PE-DESIGN

Personal Embroidery Design Software System

Ver. **6**

Instruction Manual

brother ®

IMPORTANT INFORMATION: REGULATIONS

Federal Communications Commissions (FCC) Declaration of Conformity (For USA Only)

Responsible Party: Brother International Corporation
100 Somerset Corporate Boulevard
Bridgewater, NJ 08807-0911 USA

declares that the product

Product Name: Brother USB Writer
Model Number: PE-Design

complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Consult the dealer or an experienced radio/TV technician for help.
– Changes or modifications not expressly approved by the manufacturer or local sales distributor could void the user's authority to operate the equipment.

Canadian Department of Communications Compliance Statement (For Canada Only)

This digital apparatus does not exceed the Class B limits for radio noise emission from a digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Radio Interference (Other than USA and Canada)

This machine complies with EN55022 (CISPR Publication 22) /Class B.

Congratulations on choosing our product!

Thank you very much for purchasing our product. To obtain the best performance from this unit 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 patterns

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

For safe operation

- Avoid dropping a needle, a piece of wire or other metallic objects into the unit or into the card slot.
- Do not store anything on the unit.

For a longer service life

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

For repairs or adjustments

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

Notice

This Instruction Manual does not explain how to use your computer under Windows. Please refer to the Windows manuals.

Copyright acknowledgment

MS-DOS and Windows are registered trademarks of Microsoft Corp.
IBM is a registered trademark of International Business Machine Corporation.

Important

Using this unit for unauthorized copying of material from embroidery cards, newspapers and magazines for commercial purpose is an infringement of copyrights which is punishable by law.

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 web site at: www.brother.com

New Features of Version 6.0

Stitch generating

Editing functions

Layout & Editing

User interface

Design Center

Layout & Editing

Others

Table of Contents

Basic Operation

Advanced Opreation
Design Center

Advanced Operation
Layout & Editing

Advanced Operation
Programmable
Stitch Creator

Advanced Operation
Design Database

Reference
Design Center

Reference
Layout & Editing

Reference
Programmable
Stitch Creator

Reference
Design Database

Table of Contents

Before Use

What You Can Do With This Software

This software provides digitizing and editing capabilities, allowing you the creative freedom to design original embroidery. Easily turn illustrations, photos and lettering into custom embroidery designs.

Automatically Create an Embroidery Pattern From an Image
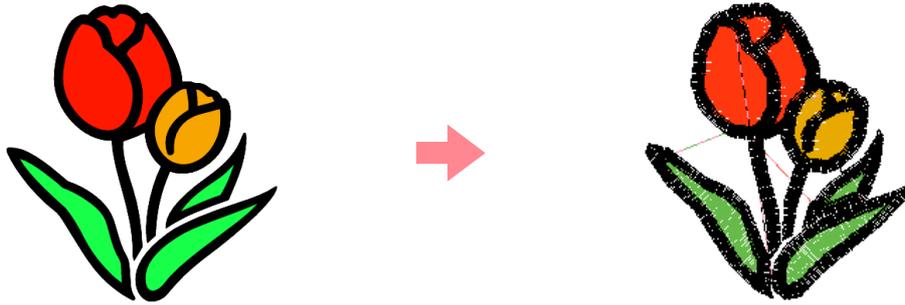
☞ *For more details, refer to "Using the Auto Punch Function" on page 19.*

Automatically Create an Embroidery Pattern From a Photo
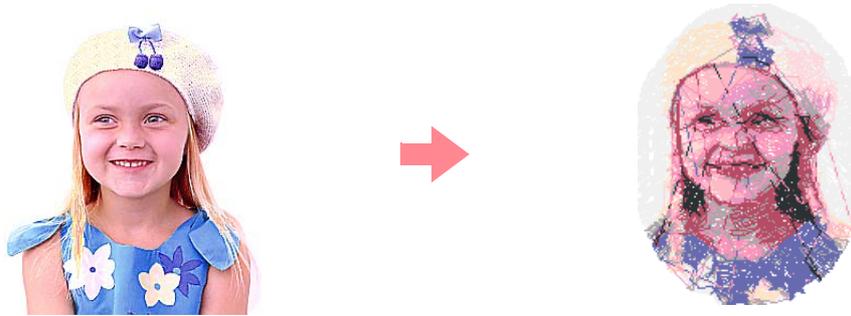
☞ *For more details, refer to "Using a Photo Stitch Function" on page 25.*

1

Easily Create Large-Size Embroidery Designs
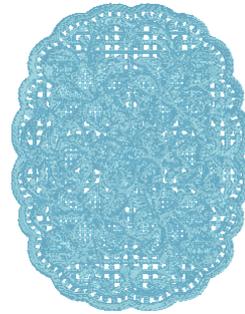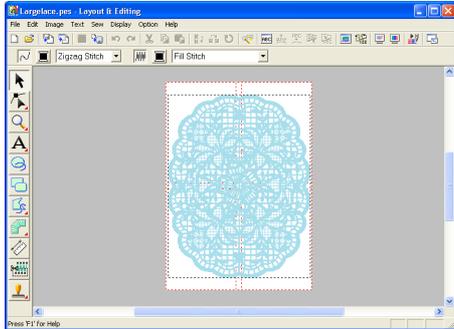
☞ *For more details, refer to "Creating Large-Size Embroidery Patterns" on page 59.*

Have Fun Creating Embroidery Patterns Manually

You can combine embroidery patterns or apply stitching to drawings and text. In addition, you can design a wider variety of embroidery patterns by using the many sew types available.
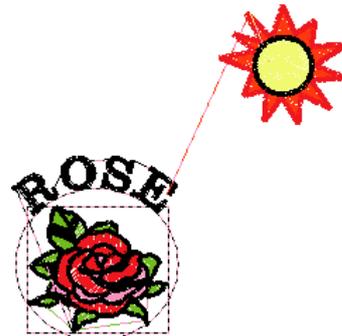
☞ *For more details, refer to "Creating and Editing Embroidery Patterns" on page 30.*

Create Embroidery Patterns Using All Three Applications

■ Design Center

☞ *Refer to "Using Design Center" on page 30.*

☞ *For more details, refer to pages 69 through 105.*

■ Layout & Editing

☞ *Refer to "Automatically Creating Embroidery Patterns" on page 19.*

☞ *Refer to "Using Layout & Editing" on page 39.*

☞ *For more details, refer to pages 106 through 207.*

■ Programmable Stitch Creator

☞ *Refer to "Using Programmable Stitch Creator" on page 54*

☞ *For more details, refer to pages 208 through 222.*

Overview of the Manual

Structure of the manual

This manual consists of three main sections: Basic Operation, Advanced Operation, and Reference.

■ Basic Operation

By following the step-by-step instructions contained in this section, you can create basic embroidery patterns. For first time users, this is a good way to become familiar with the various functions.

■ Advanced Operation

This section separately outlines the capabilities and use for each application, allowing you to create more advanced and original embroidery patterns than those created in Basic Operation.

■ Reference

This section contains an explanation of the Tool Box and a summary of the menu for each application. You can use this section to clarify the purpose and use of any icon or menu command.

List of terms used

The following terms are used throughout this manual, as described below.

Embroidery pattern: An embroidery design

Object: A component of the embroidery pattern

Multi-position hoop: An embroidery frame that can be attached to the embroidery machine at various positions so that large-size patterns can be sewn

Sew type: A type of stitching (for example, zigzag stitch, running stitch and satin stitch)

Stitching: A series of stitches

Introduction

Applications of the software

This package consists of four applications.

■ Design Center

Design Center is used to manually create embroidery patterns from images. The images may come from scanning a printed image or can be created with an application like Paint®. The extension of the image files must be .bmp, .tif, .jpg, .j2k, .pcx, .wmf, .png, .eps, .pcd, or .fpx. Design Center automatically detects outlines in the image and replaces them with broken lines that can be edited and assigned sewing attributes.
The procedure is divided into four stages:

❏ **Stage 1 (Original Image stage)**: Open an image file and select one or more colors that the application will use to trace the outlines.

❏ **Stage 2 (Line Image stage)**: The original color image is replaced with a black-and-white image (the colors selected in stage 1 (Original Image stage) become black, and all other colors become white). This image can be edited using pens and erasers of different thicknesses. (You can also start with this step to draw a black-and-white image by hand.)
When the image is ready, start the automatic tracing process.

❏ **Stage 3 (Figure Handle stage)**: The black-and-white image is replaced with a set of outlines made of editable broken lines. You can edit the broken lines by moving, inserting or deleting editing points.

❏ **Stage 4 (Sew Setting stage)**: In this final step, apply sewing attributes (thread color and sew type) to the outlines and the inside regions.

At any stage, you can save your work to retrieve it later. In stage 1 (Original Image stage) and stage 2 (Line Image stage), the file will be saved with the .pel extension. In stage 3 (Figure Handle stage) and stage 4 (Sew Setting stage), the file will be saved with the .pem extension. In addition, if the imported image has not yet been saved, it can be saved with the .bmp extension.

Saving your work as you move through the stages will be helpful if you make changes, then later decide to use the original pattern.

When your image has reached stage 4 (Sew Setting stage), you can import it into Layout & Editing, where the image can be moved and scaled as a single object.

■ Layout & Editing

Layout & Editing is used to automatically create embroidery patterns from images, and to combine images and text to create embroidery patterns that can be written to an original card. The images may come from scanning a printed image or can be created with an application like Paint®. The extension of the image files must be .bmp, .tif, .jpg, .j2k, .pcx, .wmf, .png, .eps, .pcd, or .fpx. In addition, the following types of embroidery patterns can be incorporated into the embroidery pattern.

❏ Embroidery patterns created with Design Center

❏ Embroidery patterns on embroidery cards purchased from your dealer (Some patterns cannot be read.)

❏ Embroidery patterns in the Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna (.hus) and embroidery sewing machine (.phc) formats

❏ Embroidery patterns created within Layout & Editing itself (These patterns include text, circular shapes, boxes, polygons, curves and manual punching patterns.)

After gathering the different parts of your embroidery pattern, you can use the layout functions to adjust their relative position, orientation and scale.

When an embroidery pattern is complete, you can save it (with the .pes file extension) and write it to an original card. The original card can then be inserted into your sewing machine for the embroidery pattern to be sewn.

Before Use

■ **Programmable Stitch Creator**

Programmable Stitch Creator allows you to create, edit and save fill/stamp and motif stitch patterns that can be applied as a programmable fill stitch or motif stitch, or as a stamp to the enclosed regions of embroidery patterns both in Design Center and Layout & Editing. The fill/stamp stitch patterns are saved as .pas files, and the motif stitch patterns are saved as .pmf files. The application comes with a number of .pas and .pmf files that you can use as they are or edit to enhance your embroidery patterns.

■ **Design Database**

Design Database allows you to easily preview the embroidery pattern files on your computer so that you can find the desired pattern, which can be opened with or imported into Layout & Editing. From Design Database, you can also convert the files to other formats (.pes, .dst., .exp., .pcs or .hus), or print or output as an HTML file images of the embroidery patterns in a selected folder. In addition, the sewing information for the embroidery patterns in a selected folder can be outputted as a CSV file for use in other database applications.

Package contents

Check that the following items are included. If anything is missing or damaged, contact your service representative.

Version 6.0 or version 6.0 upgrade for versions 1.0 through 4.0:

USB card writer module
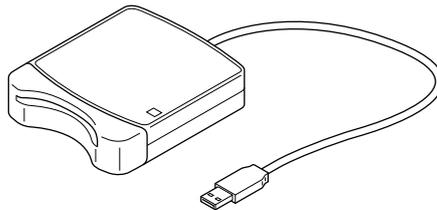
CD-ROM   Original card   Instruction manual   Template
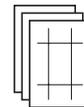
Version 6.0 upgrade for version 5.0:

CD-ROM   Instruction manual   Template
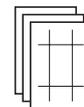
> ⚠ **Note:**
> *The USB card writer module and the original card are not included in the kit provided for upgrading from version 5.0.*

Optional supplies

Original card

⚠ **Note:**

The only original cards that can be used with this USB card writer module are those like the one enclosed or optional original cards of the same type.

Principal parts

LED indicator
This indicator lights up when the unit is turned on, and flashes when the USB card writer module is communicating with the computer.

⚠ **Note:**

Never remove an original card or unplug the USB cable while this indicator is flashing.

Card slot
Insert an original card/embroidery card here.

USB connector
Connect to the computer.
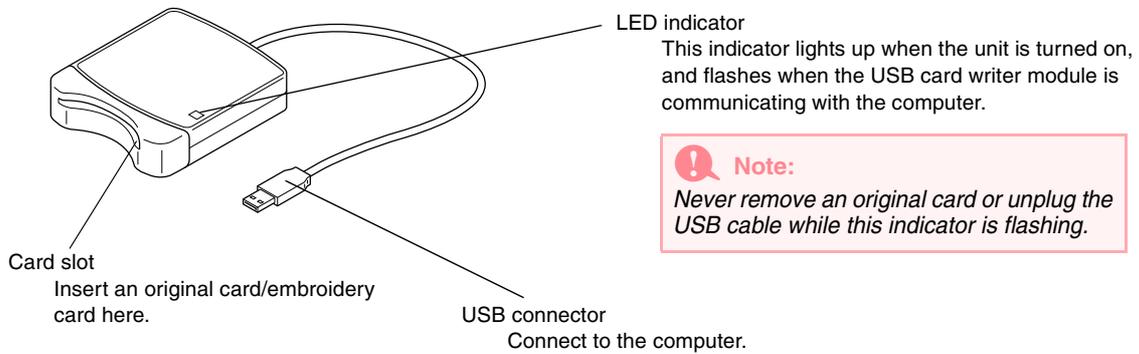
📖 **Memo:**

- *Since power is supplied to the USB card writer module through the USB connection to the computer, there is no power supply cable or power switch.*
- *Be sure to keep original cards away from high humidity, direct sunlight, static electricity and strong shocks. Furthermore, do not bend the cards.*

Installation

Installation procedure

The installation procedure is different depending on whether the full version or an upgrade of the software is being installed. Be sure to perform the installation procedures listed below.

Installing version 6.0 (full version)

[STEP 1] Installing the software ☞ **page 8**

[STEP 2] Installing the driver for the card writer module ☞ **page 10**

Upgrading from version 1.0 through 4.0

[STEP 1] Installing the software ☞ **page 8**

[STEP 2] Installing the driver for the card writer module ☞ **page 10**

Upgrading from version 5.0 or 5.01

[STEP 1] Installing the software ☞ **page 8**

[STEP 2] Installing the driver for the card writer module ☞ **page 10**

[STEP 3] Upgrading the USB card writer module ☞ **page 12**

Upgrading from version 5.02 or later

[STEP 1] Installing the software ☞ **page 8**

> **Memo:**
> *When upgrading from version 5.02 or later, STEP 2 is not performed.*

[STEP 3] Upgrading the USB card writer module ☞ **page 12**

> **Note:**
> • *If the installation is interrupted or not performed as described, the software will not be installed correctly.*
> • ***Before turning on the computer, be sure to disconnect the USB card writer module. If the computer is turned on while the card writer is connected, the installation may not be completed correctly when upgrading from version 5.0 or 5.01.***
> • *In order to upgrade the USB card writer module, you must be able to connect to the Internet. If you cannot connect to the Internet, contact your nearest service representative.*

System requirements

Before installing the software on your computer, make sure that the computer meets the following requirements.

Computer	IBM-PC or compatible computer originally equipped with a USB port
Operating system	Windows 98, ME, XP or 2000
Processor	Pentium 500 MHz or higher
Memory	Minimum 64 MB (256 MB or more is recommended.)
Hard disk free space	Minimum 100 MB
Monitor	SVGA (800 × 600), 16-bit color or higher
Port	USB Ver. 1.1 or higher
Printer	A graphic printer that is supported by your system (if you wish to print your images)
CD-ROM drive	Required for installation

> **⚠ Note:**
> * *Power is supplied to the USB card writer module through the USB connection. Connect the USB card writer module to a USB connector on the computer or to a self-powered USB hub that can supply enough power to the card writer module. If the card writer module is not connected in this way, it may not operate correctly.*
> * *This product may not operate correctly with some computers and USB expansion cards.*

[STEP 1] Installing the software

This section describes how to install the application software.

> **⚠ Note:**
> * *If the installation is interrupted or not performed as described, the software will not be installed correctly.*
> * ***Before turning on the computer, be sure to DISCONNECT the USB card writer module.***

> **📖 Memo:**
> ***The following installation procedure includes descriptions and dialog boxes for Windows XP. The procedure and dialog boxes for other operating systems may be slightly different.***

1. Insert the enclosed CD-ROM into the computer's CD-ROM drive.
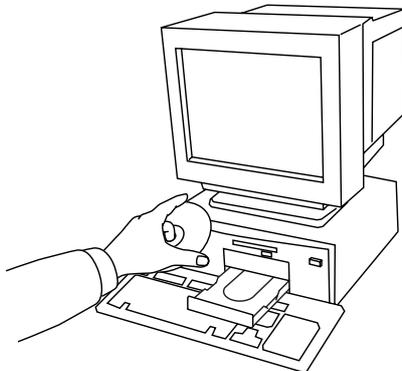
→ After a short while, the **Choose Setup Language** dialog box automatically appears.

Before Use

📖 **Memo:**

If the installer does not automatically start up:
1) *Click the **Start** button.*
2) *Click **Run**.*
 → *The **Run** dialog box appears.*
3) *Type in the full path to the installer, and then click **OK** to start up the installer. For example: D:\setup.exe (where "D:" is the name of the CD-ROM drive)*

2. Select the desired language, and then click **OK**.

→ The InstallShield Wizard starts up, and the first dialog box appears.
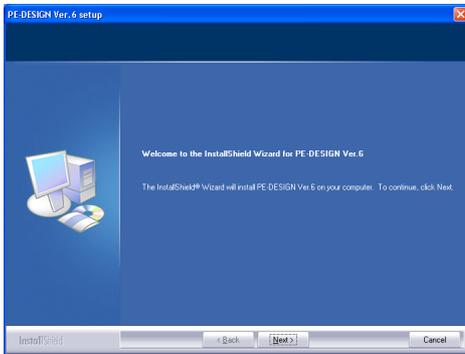
3. Click **Next** to continue with the installation.

→ A dialog box appears, allowing you to select the folder where the software will be installed.
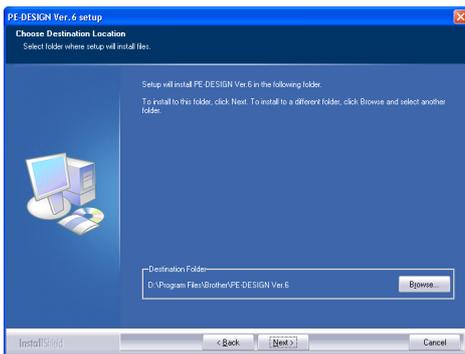
📖 **Memo:**

To install the application into a different folder:
1) *Click **Browse**.*
2) *In the **Choose Folder** dialog box that appeared, select the drive and folder. (If necessary, type in the name of a new folder.)*
3) *Click **OK**.*
 → *The **Choose Destination Location** dialog box of the InstallShield Wizard shows the selected folder.*
4) *Click **Next** to install the application into the selected folder.*
• *To return to the previous step, click **Back**.*
• *To quit the installation, click **Cancel**.*

4. Click **Next** to install the application into the default folder.

→ When the installation is completed, the dialog box shown below appears.
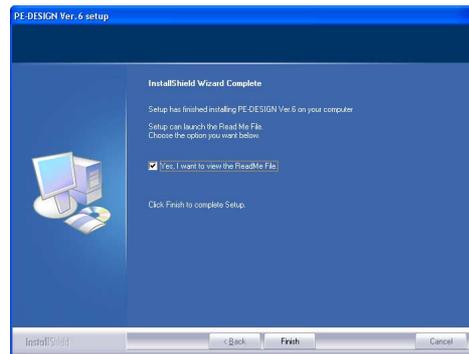
5. Click **Finish** to complete the installation of the software.

⚠️ **Note:**
Even though the installation is completed, do not remove the CD-ROM from the computer's CD-ROM drive.

9

[STEP 2] Installing the driver for the card writer module

This section describes how to install the driver for the card writer module.

> **⚠ Note:**
>
> *If you upgrading from version 5.02 or later, skip this section and continue with the procedure described in "[STEP 3] Upgrading the USB card writer module" on page 12.*

1. Plug the USB connector into the USB port on the computer.
Make sure that the connector is fully inserted.
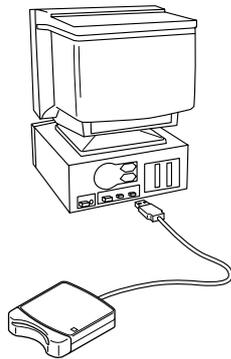
For Windows XP users connected to the Internet:

→ The installation of the driver is completed automatically.

For all other users:

→ After a short while, the **Found New Hardware Wizard** (or **Add New Hardware Wizard**) dialog box appears.

2. For Windows XP: Select **Install from a list or specific location [Advanced]**, and then click **Next**.

Select **Search removable media (floppy, CD-ROM...)**, and then click **Next**.

For Windows 98: Select **Search for the best driver for your device. (Recommended)**, and then click **Next**.

Select **CD-ROM drive**, and then click **Next**.

For Windows Me: Select **Specify the location of the driver [Advanced]**, and then click **Next**.

Select **Removable Media (Floppy, CD-ROM...)**, and then click **Next**.

For Windows 2000: Select **Search for a suitable driver for my device [recommended]**, and then click **Next**.

Select **CD-ROM drives**, and then click **Next**.

3. Follow the instructions of the Found New Hardware Wizard (or Add New Hardware Wizard) to complete the installation of the driver.

4. Remove the CD-ROM from the computer's CD-ROM drive.

[STEP 3] Upgrading the USB card writer module

This section describes how to upgrade the USB card writer module for version 6.0. Users upgrading from version 5.0 or later must upgrade the card writer. After installing version 5.0 or later, immediately follow the procedure below to upgrade the card writer for version 6.0.

> **Note:**
> • *If the USB card writer module is not upgraded, Design Center and Layout & Editing of version 6.0 can no longer be used after the specified number of trial uses has been reached.*
> • *In order to upgrade the USB card writer module, you must be able to connect to the Internet. If you cannot connect to the Internet, contact your nearest service representative.*

1. Start up Layout & Editing.

→ The dialog box shown below appears.

2. To begin the upgrade, click **Upgrade now**.

→ The Upgrade wizard starts up, and the first dialog box shown below appears.
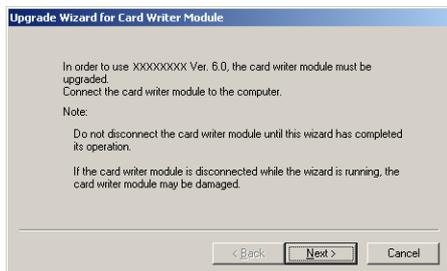
3. Click **Next**.
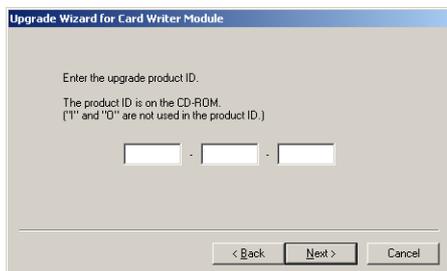
4. Type in the 15-digit product ID on the label attached to the CD-ROM case, and then click **Next**.

→ The entered product ID and the serial number automatically retrieved from the USB card writer module is displayed.
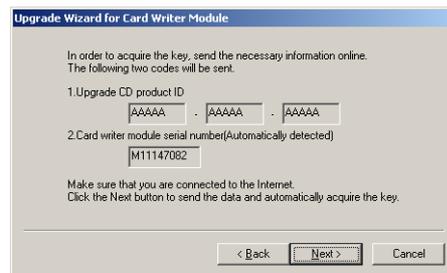
5. Click **Next** to access our server through the Internet and retrieve the upgrade key.

→ If the upgrade key has been successfully retrieved, the dialog box shown below appears.

6. Click **Next** to begin upgrading the USB card writer module.

Before Use

→ If the upgrade has been completed successfully, the dialog box shown below appears.

```
Upgrade Wizard for Card Writer Module


    The card writer module was successfully upgraded.

    We hope you enjoy using XXXXXXXX Ver. 6.0.




                                    Finish
```
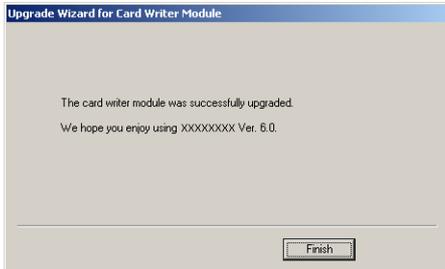
Note:
If a warning appears at any time, follow the instructions that are displayed.

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 **Help** menu of Layout & Editing to start up the installed Web browser and open the online registration page on our Web site.

Note:
Online registration may not be available in some areas.

Uninstallation

1. Turn on the computer and start up Windows.

2. Click the **Start** button in the task bar, and then click **Control Panel**.

3. In the Control Panel window, double-click **Add or Remove Programs**.

Note:
*With an operating system other than Windows XP, point to **Settings** in the **Start** menu, and then click **Control Panel**. In the Control Panel window, double-click **Add/Remove Programs**.*

4. In the dialog box that appeared, select this software, and then click **Change/Remove**.

Technical support

Contact Technical Support if you have a problem. Please check the company web site (www.brother.com) to find the Technical Support in your area.

Note:
Have the following information ready before contacting Technical Support.
• The make and model of the computer that you are using as well as the Windows version (Refer to page 8 and check the system requirements for this product again.)
• Information on any error messages that appear

Tips and Techniques for Creating Embroidery Patterns

■ Sewing wide areas

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.

Pattern

After sewing
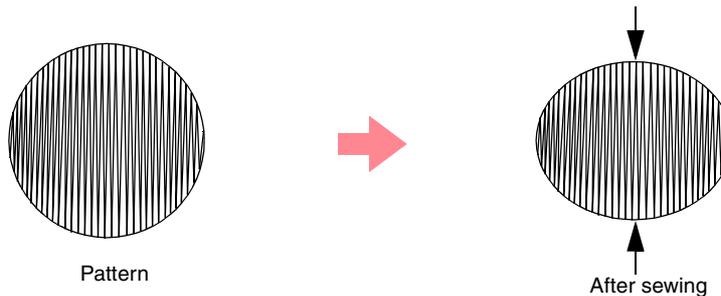
> **! Note:**
>
> *When using the satin stitch in a wide area, the needle may move out of position by about 10 mm with some machines. In order to avoid this, use the above-mentioned alternate method.*

■ Sewing direction

In order to limit shrinking, select a stitch direction perpendicular to the larger edge of the area.
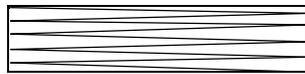
Shrinking more likely to occur
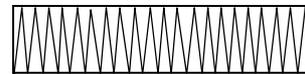
Shrinking less likely to occur

■ Sewing order

After creating an embroidery pattern made of several different parts (in Design Center or Layout & Editing), be sure to check the sewing order and correct it if necessary.

With Design Center, the default sewing order is the order in which the sewing attributes are applied.

With Layout & Editing, the default sewing order is the order in which the elements are drawn.

■ Enlarging/reducing embroidery patterns

There are several ways of enlarging or reducing an imported embroidery pattern in Layout & Editing. You may choose to scale your pattern with the pointer, or apply the Stitch to Block function, then scale the pattern.

When you normally scale an imported pattern, the number of stitches that will be sewn remains the same, resulting in a change of embroidery quality if the size of the pattern is greatly changed. However, by holding down the **Ctrl** key while scaling the imported embroidery pattern, the original embroidery quality can be maintained, since the stitch density and fill pattern automatically adapts to the new size.

Another method of maintaining the original embroidery quality of the pattern is to select the **Sew** – **Stitch to Block** command, then scale the pattern. When a pattern is scaled only moderately, it may not be necessary to apply the Stitch to Block function.

> This system 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 sewing 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.

Sew Types

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 details, refer to pages 91 through 95 and pages 172 through 178.)

■ Line sew types

Zigzag stitch
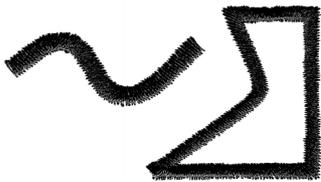
Running stitch
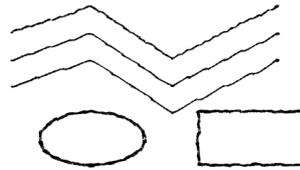
Motif stitch

E/V stitch
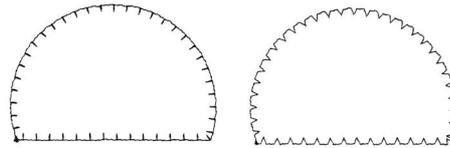
> 📖 **Memo:**
> *The stitching for the programmable fill stitch and the motif stitch depends on the selected stitch pattern. For details, refer to "Programmable fill stitch" on page 93 and 175 and "Motif stitch" on page 95 and 177.*

■ Region sew types

Satin stitch
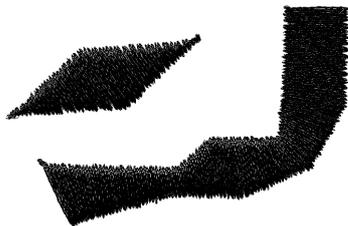
Fill stitch
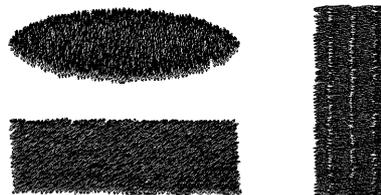
Before Use

Programmable fill stitch
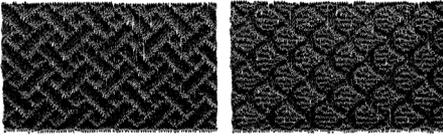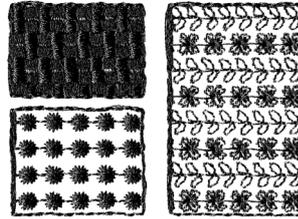
Motif stitch

📖 **Memo:**
The stitching for the programmable fill stitch and the motif stitch depends on the selected stitch pattern.
For details, refer to "Programmable fill stitch" on page 93 and 175 and "Motif stitch" on page 95 and 177.

Cross stitch
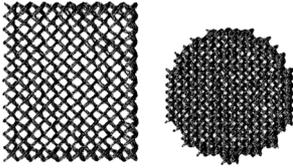
Concentric circle stitch
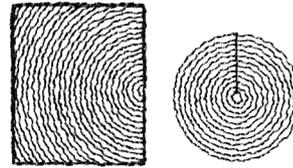
Radial stitch
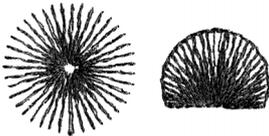
Spiral stitch

Piping stitch
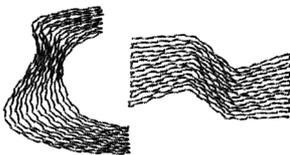
Chapter 1
Basic Operation

Getting Started

About This Chapter

This chapter is organized as a tutorial to provide you with a hands-on introduction to the basic features of the applications.

1. Automatically Creating Embroidery Patterns

2. Creating and Editing Embroidery Patterns

3. Creating Large-Size Embroidery Patterns

Automatically Creating Embroidery Patterns

Using the Auto Punch Function

In this section, we are going to automatically create an embroidery pattern from an image.

Follow the instructions in this section step by step. If you have to interrupt this exercise for any reason, it is recommended to save the file (refer to Step 6, "Saving the embroidery pattern", on page 23). You will be able to retrieve it later and resume your work.

The complete procedure will take you through the different steps of a normal working session using the Auto Punch function.

Step 1	Starting up Layout & Editing	page 19
Step 2	Opening an image file	page 20
Step 3	Adjusting the size and position of the image	page 21
Step 4	Automatically converting the image to an embroidery pattern	page 21
Step 5	Displaying a preview of the embroidery pattern	page 22
Step 6	Saving the embroidery pattern	page 23
Step 7	Transferring the pattern to an original card	page 24
Step 8	Quitting Layout & Editing	page 24

Step 1
Starting up Layout & Editing

1. Click 🏁 **start** , select **All Programs**, then **PE-DESIGN Ver.6**. Select **Layout & Editing** to open the Layout & Editing window.

> 📖 **Memo:**
> *If a shortcut for Layout & Editing was created, for example, on the desktop, double-click it to start up the application.*
>
> Layout &
> Editing

→ The Layout & Editing window appears.

> 📖 **Memo:**
> • *To fill the entire screen with the Layout & Editing window, click the maximize button on the right end of the title bar.*
> • *At this time, you can change the Design Page properties by using the menu command **Option** – **Design Page Property**. (For more details, refer to page 77.) For this example, we will not change the Design Page settings.*

Title bar
Menu bar
Toolbar
Sewing Attributes bar
Tool Box

Close button
Maximize button
Minimize button
Work area
Design Page
Reference Window

Status bar

Step 2
Opening an image file

First, we need to open the image that will be converted into the embroidery pattern.

1. Click **Image** on the menu bar, point to **Input**, and then click **from File** on the submenu.

→ An **Open an image file** dialog box similar to the one shown below appears.
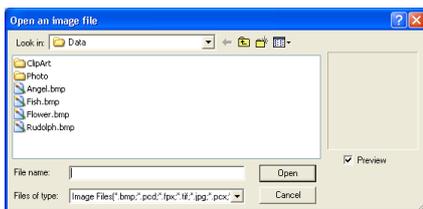
2. Double-click the **ClipArt** folder to open it.

3. Select the sample file **tulip.bmp** in the **ClipArt** folder.

📖 **Memo:**
*If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

4. Click **Open** to open the image file and to close the dialog box.

📖 **Memo:**
Double-clicking the file name also adds the image to the work area and closes the dialog box.

→ The image appears in the work area.
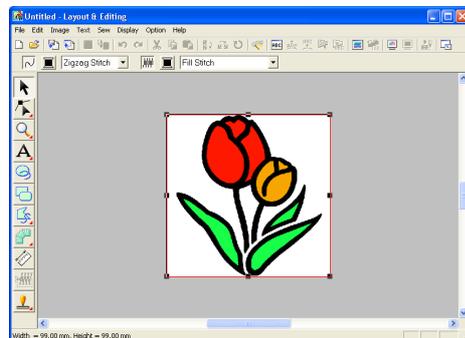
Step 3
Adjusting the size and position of the image

1. Click **Image** on the menu bar, and then click **Modify**.

   → Handles appear around the image.
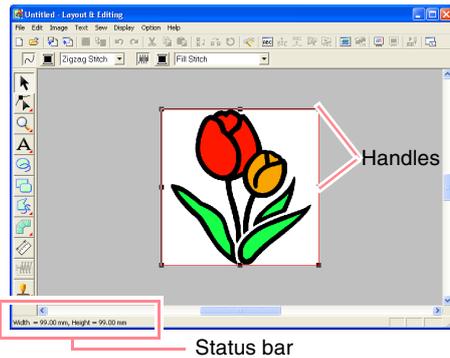
Handles

Status bar

📖 **Memo:**

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

2. Move the pointer over a handle.

   → The shape of the pointer changes to ↖ , ↗ , ↕ , or ↔ , depending on the handle that the pointer is over.

   📖 **Memo:**

   - ↔ *is for scaling the width.*
   - ↕ *is for scaling the height.*
   - ↖ *and* ↗ *are for scaling both dimensions at the same time.*

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

4. Move the pointer over the selected image.

   → The shape of the pointer changes to ⊕ .

5. Drag the image to the desired location.
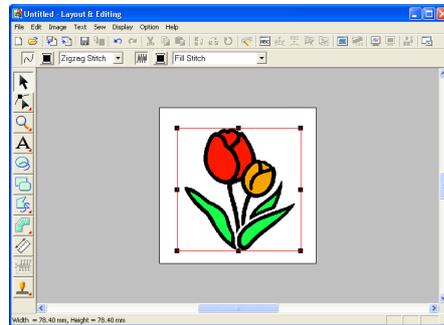
Step 4
Automatically converting the image to an embroidery pattern

1. Click **Image** on the menu bar, and then click **Image to Stitch Wizard**.

An alternate method is to click the Toolbar button indicated below.

Image to Stitch Wizard
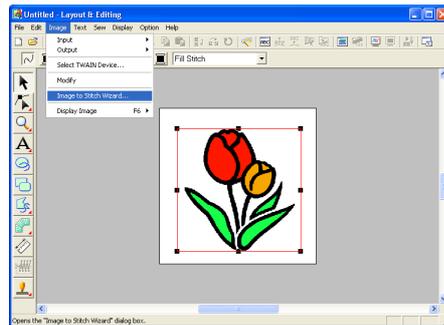
   → The **Select Stitch Method for Image** dialog box appears.
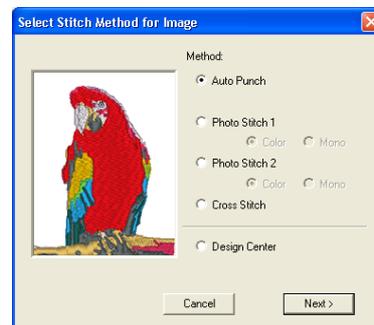
2. Select **Auto Punch**, and then click **Next**.

   → The image is analyzed, and the resulting image is displayed in the **Image Analysis** dialog box.

