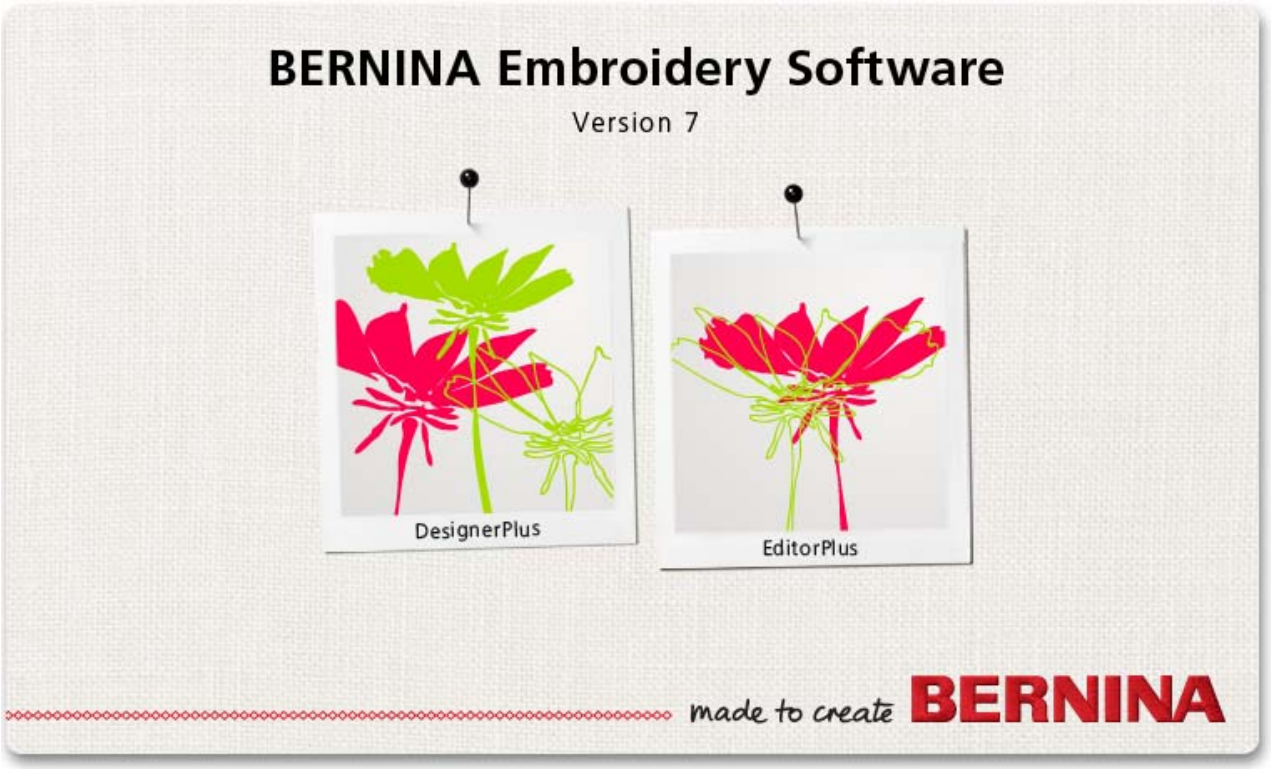

REFERENCE MANUAL

BERNINA CrossStitch

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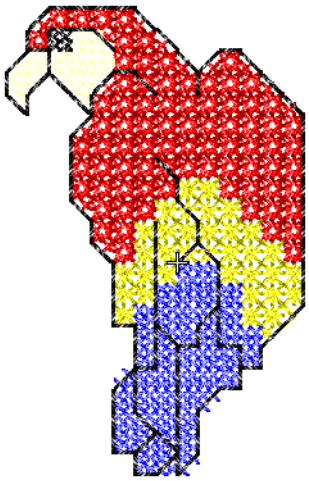
Rev 2 Aug 2013

Chapter 1
Introduction to BERNINA Cross Stitch

Cross stitching is a popular technique for filling large areas with low stitch counts. It can also be used for outlines and borders. It is suitable for homeware, tablecloths, children's clothes and folk designs. Cross stitch is sometimes combined with appliqué.

Unlike machine embroidery where designs are enhanced with different stitch types, angles, and effects, in cross stitch you can only add dimension to the design with shades of colors. For this reason, most cross stitch designs use many more colors than machine embroidery.

This section provides an overview of the various cross stitch types.



Types of cross stitch

Cross stitches are created on a matrix of squares or 'pixels'. Any part of the square can be stitched, from the edges to the diagonals. The full range of cross stitches is listed below.

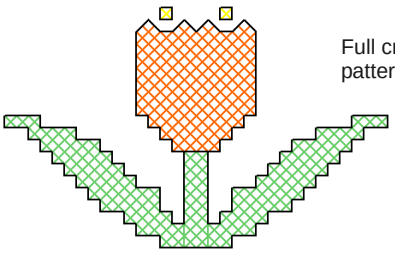
	Full Cross		Upright Cross
	Three-Quarter Cross		Double Cross
	Half Cross		Elongated Vertical Cross
	Quarter Cross		Elongated Horizontal Cross
	Mini Cross		Single Line
	French knot		

Cross stitch fills

When using cross stitch as a fill you can select from any of the cross stitch fill types.

Full cross stitch

Full cross stitches are made up of two equal-length stitches that cross at the center to form an X. The overall effect of the fill depends on which stitch in the X lies underneath or on top. You can also mix and match for special effects.

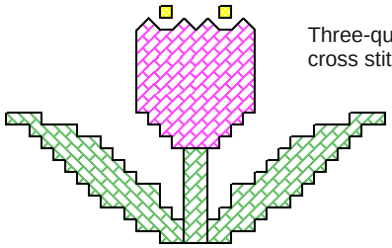


Full cross stitch pattern

Three-quarter cross stitch

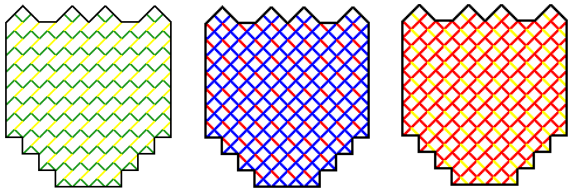
A three-quarter stitch is most often created by stitching a quarter stitch followed by a half stitch. A

different effect is achieved by stitching the half stitch first and anchoring it with the quarter stitch.



Note The long arm of the three-quarter stitch can go either / or \ directions.

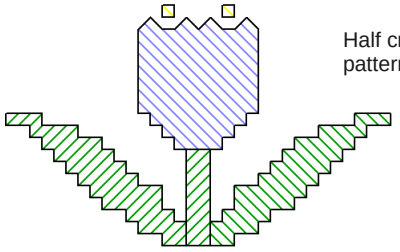
Frequently a quarter stitch and a three-quarter stitch of different colors share a single square. Mix and match their positions to give different effects.



Mixtures of quarter and a three-quarter stitches

Half cross stitch

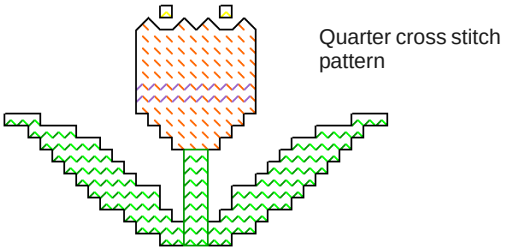
A half stitch is simply a diagonal stitch that looks like / or like \. Half stitches are usually used for shadows and background shading. The stitch can start from any corner. Sometimes two half stitches of different colors are used to make one full cross stitch.



Half cross can go in either direction depending on the effect you want to achieve. For example, half cross used to represent feathers would slant in the direction of the feathers themselves.

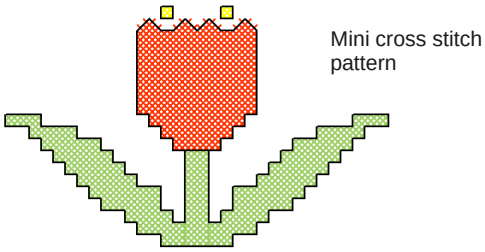
Quarter cross stitch

Quarter stitches are used to stitch more intricate patterns.



Mini cross stitch

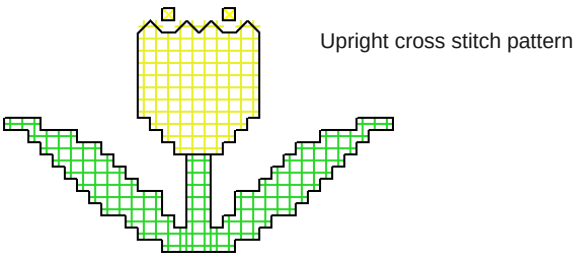
Mini cross stitches are two equal-length stitches that cross at the center to form an X but they only fill quarter of the square. Use mini cross stitch for details such as eyes or for a denser look in parts of your design.



Upright cross stitch

Upright cross stitches are comprised of a vertical and horizontal stitch.

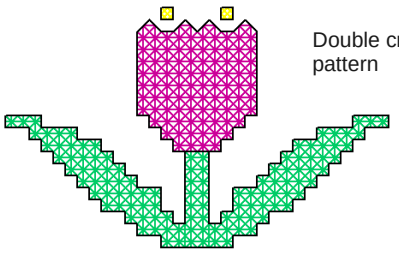
The stitches can be worked diagonally across the canvas, or in a horizontal or vertical line.



Double cross stitch

Double cross stitch is two full cross stitches stitched at 90° on top of each other. A double cross stitch resembles a star. It is generally used in a scattered

fashion or worked into a row to form a decorative border.



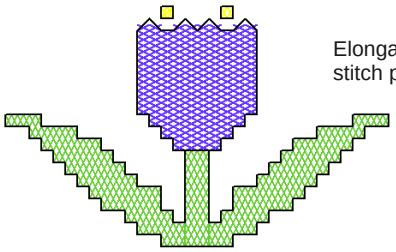
Typically the top thread of the bottom cross is the stitch which lies at 135º to the horizontal; and the top thread of the overlapping cross is the horizontal stitch.

Elongated cross stitch

Elongated cross stitch consists of two equal-length stitches that cross to form an X. There are two types:

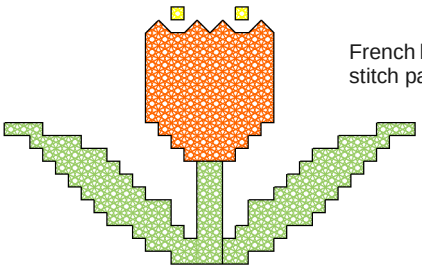
- elongated horizontal cross stitch
- elongated vertical cross stitch.

Elongated horizontal cross stitches are only half the height of normal cross stitch and elongated vertical cross stitches are only half the width of normal cross stitch.



