BERNINA

Embroidery Software

ART Design

Version ***1***

BERNINA ART Design Online Manual

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Note

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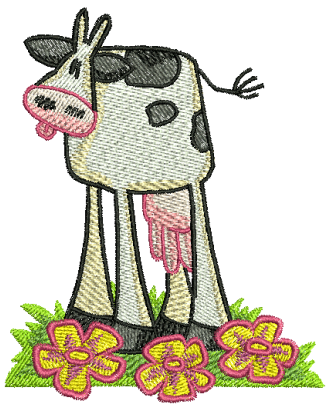
Chapter 1

Introduction

Welcome to BERNINA Embroidery Software, the leading embroidery design application for home users. BERNINA ART Design is an MS Windows-based product incorporating many of the conventions with which most PC users are already familiar. This product is intended primarily for embroidery design scaling, TrueType lettering, and as a universal embroidery file format converter.



If you are new to BERNINA Embroidery Software, you'll be pleased with the flexible capabilities of BERNINA ART Design, the ease with which you can open and edit designs.

You should familiarize yourself with Basic Procedures. Here you will learn how to start the application, open a design, print designs, and send designs to your BERNINA home embroidery machine. The chapter Viewing and Selecting Designs also provides an overview of the design viewing modes in BERNINA ART Design.

BERNINA ART Design documentation

BERNINA ART Design documentation includes:

- Onscreen User Manual
- Onscreen Help

User Manual

The User Manual is produced in onscreen form. The onscreen version is accessed from the Help menu.

Onscreen Help

Onscreen Help is accessed from the Help menu in BERNINA ART Design.

Conventions used in the manual

The following conventions are adopted and used throughout the manual.

Commands

In this manual, commands on a menu or submenu are referred to by both the menu and command names. For example the 'Show All' command in the 'View' menu is referred to as **View > Show All**.

Dialog boxes

Dialog boxes are referred to as 'dialogs' and are shown in the manual only if they provide important information on using BERNINA ART Design. The screen images provided are intended to be representations, not exact duplicates of the layouts generated by the software.

Keyboard conventions

Instruction	Symbol	Action
Click		Click the left mouse button.
Right-click		Click the right mouse button.
Double-click		Click the mouse button twice without moving the mouse.
Click OK	or Enter	Click OK with the mouse or press the Enter key on the keyboard to complete the action.

Shortcut	Description
Ctrl + S	While holding down the Control key (Ctrl), press the lowercase letter S key.
Ctrl + Shift + H	While holding down the Control key (Ctrl), press Shift and the H key.
For a complete list of keyboard shortcuts, refer to the Quick Reference Guide.	

Viewing information onscreen

Select Help Topics (Help menu) to view onscreen help.

Select Onscreen Manual (Help menu) to view the onscreen manual.

Select Bernina International Home Page (Help menu) to view the Bernina International Web Page.

Select Bernina of America Home Page (Help menu) to view the Bernina of America Web Page.

Select Embroidery Onscreen (Help menu) to view the Embroidery Onscreen Web Page.

Onscreen user documentation is provided in the form of an Onscreen Manual and Onscreen Help.

Viewing Onscreen Help

Onscreen Help provides quick access to general information on BERNINA ART Design features and step-by-step instructions.

To view Onscreen Help

1. Select **Help > Help Topics** to open the main Help window.
2. Click **Contents** to display the main list of topics. Topics are grouped under high-level headings with 'book' icons.
3. Double-click a book to view the list of topics, then double-click a topic.

Tip Alternatively, click **Find** and enter keywords to search on a specific subject.

Viewing the Onscreen Manual

You can read the Onscreen Manual using Adobe Acrobat™ Reader. This application is supplied with your BERNINA ART Design. Using the Onscreen Manual you can quickly search for the information you need, using standard Adobe Acrobat™ Reader features.

To view the Onscreen Manual

- Select **Help > Onscreen Manual**.

Note If BERNINA ART Design is not running, you can open the Onscreen Manual directly from Windows Explorer. To do this, navigate to the ..\Program Files\BERNINA\ART Design\bin folder, and double-click **UserManual.pdf**.

Linking to the BERNINA® websites

You can access sales and support information about the products easily from within the software.

Note You must have a correctly configured web browser on your system together with web access.

To link to the BERNINA® website

- Connect to your Internet Service Provider (ISP).
- Select **Help**.
  You are directly connected to the BERNINA® homepage at:
  - Bernina International Home Page - http://www.bernina.com/
  - Bernina of America Home Page - http://www.berninausa.com/
  - Embroidery Online - http://www.embroideryonline.com

Basic Procedures

To start using BERNINA ART Design, you need to know the basic procedures, such as starting up, opening designs, and saving. Once you start BERNINA ART Design, you use commands or icons, and dialogs to complete your tasks. You select commands in the same way as other MS Windows® applications – from menus or toolbars.

BERNINA ART Design opens a range of native ART files, as well as some other embroidery file formats, from computer hard disk, floppy disk or CD ROM. BERNINA ART Design gives you a wide range of standard factory-supplied hoops to select from. Grid lines help you accurately align or size embroidery objects.

This section describes how to start BERNINA ART Design and access the available commands and tools. It covers basic procedures to do with opening and saving design files. It also explains how to activate hoops and grids.

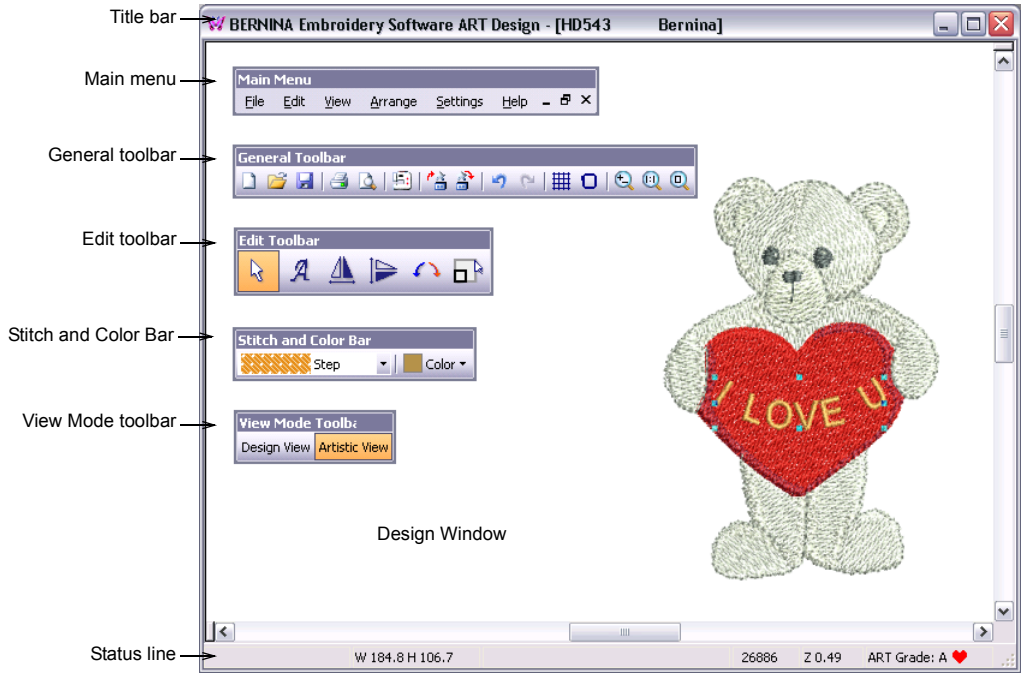
Starting BERNINA ART Design

Double-click to start BERNINA ART Design.

BERNINA ART Design can be opened via the desktop icon or MS Windows® Start menu.

To start BERNINA ART Design

- Double-click the BERNINA ART Design shortcut icon on the MS Windows® desktop.
  Alternatively, select **All Programs > BERNINA ART Design > BERNINA ART Design** from the **Start** menu.
  BERNINA ART Design opens with a new, blank design (Design1). The screen image below displays an 'exploded' view of **all** toolbars in BERNINA ART Design.

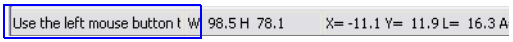


Note Toolbars are dockable left, right, top and bottom, and can be 'floated' anywhere on screen. While the **Stitch and Color Bar** can be docked vertically, the **Fill** dropdown list is not displayed. Therefore, it is advisable to dock the bar only horizontally.

- Customize the design window by showing or hiding the grid, changing the grid dimensions, and showing and hiding toolbars. See Displaying the grid for details.

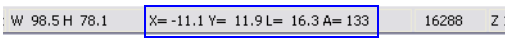
Tip The Status Line provides valuable information about the current design.

- To the left is the **Prompt Message** which instructs you while you work.



- **W** and **H** indicators tell you the design width and height respectively.

- Next to these are the measurement indicators, **X**, **Y**, **L** and **A**. See Measuring distances on-screen for details.



- Next to the measurement indicators are the **Total Stitch Count** indicator and **Zoom Factor** indicator. See also Zooming in and out.

- On the far right is the **File Type** indicator. BERNINA ART Design native ART designs are classified in four grades depending on how the file was created. See Working with design files for details.

Using commands and tools

Once you start BERNINA ART Design, you use commands or icons, and dialogs to complete your tasks. You select commands in BERNINA ART

Design in the same way as other MS Windows® applications – from menus or toolbars. Keyboard shortcuts are also available for the most frequently used commands. See BERNINA ART Design Shortcut Keys for details.

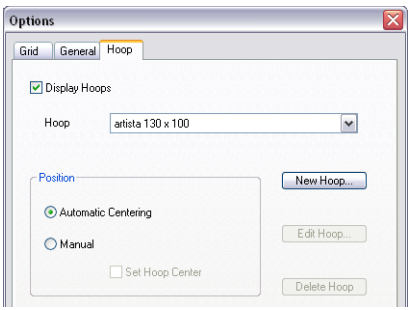
Selecting commands from toolbars

Toolbars provide quick and easy access to BERNINA ART Design commands. Click a toolbar button to activate a command or, where applicable, right-click to set its properties.

To select commands from toolbars

- Rest the pointer over an icon to see its name in a 'tooltip'.

- Click the icon to activate the command.
- Right-click to adjust settings or activate the secondary command.
  - If the icon has both left and right-click commands, the name is split with a slash (/). For example, the **Scale by 20% Down/Up** icon lets you scale objects down by 20% when you click it, or scale objects up by 20% when you right-click.
  - For many tools, right-click accesses current command settings. For example, **Show Hoop** displays or hides the hoop when you click, or opens the **Options > Hoop** dialog when you right-click. See Hoops and grids for details.



Undoing and redoing commands

Use Undo (General toolbar) to undo a command.

Use Redo (General toolbar) to reapply a command which has been 'undone'.

You can undo the effects of most commands. If you change your mind, you can redo them again. BERNINA ART Design remembers the last few commands you used.

To undo and redo a command

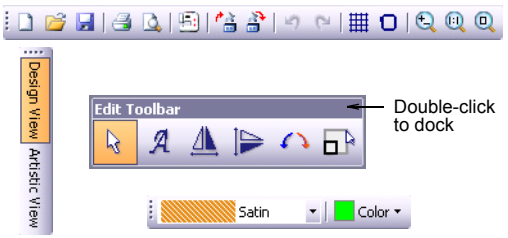
- To undo a command, click the **Undo** icon.
  When BERNINA ART Design cannot remember more commands, **Undo** is dimmed.
- Click the **Redo** icon to re-apply an 'undone' command.

Moving and docking toolbars

Toolbars provide quick and easy access to BERNINA ART Design commands. Toolbars are 'dockable'. This means you can move them around the Design Window.

To move or dock a toolbar

- To move a toolbar to a more convenient location, click and drag it:
  - Toolbars are dockable left, right, top and bottom.
  - They can be 'floated' anywhere on screen.



- To dock it in its normal position, double-click the toolbar title.

Working with design files

By default BERNINA ART Design saves designs to its native 'ART' file format. This format contains all information necessary both for stitching a design and for later modification. BERNINA ART Design opens a range of native ART files from computer hard disk, floppy disk or CD ROM. You can save designs in various ART formats.

ART files

Native ART designs, called 'ART Grade A', contain a complete set of design information in a single file – object outlines and properties, actual stitches, thread colors, a picture icon and comments. There are three other grades of ART file, depending on how the ART file was created – Grade B is more reliable than Grade C, but not as good as Grade A format, and Grade D is the least reliable. It goes without saying that only ART Grade A files provide 100% perfect scaling and transformation.

File source	Description
Art Grade A	Pure ART file created in BERNINA ART Design-based software. These files contain pure ART objects, outlines and stitches.
Art Grade B	Designs read from outline format such as GNC and saved in ART format. Such designs cannot be read directly in BERNINA ART Design but once converted to ART in other software, BERNINA ART Design reads them as Grade B designs.
Art Grade C	Designs read from stitch files – SEW, PCS, PES, etc – where stitches have been converted to objects.
Art Grade D	Designs read from stitch files – SEW, PCS, PES, etc – where stitches have NOT been converted to objects.

Tip For information about the source of a design file, refer to the **Open** dialog or the **Design Properties** dialog. See Viewing design information for details.

Opening designs

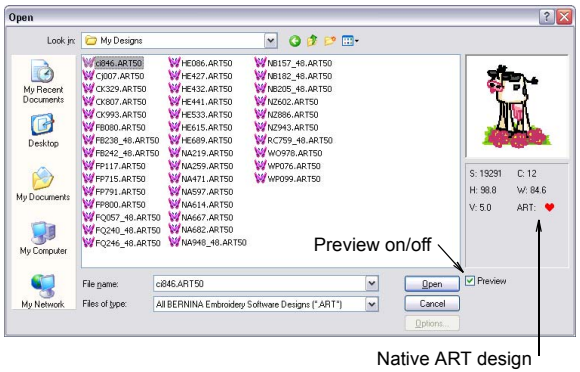
Use Open (General toolbar) to open an existing design.

BERNINA ART Design opens a range of embroidery files in addition to its own ART format. Native ART designs are classified in four grades depending on how the file was created. See also Starting BERNINA ART Design.

Caution You cannot open ART files created with a later version of the software to the one you are running. If you attempt to, you will be prompted to update your system to the current version.

To open a design

1 Click the **Open** icon.
The **Open** dialog opens.



2 Select a folder from the **Look In** list.

Note You can read designs stored on floppy disk or CD as well as computer hard disk.

3 If the design is not in ART format, select a file type from the **Files of Type** list.

4 Select a design or designs.

- To select a range, hold down **Shift** as you click.
- To select multiple items, hold down **Ctrl** as you click.

5 Select the **Preview** checkbox to preview the design (for supported file formats) together with design data. This includes stitch and color numbers, design height and width, and software version number.
6 Click **Open**.

Note You can also read designs from your embroidery machine memory. See Reading designs from machine for details.

Starting new designs

Use New (General toolbar) to start a new design with the NORMAL template.

When you start BERNINA ART Design, a new file – **Design1** – is automatically created, ready for you to start digitizing. By default, **Design1** is based on the NORMAL template. Templates contain pre-set styles, defaults or objects, to make digitizing quicker and easier. When you create a file based on a template, the template's values are copied to the new design.

To start a new design

- Click the **New** icon.
  A blank design opens in the Design Window based on the NORMAL template.

Inserting designs

Select Insert Design (File menu) to combine designs.

BERNINA ART Design lets you insert one design into another. The two (or more) designs can then be saved as a combined design. When you insert a design in another, the two color palettes are combined. Colors with the same RGB values are automatically identified as having the same thread color. If you want to preserve these as separate colors, you need to change one or other before merging.

To insert designs

1 Create or open a design.
2 Travel to the position in the stitching sequence where you want to insert the design. See Traveling by stitches for details.
3 Select **File > Insert Design**.
  The **Open** dialog opens.
4 From the **Look In** dropdown list, select the folder where the design you want to insert is stored, and select the required format from the **Files of type** dropdown list.
5 Select the design file to insert, and click **Open**.
  The design is inserted at the current needle position.
6 Move the second design into the required position.
7 Save the combined design under the original or different name.
  The designs you have inserted are now combined into one design.

Saving designs

Use Save (General toolbar) to save the current design.

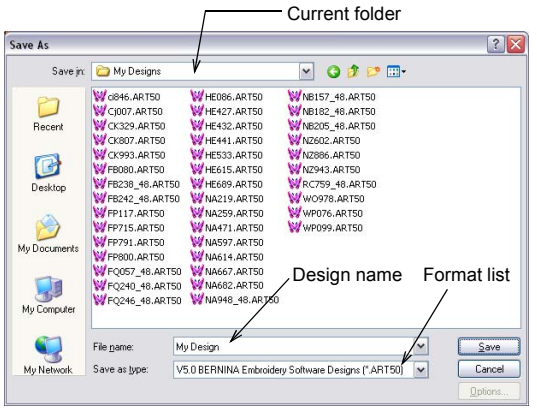
BERNINA ART Design can save designs in pure ART format. Saving a design records its file name, location and format, and updates it with any changes you make. When you save an existing design under a new name, to a different location or

format, you create a copy of the original design. See also Writing designs to machine.

Tip Save your designs early and often. Do not wait until you finish working. To save changes to an existing file but preserve the original, use **Save As**. Once you have saved a design, every time you click **Save** on the toolbar the file will be updated.

To save a design

1 Click the **Save** icon.
If this is the first time you have saved the design, the **Save As** dialog opens.



2 Select the folder where you want to save the design from the **Save In** list.
3 Enter a name for the design in the **File name** field.
4 Select a file format from the **Save as type** list.
5 Click **Save**.

Note You can also write designs to your embroidery machine memory. See also Writing designs to machine.

Hoops and grids

Fabrics should be hooped before stitching out on the machine. BERNINA ART Design gives you a wide range of standard factory-supplied hoops to select from. Grid lines help you accurately align or size embroidery objects.

Displaying the hoop

Click Show Hoop (General toolbar) to view the hoop. Right-click to change the settings.

The large hoop is displayed when you open BERNINA ART Design. The hoop represents the embroidery hoop that you connect to your BERNINA home embroidery machine. As you position objects, the hoop position adjusts automatically so that it is always centered around objects in the window. See also Hooping Designs.

To display the hoop

- Click the **Show Hoop** icon to turn on the hoop display.

- Click the **Show Hoop** icon again to turn off the hoop display.

Displaying the grid

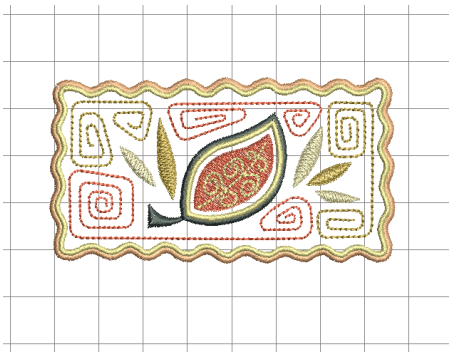
Click Show Grid (General toolbar) to show or hide the grid. Right-click to change the Grid settings.

Use grid lines to help accurately align or size embroidery objects. You can show or hide the grid.

Tip You can change the grid spacing and select a reference point in the **Options** dialog. See Setting grid options for details.

To display the grid

- Click the **Show Grid** icon to turn on the grid display.



- Click the **Show Grid** icon again to turn off the grid display.

Measuring distances on-screen

Use Measure (View menu) to measure distances on-screen.

Measure the distance between two points on screen using the **Measure** command. This command displays coordinates, distance and angle of the mouse pointer from a point corresponding to the center of a hoop in an empty design. View the measurements in the Status Line or in a tooltip. See Interpreting pointer position values for details.

