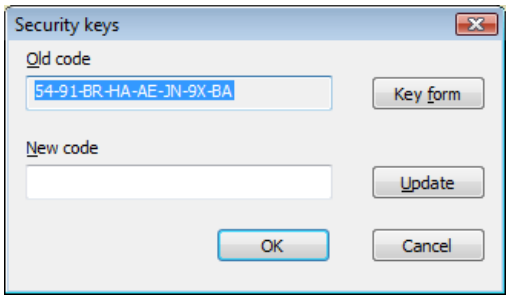



**Figure 10.8: Security Keys dialog**

**Creative DRAWings** need a USB security key to run for copyright and security reasons. The key contains a serial number that allows the program to run in different levels and be upgraded to newer versions. More details about the level of the program can be found in the Security Keys dialog box. This shows the level of the program, the program’s code and includes some functionality, which can be used for changing levels and upgrading to newer versions.

In the Level area you can view the available levels of the software. There are no currently available higher levels for **Creative DRAWings**. All levels are included in the package. In the Old code text field the security key code is displayed and in the New code text field a new code can be added, which will upgrade **Creative DRAWings** to a newer version. More specifically, if you want to upgrade **Creative DRAWings**, you can purchase an upgrade code, enter it in the field and Update your program by clicking on the respective button. The software will be upgraded after restarting the software.

The Key form button displays all the information you will need to upgrade your software. If you decide to upgrade your software to a newer version you might be asked to send the Key form to your reseller.

# Chapter 12 - Creating embroidery designs

## Introduction

In this chapter you will learn all the procedures you have to follow in order to create embroidery designs with **Creative DRAWings**. We will start from setting the parameters of the software, we will continue analyzing how to create and edit embroidery designs, we will show you how to set some embroidery parameters for better embroidery results and end up by analyzing the process from saving the design until embroidering it. All this information will help you to understand how **Creative DRAWings** works and how easy is to create embroidery designs in matter of seconds. To understand better what is described in this chapter you must read the previous chapters first and be familiar with the tools that **Creative DRAWings** includes.

## Setting up the workspace

Inside **Creative DRAWings** you can customize the workspace by using the tools that are provided for this reason. Some adjustments are needed to be made in order **Creative DRAWings** to fit your preferences and run with the best possible settings. You can change the 3D setup for better quality or faster response, change the size of the toolbar icons, change the measurement type and set the size of your monitor for actual size preview.

### Customize 3D setup

Before even start **Creative DRAWings**, you can adjust the 3D preview of **Creative DRAWings** in order to work in the best possible way according your graphics card capabilities. This is an important tool because it allows you to customize the 3D settings according your needs and preferences. Therefore, if you have a fast graphics card you can set the quality of 3D in the highest level without losing performance when you work in multiple instances of **Creative DRAWings**. Also, you can choose to decrease the quality of graphics to increase performance. All these adjustments can be made from **Creative DRAWings 3D Setup** 

that can be found under **Start>All programs>Creative DRAWings** startup folder or from the **3D properties** tab in the **Tools>Options** dialog.

With **Creative DRAWings 3D Setup** you can change 3D settings without opening **Creative DRAWings** and you can choose between **Stability**, **Speed**, **Quality** and **High Quality**. Each option gives to the software the feature that is describing by taking under consideration the graphics card of the current system.

Similar options you have at **3D properties** tab of **Tools > Options** dialog where you can additionally change more specific 3D settings, like **Antialias** and **Drop shadows**. We recommend using one of the prefix settings by clicking on one of the **Fast**, **Quality** and **Safe** options. When you find the one that fits best to the way you are using **Creative DRAWings**, apply it and work with it.

From **Creative DRAWings 3D** setup the settings that we propose is **DirectX 9.0C or newer** technology with **Quality** optimization settings and from **3D properties** the **Quality** button settings. You have to use one of the two possible options to set your 3D preview in **Creative DRAWings**. The settings that you will choose will affect also the number of **Creative DRAWings** instances that you can have open at the same time.

More about 3D setup in chapter 11.

### Change toolbar icons

In the Create and stitch tab of **Creative DRAWings** you can change the sizes of the toolbars' icons. By changing the size of the icons you can customize the workspace you are working according the screen resolution of your system and your viewing preferences. You can do that from the **View** tab of **Tools > Options** dialog.

From the **Stitch type** section you can adjust the size of the stitch type icons from Large to Small or the opposite. Also, you can select if you want to view text under the icons, at the right side of the icons or not to view any text.

From the **Lists** section you can adjust the size of the rest **Object properties** toolbar icons.

Select the sizes you prefer click **OK** and restart **Creative DRAWings**. You can change the size of icons as many times as you want until you are satisfied with the workspace you are viewing.

More about setting the size of icons in chapter 10.

### Set monitor size

Another important thing that you have to adjust in stitch mode of **Creative DRAWings** is the size of your monitor. If you insert the exact measure size of your monitor every time you select the **100% zoom preset** from the standard toolbar you will view the actual size of the embroidery design on the screen. Therefore, it would be easier for you to visualize the exact size of the embroidery design and change them, if needed, from the **Create** or **stitch** mode of **Creative DRAWings**.

In order to define the size of your monitor you have to select the **Monitor** tab from the **Tools > Options** dialog. After that, measure the width of your monitor with a ruler to find the exact visible area. Enter the measure value in the **Visible area** field in the requested measure format and click 'OK' to apply changes. The monitor will be immediately set to the right size and every time that you select **100% preset zoom** you will view the actual size of the design.

The other option you have in defining the size of your monitor is to choose one of the preset dimensions that are listed in the dialog (17", 19",…) or just use the **Auto Detect** mechanism that will try to find automatically the size of your monitor.

More about setting the size of the monitor we have discussed in chapter 10.

### Set measurement system

**Creative DRAWings** has metric as the default measurement system, but gives the ability to you to change it to inches. This is important for those who want to view the sizes in their local measurement system. The measurement system can be immediately changed from the **General** tab of **Tool>Options** dialog. From the **Measurement system** drop down menu you can select between Metric or US (inches), click 'OK' and apply the changes.

There are more adjustments that can be made in **Creative DRAWings** that we have discussed in Chapter 11. When you finish setting up **Creative DRAWings** you can continue with the creation of embroidery designs.

## Creating and editing embroidery designs

Creating embroidery designs in **Creative DRAWings** is the easiest part. You can import a design from the starting dialog and the software will convert it to stitches immediately. **Creative DRAWings** analyzes the imported design and sets stitches with the appropriate stitch type on each object. It uses artificial intelligence and knowledge of experts in the embroidery field, and produces high quality embroidery results.

To start embroidering in **Creative DRAWings**, import a design in **Creative DRAWings** from the starting dialog or create a design from scratch and convert it to stitches in the stitch mode. To

import the design in the Create mode you have to open a new instance of **Creative DRAWings** and from the starting dialog double click on **Create New** and then the **From file** option, find the design you want to embroider by clicking on the browse  icon, continue the dialog by selecting fabric and end up with your design immediately converted to an embroidery design. If the design that you will import is a bitmap (.jpg, .bmp, .tiff, .gif, etc.), a scanned image or a capture from the webcam, you can decide if you want the design to be converted to a cross-stitch design, photo-stitch design, to be traced and filled with normal embroidery or be imported as backdrop. If it is a vector design (.cmx, .svg, .ai, etc.) the design will be converted to normal embroidery design with satin, step, Row Fill or appliqué fills and running or satin serial border outlines.

Also, you can create the design you want from scratch by using the available tools and convert it to stitches. To create a design from scratch in the Create mode you have to open a new instance of **Creative DRAWings** and from the starting dialog double click on **Create New** and then the **New graphic** option. Follow the dialogs and the working space in Create mode will appear. Use the available designing tools from the Tools toolbar and create the deign you want to embroider. The designs that you can create are Text art designs, Line art designs and designs that are based on standard shapes. Generally most of the designs you can think of, can be designed in the Create mode of **Creative DRAWings**.