French knots

French knots were originally a hand-stitch used to create a raised look for embellishment. They were traditionally used in 'whitework' with very exclusive cotton and fine silk threads.



French knots can be used in combination with other cross-stitch types. Use them for eyes, door knobs, dots for flower pistils, or in place of beads used in hand-work designs – e.g. ornaments on a Christmas tree or to dot letters such as 'i'. Use them as an outline border. Try them with colorful metallic or variegated threads. French knots are better sewn in larger grids.

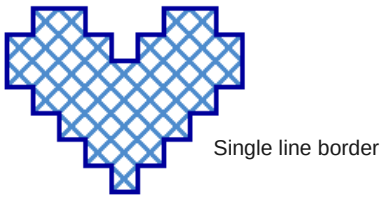
Cross stitch borders

Cross stitch can be used as an embroidery outline or border. You can also combine cross stitching with other stitch types to achieve special effects.

You can make outlines with **Single Line** or **Full Cross** stitches or a combination of both for a denser border. A **Single Line** outline is treated by the software as a border while a **Full Cross** outline is treated as a fill. This is important if you need to delete a border because a single line can be deleted as a single object while a full cross stitch border cannot.

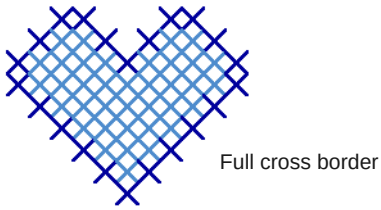
Single line border

Single Line stitches are only used to create borders or add details. The single line can be placed on any side of the square. Click on the side you want to place the line. You can place a single line border on one side or all four sides of the square. The single line border can be placed in a square which already has a cross stitch in it.



Full cross border

Full crosses can also be used as a decorative outline stitch. If you use full cross as a border it will be the same cross stitch type as selected in the Fill stitch type list. You can change this by changing the Fill stitch type.

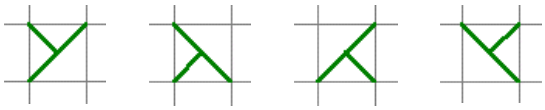


Cross stitch variations

The orientation of fractional cross stitches can be varied to create different patterning effects. You do this directly pixel-by-pixel, or by setting a fill stitch orientation. You can also combine fractional cross stitches in a variety of ways. See also Types of cross stitch.

Three-quarter cross stitches

Quarter and three-quarter cross stitches can be used to create rounded edges. See also Cross stitch fills.

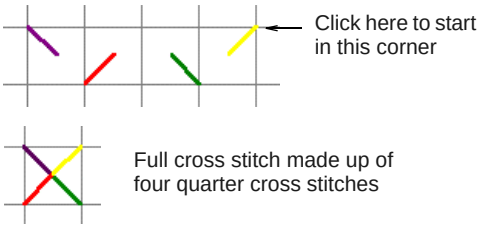


Half cross stitches

Half cross stitches can be used to give objects an 'airy' look. You can also use half cross stitches to make a full cross stitch with two colors. See also Combination stitches.

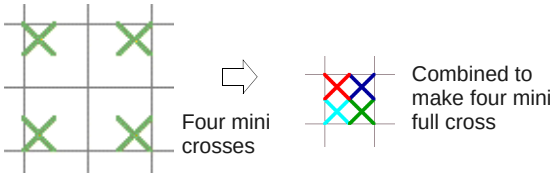
Quarter cross stitches

Quarter and three-quarter cross stitch can be used to smooth rounded edges. You can also use quarter cross stitch to make a full cross stitch with up to four colors. See also Combination stitches.



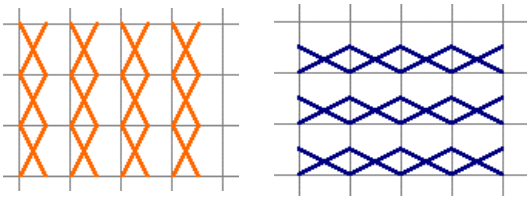
Mini cross stitches

Use mini cross stitch for details such as eyes or for a denser look in parts of your design.



Elongated cross stitches

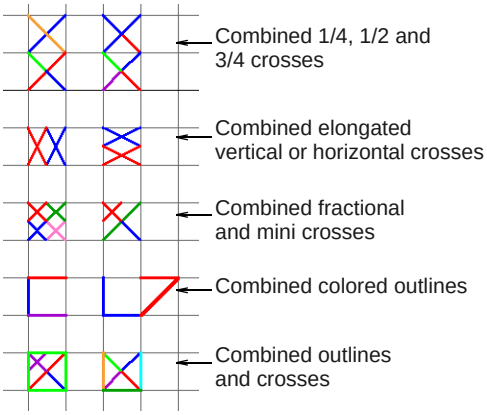
Vertical and horizontal elongated cross stitches are made up of two equal-length stitches that cross to form an X. They fill either the left, right, top or bottom of the square.



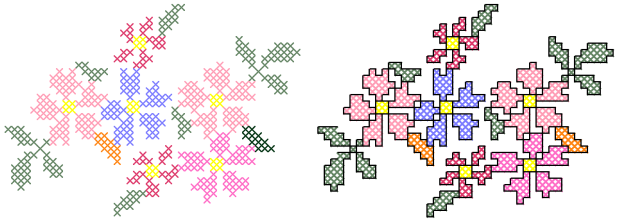
Elongated cross stitch patterns

Combination stitches

Quarter, half and three-quarter cross stitches can be combined to make crosses comprised of multiple colors. You can also combine mini crosses, elongated vertical or horizontal crosses and outline stitches.



CHAPTER 2
CROSS STITCH ESSENTIALS



In BERNINA Cross Stitch you can add cross stitches either to an entire design or selected areas. Or you can place them individually. There are two stitch types, **outline** and **fill**. An outline stitch can be a single run, or a line of cross stitches. A fill can be any of the cross stitch types. You can pre-set stitch type, length and the number of times each stitch is sewn.

This section describes the use of the cross stitch design window, techniques for manual cross stitch digitizing, and cross stitch design file handling.

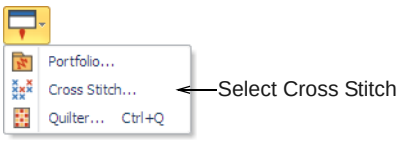
Launching BERNINA Cross Stitch

Use General > Application Launcher to access ancillary applications – Portfolio, Cross Stitch, and Quilter.

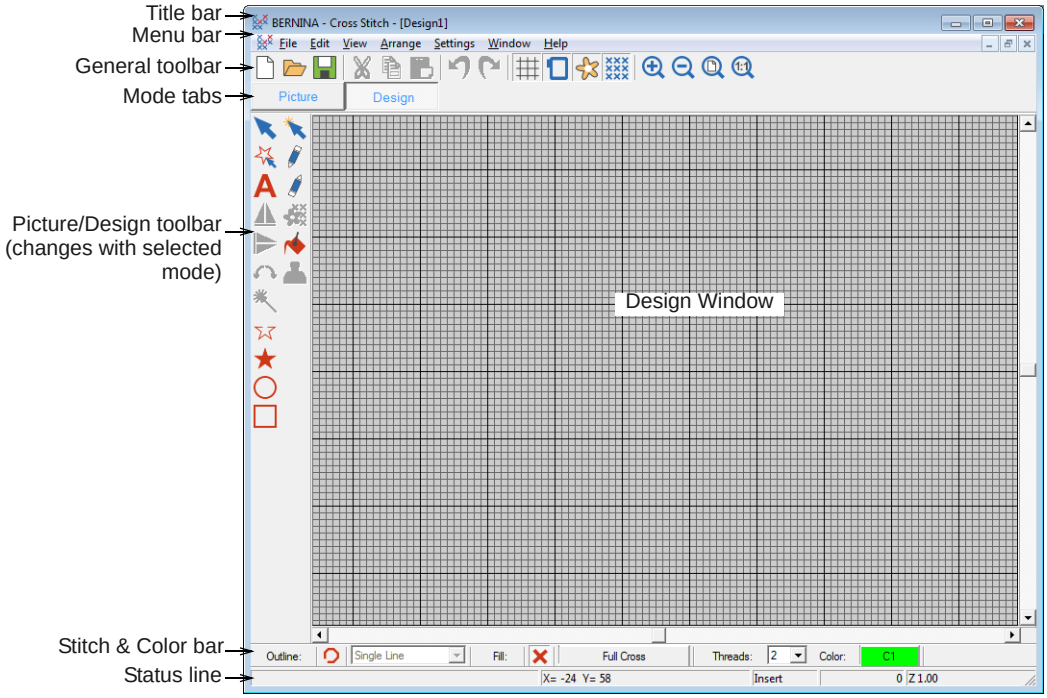
Cross stitch design involves a different digitizing technique to ordinary embroidery design. For this reason, BERNINA Cross Stitch has its own design window which you open from within BERNINA Embroidery Software.

To launch BERNINA Cross Stitch

- Run BERNINA Embroidery Software.
- In **Embroidery Canvas** click the **Application Launcher** and select **Cross Stitch** from the droplist.



BERNINA Cross Stitch opens in its own design window.



Picture and Design modes

Click the Picture tab to load a picture to be used as a template.

Click the Design tab to edit and add stitches.

BERNINA Cross Stitch uses two window modes, **Picture** mode and **Design** mode. Use **Picture** mode to open or scan a picture to use as a template for stitching. Edit your picture in **Picture** mode, then select **Design** mode to edit your stitches or go directly to **Design** mode to add stitches without using a template.To see your design in Artistic mode, open the design in BERNINA Embroidery Software. See Using cross stitch with BERNINA® Embroidery Software for details.

Changing grid settings

Click Grid (General toolbar) to show or hide the grid. Right-click to open the Grid dialog.

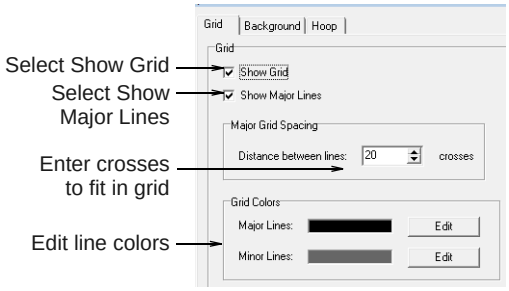
Use the **Options > Grid** dialog to change grid settings:

- Show or hide the grid
- Show major lines (when grid is on)
- Set the grid spacing
- Change the color of major and minor lines.

To change grid settings

1 Right-click the **Grid** icon.

The **Options > Grid** tab opens.

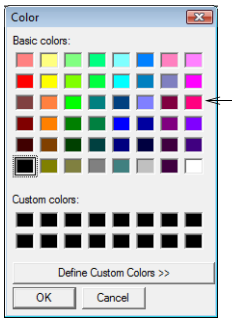


2 Select the **Show Grid** checkbox to show grid lines.

3 Select **Show Major Lines** to show major grid lines.

4 Enter the number of crosses to fit between the major grid lines.

5 Click **Edit** to change the color of the major and minor lines.



6 Select from the available colors or define your own.

Click **Define Custom Colors** to mix your own colors from the color wheel.