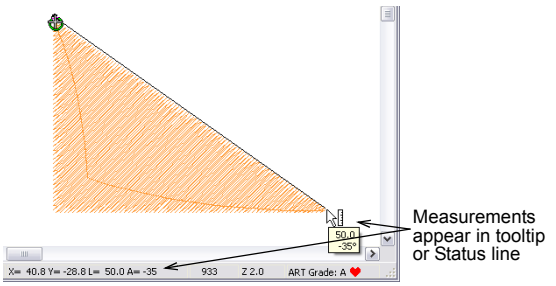
Tip For more accurate results, zoom in before you measure. The measurement is always the actual size, and is not affected by the zoom factor.

To measure a distance on-screen

1. Select **View > Measure** or press **M**.
2. Click the start point.
3. Move the pointer to the end point and hold the mouse still.

   The following information displays in the **Status Line**:
   - Position coordinates of the end point (**X=, Y=).**
   - Length of the measured line **(L=).**
   - Angle of the line relative to the horizontal **(A=)**.

   Measurements are shown in millimeters or inches, depending on the option selected in the MS Windows® Control Panel. See your MS Windows® documentation for more information.



Tip If activated, length and angle measurements will also appear in a tooltip. See Showing/hiding the Measure tooltip for details.

4. Press **Esc** to finish.

Chapter 3

Viewing and Selecting Designs

BERNINA ART Design provides many viewing features to make it easier to work with your design. Zoom in on an area to see more detail or view the design at actual size. Preview a design in different colors on different backgrounds. Even show or hide needle penetration points.

Before even opening BERNINA ART Design or your design, you can check the software version number and other design information for ART files directly from MS Windows® Explorer. You can view stitching details about a design in the Design Properties dialog. Also the Print Preview provides essential design information, including a design preview, the size of the design, color sequence and any special instructions.

This section explains the design viewing modes available in BERNINA ART Design as well as the various design viewing settings. It also explains how to obtain and customize information about your designs.

Design viewing modes

BERNINA ART Design provides a number of distinct viewing modes. You can also zoom in on an area to see more detail, view the design at actual size, as well as zoom out to see the whole design. You can show a graphical representation of what the final embroidery will look like with Artistic View.

Switching design views

BERNINA ART Design provides two 'views':

- Design View
- Artistic View.

These are each accessed via the **View Mode** toolbar.

Use Design View to open designs and view stitches and stitching sequence. Artistic View offers a graphical representation of what the final embroidery will look like. The design is shown more realistically than in Design View. All editing commands are available in Artistic View.

To switch design views

- Click the **Design View** tab to switch to Design View.

Design View mode | Artistic View mode

- Click the Artistic View tab to switch to Artistic View.

Tip Use Artistic View together with a background fabric to see how your design will look when stitched out. See Changing backgrounds for details.

Zooming in and out

Click Zoom Box (General toolbar) to zoom in and out of the Design Window. Use it also to zoom in on bounded areas of the screen.

Click Show All (General toolbar) to show the whole design.

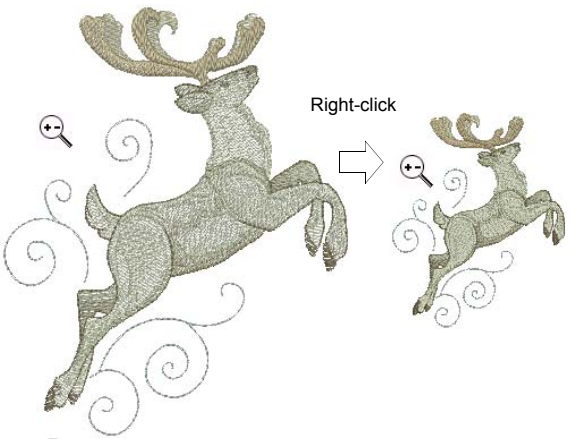
Click Show 1:1 (General toolbar) to show the design at the correct size.

Magnify your view of the design by zooming in on individual stitches or details, or zoom out to display more of the design in the window. The current zoom factor is shown at the lower right corner of the screen. See also BERNINA ART Design Shortcut Keys.

Note To make sure your design is being displayed at the correct size, calibrate your monitor. See Calibrating the monitor for details.

To zoom in and out

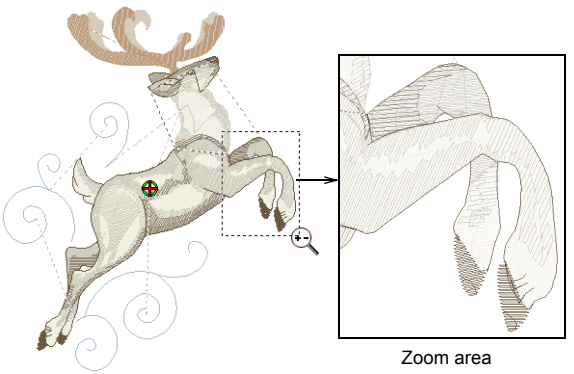
- Click the **Zoom Box** icon or press shortcut letter **B**. The cursor becomes a magnifying glass.
- Right-click in the Design Window to zoom out – the view zooms out to half the previous screen magnification, centered at the point you clicked.



Tip The Status Line displays the current 'zoom factor'. See Starting BERNINA ART Design for details.

- Left-click in the Design Window to zoom in – the view zooms to twice the previous screen magnification, centered at the point you clicked.

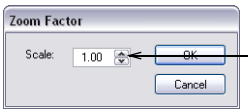
- Left- or right-click-and-drag a bounding box around the zoom area. Release the mouse to view the entire boxed area on screen.



Drag bounding box

Zoom area

- To display the whole design, click **Show All**. Alternatively, select **View > Show All**, or press **0**.
- To display the design at actual size, click **Zoom 1:1**.
- To display the design at a particular scale, press **F** on the keyboard. Enter a scale as a percentage of the actual size, and click **OK**.



Enter scale

- Press **Esc**, **Enter** or **Spacebar** keys to exit **Zoom** mode.

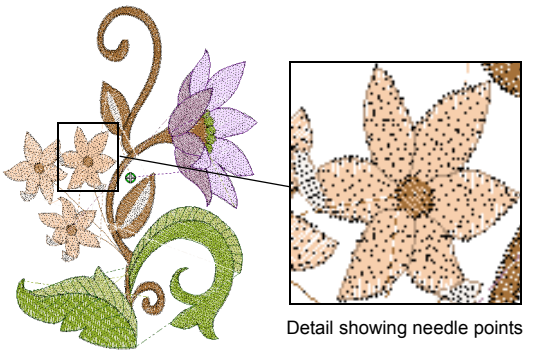
Viewing needle points

Select Needle Points (View menu) to show or hide the needle points in a design.

In Design View, you can show or hide needle points. For example, you may want to view needle points to select stitches for editing.

To view needle points

- To show or hide needle points, select **View > Needle Points**.



Needle points ON

Detail showing needle points

Viewing the stitching sequence

When working with embroidery designs, you need to understand the stitching sequence. You can check a design's stitching sequence by 'traveling' through it by stitches, colors or objects. You can also check the sequence by slowly redrawing your design on screen. BERNINA ART Design simulates stitching out by changing stitches from black to their allocated thread colors as they are 'stitched'.

Traveling to the start or end of a design

Press Home key to travel to the start of a design.

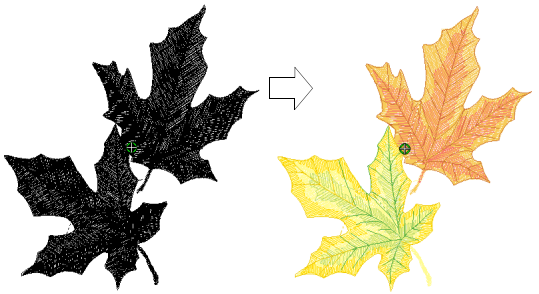
Press End key to travel to the end of a design.

Use the keyboard shortcuts to travel quickly to the start or end of the stitching sequence.

To travel to the start or end of a design

- To travel to the start of the design, press the **Home** key.

The entire design is displayed in black.



Travel to start Travel to end

- To travel to the end of the design, press the **End key**. The design is displayed in the selected thread colors.

Traveling by object

Use the keyboard shortcuts to travel through the design by object.

To travel by object

- Travel to the start of the design, by pressing the **Home** key.
- To travel to the next object, press **Ctrl+T**.

Travel by object

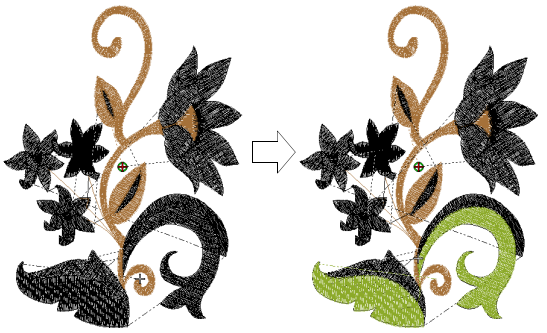
- To travel to the previous object, press **Shift+T**.

Traveling by color

Use the keyboard shortcuts to travel through the design by color.

To travel by color

- To travel to the previous color, press the **Page Up** key.



First color brown Second color green

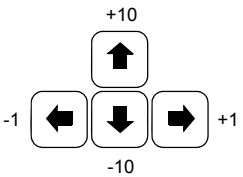
- To travel to the next color, press the **Page Down** key.

Traveling by stitches

Use the arrow keys to travel through the design one or more stitches at a time. The current needle position is indicated by a large white cross or 'needle position marker'. Initially, this is located at the end of the design. When you travel through stitches, the needle position marker moves accordingly. The current stitch number appears in the **Status Line**. See also Viewing the stitching sequence slowly.

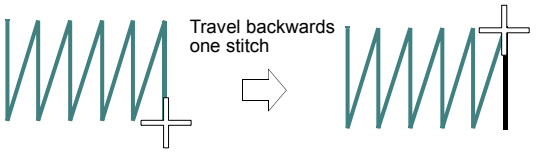
To travel by stitches

1 Ensure that **Select Object** is not selected, then press the arrow keys to travel by 1 or 10 stitches.



- Press the left or right arrow key to travel 1 stitch backward or forward.
- Press the up or down arrow key to travel 10 stitches backward or forward.

2 Press the **+** or **-** keys located on the keypad to travel by 100 stitches. The **+** key moves you forward, while the **-** key moves you backwards.



Tip If you travel outside the visible area, press the **C** key to center the current stitch on the screen.

Viewing the stitching sequence slowly

Select Slow Redraw (View menu) and run to view the stitching and color sequence of a design in slow motion.

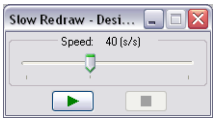
You can check a design's stitching sequence in BERNINA ART Design by slowly redrawing your design on screen.

Note **Slow Redraw** cannot be used with **Artistic View**.

To view the stitching sequence slowly

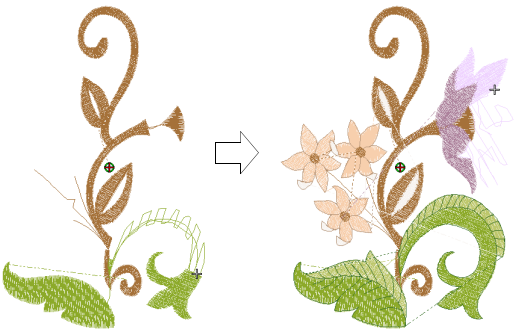
1 Select **View > Slow Redraw** or press **Shift+R**.

The **Slow Redraw** dialog opens.



2 Use the slider bar to set the redraw speed.

3 Click the **Play** button.
The design is redrawn on screen according to the stitching sequence.



4 Click **Stop** to stop.
The remainder of the design is redrawn.

Summary of travel shortcut keys

To travel	Press
to the start of design	Home
to the end of design	End
1 stitch backward	→
1 stitch forward	→
10 stitches backward	↑
10 stitches forward	↓
100 stitches forward	+ *
100 stitches backward	- *
to the previous color	Page Up
to the next color	PageDown
to next object	Ctrl + T

* on keypad - Num Lock off

To travel	Press
to previous object	Shift+T
* on keypad - Num Lock off	

Selecting designs

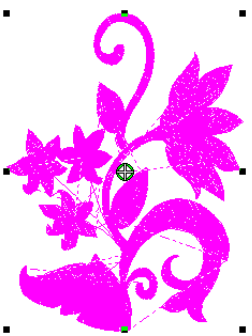
Click Select Object (Edit toolbar) as necessary (generally activated by default), and click objects to select.

Select your design to apply changes. You can cancel all selections in the design.

To select designs

1. Click the **Select Object** icon.
2. Click the design.
   When you click an object, selection handles appear around it. You can click anywhere within these extents to click and drag the design.
   Selection handles appear around the entire design.

Design unselected



Design selected

- To deselect, press **Esc**.

To deselect designs

- Cancel a selection using any of the following methods.
  - Press **Esc**.
  - Click an empty area of the background.

Changing backgrounds

Select Thread Colors (Settings menu) to change background colors.

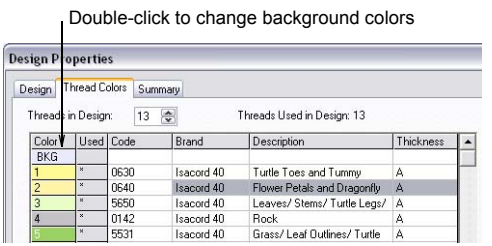
In BERNINA ART Design, you can change the background color of the Design Window to match the color of your fabric. Or you can select a background fabric for more realistic previews and presentations. The background is saved with the design.

White background

Yellow background

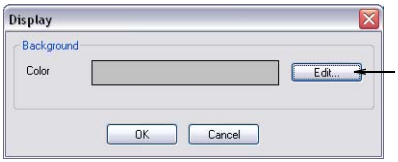
To change the background

1. Select **Settings > Thread Colors**.
   The **Design Properties > Thread Colors** dialog opens.



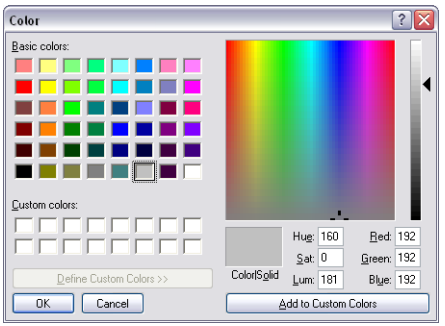
2. Select **BKG** from the list.
3. Click the **Edit** button or double-click the **BKG** button.

The **Display** dialog opens.



4 Click the **Edit** button.

5 Select a color from the **Color** dialog.



6 Click **OK**.
The background is saved with the design.

Viewing design information

BERNINA ART Design provides information about designs in a variety of ways and formats. Before even opening BERNINA ART Design or your design, you can check the software version number and other design information for ART files directly from MS Windows® Explorer. You can view stitching details in the **Design Properties** dialog. The **Print Preview** tool provides essential design information, including a design preview, the size of the design, color sequence and any special instructions.

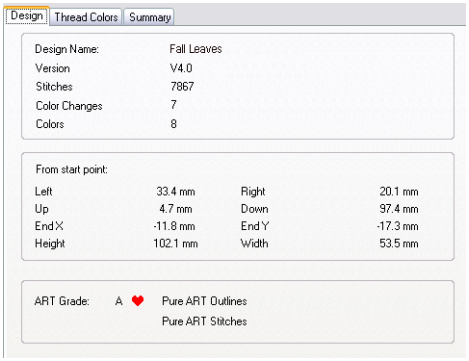
Viewing design information

Use Design Properties (File menu) to view stitching details about a design.

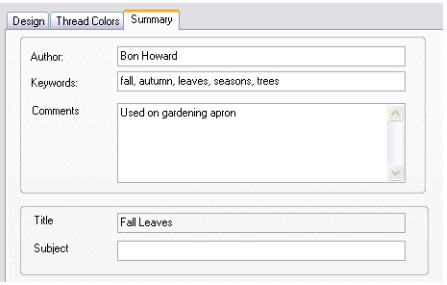
You can check software version number and other design information through the **Design Properties** dialog. Stitching details are also provided. Most of the fields cannot be modified directly.

To view design information

1 Select **File > Design Properties**.
The **Design Properties > Design** tab opens. This tab contains information about height and width and stitch count and colors. The data is extracted from the design and cannot be modified.



2 Select the **Summary** tab to view or enter summary information about the design.



3 Click a field and enter any text which will help you identify the design at a later date.

Note Information from this tab is included on the Print Preview as well as the **Summary** tab of the **Windows Properties** dialog. See Previewing designs for details.

4 Click **OK**.

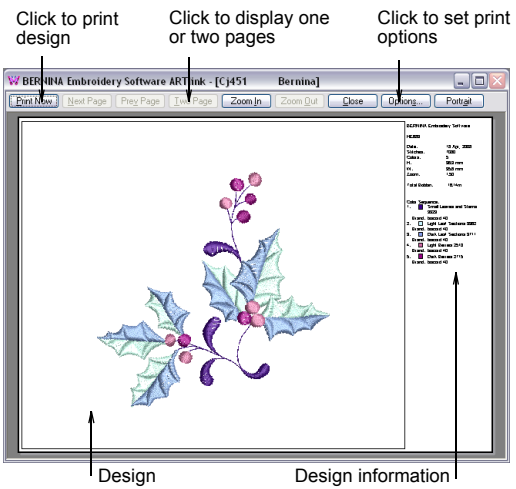
Previewing designs

Click Print Preview (General toolbar) to preview the print preview on-screen.

The **Print Preview** contains a design preview and essential design information, including the size of the design, color sequence and any special instructions. See also Printing designs.

To preview designs

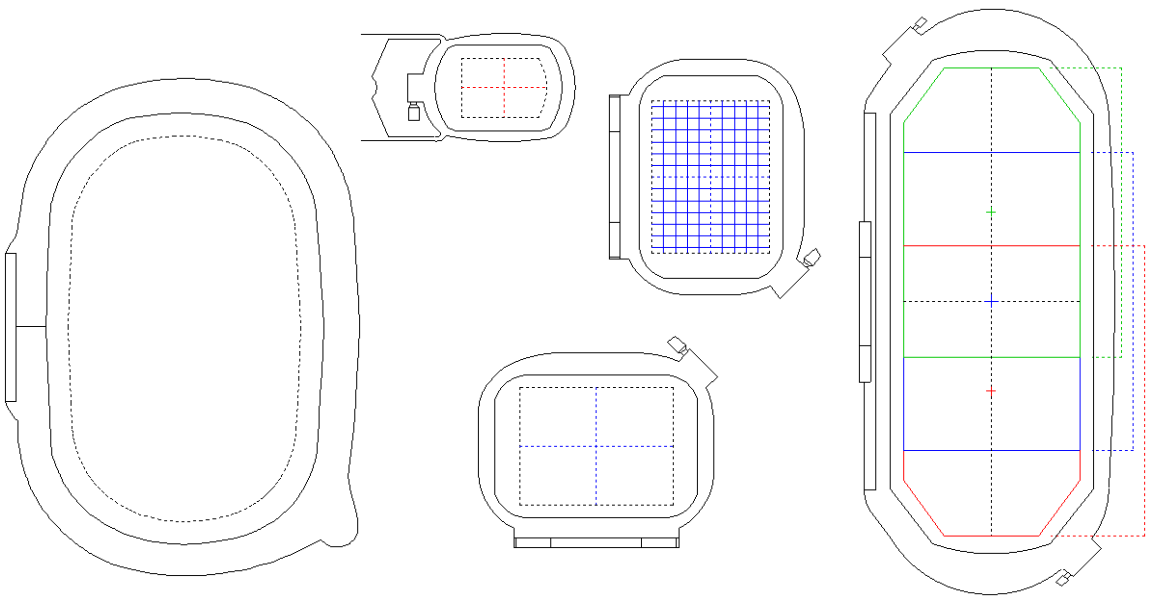
1 Click the **Print Preview** icon.
The design preview displays in a preview window.