## Import embroidery file

Inside **Creative DRAWings** you can also import embroidery files. You can import them as it is and if you want convert them to Vector artwork. You can import an embroidery file only from the starting dialog of **Creative DRAWings**, by selecting the design you want to import and importing it on the working area. With the **From embroidery** option you can import a stitch file format like ".ngs", ".dsz", ".pes"…and **Creative DRAWings** will import it as it is. With this tool you can import your readymade embroidery designs as they are or convert them to vector designs, make any changes you want and embroider them again.

Limited changes can be made on the embroidery files, if they are not converted to artwork, but you will be able to draw new objects and produce a new embroidery design based on an old one. The imported embroidery file will not be visible in the **Create** mode unless the **Stitches** and the **3D preview** options of the **View** menu are enabled. Once the embroidery file is visible in the **Create** mode you can make some limited transformations by using the available tools. You can rotate it, slant it, change colors, reposition its objects, add new objects or text and generally create a new design using an old one. On the imported file you cannot make any embroidery adjustments such as change stitch type, change direction of stitches or use the divide tool. Generally you cannot make any embroidery transformations of the design because the imported file contains only stitch data that are fixed and cannot be changed. The only way you can change the stitch type and edit the stitch objects extensively, is to convert them to vector artwork.

To convert the embroidery file to vector artwork you have to import it first inside **Creative DRAWings**, select the objects you want to convert(or the entire design), right click on them, and from the right click menu select the **Convert to curves** option. The stitch objects will automatically be converted to vector objects allowing you to redesign then and create a new embroidery design by using the artwork of the old design. You can edit the Vector artwork that will be produced like any vector artwork that it is imported inside **Creative DRAWings**. The available editing tools together with your creativity will help you produce the artwork you want to embroider.

## Select hoop

On the working area of **Creative DRAWings** you can view the hoop that you have selected from the starting dialog. If the hoop was not the one you wanted you can change it with another existing one or you can create a new hoop that looks like the one you willing to use. You can change the hoop by selecting the Change hoop option from Tools menu. From there you can select to use an

existing hoop or create a new one that will have the same dimensions with the one that you will actually use to embroider the design. If the hoop that you will use is oblong and your design too big to fit in the hoop horizontally, you can rotate your hoop 90$^{o}$ degrees from the same dialog and the design will fit. The software will automatically recognize the rotation and will save the design rotated in order to fit to your hoop. The rotation will appear also in the printout of the design.

The hoop that you will use inside **Creative DRAWings** must be selected carefully because if the design is larger from the hoop, the needle carrier will hit the hoop and will be destroyed.

## Change fill

Inside **Creative DRAWings** you can edit the embroidery design by changing fills, applying patterns and styles and create unique combinations. Changing the fill of an object is very simple in **Creative DRAWings**. First, you have to select the object you want to apply different fill by using any of the selection tools or by simply clicking on the object. The object will become selected and all the current properties of the embroidery design will appear on the **Object properties** toolbar. If the selected object is filled with step stitches you can change it to Row Fill or satin stitch type or even appliqué by simply clicking on the stitch type. The new stitch type that you have selected will replace the old one in the preview area and on the object properties toolbar will appear the properties of it. Every time you change a stitch type the properties of it are set to default. You can change them by applying different patterns or styles on the design that you can select from the respective lists. Whenever you select a pattern or style it is directly applied on the object where you can preview it before embroidering it.

The big objects of the embroidery designs are usually set to step stitch type and the smaller to satin. You have to avoid setting satin stitch type to large objects because the embroidery result would not be appropriate. Satin stitches are usually placed in smaller objects and letters. Most of the time overlapping satin objects are not trimmed and embroidered over the objects that are placed on, making the embroidered design more relief and giving a 3D perspective. The way of embroidering style differs from embroiderer to embroiderer. You can use your own way to embroider your designs.

If you want to place appliqué on an embroidery design, you have to select the object you want to replace with appliqué and select **Appliqué** from **object properties** toolbar. The object will be filled with an appliqué fabric with color same with the color of the object. If the object has a border outline (running, satin serial), extra holding stitches will not be added. Otherwise, the default holding stitches will be e-stitches. You can customize the holding stitches of appliqué by adding a border outline to the object, from the Create mode, that will be converted to running stitches at stitch mode. On running holding stitches you can apply a style you prefer and create artistic holding stitches that will change totally the look of the design.

The most difficult stitch type fill to edit is cross-stitch. **Creative DRAWings** can convert bitmaps images to cross-stitch designs. If you want to set normal stitches (satin, step, Row Fill) on a bitmap you have to convert it first to vector graphics using a bitmap tracer that is also available. The bitmap tracer that you can use is automatically activated whenever you import a bitmap image from the starting dialog and it is one of the three import options you have. After tracing the design and producing a vector design with fewer objects possible, the design is imported in Create mode where you can export it to .svg vector file format or embroider it normally by clicking on the stitch mode. Whenever you try to trace a bitmap keep in mind that the image that you will produce is for embroidering purpose and not for screen printing. Also, not all bitmap images can be converted to accurate vector designs and then to normal embroidery. The only way to set stitches on a bitmap and embroider the actual image is by applying cross-stitches or Photo-stitch on it.

Cross-stitch designs can be edited inside **Creative DRAWings** easily. Every time you select the cross-stitch design, its properties appear on the object properties toolbar. There you can change the cell size of each cross and the number of times that the cross will be embroidered.

In addition from the background colors list, which contains all the colors that are currently on the cross-stitch design, you can select which ones you do not want to be embroidered and remove them from the design. This ability is really helpful when you do not want to embroider the background color of the bitmap design you have inserted. Most of the times bitmap images are in rectangle shapes that are entirely filled with different colors. Some of those colors, for example the background of a portrait image or other environmental objects, can be easily removed from the cross-stitch embroidery by selecting the color that represents the specific object from the background list.

In order to increase the detail of the cross-stitch design you have to either increase the size of the bitmap or decrease the cell size of the cross-stitch. This will have as result in the first case a big highly detailed cross-stitch design and in the second case a highly detailed cross-stitch design in the same size with the original but with smaller crosses.

In order to change a color from a cross-stitch object you have to either change the color of the source bitmap, and then re-embroider it, or change it from the color palette editor  of the standard toolbar. In the palette editor you can view all the colors that the current bitmap contains and if you hold the mouse over a specific color, you can view, also, which objects are filled with the specific color in the preview area behind the dialog. With this ability you can decide better which colors you want your design to have and make the changes to create the best possible result.

Cross-stitch objects can change easily to Photo-stitch by selecting the Photo options from Object properties toolbar. Photo-stitch is the only alternative you have when it comes to fill bitmap images with stitches. It consists of 4 stitch layers that have different colors. Each thread color layer is one of the CMYK(Cyan, Magenta, Yellow and Black) color model. First the Magenta color is embroidered, then the Cyan color, the Yellow color follows and finally comes the Black color. These colors cannot be changed and you must use them exactly as they are embroidered if you want to produce accurate Photo-stitch results. The photo-stitch object gives you the ability to adjust the satin bars width and the density of each satin bar for more accurate results.

## Change outline

**Creative DRAWings** except from filing with stitches solid objects, can set stitches on the outline of objects and on line art designs. Every time you convert vector designs, with objects that have outlines to stitches, both fills and outlines are filled with respective stitches automatically decided from the software. In **Creative DRAWings** the outlines can be converted to running or satin serial stitches. The stitch type of the outline depends on the width of the border line. If the border line is thick, **Creative DRAWings** will use satin serial to fill it and running if it is not. This automated selection can be easily changed by selecting a different outline stitch type from the Outline  tab of the object properties toolbar. There you can change the properties of the stitch type or even the stitch type itself. Whenever you need to restore the default settings of a specific object you have to check the Auto check box of object properties toolbar and the default settings of the object will be restored. The default settings are those that **Creative DRAWings** proposes for the specific object or multi selection of objects.