7 Click **OK**.

Changing hoop settings

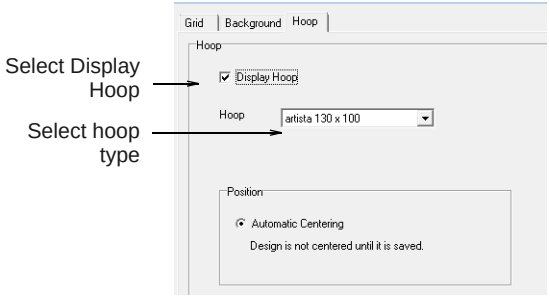
Click Hoop (General toolbar) to show or hide the hoop. Right-click to open the Hoop dialog.

You can show or hide the hoop, change the hoop size and center the design in the hoop.

To change hoop settings

1 Right-click the **Hoop** icon.

The **Options > Hoop** tab opens.



2 Select the **Display Hoop** checkbox.

3 Select a hoop type from the list.

Note **Automatic Centering** is always on. To make a group of stitches sit on one side of the design, digitize some temporary stitches on the other side.

4 Click **OK**.

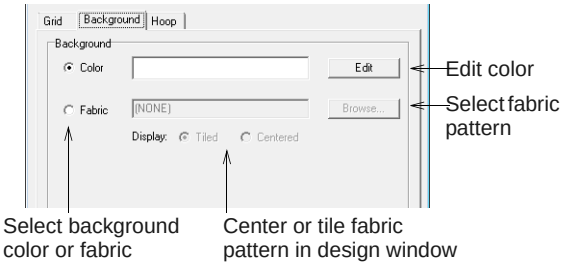
Changing background colors and fabrics

In BERNINA Cross Stitch 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.

To change the background color or fabric

1 Select **Settings > Options**.

2 Select the **Background** tab.

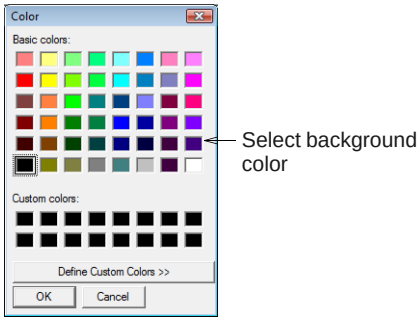


3 Select the design window background type.

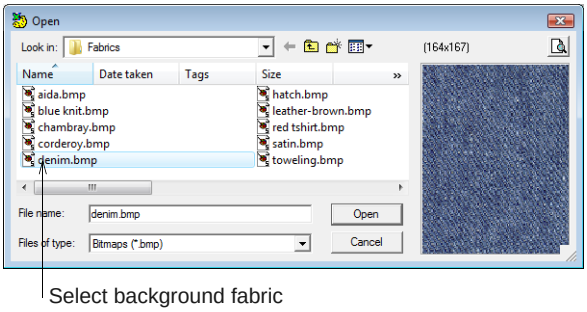
- **Color**: uses the selected color.
- **Fabric**: uses an image of a fabric.

4 Select a color or fabric to use.

- To select a background color, click **Edit**. Select a color from the **Color** dialog and click **OK**.



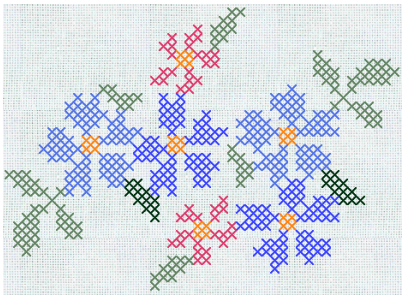
- To select a fabric, click **Browse**. Select a fabric type from the **Open** dialog and click **OK**.



You can center or tile the fabric bitmap in the design window. If the bitmap is large enough to

fill the entire window, select **Center**. Otherwise, select **Tile**.

5 Click **OK**.



Viewing stitches as crosses or tiles

Click Crosses (General toolbar) to show stitches as colored tiles or cross stitches.

There are two display modes for BERNINA Cross Stitch – crosses or colored tiles. When you change to tile mode, you see the same result as when you import a bitmap into the design window.

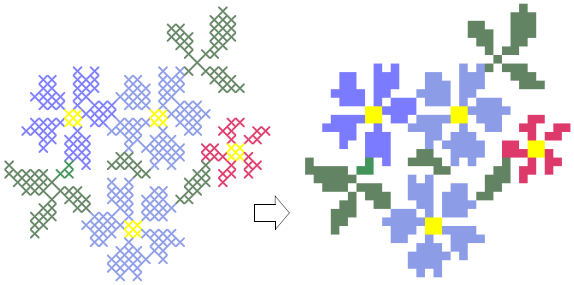
To view stitches as crosses or tiles

1 Select **Design** mode.

2 Click the **Crosses** icon.

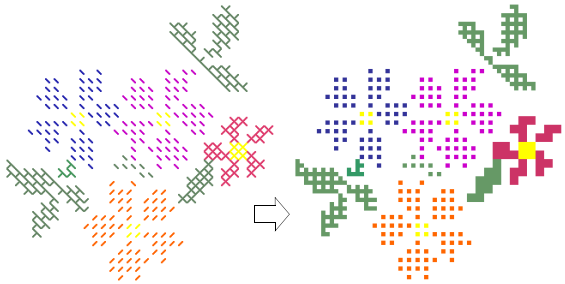
Any digitized areas are shown as crosses (or lines for line borders).

3 Click again to show stitches as colored squares.



Stitches shown as crosses

Cross stitches shown as colored squares

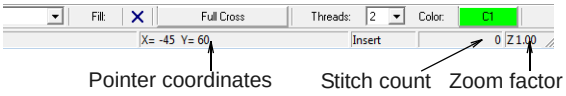


Stitches shown as crosses

Fractional stitches shown as colored squares

Viewing design information

The Status Bar provides design information such as individual stitch information, approximate stitch count and thread usage as well as the zoom factor of the design.



Setting design size and density

In BERNINA Cross Stitch, design size is controlled by the 'fabric count'. The more stitches per inch, for example, the smaller and more compact the resulting design. You can also adjust the density of individual cross stitches by stitching them once, twice or three times.

Setting the design size

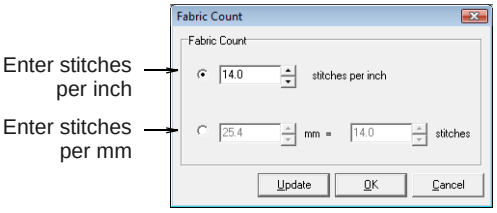
You set cross stitch design size by adjusting the 'fabric count'. This actually changes the scale of your finished design. The more stitches per inch, for example, the smaller and more compact the resulting design.

Caution A common problem with cross stitch designs is that they 'pull', especially with smaller, closely packed stitches. Cross stitch designs tend to pull in a uniform way with gaps usually forming in straight lines. Sometimes holes appear giving the impression of missing stitches. See also Setting the stitch density.

To set the design size

1 Select **Settings > Fabric Count**.

The **Fabric Count** dialog opens.



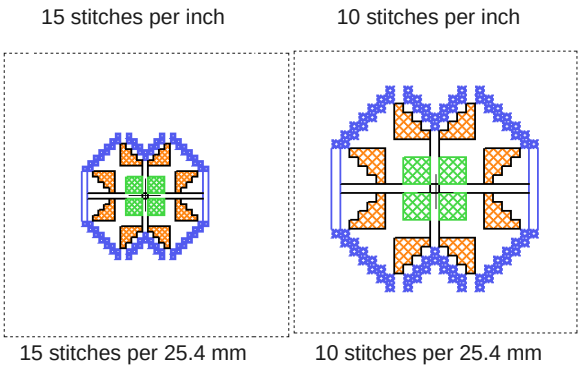
2 Select a fabric count option, inches or millimeters:

- **Number of stitches per inch**: The fewer stitches per inch, the bigger the resulting design.
- **Number of millimeters per number of stitches**: Because a cross stitch is bigger than a millimeter, you can adjust the **mm** and **stitch**

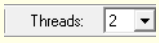
settings in relation to each other. The higher the mm value, or smaller the stitch value, the bigger the design.

Tip By clicking **Update**, you get an immediate conversion of any values you have entered. For example, change the **stitches per inch** value, click **Update**, and the corresponding **stitches per mm** value will be updated.

3 Click **OK**.



Setting the stitch density



Use Threads list (Stitch and Color bar) to set the stitch density.

You can adjust the density of any cross stitch by stitching it once, twice or three times. The number of 'crossovers' correspond to the values **2**, **4** and **6** in the **Threads** list. You can change these values at any time.

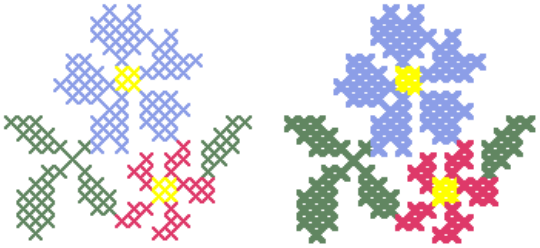
If you make a design smaller to fit inside the hoop, stitches may be stacked on top of each other and pull the fabric. You can avoid this problem by reducing the number of crossovers to single (2 threads) for both fills and outlines. You can also use a thinner weight thread.

Tip If you cross stitch a design where every square has a stitch, remember to baste and stabilize the fabric.

To set the stitch density

- Select a value from the **Threads** list.

The value **2** corresponds to a single stitch, **4** is double, while **6** is triple. This is represented on screen by line thickness.

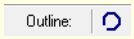


Tip When you move your mouse over the stitch, a tool tip will tell you the type and color of stitch used.

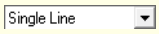
Selecting cross stitch types

BERNINA Cross Stitch provides the full range of cross stitch types which you can use to create outlines and fills of any color. You can also control the orientation of fractional cross stitches to create different patterning effects.

Selecting outline stitches



Use Outline (Stitch and Color bar) for outline stitches.



Select an outline stitch from the Outline Stitch list.

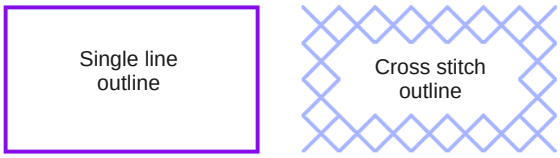
There are two types of outline stitch, **Single Line** and **Current Cross Stitch**. Select a cross stitch type before selecting **Current Cross Stitch**.

To select an outline stitch

1 Click the **Outline** icon.

2 Select a stitch type from the **Outline Stitch** list.

New stitches will be digitized as single lines or crosses. If you are using Current Cross Stitch, the currently selected cross stitch type applies. See Selecting fill stitches for details.



