
User's Manual

Hot Fix
ERA
VERSION 17

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Editorial

Welcome

Thank you and congratulations for choosing a product from our multimedia garment decoration suite, Design Era.

We have put our best effort developing this product, as we have been doing for the last 20 years, to always offer you the most advanced and competitive system on the market.

We hope you enjoy it.

About this Manual

Design Era is a multimedia garment decoration suite currently integrated by two products, Stitch Era, a full featured embroidery design system and Hotfix Era, a powerful design product focused on garment decoration with thermofixed materials like rhinestones and sequins.

Hotfix Era allows you to create impressive designs quickly and easily.

The advanced user interface, unique in the market for this kind of product, is based on contextual ribbons that displays, all the time, just the tools you need to work with the selected object, no matter if it is a raster image, a vector graphics or a hotfix object.

The Universal Selection Tool simplify the way you work: just one tool to select almost any type of object.

Powerful artwork tools let you use raster images and vector graphics and convert them to hotfix objects directly with a few clicks.

Several styles for beads placement, design simulation with a beads library with more than 3000 elements using realistic models with all their shines and texture, are just a few of the features you are about to discover.

Chapters 1 and 2 are dedicated to introduce some notions about the hotfix technique, the user interface and the conceptual elements on which the product is based.

Chapter 3 includes information about the tools for working with artwork graphics: raster images and vector files and objects.

Chapter 4, probably one of the most important ones, is focused on hotfix objects creation and edition.

Chapter 5 is dedicated to a very powerful Hotfix Era object: Texts

Chapter 6 contains information related with the several output modes available for different hotfix production techniques: manual placement, stencils produced with vinyl or laser cutters and automatic setting machines.

Finally, Chapter 7 shows how to work with an advanced creation tool called Smart Design.

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Chapter 1

HotFix ERA Basics

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Starting HotFix Era

When you start HotFix Era from the desktop shortcut icon or from the programs list of the start menu you can see the software splash screen. If it is the first time you run the application, it will appear the welcome screen as shown in the picture on the right, showing at the bottom the legal notes. Take a couple of minutes to read it, and if you agreed with the terms and conditions of the license, then click 'Yes' to complete the *HotFix ERA load*.

Check in the “Please, do not ask me again” box, if you want to avoid this step the next time you run the program.

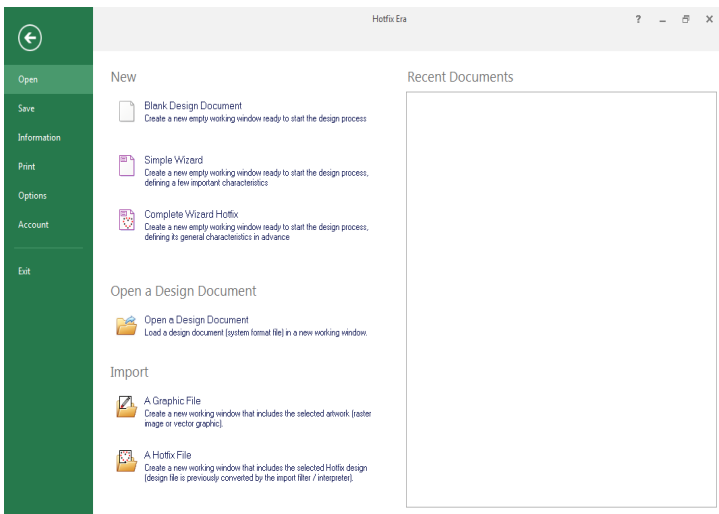


Once the program is loaded, the first screen is displayed.

This is the “File-Open” page.

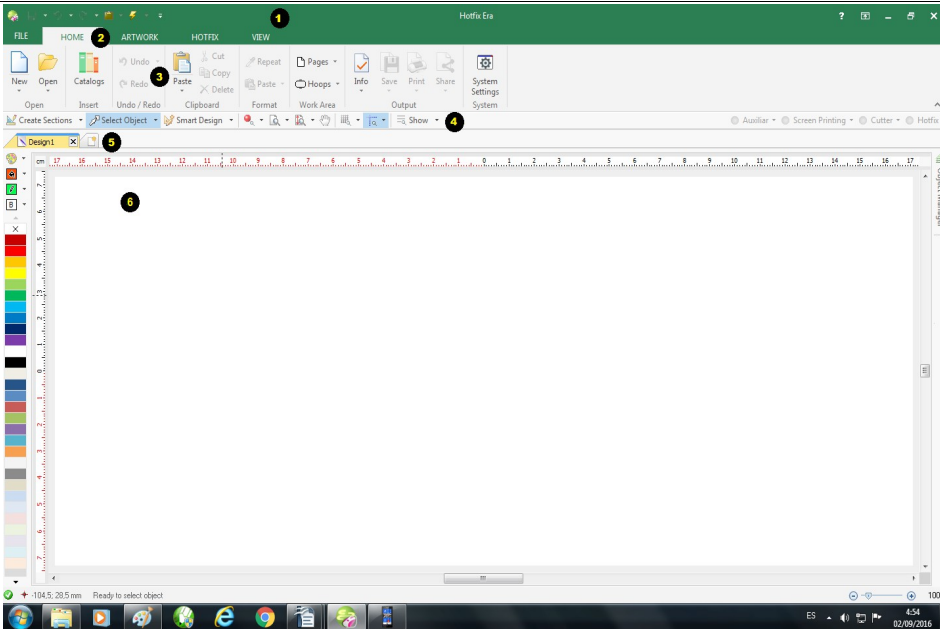
The other functions, like Save, Info and Print, will become available in this tab as soon as you open a file on screen.

This chapter will explain how the available tools are organized (i.e. how to navigate within the program).



It is very important to recognize each part of the program screen. To do so, on the “File-Open” tab, under the “New” section, click on “Blank Design Document”.

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- (1) On the top of the screen is the TITLE BAR. That bar shows the application name (HOTFIX ERA) and it may also show small buttons, which are shortcuts for several program functions. This is the Quick Access Toolbar.



It contains very frequent used commands like Save, Undo/Redo, Clipboard (Cut, Copy, Paste and Delete) and Generate (recalculate hotfix objects).

This handy element is always visible and avoids you to switch ribbon tabs or access the Application menu for accessing these commands.

- (2) Below the TITLE BAR, is the TABS BAR. That bar shows the names of groups of thematic functions. You will find the tabs FILE, HOME, ARTWORK, HOTFIX and VIEW.
- (3) Below the TABS BAR is the RIBBON BAR. This bar shows the available tools for the selected tab (group name). When the tab is changed, the ribbon changes accordingly.
- (4) Below the RIBBON BAR you will find a bar which we will call AUXILIARY BAR where you have some useful functions handy like Create Sections; Select Objects; Smart Design;

Zoom tools; and some visual aids like guidelines, grid and subgrid; object guides and hide/show commands. On the right side of this bar there are some tabs to show/hide/block different design layers (Auxiliar; Screen Printing; Cutter; Embroidery; Hotfix).

- (5) Below the previous bar is the DOCUMENT BAR. This bar also includes tabs. Each tab represents a document (a design) and has a different color.
- (6) Below the DOCUMENT BAR is the WORKSPACE. When a document tab is selected, this space is the area where the design is displayed.

Walking around the User Interface

Before learning each part in detail, let's navigate around the program for a while, in order to understand the program organization and make it easier to find the tools.



Click on the tab NEW DOCUMENT of the document bar.

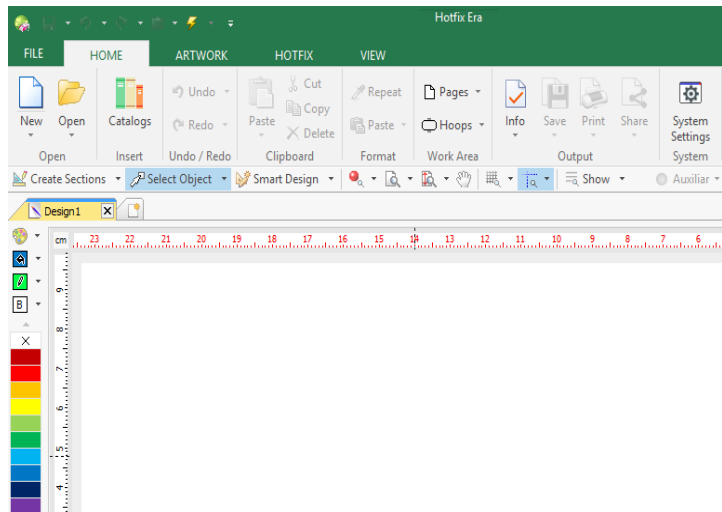
Several things occur:

A new design document is created (name Design1)

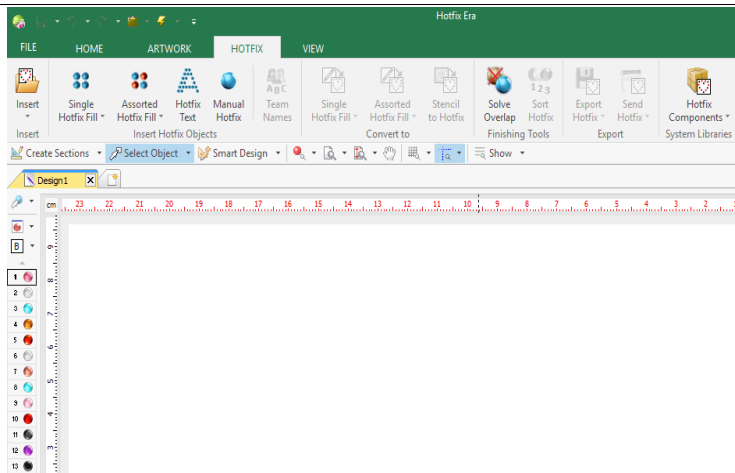
An empty workspace is displayed

All tabs appear in the tabs bar (HOME tab is selected)

The ribbon bar shows the tools/functions of the HOME group



Click on the HOTFIX tab and see how the tools/functions of that group appear on the ribbon bar.



Then click on the VIEW tab and see how the tools/functions of that group appear on the ribbon bar.

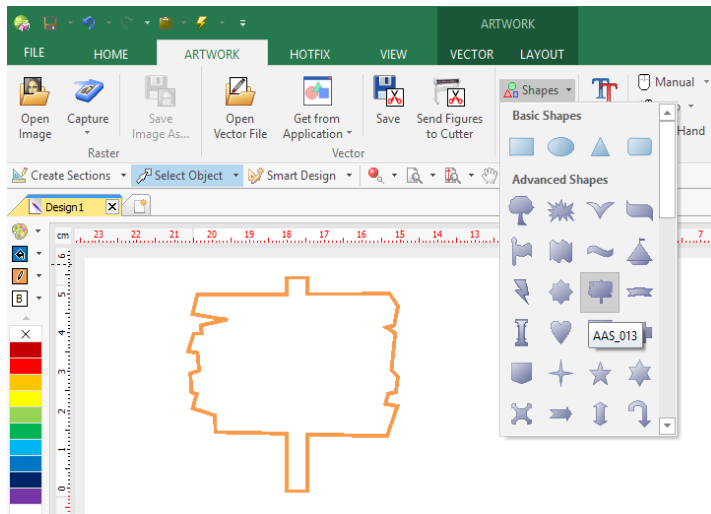
These are not the only available tabs of the TABS BAR. According to the activity (design creation, editing, etc) new CONTEXT BARS may appear.

As an example:

Click on the artwork tab

Click on the Shapes tool and select the advanced shape which tooltip says AAS_013.

Click on any place of the workspace and (without releasing the mouse button) drag the mouse to other position and then release the mouse button.

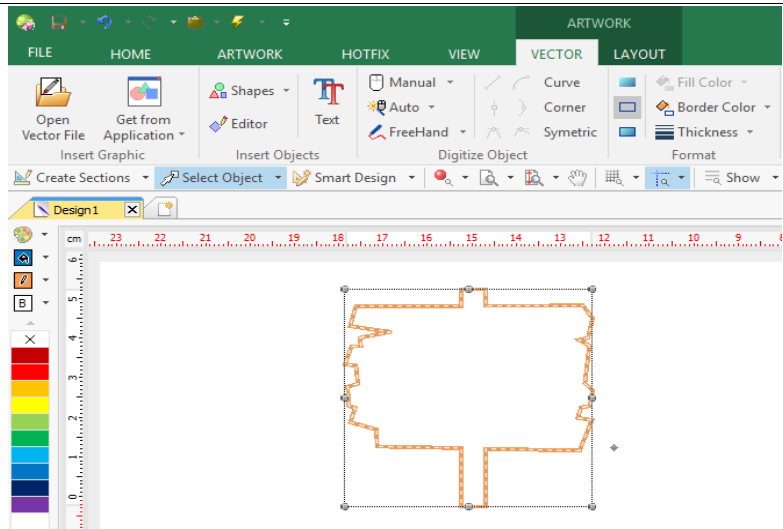


You can see that:

A geometric shape was created.

It is selected.

New context tabs are available (Vector, Layout) with more tools/functions available. Those tools/functions will apply to the selected shape.



This was only an example of how context tabs become available according to the activity and according to the selected objects. The same concept will apply to hotfix objects. The tools are well organized and become available when they are required.

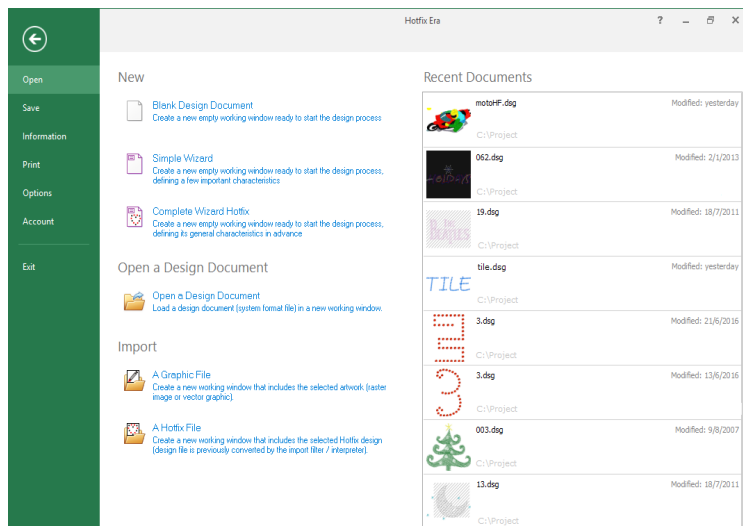
Let's continue with the FILE TAB.

In the File-Open group you will find three different sections:

New, Open and Import.

Inside the *New* section you have the commands to create a new design document:

Blank Design Document; Simple Wizard; and Complete Wizard Hotfix.



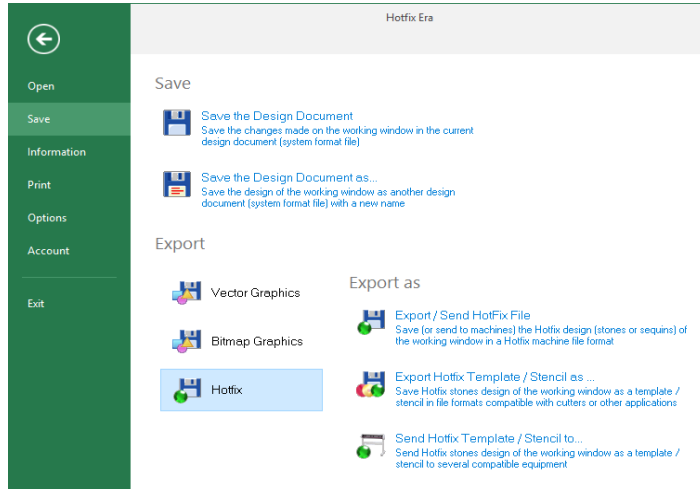
Inside the "Open" section you have the command "Open a Design Document".

Finally, inside the "Import" section, you have the commands: A Graphic File; and A Hotfix file.

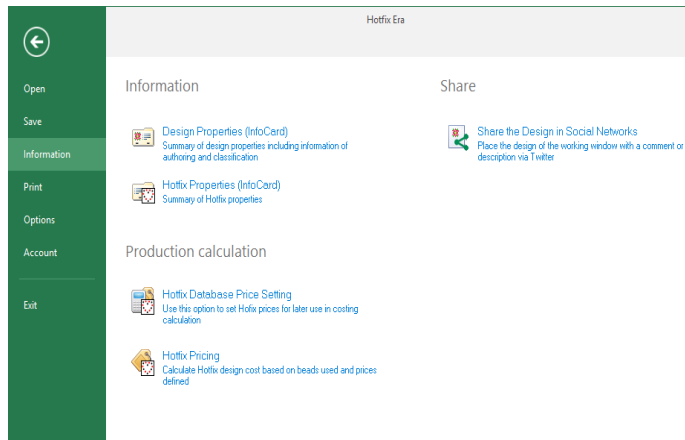
On the far right you will find the samples of the recently opened documents, which a little thumbnail and the physical location of the file. Double click on any to open it.

Section FILE-SAVE includes functions to save (store) the active design (current design document) in the system native format: “Save the Design Document” and “Save... as”;

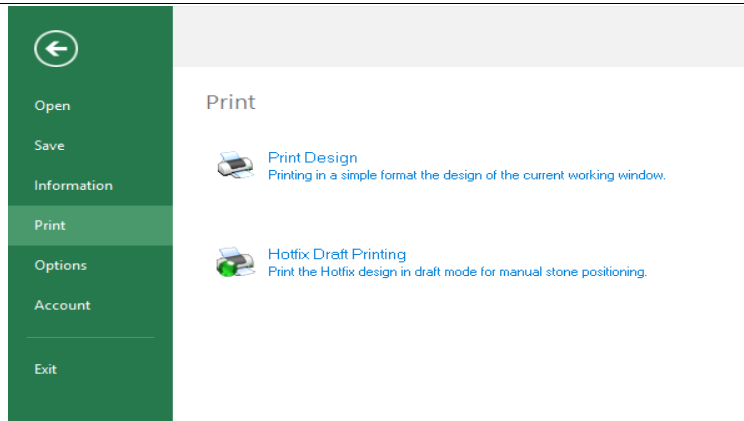
and / or export the design (Vector, Bitmap, or Hotfix) in any compatible machine format, send the active design directly to the machine for production, etc.



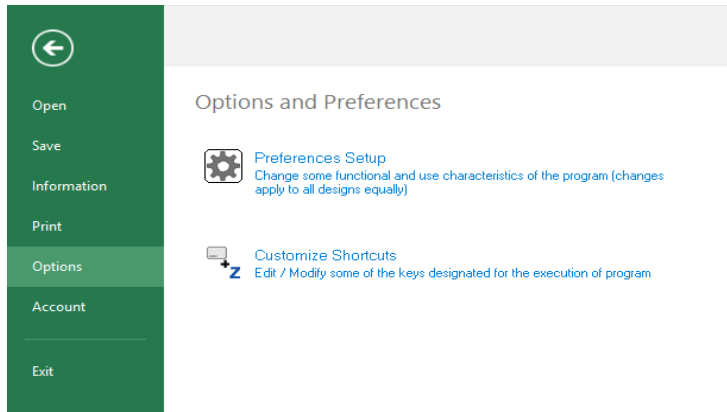
Section FILE-INFORMATION includes several functions related to the properties of the active design (Infocard); also allows you to Share your design in Social Networks; and lets you make estimates of hotfix pricing and production (optional features)



Section FILE-PRINT includes several printing functions for Hotfix designs.



Section FILE-OPTIONS includes functions related with the setting of the software application (it is not related with the active design itself).



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Click on “Preferences Setup”. A dialog box will open.

On the left panel, click on the Application group.

The right side will show the contents of it.

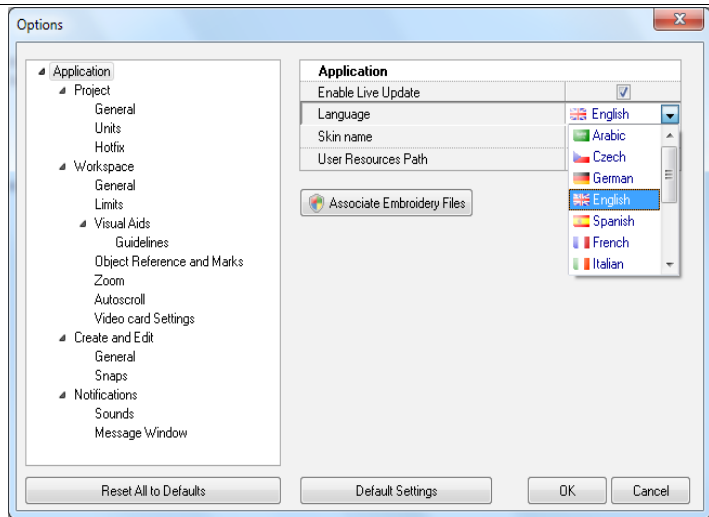
Click on Language to unfold a list of available options.

Then choose the selected option from the setting list (right side).

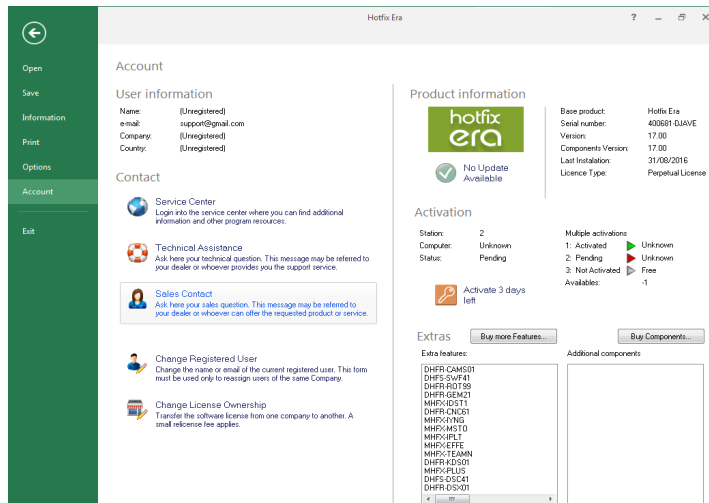
This function will require to exit the program, and restart it.

There are several aspects of the user interface and system behavior you may configure according to your preferences. The Options and Preferences box groups all the configurable items in HotFix ERA.

Let’s return to the FILE tab, last section.



Section FILE-ACCOUNT includes the information of the licensed software product, activation status, registered user information and Contact links.



Up to now we have described the basics of the user interface. Following sections will explain the mentioned parts with more detail.

Artwork Tab Tools, organization



Click on the tab NEW DOCUMENT of the document bar.

- A new tab will be created (Design1) in the document bar,
- The workspace (active design) is empty.

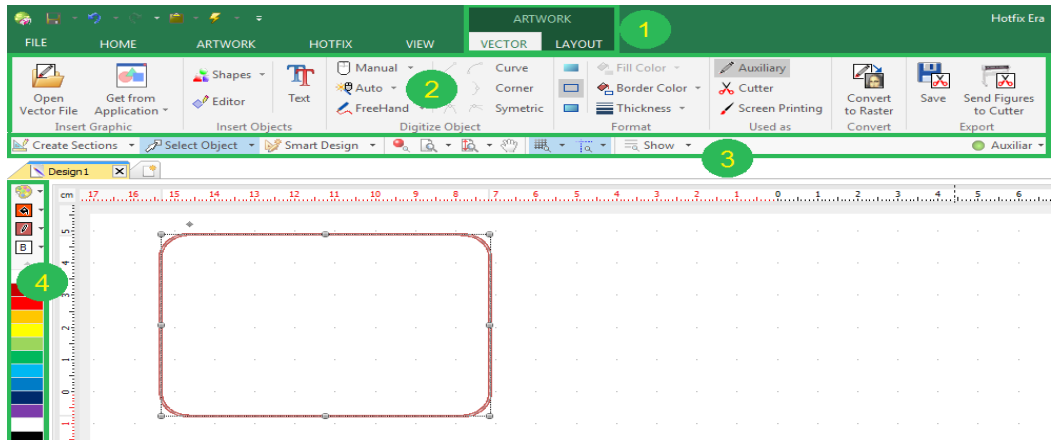
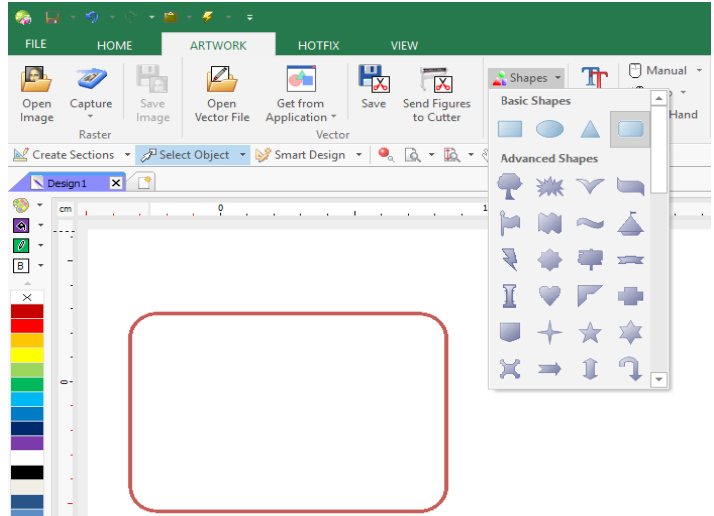
Click on the ARTWORK tab.

The MAIN ARTWORK TAB (and main artwork ribbon bar) will appear on screen.

Click on the Shapes tool and select a Basic Shape (rounded rectangle).

Click on any place of the workspace and (without releasing the mouse button) drag the mouse to another position and then release the mouse button.

The corresponding shape will appear on the screen.



ARTWORK

Artwork is the part of the design document which includes the set of graphic elements of the design (raster images or vector graphics). In the example above, only the created vector object is the artwork of our design.

ARTWORK CONTEXT TABS (1)

More tabs are visible in the tabs bar. The new tabs are context tabs because they depend on the current activity of the program. As we are working with Vector Artwork (graphic shapes / figures), then related (or context) tabs are available: VECTOR and LAYOUT.

ARTWORK RIBBON BARS (2)

When you select each of those context tabs, the ribbon displays all the related functions grouped in sections. The functions will apply to the object selected on the workspace. In this moment you are able to edit any of the vector objects present on your design or create more vector objects. These functions will be explained later.

ARTWORK AUXILIAR BAR (3)

Below the RIBBON BAR you will find a bar which we will call the AUXILIARY BAR where you have some useful functions handy like Create Sections; Select Objects; Smart Design; Zoom tools; and some visual aids like guidelines, grid and subgrid; object guides and hide/show commands. On the right side of this bar there are some tabs to show/hide/block different design layers. The first led, Auxiliar, corresponds to the image/s you have on screen.

ARTWORK COLOR BAR (4)

On the left of the workspace, a vertical toolbar shows some tools related to the color palette of the artwork and other tools.

If you want to set the color to create an object, or edit (modify) the color of an existing object, you can press the left mouse button on any color of the color palette to set the fill color (area) and/or the right mouse button to set the border color (line).

If you want to change the color palette (colors displayed on the left of the workspace) you can set each color with the color palette function (there is a palette icon) in the artwork color bar.

These functions will be explained later.

The same concept of new context tabs with related functions in the ribbon bars apply to Hotfix objects. The tools are well organized and become available when they are required.

Hotfix Tab Tools, organization

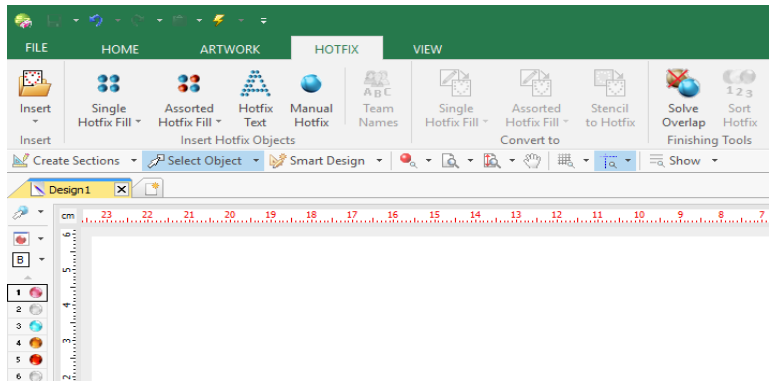


Click on the tab NEW DOCUMENT of the document bar.

- A new tab will be created (Design1) in the document bar,
- The workspace (active design) is empty.

Click on the HOTFIX tab

The MAIN HOTFIX TAB (and main hotfix ribbon bar) will appear on screen.



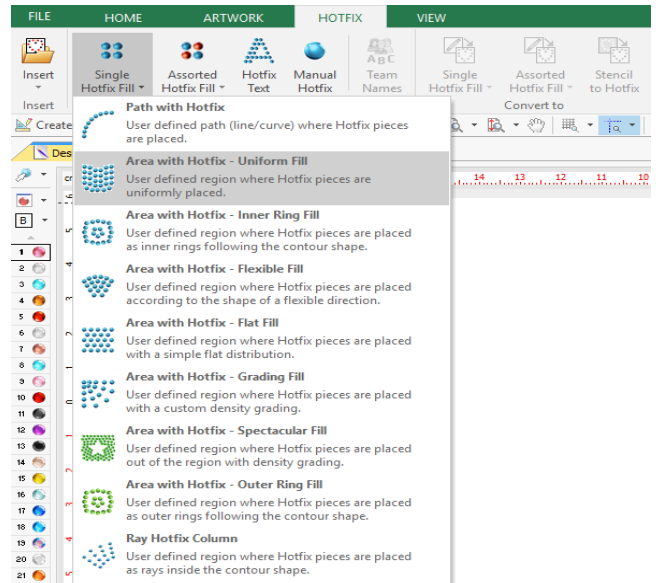
There are many hotfix tools. At this time we will only show how to use one of them.

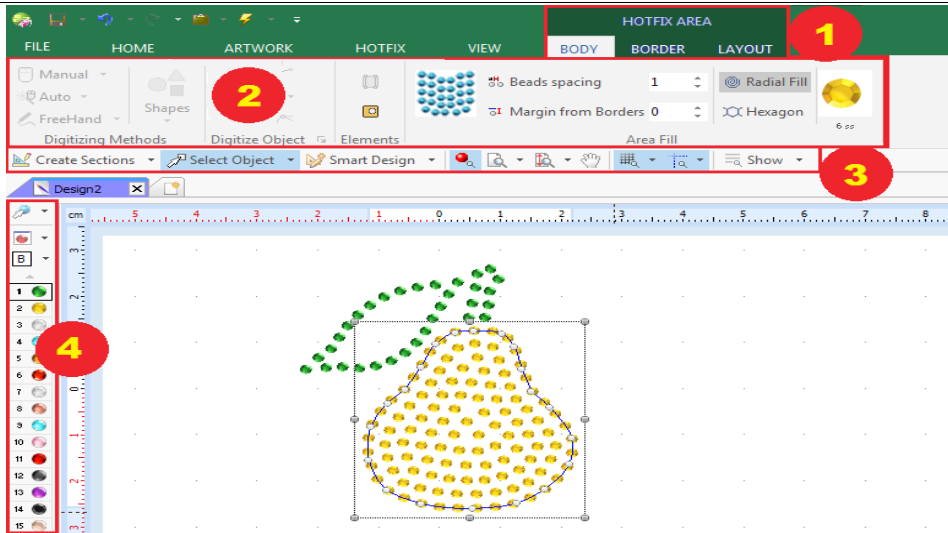
Let's create an area with hotfix.

To do so, on the Insert Hotfix Objects group, click on Single Hotfix Fill (input method) and select Area with Hotfix-Uniform Fill from the list of hotfix styles.

Note: as you can see in this picture, HotFix Era has a huge set of tools (among others, many hotfix fill styles) but they may be not available in all software products (or software levels).

The official website offers information about the features available in each software product.





Click (mouse left button) on several points of the workspace. To close an object, simply locate the last point above the first point. The system will close the area automatically. To close it manually, you can either press the Enter Key or click the mouse center button. This will confirm the hotfix object and will show the corresponding beads (rhinestone, sequin/spangle).

HOTFIX

Hotfix is the part of the design document which includes the rhinestone and sequin/spangles objects. In this case, only the created hotfix object is our hotfix design.

HOTFIX CONTEXT TABS (1)

More tabs are visible in the tabs bar. The new tabs are context tabs because they depend on the current activity of the program. As we are working with Hotfix, then related (or context) tabs are available: HOTFIX AREA BODY, BORDER & LAYOUT.

HOTFIX RIBBON BARS (2)

The context ribbon bar shows the group of functions of Hotfix Area input method, with Uniform Fill. There are many many context ribbon bars as there are many input methods and hotfix fill styles. The functions will apply to the hotfix object selected on the workspace or to a new hotfix object under construction. These functions will be explained later.

HOTFIX AUXILIAR BAR (3)

Below the RIBBON BAR you will find a bar which we have called AUXILIARY BAR where you have some useful functions handy like Create Sections; Select Objects; Smart Design; Zoom tools; and some visual aids like guidelines, grid and subgrid; object guides and hide/show

commands. On the right side of this bar there are some tabs to show/hide/block different design layers. The hotfix led, corresponds to the hotfix object/s you have on screen.

HOTFIX BEADS BAR (4)

To the left of the workspace, there's a vertical toolbar that shows some tools related to the beads (rhinestone, sequin/spangle) palette of the hotfix design and other tools.





If you want to set the type of bead to create a hotfix object or edit (modify) the type of bead of an object, you can press the mouse left button on any bead to select that bead type.

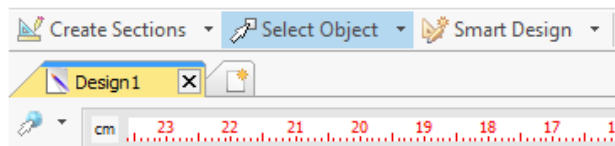
If you want to change the beads palette (beads types displayed on the left of the workspace) you can set each bead with the beads palette function (there is a palette icon) in the hotfix threads bar.

These functions will be explained later.

Understanding Working Modes

There are 4 main working modes:

- Design Creation 
- Object Editing 
- Smart Design 
- Hotfix Editing 



Design Creation

Also known as Digitizing or Object Creation.

In this working mode, users are able to insert many objects in the design.

There are many kind of objects. We classify them in 2 types:

- Graphic/Vector Objects
- Hotfix Objects

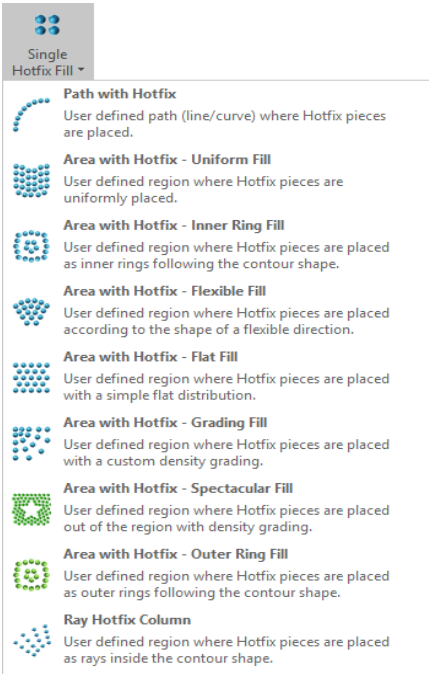
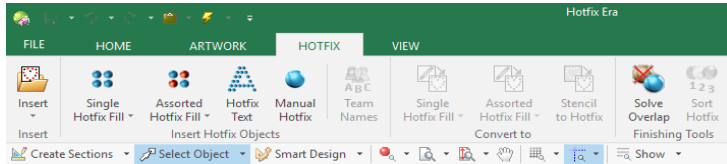
Example:



Create a **new design** document as described previously

Select the HOTFIX tab.

The program will show the MAIN HOT FIX ribbon bar.



Click on the Hotfix Objects group:

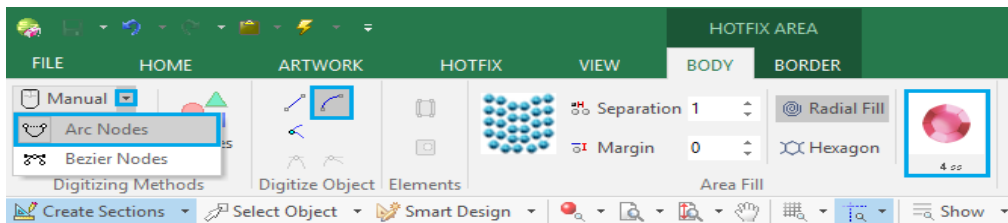
Single Hotfix Fill

The program will show the available Fill Styles.

Select the Hotfix Style:

Area with Hotfix – Uniform Fill

The program will show the Area with Hotfix – Uniform Fill ribbon bar.

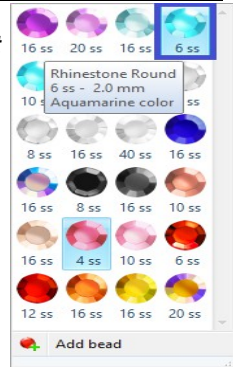


Let's make some adjustments on the properties of the area we are going to do, just by working on the ribbon. These adjustments will apply to the objects we are creating.

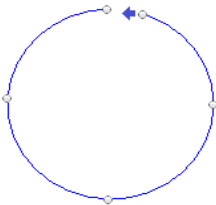
Click on the small arrow on the right of *Manual (Digitizing Methods group)*, and select *Arc Nodes*. Now click on the *Curve* function (*Digitize Object* group).

Click on the bead sample (in this case the Rose color 4ss) to open the bead selector (right capture). It will show you the available beads with their sizes and colors.

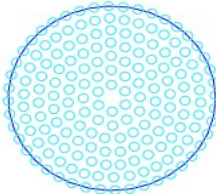
We have clicked over the 6ss Aquamarine color, Round Rhinestone. The change will be automatically updated on your ribbon bar.



Now you can insert the area's reference nodes.

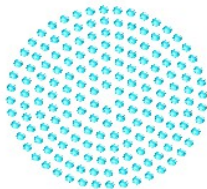


On the workspace, make several mouse left clicks in different precise positions (each mouse click adds a node to the object in construction), creating a circle (or any other shape). Make the last click over the first node to close the shape.



Finally, hit Enter to confirm the created object. The program will generate the hotfix beads.

Note: To confirm you can also click the mouse center button or from the context menu choosing Accept / OK.



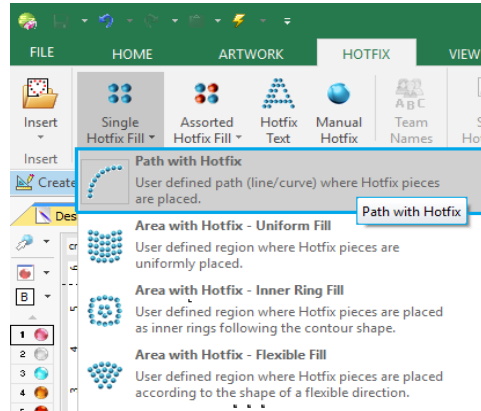
Press F7 to see the object just created in Simulation mode.

Now you can click on the MAIN HOTFIX tab and start creating a second embroidery object of any kind.

Different ways of selecting the same object kind.

You have several ways of enabling the same Hotfix creation tool object:

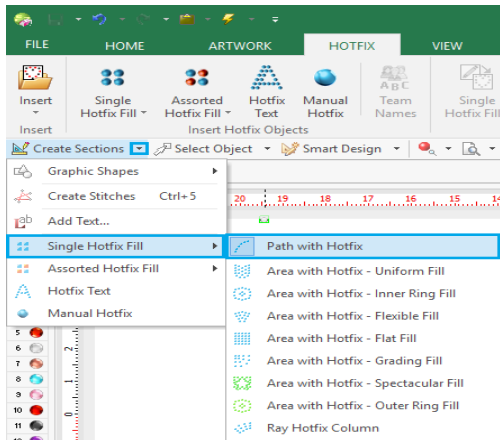
- 1 From the *Hotfix* ribbon > *Insert Hotfix Objects* group > choose the type to unfold the list of available styles. Click on the desired one.



- 2 Selecting it from the *Design Creation* mode button.

Click on the small arrow on the right of the Design Creation mode button.

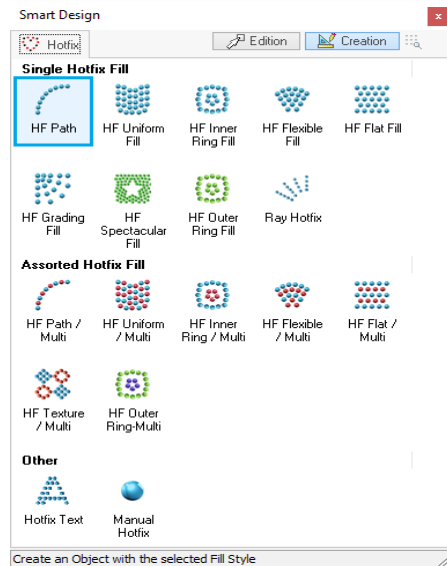
Then select the object type and finally the style to use from the pop-up menus.



3 Selecting it from the Smart Design tool.

Click on the Smart Design button.

Then select the object type and stitch style to use from the Smart Design tool.



Digitizing Modes:

Up to now we have used only the manual digitizing mode (click node by node). There are some details you must know about this digitizing mode, and you must also know that there are other digitizing modes (they may vary according to the software product):

- Manual Digitizing (arc curves, bezier curves)
- Automatic Digitizing (auto-trace, auto-complete, etc)
- Geometric Shapes (regular shapes, auto-shapes)
- Free Hand Digitizing

These digitizing modes will be explained in following chapters.

Conclusion. Important Concept:

- ✓ An object is the simplest element we can insert in a design. The object is defined by a **shape** (contour, holes, etc) with auxiliary elements, and by the **properties**.
- ✓ We insert hotfix objects in a design because it is easier and faster than inserting stones or sequins one by one. When you insert a simple circle and define the hotfix properties (stone spacing, etc) the program converts that object into stones or sequins.
- ✓ If you save the design in the system native format DSG, that format keeps all the information of the objects (shapes, properties, etc.). You may then edit (modify the shape and properties) at any moment easily.

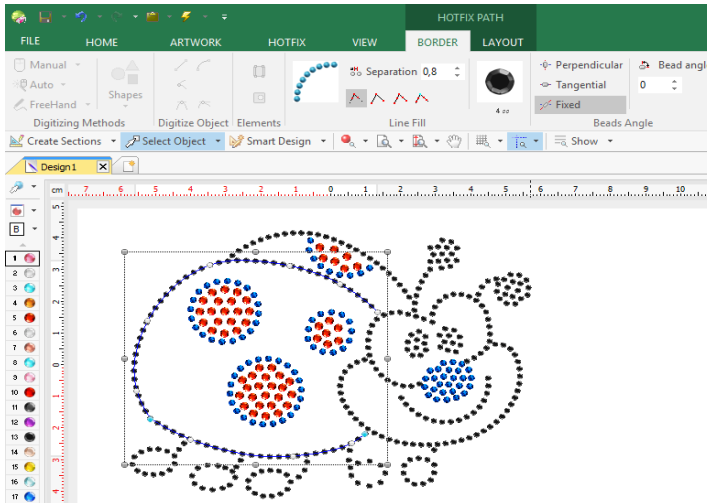
- ✓ Instead, when you save the design in a machine file format (also known as expanded formats), that format only knows about stones/sequin, and the useful information of the object is lost.

System formats include Hotfix Objects.

Expanded formats (machine formats) include Hotfix beads.

Object Editing

This is the second working mode. When you have a design made by several objects, you are able to edit every characteristic of those objects: You can change the shape of an object, enlarge reduce and move it, and modify each property in the same way you did when the object was created.



Press the Select Object tool (to enter the object editing mode).

Select an object or a block of objects in the workspace. A surrounding rectangle will cover the object/s.

