

brother

# PE#DESIGN PLUS2

Personal Embroidery Design Software System

**Instruction Manual**



Before using this software, first read the Installation Guide for details on installing the software. In addition, be sure to read this Instruction Manual before using the software. We recommend that you keep this document nearby for future reference.

# Congratulations on choosing our product!

Thank you very much for purchasing our product. To obtain the best performance from this device and to ensure safe and correct operation, please read this Instruction Manual carefully, and then keep it in a safe place together with your warranty.

## Please read before using this product

### For designing beautiful embroidery designs

- This system allows you to create a wide variety of embroidery designs and supports a wider range of sewing attribute settings (thread density, sewing pitch, etc.). However, the final result will depend on your particular embroidery machine model. We recommend that you make a trial sewing sample with your sewing data before sewing on the final material.

### For safe operation

- Do not save any files on the "PE-DESIGN Software Key" for transferring or storage.
- Do not plug the "PE-DESIGN Software Key" into your embroidery machine.

### For a longer service life

- When storing the "PE-DESIGN Software Key", avoid direct sunlight and high humidity locations. Do not store the "PE-DESIGN Software Key" close to a heater, iron or other hot objects.
- Do not spill water or other liquids on the "PE-DESIGN Software Key".
- Do not drop or hit the "PE-DESIGN Software Key".

### For repairs or adjustments

- In the event that a malfunction occurs or adjustment is required, please consult your nearest service center.

### Notice

- Since this "PE-DESIGN Software Key" device is required to run the software, its replacement value is the retail price of the software. Please keep in a safe place when not in use.
- Neither this Instruction Manual nor the Installation Guide explains how to use your computer under Windows®. Please refer to the Windows® manuals.
- The procedures in this manual are written for use in Windows® 10. If this software is used on an operating system other than Windows® 10, the procedures and appearance of the windows may differ slightly.

### Trademarks

- Windows® is a registered trademark of Microsoft Corporation.
- CorelDRAW® is a trademark or registered trademark of Corel Corporation and/or its subsidiaries in Canada, the United States and/or other countries.
- Adobe® and Illustrator® are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Other product names mentioned in the Instruction Manual and Installation Guide may be trademarks of registered trademarks of their respective companies and are hereby acknowledged.

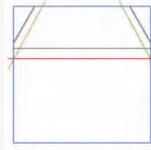
### Caution

The software included with this product is protected by copyright laws. This software can be used or copied only in accordance with the copyright laws.

**SAVE THESE INSTRUCTIONS**  
**This product is intended for household use.**

**For additional product information and updates, visit our website at:**  
**<http://www.brother.com/> or <http://support.brother.com/>**

# Search by Sample Project



## Making a Quilt Using an Embroidery Pattern

▶▶ page 14



## Arranging Stitch Patterns

▶▶ page 21



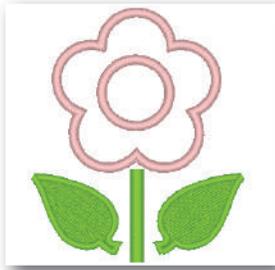
## Changing the Stitching for Each Shape Pattern

▶▶ page 24



## Creating Embroidery Patterns From a Vector File

▶▶ page 40



## Editing an Imported Shape to Create an Embroidery Design for an Appliqué

▶▶ page 27



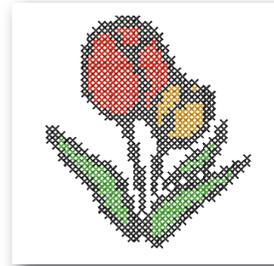
## Combining Text

▶▶ page 64



## Auto Punch

▶▶ page 73



## Cross Stitch

▶▶ page 76



## Photo Stitch1

▶▶ page 79



## Photo Stitch2

▶▶ page 84

# Search by Operation

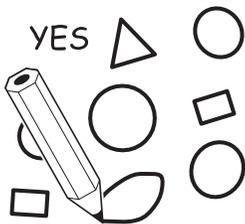
## Visualizing the finished project



I want ...

- a sample project that I can follow.
  - ▶▶ page 14, 21, 24, 27, 40, 64, 73, 93
- to see various sample patterns.
  - ▶▶ page 44, 64
- to embroider an image file that I have.
  - ▶▶ page 40, 90

## Creating patterns



I want ...

- to enter text.
  - ▶▶ page 67
- to use a photo or illustration.
  - ▶▶ page 40, 90

## Arranging patterns



I want ...

- to move patterns.
  - ▶▶ page 21, 53
- to enlarge/reduce patterns.
  - ▶▶ page 54
- to rotate patterns.
  - ▶▶ page 54
- to enjoy arranging patterns.
  - ▶▶ page 21, 53

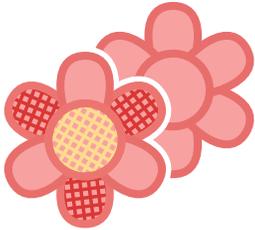
## Adding colors



I want ...

- to change color combination.
  - ▶▶ page 61
- to simulate color schemes.
  - ▶▶ page 61

## Enhancing with sewing attributes



I want ...

- to change the sew types for patterns.
  - ▶▶ page 24, 62
- to make the pattern more expressive.
  - ▶▶ page 62

## Creating embroidery data



I want ...

- to know what I can do with the data.
  - ▶▶ page 28, 34
- to preview the finished embroidery.
  - ▶▶ page 35, 36
- to choose the sewing order.
  - ▶▶ page 37

## Embroidering



I want ...

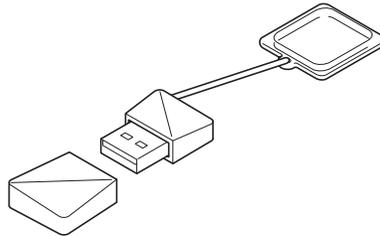
- to embroider with my embroidery machine.
  - ▶▶ page 18, 19
- to save my favorite designs.
  - ▶▶ page 46
- to manage embroidery data I create.
  - ▶▶ page 46, 59

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# PE-DESIGN Software Key

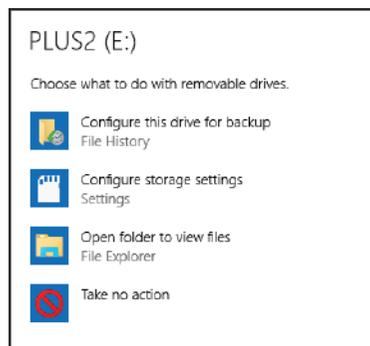
In order to use PE-DESIGN PLUS2, the included "PE-DESIGN Software Key" must be plugged into a USB port of the computer.  
The "PE-DESIGN Software Key" prevents unauthorized use of this software. The software cannot be started if the "PE-DESIGN Software Key" is not plugged in.



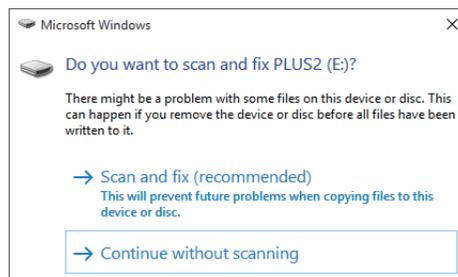
\* Design is subject to change.



- The "PE-DESIGN Software Key" cannot be used as USB media. Do not save embroidery files on the "PE-DESIGN Software Key" for transferring or storage.
- When the "PE-DESIGN Software Key" is plugged into a USB port of the computer, the **[AutoPlay]** dialog box appears. Do not use this dialog box. Click  to close the dialog box, and then start up PE-DESIGN PLUS2.



- When the message "Do you want to scan and fix PLUS2 (E:)" appears, select **[Continue without scanning]** and then start up PE-DESIGN PLUS2. The drive name for the PLUS2 differs depending on computers.



- To unplug the "PE-DESIGN Software Key" from the computer, click **[Start] - [File Explorer]**, right-click the "PE-DESIGN Software Key", and then click **[Eject]**.
- Do not format the "PE-DESIGN Software Key".
- We recommend that you back up this software in order to prepare for unexpected problems.

# Comparison of Types of Data Created With PE-DESIGN PLUS2

Three types of data are used in PE-DESIGN PLUS2.

**Stitch pattern:** Most of built-in embroidery data

**Text pattern:** Data created with the [Text] tools

**Shape pattern (Outline pattern):** Data created with the [Shapes] tools.

## ■ Stitch pattern

Stitch patterns can be arranged by rotating, flipping over and combining them.



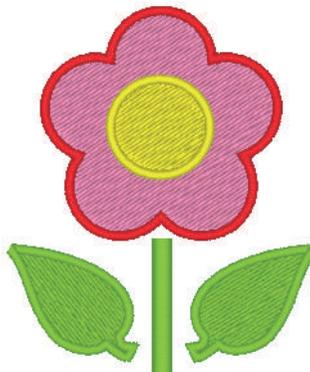
## ■ Text pattern

You can edit text by entering/deleting characters, specify text attributes (such as the font or the transformation shape) and specify sewing attributes.



## ■ Shape pattern

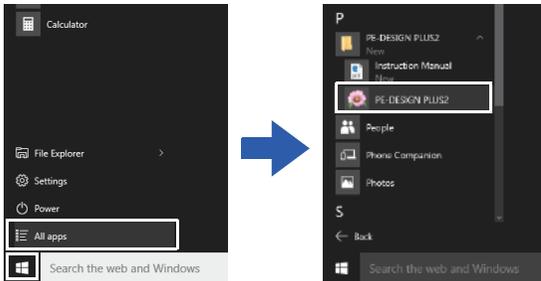
You can specify region and line sew types as well as sewing attributes, edit paths (by moving/deleting points, reshaping through handle movements), remove/merge overlapping regions, set hole sewing, and create offset lines.



# Starting Up Applications

## Starting up PE-DESIGN PLUS2

Click , then [All apps], then [PE-DESIGN PLUS2], and then click [PE-DESIGN PLUS2].

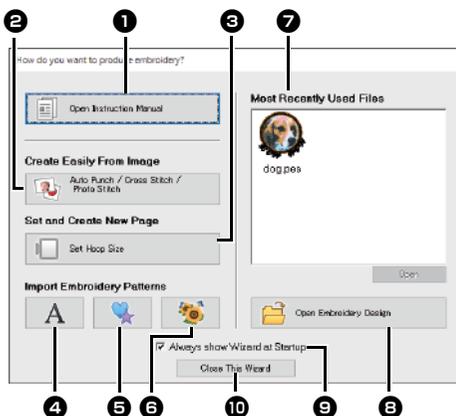


For Windows® 8.1 users: Click the down arrow in the bottom-left corner of the [Start] screen to show the [Apps] view, and then Click [PE-DESIGN PLUS2] under the title [PE-DESIGN PLUS2] in the screen.

For Windows® 7 or Windows Vista® users: Click , then [All Programs], then [PE-DESIGN PLUS2], and then click [PE-DESIGN PLUS2].

## About the Startup Wizard

When [PE-DESIGN PLUS2] starts up, the following wizard appears.



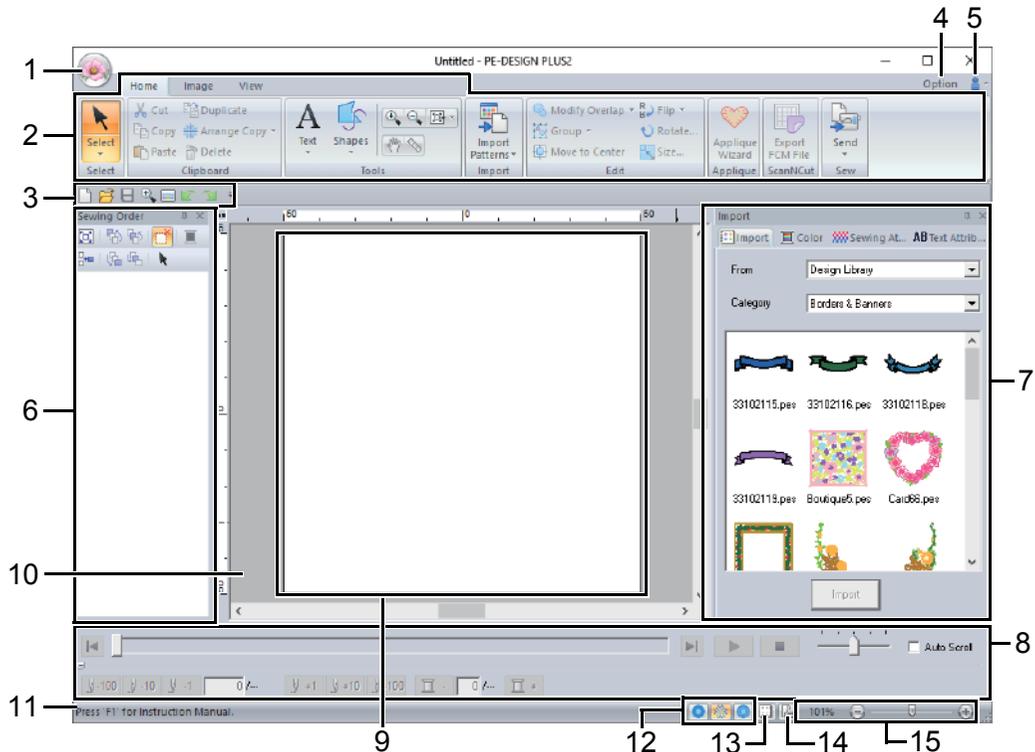
- 1 Open Instruction Manual**  
Click this button to open the Instruction Manual (in PDF format).
- 2 Auto Punch / Cross Stitch / Photo Stitch**  
Click this button to start the wizard for creating an embroidery pattern from an image.
  - ▶▶ "Creating Embroidery Patterns Using Images" on page 73 and "Importing and Editing Image Data" on page 90
- 3 Set Hoop Size**  
Click this button to specify the size of the Design Page (embroidery hoop size).
  - ▶▶ "Specifying the Design Page Settings" on page 32
- 4** , **5** , **6**   
Click these buttons to import the pattern shown on the button from the [Import] pane.
- 7 Most Recently Used Files**  
Click the name of a file from the list, and then click [Open].
- 8 Open Embroidery Design**  
Click this button to open embroidery data (.pes).
  - ▶▶ "Opening a PE-DESIGN PLUS2 file" on page 43
- 9 Always show Wizard at Startup**  
Select this check box to start up the wizard each time PE-DESIGN PLUS2 is started up.
- 10 Close this Wizard**  
Click this button to close the Startup Wizard without performing an operation.



To open the wizard while you are using the [PE-DESIGN PLUS2], click  in the [Quick Access Toolbar], or click  and then select [Wizard] from the command menu.

# Understanding Windows

## PE-DESIGN PLUS2 Window



### 1 Application button

Click to display a menu containing commands for file operations, such as **[New]**, **[Save]**, **[Print]** and **[Design Settings]**.

### 2 Ribbon

Click a tab at the top to display the corresponding commands. Refer to the name below each group when selecting the desired command. Clicking a command with the ▼ mark displays a menu containing a choice of commands.

### 3 Quick Access Toolbar

This contains the most frequently used commands. Since this toolbar is always displayed, regardless of the Ribbon tab that is selected, adding your most often used commands makes them easily accessible.

►► *"Customizing Quick Access Toolbar" on page 98*

### 4 Option button

Click this button to specify settings for the Design Page and user thread charts.

### 5 Help button

Click this button to display the Instruction Manual and view information about the software.

### 6 Sewing Order pane

This pane shows the sewing order. Click the buttons at the top of the pane to change the sewing order or thread color.

### 7 Import/Color/Sewing Attributes/Text Attributes panes

This pane combines tabs for importing embroidery patterns as well as for specifying thread colors, sewing attributes and text attributes. Click a tab to display the available parameters.

### 8 Stitch Simulator pane

The Stitch Simulator shows how the pattern will be sewn by the machine and how the stitching will appear.

## 9 Design Page

The actual part of the work area that can be saved and sewn.

## 10 Work area

## 11 Status Bar

This displays the size of the embroidery data, the number of stitches or a description of the selected command.

## 12 View mode buttons

Click a button to change the View mode.

## 13 Show grid button

Click to switch between displaying and hiding the grid.

## 14 Design Property button

Click to display a dialog box containing sewing information for the embroidery data.

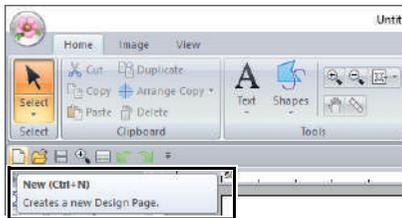
## 15 Zoom slider

This displays the current magnification ratio. Click to specify a value for the magnification ratio.

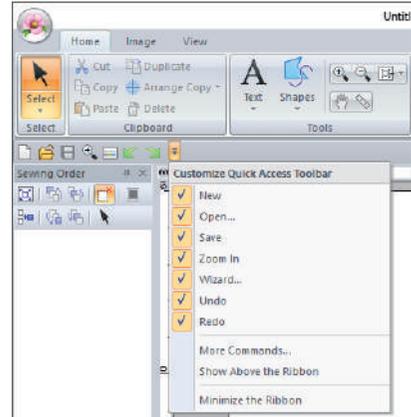
Drag the slider to change the magnification ratio.



- Panes 6, 7 and 8 can be displayed or hidden from the **[Show/Hide]** group in the **[View]** tab. In addition, these panes can be displayed as separate dialog boxes (Floating) or attached to the main window (Docking).
- Position the pointer over a command to display a ScreenTip, which provides a description of the command and indicates its shortcut key.



## Customizing the window



### Quick Access Toolbar/Ribbon

A menu appears when in the **[Quick Access Toolbar]** is clicked.

The menu contains various commands, such as **[Show Above the Ribbon]** and **[Minimize the Ribbon]**, to customize the window.

Example: With **[Show Above the Ribbon]** selected and a check mark beside **[Minimize the Ribbon]**



### Quick Access Toolbar commands

The first time this application is started up, the following commands appear in the Quick Access Toolbar.



Click , then select or unselect the check boxes beside the commands to switch between displaying and hiding them. When the check mark is cleared, the command is hidden. Alternatively, changes to the commands listed in the **[Quick Access Toolbar]** can be specified in the **[Options]** dialog box and all applied at the same time.

►► "Customizing Quick Access Toolbar" on page 98

## ■ Import/Color/Sewing Attributes/ Text Attributes pane, Sewing Order pane and Stitch Simulator pane

### Floating

Each tab or the entire pane can be undocked to become a dialog box that can be moved around the screen.

- Double-click the title bar of the pane, or tab.
- Right-click the pane or tab, and then click **[Floating]**.
- Drag a tab out of the pane.

### Docking

Each pane can be docked back to the window.

- Double-click the title bar.
- Right-click the pane, and then click **[Docking]**.
- Drag the title bar to the location where the pane will be docked.

### Hide

When a tab or a pane is no longer needed, it can be hidden.

- Click  in the upper-right corner of the dialog box.
- Right-click the tab or dialog box, and then click **[Hide]**.
- To hide the tab, click **[View]** tab in the Ribbon, and then click the name in the **[View]** tab. To display the tab again, perform the same operation.

### Auto Hide

When a pane is temporarily not needed, it can be moved to the side bar, then displayed by clicking it or positioning the pointer over it. The pane is automatically hidden again when it is no longer being used, for example, when you click anywhere outside of the pane.



- Right-click the tab or the title bar of the pane, and then click **[Auto Hide]**.
  - In the upper-right corner of the pane, click .
- To cancel Auto Hide, right-click the title bar, and then click **[Auto Hide]**, or simply click  in the title bar.

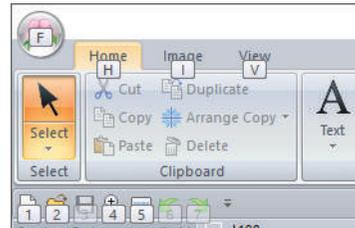


- The Stitch Simulator pane cannot be temporarily hidden (Auto Hide).
- These panes can be returned to their default displays.

►► "Customizing Shortcut keys" on page 99

## ■ Using access keys

When the **<Alt>** key is pressed, a KeyTip (label showing the letter of the access key) appears on each command. On the keyboard, press the key corresponding to the command that you wish to use.

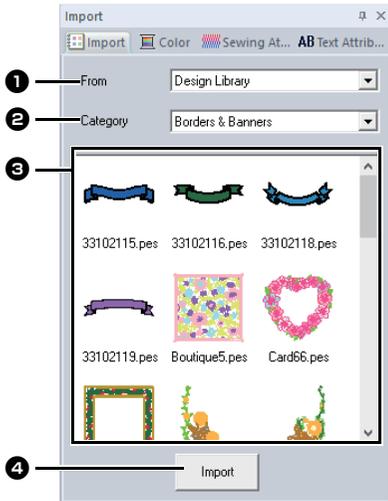


To stop using the access keys and hide the KeyTips, press the **<Alt>** key.

# Example of Importing Embroidery Data

## Using the Import pane

Embroidery data can be imported by using the **[Import]** pane.



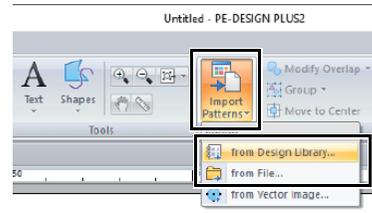
- 1 **From**  
Select a pattern location.
- 2 **Category**  
Select a pattern category.  
The categories in the pattern location selected in the **[From]** selector are listed.
- 3 The patterns in the category selected in the **[Category]** selector appear in the list. Pointing to a pattern and holding down the left mouse button displays a dotted box in the Design Page. This allows you to check the size of the pattern.
- 4 **Import**  
Click this button to import the selected pattern.



- The pattern can also be imported by double-clicking it in the list or by dragging it to the Design Page.
- Multiple files cannot be selected to be imported at the same time.
- ▶▶ "From a folder" on page 44

## Using Import commands

- 1 Click the **[Home]** tab.
- 2 Click **[Import Patterns]** in the **[Import]** group, and then click **[from Design Library]** or **[from File]** from the **[Import]** menu.



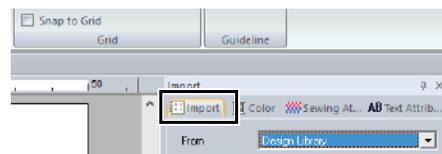
→ The **[Import]** pane appears on the right side of the screen.



The **[Import]** pane can also be displayed by selecting the **[Import Pane]** check box in the **[View]** tab.



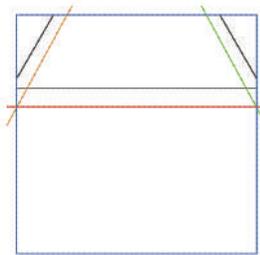
When the **[Color]** pane, **[Sewing Attributes]** pane or **[Text Attributes]** pane is displayed, click the **[Import]** tab to display the **[Import]** pane.



# Basic Operations

## Tutorial 1: Making a Quilt Using an Embroidery Pattern

This section will describe how to create an embroidery pattern for quilting. We will use the Shapes tools to draw lines for positioning fabric and for stitching. This data will then be transferred to an embroidery machine in order to make a quilt.

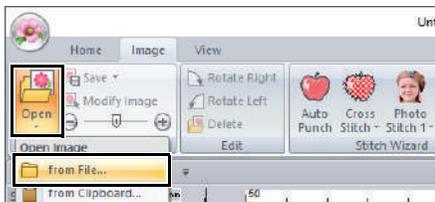


The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_1

<b>Step 1</b>	Importing image data into PE-DESIGN PLUS2
<b>Step 2</b>	Changing the grid settings
<b>Step 3</b>	Scaling an image
<b>Step 4</b>	Adjusting the density of the background image
<b>Step 5</b>	Drawing straight lines for positioning fabric
<b>Step 6</b>	Drawing straight lines for stitching fabrics with right sides together
<b>Step 7</b>	Transferring embroidery patterns to embroidery machines
<b>Step 8</b>	Quilting with the machine

### Step 1 Importing image data into PE-DESIGN PLUS2

- 1 Click the **[Image]** tab.
- 2 Click **[Open]** in the **[Image]** group, and then click **[from File]**.

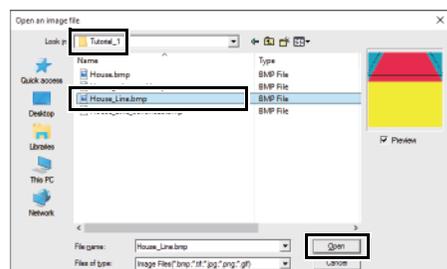


- 3 Double-click the **[Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_1]** folder to open it.

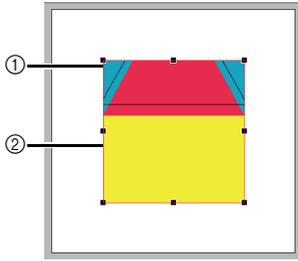


When this application is installed, the **[PE-DESIGN PLUS2]** folder is installed in the Documents folder.

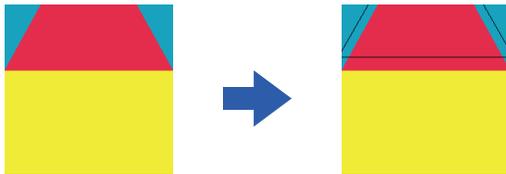
- 4 Select the file **[House\_Line.bmp]**, and then click **[Open]**, or double-click the file's icon.



→ The image appears in the work area.



- ① Handle
- ② Red line



- This image was created by adding lines, separated by the width of the seam allowance, to the outside of the shapes in the illustration of the house.
- To create a similar quilt:
  - First, print the design.
  - Draw lines (for the seam allowances) about 7 mm from each of the shapes in the design.
  - Scan the image, save it to a computer, and then import it into PE-DESIGN PLUS2 as a background image.

## Step 2 Changing the grid settings

Use the grid settings to draw lines for positioning the fabric.

A grid of dotted lines or solid lines can be displayed or hidden, and the spacing for the grid can be adjusted.

**1** Click **[View]** tab.

**2** Specify the grid settings.



**1 Show Grid**

Select this check box to display the grid.

→ For this example, select this check box.

**2 with Axes**

Select this check box to display the grid as solid lines.

→ For this example, select this check box.

**3 Interval**

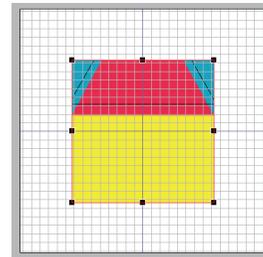
Specify the grid spacing.

→ For this example, set **[Interval]** to 3.5 mm.

**4 Snap to Grid**

Select this check box to align patterns with the grid. The snap feature works whether or not the grid is displayed.

→ For this example, select this check box.

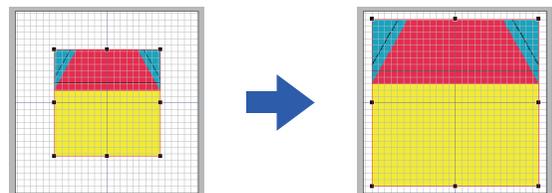


The  button can also be used to switch the grid between being displayed or hidden.



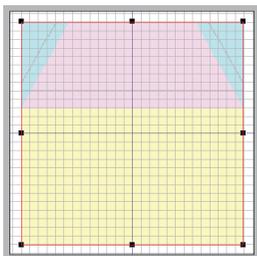
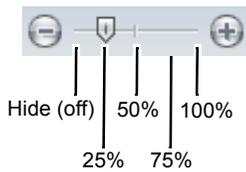
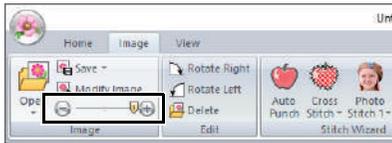
## Step 3 Scaling an image

- 1** Drag the handle to adjust the image to the desired size. Enlarge the image to the maximum size of about 95 mm square and position it with the corners of its outline at intersections of the grid.



## Step 4 Adjusting the density of the background image

- 1 Click the **[Image]** tab.
- 2 Drag the slider, or click **[-]** or **[+]** in the **[Image]** group to change the density of the template image to "25%".

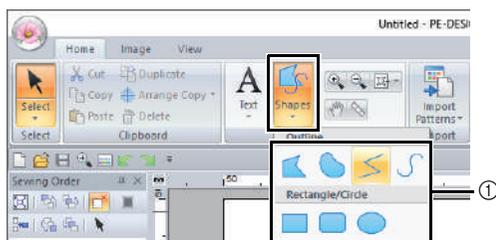


Press the shortcut key **<F6>** to switch between displaying the image (**On (100%)**) to displaying it faded at each density (**75%**, **50%** and **25%**) to hiding the image (**Off**).

## Step 5 Drawing straight lines for positioning the fabric

Shapes can be created either by drawing them with the Shapes tools.

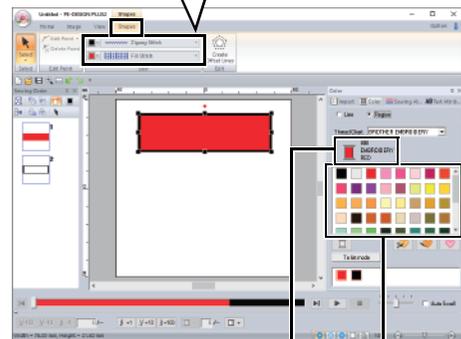
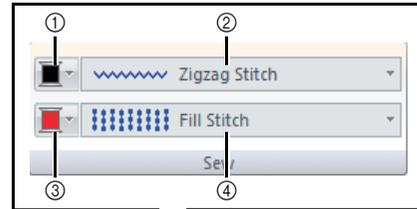
To draw a shape, select a Shapes tool, and then drag the pointer in the Design Page to draw the shape.



① Shapes tools

Specify the sew types for the shape on the **[Shapes]** tab, and the thread colors on the **[Shapes]** tab or the **[Color]** pane.

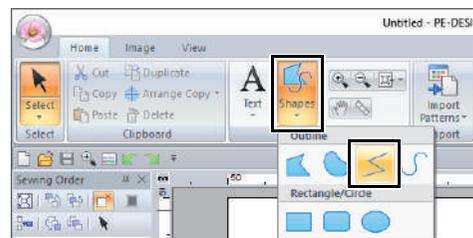
The screen changes so that the sew types and thread colors for the shape can be specified. The thread colors can also be specified on the **[Color]** pane.



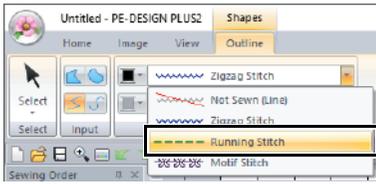
- ① Line color button
- ② Line sew type selector
- ③ Region color button
- ④ Region sew type selector
- ⑤ Selected thread color and color name
- ⑥ Thread color palette

Draw straight lines as reference for positioning the fabric.

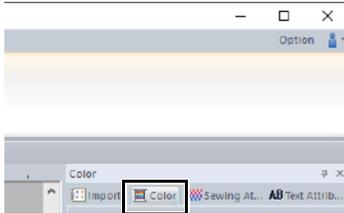
- 1 Click the **[Home]** tab.
- 2 Click **[Shapes]** in the **[Tools]** group, and then click  in the Shapes tools.



- 3** Click the [**Line sew type**] selector, and then select [**Running Stitch**].



- 4** Click the [**Color**] tab to display the color palette.



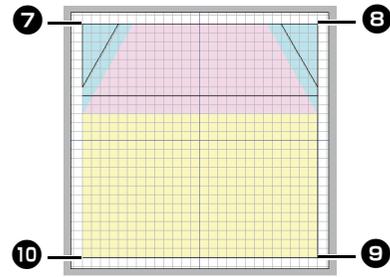
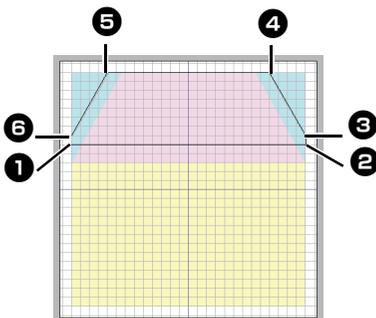
- 5** Click [**BLACK**].



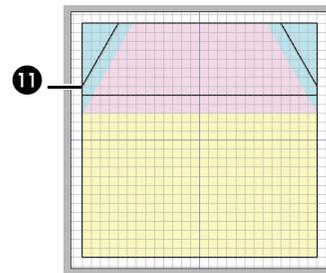
To view the thread colors in a list so that the desired color can more easily be found, click [**To list mode**].

▶▶ "Setting the thread color" on page 61

- 6** Click points **1** through **10**.



- 7** Double-click end point **11**.



The color, sewing attributes and size can also be changed after the shape is drawn.

## Step 6 Drawing straight lines for stitching fabrics with right sides together

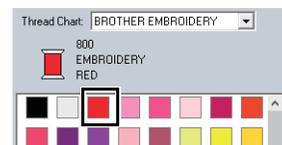
We will draw lines at the positions where the machine will sew. The machine will sew the fabric in the order that the lines are drawn.

A different color must be specified for each line.

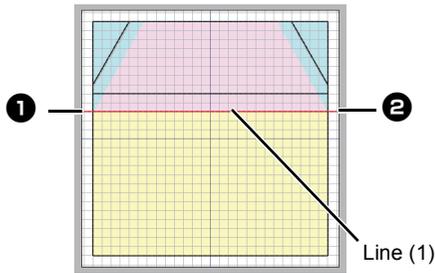
- 1** Repeat **1** through **4** under "Step 5 Drawing straight lines for positioning fabric" on page 16.

- 2** Specify a line color different from what is already selected.

For this example, select [**RED**].