In **Running** stitch type you can decide the passes you want the running stitches to have by specifying how many times it will be embroidered. This option gives thicker running embroidery that can be useful in cases of embroidering line art design or holding appliqué on the fabric. Also, you can set the distance you want the outline to be shifted from its initial position by specifying the

Offset value. On running stitches you can apply different styles that give artistic feel to the embroidery design you are creating. There are many styles that you can use in order to produce the artistic result you want. They can be applied easily by selecting the line art or the border outline you want, and from the outline tab select the style you prefer. The selected style will be immediately applied and will be visible on the preview area. You can continue changing styles until you find the one that fits best to your design.

The alternative border outline fill is **satin-serial** and can be accessed from the outline tab of object properties toolbar. On satin-serial you can apply different patterns that will give artistic feel on the design. In order for the applied patterns to be visible you must increase the width of the outline from the Create mode. After increasing the width of the outline you can apply the pattern you prefer by selecting the object and then the pattern from the patterns list. You can apply different patterns until you are satisfied with the embroidery result. Also, you can set the distance you want the outline to be shifted from its initial position by specifying the Offset value. Any change you are making on the outlines it is previewed on the 3D preview area.

## Remove overlaps and make Trims

Most of the readymade vector designs that are imported in **Creative DRAWings** are prepared for screen printing and not for embroidery. Therefore, there are vector designs that their objects are overlapping. We have overlap when an object/shape is completely or partially over another object/shape. When you try to set stitches on a vector design with overlapping objects/shapes by clicking on the stitch mode, the software would have to embroider both overlapping objects, which is not the best way in most cases. There are designs that overlapping objects would give a better feel when they will be embroidered but this is not the standard case.

For these reasons, **Creative DRAWings** includes a function that removes the areas of objects that are not needed and produces the best possible embroidering results. In order to do that, it uses the Remove overlaps filter that appears on the object properties toolbar after selecting an object. This filter is automatically applied in the software and you can realize that, if you try to move an object that is under another object.

It is, also, possible to manually alter the overlapping status of each object. There are three possible options that you can apply on a specific object, Auto, Never and Always. The Auto is the default option and the one that **Creative DRAWings** uses to create the best possible results on the design. When the Never option is applied on an object, the specific object will never trim the objects that overlap. This means that all the objects/shapes that are under the selected objects will be embroidered normally, placing all their stitches on the fabric. The opposite option is Always. When it is applied to a specific object it trims all the objects that it overlaps. This means that all the parts of objects/shapes that are under the selected object will not be embroidered.

This tool is really useful because it increases even more the embroidery quality, reduces the number of stitches that will be placed on the fabric and decreases the embroidering process time.

Sometimes you might need to trim a part of an object in order to re-sequence it easier. For this purpose you can use the Trim tool. With the Trim function you can create wholes inside objects or reshape them by removing parts of their shape. You can trim any object you want in a vector design but you cannot trim a bitmap image that it is imported in the design. You can apply the **Trim** function only to objects that overlap partially or entirely. First you have to decide which object will be the one that will be trimmed (target object) and which object you will use to apply the trimming (source object). Then you have to select the source object first and then the target object by holding the **Shift** key pressed, to add it to your selection. You can apply the Trim option by pressing the icon from standard toolbar. The trim will be applied on the target object and the

area that was covered from the source object will be removed from the target object. This change is permanent in contradiction with the Remove overlap tool that it becomes permanent when saving the design to a stitch file(.dst, .pes, etc.) or exporting it to Wings' modular.

### Change direction and divide objects

With the **Directions** tool you can change the direction of stitches of a specific object. This is a very useful tool that can be used to give a better feel to the embroidery design and negate the push and pull powers that are applied to the fabric from the stitches in the embroidering process. In objects filled with step stitches you can add only one direction by selecting the object, then activating the **direction** tool  from the Tools toolbar and by clicking and dragging with the mouse on the object you define the new direction of stitches. All the stitches are parallel to the direction you have inserted. If you want you can change the direction of the object stitches by click and dragging the one end, of the already inserted direction, to a new position, or by deleting the old one (by clicking on the X at the middle) and inserting a new one.

If objects are filled with Row Fill or satin stitches, you can have more than one directions. In order to insert the directions you have to select the object, activate the directions tool from the Tools toolbar and add directions on the satin/Row Fill object by click and dragging from one side to the other of the object. You can continue inserting directions to the object until you are satisfied with the embroidery result. While using directions tool you will realize that it snaps on the sides of satin/Row Fill object showing you how to use it. If you insert an invalid direction, the fill of the shape will change to step. You can change it back by adding a correct direction or by clicking on the stitch type you want to be from the object properties toolbar.

The other useful tool that **Creative DRAWings** includes is the **divide** tool. With this tool you can divide the satin and Row Fill objects without splitting the object. It uses branches technique to create in the same object different sections. In order to divide a satin/Row Fill object you have to select the object you want to divide, click on the divide tool from the standard toolbar and with the green bullet on the cursor click and drag from one side of the object to the other and create the line that will divide the object. You can add more divide lines and create additional branches. Also you can use an already inserted divide line as a side of the object to create a divide line that will divide a sub section of the object. By inserting divide lines you can customize the way the embroidery design will be embroidered and give a different touch to ordinary embroidery techniques. It can be useful for customizing the way of embroidering characters and symbols. Until now this was possible only if you could create the vector design that will produce the respective embroidery results. With some practice you will realize the designing power that this tool gives you.

Combinations of those tools can produce even better embroidering results with a touch of your embroidering expertise and preference.

## Setting up embroidery parameters

After finishing with the embroidery transformation you have to set up some important embroidering parameters that will give the appropriate information to the software to produce the best possible embroidery result according to your settings. Therefore, you have to decide on which fabric you will embroider on, the thread manufacturer color palette that will be used, the number of colors and make some embroidering optimization. The options that you will choose to use will produce the respective result.

### Select fabric

The fabric that the embroidery design will be placed on is an important factor for the quality of the final embroidery result. Therefore, you must be precise on the fabric selection from the Select fabric dialog of Tools menu. From the Select fabric dialog box you can find the fabric that you will use to embroider your design on. The fabrics are split to six categories according the embroidery that have to be placed on them. Therefore if the fabric is in the Embroidery light category the embroidery that must be placed on it will have low density and some other specific parameters adjustments that differ from one fabric to the other. The same applies, also, for the other categories according their name. There is always a case that you might want, for a reason, to use different fabric embroidering setting on a different fabric. In order to do that, for example to use Embroidery heavy fabric parameters on a fabric that belongs to Embroidery normal category, you have to select the **standard** fabric (e.g. Standard Heavy) that exists in each category except the Embroidery Smooth category. Exactly the same procedure you have to use if you have a fabric that does not exist in any of the categories. The embroidery smooth category contains most available fabrics in the market allowing you to select the one that is similar with the fabric you will actually use. The embroidery that will be placed on the fabric will be smooth and soft.

After selecting which fabric you will use, select the color of the fabric that you will embroider it on, (for better preview) and click on the OK button to apply your changes on the design.

More information about Fabric selections can be found in chapter 9.

## Select thread colors

Another parameter that you have to adjust before embroidering your design is the thread colors that will be used for embroidering the design. The colors of a vector/bitmap design that you have imported/created might be hundreds but not all colors have a respective thread color. The thread colors are limited and vary from thread manufacturer to manufacturer; therefore you have to match the current RGB (Red Green Blue) colors of the design with one of the thread manufacturers color palettes that **Creative DRAWings** includes. You can do that from **Edit palette** dialog when you are on the **stitch** mode of **Creative DRAWings**. After matching the colors, the software will show you next to the color the exact name/number of the thread that you have to use in order to produce the embroidery result you are viewing in the 3D preview area.