Now, you can execute any of the object editing functions, among others:

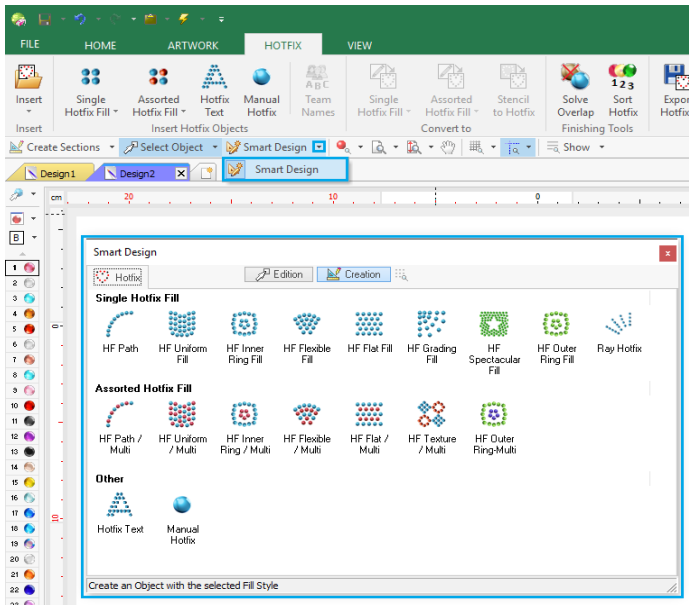
- Move the object (drag and drop the rectangle)
- Re-size the object (move the rectangle handlers)
- Rotate the object (press the CTL key and move the rectangle handlers)
- Change the shape of the object (drag and drop the nodes of the object)
- Modify any of the elements of the object
- Change any of the fill properties (from the ribbon bar, or from the object inspector)

After you edit a hotfix object, the program will re-generate the stones/sequins according to the new object features.

As explained, when the design is made of objects, then object editing is very powerful to modify existing designs. It uses the generation engine to rebuild objects. By contrast, hotfix editing (stone by stone) is more complicated, slow, and it doesn't use the generation engine of this software to rebuild design parts.

Smart Design

This is the third working mode. This tool simplifies the steps and speeds up the object creation or edition process, as well as some functions related with the auto-digitizing feature over vector objects.



Press the Smart Design tool (to enter the Smart Design mode).

A window with the tabs Hotfix; Edition and Creation will open.

Click on the Creation tab to see the available tools to build a new object;

Click on the Edition tab and select an object, to be able to...

...convert it from vector object into and embroidery (or Hotfix) object;

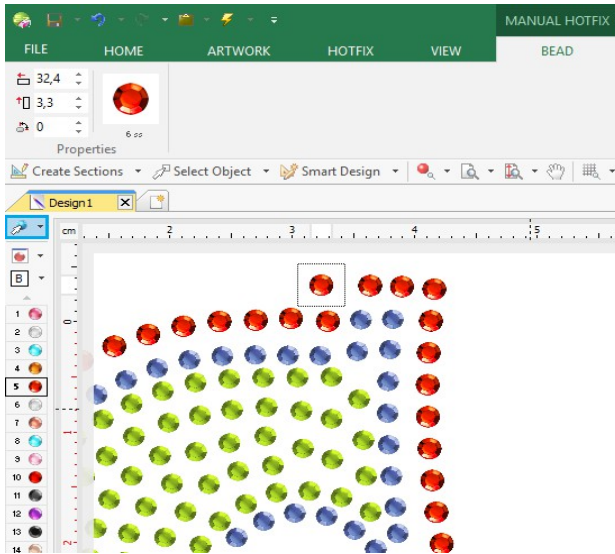
... convert the kind and fill of an embroidery (or Hotfix) object to a totally different one, among the available.

If your software product has both embroidery and hotfix features, this tool allows the conversion of embroidery objects into hotfix ones and viceversa.

This working mode will be explained in Chapter 7 - The Smart Design Tool.

Hotfix Editing

This is the forth working mode. Also knows as Expanded Editing. Sometimes you need to edit stones on a hotfix design. Certainly HotFix ERA includes the tools for expanded editing. Expanded editing is required when the design is not made of objects, this is the case when the designs are imported from commercial machines file formats. However expanded editing can also apply to objects if fine tuning is required.



Press the Edit Hotfix tool (entering to the hotfix editing mode).

Select a hotfix bead in the workspace. It will be surrounded by a square.

The ribbon bar will show information about the position, angle and bead type.

Now, you can execute any of the hotfix editing functions, among others:

- Move, delete or insert beads
- Select blocks, then move, delete, rotate, copy & paste, etc.
- Use the Repetitions group of functions (Duplicate and effects options).

Common Tools

There are some useful tools that are always available no matter what tab is active. They are located in two groups: one above the working area which we will call Auxiliary toolbar and the other on the right edge of the working area, called Views Panel;



The one above the workspace area gathers the following functions: on the left: Create Sections, that allows to build new objects, graphic shapes, and hotfix; Select Object, used to

select one or more objects for edition; Smart Design, a great tool for quick object creation, edition and conversion (briefly explained in previous pages); and visualization tools like simulation view, zooms, pan and hide/show options;

On the right you will find some very helpful led lights, one for each document type you are using and each with its corresponding tab in the Document Map. You have Auxiliary; ScreenPrinting; Cutter; and Hotfix. They allow you to Hide, Show or Lock the objects that form your design to easier your designing process.

Auxiliary toolbar will be explained in the next Chapter.

Views Panel – Object Manager

Located on the right side of the workspace area, the Views panel allows you to explore the structure of your designs, that is, the sequence of entities the design is built of.

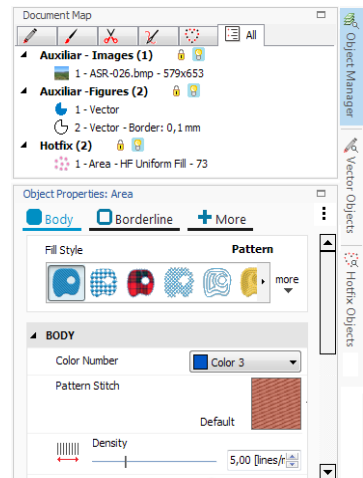
The main view is the Object Manager. It contains a panel with a map of the design, divided in object types, and section by section, with predefined fill modes.

Below is the Object Inspector, which shows the complete list of properties to be able to control, in detail, how the system will generate the beads for your hotfix designs.

When you click on a section on the Object Manager, the Object Inspector shows all the related properties to the object selected.

Another important view is called Hotfix Objects. It shows a Sequence of all the Hotfix Objects present in the design, and below it, a list of all the design's hotfix beads.

The last view, called Vector Objects shows a list of all the vector objects present in the design.

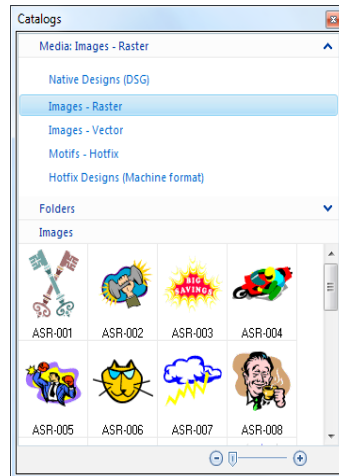


Catalog

There's also another group gathered in a floating window that remains open once you click on its access, named Catalog. It is located on the HOME ribbon, INSERT group. It allows graphic browsing of all the media handled by your software so you have quick access to it. It's divided in three panels. The upper one shows the media type: Images (Raster and Vectors); Native Designs (DSG files); Hotfix Designs (machine format) and Motifs (predefined files ready to be used);

Having selected the media type, the second panel, named "Folders" shows the available folders on your computer. Navigate through your disk units and folders until you find the one needed. The third panel, named "Images", will display the contents of the selected folder graphically.

Find the desired object and just drag it into the workspace to load it. Don't worry about the object type, the system will recognize it and will proceed properly.



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Chapter 2

The File Page and Ribbons

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In this chapter you will learn about the basic commands you need to open hotfix files and use the large set of visual tools available to explore the design, manipulate its colors, access detailed information and generate printouts.

The File Page

Once the program is loaded, the **File Page** will open.

The first screen to be displayed shows the File - Open commands. You have other commands grouped in the File page besides Open. They are Save; Information; Print; Options and Account. We will see them in detail in this chapter.

File - Open

From this command you can load all types of designs (expanded and condensed) into Hotfix ERA.

It offers several options to start your work, which are gathered within the following group names:

- New;
- Open a Design Document;
- Import;
- Recent Documents;

New

Blank Design Document: Opens a new working window ready to start working.

Simple Wizard: Use this option to create new designs by just indicating the design name, storage folder, design authoring information, classification, job order, and price.

Complete wizard Hotfix: This option will prompt you to specify design name, storage folder, design authoring information, classification, job order, price, and hoop to be used. Some information is optional and other is required.

Open a Design Document

Open a Design Document: Displays an Open Design dialog so you can browse your units and folders and select the design (condensed format) you want to open, in a new working window.

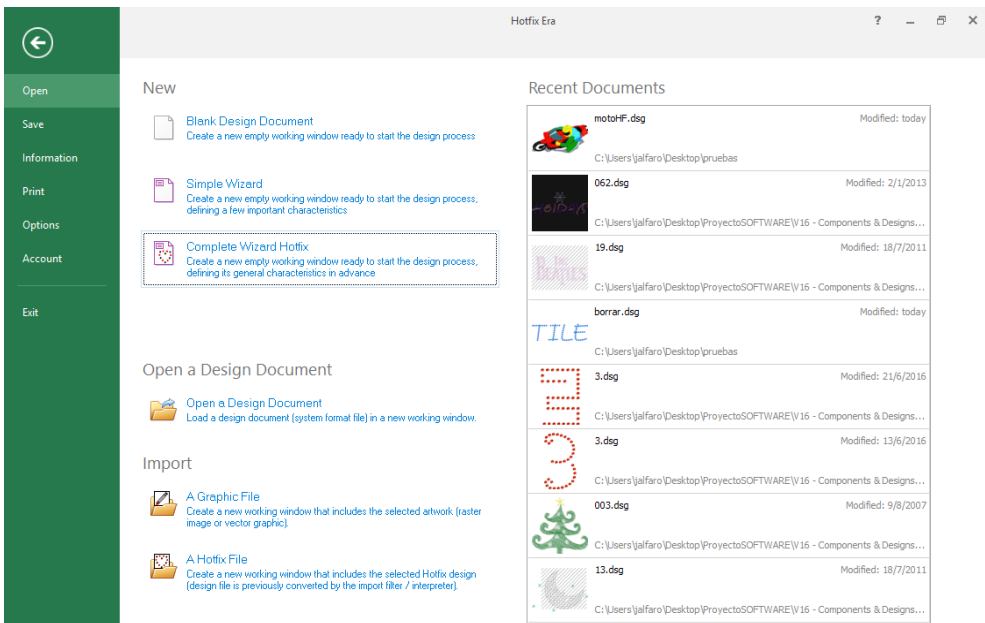
Import

A Graphic File: You can open a Raster or Vector Image into a new document, as well as getting an image file directly from Corel DRAW or Adobe Illustrator.

A Hotfix File: Open an already made hotfix file into a new document.

Recent files

Shows a graphical preview of the last recent designs loaded, so you can double-click on any to quickly re-open it.



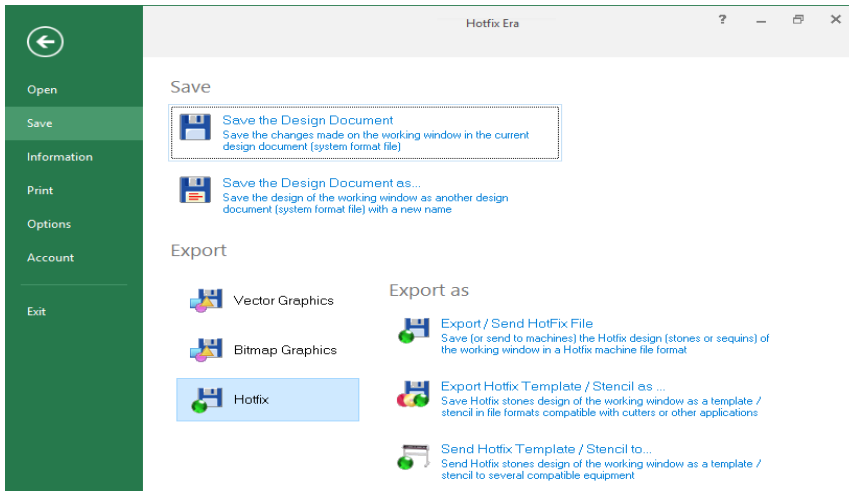
After you click on any of the available options, a window may open.

- You can browse your units using the left panel and the Look In control available in the toolbar.
- You can switch the view mode to icons, list, details, several thumbnails mode, etc
- You can select the codes to be displayed or use the All Files filter to indicate Hotfix ERA to display all types of embroidery files.

To open a design just double click on it (or select with one click and press the Open button).

File - Save

From this command you can save (store) the active design (current design document) in the system native format, export the design in any compatible machine format, send the active design directly to the machine for production, etc.



It offers several options to start your work, which are gathered within the following group names:

Save

Save the Design Document: Save the Design Document to save a Design format file also known as condensed file. You can save Sierra Designs (DSG files)

Save the Design Document as...: This option will save a copy of the working window with another name.

Export

Vector Graphics

Bitmap Graphics

Hotfix

When you click on any of the options, "Export As" will list the available choices.

When you finish your work with a condensed design, save it for the last time to keep the last changes made and use the Export command to prepare it to be sent to your machine.

If later, you need to make some changes, open the dsg file (condensed), make the changes, save the dsg file and export it again.

This procedure may sound too indirect at this point but, as you will discover in the following chapters, dsg files are much easier and flexible to modify than expanded design files.

The whole idea is to work, all the time, with dsg files and export them into expanded files just before sending them to the machine.

Note 1: Hotfix Era offers an auto-backup feature that automatically saves the active design at a regular time interval (specified in File – Options - Preferences Setup – Project – General). However, it's a good practice to save the design by yourself once you have complete a task you consider important during the design process.

File - Information

From this command you have access to four different groups that have to do with the design information, sharing and production calculation.

Information

- **Design Properties (Infocard):** Shows a summary of the design properties including information of authoring and classification.
- **Hotfix Properties (Infocard):** Shows a summary of the hotfix properties.

Share

- **Share the Design in Social Networks:** You can upload the design on the work window along with a comment via Twitter.

Product Calculation

- **Hotfix Database Price Setting:** Allows setting the prices of hotfix to be used in costing calculation.
- **Hotfix Pricing:** Calculate Hotfix design cost based on prices of hotfix configured.

We will see each one in detail.

Information-Design Properties (Infocard)

It is divided in three tabs: General; Job and Authority; Category.

General tab

Contains basic design file information such as design name, file name, storage path, file size, creation date, last edition date and file attributes.

Job and Authority tab

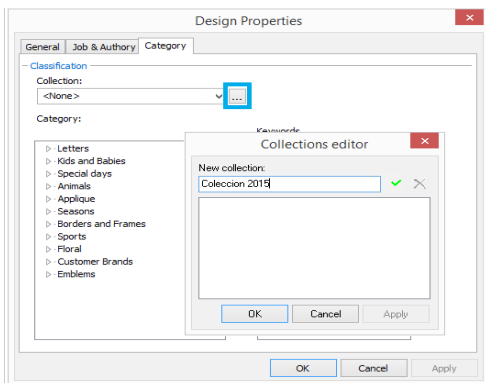
Using this tab you can add job order and design author Information.

Data related with job order includes order number, requesting and creation dates, customer name and time used (computed automatically)

Author information includes design codification, owner, author, copyrights, etc.

Category tab

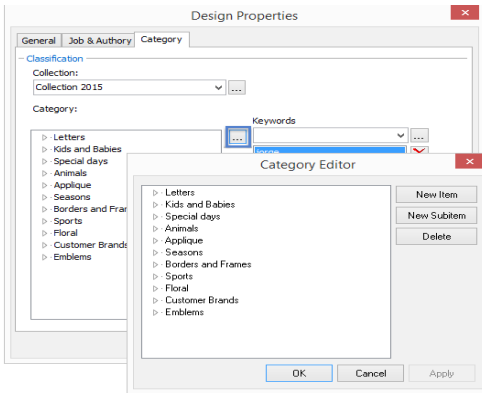
Last, the Category tab allows to establish information about Collection, Category and Keywords which will be assigned to the design. All this data will be very useful for those design saved in the Design Library.



To add information follow these steps:

Collection – To add a new collection, clic on the ellipsis button [...], which is marked on the left figure.

The Collection Editor box opens, type the name and press the green check button to finish inserting it to the system, it will be listed in the Collection list, clic on the OK button to confirm the Collection just inserted.



Category – It is a hierarchy tree. To assign the design a determined category, simply select it from the list.

In the case the Category does not exist, enter the Category Editor through the ellipsis button [...] and type the adequate category.

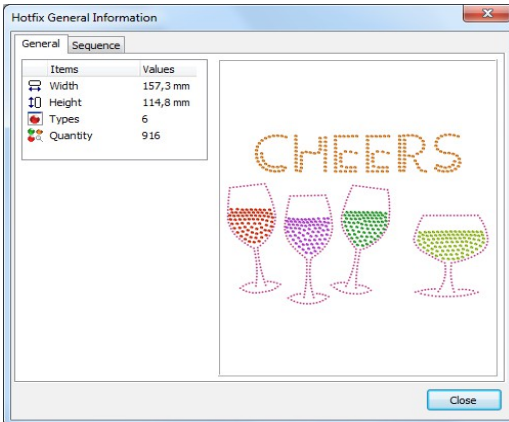
From this box you can create and delete items and sub items through the corresponding buttons (see left figure).

Keywords - Keywords are intended for helping searches. A keyword is a descriptive word (normally just one word) related to the design thematic. A design may contain several keywords. You can add keywords using the Keyword editor (ellipsis button).

Information-Hotfix Properties (Infocard)

It's divided in two tabs: General Information and Sequence.

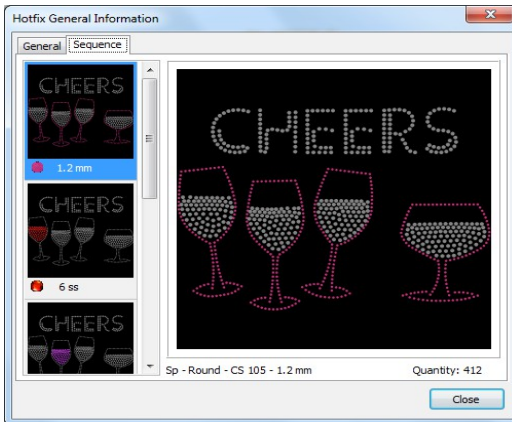
General Information tab



It's divided in two panels. Left panel includes general design data such as Width, Height, number of different types of beads and Quantity.

The right panel shows a simulation view of the design.

Sequence

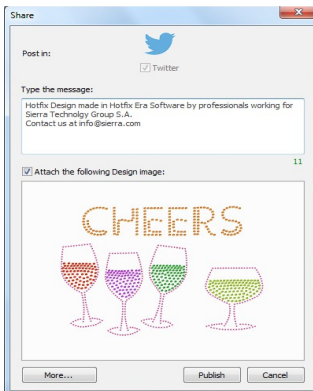


Within this tab you will find on the left a sorted list with a graphic view showing the beads color in the design in the order they will be processed.

The thumbnails also contains information about the bead diameter.

On the right you will find a simulated view of all the design, but highlighting the bead type you selected on the left panel.

Share-Share the Design in Social Networks



This option allows you to upload the design that is on the work window to the Social Networks - Twitter.

You may add a comment along with the design.

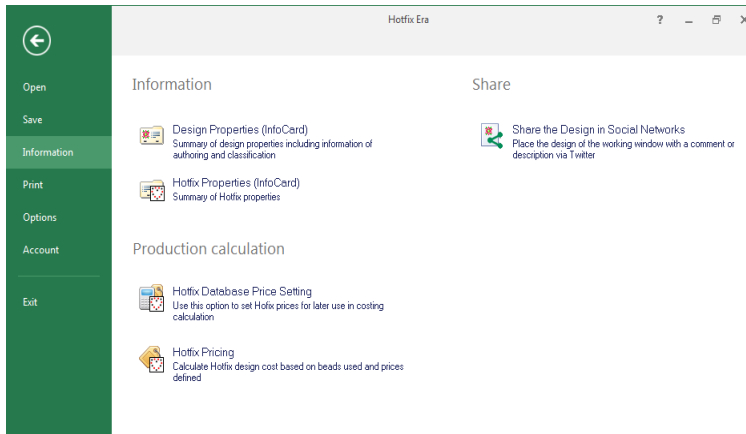
Follow these steps:

With the design you want to upload on your active document windows, go to the *File-Information* tab, then to the *Share* group, and click on *Share the Design in Social Networks*.

Information-Product Calculation (Optional Feature)

Hotfix Era includes tools to prepare hotfix service quotations.

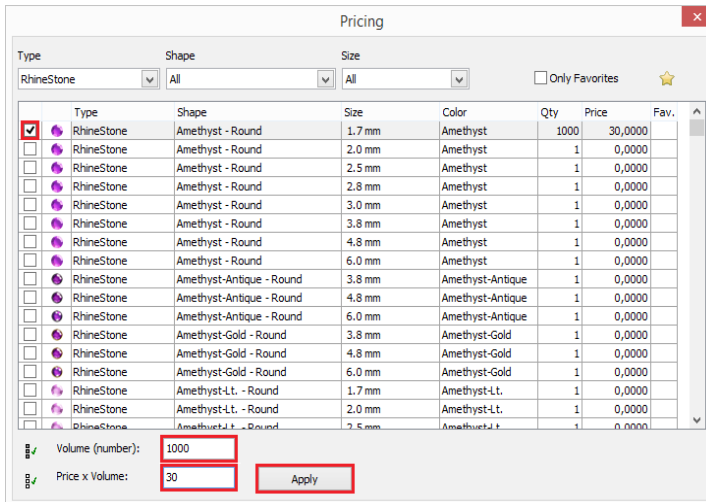
You can access these tools from the *File – Information - Product - Calculation* menu, and selecting any of the items: *Hotfix Database Price Setting* or *Hotfix Pricing*.



Hotfix Database Price Setting

This dialog box lets you add a price to any of the listed bead types, for a later use in pricing calculations.

Use the Type, Shape and Size filters to be able to find a desired bead easily on the list.



From the *Type* list you can select among Rhinestones, Rhinestuds, Nailheads, Sequins and Spangles.

From *Shape* you can choose the geometry you are looking for among: Std-Heart; Std-Octagon; Std-Oval; Std-Rectangle; Std-Round; Rim-Round; Std-Square and Std-Star.

Once you selected the bead Type and Shape, you will be able to find the dimensions available on the Size list.

Once you find the desired bead, select it by checking its corresponding box. Insert the Volume (number) , and Price x Volume and press Apply. The system will automatically update the information on the list.

Hotfix Pricing

This tools is specialized to prepare hotfix service quotations based on design information, beads count and price values you define.

To determine a price for your design follow these steps:

1. Open the hotfix design on screen.
2. From *File > Information > Product Calculation* , choose *Hotfix Pricing*.
3. The *Hotfix Cost* dialog box will open showing the total cost of the selected design.

Description	Qty	Price	SubTotal
RhineStone - Std - Round - Rose - 4 ss	966,00	0,0267	25,76
RhineStone - Std - Round - Jet Hematite - 4 ss	749,00	0,0200	14,98
RhineStone - Std - Round - Peridot - 4 ss	95,00	0,0240	2,28
			43,02

If any of the items shown on the Hotfix Cost dialog box do not have Qty. and/or Price, or you want to update any of the values, you can set them through any of the following ways...

- From the Hotfix Database Price Setting (previous page) ...

but more directly...

- From *Prices* button, to open the *Pricing* window with only the beads used for the selected design. Select each type, insert *Volume* and *Price*, and press *Apply*.
- From *Set price for selected bead* button. On the *Hotfix Cost* dialog box, click on one of the items to highlight it. Upon pressing the button, the *Set Price* dialog box will open. Insert *Volume* and *Price*, and press *Apply* to update the information.
- From the Hotfix Cost dialog box, you can print the Pricing information of the design.

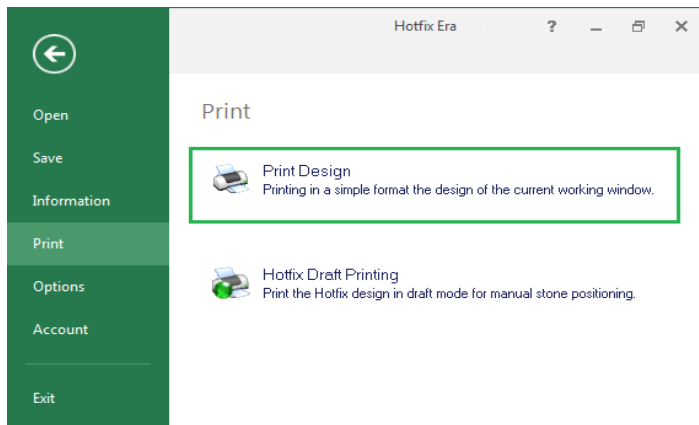
<u>Quote</u>				
Design	HF_Peach			
Size (width)	124,7 mm	Hotfix types:	3	
Size (height)	204,1 mm	Hotfix quantity:	1810	
Description		Qty	Price	Subtotal
RhineStone - Std - Round - Rose - 4 ss		966,00	0,0267	25,76
RhineStone - Std - Round - Jet Hematite - 4 ss		749,00	0,0200	14,98
RhineStone - Std - Round - Peridot - 4 ss		95,00	0,0240	2,28
		Total		43,02

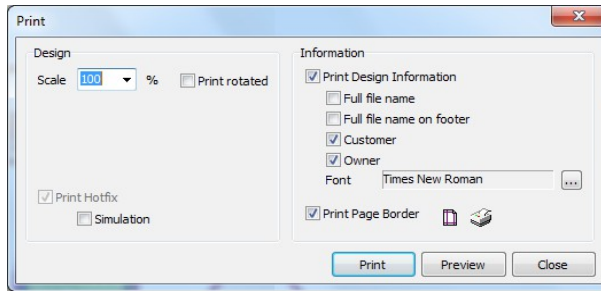
File – Print

Hotfix Era offers two methods for printing your designs: Standard Print and Hotfix Draft Printing. The Standard Print allows a general, simple layout, with a quick setup, while Hotfix Draft Printing prints the Hotfix design in draft mode for manual stone positioning.

Standard Printing

To print the active design, just use the Print command from FILE – PRINT – PRINT DESIGN. The Print box allows you to select basic printing parameters for the design picture and for the information to be printed with it.





Scale: This parameter refers to the size of the design in the paper sheet. Use 100% to get a full scale, 1:1 print out

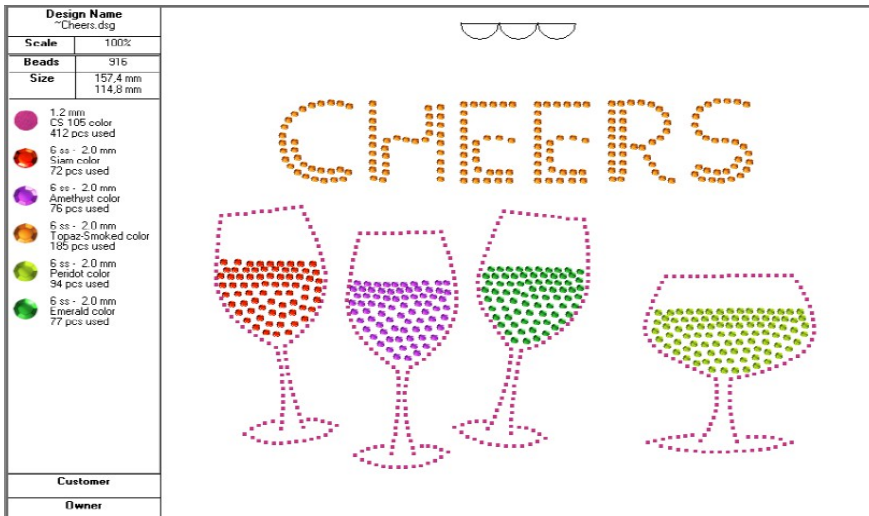
Print rotated: When checked, the design is printed in landscape mode.

Print Hotfix - Simulation: When checked, the design is printed in simulation mode.

Print Design Information: Check this box to include an information area in the printout. The marks Full file name, Customer and Owner allows you to set what extra information should be included.

Print Page Border: Check this mark to force a thin box to be printed all around the layout.

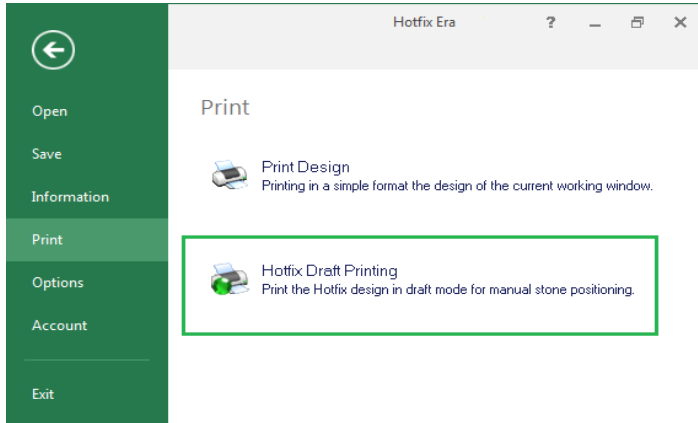
Note: Use the Preview button to check how the printout will look before printing. Use the controls at the lower right corner to control page margins and set printer preferences.



Hotfix Draft Printing

Use the option Hotfix Draft Printing to print the Hotfix design in draft mode for manual stone positioning.

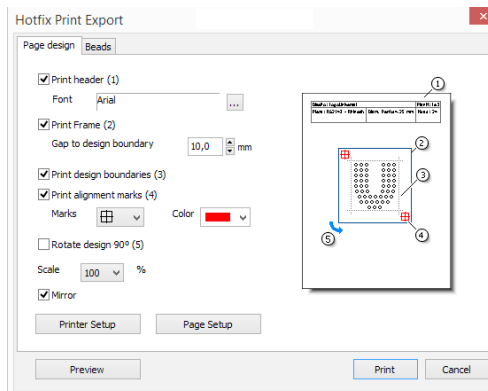
To print the active design, just use the Print command from *File* ribbon > *Print* > *Hotfix Draft Printing*.



The *Hotfix Print Export* dialog box will open (next figure). It allows you to select basic printing parameters for the design picture and for the information to be printed with.

This command lets you print placement sheets to use them, for example, as a reference for manual placement:

- Print the placement sheet.
- Put a transparent transfer sheet (adhesive up) over the placement sheet.
- Manually set the pieces using the placement sheet as reference.
- Set the transfer sheet on the garment and apply heat.



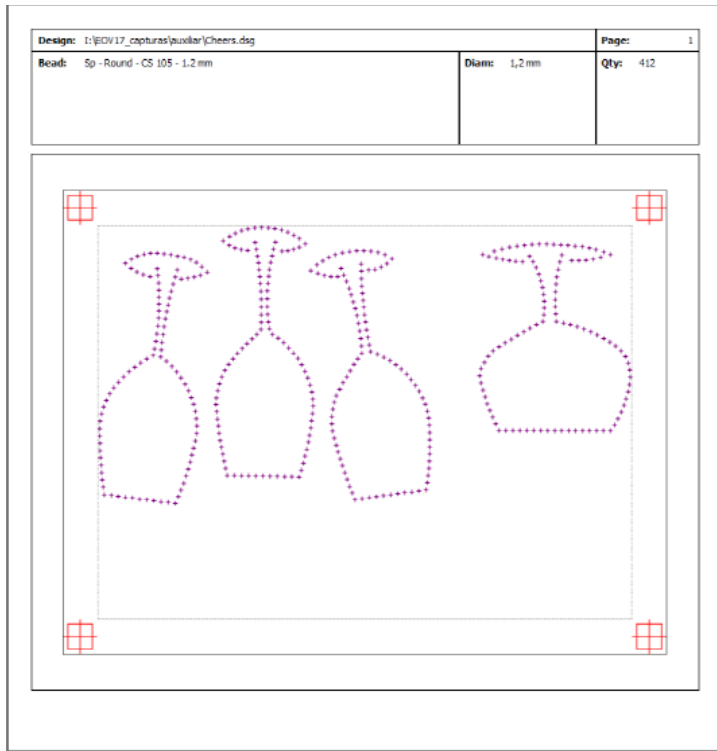
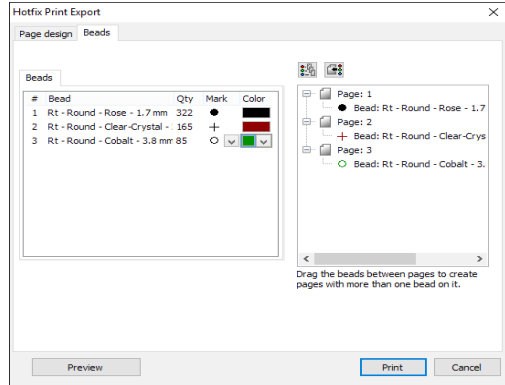
The print dialog is organized in two tabs:

Page design:

Lets you control the reference elements that will be printed: information header, design frame, alignment marks, design rotation and general scale.

Beads:

Includes two lists: A bead types list at the left and a Pages List at the right. You can change the Marks visualization and colors among the options given, to be able to locate them easier.



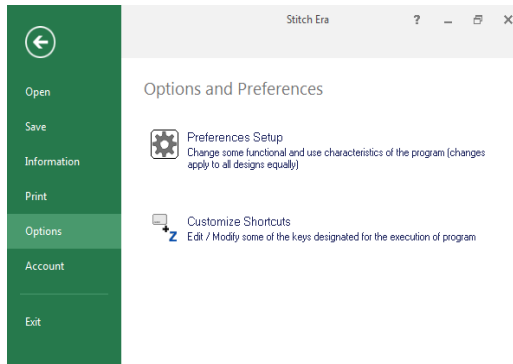
File – Options

Hotfix Era lets you customize many topics related with the interface look and system behaviour. All the configurable options are managed from the FILE tab, OPTIONS section.

These options include functions related with the setting of this software application.

Options and Preferences show three possible customization choices:

- Preferences Setup. You can make some adjustments on the program to suit your needs.
- Customize Shortcuts. You can modify some of the predefined function keys to work faster on your designs.

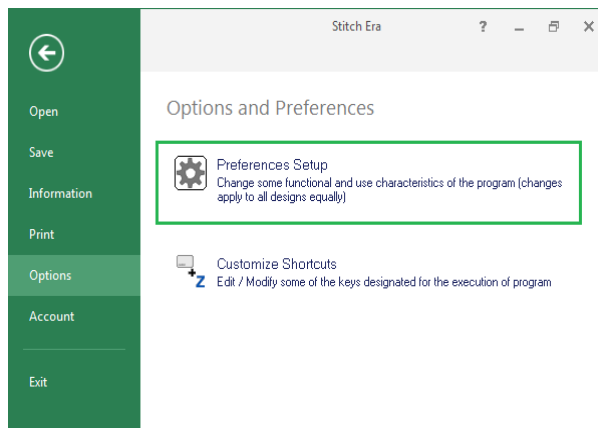


Preferences Setup

The Options and Preferences box shows a tree where the configurable options are organized in categories and topics.

Your settings will be saved when you press the OK button and will be preserved permanently.

The following paragraphs contain a brief description about the configurable options:



Application

This category contains settings to set the preferences about:

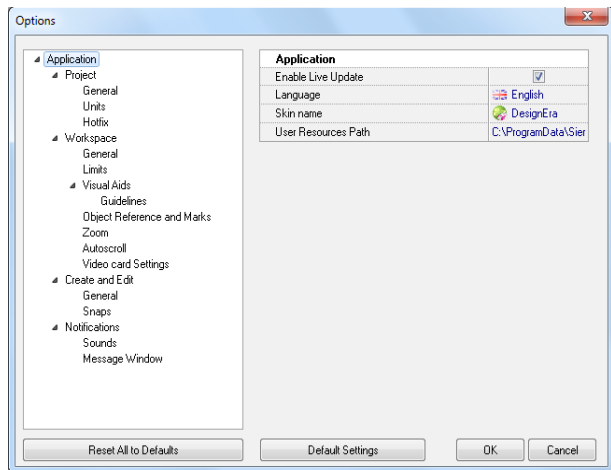
1. Live Update: When enabled, the system checks for updates, services packs, news and special offers available for your product. This option requires internet access.
2. System language
3. Skin name: you have a list of available skins to choose from, to change the appearance of your software.
4. Users Resources path: to set the location of the components made by the user.

Project

General: This category contains options to control how the system starts.

Units: Lets you select the measurement units used for different elements. Click the numbers in the Group column and review the brief description, indicating the elements the units apply to.

Hotfix: This category allows you to configure what kind of beads will be shown (Rhinestones / Rhinestuds / Nailheads / Sequins / Spangles), the cutting margin and the way of sorting them.



Workspace

Within this category you will find options to manage the appearance of the workspace and visual aids, and the behaviour of some visual tools.

General: Options for rulers, large cross cursor and ribbon fitting in 1024 pixels wide screens

Limits: Set the max. workspace size and decide if the work area is limited to the workspace (system will not allow you to place objects outside the workspace if you check the option)

Visual Aids: This group lets you control de Guidelines (or Reference lines) position and colour and to define the Grid and Sub grid look and behaviour

Object References and Marks: Controls in this group allow you to define the visual aspect (color, transparence, etc.) of the marks the system uses to represent nodes, sections

references, etc.

Zoom: Use these controls to define the zoom factors and use of mouse wheel for zooming.

Auto scroll: This group controls the automatic scrolling feature: region size, speed, etc.

Video card Settings: These are important settings related with the performance of your display system. If you are using a good video card, you will want to set the Video hardware acceleration to the highest value to get faster screen redraws. It is also recommended to activate the Enhanced line drawing.

Some video cards may be not fully compatible with OpenGL implementation, and you might experience abnormal screen redraw. Lower the Video hardware acceleration value. Set value to zero, if video card is totally incompatible with OpenGL.

Create and Edit

This category includes the available customizable options for edition and creation tools and to set some general features of stitch generation and processing.

General: You will find options to control curve types (bezier or arcs), to hide and show some references while create or edit, to manage the Auto Generation mechanism, etc.

Snaps: Use this controls to enable or disable the snap schema and to define what snap tools you want. Snap is useful when you need to digitize with large accuracy, for example, when creating geometric designs.

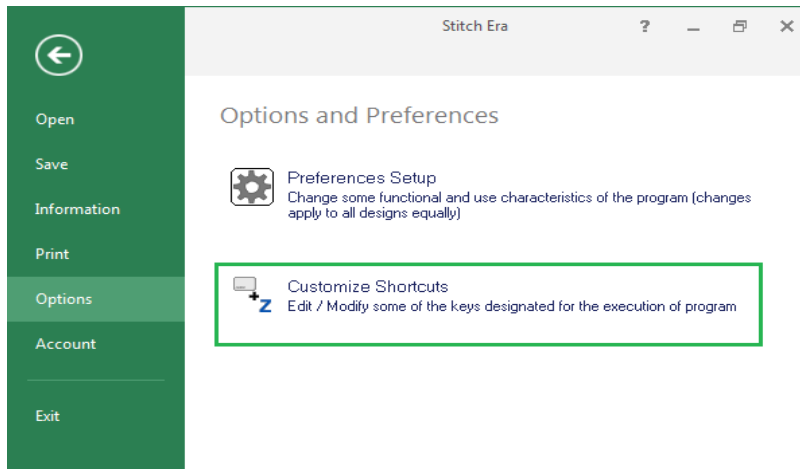
Notifications

Into this category you will find options to configure sounds for specific events and to control the Messages Window behaviour.

Reset to Default Values

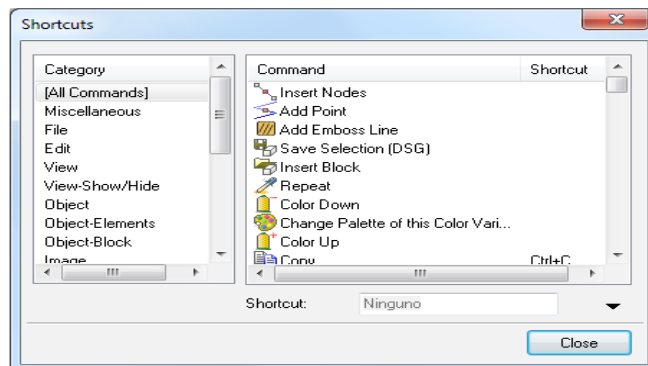
Settings in each group can be reset to their default values by pressing the Default Setting button located on the corresponding group. If you need to reset all the configurable options to their factory values, use the button Reset All To Default located below the tree panel.

Customizing Shortcuts















Hotfix Era lets you customize the shortcuts for most of the commands. To do so, follow the next steps:

- 1- Click on the FILE tab, then on OPTIONS group and select “Customize Shortcuts”.
- 2- In the Shortcuts box, locate the command you want to modify its shortcut, using the Category and Command lists.
- 3- Click on the box named Shortcut, press the desired key sequence and confirm it with the green button. Repeat these steps for all commands you need.








Keyboard Shortcuts




	File	
	New (Blank Design)	Ctrl + N
	Open	Ctrl + O
	Save File	Ctrl + S
	Save as	Ctrl + Alt + S
	Print	Ctrl + P
	Design Information	Ctrl + I


	Edit	
	Copy	Ctrl + C
	Cut	Ctrl + X
	Paste	Ctrl + V
	Undo	Ctrl + Z
	Redo	Ctrl + Y
	Delete Hotfix	Del

	Help	
	Language	Ctrl + Alt + F1

	Object-Elements	
	Corner Node	Ctrl + L
	Curve Node	Ctrl + K

	View	
	Refresh	F5
	3D + Aux	F7
	Simulation View	Ctrl + F7

	View-Zoom	
	Zoom Area	F6
	Maximize Total	Ctrl + F6
	Maximize Object	Shift + F6

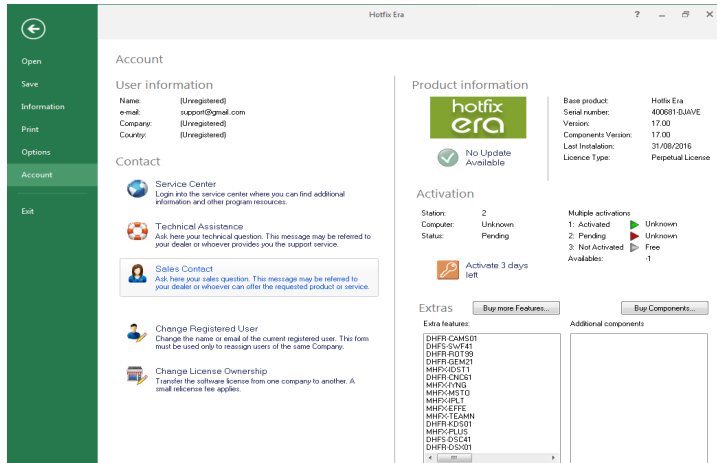
	View-Show/Hide	
	Show Sections	F2

File – Account

Gives you information about the User, installed Product, Activation Status.

It also lets you buy Features and Components.

You have contact links to the Service Center; Technical Assistance; Sales Contact; and to change Registered User and License Ownership.



Learning about the different Ribbons

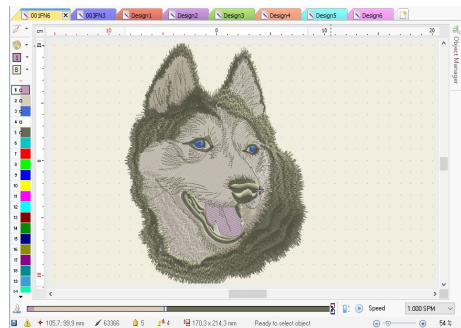
Once you have selected any of the File-Open commands, the main view will appear.