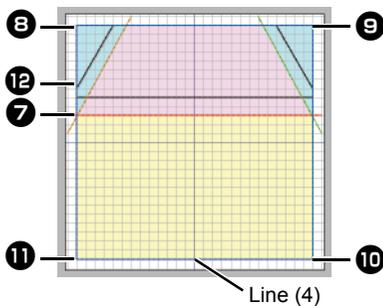
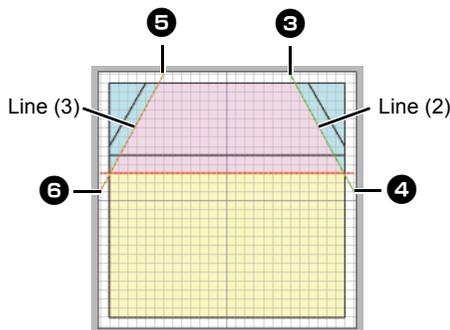


- 3** Click point **1**, and then double-click end point **2** to draw line (1).



- 4** Repeat the previous steps to draw lines (2), (3) and (4).

For this example, select **[LIME GREEN]** for line (2), **[PUMPKIN]** for line (3), and **[BLUE]** for line (4).



## Step 7 Transferring embroidery patterns to embroidery machines

You can sew a pattern transferred to your embroidery machine by writing it to media.

For details, refer to the Operation Manual provided with your embroidery machine.

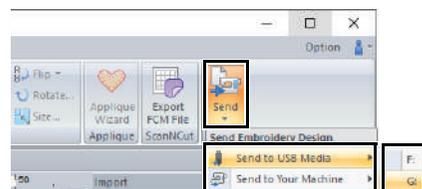


Designs can be transferred to an embroidery machine compatible with USB media or connected to a computer using a USB cable.



The "PE-DESIGN Software Key" cannot be used as USB media. Do not save embroidery files on the "PE-DESIGN Software Key" for transferring.

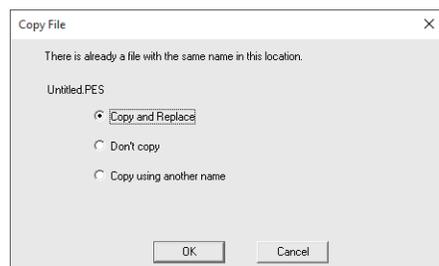
- 1 Plug the USB media into the computer, or connect the embroidery machine to the computer.
- 2 Click the **[Home]** tab.
- 3 Click **[Send]** in the **[Sew]** group, click **[Send to USB Media]** or **[Send to Your Machine]**, and then select the desired drive.



→ Data transfer begins.



If there is already a file with the same name at the destination, the following dialog box appears. Select whether to overwrite the existing file, to stop copying or to copy the file using a different name.



- After the data has been transferred, the message "Finished outputting data." appears, indicating that the transfer is finished. Click [OK].

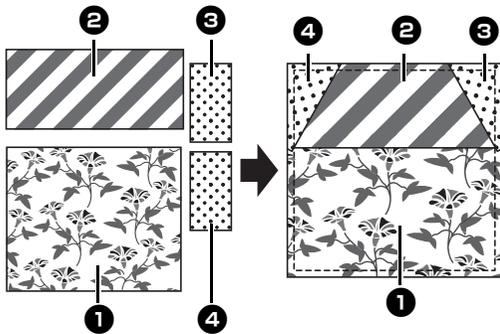


- For details on transferring designs with this method, refer to the Operation Manual provided with your embroidery machine.
- If the connected embroidery machine has been set to Link mode, the command [Send to Your Machine], mentioned in this procedure, cannot be selected. To select this command, return the machine to normal mode.

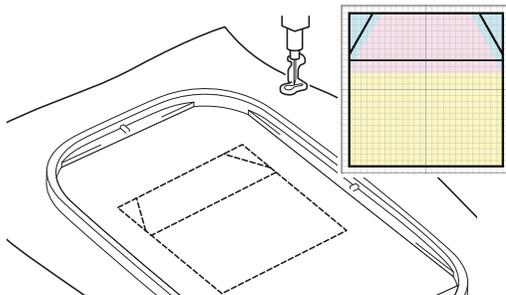
## Step 8 Quilting with the machine

Now, we will use the transferred embroidery patterns to make a quilt with the house pattern.

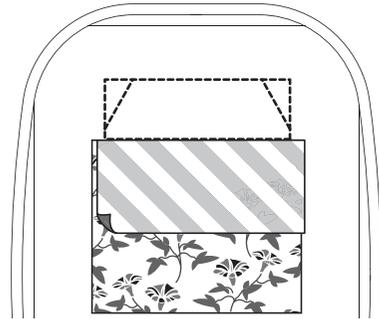
- Cut the fabric for each piece.



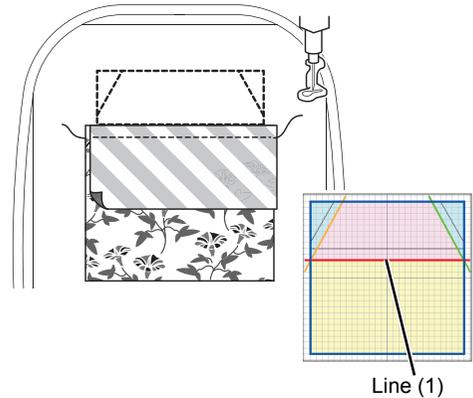
- Hoop the base fabric in the embroidery frame, and then sew the first color for positioning fabric. For this example, sew the [BLACK] line drawn in "Step 5 Drawing straight lines for positioning fabric" on page 16.



- With right sides together, place fabrics 1 and 2 so that their top edges are aligned with the horizontal line at the center of the base fabric.



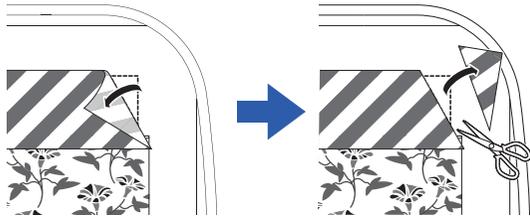
- For this example, sew the [RED] line (1) drawn first in "Step 6 Drawing straight lines for stitching fabrics with right sides together" on page 17.



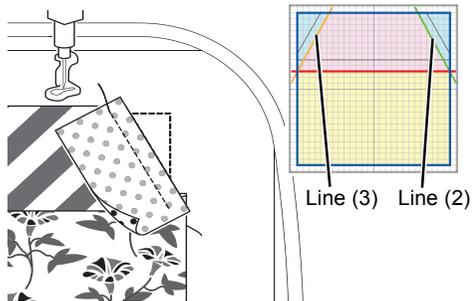
- Fold open the fabrics that were sewn together.



- 6** Fold the right side of fabric **2** along the upper-right diagonal line in the base fabric, and then use scissors to cut the fabric.

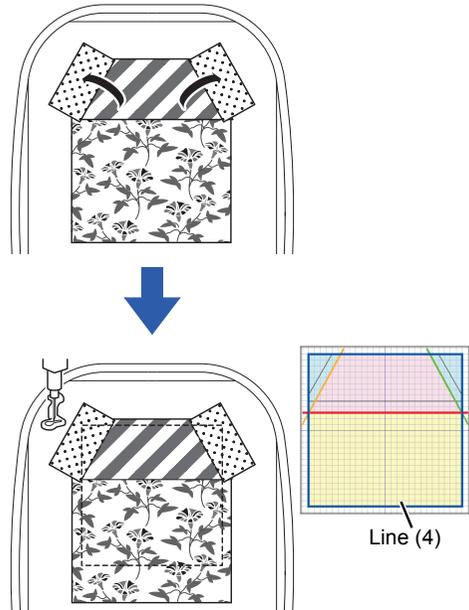


- 7** With its right side down, place fabric **3** on top so that it is aligned with the upper-right diagonal line in the base fabric. Then, start the machine. For this example, sew the **[LIME GREEN]** line (2) drawn in "Step 6 Drawing straight lines for stitching fabrics with right sides together" on page 17.



- 8** Repeat **6** and **7** for fabric **4**, and then start the machine. For this example, sew the **[PUMPKIN]** line (3) drawn in "Step 6 Drawing straight lines for stitching fabrics with right sides together" on page 17.

- 9** Open the fabrics, and then sew around the house pattern. For this example, sew the **[BLUE]** line (4) drawn in "Step 6 Drawing straight lines for stitching fabrics with right sides together" on page 17.



- 10** Cut around the house pattern with a 7 mm seam allowance.



# Tutorial 2: Arranging Stitch Patterns

This section will describe how to arrange stitch patterns in order to create an embroidery design.

Built-in stitch patterns can be duplicated, flipped over and rotated to create an original embroidery design.

We recommend using a built-in stitch pattern in its original size, or resizing it only slightly.



The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_2

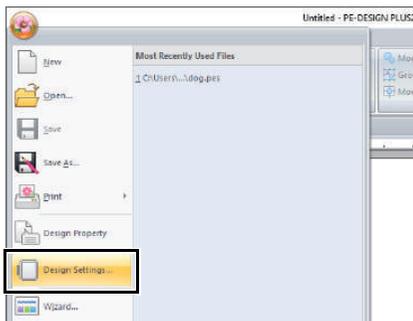


Stitch patterns contain a collection of information including needle drop points and thread color order. Upon being resized, the stitching becomes either more dense or light while maintaining the unchanged needle drop point pattern. These changes may have an influence on the quality of your embroidery project.

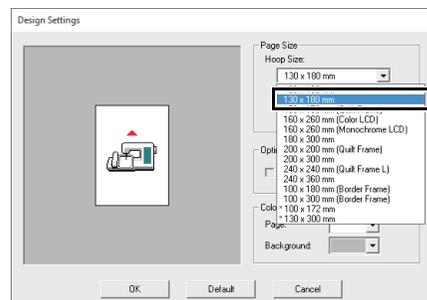
<b>Step 1</b>	Setting the design page size
<b>Step 2</b>	Importing and rotating a pattern
<b>Step 3</b>	Duplicating a pattern
<b>Step 4</b>	Flipping a pattern
<b>Step 5</b>	Arranging patterns

## Step 1 Setting the design page size

1 Click , then [Design Settings].

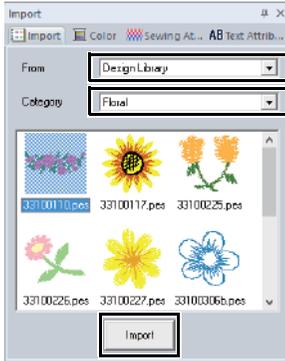


2 From the [Hoop Size] selector, select [130 × 180 mm], and then click [OK].

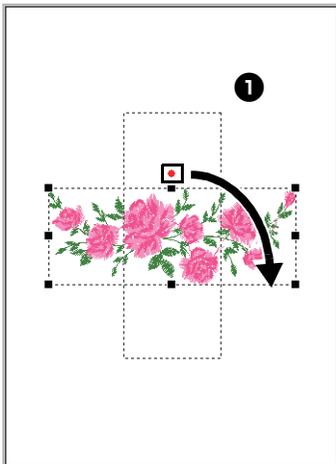


## Step 2 Importing and rotating a pattern

- 1 In the [Import] pane, select [Design Library] from the [From] selector, then [Floral] from the [Category] selector. Select [33100110.pes], and then click [Import].



- 2 While holding down the <Shift> key, drag the red dot at the top of the pattern to the right to rotate the pattern 90° clockwise ①.

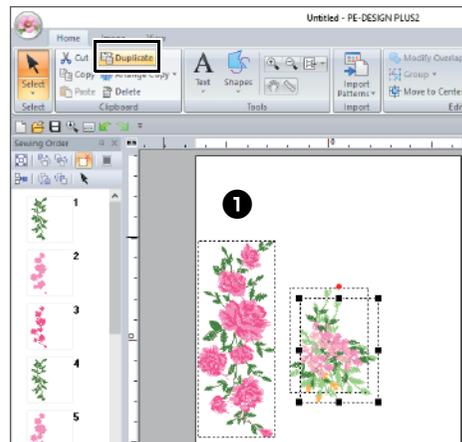


Holding down the <Shift> key while dragging the red dot rotates the pattern in 15° increments.

- 3 Drag the pattern ① to the left side.

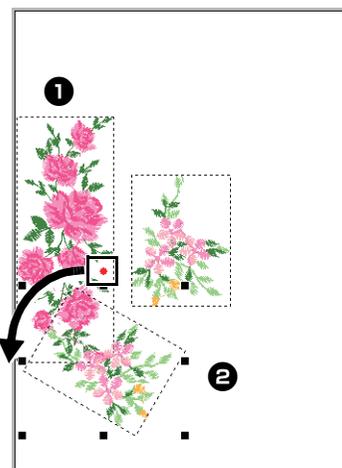
## Step 3 Duplicating a pattern

- 1 As in "Importing and rotating a pattern" on page 22, import pattern [33103503a.pes] from the [Floral] category in the [Import] pane.
- 2 Select the pattern, and then click the [Home] tab.
- 3 Click [Duplicate] in the [Clipboard] group to duplicate the pattern.  
→ The duplicate appears, overlapping the original pattern and offset down and to the right.



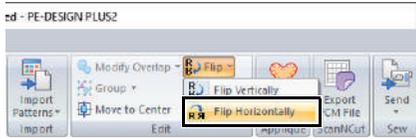
The [Duplicate] command can also be selected from the menu that appears after right-clicking the selected pattern.

- 4 Move the duplicate pattern below pattern ①, and then rotate it 60° counterclockwise ②.

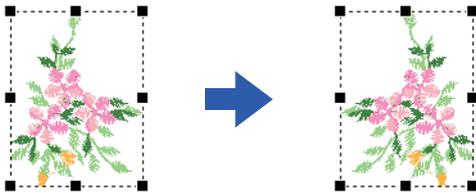


## Step 4 Flipping a pattern

- 1 Select the original pattern, then click **[Flip]** in the **[Edit]** group of the **[Home]** tab, and then click **[Flip Horizontally]**.

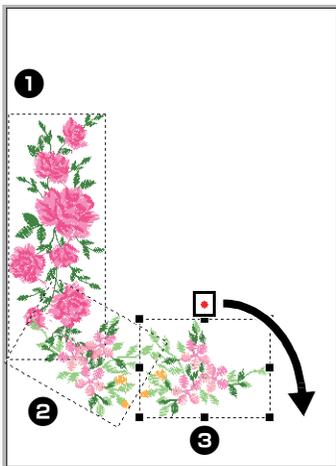


→ The selected pattern is flipped horizontally.



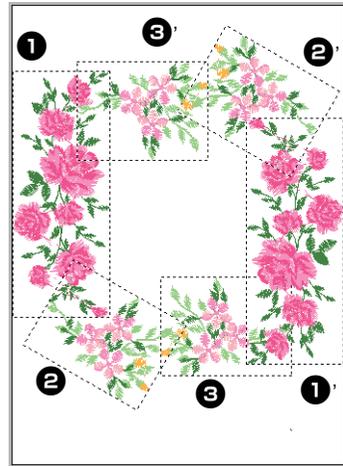
The **[Flip]** command can also be selected from the menu that appears after right-clicking the selected pattern.

- 2 Move the flipped pattern to the right of pattern ②, and then rotate it 90° clockwise ③.

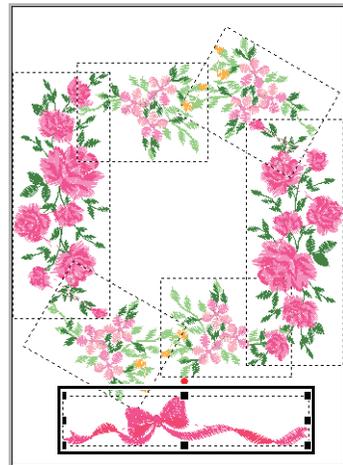


## Step 5 Arranging patterns

- 1 Arrange the patterns to create a circle as shown in the figure, using the **[Duplicate]** and **[Rotate]**.



- 2 Select **[no77\_2.pes]** in the **[Misc]** category of the **[Import]** pane, then click **[Import]**, and then move it below the flower patterns.

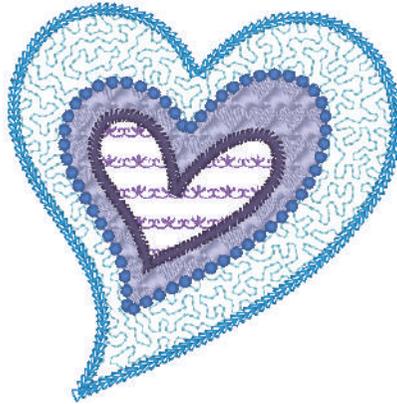


Change the sewing order as desired.

- For details, refer to "Editing the sewing order" on page 38.

# Tutorial 3: Changing the Stitching for Each Shape Pattern

The sew type for areas within closed outlines of text patterns or shapes can be specified.

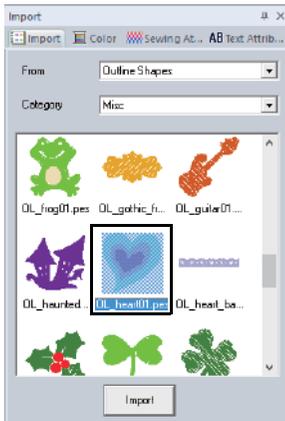


The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_3

<b>Step 1</b>	Importing an outline shape
<b>Step 2</b>	Applying motif stitches to line
<b>Step 3</b>	Applying programmable stitches to a shape
<b>Step 4</b>	Applying motif stitches to a shape

## Step 1 Importing an outline shape

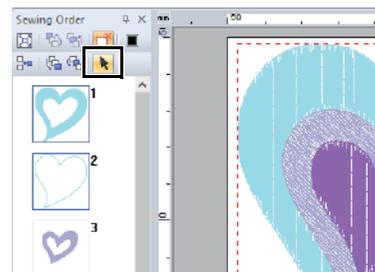
- 1 In the **[Import]** pane, select **[Outline Shapes]** from the **[From]** selector, then **[Misc]** from the **[Category]** selector. Select **[OL\_heart01.pes]**, and then click **[Import]**.



## Step 2 Applying motif stitches to line

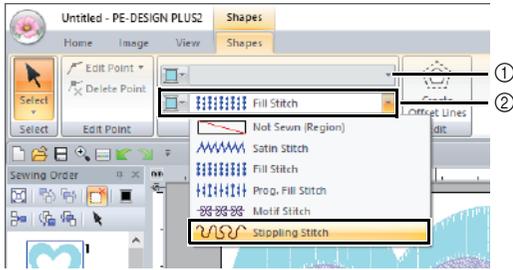
Detailed line and region attribute settings can be specified from the **[Sewing Attributes]** pane. Now, we will specify settings for line sewing and region sewing for the largest heart pattern.

- 1 Click on workspace to deselect the heart pattern.  
While holding down the **<Ctrl>** key, click the line (frame 2) and region (frame 1) of the largest heart pattern arranged in the **[Sewing Order]** pane.
- 2 Click  at the top of the **[Sewing Order]** pane.



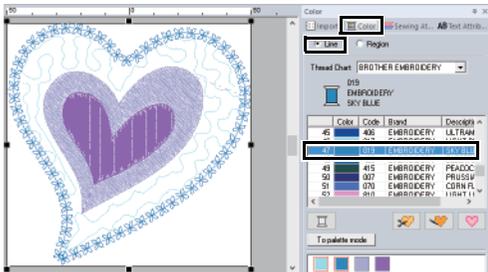
# Tutorial 3: Changing the Stitching for Each Shape Pattern

- 3 Click the **[Shapes]** ribbon tab.
- 4 Click the **[Region sew type]** selector in the **[Sew]** group, and then select **[Stippling Stitch]**.



- ① Line sew type selector
- ② Region sew type selector

- 5 Click the **[Line sew type]** selector in the **[Sew]** group, and then select **[Motif Stitch]**.
- 6 Click the **[Color]** tab. Select the **[Line]** check circle, and then click **[SKY BLUE]** in the list.

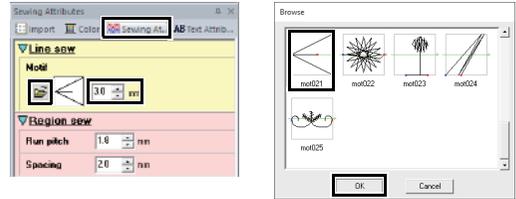


- 7 Click the **[Sewing Attributes]** tab and then click .

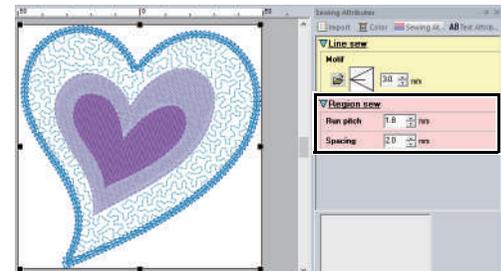
If the **[Sewing Attributes]** pane is not displayed, click the **[View]** tab, then **[Attributes]**, then **[Sewing Attributes]**.

Select the desired motif stitch pattern from the **[Browse]** dialog box, and then click **[OK]**. Specify the motif size.

For this example, select **[mot021]** and 3.0 mm for the motif size.



- 8 Specify the region sew settings. For this example, select 1.8 mm for the run pitch and 2.0 mm for the spacing.

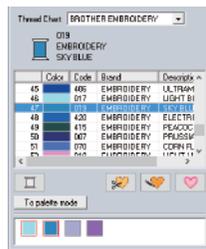


When the color palette is displayed in list mode, the names of the thread colors are shown. To switch to list mode, click **[To list mode]** in the **[Color]** pane.

Palette mode

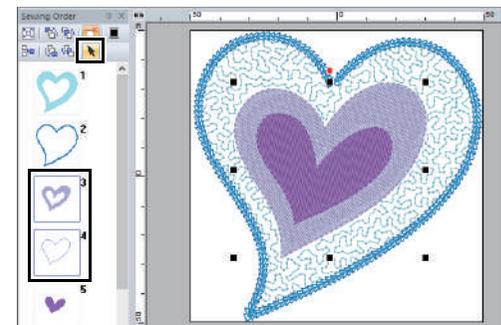


List mode



## Step 3 Applying programmable stitches to a shape

- 1 Select the second-largest heart pattern (frames 3 and 4) in the **[Sewing Order]** pane.



- Set a color and sew type for each shape as follows.

### Line sew

- **Line sew type** : Motif Stitch
- **Line color** : CORN FLOWER BLUE

### Region sew

- **Region sew type** : Prog. Fill Stitch



- Click the **[Sewing Attributes]** tab, and then specify the following settings.

### Line sew

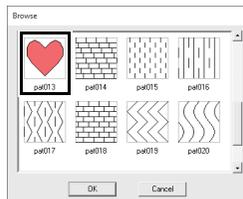
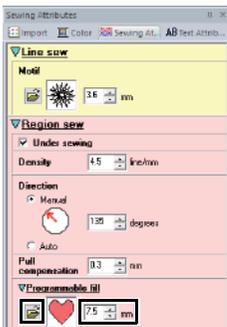
- **Motif pattern** : mot022 
- **Motif size** : 3.6 mm

### Region sew

- **Under sewing** : ON
- **Density** : 4.5 line/mm
- **Direction** : Manual, 135 degrees
- **Pull compensation** : 0.3 mm

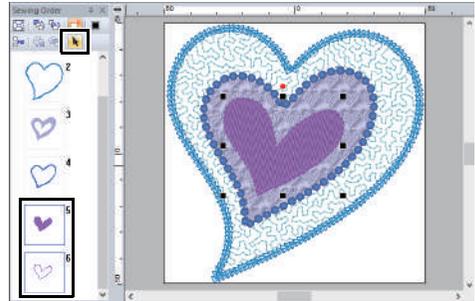
- Click  under the **[Programmable fill]**, select the desired pattern in the **[Browse]** dialog box, and then click **[OK]**.  
For this example, select **[pat013]**.

- **Fill stitch pattern** : pat013 
- **Pattern size** : 7.5 mm



## Step 4 Applying motif stitches to a shape

- Select the smallest heart pattern (frames 5 and 6) in the **[Sewing Order]** pane.



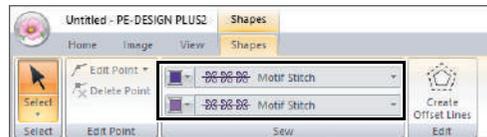
- Click the **[Shapes]** tab.

### Line sew

- **Line sew type** : Motif Stitch
- **Line color** : PURPLE

### Region sew

- **Region sew type** : Motif Stitch



- Click the **[Sewing Attributes]** tab, and then specify the following settings.

### Line sew

- **Motif pattern** : mot024 
- **Motif size** : 3.0 mm

### Region sew

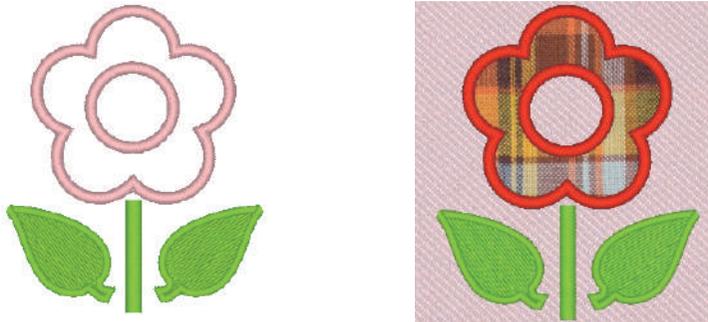
- **Motif pattern** : mot025 
- **Motif size** : 7.5 mm



# Tutorial 4: Editing an Imported Shape to Create an Embroidery Design for an Appliqué

This section will describe how to edit imported shapes and use the Applique Wizard.

The Applique Wizard provides instructions for easily creating appliqués. For this example, we will create an appliqué that has holes (empty regions).



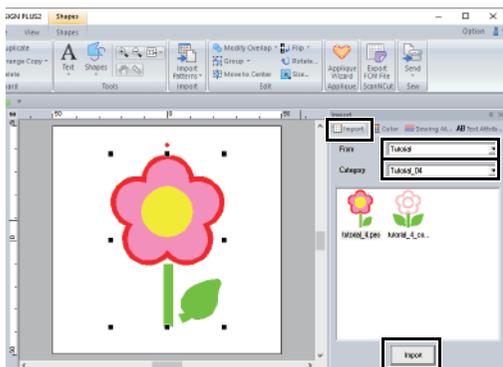
The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_4

<b>Step 1</b>	Importing patterns
<b>Step 2</b>	Editing points and modifying shapes
<b>Step 3</b>	Using the mirror copy tool
<b>Step 4</b>	Specifying hole sewing
<b>Step 5</b>	Creating appliqués

## Step 1 Importing patterns

Shapes can be created either by drawing them with the Shapes tools or by importing sample shape patterns.

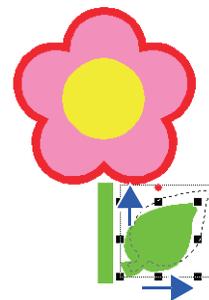
- To import a shape, select **[Tutorial]** from the **[From]** selector of the **[Import]** pane, then **[Tutorial\_04]** from the **[Category]** selector. Select the shape, and then click **[Import]**.



## Step 2 Editing points and modifying shapes

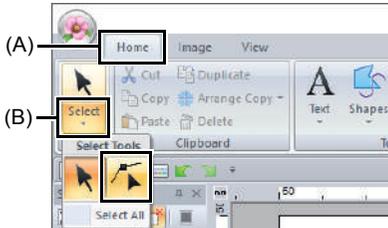
Now, we will edit a point in the leaf.

- Click on workspace to deselect the flower. Click on the leaf to select it. Left click and drag the handle to adjust the leaf. Place the pointer over the leaf so that the shape of the pointer changes to a crosshair, and then drag the leaf to the desired position.

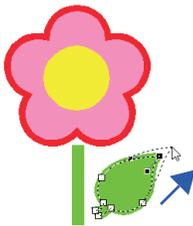


## 2 Edit a point.

- (A) Click the **[Home]** tab.
- (B) Click **[Select]** in the **[Select]** group, and then click .

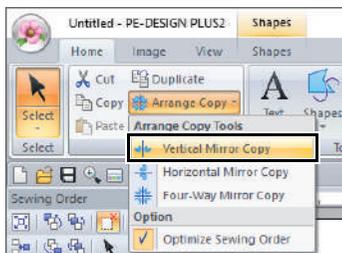


- (C) Click the shape for the leaf.  
→ The points in the shape appear.
- (D) Select the point, and then drag the point to the desired location.

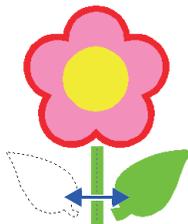


## Step 3 Using the mirror copy tool

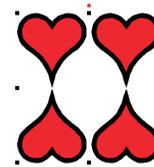
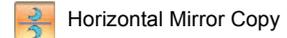
- 1 Click the **[Home]** tab.
- 2 Click **[Select]** in the **[Select]** group, then click , and then select the leaf.
- 3 Click **[Arrange Copy]** in the **[Clipboard]** group, and then click **[Vertical Mirror Copy]**.



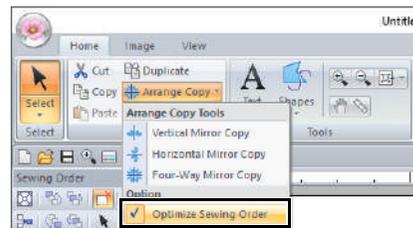
- 4 Move the pointer, and then click when the patterns are arranged as desired.



- Arrange copy type



- Optimize sewing order  
Before using an **[Arrange Copy]** tool, optimizing the sewing order adjusts the sewing order of the patterns created with the **[Arrange Copy]** tool in order to reduce the number of thread color changes.



**[Optimize Sewing Order]**  
not selected

**[Optimize Sewing Order]**  
selected



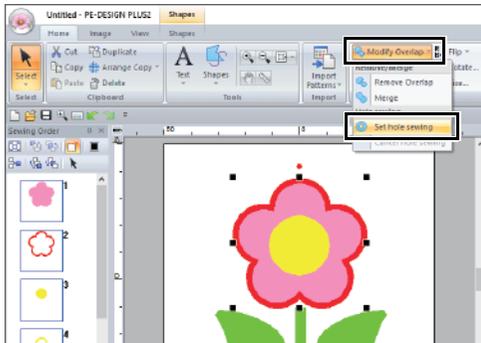
The sewing order is the order in which patterns are created.

Patterns will be sewn so that those with the same thread colors will be connected.

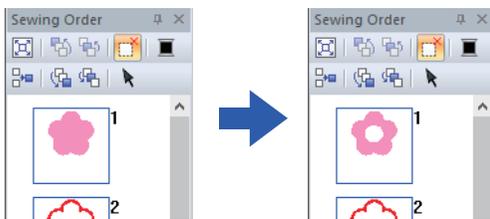
## Step 4 Specifying hole sewing

Now, we will apply a setting so that the overlapping areas are not sewn twice.

- 1 While holding down the <Ctrl> key, click the circle, then the flower.
- 2 Click the **[Home]** tab, then click **[Modify Overlap]** in the **[Edit]** group, and then click **[Set hole sewing]**.



→ When hole sewing is specified, the pattern displayed in the **[Sewing Order]** pane changes.

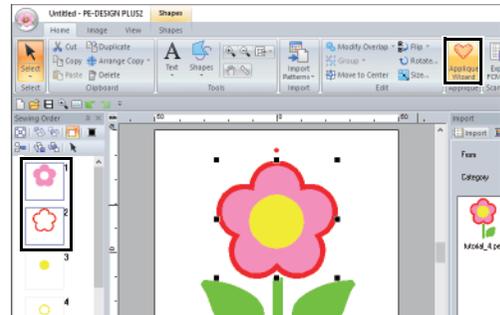


Hole sewing cannot be applied if one of the patterns is not completely enclosed within the other pattern.

▶▶ "Hole sewing" on page 56.

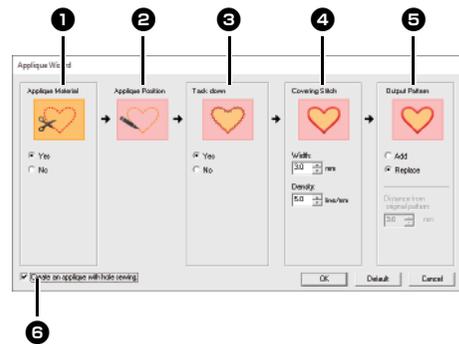
## Step 5 Creating appliqué

- 1 Select the outer pattern, and then click **[Applique Wizard]** in the **[Home]** tab to start the **[Applique Wizard]** dialog box.



Be sure to select the outer pattern before starting the **[Applique Wizard]**.

- 2 Specify settings in the **[Applique Wizard]** dialog box in the following order ① - ⑥.



### ① Applique Material

Specify cutting lines for the appliqué. The outline of the appliqué can be sewn as running stitches to be sewn onto the appliqué fabric as a guide for cutting it out.  
→ For this example, select **[Yes]**.

### ② Applique Position

The guideline for attaching the appliqué piece is set to be sewn automatically.

### ③ Tack down

Specify basting of the appliqué. The appliqué piece can be basted onto the base fabric.

→ For this example, select **[Yes]**.

## 4 Covering Stitch

Specify the stitching for securing the appliqué. Select the sew type and other attributes (**[Width]** and **[Density]**) for finishing the appliqué.

→ For this example, set **[Width]** to "3.0 mm" and **[Density]** to "5.0 line/mm".

## 5 Output Pattern

Select whether covering stitches will be added around the entire pattern (**[Add]**) or covering stitches will be sewn for shape lines (**[Replace]**).

→ For this example, select **[Replace]**.

Add



Replace



▶▶ "About the Output Pattern settings" on page 30.

## 6 Create an applique with hole sewing

Select this check box when creating an appliqué with holes (empty regions).