21

📖 **Memo:**

The following stitch methods are also available.
- *Photo Stitch 1 (Color and Mono)*
  Refer to page 116 for more details on the Color setting and to page 120 for more details on the Mono setting.
- *Photo Stitch 2 (Color and Mono)*
  Refer to page 122 for more details on the Color setting and to page 124 for more details on the Mono setting.
- *Cross Stitch*
  For more details, refer to page 125.
- *Design Center*
  For more details, refer to "Using Design Center" on page 30.
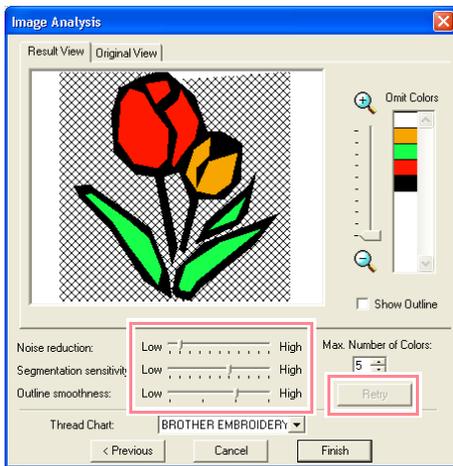
📖 **Memo:**

- *Various settings are available for converting the image to an embroidery pattern. (For more details on the various settings, refer to page 115.) After changing the settings, click Retry to display the image with the new settings applied.*
- *Areas of the image that will not be converted to the embroidery pattern appear with a crosshatch pattern. Click each area to select whether or not it should be converted.*

3. Click **Finish**.

→ The image is converted to an embroidery pattern, which is displayed in the Design Page.
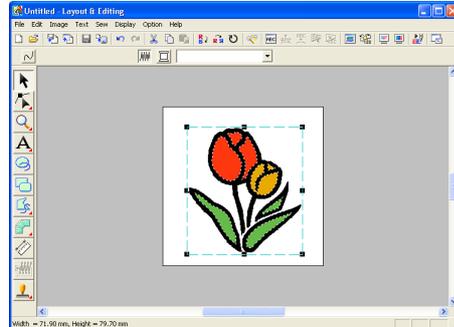
Displaying a preview of the embroidery pattern

You can display a preview of the embroidery pattern in order to see how the stitching is connected, or you can display a realistic preview of the embroidery pattern in order to see how the pattern will appear once it is sewn.

1. Click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.

Preview

→ A preview of the embroidery pattern appears.
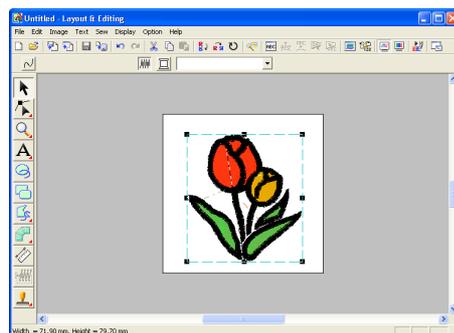
Automatically Creating Embroidery Patterns

📖 Memo:

- *To zoom in (or out), click 🔍 (or 🔍) on the Tool Box, and then click the desired area of the embroidery pattern.*
- *To display, hide, or display a faded copy of the original image, which remains in the work area, click **Image** on the menu bar, point to **Display Image**, and then click the desired display setting.*
  - *To display the original image, click **On**.*
  - *To display a faded copy of the image, click **Faded**.*
  - *To hide the original image, click **Off**.*

2. To display a realistic preview of the entire embroidery pattern, click **Display** on the menu bar, and then click **Realistic Preview**.
An alternate method is to click the Toolbar button indicated below.

Realistic Preview
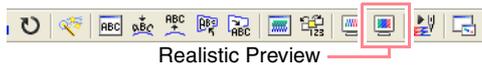
→ A realistic preview of the embroidery pattern appears.

📖 Memo:

To zoom in (or out), click 🔍 (or 🔍) on the Tool Box, and then click the desired area of the embroidery pattern.

⚠️ Note:

The embroidery pattern cannot be edited while the realistic preview is displayed.

3. To leave the realistic preview display, repeat step **2.**, or press the (**Esc**) key.

Step 6
Saving the embroidery pattern

Once the embroidery pattern is finished, you may want to save it in order to retrieve it later.

1. Click **File** on the menu bar, and then click **Save**.
An alternate method is to click the Toolbar button indicated below.

Save

→ If the pattern has already been saved at least once, the file is saved immediately.

📖 Memo:

*To save the file with a different name, use the menu command **File** – **Save As** instead.*

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

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

3. Click **Save** to save the pattern.

📖 Memo:

- *To quit the operation, click **Cancel**.*
- *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*

- *To overwrite the file, click **Yes**. The new file name appears in the title bar of the Layout & Editing window.*
- *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

Step 7
Transferring the pattern to an original card

Before you can actually sew the embroidery pattern, you must transfer the pattern to a sewing machine. Transfer the embroidery pattern to the sewing machine using media of the type used by your machine, for example, original cards, floppy disks, CompactFlash cards, or USB media. For this example, we will transfer the pattern to an original card.

1. Insert an original card into the USB card writer module.

   Note:
   The original card is inserted correctly when you hear it snap into place.

2. Click **File** on the menu bar, point to **Write to Card**, and then click **Current Design** on the submenu.
   An alternate method is to click the Toolbar button indicated below.

   ——— Write to Card

   → The following message appears.

   Note:
   If the original card is not brand new, make sure that the patterns already stored on the card are no longer needed.

3. Click **OK**.

   → The following message appears.

   Memo:
   *To quit the operation, click **Cancel**.*

   Note:
   If the card writer module is not correctly connected or powered, or if the original card is not inserted or is defective, an error message will appear. For more details, refer to "Writing an embroidery pattern to an original card" on page 195.

4. Click **OK** to close the message.

Step 8
Quitting Layout & Editing

1. Click **File** on the menu bar, and then click **Exit**.

   → The Layout & Editing window closes.

   Memo:
   Layout & Editing can also be closed by clicking the close button on the right end of the title bar.

Using a Photo Stitch Function

In this section, we are going to automatically create a more realistic embroidery pattern from a photo.

Follow the instructions in this section step by step. If you have to interrupt this exercise for any reason, it is recommended to save the file (refer to Step 6, "Saving the embroidery pattern", on page 23). You will be able to retrieve it later and resume your work.

The complete procedure will take you through the different steps of a normal working session using one of the Photo Stitch functions.

Step 1	Starting up Layout & Editing	page 25
Step 2	Opening an image file	page 26
Step 3	Adjusting the size and position of the image	page 27
Step 4	Automatically converting the image to an embroidery pattern	page 27

Basic Operation

Step 1
Starting up Layout & Editing

1. Click 🏁 **start**, select **All Programs**, then **PE-DESIGN Ver. 6**. Select **Layout & Editing** to open the Layout & Editing window.

> 📖 **Memo:**
> *If a shortcut for Layout & Editing was created, for example, on the desktop, double-click it to start up the application.*
>
>
>
> Layout & Editing

→ The Layout & Editing window appears.

> 📖 **Memo:**
> • *To fill the entire screen with the Layout & Editing window, click the maximize button on the right end of the title bar.*
> • *At this time, you can change the Design Page properties by using the menu command **Option** – **Design Page Property**. (For more details, refer to page 77.) For this example, we will not change the Design Page settings.*

Automatically Creating Embroidery Patterns

Title bar
Menu bar
Toolbar
Sewing Attributes bar
Tool Box

Status bar

Close button
Maximize button
Minimize button

Work area

Design Page
Reference Window
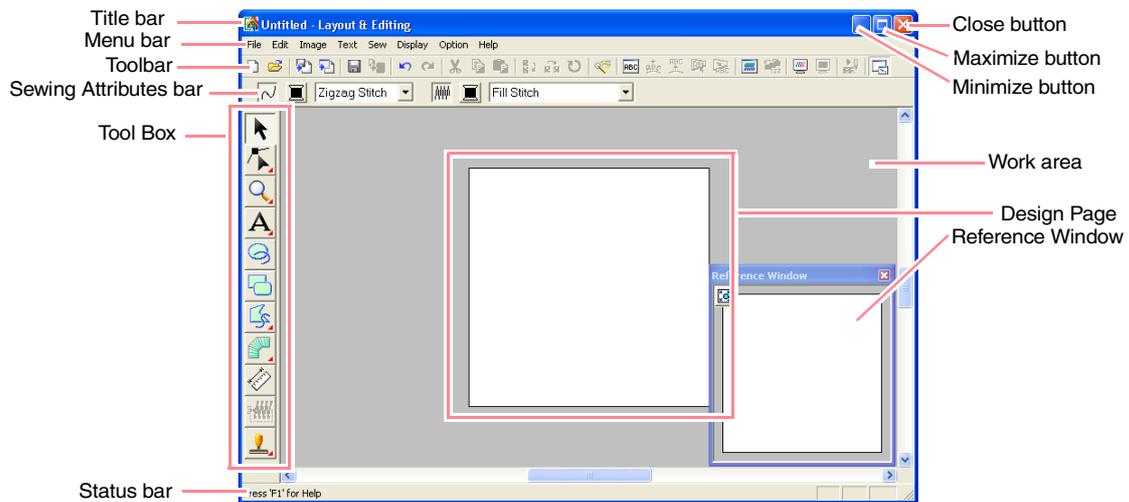
Step 2
Opening an image file

First, we need to open the image that will be converted into an embroidery pattern.

1. Click **Image** on the menu bar, point to **Input**, and then click **from File** on the submenu.
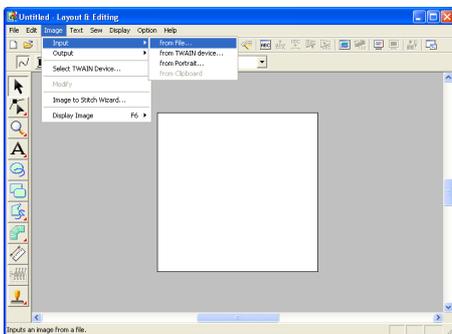
→ The **Open an image file** dialog box appears.
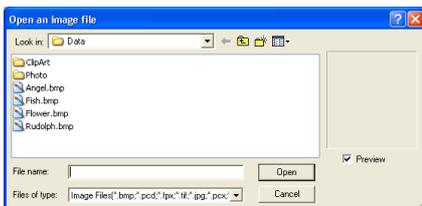
2. Double-click the **Photo** folder to open it.

3. Select the sample file **girl.bmp** in the **Photo** folder.

> **Memo:**
> *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

4. Click **Open** to open the image file and to close the dialog box.

> **Memo:**
> *Double-clicking the file name also adds the image to the work area and closes the dialog box.*

→ The image appears in the work area.
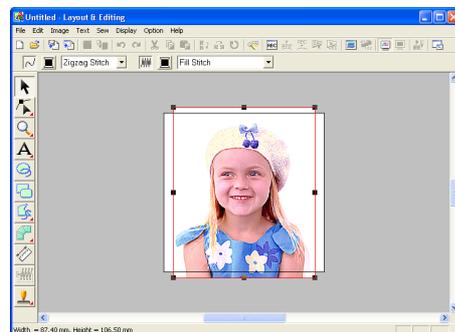
Automatically Creating Embroidery Patterns

Step 3
Adjusting the size and position of the image

1. Click **Image** on the menu bar, and then click **Modify**.

→ Handles appear around the image.

Handles
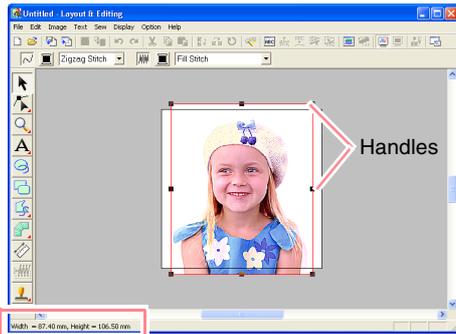
Status bar

📖 **Memo:**

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

2. Adjust the selected image to the desired size, and move it to the desired location.

☞ *For more details, refer to , "Changing the Size and Position of the Image", on page 114.*
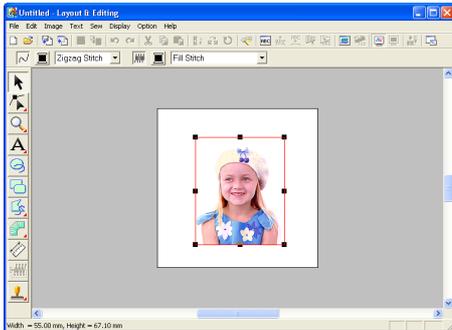
Step 4
Automatically converting the image to an embroidery pattern

1. Click **Image** on the menu bar, and then click **Image to Stitch Wizard**.
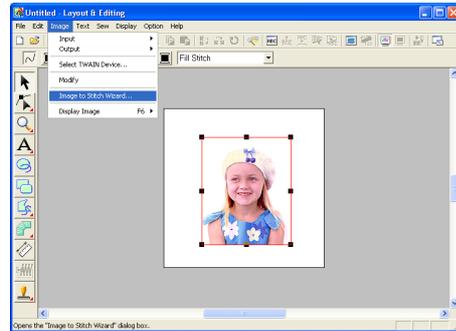
An alternate method is to click the Toolbar button indicated below.
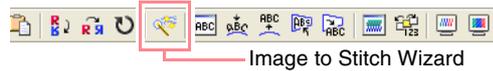
Image to Stitch Wizard
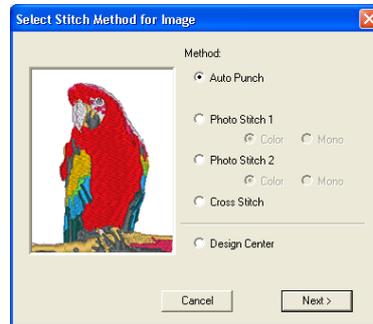
→ The **Select Stitch Method for Image** dialog box appears.

2. Select **Photo Stitch 1**, then **Color**, and then click **Next**.

→ The **Select Mask** dialog box appears.
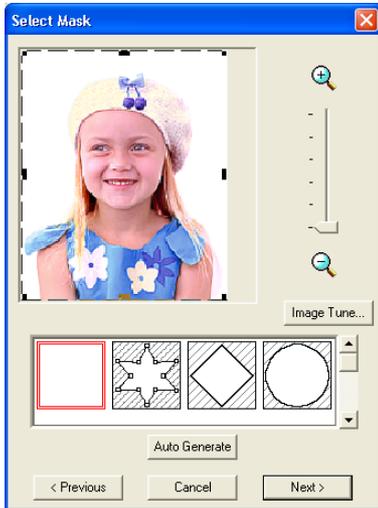
📖 **Memo:**

The following stitch methods are also available.

- ***Auto Punch***
  For more details, refer to page 115.
- ***Photo Stitch 1** (**Mono**)*
  *For more details on the **Mono** setting, refer to page 120.*
- ***Photo Stitch 2** (**Color** and **Mono**)*
  *Refer to page 122 for more details on the **Color** setting and to page 124 for more details on the **Mono** setting.*
- ***Cross Stitch***
  For more details, refer to page 125.
- ***Design Center***
  For more details, refer to "Using Design Center" on page 30.

3. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to.

4. In the image preview box, move the handles of the mask until it surrounds the desired part of the image to be converted to an embroidery pattern.
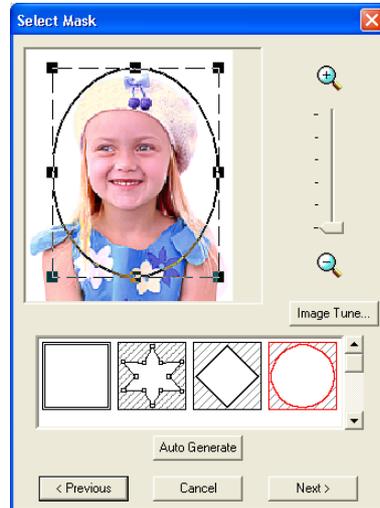
📖 **Memo:**

Any part of the image that is outside of the mask will not be converted to an embroidery pattern.

5. Click **Next**.

→ The image is analyzed, and the **Check Mask Shape** dialog box appears.

6. If the shape and position of the mask are as desired, click **Next**.

> → The **Photo Stitch 1 Parameters** dialog box appears.
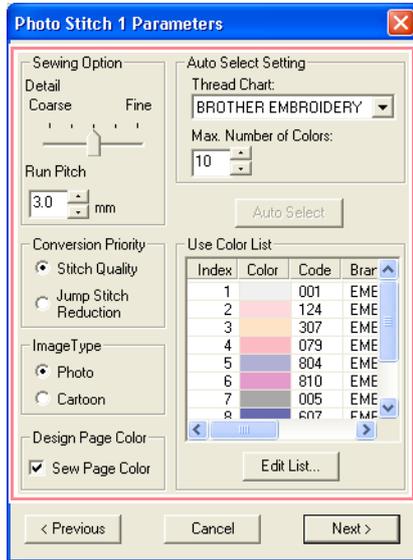
Photo Stitch 1 Parameters

Sewing Option
Detail
Coarse — Fine

Run Pitch
3.0 mm

Conversion Priority
○ Stitch Quality
○ Jump Stitch Reduction

Image Type
● Photo
○ Cartoon

Design Page Color
☑ Sew Page Color

Auto Select Setting
Thread Chart:
BROTHER EMBROIDERY ▼
Max. Number of Colors:
10

Auto Select

Use Color List

Index	Color	Code	Bran
1		001	EME
2		124	EME
3		307	EME
4		079	EME
5		804	EME
6		810	EME
7		005	EME
8		607	EME

Edit List...

< Previous   Cancel   Next >

📖 **Memo:**
Various settings are available for converting the image to an embroidery pattern. (For more details on the various settings, refer to page 116.)

7. Click **Next**.

> → The image is converted to an embroidery pattern, which is displayed in the **Preview** dialog box.

Preview

< Previous   Cancel   Finish
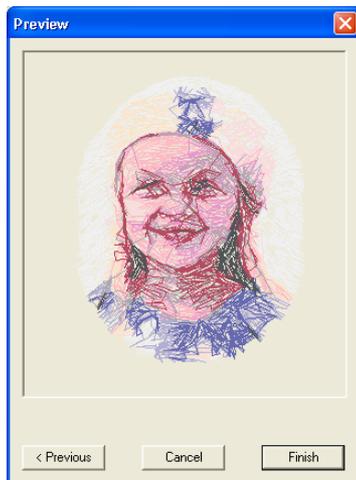
8. Click **Finish**.

> → The embroidery pattern is displayed in the Design Page.
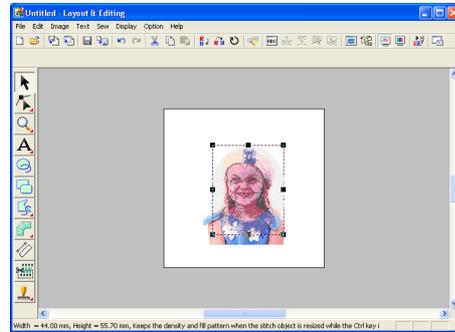
☞ *For details on previewing the embroidery pattern, refer to Step 5, "Displaying a preview of the embroidery pattern", on page 22.*

☞ *For details on saving the embroidery pattern as a file, refer to Step 6, "Saving the embroidery pattern", on page 23.*

☞ *For details on transferring the embroidery pattern to an original card, refer to Step 7, "Transferring the pattern to an original card", on page 24.*

Basic Operation

Creating and Editing Embroidery Patterns

Using Design Center

In this section, we are going to manually create an embroidery pattern from an image using a four-stage procedure. This pattern will be used later as the stepping stone to create a more complex embroidery pattern.

Follow the instructions in this section step by step. If you have to interrupt this exercise for any reason, it is recommended to save the file (refer to Step 9, "Saving the file", on page 38). You will be able to retrieve it later and resume your work.

The complete procedure will take you through the different steps of a normal working session with Design Center and will introduce you to its most important features.

Step 1	Starting up Design Center	page 30
Step 2	Opening an image file	page 31
Step 3	Continuing to stage 2 (Line Image stage)	page 31
Step 4	Editing lines	page 32
Step 5	Continuing to stage 3 (Figure Handle stage)	page 33
Step 6	Continuing to stage 4 (Sew Setting stage)	page 34
Step 7	Specifying sewing attributes	page 34
Step 8	Previewing the image	page 37
Step 9	Saving the file	page 38

Starting up Design Center

1. Click ![start], select **All Programs**, then **PE-DESIGN Ver.6**. Select **Design Center** to open the Design Center window.

   📖 **Memo:**
   If a shortcut for Design Center was created, for example, on the desktop, double-click it to start up the application.

   Design Center

→ The **How do you want to produce embroidery?** dialog box and the Design Center window appear.
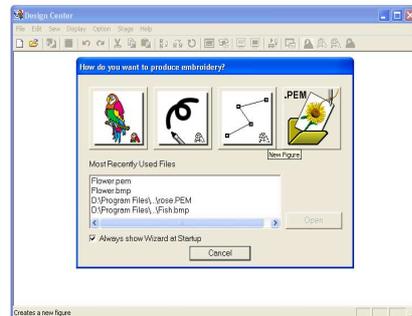
📖 **Memo:**
To fill the entire screen with the Design Center window, click the maximize button on the right end of the title bar.

Step 2
Opening an image file

First, we need to open the image that will be used to create the embroidery pattern.

1. In the **How do you want to produce embroidery?** dialog box, click [image].

→ The **From Image** dialog box appears.

2. Click [image].
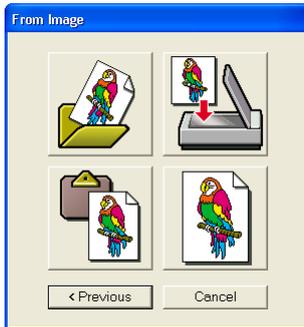
→ The **Open** dialog box appears.

📖 **Memo:**
The Open dialog box can also be displayed by selecting the menu command Open – File in Design Center.

3. Select the sample file **Flower.bmp** in the **Data** folder.

📖 **Memo:**
If the Preview check box is selected, the contents of the selected file will appear in the Preview box.

4. Click **Open** to open the image file and to close the dialog box.

📖 **Memo:**
Double-clicking the file name also adds the image to the work area and closes the dialog box.

→ The image appears in the Design Page and in the **Cut out to Line Image** dialog box.
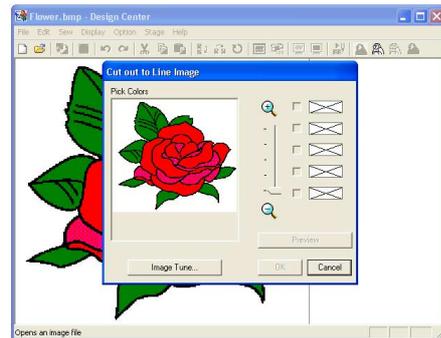
Step 3
Continuing to stage 2 (Line Image stage)

After opening the image, we will continue to stage 2 (Line Image stage), where we will select the color(s) that will be used to create the line image (outline of the image).

📖 **Memo:**
If the wizard is not being used, click Stage on the menu bar, and then click To Line Image. An alternate method is to click the Toolbar button indicated below.

To Line Image

1. Move the pointer over the image in the **Cut out to Line Image** dialog box.

→ The shape of the pointer changes to [image].

📖 **Memo:**
To display the image enlarged (or reduced), move the ZOOM slider up (or down). When the image is enlarged, you can scroll through it to display different parts.

2. Click any part of the outline.

→ The selected color appears in the top box under **Pick Colors**, and appears in the check box to show that the color is selected.
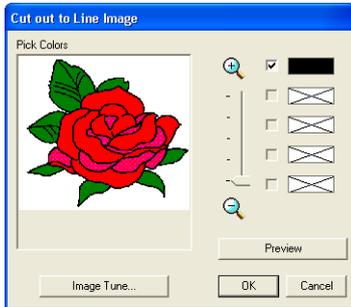
📖 **Memo:**

- *If the image contains outlines of different colors, you can repeat step* **2.** *to select up to five colors. If more than five colors are selected, only the last five colors selected remain in the list.*
- *To deselect a color, clear the corresponding check box.*
- *To adjust the color tone and reduce image noise (distortions), click* **Image Tune**. *(For more details, refer to page 74.)*

3. Click **Preview** to preview the line image in the Design Page.

📖 **Memo:**

To quit the operation and go back to stage 1 (Original Image stage), click **Cancel**.

4. When the line image appears as desired, click **OK**.

→ The line image is displayed in the Design Page.
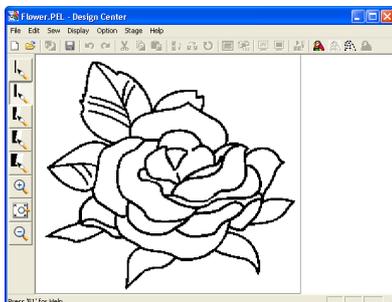
📖 **Memo:**

At this time, the pattern can be saved as a .pel file. For details, refer to Step 9, "Saving the file", on page 38.

Step 4
Editing lines

At this time, you might need to correct a few lines in the line image. You should make sure that regions are completely enclosed by either a single closed line or intersecting lines. You may also want to edit the line image and either add or remove some details. You can do this at this time using the pens and erasers in the Tool Box.

In this example, we are going to display the line image enlarged to make editing easier, then use an eraser to remove some of the outline.

1. Click .

→ When the pointer is moved over the work area, the shape of the pointer changes to

.

2. Click the line image.

📖 **Memo:**

- *To further enlarge the line image, repeat step* **2.**
- *To zoom in on a specific area, move the pointer near the desired area, and then drag the pointer diagonally over the desired area. A dotted box appears as you drag the pointer, and the selected area is enlarged when the mouse button is released.*
  For more details on the **Zoom** *buttons in the Tool Box, refer to page 234.*

3. Click on the Tool Box.

→ When the pointer is moved over the work area, the shape of the pointer changes to

.

4. Move the pointer over the line that you want to erase, and then hold down the right mouse button.

→ The shape of the pointer changes to

.

5. Carefully drag the pointer to erase the line.

6. Repeat steps **4.** and **5.** to delete a few leaves.
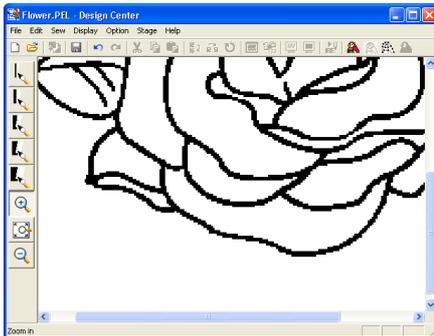
📖 **Memo:**
- *If you deleted part of the outline by mistake, you may need to redraw some of lines. To do this, simply hold down the left mouse button and start drawing the line.*
- *If you are not satisfied with your editing, select the menu command **Stage** – **To Original Image** to go back to stage 1 (Original Image stage), and then create the line image and start editing again.*

7. After editing the line image, click 🔲 on the Tool Box to view the entire line image so that it fits in the window.

→ The Design Page fills the Design Center window.
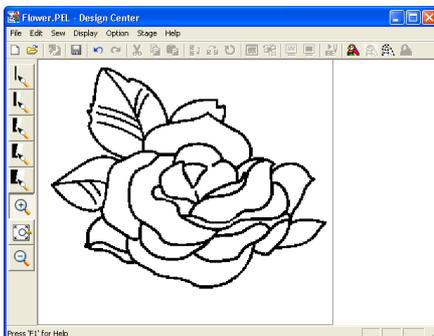
📖 **Memo:**

To select how the reduced line image is displayed:

1) *Click* 🔍 *on the Tool Box.*
   → *When the pointer is moved over the work area, the shape of the pointer changes to* 🔍 *.*
2) *Click the Design Page.*
3) *To further reduce the line image, repeat step 2).*

Step 5
Continuing to stage 3 (Figure Handle stage)

In stage 2 (Line Image stage), the line image is simply a collection of dots (or pixels). Editing in stage 2 means adding or removing black dots. When you move to stage 3 (Figure Handle stage), the application automatically connects the dots to create lines, which can be edited.

1. Click **Stage** on the menu bar, and then click **To Figure Handle**.
An alternate method is to click the Toolbar button indicated below.

To Figure Handle
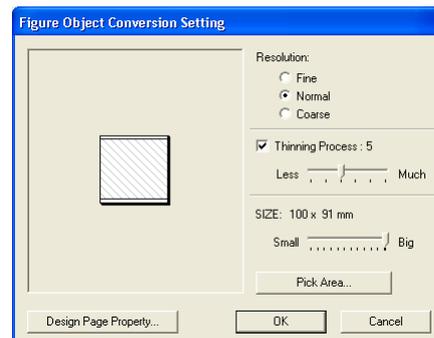
→ The **Figure Object Conversion Setting** dialog box appears.

📖 **Memo:**

Various settings are available for converting the line image to a figure handle image. (For more details on the various settings, refer to page 76.) In addition, this dialog box allows you to preview how the image will fit in the selected Design Page (the size of the area to be sewn).

2. Click **OK**.

→ The line image is converted to a figure handle image, which is displayed in the Design Page.
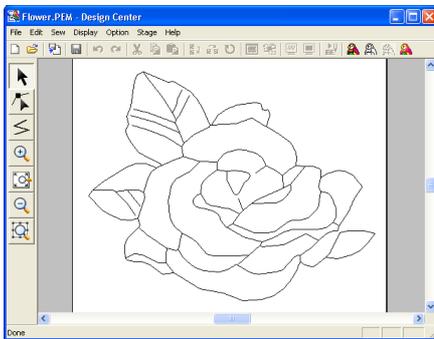
📖 **Memo:**

• *The Tool Box for stage 3 (Figure Handle stage) contains various editing tools for drawing lines, moving, deleting or inserting points as well as zooming. For details on the editing tools, refer to page 234.*

• *At this time, you can change the Design Page properties by using the menu command* **Option** – **Design Page Property***. (For more details, refer to page 77.)*

Step 6
Continuing to stage 4 (Sew Setting stage)

1. Click **Stage** on the menu bar, and then click **To Sew Setting**.
An alternate method is to click the Toolbar button indicated below.

——— To Sew Setting

→ The Tool Box for stage 4 (Sew Setting stage) appears.
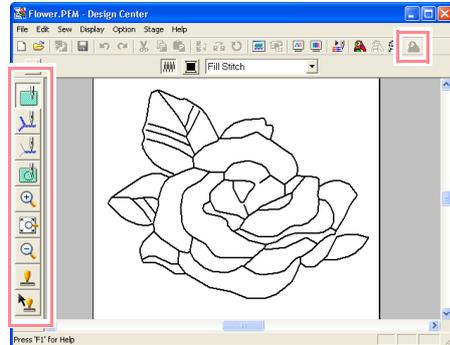
In this stage, you can set and check the sewing attributes for each part of the pattern. You can also specify hole sewing for larger regions that completely enclose smaller ones in order to avoid sewing the same region twice. Other tools are available for zooming.

📖 **Memo:**

• *To zoom in (or out), click 🔍 (or 🔍) on the Tool Box, and then click the desired area of the embroidery pattern, as in stage 3 (Figure Handle stage).*

• *To display the Design Page so that it fits the window, click 🔍 on the Tool Box.*

Step 7
Specifying sewing attributes

We are now going to apply sewing attributes to the different parts of the pattern.

■ Specifying sewing attributes for the outline

1. Click 🪡 on the Tool Box.

→ The shape of the pointer changes to

 , and the Sewing Attributes bar appears as shown below.

2. To change the outline color, click the **Line color** button ( ) on the Sewing Attributes bar, click the desired color in the **Line Thread Color** dialog box that appeared, and then click **Close**.

📖 **Memo:**
To move the dialog box to a more convenient place on the screen, move the pointer over the title bar, and then drag the dialog box.

→ The **Line color** button ( ) on the Sewing Attributes bar is displayed in the selected color.

3. To change the sew type to the zigzag stitch, click in the **Line sew type** selector

( ) on the Sewing Attributes bar, and then click **Zigzag Stitch**.

4. To change the attributes for the zigzag stitch, click **Sew** on the menu bar, and then click **Sewing Attribute**.
An alternate method is to click the Toolbar button indicated below.

Sewing Attribute

→ The **Sewing Attribute Setting** dialog box appears, containing the default settings for the selected outline sew type.
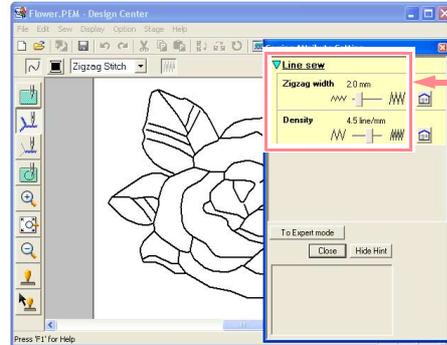
5. To change the width from 2.0 mm to 1.5 mm, move the slider to the left until **Zigzag width** is set to **1.5**.

📖 **Memo:**
*To close the dialog box, click **Close**.*

6. Click the outline of the pattern to apply the attributes (color, sew type and width) to it.

→ The image now appears as shown below with "marching lines" along the outline.
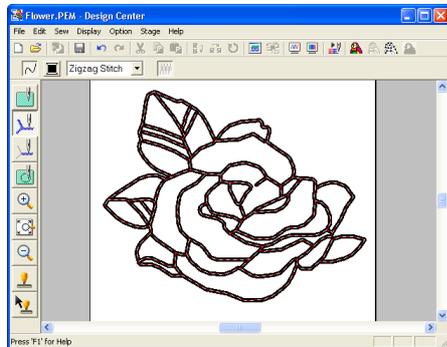
📖 **Memo:**
*If you think that the width of the outline is too thick, you can change it again. To change the width of the outline, repeat step **5.**, and then click the outline to apply the new setting. (If the **Sewing Attribute Setting** dialog box is not displayed, right-click the outline.)*

■ Specifying sewing attributes for the regions

1. Click on the Tool Box.

→ The shape of the pointer changes to

 , and the Sewing Attributes bar appears as shown below.

For the leaves

2. Click the **Region color** button ( ) on the Sewing Attributes bar, click the color **LEAF GREEN** in the **Region Thread Color** dialog box that appeared, and then click **Close**.

→ The **Region color** button ( ) on the Sewing Attributes bar is displayed in the selected color.

3. Click in the **Region sew type** selector

(Fill Stitch) on the Sewing Attributes bar, and then click **Fill Stitch**.

4. To change the attributes for the fill stitch, click **Sew** on the menu bar, and then click **Sewing Attribute**.
An alternate method is to click the Toolbar button indicated below.

Sewing Attribute

→ The **Sewing Attribute Setting** dialog box appears, containing the default settings for the selected region sew type.
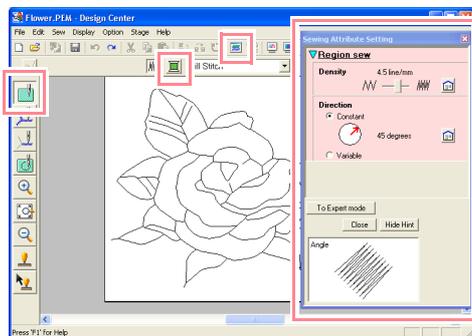
5. To change the direction of the fill stitching, click **Constant** under **Direction**, move the pointer over the red arrow inside of the circle under **Constant**, and then drag the red arrow to the desired angle.

📖 **Memo:**
- *When the pointer is moved over the red*

  arrow, its shape changes to *.*
- *Using different directions for different regions can add contrast and improve the appearance of the embroidery.*

Direction set to 45°
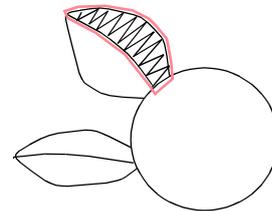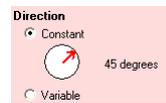
Direction set to 90°
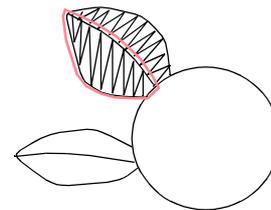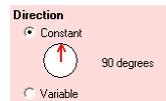
Direction set to 135°
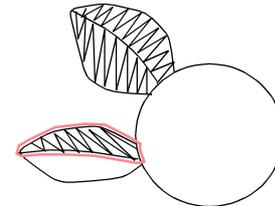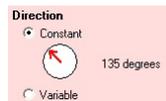
6. Click the regions of the leaves to which you want to apply the attributes.

→ "Marching lines" appear around the selected region.

7. Repeat steps **5.** and **6.** until attributes are applied to all leaves.

Basic Operation

⚠ **Note:**

Sewing attributes cannot be applied to regions that are not fully enclosed, as shown in the illustration of the leaf below.
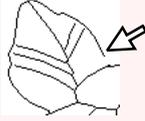
If the attributes cannot be applied to a region, go back to stage 3 (Figure Handle stage) and make sure that region is closed. Edit any broken lines with the Point Edit tool. For details on editing the figure handle image, refer to "Editing Points in Outlines" on page 81.

After applying the sewing attributes to the leaves, the image appears as shown below.
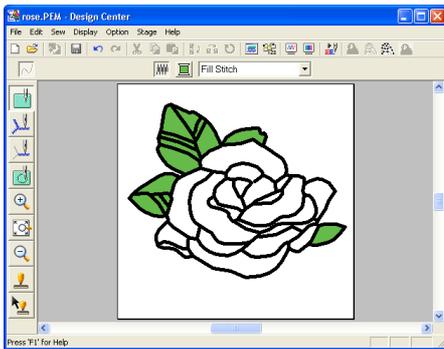
For one side of the petals

8. Select the color **CARMINE**, set the stitching direction, and then click each region where you want to apply the attributes.
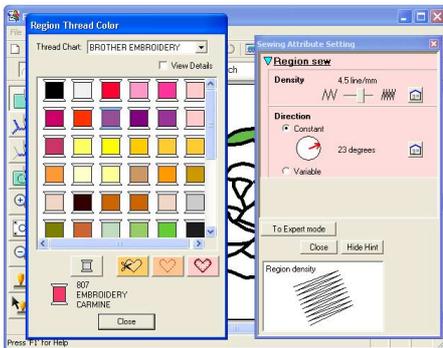
For the other side of the petals

9. Select the color **RED**, set the stitching direction, and then click each region where you want to apply the attributes.