You will see a group of different ribbons which we named in the previous chapter. In this chapter we will talk about the Home and View ribbons. Artwork ribbon will be studied in chapter 3 Images and Vectors. Hotfix ribbon will be shown from chapters 4 to 7.

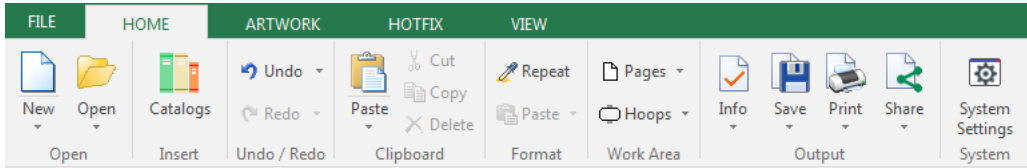
Within Hotfix Era we call Main View to a series of panels and windows that display the design considering different aspects, like graphic look, entities sequence, stitches, etc.

Most of the job with a design is done in the graphic area we call workspace or main view.

It is the largest area in your screen and displays the design graphically. Every time you open a design or create a new one, it is presented within a new tab. You can switch among loaded designs by simply clicking on its corresponding tab.



The Home ribbon



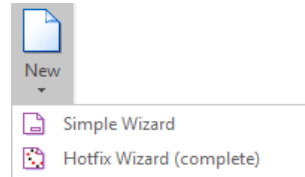
Open

This group has two commands: *New* and *Open*.

New: click on the arrow to unfold the possible options.

Simple Wizard: Use this option to create new designs by indicating just the material and hoop.

Hotfix Wizard: Same as previous one.

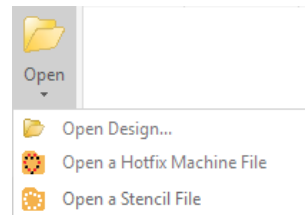


Open: click on the arrow to unfold the possible options.

Open Design: Use this option to open a native.

Open a Hotfix Machine File: Allows opening a file with extension YNG; DST; PLT and CSV.

Open an Stencil File: Allows opening a file with extension PLT.



Catalogs

It is located on the HOME ribbon, INSERT group. It is a floating window which remains open once you click on its access.

It allows graphic browsing of all the media handled by your software so you have quick access to it. It's divided in three panels. The upper one shows the media type: Images (Raster and Vectors); Native Designs (DSG files); Hotfix Designs (machine format) and Motifs (predefined files ready to be used);

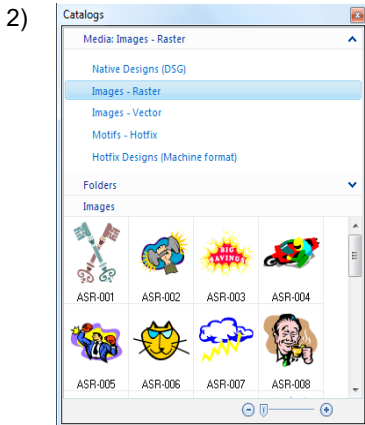
Having selected the media type, the second panel, named "Folders" shows the available folders on your computer. Navigate through your disk units and folders until you find the one needed. The third panel, named "Images", will display the contents of the selected folder graphically.




Once you find the desired object, step on it, and drag it into the workspace. The system will recognize the type of object, proceed to open it on the workspace, and visualize the corresponding ribbon toolbars.

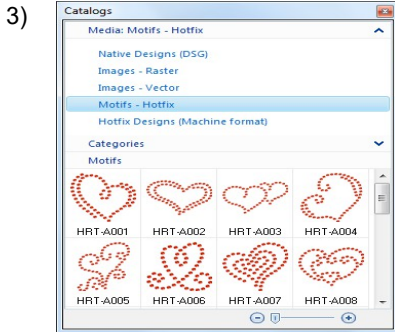
Example: We are going to open a hotfix motif named *HRT-A0001*. Follow these steps:

1) Open a blank document. On the *Home* ribbon, *Insert* group, click on *Catalogs*.



On the first panel, click on the  to the right of the item *Media: Images - Raster* to unfold the list of other Media type available.

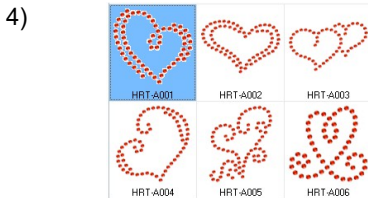
Click on *Motifs – Hotfix*



The *Media* type will now show: *Motifs – Hotfix*

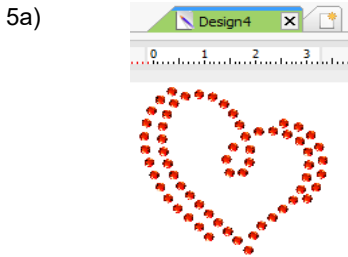
The third panel will show *Motifs* and beneath it you will see all the Motifs found on the first Category (listed in Categories).

To see the contents of another Category, on the second panel, click on the ▼ to the right of the item Categories to unfold the list of the others available. Click on the desired one to show the contents on the third panel.



Step on the motif you want. In this case, the *HRT-A001*.

You have two options: OPEN or EDIT the motif.

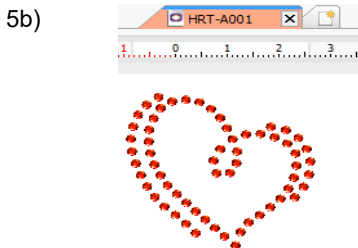


OPEN it as a new design...

> just by dragging it from the Catalogs window and dropping it on the workspace;

> double click on it on the Catalogs window, and then, on the workspace, keeping the left mouse button depressed, move it as you were making a rectangle. You will see the design being made. When you are satisfied with the size, release the button.

Note: See that the name of the *document tab* says *Design4*, which corresponds to a design file.



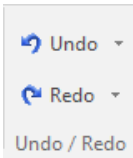
EDIT the motif to make changes on it.

When you save it, it will update the existing motif.

Create a different one by using the Save as...command.

Note: See that the name of the *document tab* says HRT-A001, which corresponds to a motif file being edited.

Undo and redo



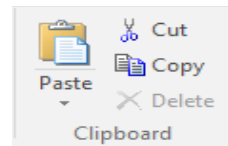
It is always possible to undo the last actions taken, starting by the most recent, from the Undo command.

It is also possible to access this command from the quick access toolbar or from the Ctrl + Z shortcut. If you are not pleased with the undo result, you can restate the option from the command Redo, or through the shortcut Ctrl + Y.

Note: Remember that in basic levels, there's a limited number of undo/redo actions.

Clipboard

During the process of making copy and paste, once you have pressed CTRL+C, the object will remain in the clipboard until you decide to paste the content of it (CTRL+V). You can copy and paste raster and vector images; design, embroidery, and hotfix objects from the clipboard.



Delete



Use this command to delete a section or group of sections without modifying the rest of the design. First of all, it is necessary to select a section or block. Then, access the Home ribbon or context menu and click on the Delete button.

Cut



This command copies the section or block selected into the clipboard and deletes it from the current document without modifying the rest of the design. The block cut remains in the clipboard. Activate the command from the Home ribbon or click on Ctrl + X.

Copy



This command copies the section or block into the clipboard, without altering the current design or deleting the original section or block. Click on the Copy command from the Home ribbon or click on Ctrl + C so that the clipboard holds the selected block. Then, paste it wherever you want.

Paste



This command copies the clipboard content in the active document. To use this command, you must have previously copied or cut a block. Click on the Paste command. Paste in the toolbar or press the Ctrl + V keys.

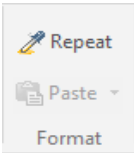
Paste in Place



This command copies the clipboard content in the active document, but exactly in the same place of the copied object (original).

Yet, there are certain image creation applications that allow you to copy an image file type you are working on (Windows Metafile, EMF, etc.), to the Clipboard. This is recommended for certain sketches with a high level of elements, or when it is necessary to obtain more precision (better level of detail). You may then paste it in Embroidery Office using these commands.

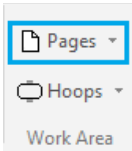
Format



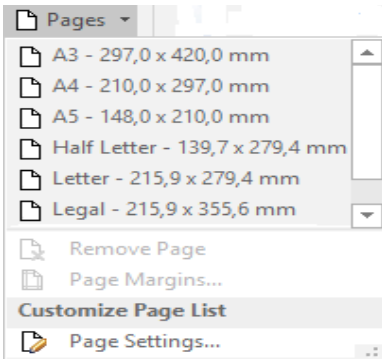
Repeat command lets you pick up an object's properties and copy them to another object of the same kind. Press *Repeat* command, the cursor will turn into a dropper. Click on an object to pick up its properties.

The cursor will turn into a bucket. Click on another object and the properties will be pasted over the new object.

Work Area (Pages and Hoops)

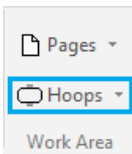


Pages allows defining the work area as a printer/cutter sheet type (A4, Letter, etc.).



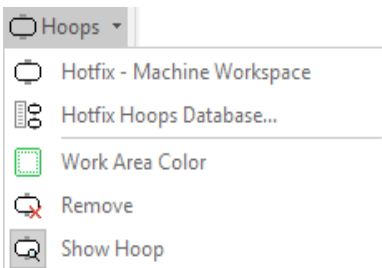
Click on the arrow to the left of the *Pages* button to unfold the available options.

You can also make a new one with your own dimensions on “Page Settings”.



Hoops allows you to display in the workspace an schematic representation of the hoop you will use at the time to process your design.

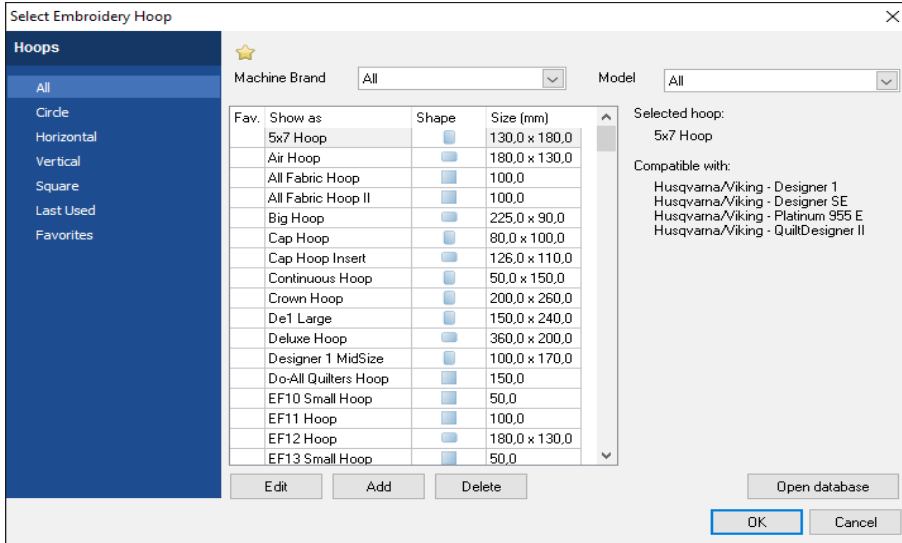
Displaying the hoop on screen gives you the chance to check if design will fit in the hoop area safely, avoiding any machine incidents, and to fix its position if required.



Click on the arrow to the left of the *Hoops* button to unfold the available options.

From *Hotfix – Machine Workspace*, you can select one of the available ones.

From the *Hotfix Hoops Database*, you can customize your hoops. Add a new one or delete an existing one.



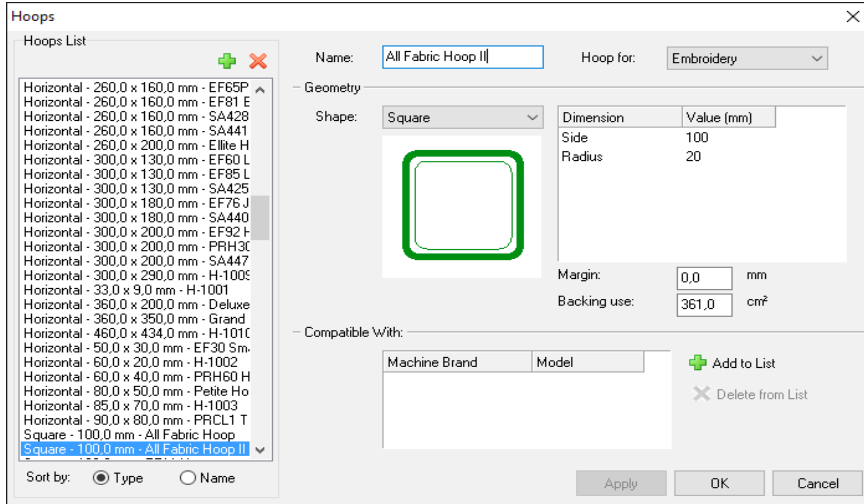
Once selected press OK and use the *Show Hoop* command located in the *Home* ribbon > *Work Area* group > *Hoops* button, to turn the hoop on/off.

Creating new hoops

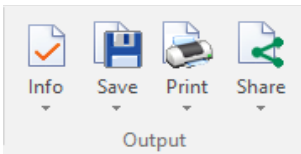
If the one you need is not among the ones available, go to *Hotfix Hoops Database*, and create one on your own.

Use the Add command (the button with a + sign located above the list at the left) to add a new hoop. You will need to specify a name, brand and code (it will help to keep your hoop database well organized) and, of course, the basic shape and size.

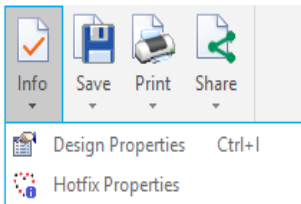
You can also specify a safety margin, that will be displayed as a dotted line around the hoop, and will prevent you to place stitches too closer to the hoop edge. Even more, if you own several machines, you may add a reference to later help you identify what machines can use the hoop, by filling the list “Compatible with”.



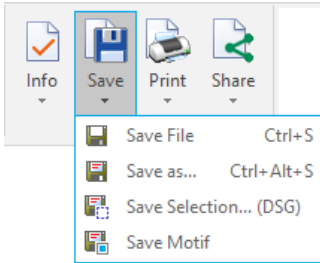
Output options



These options allow you to quickly access the commands that are necessary for gathering information on the design you are making; saving and printing it; and sharing it by e-mail or through the social networks.



Gives important information about the design. Already mentioned in this chapter, Page 7.



Save File: Save the Design Document (DSG files).

Save as...: Save a copy of the working window with another name.

Save Motif: Create a motif (*.motif file) out of a design you created. You can also use a block of sections instead of the whole design. Use the motif from the Catalog (page 32).

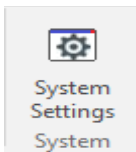


Allows you to print your design in a standard way or with different styles. Already mentioned in this chapter, Page 19.



This option allows you to upload the design that is on the work window to the Social Networks - Twitter. Already mentioned in this chapter, page 9.

System options

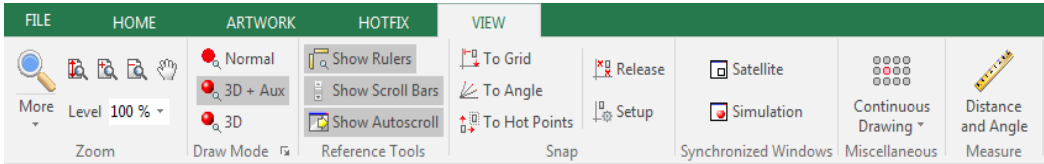


System Settings gives a quick access to the *Preferences a Setup* window. The other way is from *File Page > Options group > Preferences and Setup*

The View ribbon

The View ribbon contains all the commands needed to control how your designs will be displayed on screen. It gives access to the basic Zoom tools, visualization mode (Normal – 3D), lets you

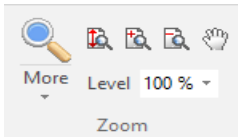
enable / disable reference tools and synchronized windows (Satellite, Simulation and Stitch Navigation), etc.



Zoom Tools

The Zoom group contains all the zoom and panning commands you will need to work comfortably on screen. However, some frequently used zoom tools are always available below the ribbon independently of which one is active (on top of the main work area) and, if available, through the mouse wheel.

Zoom Area (F6)



This is a versatile tool with several functions. The basic one lets you define a rectangular region on the workspace and magnify it to the largest possible size. Just select the tool, move the pointer over the workspace, click and drag diagonally to define the region to be magnified. When you release the button, that area will be shown to the largest possible size.

A second function within this tool is a dynamic zoom mode: Once the tool is selected, hold the Shift key pressed (the pointer shape will change), move the pointer near the center of the design detail you want to zoom and drag up and down. The design will be zoomed in and out, following your mouse drag dynamically.

The third function is triggered with the Ctrl key: when you hold this key pressed, your drag will be interpreted as a panning command. You can alternatively use the Shift and Ctrl keys to perform one or other actions.

Even more, the Zoom Area button is a little special one: If you click near the arrow sign below the label More, it unfolds a menu with several more zoom tools. We will mention them later in this section.

Zoom Total (Ctrl+F6)



This tool considers all objects in your design and calculates the necessary zoom factor to produce a view where all of them are shown in your screen.

Pan



Pan is the action of moving the viewable area so different regions of the design appear on the screen. The result is similar to what you get when using the scroll bars. Note that the physical design position does not change at all, just the region you are viewing changes.

To use the Pan command, you have two different ways:

- a) Select it from the auxiliary toolbar, move the pointer over the workspace and drag. The tool will not remain active when you release the mouse button;
- b) From Reference Tools, click on Show Rulers. Now place the cursor over the ruler, it will change from an arrow to a hand. Click and move the mouse. You will see that the workspace and ruler move in the direction you move the mouse.

Zoom In – Zoom out



Zoom In (+) allows a more detailed (closer) view of the design, while Zoom Out (-) produces a less detailed view, (more distant)

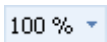
Both tools work with a predefined factor you can set through File – Options - Preferences Setup – Workspace – Zoom.

Zoom in-out using the mouse wheel



If your mouse has a center wheel, you can use it to zoom in and out. Just move the pointer to the region you want to keep visible and rotate the wheel clockwise or counterclockwise.

Zoom Scale

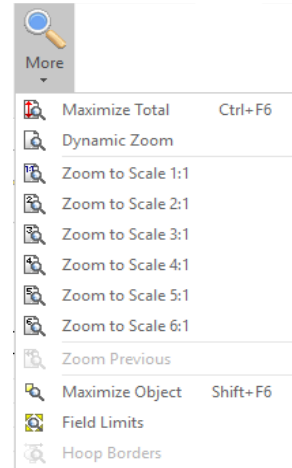


This control allows you to set the main view to a given predefined scale. Please, note that you need to calibrate your screen to get accurate results. See Calibrate Rulers, later on, in this chapter.

More Zoom options

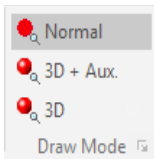
As mentioned, more Zoom options are available when you unfold the menu using the arrow in the main Zoom button:

- Zoom commands to several predefined scales.
- Zoom to selected objects
- Zoom to previous view
- Zoom to design limits



Draw Mode

Normal mode



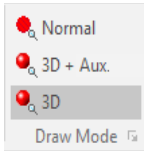
The main view can display your designs in three modes: the standard or *normal mode*, the 3D and the 3D + Aux.

The normal mode provides an schematics representation of the design, where all the elements (stitches, entities contours, etc) are drawn with lines of the same thickness.

You can switch the view mode using the controls in the group *Draw Mode* or using the corresponding button on the Auxiliary toolbar, located above the workspace.



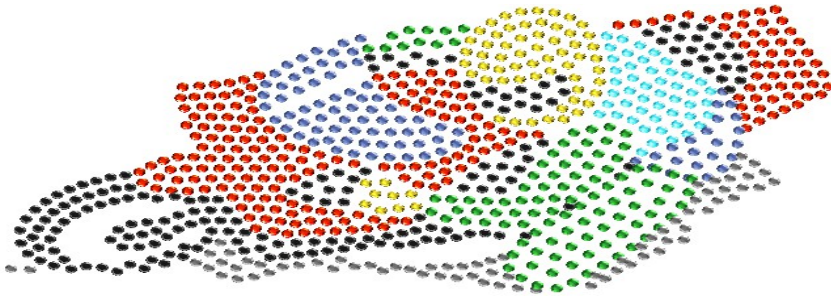
3D mode



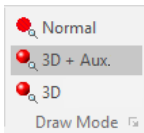
It is a 3D piece simulated mode, where the design is displayed in a very realistic representation, that provides a good feedback about what its final appearance will be.

3D mode can be tuned to match your preferences and to get the most realistic view possible. Click on the arrow on the lower right corner to display 3D Light and Quality settings.

A small box will display, with controls to set light direction (drag the small mark in the edge of the shaded circle), contrast and simulation quality (more quality means lower display speed, but modern video hardware allows you to work comfortably even at top quality).

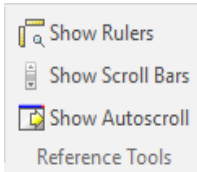


3D + Aux. mode



It is the same as the 3D piece simulated mode, but it also shows the image used as reference for designing. Shortcut for this function (F7).

Reference tools



During the creation or edition processes, you may need some geometric references to ensure the design fits a predefined size, or keeps an specified layout. Also, you may need some tools to help you move along your design without making too many clicks and wasting time. These are sets of graphic elements that will help you with these tasks.

There are three Reference Tools:

Rulers: You enable two of them, one horizontal and the other vertical. You can display Metric or English units. They help you get an idea of the design's size.

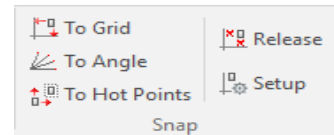
Scroll Bars: You enable two bars (horizontal and vertical) with a slider. Moving the slider will move all the work window in the direction you move the slider. It doesn't modify the image at all.

AutoScroll: ◀. All around the main view, between the workspace itself and the rulers, there is a region called auto scroll region. Just clicking on that area will trigger a pan action into a direction set according with the edge clicked.

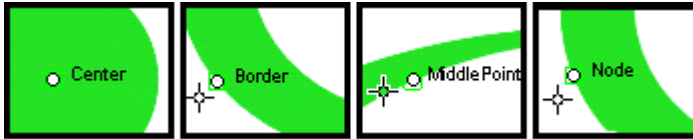
Moving the pointer away from the scroll region will stop the panning. Panning speed and size of the auto scroll region may be controlled through File – Options – Preference Setup – Workspace – Auto scroll page.

Snap Modes

The snap tool restricts the placement of design object elements to predefined points, such as, grid points, other objects singular points, etc. The snap mode is useful to create geometric shaped objects or to perfectly connect objects. You can activate the snap tool for creation and/or for edition.



The Snap to Grid and To SubGrid modes restrict elements placement to grid and sub-grid points respectively. The Snap To Hot Points allows you to place elements exactly at the middle point, center, border, etc of an existing object: just moving the pointer near a singular point will display an small legend and the mouse pointer will be trapped by the singular point like it was "magnetized". Observe the following picture:



To specify what hot-points are enabled, select, *To Hot Points* and then click on *Setup*.

The Options and Preferences Snap page will be displayed and you can set what type of singular points should be recognized.

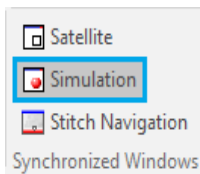
Enable or disable the different modes (To Grid; To Angle; To Hot Points) by clicking on the desired button in the *Snap* group.

The sub grid must be enabled from the Auxiliary bar, clickin on the Show Grid arrow, and then on Grid Settings.

To disable any of the snaps just click on the “Release” button.

Synchronized Windows

Simulation View

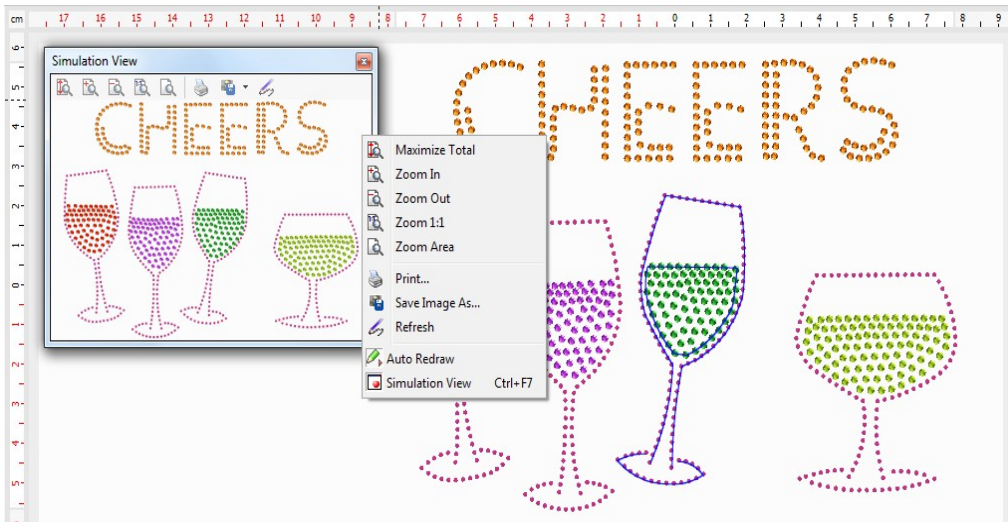


The simulation view is a floating window that displays a realistic simulation of the design. Due it is separated from the main view, you can keep the simulation view opened, displaying a region of the design while the main view displays a different region.

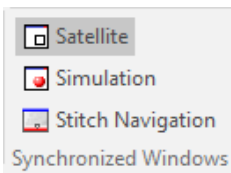
Both views may work synchronized, so, the simulation view reflects, almost immediately, the changes made in the main view.

The simulation view has a tiny toolbar that let you to use some zoom tools, set simulation preferences, adjust thread colors (allowing to use an special palette) and print the simulation.

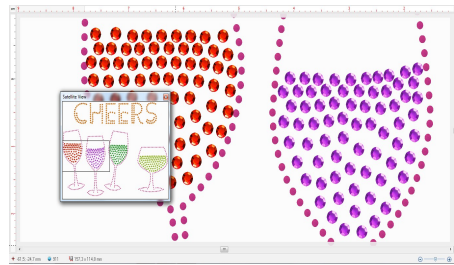
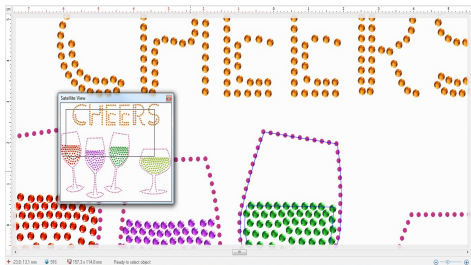
All these commands are also available in the Simulation View context menu.



Satellite View

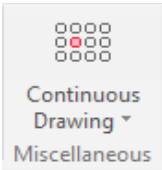


This floating window provides, all the time, a complete view of the design and adds a graphical reference to give you feedback about the region currently displayed in the workspace. The examples below show the workspace with the Satellite opened in two different situations. Note the small rectangle inside the Satellite view, indicating the region of the design currently displayed in the workspace.



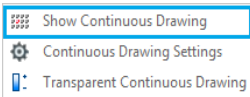
Satellite view is synchronized with the Main view: if you change the zoom level or pan the Main view, Satellite will be refreshed properly. You can also pan and zoom from the Satellite view: dragging the rectangle (start drag from its interior) will produce a pan action in the Main view and, dragging the rectangle edges, will produce a zoom action in the Main view.

Miscellaneous

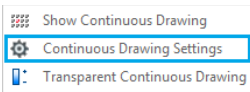


This button allows you to set the options for visualizing how a design in continuous working mode would be like without the need to take it to the machine to test it.

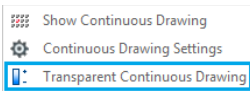
Click on the arrow button to unfold the options menu.



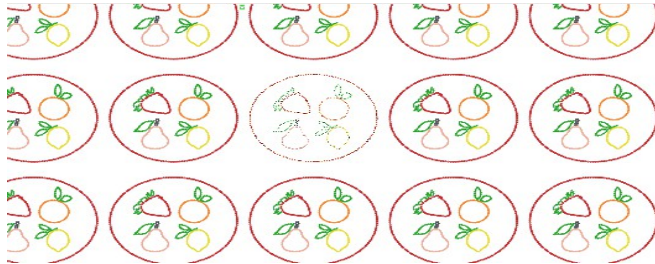
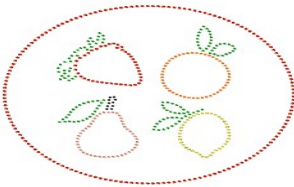
Enables/disables the visualization of the continuous drawing of the design.



Allows you to configure the horizontal and vertical spacing of the objects.



Move the slider to modify the transparency of all the objects except for the original one.



You can make a visual repetition of your design on both horizontal and vertical axis.

The idea of this tool is to give a very real result of how your design is going to be, with no need of taking it to the machine to test it and adjust parameters.

You can set up the distance between designs for both axis.

Modify the parameters until you are satisfied with the results. Remember to write down the values used for that particular design.

Measure Tool



In the *View* ribbon > *Measure* group, you will find a tool to measure objects on screen. Just click on the button to activate the tool, move the pointer to one end of the object to be measured and drag towards the other end. An on-screen transparent label will follow your mouse movements, showing distance measured, angle and horizontal and vertical coordinates. To exit the tool, press the Esc key.

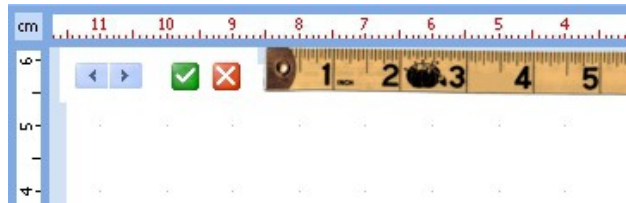
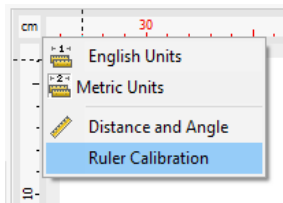
If Show Rulers is enabled, you can quickly call this tool by picking it up from the menu that appears when you click the small box with the measurement units legend, located at the upper left corner of the workspace (where both rulers cross – See Screen Calibration).

Screen Calibration

Some zoom tools are related with a scale, like zoom 100% (or 1:1). So, when you use this kind of tools, the objects in your screen should have true size, that is, if you measure them with a real ruler placed over the screen, it should measure the same the system indicates.

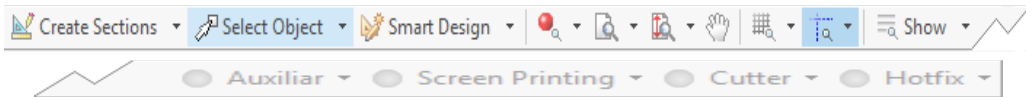
To accurately do this, it is required to calibrate your screen. You will need a real ruler (a soft one, made of plastic is better). Follow this procedure:

- 1- Click the icon located at the upper left corner of the workspace, the one with the measurement units legend in it, and select Ruler Calibration from the menu.
- 2- Put a real ruler over the screen, below the system horizontal ruler and aligned with it.
- 3- Click the arrow button to get a match between the marks in real ruler and the marks in the system ruler. Then click the green button. Your monitor will be calibrated.

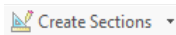


Auxiliary Toolbar

Below the *ribbon bar* and on top of the *workspace* you will find this bar, where you have some useful functions handy like Create Sections; Select Objects; Smart Design; Zoom tools; and some visual aids like guidelines, grid and subgrid; object guides and hide/show commands (first figure). On the right side of this bar there are some “traffic lights” to show/hide/block different object layers (Auxiliar; Screen Printing; Cutter; Hotfix) (second figure).

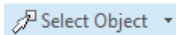


Create Sections



This button gathers all the tools that are available for creating a hotfix design (depending on your system level). Click on the arrow to unfold the list of tools. The creation tools are explained in Chapter 4.

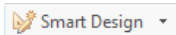
Select Object



This tool allows you to select an object or block of objects, which can be raster images, vectors, or hotfix objects. Then you can make modifications on the geometry (expand, reduce, rotate, mirror, etc.).

A large set of selection tools is available from the Select Object menu, to be able to create your blocks.

Smart Design



This working mode accelerates the activities related with the objects creation and edition, as well as some functions related with auto-digitizing (auto-complete).

The Smart Design tool includes the different types of objects with their respective fill modes. It will be explained in Chapter 7.

Other visualization tools.



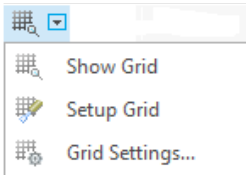
These were explained in Zoom Tools, page 31 in this chapter.

Grid



The *Grid* command controls the visibility of a set of small, equally spaced marks on the workspace. These marks allow you to accurately place objects within your design. You can control many aspects of the grid, such as the distance, mark shape, color, etc. Use the Grid button to turn on/off grid visibility.

Grid setup



Grid customization controls are displayed when you click on the arrow button. Show grid lets you hide/show the grid. A basic and interactive size setting is available with the command *Setup Grid* and a detailed configuration is accomplished through the *Grid Settings...*



Setup Grid: Turn on the grid and then select *Setup Grid*. The mouse pointer will change into a ruler shaped one, and when you drag, the grid size will change following your mouse movements. This method is useful when you need to set the grid distance matching the size of an object displayed in the screen, such as a detail in an image.



Grid Settings...: This command pops up the Options box, with the grid page selected. You will find controls to set the grid position (grid displayed above or below the objects), style, color and size. You can also set a sub-grid, allowing a set of closer sub-marks be displayed inside the main grid marks.

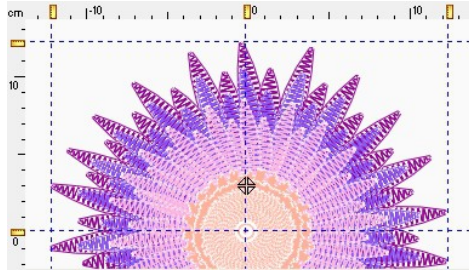
Guidelines



We call Guidelines to a set of auxiliary vertical and/or horizontal lines you can set to help with object alignment and placement.

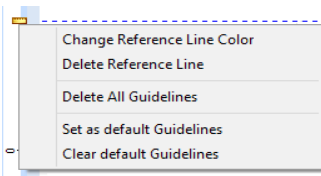
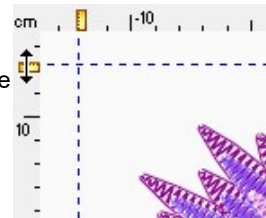
To add a Guideline, use the following procedure:

- 1) Move the mouse pointer over one of the rulers (vertical or horizontal)
- 2) While keeping the Ctrl key depressed, press the mouse left button and drag towards the workspace. A guideline will appear and follow the mouse pointer while you drag.
- 3) Once the pointer reaches the position you want, release the mouse button.



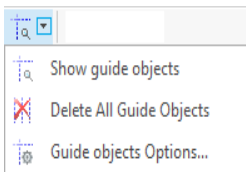
Repeat the operation for each guideline you want to add.

If you need to change a guideline position, just move the pointer over the corresponding icon located over the ruler, and drag it.



Using the mouse right button over the guideline icon, opens a context menu with a group of commands. You may remove one or all guidelines, set a guideline as default and change the guidelines color.

Guide setup

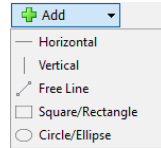


Guide customization controls are displayed when you click on the arrow button. Show guide objects lets you hide/show the guidelines.

Using the *Guide Setup – Delete All Guide Objects*, you can quickly remove all the guidelines.

Having the Guidelines enabled, the command *Guide Setup – Guide objects Options...* pops up the *Guidelines Editor* window.

From this window, you can achieve a precise location of the guidelines you made. To modify a guideline, just click on it to select it, change the coordinate and press Apply.

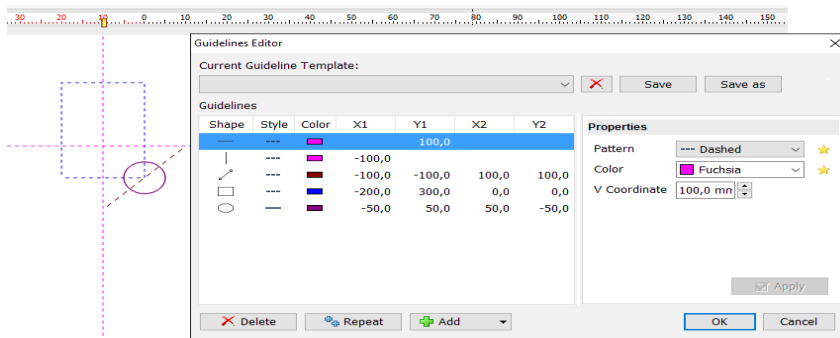


Also you can add new guidelines from the Add button. Select the type you want, insert the coordinates, choose a color and press Apply. The new guideline will appear on the screen.

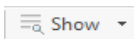
Apart from the common ones, Horizontal and Vertical lines, you will find three new kind of guides: *Free Line*, where you can make a segment guideline with the direction you want; and two guide objects, *Square/Rectangle* and *Circle/Ellipse* in which you can have a shape made out of segment guidelines.

To delete a guideline, click on it to select it, and click on Delete.

You can also save your current guideline disposition as a template for a later use.



Show/Hide design references



We call Design References to a set of graphic elements that improve design visualization. This set contains the controls required to turn on/off these elements.



Solid Vector : Shows the solid (complete) vector or just the outline of it.



Show Sections: Show/Hide entities wireframe. Sometimes, specially during the finishing tasks, is useful to view just the stitches, hiding all other references.



Show Connectors: Show/Hide thread connections between entities.



Show Commands: Show/Hide graphic indicators for machine functions or machine controls such as, color change, thread trims, etc.



Show Design Start/End: Show/Hide special screen symbols to indicate designs start and end points.

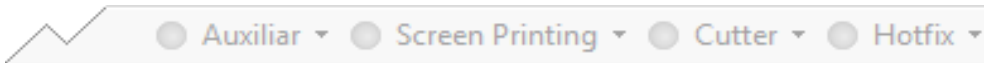


Show Hotfix: Turn on/off beads display in realistic 3D view.



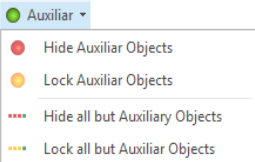
Show Solid Hotfix: Turn on/off beads display in plain colors.

Traffic Lights



These coloured led buttons allow you to show, hide, or block different object layers (Auxiliar; Screen Printing; Cutter; Hotfix).

Auxiliar



Allows control over Images used as reference for design creation.

Click on the *Auxiliar* button to toggle between *Hide* and *Show* image. When image is shown, led will be *green*; when image is hidden, led will be *red*.

Click on the *arrow* to visualize the other available options:

Hide Auxiliar Objects

Turns off all reference images. To turn them on, just click over the auxiliar button again. Light will change from *red* to *green*.

Lock Auxiliar Objects

Locks all reference images. This means that you cannot select them. Very useful when you are digitizing and do not want to move the image or select it by mistake. To unlock them, just click over the auxiliar button again. Light will change from *yellow* to *green*.

Hide all but Auxiliar Objects

If you have vector images, and/or hotfix objects on screen and you want to leave only the auxiliar images visible. Auxiliar led will be *green* and all the others will be *red*.

Lock all but Auxiliar Objects

If you have vector images, and/or hotfix objects on screen and you want to lock them, to be able to work on the auxiliar images only. Auxiliar led will be *green* and all the others will be *yellow*.

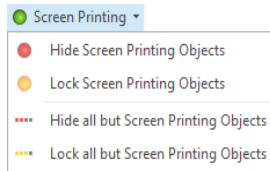
When you enable the onscreen simulation (3D), the Auxiliar images will become hidden. To view



the auxiliary images again, just disable the simulation view.

If you open the Object Manager to see the Document Map, the changes on the traffic lights will be reflected on it. Locked objects will appear grayed. Hidden objects will not appear on their respective tab.

Screen Printing

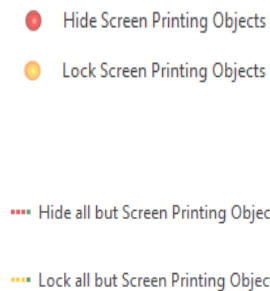


Allows control over Images that are part of the final design, for example as background of the embroidery.

When you set an image as screenprinting, it will be showed, along with your embroidery objects, in the simulation window.

Click on the *Screen Printing* button to toggle between *Hide* and *Show* image. When image is shown, led will be *green*; when image is hidden, led will be *red*.

Click on the *arrow* to visualize the other available options:



Turns off all screenprinting images. To turn them on, just click over the screenprinting button again. Light will change from *red* to *green*.

Locks all screenprinting images. This means that you cannot select them. Very useful when you are digitizing and do not want to move the image or select it by mistake. To unlock them, just click over the screenprinting button again. Light will change from *yellow* to *green*.

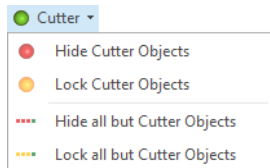
If you have vector images, and/or hotfix objects on screen and you want to leave only the screenprinting images visible. Screenprinting led will be *green* and all the others will be *red*.

If you have vector images, and/or hotfix objects on screen and you want to lock them, to be able to work on the screenprinting images only. Screenprinting led will be *green* and all the others will be *yellow*.

When you enable the onscreen simulation (3D), the Auxiliary images will be visible.

If you open the Object Manager to see the Document Map, the changes on the traffic lights will be reflected on it. Locked objects will appear grayed. Hidden objects will not appear on their respective tab.

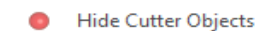
Cutter






These figures are the ones that will be sent to the cutter device.

Click on the *Cutter* button to toggle between *Hide* and *Show* image. When image is shown, led will be *green*; when image is hidden, led will be *red*.

Click on the *arrow* to visualize the other available options:



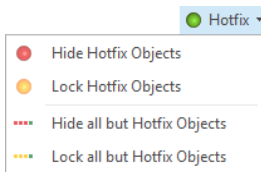
Turns off all *Cutter* images. To turn them on, just click over the *Cutter*

-  **Lock Cutter Objects** Locks all *Cutter* images. This means that you cannot select them. Very useful when you are digitizing and do not want to move the image or select it by mistake. To unlock them, just click over the *Cutter* button again. Light will change from *red* to *green*.
-  **Hide all but Cutter Objects** If you have vector images, and/or hotfix objects on screen and you want to leave only the *Cutter* images visible. *Cutter* led will be *green* and all the others will be *red*.
-  **Lock all but Cutter Objects** If you have vector images, and/or hotfix objects on screen and you want to lock them, to be able to work on the *Cutter* images only. *Cutter* led will be *green* and all the others will be *yellow*.

When you enable the onscreen simulation (3D), the Cutter images will be visible.

If you open the Object Manager to see the Document Map, the changes on the traffic lights will be reflected on it. Locked objects will appear grayed. Hidden objects will not appear on their respective tab.





Hotfix



Allows control over the hotfix design objects.

Click on the *Hotfix* button to toggle between *Hide* and *Show* embroidery. When *Hotfix* is shown, led will be *green*; when *Hotfix* is hidden, led will be *red*.

Click on the *arrow* to visualize the other available options:

-  **Hide Hotfix Objects** Turns off all *Hotfix* objects. To turn them on, just click over the *Hotfix* button again. Light will change from *red* to *green*.
-  **Lock Hotfix Objects** Locks all *Hotfix* objects. This means that you cannot select them. Very useful when you are working on an image or hotfix object and do not want to move a *Hotfix* object or select it by mistake. To unlock them, just click over the *Hotfix* button again. Light will change from *yellow* to *green*.
-  **Hide all but Hotfix Objects** If you have raster and vector images, and/or hotfix objects on screen and you want to leave only the *Hotfix* objects visible. *Hotfix* led will be *green* and all the others will be *red*.
-  **Lock all but Hotfix Objects** If you have raster and vector images, and/or hotfix objects on screen and you want to lock them, to be able to work on the *Hotfix* objects only. *Hotfix* led will be *green* and all the others will be *yellow*.