→ For this example, select this check box.



- The **[Create an applique with hole sewing]** check box appears when only the outer pattern with hole sewing applied or only a text pattern (with fonts other than built-in fonts 025 and 029, or a Small Text font) is selected, or when **[Replace]** is selected under **[Output Pattern]**.

\* Multiple text patterns can be selected if certain conditions are met.

- The shape of the appliqué material appears as shown below, depending on whether the **[Create an applique with hole sewing]** check box is selected or not.



When the **[Create an applique with hole sewing]** check box is cleared

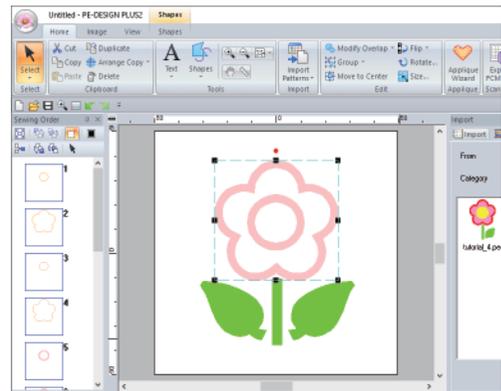


When the **[Create an applique with hole sewing]** check box is selected



To return all parameters to their default settings, click **[Default]**.

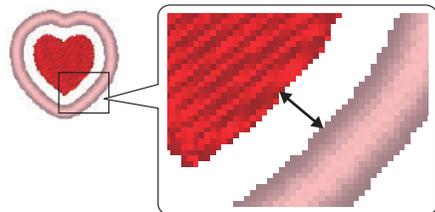
- Click **[OK]** to exit the Applique Wizard dialog box.



## About the Output Pattern settings

### Add

- Covering stitches will be created around the original pattern.
- Under **[Distance from original Pattern]**, specify the distance of the covering stitches from the original pattern.



- This can be used to combine various patterns.



The **[Add]** setting is not available if the stitch pattern does not exist, for example, when both the line and region sew types are set to **[Not Sewn]**.

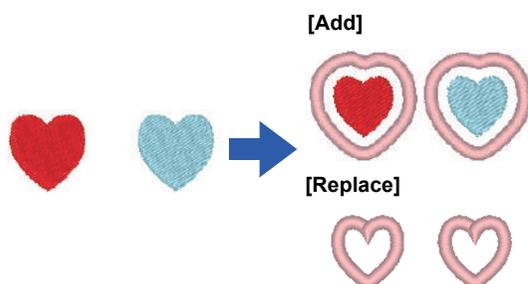
## Replace

- Covering stitches will be sewn for outlines in the original pattern.
- The original pattern will be deleted.
- Shape and text patterns can be used as the original pattern. However, the following patterns cannot be used.
  - Open lines
  - Closed lines that are intersecting
  - Text created with built-in fonts 025 and 029, or a Small Text font
  - Original patterns containing both a shape pattern and a text pattern

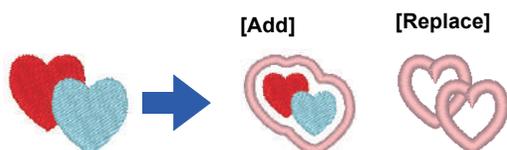


When multiple patterns are selected, covering stitches will be created as shown below.

- If the patterns do not overlap  
Covering stitches will be created for each pattern.



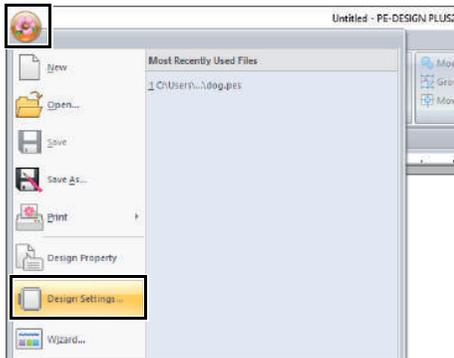
- If the patterns overlap  
With the **[Add]** setting, covering stitches will be created for an outline around all patterns.



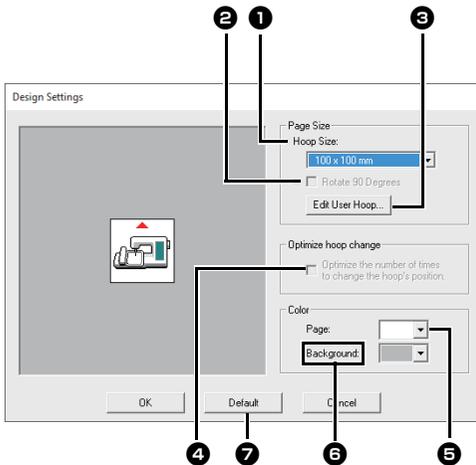
# Specifying the Design Page Settings

The color and size of the Design Page can be changed. You can select a Design Page size according to the size of hoop that you will be using with your embroidery machine. You can also specify a custom size for the Design Page for embroidery patterns that will be split and embroidered in multiple sections.

- 1 Click , then **[Design Settings]**.



- 2 Specify the settings for the Design Page, and then click **[OK]**.



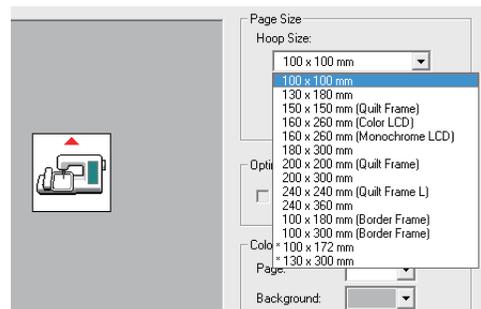
- 1 **Hoop Size**  
Select the desired hoop size from the selector.
- 2 **Rotate 90 Degrees**  
Select this check box to arrange the pattern in a Design Page rotated 90°.
- 3 **Edit User Hoop**  
Click this button to display the **[User Hoop Settings]** dialog box, where a user hoop size can be added. The added user hoop size appears at the bottom of the list.
  - ▶▶ "Specifying a user hoop size" on page 33

- 4 **Optimize hoop change**  
This setting can be selected if a multi-position hoop (100 × 172 mm or 130 × 300 mm) has been selected as the Design Page size.  
Select the check box to optimize the sewing order/order of hoop position changes so that the number of times that the hoop position is changed is reduced to the minimum.  
This reduces the risk of misalignment in the embroidery pattern or uneven stitching from changing the hoop position too often.

- 5 **Page**  
Select the desired color for the Design Page.
- 6 **Background**  
Select the desired color for the work area.
- 7 **Default**  
To return to the default settings, click this button.

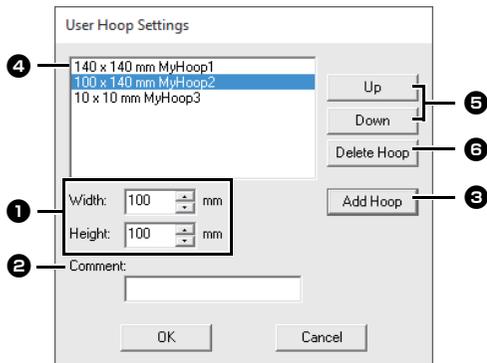


- The Design Page sizes **100 × 172 mm**, **130 × 300 mm** indicated by the "\*", are used to embroider multi-position designs using a special embroidery hoop attached to the embroidery machine at three installation positions.



- ▶▶ "Tutorial 8: Creating Design for Multi-Position Hoops" on page 93
- Do not select a hoop size larger than the embroidery hoop that can be used with your machine.

## Specifying a user hoop size



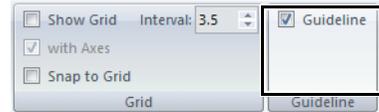
- 1 Width, Height**  
Type in the size of the hoop to be added.
- 2 Comment**  
If text was entered in this box, that text appears beside the size.
- 3 Add Hoop**  
Click this button to add the hoop size.
- 4 User Hoop List**  
The added hoop size appears in the list. Select a hoop size in this list to change the display order or to delete it.
- 5 Up, Down**  
Click these buttons to move the selected hoop size up or down in the display order.
- 6 Delete Hoop**  
Click this button to delete the selected hoop size.



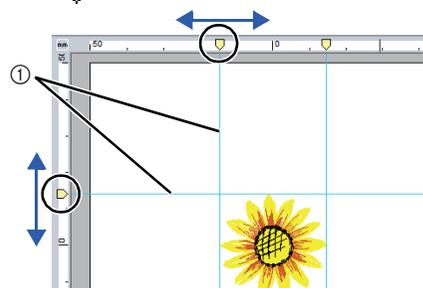
- A User Hoop cannot rotate 90°.
- A User Hoop cannot be added to the Section Size (for Hoop Size) selector under Custom Size.
- Do not create a Custom Hoop larger than the embroidery hoop that can be used with your machine.

## Changing the guideline settings

- 1** Click the **[View]** tab.
- 2** Select the **[Guideline]** check box in the **[Guideline]** group.



- 3** Click a ruler in the Design Page.  
→  appears, and a guideline is drawn.



- ① Guideline
  - To move a guideline, drag .
  - To delete a guideline, click .



- A guideline is added each time the ruler is clicked. In addition, up to 100 guidelines each can be added to the horizontal and vertical rulers.
- While a guideline is being dragged, its position is shown in the status bar.
- When the **[Guideline]** check box is cleared, the guidelines are hidden.
- If both the **[Show Grid]** and **[Snap to Grid]** check boxes are selected in the **[Grid]** group, the guidelines will be added/moved along the lines of the grid.

▶▶ "Changing the grid settings" on page 15

# Checking Embroidery Patterns

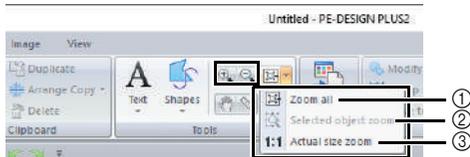
## Zooming

- 1 Click the **[Home]** tab.
- 2 Click  or  in the **[Tools]** group.



-  : Click the Design Page to zoom in. (Right-click the Design Page to zoom out.)
-  : Click the Design Page to zoom out. (Right-click the Design Page to zoom in.)

Otherwise, click  beside , and then click **[Zoom all]**, **[Selected object zoom]** or **[Actual size zoom]**.



- ① **Zoom all**  
The entire Design Page is displayed to fit within the window. The same operation can be performed by clicking  in the **[Tools]** group.
- ② **Selected object zoom**  
The Design Page is zoomed to display only the selected objects.
- ③ **Actual size zoom**  
The Design Page is displayed at its actual size.



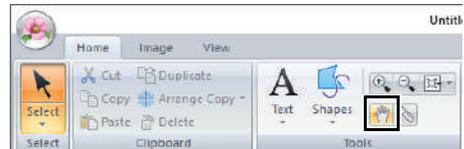
- Zooming is also possible by dragging the **[Zoom]** slider in the status bar or clicking the Zoom ratio.
- You can also zoom in or out when any other tool is selected by holding down the **<Ctrl>** key while rotating the mouse wheel.

▶▶ "PE-DESIGN PLUS2 Window" on page 10

## Using the Pan tool

The part of the work area that is displayed can easily be changed by using the Pan tool.

- 1 Click the **[Home]** tab.
- 2 Click  in the **[Tools]** group.



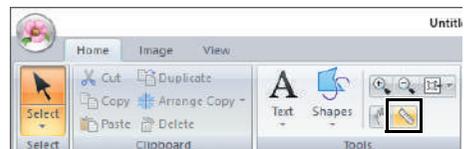
- 3 Drag the work area to view the desired part.



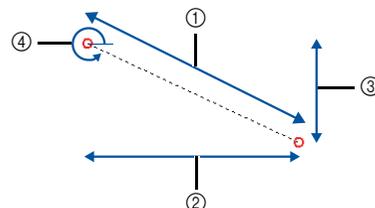
- You can also pan the work area when any other tool is selected by holding down the **<Space>** key while dragging the pointer.
- To scroll horizontally, hold down the **<Alt>** key while rotating the mouse wheel.

## Using the Measure tool

- 1 Click the **[Home]** tab.
- 2 Click  in the **[Tools]** group.



- 3 Click the two points, one on each end of the distance that you want to measure.  
→ The length appears in the status bar at the bottom of the window.

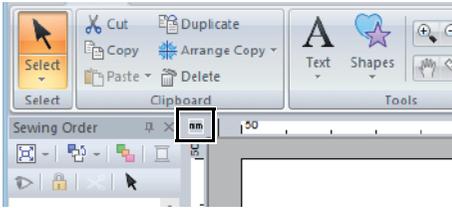


Length = 67.94 mm ( Width = 60.40 mm, Height = 31.10 mm ), 333 degrees

- ① Length
- ② Width
- ③ Height
- ④ Angle



Click **mm** / **in.** to switch the measurement units between millimeters and inches.

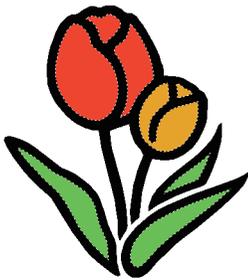


## Changing the display of the embroidery design

- 1 Click the **[View]** tab.
- 2 Click **[Solid]**, **[Stitch]** or **[Realistic]** in the **[View Mode]** group.



### ■ Solid View



### ■ Stitch View



You can display a stitch view of it in order to see how the stitching is connected.

### ■ Realistic View

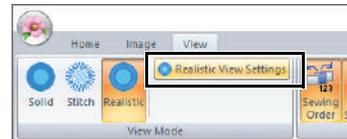


You can display a realistic view of it in order to see how the design will appear once it is sewn.

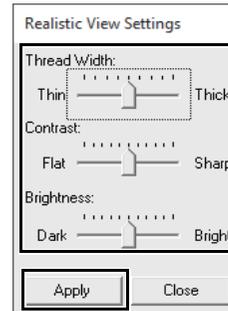


#### Changing realistic view settings

1. Click the **[View]** tab.
2. Click **[Realistic View Settings]** in the **[View Mode]** group.

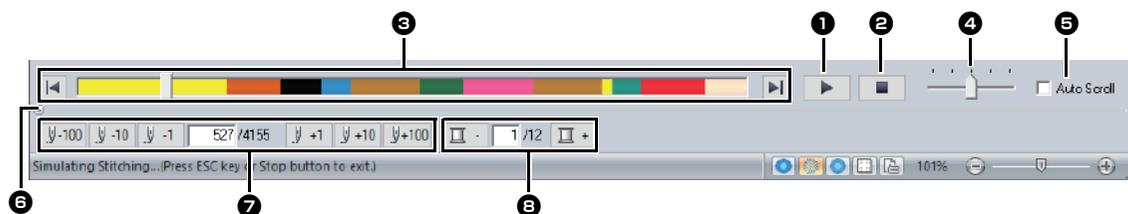


3. If necessary, specify settings for **[Thread Width]**, **[Contrast]** and **[Brightness]**, and then click **[Apply]** (**[OK]**).



## Checking the stitching with the Stitch Simulator

- 1 Click the buttons to view a simulation of the stitching.



- 1 Starts the stitching simulation. During stitching simulation, this button changes to , which can be clicked to temporarily stop the simulation.

- 2 Stops the simulation and returns to the previous display.

- 3 The slider shows the current location in the simulation. In addition, the slider can be moved to change the position in the simulation.

: Returns to the beginning of stitching and stops the simulation.

: Advances to the end of stitching and stops the simulation.

- 4 Drag the slider to adjust the simulation stitching speed.

- 5 Select this check box to automatically scroll the simulation of the pattern when it is too large to be fully displayed.

- 6 Click to hide the bottom section of the Stitch Simulator. Click  to display it again.

- 7 Shows the number of the current stitch/total number of stitches.

  : Reverses the simulation by the indicated number of stitches.

  : Advances the simulation by the indicated number of stitches.

- 8 Shows the number of the color being drawn/total number of colors used.

 -: Returns to the beginning of stitching for the current or previous thread color.

 +: Advances to the beginning of stitching for the next color.



If the Stitch Simulator is not displayed at the bottom of the window, click **[Stitch Simulator]** on the **[View]** tab.



- The zoom tools and pan tool can be used while a simulation is being viewed. If any other command is selected, the simulation stops.
- If a value is entered at **7** or **8**, the simulation is reversed/advanced to the indicated location.



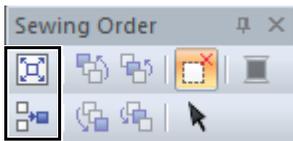
- If a pattern was selected when the stitching simulation was started, only the selected pattern is drawn in the simulation.
- The **[Auto Scroll]** check box is not available in Realistic View.

## Checking and Editing the Sewing Order

- 1 Click the **[View]** tab.
- 2 Click **[Sewing Order]** in the **[Show/Hide]** group.  
Clicking the button switches between displaying and hiding the Sewing Order.



- 3 Click and in the **[Sewing Order]** pane.



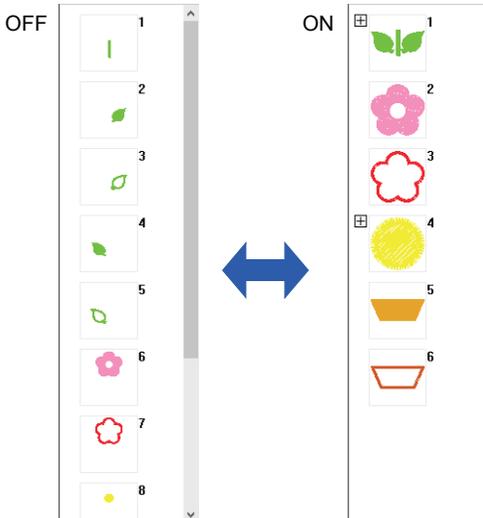
### Zoom

Click to enlarge each pattern to fill its frame.



### Show by color order

Click to display in one frame all patterns of the same color that will be sewn together.

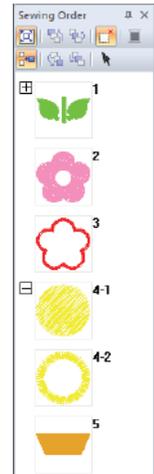


When multiple same color patterns are combined into one frame, appears to the left of that frame.

Click to display the combined same color patterns in separate frames.

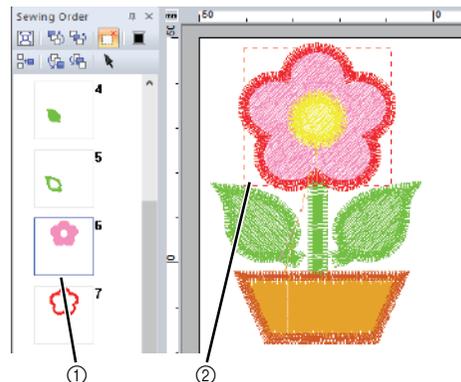
appears under the first frame, and each frame is displayed with a subnumber following the first, to indicate its sewing order within the patterns of the same color.

Click to recombine all of the same color patterns back into one frame.



## Selecting a pattern

- 1 Click a frame containing the pattern in the **[Sewing Order]** pane.



- ① Blue line
- ② Marching line



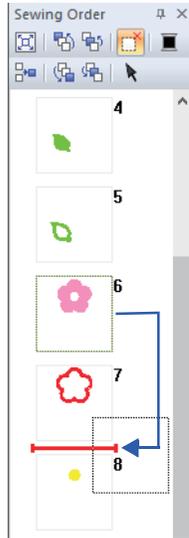
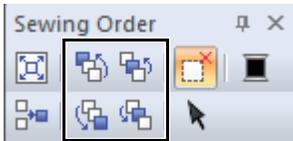
To select multiple patterns, hold down the **<Shift>** or **<Ctrl>** key while clicking the frames for the desired patterns. In addition, multiple frames can be selected by dragging the pointer over them.

- 2 Click in the **[Sewing Order]** pane to select the pattern in the Design Page corresponding to the frame selected in the **[Sewing Order]** pane. The pattern can also be selected by double-clicking its frame in the **[Sewing Order]** pane.

## ■ Editing the sewing order

The sewing order can be changed by selecting the frame containing the pattern, then dragging the frame to the new location. A red line appears, indicating the position where the frame is being moved.

The frame can also be moved by clicking , , , or  in the [Sewing Order] pane.



### Sew First

Click to move the selected pattern to the beginning of the sewing order.



### Sew Previous

Click to move the selected pattern ahead one position in the sewing order.



### Sew Next

Click to move the selected pattern back one position in the sewing order.



### Sew Last

Click to move the selected pattern to the end of the sewing order.

## ■ Changing colors

- 1 Select one or more frames in the [Sewing Order] pane, and then click  at the top of the [Sewing Order] pane.  
→ The Color pane appears in front of the other panes.  
→ The Color pane appears in front of the other panes.
- 2 Click the desired color in the [Color] pane.  
▶▶ "Color pane" on page 61

## ■ Changing sewing attributes

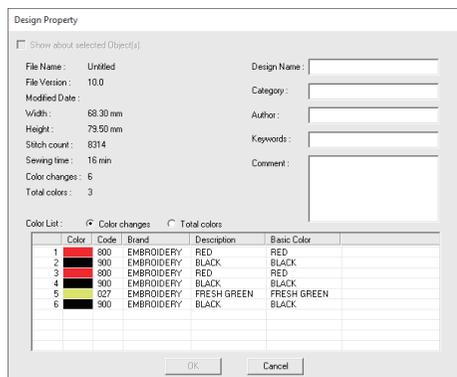
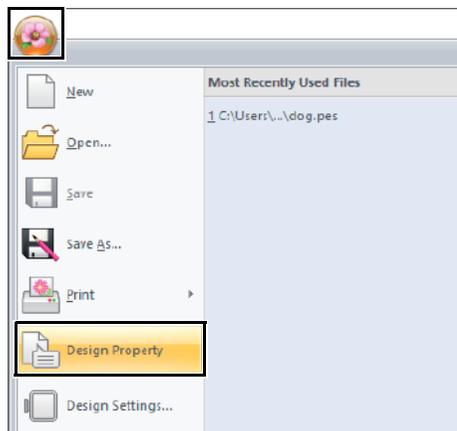
- 1 In the [Sewing Order] pane, select one or more frames containing a pattern other than a stitch pattern.  
→ The sew type selector for the selected frame appears.
- 2 Click the [Sewing Attributes] tab.  
If the [Sewing Attributes] pane is not displayed, click the [View] tab, then [Attributes], and then click [Sewing Attributes].
- 3 Change the sewing attributes and sew type.  
▶▶ "Line sew types", "Region sew types" on page 63 and "Specifying sewing attributes" on page 63

## ■ Displaying/hiding frames not sewn

For details, refer to "Displaying frames not sewn" on page 41.

## Checking embroidery design information

Click , then [Design Property].



You can enter comments and information about the pattern to a saved .pes file.



The information shown in the color list can be switched.

### • Color Changes

The thread color information for each color change is displayed. This allows you to check the total number of thread color changes.

Color List:		<input checked="" type="radio"/> Color changes	<input type="radio"/> Total colors	
Color	Code	Brand	Description	Basic Color
1	800	EMBROIDERY	RED	RED
2	900	EMBROIDERY	BLACK	BLACK
3	800	EMBROIDERY	RED	RED
4	900	EMBROIDERY	BLACK	BLACK
5	027	EMBROIDERY	FRESH GREEN	FRESH GREEN
6	900	EMBROIDERY	BLACK	BLACK

### • Total Colors

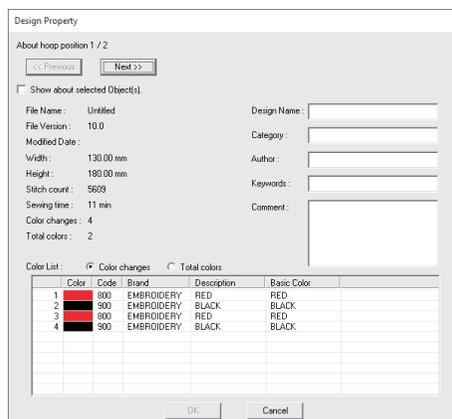
The thread color information for the necessary threads is displayed. This allows you to check the total number of thread colors.

Color List:		<input type="radio"/> Color changes	<input checked="" type="radio"/> Total colors	
Color	Code	Brand	Description	Basic Color
1	800	EMBROIDERY	RED	RED
2	900	EMBROIDERY	BLACK	BLACK
3	027	EMBROIDERY	FRESH GREEN	FRESH GREEN



You can select and check the properties of individual patterns within the embroidery design by selecting the pattern before opening this dialog box. In this case, clearing the **[Show about selected Object(s)]** check box switches the dialog box to display properties for all patterns in the Design Page.

If **[Hoop Size]** was set to a multi-position hoop (100 × 172 mm or 130 × 300 mm), a **[Design Property]** dialog box appears with the sewing information for each hoop of the pattern in the Design Page.



# Tutorial 5: Creating Embroidery Patterns From a Vector File

An embroidery pattern can be created from an image, such as photo or illustration. WMF, EMF and SVG image files can be converted to embroidery patterns.



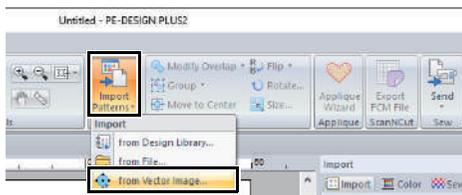
The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_5

<b>Step 1</b>	Importing vector images (SVG files)
<b>Step 2</b>	Displaying frames not sewn
<b>Step 3</b>	Decorating the outer heart shape

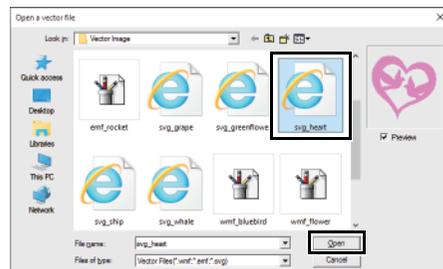
## Step 1 Importing vector images (SVG files)

Vector image data in the ".wmf" (Windows Metafile), ".emf" (Enhanced Metafile) and ".svg" (Scalable Vector Graphics) file formats can be converted to shape patterns.

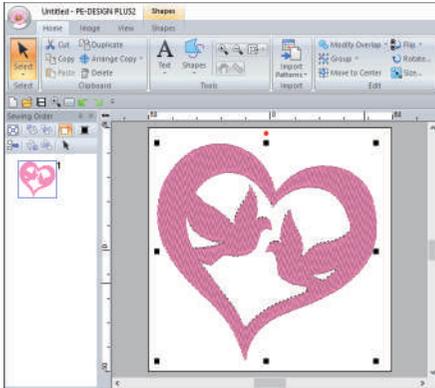
- 1 Click the **[Home]** tab.
- 2 Click **[Import Patterns]** in the **[Import]** group, and then select **[from Vector Image]**.



- 3 Select the file to be imported, and then click **[Open]**.  
For this example, we will import **[svg\_heart.svg]**.



→ The image appears in the **[Design Page]** as a shape pattern.



- Image, text, width of the line, gradient, opacity, and any other styles or attributes of graphics will not be imported. With files in the ".emf" and ".svg" formats, the data is converted while retaining curves.
- The data on all layers of an SVG file, regardless of whether it is displayed or hidden, will be converted into the embroidery pattern.

## Step 2 Displaying frames not sewn

- 1 Click  in the toolbar at the top of the [Sewing Order] pane.



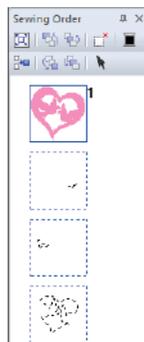
### Hide Objects Not Stitched

Click to display hidden objects that are not to be stitched.

ON



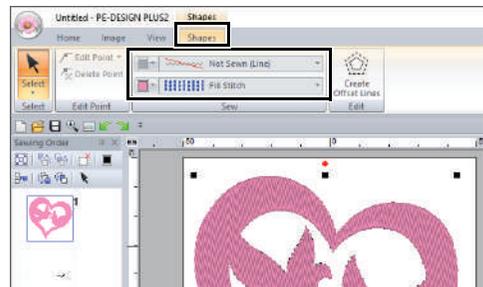
OFF



- Frames containing patterns that will not be sewn can be displayed or hidden.
- As a default, frames containing patterns that will not be sewn will be hidden.
- When frames containing patterns that will not be sewn are displayed, that frame can be selected and its pattern can be edited.

## Step 3 Decorating the outer heart shape

- 1 Select the colored area of the heart shape, and then click [Shapes] tab.



- 2 Specify a color and sew type for each shape as follows.

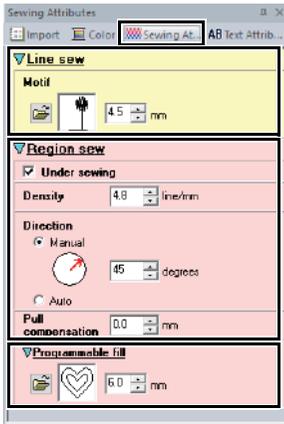
### Line sew

- **Line sew type** : Motif Stitch
- **Line color** : SALMON PINK

### Region sew

- **Region sew type** : Prog. Fill Stitch
- **Region color** : DEEP ROSE

- 3 Click the **[Sewing Attributes]** tab, and then specify the following settings.

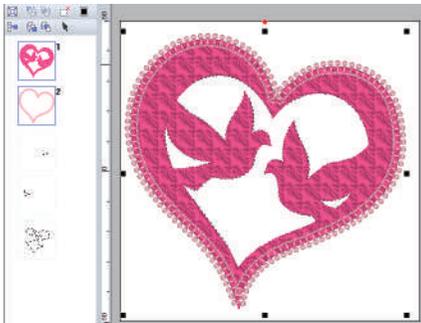


### Line sew

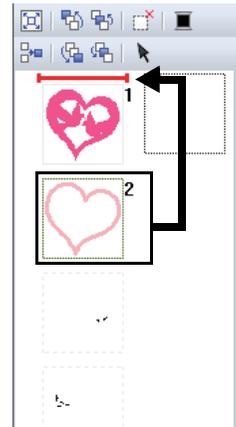
- **Motif pattern** : mot023 
- **Motif size** : 4.5 mm

### Region sew

- **Under sewing** : ON
- **Density** : 4.8 line/mm
- **Direction** : Manual, 45 degrees
- **Pull compensation** : 0.0 mm
- **Programmable fill**
  - **Fill stitch pattern** : pat012 
  - **Pattern size** : 6.0 mm



- 4 In the **[Sewing Order]** pane, drag frame 2 (heart shape outline) to the top (above the outer heart shape).



Change the sewing attributes for objects that are not to be stitched as desired.

## ■ Creating an embroidery pattern using vector images drawn with other image-editing applications

Being converted to the ".svg" file format, vector image files created with other commercially available applications (e.g., ".ai" (Adobe Illustrator Artwork) and ".cdr" (CorelDraw file)) can be imported.

First convert the vector image files into either of WMF, EMF or SVG file format with your applications, and then import them to PE-DESIGN PLUS2 by following the steps described in "Importing vector images (WMF/EMF/SVG)".



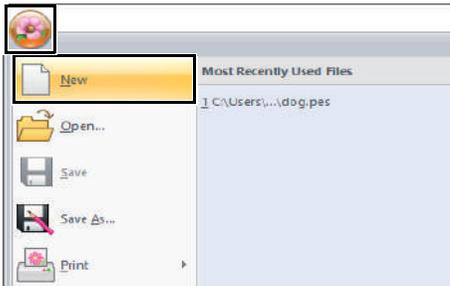
Raster image files (e.g., ".bmp" and ".jpg") can be used as background images in PE-DESIGN PLUS2, or they can be converted to embroidery patterns using the Image To Stitch Wizard.

- ▶▶ For details, refer to "Creating Embroidery Patterns Using Images" on page 73.

# Opening/Importing Embroidery Designs

## Creating a new embroidery design

Click , then **[New]**.

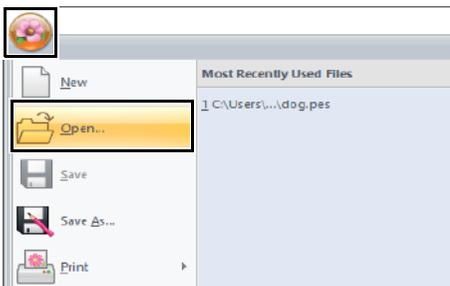


The size of the Design Page can be changed.

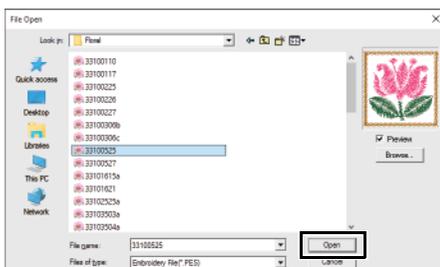
►► "Specifying the Design Page Settings" on page 32

## Opening a PE-DESIGN PLUS2 file

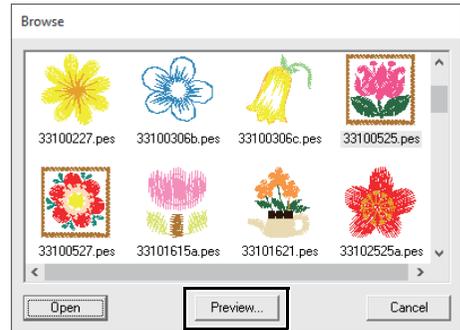
1 Click , then **[Open]**.



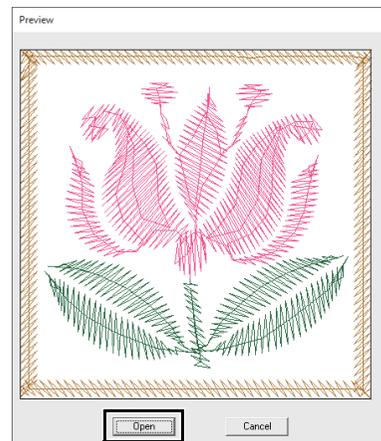
2 Select the drive, the folder and the file, and then click **[Open]**, or double-click the file's icon.