Note Depending on the stitch type you select, you can set the direction of the stitch. See Setting cross stitch orientation for details.

Selecting fill stitches

Use Fill (Stitch and Color bar) for fills.

Click Fill Stitch (Stitch and Color bar) to open the Select Stitch dialog.

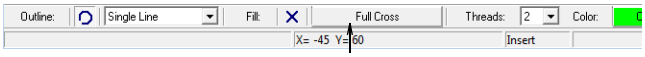
Fill stitches are all cross stitches. Choose from amongst the following types: Full Cross, Three-quarter Cross, Half Cross, Quarter Cross, Mini Cross, Upright Cross, Double Cross, Elongated Vertical Cross, and Elongated Horizontal Cross. See Cross stitch fills for details.

To select a fill stitch

1 Click the **Fill** icon.

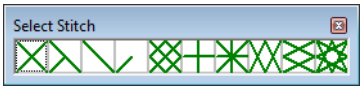
2 Click or right-click the **Fill Stitch** button.

Tip If you want the **Select Stitch** dialog to remain open, right-click **Fill Stitch** button.



Fill Stitch button

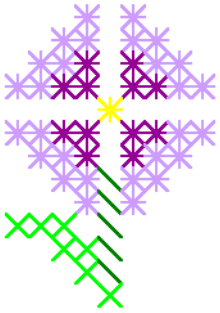
The **Select Stitch** dialog opens.



3 Choose a stitch type.

Stitches will be digitized in that stitch type. The **Select Stitch** dialog closes.

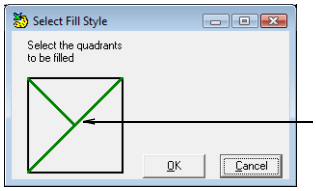
4 Depending on the stitch type you select, you can set the direction of the stitch. See Setting cross stitch orientation for details.



Variety of cross stitch fill effects

Setting cross stitch orientation

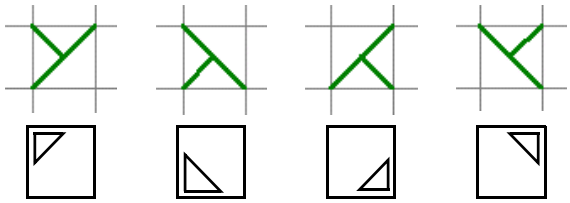
You can control the orientation of fractional cross stitches to create different patterning effects. When digitizing individual stitches, you do this directly pixel by pixel. When digitizing a fill, you do so via the **Select Fill Style** dialog. The method is the same. See Types of cross stitch for details.



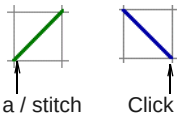
Click in the quadrant to be filled

To set cross stitch orientation

- To create three-quarter cross stitches, click the corner where you want the quarter stitch to be.



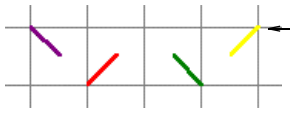
- To create half cross stitches, click the corner where you want your stitch to start.



Click here to make a / stitch

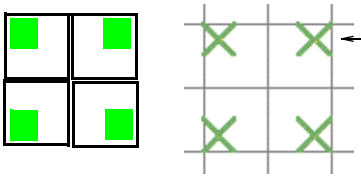
Click here to make a \ stitch

- To create quarter cross stitches, click the corner where you want your stitch to start.



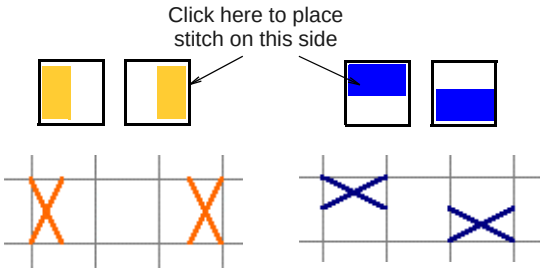
Click here to start in this corner

- To create mini cross stitches, click the corner where you want your stitch to start.



Click here to place a stitch in this corner

- To create elongated cross stitches, click the corner where you want your stitch to start.



Selecting cross stitch colors

BERNINA Cross Stitch allows you to set up an unlimited number of color slots. New objects are digitized using the currently selected color. You can change color before or after digitizing. BERNINA® Embroidery Software also lets you manage the thread colors in your Color Chart. Select from a range of commercial thread charts. Adjust the exact number of colors in the Color Chart as required. Add extra slots as required.

Selecting stitch colors

Use Color Palette (Stitch and Color bar) to select a stitch color.

You can select stitch colors from the **Color Palette** before digitizing, or apply a new color to selected areas.

To select a stitch color

1 Click or right-click the color palette to open it.

Tip If you want the **Select Thread** dialog to remain open, right-click the color palette.

2 Select a color.

- Select a color from the color palette to apply to newly digitized areas.
- Select a stitch block, then select a color to change its color.

Stitches will be digitized in the selected color.

Tip You can drag the **Select Thread** dialog and place it anywhere in the design window.

Searching and assigning threads

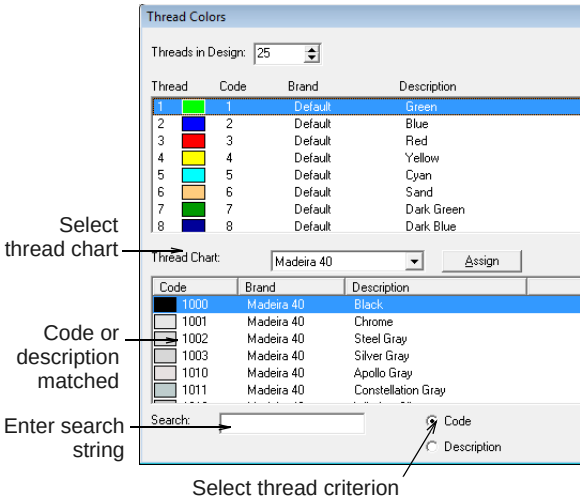
You can search for a thread by code or description and assign it to a selected design color slot. The supplied charts represent the brands of threads that BERNINA Cross Stitch supports. Each chart has a range of colors associated with it. The code, brand and description of each color is displayed so that you can easily find them in a craft or sewing shop. You can select colors by shade or by number. Select the thread chart for the brand of thread you have at home or just select a chart which has colors you like.

Caution The representations of commercial thread charts are approximate, and the computer simulations are not intended to exactly match the identified thread color.

To search and assign a thread

1 Select **Settings > Thread Colors**.

The **Thread Colors** dialog opens.



2 Select a thread chart from the **Thread Chart** 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.

5 Select a color slot in the **Threads in Design** panel and click **Assign**.

6 Click **OK** to close.

Note Selected color settings only apply to the current design and are part of the 'design properties'. As such they are saved with the design.

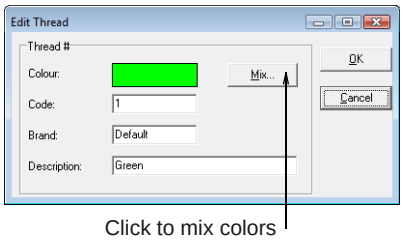
Mixing your own thread colors

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 Click **Edit** in the In the **Thread Colors** dialog.

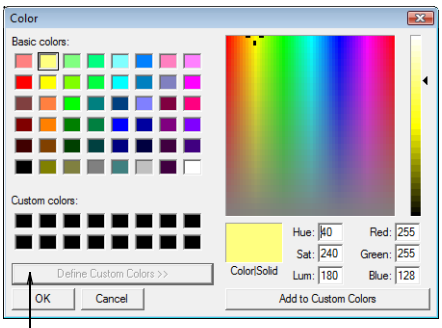
2 The **Edit Thread** dialog opens.



Click to mix colors

3 Click **Mix**.

The **Color** dialog opens.



Click to open color spectrum

4 Click **Define Custom Colors** to open the color spectrum.

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

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

7 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.

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

9 Click **OK**.

The new color appears in the **Color** preview box.

Digitizing with cross stitches

BERNINA Cross Stitch provides techniques for digitizing single stitches or lines of stitches, filled and unfilled rectangles or circles, or filled and unfilled 'closed' free-form shapes. You can also create free-form outlines or borders. The **Area Fill** feature lets you fill closed shapes or 'color blocks' with stitches.

Digitizing single stitches or lines

Use Pencil (Design toolbar) to draw a single stitch or line of stitches.

You can digitize a single stitch or line of stitches. Depending on the stitch type you select, you must also set the stitch direction. See also Creating combination stitches.

To digitize a single stitch or line

1 Click **Outline** and select an **Outline** stitch type.

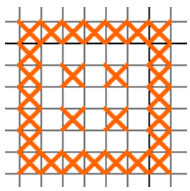
If you are using **Full Cross**, the currently selected cross stitch type applies. See also Selecting fill stitches.

2 Select a color from the color palette. See Selecting stitch colors for details.

3 Click the **Pencil** icon.

4 Click a square to make a single stitch, or click and drag the pencil to make a line.

Note Press **Ctrl** and drag to draw straight vertical lines.



Single stitches and lines

Tip You can also use the **Pencil** tool to create combinations of partial crosses comprised of

multiple colors. See also Creating combination stitches.

Digitizing circles

Use Circle (Design toolbar) to draw and digitize ovals or circles.

The **Circle** tool provides a quick way to digitize filled or unfilled circles.

To digitize a circle

1 Click the **Circle** icon.

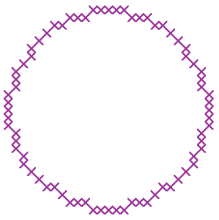
2 Select a color from the **Color** palette. See Selecting stitch colors for details.

3 Select an **Outline** or **Fill** stitch type. See Selecting cross stitch types for details.

4 Mark the center point then mark a point on the circumference.

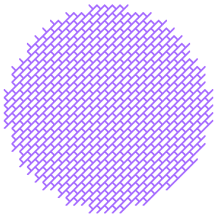
- If you want a perfect circle, press **Enter**.
- If you want an ellipse, mark a third reference point and press **Enter**.

The circle or oval is filled or outlined depending on the stitch type selected.

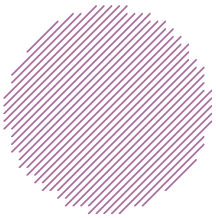


Full cross border

Full cross fill



Three-quarter cross fill



Half cross fill

Digitizing rectangles

Use Rectangle (Design toolbar) to draw and digitize rectangles or squares.

The **Rectangle** tool provides a quick way to digitize filled or unfilled rectangles or squares.

To digitize a rectangle

1 Click the **Rectangle** icon.

2 Select a color from the **Color** palette. See Selecting stitch colors for details.

3 Select an **Outline** or **Fill** stitch type. See Selecting cross stitch types for details.

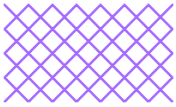
4 Mark rectangle origin, then rectangle corner.