If you open the Object Manager to see the Document Map, the changes on the traffic lights will be reflected on it. Locked objects will appear grayed. Hidden objects will not appear on their respective tab.

Hotfix pieces library

The vertical toolbar that appears at the left of the working area displays a collection of hotfix beads you can easily pick to create your hotfix objects. This collection, that also appears as galleries within the hotfix objects ribbon, and that is quite similar to a color palette, is called Hot fix Palette or Bead Bar.

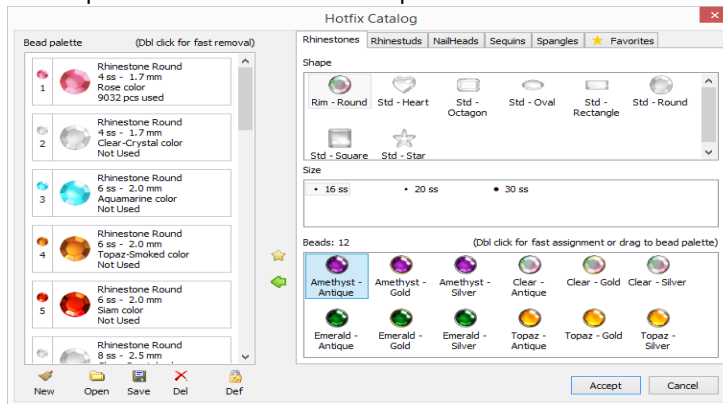
Hotfix Palette or Bead Bar.

To choose what hotfix pieces you'll see in the bead bar, you need to use a large set of hotfix pieces called Hotfix Catalog. Using the catalog you can define and change the bead bar, create new ones and save and open them from disk. So, the Hotfix Catalog is also the management tool for bead bars.



Clicking the Hotfix Catalog button in the vertical toolbar opens the catalog window. Inside it, there are two main panels: the bead bar at the left and the library at the right

The main idea behind this box is that you build your bead palette, or bead bar by selecting the pieces you want to use from the beads library. The following paragraphs explain how to do that and also describe the panels and related tools in depth.



Beads Library

The Beads Library is a collection of thousands of hotfix pieces organized by type that you can easily browse to choose the pieces you'll use in your design.

There are a group of tabs located at the top of the right panel to let you access the catalog by bead type: rhinestones, rhinestuds, nailheads, etc.

Just activate the tab corresponding to the type you want to browse and then click on one of the listed shapes. The available Sizes and pieces will be shown underneath. Use the Controls to add the desired beads to your bead bar. They are explained next.

Available Controls:

Between the two main panels you will find several icons: a yellow star, and some colored pointing arrows. Each one has a different purpose.



Star icon: Stepping on a piece, and clicking on this icon will place a little yellow star on the upper left margin of the selected bead and will add it to the Favorites tab. You can have all you most used beads on the favorites tab for a quicker selection. Click over the star icon to unmark the piece and delete it from the favorites tab.

Add / Replace / Remove from bead bar: A group of arrow icons allow you easily add, replace and remove pieces from the bead bar.



When you step on a piece on the right panel, if a green left pointing arrow appears, it means that it is not currently included in the bead bar (on the left panel) and you can simply click on the arrow to add it. Instead, if a red right pointing arrow appears, it means that it is already included in the bead bar and clicking on the arrow will remove it from the bead bar.



You can also double click on a bead to remove it from the bead bar. To replace an existing bead by the one you want, highlight a bead on the bead bar, and press the orange left pointing arrow icon.



Bead bar

This panel is just a more detailed view of the bead palette displayed at the left of the working area. It's an ordered list of hotfix pieces, you can freely arrange by reordering, adding and removing elements. The list must have at least one element and may have as many elements as you need.

Changing order: To arrange the order of the pieces, just click on one and use the up and down arrows until you locate it in the desired position. You can also use the context menu to move a piece up or down into the list, one position at a time.

Removing pieces: Step on the item you want to remove to highlight it and click on the red right pointing arrow, or double click on it.

Adding pieces: Simply, pick the piece you want to add from the library, drag it into the list and drop it at the desired position. You'll see blue horizontal marks appearing and disappearing between the items; they are indicating the position the piece will take if you drop it in that moment.


Be careful when you drop because dropping *between items* will *add* pieces while dropping *over an item* will *replace* the piece.

Replacing pieces: If you need to replace a piece for a different one you may proceed to remove it and then to add the new one or you may take a shortcut: pick the new piece from the library, drag it into the list and drop it *over* the piece you want to replace.





Clearing the bead bar: By default, the system shows a predefined bead bar to let you start working. However, you may want to create an entire new one, starting from zero.


This tool, located at the bottom left side of the catalog window, clears the entire bead bar, producing an empty, fresh list.

 **Save the bead bar:** Once you create your own bead bar, or modify an existing one, you can save it to disk for permanent storage.

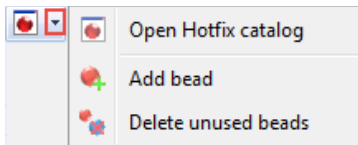
To do it, click the Save command and in the save dialog box, enter a name for your bead bar and click OK.

 **Load a bead bar from disk:** Previously saved bead bars may be loaded using the Open command. When you activate the command, the system displays a list with the names of all previously saved bead bars. Just select the one you want to load and click OK.

 **Deleting a bead bar from disk:** Use this command to permanently delete saved bead bars. Just activate the command, select the bead bar you want to delete from the displayed list and click OK.

 **Set as Default:** The current bead bar may, that is, the one currently displayed in the left panel, may be set as the default bead bar. This means that every time you create a new design, that bead bar will be automatically loaded and displayed in the vertical toolbar.

Quick Hotfix Selection tool



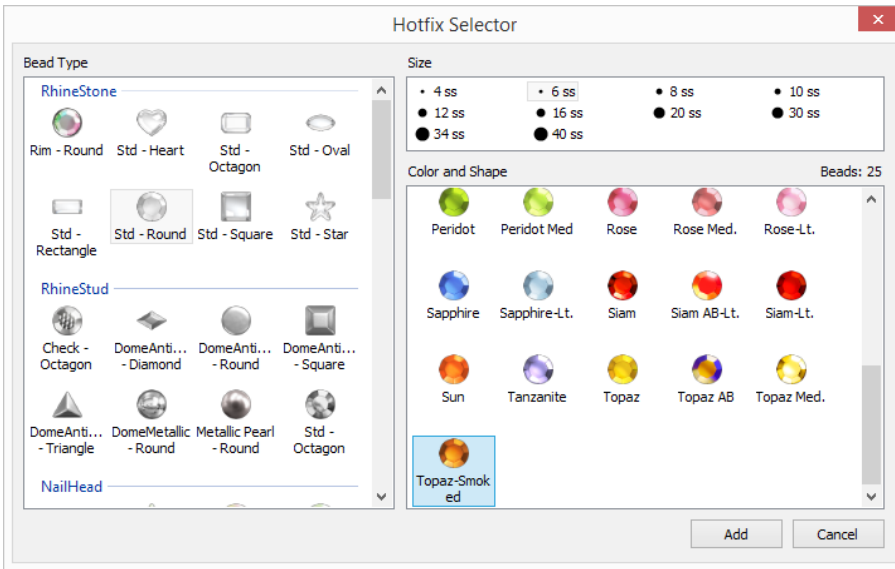
Click on the arrow to the right of the Bead Bar icon to open the Quick Hotfix selection tool. It contains useful commands to quickly manage your bead bar.

Open Hotfix catalog: to let you configure your bead bar.

If you replace any of the beads, all objects that were using the replaced bead will be recalculated with the new bead.

Delete unused beads: Checks used beads in your design and deletes the unused ones from the bead bar.

Add bead: Lets you select a bead that will be added to the current bead bar. It opens the Hotfix Selector window.

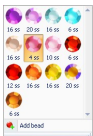


The box allows a quick bead selection based on Type, Size, Color and Shape.

The best way to use it is to follow this sequence:

- 1- Select a bead type (the left panel shows all the bead types available in the system bead library)
- 2- Once a type is selected, the right panels are updated to display the available sizes and colors for that type. Use the upper right panel and select a size.
- 3- Once you select a size, the right lower panel is updated to show all the bead colors available for that type and size. Click on the desired one and press Add.

Bead Gallery



The Bead Gallery is a graphic control that appears within all hotfix fill ribbons. It displays the bead types you have in your palette. By default, the beads are sorted by color and size but you may set the system to use palette order (Options and Preferences - Project - Hotfix - Hotfix Gallery sort by)

Bead bar behavior for existing and new designs

HotFix ERA maintains bead bars in a per-design basis. That is, every time you save a design, the hotfix pieces palette is packed and saved inside it. So, when you open a previously saved design, no matter what your current bead bar is, the bead bar you were using when you saved the design is automatically loaded.

HotFix ERA allows you to open a previously saved bead bar at any time. In this case, the current bead bar is replaced by the loaded one, keeping the bead's order: piece #1 of the old bar is replaced by piece #1 of the new one, old #2 by new #2 and so on.

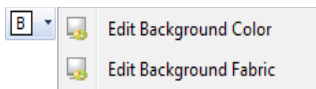
When you create a new design, the system loads the default bead bar. You can set what bead bar should be used as the default one, using the Set as default command (*Def* button), inside the hotfix catalog window.

You will be able to enter the information that corresponds to the manufacturer (and its logotype), line, material, length and size, color code, *pantone*, color, etc., while you can choose the shade from a color table or by entering the RBS or HLS values.

From the Edit button (second button) you will be able to edit any thread lines you have already loaded into the system. A table will show the values you defined for each of the colors when creating the chart. To modify a value, double-click on the corresponding box and change the value.

From the Delete button (third button) you will be able to erase any of the thread lines you have already loaded into the system.

Background color and fabric



The option Background is available above the Palette bar besides the Working Area. This command will let you define the color that will be displayed as background of the design.

Color Background

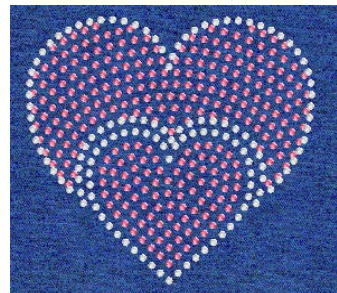
To set a background color, simply click on the color table. You can also use the RGB or the HSL definitions. Observe the result obtained in the Sample box. Finally, click on the OK button to confirm.

Selecting a fabric as background

Click on Edit Background Fabric to access the window from which you can select a background fabric from the available ones. It simulates the fabric on which the design will be embroidered, and its purpose is to assist the design visually, since it does not modify the stitches.

Once you have selected a background fabric, click on the OK button to select it.

The new background will be visualized when you execute the Simulation View (Ctrl+F7), or the On-screen Simulation View (F7).



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Chapter 3

Images and Vectors

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Working with Raster Images

With *Hotfix Era* you can open a bitmap image of multiple formats and convert it into a hotfix design. With the image applied in the work area, you will be able to use it as reference guide and build up the necessary beads. In a quicker way you will be able to apply an automatic transformation from image to hotfix.

Note: You may insert an image before or after having started working on a design in Hot Fix Era this option will allow you to add new sections to designs that have already been started.

Supported image formats

The following formats are compatible with *Hotfix Era*

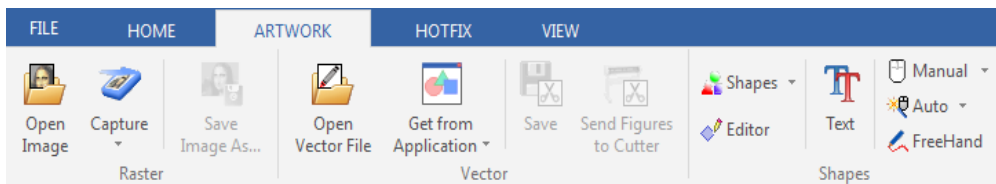
- BMP – Windows Bitmap
- JPG – JPEG Bitmaps
- PCX - Paintbrush
- TGA - Targa Bitmap
- CLP - Clipboard Format
- *PNG – Portable Network Graphics*

The working sequence with images is the following:

- 1) Acquire the image from the artwork by means of a scanner or use a graph created in any related application.
- 2) Scale the image to the final size.
- 3) Capture the design sections from the image outlines.
- 4) Save the design along with the reference image if necessary.

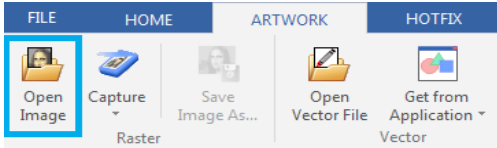
Below you will find details on each of these steps.

The Artwork ribbon contains all Hot Fix Era available commands to work with raster and vector images.

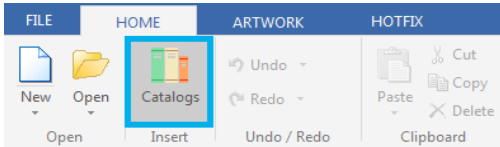


Open image

A way of inserting background images is to use those created using a graphics program, taken from a clip-art, or downloaded from the Internet.



HotFix Era allows you to load images through the button “Open Image” on the “Artwork” ribbon, “Raster” group.



You can also use the “Catalog” button on the “Home” ribbon, “Insert” group. On the Media tab, select Images-Raster.



The Open Image window appears. You may have two folders: Raster and Vector. Double click on Raster to view the folder contents. You have some preloaded bmp. files. to choose from. Select any and press the Open button to take it to the working area.

To load any image:

In the lower part of the window the box “Files of type” allows you to select the image format.

- 1) Select drive and folder on the left side.
- 2) On the right side, click on the image.
- 3) Click on Open.

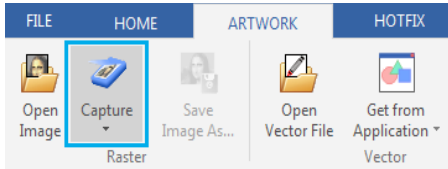
*Note: The location of the preloaded Raster images is:
C:\Users\Public\Pictures\Sierra Technology\Artwork Bitmap*

When inserting the image, the Image ribbon appears so that you can work over it.

Deleting an image

If you want to delete an image from the active document, simply select the image from the select object mode and press the “Del” key (Delete) .

Capture Image from Scanner



From the Artwork ribbon click on the button “Capture” and then on “Scanner Capture” to open the corresponding scanner dialog box. Complete the information required (mainly resolution and color mode). Though the way of working depends of the scanner you have installed, the normal process follows these steps:

- 1) Pre-scan to preview position and center image.
- 2) Select the area to be scanned.
- 3) Capture the selected area.

Once the scan is complete, the image will appear on the *Hotfix Era's* active document. Remember the following parameters; they are very important when obtaining an image from a scanner:

Resolution:

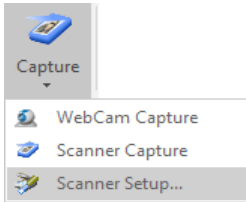
It is normally measured in dpi (dots per inch or points per inch) and it defines the brightness of the digitized image. The higher the number, the neater the image, but it will also use more system's memory. Except on 5x5 cm. or smaller images, a 300-dpi resolution is correct.

Color Mode:

You can capture an image in color or black and white. If you capture it in color, you must indicate the number of colors to be used. On most cases, a 256-colors mode is enough; if you use more color, the resulting image will be better viewed but will take more memory. If you wish to capture the image in black and white, you can use 256 shades of gray. Have the following recommendations in mind when scanning images:

- Only scan the area of the image that you will work on. This will result in smaller, manageable images.
- Use low resolution settings. On most cases, a 300-dpi resolution is enough. If you are going to work with the Photo type, the image used must have a high contrast level.

Configuring the scanner

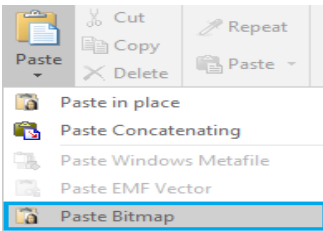


The scanner is a device that reads the images printed on paper or fabric. *HotFix Era* works directly with any Twain-compatible scanner already installed on your Windows system.

Note: Most scanners come with Twain-interface software. Refer to your scanner manuals to obtain further information on the controllers and how to install them. Once a scanner has been configured, you will not need to repeat this process.

Since you may have more than one Twain device installed on your system (for example a scanner and a desktop digital camera), it will be necessary to indicate *HotFix Era* which device to use. Proceed as follows:

- 1) Click on Capture > Scanner Setup...
- 2) A Select Source dialog box opens, showing all the available Twain sources.
- 3) Click on the source that corresponds to the device to be used and press Select.

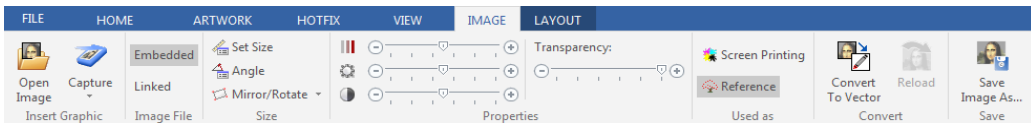


You may also insert a raster image using the Windows clipboard. Using your favorite application, select the image and press Ctrl+C.

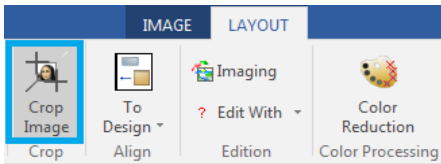
This action copies the image to the Windows clipboard. Then, activate *Embroidery Office* and on the HOME ribbon, CLIPBOARD group, click on “Paste” and then on “Paste Bitmap”.

The image will be inserted centered at the origin point (0,0).

Any time a raster image is selected, the Image ribbon is automatically displayed



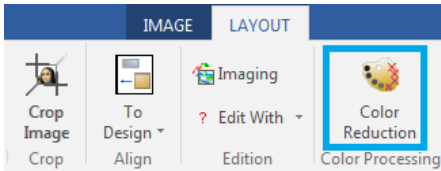
Cropping Image



Click the button Crop Image and the cursor will change, indicating that it is suitable for cutting.

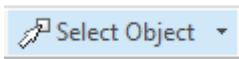
Draw a rectangle over the area of the image that you want to preserve and all the part inside the rectangle will be preserved, the part in the outside will be deleted.

Modifying Image Colors



Clicking on the button, opens a window, in which you can quickly reduce the number of colors of the image. The window is divided in two panes, one shows the original and the other the results. It also has zoom tools and pan for your convenience. When you are satisfied with the result press OK to take it back to the main working window.

Scale, rotate and move images manually



Click on Select Object (press F11) and click on the image you want to select. The image will become surrounded by a box with highlighted corners and centers.

You can work with the corners and centers to expand, compress, move and rotate the image freely.

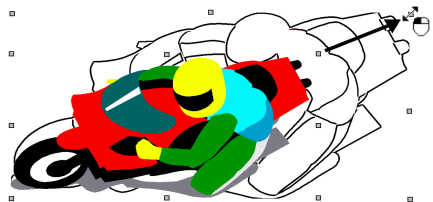
You can also use the commands to scale and align for a precise adjustment.

Note: Perform the necessary modifications on the image before starting to create the design. If you have already created sections and you change the size, move or rotate the image, it will be difficult to modify the sections so as to adjust them to modified reference image.

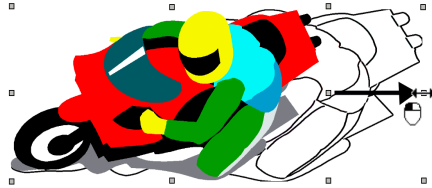
Click on the image and drag any of its corner nodes to adjust its size proportionally.

When dragging a determined corner node, the scaling will leave the opposite corner fixed in its position (right figure).

If you drag while pressing the Shift key, the scaling will be performed keeping the center of the image in its position, while all the corners scale following the movement of the mouse.



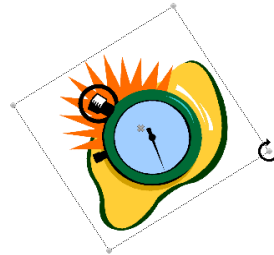
But, if you drag the pivot of any of the mid-sides, you can change only one of the dimensions (horizontal or vertical depending on the dragged side), as shown in the right figure. If you hold down the Shift key while dragging, you will be able to move both vertical and horizontal sides in a symmetric way.



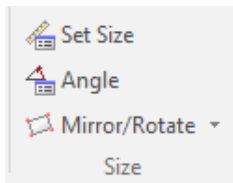
Taking the mouse pointer next to the central zone, changes the cursors shape.

To rotate the image, while holding down the Ctrl key, click and drag any corner node. Observe how the image border is modified as well as the mouse pointer (right figure).

To finish this operation, simply release the mouse button.



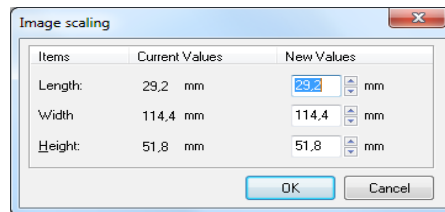
Scale image & Shape



Once you have the image on the screen, whether it was in the disk or scanned, you can perform certain operations such as expand / compress, slant or rotate the image. Such modifications can be done manually or controlled from the Image-Layout ribbon, changing the values of the boxes Size (Width, Height) and Position. If you want to modify the size in the same proportion, you must activate the padlock icon as you can see on the example box of Size & Position.

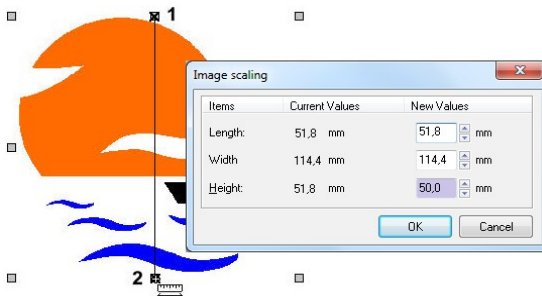
Set Size (scale Tool)

This option allows you to precisely adjust the size of a reference image, altering its original size according to the correct measure of the image segment. This allows you to work with an image with the same dimensions that the final design should have.



The working method is the following:

- 1) Click on the Set Size icon. Click on any point of the image and drag it. *HotFix Era* will trace a line from the point to the mouse's position.
- 2) Release the mouse buttons. The Image Scaling window displays the length of the traced line and allows you to define the new value. Type in the corresponding size.
- 3) Clicking on OK, the image will be scaled so that the traced line has the indicated new size.



For example, if your design has to have a maximum height of 50 mm., after inserting an image select the Measure and Scale tool, click on the upper part of the image (shown in figure as point 1), drag downwards up to the silhouette end and release the button in point 2, so that the Scale image box will open showing the length between points 1 and 2, while it allows you to indicate the new dimension that that distance has to have.

For this example, type 50 in the box placed at the right of the Height row, and press OK, all the image is scaled so that the segment 1-2 measures 50 mm. You can also use the Width and Height controls to give an exact size to the entire image.

Set Angle (Rotate Images)

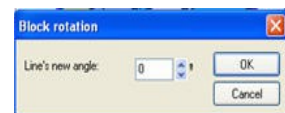


Fixing the rotation angle is useful for some Works where you need precision. Look at the next sample: We want the image to show the hand totally vertical and not as in the original image.

- 1) Click in Fix Angle and draw a line as indicated in the figure



- 2) Releasing the mouse button appears a dialog box to set the new angle of the line drawn. Set the value "0"



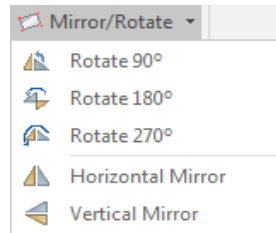
3) When pressing OK, the image will be rotated so that the line drawn is horizontal, which means the hand is totally vertical.



Mirror/Rotate

The application gives you the possibility to rotate an image to specific angles (90, 180 and 270 degrees) and to mirror horizontally and vertically in the working window.

Click on the button Mirror/Rotate to get the available options.



Properties

Saturation, Brightness and Contrast



This type of edition is the same as with any basic image editor. Moving the slider of each control to modify the Artwork.

Transparency



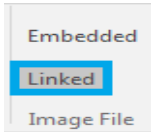
From the box Properties you can modify the level of visualization of the image you have in the working area. The lower the percentage of transparency to dimmer the image will be. At the lowest value the image will disappear.

Image Modes: Linked and Embedded

HotFix Era stores, inside the design file, information about the images you loaded, so they can be displayed the next time you open the design. By default, the images are "Linked", that is, instead of storing the image itself into the design, only the location within your disk is stored. This is good to keep design files small but, if you move the design to another computer, the link fails. For those

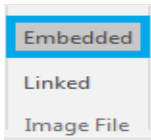
cases, you may “Embed” the image, that is, instruct HotFix Era to store the image, not the link, inside the design file.

Linking Images



HotFix Era will save a link to the image, so the next time you open the design the image will load with the same position, size and rotation angle. It is required that the image be kept on the disk with the same name and in the same folder where it was when it was added to the design. This is the default behavior.

Embed an image

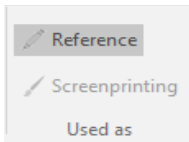


With the image selected, just click the button Embedded. HotFix Era will store the image within the design file.

Images are automatically switched to embedded when you modify them, for example when cropping or reduce its colors. This is also the default mode for images pasted from clipboard.

Using Raster images as...

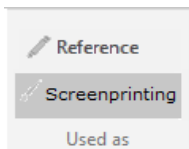
Reference images



Usually, images are loaded to be used as reference for design creation. They will become hidden when you activate the simulation window.

Open the Object Manager to see the Document Map, which consists of several tabs. If a raster image is used as Reference, it should only appear in the Auxiliary tab.

Screen Printing images

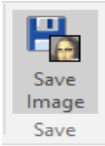


On some cases the image is part of the final design, for example as background of the embroidery. In this case, set the image as screenprinting, so it will be showed, along with your embroidery objects, in the simulation window.

Open the Object Manager to see the Document Map, which consists of several tabs. If a raster image is used for Screen Printing, it should only appear in this tab.

All images no matter what kind they are will appear in the ALL tab.

Save



If you are planning to work with an image taken from the scanner in several sessions, you must save the image on your disk, so that it will be available the next time you open the design.

Save the file under EMF format, compatible with many programs that use vector graphics, DXF and PLT. Depending upon the format selected, the border and body or just the border will be saved.

To save an image:

- 1) Select the image.
- 2) Click on *Save As*, on the *Artwork Image* ribbon, *Save* group.
- 3) In the *Save* box, choose folder, name and format with which you want to save the image and press *Save*.

It is recommended to use the default Image folder to save the images, even to save the new graphic files that you copy or produce.

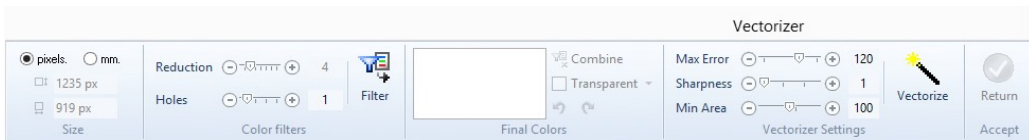
Vectorize. Image to figure



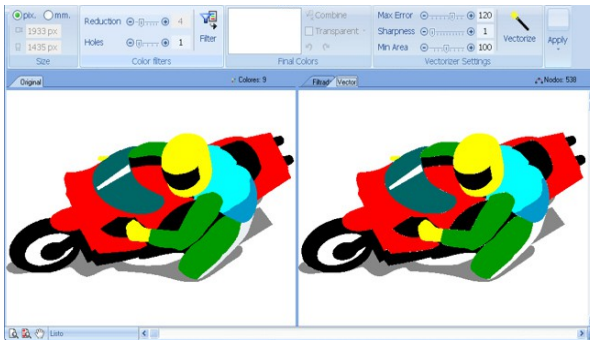
HotFix Era includes a complete vectorizer in order to transform a bitmap image inserted in the working area in vector figures. Remember that you will be able to quickly create the sections of a design from each of these vector images.

To work on a bitmap image select it and activate the command *Convert to Vector*, from the *Image* ribbon > *Convert* group.

The Vectorizer box then appears. In it you will find a series of controls on the Vectorizer ribbon, while the rest of the box will show a preview.



Observe at the top of the Previews there are three tabs, each of them allows you to visualize the three stages by which a vectorized image should go through: the original figure, the clean figure and, finally, the vectorized result.



To make a zoom of the sample set out in the preview (in any of the tabs) using the command window available in its lower left corner: you can make a specific zoom, zoom in whole or pan.

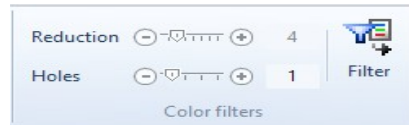


Basically, you can follow two steps in order to vectorize the image. These are explained next:

Step 1 - Clean the image

This first stage implies reducing the complexity and noise of the graph, for the result to be as clean and clear as possible. Since *HotFix Era* vectorizes the image scanning its changes in tone, this first task is important in order to obtain good results. Have in mind that the cleaner and clearer the image, *HotFix Era* will better interpret its shapes.

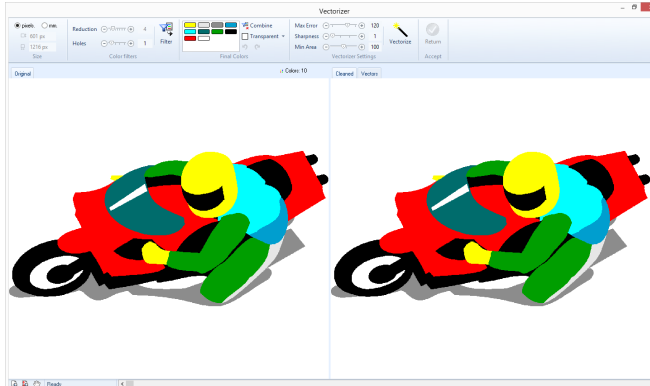
From the first sliding controls of the Vectorizer you can optimize the image, trying to leave it as clean as possible, clearly defining its shapes and borders and getting out the colors mix that “dirty” the result, causing the so called impure images.



These controls are the following:

- **Reduction:** Moving the slider to the right you reduce the number of colors in the image, this is the first filter you should control, reducing the colors without deforming the image.
- **Holes:** This control eliminates the noise in the image, this noise is composed by small pixels dissociate color, called “holes”. As you move the slider towards the right, the application will eliminate the biggest holes.

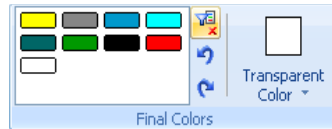
After configuring the controls, click on the Filter button for the application to show you the result in the Clean tab of the Preview.



In the figure observe the Preview box after Filtering the image, see that the Cleaned tab is activated

According to the result obtained, modify the values of the controls previously mentioned, until the product look like what you expect. Do this as many times as necessary.

After cleaning the image and having obtained the convenient result, use the two following controls. Their function is explained below:



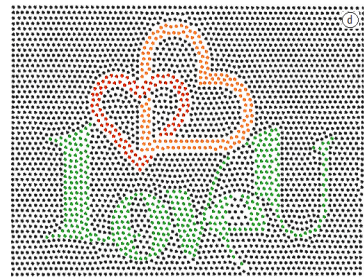
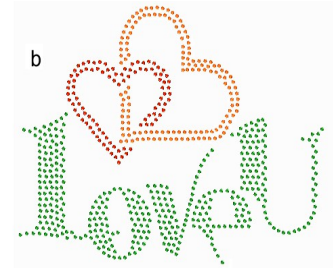
- **Final Colors:** From the colors view select those tones that are similar, and click on the Combine button for them to merge. It is convenient to reduce the number of colors of the image when possible, in this way the application will be able to distinguish easily the changes in tone, thus obtaining more precise vectorization. To select two or more colors, press Ctrl and click on the color to merge, then press the Combine button.
- **Transparent Color:** *HotFix Era* scans the image and captures the background color of the image so as not to include it in the vectorization since, when vectorizing the background color of the image it will form a figure that will “frame” the result. observe the image on the right; it is a bitmap inserted as image in *HotFix Era* which background is gray.

Now, as an example, the following image will be vectorized changing its transparency color.

In the following examples, figure (a) is the result of vectorizing the image defining the gray color as transparent.

When converting into stitches, you will obtain the result shown in (b). Note that the design does not reproduce the gray box that frames the original representation.

On the other hand, figure (c) shows the result of vectorizing the image used as model specifying that the white color should be transparent. In this case, when converting all the vectorial figures in stitches sections, the result will be the one shown in (d).



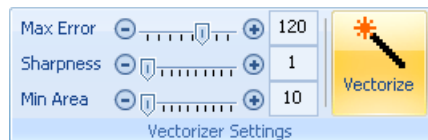
Note: You should apply one or other method depending on the result you want to achieve.

Step 2 - Vectorize

Here you should transform the image (free from noise) in vector shapes.

Once you have created the vector-based figures, you will be able to work on them freely: you will be able to scale them, modify their shape changing the nodes, change their color, etc. The creative possibilities, when the original bitmap image is vector-based, are many. It all depends on your imagination.

For this to happen you must configure well the items that define the characteristics of the created vector (right figure). These are described below:



Max Error: This control defines the curvature degree that the trace will have. It increases or reduces the precision the vector curve will have regarding to the original bitmap.

Sharpness: If you increase this value, the number of nodes that the created vector-based figure has will decrease, thus obtaining a sharpened result.

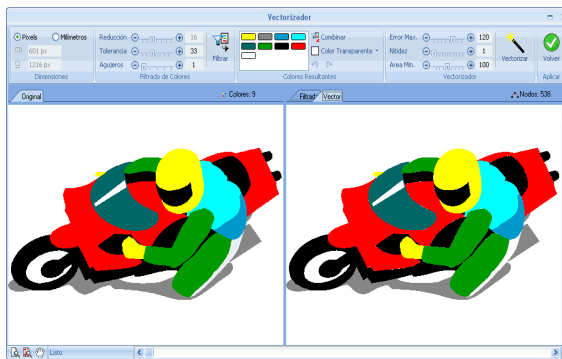
These two controls define the curvature degree that the vector will have. High values of these controls results in rounded outlines. If these items have small values, the trace of the vector-based figures will adjust to the outlines of the bitmap image.

Min. Area: It eliminates the small surfaces, according to the value specified in the sliding control. It is useful to exclude the smaller elements from the vectorization.

Observe the result that the chosen values will produce when vectorizing the bitmap image from the Vector tab in the Preview frame.

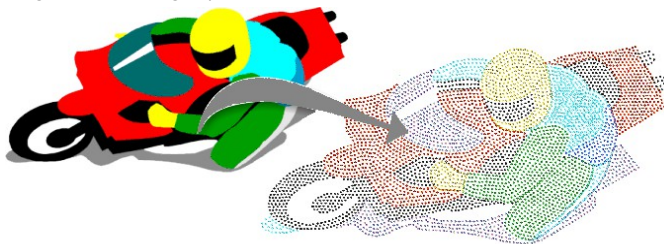
If you click on the OK button you will confirm the values entered to create the vector Figures. These will reproduce the shape presented in the Vector tab of the Preview.

Upon accepting, the vector figures will appear in the work area.



Finally, you must create sections as from these vector figures, choosing carefully the type and fill they will have (See Chapter 4 Creating Hotfix Designs).

You must define the orientation of the direction lines, the location of the entry and exit points, the correct sequence of sections, etc. according to the figures that form the design.



Working with Vectors

HotFix Era allows you to work with vector-based images; these are a new method to easily digitize shapes of all types, also having the opportunity to combine two or more figures so as to obtain complex structures.

Once you obtain the desired figure, you will be able to convert it into a section (Auto-Digitizing) thus simplifying the creation process.

If these vector-based figures are not deleted before saving the document, they will be saved together with the design. This will be useful if you want to modify the created shapes in next editions.

Vector-based graph: Contrary to the bitmap graphs (or BMP) the vector-based figures are created as group of lines and not as individual points or pixels patterns.

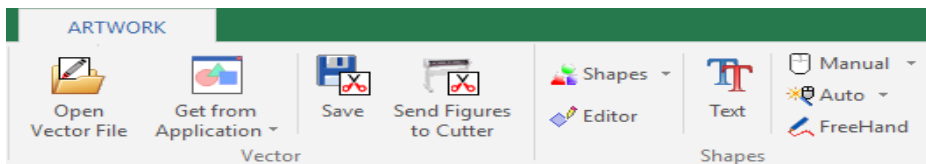
Supported vector formats

The following formats are compatible with *HotFix Era*:

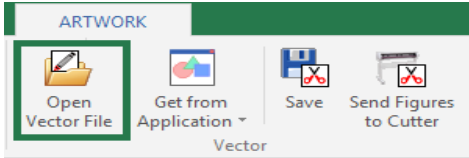
- WMF - Windows MetaFiles
- EMF - Enhanced MetaFiles
- CDR – Corel Draw
- CMX - Corel Presentation Exchange
- AI - Adobe Illustrator
- Imaging - EO Imaging
- DXF - Drawing Exchange Format
- PLT - Vector Plotter Files

Note: To use the cdr and cmx formats you need Corel Draw ® installed in your system and the file opened in the application. To use the ai format Adobe Illustrator ® installed in your system and the file opened in the application.

All available methods to insert a vector artwork are available within the Artwork ribbon bar



Open a Vector File



A way of inserting background vectors is to use those created using a graphics program, taken from a clip-art, or downloaded from the Internet. *Hotfix ERA* allows you to load vectors from disk through the button Open Vector File on the Artwork ribbon > Vector group.

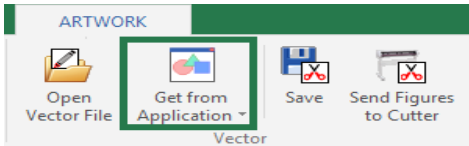
The Open window appears, showing the images available on disk in different formats. In the lower part of the window the box Files of type allows you to select the image format.

To load an image:

- 1) Select drive and folder on the left side.
- 2) On the right side, click on the image.
- 3) Click on Open

If you want to delete a vector from the active document, simply select the image from the select object mode and press the Delete key.

Get Vector from CorelDraw and Illustrator



HotFix Era is compatible with Corel Draw versions 10, 11, 12, X3, X4, X5, X6 and X7 and Illustrator if these applications are installed in your computer.

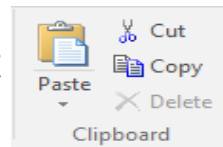
In this way you will be able to insert any vector-based figure made in Corel Draw or Illustrator but not bitmaps imported to Corel/Illustrator or word art.

Once working with *HotFix Era* you will be able to edit the figures in the same way that you work with the vector-based created within the application.

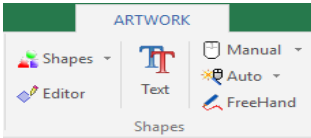
Note: For the correct performance of these utilities, it is necessary for Corel Draw or Illustrator to be fully installed.

Paste Enhanced Metafile

Certain image creation applications allow you to copy an image file type you are working on (Windows Metafile, EMF, etc.), to the Clipboard. This is recommended for certain sketches with a high level of elements, or when it is necessary to obtain more precision (better level of detail). You may then paste it in *Hotfix ERA* using these commands.



Create vector figures

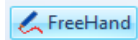


With *HotFix Era* you can create vectorial figures in different ways: from the *Artwork ribbon > Shapes* group.

The geometric figures available to insert are organized in Shapes, Editor and Text figures. You can also create vector figures manually with bezier curves or freehand.



Bézier: This tool is based on the sketch possibilities that allow Bezier curves.

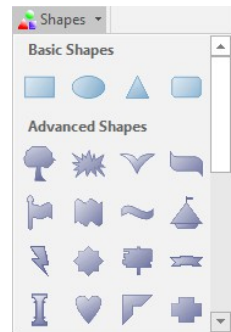


FreeHand: To trace freely open figures, drawing directly in the working area.

Shapes

To insert any of the figures, choose the tool from the Artwork ribbon > Shapes group. From the list that appears, you have Basic and Advanced Shapes; Extended Shapes; Puzzle1 and Puzzle2. Click on the desired one. Then, press the left mouse button on a point of the working area and drag without releasing it, while doing this the shape of a figure will be progressively formed. To produce perfect squares (if working with rectangles) or perfect circles (if working with ellipses), keep the Ctrl key depressed while dragging the mouse.

Once the outline has the size and shape you need, release the mouse button. Immediately after creating the figure, it will become editable for you to adjust its size and shape.



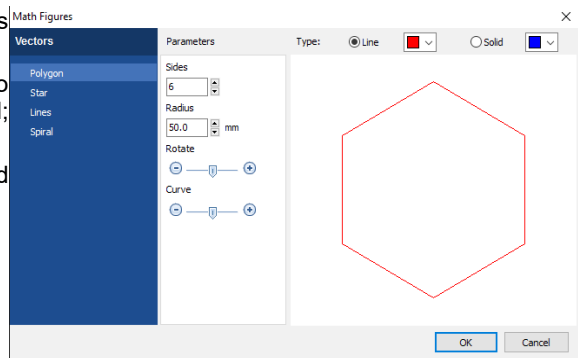
Editor

Hot Fix allows you to create vector figures using a very easy interface.

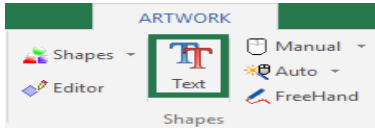
Select the type of vector you want to create: Polygon, Star, Lines or Spiral; adjust some Parameters;

Select if you want the outline or a solid figure, and their corresponding color.

Press OK to create the figure.



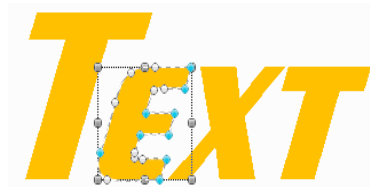
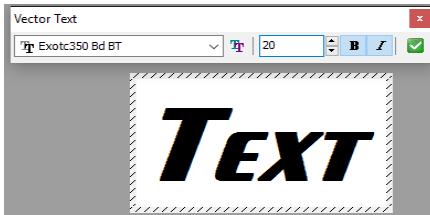
Vectors based on TrueType texts



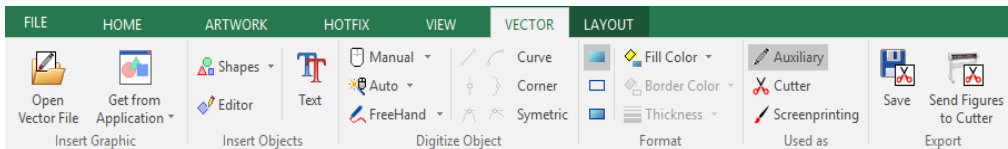
Pressing this button opens a dialog box that allows you to type text or lines of text, including selecting the font and size, alignment and presentation.

To create multi-line texts, once you have inserted the first text, press CTRL + Enter to begin a new line, and type the second text.

Once you have finished inserting the text, press the green check, to take it to the working window.



Any time a vector is selected, HotFix Era shows the Vector ribbon with all the tools to work with them.



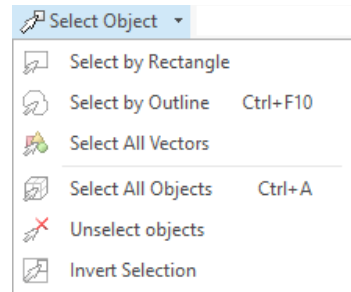
Editing Vector figures

Vector Objects Selection

All vector figures inserted in Embroidery Office are editable, such transformations are done using them together or modifying nodes individually.

To select any object located in the main work area press this button, click on the object you want. Immediately see a box on it that lets you manually resize, while the ribbon changes to provide the necessary tools needed to edit the object.

Click on the *Select Object* button to display the selection options:



Select by rectangle

From left to right: Select the objects that are fully included in the box
 From left to right: Select the objects "crossed" by the rectangle.