To view the data in the selected folder as thumbnails in the **[Browse]** dialog box, click **[Browse]**.



To see a more detailed design, select a file, and then click **[Preview]**.



- To open the displayed file, click **[Open]**.
- If no files are listed, there are no .pes files in the selected folder. Select a folder containing a .pes file.
- If the selected file is in a format other than the .pes format, the message "Unexpected file format" appears in the **[Preview]** window.



A file can be opened in any of the following ways.

- Drag the embroidery design from file Windows Explorer into the PE-DESIGN PLUS2 window.
- Double-click the embroidery design file in Windows Explorer.



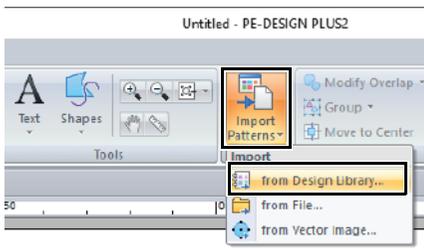
If a .pes file created with PE-DESIGN 10 or earlier is opened with this software, the message "This file will be imported into a new Design Page." appears before the embroidery design is displayed on the new Design Page.

## Importing embroidery designs

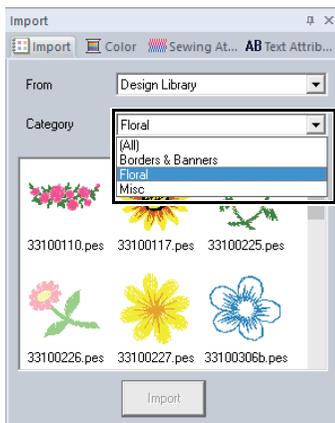
Embroidery designs can be imported from the **[Import]** pane. For more details on the **[Import]** pane, refer to "Example of Importing Embroidery Data" on page 13.

### ■ From Design Library

- 1 Click the **[Home]** tab.
- 2 Click **[Import Patterns]** in the **[Import]** group, and then click **[from Design Library]**.



- 3 From the **[Category]** selector, select a category to display the corresponding embroidery data.



- 4 Select the file icon for the design to be imported, and then click **[Import]**.

### ■ From a folder

- 1 Click the **[Home]** tab.
- 2 Click **[Import Patterns]** in the **[Import]** group, and then click **[from File]**.

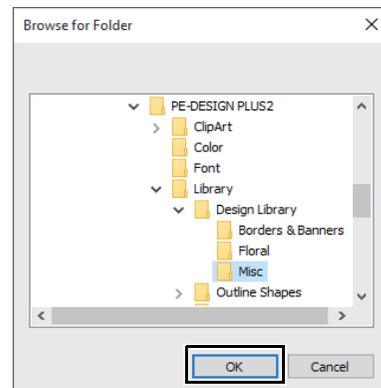


- 3 Click .

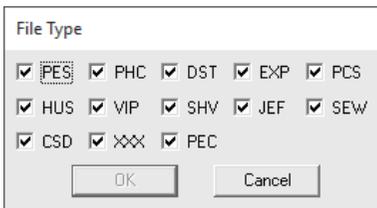


- ① Indicates the path to the currently selected folder.

- 4 Select a folder, and then click **[OK]**.



- 5** Click **[File Type]** in the **[Import]** pane. Select the file name extensions of the corresponding embroidery data to be displayed, and then click **[OK]**.



- 6** Select the file icon, and then click **[Import]**.



When importing designs from other vendors, be sure to choose a design that will fit in the Design Page.



Since .dst files do not contain thread color information, the colors of an imported .dst file may not appear as expected. You can change the thread colors by using functions in the **[Sewing Order]** pane.

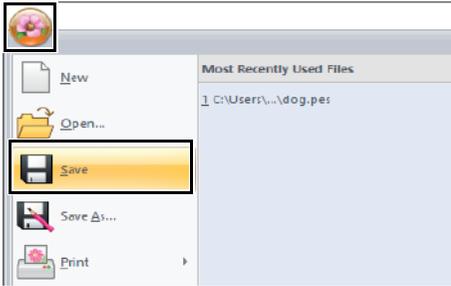
- ▶▶ *"Changing colors" on page 38*
- When importing .dst files, the number of jump stitches for thread trimming can be specified.
  - ▶▶ *"Specifying the number of jumps in embroidery design of the DST format" on page 102*

# Saving and Exiting

## Saving

### Overwriting

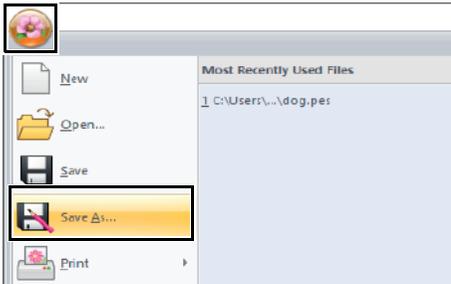
Click , then **[Save]**.



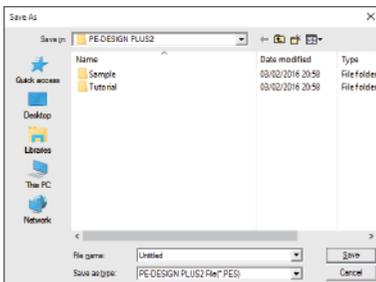
If no file name has been specified or if the file cannot be found, the **[Save As]** dialog box appears.

### Saving with a new name

**1** Click , then **[Save As]**.



**2** Select the drive and the folder, and then type in the file name.

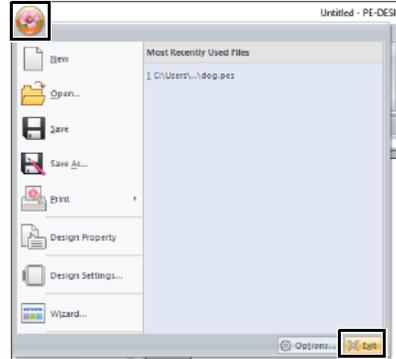


**3** Click **[Save]** to save the data.

→ The new file name appears in the title bar of the PE-DESIGN PLUS2 window.

## Exiting

Click , then **[Exit]**.

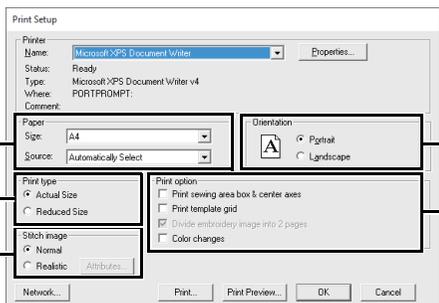
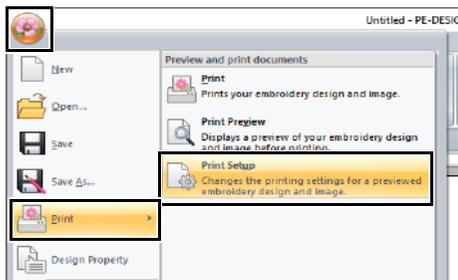


# Printing

## Specifying print settings

Before printing, you may need to change the print settings for the embroidery design files.

- 1 Click , then **[Print]**, then **[Print Setup]**.



- 1 Specify the paper size.
- 2 Specify the paper orientation.
- 3 **Print type**

### Actual Size:

Select this option to print the design at actual size and the sewing information (dimensions of the embroidery pattern, sewing color order, stitch count and hoop position) on separate pages.

### Reduced Size:

Select this option to print a reduced image together with all of the above-mentioned information on a single page.

- 4 **Print option**

### Print sewing area box & center axes:

Select this option to print black lines to indicate the sewing area and the center axes for the data. (This setting is only available when **[Actual Size]** is selected.)

### Print template grid:

Select this check box to print green lines to represent the grid printed on the embroidery sheet included with the hoop. (This setting cannot be selected if **[User Hoop]** has been selected as the Design Page size.)

### Divide embroidery image into 2 pages:

Select this check box to print at actual size and on A4- or Letter-size paper a design that is larger than the paper size by dividing it in two and printing each half on different pages.

(This setting is only available when **[Actual Size]** is selected in the **[Print Setup]** dialog box and when the Design Page is set to the larger hoop sizes. This setting is not available if a **[User Hoop]** size is selected.)

With this split printing feature,  or  is printed in the lower-right corner of the paper to indicate which half is printed.

### Color Changes:

Select this check box to print the thread color change information for the pattern.

When this check box is cleared, the information for the necessary threads is printed. This allows you to check the total number of thread colors.

- 5 **Stitch image**

### Normal:

Select this option to print the design as lines and dots.

### Realistic:

Select this option to print a realistic image of the design. To change the settings of the realistic image, click **[Attributes]**.

▶▶ "Changing realistic view settings" on page 35



If the **[Divide embroidery image into 2 pages]** check box is cleared and you print on paper of a larger size, the design does not print in two halves. Likewise, if you print on paper of a smaller size, the design might be cut off.

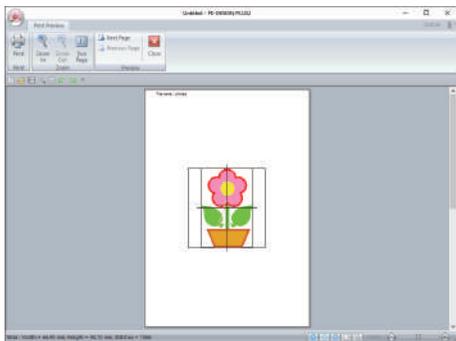
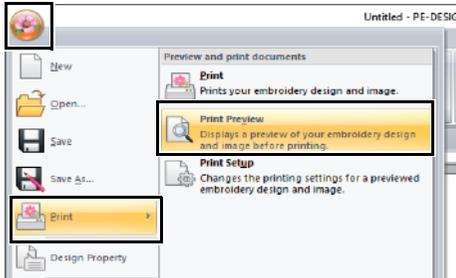
2 Click **[OK]**.

►► "Changing the display of the embroidery design" on page 35.

## Checking a print image

You can preview the contents of the Design Page before printing.

Click , then **[Print]**, then **[Print Preview]**.

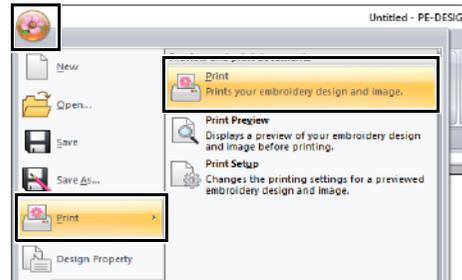


The print image can also be displayed by clicking **[Print Preview]** in the **[Print Setup]** dialog box.

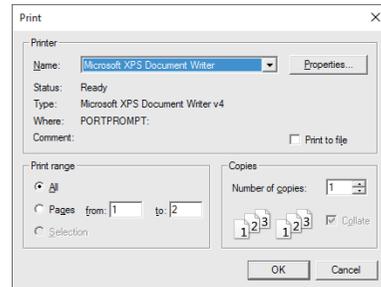
## Printing a Design Page with sewing information

You can print the Design Page together with its sewing information.

1 Click , then **[Print]**, then **[Print]**.



2 Select the necessary settings.



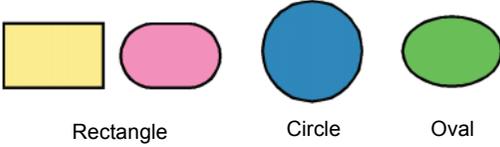
3 Click **[OK]** to begin printing.

4 Follow the instructions for the printer to finish printing.

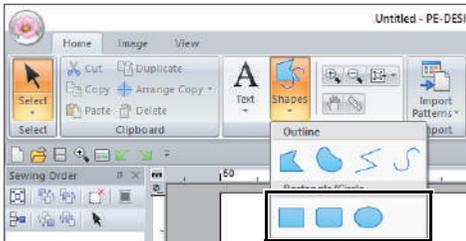
# Drawing Shapes and Reshaping

## Drawing Shapes

### Drawing rectangle or circle shape



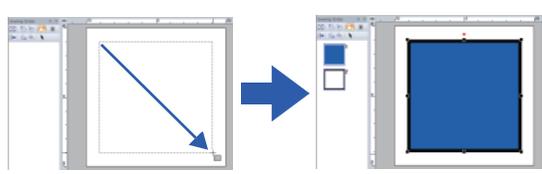
- 1 Click the **[Home]** tab.
- 2 Click **[Shapes]** in the **[Tools]** group, and then click a tool icon under **[Rectangle]/[Circle]** to select the desired **[Rectangle]/[Circle]** tool.



- : Rectangle
- : Rectangle with rounded corners
- : Circle or Oval

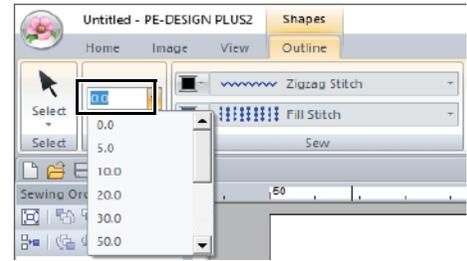
To draw a circle or square, hold down the **<Shift>** key while dragging the pointer.

Drag the pointer in the Design Page.

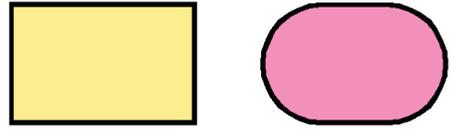


### Rectangles with rounded corners

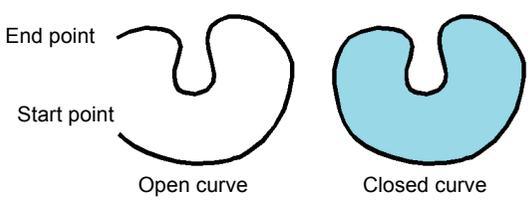
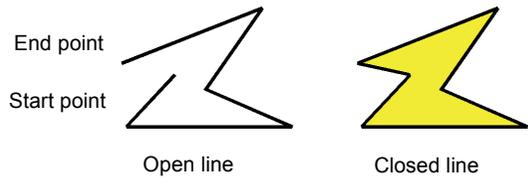
- To change the radius of the corners, click the **[Edge radius]** selector in the **[Outline]** tab. Then, type the desired radius, or select the desired value.
- Specify the radius of the corners before drawing the rectangle. The setting cannot be changed after the rectangle has been drawn.



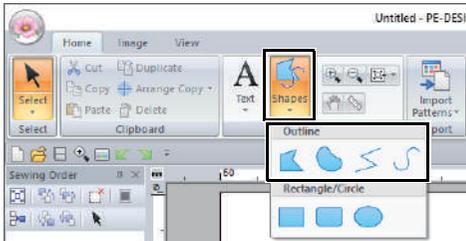
Example 1                  Example 2  
Edge radius: 0.0 mm      Edge radius: 20.0 mm



### Drawing outlines (straight lines and curves)



- 1 Click the **[Home]** tab.
- 2 Click **[Shapes]** in the **[Tools]** group, and then click a tool icon under **[Outline]** to select the desired Outline tool.



-  : Click points to draw a closed line constructed of straight lines. (Shortcut key: **<Z>**)
-  : Click points to draw a closed curve. (Shortcut key: **<X>**)
-  : Click points to draw an open line constructed of straight lines. (Shortcut key: **<Z>**)
-  : Click points to draw an open curve. (Shortcut key: **<X>**)

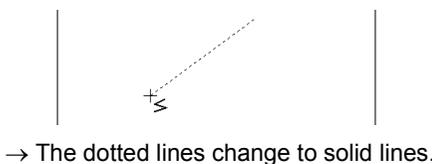
- 3 Click in the Design Page or drag the pointer to draw the line.



The shortcut keys are available only after an Outline tool has been selected.

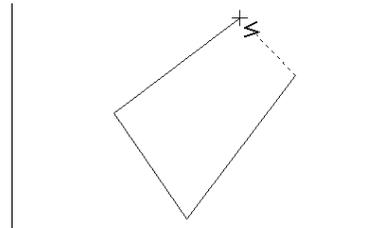
## ■ Straight lines/curves

- 1 Click in the Design Page to specify the start point.
- 2 Click in the Design Page to specify the next point.



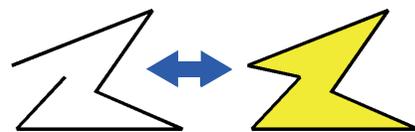
- To remove the last point that was entered, right-click the mouse button, or press the **<BackSpace>** key.
- The Curve tool is used in the same way.

- 3 Continue clicking to specify every point, and then double-click the last point, or press the **<Enter>** key.

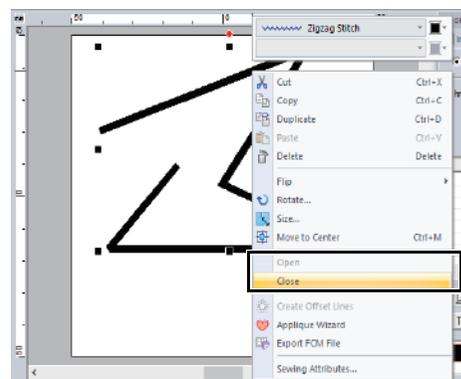


- You can freely switch between the different line types either by clicking a different button or by pressing the shortcut key.
- When drawing a straight line, hold down the **<Shift>** key while moving the pointer to draw vertically or horizontally.
- Even after the pattern is drawn, you can change the attributes of line ends.
- ▶▶ *"Changing the attributes of line ends" on page 50.*
- Even after the pattern is drawn, you can transform straight lines into curves and vice versa.
- ▶▶ *"Transforming straight lines into curves or curves into straight lines" on page 52.*

## ■ Changing the attributes of line ends



After selecting a shape pattern, right-click it, and then click **[Open]** or **[Close]** to change the line ending.



## Reshaping Embroidery Patterns

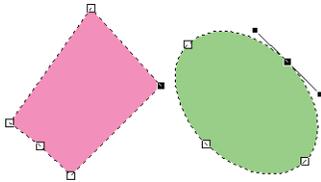
Patterns can be reshaped by moving, adding or deleting points. While creating shape patterns, a clicked location becomes a point.

### Selecting points

- 1 Click the **[Home]** tab.
- 2 Click **[Select]** in the **[Select]** group, and then click  to select the **[Select Point]** tool.



- 3 Click the shape pattern.
- 4 To select a single point, click an empty square.

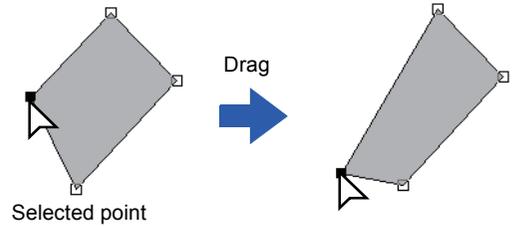


Multiple points can be selected in any of the following ways.

- Drag the pointer.
  - All points within the box are selected.
- Hold down the **<Ctrl>** key while clicking the points.
  - To deselect a point, click the selected point.
- Hold down the **<Shift>** key while pressing an arrow key to select multiple points.
- Hold down the **<Ctrl>** key while pressing an arrow key to change the point that is selected.

### Moving points

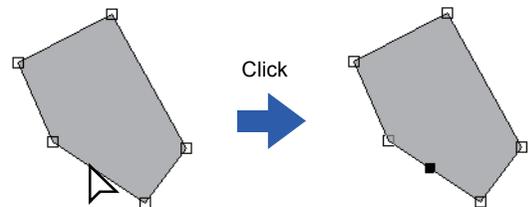
- 1 Select the point.
- 2 Drag the point to the new location.



- To move the point of a broken line, a curve, or stitch data horizontally or vertically, hold down the **<Shift>** key while dragging it.
- A selected point can also be moved with the arrow keys.
- Points in patterns set for hole sewing can also be moved. However, the point cannot be moved to cross an outline. In order to move the point in this way, cancel hole sewing first.
- If you start dragging by clicking elsewhere on the outline of the pattern, a new point will be inserted or the selected point(s) will be deselected.

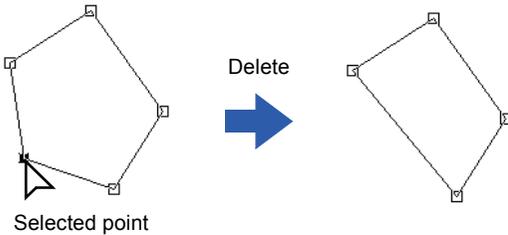
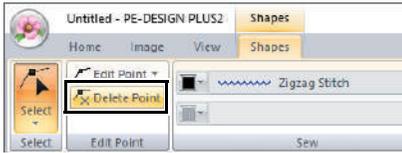
### Inserting points

- 1 Select the **[Select Point]** tool.
- 2 Click the shape pattern.
- 3 Click the outline to add a point.



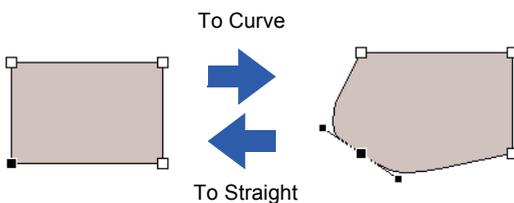
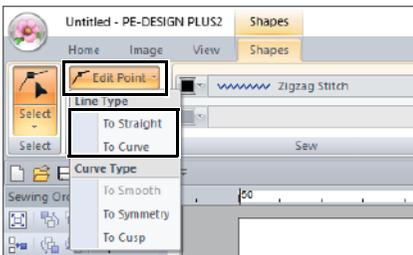
## ■ Deleting points

- 1 Select the point.
- 2 Click the **[Shapes]** tab.
- 3 Click **[Delete Point]** in the **[Edit Point]** group. Otherwise, press the **<Delete>** key to remove the point.



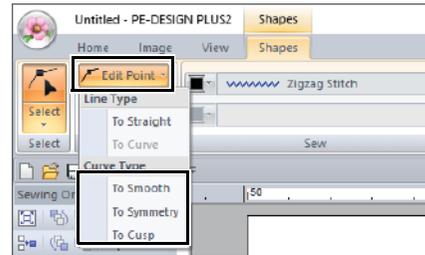
## ■ Transforming straight lines into curves or curves into straight lines

- 1 Select the point.
- 2 Click the **[Shapes]** tab.
- 3 Click **[Edit Point]** in the **[Edit Point]** group, and then click **[To Straight]** or **[To Curve]**.

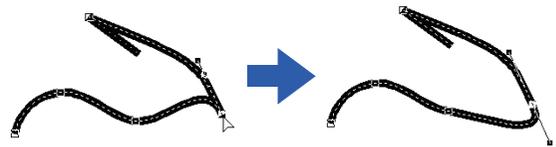


## ■ Changing the curve type

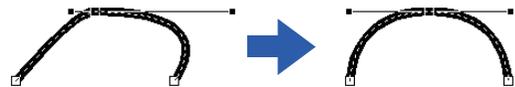
- 1 Select a point on a curve.
- 2 Click the **[Shapes]** tab.
- 3 Click **[Edit Point]** in the **[Edit Point]** group, and then click **[To Smooth]**, **[To Symmetry]** or **[To Cusp]**.



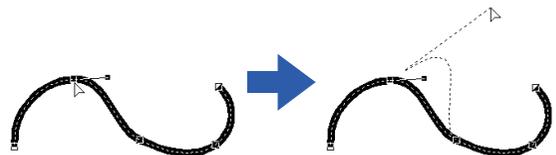
### To Smooth



### To Symmetry



### To Cusp



- 4 Drag the solid black handle to adjust the shape of the line.

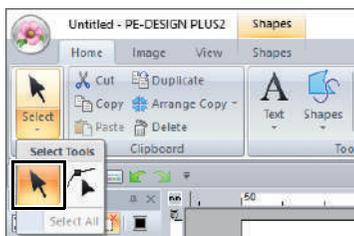


The shape can be changed by dragging the solid black handle on either side of the point.

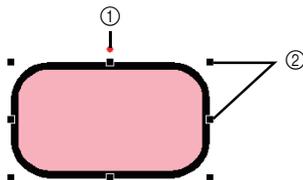
# Editing Embroidery Designs

## Selecting patterns

- 1 Click the **[Home]** tab.
- 2 Click **[Select]** in the **[Select]** group, and then click .



- 3 Click the pattern.



- ① Rotation handle
- ② Handles



The status bar shows the dimensions (width and height) of the pattern.

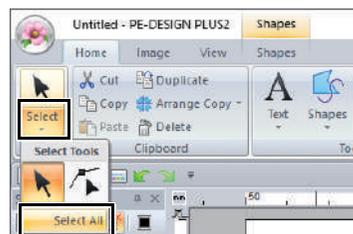
- 4 To select an additional pattern, hold down the **<Ctrl>** key and click the other pattern.



- You can also select patterns by dragging the pointer across the pattern.
- Press the **<Tab>** key to select the next pattern in the order that they were created.
- If multiple patterns are selected, a pattern can be deselected by holding down the **<Ctrl>** key while clicking the pattern.

## Selecting all embroidery patterns

- 1 Click the **[Home]** tab.
- 2 Click **[Select]** in the **[Select]** group, and then click **[Select All]** to select all patterns.



All patterns can also be selected by pressing the shortcut keys **<Ctrl> + <A>**.

## Moving patterns

### Moving manually

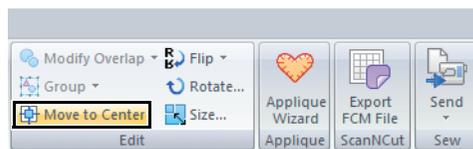
Drag the selected pattern(s) to the desired location.



- To move the pattern horizontally or vertically, hold down the **<Shift>** key while dragging it.
- Pressing the arrow keys moves the selected pattern.
- Holding down the **<Ctrl>** key and dragging the pattern creates a duplicate of the pattern at the destination.

### Moving embroidery patterns to the center

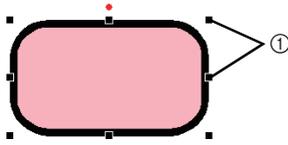
- 1 Select the pattern(s), and then click the **[Home]** tab.
- 2 Click **[Move to Center]** in the **[Edit]** group.



## Scaling patterns

### Scaling manually

1 Select the pattern(s).



① Handles

2 Drag the handle to adjust the selected pattern(s) to the desired size.



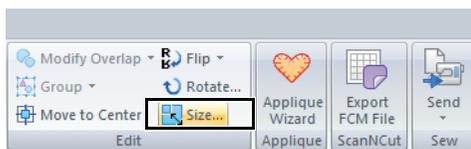
- If the **<Shift>** key is held down while a handle is dragged, the pattern is enlarged or reduced from the center of the pattern.
- As you drag the handle, the current size is displayed on the status bar.
- When scaling stitch patterns, the number of stitches remains the same, resulting in a loss of quality. To maintain the density and fill pattern of the embroidery pattern, hold down the **<Ctrl>** key while scaling. Even stitch patterns with a non-uniform stitch density and needle drop point pattern can be scaled while maintaining the density and fill pattern.

▶▶ "Enlarging/Reducing Stitch Patterns" on page 104.

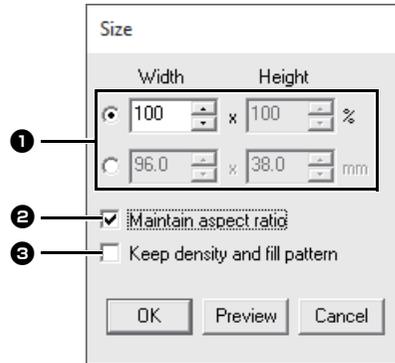
### Scaling numerically

1 Select the pattern(s), and then click the **[Home]** tab.

2 Click **[Size]** in the **[Edit]** group.



3 Specify the size, and then click **[OK]**.



- 1 Select the whether the width and height will be set as a percentage (%) or a dimension (millimeters or inches). Set the width and height.
- 2 To change the width and height proportionally, select the **[Maintain aspect ratio]** check box.
- 3 To resize the selected pattern while maintaining the original density and fill pattern, select the **[Keep density and fill pattern]** check box.



The **[Keep density and fill pattern]** check box is available only if stitch pattern is selected.

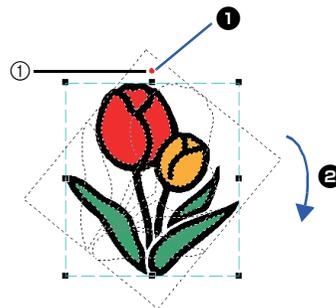
▶▶ "Enlarging/Reducing Stitch Patterns" on page 104

## Rotating patterns

### Rotating manually

1 Select the pattern(s).

2 Drag the rotation handle.



- 1 The shape of pointer changes to
  - 2 Rotate
- ① Rotation handle



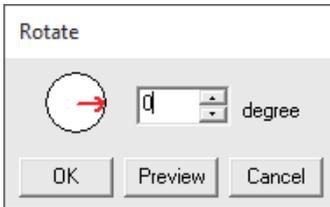
To rotate the pattern in 15° increments, hold down the <Shift> key while dragging the handle.

## Rotating numerically

- 1 Select the pattern(s), and then click the [Home] tab.
- 2 Click [Rotate] in the [Edit] group.



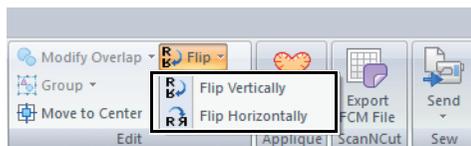
- 3 Type or select the rotation angle. Click [OK].



An angle can also be selected by dragging  in the [Rotate] dialog box.

## Flipping patterns horizontally or vertically

- 1 Select the pattern(s), and then click the [Home] tab.
- 2 Click [Flip] in the [Edit] group, and then click [Flip Vertically] or [Flip Horizontally].



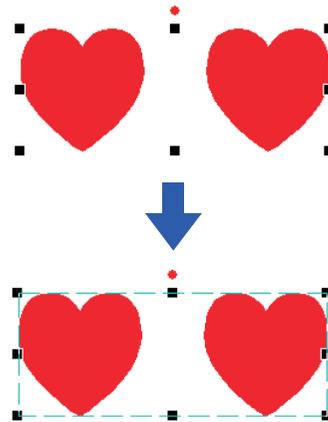
## Mirror Copies

For details, refer to "Using the mirror copy tool" on page 28.

## Grouping/Ungrouping embroidery patterns

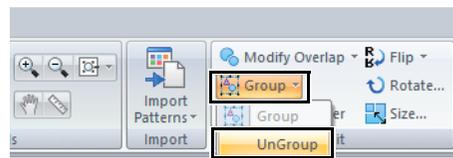
### Grouping patterns

- 1 Select several patterns, and then click the [Home] tab.
- 2 Click [Group] in the [Edit] group, and then click [Group].



### Ungrouping patterns

- 1 Select grouped patterns, and then click the [Home] tab.
- 2 Click [Group] in the [Edit] group, and then click [Ungroup].



## ■ Editing grouped patterns individually

Even after patterns are grouped, they can be edited individually.

- 1 To select a single pattern within a group, hold down the **<Alt>** key while clicking the pattern.
- 2 Edit the pattern.

## Hole sewing

By specifying hole sewing, the stitching in overlapping regions will not be sewn twice. Hole sewing can be set only when one region completely encloses another.

Embroidery patterns created with the Shapes tools can be selected to set hole sewing.



Hole sewing not set

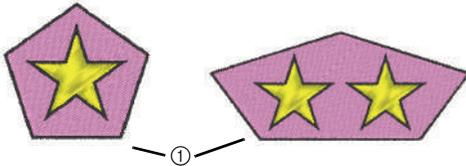


Hole sewing set

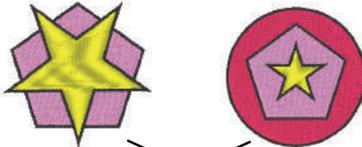
- ① Sewn twice
- ② Sewn once

- 1 Select a pair of patterns, for example, a star included in a pentagon.

While holding down the **<Ctrl>** key, click the star, then the pentagon.



① Valid



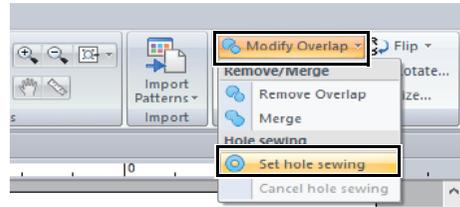
② Invalid



Hole sewing cannot be specified with the following shape patterns.

- Patterns with an intersecting outline.
- Patterns with multiple sewing direction lines.

- 2 Click the **[Home]** tab.
- 3 Click **[Modify Overlap]** in the **[Edit]** group, and then click **[Set hole sewing]**.

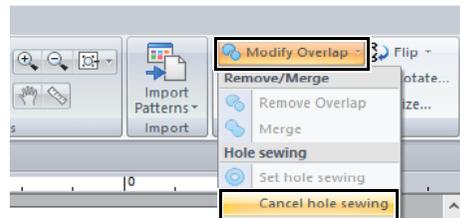


To see better what the hole sewing setting does, preview the patterns before and after setting hole sewing.

▶▶ "Stitch View" on page 35

## ■ Canceling hole sewing

- 1 Select a pattern that has been set for hole sewing.
- 2 Click the **[Home]** tab.
- 3 Click **[Modify Overlap]** in the **[Edit]** group, and then click **[Cancel hole sewing]**.