Press **Ctrl** and mark corners to digitize a square. The square or rectangle is filled or outlined depending on the stitch type selected.

Note Depending on the stitch type you select, you can set the direction of the stitch. See Creating combination stitches for details.

Single line border

Cross stitch border



Fill stitches

Digitizing open and closed shapes

Use Closed Curve (Design toolbar) to draw and digitize closed shapes.

Use Open Curve (Design toolbar) to draw and digitize open shapes.

You can create freeform outlines or borders using the **Open Curve** icon. You can create freeform filled shapes using the **Closed Curve** icon. Select an outline stitch for unfilled shapes and a fill stitch for filled shapes.

To digitize an open or closed shape

1 Click **Open Curve** or **Closed Curve**.

2 Select a color from the **Color** palette. See Selecting stitch colors for details.

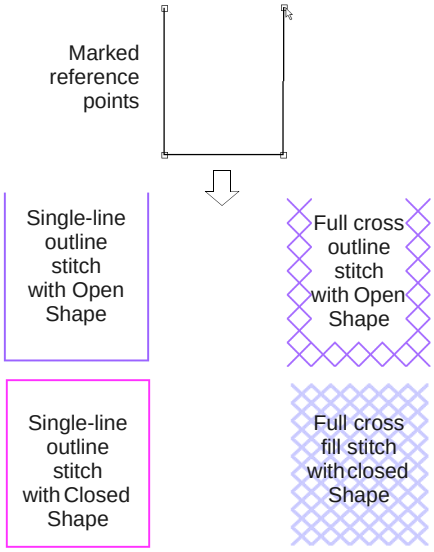
3 Select an **Outline** or **Fill** stitch type. See Selecting cross stitch types for details.

4 Mark reference points on your design.

Left-click for sharp corners and right-click for round corners.

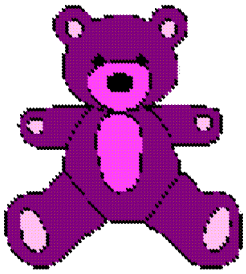
5 Press **Enter**.

The shape is filled or outlined depending on the stitch type selected.



The shape is filled in the selected stitch type and color.

Digitized using Auto Digitizer



Colors changed using Area Fill

Caution **Area Fill** will not work within single outline shapes and some shapes with angled sides may not fill correctly. Try creating two rows of cross stitches around the outline.

Area-filling color blocks

Use Area Fill (Design toolbar) to fill a closed shape or color block with stitches.

Fill closed areas with stitches using **Area Fill**. You can also use the tool to change the color and stitch type of **Full Cross** outlines.

Note The **Area Fill** tool only works on the cross stitch layer. It will not work with bitmap images used as backdrops.

To area-fill a color block

1. Select a color from the **Color** palette. See Selecting stitch colors for details.
2. Select a **Fill** stitch type. See Selecting fill stitches for details.
3. Click the **Area Fill** icon.
4. Click within a closed area.

Handling cross stitch design files

Cross stitch designs have their own ARX file format. This can be read by BERNINA® Embroidery Software. You can also combine ARX with designs in other formats.

Saving cross stitch designs

Use Save (General toolbar) to save cross stitch files.

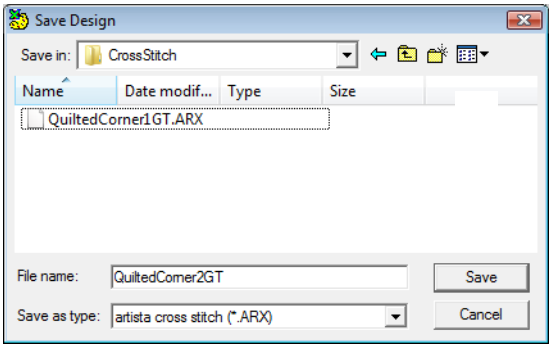
Save your design early and often. Use the ARX extension for saving cross stitch files.

To save a cross stitch design

1. Select **File > Save**.

   If this is the first time you have saved the design, the **Save As** dialog opens. The file is saved as an ARX file.

2 Select the **cross stitch** (ARX) file type from the **Files of Types** list.



Note You can only save in ARX format.

3 Type a new name for the design and click **Save**.

Using cross stitch with BERNINA® Embroidery Software

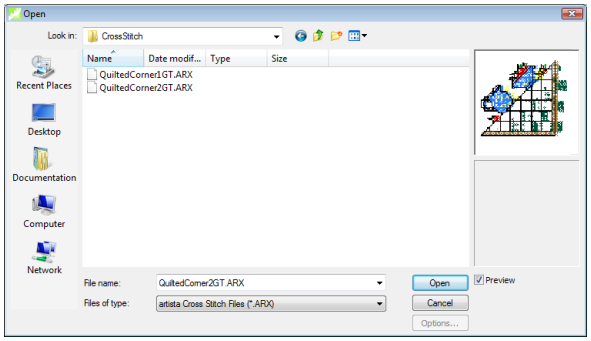
Cross stitch designs are saved as ARX files. These can be opened directly into BERNINA Embroidery Software and combined with other embroidery.

To use cross stitch with BERNINA® Embroidery Software

1 Start BERNINA® Embroidery Software.

2 Select **File > Open**.

The **Open** dialog opens.

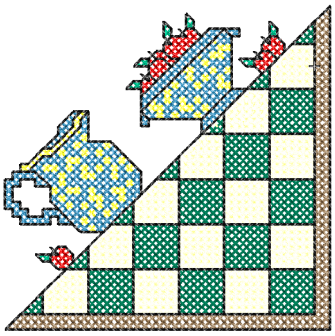


3 Select ARX files from the **Files of Type** list.

4 Select your file.

5 Click **Open**.

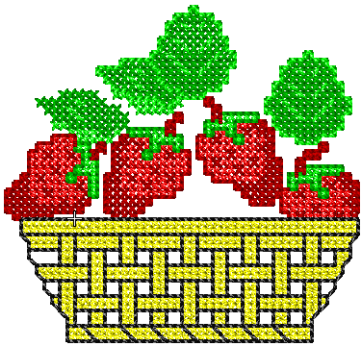
The cross stitches display as they will be stitched.



CHAPTER 3
CROSS STITCH EDITING

BERNINA Cross Stitch provides techniques for editing cross stitch designs, including moving, rotating, and mirroring stitch blocks. You can erase stitches as well as change colors and stitch types of selected areas. You can clone a selection for re-use as a 'rubber stamp' and fill large areas with motifs or special composite stitches. You can also edit stitches to create combinations of partial crosses comprised of multiple colors.

This section provides details of cross stitch editing features.



Selecting and locking stitches

In order to edit an area of a design, you must first select it. BERNINA Cross Stitch provides a number of ways to select cross stitches. It also lets you lock cross stitches and/or outlines so that they are not moved or edited by accident.

Selecting cross stitches with Select Object or Polygon Select

Use Select Object (Design toolbar) to select a single stitch or block of stitches.

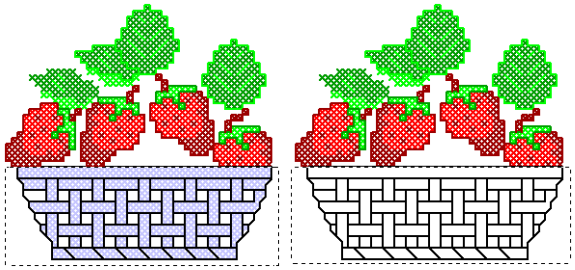
Use Polygon Select (Design toolbar) to select irregular areas or shapes.

The **Select Object** and **Polygon Select** tools work in a similar way to BERNINA Embroidery Software. The difference is that in BERNINA Cross Stitch you work with stitch blocks or areas rather than design objects.

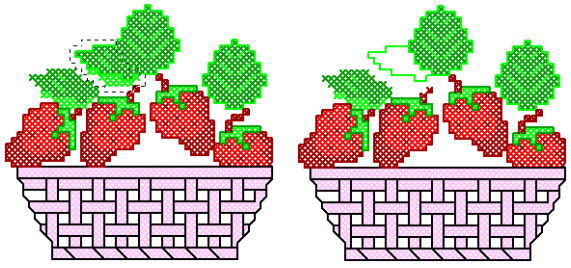
Caution You cannot select cross stitches outside the hoop.

To select cross stitches with Select Object or Polygon Select

- With the **Select Object** tool selected, simply drag a bounding box around the area to be selected.
- With the **Polygon Select** tool selected, mark reference points around the area you want to select and press **Enter**.


Select tool used

Fill stitches deleted


Polygon Select tool used

Fill stitches deleted

Tip Hold down **Ctrl** to select multiple areas.

Selecting cross stitches with Auto Select

Use Auto Select (Design toolbar) to select a single color block or an undigitized area.

Auto Select is specific to BERNINA Cross Stitch. It allows you to select a single color block or a closed undigitized area. Only adjoining stitches of the same color are selected.

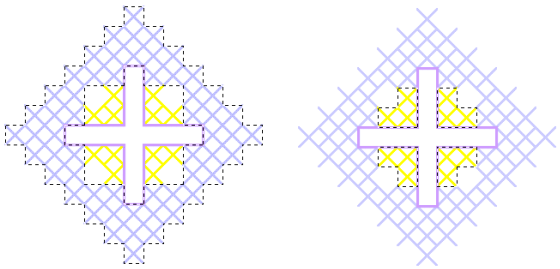
To select cross stitches with Auto Select

1 Click the **Auto Select** icon.

2 Click a block of stitches.

Only adjoining stitches of that color are selected.

Tip Hold down **Ctrl** to select multiple blocks.



Color block selected

Hold down Ctrl to select yellow color blocks

Tip You can change the color of the selection completely by selecting a color from the palette.

Locking stitches

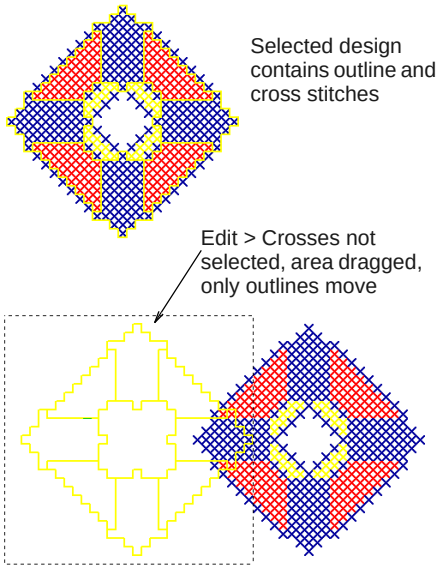
You can lock cross stitches and/or outlines so that they are not moved by accident.

To lock stitches

1 Select **Edit > Crosses** or **Edit > Outlines**.

When **Crosses** is ticked in the menu, cross stitches can be moved. Likewise, when **Outlines** is ticked, outlines can be moved.