Select by outline

Draw an outline "node to node" around the figure you want to select. When you finish surround the object, press ENTER or mouse middle button and the object will be selected. This mode of selection is really useful when you have overlapping figures.

Select all objects

Select all objects (vectors, images, embroidery and / or stone that are in the work area.

Invert actual selection

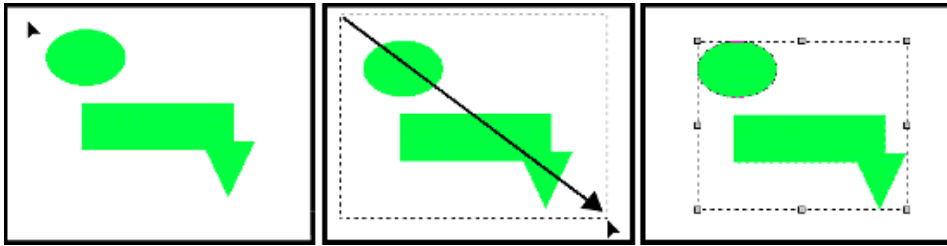
Change the selection excluding selected items and selected those that were previously outside the selection.

Selecting two or more figures

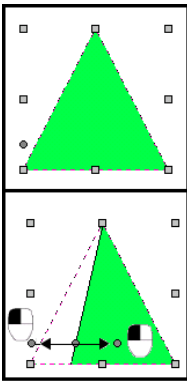
To select several figures close between each other you can click on the working area and, without releasing the mouse button, move until the dotted box embosses the figures you want to work on (next page figures).

You can also select more than one figure by pressing the Ctrl key and clicking on the elements you are going to work on.

Instead, if you press the Shift key at the time of clicking two figures, you will select all those objects that are between both figures in the corresponding sequence.



Scale and Rotate graphically



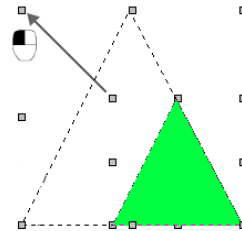
In certain figures (for example the triangle) the modification points appear active (left image). These allow you to change the original shape.

The vector-based figures (either created from *HotFix Era* or imported from different applications) are liable to transform, modify their curves, merge and convert to hot fix sections.

You can expand, compress, rotate and move images manually, in the same way you can do it with any other image (right figure).

Press the Ctrl key to rotate the figure or modify its rotation pivot.

Press the Shift key to modify the size of the figure fixing its center.



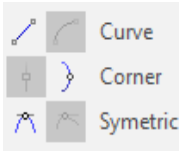
If necessary, before you continue working with the figure, adjust its aspect and location, since by dragging the corners you can proportionally modify the height and width at the same time, while by dragging the pivots you expand or compress the figure in one direction (either the height or the width).

To move the figure to another location of the working area, simply place the mouse pointer to the center of the figure and when this pointer changes its shape (cross with four arrows), click and drag towards the desired position.

To perform modifications in more than one figure at the same time, simply select the figures that will be involved in the modification and perform all actions on all of them at the same time.

These figures are placed following the order in which they were created, reason why some will be on top of others.

Edit Nodes



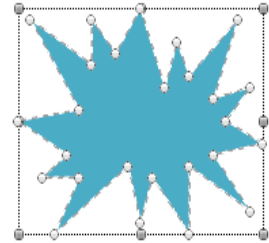
The vector-based figures are made of nodes, that behave similarly to those that make the embroidery sections. For more information about the operation with nodes see chapter “Manual Basic Digitizing”.

Once the vector-based figure has been created you can modify the nodes that give shape to it as well as the layout of each node’s handles.

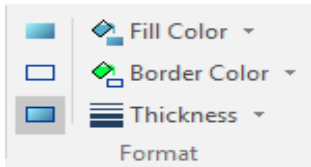
To do so, click on the Select Object tool, and then on the desired figure. From the context menu, click on “Convert to Curves”, to see its nodes.

Now that the figure has been converted into curves you will be able to alter its geometry, modifying the location of its nodes and the layout of its handles.

You can also eliminate nodes, create new ones, etc. Operate on the nodes in a similar way to that used when you work on the nodes of an embroidery section. These options are available from the context menu.



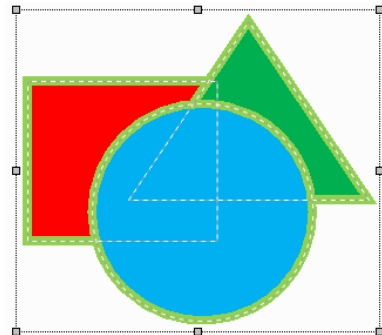
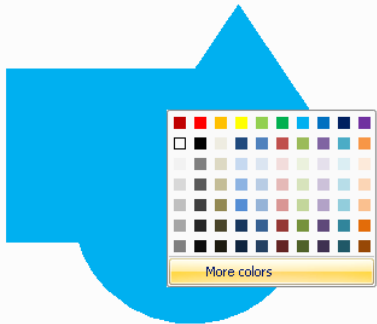
Vector Color and Format



This box allows to modify the border and fill color of the vector-based figure selected, modify the border width or add/remove it.

You can choose a vector only with fill, only with border or both. In the left picture both are selected.

This option is useful for those cases where you must work on several overlapped figures.



On the right figure please note that the color of each figure has been modified, improving considerably the visualization of the elements.

Setting colors from the color palette

The color bar or color palette may be used to set or change the border and fill color of vector objects. With a vector object selected, clicking any color within the palette will fill that object with the pointed color. Right clicking on the color, sets the border color for that object.

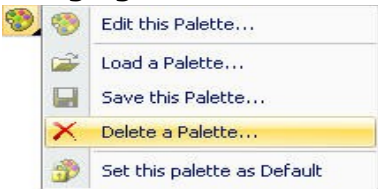


The first element in the color palette is a special item. It represents the “No color” entry and may be used to remove the border and fill color of vector objects.

Clicking the no color item eliminates the vector fill color

Clicking the no color item with the right mouse button, eliminates the vector border

Managing Color Palettes



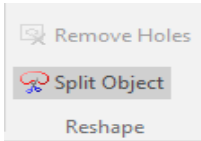
Edit this Palette: Allows you to access a dialog box with options to select and edit a color palette.

Load, Save and Delete a color palette: Get a dialog box that lets you work with color palettes.

Set this Palette as Default: Each time you open a document vector, this color palette appears.

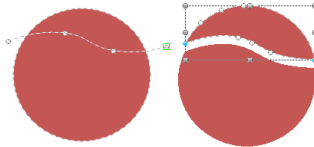
Reshaping Vector Objects

Vector Split



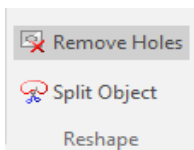
This tool allows you to split a vector object using an arbitrary line (defined by a sequence of nodes).

Once the splitting line is defined, press the Enter key, to execute the operation.

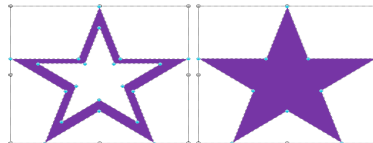


This tool is also available from the context menu.

Remove Holes



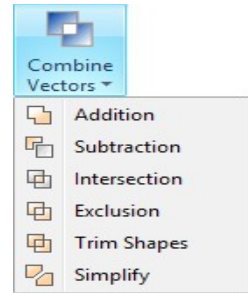
Automatically deletes all the holes of the selected vector object.



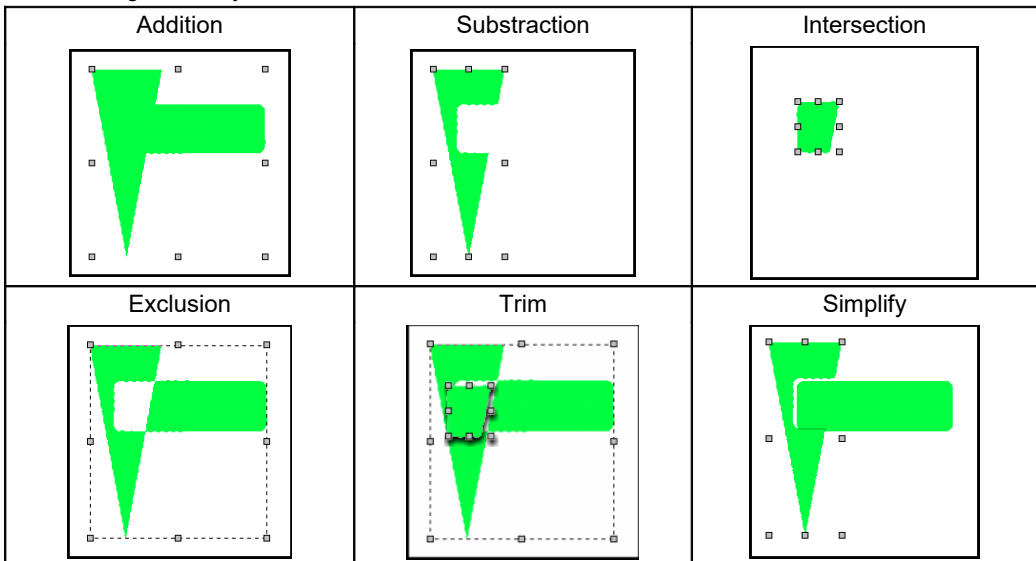
Combining vectors (Shaping)

Using the Shaping tools it is possible to create shapes resulting from the intersection of two vector-based figures. Have in mind that if you have full command of this technique you will be able to sketch complex shapes with little effort.

In this way, the combination of several shapes creates one only figure (in most cases), or performs modifications in the geometry of both figures. You can combine the different types of figures available in the application so as to create new shapes easily. The procedure to combine figures is the following:



To give an example we will apply each of the described combinations to the figures presented in the below figures, so you can observe the different results obtained.



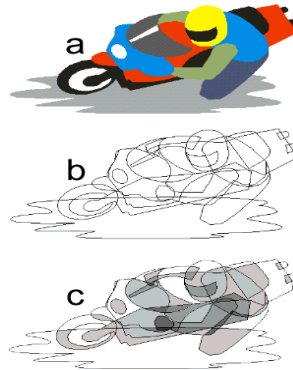
This tool is available from the Artwork – Vector – Layout ribbon > Combine group > Combine Vectors or from the context menu. It is very useful whenever you have to work on vector-based images, since some shapes are made up by several figures, and many of them can be overlapped.

In the three figures next see how the vector-based drawing is formed, pay attention to the number of overlapping zones it has.

In figure (a) appreciate how you view the image in *EO Design's* Graphic View, see that it looks like one only element at first sight.

Nevertheless, in figure (b) you can see the outlines of each of the figures that form the sketch. You can see that it is composed by several overlapping elements, one on top of the other.

In figure (c) each of the overlapping zones were painted in gray. Note that there are darker areas, since several figures overlap there.



Group & Ungroup Vectors



It is possible to group two or more vector-based figures to be considered a unit. In this way, it will be possible to move them, apply the same transformations in shape and other changes to all the figures in the group at the same time.

It is also possible to merge other groups already created, thus creating nested groups.

To create a group select the figures to activate the Group command from the Artwork – Vector – Layout ribbon > Grouping group or from the context menu (Group Objects > Vectors group).

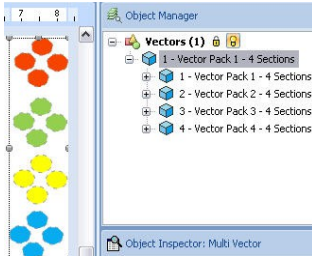
Ungroup and Ungroup all

To ungroup the figures that form a group, select the group and then choose the option Ungroup. If you have created nested groups (groups made by other groups), the Ungroup command explodes just one level, while the Ungroup All explodes all the groups and returns the original objects completely ungrouped.

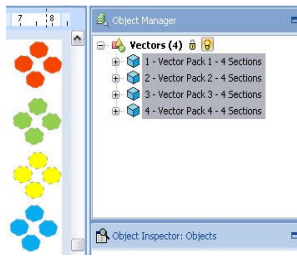


This option is very important whenever you insert wmf or emf images, since it is made up by a series of grouped vector-based images.

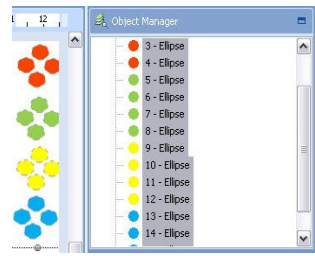
In order to edit any of these figures, you must first apply this function.



Two grouping levels

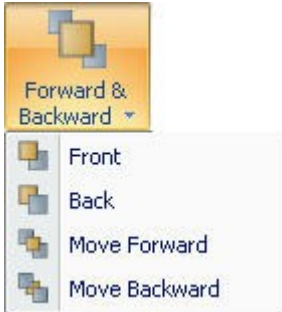


Ungroup



Ungroup All

Vector Order



In the edition of vector-based figures, you will be able to modify the layout of the vector-based shapes from Ribbon Vector > Grouping > Order or from the context menu options.

The options are:

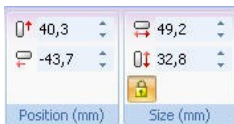
Front: It sends the selected element to the front, before the rest of the objects, placing it in the forefront.

Back: It places the selected object behind the rest of the objects.

Move Forward: The figure selected moves one level forward.

Move Backward: The figure selected moves one level backwards.

Accurate Size & position control

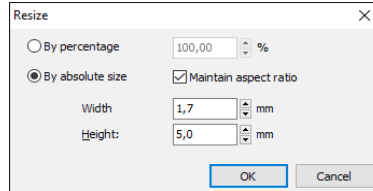


Once you have the image on the screen, whether it was in the disk or scanned, you can perform certain operations such as expand / compress, slant or rotate the image. To access these tools, select a vector and press the Block Layout tab, Position and Size group.

Position: This button commands the movement on the vertical axis and the horizontal axis of the figure. Take the center line marking the upper box surrounds the figure.

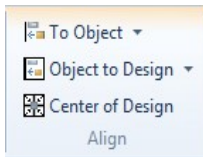
Size: This group lets you precisely control the size of the object. The padlock icon sets the proportional mode: when pressed, changing one of the object's dimensions (width or height) will automatically adjust the other in order to keep the object aspect ratio. When unchecked, you can control both, width and height independently.

Clicking on the small icon at lower-right corner will open a box from where you may set the dimensions as a value or percentage.



The options to rotate a vector by setting the rotation angle, works the same way as for bitmap images.

Alignment



These functions allow you to place the vector figure on the left, right, top, bottom or center, in both directions or in either of the two.

To access these tools, select a vector and press the Block Layout tab, Align group.

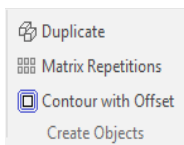
You will also be able to access the tools from the vector's context menu.

To Object: This tool aligns the objects inside the block to left, right, top and bottom, using as reference the leftmost, rightmost, upper and lower object of the block. You can also align the objects center horizontally, vertically or both.

To Design: Contains tools for align the whole block with respect to the design, that is, with respect to all other objects not included in the block.

Center at origin: Moves the center of the block to the system origin point (0,0)

Vector Repetitions



The following functions allow you to repeat one or more times the selected figure/s. You can access these commands from Artwork - Vector - Layout > Create Objects group or from the context menu options.

Duplicate



This command performs a copy and paste of the selected vector/s in only one step. It always works on the active document. Pressing the button more times makes another copy of the selected vector/s you copied the first time.

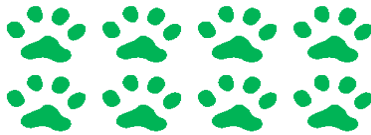
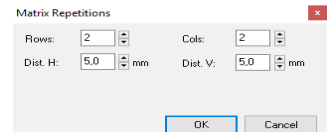
Matrix Repetitions



Use this function to duplicate the vector/s a certain number of times; the copies of the vector/s will appear adjusted to a mold in the shape of cells.

Define the number of rows, columns and the horizontal and vertical distance from the matrix cells. To work with this tool, follow the procedure below:

- 1) Select a group of vectors (paw) and from the Layout tab click on Matrix Repetitions.
- 2) In the Matrix box set the number of rows and columns, and the distance between them, horizontally and vertically.



Click on OK to see the result in the work area, the vector/s will repeat a number of times depending on the values entered.

In the example shown in the left figure we chose a number of 2 rows and 4 columns to repeat the paw vector.

Contour with Offset



Use this function to create one or more vector lines, outside or inside the original vector's shape outline (contour) separated a defined distance one from the other.

After selecting Contour with Offset, the “Create contour” window will open. You have several predefined contour options to choose from:

Outer Contour, that makes the new vector/s towards the outside of the original vector;

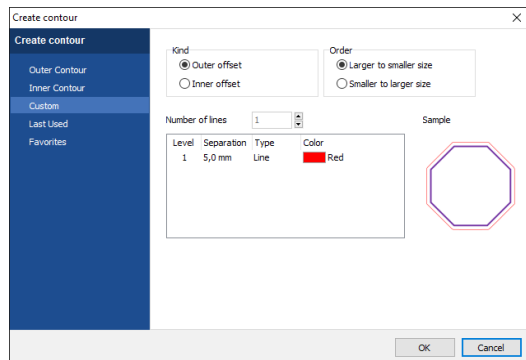
Inner Contour, that makes the new vector/s towards the insides of the original vector;

Custom, lets you define whether you want to make an inner or outer contour; the order in which the vectors will be made; the number, separation and color of the new lines.

Last Used shows the most frequent ones.

Favorites shows all the ones which you have marked as favorites in Outer or Inner Contours. To copy a predefined contour to the favorite tab, just go to the Outer or Inner Contour tabs, click on the desired one and press the yellow star found on the same tab.

Also on the Inner and Outer Contour windows, you have an **Edit** button on the right that let's you see and modify the selected contour.



Export Vector Images

Saving Vector Images to Disk



You can work on vector figures and use the tools provided by the application to modify the vector graphics. Afterwards you can save the vector to disk directly from the application.

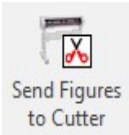
From the ribbon Artwork-Vector-Layout > Export group > Save button...

Save the file under EMF format, compatible with many programs that use vector graphics, DXF, PLT and SVG. Depending upon the format selected, the border and body or just the border will be saved.

When you import or open vector images composed of many vectors, you must ungroup to start editing each one of them.

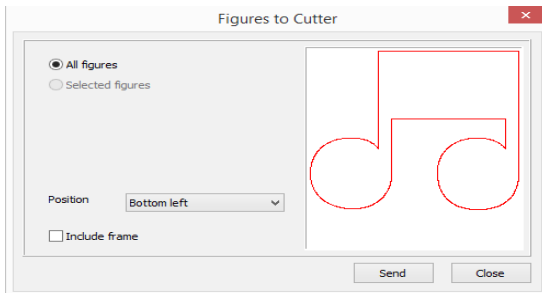
If these vector shapes are not removed before saving the document it is saved with the design. This is useful to change created saved forms in later editions.

Send Figures to Cutters



You can send a vector shape, a group of vector shapes or the entire vector image to the vinyl cutter. The cutter driver provided by the cutter manufacturer must be previously installed.

From the ribbon Artwork-Vector-Layout > Export group > Send Figures to Cutter...



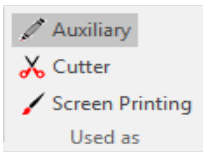
When you press *Send*, the system will display the standard Print dialog where you need to select the cutter device and, through the Properties button, set media size, pen properties, etc.

When you accept the Print dialog, a small box will prompt you to click Ok when the device were ready.

Load and align the media in the device and press OK to start cutting.

Using Vector images as...

Auxiliary images

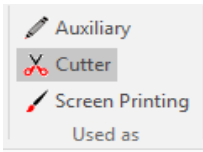


They are loaded just to be used as reference for design creation.

When you enable the Simulation View, the Auxiliary images will become hidden. To view the auxiliary images again, just disable the simulation view.

Open the Object Manager to see the Document Map, which consists of several tabs. If a vector image is only used as reference, it should only appear in this tab.

Cutter images

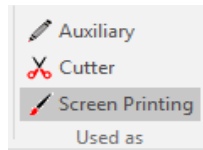


These figures are the ones that will be sent to the cutter device.

When you enable the Simulation View, the Cutter figures will be visible on the workspace.

You can turn an auxiliary image to a cutter one, just by selecting the auxiliary image and clicking on the Cutter button. The converted image will no longer appear in the Auxiliary tab, but will be now shown in the Cutter tab.

Screen Printing images



You may load an image that is part of the final design, for example as background of the embroidery. When you set an image as screenprinting, it will be showed, along with your embroidery objects, in the simulation window.

When you enable the Simulation View, the Screen Printing figures will be visible on the workspace.

You can turn an auxiliary or cutter image, to a Screen Printing one just by selecting the desired image and clicking on the Screen Printing button. The converted image will no longer appear in the original tab, but will be now shown in the Screen Printing tab.

All images no matter what kind they are will appear in the ALL tab.

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Chapter 4

Creating Hotfix Designs

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HotFix ERA Objects

The software offers many types of hotfix objects which can be used to create hotfix designs. Those tools have been grouped in: *Single HotFix* and *Assorted HotFix* according to the number of hotfix types present on the main fill. In addition, you may also create text with HotFix and place individual HotFix manually. Some objects are lines (paths) and other objects are areas (regions), on for both Single HotFix and Assorted HotFix groups.

Note: The number of available HotFix object types and fill styles depend on the purchased product. Some of these features may be optional for standard products.

Choosing what object type is better, depends on the design feature you are working on: open shapes should be digitized with paths, closed filled shapes with areas, etc.

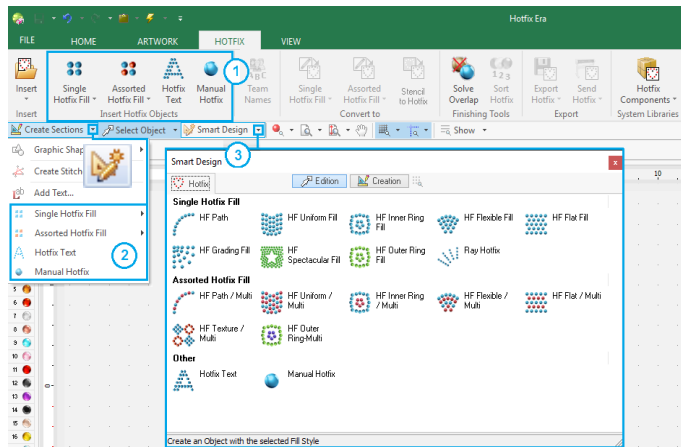
Every object type has specific features, properties, and a specific tool to create it.

The creation tools can be enabled through different ways:

(1) From the *HotFix* Tab, on the *Insert HotFix Objects* group, select the required object type and choose the fill style.

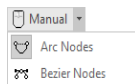
(2) From the *Create Sections* button, select the required object type and choose the fill style.

(3) Press the “Smart Design” button to access the Smart Design tool, and select the appropriate creation tool and fill style.



About Nodes

The following paragraphs introduce the HotFix ERA objects, their elements, fill modes, and properties. The object's boundary (what we call the object's “main reference”) are built by inserting a sequence of points called “nodes”. Nodes are more than simple points; they have some properties that let you control how the system connects them: with a straight line, with a smooth curve or with a sharp curve.



At the moment of manual tracing you can specify two *working modes*: Arc Nodes or Bezier Nodes. According to which one you choose, the nodes will behave differently.

Though working with Circular Arcs, will be easier for you to capture geometric shapes, it generally requires the insertion of more nodes. On the other side, working mode with Bezier curves

requires a better skill when capturing shapes, but allows you to reduce the number of nodes that form the geometry of a section. This mode is recommended for those users who normally design with vector-based applications that use this type of curves (for example, CorelDraw®).

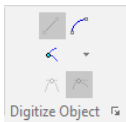
The default working curve type is Bezier but you can modify it to Circle Arcs from the *Home* ribbon > *System* group > *System Settings* --> *Application* > *Create & Edit* > *General* > *Curves type* item.

Once a creation tool is activated, the ribbon changes to display the properties and controls that apply to that specific object.



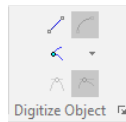
All creation ribbons contain two groups; one, the *Digitizing Methods* from where you can define whether to work with *Bezier* or *Circle Arcs*; and the other called *Digitizing Objects* from where you can control node's properties.

There are two basic node types:



Straight Type:

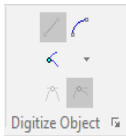
Represented by square nodes.
Connects nodes with a straight line.



Curve Type:

Represented by circular nodes.
Connects nodes with a curved line.

There is an extra property for both node types, although its effect is more visible for curve nodes:



Normal Type:

Curvature of the segments on both sides of the node is the same. Displayed in white color.

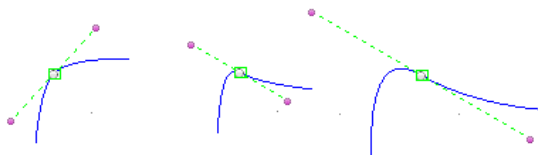


Corner Type:

Curvature of the segments on both sides of the node may be different, letting you get a sharp point in the shape. Displayed in cyan color.

Note: If you switch a straight node between Normal and Corner you will not see any difference in the shape (just the node color will change). However, it may have impact on the beads placement because the system will always try to place a bead at the corner nodes.

Curve nodes have also a special control that lets you define the curvature of the segments at both sides of them. These controls, called “handles”, are small segments with a dot at the end that you can move (by dragging them with the mouse) to establish how the curved segments behave at the node.



The picture at the left shows the same curved node with three different positions of the handles. Handles may be moved near or far from the node to get a sharper or smoother curve and may be rotated around the node to change concavity.

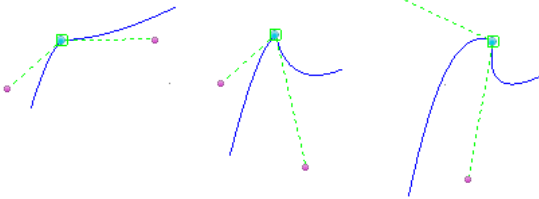
There is a property for normal curve nodes that adds some extra control for the handles:



Symmetric: Force that both handles are the same size, making the curvature of the segments at both sides of the node, equal. When you move one of the handles, the opposite ones is automatically moved at the same distance with respect to the node.



Uniform: Both handles may be set at different distances with respect to the node, although they are forced to remain aligned.



When the curve node is marked as a corner, its handles may be set at different distances from the node and may have different directions.

The picture shows the same corner curve node with different positions of its handles. Note that handles may be set at any distance from the node and they are not aligned.

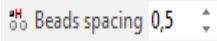
Paths



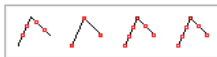
Paths are linear objects, with beads arranged along them. They are simply defined by a sequence of nodes. They may be open or closed, may have smooth or sharp curved segments (controlled by the properties of its nodes) and also may intersect themselves.



One basic fill mode is available for this type of object: beads are arranged along the path, trying to keep the same distance between them. The properties to control this placement (the fill mode properties in HotFix ERA terminology) are:



Beads Spacing: Controls the space between beads. A distance of 0 (zero) means that beads are “touching” its neighbors.



Fitting mode: This property controls how beads are spread along the path. Four options are available (from left to right):

Path: This is the default and more common option. Beads are uniformly placed along the path, but considering:

Always a bead is placed in the position of the first and last node and always a bead is placed at the nodes where direction of the segments changes abruptly.

References: The system places beads at the position of nodes only. The value entered for Distance value is ignored.

Path + References: The system places beads at the position of the nodes and fits additional ones between them using the configured Distance value.

Paths + Corners: Similar to the Path option, but with an extra rule: Always a bead is placed at the corner nodes.



Angle mode: Non round beads may be oriented, that is, placed rotated (with respect to its center) at different angles. Orientation may be fixed (all beads at the same angle) or may be variable, considering the path direction. This property has three options that let you control beads orientation (from left to right):

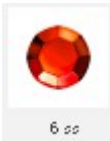
Perpendicular: Beads are oriented following a variable direction perpendicular to the path.

Tangent: Beads are oriented considering a direction tangent to the path.

Fixed: This is the default option. All beads are placed at a the fixed angle indicated in Angle Value.



Angle value: Available only for Angle Mode = Fixed, indicates the angle used to rotate the beads. The default value is 0 (zero). Angle is measured with respect to the document horizontal axis.





Bead Type: This control lets you select the bead you will use for the object. Clicking on it unfolds the current bead palettes that allows you to select any of the pieces contained on it.

Note: The distance between beads is not exactly preserved all the time. To fit beads properly, the system smoothly adapts the distance using the entered value as a mean value.

Areas

The term Area refers to an object defined by a closed boundary. Normally, beads are placed in the inner region of the area and, optionally, also along its boundary. HotFix ERA defines some additional elements for the area objects:

 **Holes:** Are regions inside the main reference, where no beads are placed. Once the main reference was created, select Hole from the Element group at the ribbon, to add a hole to the area object. Holes are closed shapes, so, if you created an open shape, the system will close it automatically.

 **Direction lines:** Are special geometric references, used in some fill modes, to guide the beads placement. Directions are open shapes, build with straight and/or curve nodes in a process very similar to the Path object creation. To add a direction you just need to click the Direction button located at the Element group in the ribbon bar.

Area objects support a combination of fill modes, one for the inner region and one for the borderline. Borderlines are simply processed as closed paths. For the inner region, there are four fill modes available: Uniform Fill; Inner Ring Fill; Flexible Fill and Flat Fill. The basic difference between them is the style in which the beads are arranged, producing different visual effects.

Areas with Hotfix Uniform Fill



Hotfix Uniform is a fill mode designed to produce the best possible coverage of the area region. The placement algorithm tries to generate the most uniform placement possible, considering the shape, the bead size and the specified beads separation.



The picture on top shows an Area object main reference, with two corner nodes, in cyan, and two normal curve nodes. On the right, the same object showing the fill, radial hotfix and borderline.

When creating and editing area objects, the ribbon displays two tabs named Body and Border. Body tab contains all the controls to set the properties for the inner region fill and Border tab, for the borderline. Controls in the border are the same you find for a path object.

The properties to control the radial fill mode (Body tab) are:



Beads Spacing: Controls the space between beads. A distance of 0 (zero) means that beads are “touching” its neighbors. If bead type is sequin, a negative value, that produces some overlapping, is allowed.



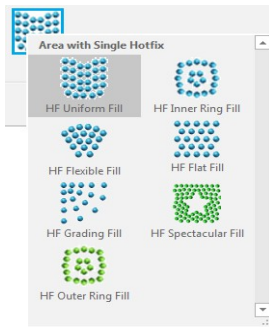
Margin from Borders: Set a distance from the borderline where no beads are placed.



Initial Layout: Radial fill is based on a special algorithm that starts from an initial placement and then moves the beads to set them equidistant. Initial Layout property lets you select two possible starting placements. The *Radial* option tends to produce a placement that slightly follows the shape of the object and the *Hexagon* option produces a more uniform, shape independent, placement.

As in all fill modes, you can select the bead you will use with the control on the right of the Area Fill group. This control always displays a real view of the bead type currently selected for the object.

Areas also let you change the fill mode on the fly. Pressing the control on the left of the group, unfolds a menu with the available fill modes.



Areas also let you change the fill mode on the fly.

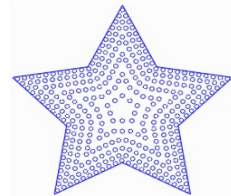
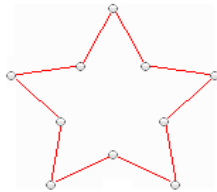
Pressing the control on the left of the group, unfolds a menu with the available fill modes.

The number of modes depend on the system level you acquire.

Areas with Hotfix Inner Ring Fill



In this fill mode, the system calculates a group of interior rings and places the beads along them. The special feature of the Variable Distance fill mode, is that you can control the separation between the rings, in a one by one basis, allowing beads density gradients that produce interesting effects.



Ring fill mode is better suited for large area objects with small beads. This combination allows that several rings may be fitted inside the shape so the distance variation effect may become evident.

The properties to control the Variable Distance fill mode (Body tab) are:



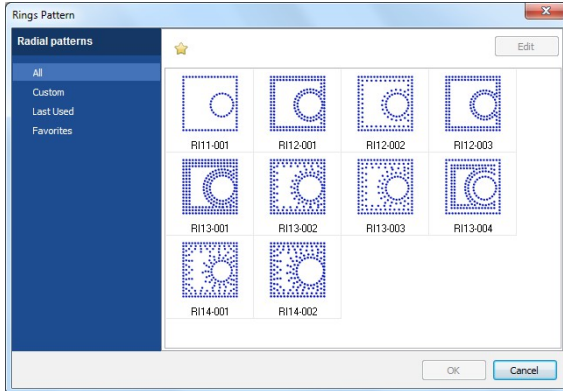
Beads Spacing: Controls the space between beads along all of the rings. A distance of 0 (zero) means that beads are “touching” its neighbors. If bead type is sequin, a negative value, that produces some overlapping, is allowed.



Margin from Borders: Set a distance from the borderline where no beads are placed.



Pattern: This button displays the Rings Pattern dialog box. This tool lets you use any of the Radial Patterns included; or to edit them to create a new one.



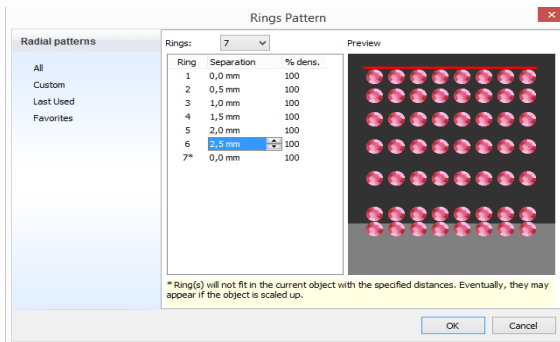
The Rings Pattern box shows some Radial Pattern samples you can use. Click on the *All* option, select one and press OK.

You can also edit any of them, change their configuration and use it right away. It will appear under the *Custom* option.

To access any Ring Pattern quicker, add it to the Favorites tab, first select one of the available ones, and afterwards clicking on the yellow star. It will appear on your Favorites tab.

Choose any pattern, for example the one named RI11-001, press the Edit button to see the number of rings the pattern has, and a preview pane on the right.

The Rings control is set to 1 and the list contains just one row. You may define as many rings as you want, however:



- If the number of defined rings and their separations produce a pattern that is not enough large to completely fill the object, the system will repeat the pattern starting with ring 1.

- If the number of defined rings and their separations produce a pattern that does not fit inside the object, some rings will be ignored. In this case, the system shows a warning message and the ignored rings will be marked with * in the list.

The Rings Pattern settings in the picture above was used to fill the star design shown in the previous page. Seven rings were defined. The separation between them was increased from ring to ring to produce the vanishing effect.

The red line in the Preview panel indicates the object boundary. The black background region represents the object interior.

Observe that the last ring falls outside the black region, meaning that it will not fit and will be ignored. For this reason the warning message appears at the bottom and the ring 7 is marked with *. If you scale the object, maybe the object that does not fit in, will fit.



Angle mode: Non round beads may be oriented, that is, placed rotated (with respect to its center) at different angles. Orientation may be fixed (all beads at the same angle) or may be variable, considering the path direction.

This property has three options that let you control beads orientation (from left to right):

Perpendicular: Beads are oriented following a variable direction perpendicular to the path.

Tangent: Beads are oriented considering a direction tangent to the path.

Fixed: This is the default option. All beads are placed at a the fixed angle indicated in Angle Value.



Angle value: Indicates the angle used to rotate the beads. The default value is 0 (zero).

Areas with Hotfix Flexible Fill



Flexible Hotfix is a powerful fill mode that allows you to create a beads placement that is guided by an almost arbitrary direction line.

This fill mode requires that a new element to be defined, the direction line. It's a simple, open line, built from a sequence of nodes (straight and curves).

Basically, the placement is generated using a set of imaginary lines (with the same shape than the direction line).

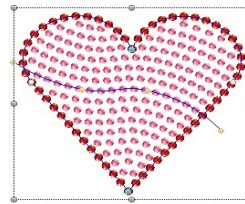


Beads are then placed along these line in a row by row basis.

So, this fill mode includes properties not only to control beads spacing along the “imaginary” rows but rows spacing as well.



Once you complete the input of the main reference, from the *Elements* group in the *Hot Fix Area Body* ribbon, click on the *Direction* icon. Then just start creating a line that crosses the main reference, like in the picture above right. Press Enter to confirm.



Direction line is not mandatory; you may enter it or not. In the last case, the system uses an internal and invisible, horizontal straight line. The Body tab of Flexible fill shows the following properties:



Beads Spacing: Controls the space between beads along a row. A distance of 0 (zero) means that beads are “touching” its neighbors. If bead type is sequin, a negative value, that produces some overlapping, is allowed.



Rows spacing: Controls the spacing between rows.



Margin from Borders: Set a distance from the borderline where no beads are placed.

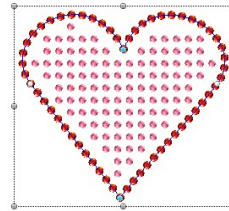
You can select the bead you will use with the control on the right of the Area Fill group. This control always displays a real view of the bead type currently selected for the object.

These Area types also let you change the fill mode on the fly. Pressing the control on the left of the Area Fill group, unfolds a menu with the available fill modes.

Areas with Hotfix Flat Fill



Hotfix Flat fill mode produces a regular, column by row based, beads placement. Better suited for large or very geometric shapes, it does not require additional geometric references and allows you to control column and row spacing, beads angle, etc.



Properties available in the Body tab for this fill mode are:



Columns spacing: controls horizontal beads separation.



Rows spacing: controls vertical beads separation.



Beads Offset: Sets an initial displacement for placement of beads in even rows. Grid fill mode produces regular, vertically and horizontally aligned placement., but sometimes, shapes require a bit irregular placement. Offset helps this avoiding the vertical alignment. The value is a percentage. Best effect is obtained with 50% offset.



Beads angle: Set the rotation (around its center) angle of the beads. Useful for non round pieces.



Border mode: Instructs the system how to place beads at the object boundaries. Inside option (upper left), forces to remove the beads that are not completely inside the object boundaries. Outside option (lower left) allows beads that are placed crossing the object boundaries.



Placement Tolerance: Usually, if columns and rows spacing values are considered strictly, some beads do not fit and should not be placed. However, sometimes the placement would look better if some pieces in that situation were allowed. Tolerance controls how strictly the system behaves in these “limit” situations. A value of 0% (zero) means no tolerance at all, and larger values relaxes the placement rule allowing some “limit” pieces to be included.

Areas with Hotfix Grading Fill

OPTIONAL FEATURE

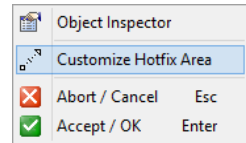
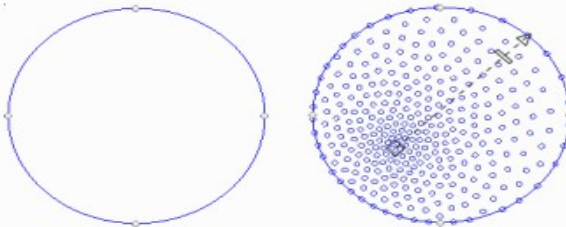


Grading fill mode produces a bead placement where the spacing varies gradually along a specified direction allowing the creation of interesting volumetric effects.

Basically, you define a “variation line” and indicate an initial and final spacing values.

By default, the system places the variation line starting at the center of the area object and ending near the area edge; initial spacing is set by default to a value lower (more dense placement) than the final spacing, but you may change it according to your needs.

You need to access the context menu and select Customize Hotfix Area to display the variation line. You may drag the line ends (square and triangle marks) to modify the line size and position.



An additional rectangular mark (called average spacing cursor) defines the position where the beads spacing will be set to the average value between the initial and final ones. You may drag the cursor (always on the line) to any position. Once the line is defined, it rules the beads spacing and the system will place the beads with spacing values that will vary gradually from initial to final values.

Properties available in the Body tab for this fill mode are:



Initial Spacing: controls beads spacing at the starting point (square mark)



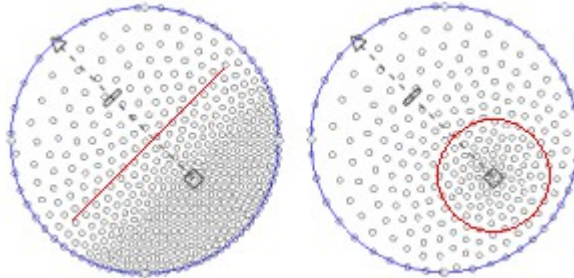
Final Spacing: controls beads spacing at the ending point (triangle mark)



Half Grading Point: Defines a point where spacing is the average value between Initial and Final values. Position of this point is represented as a value in the range 0.1 to 0.9, where 0.1 is located near Initial point and 0.9 is located near Final point



Grading Variation Mode: This control defines how spacing variation is accomplished. Radial mode (lower left) produces variation following concentric circles around the Initial point, while Linear mode (lower right) produces variation following an imaginary line perpendicular to the direction line.



Areas with Hotfix Textures



Textures are predefined bead's arrangements that can be used to fill area objects. You may imagine the textures as a large pre-built design where your area objects behaves like a clipping boundary.

You may select what region of the texture is clipped by your area and even scale the texture so as it better fits your needs. The idea behind textures is to allow you to create artistic and geometric complex and time consuming bead placements, in a very short time and with just some few clicks.

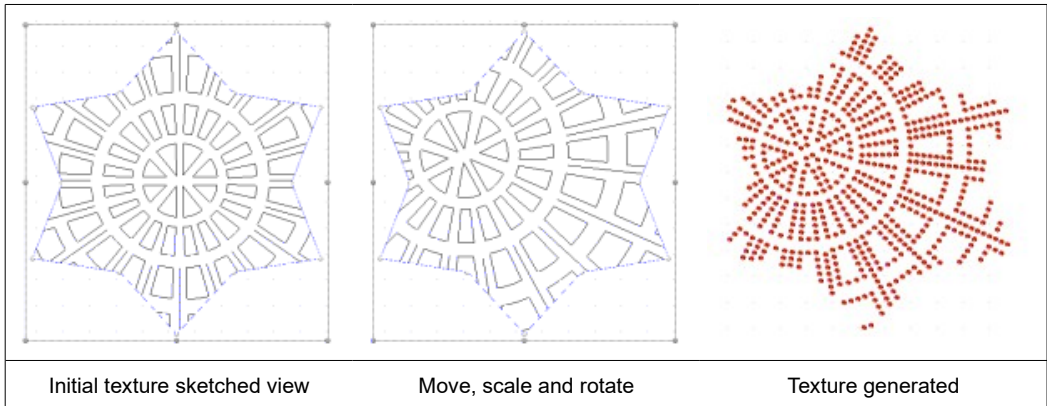
The basic steps to use textures are:

- 1- Within the Hotfix ribbon, select Area with Assorted Hotfix Fill and then Area with Texture Fill. The system displays the Hotfix Area Body ribbon, with the Default texture selected.
- 2- Create the area object as usual. Consider that texture fill is intended for medium to large size areas. You may not appreciate the texture pattern if you use very small areas. As a guideline, avoid objects smaller than 50 x 50 mm.
- 3- Once the area contour is completed, the system will show a sketched view of the texture, drawn using a contrast color. In this state, you may move the texture regarding your area boundaries by simply dragging with the mouse; also, if you drag while holding the *Shift* key, you may scale the texture pattern. If you hold the *Ctrl* key and drag you may rotate the texture.

Textures are designed using a predefined bead type and spacing. However, you may change them using the ribbon controls during creation or later, during edition. Again, consider that using

large size beads or large spacing values may produce poor results. Scaling down too much may also lead to this.

4- Once you are satisfied with the texture's position, scale and bead type, press Enter. The system will calculate the beads placement and display the result.



Properties available in the Body tab for this fill mode are:



Initial Spacing: controls the spacing between beads along the lines that form the texture.