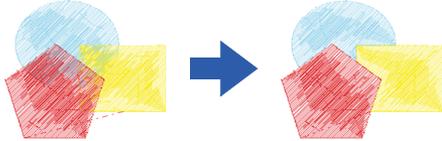


## Changing shapes of overlapped patterns

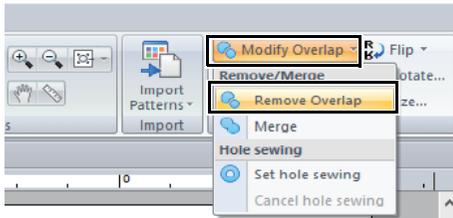
Embroidery patterns created with the Shapes tools can be selected to remove overlapping regions or to be merged.

### ■ Removing overlapping

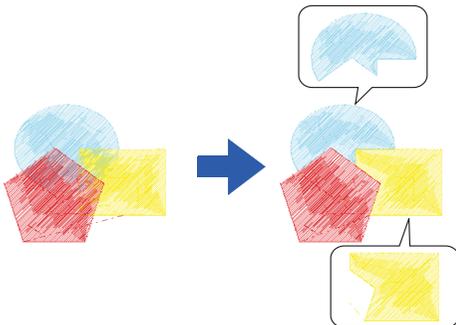
Overlapped patterns can be set so that the overlapping region is removed.



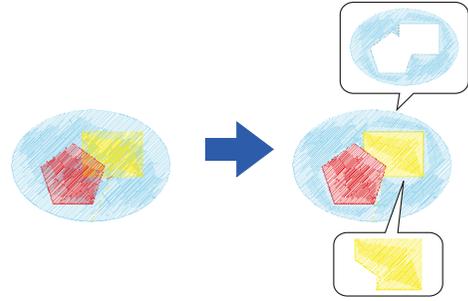
- 1 While holding down the **<Ctrl>** key, click two or more overlapped patterns to select them.
- 2 Click the **[Home]** tab.
- 3 Click **[Modify Overlap]** in the **[Edit]** group, and then click **[Remove Overlap]**.



- When partially overlapped



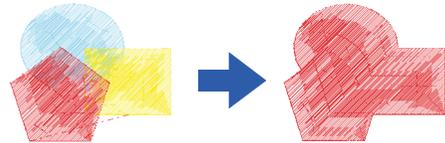
- When enclosed



-  First pattern in the sewing order
-  Second pattern in the sewing order
-  Third pattern in the sewing order

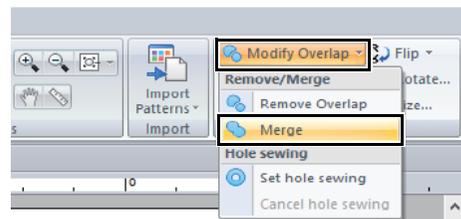
### ■ Merging

Overlapped pattern can be merged together.



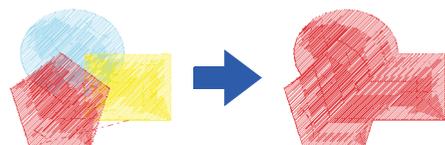
→ The color and sew type of the last pattern drawn (topmost pattern) is applied to the merged pattern.

- 1 While holding down the **<Ctrl>** key, click two or more overlapped patterns to select them.
- 2 Click the **[Home]** tab.
- 3 Click **[Modify Overlap]** in the **[Edit]** group, and then click **[Merge]**.



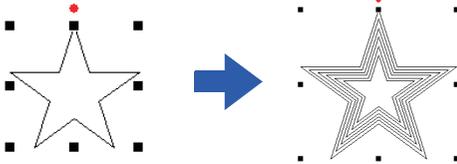
→ If this cannot be applied to the selected patterns, an error message appears.

- When partially overlapped



## Creating an offset line pattern

Line stitching in a concentric pattern can be created based on the selected shape.



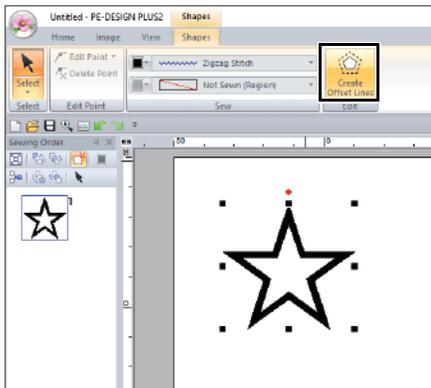
- 1 Draw a shape, and then select it.



Be sure to select one closed line.

- ▶▶ *"Changing the attributes of line ends" on page 50*

- 2 Click the **[Shapes]** tab.
- 3 Click **[Create Offset Lines]** in the **[Edit]** group.



- 4 Specify the desired settings for the offset line pattern, and then click **[OK]**.

**Offset Line Settings**

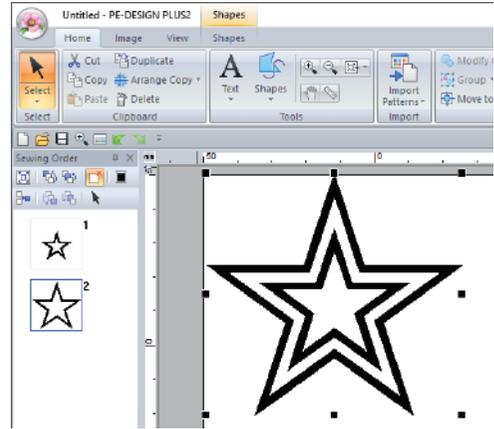
Offset Direction:  
 Outward     Inward

Spacing:  mm

Offset Line Count:

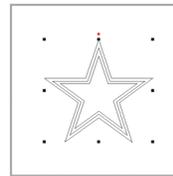
Rounded Corners

OK    Preview    Cancel

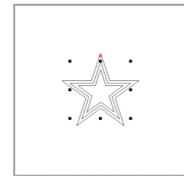


### Offset Direction

Outward

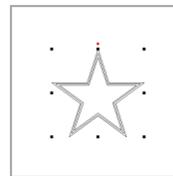


Inward

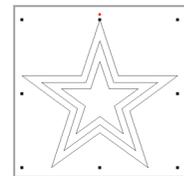


### Spacing

1 mm

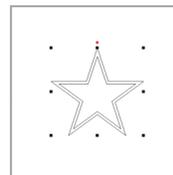


5 mm

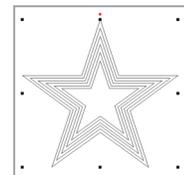


### Offset Line Count

1 line

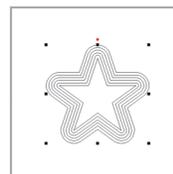


5 lines

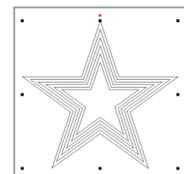


### Rounded Corners

Check box selected.

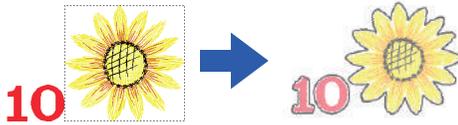


Check box cleared.



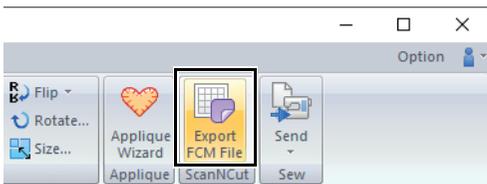
## Exporting an FCM File for ScanNCut (Brother cutting machine)

A created embroidery pattern can be exported as data in the .fcm format so that it can be cut out using the Brother cutting machine (ScanNCut).

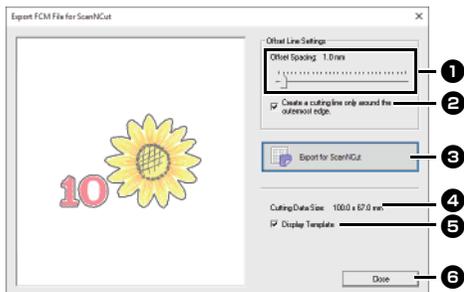


- Embroidered fabric cannot be cut with the ScanNCut machine.
- There are limitations on the thickness of fabric that can be cut by the ScanNCut machine.
- For details, refer to the Operation Manual for the Brother cutting machine (ScanNCut).

- 1 Select the pattern(s), and then click the **[Home]** tab.
- 2 Click **[Export FCM File]** in the **[ScanNCut]** group.



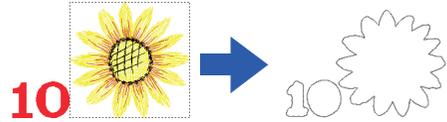
- 3 Specify the desired settings for the cutting line, and then click **[Export for ScanNCut]**.



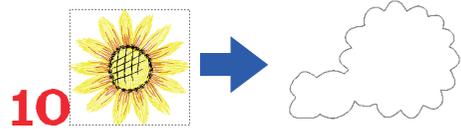
### 1 Offset Spacing

Specify the distance from the outline of the pattern to the cutting line.

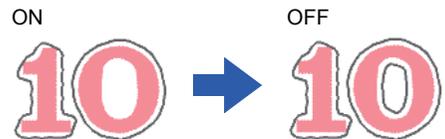
- If **[Offset Spacing]** is set to 0.0 mm, the outline of the pattern will become the cutting line.



- If **[Offset Spacing]** is set to any setting other than 0.0 mm and the cutting lines overlap, they will be merged.



- 2 Select this check box to draw the cutting line only around the outer edge of the pattern. Clear this check box to also draw cutting lines inside the pattern.



### 3 Export for ScanNCut

Click this button to display the **[Export FCM File]** dialog box, where the destination for saving the file can be specified.

### 4 Cutting Data Size

Displays the size of the cutting data.

### 5 Display Template

Select this check box to display a faint image of the original pattern.

### 6 Close

Click this button to close the dialog box.



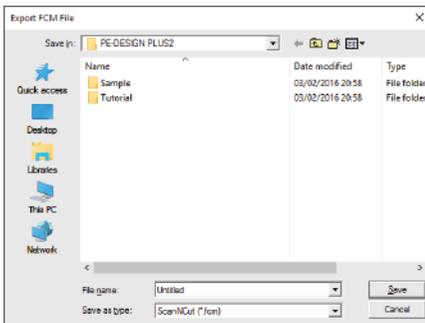
- If characters in a text pattern overlap, they will be merged.



However, if **[Offset Spacing]** is set to 0.0 mm, the overlapped patterns may not be merged.

- Extremely small data will not be exported.
- The maximum size for cutting data fits within a 12 x 12 inch (305 x 305 mm) mat. If this maximum is exceeded, an error message appears.
- A maximum of 100 .fcm files can be created at the same time in the **[Export FCM File]** dialog box. If this maximum is exceeded, an error message appears.

- 4 Select the drive and the folder, and then type in the file name.

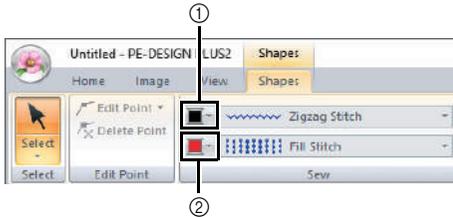


- 5 Click **[Save]** to save the data.

# Specifying Thread Colors and Sew Types for Lines and Regions

## Setting the thread color

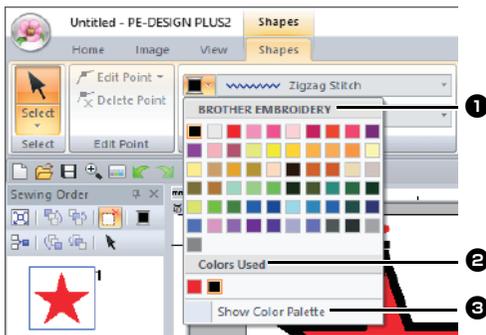
The **[Sew]** group in the **[Shapes]** tab allows you to set the thread color of shapes.



- ① Line color
- ② Region color

### Color

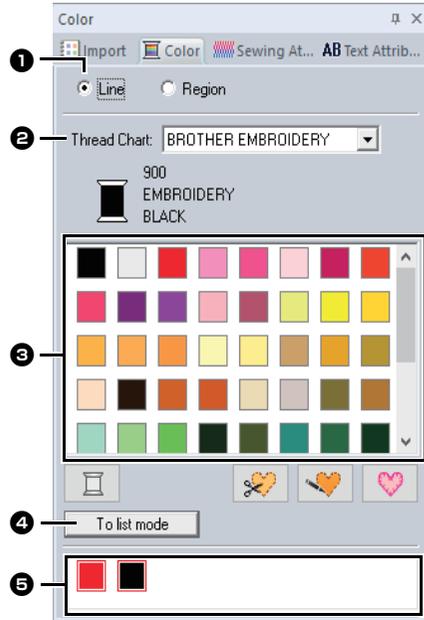
Click the **[Color]** button, and then select the desired color from the list of thread colors.



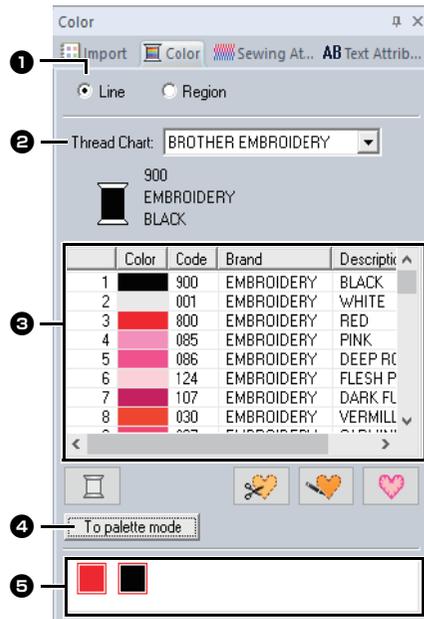
- ① Thread brand name or name of user thread chart and its thread color list: Displays the brand name and its thread color chart for the currently selected pattern.
- ② Colors Used: Displays all thread colors being used in the embroidery design.
- ③ Show Color Palette: Click to display the **[Color]** pane.

## Color pane

### Palette mode



### List mode



- 1 Select the type of stitching (**[Line]** or **[Region]**) to display the corresponding colors being used.

## Line

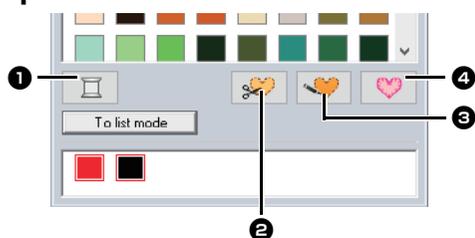
Line color

## Region

Region color

- 2 From the **[Thread Chart]** selector, select a thread brand or your user thread chart.
- 3 From the list of thread colors, select the desired color.
- 4 Click to switch the mode.
- 5 Displays all thread colors being used in the embroidery design. When an embroidery pattern is selected, a frame appears around the colors used in that pattern. The same thread colors can be specified by selecting them here.

## Special colors



- 1 **NOT DEFINED**  
If you want to be able to manually select the color for a monochrome pattern, you can select **[NOT DEFINED]**.  
Colors for creating appliqués:  
You can create appliqués using the following three special colors.
- 2 **APPLIQUE MATERIAL**  
marks the outline of the region to cut from the appliqué material.
- 3 **APPLIQUE POSITION**  
marks the position on the backing material where the appliqué must be sewn.
- 4 **APPLIQUE**  
sews the appliqué on the backing material.

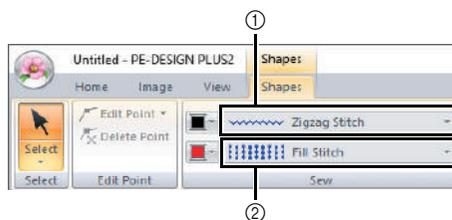


By using the Applique Wizard, appliqués can easily be created.

▶▶ "Creating appliqués" on page 29

## Setting the sew type

The **[Sew]** group in the **[Shapes]** tab allows you to set the sew type.



- 1 Line sew type selector
- 2 Region sew type selector

## Line sew types



The sew type for lines in shapes and text can be selected in the **[Line sew type]** selector.

Click the **[Line sew type]** selector, and then select the desired sew type.

- 1 **Not Sewn (Line)**  
Select this setting to turn off line sewing (line will not be sewn).

## Region sew types



The sew type for regions in shapes, and text can be selected in the **[Region sew type]** selector.

Click the **[Region sew type]** selector, and then select the desired sew type.

→ The available region sew types differ depending on whether a shape pattern or text pattern is selected.

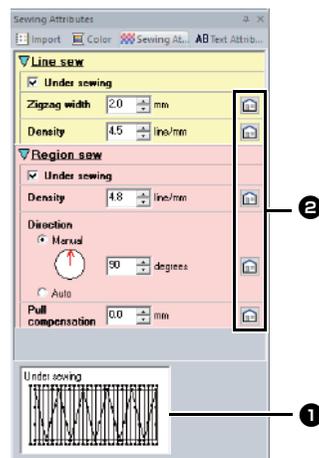
### 1 Not Sewn (Region)

Select this setting to turn off region sewing (region will not be sewn).

▶▶ *"Specifying sewing attributes" on page 63 and "Region sewing attributes" on page 107*

## Specifying sewing attributes

- 1 Select an embroidery pattern, a Shapes tool or a Text tool.
- 2 Click the **[Sewing Attributes]** tab.



### 1 Hint view

With each change in the settings, a preview of the stitching can be checked here. By moving the pointer over each setting, a preview of the setting can be displayed.

- 2 Click this button to return the attribute to its default setting.



The sewing attributes displayed in the dialog box depend on the selected sew type.

- 3 Change the sewing attributes displayed under **[Line sew]** or **[Region sew]**.

→ The settings are applied to the embroidery pattern each time the settings are changed.

▶▶ For details on the different sewing attributes and settings, refer to *"Line sewing attributes" on page 106* and *"Region sewing attributes" on page 107*.

# Creating Embroidery Patterns Containing Text

## Tutorial 6: Combining Text

This section will describe how to import and edit two text patterns, then combine them to create an embroidery design.

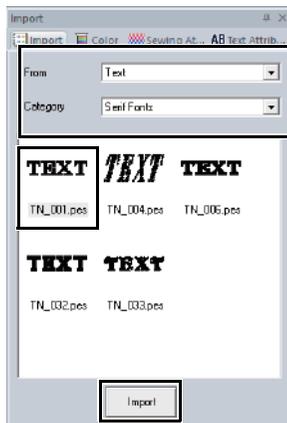


The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_6

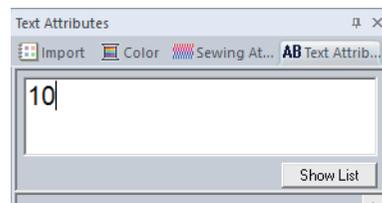
<b>Step 1</b>	Entering text
<b>Step 2</b>	Changing text color and sew type
<b>Step 3</b>	Importing transformed text

### Step 1 Entering text

- 1 In the **[Import]** pane, select **[Text]** from the **[From]** selector, then **[Serif Fonts]** from the **[Category]** selector.  
Select **[TN\_001.pes]** (Serif 01), and then click **[Import]**.

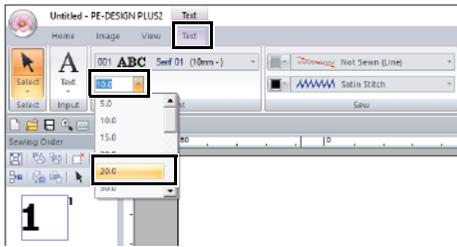


- 2 Click the **[Text Attributes]** tab, click in the text field to enter input mode, delete the text "TEXT", type in "10", and then press the **<Enter>** key.



- 3 Select the text "10", and then click the **[Text]** ribbon tab.

- Click the down arrow to the right of the **[Text Size]** selector in the **[Font]** group, and then select "30.0" from the list.



## Step 2 Changing text color and sew type

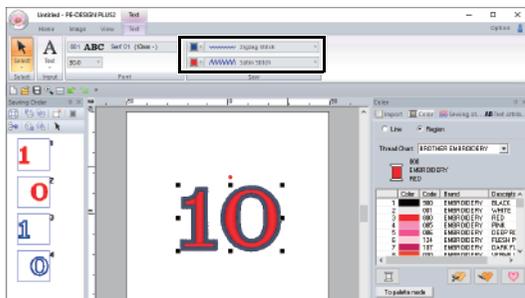
- Specify a color and sew type for each shape as follows.

### Line sew

- **Line sew type** : Zigzag Stitch
- **Line color** : ULTRAMARINE

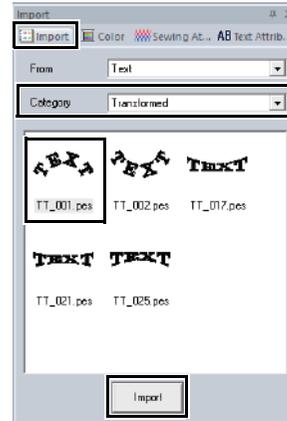
### Region sew

- **Region sew type** : Satin Stitch
- **Region color** : RED

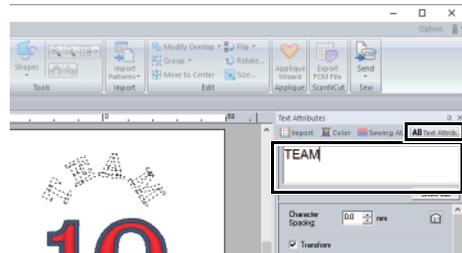


## Step 3 Importing transformed text

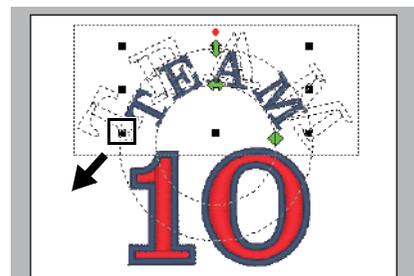
- In the **[Import]** pane, select **[Transformed]** from the **[Category]** selector. Select **[TT\_001.pes]** (arched text), click **[Import]**, and then move the imported text above the "10".



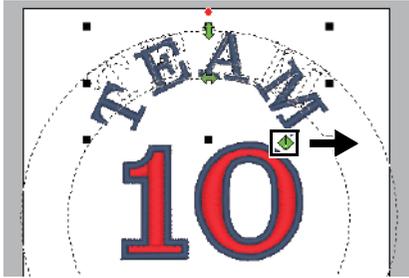
- Click the **[Text Attributes]** tab, click in the text field to enter input mode, retype in "TEAM" and then press the **<Enter>** key.



- Select the text "TEAM", and then click the **[Color]** tab. Select **[ULTRAMARINE]** as the region color.
- Select the text "TEAM" with the **[Select]** tool, hold down the **<Shift>** key, and then drag a black dot in a corner of the pattern to enlarge the pattern to the desired size.



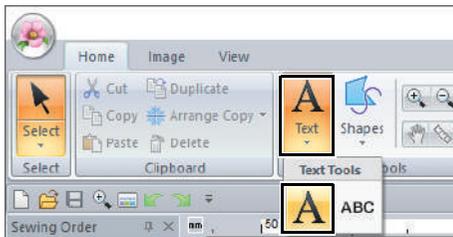
- 5 Drag  to adjust the radius of the circle that the text is formed on.  
Drag the text to adjust its position.



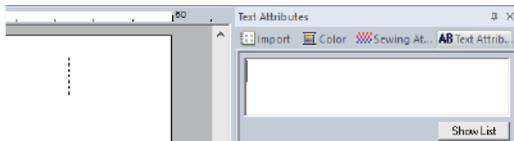
# Advanced Operations for Entering Text

## Entering text

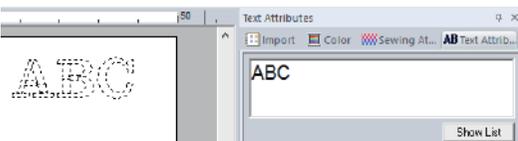
- 1 Click the **[Home]** tab.
- 2 Click **[Text]** in the **[Tools]** group, and then click **A**.



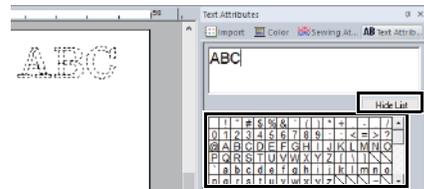
- 3 If necessary, change the font, text size, color and sew type.
  - ▶▶ *"Setting text attributes" on page 68 and "Embroidery attributes for text" on page 70*
- 4 Click in the Design Page.



- 5 Type the text.

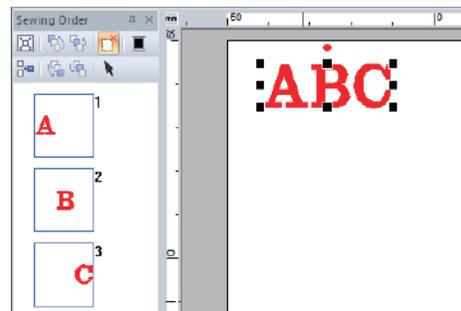


- Characters can also be entered by clicking them in the character table. To display it, click **[Show List]** under the text field. This is particularly useful if you have to enter accented characters that are not available on your keyboard. To hide the character table, click **[Hide List]**.



- Hold down the **<Ctrl>** key and press the **<Enter>** key to enter a new line of text.

- 6 Press the **<Enter>** key or click the Design Page.



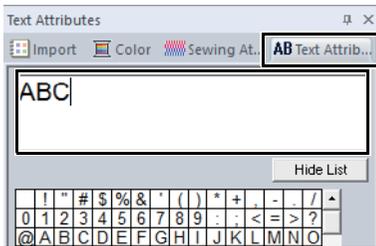
If the entered character is not available with the selected font or if the character cannot be converted to an embroidery pattern, the character appears as  in the Design Page. If this occurs, enter a different character.

## Editing entered text

Switch to one of the following text edit modes, and then type text as needed using the cursor appearing at the end of the text.

### Using Text Attributes tab

- 1 Select a single text pattern.
- 2 Click the **[Text Attributes]** tab, and then click in the text field.

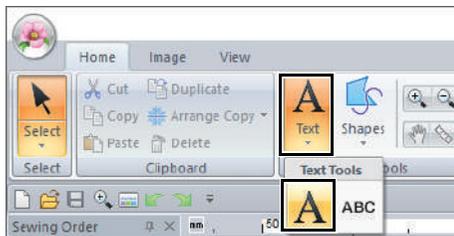


### Using keyboard

- 1 Select a single text pattern.
- 2 Press a character key in the keyboard.

### Using Text tool

- 1 Click **[Text]** in the **[Tools]** group of the **[Home]** tab, and then select **A**.



- 2 Click a text pattern to edit.

## Setting text attributes

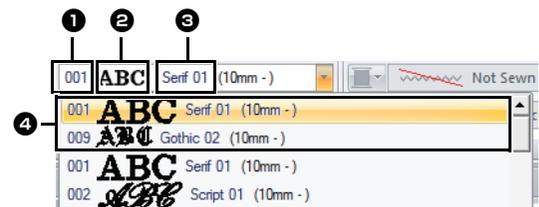
Text attributes can be specified with the **[Font]** selector and **[Text Size]** selector in the **[Text]** tab.



The **[Text]** tab appears when a text pattern or a Text tool is selected.

### Font

Click the **[Font]** selector, and then select the desired font.

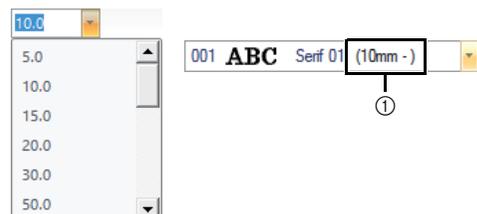


- 1 **Font Type**  
A number identifies built-in fonts.
- 2 **Font sample**  
If a single string of text is selected, the fonts in the list appear with the selected characters.
- 3 **Font name**
- 4 **Most recently used fonts**

### Text size

Click the **[Text Size]** selector. Type the desired height and press the **<Enter>** key, or select the desired value.

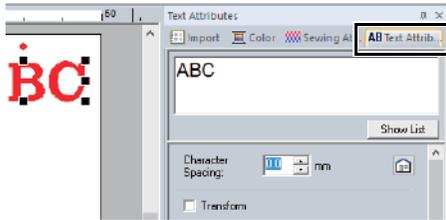
Built-in fonts are listed in the **[Font]** selector with the recommended minimum size. We recommend using these fonts at a size equal or greater than the size indicated.



- 1 Recommended minimum size

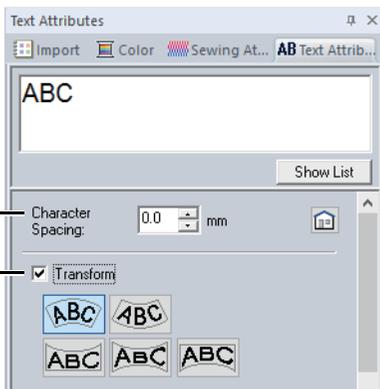
## ■ Specifying various text attributes

- 1 Select the text.
- 2 Click the [Text Attributes] tab.

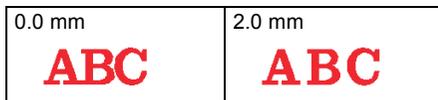


If the [Text Attributes] pane is not displayed, click the [View] tab, then [Attributes], and then click [Text Attributes].

- 3 Change the text attributes.



### 1 Character Spacing



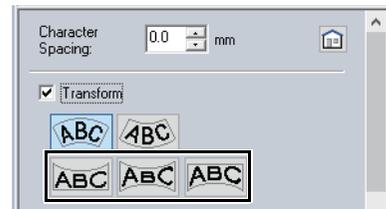
### 2 Transform

Refer to the following section.

## ■ Transforming text



- 1 Select the text.
- 2 Select the [Transform] check box, and then click the transformation shape button.



Depending on the selected shape, a dotted line and  appear around the text.



A text pattern contains data for both line and region sewing. Therefore, if this command is selected, depending on the form of the font, there may be a gap between the line and the region in the text.

- 3 Drag  to transform the text.



-  can only be dragged vertically.
- To return the transformed text to its original shape, clear the [Transform] check box.



If  was selected in step 2, the following operations can also be performed.

Drag ,  and  to transform the text.



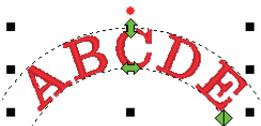
: Adjusts the text size.



: Moves the text along the circle.



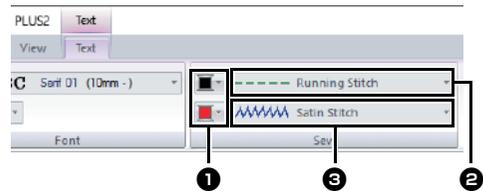
: Adjusts the radius of the circle.



## Embroidery attributes for text

The Sew group in the Attributes tab allows you to set the embroidery attributes (thread color and sew type, outline and inside region on/off).

When text is selected, settings can be specified for the following.



- 1 Line color/Region color**  
 Sets the thread color for outlines and inside regions.  
 ▶▶ "Color" on page 61
- 2 Line sew type**  
 Sets the sew type for the outlines.  
 Except with built-in fonts 025 and 029, all sew types are available for lines in text.  
 ▶▶ "Line sew types" on page 62
- 3 Region sew type**  
 Sets the sew type for an inside region.  
**[Satin Stitch], [Fill Stitch] and [Prog. Fill Stitch]** are available for lines in text.  
 ▶▶ "Region sew types" on page 63



- Text patterns created using built-in fonts 025 and 029 have an inside region. The thread color and sew type for only the region can be selected.
- Sewing attribute that can be set with Text under sewing. For details, refer to "Region sewing attributes" on page 107.



- To turn off line sewing, select **[Not Sewn (Line)]** from the **[Line sew type]** selector.
- To turn off region sewing, select **[Not Sewn (Region)]** from the **[Region sew type]** selector.
- The variety of embroidering effects possible differs depending on the selected combination of settings for line sewing and region sewing.

	Line sewing specified (Text Outline Sew Type)	Region sewing specified (Text Body Sew Type)
	Any other than <b>[Not Sewn (Line)]</b>	Any other than <b>[Not Sewn (Region)]</b>
	<b>[Not Sewn (Line)]</b>	Any other than <b>[Not Sewn (Region)]</b>
	Any other than <b>[Not Sewn (Line)]</b>	<b>[Not Sewn (Region)]</b>

## Small Text

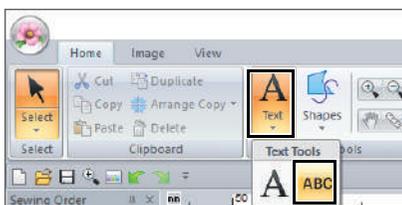


Precautions for embroidering small text patterns.

- ▶▶ "When sewing small fonts" on page 72

### ■ Entering small text

- 1 Click the **[Home]** tab.
- 2 Click **[Text]** in the **[Tools]** group, and then click .



- 3 Enter text in the same way that regular text is entered, starting with step 3.

- ▶▶ "Entering text" on page 67



Sample small text font patterns are available in the **[Import]** pane when **[Text]** is selected in the **[From]** selector and **[Small Text]** is selected in the **[Category]** selector.

- ▶▶ "Example of Importing Embroidery Data" on page 13

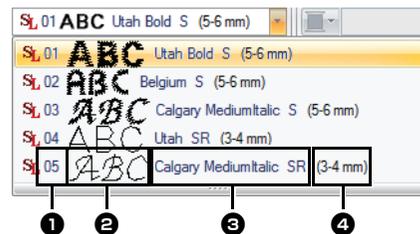
### ■ Editing small text

Small text attributes can be selected from the **[Text]** tab, the **[Text Attributes]** pane and the **[Color]** pane. When the small text tool is selected, the **[Text]** tab appears as shown below.



The **[Text]** tab appears when a small text pattern or the small text tool is selected.

### Small text fonts



- 1 Font number
- 2 Font sample
- 3 Font name
- 4 Recommended size

- ▶▶ "Font List" on page 110



Only built-in fonts specifically for small text can be used.