2 Adjust the view as required:
- To change the orientation of the paper, click **Landscape** or **Portrait**.
- To change the information that displays, and set printing preferences, click **Options**. See also Setting print options for embroidery.
- Click **Zoom In** to read the design information or view the design preview more closely. Large designs may be displayed over a number of pages.
- To print the design, click **Print**.
- To close the print preview, click **Close**.

Hooping Designs

Fabrics must be hooped before stitching out on the machine. BERNINA ART Design allows you to select from a wide range of standard factory-supplied hoops. If your project contains a large design or a number of smaller designs, you may need to use multiple hoopings. If you have a hoop which does not appear in the list, you can define a custom hoop from scratch or based on a standard hoop. See also Displaying the hoop.



This section describes how to choose and display hoops in BERNINA ART Design. It covers creating and modifying custom hoops. It also deals with hooping large designs.

Selecting hoops

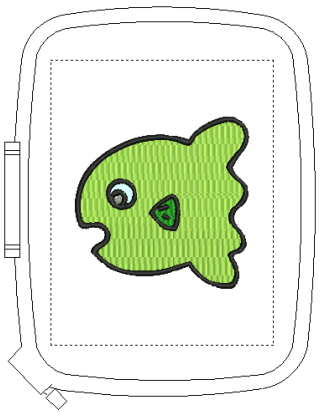
Whenever you create a new design, a single hoop representing the embroidery hoop you connect to

your embroidery machine appears by default in the middle of the Design Window. As you position objects, the hoop position adjusts automatically so that it is always centered around objects in the window. The **Show Hoop** tool allows you to toggle hoop display on or off. A range of hoop sizes and orientations is available for a wide variety of design types.

Changing hoops

Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to change hoop settings.

From the range of hoop sizes available, select the smallest hoop which will accommodate your design. This will hold the fabric tight while stitching.

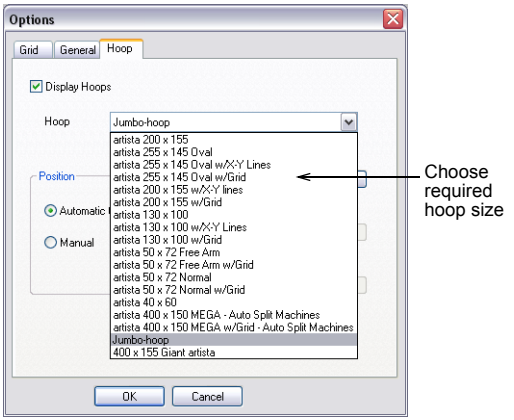


Note When you choose a new hoop, it becomes the 'current' hoop until changed in the present or a future session.

To change hoops

1 Right-click the **Show Hoop** icon or select **View > Hoop**.

The **Options > Hoop** dialog opens.



2 Select a hoop from the **Hoop** list.

3 If you want a significant point of the design to be stitched in a particular part of the hoop, select **Manual** and select **Set Hoop Center**.

4 Click **OK**.

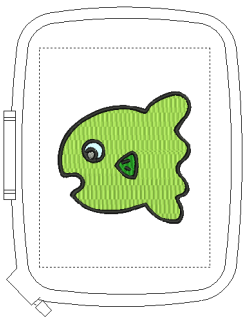
If you selected **Set Hoop Center**, click where you want the center to be in the design window.

Setting hoop centers

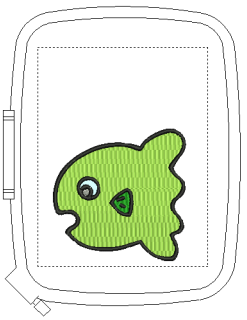
Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to change hoop settings.

By default, BERNINA ART Design ensures that your design is always centered in the hoop. However, you can use the manual option if you need to

digitize in another part of the hoop. You can also change the center position of the hoop.



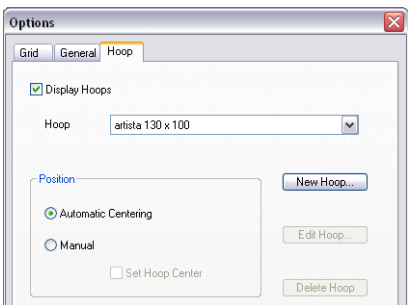
Automatic Centering



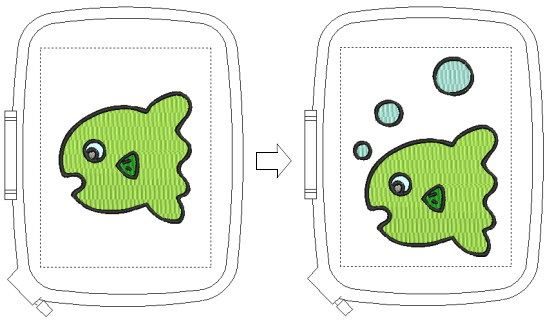
Manual

To set the hoop center

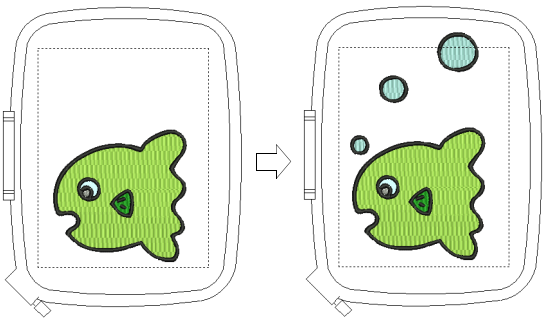
1 Right-click the **Show Hoop** icon or select **View > Hoop**.
The **Options > Hoop** dialog opens.



2 In the **Position** panel, select how to center the hoop.
- **Automatic Centering**: the hoop moves so that the design is always in the center.



- **Manual**: the hoop remains in its original position.
Select **Set Hoop Center** to change the hoop position.



3 Click **OK**.
If you selected **Set Hoop Center**, click in the Design Window where you want the center to be.

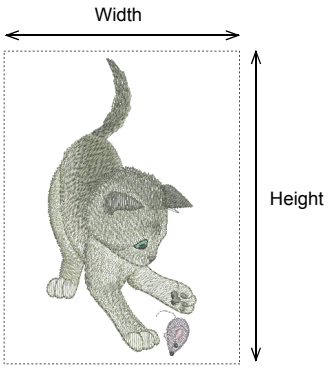
Defining custom hoops

If you are using a hoop size that is not in the hoop list, you can define your own hoops and save them for later use. You can create or edit four types of hoop – rectangular, oval, sliding and 3-position.

Defining rectangle hoops

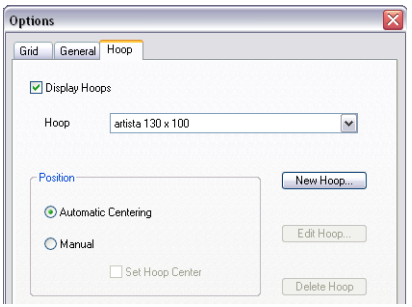
Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to create hoops.

Rectangle hoops are displayed as dotted black lines. You can set the height and the width of the rectangle according to the dimensions of the hoop you are using.

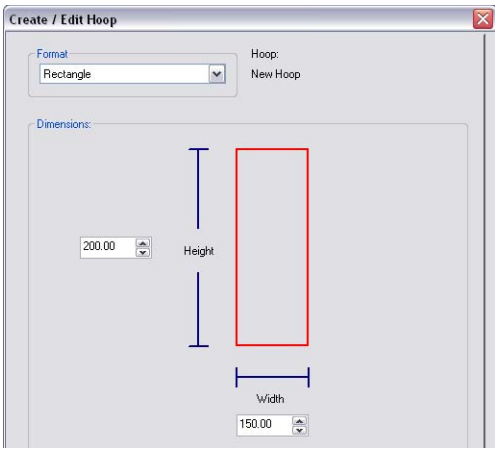


To define a rectangle hoop

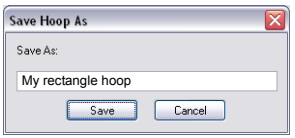
1 Right-click the **Show Hoop** icon or select **View > Hoop**.
The **Options > Hoop** dialog opens.



2 Click **New Hoop**.
The **Create/Edit Hoop** dialog opens.



3 In the **Format** panel, select **Rectangle**.
4 In the **Dimensions** panel, enter the **Height** and the **Width** of the rectangle hoop.
5 Click the **Save Hoop As** button.
The **Save Hoop As** dialog opens.
6 Enter a hoop name.

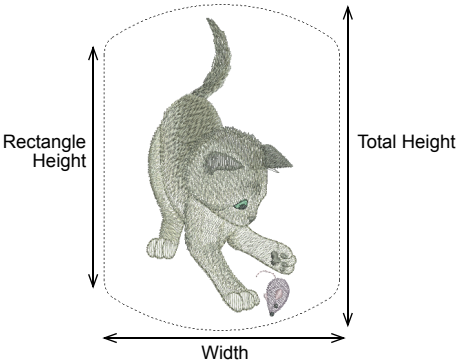


7 Click **OK** and **Save Hoop**.

Defining oval hoops

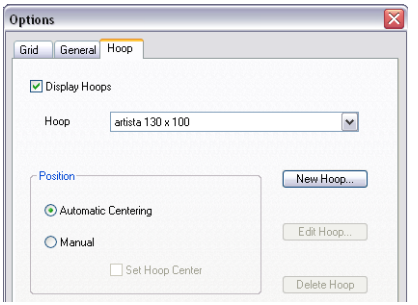
Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to create hoops.

Oval hoops are displayed as black dotted outlines. You can set the height and the width of the oval according to the dimensions of the hoop you are using.



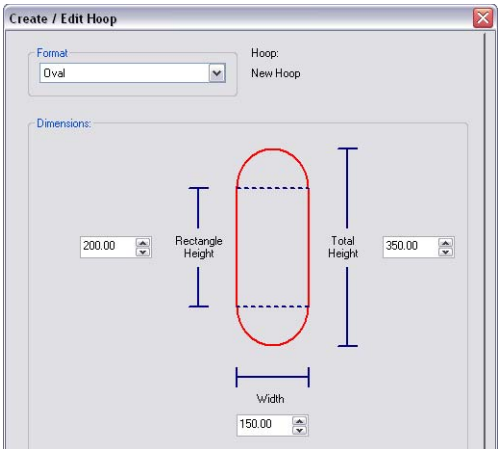
To define an oval hoop

1 Right-click the **Show Hoop** icon or select **View > Hoop**.
The **Options > Hoop** dialog opens.



2 Click **New Hoop**.

The **Create/Edit Hoop** dialog opens.

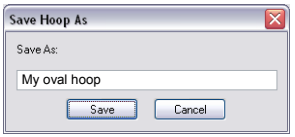


3 In the **Format** panel, select **Oval**.

4 In the **Dimensions** panel, enter the **Rectangle Height, Total Height** and the **Width** of the oval hoop.

5 Click the **Save Hoop As** button.
The **Save Hoop As** dialog opens.

6 Enter a hoop name.

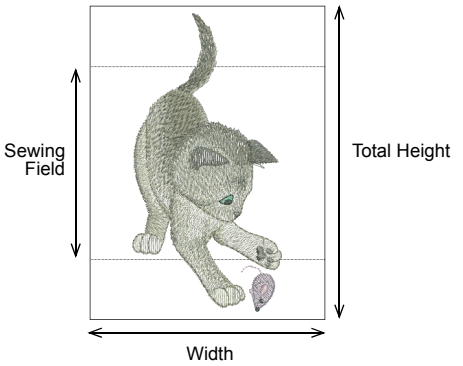


7 Click **OK** and **Save Hoop**.

Defining sliding hoops

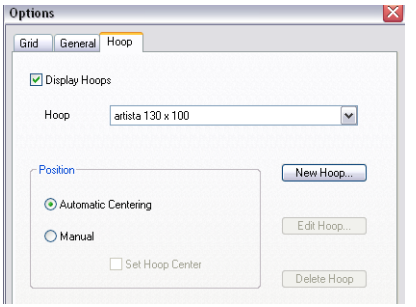
Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to create hoops.

Sliding hoops are special hoops with adjustable frames to accommodate unusual size designs. You can set the height and the width of the hoop as well as the sewing field within according to the dimensions of the hoop you are using.



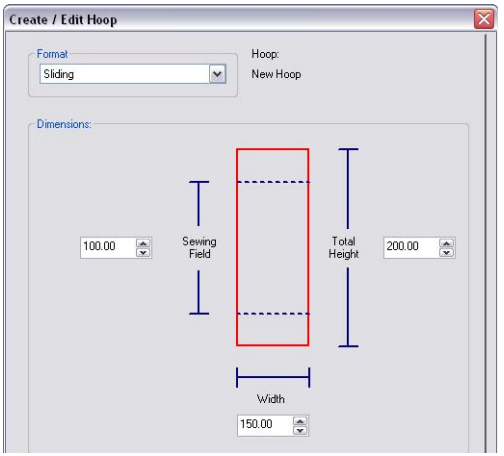
To define a sliding hoop

1 Right-click the **Show Hoop** icon or select **View > Hoop**.
The **Options > Hoop** dialog opens.



2 Click **New Hoop**.

The **Create/Edit Hoop** dialog opens.



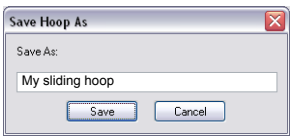
3 In the **Format** panel, select **Sliding**.

4 In the **Dimensions** panel, enter the **Sewing Field, Total Height** and **Width** of the hoop.

Note It is best to enter the total height of the hoop first. If the sewing field is larger than the default total height, the size will go back to a smaller size.

5 Click the **Save Hoop As** button.
The **Save Hoop As** dialog opens.

6 Enter a hoop name.

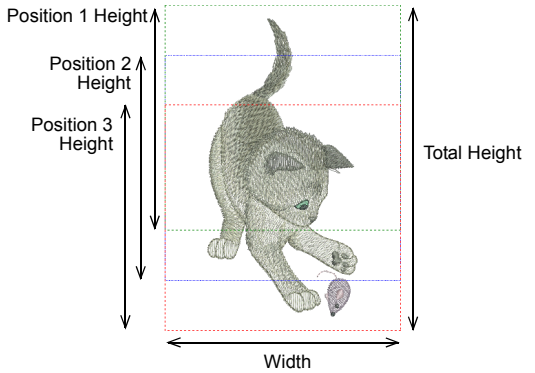


7 Click **OK** and **Save Hoop**.

Defining 3-position hoops

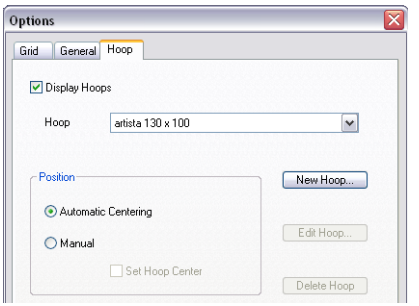
Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to create hoops.

3-position hoops allow large designs to be split manually and stitched without the usual registration problems. Unlike sliding hoops, the sewing fields are in fixed positions with known dimensions, making it easy to register objects stitched in each position. In the software, they are displayed as three dotted rectangles. The top rectangle is green, the middle, blue and the bottom, red. You can define your own 3-position hoop according to the dimensions of the hoop you are using.



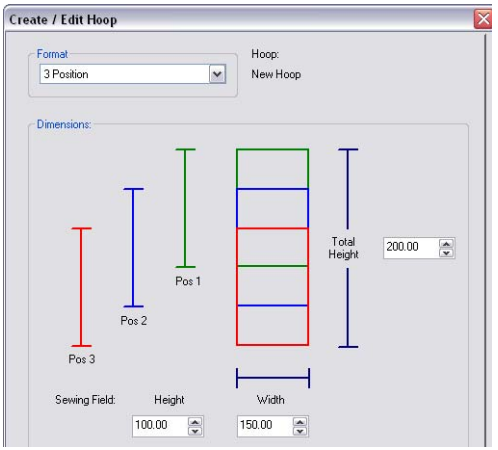
To define a 3-position hoop

1 Right-click the **Show Hoop** icon or select **View > Hoop**.
The **Options > Hoop** dialog opens.



2 Click **New Hoop**.

The **Create/Edit Hoop** dialog opens.



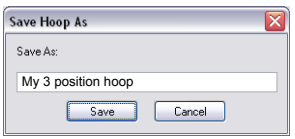
3 In the **Format** panel, select **3-Position.**

4 In the **Dimensions** panel, enter the **Total Height**, the heights for **Position 1, 2** and **3,** followed by the hoop **Width**.

Note It is best to enter the total height of the hoop first. If the sewing field is larger than the default total height, the size will default to a smaller size.

5 Click the **Save Hoop As** button.
The **Save Hoop As** dialog opens.

6 Enter a hoop name.



7 Click **OK** and **Save Hoop**.

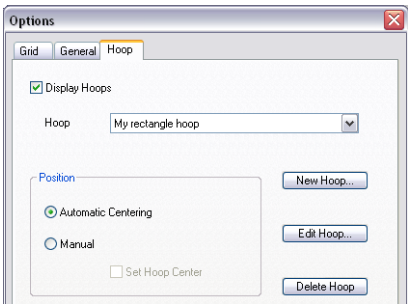
Modifying custom hoops

Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to edit hoops.

You can change the height and width of new hoops as required. Only custom hoops can be modified.

To modify a custom hoop

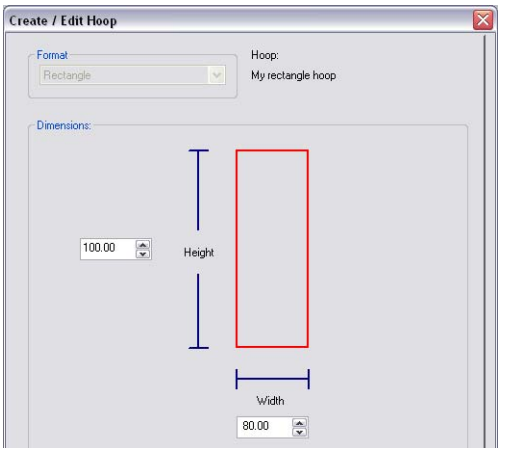
1 Right-click the **Show Hoop** icon or select **View > Hoop**.
The **Options > Hoop** dialog opens.



Note To delete a hoop, click **Delete Hoop** then click **OK** to confirm. The hoop is removed permanently.

2 In the **Hoop** list, select the hoop.

3 Click **Edit Hoop**.
The **Create/Edit Hoop** dialog opens.



4 Enter the new dimensions.

5 Click the **Save Hoop** button.

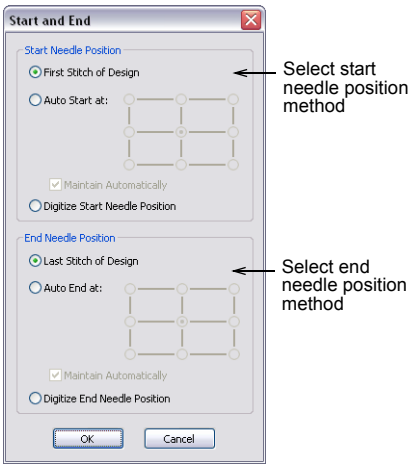
Setting automatic start and end points

Use Start and End (Arrange menu) to set the start and end points of the design.