Texture: Lets you select the texture model among the ones available at the texture library. When you click on it, the Texture Library dialog pop-ups and you may graphically select the texture component to use

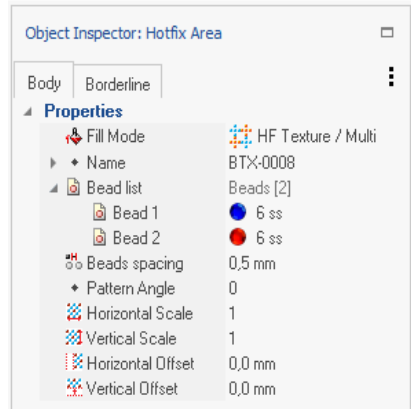


Beads List: Textures are multiple beads components, that is, a given texture may use more than one bead type. This control allows you to modify the bead type for every bead type used in the texture. When you click on it, the system first displays a list of the bead types used, inviting you to select one of them. Once do it, the bead bar list is displayed so you may select a different bead type. You may repeat this operation for every bead type used in the texture.

These properties may be also changed through the Object Inspector. Using it, you may also change the vertical and horizontal scale, position and rotation of the texture. The Bead List group will display a row for every bead type used and, when you click on any of them, a list with your current bead bar contents will appear.

During edition, from the context menu, select Texture to enter the texture graphic edition mode (mouse drag to move, scale and rotate).

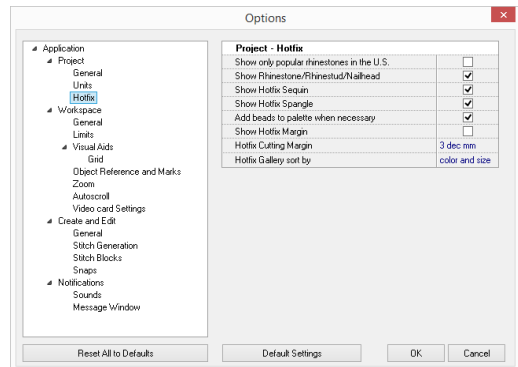
Fill types with multiple-beads required a new configurable option to control the system behavior at the moment to use a component that includes a bead type that is not currently within the bead bar.



Textures are designed using a given set of bead types. Although you may change them, you need to do it carefully, because some details of the textures may be lost if you, for example, use a bead size much larger than the original. Also the distance among the different features within the texture may become too close if you use very large bead types.

To make it simpler, the system, by default, will use the bead types predefined within the texture, adding them, if necessary, to your current bead bar.

You may control this behavior using the Options and Preferences dialog. Use the tree list at the left and select Application > Project > Hotfix. Then, at the right panel, the check labeled “Add beads to palette when necessary” will let you control if the system automatically adds beads to bead bar (checked) or not. If you uncheck the option, the system will assign the first bead in your current bead bar to the bead type 1 in the texture, the second to the bead type 2, and so on.

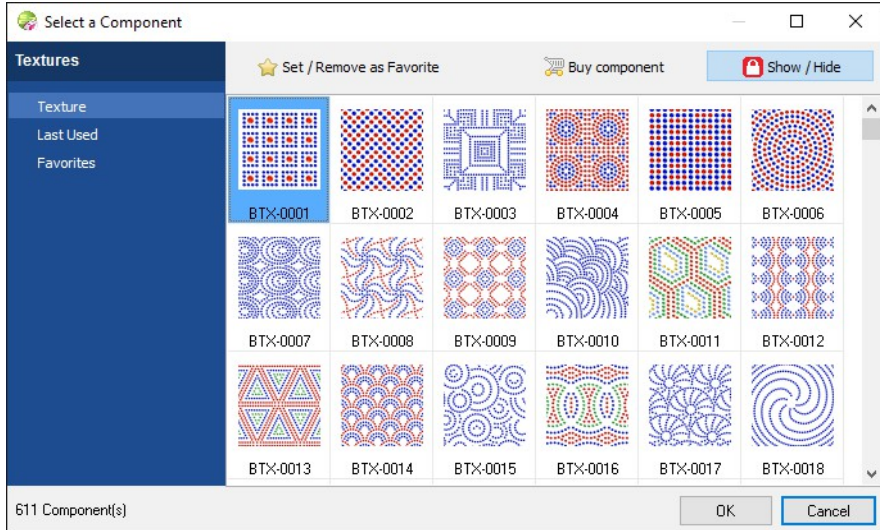


To change the existing texture of your design, just click on the Ellipsis button [...] to open the “Select a Component” window, and choose another Texture.

Click on *Texture*, select one and press OK.

To access any texture quicker, add it to the Favorites tab, first select one of the available ones, and afterwards clicking on the yellow star. It will appear on your Favorites tab.

You can also click on any with the red padlock, and click on Buy Component to be able to purchase it and add it to your library of available textures.



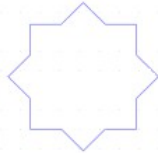
Areas with Hotfix Spectacular Fill

OPTIONAL
FEATURE

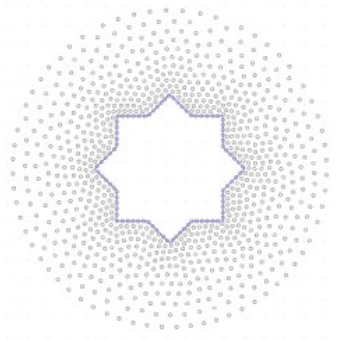


This fill mode is slightly different from all the others; the reason is that the beads arrangement it produces is located *outside* the area region, instead of inside it.

Just a simple example will make it a bit clear:



Star shaped area object



The object with Spectacular Fill

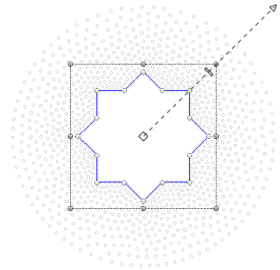
The Spectacular fill spreads beads, with variable density, around the defined object. How far the beads are spread and the density variation used are easily and graphically controlled and also the shape of the “spreading pattern” may be selected among several shape options.

The basic steps to use Spectacular Fill are:

1- Within the *Hotfix* ribbon, select *Single Hotfix Fill* and then *Area with Hotfix - Spectacular Fill*. The system displays the *Hotfix Area-Body* ribbon.

2- Create the area object as usual. Consider that this fill mode spreads beads outside the object, so check you have enough clearance around the object.

3- Once the area contour is completed, the system will create the effect using the current density and shape values. Click on the Select Object tool (or press F11) and the system will enter to edition mode for the object you have just created. Get the context menu (right click) and select *Customize Spectacular Fill Density*: the system will display a line with a square mark near the object center, a rectangular cursor at the middle and a triangle mark at end. Drag the triangle mark to change the size of the shape effect, drag the square mark to change the effect shape center and slide the middle mark to change the average spacing position (see properties next).



These handles let you almost completely control the effect. To change the shape of the spreading pattern, you need to use the Effect Shape control at the ribbon bar.

Take a look to the available properties. They are quite similar to the Variable Density fill mode:



Initial Spacing: controls beads spacing at the shape's center (square mark)



Final Spacing: controls beads spacing at the shape's outline (triangle mark)



Half Grading Point: Defines a point where spacing is the average value between Initial and Final values. Position of this point is represented as a value in the range 0.1 to 0.9, where 0.1 is located near Initial point and 0.9 is located near Final point.



Effect Shape: Defines the shape of the beads pattern. The shape will always surround the object. The shape size is controlled graphically.

Curve: Creates a shape effect similar to the object shape

Circle: Creates a circular or elliptical shape

Rectangular: Creates a rectangular or square shape

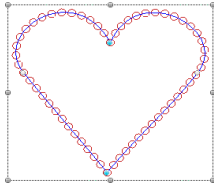
Round Rectangle: Creates a round-rectangular or square shape

Areas with Hotfix Outer Ring Fill

OPTIONAL
FEATURE



In this fill mode, the system calculates a group of exterior rings and places the beads along them. The same as the inner ring fill, the special feature of the Variable Distance fill mode, is that you can control the separation between the rings, in a one by one basis, allowing beads density gradients, to achieve incredible effects.



Ring fill mode is better suited for large area objects with small beads. This combination allows that several rings may be fitted outside the shape so the distance variation effect may become evident.

The properties to control the Variable Distance fill mode (Body tab) are:



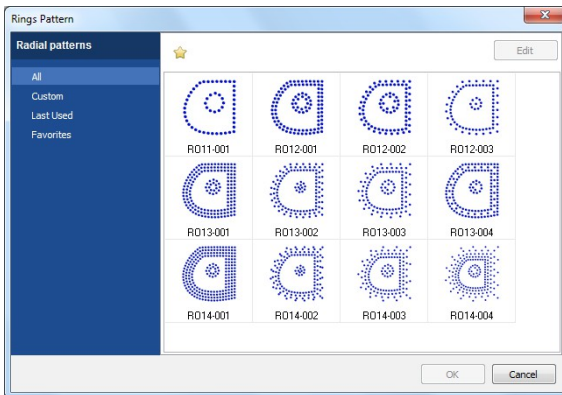
Beads Spacing: Controls the space between beads along all of the rings. A distance of 0 (zero) means that beads are “touching” its neighbors. If bead type is sequin, a negative value, that produces some overlapping, is allowed.



Margin from Borders: Set a distance from the borderline where no beads are placed.



Pattern: This button displays the Rings Pattern dialog box. This tool lets you use any of the Radial Patterns included; or to edit them to create a new one.



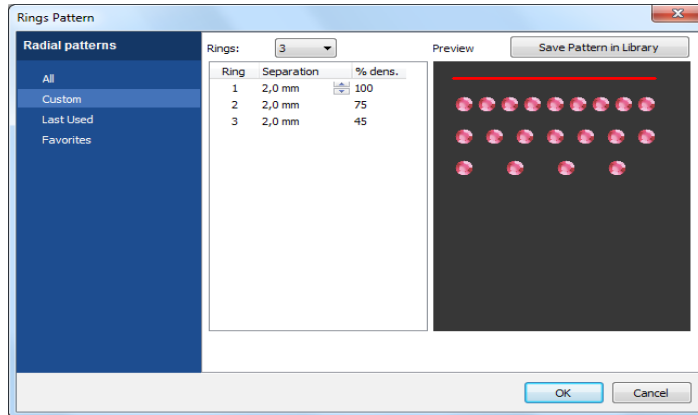
The Rings Pattern box shows some Radial Pattern samples you can use. Click on the *All* option, select one and press OK.

You can also edit any of them, change their configuration and use it right away. It will appear under the *Custom* option.

To access any Ring Pattern quicker, add it to the Favorites tab, first select one of the available ones, and afterwards clicking on the yellow star. It will appear on your Favorites tab.

Choose any pattern, for example the one named RO11-001, press the Edit button to see the number of rings the pattern has, and a preview pane on the right.

The Rings control is set to 1 and the list contains just one row. You may define as many rings as you want.



The Rings Pattern settings in the left picture was used to fill the heart design shown in the previous page. Three rings were defined. The separation between them was increased from ring to ring to produce the vanishing effect. The red line in the Preview panel indicates the object boundary. The black background region represents the object exterior.



Angle mode: Non round beads may be oriented, that is, placed rotated (with respect to its center) at different angles. Orientation may be fixed (all beads at the same angle) or may be variable, considering the path direction.

This property has three options that let you control beads orientation (from left to right):

Perpendicular: Beads are oriented following a variable direction perpendicular to the path.

Tangent: Beads are oriented considering a direction tangent to the path.

Fixed: This is the default option. All beads are placed at a the fixed angle indicated in Angle Value.



Beads angle: Set the rotation (around its center) angle of the beads. Useful for non round pieces.

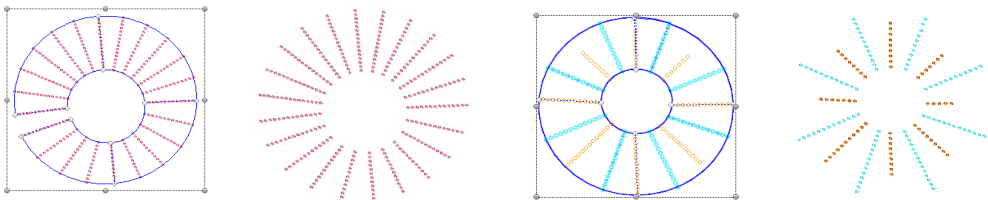
OPTIONAL
FEATURE

Ray Hotfix Column



In this fill mode, the user defines a column type section, in which the system will place the beads along a series of *rays* which are oriented parallel to the column's directions (defined by consecutive pair of nodes). You can control the separation between the rays, and a random edge fill on them.

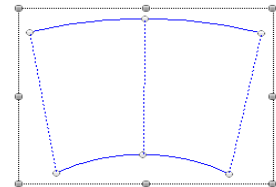
In a Column type section, the main reference is formed by guides. These are defined by sequenced pair of nodes, which establish directions within the column. These guides define both the section's geometry and the direction of the rays. A section of this type is formed at least by two pair of nodes.



The basic steps to use Ray Hotfix Column are:

1- Within the *Hotfix* ribbon, select *Single Hotfix Fill* and then *Ray Hotfix Column*. The system displays the *Hotfix Vector-Body* ribbon.

2- Create the column object as usual, that is, insert at least two pairs of nodes that will work as directions.



3- Once the column has been completed, the system will create the rays effect using the current ray type and separation values. Click on the *Select Object* tool (or press F11) and the system will enter to edition mode for the object you have just created.

4- Open the Object Inspector to see the property values.



The properties to control the Ray Hotfix Column (Body tab) are:



Rays Density: You have two choices: Use Ray Separation or Use Ray Count.



Ray Separation: Establish the distance in mm. Between each ray.



Ray Count: Establish the number of rays inside the column.



Insert Ray On: Define if rays are going to be established on:



References: where the column nodes were located



References+Interior: where the column nodes were located + the ray separation



Beads Spacing: Controls the space between beads along the rays. A distance of 0 (zero) means that beads are “touching” its neighbors. If bead type is sequin, a negative value, that produces some overlapping, is allowed.



Margin from Borders: Set a distance from the edge of the rays where no beads are placed.



Angle mode: Non round beads may be oriented, that is, placed rotated (with respect to its center) at different angles. Orientation may be fixed (all beads at the same angle) or may be variable, considering the path direction.

This property has three options that let you control beads orientation (from left to right):

Perpendicular: Beads are oriented following a variable direction perpendicular to the path.

Tangent: Beads are oriented considering a direction tangent to the path.

Fixed: This is the default option. All beads are placed at a the fixed angle indicated in Angle Value.



Beads angle: Set the rotation (around its center) angle of the beads. Useful for non round pieces.



Random Edge: The beads may cover the ray path in a randomly way. You have three choices:



Side A



Side B



Both Sides



Random Factor: Percentage of the complete ray that will be not filled completely with beads, but randomly.

Path and Areas with Hotfix Assorted Fill

OPTIONAL
FEATURE



The software counts with a toolset for the creation of HotFix objects, where the main fill rhinestones (or sequins) of several shapes, colors and sizes at the same time..

These tools enlarge the diversity and variety of creative fills for the creation of HotFix designs.

These kind of fill styles may have limitations in some cases (with some geometric shapes). The user must check that the resulting objects match to the expected result. The user must also check in detail when the used components are of different shapes and sizes, because the proximity of the component may produce undesirable results, even overlapping.

Manual Hotfix



This tool lets you insert one, isolated, hotfix piece anywhere in your design. Very useful to add some special pieces, sometimes large ones, normally used in very low quantities, or to complete the placement generated by the system for a given object.

To add manual pieces, just activate the tool from the Hotfix ribbon, select a bead from the bead bar and click where you need to place it.

When the Manual Hotfix tool is active, the ribbon shows position, angle and bead type properties that let you control, accurately, the bead placement.

Hotfix Texts

Texts are very powerful objects allowing you to easily create legends with hotfix pieces.

HotFix ERA lets you to create hotfix text using a set of detailed, pre-digitized fonts, and also using the TrueType ® fonts installed in your computer. HotFix ERA Text features include a complete manipulation of size, orientation, spacing (characters, words, lines) of texts and characters inside texts, text layout effects (like arc, bridge, diamond, etc) and more.

Due to the extense possibilities text objects offer, we have prepared a special chapter, the next one, totally dedicated to texts object.

Creating Hotfix objects

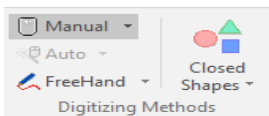
Producing a hotfix design, from the idea to the garment, basically involves:

- Artwork: Some kind of drawing, sketch, image or good specification related with the art behind the design.
- Planning: You need to know the size of your design and what hotfix pieces will be used. The knowledge about how the design will be transferred to the garment (machine, stencil, manual) may also help.
- Object Creation: As mentioned, this task known as “Digitizing” refers to the process to convert the artwork into objects and set the properties that control the beads placement.
- Export the design: Once the design is finished, you need to produce some type of output to move the design from the computer to the garment.

In this section we will focus on the Object Creation task or Digitizing. We will assume that an artwork image (of any type, unless specified) is displayed as screen background.

The chapter Images and Vectors contains detailed information about the HotFix ERA tools for working with artwork files.

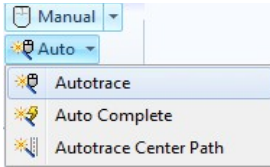
Manual Digitizing



The term Manual Digitizing means that objects creation is accomplished by tracing the artwork shapes manually. You need to select the proper creation tool (path and area basically) and place the nodes using the background image as reference and trying to reproduce the features of the shapes in the artwork.

Selecting the bead type you will use and setting the fill mode properties may be done before or during creation or, after creation (edition). Usually, the basic settings are done during creation and then adjusted (edited). This process is repeated for each shape in the artwork.

Assisted Digitizing: Autotrace



Autotrace is a time saving tool that automates the process of tracing the artwork. Instead of manually placing the nodes to capture the shapes in the artwork, the system automatically detects them (based on its color) and creates the objects reference for you.

To use this feature you just need to select Autotrace within the Digitizing Methods group, located on the left side of the path and area hotfix object ribbons. Autotrace is disabled if there is no image loaded on the working area.

When used with raster images (pixel based images), the key for success is the image quality:

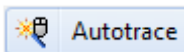
- 1- The minimum recommended image size is around 125 pixels per inch (5 pixels per millimeter). So, if your design has to measure 4" x 4", the image size should be at least 500 x 500 pixels.
- 2- Image colors have to be "solid" for proper recognition. Sometimes, a region that seems to be light blue is made of a mixture of blue and white pixels.
- 3- Shape borders should be well defined. Usually, the process of scaling an image, introduces an effect called blur that is not good for automatic recognition. A shape border in a good image is a clean edge with different colors at both sides, while in a blur-ed image you can note a graded transition between colors. Shadows and light effects are also bad for automatic tracing.

Take a look at a brief example about Autotrace usage. We will use a raster image called ASR-025 included with the system and scaled to 5" (125 mm) wide.



Step 1 - Select creation tool

We will digitize the Indian face using an Area with Hotfix - Uniform Fill and Radial Fill initial layout . As the shape size is not so large, we will select a small, 4 SS (1,7 mm.), round rhinestone crystal red.



Step 2- Select tracing mode

From the Digitizing Methods group, to the left side of the HotFix Area Body ribbon, click on Auto to open the list of options, and click on Autotrace. When you move the mouse pointer into the working area, you'll note a special mouse cursor.

Step 3 – Trace

Move the mouse pointer over the shape representing the indian face and click on it. The shape borderline will be recognized and will be surrounded by a flashing dashed line.

In the group Area Fill, check that the Bead spacing is set to 1 mm and Margin to 0; and that Radial is set as initial layout.

Hit the enter key. The system will generate the required beads placement to fill in the shape.



Step 4 – Continue creating.

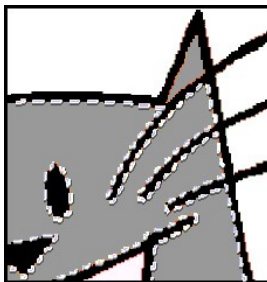
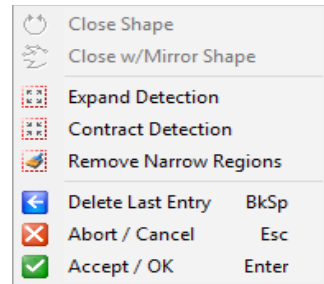
Once the first object is created, the system will be ready for the next one. Move the pointer to red shape above the face, click on it and hit enter. Repeat the process with all red shapes in the artwork.



Hide the image to check the result. To do it, just click on the word Auxiliar at the top-right of the working area.

During tracing, you have the chance to modify the recognized region before creating the object main reference. The context menu lets you expand and contract the recognized shape.

These tools are useful to create objects slightly smaller or larger than the artwork shape. You can also remove small regions and inlets and smooth abrupt shape changes using the tool Remove Narrow Regions.



Filtering example: Note how narrow inlets were removed by the filter.

Autotrace helps you creating one reference at a time. If the shape you are tracing has a hole, once you created the main reference, before hitting Enter, select Hole and then use the autotrace again to capture the hole reference. Even more, you may switch to manual mode on the fly and, eventually, create the hole reference manually. After the hole has been traced, press Enter.

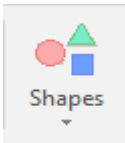
Automatic Digitizing: Auto Complete



Auto Complete is a full automatic digitizing tool. Although the procedure to use Auto Complete is almost identical to the Autotrace procedure, it creates all the object references at a time, that is, the main reference and the references for all holes the shape has.

Even more, Auto Complete lets you trace several shapes at a time, creating several objects, of the same type and fill mode: Once the first shape was traced, press and hold the Ctrl key and trace another one. When you press Enter, the two objects will be created at the same time.

Digitizing using Geometric Shapes



Creating objects from Geometric shapes is another semi-automatic digitizing method. It helps you to create the object references (main reference and holes) from a library geometric shapes. They are available for path and area objects.

Using this tools is very simple. See the example next.

Creating a path with a geometric shape

Step 1 – Select the path tool and set the Digitizing Mode to manual. For this example, we will use a round rhinestone with a diameter of 2 mm. (6ss), Aquamarine Color. Set Bead spacing to 1 mm, Angle Type Fixed with Bead Angle value of 0 (zero) degrees. Set “Add Beads on” Path.

Step 2 - Click on Shapes. Within the gallery, scroll down to the category named Advanced Shapes and select the shape named AAS_022 showed in the right picture.

Move the pointer into the working area and drag the mouse. The shape will appear and will start to scale up following the mouse move. Set a size around 60 x 57,7 mm. You may press and hold down the Ctrl key to scale the shape proportionally.



Step 3 – Release the mouse button and hit Enter. Press Ctrl+F9 to generate the beads. You have just created a path object with an aspect similar to the one showed in the picture on the right.



Editing Hotfix objects

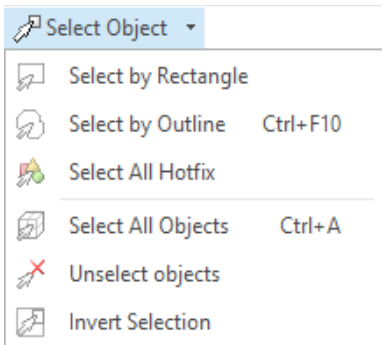
Once created, modifying the hotfix objects is a very simple task. You just need to activate the *Select Object* tool and click on the object you want to edit. HotFix ERA will highlight the object, display its nodes and refresh the ribbon, toolbars and other views to give you access to the object properties and geometric elements.

Selected objects are surrounded by a set of special handles that allow you to move, scale and rotate it. Also, within the ribbon bar, appears a tab named Layout with alignment and repetition tools among others.

Selecting the objects for editing is a topic by itself. The following paragraphs introduce the available selection tools.

Object Selection tools

The second button on the auxiliary toolbar, located above the working area, is the selection tool. Clicking on the button activates the powerful selection tool. Depending on how you use the tool and which controls you activate when you are making a selection, you get a different behavior and results.



If you click on an object, it becomes selected.

If you click and drag left to right, the tool lets you select by rectangle. A shaded rectangular box, with one corner fixed at the position you start dragging and the opposite located in the current mouse pointer position, is displayed on the screen. When you release the mouse buttons, all objects totally inside the rectangle are selected.

If you click and drag right to left, the tool lets you select by “crossing rectangle”. In this mode, objects totally or partially included in the rectangle are selected.

If you press and hold the Ctrl key, a click on an object adds it to the selection set. Once an object is added, a new click on it removes it from the selection set.

Clicking on the arrow pointing down, unfolds the selection menu, with extra selection tools.



Select by Rectangle: Is the default mode mentioned in the above paragraph.



Select by Outline: In this mode, you create, click by click, a free shaped outline surrounding the objects you need to select. Once did it, access the context menu and select OK to instruct the system to select all objects included inside the defined outline.



Select All: Automatically selects all objects in the design



Invert Selection: Creates an inverted selection set, that is: all currently selected objects are unselected and all currently unselected objects are selected.

Hotfix piece edition tool



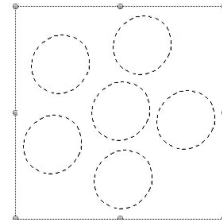
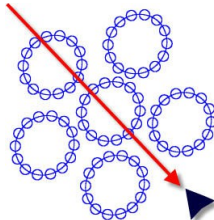
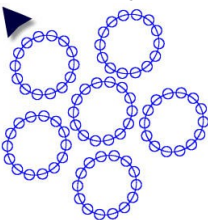
This tool lets you modify an individual hotfix piece, no matter if the piece belongs to an object filling or is a manual hotfix piece.

Once the tool is activated and a bead selected:

- Drag to move the piece.
- Press and hold Ctrl key to display the rotation handles. Drag them (always holding Ctrl) to rotate the piece. Rotation center may be also dragged to move it where required.
- Press Delete key to remove the piece
- Press Shift key and drag to initiate an on the fly piece insertion.
- Click on the bead bar or use the beads gallery within the ribbon to change the bead type.
- You can also use the Position and Angle controls within the ribbon to accurately edit the bead.

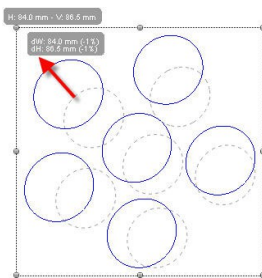
Working with Hotfix Objects Blocks

Any time you use the selection tools, the resulting selection set (even if it contains just one object) is considered as an object block. As described previously on Object Selection Tools, you can create a block using any of the selection methods. Once created, HotFix ERA draws a dashed box around the objects.

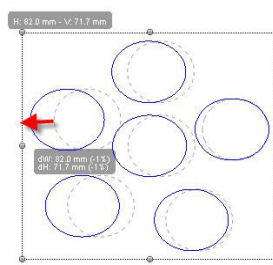


The box has eight grips or handles (in the corners and in the middle of each side).

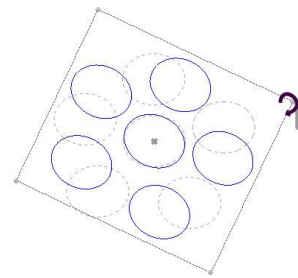
- Drag any corner handle to produce a proportional scaling of the block, keeping the opposite corner in place.
- Press and hold the Shift key and drag a corner handle to produce a proportional scaling but keeping the block center in its place.
- Drag any side handle to scale horizontally or vertically, keeping the opposite side in its place.
- Press and hold the Shift key and drag any side handle to scale horizontally or vertically but keeping the block center in its place.
- Press and hold the Control key and drag the corners to rotate the block around the rotation center. Holding the Ctrl key you can also drag to move the rotation center where you need.



Scale proportional



Non proportional scaling



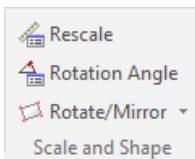
Rotate

Note: During these operations, a floating legend (called tooltip) with current size, size change and angle is displayed to help you to work more accurately.

When an object or block is selected, HotFix ERA activates the tab Layout within the ribbon (this tab is the default when the block contains multiple objects).

The Layout tab contains a set of tools specially prepared for block operations:

Scale and Shape group



Rescale: This tool lets you define a segment in the object and then indicate to system the size you need that segment to be. So, you can scale your block considering the size you need for an specific shape on it (the height of a given shape, the diameter of a circle, etc)

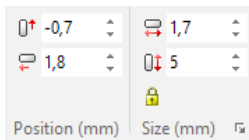
Proceed this way:

- 1- Define the block
- 2- Activate the Rescale tool. Move the mouse pointer into the working area and click to set one end of the reference segment and drag to set the end point.
- 3- When the mouse button is released, the scale box will appear. The measured length of the defined segment will be highlighted and ready to accept your input. Just enter the size you want and press OK. The block will be scaled so as the segment you defined now measures the size you entered.

Rotation Angle: This tool operates quite similar to rescale. Once activated the system waits you define a segment (click for start point and drag for end point). Then, the rotation box appears with the measured angle highlighted and ready for input. You just need to enter the desired angle and press OK. The block will be rotated so as the defined segment has the entered angle. This tool is very useful at the time of aligning a shape with the axes. Define the angle reference segment aligned with the shape and then set the new angle to 0 or 90 degrees.

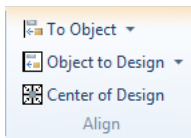
Rotate/Mirror : Simple tools that produce common fixed angle rotation (90, 180, 270 degrees) and mirrors (vertical and horizontal).

Position and Size Groups



This groups contain controls that let you set the position and size of object blocks accurately. Just enter the desired value in the boxes and press enter.

Align Group



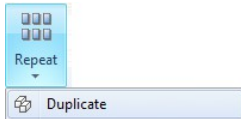
This group contains tools for aligning objects respect other objects inside the block and the hole block respect to the design.

To Object: This tools aligns the objects inside the block to left, right, top and bottom, using as reference the leftmost, rightmost, upper and lower object of the block. You can also align the objects center horizontally, vertically or both.

To Design: Contains tools for align the whole block with respect to the design, that is, with respect to all other objects not included in the block.

Center tool: Moves the center of the block to the system origin point (0,0).

Repetitions



Access the available commands from the Block – Layout ribbon. In the case of Hotfix design, you have only the Duplicate option.

Duplicate Block



This command performs a copy and paste of the selected block in only one step. It always works on the active document.

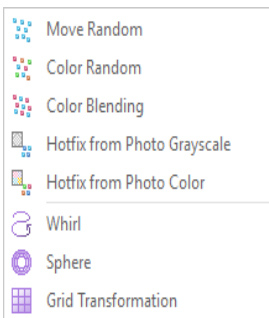
Effects on Hot fix objects

OPTIONAL FEATURE



HotFix ERA allows you to distort a block following complex geometrical patterns by means of the so-called effects. In the next paragraphs you will find a description of these effects and the instructions on how to use them.

Note: Remember that the undo-command is always available, in case you want to undo after having applied an effect to a block.



All the effects are available both from the ribbon BLOCK LAYOUT > Create Objects group > Effects on Hotfix Objects, and from the context menu.

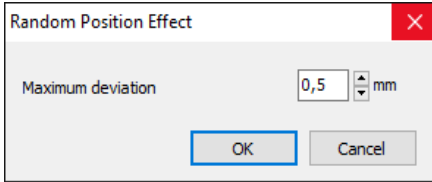
The available effects are: Move Random; Color Random; Color Blending; Hotfix from Grayscale; Hotfix from Photo Color; Whirl; Sphere and Grid Transformation.

Move Random

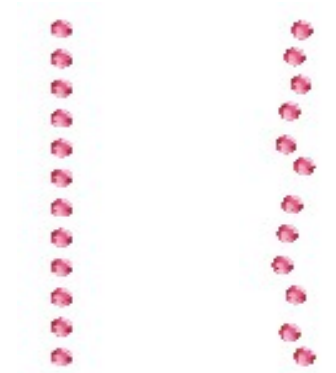
OPTIONAL FEATURE



When applied to a block, some of the stones are displaced a distance that is configured from the Random Position Effect.



The result show how some of the stones have been moved with no specific direction, to add an irregular look on the design.

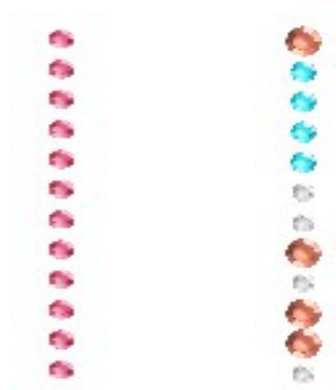
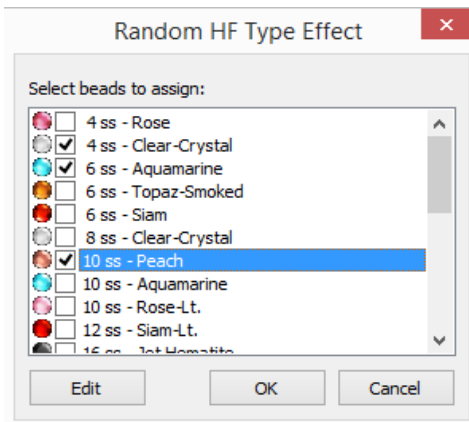


Color Random

OPTIONAL FEATURE



When applied to a block, some of the stones are replaced with the ones you have specified from the Random HF Type Effect box.



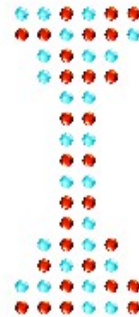
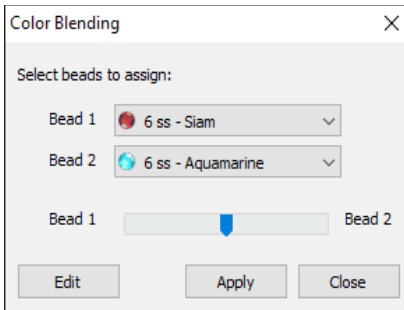
The result shows how some of the stones have been replaced aleatorily with some of the selected from the Random HF Type effect box.

Color Blending

OPTIONAL FEATURE



When applied to a block, the different color beads mix within the object. The amount of beads of each color depends on the relative location of the slider in the Effect box.



The result shows how part of the stones have been replaced aleatorily with the other selected color from the Color Blending effect box.

Grayscale Photo Stone

OPTIONAL FEATURE



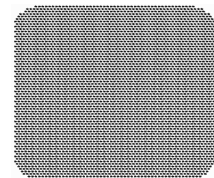
You need to have a Hot Fix object and an a grayscale image below. When you apply this effect, the stones change their size following this premises: dark gray, uses a big size stone; intermediate gray uses an intermediate size stone; light gray uses a little stone.

Insert an image on the workarea. We used PSR-004.jpg available from C:\Users\Public\Pictures\Sierra Technology\Artwork Photo or through the Catalog.



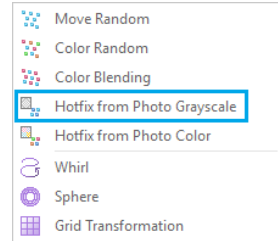
From the Hotfix ribbon, choose Area with HotFix - Flat Fill. To create the area object, use the Round Rectangle from the Shapes item.

We used Beads and Rows spacing in 0,5 mm, Beads offset in 50% and a Jet Color 10ss Rhinestone Round.

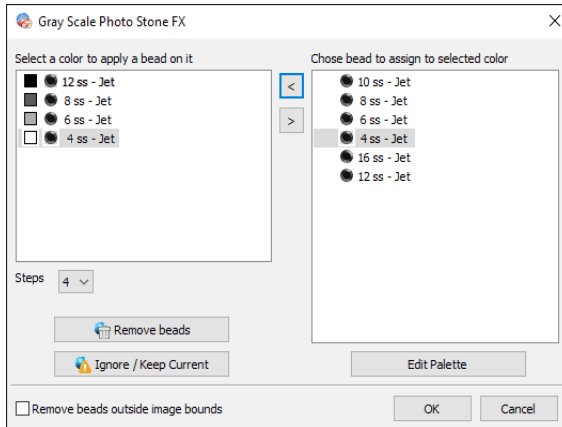


Move the Area object you have just created over the image.

From the *Hotfix Area Layout* ribbon, *Create Objects* group, click on *Effects* on *Hotfix Objects*, and choose *HotFix from Photo Grayscale*.



The Gray Scale Photo Stone FX box will open. On the left pane it shows all the colors the image has. On the right pane, you will have all the beads defined on your system for this task. You have to assign a bead to each color, to be able to use the Photo Stone tool. Proceed as follows:



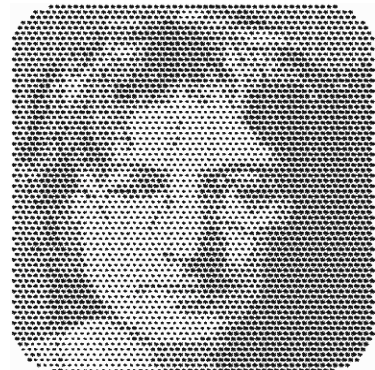
On the right pane, click on a bead to be used, then click on the color on the left pane to be replaced and press the [

The selected bead will appear on the left pane corresponding to the color you chose.

Repeat the operation will all the image colors and press OK.

See the result on the right image.

You get a design similar to the image you used, but made out of different size but same color stones, that are displaced in the same way the Fill mode you selected.



Color Photo Stone

OPTIONAL FEATURE



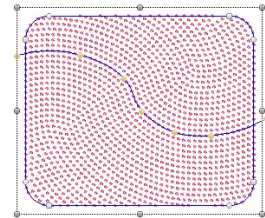
You need to have a Hot Fix object and an a image below. When you apply this effect, the stones change their color to the one most similar to the color of the image on the background. The result is getting a design very similar to the image below.

Insert an image on the workarea. We used ASR-006.bmp available from C:\Users\Public\Pictures\Sierra Technology\Artwork Bitmap or from the Catalog.

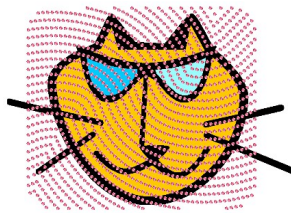


From the Hotfix ribbon, choose Area with Flexible Fill. To create the area object, use the Round Rectangle from the Closed Shapes item.

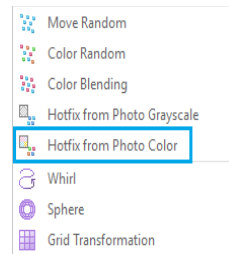
Next click on Add Direction, and insert a curve direction. Press Enter. You will get a result similar to the figure on the right.



Move the Area object you have just created over the image.



From the Hotfix Area Layout ribbon, Repetitions group, click on Effects on Hotfix Objects, and choose Photo Stone.

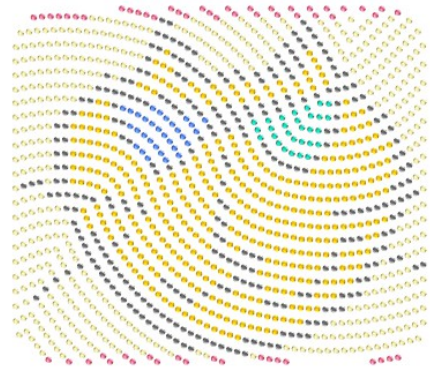
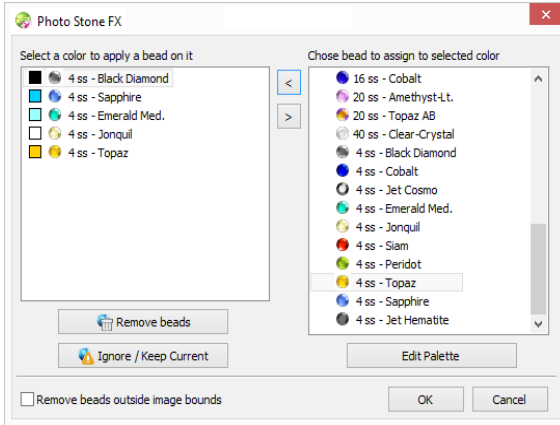


The Color Photo Stone FX box will open. On the left pane it shows all the colors the image has. On the right pane, you will have all the beads defined on your system. You have to assign a bead to each color, to be able to use the Color Photo Stone tool.

Proceed as follows:

On the right pane, click on a bead to be used, then click on the color on the left pane to be replaced and press the [<] button. The selected bead will appear on the left pane corresponding to the color you chose.

Repeat the operation will all the colors and press OK.



See the result on the upper right image. You get a design similar to the image you used, but made out of stones, that are displaced in the same way the Fill mode you selected.

Whirl

OPTIONAL FEATURE

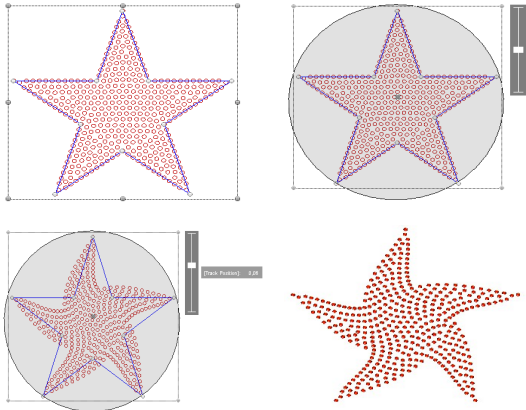


This effect will allow you to deform an area of the block into a whirl.

Move the mouse towards the Graphic View area, exactly where you want to set the center of the whirl. *HotFix ERA* will draw a circle while you drag the mouse button, hence defining the diameter of the transformation sector.

Release the button when you are satisfied with the result.

If you want to modify the position of the sphere, place the mouse pointer inside the circle and drag to displace it. If you want to correct the diameter, drag the mouse pointer towards the outlines of the circle and drag it.



Intensity Selector: On the right side of the circle there's a knob located vertically. Drag it up or down to specify the intensity of the effect, and see the result in a dynamic way in the Graphic View. To finish, press the Enter key or choose Accept/OK from the context menu.

Sphere

OPTIONAL FEATURE

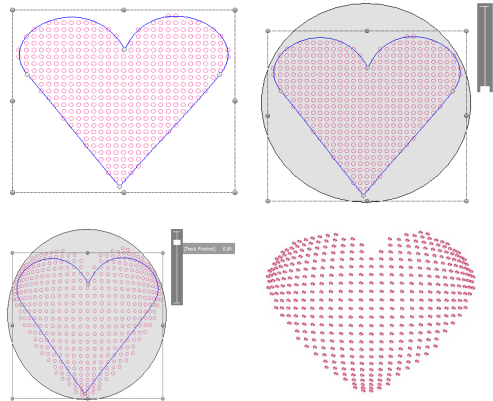


This effect will allow you to deform the block, giving it a spherical shape. To use this command follow the steps below:

The application over the block is similar to the Whirl effect, having to define the effect intensity from the control slider. Click inside the design area and drag the mouse pointer to determine the area to apply the effect; you can move it or change its size.

Apply the desired intensity from the right control slider.

When you are satisfied with the result, open the context menu and click on Accept / OK, or simply press the Enter key.



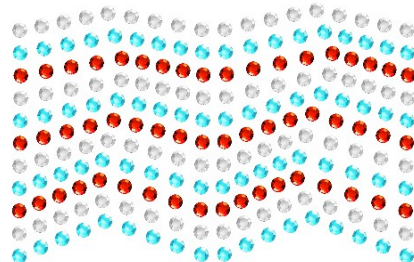
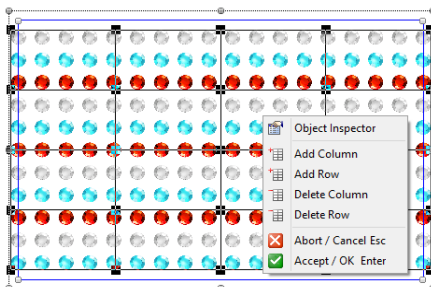
Grid Transformation

OPTIONAL FEATURE



This effect allows you to place the block on a rectangular grid. To form this grid, open the context menu and add or delete rows or columns (next figure left), according to the result you want to obtain. The rows and columns entered will be arranged along or across the block, forming a grid.

Moving the grid's points with the mouse (the intersection between rows and columns) you deform it, while the block beads follow that transformation (next figure right).