- ▶▶ For a list of the built-in fonts specifically for small text, refer to "Small Text" on page 111.

The settings for all small text attributes except the font are specified in the same way that they are specified for regular text patterns.

However, with small text, settings cannot be specified for the following.

- Sew type
- Sewing Attributes
- Transform



---

To edit an entered small text, select the small text with the **[Select]** tool, and then type the new text into the text field in the **[Text Attributes]** pane. There are other ways to edit text.

▶▶ *"Editing entered text" on page 68*

---

### ■ When sewing small fonts

For best results when using your embroidery machine to embroider patterns containing small font patterns, follow the recommendations described below.

- 1** Reduce the thread tension to less than what is used when embroidering normal designs.
- 2** Sew at a speed slower than what is used when embroidering normal designs.  
(For details on adjusting the thread tension and sewing speed, refer to the Operation Manual provided with your embroidery machine.)
- 3** Do not trim the jump stitches between the characters.  
(For details on setting the machine for thread trimming, refer to the Operation Manual for the embroidery machine.)

# Creating Embroidery Patterns Using Images

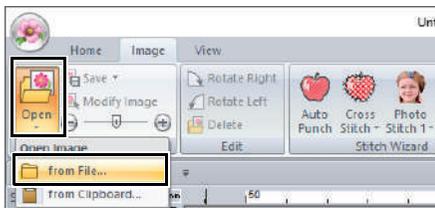
## Tutorial 7-1: Auto Punch

In this section, we are going to use the Auto Punch function to automatically create an embroidery pattern from an image.

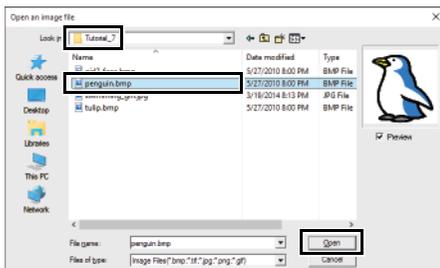
<b>Step 1</b>	Importing image data into PE-DESIGN PLUS2
<b>Step 2</b>	Starting the Auto Punch wizard
<b>Step 3</b>	Applying an image mask and adjusting its size and position
<b>Step 4</b>	Creating a border from the mask outline and converting to an embroidery pattern

### Step 1 Importing image data into PE-DESIGN PLUS2

- 1 Click the **[Image]** tab.
- 2 Click **[Open]** in the **[Image]** group, and then click **[from File]**.



- 3 Double-click the **[Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_7]** folder to open it.
- 4 Select the file **[penguin.bmp]**, and then click **[Open]**, or double-click the file's icon.



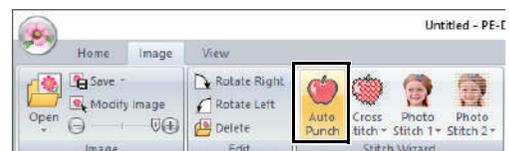
→ The image appears in the work area.



- Images with few and distinct colors work best with **[Auto Punch]**.
- Repeat steps **1** to **4** to choose another picture image. Otherwise, the image can be replaced with the **[Select Mask]** dialog box.
  - ▶▶ *"Select Mask dialog box" on page 87*
- You can import picture images from clipboard, and import that image.
  - ▶▶ *"Importing and Editing Image Data" on page 90*

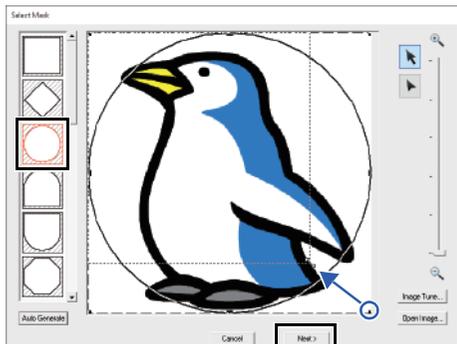
### Step 2 Starting the Auto Punch wizard

- 1 Click the **[Image]** tab.
- 2 Click **[Auto Punch]** in the **[Stitch Wizard]** group.



## Step 3 Applying an image mask and adjusting its size and position

- 1 Click  to select the circle mask. Drag handle to adjust the size of the mask, and drag the mask to adjust its position. Click **[Next]**.

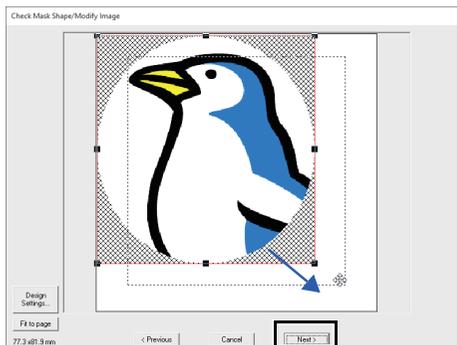


▶▶ "Select Mask dialog box" on page 87.



The mask outline selected here can be used as line data (border) in "Step 4 Creating a border from the mask outline and converting to an embroidery pattern" on page 74.

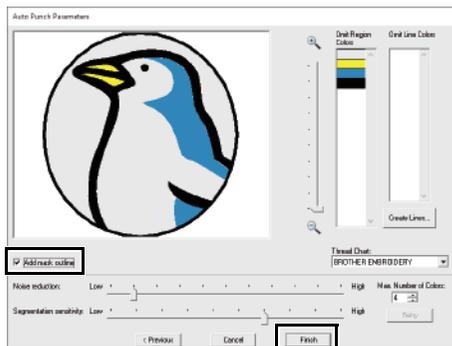
- 2 Drag the image to adjust its output location and size. The white background indicates the sewing area in the Design Page. Click **[Next]**.



▶▶ "Check Mask Shape/Modify Image dialog box" on page 88

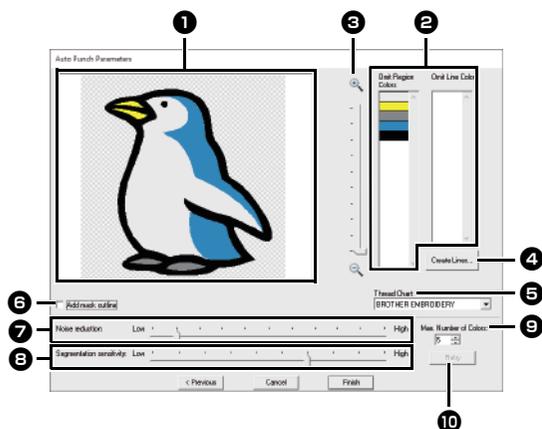
## Step 4 Creating a border from the mask outline and converting to an embroidery pattern

Select the **[Add mask outline]** check box, check the preview image, and then click **[Finish]**.



→ The image is automatically hidden and stitches are automatically input.

## Auto Punch Parameters dialog box



### 1 Result View

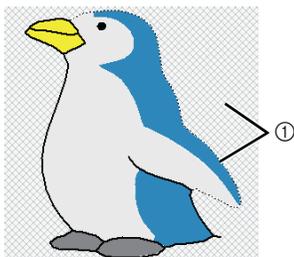
The resulting analyzed image appears in the Result View box.

### 2 Omit Region Colors/Omit Line Colors

In the [Omit Region Colors] list and [Omit Line Colors] list, click the colors to select whether or not they will be sewn. You can select whether or not areas will be sewn by selecting their colors. Colors that are crossed out are set to not be sewn.



- To select whether or not a part of the image is to be sewn, click in the Result View box, or click in the [Omit Region Colors] and [Omit Line Colors] lists.
- Areas filled with a crosshatch pattern in the Result View box will not be sewn. In addition, lines that appear as dotted lines will not be sewn.

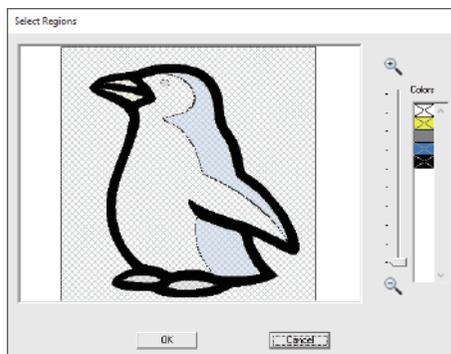


① These areas will not be sewn.

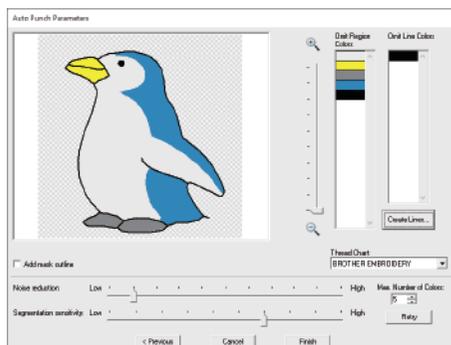
### 3 Zoom

### 4 Create Lines

Click this button to display the [Select Regions] dialog box, where the areas to be converted to lines can be selected.



Click the areas to be converted to lines, and then click [OK].



### 5 Thread Chart

Select the thread chart to be used.

### 6 Add mask outline

If this check box is selected, line data is created from the mask outline.

### 7 Noise reduction

Sets the level of noise (distortions) that is removed from the imported image.

### 8 Segmentation sensitivity

Sets the sensitivity for the image analysis.

### 9 Max. Number of Colors

Sets the number of colors used.

### 10 Retry

To view the results of the changes, click this button.

# Tutorial 7-2: Cross Stitch

Cross Stitch embroidery patterns can be created from images.

<b>Step 1</b>	Importing image data into PE-DESIGN PLUS2
<b>Step 2</b>	Starting the Cross Stitch wizard

## Step 1 Importing image data into PE-DESIGN PLUS2

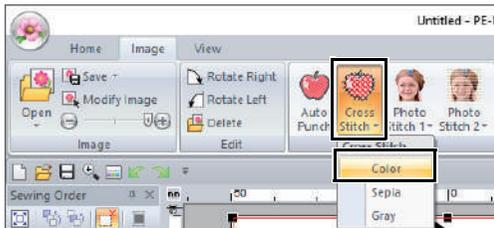
Importing image data.

Select the [Tutorial\_7] folder, and then select [tulip.bmp] as the image.

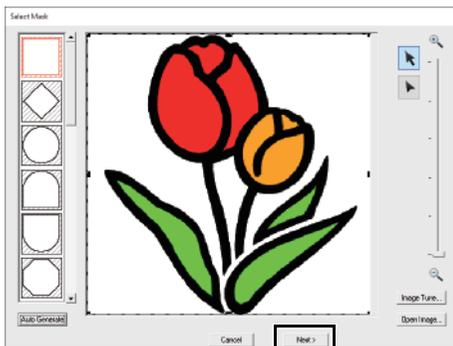
For details on importing image data, refer to "Importing image data into PE-DESIGN PLUS2" on page 73.

## Step 2 Starting the Cross Stitch wizard

- 1 Click the [Image] tab.
- 2 Click [Cross Stitch] in the [Stitch Wizard] group, and then click [Color].



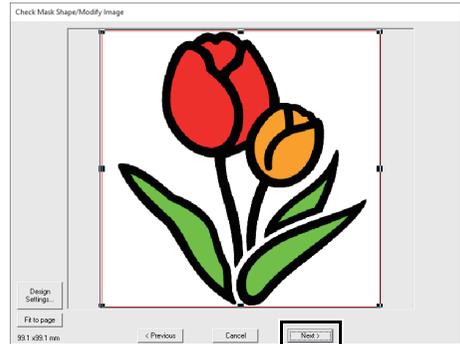
- 3 Click [Next].



From this dialog box, an image mask can be applied, and its size can be adjusted and shape edited. For this example, we will simply continue to the next step.

▶▶ "Select Mask dialog box" on page 87

- 4 Click [Next].



From this dialog box, the size and position of the image can be adjusted. For this example, we will simply continue to the next step.

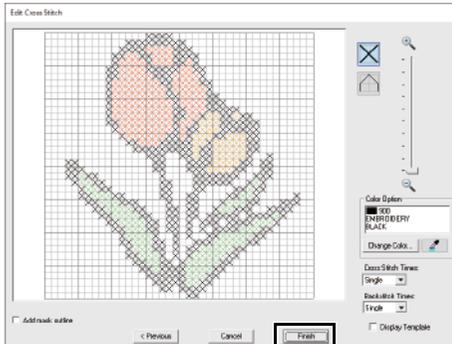
▶▶ "Check Mask Shape/Modify Image dialog box" on page 88

- 5 Click [Next].

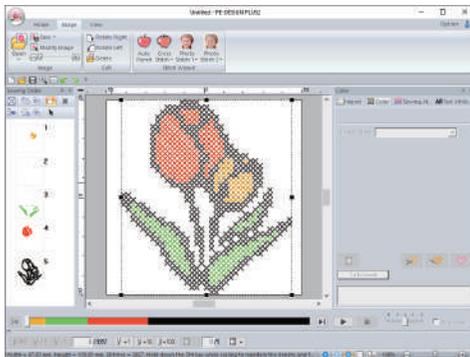


In this dialog box, the cross size and the number of colors can be specified. For this example, we will use the default settings.

## 6 Click [Finish].

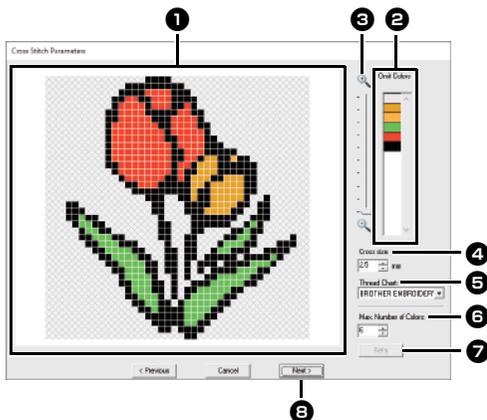


In this dialog box, stitches can be added, deleted or edited, and colors and the number of times each stitch is sewn can be specified. For this example, we will use the default settings.



→ The image is automatically hidden and stitches are automatically input.

## Cross Stitch Parameters dialog box



## 1 Result View

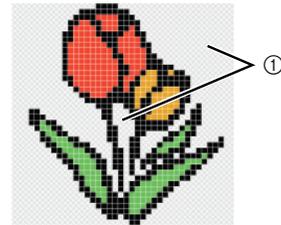
Areas that will not be converted to cross-stitching are shown with a crosshatch pattern.

## 2 Omit Colors

In the Omit Colors list, click the colors to select whether or not they will be sewn.



- To select whether or not a part of the image is to be sewn, click in the Result View box, or click in the [Omit Colors] list.
- Areas filled with a crosshatch pattern in the Result View box will not be sewn.



① These areas will not be sewn.

## 3 Zoom

## 4 Cross size

Sets the size of the pattern.

## 5 Thread Chart

You can select the brand of thread to use in the created cross stitch pattern.

## 6 Max. Number of Colors

Sets the number of colors used in the created pattern.

## 7 Retry

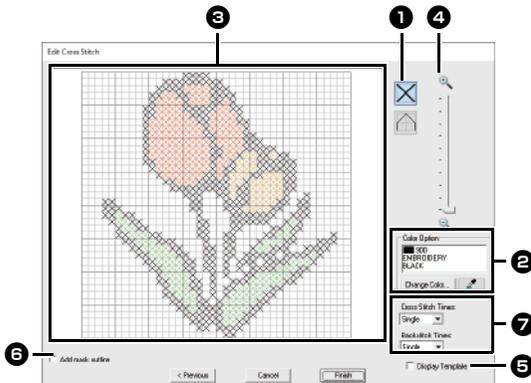
To view the results of the changes, click this button.

## 8 Next

Continues to the next step ([Edit Cross Stitch] dialog box).

## ■ Edit Cross Stitch dialog box

Click a button in (1) to select the type of stitch, select a thread color in (2), and then click or drag in (3) to edit the stitches.



### 1 Selecting stitches

Selecting stitches to be added/deleted

(cross-stitches): Specifies a cross-stitch inside a box.

(backstitches): Specifies a back stitch inside (  or  ) or on the edge (  or  ) of a box.

### 2 Color Option

To change the color, click **[Change Color]** to display the **[Thread Color]** dialog box, and then click the desired color.

To select the color to be used for a stitch, click , and then click the stitch to be sewn with that color.

### 3 Editing area

- ◆ For cross-stitches  
Clicking a box: Adds one stitch.
- ◆ For backstitches  
Clicking an edge of a box: Adds one stitch at the edge.  
Clicking a diagonal line in a box: Adds one stitch on the diagonal.
- ◆ For both cross-stitches and backstitches  
Dragging the pointer: Adds consecutive stitches.  
Right-clicking/dragging with the right mouse button held down: Deletes one stitch/deletes consecutive stitches.

### 4 Zoom

### 5 Display Template

To display the imported image, click **[Display Template]**.

### 6 Add mask outline

If this check box is selected, line data is created from the mask outline.

### 7 Cross Stitch Times/Backstitch Times

For the number of times each stitch is to be sewn, select **[Single]**, **[Double]** or **[Triple]**.



If **[Previous]** is clicked to return to the **[Cross Stitch Parameters]** dialog box after the stitches have been edited, the edited stitches are reset to their previous arrangement.

# Tutorial 7-3: Photo Stitch 1

By using the Photo Stitch 1 function, embroidery patterns can be created from photos. This type of embroidery pattern created from a photo has detailed and overlapping stitching.

<b>Step 1</b>	Importing photo data into PE-DESIGN PLUS2
<b>Step 2</b>	Starting the Photo Stitch 1 wizard
<b>Step 3</b>	Applying an image mask and adjusting its size and position
<b>Step 4</b>	Selecting appropriate thread colors and creating an embroidery pattern

## Step 1 Importing photo data into PE-DESIGN PLUS2

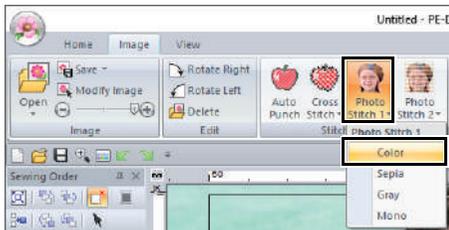
Importing image data.

Select the [Tutorial\_7] folder, and then select [swimming\_girl.jpg] as the image.

For details on importing image data, refer to "Importing image data into PE-DESIGN PLUS2" on page 73.

## Step 2 Starting the Photo Stitch 1 wizard

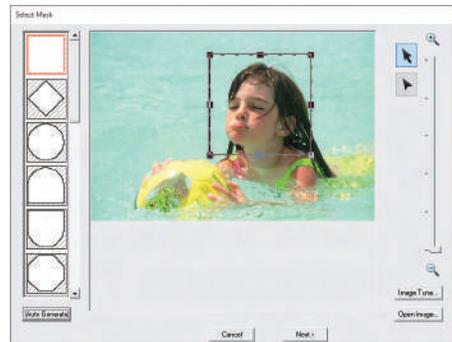
- 1 Click the [Image] tab.
- 2 Click [Photo Stitch 1] in the [Stitch Wizard] group, and then click [Color].



- With [Photo Stitch 1], an embroidery pattern can be created in color (Color), sepia (Sepia), grayscale (Gray) or one color (Mono). For this example, select [Color].
- Creating beautiful photo embroidery
  - The following types of photos are not appropriate for creating embroidery patterns.
    - ◆ Photos where the subject is small, such as in photos of gatherings
    - ◆ Photos where the subject appears dark, such as photos taken in a room or taken with backlighting
  - An image with a width and height between 300 and 500 dots is suitable.

## Step 3 Applying an image mask and adjusting its size and position

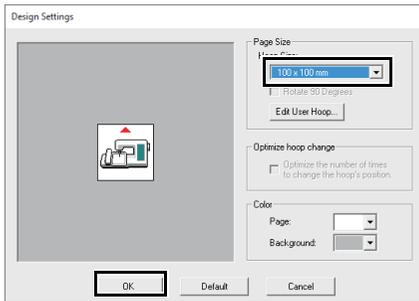
- 1 Drag the handles to adjust the shape of the mask. Drag the mask to adjust its position.



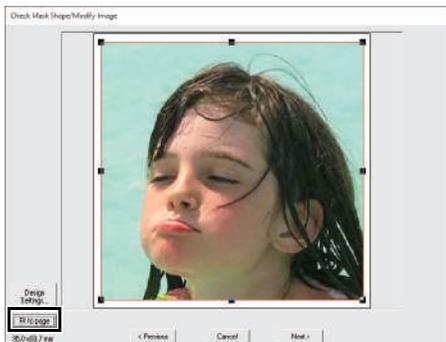
- 2 Then click [Next].
- 3 Click [Design Settings].



- 4 Select **[Hoop Size]** and choose a Design Page size of 100 × 100 mm from the selector. Then, click **[OK]**.



- 5 Click **[Fit to page]** to change the final finishing size.



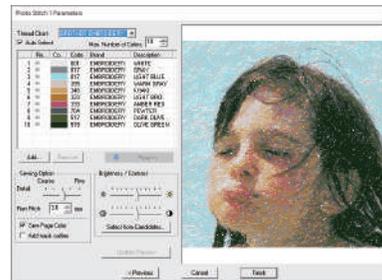
▶▶ "Check Mask Shape/Modify Image dialog box" on page 88 and "Gray Balance / Modify Image dialog box" on page 89



- The size of the embroidery pattern appears in the lower left corner of the dialog box. The user can change the size freely with this display.
- The minimum sizes of embroidery patterns that can be sewn are listed below.
  - ◆ Face only: 100 × 100 mm
  - ◆ Head and face: 130 × 180 mm

- 6 Check the preview of the area to be converted then click **[Next]**.

## Step 4 Selecting appropriate thread colors and creating an embroidery pattern

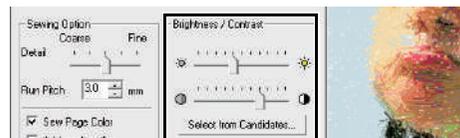


At this point, the embroidery pattern can be completed by clicking **[Finish]**. However, this section will describe how to improve the photo stitching by changing various settings.

- 1 From the **[Thread Chart]** selector, select **[Brother Chart (Photo Stitch)]**. In the **[Max. Number of Colors]** selector, specify "20". Click **[Update Preview]**.



- 2 Slide the **[Brightness]** slider one position to the left, and the **[Contrast]** slider two positions to the right. Click **[Update Preview]**.

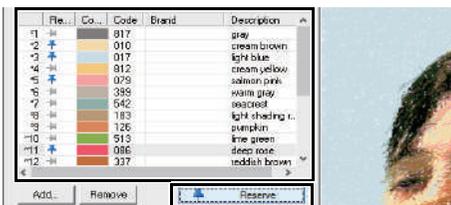


Make adjustments as needed, depending on the image. If it is difficult to adjust the tone, click **[Select from Candidates]**.

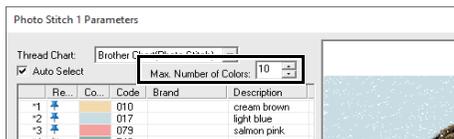
▶▶ "Select from Candidates" on page 82.

**3** While looking at the preview on the right side, select colors from the list for the most frequently used colors (light blue for the background) and for the more characteristic colors (deep rose for the lips), and then click **[Reserve]**.

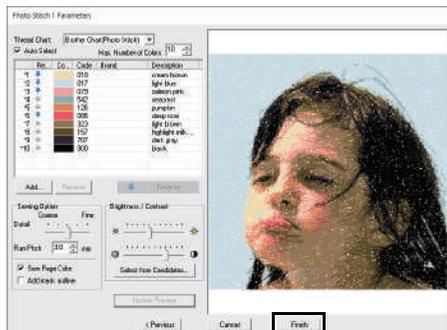
→ For this example, four colors (cream brown, light blue, salmon pink and deep rose) are reserved.



**4** In the **[Max. Number of Colors]** selector, specify "10", and then click **[Update Preview]**.



**5** Click **[Finish]**.



→ The image is automatically hidden.



If the created embroidery pattern contains colors that you do not wish to emphasize (for example, grays in the face), change the sewing order in the **[Sewing Order]** pane so that the undesirable color is sewn before all other colors.

▶▶ "Changing colors" on page 38.

## Tips for improved results

If the actual thread colors differ from the thread colors on the screen, the embroidering results will be greatly affected.

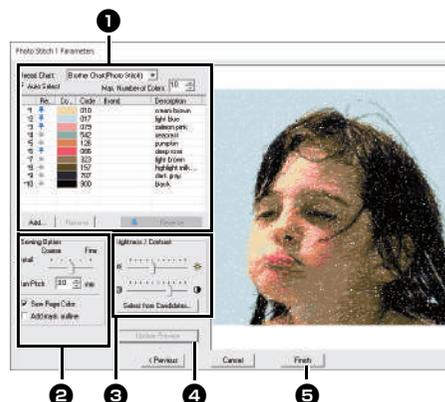
**[Brother Chart (Photo Stitch)]** is a thread chart based on the Brother embroidery thread colors and flesh tones, and has been adjusted to account for the difference between thread colors on the screen and actual thread colors; however, colors may appear differently depending on your operating environment.

If the thread colors on the screen are different from the actual thread colors, use the user thread color lists and adjust the thread colors to achieve better results.

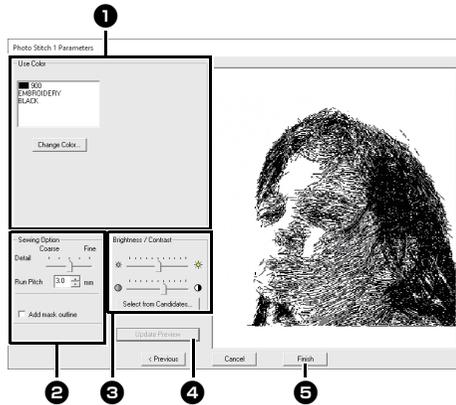
▶▶ "Editing user thread charts" on page 99

## Photo Stitch 1 Parameters dialog box

With Color, Sepia or Gray

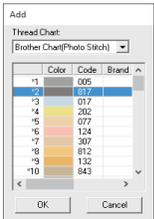


## With Mono



Select the thread colors in the color options **1**, specify the desired settings under **[Sewing Option]** **2** and **[Color Option]** **3**, and then, click **[Update Preview]** **4** to preview the effects of the specified settings. Click **[Finish]** **5** to convert the image to an embroidery pattern.

### 1 Color options

Color/Sepia/Gray	
<b>Thread Chart</b>	You can select the brand of thread to use in the created pattern.
<b>Auto Select</b>	Select whether thread colors will be selected automatically (on) or manually (off). Select this check box to turn on this function.
<b>Number of Colors</b>	Sets the number of colors selected by the Auto Select function.
<b>List of colors used</b>	Displays the thread colors that are being used. With this list, the thread colors that are being used can be checked or changed.
<b>Add</b>	<p>Click this button to add a thread color to the list of colors used. When clicked, the <b>[Add]</b> dialog box appears.</p>  <p>Select a thread chart, then a thread color, and then click <b>[OK]</b> to add the color to the list. Added thread colors will be reserved as thread colors that must be used.</p>

<b>Remove</b>	Select a thread color in the list of colors used, and then click this button to delete the selected color from the list. This is used to delete unnecessary thread colors and reduce the number of colors.
<b>Reserve</b>	Specifies thread colors that must be used. Select a thread color in the list of colors used, and then click this button to display  in the Reserved column. To cancel this setting, click to icon so that it appears as  .
Mono	
<b>List of colors used</b>	Displays the thread colors that are being used.
<b>Change Color</b>	Click this button to display the <b>[Thread Color]</b> dialog box, where the thread colors can be changed.

### 2 Sewing Option

<b>Detail</b>	Selecting a setting closer to <b>[Fine]</b> creates more details in the pattern and increases the number of stitches. (The stitches will be overlapping.)
<b>Run Pitch</b>	When the value is lowered, the sewing pitch (stitch length) will be shortened, resulting in finer stitching.
<b>Sew Page Color</b> (Available only with <b>Color, Sepia and Gray</b> )	If this check box is cleared, the parts of the pattern that are the same color as the Design Page will not be sewn. If it is selected, those parts will be sewn.
<b>Add mask outline</b>	If this check box is selected, line data is created from the mask outline.

### 3 Brightness / Contrast

The top slider is used to adjust the brightness. The bottom slider is used to adjust the contrast.	
<b>Select from Candidates</b>	<p>The image can be automatically adjusted. Click this button to display nine patterns with different brightness and contrast levels based on the original image. Select one of the candidates, and then click <b>[OK]</b>.</p> 

### 4 Update Preview

Update the previewed image after settings have been changed.



- If the **[Auto Select]** check box is selected, the thread colors will be automatically selected from the chart selected in the **[Thread Chart]** selector. If thread colors are reserved, they will be included in the colors selected according to the number specified in the **[Number of Colors]** box.

If the **[Auto Select]** check box is cleared, the settings in the **[Thread Chart]** selector and **[Number of Colors]** box are not applied, and only the thread colors in the current list of colors used will be used to assign thread colors.

- When thread colors are added/deleted, the **[Auto Select]** check box is cleared. To use added thread colors and automatically select other thread colors, select the **[Auto Select]** check box, and then update.
- The thread colors in the list of colors used are listed, in order, starting from the brightest. This order is the sewing order and cannot be changed.

# Tutorial 7-4: Photo Stitch 2

We will create an embroidery pattern with Photo Stitch 2 in a method different than that used with Photo Stitch 1.

<b>Step 1</b>	Importing photo data into PE-DESIGN PLUS2
<b>Step 2</b>	Starting the Photo Stitch 2 wizard
<b>Step 3</b>	Applying an image mask and adjusting its size and position
<b>Step 4</b>	Changing the sewing angle

## Step 1 Importing photo data into PE-DESIGN PLUS2

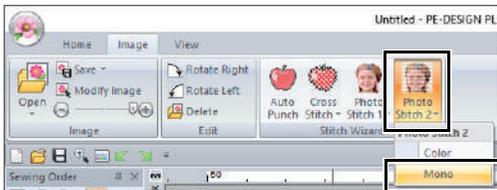
Importing image data.

Select the [Tutorial\_7] folder, and then select [girl2- face.bmp] as the image.

For details on importing image data, refer to "Importing image data into PE-DESIGN PLUS2" on page 73.

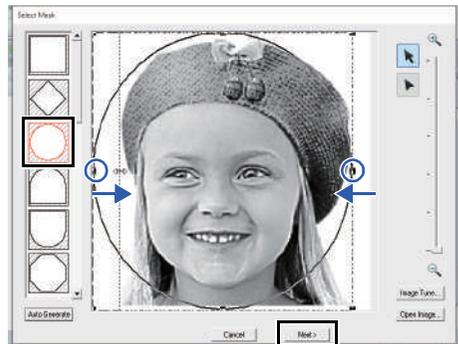
## Step 2 Starting the Photo Stitch 2 wizard

- 1 Click the [Image] tab.
- 2 Click [Photo Stitch 2] in the [Stitch Wizard] group, and then click [Mono].



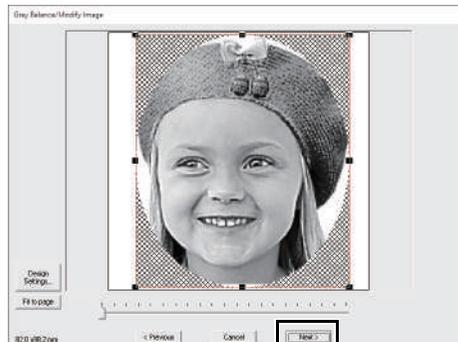
## Step 3 Applying an image mask and adjusting its size and position

- 1 Click  to select the circle mask.  
 Drag handle to adjust the size of the mask, and drag the mask to adjust its position.  
 Click [Next].



▶▶ "Select Mask dialog box" on page 87

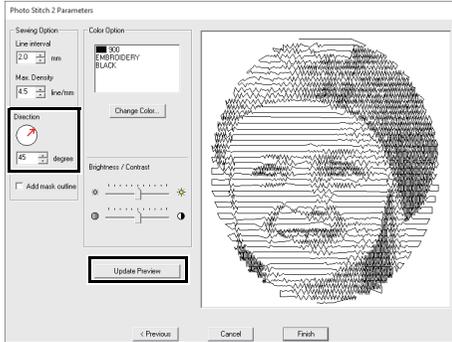
- 2 From this dialog box, the size and position of the image can be adjusted. For this example, we will simply continue to the next step.  
 Click [Next].



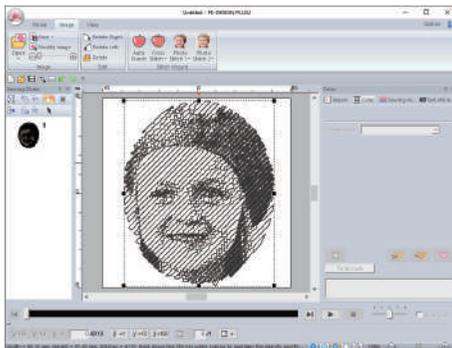
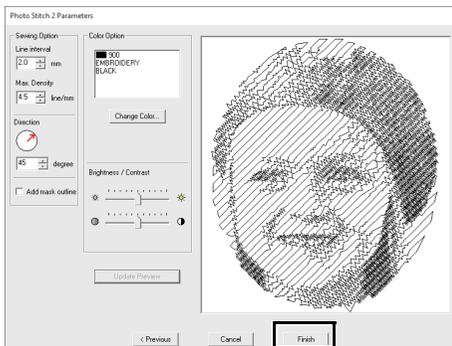
▶▶ "Check Mask Shape/Modify Image dialog box" on page 88 and "Gray Balance / Modify Image dialog box" on page 89

## Step 4 Changing the sewing angle

- 1 In the [Direction] box, type "45".
- 2 Click [Update Preview].