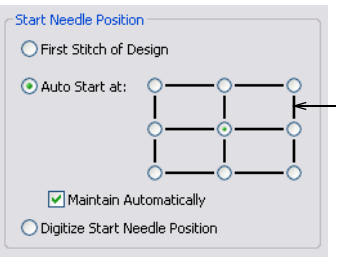
Before stitching, some embroidery machines require you to position the starting needle exactly above the first needle penetration point. This reduces the chance of the needle hitting the side of the hoop. Use automatic **Start and End** to set the positions of first and last stitches in a design.

To set automatic start and end points

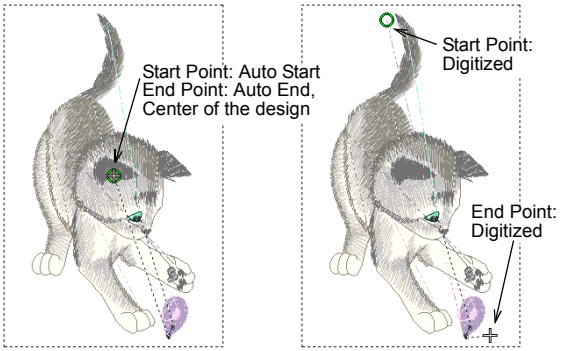
1 Select **Arrange > Start and End**.
The **Start and End** dialog opens.



2 Select a **Start Needle Position** method:
- **First Stitch of Design**: The start point is set to the first stitch in the design.
- **Auto Start at**: The start point is automatically maintained at a specified point in the design. Choose from the available options:



- **Digitize Start Needle Position**: You are prompted to manually mark the start and end points.



3 Select an **End Needle Position** method:
- **Last Stitch of Design**: The end point is set to the last stitch in the design.
- **Auto End at**: The end point is automatically maintained at a specified point in the design.
- **Digitize End Needle Position**: You are prompted to manually mark the end point.

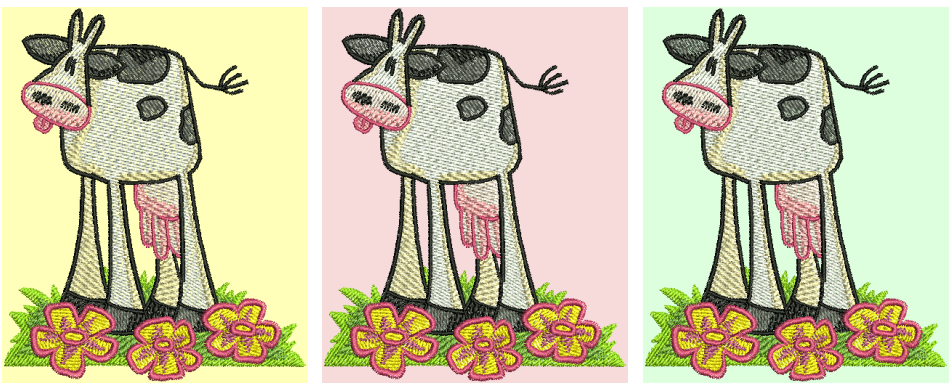
4 Select the **Maintain Automatically** checkbox (the default) to automatically maintain start and/or end needle positions.

5 Click **OK**.
Connecting stitches will be inserted as required before the first and after the last stitches in the design.

Chapter 5

Thread Colors and Thread Charts

When your design was digitized, thread colors were selected for each object from a color palette. The color palette contains a selection of thread colors tailored for each design. This color scheme represents the actual thread colors in which a design will be stitched.



You can preview a design in different colors and on different backgrounds. In effect, you can preview multiple color schemes. You can also print multiple color schemes, design backgrounds, and icons of color blocks with the print preview.

For each color scheme, you can select colors from commercial thread charts containing a range of colors from different thread manufacturers, or define your own. To save time when setting up new color schemes, you can create your own thread charts, using the most frequently used colors. You can add, edit and delete threads from a thread chart, or rename or delete the chart itself. In BERNINA ART Design you can search for particular threads by various criteria.

This section describes how to match your own thread colors, and create new thread charts, as well as modifying thread charts and background colors.

Matching thread colors

In BERNINA ART Design you can search for particular threads manually by various criteria. Thread color matching lets you to find and change a thread color based on closest match in one or several thread charts.

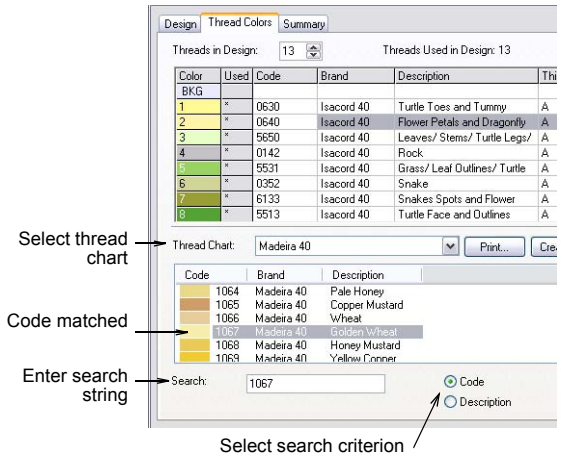
Searching for thread types

Select Thread Colors (Settings menu) to search for a thread.

You can search for a thread by code or description in the **Thread Colors** dialog.

To search for a thread type

1 Select **Settings > Thread Colors**.
The **Design Properties > Thread Colors** tab opens.



2 Select the thread chart to be included in the search from the **Thread Charts** list.
3 Select the thread criterion to search on – **Code** or **Description**.
Code is the identification number of a thread color in a brand.
4 In the **Search** field, enter the first few characters of the required code or description.
The system searches for the closest match and displays them in the thread color list.

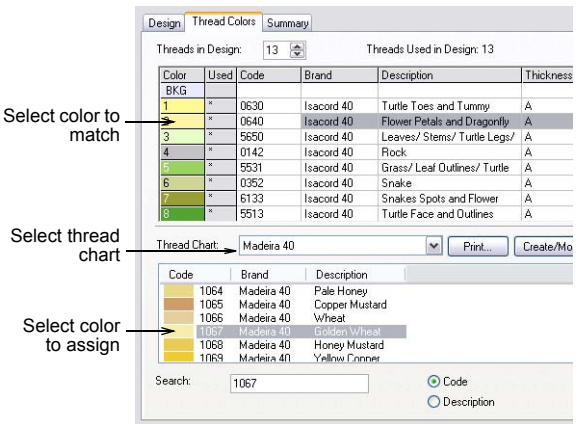
Matching threads from different charts

Select Thread Colors (Settings menu) to match threads from different charts.

You can find and change a thread color based on closest match in one or several thread charts. You can also use this method to change all objects of one color to another color. For example, change all light green objects to light blue.

To match threads from different charts

1 Select **Settings > Thread Colors**.
The **Design Properties > Thread Colors** tab opens.



2 Select a color to match.
3 Select the nearest matching thread and assign to the thread palette by clicking **Assign**.
4 Repeat until all the colors you intend to use in the design have been matched.

5 Click **OK**.

The system assigns selected thread colors to the design.

Creating your own thread charts

Select Thread Colors (Settings menu) to create new thread charts.

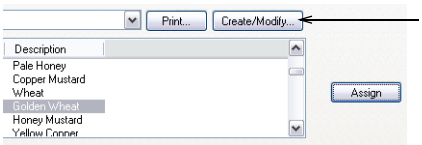
Thread charts are lists of pre-defined thread colors. They may be based on commercially available thread charts, or charts you define yourself.

Creating new thread charts

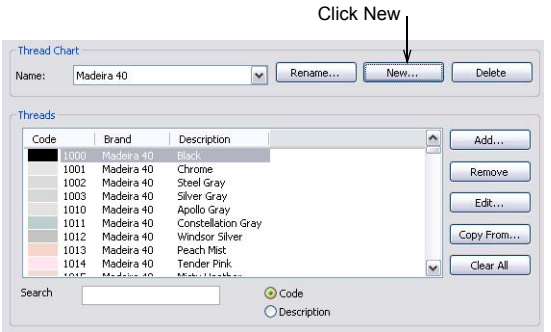
When you create a thread chart, you are creating a store of colors to use in your designs.

To create a new thread chart

1 Select **Settings > Thread Colors.**
The **Design Properties > Thread Colors** tab opens.



2 Click **Modify Charts**.
The **Modify Thread Chart** dialog opens.



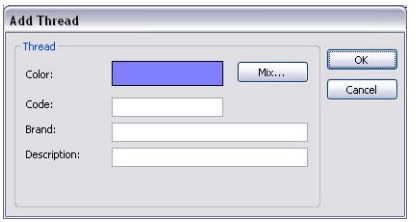
3 Click **New**.
The **New Thread Chart** dialog opens.

4 Enter a name for the chart and click **OK**.

Note Do not use symbols or punctuation, such as commas, when creating your own color charts or editing existing color charts.

You return to the **Modify Thread Chart** dialog. The new chart is created, ready for you to add thread colors.

5 Click **Add** to open the **Add Thread** box. See Adding your own colors to thread charts for details.



6 Click **Copy From** to add colors from an existing chart. See Copying colors between charts for details.

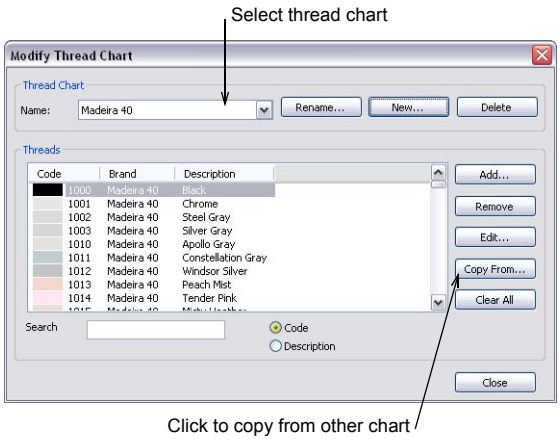
7 Click **OK**.
The new chart is created and ready for use.

Copying colors between charts

You can copy colors between different thread charts to create your own charts from existing colors.

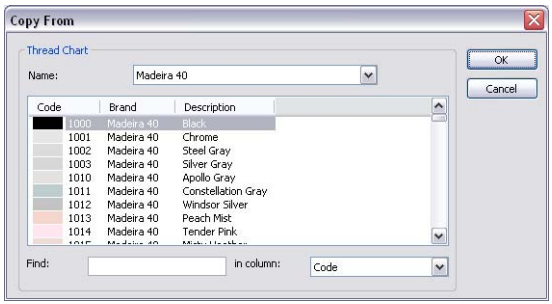
To copy colors between charts

1 Open the **Modify Thread Chart** dialog. See Creating new thread charts for details.



2 Select a chart from the **Thread Chart > Name** list.

3 Click **Copy From**.
The **Copy From** dialog opens.



4 From the **Name** list, select the thread chart containing the color you want to copy.

5 Select the color you want to copy, then click **OK**.
The color is copied to the thread chart, and appears at the bottom of the list.

Adding your own colors to thread charts

You can add colors to thread charts using colors from other charts or colors you mix yourself.

To add your own colors to a thread chart

1 Open the **Modify Thread Chart** dialog. See Creating your own thread charts for details.

2 Click **Add** to add your own colors.
The **Add Thread** dialog opens.

3 Mix the thread **display** color. See Mixing your own thread colors for details.

4 Enter code, brand, and description details for the new thread color.
Code is the identification number of a thread color in a brand.

5 Click **OK**.
The new color appears in the **Threads** list.

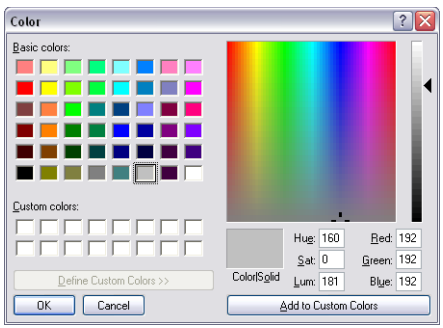
Mixing your own thread colors

You can change the color that displays for a particular thread, or create new thread colors using the **Color** dialog.

To mix your own thread colors

1 In the **Add Thread** or **Edit Thread** dialog, click **Mix**.
- See Adding your own colors to thread charts for details.
- See Modifying thread details for details.

The **Color** dialog opens.



2 From the **Basic colors** table, select a color that closely matches the color you require.

3 Click and drag the cross hairs on the color spectrum to get the exact color you require.

4 Drag the slider on the right of the color spectrum to adjust color brightness.

The HLS and RGB values appear in the bottom right-hand corner of the **Color** dialog. Enter these values directly to define exact colors.

5 When you have mixed the required color, click **Add to Custom Colors**.

6 Click **OK**.
The new color appears in the **Color** preview box.

Modifying thread charts

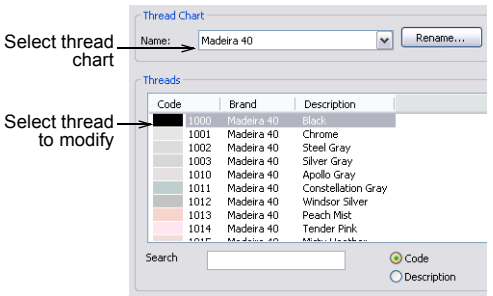
Update existing thread charts by modifying thread details or removing threads. You can also rename or delete thread charts.

Modifying thread details

Change the code, brand or description, brand for an existing thread.

To modify thread details

1 Open the **Modify Thread Chart** dialog. See Creating new thread charts for details.



2 From the **Name** list, select the chart to modify.

3 In the **Threads** list, select the thread to modify.

4 Click **Edit**.
The **Edit Thread** dialog opens.

5 Edit thread details as required. See Adding your own colors to thread charts for details.

6 Click **OK**.

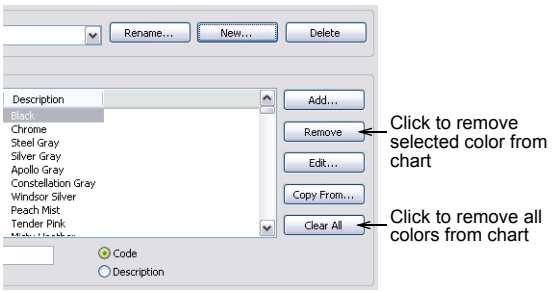
Removing threads from charts

Select Thread Colors (Settings menu) to remove threads from charts.

You can remove obsolete thread colors from thread chart easily, using the **Modify Charts** dialog.

To remove threads from charts

1 Open the **Modify Thread Chart** dialog. See Creating new thread charts for details.



2 From the **Name** list, select the chart to modify.

3 From the **Threads** list, select the thread (or threads) to remove.

4 Click **Remove.**
You are prompted to confirm the removal.

5 Click **Yes.**

Tip To delete all the threads from a thread chart, click **Clear All**.

Renaming thread charts

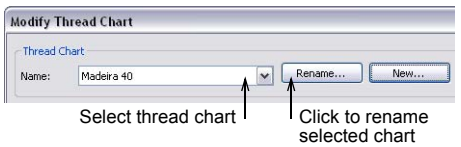
Select Thread Colors (Settings menu) to rename thread charts.

Rename thread charts from the **Modify Thread Chart** dialog.

Tip Select names that will help you remember the charts you need, or that sort frequently used charts to the top of the list.

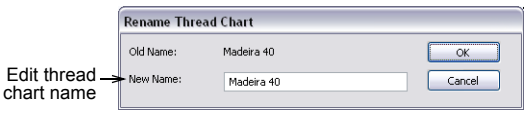
To rename thread charts

1 Open the **Modify Thread Chart** dialog. See Creating new thread charts for details.



2 From the **Name** list, select the chart to modify.

3 Click **Rename**.
The **Rename Thread Chart** dialog opens.



4 Enter the new name for the thread chart, then click **OK**.

Deleting thread charts

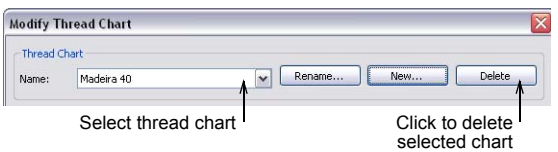
Select Thread Colors (Settings menu) to delete thread charts.

Delete obsolete thread charts from the **Modify Thread Chart** dialog.

Note Be careful when deleting thread charts. If you delete the wrong chart you will need to reinstall BERNINA ART Design to restore it.

To delete thread charts

1 Open the **Modify Thread Chart** dialog. See Creating new thread charts for details.



2 From the **Name** list, select the chart to delete.

3 Click **Delete**.
You are prompted to confirm the deletion.

4 Click **Yes**.

Arranging and Transforming Designs

BERNINA ART Design allows you to change the position, size and orientation of designs by moving, scaling and transforming. You can modify designs directly on-screen.

This section describes how to position designs, as well as how to scale, rotate, skew, and mirror designs.

Note The scalability and stitching quality of a design ultimately depends on its original source – ART Grade A, ART Grade B, ART Grade C, or ART Grade D. Only native ART Grade A designs contain the complete set of design information required for 100% perfect scaling and transformation.

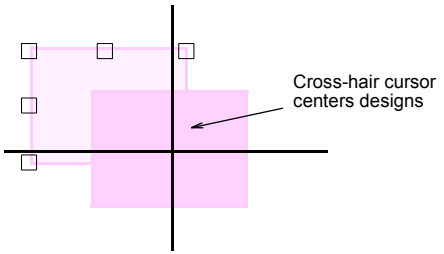
Positioning designs

Click Select Object (Edit toolbar) as necessary (generally activated by default), and click objects to select.

Position designs using the mouse to drag them to a new position, or nudging them with the arrow keys.

To position a design

1 Select the design to move. See Selecting designs for details.
2 Click and drag it to a new position.



3 For more accurate positioning, press the arrow keys to 'nudge' the design into the required position.

Tip Zoom in to make it easier to make small adjustments. The distance the design moves depends on the current zoom factor. The greater the zoom factor, the smaller the distance moved.

Scaling designs

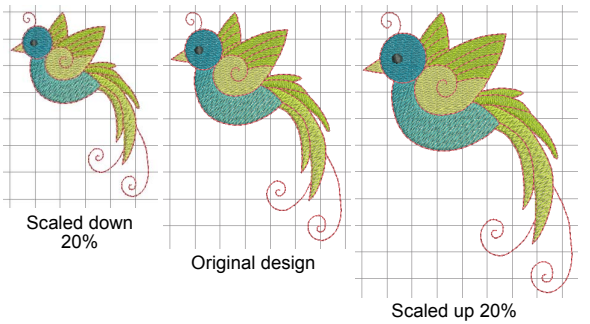
You can scale designs by dragging the selection handles with the mouse. As a design is scaled, the stitch count changes to preserve the current stitch spacing.

Note Only native ART designs contain the complete set of design information required for 100% perfect scaling and transformation.

Scaling designs using Scale by 20% Down/Up

Click Scale by 20% Down/Up (Edit toolbar) to scale selected designs by 20%.

Use this technique when you need to make very quick changes that do not need to be precise.



To scale designs using Scale by 20% Down/Up

1 Select the design.
2 Click the **Scale by 20% Down/Up** icon.
- Click to make the design 20% smaller.
- Right-click to make the design 20% bigger.

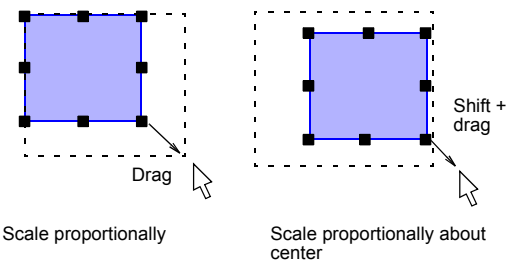
Scaling designs using click and drag

Use Select Object (Edit toolbar) to scale designs using click and drag.