In order to edit the thread colors you have to click on the **Edit palette**  function from the standard toolbar. It is better to do that in the stitch mode of **Creative DRAWings** because there you can see the final colors that will be used from the software to fill the design. In the dialog box that will appear you can change the number of threads that will be used, the thread color manufacturer palette, even the current color of an object that will be embroidered (read more in chapter 7). From the **Palette** drop down menu you can select the thread manufacturer color palette of the threads that you will use. These information will be available to you in the printout of the design which is needed for the embroidering process. After the selection of the color palette you can view the embroidery design with the new assigned thread colors behind the dialog box on the 3D preview area. Also, you can make more adjustments like reduce the number of colors by using the Thread to use track-bar or manually by moving the colors in the Design colors list. Finally, you can even change the current color by double clicking on the color you want to change from the Thread color list and in the next dialog selecting another one from the list or from the New color dialog. All the changes are applied immediately on the embroidery design by clicking the OK button.

Instead of reducing the colors in the stitch mode you can create the design in the Create mode exactly with the colors you will use to embroider it. You can use the **Thread palette** toolbar to change the colors of the design and reduce them to the number of colors that your embroidery machine supports or the number of colors you want the design to have. If you do that you will not have to make any change in the Edit palette dialog in the stitch mode of **Creative DRAWings**.

## Optimize the design

There are some more settings that you have to take under consideration before embroidering the design you have created. These are optimization settings to adjust in order to get the embroidery results you want. You can find them in the **Optimizer options** dialog under the **Tools** menu. There you can specify the frame-out distance from the needle carrier in order to place appliqué on the design, the thread trimming distance between objects, the thread trimming distance between areas of Cross-Stitch, the insertion of end points at the closest object connection and the number of color changes.

**Appliqué frame-out distance:** While embroidering a design that includes a shape that will be made with appliqué, at some point will stop and the frame will come out in order for you to place the appliqué on. This movement of the frame, you can specify in this field. The distance that you will set is important because it will give you the appropriate space to place the appliqué on the fabric easily. The higher the inserted value, the longer the frame out distance. There is an upper limit to this value 5 cm or 2 inches.

**Trimming distance between objects:** This is one of the most important parameters that you have to adjust before embroidering your designs. **Creative DRAWings** will cut all the connecting threads between different objects that are longer of this value. Therefore, if the **Trimming distance between objects** is 2 mm and **Creative DRAWings** finds a connection thread between two objects that is longer than this value, it will cut the thread and continue embroidering the next object. In order to view where **Creative DRAWings** inserted thread cuts you have to export the design to Wings' modular and view the stitches that connect the objects. If the connection stitch is dashed, means that there is thread trim between the two objects. On the other hand if the stitch is continuous and connects the two objects, which means that there is a jump-stitch between the two objects. It can become easier to distinguish that by pressing the **P** button and 3D preview the design in Wings' modular. There, the jump-stitches between objects will be visible connecting the two objects with a thread. If there are jump-stitches between objects that you want to remove, you have to go back to **Creative DRAWings**, decrease the value of **Trimming distance between objects** in order to be shorter from the distance of the two objects (use the measure tool to find the distance between objects), click **OK** to apply the changes, export the design again to Wings modular and check if the jump stitches were converted to thread trims. The lowest trimming distance between objects that you can have is 0.5mm. Adjust this parameter until it meets your preferences.

In addition, the **combined** objects of vector designs, in the stitch part of **Creative DRAWings** or in the create mode with 3D preview option of View menu enabled, will still be displayed with jump-stitches connecting them. This does not affect the thread trims between combined objects that can be adjusted from the **Trimming distance between objects** parameter. If the **Trimming distance between objects** is shorter than the jump-stitches that connect the combined objects, then the thread trims will be inserted normally. In order to view the applied thread trims you have to export the design to Wings' modular.

**Trimming distance in Cross-stitch:** This parameter is similar with the Trimming distance between objects, but it refers to cross-stitch designs. **Creative DRAWings**, while embroidering cross-stitches, moves from one cross-stitch to another using **Tacking** stitches. Tacking stitches are stitches that are placed on the fabric in order for the needle carrier to move from one object to another without making thread trims. These stitches are not visible because they will be covered from the stitches of another cross-stitch object that will be embroidered later in the embroidering sequence. In order for the software to make Tacking stitches instead of making thread trims, the value of **Trimming distance in Cross-stitch** must be greater than the distance between the same objects. For example, if the distance between two crosses of a design is 10mm, the Trimming distance between objects must be over 10mm in order to avoid thread trims. The default distance

is 20mm and is the proposed one. It is better to avoid decreasing it because the continuous thread trims might be annoying.

**End points at closest connection, even on trims:** This option is important for the way that the design will be embroidered. When the checkbox is checked **Creative DRAWings** filters the entire design and finds the closest connection points between the objects even if a thread trim is made. This option gives better rooting between objects and better flow of the embroidery. In addition, it gives less thread trims because the objects of the same color are connected from their closest point. Furthermore in order to make the proper rooting between objects it places more stitches on the fabric.

If this option is not active, **Creative DRAWings** will choose the best position to place the entry and exit points of each object and not the closest connection points. The selection depends on your embroidering style.

## Change Sequence

**Creative DRAWings** software includes automatic and manual tools for producing the embroidery sequence. You can combine the different available tools and produce the embroidery results you prefer.

### Automatic Embroidery sequence

**Creative DRAWings** embroidery software includes an automatic sequencing mechanism that produces great results based on the sequencing options that you have set. There are three tools that are responsible for adjusting the automatic embroidery sequence. These tools are the **Auto-sequence** tool, the **Sequence** tool and the **Sequence manager**. With these tools you can adjust the automatic embroidery sequence that is produced from the software.

The **Auto sequence** tool  is located at the bottom of the **Tools** toolbar and by default is enabled. This means that any design that you are converting or creating from scratch will have its embroidery sequence automatically produced according your preferences. The **Auto sequence** tool has some options that you can adjust through **Optimizer options** dialog that you will find under **Tools** menu. The **Auto-sequence** option is checked and all its options can be set to different values. The options that you can adjust are the **Optimization strategy,** the **Keep sequence of overlapped objects, even if trimmed,** the **No thread trims inside combined objects** and the **Minimizing color changes**. By adjusting these options you can manipulate the embroidery sequence results and bring it closer to your preferences. It is important to keep in mind that all optimizing options are related and the embroidery sequence is calculated based on all optimizing options and not only to a specific one. Whenever you set the optimization settings you have to consider how the change you are making will affect the embroidery sequence by keeping in mind all the other optimizer settings.

Another tool to adjust the automatic embroidery mechanism is the Sequence tool. With the **Sequence** tool you can order specific objects or set of objects to be embroidered at the beginning or at the end of the embroidering process. The **Sequence** tool appears at the bottom of object properties toolbar whenever you select an object or a set of objects.

The **Sequence** option gives you three possible abilities: **To start**, **To end** and **Auto**. By default the **Auto** option is selected that lets the software decide the embroidering sequence of the design. If you want an object to change order and be embroidered first or last in the embroidering sequence you have to use, respectively, **To start** or **To end** option. If you do not make any change on the sequence option, **Creative DRAWings** will automatically create the best possible embroidery sequence for you based on the other settings that you have set on the **Optimizer options** dialog.

Every time you want you can simulate the embroidery sequence of the design through **Slow redraw** tool and decide if you need to make more changes on the embroidery sequence.

Finally, The **Auto-sequence**, affects the way that the items of **Sequence manger** will be viewed. When Auto-sequence is enabled the program automatically decides the sequence of all stitch objects, so you don't have any control of the sequence of the design items via sequence manager in this case. All normal stitch  objects will be shown as one object on the Sequence manager and there will be no separation between its sub-objects. The only items that are separated are the Appliqué  , the Cross-stitch  , the Photo-stitch  and the imported stitch file  objects. These objects can be re-sequenced normally by click and dragging them to a new position on the sequence manager. This is allowed because these kind of objects are totally different from normal stitch objects and they need special care when they are embroidered.