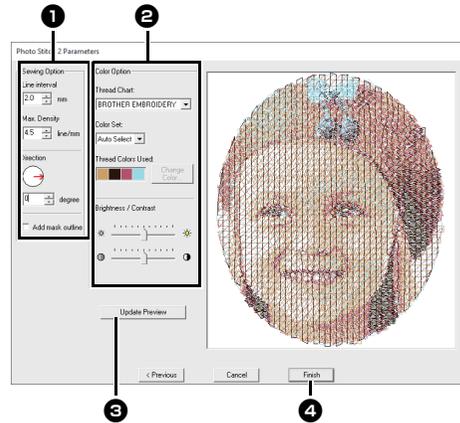


- 3 Click [Finish].

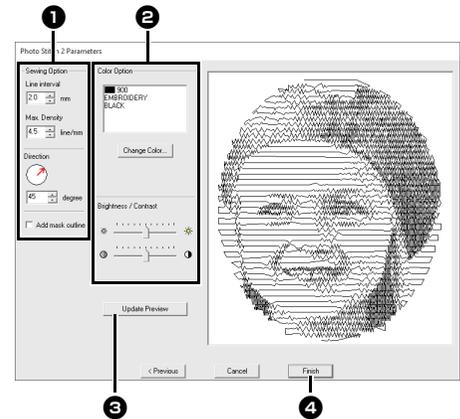


## Photo Stitch 2 Parameters dialog box

With Color

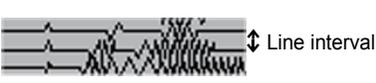
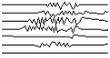
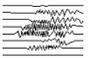


With Mono



Specify the desired settings under [Sewing Option] 1 and [Color Option] 2, and then click [Update Preview] 3 to preview the effects of the specified settings. Click [Finish] 4 to convert the image to an embroidery pattern.

## ① Sewing Option

<b>Line interval</b>	 Line interval
<b>Max. Density</b>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Lower value</p>  </div> <div style="text-align: center;"> <p>Higher value</p>  </div> </div>
<b>Direction</b>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>0°</p>  </div> <div style="text-align: center;"> <p>45°</p>  </div> <div style="text-align: center;"> <p>90°</p>  </div> </div>
<b>Add mask outline</b>	If this check box is selected, line data is created from the mask outline.

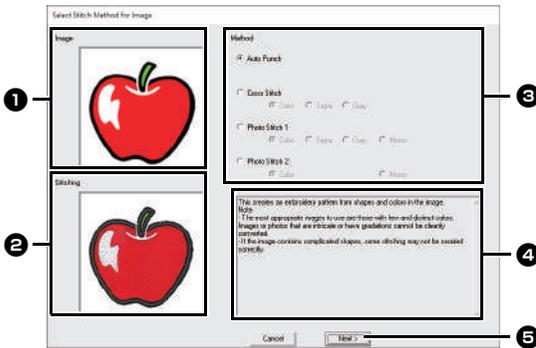
## ② Color Option

Color	
<b>Thread Chart</b>	You can select the brand of thread available in the <b>[Color Set]</b> selector.
<b>Color Set</b>	<p>If <b>[Auto Select]</b> is selected, the most appropriate four colors will automatically be selected.</p> <p>Selecting a different option specifies the four colors used when creating the embroidery pattern.</p> <p>The color choices are: cyan (C), magenta (M), yellow (Y), black (K), red (R), green (G) and blue (B). Select one of the following combinations that contains the colors most used in the image.</p> <p>Color combinations: CMYK, RGBK, CRYK, BMYK</p>
<b>Thread Colors Used</b>	Displays the four selected thread colors.
<b>Change Color</b>	<p>Under <b>[Thread Colors Used]</b>, click a color. Then, click <b>[Change Color]</b> to display the <b>[Thread Color]</b> dialog box. Select the new color and click <b>[OK]</b>.</p> <p>The selected thread color will be applied to the image shown in the preview window.</p>
Mono	
<b>Change Color</b>	Click on the <b>[Change Color]</b> button to open the <b>[Thread Color]</b> dialog box if you wish to change the color of the photo stitching. Select the color and click <b>[OK]</b> to make the color change.
Color/Mono	
<b>Brightness / Contrast</b>	<p>The top slider is used to adjust the brightness.</p> <p>The bottom slider is used to adjust the contrast.</p>
<b>Update Preview</b>	Updates the previewed image after settings have been changed.

# Advanced Stitch Wizard Operations

## Image To Stitch Wizard

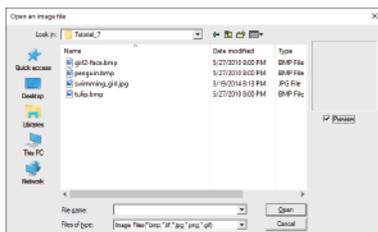
Click  in the [Quick Access Toolbar] to display the Startup Wizard, and then click [Auto Punch / Cross Stitch / Photo Stitch]. If an image has been imported, the next dialog box appears.



- 1 Sample image before being converted
- 2 Sample image of embroidery pattern after being converted
- 3 Select the conversion method.
- 4 Description of conversion method
- 5 Click to continue to the next step.



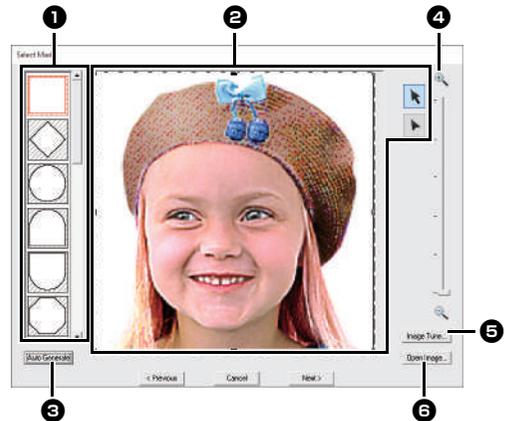
If no image has been imported into the Design Page, the [Open an image file] dialog box appears.



## Adjusting the Mask and Image

### Select Mask dialog box

The [Select Mask] dialog box appears no matter which conversion method was selected.



- 1 Mask shapes
- 2 The mask can be reshaped or repositioned. Select the tool appropriate for the operation to be performed.

 : Drag the handles to enlarge/ reduce the mask. Drag the mask to adjust its position.

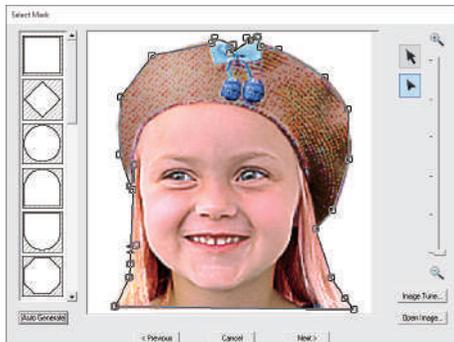
 : Points can be entered, moved and deleted to create a mask with the desired shape. To add points, click the outline of the mask. To move a point, select the point, and then drag it. To delete points, select the point, and then press the **<Delete>** key.



With a small original image, it may not be possible to reduce the size of the mask.

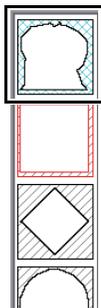
- 3 If **[Auto Generate]** was clicked, an outline of mask was automatically detected from the image.

The **[Auto Generate]** button is available only with images that have a light-colored background, like in this photo.



A mask shape edited with  or created by clicking **[Auto Generate]** will be added at the top of the list. Then, this mask shape can be selected the next time a pattern is created using a Stitch Wizard. A maximum of five shapes will be added, and they will be arranged in order of the most recently used.

These mask shapes appear no matter which Image To Stitch function is selected.



- 4 **Zoom**

- 5 Clicking the **[Image Tune]** button displays an **[Image Tune]** dialog box.



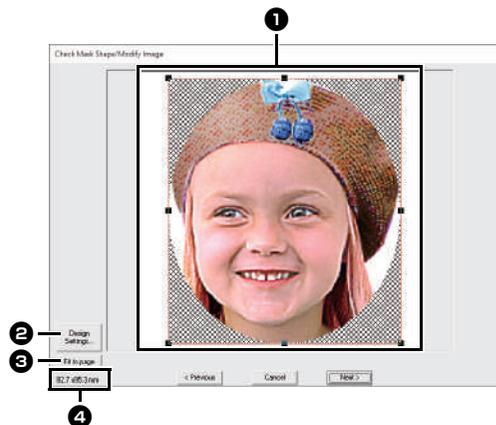
- 6 Clicking **[Open Image]** allows you to replace the image with a different one. The **[Open an image file]** dialog box appears. Select a file.

The next step differs depending on the color range selected for the embroidery pattern.

## ■ Check Mask Shape/Modify Image dialog box

If **Color**, **Sepia** or **Gray** was selected for **[Photo Stitch 1]**, **[Photo Stitch 2]** or **[Cross Stitch]**, or if **[Auto Punch]** was selected:

The following dialog box appears.

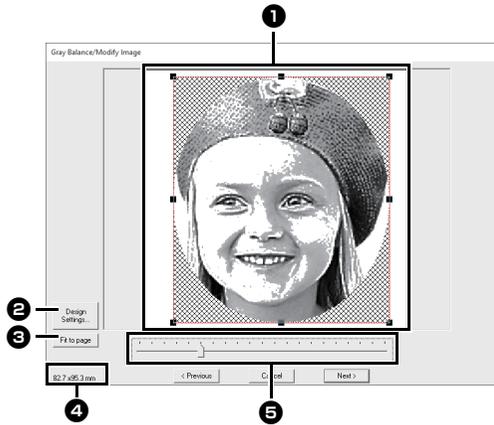


- 1 Adjust the position and size of the image. Drag the image to the desired position. Drag the handle to adjust the image to the desired size.
- 2 Click **[Design Settings]** to change the size of the Design Page. Specify the settings in the **[Design Settings]** dialog box.
  - ▶▶ "Specifying the Design Page Settings" on page 32
- 3 Click **[Fit to page]** to adjust the image to the size of the Design Page.
- 4 **Embroidery pattern size**

## ■ Gray Balance / Modify Image dialog box

If [Mono] was selected for [Photo Stitch 1] or [Photo Stitch 2]:

The following dialog box appears.



- 1 Adjust the position and size of the image. Drag the image to the desired position. Drag the handle to adjust the image to the desired size.
- 2 Click [Design Settings] to change the size of the Design Page. Specify the settings in the [Design Settings] dialog box.
  - ▶▶ "Specifying the Design Page Settings" on page 32
- 3 Click [Fit to page] to adjust the image to the size of the Design Page.
- 4 **Embroidery pattern size**
- 5 Drag the slider to adjust the gray balance.

# Importing and Editing Image Data

An imported image can be used with the Image To Stitch Wizard.



Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.

## Image file formats

Images in the following formats can be imported.

- Windows bitmap (.bmp), Exif (.tif, .jpg), Portable Network Graphics (.png), GIF (.gif)

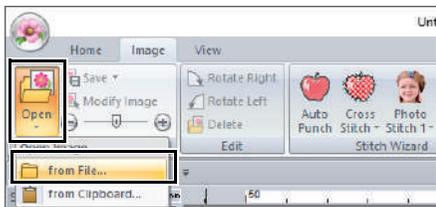


- Vector image data in the ".wmf" (Windows Metafile), ".emf" (Enhanced Metafile) and ".svg" (Scalable Vector Graphics) file formats can be converted to shape patterns as it is without some information not supported.

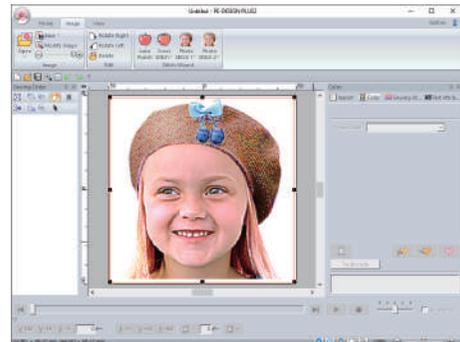
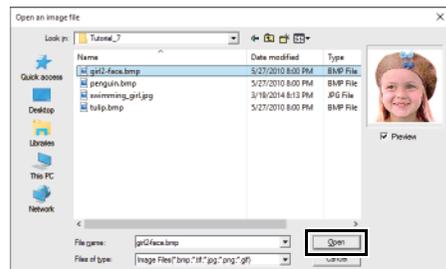
▶▶ "Step 1 Importing vector images (SVG files)" on page 40

## Importing image from a file

- 1 Click the **[Image]** tab.
- 2 Click **[Open]** in the **[Image]** group, and then click **[from File]**.



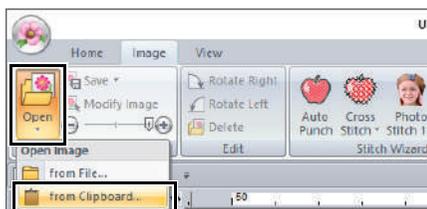
- 3 Select the drive, the folder and the file. Click **[Open]**.



- If the **[Preview]** check box is selected, the contents of the selected file will appear in the **[Preview]** window.
- Various clip art images can be found in the **[ClipArt]** folder at:  
(Drive where PE-DESIGN PLUS2 was installed)\Program Files (x86)\Brother\PE-DESIGN PLUS2\ClipArt

## Importing image from the clipboard

- 1 Click the **[Image]** tab.
- 2 Click **[Open]** in the **[Image]** group, and then click **[From Clipboard]**.



→ The image on the clipboard is imported into the Design Page.



This can only be done when there is image data on the Clipboard.

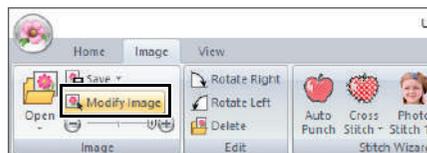
## Adjusting the density of the background image

For detailed instructions, see "Adjusting the density of the background image" on page 16.

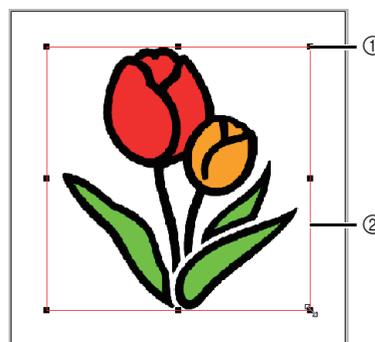
## Changing the size, angle and position of the image

### Selecting an image

- 1 Click the **[Image]** tab.
- 2 Click **[Modify Image]** in the **[Image]** group.



→ The image is selected and appears as shown below.



- ① Handle
- ② Red line



The status bar shows the dimensions (width and height) of the image.

### Moving an image

Drag the selected image to the desired location.

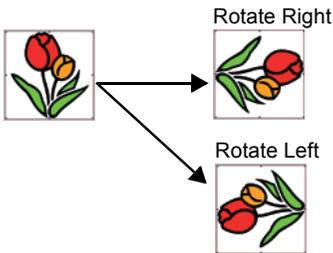
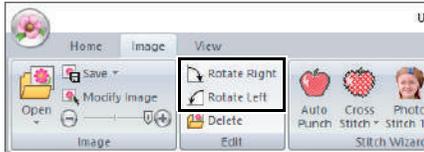
### Scaling an image

Drag the handle to adjust the image to the desired size.

## Rotating an image

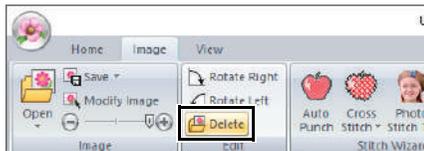
An image can be rotated in 90° increments.

- 1 Click the **[Image]** tab.
- 2 Click **[Rotate Right]** or **[Rotate Left]** in the **[Edit]** group.



## Deleting an image

- 1 Click the **[Image]** tab.
- 2 Click **[Delete]** in the **[Edit]** group.



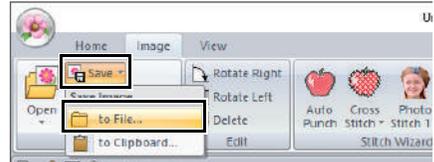
An image can also be deleted by selecting it, then pressing the **<Delete>** key.

- ▶▶ *"Changing the size, angle and position of the image" on page 91*

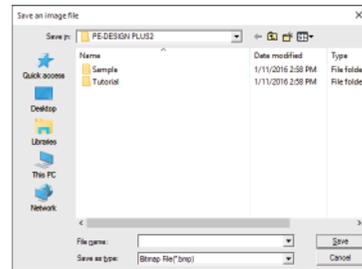
## Saving the image data

### Saving as a file

- 1 Click the **[Image]** tab.
- 2 Click **[Save]** in the **[Image]** group, and then click **[to File]**.



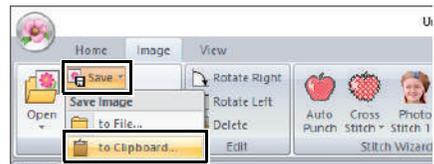
- 3 Select the drive, the folder and the format. Type in file name. Click **[Save]**.



The image data can be saved in either of the following formats: Windows bitmap (.bmp), Exif (.jpg).

### Outputting to the Clipboard

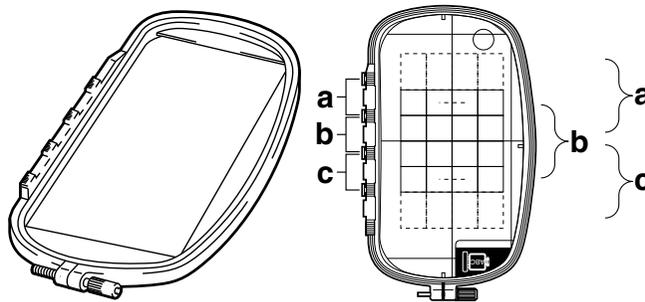
- 1 Click the **[Image]** tab.
- 2 Click **[Save]** in the **[Image]** group, and then click **[to Clipboard]**.



# Creating Design for Multi-Position Hoops

## Tutorial 8: Creating Design for Multi-Position Hoops

This program enables you to create multi-position designs that you can stitch in any multi-position hoop attached to your embroidery machine.



Example of multi-position hoop: 100 × 172 mm hoop

Although the size of the design that can be embroidered using an multi-position hoop is 130 × 180 mm (or 100 × 100 mm, depending on the sewing area of the embroidery machine), first determine which of the three installation positions (indicated as a, b, and c in the illustration above) the multi-position hoop will be installed at and determine the orientation of the design.

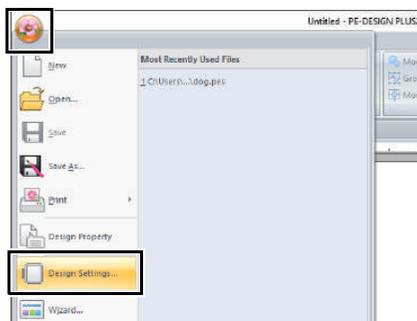
When creating the design, each design section can only be as large as the sewing area of the embroidery machine.

The sample file for this tutorial is located at:  
Documents (My documents)\PE-DESIGN PLUS2\Tutorial\Tutorial\_8

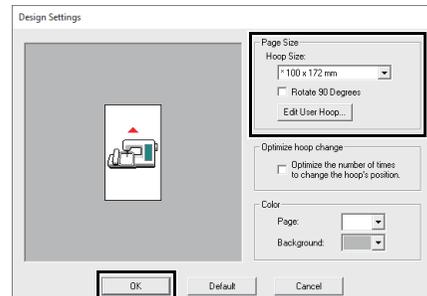
<b>Step 1</b>	Selecting the Design Page size
<b>Step 2</b>	Creating the design
<b>Step 3</b>	Optimizing hoop changes
<b>Step 4</b>	Checking the pattern

### Step 1 Selecting the Design Page size

**1** Click , then **[Design Settings]**.



**2** Select **[Hoop Size]** and choose a Design Page size of **[\*100 × 172 mm]** or **[\*130 × 300 mm]** from the selector. For this example, select **[\*100 × 172 mm]**. Then, click **[OK]**.

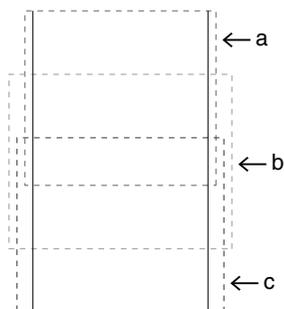




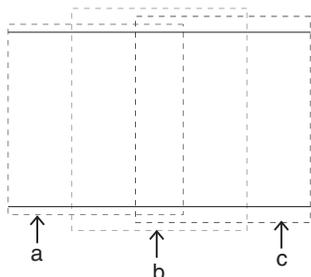
- Settings for multi-position hoops are indicated by " \*".
- Choose the appropriate setting after checking the size of the hoop available for your machine.

## Step 2 Creating the design

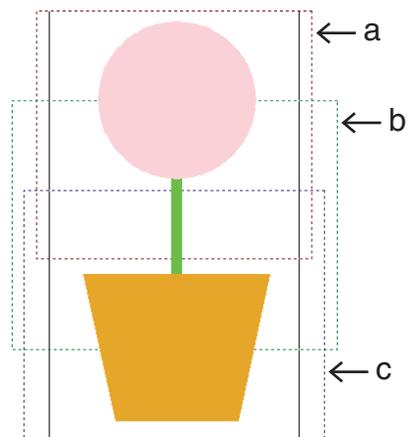
- 1 The Design Page appears on the screen as shown below.



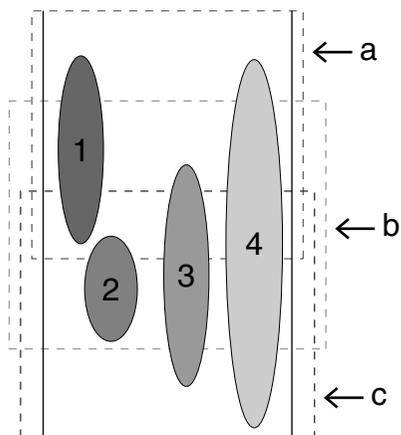
- **Area**
  - **Area a**  
Embroidering area when the multi-position hoop is installed at the top installation position.
  - **Area b**  
Embroidering area when the multi-position hoop is installed at the middle installation position.
  - **Area c**  
Embroidering area when the multi-position hoop is installed at the bottom installation position.  
The dotted lines separate each area.
- If the **[Rotate 90 Degrees]** check box is selected, the embroidering areas appear as shown below.



- 2 Create the design, making sure that it meets the following conditions.



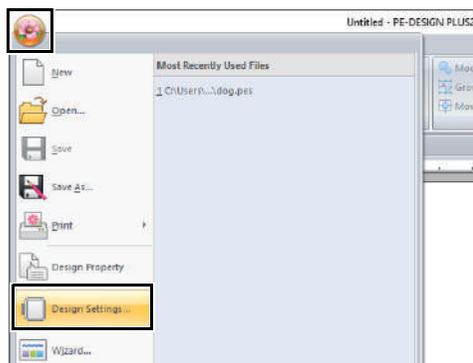
- The size of one pattern must be no larger than 100 × 100 mm (or 130 × 180 mm).
- Each pattern must completely fit within a single area (a, b, or c).



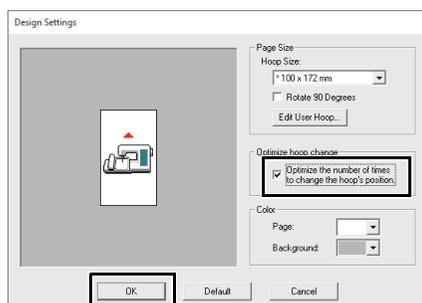
- 1: The position of this pattern is correct since it fits completely within area a.
- 2: The position of this pattern is correct since it fits completely within either area b or area c.
- 3: The size of this pattern is acceptable, but its position must be corrected since it does not fit completely within any of the areas.  
(It will be necessary to correct the position in order to fit in either b or c.)
- 4: This pattern must be corrected since it is too large.  
(It will be necessary to correct the position and size in order to fit in either a, b, or c.)

## Step 3 Optimizing hoop changes

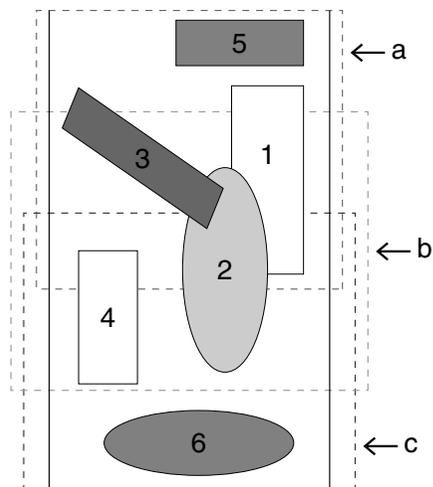
- 1 Click , then **[Design Settings]**.



- 2 Select the **[Optimize the number of times to change the hoop's position]** check box, and then click **[OK]**.



- A check mark appears when this function is turned on; no check mark is displayed when this function is turned off.



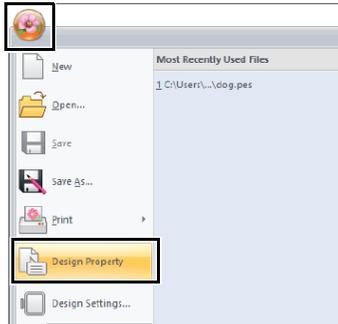
- When the Optimize hoop change function is turned on, the sewing order that you have set is optimized to reduce the number of times that the hoop installation position is changed. For the example shown on this page, the sewing order is: a (pattern 1) → b (pattern 2) → a (patterns 3 & 5) → c (patterns 4 & 6). If the Optimize hoop change function is turned off, each pattern is sewn according to the sewing order that you have set. For the example shown on this page, the sewing order is: a (pattern 1) → b (pattern 2) → a (pattern 3) → c (pattern 4) → a (pattern 5) → c (pattern 6). Therefore, since the number of times for changing the hoop installation position is not optimized, it may be changed more often than if it was optimized.



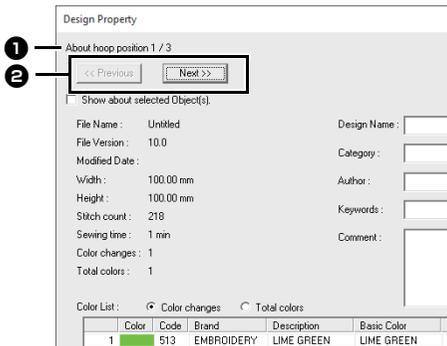
Since the pattern may not be sewn correctly or the fabric may not feed evenly if the hoop installation position is changed too often, we recommend turning on the **[Optimize hoop change]** function. Turning on this function will change the sewing order that you have set, therefore, check the sewing order before you begin embroidering.

## Step 4 Checking the pattern

- 1 Click , then **[Design Property]**.



- 2 Check the sewing order of each pattern and the number of times the hoop position will be changed.



Only the patterns that would be sewn at the current position in the hoop installation order appear in the Design Page, and the embroidering area for the current hoop position is outlined in red.

- 1 The position in the hoop installation order for the currently displayed pattern.
- 2 To display information for patterns at other positions in the hoop installation order, click **[Previous]** or **[Next]**.



If a pattern is larger than the embroidery area or if a pattern is positioned so that it does not completely fit within an embroidery area, the error message appears. After the pattern causing the error is displayed, select the pattern and change its size or position.

## ■ Saving the design

The design for a multi-position hoop is created by considering the pattern for each hoop installation position as one pattern, then combining them.

One multi-position hoop design is saved as a single file (.pes).



- If the file size or the number of color changes is larger than the specified number, or if one of the patterns does not completely fit within an embroidery area, the error message appears.
- The patterns appear on the machine as shown below.



 : This pattern is sewn when the hoop is installed at the top installation position (position a).

 : This pattern is sewn when the hoop is installed at the middle installation position (position b).

 : This pattern is sewn when the hoop is installed at the bottom installation position (position c).

Therefore, the frame installation position sewing order for the pattern shown above is b, a, then c.

## Notes on embroidering using the multi-position hoop

- Before embroidering your design, sew a trial sample of the design on a scrap piece of fabric from your design, making sure to use the same needle and thread.
- Be sure to affix stabilizer material to the back of the fabric and tightly stretch the fabric within the hoop. When embroidering on thin or stretch fabrics, use two layers of stabilizer material. If no stabilizer material is used, the fabric may become over-stretched or wrinkled or the embroidery may not be sewn correctly.



- Stabilizer must always be used when embroidering to stabilize the fabric. There are many types of stabilizer; the type that you will use depends on the type of fabric that you are embroidering on.
- For large-size designs that are split into sections, the stabilizer must be adhered to the fabric, for example, iron-on stabilizer. In some cases, you may need to use two pieces of stabilizer for your embroidery.
- When using spray adhesive, spray the adhesive onto a hooped piece of stabilizer that is strong enough for the entire large-size embroidery. In some cases, you may need to use two pieces of stabilizer for your embroidery.



- For best results, attach the stabilizer to the fabric (as described on this page). Without the correct stabilizer, the design may become misaligned due to puckering in the fabric.
  - Be sure to check the recommendations on the stabilizer package.
- 
- Use the zigzag stitch for sewing the outlines in order to prevent embroidering outside the outlines.

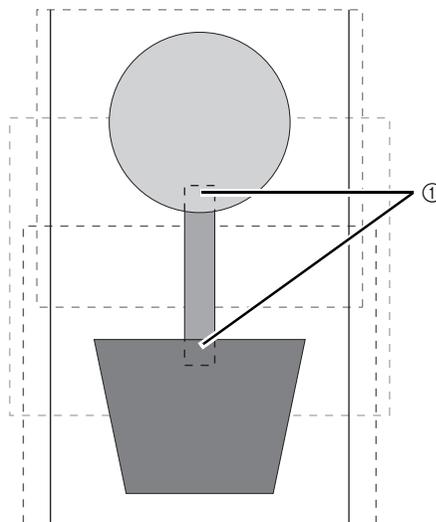


○



×

- For patterns that require the hoop to be installed at different installation positions, design the embroidery pattern so that the various parts of the pattern overlap in order to prevent misalignment while embroidering.



① Overlap

## ■ Printing a Design Page for a multi-position hoop

On the first page, a complete image of the Design Page is printed at actual size. (However, for a 130 × 300 mm Design Page, a reduced image of the Design Page is printed.) On the following pages, an image of each design section and its sewing information are printed in the sewing order.

When **[Actual Size]** is selected:

An image of the pattern in each design section is printed on a separate page as the corresponding sewing information.

When **[Reduced Size]** is selected:

An image of the pattern in each design section is printed on the same page as the corresponding sewing information.

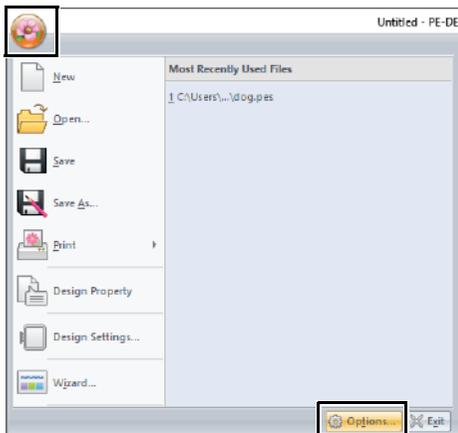
▶▶ "Printing" on page 47

## Changing Various Settings

### Changing options settings

From the **[Options]** dialog box, the commands appearing in the **[Quick Access Toolbar]** and settings for the application's appearance can be selected, and also the settings on shortcut keys, jump stitches, thread charts can be specified or changed. Follow the procedure described below to display the **[Options]** dialog box.

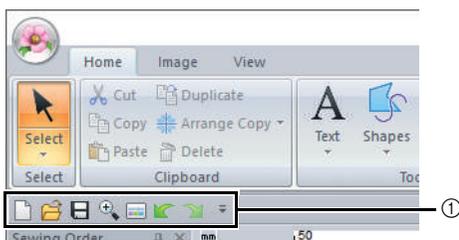
Click , and then click **[Options]** on the bottom of the window.



The **[Options]** dialog box can also be displayed using either of the following methods.

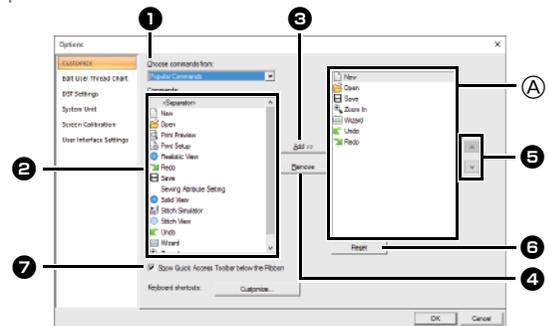
- Click  at the right end of the Quick Access Toolbar, and then click **[More Commands]**.
- Click **[Option]** in the upper-right corner of the window.

### Customizing Quick Access Toolbar



① Quick Access Toolbar

1 Click **[Customize]**.



2 Repeat the following operations until the desired commands are displayed.

① **Choose commands from selector**  
Select a command category.

② **Commands list**  
Select the command to be added.

③ **Add button**  
Selected command is added.  
The command appears in ④.

④ **Remove button**  
Selected command is removed.  
The command is removed from ④.

⑤   
  
Select an icon in ④, and then click the buttons at to move it to the desired position.

⑥ **Reset button**  
Reverting to the default commands.

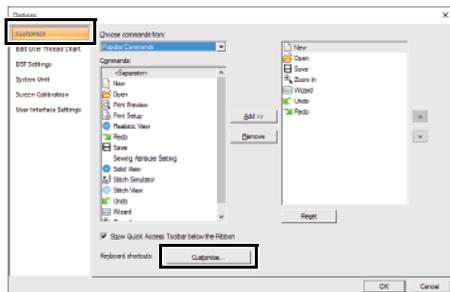
Settings for the following can also be specified from this dialog box.