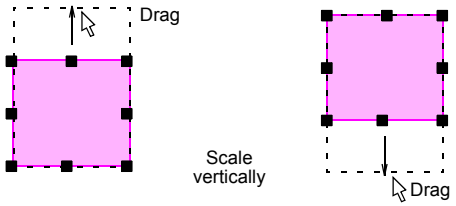
You can change the height and width of a design, or scale it proportionally using the selection handles.

To scale designs using click and drag

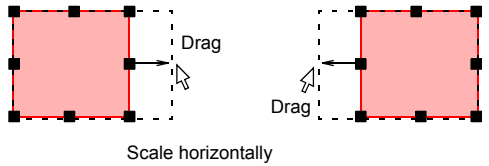
1 Select the design.
Eight selection handles display around the design.
2 Click and drag a selection handle to resize the design.



- To scale height and width proportionally, use a corner handle.

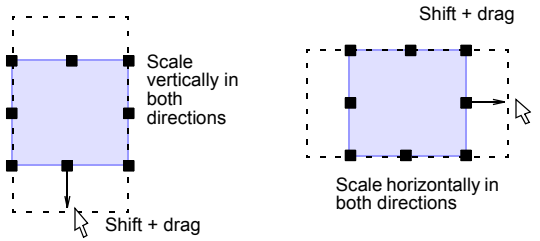


- To change the height, use the handles at the center-top or center-bottom.



- To change the width, use the handles at the center-sides.

Tip To resize around a center anchor, hold down **Shift** while you resize. **Ctrl+Shift** resizes height and width simultaneously around a center anchor.



Rotating designs

You can rotate designs directly on-screen using click and drag or the **Rotate CCW/CW** tool.

Rotating designs using Rotate CCW/CW

Click Rotate CCW/CW (Edit toolbar) to rotate a design by 45° clockwise. Right-click Rotate CCW/CW to rotate a design by 45° counter clockwise.

Use **Rotate CCW/CW** on the **Edit** toolbar to rotate designs by 45° rotations in either direction.

To rotate designs using Rotate CCW/CW

1. Select the design.
2. Select the design with **Select Object**.
3. Click **Rotate CCW/CW** on the toolbar.
   - Right-click to rotate 45° clockwise.
   - Click to rotate 45° counter clockwise.

Rotating designs using click and drag

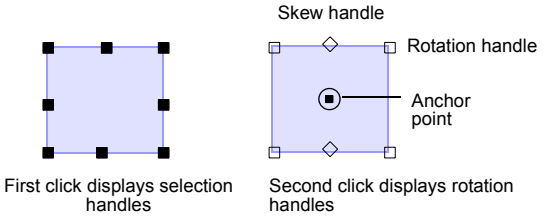
Use Select Object (Edit toolbar) to rotate designs using click and drag.

When you select a design, selection handles display at its extremities. If you click the design again, the handles change to rotation handles.

To rotate designs using click and drag

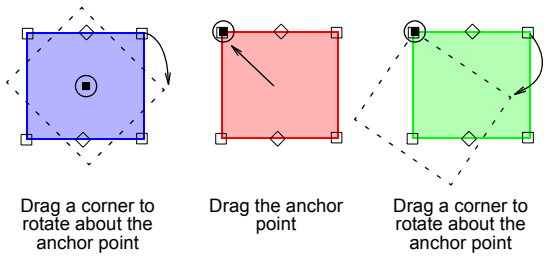
1. Select the design.
2. Click the design a second time.

Rotation handles appear at the corners of the design and an anchor point displays at the design's center.



3 If required, drag the rotation anchor from the center to a new position.

4 Click a rotation handle, and drag it clockwise or anti-clockwise. An outline and cross-hairs display as you rotate.



Skewing designs

You can skew designs along the horizontal plane by clicking skew handles and dragging to the required angle.

To skew a design

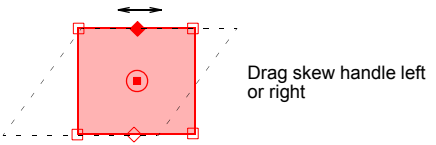
1 Select the design.

2 Click the design a second time.

Rotation and skew handles appear around the design. Skew handles are diamond-shaped and appear at the center-top and bottom of the design.

3 Drag the skew handles left or right.

The design skews along the horizontal plane. An outline and cross-hairs show the change to the design's shape.



Mirroring designs

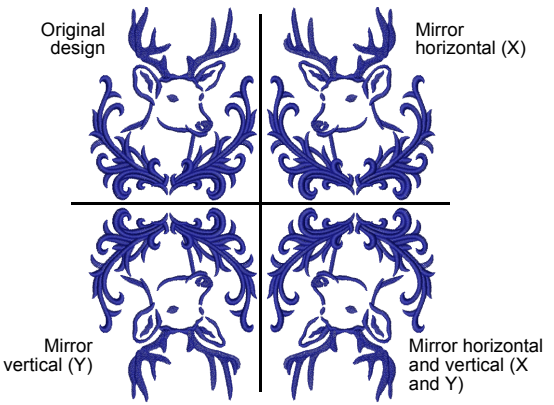
Click Mirror Horizontal (Edit toolbar) to flip a design horizontally.

Click Mirror Vertical (Edit toolbar) to flip a design vertically.

You can mirror designs horizontally or vertically using the **Mirror** tools.

To mirror a design

1 Select the design.



2 Click the **Mirror Horizontal** icon to flip horizontally or **Mirror Vertical** to flip vertically.

Lettering Essentials

Add lettering to designs quickly and easily. Place it on a straight baseline or curve it around a circle. You can apply formatting to lettering objects in the same way as a word processor, including italics and bolding. Letter spacings can be determined before or after creating lettering objects and placing them in your design.

This section describes how to add lettering to embroidery designs. It also covers applying lettering baselines and adjusting formatting.

Adding lettering to embroidery designs

Click Lettering (Edit toolbar) to enter text in the dialog and adjust settings for embroidery lettering.

MS Windows® comes with a collection of TrueType fonts pre-installed and there are many others available from various sources. All TrueType fonts installed on your system are available when placing lettering in your designs. Using the dialog allows you to specify letter formatting before adding. This is the more traditional method and is useful with more complex designs.

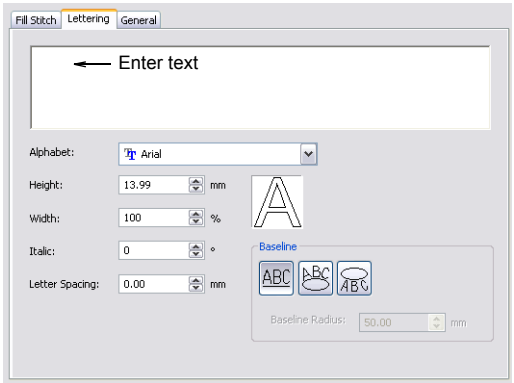
Note Not all TrueType fonts are suitable for embroidery designs. Experiment with the ones you like and try different stitch settings.

Tip Install new fonts using **My Computer > Control Panel**. Double-click the **Fonts** folder then select **File > Install New Font**. Before you can use the new fonts, you need to restart your computer and then BERNINA ART Design will display the new fonts in the Alphabet list.

To add lettering to embroidery designs

1 Click **Lettering**.

The **Object Properties** dialog opens.



2 Enter the text you want to embroider in the text entry panel.
To start a new line of lettering, press **Shift+Enter**.

Tip You can insert a color change between two letters by keying a caret (^) symbol. Subsequent letters default to the next color in the palette.

3 Select a font from the **Alphabet** list.
Any TrueType fonts installed on your computer are listed.

4 Adjust formatting and baseline settings as required. See Formatting lettering for details.

Tip Consider letter size before changing alphabets. Some alphabets look best at smaller size, others at larger. See also Scaling lettering numerically.

5 Click **OK**.

6 Click where you want to place the lettering, or mark reference points for the baseline you selected. See Applying lettering baselines for details.
The text is stitched using the selected font.

Tip Letter stitching is generated according to settings in the **Fill Stitch** tab. You can change these at any time. See Adjusting letter stitching for details.

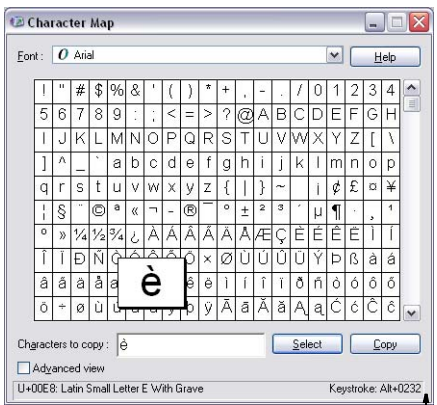
Inserting special characters

Use the MS Windows® **Character Map** for quick access to special symbols and characters. The Character Map is usually installed as part of the MS Windows® setup.

Tip You can also create special characters in each alphabet by holding down the **Alt** key on your keyboard and typing **0** (zero), its code, using the numbers on the keypad. For example, to type **è** with the code **232**, type **Alt + 0232**. The character will appear when you release the **Alt** key. The Character Map gives you codes for all characters.

To insert special characters

1 Open the MS Windows® Character Map.
By default, you will find it under **Start > Programs > Accessories > System Tools > Character Map**.



Alt key combination

2 Double-click a character, or select it and press **Select**.
The character appears in the **Characters to copy** box.

Note The equivalent **Alt** key combination is shown at the bottom of the dialog. This can be used to key the character directly on screen.

3 Click **Copy** to copy the character to the clipboard.

4 Paste it into the text entry panel by pressing **Ctrl+V**.

5 Click **Apply**.

Continue creating the lettering object in the normal way.

Applying lettering baselines

Baselines determine the shape of lettering objects in a design. You can place lettering on a straight horizontal or vertical line, curve lettering around a circle or arc, or digitize your own baseline. Different reference points are needed depending on the baseline you use. You can digitize baselines on-screen.

Baselines use default settings to determine their size, spacing and angles. BERNINA ART Design gives you both interactive and precise numerical control over many baseline settings. Techniques are available to modify baseline type, length, radius and angle, as well as baseline position.

Note BERNINA ART Design will remember which baseline you used last and use this one if you type letters directly on-screen.

Selecting baselines

	Use Lettering (Edit toolbar) to select baselines and adjust baseline settings.
ABC	Use Free Line to create straight horizontal baselines of no fixed or pre-determined length.
	Use Circle CW to create clockwise baselines.
	Use Circle CCW to create counter-clockwise baselines.

Different baselines are available for use with new or selected lettering objects. Adjust baseline settings interactively or via properties.

To select baselines

1 Select a lettering object and click **Lettering**, or double-click the lettering. See also Adding lettering to embroidery designs.
The **Object Properties** dialog opens.

2 Select a baseline.
The baseline you choose depends on the effect you want to achieve. You need to digitize different reference points depending on the type of baseline you select. Options include:
- Straight Horizontal: See Creating horizontal baselines for details.
- Circle CW: See Creating circular baselines for details.
- Circle CCW: See Creating circular baselines for details.

3 Click **Apply**.
The selected baseline is applied to any selected lettering object or newly created lettering objects.

Tip Create identical baselines by duplicating or copying them in your design.

Creating horizontal baselines

	Use Lettering (Edit toolbar) to select baselines and adjust baseline settings.
ABC	Use Free Line (OP > Lettering dialog) to create straight horizontal baselines of no fixed or pre-determined length.

Free Line baselines do not have a fixed or pre-determined length. They extend as long as you keep adding letters.

To create horizontal baselines

1. Select a lettering object and click **Lettering**, or double-click the lettering. See also Adding lettering to embroidery designs.
2. Enter your text in the text entry panel.
3. Select the **Free Line** icon.
4. Click **Apply**.
5. Click where you want to place the letters.

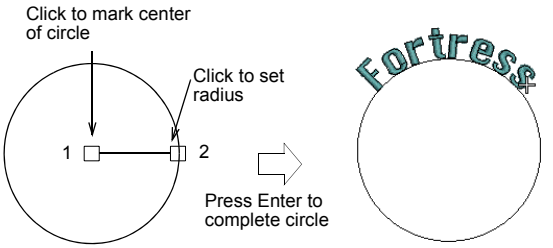
Creating circular baselines

	Use Lettering (Edit toolbar) to select baselines and adjust baseline settings.
	Use Circle CW (OP > Lettering dialog) to create clockwise baselines.
	Use Circle CCW (OP > Lettering dialog) to create counter-clockwise baselines.

Use Circle CW and Circle CCW baselines to place letters around a full circle or ellipse in clockwise or counter-clockwise directions. By default, letters are positioned **above** Circle CW baselines and **below** Circle CCW baselines. They are also centered by default.

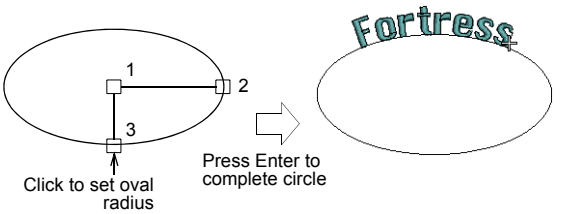
To create circler baselines

1. Select a lettering object and click **Lettering**, or double-click the lettering. See also Adding lettering to embroidery designs.
2. Enter your text in the text entry panel.
3. Select the **Circle CW** or **Circle CCW** icon and click **Apply**.
   The Status Line will prompt you.
4. Mark the center of the circle.



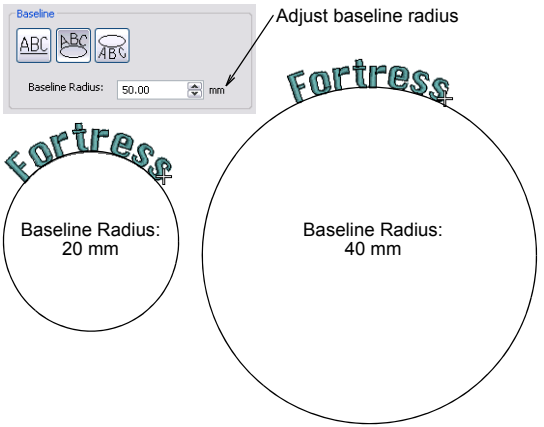
5. Mark a point to define the radius.
6. Press **Enter** to complete the circle.

7. Alternatively, if you want to create an oval baseline, mark a third reference point.



8. Press **Enter** to complete the oval.

Tip Make a circle large enough for your lettering. If it is too small, or the lettering too big, the letters will be crowded. Adjust the baseline radius in the **Object Properties**.



Formatting lettering

You can control the appearance of lettering by changing object properties before or after adding lettering, in the same way as other objects.

Making italic lettering

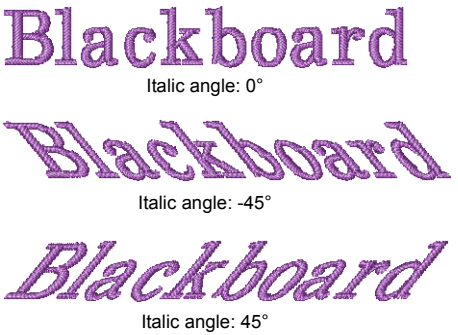
Use Lettering (Edit toolbar) to adjust italic settings.

You can slant letters to the left or right for an italic effect. The default italic angle is 0° which is equivalent to no italics. The largest angle lettering can be inclined is 45°.

To make italic lettering

1 Select a lettering object and click **Lettering**, or double-click the lettering. See also Adding lettering to embroidery designs.
The **Object Properties** dialog opens.

2 Enter an angle in the **Italic** field.
You can enter an angle anywhere between 45° and -45°.
3 Click **Apply**.
The setting is applied to any selected lettering object or to newly created lettering objects.



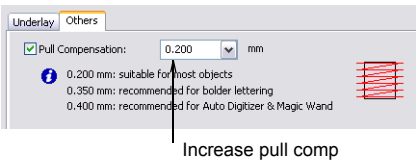
Making bold lettering

Use Lettering (Edit toolbar) to adjust bolding settings.

You can create the effect of bold lettering by increasing the pull compensation settings for selected lettering objects.

To make bold lettering

1 Select a lettering object and click **Lettering**, or double-click the lettering. See also Adding lettering to embroidery designs.
The **Object Properties** dialog opens.
2 Click the **Effects** button.
The **Effects** dialog opens.



3 Select the **Others** tab.
4 Select the **Pull Compensation** checkbox and increase the setting to 0.4–0.6 mm.

Caution Do not use a value of more that 0.6 mm or letters may distort.

5 Click **Apply**.

The setting is applied to any selected lettering object or to newly created lettering objects.

Pull comp: 0.2 mm Pull comp: 0.6 mm

Changing letter spacing

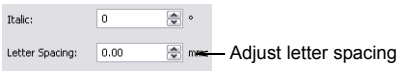
Use Lettering (Edit toolbar) to adjust letter spacing settings.

You can adjust letter spacing in lettering objects at any stage.

To change letter spacing

1 Select a lettering object and click **Lettering**, or double-click the lettering. See also Adding lettering to embroidery designs.

The **Object Properties** dialog opens.



2 Enter a spacing value (mm).

3 Click **Apply**.

The setting is applied to any selected lettering object or to newly created lettering objects.

Letter spacing: 1 mm Letter spacing: 3 mm

Chapter 8

Editing Embroidery Lettering

BERNINA ART Design gives you both interactive and precise numeric control over many attributes affecting lettering objects. Lettering text can be edited by means of the dialog. Lettering colors can be changed via the Color Palette. Size can be adjusted interactively or numerically. Small, narrow letters may not require underlay, depending on their size and the fabric to be used. Use the available tools to skew and rotate lettering objects. When you resize lettering, you may need to apply or remove underlay as well as adjust cover stitching. Finally, you may want to save preferred settings to a design template for future use.

This section describes how to edit lettering text, change lettering colors, as well as scale and transform lettering. It also covers removing underlay from small lettering and adjusting cover stitching. It also deals with managing lettering templates.

Modifying text

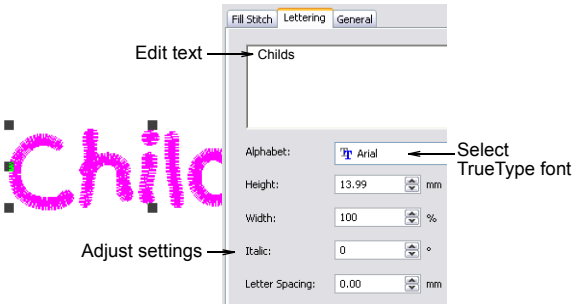
Use Lettering (Edit toolbar) to edit the lettering text.

When you create a lettering object, you can adjust it via its object properties. If you have imported a design with existing lettering which you wish to edit, the original font used in its creation will not be recognized. To edit it, you need to reselect the original TrueType font or choose another installed on your system.

To modify text

1 Select a lettering object and click **Lettering**.

The **Object Properties** dialog opens.



2 Edit the text in the text entry panel as required.

3 Adjust settings as required. See Formatting lettering for details.

Tip If you have imported a design with existing lettering, the **Alphabet** field will show blank because the embroidery is not recognized as a TrueType font. Thus, reselect the TrueType font the lettering is based on or choose another from the list.

4 Click **Apply**.

Note Letters are filled with stitches according to current stitch settings in the **Object Properties > Fill Stitch** dialog. You can change these at any time. See Adjusting letter stitching for details.

Changing lettering colors

New lettering objects are created using the selected color on the **Stitch and Color** bar. You can change the color before or after creation. If the color you want is not available, you may need to add it to the palette.

Note Due to the differences in computer monitors and computer video cards, the approximate colors displayed should be used only as guides. Threads should always be matched to the appropriate physical color card.

Selecting new colors

Use Color (Stitch and Color bar) to set current color.

When you create a new lettering object, it automatically takes the color selected in the **Color Palette**. This is the 'current' color.