Step 8
Previewing the image

You can display a preview of the embroidery pattern in order to see how the stitching is connected, or you can display a realistic preview of the embroidery pattern in order to see how the pattern will appear once it is sewn. (The embroidery pattern can only be previewed in stage 4 (Sew Setting stage) only.)

1. To display a preview of the embroidery pattern, click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.
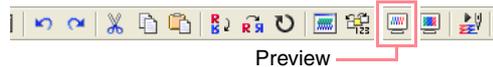
Preview

→ A preview of the embroidery pattern appears.
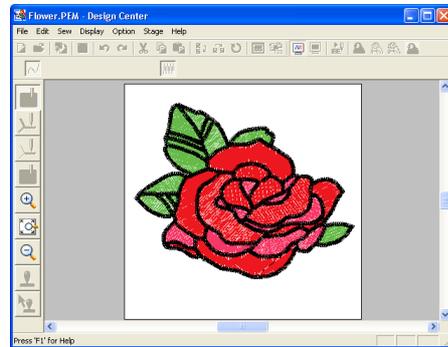
📖 **Memo:**

To zoom in (or out), click 🔍 (or 🔍) on the Tool Box, and then click the desired area of the embroidery pattern.

2. To leave the preview display, repeat step **1.**, or press the **Esc** key.

⚠ **Note:**
The embroidery pattern cannot be edited while the preview is displayed.

3. To display a realistic preview of the embroidery pattern, click **Display** on the menu bar, and then click **Realistic Preview**. An alternate method is to click the Toolbar button indicated below.

Realistic Preview

→ A realistic preview of the embroidery pattern appears.

📖 **Memo:**

To zoom in (or out), click 🔍 (or 🔍) on the Tool Box, and then click the desired area of the embroidery pattern.

4. To leave the realistic preview display, repeat step **3.**, or press the **Esc** key.

⚠️ **Note:**

* *The embroidery pattern cannot be edited while the realistic preview is displayed.*
* *The Realistic Preview function cannot display a clean preview of the pattern if the monitor is set to 256 colors or less. The monitor should be set to at least 16-bit High Color (65536 colors).*

Step 9
Saving the file

Since this embroidery pattern will be used as the basis of a more complex embroidery picture, we need to save it.

1. Click **File** on the menu bar, and then click **Save As**.

→ The **Save As** dialog box appears.

📖 **Memo:**

*To overwrite the original file in the original folder, use the menu command **File** – **Save** instead.*

2. The default name **Flower.pem** is displayed.

3. If necessary, change the drive and folder.

4. Click **Save** to save the file.

📖 **Memo:**

.pem files cannot be written to original cards. Import them into Layout & Editing first. (For details, refer to "Importing embroidery patterns from Design Center" on page 128.)

Using Layout & Editing

In this section, we are going to complete the embroidery pattern by combining a pattern imported from Design Center with objects created using Layout & Editing, one of which will have a programmable fill stitch applied to it.

Follow the instructions in this section step by step. If you have to interrupt this exercise for any reason, it is recommended to save the file (refer to Step 14, "Saving the file", on page 53). You will be able to retrieve it later and resume your work.

The complete procedure will take you through the different steps of a normal working session with Layout & Editing and will introduce you to some of its most important features.

Step 1	Importing embroidery patterns from Design Center	page 39
Step 2	Adjusting the size and position of the embroidery pattern	page 40
Step 3	Adding shapes	page 41
Step 4	Adding text	page 43
Step 5	Fitting the text around the oval	page 44
Step 6	Adding a circle for the center of the sun	page 45
Step 7	Selecting a programmable fill stitch	page 46
Step 8	Adding a closed broken line for the sun's rays	page 48
Step 9	Changing the sewing order of sun and rays	page 49
Step 10	Adjusting the rays	page 50
Step 11	Setting hole sewing	page 50
Step 12	Previewing the embroidery pattern	page 51
Step 13	Transferring the pattern to an original card	page 52
Step 14	Saving the file	page 53
Step 15	Quitting Layout & Editing	page 53

At the end of this session, the embroidery pattern will appear as shown below.
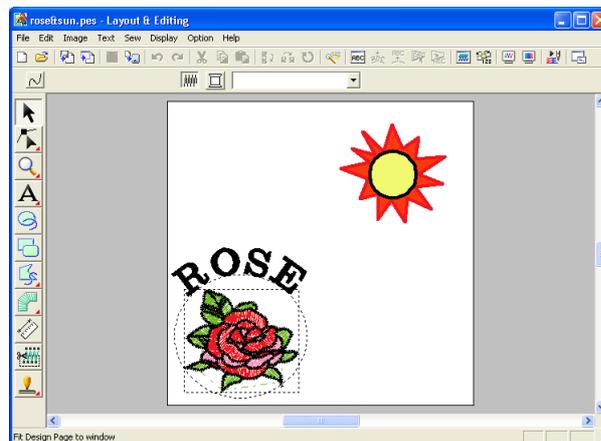
Step 1

Importing embroidery patterns from Design Center

The first object of the embroidery pattern will be the file **Flower.pem**, which we created in Design Center. In order to import an embroidery pattern from Design Center into the Design Page of

Layout & Editing, the .pem file must be opened in Design Center.

📖 **Memo:**
If Design Center has not been started up, refer to "Starting up Design Center" on page 30.

1. In Design Center, click **File** on the menu bar, and then click **Open**.

→ An **Open** dialog box similar to the one shown below appears.
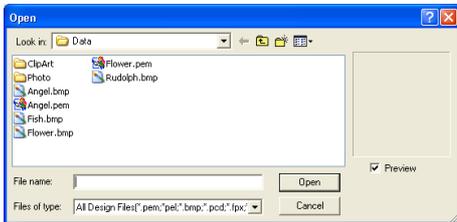
2. Select **Design Center PEM File (*.PEM)** in the **Files of type** box, the sample file **Flower.pem** in the **Data** folder, and then click **Open**.

📖 **Memo:**
*If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

❗ **Note:**
Be sure to select a .pem file saved in stage 4 (Sew Setting stage).
You cannot import another file type from Design Center.

→ The embroidery pattern is displayed in the Design Page of Design Center.
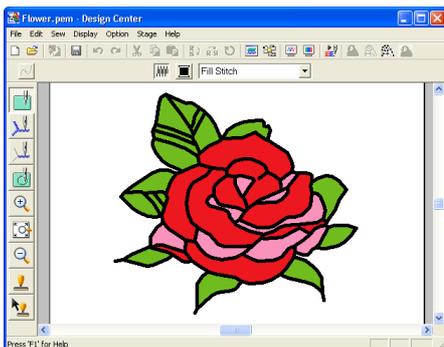
3. Click **Option** on the menu bar, and then click **Layout & Editing** to display the Layout & Editing window.

4. In Layout & Editing, click **File** on the menu bar, point to **Import**, and then click **from Design Center** on the submenu.

An alternate method is to click the Toolbar button indicated below.

from Design Center

→ The **Import size** dialog box appears.
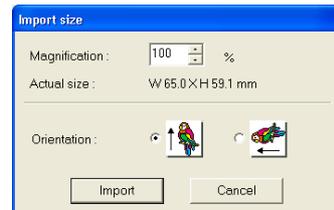
5. In the **Magnification** box, type or select **70%**, and then click **Import**.

→ The embroidery pattern is imported into the Design Page of Layout & Editing.
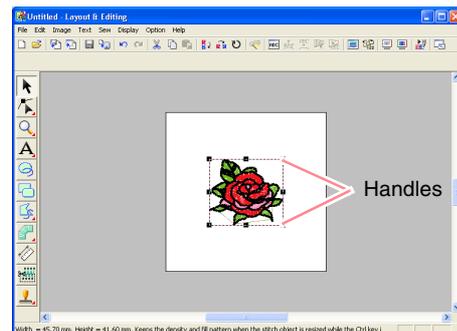
Handles

📖 **Memo:**
- *The dotted line and the handles that appear around the embroidery pattern show that the pattern is selected.*
- *The status bar shows the dimensions (width and height) of the selected pattern.*

Step 2
Adjusting the size and position of the embroidery pattern

When you import a pattern from Design Center, Layout & Editing puts the pattern at the center of the Design Page. We are now going to change the size of the imported pattern and move it to a different location.

1. Click ▶ on the Tool Box.

→ The shape of the pointer changes to .

Creating and Editing Embroidery Patterns

2. Move the pointer over a handle.

→ The shape of the pointer changes to

↖ , ↗ , ↕ , or ↔ , depending on the handle that the pointer is over.

> 📖 **Memo:**
> - ↔ *is for scaling the width.*
> - ↕ *is for scaling the height.*
> - ↖ *and* ↗ *are for scaling both dimensions at the same time.*

3. Drag the handle to adjust the selected pattern to the desired size.

> 📖 **Memo:**
> *To maintain the stitch density and fill pattern, hold down the* **Ctrl** *key while dragging a handle. (For more details, refer to "Enlarging/reducing embroidery patterns" on page 14.)*

4. Move the pointer over the selected pattern.

→ The shape of the pointer changes to ⊕ .

5. Drag the pattern to the desired location.
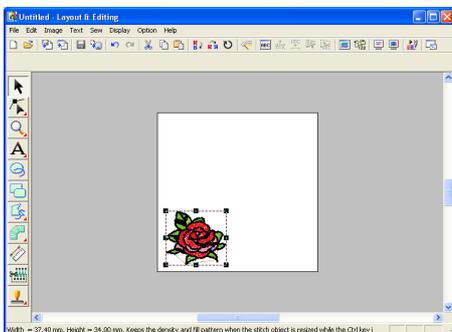
Step 3
Adding shapes

The next object to add to our embroidery pattern will be an oval. Since this oval will be used only as a guide for arranging the text that we will add later, we must set it so that it is not sewn.

■ **To add the oval**

1. Click 🔵 on the Tool Box.

→ The shape of the pointer changes to

+⊙ , and the Sewing Attributes bar appears as shown below.

Arc shape Line sew Region sew

When the pointer is positioned over a button or selector in the Sewing Attributes bar, a label indicating the name of that element appears.

> 📖 **Memo:**
> - *The **Arc shape** selector allows you to select the shape to be drawn. For example, click **Circle** to draw circles and ovals. The other options are used to draw other curved shapes such as arcs. For more details, refer to "Drawing Circles and Arcs" on page 145.*
> - *The line sewing and region sewing attributes are used to select the sew type and thread color for the outline (line sewing) and for the inside area (region sewing).*

Line sew type
Line color
Line sew
Region sew
Region color
Region sew type
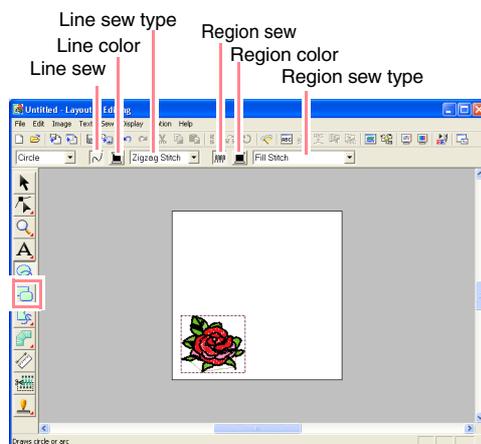
2. To change the shape of the object to be drawn, click the **Arc shape** selector, and then select the desired shape.

For this example, since we will be using the default shape **Circle**, you do not need to change the setting in the **Arc shape** selector.

> ⚠ **Note:**
> *When drawing a circle or other curved shape, select the shape before drawing. You cannot, for example, draw a circle, then change it to an arc afterward.*

3. To cancel line sewing (outline), click the **Line sew** button.

→ The **Line color** button and the **Line sew type** selector disappear.

📖 **Memo:**

*If the **Line sew** button is clicked, causing the **Line color** button and the **Line sew type** selector to disappear, the outline will not be sewn. If you want to sew the outline, click the **Line sew** button again to display the **Line color** button and the **Line sew type** selector.*

4. To cancel region sewing (inside area), click the **Region sew** button.

→ The **Region color** button and **Region sew type** selector disappear.
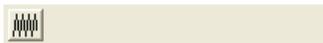
5. To draw the oval, drag the pointer in the Design Page.

→ The oval (outline and inside area) appears when the mouse button is released.
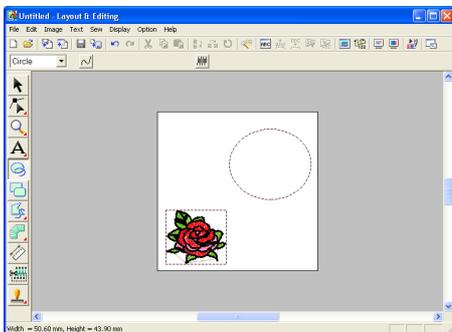
📖 **Memo:**

• *If you want to delete the oval, click �
 on the Tool Box, click the oval to select it, and then press the* Delete *key or select the menu command **Edit** – **Delete**.*

• *If you want to change the color or sew type of the oval after drawing it, click ▊ on the Tool Box, click the oval to select it, and then click the **Line sew** or **Region sew** button. The current attributes for the oval appear in the Sewing Attributes bar, where they can be changed.*

■ **To change the size of the oval**

If your oval looks very different from the one shown above, modify its size as described below.

1. Click ▊ on the Tool Box.

→ The shape of the pointer changes to ▷ .

2. Click the oval to select it.

3. Move the pointer over one of the handles of the oval.

→ The shape of the pointer changes to ↔ , ↕ , ↖ or ↗ , depending on the handle that the pointer is over.

📖 **Memo:**

• ↔ *is for scaling the width.*

• ↕ *is for scaling the height.*

• ↖ *and* ↗ *are for scaling both dimensions at the same time.*

4. Drag the handle to adjust the selected pattern to the desired size.
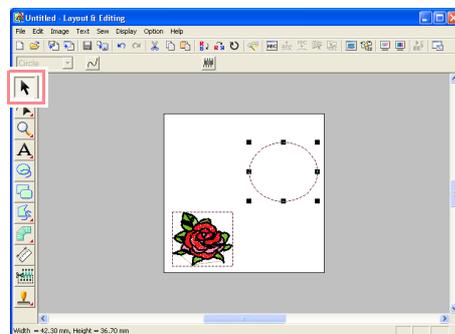
■ **To center the flower pattern in the oval**

If the flower pattern is not centered in the oval, move the oval as described below.

1. Click ▊ on the Tool Box.

→ The shape of the pointer changes to ▷ .

2. Click the oval to select it.

→ The shape of the pointer changes to ⊕.

3. Drag the oval to its final location.
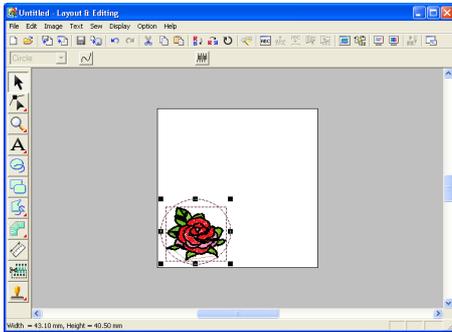
Step 4
Adding text

The next object to add to our embroidery pattern is text.

1. Click **A** on the Tool Box, and then click

A .

→ The shape of the pointer changes to

∫ , and the Sewing Attributes bar appears as shown below.

Font   Text Size   Text body color   Text body sew type
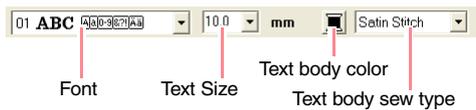
2. To change the font, click in the **Font** selector on the Sewing Attributes bar, and then select the desired font.

For this example, since we will be using the default font **01**, you do not need to change the font setting.
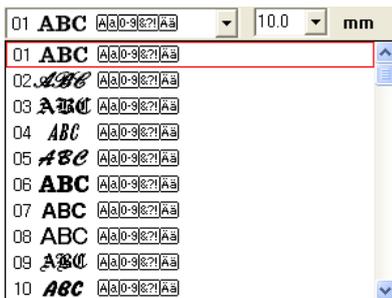
3. To change the text size, click in the **Text Size** selector on the Sewing Attributes bar, and then select the desired size for the text.

For this example, we will keep the default size of **10.0 mm**

> 📖 **Memo:**
> *The value indicates the height of the characters.*
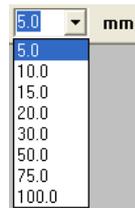
4. To change the text color, click the **Text body color** button (▣) on the Sewing Attributes bar, click the desired color in the **Region Thread Color** dialog box that appeared, and then click **Close**.

For this example, since we will be using the default color **BLACK**, you do not need to change the text color setting.

5. To change the text sew type, click in the **Text body sew type** selector, and then select the desired sew type for the text.

For this example, we will use the default sew type **Satin stitch**.

> 📖 **Memo:**
> *For more precise setting of the text attributes, refer to "Specifying text attributes" on page 157.*

6. To enter the text, click in the Design Page.

Since we can move the text after creating it, any place in the Design Page can be clicked.

→ The **Edit Text Letters** dialog box appears.
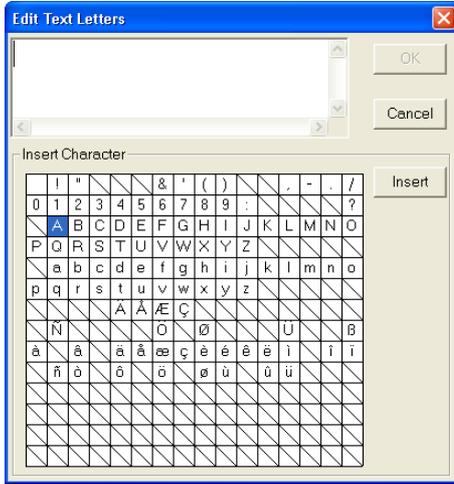
7. Type your text ("ROSE", for this example).

📖 **Memo:**
- *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.*
- *To quit the operation, click **Cancel**.*

8. Click **OK**.

→ The text is displayed in the Design Page.
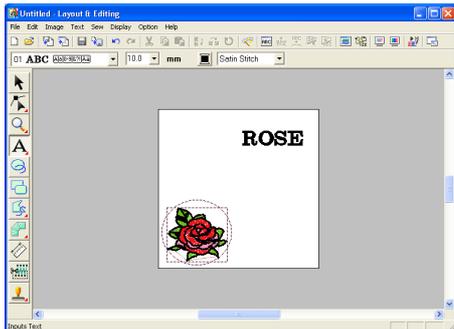
📖 **Memo:**
- *If you want to edit the entered text, click*

  ▶ *on the Tool Box, click the text to select it, and then select the menu command **Text** – **Edit Letters**. Edit the text in the **Edit Text Letters** dialog box that appeared.*
- *If you want to delete the text, select it, and then press the* Delete *key.*
- *If you want to change the text color, font or other attributes after entering the text, click*

  ▶ *on the Tool Box, click the text to select it, and then change the settings on the Sewing Attributes bar.*

Step 5
Fitting the text around the oval

Here, we are going to fit the text around the oval.

1. Click ▶ on the Tool Box.

→ The shape of the pointer changes to

    ▷ .

2. Click the text **ROSE** to select it.

3. Hold down the Ctrl key and click the oval to select it.

→ Both the oval and the text are selected.
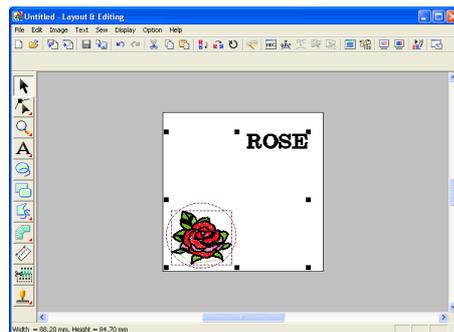
4. Click **Text** on the menu bar, and then click **Fit Text to Path Setting**.
An alternate method is to click the Toolbar button indicated below.

Fit Text to path

Creating and Editing Embroidery Patterns

→ The **Fit Text to Path Attribute Setting** dialog box appears.
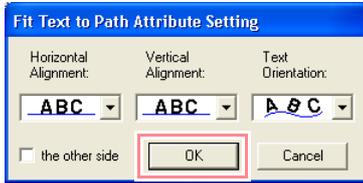
5. Click **OK** without changing any settings.

☞ *For more details on these settings, refer to "Specifying text arrangement" on page 158.*

→ The text is now arranged on the oval.
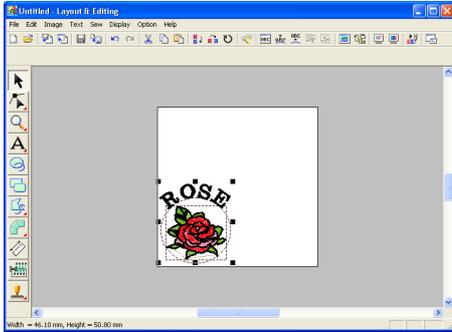
📖 **Memo:**

Moving the oval and text:

Once the text is arranged on the oval, you can move both patterns as a group, without affecting their relative position, or you can move the text alone to change its position on the oval.

To move both patterns as a group:

1) Click 🔧 *on the Tool Box, and then click the oval to select it.*
 → The shape of the pointer changes to ⊕.
2) Drag the oval.
 → The text moves together with the oval.

To move the text along the oval:

1) Click 🔧 *on the Tool Box, and then click the text to select it.*
 → The shape of the pointer changes to ⊕.
2) Drag the text.
 → The text only moves along the oval.

Step 6
Adding a circle for the center of the sun

The next object to add will be a sun. We will first draw a circle to get the basic shape, and then change the color, sew type and width of the outline and the color and sew type for the inside area.

1. To draw a circle, hold down the **(Shift)** key while drawing as described in "To add the oval" on page 41.

📖 **Memo:**
If you need to modify the size of the circle, select it, and then drag a handle at one of the corners.

2. Click 🔧 on the Tool Box, and then click the circle to select it.

3. To change the color and sew type for the outline, click the **Line sew** button (〰) so that the **Line color** button (■) and the **Line sew type** selector (Zigzag Stitch ▾) appear, and then select a line color and sew type.

For this example, select the color **BLACK**, and leave the sew type set to **Zigzag Stitch**.

4. To change the sewing attributes for the outline, click **Sew** on the menu bar, and then click **Sewing Attribute Setting**.
An alternate method is to click the Toolbar button indicated below.

Sewing Attribute Set

→ The **Sewing Attribute Setting** dialog box appears.
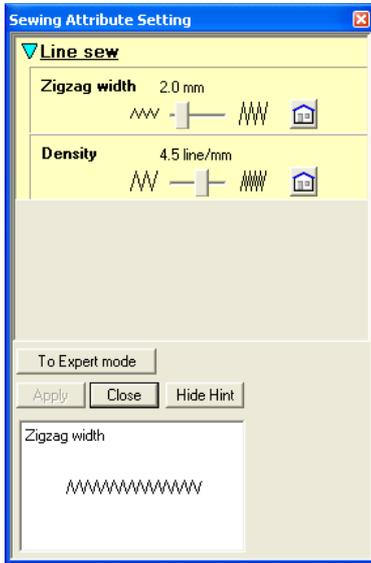
5. To change the width from 2.0 mm, set **Zigzag width** to **1.0**, and then click **Apply**.

6. To change the color for the region, click the **Region sew** button ( ) so that the **Region color** button ( ) and the **Region sew type** selector (Fill Stitch) appear, and then select a region color.
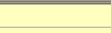
For this example, select the color **LEMON YELLOW**.

→ The embroidery pattern appears as shown below.
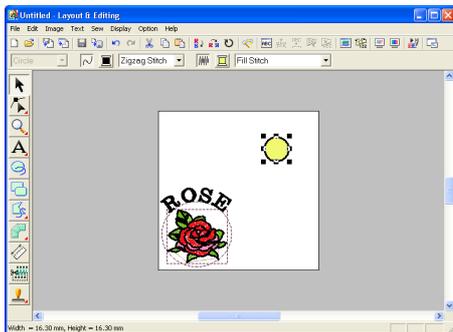
Selecting a programmable fill stitch

Next, we will select a special fill stitch pattern for the inside area of the circle, and then change its settings. Programmable fill stitch patterns, which can be created in Programmable Stitch Creator (refer to "Using Programmable Stitch Creator" on page 54), are arranged in a tile-like manner within the selected regions, creating more decorative stitching.

> **Memo:**
> *Make sure that the circle is still selected.*

1. Select **Prog. Fill Stitch** in the **Region sew type** selector (Fill Stitch).

2. Click **Sew** on the menu bar, and then click **Sewing Attribute Setting**.
An alternate method is to click the Toolbar button indicated below.

Sewing Attribute Set

→ The **Sewing Attribute Setting** dialog box appears.
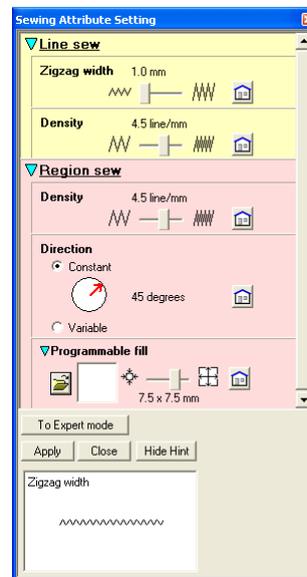
Creating and Editing Embroidery Patterns

3. Click 📂 under **Programmable fill**.

→ The **Browse** dialog box appears, allowing you to preview and browse through the existing programmable fill stitch patterns.
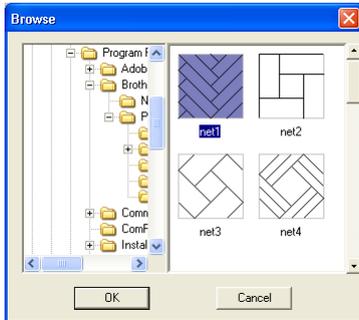
Note:
Only programmable fill stitch files, which have the .pas extension, are listed.

4. From the stitch samples, click **pat 07** to select it, and then click **OK**.

→ The dialog box closes and a preview of the selected stitch appears at the bottom of the **Sewing Attribute Setting** dialog box.

Memo:
Double-clicking the stitch pattern also selects it and closes the dialog box.

5. To change the size of the programmable stitch pattern in Beginner Mode, set the size to **10 ×
10 mm** (**0.30 × 0.30 inch**) by moving the slide to the right.
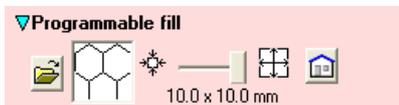
→ The **Sewing Attribute Setting** dialog box appears as shown below.
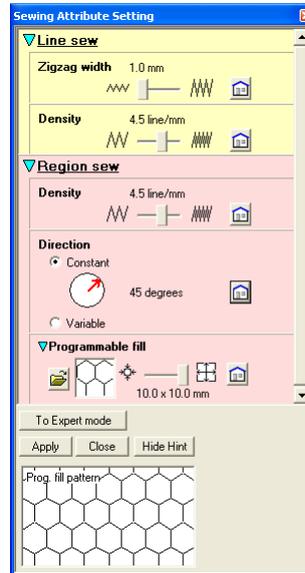
Memo:
• *The preview of the stitch pattern at the bottom of the dialog box changes each time a setting is changed. This allows you to see how each setting affects the pattern.*
• *To separately change the width and height of the stitch pattern, click **To Expert mode**, and then type or select the desired values in the appropriate boxes under **Programmable fill**.*

6. To change the direction of the fill stitching, click **Constant** under **Direction**, move the pointer over the red arrow inside of the circle under **Constant**, and then drag the red arrow until **340 degrees** is selected.

→ The **Sewing Attribute Setting** dialog box appears as shown below.
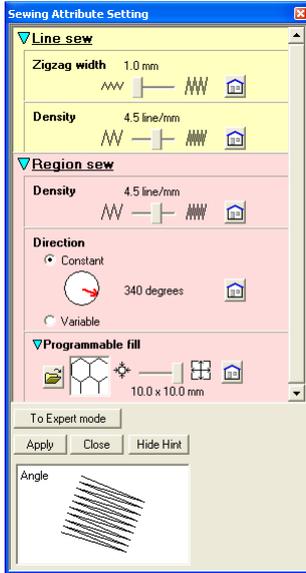
☞ *For more information on the different settings for a programmable fill stitch, refer to "Specifying sewing attributes" on page 171.*

7. Click **Apply**.

→ The stitch and its settings are applied to the inside area of the selected circle.

> **Note:**
> *The selected sewing attributes will be applied to the regions of every object that will be drawn, until the attributes are changed.*

Step 8
Adding a closed broken line for the sun's rays

Now, let's draw a few rays around the sun. There are, of course, many ways to do this. You could, for example, draw a single straight line for each ray. For this example, we will use a closed polygonal line (broken line) to draw all of the rays as a single star-shaped pattern.

1. Click on the Tool Box, and then click

 .

→ The shape of the pointer changes to

$+_<$, and the Sewing Attributes bar appears as shown below.

Path shape   Line sewing   Region sewing

2. Make sure that **Close path** is selected in the **Path shape** selector.

> 📖 **Memo:**
> *When drawing a closed path, the first point and the last point are automatically joined. The pattern has an outline and an inside area, and sewing attributes can be applied to both.*
> *With an open path, the broken line is left open (the first and last point are not automatically joined). The pattern will not have a region, therefore you can only apply sewing attributes to the outline.*

3. To change the color and sew type for the outline, click the **Line sew** button ( ) so that the **Line color** button ( ) and the **Line sew type** selector (Zigzag Stitch) appear, and then select a line color and sew type.

For this example, select the color **RED**, and leave the sew type set to **Zigzag Stitch**.

4. To change the color for the inside area, click the **Region sew** button ( ) so that the **Region color** button ( ) and the **Region sew type** selector (Fill Stitch) appear, and then select a region color.

For this example, select the color **VERMILION**.

5. To draw the rays of the sun around the circle using the circle as a guide, click in the Design Page to select the start point (①), continue clicking in the Design Page to select every other corner (② through ㉒), and then double-click.
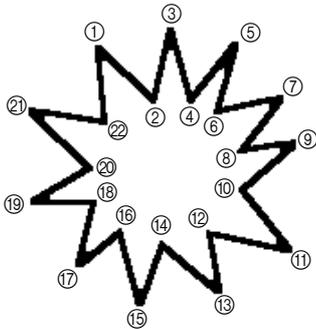
📖 **Memo:**

To remove the last point that was entered, click the right mouse button.

→ The embroidery pattern appears as shown below.
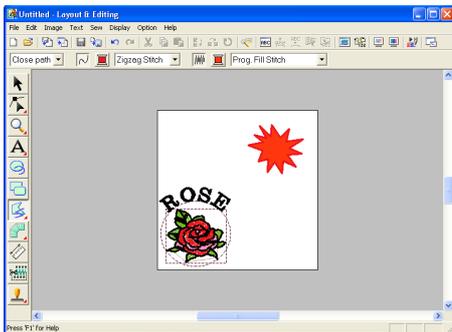
📖 **Memo:**

- *If you want to delete the pattern, click* ▲ *on the Tool Box, click the pattern to select it, and then press the* **Delete** *key or select the menu command* **Edit** – **Delete**.
- *If you want to change the pattern shape, color, or sew type after drawing it, click*

  ▲ *on the Tool Box, click the pattern to select it, and then change the settings on the Sewing Attributes bar or in the* **Sewing Attribute Setting** *dialog box.*

Step 9

Changing the sewing order of sun and rays

Since we have drawn the closed broken line for the sun's rays after drawing the circle, the sun's rays are on top of the circle. In other words, the broken sun's rays are in the foreground. Since the pattern is in the foreground, it will be sewn last. We need to change the sewing order so that the sun (circle) will be sewn on top of the sun's rays.

1. Click **Sew** on the menu bar, and then click **Sewing Order/Color**.
An alternate method is to click the Toolbar button indicated below.

Sewing Order/Color

→ The **Sewing Order/Color** dialog box apears.

2. Click the frame containing the region for the sun's rays to select it, and then drag the frame to the left of the circle for the sun. (This part of the sun will be sewn first.).
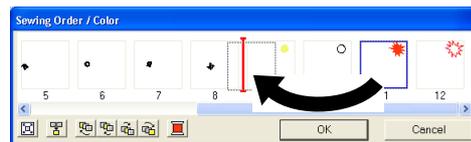
📖 **Memo:**

When a frame in the **Sewing Order/Color** *dialog box is selected, the buttons at the bottom of the dialog become available. The sewing order of the selected pattern object can also be changed by using these buttons. For more details, refer to "Checking and Editing the Sewing Order/Color" on page 184.*

3. Click the frame containing the outline for the sun's rays to select it, and then drag the selected frame between the region for the sun's rays and the circle for the sun.
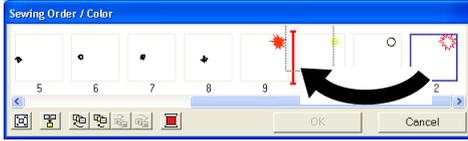
4. Click **OK**.

→ The sun's rays will be sewn before the sun (circle).
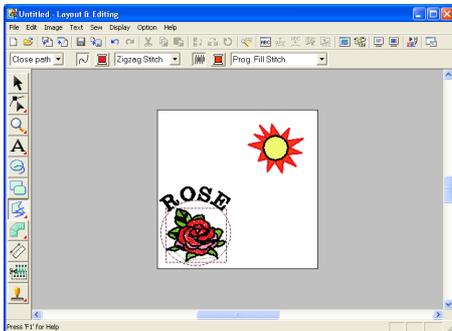
If necessary, move the circle so that it looks centered relative to the sun's rays.

Step 10
Adjusting the rays

At this time, you might want to modify the rays. You can do this by moving, deleting and adding points in the closed broken line pattern.

1. Click on the Tool Box, and then click

 .

→ The shape of the pointer changes to

 .

2. Click the sun's rays to select it.

→ The points in the pattern appear as small empty squares.

3. Click the point that you want to move.

→ The selected point appears as a small black square.

4. Drag the point to the new location.
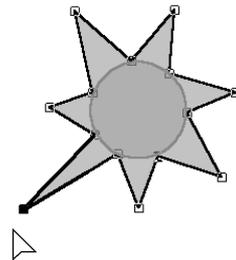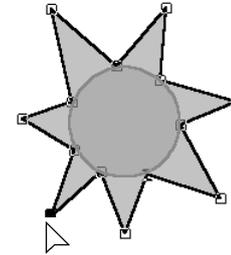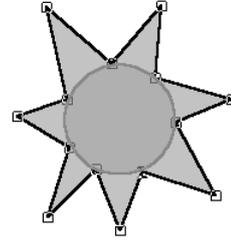
☞ *For details on adding and deleting points, refer to "Inserting points" on page 136 and "Deleting points" on page 137.*

Step 11
Setting hole sewing

If the sun is sewn according to the current settings, the sun's rays will be sewn first, and then the sun (circle) will be sewn on top of it. In order to avoid sewing the same region twice, you can specify hole sewing for a larger region that completely encloses smaller ones. If hole sewing is specified, the part of the rays behind the circle will not be sewn.

1. Click ▶ on the Tool Box, and then click the sun's circle to select it.

2. Hold down the **Ctrl** key and click the sun's rays.

→ The circle and the broken line are now selected together.

📖 **Memo:**
If it is difficult to select the two patterns, drag the pointer to draw a selection frame around the patterns.

3. Click **Sew** on the menu bar, and then click **Set Hole Sewing**.

→ The following message appears.

Layout & Editing
⚠ Setting hole sewing was completed.
OK

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

4. Click **OK** to close the message.

❗ **Note:**
Patterns with hole sewing set cannot be moved separately. To adjust their relative positions, click ▶ on the Tool Box, select one of the patterns, and then cancel hole sewing by selecting the menu command Sew – Cancel Hole Sewing.

📖 **Memo:**
Points on the outlines can be edited independently with the Point Edit tool. (For details, refer to "Moving points" on page 135)

☞ *For more details, refer to "Specifying hole sewing" on page 180.*

Step 12
Previewing the embroidery pattern

You can display a preview of the embroidery pattern in order to see how the stitching is connected, or you can display a realistic preview of the embroidery pattern in order to see how the pattern will appear once it is sewn. For example, you will be able to see that the part of the broken line (sun rays) behind the circle is not sewn and how the selected programmable fill stitch will be sewn.

1. To display a preview of the embroidery pattern, click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.

Preview

→ A preview of the embroidery pattern appears.
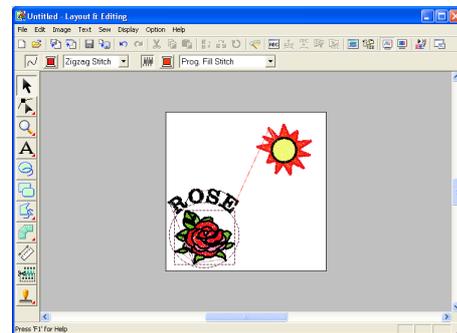
📖 **Memo:**
To zoom in (or out), click 🔍 on the Tool Box, click 🔍⁺ (or 🔍⁻), and then click the desired area of the embroidery pattern.

2. To display a realistic preview of the entire embroidery pattern, deselect all objects in the pattern by clicking in a blank area of the Design Page.

To display a realistic preview of a single object or a group of objects, select the object(s).

3. Click **Display** on the menu bar, and then click **Realistic Preview**.
An alternate method is to click the Toolbar button indicated below.