**Manual Embroidery sequence**

**Creative DRAWings** embroidery software includes a manual sequencing mechanism that gives you the ability to re-sequence the design freely based on your preferences. The software by default uses the automatic sequencing option that is very useful for inexperienced users and for those who are not familiar with embroidery sequencing. To switch to manual mode you have to click on the lamp  icon.

Whenever you disable the **Auto-sequence** by clicking on the lamp  icon**,** the **Run optimizer once dialog** appears, that allows you to run the sequence optimizer only once, or if you want not to run it at all and then gives you the ability to re-sequence the embroidery design freely through the **Sequence manager**. Inside the **Run optimizer once** dialog you have three options: the **Nothing (Leave design as is), the Simple (Just re-arrange objects)** and the **Advanced (Re-arrange and modify objects if needed).**

By selecting the **Nothing (Leave design as is)** option and clicking **OK** button, the **Optimizer** will not be applied at all and the objects will appear on the **Sequence manager** exactly with the order that they have been designed. On the other hand by selecting **Simple (Just re-arrange objects)** option and clicking **OK** button, the **Optimizer** will be applied once on the design, by making the appropriate changes and then all objects will appear on the Sequence manger. Finally, by selecting **Advanced (Re-arrange and modify objects if needed)** option and clicking **OK** button, the **Optimizer** will be applied once on the design but it will modify the objects if needed. This means that the **Fills** and **Outlines** will be separated and re-sequenced separately based on the selections of the **Optimizer.**

After disabling the **Auto-sequence** tool, all objects will appear on the **Sequence manager.** By clicking and dragging any object from the Sequence manager you can change its order. You have the full control of the embroidery sequence and all the intelligent mechanisms have been disabled.

It is important to remember that while re-sequencing, some objects might change as a result of the **Remove overlap** functionality that is applied automatically. The **Remove overlap** option that is located on the **object properties** toolbar removes unneeded parts of the design that are positioned underneath of other objects in order to reduce the embroidery stitch count and thickness. It does not remove them permanently like the **Trim** tool does, but it holds the artwork information until you save the design to stitch file (.dst, .pes, etc.) or export it to Wings' modular. Therefore, you might move a large object from the bottom of the design (that looks like a border/outline because of the Remove overlap functionality) and place it on top, but once you do that you find out that it changes to a large fill object that covers all the other objects. To overcome that you have to use the **Trim** tool first from the standard toolbar, in order to trim the bottom object

and then re-order it. All these are automatically calculated when you are enabling the **Auto-sequence** functionality.

## Embroidery process

After finishing the parameters setup you can continue with preparing the design for the embroidering process. You can export the design in Wings' modular to view the actual stitches of the design or use the slow redraw tool to simulate the embroidering process inside **Creative DRAWings**. In addition you have to print the design and have the printout as a guide for the embroidering process because it includes all the needed information. Finally you have to save the design to the embroidery file format of your embroidery machine in order to load the design to the machine.

### Export designs

Every embroidery design that is created in **Creative DRAWings** can be immediately exported to Wings' modular. In order to do that select from **File > Export** menu and then the **To Editor…** option or press **Ctrl+E** shortcut key from the keyboard. The embroidery design will be exported to Wings' modular.

Wings' modular **Basic** is included in the **Creative DRAWings** package. It is a full working Professional embroidering software split into modules. It includes 14 modules which are activated separately. **Basic** module is the first and most important module because contains the basic parts of the software. **Basic** module includes the standard interface, scaling design capabilities, simple design editing, fully functional stitch editor, image database management and all supported floppy formats. It also includes many connection abilities that allows you to connect the software with your embroidery machine. You can read more about **Wings' modular** Basic module inside the **Basic module manual** that is also included or from the **Help > Contents** menu in the **Basic-Connect** module Contents tab book.

### Saving designs

The saving procedure in **Creative DRAWings** is similar with the saving procedures of any Windows® software.

To save an embroidery design in **Creative DRAWings** you have to:

1. select the **File > Save** option from the stitch mode
2. select the location where you want the embroidery designs to be saved using the available tools,
3. select the embroidery file format from the **Save as type**
4. Insert the name of the design in the **File name** field
5. Click on **Save** button to save the design.

Every embroidery design must be saved first in .DRAW file format and then in any other embroidery machine file format. You have to do that in order to be able to open the designs you created again in **Creative DRAWings** and edit it. **Creative DRAWings** can open only .DRAW files, therefore it is better to keep a copy of your embroidery design in this file format. After saving the design in .DRAW file format you can save the design in any embroidery machine file format you want. You can do that by directly saving it from **Creative DRAWings** or after exporting them to Wings' modular where you can make more changes to the design.

To open an embroidery machine file (.dst, .pes, .jef, etc) format, you can do it by loading it in Wings' Modular or directly inside **Creative DRAWings** through **From embroidery** option of the starting dialog.

If you open it inside Wings' modular you can make some changes and re-save the designs in the format you want. Embroidery machine file formats have some limitations in the information that they are saving in their format. Therefore you might load a design that was saved in an embroidery file format from **Creative DRAWings** and then load it in Wings' modular you will view that the color palette is not loaded correctly. This is happening because not all embroidering machine file formats saving the color palette in their file. In order to avoid losing useful information that was exported from **Creative DRAWings** you can save the design in .NGS file format which is Wings Systems' file format and it is holding all the needed information of the embroidery design. You cannot load the .ngs files in any embroidering machine but you can open them with Wings' modular or any other software that supports this file. Whenever you load an .ngs file in modular the design will appear exactly in the way that was exported from **Creative DRAWings**. Any loaded file in .ngs file format can be easily saved in any embroidering machine file format (.dst, .pes, .jef, etc) without losing embroidering quality in the transformation.

After you finish saving the design in the format your embroidery machine supports, you can proceed to the embroidering process.

## Use of printout

The printout of the embroidery design is very useful for the embroidering process. All the information that you might need while embroidering are listed there. You can find information of the embroidering sequence that is really important if you embroidering designs in .dst or .sst file formats, because the sequence that the printout shows must be entered, also, in the embroidering machine. In addition you can view the exact number of stitches of the embroidery design, the date that the design was created, the number of changes that will be made, the actual size of the design, useful information about the materials that must be used for stabilizers and which colors must be used.

In order to embroider the design as you are viewing it you have to follow the steps below:

1. Place the threads in the embroidering machine according the order that is given in the printout. The first color in the first needle carrier, the second in the second needle carrier and so forth. If the embroidering machine has only one needle carrier you have, each time that a color change is occurring after a thread cut, to change color to the needle carrier and continue embroidering.
2. Then load the design in the embroidering machine. If the design is .dst or .sst you have to enter also the embroidering sequence that is listed in the printout. Otherwise you can proceed to the next step.
3. Place the hoop on the machine with the fabric you want to embroider on and all the stabilizing materials needed, as they listed in the information section or using other that fit from your experience.
4. Check if the hoop is the appropriate for the dimensions of the design. If the **Scale** of the printed design that is located under the header of the printout is 100% then the printed design has actual dimensions. Therefore you can check if it fits in the hoop. If the printout is more than one page and you are not sure if the design fits in your hoop, you have to print the design in multiple pages, cut the pieces of the design and connect them again to create the whole design from the pieces and place it in the hoop to see if it fits.

5. After finishing any extra adjustments that your embroidery machine needs, you can proceed with embroidering your design.

The embroidering process will finish and produce the embroidery design you have created.

# Appendix A - Creative DRAWings Tips

## Creative DRAWings Quality hints

**Creative DRAWings** is a vector and embroidery designing software. It has many tools and gives you the ability to create the designs you want to embroider. Also, you can import readymade vector designs that were not designed for embroidering purposes but for printing purposes. Those graphic designs might include graphics and visual effects that cannot be converted to stitches and produce various problems during their conversion. Those designs need some editing inside the Create mode, to become proper for embroidering purposes. **Creative DRAWings** users must always have in mind that the designs they are creating will be embroidered with threads on a fabric.

Take into consideration the following guideline that will help you create high quality embroidery designs using **Creative DRAWings**.