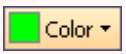
To select a new color

1 Deselect all design objects.
The **Stitch and Color** bar becomes activated. The currently selected (default) color is shown on the toolbar with a dropdown arrow beside it.

2 Click **Color**.
The Color Palette expands to accommodate numbers of colors.

3 Select a color from the **Color Palette**.
This color becomes current for newly created lettering objects.

Recoloring lettering objects



Use Color (Stitch and Color bar) to recolor lettering objects.

Change the color of selected lettering objects in your design at any time.

To recolor a selected object

1 Select the lettering object you want to recolor.

2 Click **Color**.
The Color Palette expands to accommodate numbers of colors.

3 Select a color from the Color Palette.
The selected objects change color immediately.

Scaling lettering

When you first create lettering, it may be too big or too small. Size can be adjusted by means of the:

- **Select Object** tool
- **Object Properties > Lettering** tab, or
- **Object Properties > General** tab.

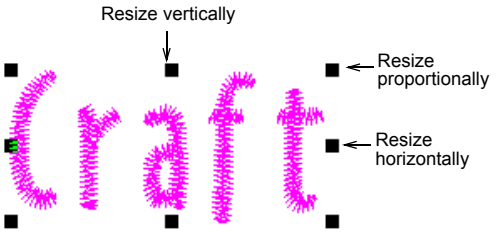
Scaling lettering interactively

Use Select Object (Edit toolbar) to scale lettering objects on-screen.

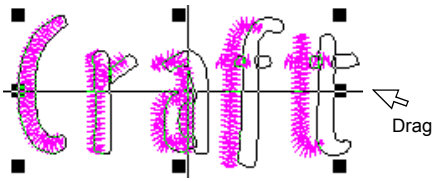
You can scale your lettering objects vertically, horizontally and proportionally with the **Select Object** tool. See also Transforming lettering.

To scale lettering interactively

1 Click **Select Object** and select the lettering object.



2 Click and drag a handle to resize the object horizontally, vertically or proportionally.



3 Release the mouse to complete.

Scaling lettering numerically

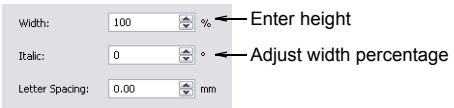
Use Lettering (Edit toolbar) to adjust letter height and width.

You can scale your lettering objects vertically, horizontally and proportionally via the **Object Properties** dialog.

Tip Change the appearance of an alphabet by changing the letter width in proportion to the height. The original width value is 100%.

To scale lettering numerically

1 Select a lettering object and click **Lettering**, or double-click the lettering.
The **Object Properties** dialog opens.



2 Enter the height in the **Height** field – letter height can be between 1 mm and 200 mm.
3 Enter the width as a percentage of height in the **Width** field.
4 Click **Apply**.
The setting is applied to any selected lettering objects or to newly created lettering objects.

Tip Alternatively, select the **General** tab. Adjust the width and height settings either as absolute values (mm) or as a percentage of the current settings.

The setting is applied to any selected lettering objects.

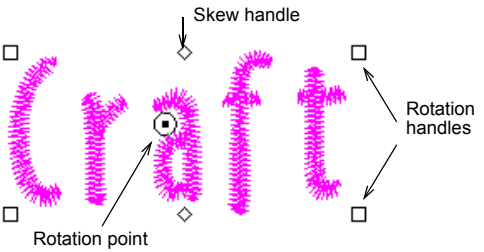
Transforming lettering

Use Select Object (Edit toolbar) to transform lettering objects on-screen.

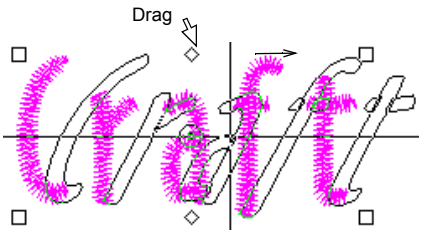
You can skew and rotate lettering objects by manipulating control points on-screen with the **Select Object** tool.

To transform lettering

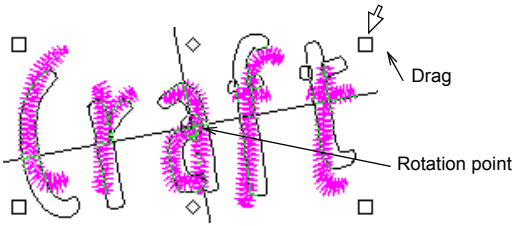
1 Click **Select Object** and select the lettering object.
Selection handles appear – these let you scale the object. See Scaling lettering interactively for details.
2 Click the lettering object again.
Another set of selection handles appears – these let you rotate and skew the object.



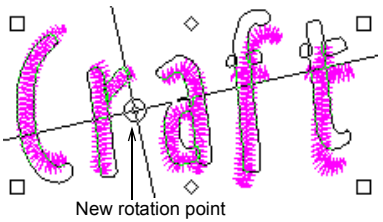
3 Click and drag one of the diamond-shaped handles to skew the lettering object horizontally.



4 Click and drag one of the hollow square handles to rotate the object.



Tip Drag the rotation point itself to a new location as required.



5 Release the mouse to complete.

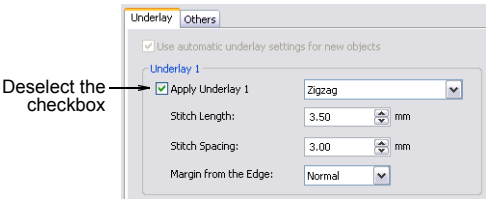
Removing lettering underlay

Use Lettering (Edit toolbar) to remove underlay from small lettering.

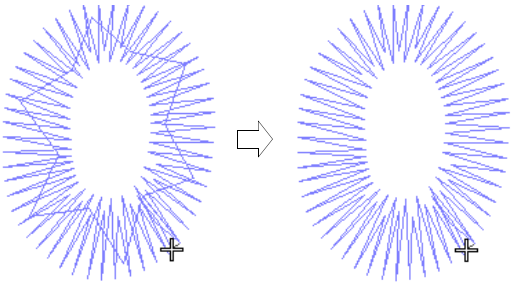
The quality of most lettering can be improved with an underlay using the same methods as for other embroidery objects. Small, narrow letters, however, may not require underlay, depending on their size and the fabric to be used.

To remove lettering underlay

1 Select a lettering object and click **Lettering**, or double-click the lettering.
The **Object Properties** dialog opens.
2 Click the **Effects** button.
The **Effects** dialog opens.



3 Select the **Underlay** tab.
4 Deselect the checkbox.
The underlay is removed.



Adjusting letter stitching

By default, lettering objects are filled with Satin stitch but you can also apply Step stitch.

Changing lettering stitch type

Satin	Use Satin (Stitch and Color bar) for narrow shapes.
Step	Use Step (Stitch and Color bar) for larger, irregular shapes.

You can change the lettering stitch type at any stage.

To change lettering stitch type

1 Select a lettering object.
2 Select a fill stitch type, Satin or Step from the dropdown list.
The selected stitch type with the current settings is applied to the selected lettering object.

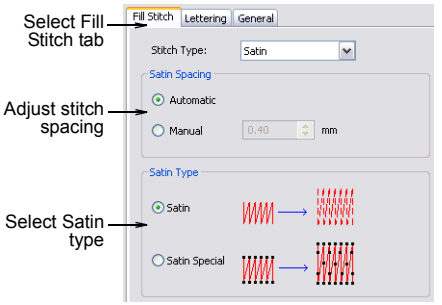
Adjusting lettering Satin stitch

Use Lettering (Edit toolbar) to apply different stitch types to lettering.

By default, lettering objects are filled with Satin stitch. Where a letter is narrow, stitches are tight, thus requiring fewer stitches to cover the fabric. Where a column is very narrow, stitches need to be less dense because too many needle penetrations can damage the fabric. You can fill lettering shapes with **Special Satin** stitching as well as the regular satin stitch. It is particularly suitable for filling large, irregular lettering shapes that are too large for satin stitch.

To adjust lettering Satin stitch

1 Select a lettering object and click **Lettering**, or double-click the lettering.
The **Object Properties** dialog opens.



2 Select the **Fill Stitch** tab.
3 Select the type of satin spacing.
4 If you chose **Manual** spacing, adjust the setting.
5 Select a satin type.
6 Click **Apply**.

Automatic Spacing

Manual Spacing

Adjusting lettering Step stitch

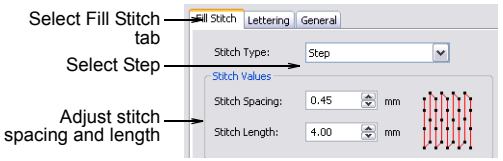
Use Lettering (Edit toolbar) to apply different stitch types to lettering.

You can fill lettering shapes with Step stitch. It is particularly suitable for filling large, irregular lettering shapes.

To adjust lettering Step stitch

1 Select a lettering object and click **Lettering**, or double-click the lettering.

The **Object Properties** dialog opens.



2 Select the **Fill Stitch** tab and **Step** from the **Stitch Type** list.
3 Adjust stitch spacing and length.
4 Click **Apply**.

Managing lettering templates

Templates are special files used to store default settings. Use templates when creating lettering with frequently-used settings so that you don't have to reset current properties every time. For example, a template may include standard objects and sample lettering. It may simply have preferred stitch settings, lettering font and size, and colors set as current properties. Or it may have special density, pull compensation or underlay settings set up to suit different fabrics.

Note The NORMAL template is the default template supplied with BERNINA ART Design. It contains current object properties. If necessary, you can revert to the original NORMAL template after modifying it. See Reverting to NORMAL template for details.

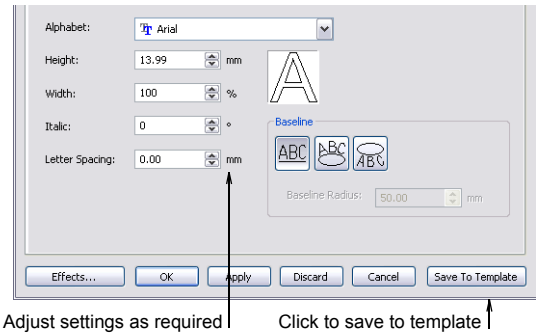
Saving lettering properties to template

Use Lettering (Edit toolbar) to save current lettering properties to a template.

You save lettering object properties to the current template via the **Object Properties > Lettering** dialog.

To save lettering properties to template

1 Access the **Object Properties > Lettering** dialog.
- To use the **current** lettering object properties, deselect all objects, then click **Lettering**.
- To use the properties for a particular lettering object, select the lettering object and click **Lettering**, or double-click it.



2 Change the lettering object properties settings as required.
3 Click **Save To Template**.
A confirmation message appears.

Note Only the **current** lettering object properties – not the objects or other settings in the design – are saved to the template.

4 Click **OK** to update the template.
5 Click **Close** to return to the Design Window.
The new lettering settings are saved in the template from which the design was created and are available for use.

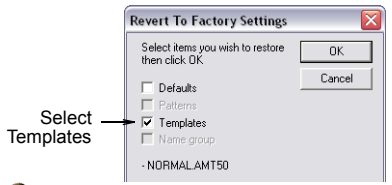
Reverting to NORMAL template

If you modify the NORMAL template supplied with BERNINA ART Design, you can revert to the original version. A factory copy is always maintained so that the NORMAL template can be restored.

To revert to NORMAL template

1 Close BERNINA ART Design.

2 Click the MS Windows® **Start** button and select **All Programs > BERNINA ART Design > Revert**.
The **Revert to Factory Template** dialog opens.



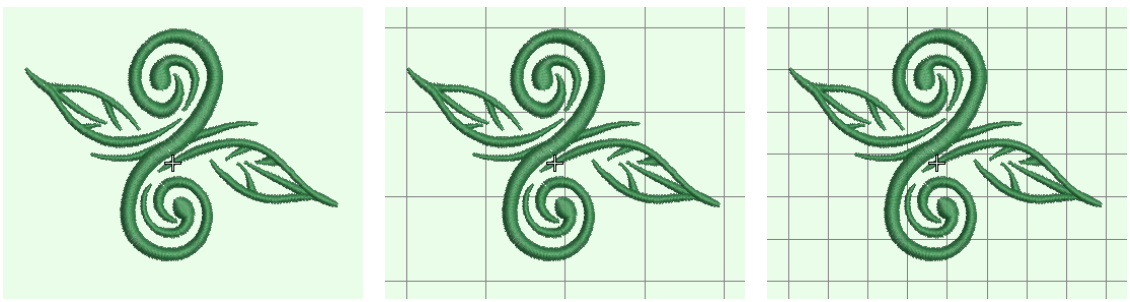
Note It may take up to 1 or 2 minutes for the dialog to open.

3 Select the **Templates** checkbox and click **OK**.
The original settings for the NORMAL template are restored.

Chapter 9

Hardware Setup and System Settings

You will need to connect peripheral devices for use with BERNINA ART Design. These may include printers and embroidery machines. BERNINA ART Design lets you adjust various system settings controlling the appearance of designs on screen, display of design information, the behavior of the design window, and other settings.



This section describes how to set up embroidery machines and describes how to calibrate the monitor. It also describes how to change grid spacing and positioning options, and change hoop options. There is also information about how to adjust the pointer position display, and how to set automatic save.

Setting up hardware

Different devices are set up in different ways – some in MS Windows®, via the Control Panel, others within BERNINA ART Design itself. For instructions on connecting devices to your computer and setting up in MS Windows®, see the documentation for the device as well as your Microsoft MS Windows® documentation.

Peripheral device connection settings

Peripheral devices such as printers are connected to an available 'port' at the front or back of your computer. These may be of either 'serial', 'parallel' or USB type. The software settings need to be configured within the MS Windows® Control Panel.

Serial port settings

PC serial COM ports are male connectors, and can be either 9-pin or 25-pin. They are named COM1, COM2, etc. The number of available ports limits the number of devices you can connect. If additional ports are required, you can add them. BERNINA ART Design allows up to 4 serial ports.

Note You must be able to identify the ports on your computer. If in doubt, consult a PC technician.

Parallel port settings

Parallel ports are used to connect your printer and scanner. They are named LPT1, LPT2, etc.

USB port settings

USB – Universal Serial Bus – ports can be used to connect, for example, your embroidery machine.

Setting up embroidery machines

Your BERNINA home embroidery machine should be connected to the COM1, COM2, COM3, COM4 or USB port of your computer. See your BERNINA home embroidery machine manual for details on connecting the machine to your computer.

Setting up printers

Your printer is connected to a parallel port. BERNINA ART Design will use the default printer that you have specified through the **Printer** icon in the MS Windows® **Control Panel**. See your printer manual for directions on setting it up properly. See MS Windows® **Help** (select **Windows Start > Help > Index**, then type 'default printer') for directions on how to set up a default printer.

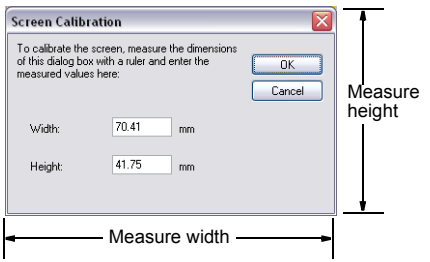
Calibrating the monitor

Use Display Setup (Settings menu) to calibrate the monitor.

You need to calibrate your monitor so that designs at 1:1 scale appear at real size. Do this when you first install BERNINA ART Design or whenever you change your monitor.

To calibrate the monitor

1 Select **Settings > Display Setup**.
The **Screen Calibration** dialog opens.

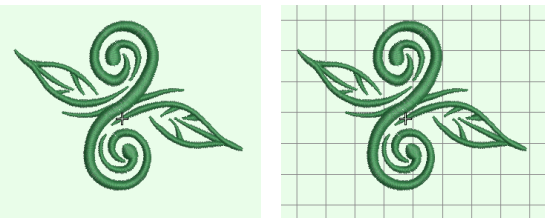


2 Measure the height and width of the dialog box.
3 Enter the measurement in the **Width** and **Height** fields.
4 Click **OK**.

Setting grid options

Right-click Show Grid (General toolbar) to set grid reference point and spacing.

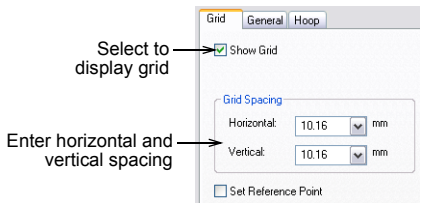
You can turn the grid on or off, change the grid spacing, or set a reference point.



Align the grid with a specific point in the design by setting a reference point – for example, when you want grid lines to intersect the center point of the design, or a horizontal grid line to sit under a particular object.

To set grid options

1 Right-click the **Show Grid** icon.
The **Options > Grid** dialog opens.

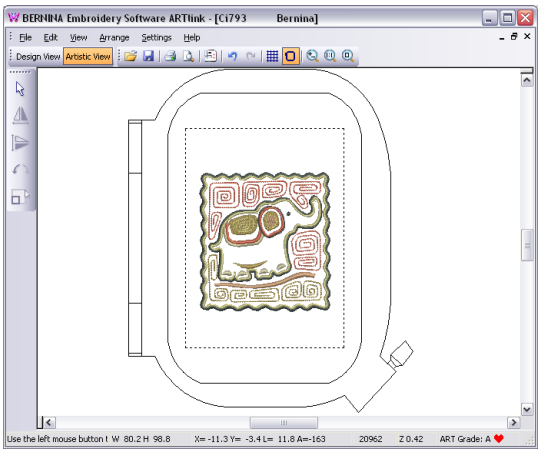


2 Select the **Show Grid** checkbox to display the grid.
3 Enter **Grid Spacing** values for horizontal and vertical grid lines.
4 Select the **Set Reference Point** checkbox to align a significant point of the design with a grid line or grid point.
For example, you can set the grid reference point to the design center. This is easier and faster than moving the whole design.
5 Click **OK**.
If you selected **Set Reference Point,** mark the reference point on your design. The grid aligns so that horizontal and vertical grid lines intersect at this point.

Setting hoop options

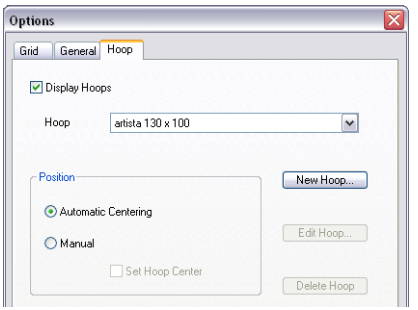
Right-click Hoop (General toolbar) to change the hoop settings.

A range of sizes is available to suit the size of your design as well as a number of embroidery machines. Select the smallest hoop which fits the design from the range of hoop sizes available. This will hold the fabric tight while stitching.



To set hoop options

1 Right-click the **Show Hoop** icon.
The **Options > Hoop** tab opens.



Tip Hide the hoop by clearing the **Display Hoops** checkbox.

2 Select a hoop from the **Hoop** list.
Select a position in the **Position** panel to center your hoop. See Setting hoop centers for details.
3 Click **New Hoop** to create customized hoops. See Defining custom hoops for details.
4 Click **Edit Hoop** to edit existing hoops. See Modifying custom hoops for details.
5 Click **Delete Hoop** to delete existing hoops.
6 Click **OK**.

Setting general options

BERNINA ART Design lets you adjust various general settings controlling the automatic saving of designs, the position of the pointer on-screen, as well the display of measurements.

Setting automatic save

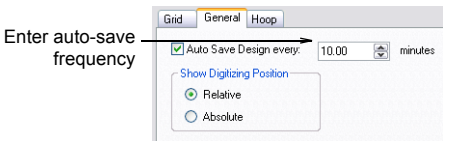
Select Options (Settings menu) to set automatic save and backup options.