Realistic Preview

→ A realistic preview of the embroidery pattern appears.
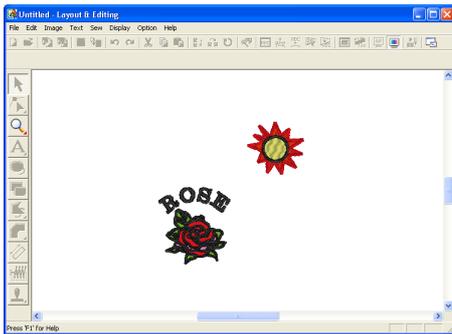
📖 **Memo:**

To zoom in (or out), click 🔍 on the Tool Box, click ⊕ (or ⊖), and then click the desired area of the embroidery pattern.
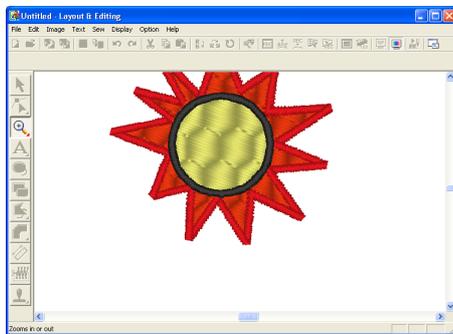
⚠ **Note:**
The embroidery pattern cannot be edited while the realistic preview is displayed.

4. To return to the previous display, repeat step **3.**, or press the **Esc** key.

Step 13
Transferring the pattern to an original card

Before you can actually sew the embroidery pattern, you must transfer the pattern to a sewing machine. Transfer the embroidery pattern to the sewing machine using media of the type used by your machine, for example, original cards, floppy disks, CompactFlash cards, or USB media. For this example, we will transfer the pattern to an original card.

1. Insert an original card into the USB card writer module.

⚠ **Note:**
The original card is inserted correctly when you hear it snap into place.

2. Click **File** on the menu bar, point to **Write to Card**, and then click **Current Design** on the submenu.
An alternate method is to click the Toolbar button indicated below.

Write to Card

→ The following message appears.

> **Layout & Editing**
> ⓘ All original card data will be deleted.
> OK   Cancel

⚠ **Note:**
If the original card is not brand new, make sure that the patterns already stored on the card are no longer needed.

3. Click **OK**.

→ The following message appears.

> **Layout & Editing**
> ⓘ Writing to original card is completed.
> OK

Creating and Editing Embroidery Patterns

📖 **Memo:**
*To quit the operation, click **Cancel**.*

⚠️ **Note:**
If the card writer module is not correctly connected or powered, or if the original card is not inserted or is defective, an error message will appear. For more details, refer to "Writing an embroidery pattern to an original card" on page 195.

4. Click **OK** to close the message.

Step 14
Saving the file

Once the embroidery pattern is finished, you may want to save it in order to retrieve it later.

1. Click **File** on the menu bar, and then click **Save**.
An alternate method is to click the Toolbar button indicated below.

Save

→ If the pattern has already been saved at least once, the file is saved immediately.

📖 **Memo:**
*To save the file with a different name, use the menu command **File** – **Save As** instead.*

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

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

3. Click **Save** to save the pattern.

📖 **Memo:**
*• To quit the operation, click **Cancel**.*
*• If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*

• To overwrite the file, click **Yes**. The new file name appears in the title bar of the Layout & Editing window.
• If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.

Step 15
Quitting Layout & Editing

1. Click **File** on the menu bar, and then click **Exit**.

→ The Layout & Editing window closes.

📖 **Memo:**
Layout & Editing can also be closed by clicking the close button on the right end of the title bar.

Using Programmable Stitch Creator

Programmable Stitch Creator allows you to design fill stitch and motif stitch patterns that can be applied as a programmable fill stitch or motif stitch both in Design Center and Layout & Editing, resulting in more decorative embroidery patterns. When applied to enclosed regions, the fill stitch or motif stitch pattern fills the region in a tile-like manner. When applied to lines, the motif stitch pattern is repeated along the length of the line. In addition, the fill stitch patterns can be applied as an individual stamp to enclosed regions. You can create your own fill stitch and motif stitch patterns or use the many stitch patterns provided with this application, with or without editing them.

In this section, we are going to edit an existing stitch pattern, and then apply embossing/engraving effects to it.

The complete procedure will take you through the different steps of a normal working session with Programmable Stitch Creator and will introduce you to its most important features.

Follow the instructions in this section step by step. If you have to interrupt this exercise for any reason, it is recommended to save the file (refer to Step 5, "Saving the edited stitch pattern", on page 58). You will be able to retrieve it later and resume your work.

Step 1	Starting up Programmable Stitch Creator	page 54
Step 2	Opening a programmable stitch pattern	page 55
Step 3	Drawing lines to edit the stitch pattern	page 56
Step 4	Applying embossing/engraving effects	page 57
Step 5	Saving the edited stitch pattern	page 58
Step 6	Quitting Programmable Stitch Creator	page 58

Step 1
Starting up Programmable Stitch Creator

1. Click ![start], select **All Programs**, then **PE-DESIGN Ver.6**. Select **Programmable Stitch Creator**.

> 📖 **Memo:**
> *If a shortcut for Programmable Stitch Creator was created, for example, on the desktop, double-click it to start up the application.*

Programmable
Stitch Creator

→ The Programmable Stitch Creator window appears.

> 📖 **Memo:**
> *To fill the entire screen with the Programmable Stitch Creator window, click the maximize button on the right end of the title bar.*

Title bar
Menu bar
Toolbar

Tool Box

Status bar

Close button
Maximize button
Minimize button

Work area

Preview window

Basic Operation
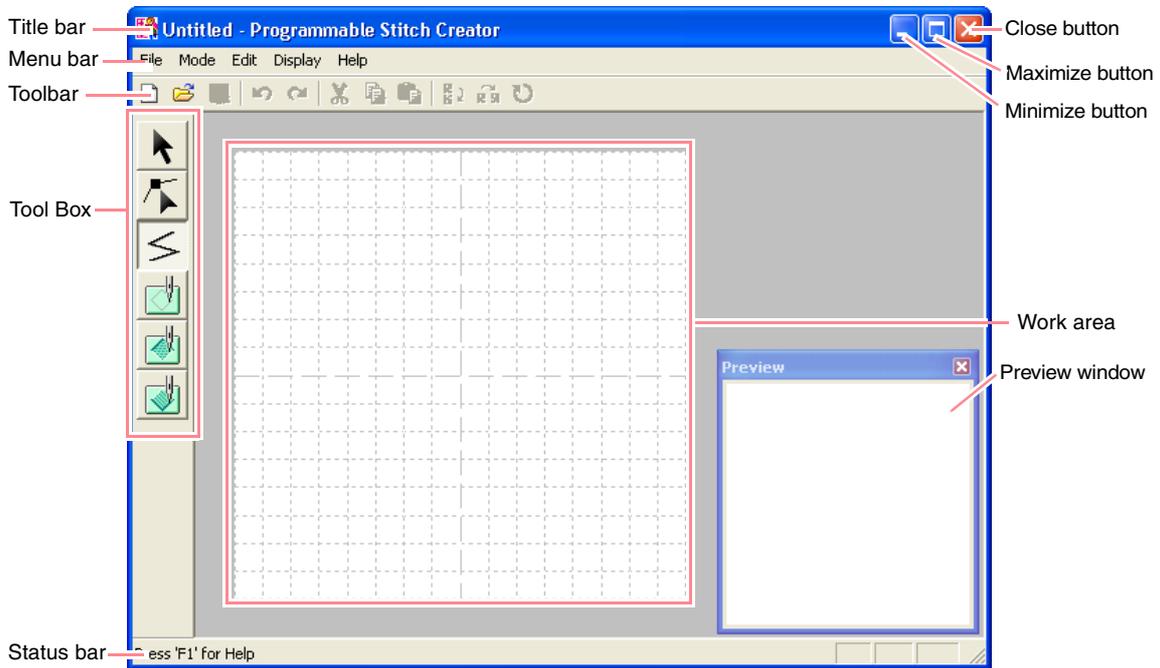
Step 2
Opening a programmable stitch pattern

For this exercise, we will edit one of the programmable fill stitch patterns provided with the application.

1. Click **File** on the menu bar, and then click **Open**.
An alternate method is to click the Toolbar button indicated below.

Open

→ The **Open** dialog box appears.
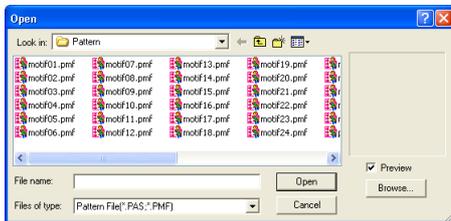
2. Select the stitch pattern file **wave1.pas** in the **Pattern** folder.

📖 **Memo:**
If the Preview check box is selected, the contents of the selected file will appear in the Preview box.

3. Click **Open** to open the pattern file and to close the dialog box.

55

📖 **Memo:**
- *Double-clicking the file name also adds the pattern to the work area and closes the dialog box.*
- *To preview the available .pas files in the selected folder, click **Browse**.*
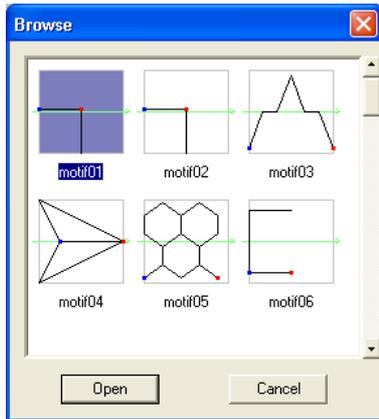
*In the **Browse** dialog box that appeared, click a stitch pattern to select it, and then click **Open** (or double-click the pattern) to open the file and to close both the **Open** and **Browse** dialog boxes.*

- *Opening a .pas file (programmable fill stitch pattern) automatically selects **Programmable Fill** mode. Opening a .pmf file (motif stitch patterns) automatically selects **Motif** mode. To change the type of stitch pattern to be created, use the commands on the **Mode** menu.*

→ The stitch pattern appears in the work area of Programmable Stitch Creator.
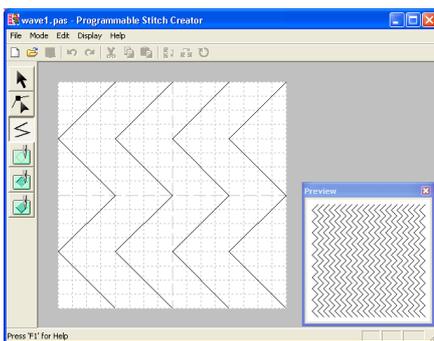
⚠️ **Note:**
*You can see a preview of the stitch pattern in the **Preview** window.*

Step 3
Drawing lines to edit the stitch pattern

Now, we are going to draw a lines between the displayed ones using the Line tool of the Tool Box.

📖 **Memo:**
*For this example, we will use the grid setting **Medium** with which the stitch pattern was saved. Grid settings should be selected depending on how detailed you want to draw. Select the grid setting **Narrow** for more detailed stitches and the grid setting **Wide** for more simple stitches. For more information on the grid settings, refer to "Changing the grid settings" on page 222.*

1. Click ⩽ on the Tool Box. Move the pointer over the work area.

→ The shape of the pointer changes to $+_\leqslant$.

2. Move the pointer to the second vertical grid line to the right of the leftmost wave, and then click the top edge of the work area.

📖 **Memo**
The horizontal and vertical lines that you draw on the work area always follow the grid. The points that you create by clicking are inserted at the intersection of the horizontal and vertical grid lines, enabling you to draw diagonal lines as well. Therefore, regardless of where you click, a point will automatically be inserted at the nearest intersection.

3. Move the pointer parallel to the wave, and then click the second vertical grid line to the right of the corner in the leftmost wave.

📖 **Memo:**
To remove the last point that was entered, click the right mouse button.

4. Repeat step **3.** until you reach the end of the wave, and then double-click the bottom edge of the work area.

5. Repeat steps **2.** through **4.** to add another wave between the rightmost wave.

→ The pattern should appear as shown below.
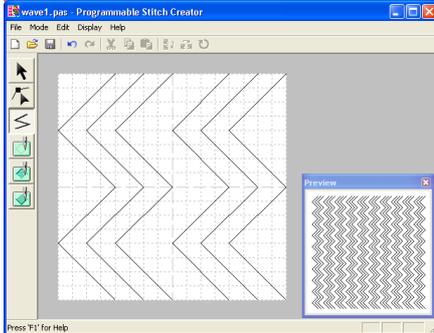
📖 **Memo:**

To edit points in the pattern, click ⟨icon⟩ on the Tool Box, and then edit the points. (For details on moving, inserting and delete points, refer to "Editing Points in Outlines" on page 81 or go back to Step 10, "Adjusting the rays", on page 50).

Step 4
Applying embossing/engraving effects

A stamp can be made by sewing regions of a fill stitch pattern with the fill stitch, satin stitch or the base stitch set for the embroidery pattern in order to create embossing and engraving effects.
In order to do this, the lines of the stitch pattern must form closed regions. In our example, the lines do not form closed regions, so we will need to add enclosing lines.

1. Click ⟨icon⟩ on the Tool Box.

→ The shape of the pointer changes to ⟨icon⟩.

2. Click the upper-left corner of the work area.

3. Move the pointer along the top edge of the work area, and then double-click the upper-right corner to draw a line along the top edge.

4. Click the lower-left corner of the work area.

5. Move the pointer along the bottom edge of the work area, and then double-click the lower-right corner to draw a line along the bottom edge of the work area.
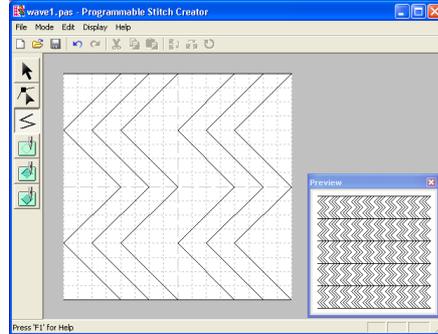
6. Click ⟨icon⟩ (**Region (engrave)**) on the Tool Box, and then click the first and fourth wave regions.

→ These regions appear in red and will be sewn with short stitches to give the effect of engraving.

7. Click ⟨icon⟩ (**Region (emboss)**) on the Tool Box, and then click the second and fifth wave regions.

→ This region appears in blue and will be sewn with no dropped stitches to give the effect of embossing.
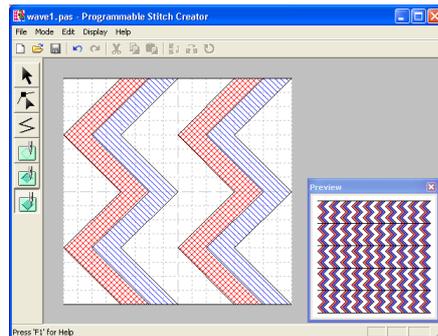
Step 5
Saving the edited stitch pattern

In order to apply your edited stitch pattern as a programmable fill stitch or as a stamp to a region in Layout & Editing or Design Center, you must first save it as a .pas file.

1. Click **File** on the menu bar, and then click **Save As**.

    → The **Save As** dialog box appears.
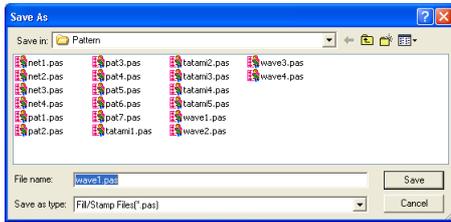
> 📖 **Memo:**
> *To overwrite the original file, use the menu command **File** – **Save** instead.*

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

3. Click **Save** to save the pattern.

> 📖 **Memo:**
> • *To quit the operation, click **Cancel**.*
> • *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*
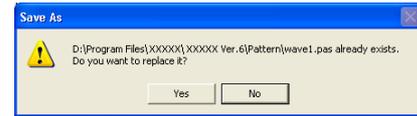
> • *To overwrite the file, click **Yes**. The new file name appears in the title bar of the Programmable Stitch Creator window.*
> • *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

Step 6
Quitting Programmable Stitch Creator

When you are finished creating stitch patterns in Programmable Stitch Creator, you can close the application.

1. Click **File** on the menu bar, and then click **Exit**.

    → If you have saved your file as described in Step 5, "Saving the edited stitch pattern", the Programmable Stitch Creator window closes immediately.

    → If you have made changes to the pattern since the last time the file was saved, you will be asked whether you want to save the changes. Click **Yes**, and then follow the procedure described in Step 5, "Saving the edited stitch pattern".

> 📖 **Memo:**
> *Programmable Stitch Creator can also be closed by clicking the close button on the right end of the title bar.*

Creating Large-Size Embroidery Patterns

A large-size embroidery pattern can be designed by specifying the size of the pattern, creating the embroidery pattern, then automatically dividing the pattern into a size that can be embroidered. By separately embroidering each section of the pattern side by side, large-size embroidery can be sewn. In addition, the joining edges can be embroidered slightly overlapping in order to blend beautifully.

Some large-size patterns may not be appropriate for use with the split sewing feature. We recommend using designs with many small filled areas, such as a bouquet of flowers, lace designs and embroidery created using the Photo Stitch function. Since designs with very large filled areas may not align properly due to fabric pull, we suggest these types of designs not be used.

In this section, we are going to adapt an existing embroidery pattern for large-size embroidery, and then sew it.

The complete procedure will take you through the different steps of a normal working session with a large-size embroidery pattern and will introduce you to its most important options.

Follow the instructions in this section step by step. If you have to interrupt this exercise for any reason, it is recommended to save the file (refer to Step 5, "Saving the pattern", on page 61). You will be able to retrieve it later and resume your work.

Designing a large-size embroidery pattern		
Step 1	Starting up Layout & Editing	page 59
Step 2	Specifying a Design Page size	page 60
Step 3	Creating the embroidery pattern	page 60
Step 4	Checking the embroidering order	page 61
Step 5	Saving the pattern	page 61
Step 6	Transferring the pattern to an original card	page 62
Step 7	Quitting Layout & Editing	page 63
Embroidering large-size embroidery patterns		
Step 1	Attaching stabilizer to the fabric	page 63
Step 2	Marking the embroidering position	page 63
Step 3	Hooping the fabric	page 65
Step 4	Embroidering	page 65

Designing a large-size embroidery pattern

Step 1
Starting up Layout & Editing

1. Click **start**, select **All Programs**, then **PE-DESIGN Ver.6**. Select **Layout & Editing** to open the Layout & Editing window.

> 📖 **Memo:**
> *If a shortcut for Layout & Editing was created, for example, on the desktop, double-click it to start up the application.*

Layout & Editing

→ The Layout & Editing window appears.

> 📖 **Memo:**
> *To fill the entire screen with the Layout & Editing window, click the maximize button on the right end of the title bar.*

Creating Large-Size Embroidery Patterns

Title bar
Menu bar
Toolbar
Sewing Attributes bar
Tool Box

Close button
Maximize button
Minimize button

Work area

Design Page

Reference Window

Status bar
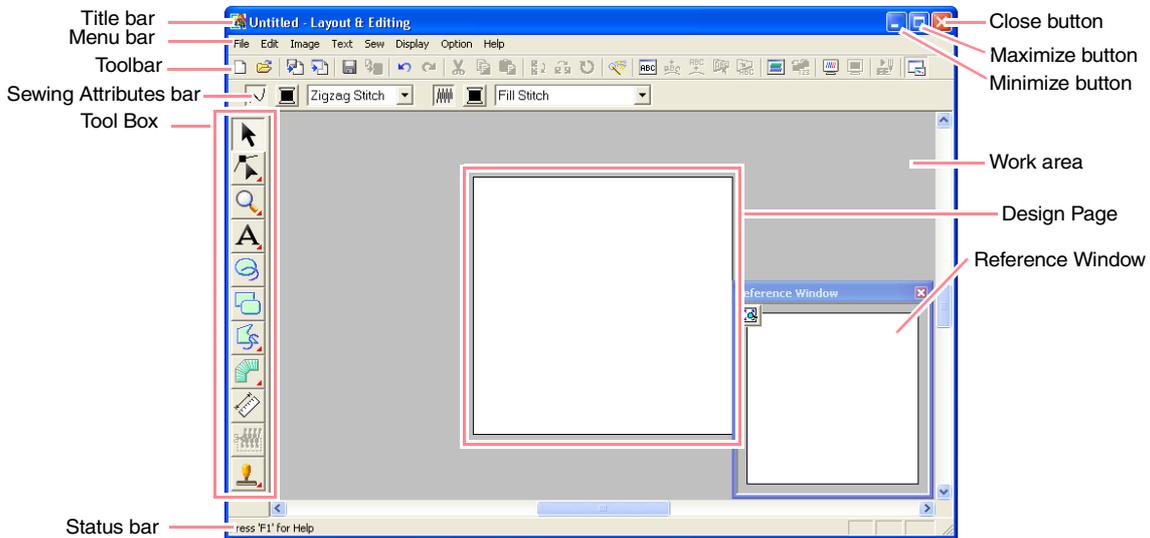
Step 2
Specifying a Design Page size

First, we need to specify the desired size for the complete embroidery pattern.

1. Click **Option**, then **Design Page Property**.

→ The **Design Page Property** dialog box appears.
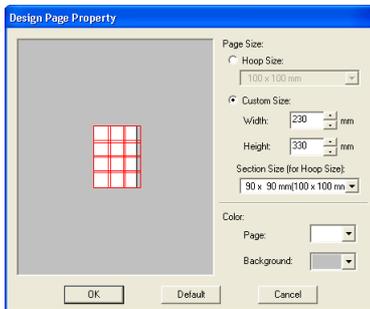
2. Select **Custom Size**, and then type or select the desired width and height for the Design Page. Enter dimensions between 100 and 1000 mm. For this example, set **Width** to **230 mm** and **Height** to **330 mm**.

> 📖 **Memo:**
> *The width and height specified under **Custom Size** determine the exact size of the embroidery design.*

3. Click in the **Section Size (for Hoop Size)** selector, and then select the size of the sections (your embroidery hoop). For this example, select **120 × 170 mm (130 × 180 mm)**.

> 📖 **Memo:**
> • *With the **Section Size (for Hoop Size)** setting, the width and height of the sections are 10 mm smaller than the actual hoop size in order to provide space for fine positioning adjustments with adjacent sections.*
> • *The preview area shows the setting changes that you make. The double lines indicate adjoining edges where embroidering will overlap.*

4. Click **OK**.

Step 3
Creating the embroidery pattern

For this example, we will use one of the lace embroidery patterns provided with the application.

1. Click **File** on the menu bar, point to **Import**, and then click **from File** on the submenu. An alternate method is to click the Toolbar button indicated below.

from File

Creating Large-Size Embroidery Patterns

→ The **Import from File** dialog box appears.
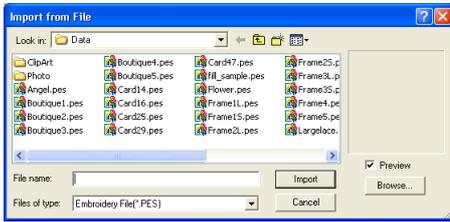
2. Select the embroidery pattern file **Largelace.pes** in the **Data** folder.

> 📖 **Memo:**
> *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

3. Click **Import** to import the embroidery pattern file and to close the dialog box.

> 📖 **Memo:**
> *Double-clicking the file name also imports the pattern into the Design Page and closes the dialog box.*

→ The embroidery pattern appears in the Design Page. (To center the embroidery pattern within the Design Page, select the menu command **Edit** – **Center**.)
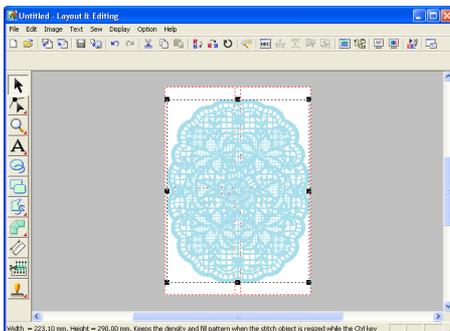
Step 4
Checking the embroidering order

Before the embroidery pattern is sewn, check the embroidering order to see the order that the pattern sections are sewn and determine which parts of the fabric should be hooped.
The pattern sections are sewn in order from left to right, top to bottom.

1. Click **Option** on the menu bar, and then click **Design Property**.

→ The **Design Property** dialog box appears, and the first pattern section to be sewn appears in the Design Page framed with a red line.
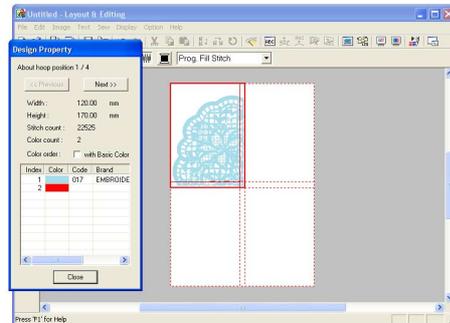
> ⚠ **Note:**
> *Before an embroidery pattern created in a custom Design Page is saved or transferred to an original card, running stitches are added at the edges of the pattern sections so that the pattern sections can easily be aligned during sewing. This alignment stitching appears in the **NOT DEFINED** color and cannot be edited. (For more details, refer to "Embroidering" on page 65.)*

> 📖 **Memo:**
> - *The embroidering order cannot be checked while the pattern is selected; therefore, be sure to deselect the pattern before selecting the menu command **Option** – **Design Property**. (For details, refer to "Selecting patterns" on page 130.)*
> - *The Design Page is automatically zoomed in on or zoomed out from to fit in the entire window, with the position of the displayed pattern section within the embroidery hoop installation order indicated at the top of the dialog box.*
> - *To display information for other pattern sections in the embroidering order, click **Previous** or **Next**.*
> - *Pattern sections that do not contain any stitching will not be displayed.*

2. Click **Close** to close the dialog box.

Step 5
Saving the pattern

Once the embroidery pattern is finished, you may want to save it in order to retrieve it later.

1. Click **File** on the menu bar, and then click **Save**.

An alternate method is to click the Toolbar button indicated below.

Save

→ If the pattern has already been saved at least once, the file is saved immediately.

📖 **Memo:**
*To save the file with a different name, use the menu command **File** – **Save As** instead.*

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

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

3. Click **Save** to save the pattern.

📖 **Memo:**
• All patterns for a divided embroidery pattern are saved as a single .pes (version 6) file.
• Only the sections that contain stitching are saved.
*• To quit the operation, click **Cancel**.*
*• If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*

*• To overwrite the file, click **Yes**. The new file name appears in the title bar of the Layout & Editing window.*
*• If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

⚠ **Note:**
If a section of the pattern exceeds the maximum allowed for the stitch count or number of colors, a message appears, describing the limitations and asking whether or not the pattern should be saved anyway. If the embroidery pattern extends off the Design Page, a message appears, asking whether or not the pattern should be saved anyway. If the pattern is saved anyway, it must be edited before it can be sewn.

Step 6
Transferring the pattern to an original card

This embroidery pattern can be transferred to a sewing machine, where it can be sewn. Transfer the embroidery pattern to the sewing machine using media of the type used by your machine, for example, original cards, floppy disks, CompactFlash cards, or USB media. For this example, we will transfer the pattern to an original card.

1. Insert an original card into the USB card writer module.

⚠ **Note:**
The original card is inserted correctly when you hear it snap into place.

2. Click **File** on the menu bar, point to **Write to Card**, and then click **Current Design** on the submenu.
An alternate method is to click the Toolbar button indicated below.

Write to Card

→ The following message appears.

⚠ **Note:**
If the original card already contains patterns, they will be deleted.

3. Click **OK**.

→ The following message appears.

📖 **Memo:**

• Each section of the pattern is saved to the original card as a separate pattern. When the patterns are displayed on the sewing machine's display, they appear with two letters in the lower-left corner, indicating that section's position in the entire pattern. The uppercase letter indicates the row and the lowercase letter indicates the column.

For example, for the pattern section marked below in red, the pattern will appear with "Bc" to indicate its position.

For the example shown above, the large-size embroidery pattern will be saved as

nine smaller patterns marked "Aa", "Ab", "Ac", "Ba", "Bb", "Bc", "Ca", "Cb" and "Cc".
*• To quit the operation, click **Cancel**.*

⚠ **Note:**

• If the card writer module is not correctly connected or powered, or if the original card is not inserted or is defective, an error message will appear. For more details, refer to "Writing an embroidery pattern to an original card" on page 195.
• If a section of the pattern exceeds the maximum size allowed, a message appears, describing the limitations and the pattern is not transferred to the original card. In addition, if the pattern is too large to be transferred to a single original card, select the sections to transfer. For more details, refer to "Writing an embroidery pattern to an original card" on page 195.

4. Click **OK** to close the message.

Step 7
Quitting Layout & Editing

1. Click **File** on the menu bar, and then click **Exit**.

→ The Layout & Editing window closes.

📖 **Memo:**

Layout & Editing can also be closed by clicking the close button on the right end of the title bar.

Embroidering large-size embroidery patterns

Step 1
Attaching stabilizer to the fabric

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, by using iron-on stabilizer, sticky stabilizer or spray adhesive.

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.

⚠ **Note:**

• For best results, attach the stabilizer to the fabric (as described in Step 1 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.

Step 2
Marking the embroidering position

Using the template for the size of hoop that you are using, mark the embroidering position on the fabric.

📖 **Memo:**

- *The templates are included in the package.*
- *The templates are also in the **Template** folder and can be printed out with a printer.*

1. Punch a hole at the end of each arrow on the template.
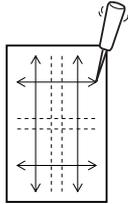
2. Place the template on the fabric, and then insert the tip of a marking pen into each hole to mark the fabric.
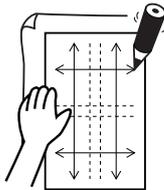
3. Connect the points marked on the fabric to draw reference lines.
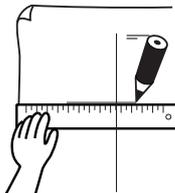
For a large embroidery pattern, reposition the template to draw the embroidering position for each section of the embroidery pattern.

1. Place the template on the fabric, and mark points A, B, C and D.
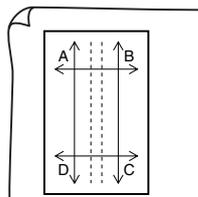
2. To mark an area to the right of the previously marked area, align points A and D on the template with marks B and C on the fabric.
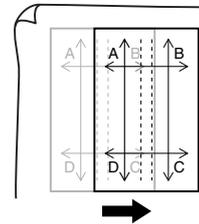
To mark an area below the previously marked area, align points A and B on the template with marks C and D on the fabric.
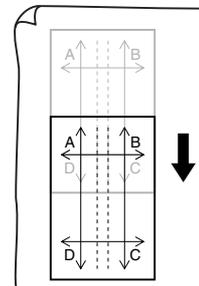
❗ **Note:**

- ***The intersection of the horizontal and vertical line indicates the center of the embroidery hoop.***
- *While carefully considering how the fabric will be hooped, place the template on the fabric, and then draw lines to indicate the embroidering position. In addition, because all embroidery areas are not drawn on the template for large embroidery hoops, be careful that the embroidery area does not extend from the marked area on the fabric as shown below.*
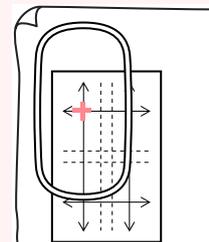
Creating Large-Size Embroidery Patterns

Step 3
Hooping the fabric

Using the hoop's plastic embroidery sheet, align the reference lines on the embroidery sheet with the marks on the fabric. Then, hoop the fabric while making sure that the fabric remains correctly aligned.

1. Insert the embroidery sheet into the inner ring of the embroidery hoop, and then place them on top of the fabric with the centerline on the embroidery sheet aligned with the reference lines (drawn on the fabric) for the first pattern section to be sewn.
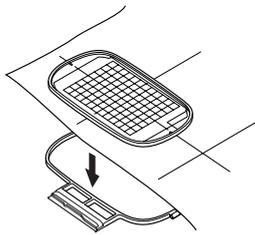
2. Keeping the reference lines on the embroidery sheet aligned with the reference lines for the first pattern section, place the fabric and inner ring of the embroidery hoop into the outer ring of the hoop, and then pull the fabric so that it is tight.
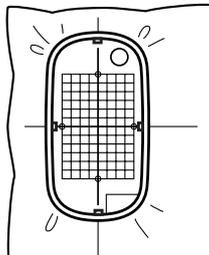
3. Finish hooping the fabric, and then remove the embroidery sheet.
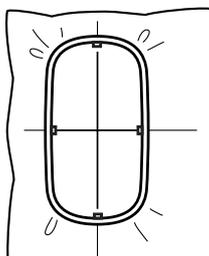
> **Note:**
> • *Place the fabric and hoop on a level surface, and then make sure that the inner ring is pressed in well enough that the top edge of the inner ring aligns with the top edge of the outer ring.*
> • *If the embroidery sheet is not used, the marks on the embroidery hoop can be used to hoop the fabric vertically and horizontally.*
> *However, since the center point on some sewing machines is off center, the embroidery sheet should be used for best results.*
> • *Another way to hoop the fabric is to use sticky stabilizer that can be hooped separately, tear away the protective paper, then carefully align the fabric onto the sticky surface using the embroidery sheet as a guide.*
> • *Tip: The fabric can be hooped more easily if double-sided tape is affixed to the back of the inside frame, which is placed on top of the fabric, and then the fabric is clamped between the inside frame and the outside frame.*

Step 4
Embroidering

Now, we are ready to embroider the pattern.

1. When large-size embroidery patterns are transferred to the sewing machine, the patterns appear on the sewing machine display as shown below. For this example, select the first embroidery pattern section (Aa).

> **Memo:**
> *If there is no stitching in section Aa, select the first section that contains stitching. Select the menu command **Option** – **Design Property** to check the embroidering order.*

2. Attach the embroidery hoop to the sewing machine, and then using the machine's layout adjusting functions, align the needle position with the intersection of the lines drawn on the fabric.

3. Embroider the selected pattern.

4. Remove the embroidery hoop from the sewing machine, and then remove the fabric from the hoop.

5. Hoop the fabric for the next pattern section. (For details, refer to "Hooping the fabric" on page 65.)

📖 **Memo:**

*When an embroidery pattern created in a custom Design Page is saved or transferred to an original card, alignment stitching (single lines of running stitches with the color **NOT DEFINED**, with a pitch of 10.0 mm, and starting with securing stitches with a pitch of 0.3 mm) is added at the edges of the pattern sections. (The alignment stitching appears in the print preview and is printed in red.)*

*Example for hooping fabric using the alignment stitching with **Largelace.pes** (**Largelace.pes** can be found in the **Data** folder.):*

1) Embroider the upper-left pattern section.
  → Alignment stitching is sewn below and on the right side of the embroidered pattern section.
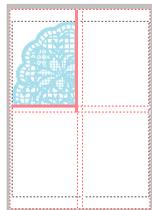
2) Hoop the fabric for the upper-right pattern section with the left side of the hoop aligned on the alignment stitching on the right side of the pattern section sewn in step 1, and then embroider the pattern.
  → Before the pattern section is embroidered, alignment stitching is sewn on the left side. Make sure that this alignment stitching aligns with the alignment stitching sewn in step 1. After the pattern section is embroidered, alignment stitching is sewn below the pattern section.
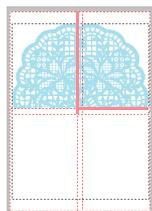
3) Hoop the fabric for the lower-left pattern section with the top of the hoop aligned on the alignment stitching at the bottom of the pattern section sewn in step 1, and then embroider the pattern.
  → Before the pattern section is embroidered, alignment stitching is sewn at the top. Make sure that this alignment stitching aligns with the alignment stitching sewn in step 1. After the pattern section is embroidered, alignment stitching is sewn on the right side of the pattern section.
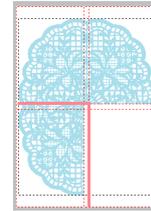
4) Hoop the fabric for the lower-right pattern section with the left side of the hoop aligned on the alignment stitching on the right side of the pattern section sewn in step 3 and with the top of the hoop aligned on the alignment stitching at the bottom of the pattern section sewn in step 2, and then embroider the pattern.
  → Before the pattern section is embroidered, alignment stitching is sewn on the left side and at the top. Make sure that this alignment stitching aligns with the alignment stitching sewn in step 3 and in step 2.
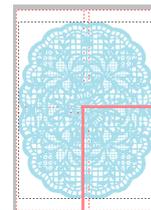
6. Continue hooping the fabric and embroidering until the entire embroidery pattern is sewn.

Chapter 2
Advanced Operation

Advanced Operations

About This Chapter

This chapter provides you with detailed procedures on the various operations that you can perform in each of the applications.

Design Center

Design Center is used to manually create embroidery patterns from images using a four-stage procedure.

Layout & Editing

Layout & Editing is used to automatically create embroidery patterns from images and to create embroidery patterns by combining drawn objects and text.

Programmable Stitch Creator

Programmable Stitch Creator allows you to create, edit and save fill/stamp and motif stitch patterns that can be applied as a programmable fill stitch or a motif stitch, or as a stamp to the enclosed regions of embroidery patterns.

Design Database

Design Database allows you to organize the embroidery pattern files on your computer so that you can easily preview them and find the desired pattern.

Design Center

Design Center is used to create embroidery patterns from images created in other applications. With Design Center, you can also apply stitch patterns created with Programmable Stitch Creator to regions of the embroidery pattern. The resulting embroidery pattern can then be imported into the Layout & Editing Design Page and combined with other patterns.

The embroidery pattern is created in four stages:

■ Stage 1 (Original Image Stage)

In stage 1, you can open an image (or clip art) from various sources, such as, an image created in Paint®, a scanned drawing, or purchased clip art.

The image file must be in the uncompressed format, and its file name extension must be .bmp, .tif, .jpg, .j2k, .pcx, .wmf, .png, .eps, .pcd, or .fpx.