2 Select an area and click and drag to move stitches.



3 Select **Crosses** or **Outlines** again to uncheck it and lock all crosses or outlines.

Simple stitch editing

BERNINA Cross Stitch lets you change the color or stitch type of selected stitch blocks at any time. You can also remove stitches at any time.

Tip BERNINA Cross Stitch lets you change the thread colors of an existing design. You can also mix your own colors to more closely match the required design colors. See Selecting cross stitch colors for details.

Copying, cutting & pasting stitch blocks

Use Copy (General toolbar) to copy selected stitch blocks to the clipboard.

Use Cut (General toolbar) to cut selected stitch blocks to the clipboard.

Use Paste (General toolbar) to paste copied stitch blocks from the clipboard.

You change copy, cut and paste selected stitch blocks at any time. The difference is that in BERNINA Cross Stitch you work with stitch blocks or areas rather than design objects. See also Rubber stamping fills.

To copy, cut and paste stitch blocks

1 Select the stitch block to copy or cut. See Selecting and locking stitches for details.

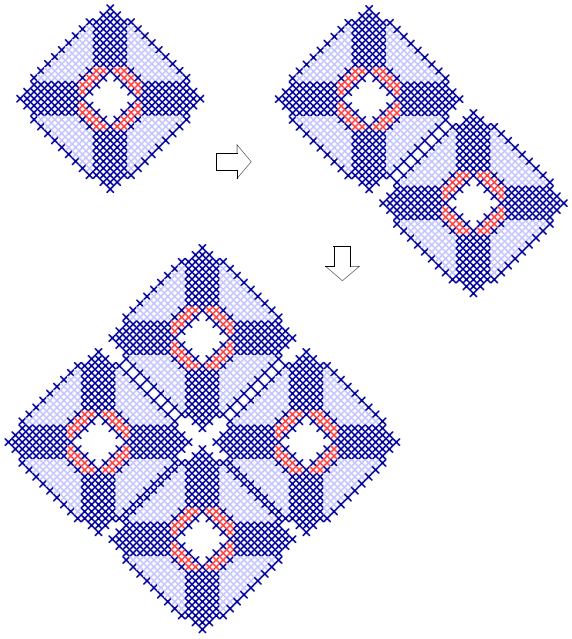
2 Click the **Copy** or **Cut** icon.

The selected area or areas are copied to the clipboard.

3 Click the **Paste** icon.

The duplicate area is pasted over top of the selected area.

4 Click and drag to move the pasted stitch block.



Tip Duplicate and rotate blocks of stitches to make patterns. See Transforming stitch blocks for details.

Changing stitch block settings

Use Auto Select (Design toolbar) to change the color or stitch type of selected stitch blocks.

You can change the color and/or stitch type of selected stitch blocks at any time.

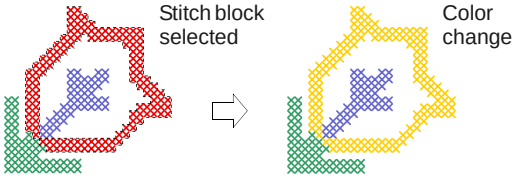
To change stitch block settings

1 Use **Auto Select** to select the color block/s. See Selecting cross stitches with Auto Select for details.

Tip Hold down **Ctrl** to select multiple blocks.

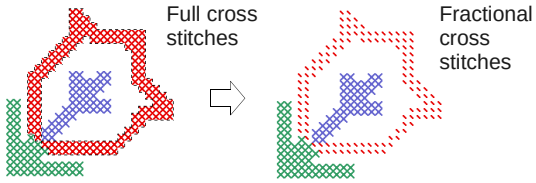
2 Select a new color from the palette.

The selected color fills the selection area. The area remains selected.



3 Select a new stitch type from the **Stitch** toolbar.

The selected stitch type fills the selection area.



Erasing fills and single lines

Use Eraser (Design toolbar) to erase fills and single lines.

Use the **Eraser** tool to remove stitches. The eraser will remove either fill stitches or single line borders depending on the stitch type selected. Cross-stitched borders are treated as fill stitches.

Caution You cannot select and erase stitches outside the hoop.

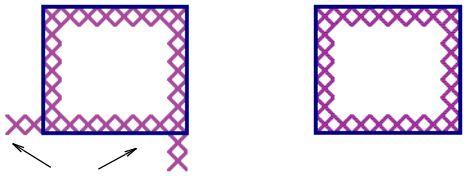
To erase a fill or single line

1 Click the **Eraser** icon.

2 Select **Fill** on the **Stitch / Color** bar.

3 Click and drag the cursor across the stitches to be removed.

Only fill stitches are removed. Any single line borders remain.

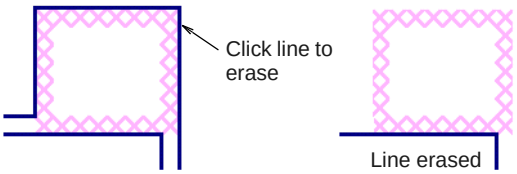


Tip You can also erase cross stitches by selecting them and pressing the **Delete** key.

4 Select **Outline** on the **Stitch / Color** bar.

5 Click anywhere on a single line.

The line is removed. Any cross stitches are not erased.



Note A single line border is removed in one click.

Transforming stitch blocks

BERNINA Cross Stitch lets you perform various transformations on selected blocks of cross stitches. You can move them, rotate them in a clockwise or counter-clockwise direction. You can also mirror blocks of cross stitches either horizontally or vertically.

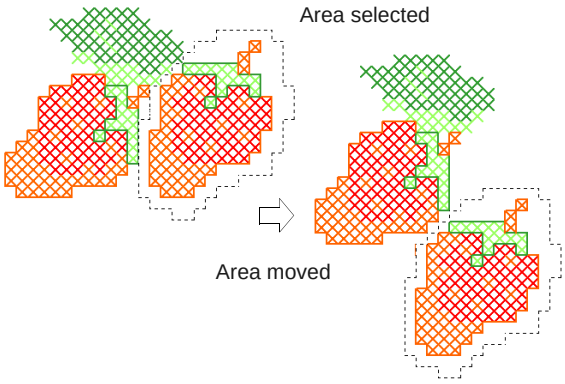
Moving blocks of cross stitches

You can move blocks of cross stitches at any time.

To move a block of cross stitches

1 Select the stitch block to move. See Selecting and locking stitches for details.

2 Click and drag them to a new location.



Rotating blocks of cross stitches

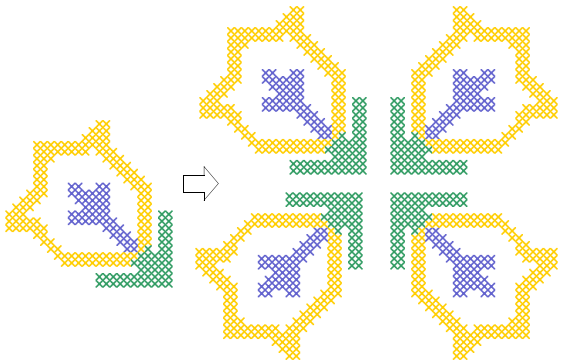
Use Rotate 90°CW/CCW (Design toolbar) to rotate selected stitches. Click to rotate clockwise. Right-click to rotate counter-clockwise.

You can rotate blocks of cross stitches in a clockwise or counter-clockwise direction. Duplicate and rotate blocks of stitches to make patterns.

To rotate a block of cross stitches

1 Select the stitch block to rotate. See Selecting and locking stitches for details.

2 Click the **Rotate 90° CW / CCW** icon.



Mirroring blocks of cross stitches

Click Mirror Horizontal (Design toolbar) to mirror selected stitches horizontally.

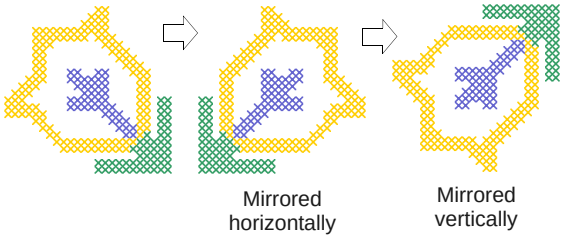
Click Mirror Vertical (Design toolbar) to mirror selected stitches vertically.

You can mirror blocks of cross stitches either horizontally or vertically.

To mirror a block of cross stitches

1 Select the stitch block to mirror. See Selecting and locking stitches for details.

2 Click the **Mirror Horizontal** icon.



Tip To mirror the complete design, select **Arrange > Mirror Horizontal / Mirror Vertical**.

Special editing techniques

BERNINA Cross Stitch provides a number of editing techniques which are especially helpful for cross stitch

digitizing. You can clone a selection for re-use as a 'rubber stamp' and fill large areas with motifs or special composite stitches. You can combine fractional cross stitches in a variety of ways.You can also add a cross stitch border or a single line border, or both, to areas of a design.

Rubber stamping fills

Use Rubber Stamp (Design toolbar) to clone stitches.

Clone a selection for re-use as a 'rubber stamp' and fill large areas with motifs or special composite stitches.

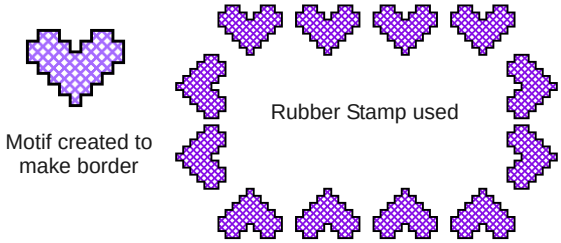
To rubber stamp fills

1 Click the **Select Object** icon and select the area to be cloned.

2 Click the **Rubber Stamp** icon.

The selected area is copied and attached to the pointer.

3 Click to place the stamp as many times as you want.



4 Press **Esc** or select another icon to turn off **Rubber Stamp.**

Creating combination stitches

Use Pencil (Design toolbar) to add combination stitches.

Quarter, half and three-quarter cross stitches can be combined to make crosses comprised of multiple colors. You can also combine mini crosses, elongated vertical or horizontal crosses and outline stitches. See Cross stitch variations for details.

To create combination stitches

1 Select **Edit > Insert**.

Insert is ticked in the menu. With **Insert** ticked, you can add more than one stitch to a square. Otherwise, a new stitch replaces the existing stitch.

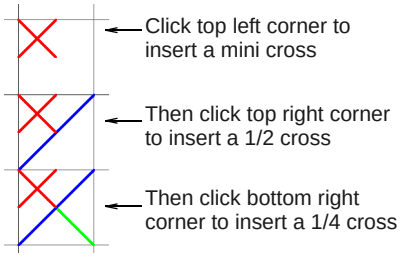
Tip When **Insert** is selected, the **Status** bar displays **Insert**. Otherwise, it shows **Overwrite**.

2 Select a stitch type. See Selecting fill stitches for details.

3 Select a color from the color palette. See Selecting stitch colors for details.

4 Click the **Pencil** icon.

5 Click where you want the stitch to be inserted.



Note If you do not have **Insert** selected, the whole stitch will be replaced.