Drag the grid's points to obtain the desired shape, as you proceed deforming the grid, *HotFix ERA* will calculate the beads location, showing the result on the Graphic View. To finish, open the context menu again and click on the option Accept / OK, or simply press the Enter key.

Object Manager and Object Inspector

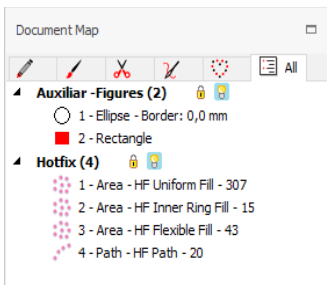


The Object Manager is a special, technical view, that displays a “map” of your designs, showing all the objects it contains: vector images, raster images and hotfix objects.

Access it Object Manager by clicking on its tab, to the right of the working area: A group with two panels will open: the Document Map at the top and the Object Inspector at the bottom.

Object Manager is an important tool to check what objects the design has and it's also a method to select objects while Object Inspector is a detailed object's properties editor.

Object Manager



The Object Manager (OM) is a special type of list known as a “tree list”, much similar to the one used to display disk units, folders, sub-folders and files.

The main items (the “parent” items, using the tree list language) are the basic object types.

Hotfix ERA works with: Images, Vectors and Hotfix objects. Inside them, a list of items (the “child” items) represent the loaded images, vector artwork objects and hotfix objects respectively.

Selecting any child item within OM, produces the synchronized selection of the object it represents within the graphic view and, vice-versa, selecting an object within the graphic view, selects the corresponding item within the OM.

Object selection is just one of many operations available from the OM: You can copy, paste, and delete objects one by one or by blocks:

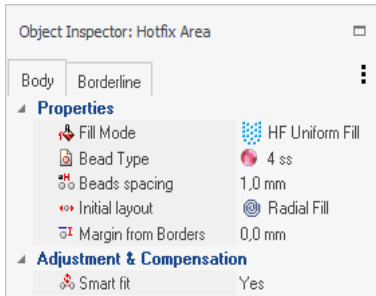
- Hold the Ctrl key and click items to create multiple selection sets;
- Click an item, hold the Shift key and click a second one to select all items between them in the list.
- Drag items (within the same parent group) to re-arrange their order within the sequence (remember that object sequence may be meaningless for rhinestones, rhinestuds and nailheads but may be important for sequins and spangles and also for vector objects).



The icons beside each parent group let you Block and Hide that object type: Blocking an object type makes impossible to select, delete or modify any object of that type;

hiding an object type makes that type invisible.

Object Inspector



The Object Inspector is a complete browser and editor for object's filling properties.

It's organized as a categorized list with items arranged in rows. Each row controls a property.

For hotfix Area objects, Object Inspector (OI) displays separated tabs for body and borderline fills; for path objects, just the borderline tab is displayed

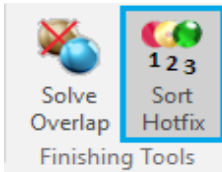
Rows in OI consist in two columns: one with the property name and icon and one with the property value. Clicking the property value activates the property editor to modify the value. Once activated, properties may display:



A down arrow to select the value among fixed options.

A spin button to increase/decrease value or type in directly.

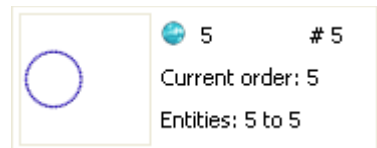
Sorting pieces



A common practice when creating a design, is to proceed shape by shape, building the required objects without paying attention to the bead type each object use. So, the resulting design sequence, that is, the order of the objects as shown in the Document Map, follows exactly the creation order. Due this, the design sequence is normally unordered in terms of bead type, that is, not all the object using a given bead type are placed one after another.

Sort Hotfix tool is designed to help you easily manage the design sequence, allowing automatic or manually controlled object sorting.

The tool dialog is basically a list with items representing an object or a group of contiguous objects that use the same bead type. The item shows also the bead type it uses, its current position within the design sequence, the object numbers it represents and a tiny icon of them.



The tool offers two modes: Sort by Palette Order (Automatic), that sorts the objects according to the bead types they use by following the bead bar order (objects using bead #1 first, then objects using bead #2, and so on) and Manually, that allows you to order the items as you want.

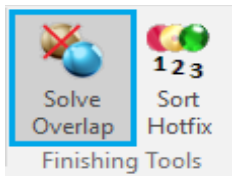
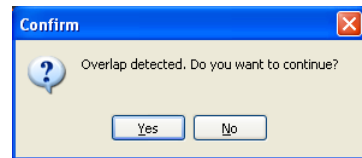
In manual mode, you may select any item and use the cursor keys to navigate through the list. The arrow buttons at the top right allows you to move the item within the design sequence (you may also use drag and drop to do it).

Once two object that use the same bead type are set contiguous, next time you open the Sort Hotfix dialog they will be shown grouped into a single item.

Cleaning overlapped pieces

Most materials used in garment decoration with hotfix beads do not allow overlapped pieces. The exception to this rule are the sequin beads type, enough thin and flat to allow overlap. Rhinestones, rhinestuds and nailheads instead, are too thick and curve to allow overlap.

When objects are overlapped, totally or partially, beads calculated for them are probably overlapped too. The system will not display any warning about this situation until you try to export the design using any of the output formats. At that moment a message will notify you that the design has overlapped pieces.



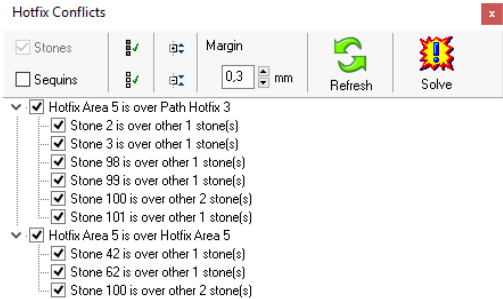
HotFix ERA includes a tool to automatically cleans overlapped pieces called Hotfix Conflict Window. To launch the tool, you need to use the button located in the *Hotfix* ribbon > *Finishing Tools* group. This tool requires you know some details about your design, basically, the order of the objects in the design sequence.

When objects A and B are overlapped, one of them, let's suppose A, is over B. This implies the idea of object's sequence: A over B is different than B over A. Most of the time this situation doesn't care for hotfix designs, however, it cares when overlap conflict exists and when you use overlapped sequins.

The object sequence is visible with the Object Manager view: the top most object in the list is the first object created and the rest of them are over it. So, the rule is: **All the objects following a given one are over it.**

The Conflict Window contains a tree list where each main item represents a conflict between two objects and the items description declares what object is over what other. If you expand the tree to explore the sub-list associated to each main object, you'll find the overlapped beads, one by one. The check marks at the left of the items let you include/exclude them from cleaning.

At the same time, the graphic view shows red crosses for each bead in conflict that are checked in the list. The toolbar at the top of the box lets you Clean, Refresh the list, Check all items, Uncheck all Items, Expand all list and Collapse all list (mentioned in order from left to right). Check the conflicts you want to solve and press the Clean button.



The system will remove the beads in conflict from the back object, preserving the beads of the front object.

When all conflicts were solved or when there is no conflicts in the design, the Conflict List will appear empty.

Importing YNG files

OPTIONAL
FEATURE



This feature allows you to read hotfix YNG files produced with GemMaster® version 2.9 and import the beads information into a DSG design file. This function imports only bead information (position, type and color). Design objects you may have created are not imported.

Import



A Graphic File

Create a new working window that includes the selected artwork (raster image or vector graphic).



A Hotfix File

Create a new working window that includes the selected Hotfix design (design file is previously converted by the import filter / interpreter).

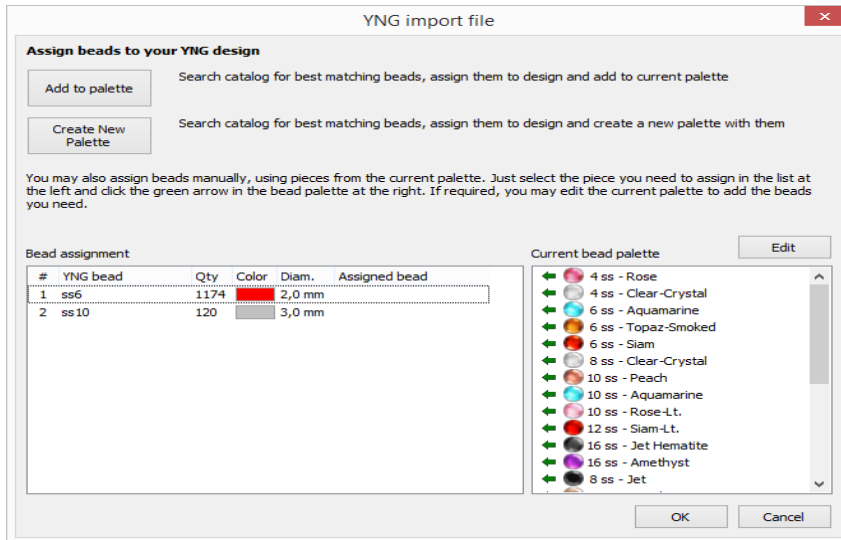
To import YNG files, go to the File>Open ribbon, and from *Import* group, click on *A Hotfix File*.

A standard File Open dialog appears. Select YNG Files (*.yng) from file type.

Navigate through your units and folders, point the desired YNG file and press Open.

Reading YNG files may take some time (a progress bar is displayed during this phase).

Once finished, the YNG Import file dialog will be presented. This dialog allows you to define which bead type, from the system's Beads Catalog, should be used for each bead type used in the YNG file.



There are two lists: The one at the left (Bead assignment) shows the bead types found inside the YNG file, while the one at the right shows your current bead palette.

Two buttons at the top region of the box allow you to assign beads automatically:

Add to Palette: The system will search the Beads Catalog for beads that best match in size and color to the beads used in the YNG file. Once found, beads will be assigned to the imported design and they will be added to the current bead palette.

This mode keeps your current bead palette items, so it is recommended if you are importing a YNG file into an existing design (so you will get a merged design). The bead palette will contain all the bead types it previously contains plus the bead types used by the YNG file. If your palette already contains a bead type used by the YNG file, the existing one will be used (no duplicates).

Create New Palette: The system will search the Beads Catalog for beads that best match in size and color to the beads used in the YNG file. Once found, a new bead palette with them will be created (your current palette will be lost) and its beads will be assigned to the imported design .

This mode is recommended if you are importing a YNG file into a new, empty design . The bead palette will contain just the bead types used by the YNG file

Finally, you may also assign beads manually. Just select a row in the list at the left, and, using the list at the right, click the green arrow to assign that bead to the imported design.

The Edit button at the top of the Current Bead Palette list allows you to modify your current palette to best suite the assignment needs.

Once you have completed the bead assignment task, press the OK button.

The YNG design will be loaded into your working area.

Beads will be imported as Manual Hotfix objects, grouped by sequences of the same bead type, according to the bead order found in the YNG file.

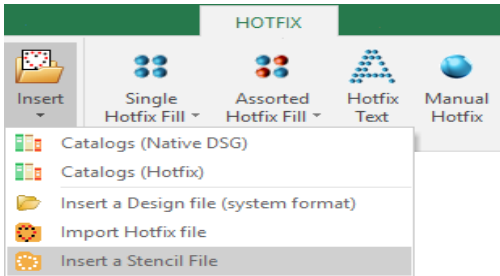
This arrangement facilitates bead type edition, scaling, etc.

Importing PLT files

OPTIONAL
FEATURE



This feature allows you to read the hotfix files created in other applications and stored in HPGL (PLT extension) as rhinestone stencils and import the information as a design file DSG. The function imports only position information, size and color of the holes. Design objects are not imported because the HPGL doesn't include such information.



To import PLT files, go to the *Hotfix* ribbon > *Insert Hotfix Objects Group* > *Insert* to open menu, and click on *Insert a Stencil File*.

A standard File Open dialog appears.

Navigate through your units and folders, point the desired PLT file and press Open.

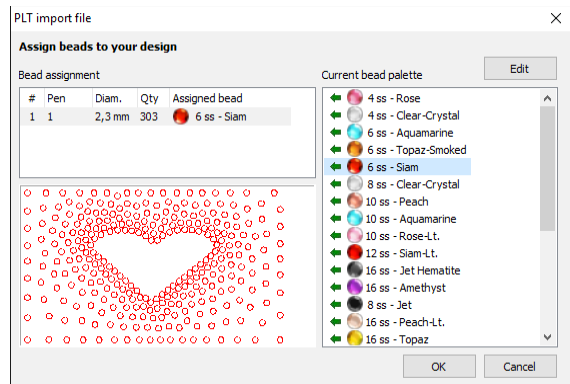
Reading PLT files can take some time (the system displays a progress bar during this stage). After reading, the PLT File Import dialog box is shown.

Reading PLT files can take some time (the system displays a progress bar during this stage). After reading, the PLT File Import dialog box is shown. This box allows you to define what kind of pieces (from the system catalog) is assigned to each part of the PLT file.

This box allows you to define what kind of pieces (from the system catalog) is assigned to each part of the PLT file.

The box contains two lists: The left list of beads assignment, which shows the different types of parts found in the PLT file and the right list, the current hotfix palette.

You can assign beads types manually. To do this, select a row in the list on the left and click on the green arrow in the list on the right for the part you want to assign. The Edit button lets you adjust the palette adding the parts you might need.



Once you have completed the bead assignment task, press the OK button.

The parts will be imported as manual hotfix objects, grouped by type of beads, according to the order found in the PLT file. This structure facilitates subsequent type editing, scaling, etc.

Importing DST files

OPTIONAL
FEATURE



This feature allows you to read the hotfix files created in other applications and stored in DST (DST extension) as rhinestone stencils and import the information as a design file DSG. The function imports bead quantity information, size and color of the holes. Design objects are not imported because the DST doesn't include such information.

Import



A Graphic File

Create a new working window that includes the selected artwork (raster image or vector graphic).



A Hotfix File

Create a new working window that includes the selected Hotfix design (design file is previously converted by the import filter / interpreter).

To import DST files, go to the *File>Open* ribbon, and from *Import* Group, click on *A Hotfix File*.

A standard File Open dialog appears. Select DST Files (*.dst) from file type.

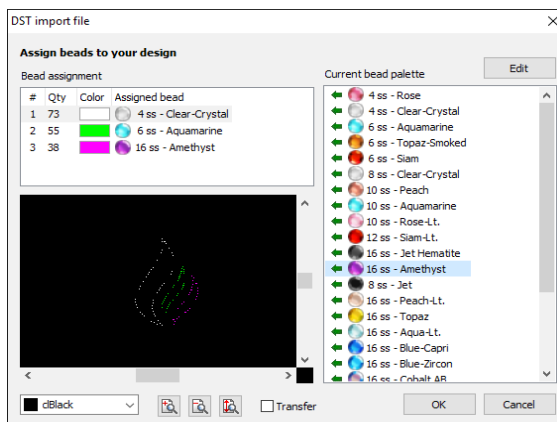
Navigate through your units and folders, point the desired DST file and press Open.

After reading, the DST File Import dialog box is shown.

This box allows you to define what kind of pieces (from the system catalog) is assigned to each part of the DST file.

The box contains two lists: The left list of beads assignment, which shows the different types of parts found in the PLT file and the right list, the current hotfix palette.

You can assign beads types manually. To do this, select a row in the list on the left and click on the green arrow in the list on the right for the part you want to assign. The Edit button lets you adjust the palette adding the parts you might need.



The parts will be imported as manual hotfix objects, grouped by type of beads, according to the order found in the DST file. This structure facilitates subsequent type editing, scaling, etc.

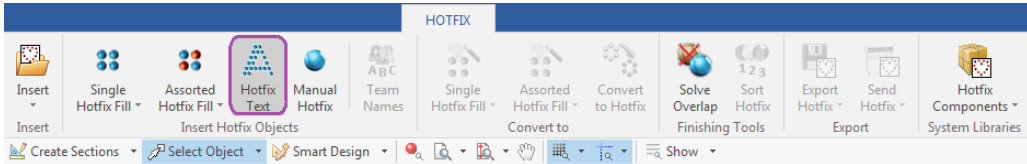
Chapter 5

Hotfix Texts

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Hotfix Text



This tool lets you create a hot fix object based on text characters using a library of predefined fonts or the TrueType fonts you may have installed in your computer.

Texts are very powerful objects. This chapter will introduce the extensive list of features available in Hotfix ERA texts.

HotFix ERA Text Objects

When you create a path or area, you build the object shape using any of the creation methods: manual, assisted, etc. Shapes for Text objects, instead, are built from characters you type, with no need for graphic input: you just need to select the font, set the size (usually the text height) and fill mode, and type the characters: HotFix ERA creates shapes for each letter and applies the specified fill mode to them.

Text object types

There are two basic text types: those based on digitized fonts and those based on TrueType fonts.

Digitized fonts: Are quality pre-built fonts, included with the system. These type of fonts were created, character by character, using special groups of basic objects (generally paths) and tested for a range of sizes and bead types. When you create a text using a predigitized font, the system uses those pre-built basic objects to generate the placement of beads.

TrueType fonts: Text based on TrueType fonts are built “on the fly”, using the shapes contained in the font to automatically create objects for each character you type. Then, all objects created for a given text are packed properly to allow easy manipulation and edition. It's important to know that not all TrueType fonts have the same quality, and not all of them are suitable for hotfix. Proper selection of text size (basically, related with the bead type you will use) is the key for getting good results.

Creating Texts: Text ribbon

The Text ribbon contains most of the commands and properties you will use to create your hotfix text objects. The following paragraphs contain a brief description of them, group by group.

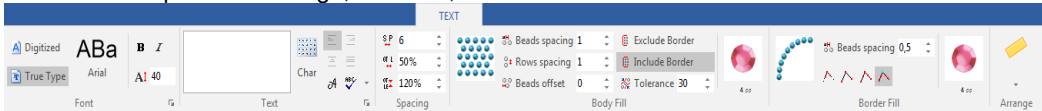
Font : This group contains controls to select the font type (digitized or TrueType), the font itself and the text height. For TrueType fonts, you can also select the font style: Bold and Italic.

Text: Inside this group you will find the box where you will type your text characters, the character table (especially useful for digitized fonts, to know what characters are available in the currently selected font), the alignment options (for multi-line texts), and the spell checker. For TrueType fonts you may also activate the preview mode, forcing the system to display the typed characters using the selected font, instead of the default one.

Spacing: This group includes controls to manage text spacing among letters, words and lines.

Body Fill – Border Fill: These groups controls the fill mode of the text object. Depending upon the selected font, both groups or just one of them will be displayed. Usually, both groups are presented for TrueType fonts and just one, Border Fill is displayed for digitized fonts.

Arrange: This group contains the commands to change the text layout, allowing you to arrange it following simple layouts like arc (upper, lower or both for multi-line texts), stair, etc. or more elaborated templates like bridge, diamond, etc.



Example: Creating simple text in 3 steps

In this example, we will create a 40 mm height hotfix text with the word “Sierra” using the digitized font Blockletter and a golden rhinestud, 2 mm. diameter. See the procedure below as a basic guide for creating texts:

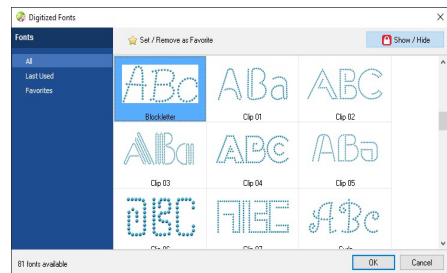
Step 1- Select the font and text height

In the Font group, click Digitized Font.

Then, click the Font button to open the font gallery and select the font named Blockletter.

Click the height control and type in 40 if you are using Metric system or 1.6 if you are using Imperial system.

The system includes a standard pack with 10 digitized fonts. Additional fonts may be available at special prices upon request.



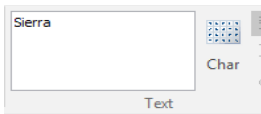
Step 2- Set fill mode properties



The font we have selected is based on path objects. Due to this fact, the system displays a Border Fill group with the same fill mode properties you find in a path object.

Set bead spacing to 0.5 mm and select a gold rhinestud 6ss (2 mm. diameter).

Step 3- Enter the text

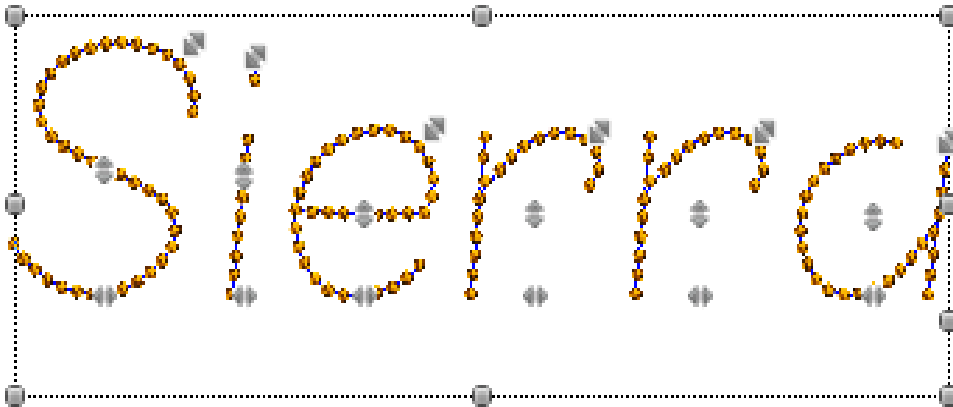


Using the box in the Text group, type in the word “Sierra” (with upper and lower case letters). The system will play an error beep sound if the character you are typing is not available in the selected font.

You may also use the Character table button to check what characters are available.

Alignment controls will be enabled if the text has more than 1 line. To enter multi-line texts you need to press “Ctrl + Enter” key combination to move the text cursor to a new line.

When you finish typing, press Enter. HotFix ERA will create the object text, displays it within the working area. A box will surround the text leaving it ready for edition.



The handles on the letters and around the text let you change the text position, size and rotation (use Ctrl to rotate) and letters size, position and spacing, graphically, by just dragging them.

Editing Texts

One of the most useful features of text objects features is the persistence: Once a text object is created it is preserved with all its properties and you may edit the font, size, words, fill mode, bead type, size, position, etc.

Anytime you select a text object, HotFix ERA highlights it, shows the text handles and displays the text ribbon, allowing edition of text properties and geometric aspect.

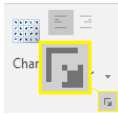
Editing Text Properties

The text ribbon is the main tool to edit text properties. Any property displayed there may be changed and the object in the graphic view will immediately reflect that change.

Using the **Font group** you may edit the font, style and height; using the **Text group** you may change the letters and alignment; the **Spacing group** lets you modify the characters, words and lines spacing; the **Fill mode group** (Body, Border or both of them) allows edition of bead type and fill style and finally, the **Arrange group**, allows changes in text layout and effects.

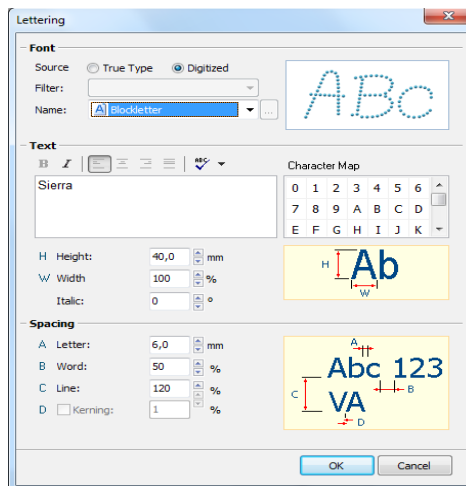
The Object Inspector may be also used to edit the fill mode properties.

The Text dialogue-box



At the bottom right corner of the Text group you may note a small icon. Clicking on it displays a dialog box with text properties related with the font and characters.

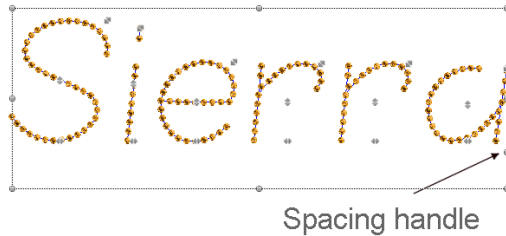
The box contains pictures that clearly show the meaning of many of the text properties.



Editing Text Geometry

As mentioned, when you select a text object, HotFix ERA displays a box and a set of handles on each letter and around the text.

Most of the **handles around the text box** operate in the same way that the handles around any other object: dragging the corner handles scales the object proportionally, keeping the opposite corner in place and dragging the handles located at the middle of the sides, scale the object horizontally or vertically, keeping the opposite side in place.



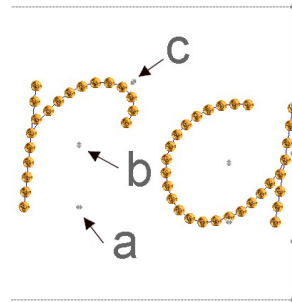
If you hold the shift key while dragging, the position of the object center is kept, and if you hold the Ctrl key, you may rotate the object and/or change the position of the rotation center.

Text objects have an additional handle located on the right side, between the lower and middle handles, called the spacing handle. Dragging it you may proportionally scale the letters and words spacing.

Handles on letters allow control of letter size and position in a per-letter basis.

Dragging the handle near the letter baseline (a) moves the letter horizontally; the middle handle (b) moves the letter vertically and the corner handle (c) scales the letter.

In the example, letter "r" was scaled up using the corner handle and move a bit up with middle handle.



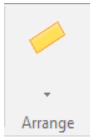
Text Transformations

In the previous section a simple geometry edition tool was presented that basically allows you to scale and rotate texts.

This section introduces tools that let you produce more flexible geometry manipulation: they are the text transformation types.

Transformation types

HotFix ERA allows two basic types of text transformation:



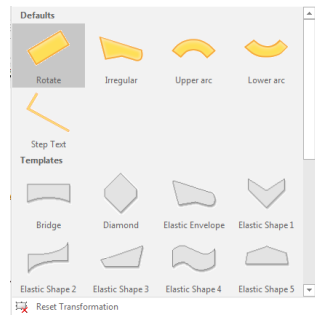
Envelope Transformations: Are based on the distortion of the box that contains the text. For example, bending the box containing the text produces an arc layout. Characters are distorted according to the envelope distortion.

Line Transformations: Are based on the distortion of the line where characters lie. For example, tipping the baseline produces a stair layout. Characters are not distorted; just their position is modified.

In addition to this classification, HotFix ERA organizes the transformation in two groups: Defaults and Templates. You can access them from the Arrange group.

Default transformations are simple, basic transformations like Rotation, Irregular, Arc (upper and lower) and Stair. Using the default transformations you may build envelope and line distortions with any shape.

Templates: Although using the default transformations you may create transformations of any shape, the system includes a set of pre-built shapes, so you don't have to do it by yourself. They are called Templates. Shapes like Bridge, Panoramic, etc. are included within the templates.



Using Transformations

All transformations have a number of handles or grips to control them. Depending upon the transformation, the system displays different handles that produce different effects. The following examples describes the behavior of the handles of some default transformations.

Stair (Step Text)

Stair transformation has three basic handles located at the right side of the text.

Handle A controls the angle of the baseline. Drag it down to get a descending stair; drag it up to get an ascending one.

Handle B changes text spacing proportionally.

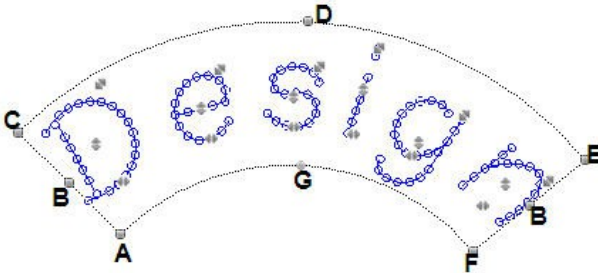
Handle C produces a proportional scaling.

When you move the mouse out of the handles, a four arrows pointer shape indicates that you may drag to move the whole text.



Upper Arc

Lets you bend the text in an arc shape. The handles to control this transformation are:



Handle A: controls the vertical size of the transformation box, keeping the superior arc in place and moving the lower one.

Handle B: Controls the horizontal size of the box, but preserving the arc shape.

Handle C: Controls the distance of the box from the arc center.

Handle D: Also controls the vertical size of the box, but it preserves the lower arc and move the upper one.

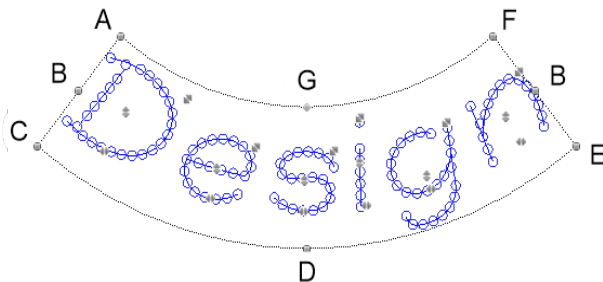
Handle E: Scales the whole box, combining the effects of handles B and D.

Handle F: Rotates the box around the arc center.

Handle G: Controls the arc radius.

Lower Arc

Lets you bend the text in an arc shape. The handles to control this transformation are:



Handle A: controls the vertical size of the transformation box, keeping the lower arc in place and moving the upper one.

Handle B: Controls the horizontal size of the box, but preserving the arc shape.

Handle C: Controls the distance of the box from the arc center.

Handle D: Also controls the vertical size of the box, but it preserves the upper arc and move the lower one.

Handle E: Scales the whole box, combining the effects of handles B and D.

Handle F: Rotates the box around the arc center.

Handle G: Controls the arc radius.

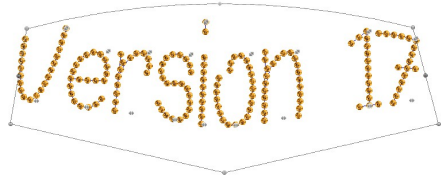
Irregular Box

Allows free distortion, with no predefined geometric shape. When you select this transformation, the system activates handles at the corners and at middle point of the sides.

Handles in this transformation have three states: free, straight and curve.

State may be changed right away by clicking on them with the mouse right button.

Changing handles state allow you to get different box distortions, like the one showed in the picture above.



User line and User Distortion

These transformations are available at the time of creating the text object only. When you edit a previously created text, none of them are available.

To use these transformations, you need to select them after typing the text but **before pressing Enter**, from the Arrange group of options.

The **User Line**, allows you to freely create the baseline where text characters lies. Each click sets a straight node of the baseline; Shift + click, sets a curve node. The backspace key deletes the last node. Hit Enter to finish baseline definition.



HotFix ERA will create the text placing the characters along the baseline created.

The **User Distortion** lets you create two lines, one at the base and one at the top, using the same procedure that the one for User Line. Both lines define a box used to distort the text. The first line you enter will be the box base line. Hit enter to continue with the box top line and hit Enter again to finish.



NOTE: top and bottom line nodes must be inserted from left to right.

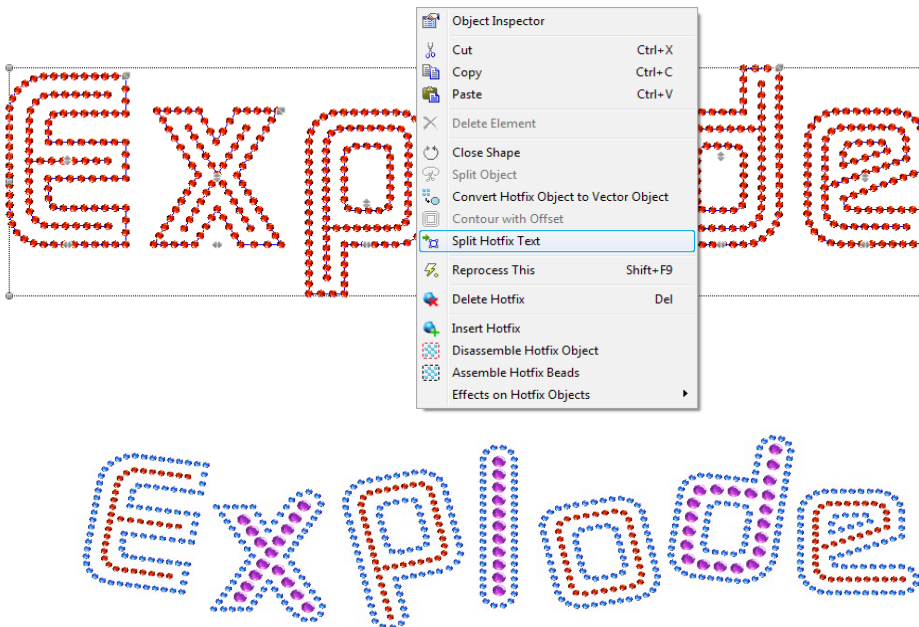
Exploding Texts (Split Hotfix)

The term Exploding is used to make reference to the action of converting text objects into its primitive basic objects: paths and areas.

Once a text object is exploded, edition as text is no more possible but, you get total control over the shapes and properties of the objects used to build the text characters.

To explode a Hot Fix text object:

- 1- Select the text.
- 2- Access the context menu and select Split Hotfix Text command.



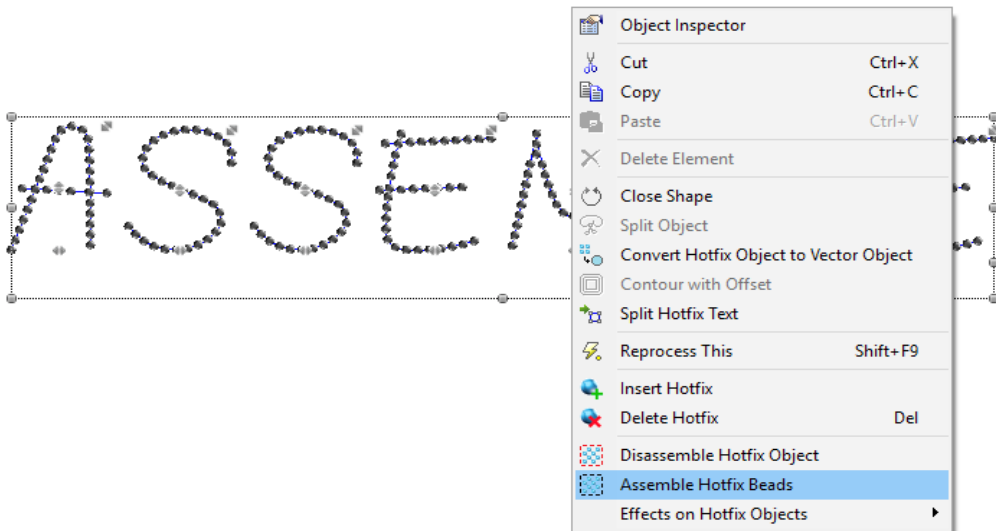
Now that you have exploded the hotfix text, you can edit the paths and areas, to be able to add nodes, modify shapes, and change beads size and color, among other things.

Assemble Hotfix Beads

The term *Assemble* is used to make reference to the action of gathering hotfix objects into only one hotfix manual section.

To Assemble HotFix Beads:

- 1- Select the hotfix objects or text.
- 2- Access the context menu and select *Assemble Hotfix Beads* command.



Now the text has been turned to Manual Hotfix and its gathered in only one manual section. You can change the color to all the beads in one blow, or move them to another location. In the Object Inspector you will find one entry that says Manual Hotfix.

Disassemble Hotfix Object

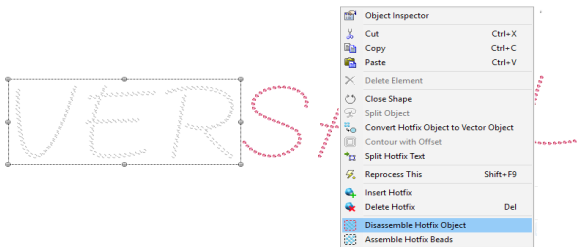
The term Disassemble is used to make reference to the action of separating a hotfix object, text or assembled hotfix beads into separated hotfix manual beads.

It's very useful when you need to have one or several colors and to avoid having to change the color to each bead, one by one.

Once you have all the manual beads, you can make one or several blocks of manual beads. Now you can select each block, press Assemble Hotfix beads, and the result will be that this block of manual beads, will be gathered into only one Manual Hotfix entity. Then you can change the bead size or color to it and/or move it.

To Disassemble HotFix Objects:

- 1- Select the hotfix objects or text (*first apply the Divide Text command*).
- 2- Access the context menu and select Disassemble Hotfix Objects command.

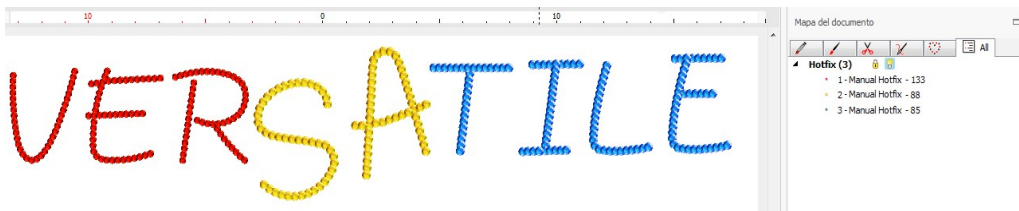


Now the object has been turned into a lot of Manual Hotfix pieces.

You can select a block and Assemble them as one to be able to move it or change its color.

We assembled the beads, that make the letters V, E and R, and then we have changed the color and the stone. We assembled two more groups.

See them in the document map. We have applied a rotation to the middle assembly.



Chapter 6

Hotfix Output

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Sending information to HPGL compatible devices.....	16
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At the time to set a hotfix design on a garment, you will need to use any of the known hotfix technique methods. From the manual method to the automatic setting machines, you will need to get information about the beads type and position for your design. At this point, the output formats become very important.

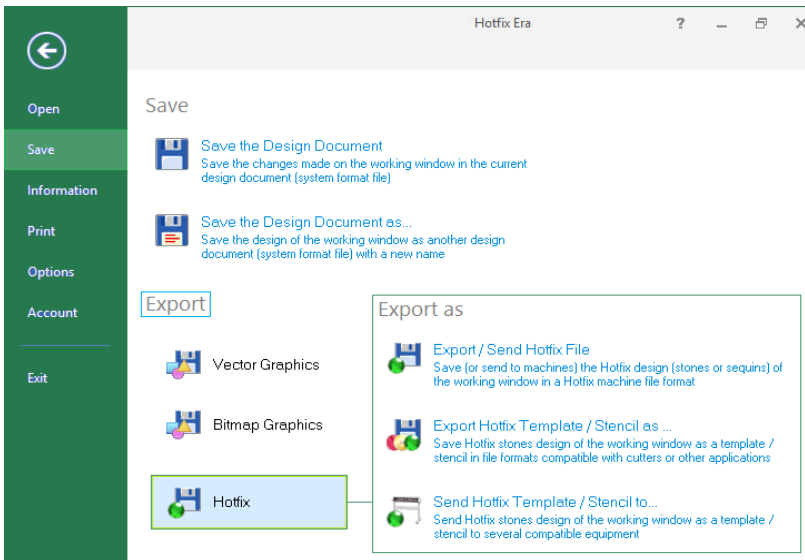
This chapter is dedicated to the output methods available in HotFix ERA. Basically, there are outputs for stones, outputs for sequins and outputs for spangles. In case of stones, some outputs are prepared for direct to garment technique and others for transfer technique. The system is also able to send information to CAMS automatic settling machines (connected to the computer through serial port), to most Windows compatible vinyl cutters (those that have an standard Windows driver) and to HPGL compatible cutters with serial port interface.

Please note that most of the output methods are optional features. Your system may have one or two of them activated but not all of them.

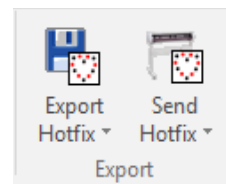
Hotfix ERA Outputs

OPTIONAL
FEATURE

The following tables lists all the output modes available. Output formats based *on files*; and the ones related with *direct connection to machines or devices* are obtained using the *File ribbon > Save - Export group > Hotfix → Export As...*



You can also output your design from the *Hotfix* ribbon > *Export* group...



File Formats

The file exported by the system should be transported to the machine using the available method (USB pen drives, disk, etc) as specified by the manufacturer.

Stones:

Output Format	Intended for
Hotfix Stone file for CAMS®	SRT file format for CAMS® stone machines. File should be transported using the pen drive interface (*)
Hotfix Stone file for GemFix ®	TJC file format for GemFix ® stone setting machines (*)
Hotfix Stone file for N&H ®	ASC file format for N&H ® stone setting machines (*)
Hotfix Stone file for Salli ®	SHF file format for Salli ® stone setting machines (*)
Hotfix Stone file for NCK ®	DST file format for NC Korea ® stone setting machines (*)
Hotfix HPGL File	PLT file with standard HPGL format for use with cutters and milling machines to create stencils. May require some post-processing with machine specific software.

The term Stone is used to refer to Rhinestones and other type of hotfix pieces the machines may support like rhinestuds and nailheads.

Sequins:

Output Format	Intended for
Hotfix Sequin file for Salli ®	DST file format for Salli CSM® sequin setting machines. (*)
Hotfix Sequin File for SWF®	DST file format for SWF-M® sequin setting machines. (*)
Hotfix Sequin File for NCK®	DST file format for NC Korea® sequin setting machines. (*)

Spangles:

Output Format	Intended for
Hotfix Spangle file for NH®	ASC file format for N&H ® spangle setting machines.(*)
Hotfix Spangle file for Coldesi	DST file format for Coldesi spangle setting machines.(*)

Hotfix Spangle file for Technics ASP	DST file format for Technics ASP spangle setting machines.(*)
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All hotfix types:

Output Format	Intended for
Hotfix Windows Metafile	EMF file format with filled shapes for all hotfix type pieces contained in the design. This format may be imported with graphic software like Adobe Illustrator, CorelDraw, etc.
Hotfix DXF file	DXF standard format with the shapes for all hotfix type pieces contained in the design. This is a popular interchange format used in CAD systems and also in some CNC and milling machines.
Hotfix SVG File	SVG file format with filled shapes for all hotfix type pieces contained in the design. This format may be imported with graphic software like Adobe Illustrator, CorelDraw, etc.

(*) Format suitable for most models. Please, ask your dealer for a sample file to check compatibility with your specific machine.

Mentioned brands and trademarks belong to their respective owners.

Send to machines and devices

Output Format	Intended for
Send To CAMS®	Sends hotfix stone design data to CAMS® machines connected to the computer through the serial port.
Send To Windows Cutter	Sends hotfix stone contours information to Windows compatible vinyl cutters to create stencils. Usually, a software driver provided by the device manufacturer is required.
Send To HPGL Serial Device	Sends hotfix stone contours information to any standard HPGL compatible device connected to the computer through the serial port.
Send to Engraver	Sends hotfix stone contours information to Windows Compatible engravers connected to the computer.
Send to Technics ASP®	Sends hotfix sequin design data to Technics ASP® machines connected to the computer through the serial port.

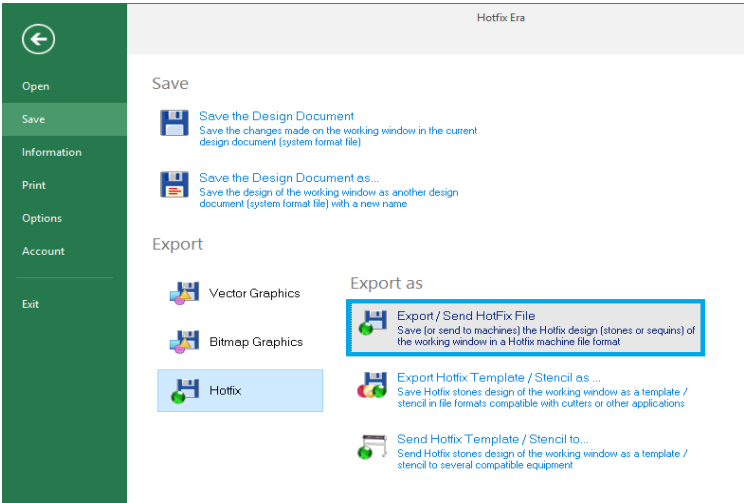


Printing

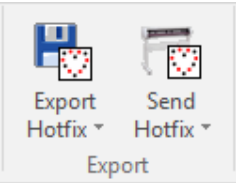
Standard printing to any Windows compatible printer is also available. This output type may be used for reference, for manual beads placement and for customer presentations.