Note that image files in other formats can be converted into the specified format if you have the proper conversion software.

In stage 1, the image is displayed with its original colors and you cannot modify it.

■ Stage 2 (Line Image Stage)

When moving from stage 1 to stage 2, select a maximum of five colors from the image that will be converted into black outlines. Unselected colors will be converted into white. You can then correct the black-and-white image using pens and erasers of different thicknesses.

If you save a file in stage 2, its file name extension will be .pel.

■ Stage 3 (Figure Handle Stage)

When you move to stage 3, the application automatically detects the outline (black areas) and replaces it with a set of broken lines. The broken lines can be edited (you can move and delete points or insert new points).

If you save a file in stage 3, its file name extension will be .pem.

■ Stage 4 (Sew Setting Stage)

You can set the sew type, thread color, and other sewing attributes for the outlines and regions to complete the embroidery pattern.

If you save a file in stage 4, its file name extension will be .pem.

If you have to interrupt your work at stage 2, 3 or 4, save the file in order to retrieve it later to resume working on it.

Main Window
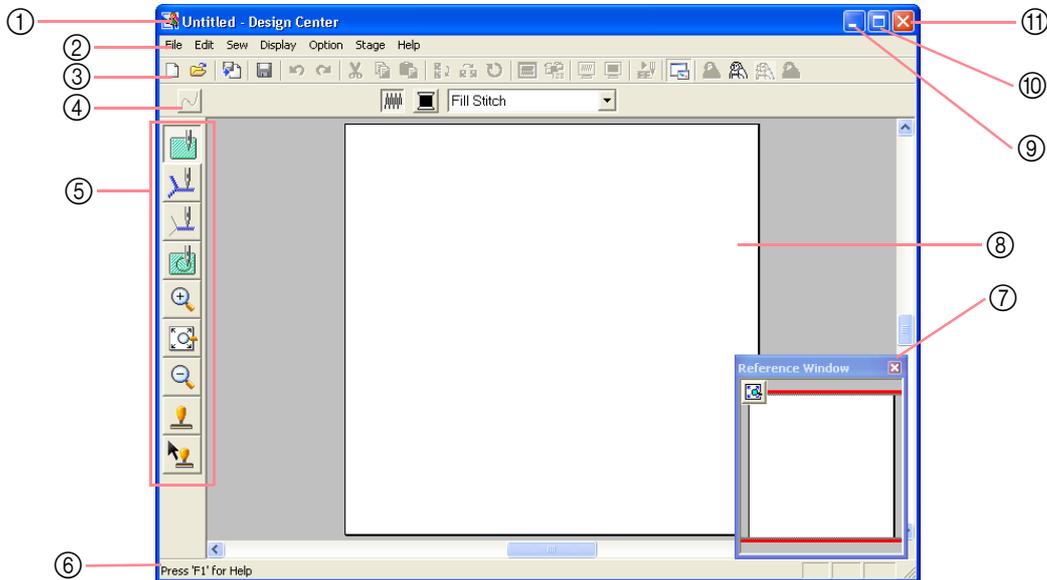
① **Title bar**

② **Menu bar**

Provides access to the functions.

③ **Toolbar**

Provides shortcuts for the menu commands.

④ **Sewing Attributes bar**

Sets the sewing attributes (color and sew type) of the lines and regions in the pattern (only in stage 4 (Sew Setting stage))

⑤ **Tool Box**

Used to select and edit the image or pattern. Stage 1 has no Tool Box; the other stages all have a different tools in the Tool Box.

⑥ **Status bar**

Provides helpful information, such as the size.

⑦ **Reference Window**

Displays all outlines and patterns in the work area, giving you an overview while you work on a detailed area. (For more details, refer to "Viewing Patterns in the Reference Window" on page 103.)

⑧ **Design Page**

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

⑨ **Minimize button**

⑩ **Maximize button**

⑪ **Close button**

Design Center

Stage 1 (Original Image Stage)

Importing Image Data

Using the wizard

This wizard provides a step-by-step guide for creating embroidery patterns.

1. Click **File**, then **Wizard**.

   → The **How do you want to produce embroidery?** dialog box appears.
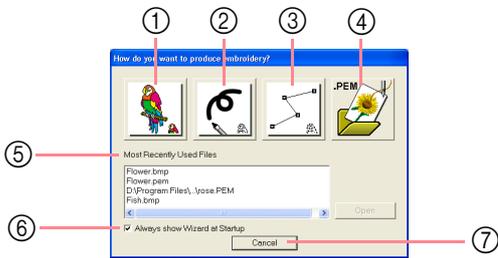
Position the pointer over any button, and the name of the function appears.

The functions for each button are described below.

① **From Image**

Click this button when creating embroidery pattern from an image.

Clicking this button displays the **From Image** dialog box, and then continues with a step-by-step guide for creating embroidery patterns.

☞ *For more details, refer to "When the From Image button is clicked" on this page.*

② **New Line Image**

Clicking this button opens a new Design Page in stage 2 (Line Image stage).

Click this button when you want to use the black pen and eraser tools to draw an image, then create an embroidery pattern from that image.

☞ *For more details, refer to "Creating a new Design Page in stage 2 (Line Image stage)" on page 74.*

③ **New Figure**

Clicking this button opens a new Design Page in stage 3 (Figure Handle stage).

Click this button when you want to draw a figure handle image, or when you want to create patterns from outlines taken from a previously saved .pem file.

☞ *For more details, refer to "Creating a new Design Page in stage 3 (Figure Handle stage)" on page 78.*

④ **Open PEM**

Click this button when you want to edit a saved .pem file (saved in stage 3 (Figure Handle stage) or 4 (Sew Setting stage)).

Clicking this button displays the **Open** dialog box so that a .pem file can be selected.

⑤ **Most Recently Used Files**

A list of the most recently edited files are displayed.

From the list, click the name of the file that you want to edit, and then click **Open**.

⑥ **Always show Wizard at Startup**

Select this check box to start up the wizard each time Design Center is started up.

⑦ **Cancel**

Clicking this button closes this dialog box.

When the From Image button is clicked

When you click the **From Image** button in the **How do you want to produce embroidery?** dialog box, the **From Image** dialog box appears.
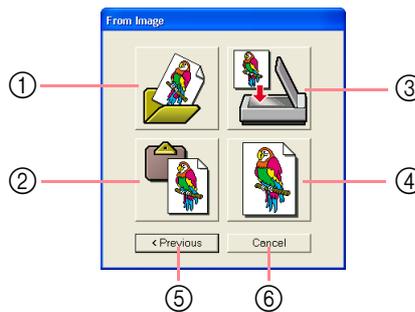
Position the pointer over any button, and the name of the function appears.

The functions for each button are described below.

① **Open Image File**

Click this button to open a previously saved image file and paste the image in the Design Page.

☞ *For details, refer to "Opening an image file" on page 20.*

② **From Clipboard**

Clicking this button pastes the image on the Clipboard into the Design Page. This function can only be used when there is an image on the Clipboard.

③ **From TWAIN device**

Click this button to import an image from a TWAIN device (such as a scanner or digital camera) connected to your computer, then paste it in the Design Page.

☞ *For details, refer to "Importing image data from a TWAIN device" below.*

④ **Use Current image**

Click this button to use an image opened in stage 1 (Original Image stage). This function can only be used when an image is opened in stage 1.

⑤ **Previous**

Clicking this button closes the current dialog box, and returns to the **How do you want to produce embroidery?** dialog box.

⑥ **Cancel**

Clicking this button closes this dialog box.

→ If any button other than **Previous** or **Cancel** is clicked, the image will be imported and pasted into the Design Page of stage 1 (Original Image stage), and the **Cut out to Line Image** dialog box appears, allowing you to choose colors for outlines.

☞ *For details on the next stages, refer to "Continuing to Stage 2 (Line Image Stage)" on page 73, "Continuing to Stage 3 (Figure Handle Stage)" on page 76, then "Continuing to Stage 4 (Sew Setting Stage)" on page 83.*

Importing image data from a TWAIN device

TWAIN is an application interface (API) standardization for software that controls scanners and other devices. Design Center supports TWAIN standardized devices, allowing you to control the device and import the image directly.

1. Check that the scanner or other TWAIN device is correctly connected to your computer.

2. Click **File**, then **Select TWAIN device**.

→ The **Select Source** dialog box appears.
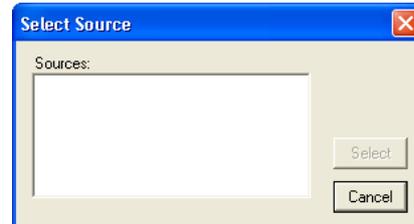
3. From the **Sources** list, click the desired device to select it.

> ❗ **Note:**
> *If no TWAIN device is installed, there will be no names displayed in the **Sources** list. First, install the driver software for the TWAIN device that you want to use.*

4. Click **Select** to choose the selected device and to close the dialog box.

> 📖 **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

5. Click **File**, then **Input from TWAIN device**.

→ The driver interface for the device selected in the **Select Source** dialog box appears.

6. Specify the necessary settings for importing an image, and then import the image.

> ❗ **Note:**
> *For information on using the driver interface, refer to the help manual for that interface, or contact the manufacturer of the interface.*

→ When the image transfer between the scanner (or other device) and the driver is completed, the imported image will be pasted in a Design Page of stage 1 (Original Image stage).

> 📖 **Memo:**
> *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*

Design Center

Stage 2 (Line Image Stage)

Continuing to Stage 2 (Line Image Stage)

After opening the image, continue to stage 2 (Line Image stage), where the color(s) that will be used to create the line image (outline of the image) will be selected. In stage 2 (Line Image stage), you can edit the image using the pen and eraser tools. You may also want to use these tools to create outlines that are easier to draw by hand, for example, free-hand writing. Use the zooming tools available to display the image enlarged or reduced.

Toolbar button: 🐾

1. Click 🐾 , or click **Stage**, then **To Line Image**.

> → The **Cut out to Line Image** dialog box appears.
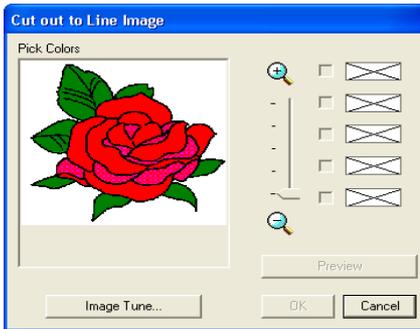
> → If you were in stage 3 (Figure Handle stage), you are returned to stage 2, unless you have modified the image in stage 3. In that case, a message will appear, asking you to confirm that you want to abandon the changes made in stage 3.

📖 **Memo:**
*To display the image enlarged (or reduced), move the **ZOOM** slider up (or down). When the image is enlarged, you can scroll through it to display different parts.*

🔔 **Note:**
If you started with stage 3 (Figure Handle stage) by opening a stage 3 file, you cannot go to stage 2.

2. Click the outline color(s) that you want to convert into black outlines.

> → When the pointer is moved over the image, the shape of the pointer changes to 🖊 .

> → The selected color appears in the top box under **Pick Colors**, and ✔ appears in the check box to show that the color is selected.

📖 **Memo:**
- *You can repeat step **2.** to select up to five colors. If more than five colors are selected, only the last five colors selected remain in the list.*
- *To deselect a color, clear the corresponding check box.*
- *To adjust the color tone and reduce image noise (distortions), click **Image Tune**. (For more details, refer to "Image tuning" on page 74.)*

3. Click **Preview** to preview the line image in the Design Page.

📖 **Memo:**
*If necessary, the settings can be changed. After changing the settings, click **Preview** to preview the outline with the new settings applied.*

4. Click **OK**.

> → All of the selected colors are converted to a black outline (line image), which is displayed in the Design Page of stage 2 (Line Image stage).
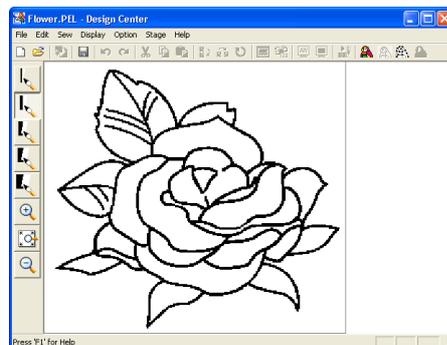
Image tuning

Clicking the **Image Tune** button in the **Cut out to Line Image** dialog box displays an **Image Tune** dialog box similar to the one shown below.

Image window

From this dialog box, you can reduce the colors of the image data (posterize) or reduce image noise (distortions). By applying an even gradation to make the image smoother, you can select colors more easily, even from image data that was taken from a scanner or other device and does not have clear outlines.

1) The image window displays the image resulting from the current settings.

2) Move the **Tone** slider to set the amount of color reduction (posterization). Set to **High** to show the original image. Set towards **Low** to increase the color reduction.

3) If the **Noise Reduction** check box is selected, the smaller areas of noise are removed.

4) Click **OK** to show the corrected image in the image window on the **Cut out to Line Image** dialog box and to close the dialog box.

Creating a new Design Page in stage 2 (Line Image stage)

Toolbar button: 🗋

1. Click 🗋 , or click **File**, then **New Line Image**.

   → If the current Design Page has already been saved or has not been edited, a new Design Page immediately appears in stage 2 (Line Image stage).

   → If the current Design Page has not been saved, you will be asked whether you want to save the changes.

Drawing and erasing outlines

Drawing outlines

1. On the Tool Box, click the button for the pen with the desired thickness.

   → The shape of the pointer changes to

   ✎ .

2. To add a dot, click once. To draw a line, drag the pointer.

□ **Memo:**

To draw vertical or horizontal lines, hold down the **Shift** *key while moving the pointer.*

Erasing outlines

1. On the Tool Box, click the button for the eraser with the desired thickness.

2. Move the pointer over the line that you want to erase, and then hold down the right mouse button.

→ The shape of the pointer changes to

 .

3. Drag the pointer to erase the line.

Advanced Opreation
Design Center

Design Center

Continuing to Stage 3 (Figure Handle Stage)

After creating the outline, which is simply a collection of dots (or pixels) in stage 2 (Line Image stage), continue to stage 3 (Figure Handle stage), where the dots are automatically connected to create lines that can be edited. In stage 3 (Figure Handle stage), you can use the Point Edit tool to move, delete and insert points, or you can use the Line tool to draw lines.

Toolbar button:

1. Click , or click **Stage**, then **To Figure Handle**.

→ If you were in stage 2 (Line Image stage), the **Figure Object Conversion Setting** dialog box appears.
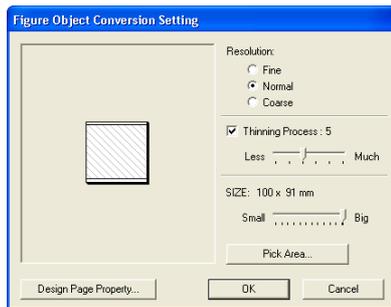
2. Select a setting under **Resolution**.

This setting determines how detailed the generated figure handle image will be. Basically, the line image is converted into pieces of broken lines. To create more details, more points are needed on the broken lines, which also increases the size of the file.
In general, **Normal** provides a sufficient resolution without making the file too large. If selecting **Coarse** gives a satisfactory result for a particular image, select this setting in order to keep the file as small as possible. Select **Fine** only if the image contains many small details, and the **Normal** setting does not give a satisfactory result.

3. To replace the black outlines with figure handle lines along the center of the outlines, select the **Thinning Process** check box, and then use the slider to select the degree of detail.

> **Memo:**
> *When the slider is set to **Much**, even very thick black lines will be replaced with a line along the center.*

ON
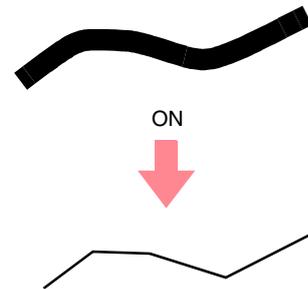
To replace the black lines with figure handle lines following the border of the outlines, clear the **Thinning Process** check box.

OFF
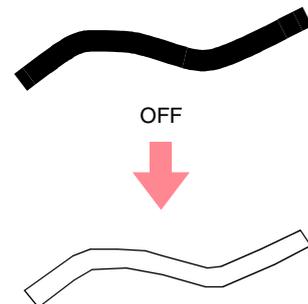
4. Use the **SIZE** slider to set the size.

> ### ⚠ Note:
> *You will not be able to enlarge the image beyond the limits of the Design Page area. If necessary, click **Design Page Property**, and then change the Design Page size in the dialog box that appeared.*

5. To select a specific part of the image, click

Pick Area, drag the pointer (╋) across the

image in the Design Page to select the desired area.

> ### 📖 Memo:
> *The **Figure Object Conversion Setting** dialog box appears again when the mouse button is released.*

6. Click **OK**.

> → The figure handle image is displayed in the Design Page of stage 3 (Figure Handle stage).
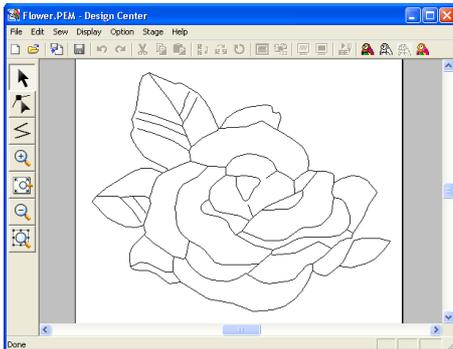
> ### 📖 Memo:
> *To close the dialog box without applying the changes to the settings, click **Cancel**.*

> ### ⚠ Note:
> *If the outline data cannot be created from the image when moving from stage 2 (Line Image stage) to stage 3 (Figure Handle stage), even after various outline conversion settings are specified, return to stage 2, and correct the outlines in the line image or apply corrections from the image.*

Specifying the Design Page size

In stage 3 (Figure Handle stage), you can select a Design Page size according to the size of hoop that you will be using with your sewing machine, or you can customize the size to fit even very large embroidery patterns.

1. Click **Option**, then **Design Page Property**.
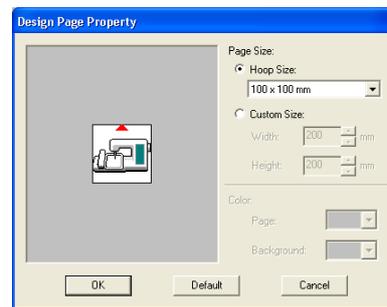
> → The **Design Page Property** dialog box appears.

2. Select the Design Page size.

To adjust the Design Page size according to the hoop size, select **Hoop Size**, and then select the desired hoop size from the selector. To specify a custom Design Page size, select **Custom Size**, and then type or select the desired width and height for the Design Page. (The setting range is 100 to 1000 mm (3.9 to 39.4 inches).)

> ### 📖 Memo:
> * *The preview area shows the setting changes that you make.*
> * *When **Hoop Size** is selected, the sewing machine image shows the orientation of the Design Page (hoop) in relation to the machine.*

> ### ⚠ Note:
> * *When **Hoop Size** is selected, do not select a size larger than the maximum embroidering area for your machine.*

3. Click **OK**.

> ### 📖 Memo:
> * *To return to the default settings (**100 × 100 mm** (**4" × 4"**) of **Hoop Size**), click **Default**.*
> * *To close the dialog box without applying the changes to the settings, click **Cancel**.*

> **Note:**
> • *Custom Design Page sizes cannot be saved for version 5 and earlier.*
> • *The selected size will be applied to every new Design Page, until the settings are changed.*

Creating a new Design Page in stage 3 (Figure Handle stage)

An empty Design Page can be created in order to draw a figure handle image or to create patterns from outlines taken from a previously saved .pem file.

1. Click **File**, then **New Figure Data**.

→ If the current Design Page has already been saved or has not been edited, a new Design Page immediately appears in stage 3 (Figure Handle stage).

Editing Outlines

Selecting outlines

1. Click ![arrow] on the Tool Box.

→ The shape of the pointer changes to

![cursor] .

2. Click the outline that you want to select.

→ When the pointer is moved over the outline, the shape of the pointer changes to

✛ .

> **Memo:**
> • *When the outline is selected, handles appear and the outline appears in blue.*

Handles

> **Memo:**
> • *The size of the Design Page is the currently selected size.*
> • *To retrieve data from a saved .pem file, use the menu command **File** – **Import Figure**.*

→ If the current Design Page has not been saved, you will be asked whether you want to save the changes.

> **Memo:**
> *In stage 3 (Figure Handle stage), the file will be saved as a .pem file.*

☞ *"Importing image data from a TWAIN device" on page 72, "Saving" on page 104, and "Creating a new Design Page in stage 2 (Line Image stage)" on page 74*

• *The outline will not be selected if an empty part of it is selected.*
• *To deselect the outline, select a different outline, or click in a blank area of the Design Page.*

3. To select an additional outline, hold down the

Ctrl key and click the other outline.

> **Memo:**
> *You can also select outlines by dragging the pointer across the outline that you want to select. As you drag the pointer, a selection frame is drawn. All outlines that are completely contained in that selection frame are selected when the mouse button is released.*

Moving outlines

1. Select the outline that you want to move.

→ When the pointer is moved over the outline, the shape of the pointer changes to

✛ .

2. Drag the outline to the desired location.

📖 **Memo:**
- *To move the outline horizontally or vertically, hold down the* **Shift** *key while dragging it.*
- *Pressing the arrow keys moves the selected outline 0.5 mm (about 0.02 inch) in the direction of the arrow on the key.*

Scaling outlines

■ Scaling manually

1. Select the outline that you want to resize.

2. Move the pointer over one of the handles of a selected outline or group of outlines.

    → The shape of the pointer changes to
    ↔ , ↕ , ↘ or ↗ , depending
    on the handle that the pointer is over.

📖 **Memo:**
- ↔ *is for scaling the width.*
- ↕ *is for scaling the height.*
- ↘ *and* ↗ *are for scaling both dimensions at the same time.*

3. Drag the handle to adjust the selected outline(s) to the desired size.

■ Scaling numerically

1. Select the outline that you want to resize.

2. Click **Edit**, then **Numerical Setting**, then **Size**.

    → The **Size** dialog box appears.
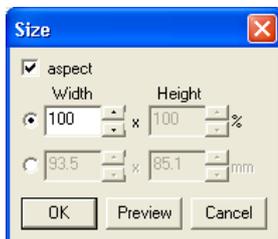
3. To change the width and height proportionally, select the **aspect** check box.

4. Select the whether the width and height will be set as a percentage (%) or a dimension (millimeters or inches).

5. Type or select the desired width and height.

📖 **Memo:**
- *Select* **100%** *to leave the outline unchanged.*
- *If the* **aspect** *check box is selected, changing one dimension automatically changes the other so that the proportion of the width and height remains unchanged.*

6. Click **OK**.

📖 **Memo:**
- *To preview the outline at the new size in the Design Page, click* **Preview**.
- *To close the dialog box without applying the changes to the settings, click* **Cancel**.

⚠ **Note:**
- *You cannot enter a size that will cause the outline to exceed the size of the Design Page.*
- *The minimum value is 1 mm (0.04 inch).*

☞ *"Changing the measurement units" on page 105*

Flipping outlines horizontally or vertically

1. Select the outline that you want to flip horizontally (up/down) or vertically (left/right).

2. To flip the outline horizontally, click **Edit**, then

    Mirror, then **Horizontal**, or click 🔲 on the Toolbar.

    To flip the outline vertically, click **Edit**, then

    Mirror, then **Vertical**, or click 🔲 on the Toolbar.

Rotating outlines

■ Rotating manually

1. Select the outline that you want to rotate.

2. Click **Edit**, then **Rotate**, or click 🔲 on the Toolbar.

    → The handles around the selected outline are replaced by small squares at the four corners of the selected outline.

Advanced Opreation
Design Center

3. Move the pointer over one of the four rotation handles.

→ When the pointer is moved over a rotation handle, the shape of the pointer changes to ↻ .

4. Drag the rotation handle clockwise or counterclockwise to rotate the outline in 1° increments.

📖 **Memo:**
To rotate the outline in 15° increments, hold down the **Shift** *key while dragging the rotation handle.*

■ **Rotating numerically**

1. Select the outline that you want to rotate.

2. Click **Edit**, then **Numerical Setting**, then **Rotate**.

→ The **Rotate** dialog box appears.

3. Type or select the desired rotation angle.

📖 **Memo:**
• The angle can also be specified by moving the pointer over the red arrow inside of the circle, then dragging the red arrow to the desired angle. When the pointer is moved over the red arrow, its shape changes to

↻ .
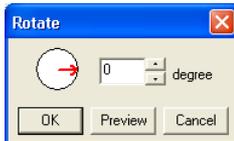
*• Select **0 degree** to leave the outline unchanged.*

4. Click **OK**.

📖 **Memo:**
*• To preview the outline at the new angle in the Design Page, click **Preview**.*
*• To close the dialog box without applying the changes to the settings, click **Cancel**.*

⚠ **Note:**
The range of values that can be entered is between 0 and 359 degrees, in 1-degree increments.

Deleting outlines

1. Select the outline to be deleted.

2. Press the **Delete** key, or click **Edit**, then **Delete**.

Editing Points in Outlines

Moving points

1. Click ![tool icon] on the Tool Box.

→ The shape of the pointer changes to ▷ .

2. Click the outline that you want to edit.

→ The outline appears in pink, and the points in the selected outline appear as small empty squares. The points at the ends of lines appear as larger squares.
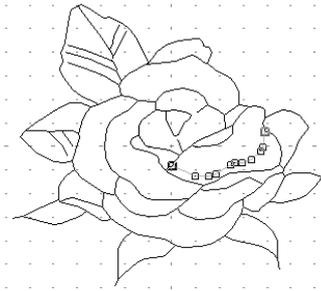
3. Click the point that you want to move.

→ The selected point appears as a small black square.

📖 **Memo:**
To select additional points, hold down the **Ctrl** *key and click each point, or drag the pointer over the points that you want to select.*

⚠ **Note:**
If you click the line instead of a square, a new point is inserted.

---

4. Drag the point to the new location.

→ All selected points move in the same direction.

📖 **Memo:**
• To move the point horizontally or vertically, hold down the **Shift** *key while dragging it.*
• Pressing the arrow keys moves the selected point 0.1 mm (about 0.01 inch) in the direction of the arrow on the key.

Inserting points

1. Click ![tool icon] on the Tool Box.

→ The shape of the pointer changes to ▷ .

2. Click the outline that you want to edit.

→ The outline appears in pink, and the points in the selected outline appear as small empty squares. The points where lines overlap appear as larger squares.

3. Click the outline at the position where you want to insert a new point.

→ A new point, appearing as a small black square, is added. The new point can be edited.

Deleting points

1. Click ![tool icon] on the Tool Box.

→ The shape of the pointer changes to ▷ .

2. Click the outline containing the point that you want to edit.

→ The points in the outline appear as small empty squares.

3. Click the point that you want to delete.

→ The selected point appears as a small black square.

📖 **Memo:**
To select additional points, hold down the **Ctrl** *key and click each point, or drag the pointer over the points that you want to select.*

---

4. Press the **Delete** key to remove the point from the outline.

⚠ **Note:**
The points where lines overlap, which appear as red squares, cannot be deleted.

Drawing a Broken Line

The line drawing mode allows you to add broken lines to your pattern. A broken line is made of one or more adjacent straight lines, in other words, the end point of one straight line is the start point of the next one.

If the broken line that you draw did not create enclosed regions, it remains a simple outline, and you can only set sewing attributes for the line itself in stage 4 (Sew Setting stage).

If the broken line created enclosed regions, you can assign sew types and colors to both the outline and the regions in stage 4.

If you draw a line through an existing region, creating two separate regions, you will be able to set sewing attributes for both regions separately, as well as for the separating line.
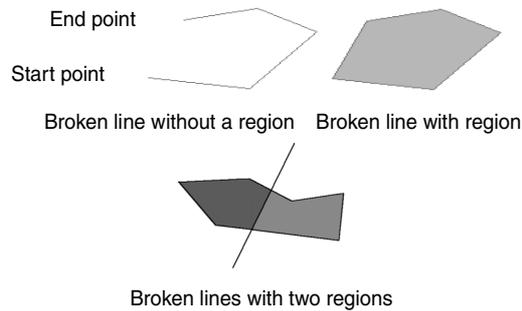
End point

Start point

Broken line without a region   Broken line with region

Broken lines with two regions

1. Click ⩽ on the Tool Box.

   → When the pointer is moved over the work area, the shape of the pointer changes to

   $+_{⩽}$.

2. To draw a line, click in the Design Page to specify the start point.

3. Move the pointer, and then click in the Design Page to specify the next point.

   → The two points are connected with a straight line.

   📖 Memo:
   • *To remove the last point that was entered, click the right mouse button.*
     If necessary, use the grid to help draw the lines. You can set the grid so that each of its vertical and horizontal lines are visible. For details on the grid, refer to "Changing the grid settings" on page 105.
   • *To draw vertical or horizontal lines, hold down the* **Shift** *key while moving the pointer.*

4. Repeat step 3. until you have specified all points except the end point.

5. Double-click in the Design Page to specify the end point.

Design Center

Stage 4 (Sew Setting Stage)

Continuing to Stage 4 (Sew Setting Stage)

After editing the outline in stage 3 (Figure Handle stage), continue to stage 4 (Sew Setting stage), where the sewing attributes can be set. Use the zooming tools available to display the pattern enlarged or reduced.

Toolbar button:

1. Click , or click **Stage**, then **To Sew Setting**.

> → The pattern is displayed in the Design Page of stage 4 (Sew Setting stage).
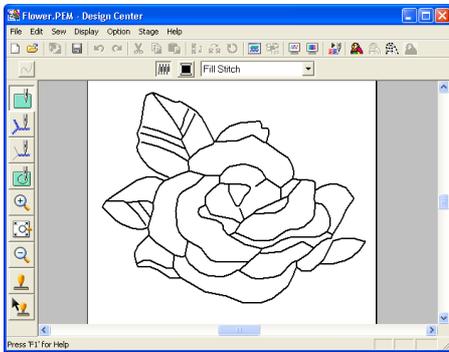
☞ *"Creating a new Design Page in stage 2 (Line Image stage)" on page 74" and "Continuing to Stage 3 (Figure Handle Stage)" on page 76*

Specifying display colors

In stage 4 (Sew Setting stage), the color of the Design Page can be set to the color of the fabric, and its background can be set to a different color for contrast.

1. Click **Option**, then **Design Page Property**.

> → The **Design Page Property** dialog box appears.
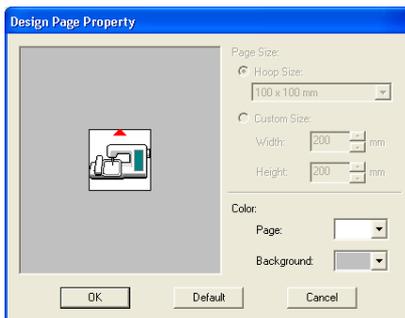
2. From the **Page** selector, select the desired color for the Design Page.

3. From the **Background** selector, select the desired color for the background.

> 📖 **Memo:**
> *The preview area allows you to check the selected colors.*

4. Click **OK**.

> 📖 **Memo:**
> • *To return to the default settings, click* ***Default****.*
> • *To close the dialog box without applying the changes to the settings, click* ***Cancel****.*

Advanced Opreation
Design Center

83

Applying Sewing Attributes to Lines and Regions

Region sewing

■ Applying sewing attributes to regions

1. Click ![icon] on the Tool Box.

→ The shape of the pointer changes to

![pointer icon] , and the Sewing Attributes bar appears similar to the one shown below.

| ![bar] | ![MMM] ![spool] Fill Stitch ▼ |

2. If necessary, change the color and sew type.

> 📖 **Memo:**
> • *You can change the color and sew type either before or after applying sewing attributes to the region. For more details on changing these settings, refer to "Color" on page 89 and "Sew type" on page 89.*
> • *You can also use the settings in the Sewing Attribute Setting dialog box to define other attributes of the sew type. (For more details, refer to "Specifying sewing attributes" on page 89.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click the enclosed region where you want to apply the sewing attributes.

→ "Marching lines" appear around the selected region, and the color and sew type selected on the Sewing Attributes bar are applied to the region.
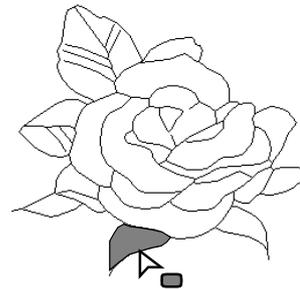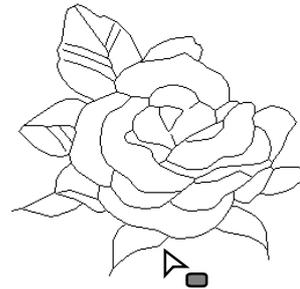
> ❗ **Note:**
> *If the attributes cannot be applied to a region, go back to stage 3 (Figure Handle stage) and make sure that region is closed. Edit any broken lines with the Point Edit tool. For details on editing the figure handle image, refer to "Editing Points in Outlines" on page 81.*

■ Checking the sewing attributes of a region

1. Click ![icon] on the Tool Box.

→ The shape of the pointer changes to

![pointer icon] .

2. Right-click a closed region.

→ The **Sewing Attribute Setting** dialog box for the selected region appears.
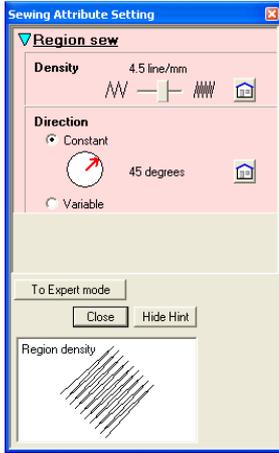
Sewing Attribute Setting
▽ **Region sew**

Density   4.5 line/mm

Direction
○ Constant

45 degrees

○ Variable

To Expert mode
Close   Hide Hint

Region density

📖 **Memo:**

• *An alternate method is to select the menu command* **Sew – Setting Attribute***, or click the Toolbar button indicated below.*

Sewing Attribute

• *The Sewing Attributes bar shows the color and sew type for the selected region. You can change the color and sew type at this time. For more details on changing the color and sew type, refer to "Color" on page 89 and "Sew type" on page 89.*

3. If necessary, change the settings in the **Sewing Attribute Setting** dialog box.

📖 **Memo:**

To return to the default setting, click 🏠 *at the right of the setting.*

☞ *"Specifying sewing attributes" on page 89*

4. To apply the new attributes to the region, click each region where you want to apply the new attributes.

5. Click **Close** to close the dialog box.

Line sewing

■ Applying sewing attributes to the entire outline

1. Click ✐ on the Tool Box.

→ The shape of the pointer changes to

🔍ₘₘ, and the Sewing Attributes bar appears similar to the one shown below.

〰️ ⬛ | Running Stitch ▾ | 〰️

2. If necessary, change the color and sew type.

📖 **Memo:**

• *You can change the color and sew type either before or after applying sewing attributes to the outline. For more details on changing these settings, refer to "Color" on page 89 and "Sew type" on page 89.*

• *You can also use the settings in the* **Sewing Attribute Setting** *dialog box to define other attributes of the sew type. (For more details, refer to "Specifying sewing attributes" on page 89.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click the outline where you want to apply the sewing attributes.

→ "Marching lines" appear along the selected outline, and the color and sew type selected on the Sewing Attributes bar are applied to the outline.

Advanced Opreation
Design Center
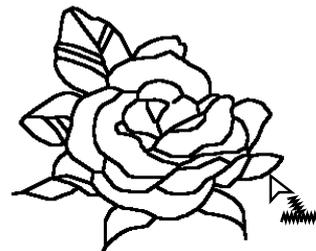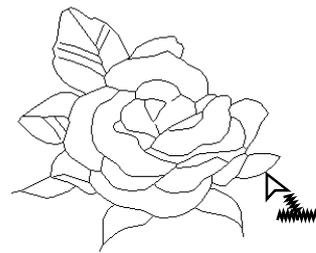
■ **Applying sewing attributes to a portion of the outline**

1. Click 🪡 on the Tool Box.

   → The shape of the pointer changes to

   🠦ww , and the Sewing Attributes bar appears similar to the one shown below.

| ∿ | ▣ | Running Stitch ▾ | 〰 |

2. If necessary, change the color and sew type.

📖 **Memo:**

   • *You can change the sew type either before or after applying sewing attributes to the portion of the outline. For more details on changing this setting, refer to "Sew type" on page 89.*

   • *You can also use the settings in the* **Sewing Attribute Setting** *dialog box to define other attributes of the sew type. (For more details, refer to "Specifying sewing attributes" on page 89.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

⚠ **Note:**

The color cannot be set separately for a portion of an outline. If you change the color, the new color will be applied to the entire outline of the portion that is clicked.

3. Click the portion of the outline where you want to apply the sewing attributes.

   → "Marching lines" appear along the selected portion of the outline, and the sew type selected on the Sewing Attributes bar is applied to the portion of the outline.
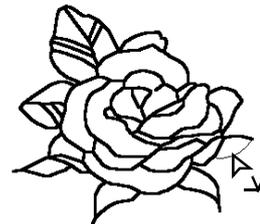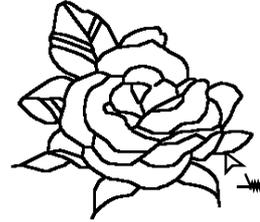
■ **Checking the sewing attributes of an outline**

1. To check the attributes of the entire outline,

   click 🪡 on the Tool Box.

   → The shape of the pointer changes to
   🠦wwww .

   To check the attributes of a portion of the

   outline, click 🪡 on the Tool Box.

   → The shape of the pointer changes to
   🠦ww .