6 Repeat as many times as needed.

Adding borders to selected areas

Add a cross stitch border or a single line border, or both, to selected areas of a design.

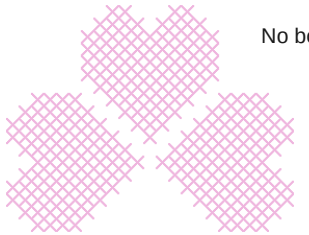
To add borders to a selected area

1 Select the **Outline** icon.

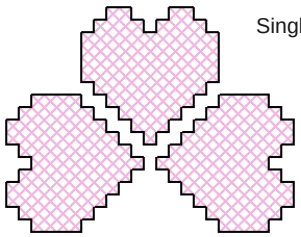
2 Click the **Area Fill** icon and click inside an area.

A line of outline stitches is added around the edges of the selection.

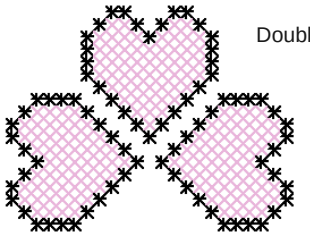
Tip Click again in the selection to add another line of stitches inside the first line.



No border



Single line border



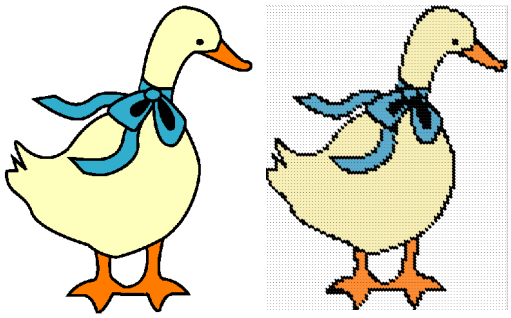
Double cross border

Tip To combine a cross stitch with a line border, select **Full Cross** stitch type and **Area Fill**, then select **Single Line** and **Area Fill** again.

CHAPTER 4
ADVANCED CROSS STITCH

The BERNINA Cross Stitch design window also lets you import pictures to use as backdrops or for automatic digitizing. You can also create special cross stitch lettering.

This section provides details of advanced cross stitch features including automatic digitizing and lettering.



Digitizing with backdrops

Bitmap images can be inserted or scanned into BERNINA Cross Stitch for use as digitizing backdrops. You can digitize backdrop images automatically using **Auto Stitch**. Use solid color bitmaps to make suitable color blocks for cross stitches.

Tip If an image needs to be resized or rotated, it is best to do so during scanning. Scaling afterwards may distort the image.

Inserting bitmap images

Use Load Picture (Picture toolbar) to open a picture.

Use Scan Picture (Picture toolbar) to scan your artwork.

You can insert bitmap images of various formats for use as digitizing backdrops.

To insert images

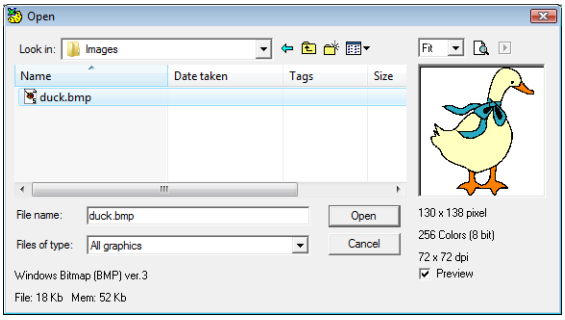
1 Click the **New** icon.

A new file opens.

2 Click **Picture** mode to open a picture.

3 Click **Load Picture**.

The **Open** dialog opens.



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

5 Select a file type from the **Files of Type** list (e.g. BMP).

6 Select the file you want to insert.

Tip Select the **Preview** checkbox to preview the selected file.

7 Click **Open**.

8 Move the picture so it fits inside the hoop or change the hoop size. See Changing hoop settings for details.

Note Areas outside the hoop will not be stitched.

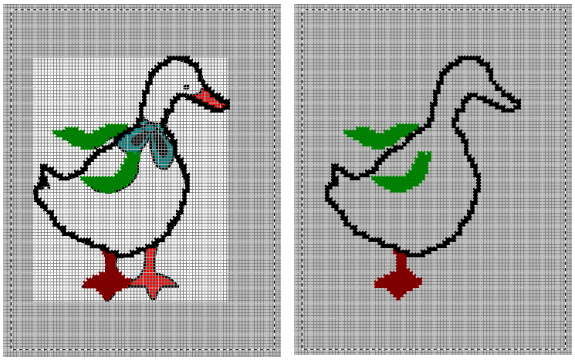
Viewing or hiding bitmap images

Click Picture (General toolbar) to show or hide the picture.

You can show or hide a bitmap backdrop temporarily while you digitize in **Design** mode.

To view or hide bitmap images

- Click the **Picture** icon to show the image.
- Click it again to hide the image.



Show picture | Hide picture

Scaling and transforming bitmap images

You can scale and reshape images once they are loaded into BERNINA Cross Stitch. However, if an image needs to be resized or rotated, it is best to do so during scanning. Scaling afterwards may distort the image. See Arranging & Transforming Objects for details.

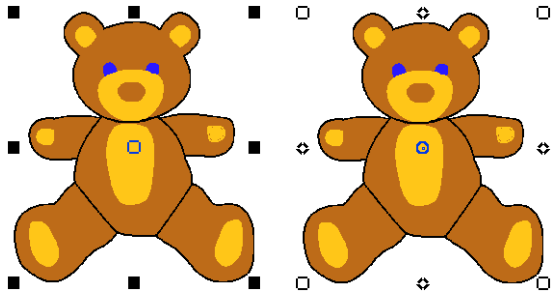
To scale and transform bitmap images

1 Insert the image. See Inserting bitmap images for details.

2 Click the **Select** icon.

3 Click the image.

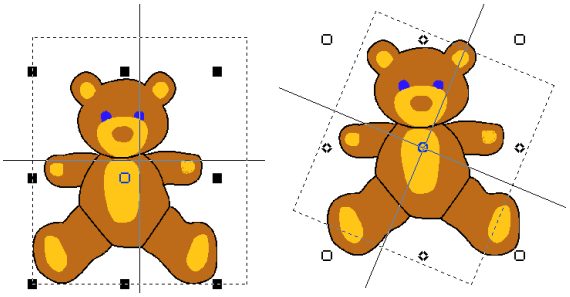
Eight resize selection handles appear around the image. Click and drag these to scale the image as you would any other object. See Scaling objects for details.



Resize handles | Transform handles

4 Click the image again.

Eight transform selection handles appear around the image. Click and drag these to rotate or skew the image as you would any other object.



Resize image | Transform image

Digitizing pictures automatically

Digitize the entire backdrop image automatically using **Auto Stitch**. Alternatively, using **Magic Wand**, you can create cross stitch fills from colored sections of a picture.

Digitizing with Auto Stitch

Use Auto Stitch (Design toolbar) to automatically create cross stitch designs from pictures.

Digitize the entire backdrop image automatically using **Auto Stitch**. You can change the stitch type manually later as required.

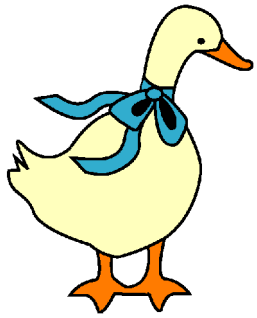
Tip You can also select blocks of color in your picture to stitch using **Magic Wand**. See Digitizing with Magic Wand for details.

To digitize with Auto Stitch

1 Prepare your image as necessary.

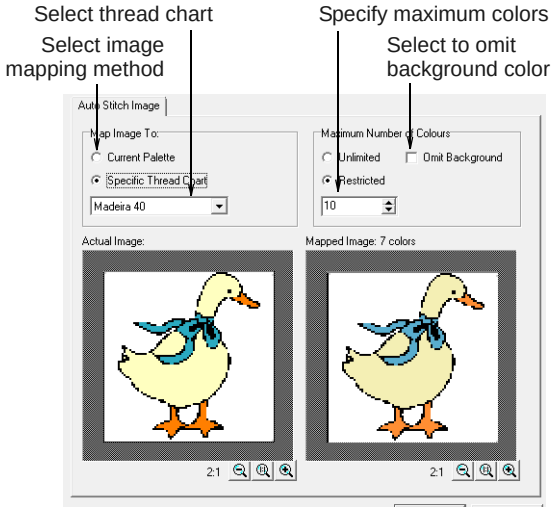
Use a third party paint program to clean up the image.

2 In **Picture** mode, load a picture. See Inserting bitmap images for details.



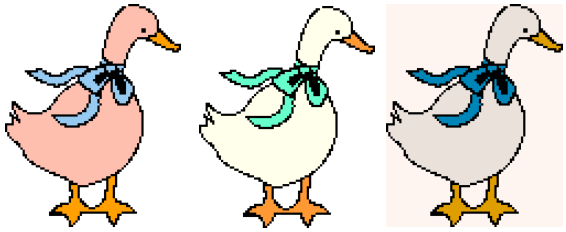
3 In **Design** mode, click the **Auto Stitch** icon and click the image.

The **Auto Stitch** dialog opens.



4 Select to map the picture colors to:

- **Current Palette:** Only colors in the current palette are used.
- **Specific Thread Chart:** Only colors in a selected thread chart are used.



Current Palette: Restricted Colors

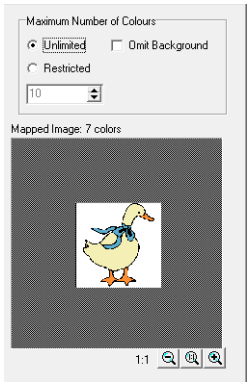
Specific Thread Chart: CSD

Specific Thread Chart: Isacord 40-fashion colors

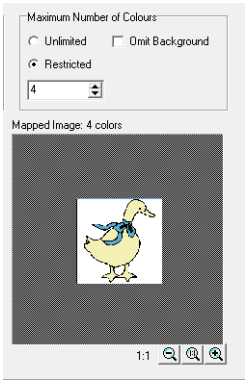
5 Specify the maximum number of colors to be used:

- **Unlimited**: Thread colors will be allocated according to the number of colors in the palette selected in the first dialog.
- **Restricted**: Enter the number of colors you want to use.
- **Omit Background**: Select to omit the background color.

The results display in the preview pane.



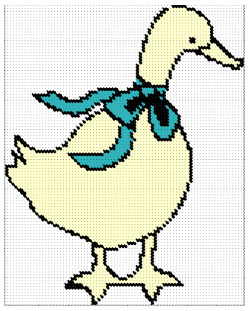
Unlimited maximum colors selected



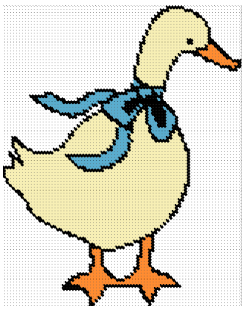
Restricted maximum colors selected

6 Click **OK**.

The picture is digitized. You may need to touch up some areas manually.