- First of all embroidery machines cannot embroider in every position. The minimum distance between two stitches is 1/10 mm horizontal and 1/10 of mm vertical.
- Small designs that have too many nodes in their border do not help in embroidery. Therefore, try to delete the nodes that do not affect the shape of the design.
- Too small objects will not be filled with stitches and will be ignored from the software. If you want them to be embroidered try to enlarge them in order the software to be able to place stitches on them.
- Another thing that you should avoid in your designs is to cross curves in the same objects. Even if we have implemented special algorithms with Artificial Intelligence for these cases, we cannot cover all the possible combinations.
- Moreover, if there are borders in a design and especially in areas that are covered with stitches from another object, it is possible unneeded overlapping to be created that will decrease the quality of the embroidery. The Remove overlaps tool of **Creative DRAWings** takes care of such situations, and decides if the object below must be trimmed or not. Sometime decides not to trim object that are completely over other object because it believes that it will be embroidered better that way. If you do not want that you can force the tool to remove the stitches underneath.
- Finally, if you want to create borders with satin serial, avoid acute (>15$^{o}$) angles (hard changes of line directions), prefer to have a curve break node on the top of each angle and always check the distance between the nodes near the angle to be greater from the width of the border line. This will help Satin serial to flow better on the border and will increase satin serial quality.

To summarize and add some more, the things you have to do are:

1. Convert unnecessary **Cusp Nodes** to **Smooth nodes**.
2. Delete unnecessary **Smooth nodes**. Do not put nodes very close to the other.
3. Avoid having too small objects
4. Avoid double outlines
5. Avoid crossing curves in the same object.

6. Avoid hard changes of direction for Satin Serial outlines
7. Use **Remove overlaps** function to avoid overlapping and reduce number of stitches.

Those are some hints that will help you to increase even more the embroidery quality that **Creative DRAWings** produces. The produced quality is based on the quality of the used vector design.

## Printing and embroidering

The procedure you have to follow in order to embroider your design correctly by using the information that are included in the printout are the following:

In the following figure we have a printout of a design.

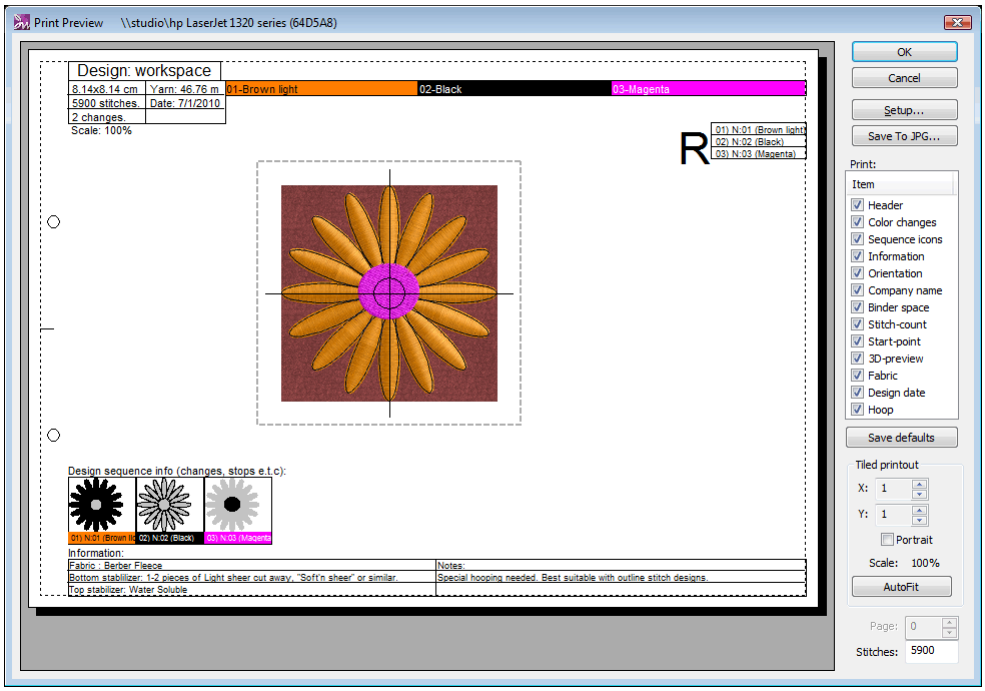



**Figure A.1: Printout**

In the header of the printout you can view the size, the number of color changes, the number of stitches on the design, the needed yarn for the current design, the colors that the current design is using and in which needle carrier should be.

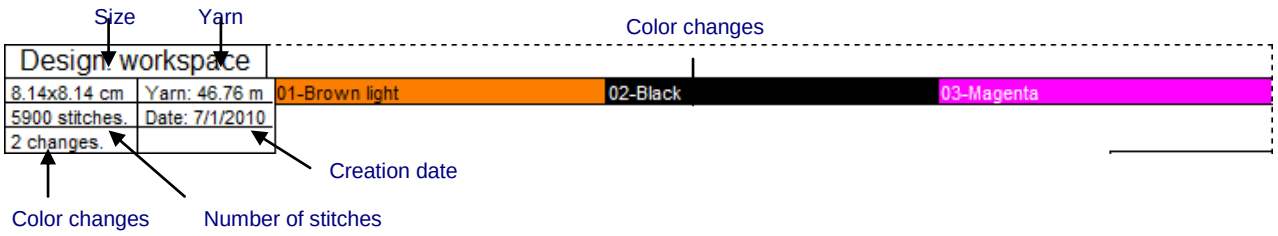



**Figure A.2: Header**

If you try to embroider the specific design that has 12 colors, set each color to each needle carrier as they are numbered. For example, in the first needle carrier you will set the yellow color 01- Gunold,502, in the second the Black and so forth. If you have set thread manufacturer's color palette like Gunold, you can find the colors that you want the design to have from the number next to the color.

If you have an embroidering machine with fewer needle carriers than 12 you can either reduce the colors of the design or while embroidering, you have to change threads on the embroidering machine after stopping it each time a color change occurs, to a color that is not on the next needle carrier.

When you finish setting the threads on the needle carriers you can continue by setting the embroidering sequence on the embroidering machine. This is not needed in all embroidery file formats. There are file formats that adjust color changes automatically to the embroidery machine. Those are: ."dsb", ".dsz", ".tap", ".exp", ".ksm", ".hus", ".vip", ".pec", ". Pes", ".jef", "sew".

On the other hand there are embroidering file formats that do not adjust the color changes automatically. To those (.dst, .sst) you have to insert them manually as the printout shows. The embroidering sequence it is shown from the **color changes** option and the **Sequence icons**.

| |
|---|
| 01) N:01 ( Gunold,502) |
| 02) N:07 ( Gunold,1128) |
| 03) N:04 ( Gunold,1104) |
| 04) N:10 ( Gunold,1168) |
| 05) N:06 ( Gunold,1259) |
| 06) N:05 ( Gunold,1002) |
| 07) N:03 ( Gunold,1034) |
| 08) N:11 ( Gunold,1172) |
| 09) N:09 ( Gunold,1510) |
| 10) N:08 ( Gunold,1558) |
| 11) N:12 ( Gunold,1503) |
| 12) N:02 ( Gunold,538) |
| 13) N:03 ( Gunold,1034) |
| 14) N:01 ( Gunold,502) |
| 15) N:02 ( Gunold,538) |

Figure A.3: Color changes

## Color changes

The color changes list shows the number of color changes that the machine will make in order to embroider the design and not the number of colors that will be used. To be more specific, the above list shows that the machine will start [("01")] embroidering using the color of the first needle carrier (N:01 (Gunold, 502)); therefore for embroidery files that do not support color changes you have to manually set the embroidering machine to have as first color the one that is in the first needle carrier.

Continuing, from the above list you can see that the first color change ( '02)' ) must be set to change the needle carrier from the "N:01" to "N:07". The second color change from "N:07" to "N:04" and so forth.