2. Right-click the outline or a portion of the outline.

→ The **Sewing Attribute Setting** dialog box for the selected outline or portion of outline appears.
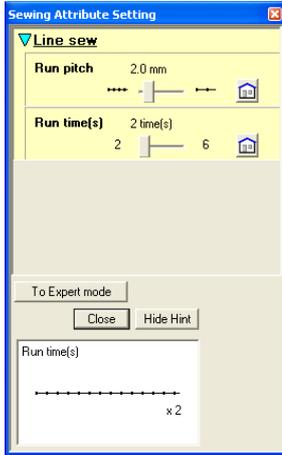
☐ **Memo:**

• *An alternate method is to select the menu command **Sew** – **Setting Attribute**, or click the Toolbar button indicated below.*
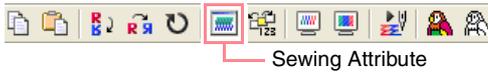
Sewing Attribute

• *The Sewing Attributes bar shows the color and sew type for the selected outline. At this time, you can change the color and sew type for the entire outline, or the sew type for the portion of the outline. For more details on changing the color and sew type, refer to "Color" on page 89 and "Sew type" on page 89.*

3. If necessary, change the settings in the **Sewing Attribute Setting** dialog box.

☐ **Memo:**

To return to the default setting, click at the right of the setting.

☞ *"Specifying sewing attributes" on page 89*

4. To apply the new attributes to the outline or portion of outline, click the outline where you want to apply the new attributes.

5. Click **Close** to close the dialog box.

Using the Sewing Attributes bar

The Sewing Attributes bar, available in stage 4 (Sew Setting stage), allows you to set the color and sew type of region and outlines.

The sewing attributes that are available depend on the tool selected in the Tool Box.

Example 1: When on the Tool Box is selected

Example 2: When or on the Tool Box is selected

When the pointer is positioned over a button or selector in the Sewing Attributes bar, a label indicating the name of that element appears.

	Region sew: Switches on/off sewing for the region.	page 87
	Line sew: Switches on/off sewing for the line.	page 88
	Region color, **Line color**: Click this button to set the thread color for lines or regions.	page 89
Fill Stitch / Running Stitch	**Region sew type**, **Line sew type**: Use these selectors to set the sew type for lines or regions.	page 89

■ Region sew

Clicking this button switches on/off sewing for a region.

☐ **Memo:**

• *The **Region sew** button is available only when on the Tool Box is selected.*

• *When region sewing is switched off, the region is not sewn (and you cannot set a color or sew type).*

1. Click .

This button has two settings:

On: The **Region color** button and the **Region sew type** selector are displayed.

Off: The **Region color** button and the **Region sew type** selector are not displayed.

Region sew   Region sew type
        Region color
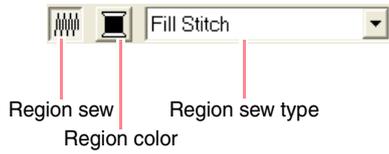
2. Click a region to apply the region sewing attributes.

→ If the **Region sew** button has been switched on, the color displayed in the **Region color** button and the sew type displayed in the **Region sew type** selector are applied to the region.

→ If the **Region sew** button has been switched off, the color and sew type for the region disappear.
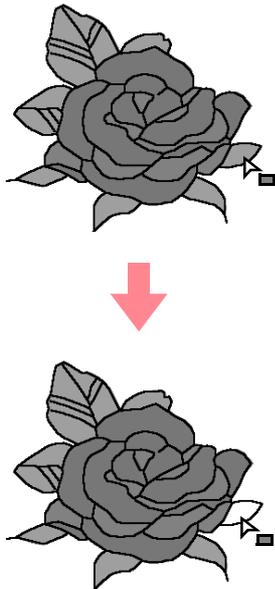
☞ *"Color" on page 89 and "Sew type" on page 89*

■ **Line sew** ⌁

Clicking this button switches on/off sewing for a line.

> **Memo:**
> * The **Line sew** button is available only when ⤴ or ⤵ on the Tool Box is selected.
> * When line sewing is switched off, the line is not sewn (and you cannot set its color or sew type).

1. Click ⌁.

This button has two settings:

On: The **Line color** button and the **Line sew type** selector are displayed.

Off: The **Line color** button and the **Line sew type** selector are not displayed.

Line sew   Line sew type
        Line color
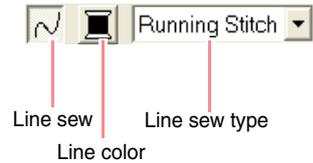
2. Click a line to apply the line sewing attributes.

→ If the **Line sew** button has been switched on, the color displayed on the **Line color** button and the sew type displayed in the **Line sew type** selector are applied to the line.

→ If the **Line sew** button has been switched off, the line is replaced with a dotted line and will not be sewn.
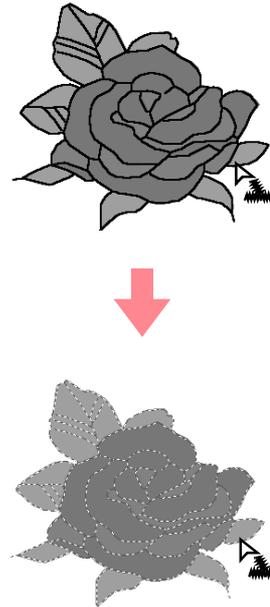
> ⚠ **Note:**
> *The color cannot be set separately for a portion of the outline. If you change the color, the new color will be applied to the entire outline.*

☞ *"Color" on page 89 and "Sew type" on page 89*

■ **Color** 📷

Click this button to set the thread color for lines or regions.

> 📖 **Memo:**
> *The **Color** button appears in the Sewing Attributes bar when the **Region sew** button*
> *(〰️) or **Line sew** button (〽️) has been turned on.*

1. Click the **Color** button.

→ A **Line Thread Color** dialog box similar to the ones shown below appears.

> 📖 **Memo:**
> *To view a list of only the thread colors, clear the **View Details** check box.*

2. From the **Thread Chart** selector, select a thread color chart or a user thread chart.

> ☞ *For details on specifying a user thread chart or for information on how machines handle thread colors, refer to "Editing User Thread Color Lists" on page 190.*

3. From the list of thread colors, click the desired color.

→ The new color is displayed on the **Region color** button or **Line color** button.

> 📖 **Memo:**
> *• The name of the selected color appears at the bottom of the dialog box.*
> *• For details on the four buttons under the list, refer to "Special colors" on page 170.*

4. Click **Close** to set the color and to close the dialog box.

5. Click the region or outline where you want to apply the color setting.

☞ *"Region sew" on page 87, "Line sew" on page 88 and "Special colors" on page 170*

■ **Sew type**

Line sew type   Region sew type

[Running Stitch ▾]   [Fill Stitch   ▾]

Use these selectors to set the sew type for lines or regions.

> 📖 **Memo:**
> *The sew type selector appears in the Sewing Attributes bar when the **Region sew** button*
> *(〰️) or **Line sew** button (〽️) has been turned on.*

1. Click in a sew type selector.

→ The available settings appear.

Line sew type   Region sew type

[Running Stitch ▾]   [Fill Stitch   ▾]
Zigzag Stitch   Satin Stitch
Running Stitch   Fill Stitch
                            Prog. Fill Stitch
                            Motif Stitch
                            Cross Stitch
                            Concentric Circle Stitch
                            Radial Stitch
                            Spiral Stitch

2. Click the desired sew type.

→ The new setting appears in the selector.

3. Click the region or outline where you want to apply the sew type setting.

☞ *"Region sew" on page 87 and "Line sew" on page 88*

Specifying sewing attributes

Various sewing attributes for lines and regions can be set in the **Sewing Attribute Setting** dialog box.

Toolbar button: 🔲

1. Click 🔲 in the Toolbar

→ The **Sewing Attribute Setting** dialog box appears.

> 📖 **Memo:**
> *The region sew attributes appear in the **Sewing Attribute Setting** dialog box when*
> *🔲 on the Tool Box is selected. The line sew attributes appear in the **Sewing***
> ***Attribute Setting** dialog box when 📐 or*
> *📐 on the Tool Box is selected.*

Advanced Opreation
Design Center

Beginner mode:
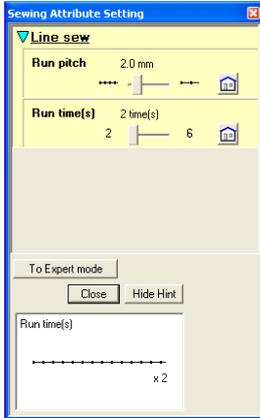
For line sewing   For region sewing
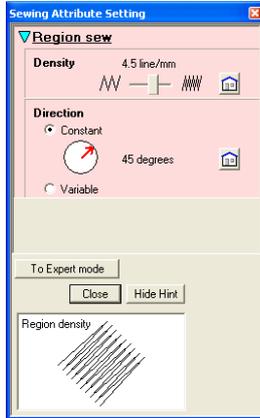
Expert mode:
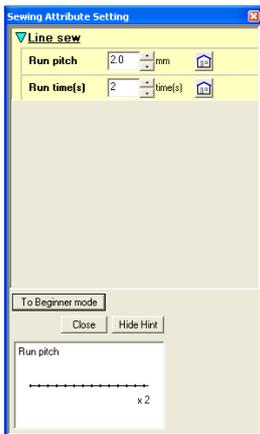
For line sewing   For region sewing
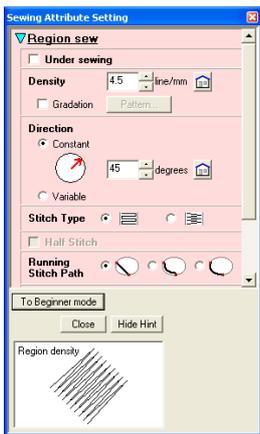
📖 **Memo:**
- *An alternate method is to select the menu command **Sew** – **Setting Attribute**, or right-click a region or line.*
- *The sewing attributes displayed in the dialog box depend on the selected sew type.*

2. To display only basic sewing attributes and simpler settings, click **To Beginner mode**. To display all of the sewing attributes and settings available for the selected sew type, click **To Expert mode**.

📖 **Memo:**
- *Settings that cannot be selected in Beginner mode are retained from the previous setting in Expert mode.*
- *To hide the preview box, click **Hide Hint**. To display the preview box, click **Show Hint**.*
  *When the **Hide Hint** button is displayed, the preview box is displayed, allowing you to view a stitching sample when the pointer is moved over the setting. The preview box shows the setting changes that you make.*

3. If necessary, change the sewing attributes displayed under **Line Sew** or **Region Sew**.

📖 **Memo:**
- *In some cases, you may need to scroll through the settings, or resize the dialog box by dragging one of its corners in order to view all of the sewing attributes.*
- *The method for entering settings varies according to the attribute. When entering numerical values in Expert mode, click the arrow buttons to select the value or enter the value directly. In Beginner mode, use the slider to change the settings. If 🔲 appears, click the button to return to the default setting.*

☞ *For details on the different sewing attributes and settings, refer to "Line sewing attributes" on page 91 and "Region sewing attributes" on page 91.*

⚠ **Note:**
All settings made in the dialog box are retained and will be applied regardless of the mode, until they are changed.

4. When the line sewing attributes are displayed, click an outline to apply the line sewing attributes to the outline.
When the region sewing attributes are displayed, click a region to apply the region sewing attributes to the region.

5. Click **Close** to close the dialog box.

■ Line sewing attributes

The available attributes differ depending on the selected sew type. In Beginner mode, not all of the following attributes appear.

Zigzag stitch

Zigzag width	Sets the width of the zigzag. Range: 1–10 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Density	Sets the number of lines per millimeter (inch). Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Half Stitch	Sets half stitching on or off. If one side of the zigzag stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:

Running stitch

Run pitch	Sets the pitch of the line sewing. Range: 1–10 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Run times	Sets the number of times that the border will be sewn. Range: 2, 4, 6 Default: 2

■ Region sewing attributes

The available attributes differ depending on the selected sew type. In Beginner mode, not all of the following attributes appear.

Satin stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. Depending on the shape of the region, however, it may not be possible to select this setting. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn.
Density	Sets the number of lines per millimeter. Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern. Default: Off For details on this attribute, refer to "Creating a gradation" on page 96.
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the type sewing direction is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 90° 135° 45° 180° 0° 225° 315° 270°
Half Stitch	Sets half stitching on or off. Available when the type of sewing direction is set to **Variable**. If one side of the satin stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:

Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region	Inside of region: Along outline: Onto outline:
Pull Compensation	Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 0–2 mm (0.00–0.08 inch) Default: 0.0 mm (0.00 inch)	

Fill stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. Depending on the shape of the region, however, it may not be possible to select this setting. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn.	
Density	Sets the number of lines per millimeter. Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)	
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to "Creating a gradation" on page 96.	
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees	$90°$ $135°$ $45°$ $180°$ $0°$ $225°$ $315°$ $270°$
Stitch Type	Specifies the shape of stitching on the edges. Available settings: Default:	
Half Stitch	Sets half stitching on or off. Available when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off	On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region	Inside of region: Along outline: Onto outline:
Step Pitch	Sets the pitch of the stitching. Range: 1–10 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch)	Step pitch

| **Frequency** | Sets the spacial frequency steps.
Range: 0–99%
Default: 30% | 30%   0% |
| **Pull Compensation** | Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing.
Range: 0–2 mm (0.00–0.08 inch)
Default: 0.0 mm (0.00 inch) | |

Programmable fill stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. Depending on the shape of the region, however, it may not be possible to select this setting. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn.	
Density	Sets the number of lines per millimeter. Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)	
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to"Creating a gradation" on page 96.	
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees	90° 135° 45° 180° 0° 225° 315° 270°
Half Stitch	Sets half stitching on or off. Available when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off	On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region	Inside of region: Along outline: Onto outline:
Pull Compensation	Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 0–2 mm (0.00–0.08 inch) Default: 0.0 mm (0.00 inch)	

			Select a pattern for programmable fill stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pas file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
Programma-ble fill		Width (horizontal length)	Sets the stitch pattern width. Range: 2–10 mm (0.20–0.39 inch) Default: 7.5 mm (0.30 inch)
		Height (vertical length)	Sets the stitch pattern height. Range: 5–10 mm (0.20–0.39 inch) Default: 7.5 mm (0.30 inch)
	Direction		Allows you to rotate the angle of the stitch patterns. Range: 0–359 degrees Default: 0 degrees
	Offset	Direction	Sets the direction of the offset as **row/column**. **row** **column**
		Value	When the pattern's arrangement is offset, sets the amount of offset. Range: 0–99% Default: 0%
	Base Sew Specifies the base stitching. (For details, refer to the illustration below.)	**Stitch Type**	Specifies the shape of stitching on the edges. Available only when the **Base Sew** check box is selected. Available settings: , Default:
		Step Pitch	Sets the pitch of the stitching for the base of a programmable fill stitch. Available only when the **Base Sew** check box is selected. Range: 1–10 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch) Step pitch
		Frequency	Sets the spacial frequency steps of the stitching for the base of a programmable fill stitch. Available only when the **Base Sew** check box is selected. Range: 0–99% Default: 30% 30% 0%

Pattern

The stitching for the base (area other than the pattern indicated by the diagonal lines) of the pro-grammable fill stitch can be set.

The pattern is sewn with the specified stitching.

Motif stitch

Motif	Selects whether to use pattern 1 or pattern 2 for the motif stitch. If you choose to use both patterns, the data is created to sew alternating rows of the two. **Pattern1 only**: Uses only pattern 1 (Default) **Pattern2 only**: Uses only pattern 2 **Pattern1 and 2**: Uses pattern 1 and pattern 2			
	Pattern1 Pattern 2	(folder icon)	Select a pattern for the motif stitch. Click (folder icon), and then, in the **Browse** dialog box that appeared, select the folder containing the .pmf file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.	
		Width (horizontal length)	Sets the pattern width (the direction along the line). Range: 2–10 mm (0.08–0.39 inch) Default: 5.0 mm (0.20 inch)	
		Height (vertical length)	Sets the pattern height (the direction perpendicular to the line). Range: 2–10 mm (0.08–0.39 inch) Default: 5.0 mm (0.20 inch)	
		H-Arrange (horizontal arrangement)	Sets the horizontal arrangement of the pattern. For patterns like ◇, the patterns will be arranged along the line as shown at the right.	Normal: ◇◇◇◇◇◇ Mirror: ▽▽▽▽▽▽ Alternate: ◇◇◇◇
		V-Arrange (vertical arrangement)	Sets the vertical arrangement of the pattern. For patterns like ▷, the patterns will be arranged along the line as shown at the right.	Normal: ▷▷▷▷▷ Mirror: ◁◁◁◁◁ Alternate: ▷◁▷◁▷
	Direction		Allows you to rotate the angle of the motif stitch. Range: 0–359 degrees Default: 0 degrees	90° 135° 45° 180° 0° 225° 315° 270°
	Row Offset		Sets the amount of offset for each row. Range: 0–10 mm (0.00–0.39 inch) Default: 0.0 mm (0.00 inch)	
	Run Pitch		Sets the pitch of the sewing. Range: 1–10 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)	

Cross stitch

Size	Sets the horizontal and vertical size of the pattern. In Expert mode, the set value is converted automatically and displayed in the box for the other measurement units. Range: 1.5–5.0 mm (0.06–0.20 inch) or 5–17 counts Default: 2.5 mm (0.10 inch) or 10 counts
Times	Sets the number of times that the pattern will be sewn. Sews twice per time. Range: **Single**, **Double**, **Triple** Default: **Single**

Concentric circle stitch, radial stitch and spiral stitch

For details on moving the center point of the concentric circle stitch and the radial stitch, refer to "Moving the center point of the concentric circle stitch and radial stitch" on page 97.

Density	Sets the number of lines per millimeter. Range: 0.5–7.0 lines per mm (13–178 lines per inch) Default: 2.0 lines per mm (51 lines per inch)
Run pitch	Sets the pitch of the line sewing. Range: 1–10 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)

Advanced Opreation
Design Center

Notes on programmable fill stitches

When setting the sew type and pattern directions of a programmable fill stitch, lines will not be sewn if the sew type and pattern direction settings cause a stitch to be sewn in the same direction as a line in the stitch pattern.

Use the Preview function to view exactly how the stitch pattern will be sewn, and then set the stitch direction and pattern direction according to the selected sew type or to the effect that you want to produce. 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°
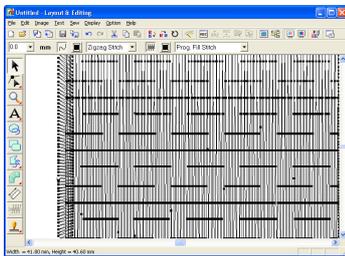
Example 3
Stitch direction: 0°
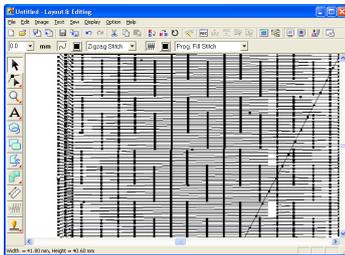
☞ *"Previewing the Sewing Image" on page 102 and "Programmable Stitch Creator" on page 208*

Creating a gradation

With a satin stitch, fill stitch or programmable fill stitch, the density of the color can be adjusted at various locations to create a custom gradation pattern.

1. In Expert mode of the **Sewing Attribute Setting** dialog box, select the **Gradation** check box.

2. Click **Pattern**.

    → The **Gradation Pattern Setting** dialog box appears.
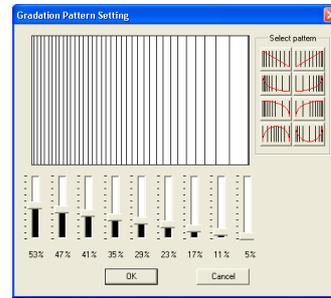
3. To select a preset gradation pattern, click the desired pattern under **Select pattern**.

4. Move the sliders to adjust the density of the gradation pattern.

    📖 **Memo:**
    The preview area shows the setting changes that you make.

5. Click **OK**.

    📖 **Memo:**
    To close the dialog box without applying the changes to the gradation pattern, click Cancel.

Moving the center point of the concentric circle stitch and radial stitch

In order to increase the decorative effect, you can move the center point of regions set to the concentric circle stitch or radial stitch.

1. Click [icon] on the Tool Box.

→ The shape of the pointer changes to [icon].

2. Select the desired color and sew type (**Concentric Circle Stitch** or **Radial Stitch**).

3. Click the region.

→ The center point ([icon]) appears.

4. Drag the center point to the desired location.
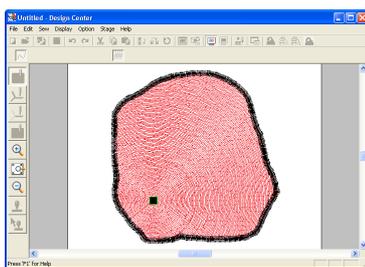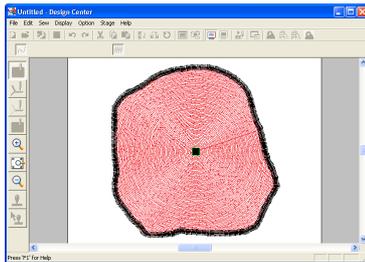
📖 **Memo:**

To move the center point later, click [icon] *,*

and then click the region with the concentric circle stitch or radial stitch applied. The center point appears and can be moved.

Specifying 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.

1. Click [icon] on the Tool Box.

→ The shape of the pointer changes to [icon].

2. Click the region that completely encloses another region.

→ A **Set hole sewing** dialog box similar to the one shown below appears.

📖 **Memo:**

To cancel hole sewing, click the white inner region. The inner region will be sewn twice when it appears in the same color as the outer region.

3. Click **OK** to set hole sewing.

📖 **Memo:**
*To quit applying hole sewing, click **Cancel**.*

Advanced Opreation
Design Center

Applying and Editing Stamps

Stamps created with Programmable Stitch Creator can be applied to regions in stage 4 (Sew Setting stage) of Design Center. Some stamp patterns are provided with this application; however, by using Programmable Stitch Creator, you can edit the patterns that are provided or you can create your own.

Applying a stamp

1. Click ![icon] on the Tool Box.

→ The shape of the pointer changes to

![pointer icon] , and the **Stamp Attribute Setting** dialog box appears.
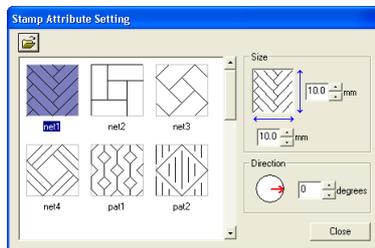
2. In the dialog box, select a stamp pattern (.pas file with stamp settings applied).

📖 **Memo:**
- *Engraving and embossing stamp settings appear as red- and blue-filled areas.*
- *.pas files with no stamp settings are also listed.*
- *To select a different folder, click* ![folder icon] *.*
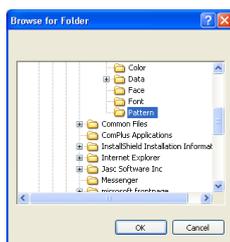
*In the **Browse for Folder** dialog box that appeared, select the desired folder, and then click **OK** (or double-click the folder) to close the **Browse for Folder** dialog box and display the stamp patterns from the selected folder in the preview window.*

3. To change the width and height of the stamp, type or select the desired size (1 to 100 mm (0.04 to 3.94 in.)) under **Size** in the **Stamp Attribute Setting** dialog box.

4. To change the orientation of the stamp, move the pointer over the red arrow inside of the circle under **Direction**, and then drag the red arrow to the desired angle.

📖 **Memo:**
- *The dialog box remains displayed so that the size and orientation of the stamp can be adjusted at any time.*
- *To close the dialog box, click **Close**.*
- *To open the dialog box again after closing it, click* ![icon] *.*

5. Click the region where you want to apply the stamp to select it.

→ "Marching lines" appear around the selected region, and the shape of the pointer changes to ![icon] whenever it is moved over the selected region.

6. Click the desired locations within the region where you want to apply the stamp.

→ The stamps appear as dotted lines in the region.
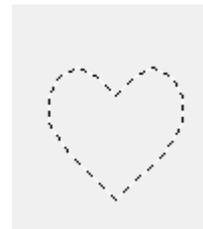
📖 **Memo:**
- *The whole stamp appears, even if it is larger than the region that it has been applied to, however, only the parts that are enclosed within the region will be sewn.*
- *Stamps can only be applied to regions that have the satin stitch, fill stitch and programmable fill stitch applied.*
- *To apply several stamps within the same region, continue clicking the region as often as needed.*
- *If the pointer cannot fit within the selected region, the stamp cannot be applied.*
- *The **Stamp Attribute Setting** dialog box appears only after a stamp tool is selected.*

- *Stamps are only sewn within the region that they have been applied to.*
- *The size of stamps may change when they are imported into Layout & Editing if the size of the design has been changed with the **Magnification** setting in the **Import size** dialog box.*

Editing a stamp

1. Click 🖊 on the Tool Box.

→ The shape of the pointer changes to

🖊 , the **Stamp Attribute Setting** dialog box appears, and stamps that have been applied are indicated by pink dotted lines.
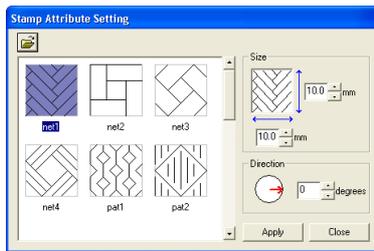
📖 **Memo:**
If a region was already selected, "marching lines" appear around the region, and its stamps are indicated by dotted lines.

2. Click the region with the stamp that you want to edit.

→ "Marching lines" appear around the selected region.

3. Click the stamp that you want to edit.

→ Round handles appear around the stamp, and a rotation handle appears at the top of the stamp.

Rotation handle

Handles
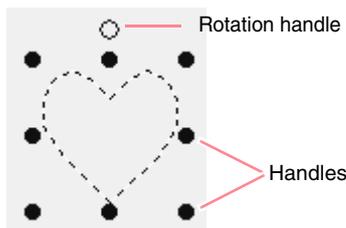
⚠️ **Note:**
Only one stamp can be selected at a time. If you select another stamp, the previously selected stamp becomes deselected.

4. To change the stamp pattern, select a different pattern in the **Stamp Attribute Setting** dialog box, and then click **Apply**.

To change the stamp size and orientation, specify the desired settings in the **Stamp Attribute Setting** dialog, or adjust it by dragging the handles or rotation handle.

To move a stamp, drag it to another location within the region or partially positioned on the region.

To delete the stamp, select the menu command **Edit** – **Delete**, or press the

Delete key.

📖 **Memo:**
- *Stamps appear only after a stamp tool is selected.*
- *Stamps are only sewn within the region that they have been applied to.*
- *To close the dialog box, click **Close**.*

Advanced Opreation
Design Center

Viewing and Modifying the Sewing Order

The sewing order of pattern colors as well as the sewing order of pattern objects of the same color can be checked and modified as necessary. (This function is available only in stage 4 (Sew Setting stage).)

Toolbar button:

1. Click , or click **Sew**, then **Sewing Order**.

→ The **Color** tab of a **Sewing Order** dialog box similar to the one shown below appears.

☐ **Memo:**
- *The frames containing regions are separated from the frames containing outlines with a thick vertical line. Frames from one side of the line cannot be moved to the other side.*
- *The patterns will be sewn in the order shown, from left to right. All regions are always sewn before the outlines.*
- *To enlarge the pattern for better viewing, click .*

2. To change the sewing order of a color, select the frame for the color that you want to move, and then drag the frame to the desired position.

→ A red line appears, indicating the position where the frame is being moved.
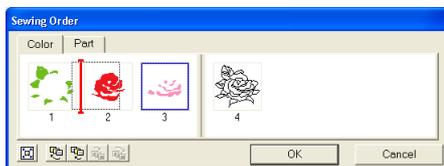
☐ **Memo:**
- *To select additional frames, hold down the* **Shift** *or* **Ctrl** *key and select each frame.*
- *In the Design Page, "marching lines" appear around the selected region or along the selected outline.*

3. To view the sewing order of multiple patterns of the same color, select the frame that you want to view, and then click the **Part** tab.

→ The individual patterns with the same color appear in different frames.
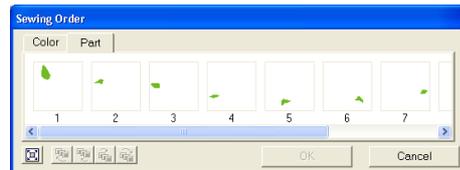
4. To change the sewing order of a pattern, select the frame for the pattern that you want to move, and then drag the frame to the desired position.

→ A red line appears, indicating the position where the frame is being moved.

☐ **Memo:**
- *To select additional frames, hold down the* **Shift** *or* **Ctrl** *key and select each frame.*
- *In the Design Page, "marching lines" appear around the selected region or along the selected outline.*

5. Click **OK** to apply the changes and to close the dialog box.

☐ **Memo:**
*To close the dialog box without applying the changes to the sewing order, click **Cancel**.*

☞ *"Previewing the Sewing Image" on page 102*

Checking the Stitching

The actual stitching as it will be performed by the sewing machine can be viewed using the stitch simulator. (This function is available only in stage 4 (Sew Setting stage).)

Toolbar button:

1. Click , or click **Display**, then **Stitch Simulator**.

   The **Stitch Simulator** dialog box appears, and the embroidery pattern is cleared from the Design Page.
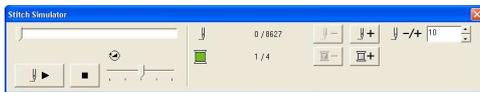
   To begin the stitching simulation, click .

   > **Memo:**
   > • During the stitching simulation, this button
   >   changes to a pause button ( ).
   > • A marker (┼) indicates the position in the simulation.
   > • To get a better view of the stitching, zoom in on the design before opening the **Stitch Simulator** dialog box.

   To reverse the simulation to the beginning of the previous color, click .

   To advance the simulation to the beginning of the next color, click .

   To reverse the stitching by a specified number of stitches, type or select the desired number of stitches, and then click .

   To advance the stitching by a specified number of stitches, type or select the desired number of stitches, and then click .

   To stop the simulation and return to the beginning, click .

   > **Memo:**
   > The slider shows the current location in the simulation. In addition, adjust the slider to change the position in the simulation.

   Drag the slider indicated by to adjust the simulation stitching speed.

   > **Memo:**
   > • The first number beside indicates the number of the current stitch, and the second number indicates the total number of stitches.
   > • The first number beside indicates the number of the color being drawn, and the second number indicates the total number of colors used.

2. Click in the upper-right corner of the dialog box to close the dialog box.

Advanced Opreation
Design Center

Previewing the Sewing Image

Once the embroidery pattern is complete or while you work on the design, you can preview the pattern's stitches. You can also view a realistic preview of the pattern in order to see how it will appear once it is sewn. (These functions are available only in stage 4 (Sew Setting stage).)

1. To display a preview of the embroidery pattern, click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.

Preview

→ A preview of the embroidery pattern appears.

2. To leave the preview display, repeat step **1.**, or press the **Esc** key.

3. To display a realistic preview of the embroidery pattern, click **Display** on the menu bar, and then click **Realistic Preview**.
An alternate method is to click the Toolbar button indicated below.

Realistic Preview

→ A realistic preview of the embroidery pattern appears.

4. To leave the realistic preview display, repeat step **3.**, or press the **Esc** key.

Changing realistic preview settings

You can change the realistic preview settings to better view the embroidery pattern. (This function is available only in stage 4 (Sew Setting stage).)

1. Click **Display**, then **Realistic Preview Attribute Setting**.

→ A **Realistic Preview Attribute** dialog box similar to the ones shown below appears.

2. Use the **Thread Width** slider to set how wide the thread will appear.

3. Use the **Contrast** slider to set the contrast.

4. Use the **Brightness** slider to set how bright the display is.

5. Click **Apply** to display a realistic preview of the patterns with the new settings (when the realistic preview is displayed).

Or, click **OK** to save the settings for the next time that the Realistic Preview function is select (when the realistic preview is not displayed).

📖 **Memo:**
*To close the dialog box without applying the changes to the settings, click **Close** or **Cancel**.*

☞ *"Previewing the Sewing Image" on page 102*

Advanced Opreation
Design Center

Viewing Patterns in the Reference Window

All outlines and patterns in the Design Page are displayed in the Reference Window, giving you an overall view of the pattern while you work on a detailed area. The display area frame (red rectangle) indicates the part of the pattern displayed in the Design Page.

Zooming

The pattern displayed in the Reference Window can be reduced to fit completely within the Reference Window or enlarged to display only the pattern.

1. Click 🔲.

→ The pattern is displayed so that it fills the Reference Window.

Moving the display area frame

The part of the pattern displayed in the Design Page can be selected from the Reference Window.

1. Move the pointer over the display area frame.

→ The shape of the pointer changes to ⊕.

2. Drag the display area frame so that it surrounds the desired part of the pattern.

→ The selected part of the pattern is displayed in the Design Page.

Redrawing the display area frame

Instead of moving the display area frame, the frame can be redrawn to display the desired part of the pattern in the Design Page.

1. Drag the pointer over the desired part of the pattern in the Reference Window.

→ The display area frame is redrawn, and the selected part of the pattern is displayed in the Design Page.

Scaling the display area frame

1. Move the pointer over a corner of the display area frame.

→ The shape of the pointer changes to ↖

or ↗ , depending on the corner that the pointer is over.

Saving

Overwriting

Once the image or pattern has been saved, changes can easily be saved so that the latest version can be retrieved later.

Toolbar button: 🖫

1. Click 🖫 , or click **File**, then **Save**.

→ If the image or pattern has already been saved at least once, the file is saved immediately.

→ 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

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same image or pattern. Files can be saved as bitmap files (.bmp) in stage 1 (Original Image stage), .pel files in stage 2 (Line Image stage), and .pem files in stage 3 (Figure Handle stage) and stage 4 (Sew Setting stage).

1. Click **File**, then **Save As**.
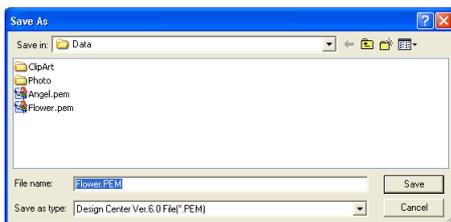
→ A **Save As** dialog box similar to the one shown below appears.

> **Memo:**
> ↖ *and* ↗ *are for scaling the height and width.*

2. Drag the corner to adjust the display area frame to the desired size.

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

> **Memo:**
> • *The correct extension is automatically selected.*
> • *Image data from stage 1 (Original Image stage) can only be saved as a bitmap file (.bmp).*
> *In stage 2 (Line Image stage), image data is saved as a .pel file.*
> *In stage 3 (Figure Handle stage) and stage 4 (Sew Setting stage), pattern data is saved as a .pem file.*

> ⚠ **Note:**
> *If you select a file type of a previous software version, saved .pem files can be opened with that version of the software; however, some information may be lost.*

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

> **Memo:**
> • *To quit the operation, click **Cancel**.*
> • *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*
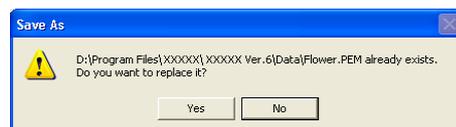
> • *To overwrite the file, click **Yes**.*
> • *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

Changing Software Settings

Changing the grid settings

A grid of dotted lines or solid lines can be displayed or hidden, and the spacing for the grid can be adjusted. (This function is available only in stage 3 (Figure Handle stage).)

1. Click **Display**, then **Grid Setup**.
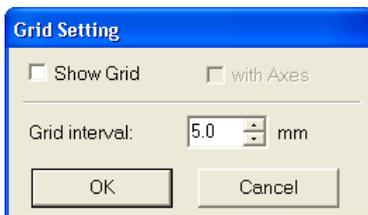
    → The **Grid Setting** dialog box appears.

2. To display the grid, select the **Show Grid** check box.
   To hide the grid, clear the **Show Grid** check box.

3. To set the grid spacing, type or select a value in the **Grid interval** box. (The setting range is 0.1 to 25.4 mm (0.004 to 1.0 inch).)

4. To display the grid as solid lines, select the **with Axes** check box.
   To display the grid as dotted lines, clear the **with Axes** check box.

> ⚠ **Note:**
> *When the **Show Grid** check box is selected and the **with Axes** check box is cleared, only the intersecting points of the grid will be displayed.*

5. Click **OK** to apply the changes and to close the dialog box.

> 📖 **Memo:**
> *To close the dialog box without applying the changes to the grid, click **Cancel**.*

Changing the measurement units

The measurements for values displayed in the application can be in either millimeters or inches.

1. Click **Option**, then **Select System Unit**, and then select the desired measurement units (**mm** or **inch**).

Advanced Opreation
Design Center

Layout & Editing

Layout & Editing is used to combine different objects into an embroidery pattern. The most complex objects can be digitized in Design Center and imported into the Design Page, or created in Layout & Editing with the wizard for automatically converting an image into an embroidery pattern. Furthermore, you can add text and monograms, rectangles, circles, broken lines, curves, and manual punching patterns, and define sewing attributes (thread color and sew type, including stitch patterns created in Programmable Stitch Creator) to the different objects of the embroidery pattern. You can move all of the patterns to obtain the best layout, and cut portions of patterns and rearrange them as desired.

Once the embroidery pattern is completed, you can save your work on the computer hard disk, print it, or transfer it to an original card (or whatever media your sewing machine uses) so that it can be sewn from your machine.

■ Inputting Images and Embroidery Patterns

Images from existing files, such as clip art or custom-made portrait drawings, and images from TWAIN devices or the Clipboard can be imported into Layout & Editing. These images can be traced or used with the wizard to automatically create embroidery patterns. In addition, embroidery patterns created in Design Center or a pattern from an embroidery card can be imported into the Layout & Editing Design Page.