4 colors selected



Unlimited maximum colors selected

Note Auto Stitch is disabled if no picture is loaded.

Digitizing with Magic Wand

Use Magic Wand (Design toolbar) to create cross stitches from a colored area of a picture.

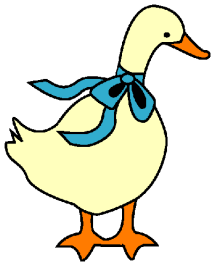
Using **Magic Wand**, you can create cross stitch fills from colored sections of a picture. **Magic Wand** works with both fill stitches and outlines.

To digitize with Magic Wand

1 Prepare your image as necessary.

Use a third party paint program to clean up the image.

2 In **Picture** mode, load a picture. See Inserting bitmap images for details.



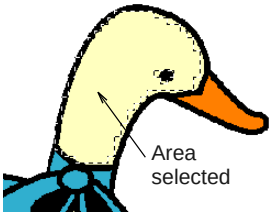
3 In **Design** mode, click **Magic Wand**.

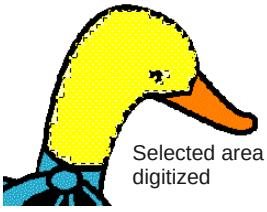
4 Select a cross stitch type.

5 Select a color from the palette.

6 Click a colored block in your picture.

All areas of that color are digitized in the selected color.





Note The **Magic Wand** selects and digitizes all blocks of that color from your picture. You can change the stitch type and color later if you want.

Digitizing cross stitch letters

Use Lettering (Design toolbar) to add letters to your design. Right-click Lettering to open the Font dialog.

As with BERNINA Embroidery Software, BERNINA Cross Stitch lets you add lettering to a design by typing it directly in the design window. In BERNINA Cross Stitch use the **Font** dialog to select font, size and style. Select either outline or fill to digitize letters. Once typed, you cannot edit letters. Each letter is treated as a stitch block.

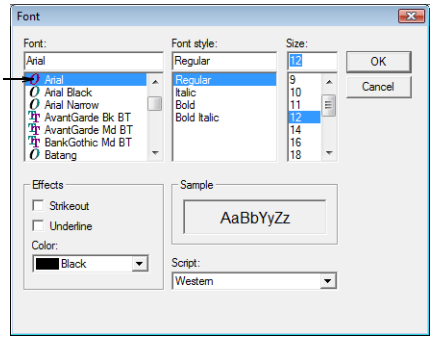
Tip Use **Creative Cross** to add lettering objects to your cross stitch design. See BERNINA Onscreen Manual for details.

To digitize cross stitch letters

1 Right-click the **Lettering** icon.

The **Font** dialog opens.

Select font, style, size from list



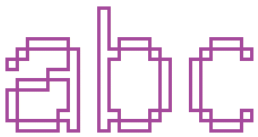
2 Select a font, style and size from the lists.

3 Click **OK**.

4 Click the start point in the design window.

5 Type the letters and press **Enter**.

Letters with fill stitches

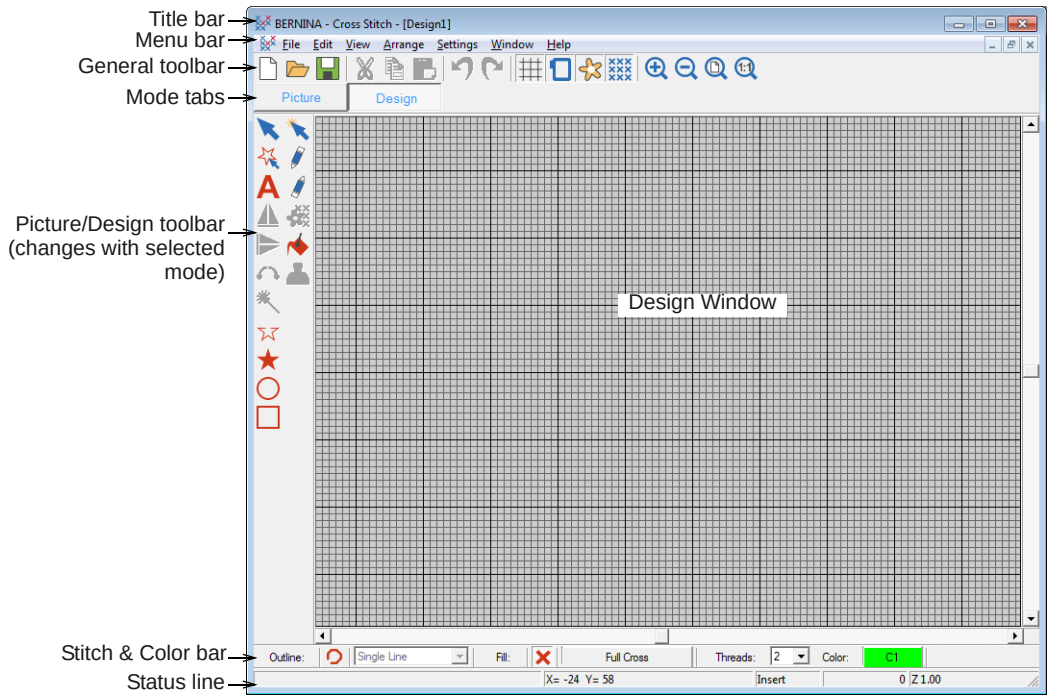

Letters with outline stitches

Tip To edit letters, use **Auto Select** with the **Ctrl** key to select. Then change the stitch type or color as required.

APPENDIX A
CROSS STITCH QUICK REFERENCE

This Quick Reference details all menu options and toolbars available in BERNINA Cross Stitch.

BERNINA Cross Stitch design window



BERNINA Cross Stitch menu bar

The BERNINA Cross Stitch window menu bar contains the pulldown menus described below. Some are also available as toolbar buttons.

Note Standard Windows **Alt** key shortcuts apply. Use the **Alt** key with the letter underlined in the menu. To cancel an operation, press **Esc** twice.

File menu

New	Open new empty design.
Open	Open design.
Close	Close current design window.
Save	Save current design.
Save As	Save current design to with a different name, location or format.

Design Properties	Add comments about design for printing on worksheet.
Exit	Close all open designs and exit BERNINA® Embroidery Software BERNINA Cross Stitch program.

Edit menu

Undo	Cancel last command.
Redo	Re-apply cancelled commands.
Cut	Delete selection and places it on clipboard.
Copy	Copy selection to clipboard.
Paste	Paste contents of clipboard to design window.
Duplicate	Duplicate selection and place it on current selection.
Delete	Delete selection without placing it on clipboard.
Select All	Select all objects in design.
Deselect All	Deselect all selected objects in design.
Insert	Insert a fractional cross stitch in the same square as other fractional stitches as long as they are not on top of each other.
Outlines	Lock or unlock outline stitches for editing.
Crosses	Lock or unlock cross stitches for editing.

View menu

By Color	Show only selected colors in design.
Show 1:1	Show design at correct size.
Show All	Show whole design.
Zoom Box	Zoom selected area to full window size.
Redraw	Redraw design.
Grid	Show or hide grid and sets grid size and spacing.
Crosses	Show stitches as colored tiles or cross stitches.
Picture	Show or hide background picture.
Hoop	Show or hide hoop and sets hoop size and position.
Measure	Measure design size.

Arrange menu

Center Design	Move design to the center of the hoop.
Mirror Horizontal	Mirror selected object/s horizontally about center.
Mirror Vertical	Mirror selected object/s vertically about center.

Settings menu

Thread Colors	Assign thread colors for use in design.
Fabric Count	Set number of stitches per inch or mm.
Fabric Display	Select background fabrics and colors.
Options	Adjust settings for display window.
Display Setup	Calibrate screen.
Scanner Setup	Set scanner options.

Window menu

Cascade	Display any open windows in a ‘cascaded’ or stair-stepped fashion.
Tile Horizontally	Display any open windows in a horizontally ‘tiled’ (non-overlapping) fashion.
Tile Vertically	Display any open windows in a vertically ‘tiled’ (non-overlapping) fashion.
1 (Title of Open Window)	Choose from a list of open windows titles in the order in which they are stacked.

Help menu

Help Topics	List online help topics.
Reference Manual	Open User Guide in Adobe Acrobat PDF format.

BERNINA Cross Stitch window toolbars

The BERNINA Cross Stitch window contains the toolbars described below.

Mode tabs

There are two **Mode** tabs in the BERNINA Cross Stitch window. Different modes display different toolbars.

Picture	Load, edit and save picture as a background for embroidery design. Embroidery shapes are not shown.
Design	Create and modify embroidery designs. Show embroidery shapes as well as pictures.

General toolbar

	New	Same as File > New
	Open	Same as File > Open
	Save	Same as File > Save

Cut	Same as Edit > Cut
Copy	Same as Edit > Copy
Paste	Same as Edit > Paste
Undo	Same as Edit > Undo
Redo	Same as Edit > Redo
Grid	Same as View > Grid
Hoop	Same as View > Hoop
Picture	Same as View > Picture
Crosses	Same as View > Crosses
Zoom Box	Same as View > Zoom Box
Zoom Out 2X	Same as View > Zoom Out 2X
Show All	Same as View > Show All
Show 1:1	Same as View > Show 1:1

Picture toolbar

Select Picture	Select pictures in design window.
Load Picture	Insert picture in design window.
Scan Picture	Scans picture into BERNINA® Embroidery Software.
Dim Picture	Dim or brighten picture to show stitches more clearly in design mode.
Save Picture	Save picture after editing.

Design toolbar

Select Object	Select a single stitch or block of stitches.
Polygon Select	Select irregular areas or shapes.
Lettering	Create lettering and change lettering properties.
Mirror Horizontal	Same as Arrange > Mirror Horizontal
Mirror Vertical	Same as Arrange > Mirror Vertical
Rotate 90° CCW / CW	Rotate selected objects in 90° increments. Click to rotate counter clockwise. Right-click to rotate clockwise.
Magic Wand	Digitize single shape in design.
Open Curve	Draw and digitize open shapes.
Closed Curve	Draw and digitize closed shapes.
Circle / Oval	Draw and digitize ovals or circles.
Rectangle	Draw and digitize rectangles or squares.
Auto Select	Select a single color block or an undigitized area.
Pencil	Draw single stitch or line of stitches.
Eraser	Erase cross stitches.
Auto Stitch	Digitize picture automatically. (This process is different to BERNINA® Embroidery Software as it converts pixels to cross stitches.)
Area Fill	Fill closed shape with stitches.
Rubber Stamp	Clone selection for re-use as ‘rubber stamp’.

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