We continue setting the machine until ready. As we mentioned before, the design has 12 colors but 14 color changes. This means that **Creative DRAWings**, while producing the embroidery design, decided that in order to embroider some objects with the same color better, it must be embroidered in two or more phases. That is why we have more color changes than colors.

It is more obvious from the **Sequence icons** below.

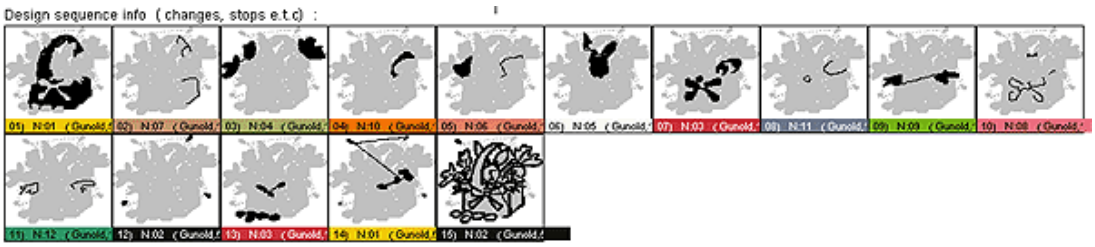


Figure A.4: Sequence icons

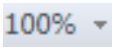
Here you can view exactly which object will be embroidered with which color. As you can see the Red objects of the design will be embroidered at the 7th and 13th color change.

In addition, most of the time more color changes produce better embroidery results, but less color changes are preferable for embroidering many copies of the same design. There is a way in **Creative DRAWings** that you can adjust the color changes in the designs that you are creating.

This option can be accessed from File > Design properties in the Optimizer mode, and is called **Minimizing color changes**.

- **Minimizing color changes:** This option is important for limiting color changes in the embroidery production process. Color changes have to do with thread changes that the embroidery machine makes in order to embroider each stitch design object. With more color changes the embroidery design sequence is followed more accurately but the production process is longer. On the other hand with less color changes the embroidery design sequence changes to fit the Minimizing color changes settings but gives shorter production process. The alterations in the embroidery design's sequence might produce inaccurate embroidery results or might not. This depends on the embroidery design, embroidery machine and the fabric. You can adjust color changes through the use of the track bar.

# Appendix B - Toolbars

| Standard toolbar | |
|---|---|
|  | Opens the **New design** dialog box. |
|  | Opens the **Open** dialog box. |
|  | Opens the **Save As** dialog box or Saves instantly an already saved design overwriting the previous saved file. |
|  | Opens the **Print Preview** dialog box. |
|  | **Undo**, cancels the latest action that was made. |
|  | **Redo**, cancels the latest undo that was performed. |
|  | Opens the **Select fabric** dialog box. |
|  | Opens the **Edit palette** dialog box. |
|  | Using this option you can **zoom-previous** your view of the current design. |
|  | Clicking on this button in the standard toolbar, you can view the current design in actual size. Also by clicking on the arrow at the right of this icon, you can select one of the **zoom presets**. |
|  | Using this option you can **view the whole design** fitted into the visible screen. |
|  | Activates the **show help on** help tool. |
|  | The **Weld** tool welds two or more overlapping objects. |
|  | The **Trim** tool can create wholes inside objects or reshape them by removing parts of their shape. |
|  | The **Intersection** tool creates an object from the area where the objects overlap. |

| Tools toolbar | |
|---|---|
|  | Activates **rectangle selection**. |
|  | Activates **lasso selection**. |
|  | Activates **Node editor** where you can edit the shape of objects. |
|  | Using this tool you can **zoom-in** your view to a part of a design. |
|  | This tool Lets you move a design around in the viewable window like you would move a paper around on a desk with your **hand**. |
|  | The **measure** tool calculates the distance between any two points in the work area. When you measure from one point to another, a ruler is drawn that shows the exact distance between the two points. |

| | |
|---|---|
|  | With the **Freehand tool** you can design simple lines or complete shapes. |
|  | With the **Bezier** designing tool you can create shapes where you can handle better the curvature of each segment easier by adjusting the control handles of each inserted node. |
|  | With the **Outline** tool you can draw lines and curves by specifying their nodes and altering the curvature of their segments by adjusting their control handles. |
|  | The **Create Ellipse** tool allows you to design ellipses that will be filled with stitches. |
|  | The **Create Pie** tool allows you to design ellipses and pie shapes that will be filled with stitches. |
|  | The **Create rectangle** tool allows you to draw rectangle shapes that will be filled with stitches. |

# Appendix C - Quick reference card

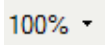
| General | | |
|---|---|---|
|  | New document | Ctrl+N |
|  | Open document | Ctrl+O |
|  | Save document | Ctrl+S |
| | Save As document | Ctrl+Shift+S |
|  | Print document | Ctrl+P |
| | Export to image | Ctrl+Shift+E |
| | Export to SVG | Ctrl+Alt+E |
| | Help | F1 |
|  | Show Help on… | Shift+F1 |
| | To Editor… | Ctrl+E |

| Selection | | |
|---|---|---|
| | Select all | Ctrl+A |
| | Invert selection | Ctrl+Shift+I |
| | Default selection tool | Space |
| | Top object | Ctrl+Home |
| | Bottom object | Ctrl+End |
| | Next object | Tab |
| | Previous object | Shift+Tab |

| Modifications | | |
|---|---|---|
|  | Undo | Ctrl+Z |
|  | Redo | Ctrl+Shift+Z |
|  | Select fabric | Ctrl+F |
|  | Edit palette | Ctrl+Shift+L |
| | Options | Ctrl+T |
| | Change Hoop | Ctrl+H |
| | Optimizer options | Ctrl+Shift+J |
|  | Divide | Shift+D |
|  | Directions | D |
| | Repeat last transform | Ctrl+R |
| | Group | Ctrl+G |
| | Ungroup | Ctrl+U |
| | Combine | Ctrl+L |
| | Break apart | Ctrl+K |
| | Convert to curves | Ctrl+Q |
| Order | | |
| | To front one | PgUp |
| | To back one | PgDn |

| | | |
|---|---|---|
| | To front of design | End |
| | To back of design | Home |

| Designing | | |
|---|---|---|
| | Insert symbol | Ctrl+F11 |
| | Delete objects | Delete |
|  | Edit shape nodes | F10 |
|  | Freehand | F5 |
|  | Bezier | Shift+F5 |
|  | Outline | Ctrl+F5 |
|  | Rectangle | F6 |
|  | Trapezoid | Shift+F6 |
|  | Ellipse | F7 |
|  | Pie | Shift+F7 |
|  | Polygon | Y |
|  | Star | S |
|  | Text | F8 |
| Align bar | | |
|  | Align Left | L |
|  | Align Right | R |
|  | Align Top | T |
|  | Align Bottom | B |
|  | Align centers Horizontally | C |
|  | Align centers Vertically | E |
|  | Same width | Shift+W |
|  | Same height | Shift+H |
|  | Same Size | Shift+S |
|  | Horizontal Spacing | Shift+C |
|  | Vertical Spacing | Shift+E |

| View | | |
|---|---|---|
| | Properties | Alt+Enter |
|  | Zoom in | Z |
|  | Zoom previous | F3 |
|  | Zoom all | F4 |
|  | 100% zoom | Shift+1 |
|  | Hand tool (pan) | H |
|  | Measure | F9 |
| | Ruler | Ctrl+Shift+R |
| | Grid | Ctrl+Shift+G |

| Backdrop | | |
|---|---|---|
| | Hide | Alt+1 |
| | Below Embroidery | Alt+2 |
| | Washed-out | Alt+3 |
| | After Embroidery | Alt+4 |

# Appendix D - Troubleshooting

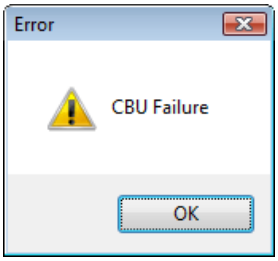
## Installation problems

Sometimes problems appear during installation procedure. If any problem appear you have to try the following.