⑦ **Show Quick Access Toolbar Below the Ribbon**  
Select where the Quick Access Toolbar is displayed. Select the check box to display the Quick Access Toolbar below the Ribbon.

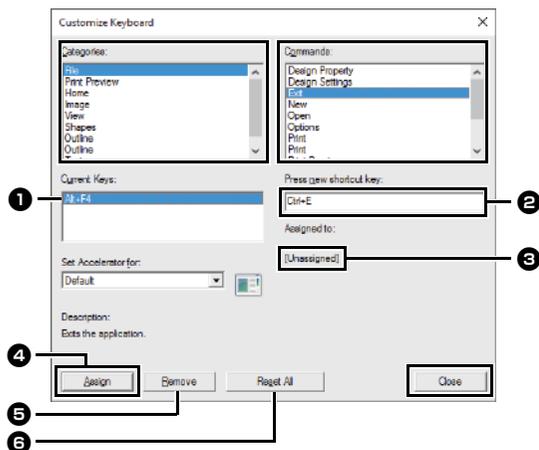
3 After the settings have been specified, click **[OK]** to apply them.

## ■ Customizing Shortcut keys

- 1 Click **[Customize]** in the command list, then **[Customize]** beside **[Keyboard shortcuts]**.



- 2 In the **[Categories]** list, select a command category. Then, in the **[Commands]** list, select the command whose shortcut keys are to be specified.



→ The default shortcut keys appear in the **[Current Keys]** box **1**.

- 3 Use the keyboard to record the new shortcut keys in the **[Press new shortcut key]** **2** box, and then click **[Assign]** **4**. The new shortcut keys appear in the **[Current Keys]** box **1**.

→ Usage information about the entered key combination appears. If the key combination has already been assigned to another command, the name of that command appears at **3**.

To remove the default or specified shortcut keys, select the shortcut keys in **1**, and then click **[Remove]** **5**.

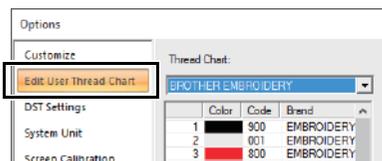
To revert to the default settings, click **[Reset All]** **6**.

- 4 Repeat steps **2** and **3** until the desired shortcut keys have been specified for the commands, and then click **[Close]**.

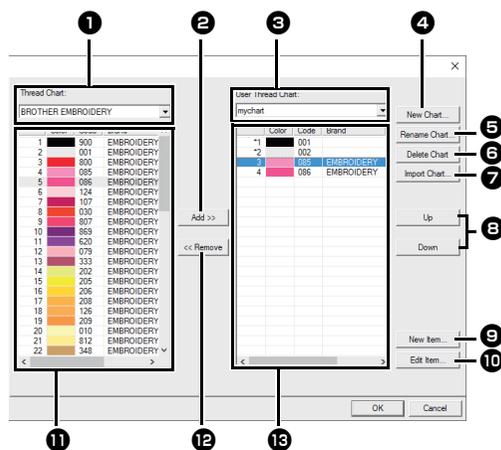
- 5 Click **[OK]** in the **[Options]** dialog box.

## Editing user thread charts

- 1 Click **[Edit User Thread Chart]**.



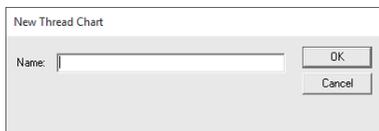
- 2 A user thread chart can be saved, edited or deleted.



- 1 Select an existing thread chart.
- 2 Adds thread colors from an existing thread chart.
- 3 When editing or deleting a thread chart, select the thread chart here before performing the operation.
- 4 Creates a new thread chart.
- 5 Changes the thread chart name.
- 6 Deletes a thread chart.
- 7 Imports the thread chart.
- 8 Changes the order of the thread colors.
- 9 Adds a new thread color.
- 10 Edits a thread color.
- 11 Displays thread colors in existing thread chart.
- 12 Deletes a thread color.
- 13 Displays thread colors in the user thread chart.

## ■ Creating a new thread chart

- 1 Click **[New Chart]** ④.
- 2 Type in the name of the chart, and then click **[OK]**.



A saved thread chart can be selected from the **[User Thread Chart]** selector and **[Thread Chart]** selector.

## ■ Renaming a thread chart

- 1 From the **[User Thread Chart]** selector ③, select the chart.
- 2 Click **[Rename Chart]** ⑤.
- 3 Type in the name of the chart, and then click **[OK]**.

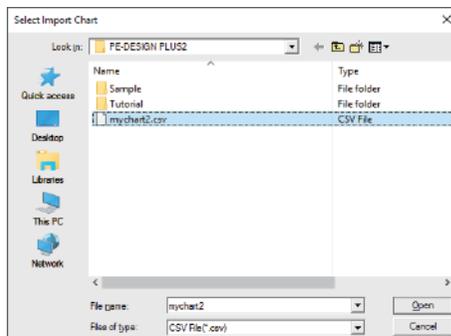


## ■ Deleting a chart

- 1 From the **[User Thread Chart]** selector ③, select the chart.
- 2 Click **[Delete Chart]** ⑥.
- 3 If a message appears, click **[Yes]**.

## ■ Importing a thread chart

- 1 Click **[Import Chart]** ⑦.
- 2 Select the drive, the folder, and the btc, btc2 or csv file, and then click **[Open]**.



Files in the .btc, .btc2 or .csv format can be imported.

▶▶ "User thread chart files" on page 101

- 3 If a message appears, click **[Yes]**.

## ■ Editing a chart

- 1 From the **[User Thread Chart]** selector ③, select the chart.
- 2 Continue with the appropriate procedure. To save the changes, click **[OK]**.

## ■ Adding items from a thread chart

- 1 From the **[Thread Chart]** selector ①, select the thread brand or a user thread chart. If multiple user thread charts have been created, thread colors can be selected from different user thread charts.
- 2 From the list ⑪, click the thread colors.



To add multiple items, hold down the **<Shift>** or **<Ctrl>** keys while selecting thread colors.

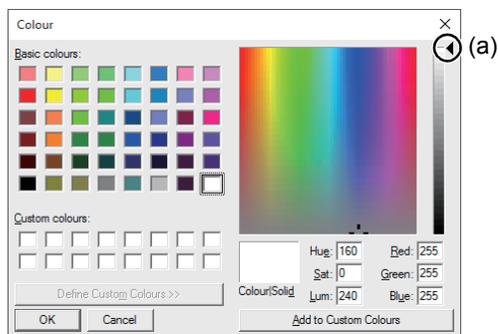
- 3 Click **[Add]** ②.  
→ The selected items are added to the list in the user thread chart ⑬.

## ■ Adding a new item

- 1 Click **[New Item]** ⑨.
- 2 To create a new color, click **[Mix]**.



- 3 Specify the color, and then click **[OK]** to add the specified color to the **[Edit Thread]** dialog box.



The color cannot be changed if the slider (a) is moved to the top of the scale.

- 4 If necessary, type in the code, brand and description into the appropriate boxes.



Only numbers can be entered for the code.

- 5 Click **[OK]** to add the new item to the list in the user thread chart ⑬.



An asterisk (\*) appears in front of the index number for items created or edited by the user.

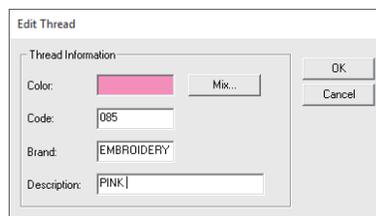
## ■ Deleting items

- 1 From the list for the user thread chart ⑬, select the item to be deleted.
- 2 Click **[Remove]** ⑫ to delete the item from the user thread chart.

## ■ Editing an item

An item registered in the list for a user thread chart can be edited to change the color or thread number.

- 1 From the list for the user thread chart ⑬, select the item to be edited, and then click **[Edit Item]** ⑩.
- 2 Edit the item details in the same way as adding a new item.



As with newly added items, an asterisk (\*) appears in front of the index number of edited items.

## ■ Changing the order of items

- 1 From the list for the user thread chart ⑬, select the item to be moved.
- 2 Click **[Up]** or **[Down]** ③ to change the order of the item.



### User thread chart files

Existing user thread charts can be imported, or edited user thread charts can be used on a different computer.

- A newly created user thread chart is saved, in the .btc2 format with the same name as the thread chart, at:  
(Drive where PE-DESIGN PLUS2 was installed)\Program Files (x86)\Brother\PE-DESIGN PLUS2\MyChart



- The file "chart1.btc" in the **[Color]** folder cannot be imported.
- A user thread chart file in the .csv format can be imported.

The .csv file should contain information for Code, Brand, Description, R, G and B, separated by commas with one color on each line. The RGB values must be within 0-255.

Example: For a .csv file

```
100,MyBrand,Black,10,10,10
101,MyBrand,White,245,245,245
```



Thread colors in embroidery patterns created with this application may appear differently on the embroidery machine, depending on the model used.

### 1. Embroidery machines without a function for displaying thread colors

The specified thread color information cannot be displayed at all.

### 2. Embroidery machines with a function for displaying thread colors

Of the thread color information specified in the embroidery pattern, only the thread color names are displayed on the machine. However, the names that are displayed are limited to the machine's preset thread color names. Therefore, the machine displays the names of its preset thread colors that are closest to the colors specified in the embroidery pattern.

### 3. Embroidery machines with a thread color index

Some machines can display the thread information specified with this application.

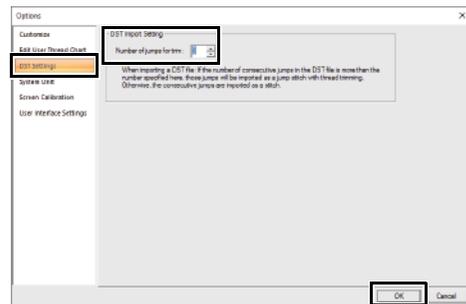
However, for thread colors that have been edited or added by the user (thread colors with an asterisk (\*) at the left side), only the thread number is displayed.

## Specifying the number of jumps in embroidery design of the DST format

With the DST format, you can specify whether or not the jump stitches are trimmed according to the number of jump codes. The number of codes differs depending on the embroidery machine being used.

Click **[DST Settings]** in the command list, specify the number of jumps, and then click **[OK]**.

To specify a setting for importing, enter a value beside **[DST Import Setting]**.



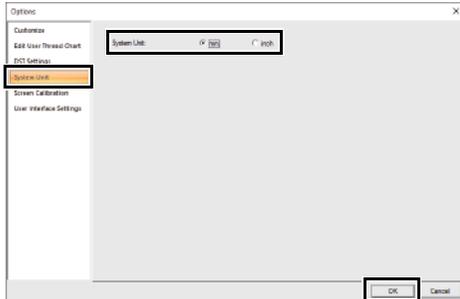
### **DST Import Setting**

If the number of consecutive jumps in the DST file is less than the number of jumps specified here, those consecutive jumps will be replaced with a stitch.

If the number of consecutive jumps in the DST file is greater than or equal to the number of jumps specified here, those jumps will be replaced with a jump stitch where the thread is trimmed.

## Changing the system unit

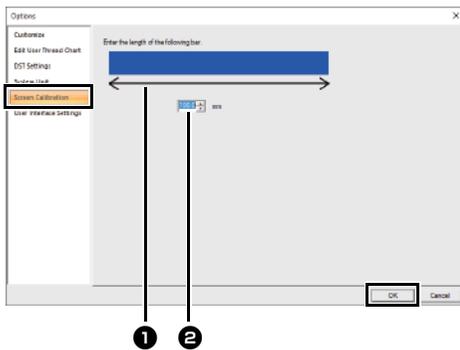
- 1 Click **[System Unit]**, and then select the desired measurement units (**[mm]** or **[inch]**).



## Adjusting the screen calibration

Measurements can be adjusted so that objects will be displayed at the same size as the actual embroidery at a zoom ratio of 100%. Once this adjustment is made, it will not need to be done again later.

Click **[Screen Calibration]**. Hold a ruler against the screen to measure the length of **1**. Next, enter the value at **2**, and then click **[OK]**.

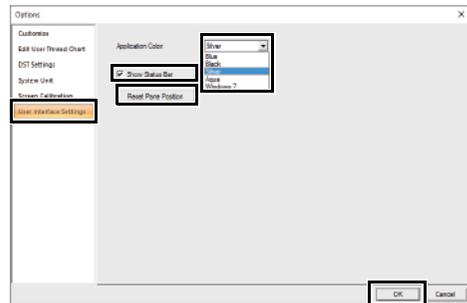


Be sure to enter the length in millimeters. A value in inches is invalid.

## Customizing User Interface Settings

The color scheme of the applications can be selected.

Click **[User Interface Settings]** in the command list, select the desired color scheme from **[Application Color]**, and then click **[OK]**.



With the **[Show Status Bar]** check box, select whether to display or hide the status bar. To display the status bar, select the check box.

If the **[Reset Pane Position]** button is clicked, the docked panes (**[Import]/[Color]/[Sewing Attributes]/[Text Attributes]** panes, **[Sewing Order]** pane and **[Stitch Simulator]** pane) return to their default displays after the application is restarted.

# For Basic Operations

## Enlarging/Reducing Stitch Patterns

Imported stitch patterns can be enlarged or reduced in PE-DESIGN PLUS2 in the following three ways.

- 1 Stitch patterns can be simply enlarged/reduced.
- 2 Stitch patterns can be enlarged/reduced while the <Ctrl> key is held down.

With method **1**, the stitching will become more dense or light without the number of stitches sewn changing. In other words, greatly enlarging or reducing the pattern changes the quality of the embroidery since the thread density is adjusted. Use this method when only slightly enlarging/reducing the stitch pattern.

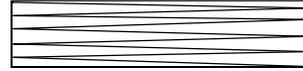
With method **2**, the size of the pattern is changed while maintaining the thread density and needle drop point pattern. However, if the original thread density and needle drop point pattern in the stitch pattern are not uniform, the thread density and needle drop point pattern may not be maintained, even by using this method. Enlarge/reduce the pattern while checking the preview. Do not use this method when only slightly enlarging/reducing the stitch pattern.



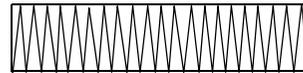
This software allows you to create a wide variety of embroidery patterns and supports wider ranges for the setting of the sewing attributes (thread density, sewing pitch, etc.). However, the final result also depends on your particular embroidery machine model. We recommend that you make a trial sewing sample with your sewing data before sewing on the final material. Remember to sew your trial sample on the same type of fabric as your final material and to use the same needle and the same machine embroidery thread.

## Sewing Direction

In order to limit pulling or puckering, select a stitch direction perpendicular to the larger edge of the area.



Pulling or puckering more likely to occur



Pulling or puckering less likely to occur

## Sewing Order

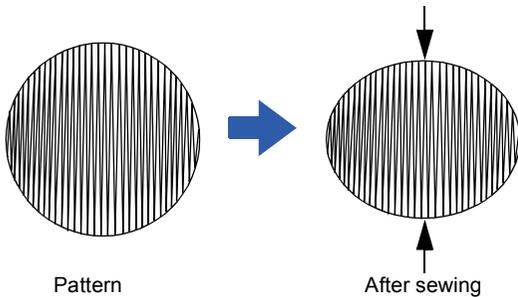
After creating an embroidery pattern made of several different parts, be sure to check the sewing order and correct it if necessary.

The default sewing order is the order in which the elements are drawn.

Be careful when changing the sewing order since overlapping areas may be incorrectly positioned.

## Sewing Wide Areas

- For best sewing results, set **[Under sewing]** to **[On]** when sewing wide regions.
  - ▶▶ For more details, refer to *"Under sewing"* on page 107.
- Changing the **[Sewing Direction]** setting prevents pulling-in or puckering of the stitching.
- When embroidering, use stabilizer material specifically for embroidering. Always use stabilizer material when embroidering lightweight or stretch fabrics, otherwise the needle may bend or break, the stitching may pull and pucker, or the pattern may become misaligned.
- When satin stitching is sewn in a wide area, the stitched area may shrink after sewing, depending on the material and the type of thread used. If this happens, switch to this alternate method: Select the fill stitch and use stabilizer material on the reverse side of the fabric.



## Sewing Attributes

The sewing attributes for each sew type are first set to their default settings; however, by changing the settings of the sewing attributes, you can create custom stitching.

- ▶▶ For more details, refer to "Line sewing attributes" on page 106 and "Region sewing attributes" on page 107.

### Line sew types

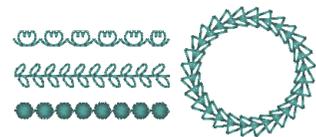
**Zigzag Stitch** (▶▶ p. 106)



**Running Stitch** (▶▶ p. 106)



**Motif Stitch** (▶▶ p. 106)

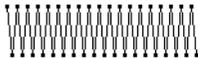
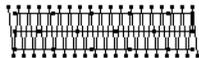
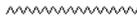
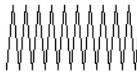


### Line sewing attributes

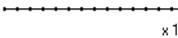
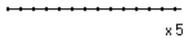
The available attributes differ depending on the selected sew type.

- ▶▶ "Specifying sewing attributes" on page 63

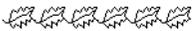
#### Zigzag Stitch

<b>Under sewing</b>	Off 	On 
<b>Zigzag width</b>	Narrow 	Wide 
<b>Density</b>	Coarse 	Fine 

#### Running Stitch

<b>Run pitch</b>	Specify the length of one stitch.	Short 	Long 
<b>Run time(s)</b>	Specify the number of times the outline is sewn.	1 time 	5 times 

#### Motif Stitch

	Select a pattern for the motif stitch. Click  to display the <b>[Browse]</b> dialog box. Select a folder, and then select the desired pattern (.pmf file) from the list of patterns that appears.
	Specify the pattern size. The pattern can be enlarged or reduced while maintaining the width-to-height proportion.
Smaller 	Larger 

## Region sew types

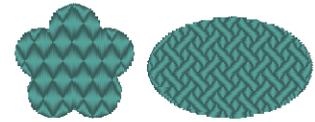
Satin Stitch (▶▶ p. 107)



Fill Stitch (▶▶ p. 107)



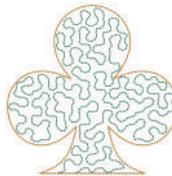
Programmable Fill Stitch (Prog. Fill Stitch) (▶▶ p. 107)



Motif Stitch (▶▶ p. 108)



Stippling Stitch (▶▶ p. 108)

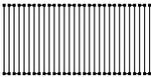
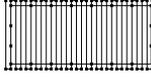
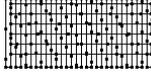
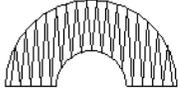
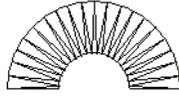
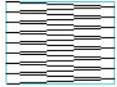
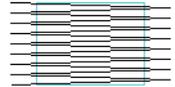


### Region sewing attributes

The available attributes differ depending on the selected sew type.

▶▶ "Specifying sewing attributes" on page 63

#### Satin Stitch/Fill Stitch/Programmable Fill Stitch

<p><b>Under sewing</b></p>	<p>Sets underlay stitching on or off. To specify underlay stitching, select the check box. Off</p> 	<p>To specify underlay stitching, select the check box. On: With text patterns</p>  <p>On: With other patterns (Shapes)</p> 	
<p><b>Density</b></p>	<p>Coarse</p> 	<p>Fine</p> 	
<p><b>Direction</b></p>	<p>This cannot be specified for text patterns. <b>Manual:</b> Sews at a fixed angle. Drag  or select a value to specify the angle. <b>Auto:</b> Automatically varies the sewing direction according to the shape of the region.</p>	<p>Manual</p> 	<p>Auto</p> 
<p><b>Pull compensation</b></p>	<p>Lengthen the sewing region in the sewing direction to adjust for pattern shrinkage during sewing.</p>		<p>No compensation</p>  <p>Longest compensation</p> 

## Programmable Fill Stitch

<b>Programmable fill</b>	Click the pattern display box to display the Browse dialog box. Select the desired pattern from the list of patterns that appears.
--------------------------	--

### Notes on programmable fill stitches

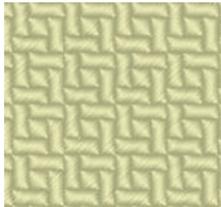
In some case of the sew type and pattern directions setting of a programmable fill stitch or a stamp, lines will not be sewn.

Use the Realistic View to view exactly how the stitch pattern will be sewn. To get an even better view, make test samples of different settings.

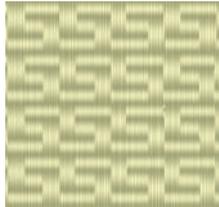
Examples of programmable fill stitching:



Example 1  
Stitch direction: 45° (default)



Example 2  
Stitch direction: 90°



Example 3  
Stitch direction: 0°



## Motif Stitch

<b>Pattern and size of the motif stitch patterns</b>	▶▶ <i>"Motif Stitch" in the "Line sewing attributes" on page 106</i>
--	--

## Stippling Stitch

<b>Run pitch</b>	Specify the length of one stitch. This cannot be specified if the motif stitch is used.	Short .....	Long —————	The turns are smoother.	The turns are more angled.	
<b>Spacing</b>	Narrow  The pattern is finer.	Wide  The pattern is coarser.				

## Motif Stitch Pattern

Motif Name	Pattern	Motif Name	Pattern
mot001		mot014	
mot002		mot015	
mot003		mot016	
mot004		mot017	
mot005		mot018	
mot006		mot019	
mot007		mot020	
mot008		mot021	
mot009		mot022	
mot010		mot023	
mot011		mot024	
mot012		mot025	
mot013			

## Prog. Fill Stitch Pattern

Fill Pattern Name	Pattern	Fill Pattern Name	Pattern
pat001		pat012	
pat002		pat013	
pat003		pat014	
pat004		pat015	
pat005		pat016	
pat006		pat017	
pat007		pat018	
pat008		pat019	
pat009		pat020	
pat010		pat021	
pat011		pat022	

# Font List

## Text

No.	Font Name	Text Outlines	Min. size
001	Serif 01	<b>ABCDE abcde</b>	10 mm (0.39")
002	Script 01	<i>ABCDE abcde</i>	10 mm (0.39")
003	Gothic 01	<b>ABCDE abcde</b>	10 mm (0.39")
004	Serif 02	<i>ABCDE abcde</i>	10 mm (0.39")
005	Script 02	<i>ABCDE abcde</i>	10 mm (0.39")
006	Serif 03	<b>ABCDE abcde</b>	8 mm (0.31")
007	Block 01	<b>ABCDE abcde</b>	9 mm (0.35")
008	Block 02	<b>ABCDE abcde</b>	10 mm (0.39")
009	Gothic 02	<b>ABCDE abcde</b>	10 mm (0.39")
010	Block 03	<b>ABCDE abcde</b>	10 mm (0.39")
011	Decorative 01	<b>ABCDE abcde</b>	10 mm (0.39")
012	Block 04	<b>ABCDE abcde</b>	10 mm (0.39")
013	Block 05	<b>ABCDE abcde</b>	9 mm (0.35")
014	Script 03	<i>ABCDE abcde</i>	10 mm (0.39")
015	Decorative 02	<b>ABCDE abcde</b>	20 mm (0.79")
016	Decorative 03	<i>ABCDE abcde</i>	10 mm (0.39")
017	Script 04	<i>ABCDE abcde</i>	10 mm (0.39")
018	Gothic 03	<b>ABCDE</b>	10 mm (0.39")
019	Script 05	<i>ABCDE</i>	10 mm (0.39")
020	Block 06	<b>ABCDE abcde</b>	9 mm (0.35")

No.	Font Name	Text Outlines	Min. size
021	Gothic 04	<b>ABCDE</b>	10 mm (0.39")
022	Decorative 04	<b>ABCDE abcde</b>	10 mm (0.39")
023	Decorative 05	<b>A.B.C.D.E.</b>	8 mm (0.31")
024	Gothic 05	<b>ABCDE</b>	10 mm (0.39")
025	Decorative 06	<b>ABCDE</b>	10 mm (0.39")
026	Gothic 06	<b>ABCDE</b>	10 mm (0.39")
027	Block 07	<b>ABCDE</b>	10 mm (0.39")
028	Gothic 07	<b>ABCDE</b>	10 mm (0.39")
029	Brussels Demi Outline	<b>ABCDE abcde</b>	10 mm (0.39")
030	Calgary MediumItalic	<i>ABCDE abcde</i>	10 mm (0.39")
031	Istanbul	<b>ABCDE abcde</b>	10 mm (0.39")
032	Los Angeles	<b>ABCDE abcde</b>	10 mm (0.39")
033	Saipan	<b>ABCDE abcde</b>	10 mm (0.39")
034	San Diego	<b>ABCDE abcde</b>	10 mm (0.39")
035	Sicilia Light Italic	<i>ABCDE abcde</i>	10 mm (0.39")

## Small Text

No.	Font Name	Text Outlines	Size
01	Utah Bold S	<b>ABCDE abcde</b>	5-6 mm (0.20- 0.24")
02	Belgium S	<b>ABCDE abcde</b>	5-6 mm (0.20- 0.24")
03	Calgary MediumItalic S	<i>ABCDE abcde</i>	5-6 mm (0.20- 0.24")
04	Utah SR	ABCDE abcde	3-4 mm (0.12- 0.16")
05	Calgary MediumItalic SR	<i>ABCDE abcde</i>	3-4 mm (0.12- 0.16")

# Troubleshooting

If a problem occurs, click , then **[Customer Support]** in the menu to visit the following Web site, where you can find causes and solutions to various problems and answers to frequently asked questions.

If you have a problem, check the following solutions. If the solutions suggested do not correct the problem, contact your authorized dealer or Brother Customer Service.

Problem	Estimated Cause	Solution	Page
Windows® does not start when you turn on the computer with the "PE-DESIGN Software Key" plugged into the USB port of the computer.	The "PE-DESIGN Software Key" is plugged in when Windows® is started.	Turn on your computer without the "PE-DESIGN Software Key" plugged into a USB port.	Refer to "Installation Guide".
The software is not installed correctly.	An operation not described in the installation procedure was performed. (e.g., [Cancel] was clicked or the "PE-DESIGN Software Key" was removed too early.)	Follow the on-screen instructions to correctly install the software.	
The message "No PE-DESIGN Software Key is connected. Please connect a PE-DESIGN Software Key." appeared.	The "PE-DESIGN Software Key" is not connected.	Check that the "PE-DESIGN Software Key" appears in the computer's list of removable storage devices. If it does not appear, unplug the "PE-DESIGN Software Key", and then plug it in again.	
	The information on the "PE-DESIGN Software Key" is corrupted.	Leave it plugged in, and uninstall, then re-install PE-DESIGN PLUS2.	Refer to "Uninstalling the Software" on page 115.

Problem	Possible Cause		
	Cause	File Format	Solution
The error message "Unexpected file format" appears. or Your embroidery pattern or image cannot be opened.	When opening an embroidery pattern (Application button > <b>[Open]</b> )	.pes	The data may be corrupted.
		.phc (machine embroidery format)	The file cannot be opened, but it can be imported. → <b>([Home] tab &gt; [Import Patterns] &gt; [from File])</b> Otherwise, convert the file to the PES format, and then open it.
		Other manufacturers' compatible formats (.dst, .hus, .exp, .pcs, .vip, .sew, .jef, .csd, .xxx, and .shv)	The file cannot be opened, but it can be imported. → <b>([Home] tab &gt; [Import Patterns] &gt; [from File])</b> Otherwise, convert the file to the PES format, and then open it.
		Incompatible formats	The file cannot be used.
	When importing embroidery patterns ( <b>[Home] tab &gt; [Import Patterns] &gt; [from File]</b> )	.pes, .phc, Other manufacturers' compatible formats (.dst, .hus, .exp, .pcs, .vip, .sew, .jef, .csd, .xxx, and .shv)	The data may be corrupted.
		Incompatible formats	Convert the file to a compatible format, such as PES, and then use it.
	When opening a background image ( <b>[Image] tab &gt; [Open]</b> ) or When opening an image for Stitch Wizard (Auto Punch, Photo Stitch 1 and 2, and Cross Stitch)	.bmp, .tif, .jpg, .png, and .gif	The data may be corrupted.
		Images in formats other than those listed above	The file cannot be opened. → Use an image in one of the formats listed above.
	When importing an image as an embroidery pattern ( <b>[Home] tab &gt; [Import Patterns] &gt; [from Vector Image]</b> )	.wmf, .emf, and .svg	The data may be corrupted.
		Vector images in a format other than .wmf, .emf, or .svg	Convert the file to the .wmf, .emf, or .svg format, and then import it.
Raster images (.bmp, .jpg, etc.)		Currently, these files cannot be imported. Open them in the background and use them for tracing.	

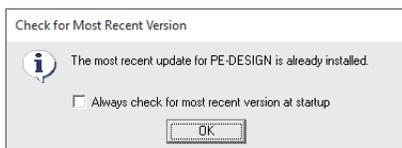
# Support/Service

## Checking for the Latest Version of the Program

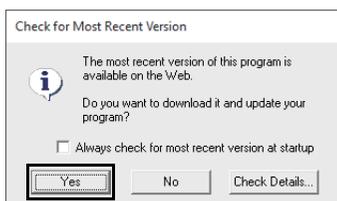
Click  in PE-DESIGN PLUS2, then **[Check for Updates]**.

The software is checked to determine whether or not it is the latest version.

If the message shown below appears, the latest version of the software is being used.



If the message shown below appears, the latest version of the software is not being used. Click **[Yes]**, and then download the latest version of the software from the Web site.



- This feature cannot be used if the computer is not connected to the Internet.
- It may not be possible to check for the latest version if a firewall is turned on. Turn off the firewall, and then try performing the operation again.
- Administrator privileges are required.



If the **[Always check for most recent version at startup]** check box is selected, the software is checked at startup to determine whether or not it is the latest version.

## Technical Support

Contact Technical Support if you have a problem. Please check the company web site (<http://www.brother.com/>) to find the technical Support in your area. To view the FAQ and information for software updates, visit the Brother Solutions Center at (<http://support.brother.com/>).



Before contacting web site:

- (1) Please have your Windows® Operating System updated to the most current version.
- (2) The make and model number of the computer that you are using as well as the Windows® Operating System version.
- (3) Information about any error messages that appear. This information will help expedite your questions more quickly.
- (4) Please check and update the software to the latest version.

## Online Registration

If you wish to be contacted about upgrades and provided with important information such as future product developments and improvements, you can register your product online by following a simple registration procedure.

Click **[Online Registration]** on the  menu of PE-DESIGN PLUS2 to start up the installed Web browser and open the online registration page on our Web site.

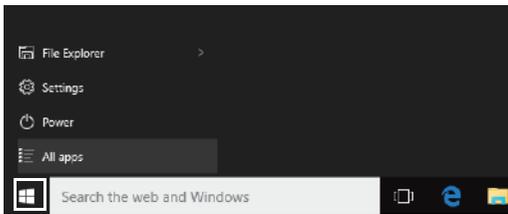
<http://www.brother.com/registration/>



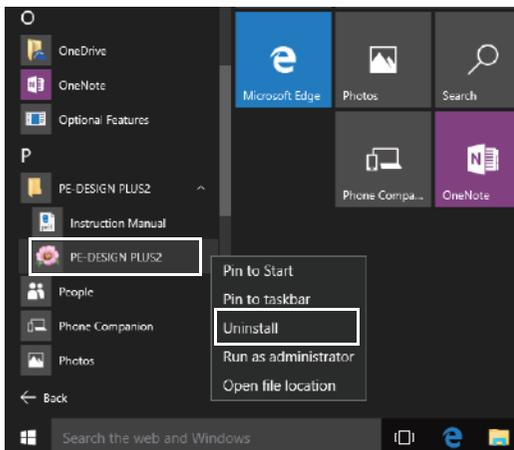
Online registration may not be available in some areas.

## Uninstalling the Software

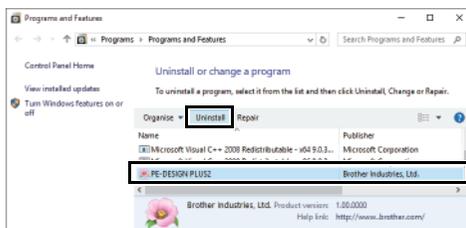
- 1 Click , and then **[All apps]**.



- 2 Click **[PE-DESIGN PLUS2]** from the application list, right-click **[PE-DESIGN PLUS2]**, and then click **[Uninstall]** in the menu.

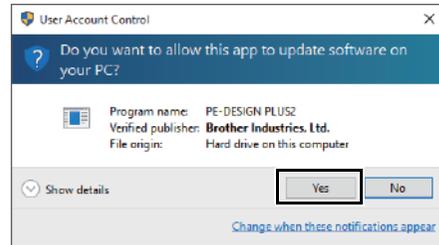


- 3 In the **[Programs and Features]** window, select **[PE-DESIGN PLUS2]** and click **[Uninstall]**.



If a confirmation message appears, click **[Yes]** to continue with the uninstallation.

- 4 Click **[Yes]**.



→ The software will be uninstalled.



- For Windows® 8.1, click the down arrow in the **[Start]** screen to show the **[Apps]** view, and then right-click **[PE-DESIGN PLUS2]** under **[PE-DESIGN PLUS2]** in the taskbar. Select **[PE-DESIGN PLUS2]** and click **[Uninstall]** in the **[Programs and Features]** window, and then click **[Remove]**.
- For Windows Vista® and Windows® 7, click the **[Start]** button, then **[Control Panel]**. Select **[Programs and Features]** in the **[Control Panel]** window. Select this software, and then click **[Uninstall]**.

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