Save your work automatically at regular intervals using **Auto Save** to protect you from losing work in the event of hardware or software failure. A backup file is created every time you save a design. The design will be saved in the BACKUP folder of your BERNINA ART Design installation. It will have the same name as the original file with the extension **BAK**.

Caution Backup files remain in the BACKUP folder until you delete them. To prevent the folder from using too much hard disk space, delete unwanted files regularly.

To set automatic save

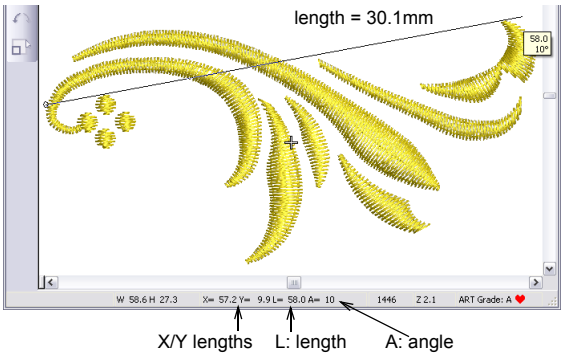
1 Select **Settings > Options > General** tab.



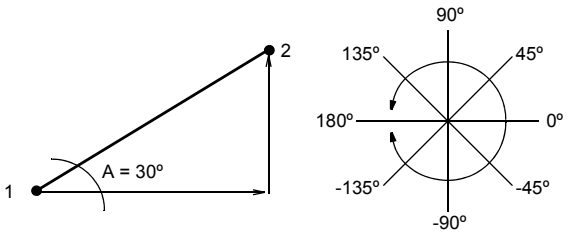
2 Select the **Auto Save Design Every** checkbox.
3 Enter the auto-save frequency in the field.
4 Click **OK**.

Interpreting pointer position values

The **X** and **Y** values show the horizontal and vertical distance of the pointer from the relative or absolute point. The **L** value is the length of the line connecting the pointer with the previous point, while **A** is the angle of that line, relative to the horizontal.



A negative **X** value indicates that the second point was placed to the left of the first point, while a negative **Y** value displays when the second point is below the first. Negative angles indicate angles of more than 180º – for example, an angle of -60º is equal to 300º.



Tip You can measure on-screen distances using the values in the **Status Bar.** See Measuring distances on-screen for details.

Setting pointer position display options

Select Options (Settings menu) to set pointer position display options.

When you move the mouse, the pointer position is displayed in the **Status Bar** at the bottom of the screen. You can optionally display the pointer position relative to the last digitized point or stitch point, or as an absolute value from the first needle point of the design.

To set pointer position display options

1 Select **Settings > Options > General** tab.

2 Select a **Relative** or **Absolute** setting for the pointer:

Position	Description
Relative	Shows pointer position relative to the last digitized point or stitch point. Useful while digitizing or editing stitches.
Absolute	Shows pointer position as an absolute value from the first needle point of the design. Useful for checking that the design fits a given area.

3 Click **OK**.

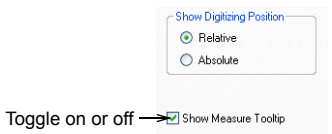
Showing/hiding the Measure tooltip

Select Options (Settings menu) to toggle on/off measure tooltip.

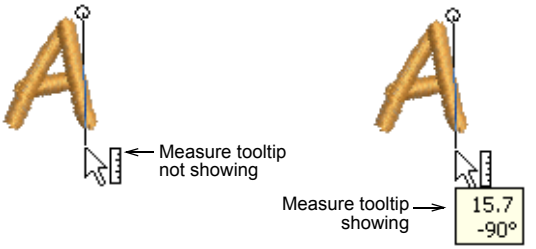
The **Measure** tool displays the coordinates, distance and angle of the mouse pointer from a point corresponding to the center of a hoop in an empty design. You can show or hide these measurements using the **Show Measure Tooltip** checkbox.

To show/hide the Measure tooltip

1 Select **Settings > Options > General** tab.

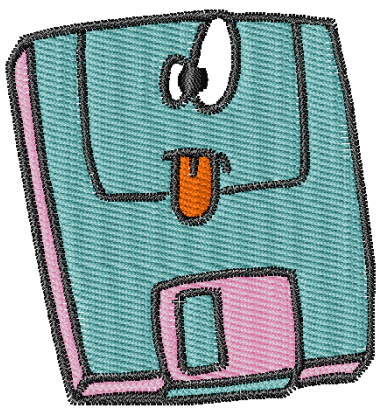


2 Select/ deselect the **Show Measure Tooltip** checkbox to toggle on/off the measure tooltip.



Chapter 10

Outputting and Storing Designs



You can output embroidery designs in a variety of ways – by printing as worksheets, appliqué patterns, color films, or as thread charts. BERNINA ART Design also allows you to save your designs as images for use with fabric and garment applications. You can also send them directly to machine for stitching. When you send designs directly to machine, they will be lost when the machine is turned off. Apart from saving to hard disk, floppy disk or archiving to CD, you can also preserve designs by writing them to embroidery machine memory, design card, or USB memory stick. The Magic Box device lets you convert between designs saved in a variety of 'non-native' formats and write them to a design card other than Magic Card.

This section describes how to print and stitch out designs. It also covers reading designs from and writing to machine. It deals too with writing designs directly to USB stick and with Magic Box.

Printing designs

You can create a hard copy of your designs using default or custom printer options. Preview designs before printing. Set print options to display the information you require. If you are using a color printer, you can print in Artistic View. Even print thread charts as a shopping reference when purchasing threads.

Previewing and printing worksheets

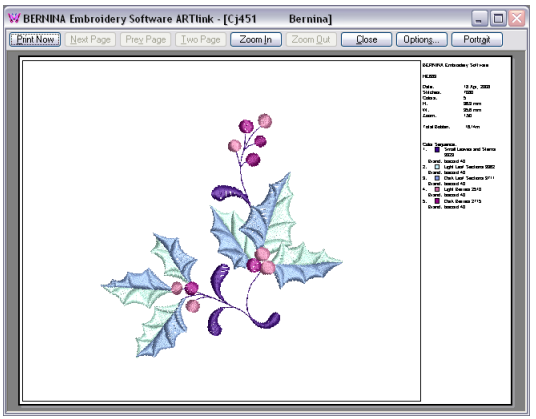
Use Print Preview (General toolbar) to preview a design before printing.

Use Print (General toolbar) to print a design.

Use **Print Preview** to view stitching information. Use it to check the sewing sequence before you stitch out your design. You can create a hard copy of your designs using default or custom printer options.

To preview and print a worksheet

1 Click the **Print Preview** icon.
Your design displays as it will be printed. Large designs may be displayed over a number of pages if printed at actual size.



2 Use the **Preview** buttons as required:

Button	Function
Next Page	View the next page.
Prev Page	View the previous page.
Two Page	Display two pages in the Preview Window.
Portrait / Landscape	Toggle design display between landscape and portrait views.
Zoom In/Out	Use to examine portions of the design or to read production information.

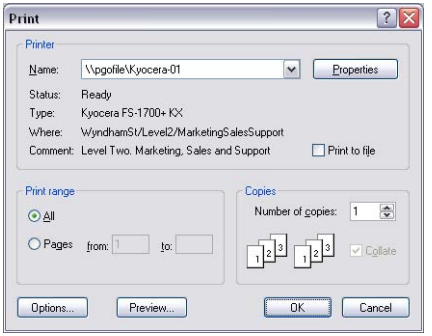
3 Click **Options** to set any **Print Options**. See Setting print options for embroidery for details.
4 Click **Print Now** to proceed with printing.
The MS Windows® **Print** dialog opens allowing you to choose a printer and adjust any other print settings you require. See also Setting print options for embroidery.
5 Click **Close** to return to the Design Window.

Setting print options for embroidery

Print options provide precise control over your design printout. You can include information about design size, color sequence, and stitch count, together with a picture of the design. There are options to include or exclude start/end point crosshairs, connectors, background color/fabric and the current hoop in Artistic View. Design information includes author, estimated length of upper thread per color and total bobbin usage.

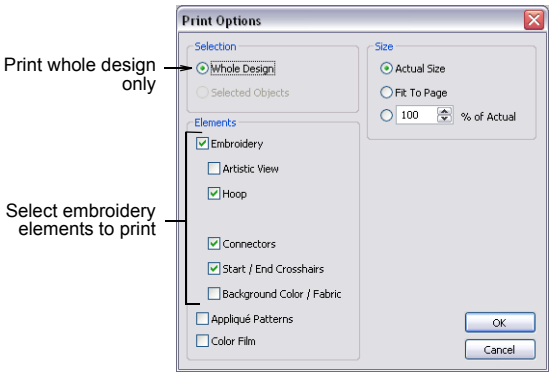
To set print options for embroidery

1 Select **File > Print**.
The **Print** dialog opens.

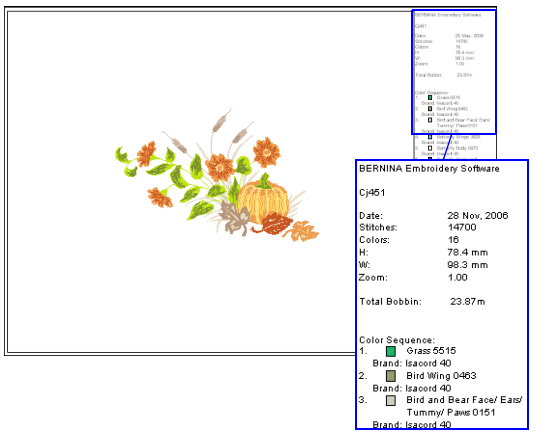


2 Select a printer from the **Name** list.
3 Type the number of copies you want to print and other printing information.
4 Click **Options** to change the size of the picture, the type of view or the items to be included.

The **Print Options** dialog opens.



5 Select the **Embroidery** option in the **Elements** panel if not already selected.
All embroidery stitches are shown by default in normal (Design View) display mode.

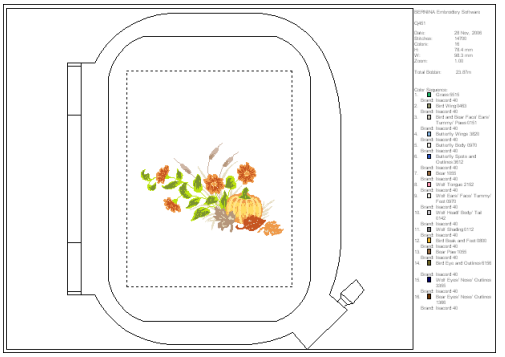


Note The **Selected Objects** option is not available in BERNINA ART Design.

6 Select Artistic View to print the design in Artistic View.

7 Include other options as required:

- **Hoop**: The hoop is included in the printout.



- **Connectors**: All connecting stitches in the design are displayed even if the current **Selection** option is **Selected Objects**.

Tip Connectors may be used as a guide when you save an ART design into multiple files to be output for multi-hooped positioning.

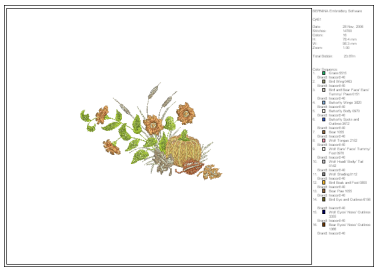
Note In Artistic View the **Connectors** option is disabled – i.e. you cannot view connecting stitches in Artistic View.

- **Start/End Crosshair**: The start/end needle position is included in the printout.

- **Background Color/Fabric**: The background page is filed with a color according to the current **Background** setting. See Changing backgrounds for details.

8 Select a size option from the **Size** panel:

- **Actual Size**: the design is printed at the same size it will be stitched.
- **Fit to Page**: large designs will be reduced to fit the printing paper, small designs will be enlarged.
- **% of Actual**: The design view is resized according to this setting.



Actual size

Fit to Page

9 Click **OK**.

Printing appliqué patterns

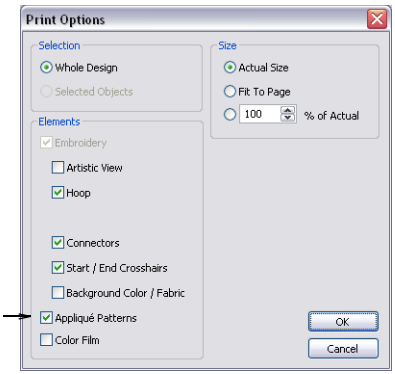
Print a copy of the appliqué pattern to use to cut out the fabric pieces. Each appliqué pattern piece is numbered according to the stitching sequence.

To print an appliqué pattern

1 Select **File > Print Preview**.

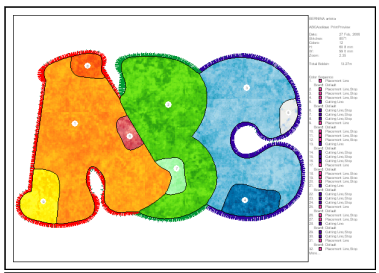
2 Click **Options** icon.
Print Options dialog opens.

3 Select the **Appliqué Pattern** checkbox.

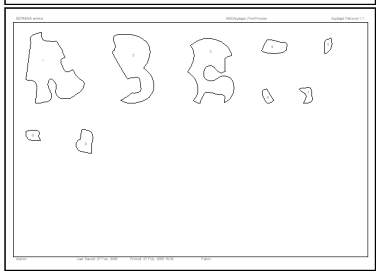


Select to print appliqué pattern

4 Click **OK**.
Each appliqué pattern piece is numbered according to the stitching sequence.



Appliqué Assembly page



Appliqué Patterns page

Note If the **Actual Size** option is selected, both an assembled appliqué layout and individual patterns in the actual size are created on separate pages. If the **Fit to Page** or **% of Actual** options are selected, the assembled appliqué layout is created in the selected size, but individual patterns are still printed in the actual size on separate pages.

5 Click **Print**.

Printing Color Film

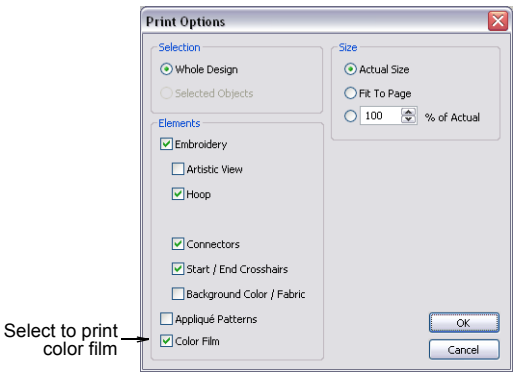
The **Color Film** option lets you include a list of color layers in the current design, together with color and stitch information for each layer.

To print a Color Film

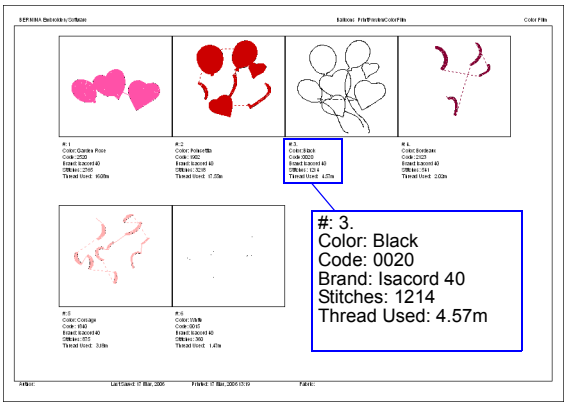
1 Select **File > Print Preview**.

2 Click **Options** icon.
The **Print Options** dialog opens.

3 Select the **Color Film** checkbox.



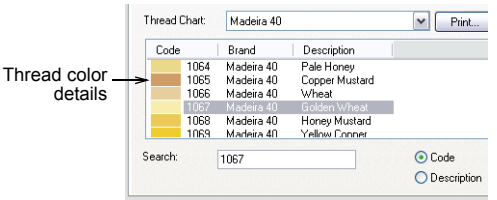
4 Click **OK**.



The following information is included:

Field	Description
Number	Position in the stitching sequence.
Color	Color name listed in the associated thread chart.
Code	Thread code for ease of ordering.
Brand	Thread brand – e.g. Isacord 40.
Stitches	Total stitch count for individual color layer.
Thread Used	Total stitch length of the individual color layer in the measurement unit currently set for the system – e.g. 'meters'.

Note The information displayed here is the same as the information displayed in the **Thread Colors** dialog. See Matching thread colors for details.



5 Click **Print**.

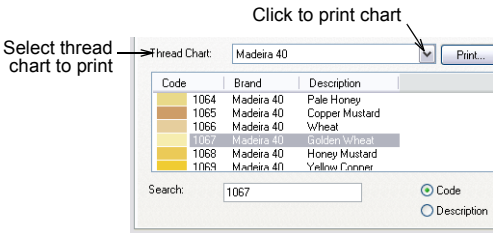
Printing thread charts

Select Thread Colors (Settings menu) to print thread charts.

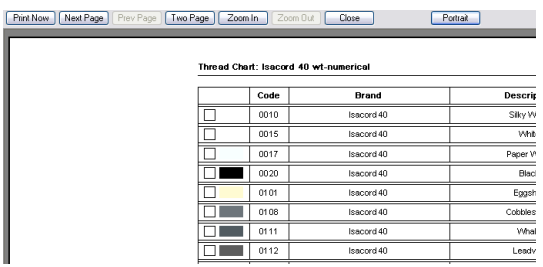
The **Thread Chart > Print** option allows you to print the thread list in the current thread chart as a shopping reference when purchasing threads.

To print a thread chart

1 Select **Settings > Thread Colors**.
The **Design Properties > Thread Colors** dialog opens.



2 Select a thread chart from the **Thread Chart** list.
3 Click the **Print** button.
A **Print Preview** page opens displaying a printed form of the selected thread chart in the current sorting order.



This printable thread chart includes the Thread Chart name, Code, Brand, and Description.

4 Use the **Preview** buttons as required:

Button	Function
Next Page	View the next page.
Prev Page	View the previous page.
Two Page	Display two pages in the Preview Window.
Portrait / Landscape	Toggle design display between landscape and portrait views.
Zoom In/Out	Use to examine portions of the thread chart.

5 Click **Print Now** to proceed with printing.
The MS Windows® **Print** dialog opens allowing you to choose a printer and adjust any other print settings you require.
6 Use the tick boxes in the printed document to mark off any threads you want to purchase. There is also a **Memo** field for notes.
7 Click **Print**.

Stitching out designs

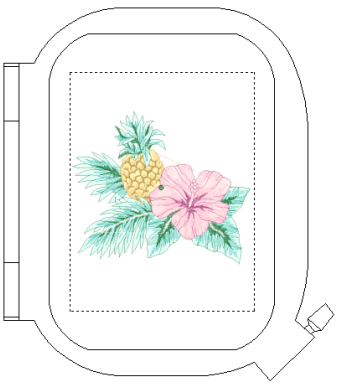
Use Write to Machine (General toolbar) to send a design to machine.

Use **Write to Machine** to send a design directly to your BERNINA home embroidery machine ready to stitch. See also Writing designs to machine.

Tip Check the sewing sequence before you stitch a design as you need to know the color sequence. Use **Print Preview** to view stitching information. See Previewing and printing worksheets for details.