■ Editing Embroidery Patterns

The embroidery patterns in the Design Page can be edited by adding text and other drawn objects to customize the embroidery pattern.

■ Checking Embroidery Patterns

After designing the embroidery pattern, you can preview it. In the preview, you can view the stitches. In the realistic preview, you can see how the design will look when it is sewn. You can also view the sewing order for each object in the design.

■ Saving and Printing

When the embroidery pattern is finished, it can be saved on the computer's hard disk in one of many formats (.pes, .dst, .hus, .exp, or, .pcs). In addition, the pattern can be transferred to an original card by using the USB card writer, to a floppy disk, or to other types of media used by your sewing machine, such as CompactFlash cards and USB media. In addition, the embroidery pattern can be printed.

■ Changing Software Settings

Grid settings for the Design Page and measurement units can be adjusted to help create the embroidery pattern and place added objects.

■ Information for Optional Large-Size Hoop Users

Combined embroidery patterns can be created specifically for multi-position hoops, including the Jumbo Hoop or Extra Large Hoop.

Main Window
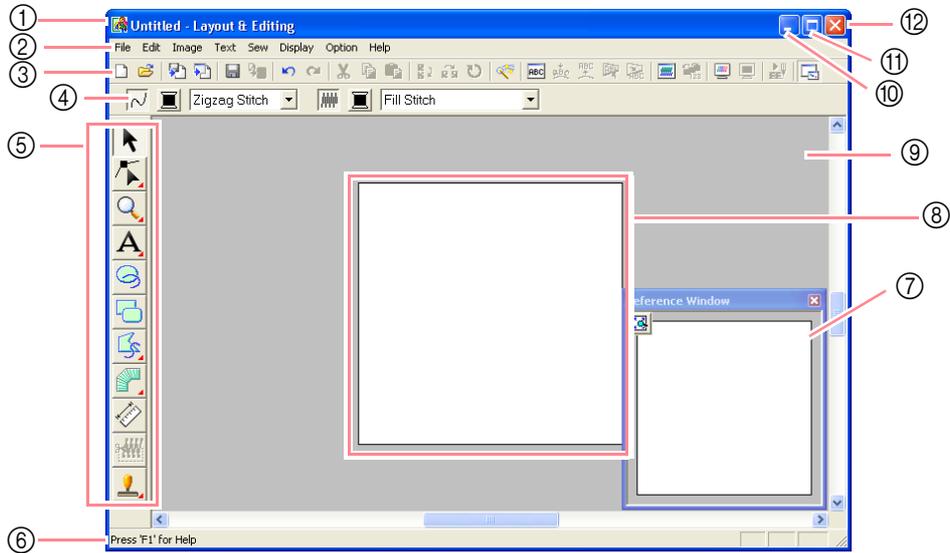
① **Title bar**

② **Menu bar**
Provides access to the functions.

③ **Toolbar**
Provides shortcuts for the menu commands.

④ **Sewing Attributes bar**
Sets the sewing attributes (color and sew type) of lines and regions in the pattern.

⑤ **Tool Box**
Used to create, select and edit patterns.

⑥ **Status bar**
Provides helpful information.

⑦ **Reference Window**
Displays all patterns in the work area, giving you an overview while you work on a detailed area. (For more details, refer to "Viewing Patterns in the Reference Window" on page 193.)

⑧ **Design Page**
The actual part of the work area that can be saved and sewn.

⑨ **Work area**

⑩ **Minimize button**

⑪ **Maximize button**

⑫ **Close button**

Advanced Opreation
Layout & Editing

107

Layout & Editing

Inputting Images and Embroidery Patterns

Creating a Design Page

Creating a new Design Page

Toolbar button:

1. Click , or click **File**, then **New**.

   → If the current Design Page has already been saved or has not been edited, a new Design Page immediately appears.

   → If the current Design Page has not been saved, you will be asked whether you want to save the changes.
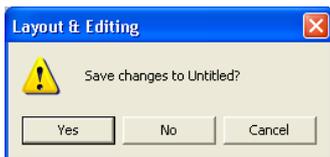
☐ Memo:
- *To save the Design Page, click **Yes**.*
- *To abandon the Design Page, click **No**.*
- *To return to the Design Page, for example, to modify it or save it with another file name, click **Cancel**.*

☞ *"Opening a Layout & Editing file" below and "Saving" on page 194*

Specifying the Design Page

The color and size of the Design Page in addition to the color of the background can be changed. You can select a Design Page size according to the size of hoop that you will be using with your sewing machine. You can also customize the Design Page for patterns that will be split into sections.

1. Click **Option**, then **Design Page Property**.
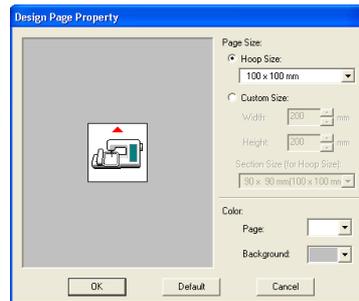
   → The **Design Page Property** dialog box appears.

2. Select the Design Page size.

   To adjust the Design Page size according to the hoop size, select **Hoop Size**, and then select the desired hoop size from the selector.

   To specify a custom Design Page size, select **Custom Size**, and then type or select the desired width and height for the Design Page. (The setting range is 100 to 1000 mm (3.9 to 39.4 inches).)
   In order to make adjustments to the fabric with the layout adjustment function of your sewing machine, select a Design Page size from the **Section Size (for Hoop Size)** selector. These Design Page sizes are 10 mm (0.39 in.) smaller than regular embroidery hoops. (This function is not for multi-position hooping. For details on multi-position hoops, refer to "Selecting the Design Page size" on page 203.)

☐ Memo:
- *The preview area shows the setting changes that you make.*
- *When **Hoop Size** is selected, the sewing machine image shows the orientation of the Design Page (hoop) in relation to the machine.*

---

3. From the **Page** selector, select the desired color for the Design Page.

4. From the **Background** selector, select the desired color for the background.

5. Click **OK**.

📖 **Memo:**
- *To return to the default settings (100 × 100 mm (4" × 4") of Hoop Size), click Default.*
- *Before an embroidery pattern created in a custom Design Page is saved or transferred to an original card, running stitches, which cannot be edited, are added at the edges of the pattern sections so that the pattern sections can easily be aligned during sewing. This alignment stitching appears in the NOT DEFINED color. (For more details, refer to "Embroidering" on page 65.)*
- *To close the dialog box without applying the changes to the settings, click Cancel.*

❗ **Note:**
- *The Design Page sizes 130 × 300 mm, 300 × 130 mm, 100 × 172 mm, and 172 × 100 mm, indicated by "*", are used to embroider multi-position patterns using a special embroidery hoop attached to the sewing machine at three installation positions. Check that you have the multi-position embroidery hoop and that these multi-position patterns can be embroidered using your sewing machine.*
- *Do not select a hoop size larger than the embroidery hoop that can be used with your machine.*
- *Custom Design Page sizes cannot be saved for version 5 and earlier.*
- *Although a custom Design Page size can be specified, since processing will take too long when trying to create an extremely large pattern with the Photo Stitch function, the message "Too large image to convert" will appear if the size exceeds a width or height of 500 mm (19 3/4 in.). After the message is closed, the photo is automatically selected, and is ready to be moved or reduced.*

☞ *"Specifying a Design Page size" on page 60 and "Changing the measurement units" on page 202*

Opening a Layout & Editing file

An embroidery pattern that has previously been saved as a Layout & Editing file (.pes file) can be opened.

Toolbar button: 📂

1. Click 📂 , or click **File**, then **Open**.

→ A **File Open** dialog box similar to the one shown below appears.
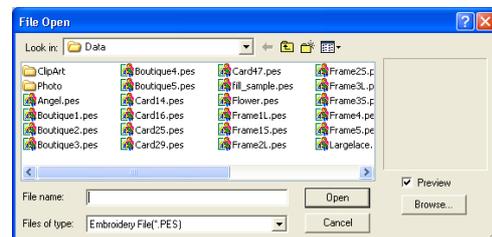
📖 **Memo:**
This dialog box can be resized so that the folder contents can be viewed better. The size of the dialog box is retained until it is changed again.

2. Select the drive and the folder.

📖 **Memo:**
- *If the Preview check box is selected, the contents of the selected file will appear in the Preview box.*
- *To quit the operation and close the dialog box, click Cancel.*

❗ **Note:**
- *Be sure to select a folder that contains.pes files.*
- *If a .pes file is saved with objects extending off the Design Page or with the number of stitches or number of colors for the objects exceeding the Design Page limitations, a preview of the image cannot be displayed.*

3. To view the contents of the .pes files in the currently selected folder, click **Browse**.

Advanced Opreation
Layout & Editing

→ A **Browse** dialog box similar to the one shown below appears.

📖 **Memo:**
- *To return to the **File Open** dialog box, click **Cancel**.*
- *To see a more detailed image, select a file, and then click **Preview**. A **Preview** dialog box similar to the one shown below appears.*
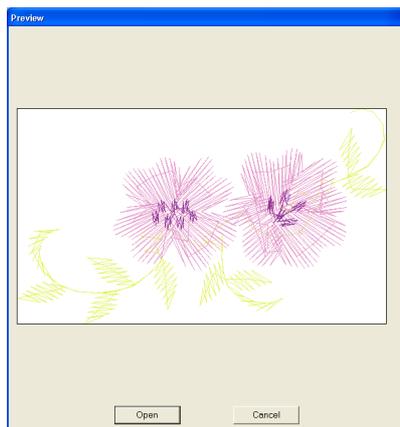
- *To open the displayed file, click **Open**.*
- *To return to the **Browse** dialog box, click **Cancel**.*

⚠ **Note:**
If a .pes file is saved with objects extending off the Design Page or with the number of stitches or number of colors for the objects exceeding the Design Page limitations, a preview of the image cannot be displayed.

4. To open a file, select it, and then click **Open**, or double-click the file's icon.

→ If the current Design Page has already been saved or has not been edited, the contents of the selected file immediately appear in the Design Page.

→ If the current Design Page has not been saved, you will be asked whether you want to save the changes.
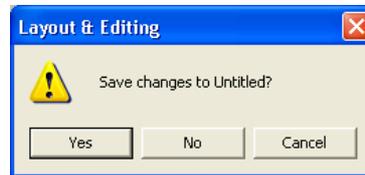
📖 **Memo:**
- *To save the Design Page, click **Yes**.*
- *To abandon the Design Page, click **No**.*
- *To return to the Design Page, for example, to modify it or save it with another file name, click **Cancel**.*

☞ *"Saving" on page 194*

Importing Image Data

Importing image data

Image data from an existing file can be imported into a Design Page and used as a guide for creating an embroidery pattern. The file name extension must be one of the following: Windows bitmap (.bmp), Exif (.tif, .jpg), ZSoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).

1. Click **Image**, then **Input**, then **from File**.

→ An **Open an image file** dialog box similar to the one shown below appears.
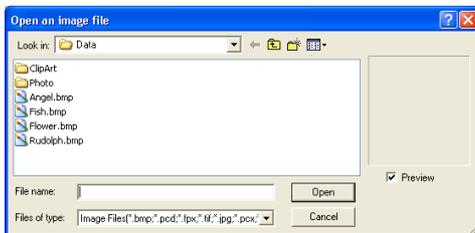
2. Select the drive, the folder and the desired file.

📖 **Memo:**
*If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

3. Click **Open** to open the file.

→ The image appears in the work area.

📖 **Memo:**
- *Double-clicking the file name also opens the file and closes the dialog box.*
- *To quit the operation, click **Cancel**.*
- *If the image was saved at a specific resolution, it is displayed at that resolution.*
- *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*
- *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
  - *To display the original image, click **On**.*
  - *To display a faded copy of the image, click **Faded**.*
  - *To hide the original image, click **Off**.*

❗ **Note:**
- *With .pcd and .fpx files containing many pages, only the first page can be opened. Tiff files with LZW compression cannot be opened.*
- *You can change the size and position of an imported image, and then save that information with the .pes file. The next time that you import the same image into the saved .pes file, a message appears, asking whether to input the image at its previously saved position and size or at its original position (the center of the Design Page).*
- *Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.*

Importing image data from a TWAIN device, such as a scanner

Images can be imported into the current Design Page from a scanner or other TWAIN device and used as a template for creating an embroidery pattern.

📖 **Memo:**
TWAIN is an application interface (API) standardization for software that controls scanners and other devices.

1. Check that the scanner or other TWAIN device is correctly connected to your computer.

2. Click **Image**, then **Select TWAIN device**.

→ A **Select Source** dialog box similar to the one shown below appears.
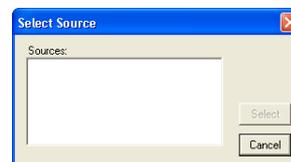
3. From the **Sources** list, click the desired device to select it.

❗ **Note:**
*If no TWAIN device is installed, there will be no names displayed in the **Sources** list. First, install the driver software for the TWAIN device that you want to use.*

Advanced Operation
Layout & Editing

4. Click **Select** to choose the selected device and to close the dialog box.

> 📖 **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

5. Click **Image**, then **Input**, then **from TWAIN device**.

→ The driver interface for the device selected in the **Select Source** dialog box appears.

6. Specify the necessary settings for importing an image, and then import the image.

> ⚠️ **Note:**
> *For information on using the driver interface, refer to the help manual for that interface, or contact the manufacturer of the interface.*

→ When the image transfer between the scanner (or other device) and the driver is completed, the imported image will be pasted into the Design Page at its original size.

> 📖 **Memo:**
> • *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*
> • *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
>   • *To display the original image, click **On**.*
>   • *To display a faded copy of the image, click **Faded**.*
>   • *To hide the original image, click **Off**.*

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

Creating a portrait image

Combine images of facial features provided with the application to create an original portrait image.

1. Click **Image**, then **Input**, then **from Portrait**.

→ The **Portrait Properties** dialog box appears.
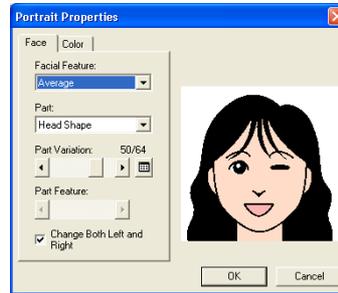
2. From the **Facial Feature** selector, select the overall contour (appearance) of the portrait (for example, narrow, wide, or child-like)

> 📖 **Memo:**
> *The preview area shows the setting changes that you make.*

3. From the **Part** selector, select the part of the portrait to be changed.

> 📖 **Memo:**
> *The part of the portrait to be changed can also be selected by clicking it in the preview area.*

4. Move the **Part Variation** slider to select the desired part variation.

> 📖 **Memo:**
> • *To change both sides of a part together, such as the eyes or ears, select the **Change Both Left and Right** check box.*
> • *The selected part variation is shown in the sample image.*
> • *To display all variations of the selected part, click* 🔳 *.*
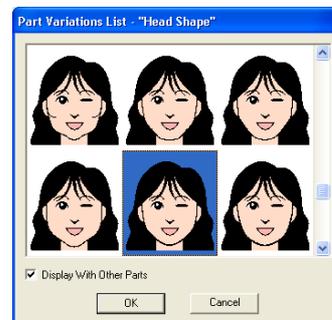
• *To display the images of all parts combined, select the **Display With Other Parts** check box in the **Part Variations List** dialog box that appeared.*
• *Select a part from the list, and then click **OK**.*

5. To select a part feature (for example, standard size, slightly larger, slightly smaller, wider or taller), move the **Part Feature** slider, if it is available.

6. To change the color of the parts, click the **Color** tab, click the selector for the color that you want to change, and then select the desired color from the color list that appeared.
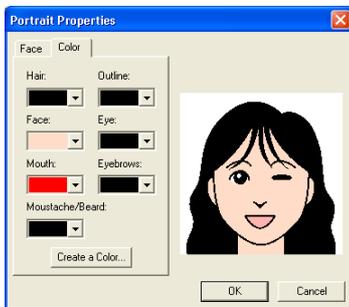
7. Click **OK**.

→ The portrait image is displayed in the Design Page.

Memo:
• *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*
• *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
  • *To display the original image, click **On**.*
  • *To display a faded copy of the image, click **Faded**.*
  • *To hide the original image, click **Off**.*

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

Importing image data from the Clipboard

Image data can be imported into the Design Page from the Clipboard. This allows you to import an image without saving it first.

1. Click **Image**, then **Input**, then **from Clipboard**.

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

→ The image is displayed in the Design Page.

Memo:
• *The image is displayed with a resolution of 100 dpi for both the height and width.*
• *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*

Changing the display settings of images

The image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed.

1. Click **Image**, then **Display Image**, and then select the desired setting.

To display the original image, click **On**.

To display a faded copy of the image, click **Faded**.

To hide the original image, click **Off**.

Memo:
• *This function is not available if no image has been imported into the Design Page.*
• *Press the shortcut key (**F6**) to switch between displaying the image to displaying it faded to hiding the image.*

Advanced Opreation
Layout & Editing

Changing the Size and Position of the Image

The size and position of the image can be adjusted.

1. Click **Image**, then **Modify**.

   → A red line and handles appear around the image.
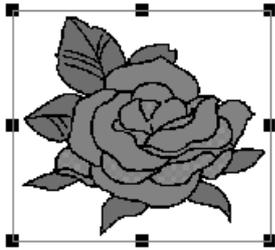
   Memo:
   The status bar shows the dimensions (width and height) of the image.

Moving an image:

1. Move the pointer over the image.

   → The shape of the pointer changes to ⊕.

2. Drag the image to the desired location.

Scaling an image:

1. Move the pointer over one of the handles.

   → The shape of the pointer changes to
   ↔ , ↕ , ↘ or ↗ , depending on the handle that the pointer is over.

   Memo:
   - ↔ *is for scaling the width.*
   - ↕ *is for scaling the height.*
   - ↘ *and* ↗ *are for scaling both dimensions at the same time.*

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

Deleting an image:

1. Press the **Delete** key, or click **Edit**, then **Delete**.

   → The image will be deleted from the Design Page.

Saving the Image Data

The image can be saved as a file or outputted to the Clipboard.

■ Saving as a file

1. Click **Image**, then **Output**, then **to File**.

   → A dialog box similar to the one shown below appears.
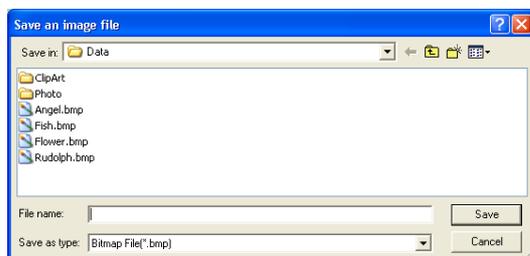
2. Select the drive, the folder and the format in which you want to save the image data.

3. Type in the file name.

   Memo:
   - *The correct extension is automatically selected.*
   - *The image data can be saved in either of the following formats: Windows bitmap (.bmp), Exif (.jpg).*

4. Click **Save** to save the data.

   Memo:
   *To quit the operation, click **Cancel**.*

■ Outputting to the Clipboard

1. Click **Image**, then **Output**, then **to Clipboard**.

   → The image data in the Design Page is copied onto the Clipboard.

Automatically Converting Image Data Into an Embroidery Pattern

The Image to Stitch Wizard gives step-by-step instructions for converting an image into an embroidery pattern.

Toolbar button:

1. If no image is displayed in the Design Page, use one of the commands on the **Input** sub-menu of the **Image** menu to display the image that you want to convert to an embroidery pattern.

2. Click **Image**, then **Modify**, and then re-size and re-position the image for creating the embroidery pattern.

3. Click , or click **Image**, then **Image to Stitch Wizard**.

    → The following dialog box appears.
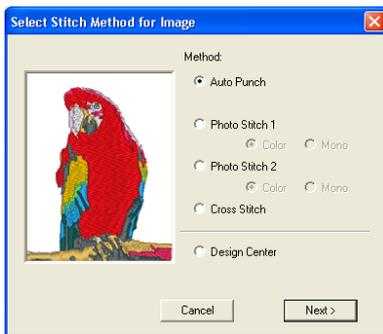
    > ⚠ **Note:**
    > *The dialog box will not appear if no image is displayed in the Design Page. Instead, a dialog box appears, allowing you to open an image file.*

4. Select the type of embroidery that you want to create, and then click **Next**.

    Auto Punch:
    Select this option to automatically extract the image for creating the embroidery pattern.

    Photo Stitch 1:
    Select this option to automatically create a realistic photo embroidery pattern. This option can be used to create embroidery patterns in color (**Color**) or black and white (**Mono**).

    Photo Stitch 2:
    Select this option to automatically create realistic photo embroidery in 4 colors (**Color**) or 1 color (**Mono**).

    Cross Stitch:
    Select this option to create a cross stitch pattern.

    Design Center:
    Select this option to start up Design Center with the Design Page image.

    > 📖 **Memo:**
    > *To quit the operation and close the dialog box, click **Cancel**.*

    > ⚠ **Note:**
    > *Although a custom Design Page size can be specified, since processing will take too long when trying to create an extremely large pattern with the Photo Stitch function, the message "Too large image to convert" will appear if the size exceeds a width or height of 500 mm (19 3/4 in.). After the message is closed, the photo is automatically selected, and is ready to be moved or reduced.*

■ If Auto Punch is selected

    → After the image characteristics are analyzed, an **Image Analysis** dialog box similar to the one shown below appears.
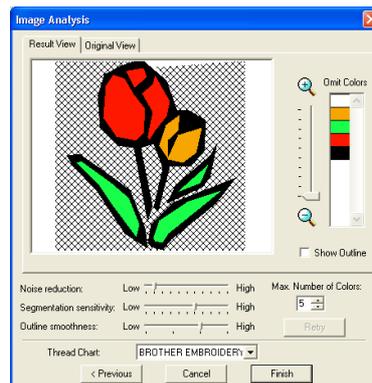
1. Select the desired settings.

    To display the resulting analyzed image, click the **Result View** tab. The embroidery pattern will be created with this image.

    To adjust the zoom ratio that the image is displayed in, move the slider between and .

Advanced Opreation
Layout & Editing

To display the outline extracted from the analyzed image, select the **Show Outline** check box.

Under **Analysis Parameters**, select the desired image-analyzing settings.
Noise reduction: Sets the level of noise (distortions) that is removed from the image.
Segmentation sensitivity: Sets the sensitivity for the image analysis.
Outline smoothness: Sets the smoothness of the extracted outline.
Max. Number of colors: Sets the number of colors used.

From the **Thread Chart** selector, select the desired thread color chart. The most appropriate thread colors from the selected thread chart are selected. A user thread chart can also be selected.

To display the original image, click the **Original View** tab.

Memo:
*• After changing the settings, click **Retry** to display the image with the new settings applied. If **Retry** is not clicked, the new settings are not applied.*
*• To quit the operation and close the dialog box, click **Cancel**.*
*• To return to the previous dialog box, click **Previous**.*

2. On the **Result View** tab, click the areas of the image to select whether or not they are to be sewn.

Memo:
Areas not set to be sewn are shown filled with a crosshatch pattern.

These areas will not be sewn.

3. If necessary, in the **Omit Colors** list, click the colors to select whether or not they will be sewn.

Memo:
Colors that are crossed out are set to not be sewn.

4. After selecting the desired settings, click **Finish**.

→ An embroidery pattern is created from the analyzed data, the appropriate thread colors and sew type settings are applied, and then the pattern is displayed in the Design Page.

Memo:
The sew type settings of the created embroidery pattern can later be changed in the same way as the settings for other objects.

■ If Photo Stitch 1 (Color) is selected
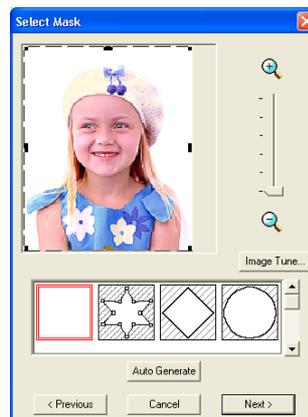
→ A **Select Mask** dialog box similar to the one shown below appears.

Note:
If the width or height of the image exceeds 500 mm, the Photo Stitch functions cannot be used.

📖 **Memo:**
- *To quit the operation and close the dialog box, click* **Cancel***.*
- *To return to the previous dialog box, click* **Previous***.*

1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

📖 **Memo:**
To automatically set a mask so that the background is trimmed off, click **Auto Generate***.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image.

📖 **Memo:**
- *To display the* **Image Tune** *dialog box, where you can adjust the image, click* **Image Tune***. (For more details, refer to "Image Tune" on this page.)*
- *To display the image enlarged (or reduced), move the* **ZOOM** *slider up (or down).*
- *When the dialog box appears, the square mask is selected.*
- *To create any shape of mask, select*

  [icon]*, and then move, enter or delete points to adjust the mask shape. To add points, click the outline of the mask. To delete points, select the point, and then press the* (Delete) *key.*

- *If* **Auto Generate** *was clicked,* [icon] *is selected, and the points in the outline of the mask can be moved, added or deleted.*

Pattern edited with the round mask

Pattern edited with the adjustable mask

⚠ **Note:**
The mask size can be set in the range from 64 × 64 dots to the size of the image.

Image Tune

Clicking the **Image Tune** button in the **Select Mask** dialog box displays an **Image Tune** dialog box similar to the one shown below.

The image window displays the image resulting from the current settings.

Move the **Original – Sharp** slider to adjust the sharpness of the image's outlines. A setting more towards **Sharp** makes a more noticeable boundary between bright and dark areas.

Move the **Dark – Bright** slider to adjust the brightness of the image.

Move the **Contrast Low – High** slider to adjust the contrast of the image.

Click **OK** to display the adjusted image in the **Select Mask** dialog box and to close this dialog box.

📖 **Memo:**
*To close the dialog box without applying the changes to the settings, click **Cancel**.*

3. In the **Select Mask** dialog box, click **Next**.

→ The image is analyzed, and the **Check Mask Shape** dialog box appears.

📖 **Memo:**
Areas not set to be sewn are shown filled with a crosshatch pattern.

4. Click **Next**.

→ The **Photo Stitch 1 Parameters** dialog box appears.

5. Specify the settings for creating the embroidery pattern.

📖 **Memo:**
- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Sewing Option

Detail	Specifies how detailed the created embroidery pattern will be. Selecting a setting closer to **Fine** creates more details in the pattern and increases the number of stitches.
Run pitch	Sets the sewing pitch. The pattern is created with this setting value as the minimum length. Range: 2 to 10 mm (0.08 to 0.39 inch) Default: 3 mm (0.12 inch)
Conversion Priority	Select what parameter is given priority when converting to embroidery pattern. **Stitch Quality**: Creates a pattern while giving priority to the stitching quality. However, many jump stitches will result. **Jump Stitch Reduction**: Creates a pattern while giving priority to reducing the number of jump stitches in order to reduce complications during embroidering. However, the stitching quality will be slightly reduced.

Image Type

Photo/ Cartoon	If **Photo** is selected, the thread colors will be mixed together, which will result in a more natural look. If **Cartoon** is selected, the thread colors will not be mixed together, which will result in a more simply colored look. Select **Photo** for image data from a photograph, etc. Select **Cartoon** for image data from an illustration, etc.

Design Page Color

Sew Page Color	If this check box is selected, the data for the parts of the pattern that are the same color as the Design Page will be created. Clear the check box to keep the fabric the same color as the Design Page. Default: Selected

Auto Select Setting

Thread Chart	Selects the thread chart for selecting the thread color with the Auto Select function. The most appropriate thread colors from the selected thread chart are selected. A user thread chart can also be selected.
Color Count	Sets the number of colors selected by the Auto Select function. Range: 1 to 50 Default: 10

Auto Select

Click this button to use the settings specified under **Auto Select Setting** and automatically select from the selected thread chart the most appropriate thread colors for creating the photo embroidery. The selected thread colors appear in the **Use Color List** mentioned below.

This button can be clicked only if the settings under **Auto Select Setting** have been changed.

Use Color List

This list allows the selected thread colors to be checked and edited.

Use Color List	Thread colors selected for creating the pattern are displayed, in order, by their level of brightness. This order is the sewing order. The order cannot be changed. The maximum number of colors is 50.
Edit List	Click this button to open the **Edit List** dialog box, which lets you manually set the thread colors to be used when creating the pattern (see below).

Edit List

Click this button to display the **Edit List** dialog box. In this dialog box, you can manually set the thread colors to be used in the data conversion.
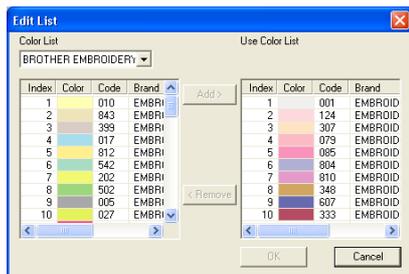
To move the color selected in the **Color List** to the **Use Color List**, click **Add**. If no color is selected, or if the **Use Color List** already contains 50 colors, this button cannot be clicked.

To delete the color selected in the **Use Color List**, click **Remove**. If no color is selected in the **Use Color List**, this button cannot be clicked.

> **Memo:**
> * The thread colors in the **Color List** and **Use Color List** are listed, in order, starting from the brightest. This order is the sewing order and cannot be changed.
> * The maximum number of colors that can be added to the **Use Color List** is 50.
> * Thread colors displayed in the **Use Color List** are not displayed in the **Color List**.
> * To select several colors, hold the **Shift** key (to select adjacent colors) or the **Ctrl** key (to select colors that are not adjacent), and then select the desired colors.

To apply the changes to the list and close the dialog box, click **OK**. The edited settings will appear in the **Photo Stitch 1 Parameters** dialog box. This button cannot be clicked if the **Use Color List** is empty.

> **Memo:**
> To close the dialog box without applying the changes, click **Cancel**.

6. In the **Photo Stitch 1 Parameters** dialog box, click **Next**.

→ A **Preview** dialog box similar to the one shown below appears, allowing the created embroidery pattern to be previewed.

Advanced Opreation
Layout & Editing

📖 **Memo:**
- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

7. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

■ If Photo Stitch 1 (Mono) is selected

→ A **Select Mask** dialog box similar to the one shown below appears.

⚠ **Note:**
If the width or height of the image exceeds 500 mm, the Photo Stitch functions cannot be used.

1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

📖 **Memo:**
*To automatically set a mask so that the background is trimmed off, click **Auto Generate**.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image

☞ *For details on the settings, refer to page 117.*

3. In the **Select Mask** dialog box, click **Next**.

→ A **Gray Balance** dialog box similar to the one shown below appears.

4. Move the slider to specify which parts of the image to create the embroidery pattern for.

📖 **Memo:**
- *Areas not set to be sewn are shown filled with a crosshatch pattern.*
- *An embroidery pattern will be created from any areas remaining in black.*
- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

5. In the **Gray Balance** dialog box, click **Next**.

→ The **Photo Stitch 1 Parameters** dialog box appears.

6. Specify the settings for creating the embroidery pattern.

📖 **Memo:**
• *To return to the previous dialog box, click* ***Previous***.
• *To quit the operation and close the dialog box, click* ***Cancel***.

Sewing Option

Detail	Specifies how detailed the created embroidery pattern will be. Selecting a setting closer to **Fine** creates more details in the pattern and increases the number of stitches.
Run pitch	Sets the sewing pitch. The pattern is created with this setting value as the minimum length. Range: 2 to 10 mm (0.08 to 0.39 inch) Default: 3 mm (0.12 inch)
Conversion Priority	Select what parameter is given priority when converting to embroidery pattern. **Stitch Quality**: Creates a pattern while giving priority to the stitching quality. However, many jump stitches will result. **Jump Stitch Reduction**: Creates a pattern while giving priority to reducing the number of jump stitches in order to reduce complications during embroidering. However, the stitching quality will be slightly reduced.

Image Type

Photo/ Cartoon	If **Photo** is selected, the thread colors will be mixed together, which will result in a more natural look. If **Cartoon** is selected, the thread colors will not be mixed together, which will result in a more simply colored look. Select **Photo** for image data from a photograph, etc. Select **Cartoon** for image data from an illustration, etc.

Use Color

Specifies the color of thread used to create the embroidery pattern.

The default setting is the darkest color in the current thread chart.

Change Color	In the list, select the color that you want to change, and then click this button to open the **Thread Color** dialog box, which lets you change the thread color used in the embroidery pattern.

7. In the **Photo Stitch 1 Parameters** dialog box, click **Next**.

→ A **Preview** dialog box similar to the one shown below appears, allowing the created embroidery pattern to be previewed.

📖 **Memo:**
• *To return to the previous dialog box, click* ***Previous***.
• *To quit the operation and close the dialog box, click* ***Cancel***.

Advanced Opreation
Layout & Editing

121

8. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

■ If Photo Stitch 2 (Color) is selected

→ A **Select Mask** dialog box similar to the one shown below appears.

> ⚠ **Note:**
> *If the width or height of the image exceeds 500 mm, the Photo Stitch functions cannot be used.*

1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

> 📖 **Memo:**
> *To automatically set a mask so that the background is trimmed off, click **Auto Generate**.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image

> ☞ *For details on the settings, refer to page 117.*

3. In the **Select Mask** dialog box, click **Next**.

→ The image is analyzed, and the **Check Mask Shape** dialog box appears.

> 📖 **Memo:**
> *Areas not set to be sewn are shown filled with a crosshatch pattern.*

4. Click **Next**.

→ The **Photo Stitch 2 Parameters** dialog box appears.

5. Specify the settings for creating the embroidery pattern.

> 📖 **Memo:**
> * *To return to the previous dialog box, click **Previous**.*
> * *To quit the operation and close the dialog box, click **Cancel**.*

Sewing Option

Line Interval	Specifies the interval between parallel lines used to create the embroidery pattern. Range: 1.2 to 5 mm (0.05 to 0.2 inch) Default: 2 mm (0.08 inch) ↕ Line interval
Max. Density	Specifies the maximum density for areas of the created embroidery pattern sewn with the zigzag stitch. The embroidery pattern will be created with a density smaller than that set here. Range: 2.5 to 5 lines per mm (64 to 127 lines per inch) Default: 3 lines per mm (76 lines per inch)

Auto Select Setting

Thread Chart	Selects the thread chart for selecting the thread color with the Auto Select function. The most appropriate thread colors from the selected thread chart are selected. A user thread chart can also be selected.
Color Set	Sets the combination of four colors used when creating the embroidery pattern. 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. Color combinations: CMYK, RGBK, CRYK, BMYK

Auto Select

Click this button to select from the selected thread chart the thread colors closest to the four colors in the selected color set. The selected thread colors appear in the **Use Color List** mentioned below.

This button can be clicked only if the settings under **Auto Select Setting** have been changed.

Use Color List

This list allows the selected thread colors to be checked and edited.

Use Color List	Displays the four selected thread colors.
Change Color	In the list, select the color that you want to change, and then click this button to open the **Thread Color** dialog box, which lets you change the thread color used in the embroidery pattern.

6. In the **Photo Stitch 2 Parameters** dialog box, click **Next**.

→ A **Preview** dialog box similar to the one shown below appears, allowing the created embroidery pattern to be previewed.

📖 **Memo:**
- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

7. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

Advanced Operation
Layout & Editing
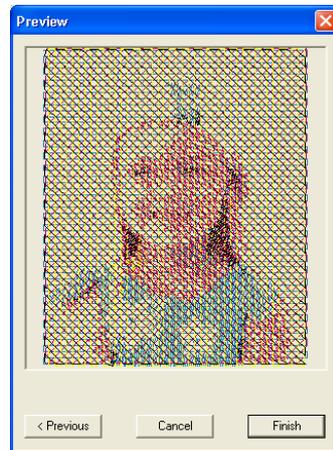
■ **If Photo Stitch 2 (Mono) is selected**

→ A **Select Mask** dialog box similar to the one shown below appears.

> **⚠ Note:**
> *If the width or height of the image exceeds 500 mm, the Photo Stitch functions cannot be used.*

1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

> **📖 Memo:**
> *To automatically set a mask so that the background is trimmed off, click **Auto Generate**.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image

> ☞ *For details on the settings, refer to page 117.*

3. In the **Select Mask** dialog box, click **Next**.

→ A **Gray Balance** dialog box similar to the one shown below appears.

4. Move the slider to specify which parts of the image to create the embroidery pattern for.

> **📖 Memo:**
> • *An embroidery pattern will be created from any areas remaining in black.*
> • *To return to the previous dialog box, click **Previous**.*
> • *To quit the operation and close the dialog box, click **Cancel**.*

5. In the **Gray Balance** dialog box, click **Next**.

→ The **Photo Stitch 2 Parameters** dialog box appears.

6. Specify the settings for creating the embroidery pattern.

📖 **Memo:**
- *To return to the previous dialog box, click* ***Previous***.
- *To quit the operation and close the dialog box, click* ***Cancel***.

Sewing Option

Line Interval	Specifies the interval between parallel lines used to create the embroidery pattern. Range: 1.2 to 5 mm (0.05 to 0.2 inch) Default: 2 mm (0.08 inch) ↕ Line interval
Max. Density	Specifies the maximum density for areas of the created embroidery pattern sewn with the zigzag stitch. The embroidery pattern will be created with a density smaller than that set here. Range: 2.5 to 5 lines per mm (64 to 127 lines per inch) Default: 3 lines per mm (76 lines per inch)

Use Color

Specifies the color of thread used to create the embroidery pattern.

The default setting is the darkest color in the current thread chart.

Change Color	Click this button to open the **Thread Color** dialog box, which lets you select the thread color used in the embroidery pattern.