Exporting Hotfix files

The commands to export stone files to the different formats are accessed through the the *File* ribbon > *Save* > *Export* > *Export As...* > *Export/Send HotFix File* or from the *Hotfix* ribbon > *Export* group > *Export Hotfix to machine*.



Remember that Output Formats are optional plugins, so the list may contain just one or two formats depending on what formats you have purchased.



A dialog box named HOTFIX EXPORTER will open.
The following sections contain details about this box.

Machine Brands and Models Supported

Machine Brand	Machine Model
Coldesi Spangle (DST)	Spangle Elite
DS-Tech Stone RSM (MACH)	DS-400-6C
GemFix Stone (MACH)	GEM4023 / 3040 / 5550-2/2 / 5550-4/2
Generic Machine (DST)	Generic 400
Nagel & Hermann Spangle LIBERO (MACH)	Sequin Libero
Nagel & Hermann Stone ALLOVER (MACH)	Allover 059 / 1600 / 3200
Nagel & Hermann Stone LIBERO (MACH)	Libero Basic/Sheet/R/A/B/C/C8
NCK® Sequin DECOS (DST)	DECOS S42-4C (400x400) / DECOS S42-4C (400x480) / DECOS S42-M4C / DECOS S42-M6C
NCK® Sequin DECOS (MACH)	DECOS S42-4C (400x400) / DECOS S42-4C (400x480) / DECOS S42-M4C / DECOS S42-M6C
NCK® Stone DECOR (DST)	DECOR S40V-1H4C (400x400) / DECOR S40V-1H4C (400x480) / DECOR S40V-2H6C (400x400) / DECOR S40V-2H6C (400x480) / DECOR S30V-1H2C
NCK® Stone DECOR (MACH)	DECOR S40V-1H4C (400x400) / DECOR S40V-1H4C (400x480) / DECOR S40V-2H6C (400x400) / DECOR S40V-2H6C (400x480) / DECOR S30V-1H2C
Salli Stone ASM (DST)	Salli ASM-6C-01H
Salli Stone ASM (MACH)	Salli ASM-6C-01H
SWF Sequin SERIE-M (DST)	SWF Sequin
Technics Spangle ASP (DST)	ASP-Compact / 645-2 / 645-4
Technics Spangle ASP (MACH)	ASP-Compact / 645-2 / 645-4
Technics Stone (DST)	Combi
Technics Stone (MACH)	Combi
Yongnam Machines - CAMS	CAMS 1V 2P / 1V 6P Basic – Option – (400x300) / 4H 3P / 2V 12P

Hotfix Exporter

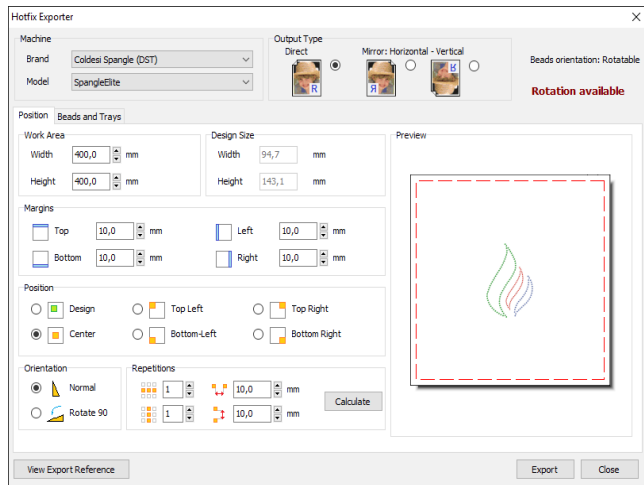
All the output formats based on files use the same dialog box, named HOTFIX EXPORTER.

Under *Machine*, you have a drop down menu to select its Brand and Model.

Output type allows you to mirror your design horizontally or vertically if needed.

You can see two common tabs: *Position* and *Beads and Trays*.

Position gives you information about your work area; lets you set your margins, and also to change the design orientation. You can also add some repetitions.



For machines using DST file format, such as Coldesi, NCK, Salli, SWF and Technics, *Position* refers to the starting point of the design; while for the rest of the machines, *Position* refers to the location of the design in the machine working area. The tab also contains a preview panel and general information about the design (name, size, and beads count) and machine features (max area, number of beads trays, etc).

The *Bead and Trays* tab contains a list with all of the bead types used in your design. The check in the first column allows you to include/exclude that piece type from the output.

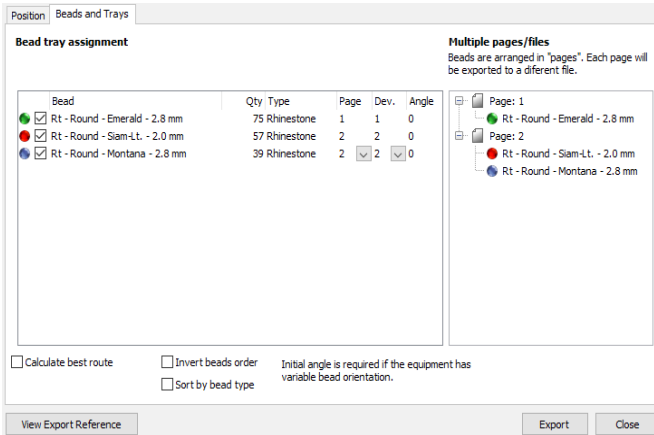
The Quantity column gives you the exact pieces to be used, so you are aware of the amount you will need to have on your tray.

The Page column lets you decide whether to have all the work on one page or to divide it conveniently.

The Dev. column lets you select the tray where the bead type is loaded in the machine (available for machines with several trays).

On the Angle column you can specify the orientation of the beads if they are not round.

On the right pane *Multiple pages / files* you have information about the Page arrangement, showing which beads appear on each Page, according to what you selected on the Page column.



On the lower part, there are some extra options with check boxes for you to enable / disable if needed:

Calculate best route; Invert beads order; Sort by bead type.

These options work only for some brands and models.

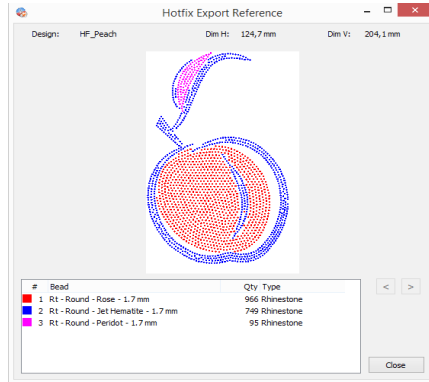
Calculate best route lets you enable an optimization process that minimizes machine travels within the design.

Sort by bead type, gathers all objects that use the same bead, that may be not contiguous, so they are executed at the same time. *Invert beads order* is used when working with transfers and there's a forced overlapping in the design, where the second stone may be over the first one, and if transferred, would change order unwittingly.

On the lower left corner of the *Hotfix Exporter* window, you will find a button *View Export Reference*. It will show you the design, type and number of pieces needed, and order (right capture).

Finally, when you press the *Export* button, a standard Windows select file dialog box will appear. Select the destination file name, folder and disk unit.

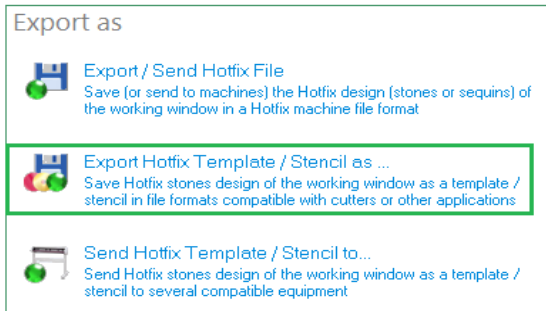
Once saved to your disk, you will need to transport the file to the machine using the procedure indicated by the machine manufacturer.



In the case of CAMS machines, appart from exporting the files using the HotFix Exporter dialog box, you can Send them directly to the machine from there too. This is achieved just by placing a check mark in the option *Send to Serial port*, that becomes available when selecting that machine type. You will find precise information on how to Send to CAMS machines further in this chapter.

Exporting to HPGL, Metafile and DXF Files

This command allows you to save hotfix stone designs from the working window as a template/stencil in file formats that are compatible with cutters or other applications.



To export to the different format files, go to the *File* ribbon > *Save* > *Export* > *Export As...* > *Export HotFix Template/Stencil as....*

or from the *Hotfix* ribbon > *Export* group > *Export Hotfix to file*

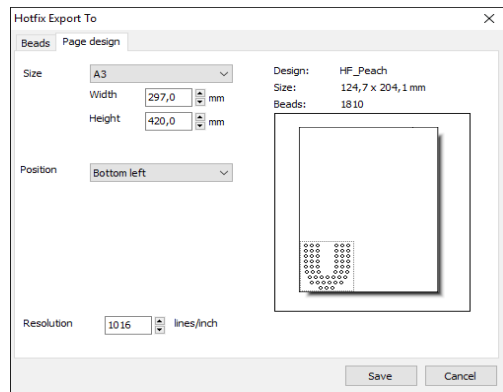
The *HotFix Export To* window will open. From the list choose the *Save* option you need. You can choose among: *Save to HPGL*; *Save to DXF*; *Save to SVG* and *Save to Metafile*.

Export to HPGL File

HPGL files are a very popular format for cutting and milling machines. The idea is you export this format to cut stencils for hotfix placement using the template technique. By default, you should export a different file for each different bead type your design uses. However, stones of very different sizes may be grouped into one stencil, as long as you set the largest one first and then the smallest one.

When you select the command *Export HPGL* file, the system opens the dialog shown on the right, which is organized in two tabs:

Page design: This tab contains controls to set the page size, design position and resolution.



Beads: This tab includes a bead list, where you define what bead types are included in the exported file and select the Pen number and margin; and a list of Pages where you organize

what beads are included in each page.

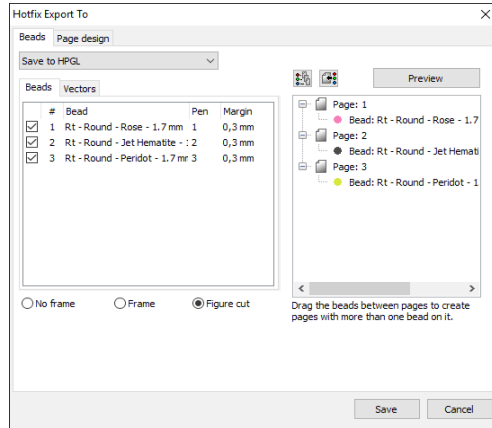
On the lower part, you have three options that allow you to include or not a frame around the design; and to be able to cut a figure around the beads to avoid wasting a lot of stencil material.

If you enable *Figure cut*, a new tab named *Vectors* will appear (as seen on right capture).

This tab will show the vector figures made around the pages in which you divide your design.

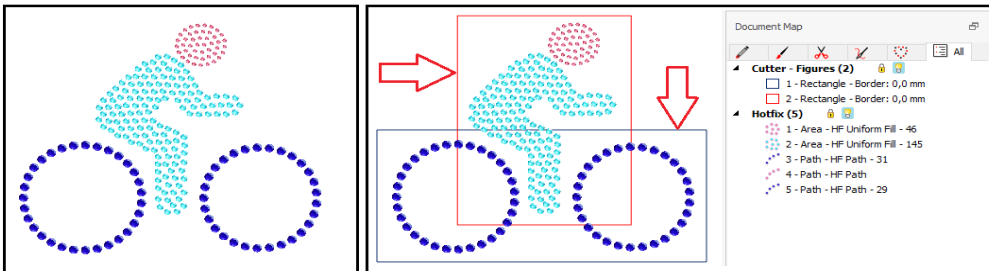
On the example next, we made a bike out of four hotfix objects.

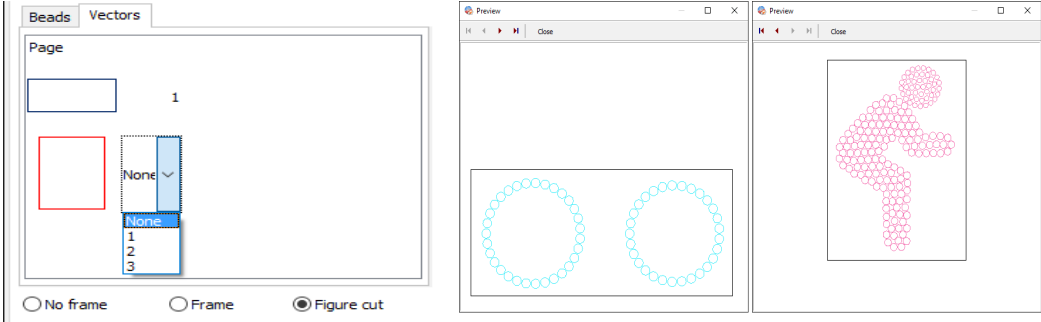
We will divide the design in two, by defining two vector figures: one for the body and head and the other for the bike's wheels.



First change the vector images property from *Auxiliar* tab to *Cutter* tab, just by selecting each image and pressing the Cutter button on the *Artwork-Vector* ribbon > *Used as group*.

After checking *Figure cut*, go to the *Vectors* tab. You will see the vectors drawn before. Select the corresponding page in which they will be enabled and press the preview button to see the result.





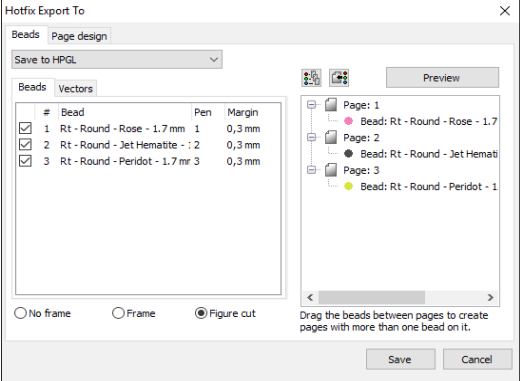
You will save a considerable amount of stencil material, by using this feature.

The Pen parameter is common for plotters and milling machines.

Margin is a value used to enlarge the mark exported for a given bead type, so the piece can be easily trapped by the stencil hole.

To organize pages, just drag the bead from any page to any other: this action will produce pages with several beads and pages with no beads (with a red cross).

The system will generate a different file for each page listed, but pages with the red cross (no beads) will be skipped.



When you press Save, the system displays a Save dialog where you indicate the path and file name for the *PLT* file. If multiple files are generated, the systems will automatically append a number “-1”, “-2”, etc. to the file name.

Export to Windows Metafile and DXF formats

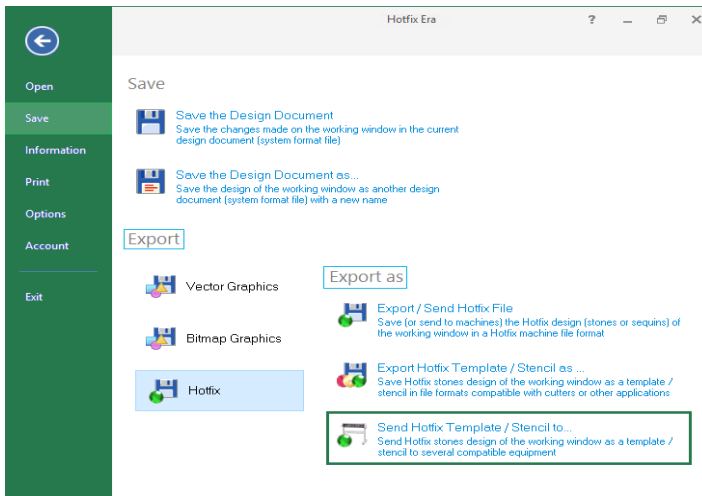
Windows Enhanced Metafile (EMF), is a vector based format well suited to be used with graphics applications like Adobe Illustrator and CorelDRAW. The system exports the beads contours as closed filled shapes using colors similar to the bead color. The Export to Metafile dialog box looks and behaves identical to the Beads tab of the Export to HPGL box.

DXF is a standard vector format commonly use as CAD interchange format. It is also used in some engravers, CNC and milling machines. The system exports the beads contours as straight sides polygons. The Export to DXF dialog box looks and behaves identical to the Beads tab of the Export to HPGL box.

Sending Hotfix to machines and devices

Through this command you can send hotix stone designs form the working window as a template/stencil to several machines and devices.

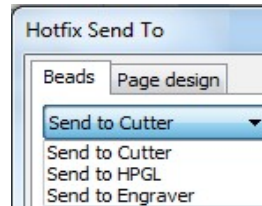
Access it from the *File* ribbon > *Save* > *Export* > *Export As...* > *Send Hotfix Template/Stencil to...*
or from the *Hotfix* ribbon > *Export* group > *Send Hotfix*



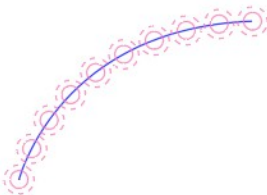
When you click on the option, a window will open.

You have three Send options to choose from: to Cutter; to HPGL; and to Engraver.

Click on the option you want.



Remember that Send Formats are optional plugins, so the list may be empty or contain just one or two items depending on what formats you have purchased.



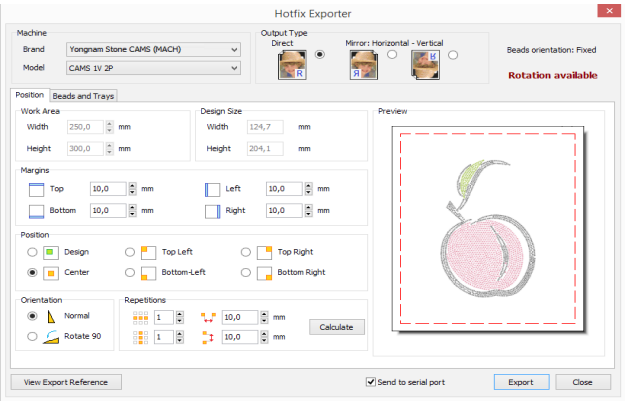
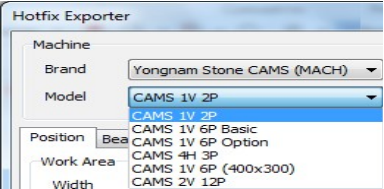
TIP: If you plan to produce stencils (using a vinyl cutter or engraver) it may be useful to display, not only the piece contour, but the piece margin as well. Piece margin is used to cut or engrave a notch slightly larger than the piece itself to allow it easier fit in. Use the check at Option and Preferences - Project - Hotfix - Show hotfix margin to enable or disable the margining display. Use Hotfix margin size to set the value of the pieces margin.

Sending information to CAMS machines

The command for sending a design to CAMS is accessed through the *File* ribbon > *Save - Export* group > *Export/Send HotFix File* or from the *Hotfix* ribbon > *Export* group > *Export Hotfix to machine*

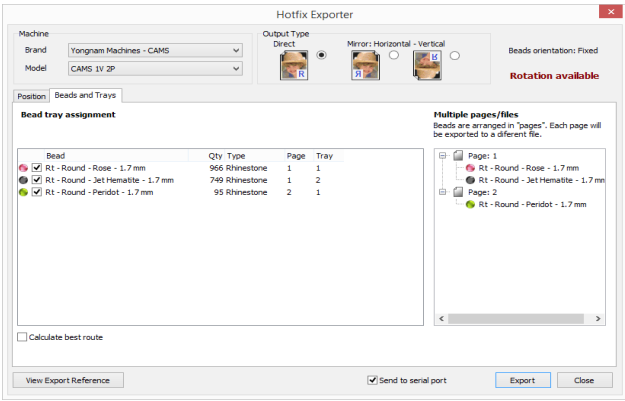
The dialog box named HOTFIX EXPORTER opens.

From *Machine Brand* select *Yongnam Machines – CAMS*; and from *Model* choose the one you want.



You can see two tabs: *Position* and *Beads and Trays*.

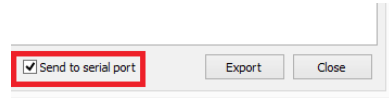
Position gives you information about your work area; lets you set your margins, and also to change the design orientation. You can also add some repetitions.



The *Bead and Trays* tab lets you set the machine tray that should be used for each bead type and the default angle for the beads (required for CAMS 1V6P Option, that is able to set pieces in any angle). Also a check in the first column lets you include or exclude any given bead from the output.

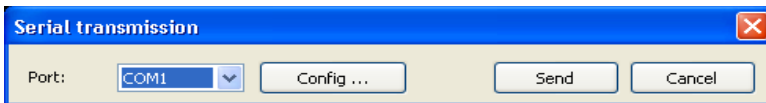
The *Tray* column lets you select the tray where the bead type is loaded in the machine (available for machines with several trays).

On the lower right corner you will see a check box, that says *Send to Serial port*. If you do not check it and press the Ok button, a standard Windows select file dialog box will appear in order to allow you to select the destination file name, folder and disk unit.



Once saved to your disk, you will need to transport the file (*.srt) to the machine using the procedure indicated by the machine manufacturer.

If you check the box, then the system will display the Serial Transmission dialog box:



You will need to select the COM port where the machine is connected and check that port transmission speed (Config button, Bits per second value) matches the machine connection speed. Data bits should be set to 8, Parity to none, Stop bits to 1 and Flow Control to hardware (these are the values used by CAMS machines).

Finally, prepare the machine to receive data and press the Send button. Design information will be sent to the CAMS machine and stored in it.

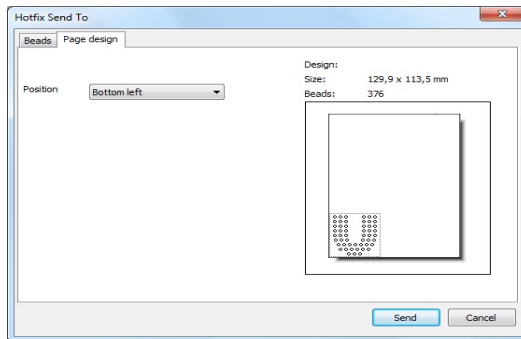
Sending information to Windows Cutters

Vinyl and laser cutters are the preferred tools to create stencils for hotfix application. Most of them includes a Windows driver, so they are usually installed and listed by Windows as printers. The drivers also allow control of pen speed, pressure or power, media size, etc.

Access it from the *File* ribbon > *Save > Export* group> *Hotfix-Export As...* > *Send Hotfix Template/Stencil to...*

or from the *Hotfix* ribbon > *Export* group > *Send Hotfix* and click on *Send Hotfix to Cutter*

The system will open the dialog shown on the right.



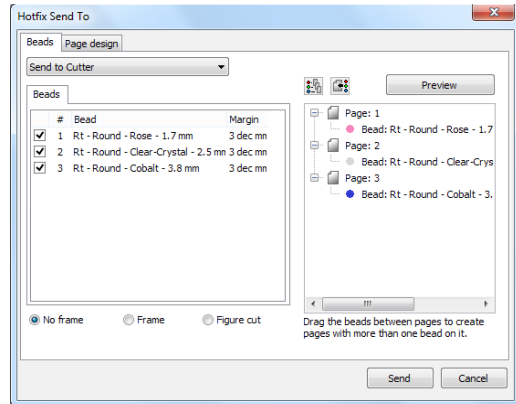
You will save a considerable amount of stencil material, by using this feature.

It's organized in two tabs:

Page design: This tab contains controls to set the origin. Media size should be set from the driver.

Beads: This tab includes a bead list, where you define what bead types are included in the exported file, margin, and a list of Pages where you organize what beads are included in each page.

Margin is a value used to enlarge the mark exported for a given bead type, so the piece can be easily trapped by the stencil hole.



To organize pages, just drag the bead from any page to any other: this action will produce pages with several beads and pages with no beads (with a red cross). The system will generate a different file for each page listed, but pages with the red cross (no beads) will be skipped.

On the lower part, you have three options that allow you to include or not a frame around the design; and to be able to cut a figure around the beads to avoid wasting a lot of stencil material.

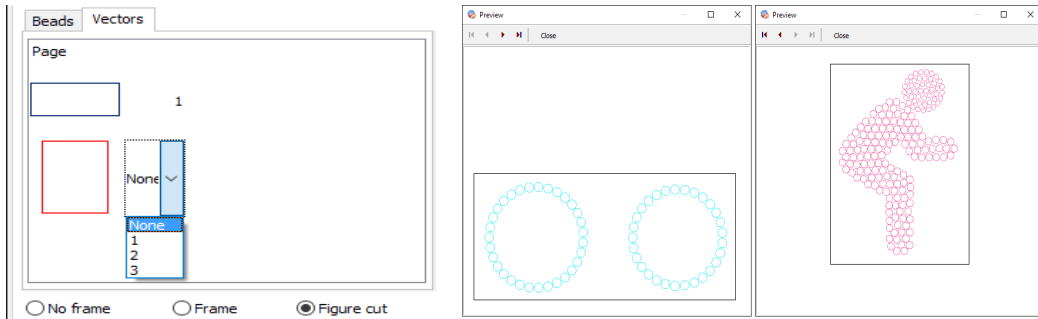
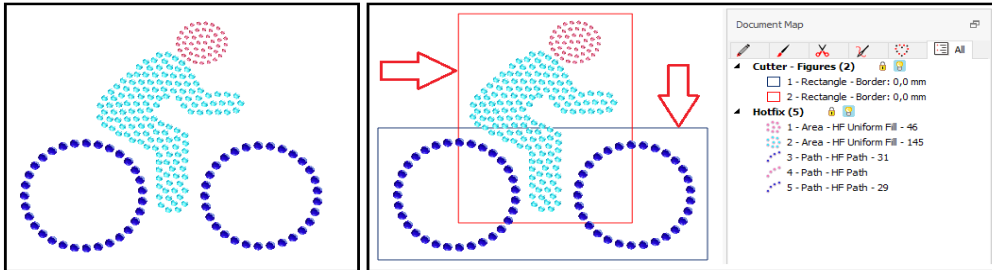
If you enable *Figure cut*, a new tab named *Vectors* will appear (as seen on right capture).

This tab will show the vector figures made around the pages in which you divide your design.

On the example next, we made a bike out of four hotfix objects. We will divide the design in two, by defining two vector figures: one for the body and head and the other for the bike's wheels.

First change the vector images property from *auxiliar* tab to *cutter* tab, just by selecting each image and pressing the Cutter button on the *Artwork-Vector* ribbon > *Used as group*.

After checking *Figure cut*, go to the *Vectors* tab. You will see the vectors drawn before. Select the corresponding page in which they will be enabled.



You will save a considerable amount of material, by using this feature.

When you press *Send*, the system will display the standard Print dialog where you need to select the cutter device and, through the Properties button, set media size, pen properties, etc. When you accept the Print dialog, a small box will prompt you to click Ok when the device were ready.

Load and align the media in the device and press OK to start cutting. This sequence will be repeated for each page in the output.

Sending information to HPGL compatible devices

This output is suited for those standard HPGL compatible devices with no Windows driver available that are connected to the computer through a serial port.

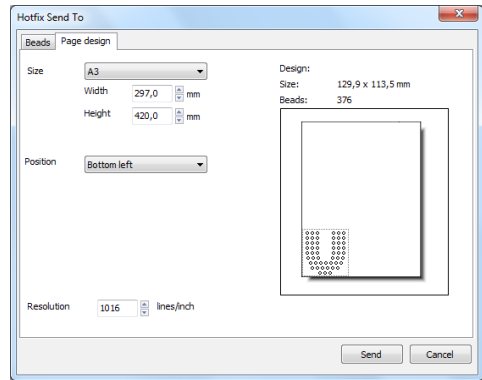
Access it from the *File* ribbon > *Save > Export group* > *Hotfix-Export As...* > *Send Hotfix Template/Stencil to...* and click on *Send Hotfix to HPGL Compatible Device*

or from the *Hotfix* ribbon > *Export group* > *Send Hotfix* and click on *Send Hotfix to HPGL Compatible Device*.

The system will open the dialog shown at the right.

It's organized in two tabs:

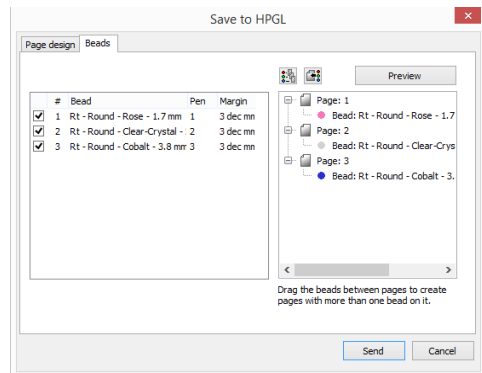
Page design: This tab contains controls to set the media size and origin.



Beads: This tab includes a bead list, where you define what bead types are included in the exported file and select the Pen number, and margin, and a list of Pages where you organize what beads are included in each page.

Pen is a common parameter for plotters and milling machines.

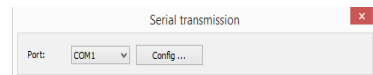
Margin is a value used to enlarge the mark exported for a given bead type, so the piece can be easily trapped by the stencil hole.



On the lower part, you have three options that allow you to include or not a frame around the design; and to be able to cut a figure around the beads to avoid wasting a lot of stencil material. This part has been explained in previous pages.

To organize pages, just drag the bead from any page to any other: this action will produce pages with several beads and pages with no beads (with a red cross). The system will generate a different file for each page listed, but pages with the red cross (no beads) will be skipped.

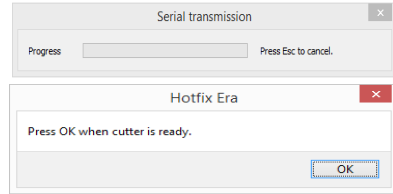
When you press *Send*, the system will display the Serial Transmission dialog box... select the COM port where the device is connected and check that port settings (Config... button) matches the device connection settings.



When you press Send, a small box will prompt you to click Ok when the device were ready.

Load and align the media in the device and press ok to start data transmission.

This sequence will be repeated for each page in the output.



Sending information to Engravers

This output is suited for those engravers, CNC and milling machines that have a Windows compatible driver (listed as standard printers). Using it, you may create the stencils required to produce hotfix design using that method.

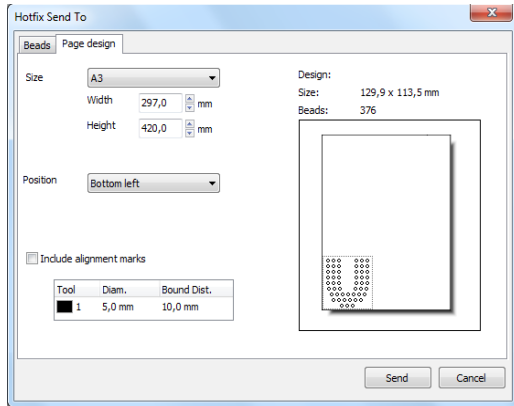
Access it from the *File* ribbon > *Save* > *Export* group > *Hotfix-Export As...* > *Send Hotfix Template/Stencil to...* and click on *Send Hotfix to Engraver*.

or from the *Hotfix* ribbon > *Export* group > *Send Hotfix* and click on *Send Hotfix Send Hotfix to Engraver*.

The system will open the dialog shown on the right.

It's organized in two tabs:

Page design: This tab contains controls to set the media size and origin. You may also indicate to include alignment marks. In this case, you should define the tool number to be used to engrave the marks, the marks diameter and the distance from the design boundaries to the marks.

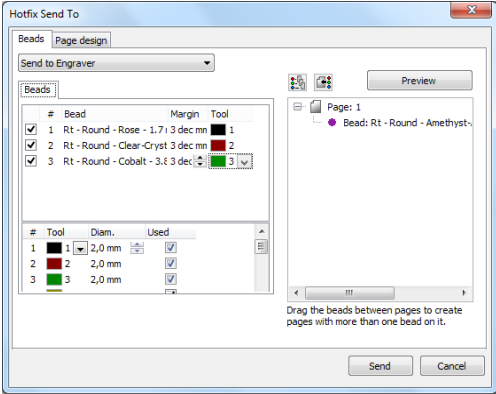


Beads: This tab includes a bead list (top-left) a tool list (bottom-left) and a pages list (right)

Using the Bead list you define which bead types will be send to the engraver, a margining (enlargement) to allow the bead to be easily trapped into the hole made by de engraver and the tool (as a color) that should be used to engrave the marks for each bead.

The Tool list lets you set the size of each tool used within the bead list.

The Pages list lets you control which bead types will be included within each engrave run (or "page"). You may include all the bead types within one unique page or you may split the job into so many pages as different bead types your design uses.



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Chapter 7

The SMART DESIGN tool for Hotfix objects

Contents:

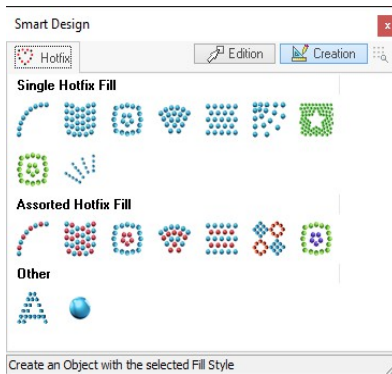
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Smart Design

This tool accelerates the activities related with the objects creation and objects editing, as it is described below, as well as some functions related with auto-digitizing. This means that Smart Design has different functionality depending on the moment it is used, but in every case it simplifies the steps of the sequence necessary for such activities.



Press the “Smart Design” button to open the Smart Design tool, located on the auxiliary toolbar (below the main ribbon and above the workspace area).



The tool will open as shown in the left figure.

The Smart Design tool includes different types of objects with their respective fill modes.

The number of objects and fill modes depend on the purchased software product, as more advanced systems include more types of objects and fill modes.

Thus, the objects and fill modes shown here may be not included in your product.

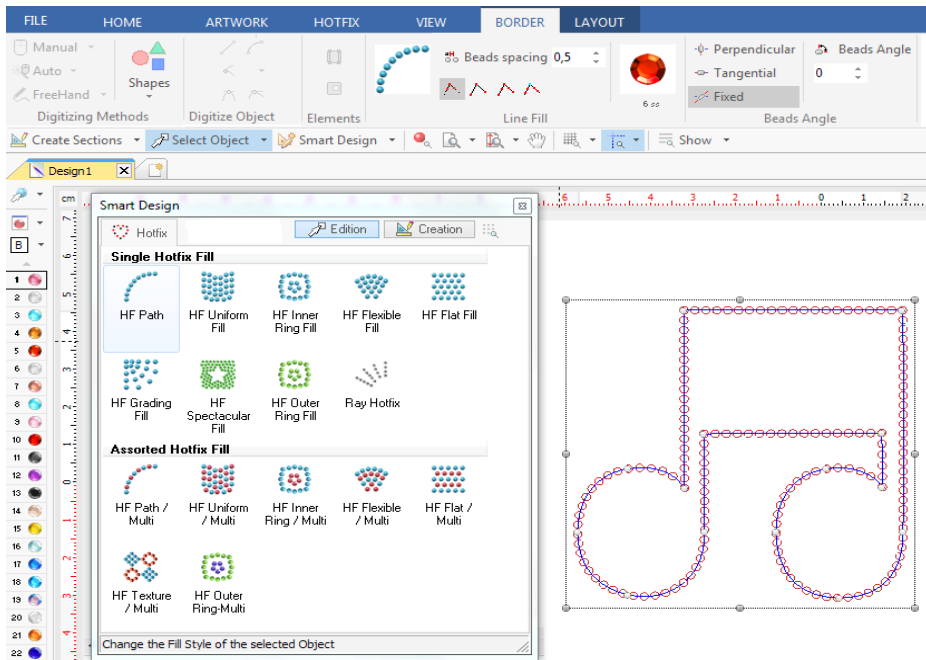
Smart Design in Objects Creation mode

When there is no object selected on the working area, the Smart Design tool works in the Objects Creation mode.

From the list of options available in the Smart Design tool, select the type of object with the fill mode you want to use to create a new object. Then start digitizing the object on the working area right away. When you finish, press Enter. So simple!

When that object creation ends, select any other object type from the Smart Design tool, and start a new object again. Really simple.

You can also use the included *Shapes* from the *Digitizing Method* group. Once you select the type of object with the fill mode you want to use, click on *Shapes* to view the available ones. Select one and then make a rectangle on the workspace area. When you are satisfied with the size, release the left mouse button. Press Enter to generate the beads. In the example next we used the musical note found in advanced shapes.



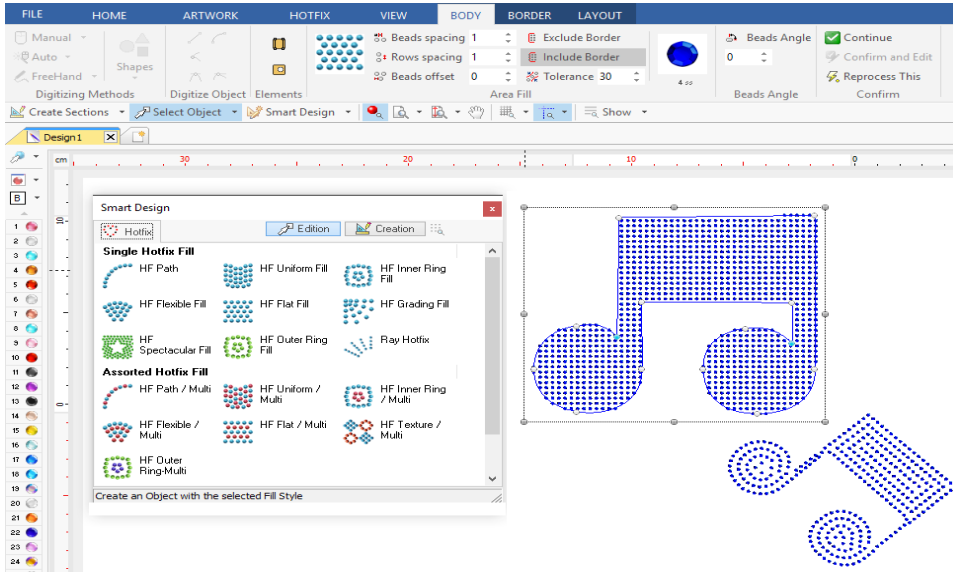
When you select the type of object in the Smart Design tool, the ribbon bar on the top of the workspace toggles to the tab that includes the properties of the selected type of objects, where you can edit the characteristics of the object you are creating.

Note:

This function replaces and simplifies the sequence of steps to select the type of object and fill mode: HotFix Tab > Object Type > Fill Mode.

Smart Design in Object Editing mode

When there is a selected object in the workspace, the Smart Design tools works in Object Editing mode. This means that if you click on one of the available modes, the Smart Design tool quickly converts the fill modes of the objects selected to the one you clicked on. You may also convert between some object types.



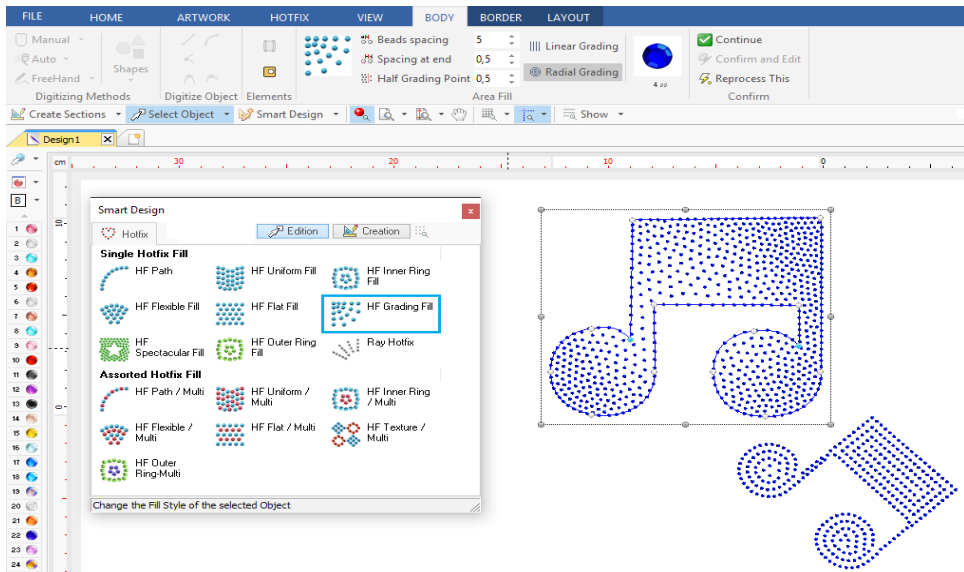
Select a hotfix object from the workspace.

The object properties are shown on the ribbon bar, on top of the workspace.

Press the type of object and fill mode to be converted, from the list of available options in the Smart Design tool.

After the conversion is done (when the selected conversion is an available option) that object will be of the new type and fill mode.

The ribbon bar will show the properties of the new object type, where the characteristics can be edited.



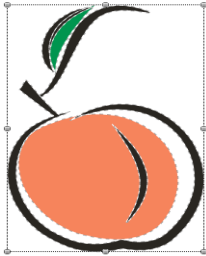
Note: Not all the type of objects can be converted to any kind of object types. In some cases the conversion cannot be performed, and in some cases the conversion process may loose some of the objects characteristics (direction lines, and other elements).

Important: On the software products containing both decoration modes hotfix (rhinestone or sequin) and embroidery simultaneously, this tool may also convert rhinestone (or sequin) objects into embroidery objects and viceversa.

Smart Design in Vectors Digitizing mode

When there is a vector shape in the workspace (from a vector graphic application), the Smart Design tools works in Auto-Digitizing mode. In this case the Smart Design tool creates an object (embroidery or hotfix, according to the software features) with the shape of the selected vectors. This is the fastest way to create objects when the artwork comes from vector files.

The vector shapes may come from vector files made on other graphic applications, from art stock collections, from vector shapes created on this application and also from the result of vectorization of raster (bitmap) files.



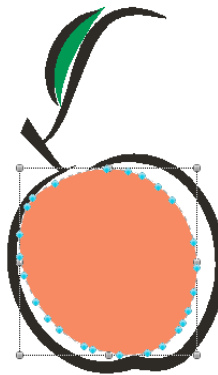
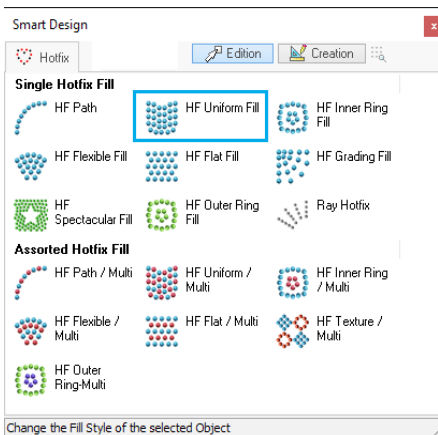
Load the vector image ASV-010.emf from the *Artwork* ribbon > *Vector* group > *Open Vector File*. The image is on the following location:
C:\Users\Public\Pictures\Sierra Technology\Artwork Vector

As it may probably be a composition of many combined graphic elements, you need to *Ungroup All* the elements of the image (function on the ribbon bar while the image is selected).

After ungrouping, check the created geometric shapes (vectors).
If required, use the combination tools (to simplify the shapes).



Once we have the final vectors, we may start auto-digitizing.
Work on each vector, one at a time.



Click on the body of the peach to select it.

Now click on the Smart Tool, on the object type and fill mode you want to use.

The Smart Design tool will create the new object, with the shape of the selected vector, using the fill mode you chose.

Next, we selected the peach contour vector, and chose HF Path to create the new object (near right figure). We changed the color to black by clicking on the black bead on the bead palette. Change Properties if needed from the ribbon.

Repeat the procedure for the remaining vectors. See the final result on the figure on the far right.