- Make sure that you have administrative right on your PC in order to be able to install the software.
- Disable your antivirus or any other security software ONLY during the installation and turn them back on, once it is finished. **Creative DRAWings** installation does not include any malicious software.
- Make sure that you graphics card meets system requirements, because otherwise **Creative DRAWings** might not work properly.

## CBU Failure When Launching Creative DRAWings

When launching **Creative DRAWings** after installation or re-insertion of the USB Dongle, a screen displays for a brief moment, followed by this error message:




This error is a result of a loose or improperly connected Dongle:

1. Close the error message.
2. Remove the Dongle, wait 10 seconds, and re-insert it, ensuring that it is securely connected.
3. Load **Creative DRAWings** once more.

## Creative DRAWings Quits and Generates a Visual C++ Runtime Error

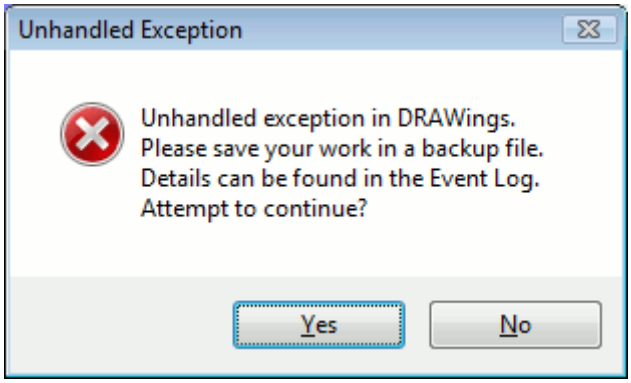
If the Dongle is removed when using **Creative DRAWings**, the application will shut down and the following error message is generated:

"**Visual C++ Runtime Error**"

Re-insert the Dongle securely and re-start **Creative DRAWings**.

## Unhandled Exception

**Creative DRAWings** has an extra security feature that handles exceptions that might occur while working with complex designs. This feature allows you to undo your last change in the design that made the system unstable and continue from that point.



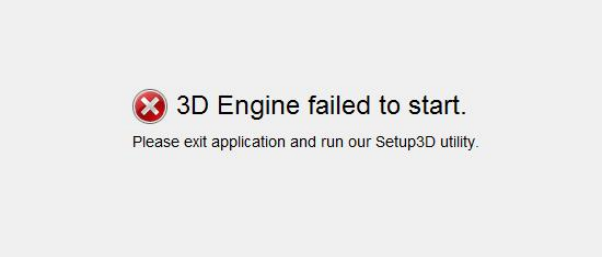

Whenever the above image appears an **Unhandled Exception** was occurred in the system. In order to continue working in **Creative DRAWings** you have to click on 'Yes' button. The system will become stable again. It is proposed, when an Exception occurs, to save changes in the current design and then continue working with the design.

If you click the 'No' button the System will crash!

## Creative DRAWings Fails to Launch

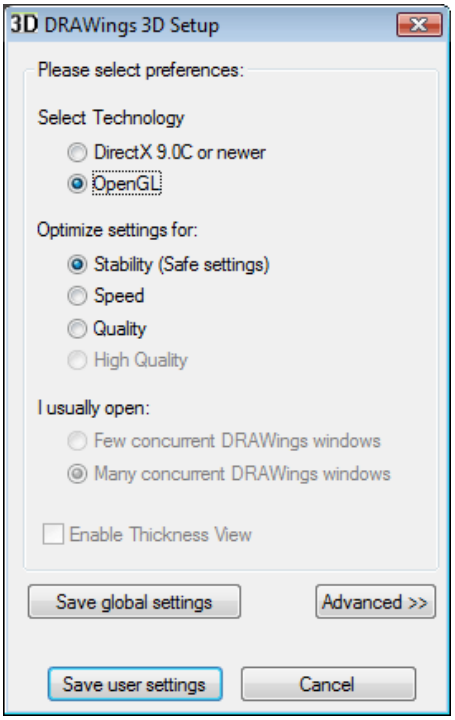
**Creative DRAWings** is a demanding software in 3D graphics card. If the PC you have installed the software does not meet the Minimum System requirements, the software might not work properly.

If the following error appears when you try to start the software, then the problem is located on the Graphics card of your system or to the 3D settings of the software.

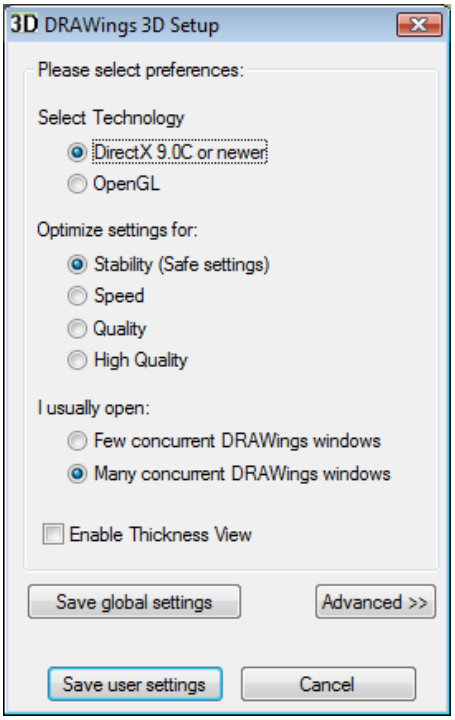



To overcome this issue please try the following:

1. Download and install the latest drivers of the Graphics card and try to start **Creative DRAWings**.
2. Try to re-install the **DirectX 9.0C** from the **Directx9** folder that you will find inside the installation CD of **Creative DRAWings**. Run **dxsetup.exe** and follow the installation. Once it is finished try once more to open **Creative DRAWings**.
3. Open **Setup 3D** from **Start>All Programs>Creative DRAWings,** set the options as they are shown in the screen capture below and select **Save settings** button.




Start **Creative DRAWings** and check if it is working properly. If this does not work open the **Setup 3D** and set the options as they were initially (as it shown in the screen capture below), and select **Save settings**.




Try to open **Creative DRAWings** once more.

4. If none of the above worked the problem is located in your Graphics card. It might have less than 64MB of Ram, or have poor 3D capabilities (usually onboard graphics cards). To fix that you will have to change it with any NVIDIA or ATI graphics card is available on the market. The software requires a good graphics card to work properly.

Information on how to proceed with checking the Video memory of the card, updating video drivers or another way to install the latest DirectX, you will find below.

## Verifying Video Card Memory

To verify the amount of RAM on the video card, do the following:

1. Right-click on the **Desktop** and select **Properties**.
2. Click the **Settings** tab.
3. Click the **Advanced** button.
4. Click the **Adapter** tab.

Memory Size should read at least 64MB. If it is less than 64MB, you will need to upgrade the video card to meet or exceed the **Creative DRAWings** system requirements.

## Updating the Video Driver

The two most common video chipsets are ATI and NVIDIA. Please visit one of the following web sites and obtain the latest driver for your card.

http://www.ati.com/
http://www.nvidia.com/

If your video card does not use either of these chipsets, visit the video card manufacturer's web site for the latest driver.

If you have a laptop you need to search for video card drivers from the laptop manufacturer's web site.

## Installing DirectX

DirectX can be downloaded from the Windows Update site, or from http://www.microsoft.com/directx. After installing DirectX, make sure that acceleration is enabled. To verify this, do the following:

1. Click **Start**, **Run**.
2. Type **dxdiag** and click OK.
3. Click on the **Display** tab.

All three DirectX Features should indicate **Enabled** beside each feature. If not, click the Enable button beside the ones that are disabled. If the buttons are disabled, there is a problem with DirectX. Consult the Microsoft knowledge base for assistance in troubleshooting DirectX, or click on the More Help tab and click on the Troubleshoot button

# Index

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## I



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## K



## L



## M



## N

## T



## U



## V



## W



## Z