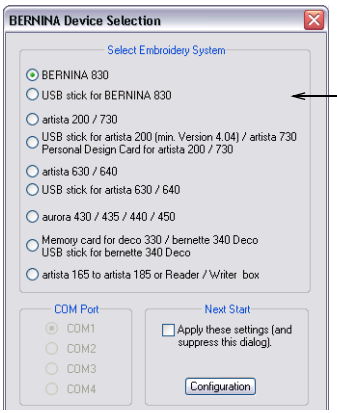
To stitch out a design

1 Open the design and select Design View. See Opening designs for details.



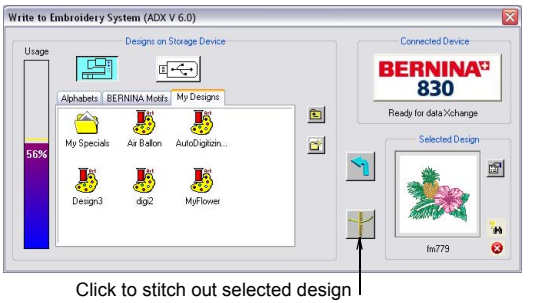
2 Check that the design fits the hoop. Use the smallest hoop possible. See Changing hoops for details.

3 Click the **Write to Machine** icon.
If this is the first time you have downloaded a design after turning on the machine or Reader box, the **BERNINA Device Selection** dialog opens.



4 Select an embroidery machine type and COM port if prompted to do so.

5 Click **OK**.
If the machine connection is working, the **Write to Embroidery System** dialog opens. The name and the thumbnail of your design are displayed.



6 Click **Stitch out Selected Design**.
The **Writing file(s) to device** dialog displays, followed by a confirmation message. The design is sent to your embroidery machine ready for stitching.

Note When you send designs directly to machine, they will be lost when the machine is turned off. Apart from saving to hard disk, floppy disk or archiving to CD, you can also preserve designs by writing them to a variety of storage devices. Saved designs can then be retrieved for editing. See also Writing designs to machine.

Reading designs from machine

You can read designs into BERNINA ART Design from a variety of sources, both on your computer and embroidery machine. Once opened, they can be checked or edited before saving to hard disk, or sending to machine for stitchout or storage. When reading designs from machine, these options are available:

- **Embroidery machine**: Most machines allow designs to be stored to and read from machine memory. This is like having a built-in design card.

- **USB memory stick**: Designs can also be read from a USB memory stick attached to your machine. See also Writing designs to machine.

Note USB memory sticks can also be attached directly to your PC and designs read into BERNINA ART Design. See Opening designs for details.

To read designs from machine

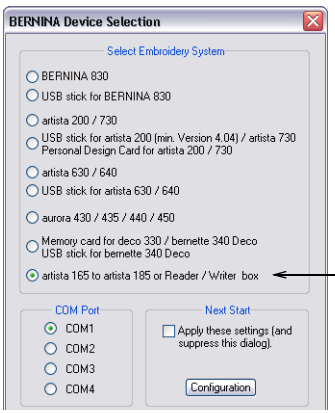
1 Open a new, blank file.

2 If you intend to read designs from card or USB stick, insert the storage device in the machine (or Embroidery Card Reader/Writer Box).

Note For connection details, see the instructions which came with your Embroidery Card Reader/Writer Box.

3 Select **File > Card/Machine Read**.

If this is the first time you have downloaded a design after turning on the machine or reader box, the **BERNINA Device Selection** dialog opens.

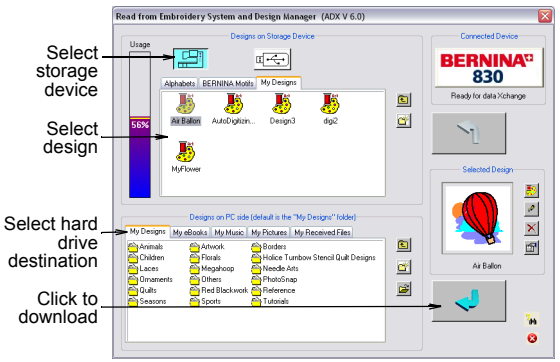


4 Select an embroidery machine or reader box, as well as COM port if prompted to do so.

5 Click **OK**.

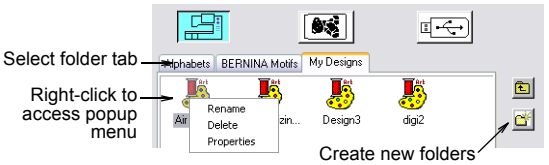
If the machine connection is working, the **Write to Embroidery System** dialog opens. The name and thumbnail image are displayed.

The **Read from Embroidery System and Design Manager** dialog opens.



6 Select the required storage source by clicking the corresponding button – embroidery machine, USB memory stick or, if supported, design card.

When you select a button, all folders and designs currently stored on the device are displayed.



Tip Right-click the design icon to access a popup menu – use it to rename, delete, or view design properties.

7 Click a folder tab (if more than one) and/or folder to locate the design.

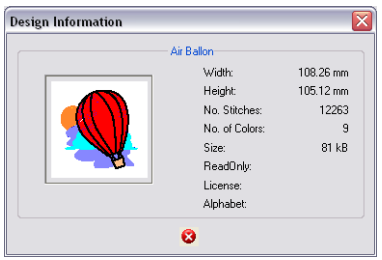
Tip Use the icons on the right of the display panel to create new folders or navigate the folder structure.

8 Select the design.

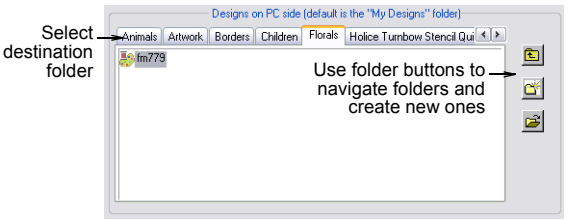
A preview image is displayed in the **Selected Design** panel.

9 Use the display panel buttons as required to:

- Open the design directly into BERNINA ART Design for editing.
- Rename the design.
- Delete the design.
- Access design properties.

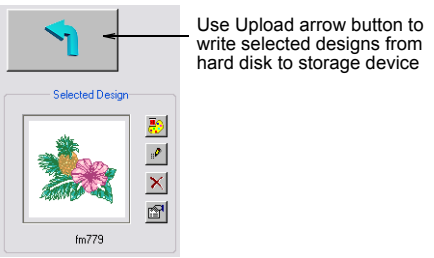


10 Select a destination folder on the hard disk where the design is to be stored.



11 Click the **Download** arrow button to read the design and save to hard disk.

Note You can write designs of the appropriate format from hard disk to the storage device using the **Upload** arrow button.



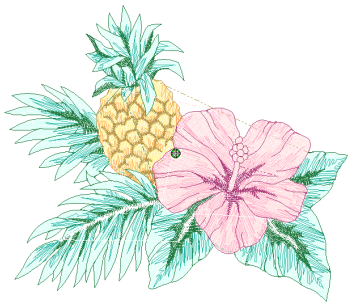
Writing designs to machine

Use Write to Machine (General toolbar) to write (save) a design to embroidery machine or USB memory stick.

If you intend to stitch designs only when the machine is connected to your computer, store them on your PC hard disk. However, you can also use the **Write to Machine** command to save designs for later use, independent of your PC. Designs from any storage device – embroidery machine or USB memory stick – can then be stitched out as many times as you like. This eliminates the need for the PC to be connected to the machine during stitchout. See your BERNINA home embroidery machine documentation for details.

To write designs to machine

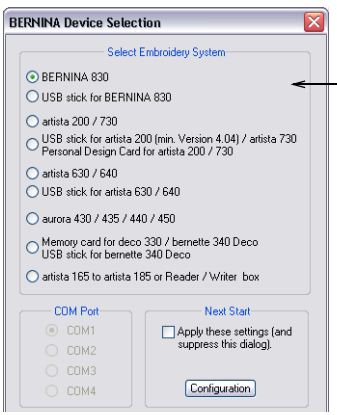
1 Open the design and select Design View. See Opening designs for details.



Note The machine (or external Embroidery Card Reader/Writer Box) must be switched on before you insert the card, otherwise designs will not display or be loaded to the machine.

2 If you intend to write the design to card or to USB stick, insert the storage device in the machine (or Embroidery Card Reader/Writer Box).
For connection details, see the instructions which came with your Embroidery Card Reader/Writer Box.

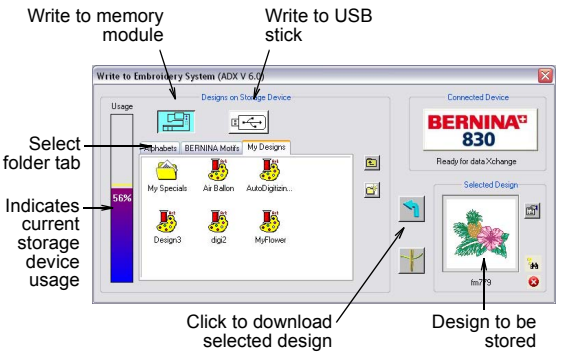
3 Click the **Write to Machine** icon.
If this is the first time you have downloaded a design after turning on the machine or reader box, the **BERNINA Device Selection** dialog opens.



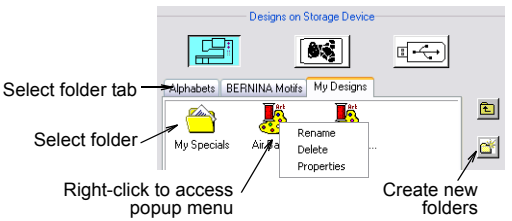
4 Select an embroidery machine or reader box, as well as COM port if prompted to do so.

5 Click **OK**.

If the machine connection is working, the **Write to Embroidery System** dialog opens. The name and thumbnail image are displayed.

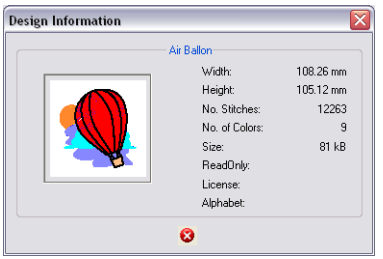


6 Select the required storage device by clicking the corresponding button – embroidery machine, USB memory stick or, if supported, design card.
When you select a button, all folders and designs currently stored on the device are displayed.



7 Click a folder tab (if more than one) and/or folder to select where the design is to be saved.

Tip Use the icons on the right of the display panel to create new folders or navigate the folder structure. Right-click the design icon to access a popup menu – use it to rename, delete, or view design properties.



Caution Make sure the needle arm on your machine is up before downloading designs.

8 Click the **Download** arrow button to write the design.
The machine touch screen goes blank while the download takes place. Once the design is saved to the selected device, you can stitch it at any time without a PC connected to your machine. See your BERNINA home embroidery machine documentation for details.

Writing designs directly to USB stick

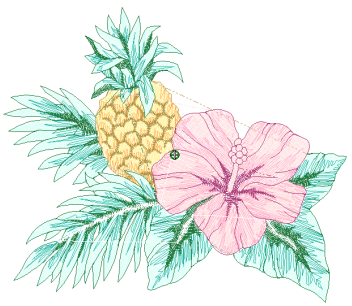
Use Write to Machine (General toolbar) to write (save) a design directly to a memory stick.

Designs can be saved to a dedicated BERNINA or OESD USB memory stick attached directly to your PC. While you can copy designs directly from your hard disk to memory stick via MS Windows® Explorer, you should do so via BERNINA ART Design. While saving the design, BERNINA ART Design automatically converts it to the correct format for stitchout.

Note Other types of memory stick can be used but they are not recognized automatically by the software.

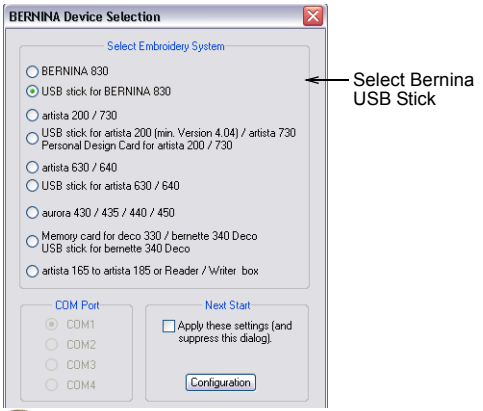
To write a design directly to USB stick

1 Open the design and select Design View. See Opening designs for details.

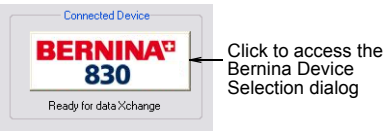


2 Insert a BERNINA or OESD USB memory stick directly into a USB port on your PC.

3 Click the **Write to Machine** icon.
If this is the first time you have downloaded a design after turning on the machine or reader box, the **BERNINA Device Selection** dialog opens.



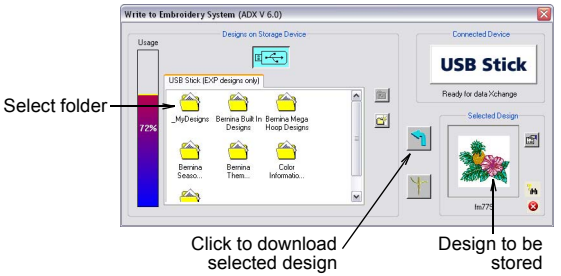
Tip If you are already connected to a embroidery system, click the **Connected Device** button in the **Write to Embroidery System** dialog in order to access the **BERNINA Device Selection** dialog. See also Writing designs to machine.



4 Select the **BERNINA USB Stick** option and click **OK**.
If you have inserted a memory stick other than BERNINA or OESD, the **Enter Drive Letter and Path** dialog opens prompting you for the device location.

5 Browse for the device location on your PC as required.

If the machine connection is working, the **Write to Embroidery System** dialog opens. The name and the preview of your design are displayed. Folders and designs currently saved on the device are also displayed.



6 Select the location the design is to be stored.

Tip Use the icons on the right of the display panel to create new folders or move up a level in the folder structure. Right-click design files already stored to access a popup menu – use it to rename, delete, or view design properties.

7 Click the **Download** arrow button to write the design to the memory stick.

While saving the design, BERNINA ART Design automatically converts it to the correct format for stitchout. See the relevant BERNINA ART Design documentation for details of how to stitch out from a USB memory stick.

Reading and writing designs with Magic Box

Magic Box lets you convert between designs saved in a variety of 'non-native' formats. You can read a design from any supported design card into BERNINA ART Design, edit it then write it to a Magic Card of any of four types each of which can support different file formats. You can also save designs read from Magic Card to your computer or write them to a design card other than Magic Card.

Note The Magic Box software is installed automatically when you install BERNINA ART Design and only works with BERNINA ART Design.

There are up to four color-coded card slots on the front of a Magic Box, corresponding to each of the available card types. (The mini Magic Box only has Slots 1 and 2.) Use Magic Box in conjunction with BERNINA ART Design in order to:

- Read an ART file from CD, hard disk or floppy, make desired changes, and write to a Magic Card.
- Read a stitch file from one of the supported design card formats (including Magic Card), make desired changes, and write it to a Magic Card.
- Read a stitch file from a Magic Card, make desired changes, and write it to the storage media of your choice.

Once a design is in BERNINA ART Design, you can add lettering, insert other designs stored on your computer, CD-ROM, or disk, and use all of BERNINA ART Design editing features.

Note The procedures here only apply to the operation of the Magic Box with BERNINA ART Design. Refer to the Magic Box User Manual for installation, setup and operating instructions.

Reading designs from design cards

Use Read from Magic Box (General toolbar) to read designs of other formats with Magic Box.

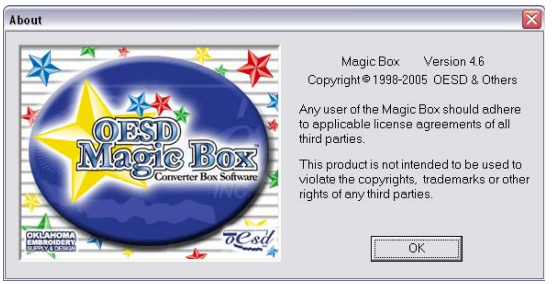
You can read a design from any supported design card, edit it, and then write it to one of the four types of Magic Card – Red, Blue, Yellow, or Green. You can select multiple designs to **write** to a Magic Card. However, you can only **read** and edit one design at a time into BERNINA ART Design.

To read designs from a design card

1 Insert a design card in the Magic Box.
The slot you choose will depend on the card format.

Note Magic Box allows you to read many design formats. See the Magic Box documentation for details.

2 Click the **Read from Magic Box** icon.
The **Magic Box About** dialog opens.



3 Click **OK** to proceed.
Refer to the Magic Box User Manual for operating instructions.

Tip You can write designs read from Magic Box to your computer floppy disk or hard drive. Alternatively, write them to any supported design card, including of course Magic Cards.

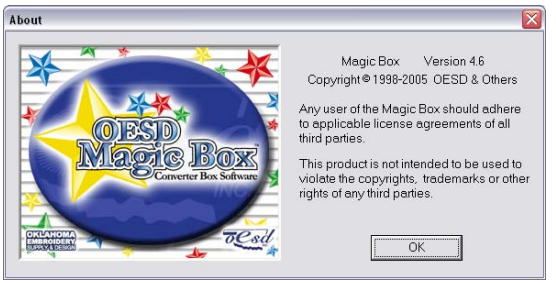
Writing designs to Magic Card

Use Write to Magic Box (General toolbar) to write designs to Magic Cards with Magic Box.

From BERNINA ART Design you can write designs to Magic Box using Magic Cards of any of four types. Use the Magic Card which supports the format you need. See the Magic Box documentation for details.

To write designs to Magic Card

1 Load an existing design from a design card or your computer. See Reading designs from design cards and Reading designs from machine.
The **Magic Box About** dialog opens.



2 Click **OK** to proceed.
Refer to the Magic Box User Manual for operating instructions.

BERNINA ART Design Shortcut Keys

You select commands in BERNINA ART Design in the same way as other MS Windows® applications – from menus or toolbars. Keyboard shortcuts are also available for the most frequently used commands.

General functions

To	Press
Open existing design	Ctrl+O
Save design	Ctrl+S
Print design	Ctrl+P
Undo command	Ctrl+Z
Redo command	Ctrl+Y
Activate Lettering tool	A
Cancel command	Esc
Exit the program	Alt+F4

Select objects

To	Press
Select all objects	Ctrl+A
Deselect all objects	Esc or X
Activate Select Object tool	O
Select an object underneath	2+
Select multiple objects	Ctrl+
Select a range of objects	Shift+
Select the next object	Tab
Select the previous object	Shift+Tab
Add the next object to selection	Ctrl+Tab
Add the previous object to selection	Ctrl+Shift+Tab

Manipulate objects

To	Press
Delete selected objects	Delete
Move selected objects	(drag-and-drop)
Nudge selected objects	+→ ← ↓ ↑
Move selected objects horizontally or vertically	Ctrl+ (drag objects)
Maintain proportions while resizing	Shift+ (drag handle)

View & zoom designs

To	Press	Or
Zoom in on a selected area (box)	B then	F8
Zoom out 2x	Shift+Z	F10
Zoom to 1:1 scale (100%)	1	
Show whole design	0 (zero)	F2
Specify zoom factor	F	F3
Center current stitch	C	F6
Return to previous view	V	F5
Redraw the screen	R	F4
Show needle points	. (period or full stop)	
Show selected objects only	Shift+S	
Measure	M	

View stitching sequence

To travel	Press	
	Keyboard	Keypad*
To the start of a design	Home	7
To the end of a design	End	1
To next color	PageDown	9
To previous color	Page Up	3
To next selected object	Tab ⇆	
To previous selected object	Shift + Tab ⇆	
To next object	Ctrl + T	
To previous object	Shift + T	
1 stitch forward	† →	6
1 stitch backward	† ←	4
10 stitches forward	† ↓	2
10 stitches backward	† ↑	8
100 stitches forward		+
100 stitches backward		-
Activate Slow Redraw	Shift + R	

* Num Lock OFF † Select Object tool OFF

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