7. In the **Photo Stitch 2 Parameters** dialog box, click **Next**.

→ A **Preview** dialog box similar to the one shown below appears, allowing the created embroidery pattern to be previewed.
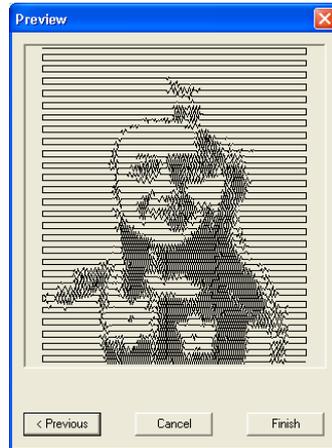
📖 **Memo:**
- *To return to the previous dialog box, click* ***Previous***.
- *To quit the operation and close the dialog box, click* ***Cancel***.

8. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

■ If Cross Stitch is selected

→ The **Cross Stitch Attributes** dialog box appears.

1. Specify the settings for creating the embroidery pattern.

📖 **Memo:**
- *To return to the previous dialog box, click* ***Previous***.
- *To quit the operation and close the dialog box, click* ***Cancel***.

Advanced Opreation
Layout & Editing

125

Cross size	Sets the horizontal and vertical size of the pattern. Range: 1.5 to 5 mm (0.04 to 0.39 inch) Default: 2.5 mm (0.08 inch)
Stitch times	Sets the number of times that the pattern will be sewn. Sews twice per time. Range: Single, Double, Triple Default: Single
Thread Chart	Selects the thread chart for selecting the thread color. The most appropriate thread color from the selected thread chart is selected. A user thread chart can also be selected.
Max. Number of Colors	Sets the number of colors used in the created pattern. The embroidery pattern is created using no more than the number of colors specified. Range: 2 to 50 Default: 8

2. Click **Next**.

→ A **Cross Stitch Setting** dialog box similar to the one shown below appears.
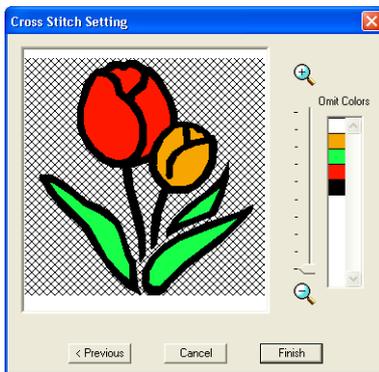
3. In the image in the dialog box, click the areas to select whether or not they are to be sewn.

📖 **Memo:**
• Areas not set to be sewn are shown filled with a crosshatch pattern.

These areas will not be sewn.

• *To adjust the zoom ratio that the image is displayed in, move the slider between* 🔍 *and* 🔍 *.*

• *To return to the previous dialog box, click* ***Previous***.

4. If necessary, in the **Omit Colors** list, click the colors to select whether or not they will be sewn.

📖 **Memo:**
Colors that are crossed out are set to not be sewn.

5. After selecting the desired settings, click **Finish**.

→ The cross stitch pattern is created and displayed in the Design Page.
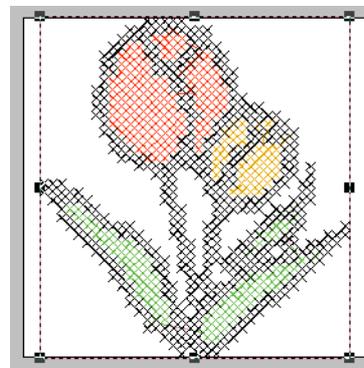
■ If Design Center is selected

→ Design Center starts up, and a Design Page is displayed with the image imported into it. For details, refer to "Design Center" on page 69.

Importing Embroidery Patterns

Importing embroidery patterns from a file

Embroidery patterns from embroidery cards (.pec) and files created in the Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna (.hus) and embroidery sewing machine (.phc) formats can be imported and added to the current Design Page.

With this function, you can also add .pes files to the Design Page, allowing you to combine several files created with this application.

Toolbar button:

1. Click , or click **File**, then **Import**, then **from File**.

   → An **Import from File** dialog box similar to the one shown below appears.
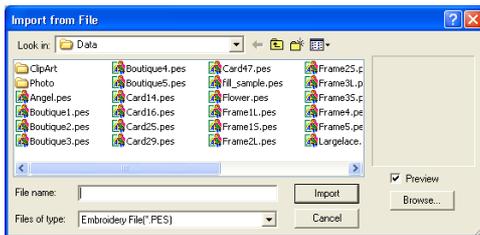
   ### 📖 Memo:
   This dialog box can be resized so that the folder contents can be viewed better. The size of the dialog box is retained until it is changed again.

2. Select the drive and the folder.

   ### 📖 Memo:
   *• If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*
   *• To quit the operation and close the dialog box, click **Cancel**.*

3. To view the contents of the files in the currently selected folder, click **Browse**.

→ A **Browse** dialog box similar to the one shown below appears.

⚠ Note:
*Be sure to select the correct file name extension from the **Files of type** box.*

📖 Memo:
• This dialog box can be resized so that the folder contents can be viewed better. The size of the dialog box is retained until it is changed again.
*• To return to the **Import from File** dialog box, click **Cancel**.*
*• To see a more detailed image, select a file, and then click **Preview**. A **Preview** dialog box similar to the one shown below appears.*
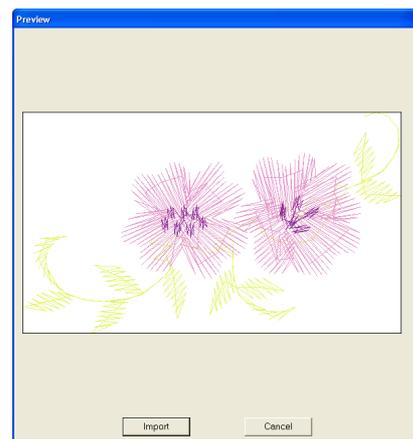
*• To import the displayed file, click **Import**.*
*• To return to the **Browse** dialog box, click **Cancel**.*

Advanced Operation
Layout & Editing

4. To import a pattern, select it, and then click **Import**, or double-click the file's icon.

　→ The embroidery pattern is displayed in the Design Page.

> **! Note:**
> • *When importing patterns from other makers, be sure to choose a pattern that will fit in the Design Page.*
> • *The colors of patterns imported from .dst (Tajima), .exp (Melco), .pcs (Pfaff) and .hus (Husqvarna) files will be slightly different. If this happens, you can change the color with the menu command **Sew** – **Sewing Order/Color**.*

> **📖 Memo:**
> • *When importing some .pec files from embroidery cards, the **Select Import size** dialog box appears. If this happens, select the desired import size, and then click **OK** to import the embroidery pattern.*
> • *To quit the operation and close the dialog box, click **Cancel**.*

Importing embroidery patterns from Design Center

An embroidery pattern in Design Center can be imported directly into the Design Page.

Toolbar button: 🔲

1. Start up Design Center and open the file that you want to import into Layout & Editing.

2. Click 🔲 , or click **File**, then **Import**, then **from Design Center**.

　→ The **Import size** dialog box appears.
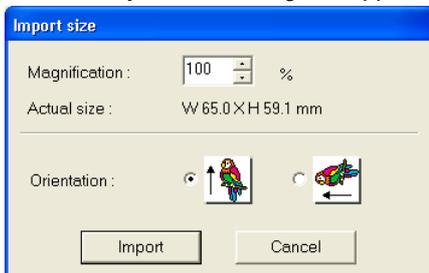
3. In the **Magnification** box, type or select the magnification factor.

> **! Note:**
> • *The embroidery pattern cannot be magnified to a size larger than the Design Page.*
> • *The magnification factor cannot be set below 25%.*

4. Under **Orientation**, select the desired orientation.

5. Click **Import** to import the embroidery pattern.

> **📖 Memo:**
> • *To quit the operation and close the dialog box, click **Cancel**.*
> • *If Design Center has not been started up, if a .pem file has not been opened or if Design Center is not in stage 4 (Sew Setting stage), one of the following messages appears.*
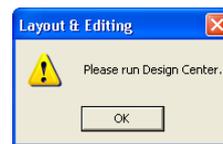
*Click **OK**, and then start up Design Center and open a .pem file.*

☞ *"Design Center" on page 69*

Importing embroidery patterns from an embroidery card

An embroidery pattern from an embroidery card inserted in the USB card writer module can be imported into the Design Page.

1. Click **File**, then **Import**, then **from Card**.

　→ If a card writer module is connected and if an embroidery card is inserted into the card writer module, the following message appears and the embroidery patterns are read from the card.
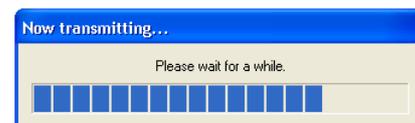
Note:
If a card writer module is connected but an embroidery card is not inserted, the following message appears.

Layout & Editing

No embroidery card is inserted.
Please insert an embroidery card.

[Retry]   [Cancel]

*• Insert an embroidery card, and then click **Retry**.*
*• To quit the operation, click **Cancel**.*

2. After the card has been read, a dialog box similar to the one shown below appears.

Import from Card

[Import]   [Preview...]   [Cancel]
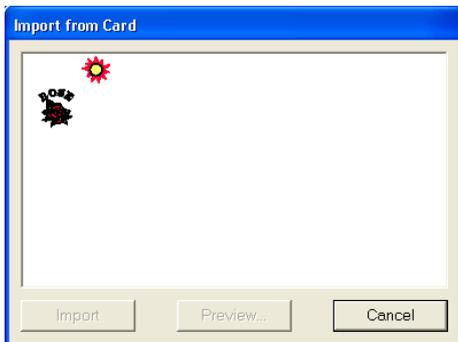
Memo:
This dialog box can be resized so that the patterns can be viewed better. The size of the dialog box is retained until it is changed again.

3. Click a pattern to select it.

Memo:
*• To see a more detailed image, select a pattern, and then click **Preview**. A **Preview** dialog box similar to the one shown below appears.*

Preview

R.O.S.E
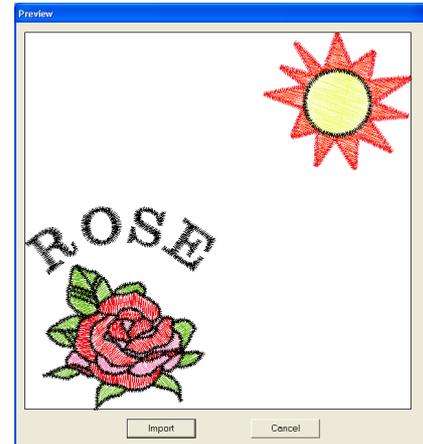
[Import]   [Cancel]

*• To import the displayed pattern, click **Import**.*
*• To return to the **Browse** dialog box, click **Cancel**.*
*• To quit the operation, click **Cancel**.*

4. Click **Import**, or double-click the pattern to import it.

Memo:
*When importing some patterns, the **Select Import size** dialog box appears. If this happens, select the desired import size, and then click **OK** to import the pattern.*

Note:
Due to copyright issues, some embroidery cards cannot be used with this function.

Advanced Opreation
Layout & Editing

Editing Embroidery Patterns

Selecting patterns

To apply settings to an existing pattern, you must first select it. The Select Object tool is used to select one or more patterns. Once a pattern is selected, you can move it, scale it, and change its direction by rotating it or inverting it.

1. Click ![pointer icon] on the Tool Box.

→ The shape of the pointer changes to

![cursor icon] .

2. Click the pattern that you want to select.

→ Handles appear around the pattern.

![pattern with handles diagram]

Handles
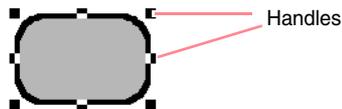
> 📖 **Memo:**
> - *The status bar shows the dimensions (width and height) of the pattern.*
> - *To deselect the pattern, select a different pattern, click a blank area of the Design Page, or click any other button in the Tool Box.*

3. To select an additional pattern, hold down the **Ctrl** key and click the other pattern.

> 📖 **Memo:**
> - *You can also select patterns by dragging the pointer across the pattern that you want to select. As you drag the pointer, a selection frame is drawn. All patterns that are contained in that selection frame are selected when the mouse button is released.*
> - *If you selected patterns that you did not want, click a blank area of the Design Page to deselect all patterns, and start again.*

■ Selecting patterns in the created order

With ![pointer icon] selected, press the **Tab** key to select the next object that was created. Hold down the **Shift** key and press the **Tab** key to select the previous object that was created.

If the **Tab** key (or the **Shift** and **Tab** keys) are pressed:

- and no object is selected, the first object (or the last object) that was created is selected.
- and multiple objects are selected, all objects are deselected except the soonest (or latest) object that was created.
- and the last (or first) object that was created is selected, the first (or last) object is selected.

■ Selecting all embroidery patterns

All patterns in the Design Page can easily be selected.

1. Make sure that ![pointer icon] on the Tool Box is selected.

2. Click **Edit**, then **Select All**.

Moving patterns

1. Move the pointer over a selected pattern or group of selected patterns.

→ The shape of the pointer changes to
     ⊕ .

2. Drag the pattern to the desired location.

> 📖 **Memo:**
> - *To move the pattern horizontally or vertically, hold down the* **Shift** *key while dragging it.*
> - *Pressing the arrow keys moves the selected pattern 0.5 mm (about 0.02 inch) in the direction of the arrow on the key.*
> - *If* **Snap to Grid** *is selected, each press of an arrow key moves the pattern one grid mark in the direction of the arrow on the key.*
> - *The arrow keys cannot be used to move text on a path if just the text is selected. The path must also be selected in order to move using the arrow keys.*

■ Moving embroidery patterns to the center

The selected patterns can easily be moved to the center of Design Page.

1. Select one or more patterns.

2. Click **Edit**, then **Center**.

→ All selected patterns move to the center of Design Page.

■ Aligning embroidery patterns

The selected patterns can easily be aligned as specified.

1. Select the patterns which you want to align.

2. Click **Edit**, then **Align**, then **Left**, **Center**, **Right**, **Top**, **Middle**, or **Bottom**, depending on how you want to align the patterns.

→ The selected patterns are aligned as shown below.
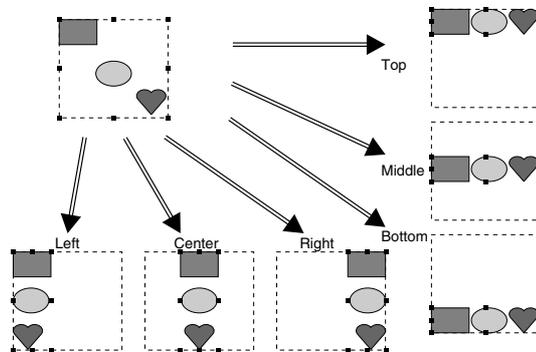
> 📖 **Memo:**
> *To choose a different alignment, select the menu command* **Edit** – **Undo**, *and then repeat step* **2.**

Text on a path

Text on a path can be aligned by selecting other objects on the Design Page together with the text, the path, or both the text and the path. The selected patterns are aligned on their outlines.

1. Text is selected.

2. Path is selected.

3. Both the text and path are selected.
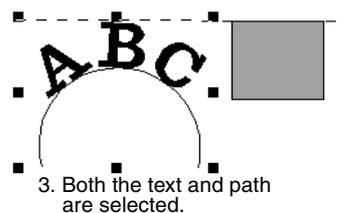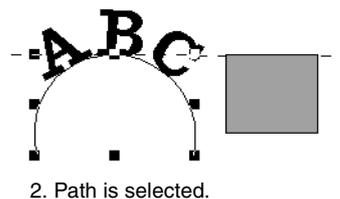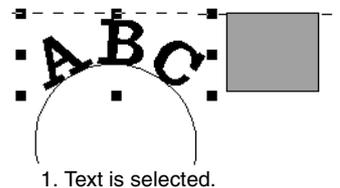
Patterns set for hole sewing

If just the inside pattern is selected, the pattern is aligned on the outline of the inside area. If the outside of the pattern is also selected, the pattern is aligned on the outline of the outside area.
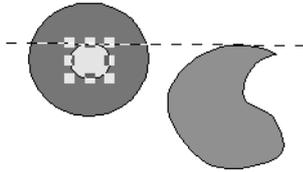
1. Inside area is selected.
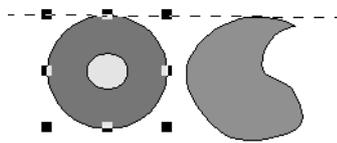
2. Outside area is selected.
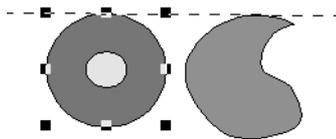
3. Both the inside and outside areas are selected.

Scaling patterns

■ Scaling manually

1. Select the pattern or patterns that you want to resize.

2. Move the pointer over one of the handles of a selected pattern or group of patterns.

→ The shape of the pointer changes to ↔ , ↕ , ↘ or ↗ , depending on the handle that the pointer is over.

📖 **Memo:**

- ↔ *is for scaling the width.*

- ↕ *is for scaling the height.*

- ↘ *and* ↗ *are for scaling both dimensions at the same time.*

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

📖 **Memo:**

- *As you drag the handle, the current size is displayed on the status bar.*
- *For more precise resizing, select the menu command* ***Edit*** *–* ***Numerical Setting*** *– **Size**, as described below.*

⚠ **Note:**

- *Stamp settings remain independent from the patterns that they are applied to. If a pattern containing a stamp is edited, be sure to check the stamp after editing is finished.*
- *Some patterns imported from embroidery cards cannot be scaled.*
- *When scaling stitch patterns, the number of stitches remains the same, resulting in a loss of quality. To maintain the quality of the embroidery pattern, hold down the* **Ctrl** *key while scaling.*

■ Scaling numerically

1. Select the pattern or patterns that you want to resize.

2. Click **Edit**, then **Numerical Setting**, then **Size**.

→ The **Size** dialog box appears.
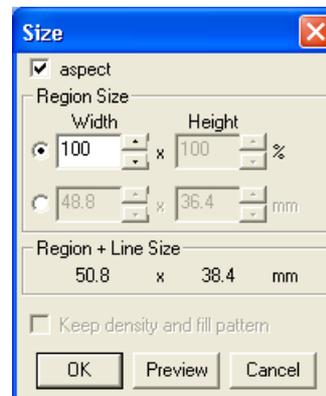
3. To change the width and height proportionally, select the **aspect** check box.

4. Select the whether the width and height will be set as a percentage (%) or a dimension (millimeters or inches).

5. Type or select the desired width and height.

📖 **Memo:**
- *Select **100%** to leave the pattern unchanged.*
- *If **aspect** is selected, changing one dimension automatically changes the other so that the proportion of the width and height remains unchanged.*
- *The specified size is for the region. If the pattern has a line, the size of the entire pattern can be viewed under **Region + Line Size** at the bottom of the dialog box.*

6. To resize the selected pattern while maintaining the original density and fill pattern, select the **Keep density and fill pattern** check box.

📖 **Memo:**
*The **Keep density and fill pattern** check box is available only if stitch data is selected.*

7. Click **OK**.

📖 **Memo:**
- *To view the pattern at the new size in the Design Page, click **Preview**.*
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Region (without line)
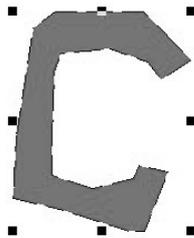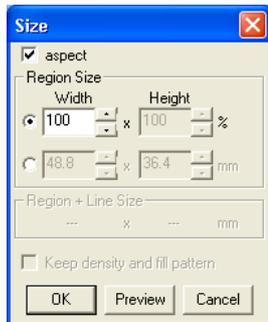
Region + line
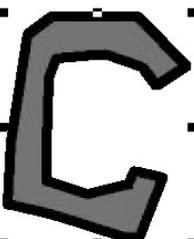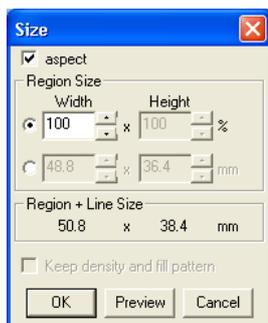
⚠️ **Note:**
- *You cannot enter a size that will cause the pattern to exceed the size of the Design Page.*
- *The minimum value is 1 mm (0.04 inch).*

☞ *"Changing the measurement units" on page 202*

Flipping patterns horizontally or vertically

1. Select the pattern that you want to flip (up/down) or vertically (left/right).

2. To flip the pattern horizontally, click **Edit**, then **Mirror**, then **Horizontal**, or click 🔲 on the Toolbar.
To flip the pattern vertically, click **Edit**, then **Mirror**, then **Vertical**, or click 🔲 on the Toolbar.

⚠️ **Note:**
Some patterns imported from embroidery cards cannot be flipped.

Rotating patterns

■ Rotating manually

1. Select the pattern that you want to rotate.

2. Click **Edit**, then **Rotate**, or click 🔲 on the Toolbar.
→ The handles around the selected pattern are replaced by smaller squares at the four corners of the selected pattern.

3. Move the pointer over one of the four rotation handles.
→ When the pointer is moved over a rotation handle, the shape of the pointer changes to ↻ .

4. Drag the rotation handle clockwise or counterclockwise to rotate the pattern in 1° increments.

Advanced Opreation
Layout & Editing

📖 **Memo:**
To rotate the pattern in 15° increments, hold down the (**Shift**) *key while dragging the rotation handle.*

■ Rotating numerically

1. Select the pattern that you want to rotate.

2. Click **Edit**, then **Numerical Setting**, then **Rotate**.

→ The **Rotate** dialog box appears.

3. Type or select the desired rotation angle.

📖 **Memo:**
• *The angle can also be specified by moving the pointer over the red arrow inside of the circle, then dragging the red arrow to the desired angle. When the pointer is moved over the red arrow, its shape changes to*

↻ *.*
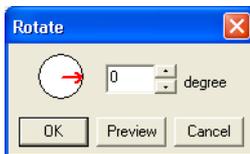
• *Select **0 degree** to leave the pattern unchanged.*

4. Click **OK**.

📖 **Memo:**
• *To view the pattern rotated the specified angle in the Design Page, click **Preview**.*
• *To close the dialog box without applying the changes to the settings, click **Cancel**.*

⚠ **Note:**
The range of values that can be entered is between 0 and 359 degrees, in 1-degree increments.

Grouping embroidery patterns

Several individual objects can be grouped so that the same changes apply to all of the patterns within the group. Grouped objects can however still be edited independently.

1. Select several objects.

2. Click **Edit**, then **Group**.

→ The selected objects are grouped.

📖 **Memo:**
• *If you select only the text fit to a path or only the path, both the path and text will be included in the group.*
• *When selecting an object set as part of a hole sewing pattern, the entire hole sewing pattern will be included in the group.*
• *To ungroup the objects, select the group, and then click **Edit**, then **Ungroup**.*

■ Editing grouped objects individually

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

1. To select a single object within a group, hold down the (**Alt**) key while clicking the object.
To select multiple objects within a group, or to select grouped and ungrouped objects, hold down the (**Alt**) and (**Ctrl**) keys while clicking the objects.

📖 **Memo:**
A light blue frame appears around the grouped objects whenever the group or an individual object is selected.

2. Edit the object as desired.

📖 **Memo:**
Grouping is cancelled if objects are deleted to leave only one.

Editing Points in Embroidery Patterns

Selecting points

1. Click ![tool] on the Tool Box.

→ Two buttons appear: ![buttons].

2. Click ![tool].

→ The shape of the pointer changes to ▷.

3. Click the pattern that you want to edit.

→ The points in the pattern appear as small empty squares.

[illustration of patterns]
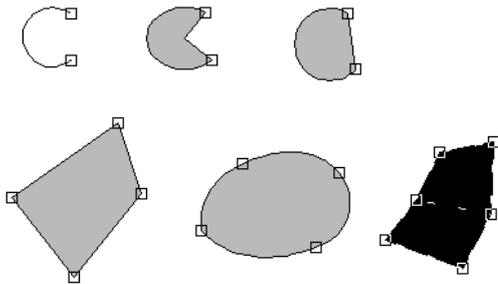
📖 **Memo:**
The pattern can be a broken line, a curve, an arc, a fan shape, an arc & string, a manual punching pattern, or stitch data.

4. To select a single point, click an empty square.

To select additional points, hold down the **Ctrl** key and click each point, or drag the pointer over the points that you want to select.

To select all points between the selected point and the next point selected, hold down the **Shift** key while clicking the next point.

To select an additional point in the direction of the end point, hold down the **Shift** key and press the → or ↓ key. To select an additional point in the direction of the start point, hold down the **Shift** key and press the ← or ↑ key. Holding down the **Shift** key and pressing the opposite arrow key deselects the point.

To deselect the current point and select the following point in the direction of the end point, hold down the **Ctrl** key and press the → or ↓ key. To deselect the current point and select the following point in the direction of the start point, hold down the **Ctrl** key and press the ← or ↑ key.

→ The selected point appears as a small black square.

❗ **Note:**
The points of some patterns cannot be selected.

Moving points

1. Click ![tool] on the Tool Box.

→ Two buttons appear: ![buttons].

2. Click ![tool].

→ The shape of the pointer changes to ▷.

3. Click the pattern that you want to edit.

→ The points in the pattern appear as small empty squares.

📖 **Memo:**
The pattern can be a broken line, a curve, an arc, a fan shape, an arc & string, a manual punching pattern, or stitch data.

4. Click the point that you want to move.

→ The selected point appears as a small black square.

❗ **Note:**
If you click the outline of the pattern instead of a point, a new point is inserted.

5. Drag the point to the new location.
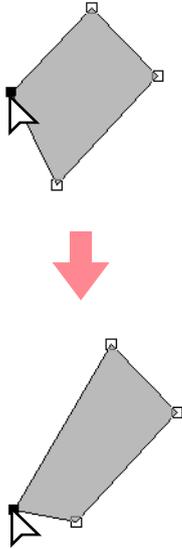
> ⚠ **Note:**
> *You must drag a point that is selected. If you start dragging by clicking elsewhere on the outline of the pattern, a new point will be inserted or the selected point(s) will be deselected.*

> 📖 **Memo:**
> • *All of the selected points move in the same direction.*
> • *To move the point of a broken line, a curve, a manual punching pattern, or stitch data horizontally or vertically, hold down the* **Shift** *key while dragging it.*
> • *Pressing the arrow keys moves the selected point 0.5 mm (about 0.02 inch) in the direction of the arrow on the key.*
> • *If* **Snap to Grid** *is selected, each press of an arrow key moves the point one grid mark in the direction of the arrow on the key.*
> • *The arrow keys cannot be used to move the end points of an arc.*
> • *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.*

Inserting points

New points can be inserted in order to change the shape of a pattern. In the case of a new point on a curve, you can also use the handle to reorient the tangent to the new point.

1. Click 🔧 on the Tool Box.

  → Two buttons appear: 🔧 💿.

2. Click 🔧.

  → The shape of the pointer changes to

  ▷ .

3. Click the pattern that you want to edit.

  → The points in the pattern appear as small empty squares.

> 📖 **Memo:**
> *The pattern can be a broken line, a curve, a manual punching pattern, or stitch data.*

4. Click the outline to add a point.

  → A new point appears selected (as a small black square and, in the case of a curve, with a control handle).
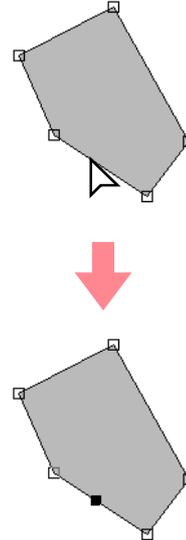
> 📖 **Memo:**
> *If a manual punching block pattern was selected, a pair of new points are inserted.*

Deleting points

1. Click ![tool icon] on the Tool Box.

→ Two buttons appear: ![buttons].

2. Click ![icon].

→ The shape of the pointer changes to

▷ .

3. Click the pattern that you want to edit.

> 📖 **Memo:**
> *The pattern can be a broken line, a curve, a manual punching pattern, or stitch data.*

→ The points in the pattern appear as small empty squares.

4. Click the point that you want to delete.

→ The selected point appears as a small black square.

5. Click **Edit**, then **Delete**, or press the

(**Delete**) key to remove the point.
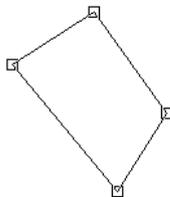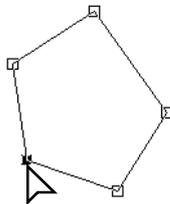
> 📖 **Memo:**
> *If a point of a manual punching block pattern was selected, the pair of points are deleted.*

Transforming straight lines into curves or curves into straight lines

1. Click ![tool icon] on the Tool Box.

→ Two buttons appear: ![buttons].

2. Click ![icon].

→ The shape of the pointer changes to

▷ .

3. Click the pattern that you want to edit.

→ The points in the pattern appear as small empty squares.

4. Click the point that you want to transform.

→ The selected point appears as a small black square.

5. To transform a straight line to a curve, click **Edit**, then **Change To Curve**, or right-click the point, and then click **To Curve** on the menu that appeared.

To transform a curve to a straight line, click **Edit**, then **Change To Straight**, or right-click the point, and then click **To Straight** on the menu that appeared.

→ A point on curve is transformed to a corner, and a corner point is transformed to a point on a curve.
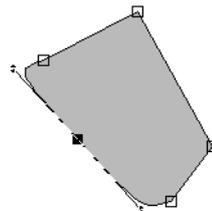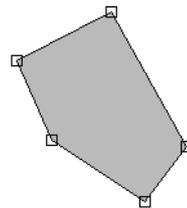
📖 **Memo:**
If the point is on a curve, you can use the control handles to adjust the curve.

Moving entry/exit points and the center point

■ Moving the entry/exit points

You can reposition the entry and exit points of objects created with the tools on the Tool Box in order to adjust the stitching.

1. Click on the Tool Box.

→ Two buttons appear: .

2. Click .

→ The shape of the pointer changes to .

⚠ **Note:**
*If the entry and exit points have been optimized (a check mark appears in front of the **Optimize Entry/Exit points** command on the **Sew** menu), the entry and exit points of the patterns cannot be edited. In order to use this tool for editing the entry and exit points, select the menu command **Sew** – **Optimize Entry/Exit points** to cancel the setting.*

3. Click the object that you want to edit.

→ The entry and exit points of the object appear.

📖 **Memo:**
If the region has the concentric circle stitch or radial stitch applied, the center point of the stitching also appears. (For details on moving the center point, refer to "Moving the center point" on page 139.)
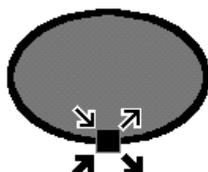
⚠ **Note:**
The entry and exit points of stitch data, text, and manual punching patterns cannot be edited.

This is the entry point for the outline stitching. The previous pattern is connected to this point.

This is the exit point for the outline stitching. Stitching continues from this point to the next pattern.

This is the entry point for the inside region stitching. The previous pattern is connected to this point.

This is the exit point for the inside region stitching. Stitching continues from this point to the next pattern.

📖 **Memo:**
If the outline or the inside region are set to not be sewn, the corresponding point does not appear.

4. Drag the arrow for the point that you want to move to the desired location on the outline.
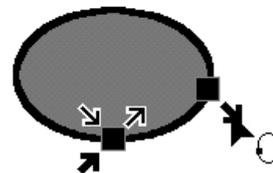
⚠ **Note:**
• *Only entry and exit points for objects created with the Circle or Arc, Rectangle and Outline tools can be edited. Stitch data or objects created with the Text tools or Manual Punch tools cannot be edited.*
• *If the menu command **Sew** – **Optimize Entry/Exit points** is selected to optimize the entry and exit points, all manual adjustments of the entry and exit points will be lost, and the positions of the points will be automatically optimized.*

■ Moving the center point

The center point for regions set to the concentric circle stitch or radial stitch can be repositioned for a more decorative effect.

1. Click ![icon] on the Tool Box.

→ Two buttons appear: ![icons].

2. Click ![icon].

→ The shape of the pointer changes to ![pointer icon].

3. Click the region set to the concentric circle stitch or radial stitch that you want to edit.

→ The entry and exit points and the center point of the object appear.
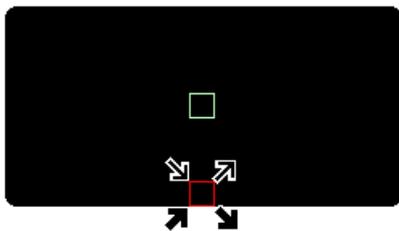
4. Drag the center point to the desired location.

■ Optimizing the entry/exit points

The positions of the entry and the exit points for the objects can be adjusted automatically in order to optimize stitching.

1. Click **Sew**, then **Optimize Entry/Exit points**.

To optimize the entry and exit points, select this command so that a check mark appears. To cancel optimizing, select this command so that no check mark appears.

→ If a check mark appears beside **Optimize Entry/Exit points**, the entry and exit points for the stitching of connected objects with the same color are optimized (in other words, they are connected by the shortest distance possible).

> ⚠ **Note:**
> - *Only entry and exit points for objects created with the Circle or Arc, Rectangle and Outline tools can be optimized.*
> - *If the menu command **Sew** – **Optimize Entry/Exit points** is selected to optimize the entry and exit points, the entry and exit points cannot be moved with the Entry/Exit point tool.*

→ If the check mark does not appear beside **Optimize Entry/Exit points**, the entry and exit points are not optimized. If the optimizing of the entry and exit points is cancelled, the entry point and exit point positions are retained. In addition, the positions of the entry and the exit points can be manually changed with the Entry/Exit/Center point tool.
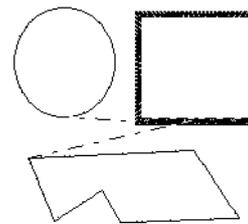
Optimize Entry/Exit points not selected
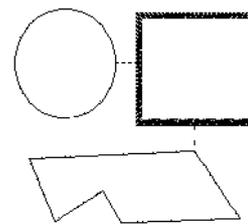
Optimize Entry/Exit points selected

Advanced Opreation
Layout & Editing

Editing Stitch Data

Converting objects to stitch data

Objects drawn with the tools in Layout & Editing can be converted into stitch data, allowing you to make detailed changes by modifying the position of individual stitches.

1. Select the object that you want to convert.

2. Click **Sew**, then **Convert to Stitch**.

   The selected object is converted to stitch data.
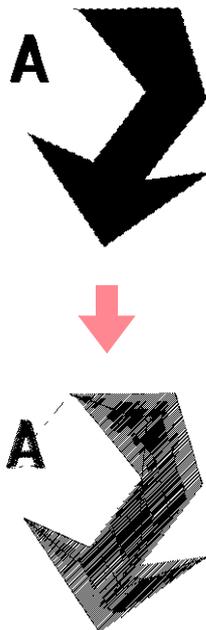
→ The dotted line around the converted data indicates that it is stitch data. Each stitch of the converted data can be edited with the Edit Point tool.

📖 **Memo:**
- *Related text, lines and patterns set for hole sewing will all be converted to stitch data, even if some of the objects are not selected.*
- *Patterns that do not have sewing attributes applied are deleted when the object is converted to stitch data.*

Editing stitch points of stitch data

1. Click ![icon] on the Tool Box.

   → Two buttons appear: ![icons] .

2. Click ![icon] .

   → The shape of the pointer changes to

   ▷ .

3. Click the object that you want to edit.

   → The stitch points in the stitch data appear as small empty squares.

   ⚠ **Note:**
   *Stitch data are surrounded with a dotted line. If the object is not surrounded by a dotted line, it cannot be edited. Select the menu command **Sew** – **Convert to Stitch** to convert the object to stitch data.*

4. To select a single stitch point, click an empty square.

   → The selected stitch point appears as a small black square.

   📖 **Memo:**
   If you click a feed, the points at both ends are selected.

To select multiple stitch points, hold down the

Ctrl key and click each of the other points that you want to select, or drag the pointer over the stitch points that you want to select.

📖 **Memo:**
- *To select all stitch points (in the stitching order) between the selected stitch point and the next point selected, hold down the* **Shift** *key while clicking the next stitch point.*

- *To select an additional stitch point in the stitching order, hold down the* **(Shift)** *key and press the* → *or* ↓ *key. To select an additional stitch point in the opposite direction of the stitching order, hold down the* **(Shift)** *key and press the* ← *or* ↑ *key. Holding down the* **(Shift)** *key and pressing the opposite arrow key deselects the stitch point.*
- *To deselect the current stitch point and select the following point in the stitching direction, hold down the* **(Ctrl)** *key and press the* → *or* ↓ *key. To deselect the current stitch point and select the previous point in the stitching direction, hold down the* **(Ctrl)** *key and press the* ← *or* ↑ *key.*
- *To select all stitch points in the next color, press the* **(Tab)** *key. To select all stitch points in the previous color, hold down the* **(Shift)** *key and press the* **(Tab)** *key.*

→ Selected points appear as small black squares.

⚠ **Note**

When selecting stitch points, be sure to click the stitch point (do not click a blank area of the Design Page), otherwise all of the selected points will be deselected.

■ Moving stitch points

1. Drag the selected stitch points to the new location.

📖 **Memo:**
- *To move the selected stitch point horizontally or vertically, hold down the* **(Shift)** *key while dragging it.*
- *Pressing the arrow keys moves the selected stitch point 0.1 mm in the direction of the arrow on the key.*

■ Inserting stitch points and feeds

1. Click a line between two stitch points to add a new point at that position.

📖 **Memo:**
To insert a stitch point and change the previous line into a feed, hold down the **(Ctrl)** *and* **(Shift)** *keys while clicking on the line.*

■ Deleting stitch points

1. Press the **(Delete)** key to delete the selected stitch point.

📖 **Memo:**
If the end point of a feed is deleted, that feed segment is deleted and the stitches before and after the feed are connected.

■ Editing entry/exit points for each color of the stitch data

1. Click ⬚ on the Tool Box.

→ Two buttons appear: ⬚⬚ .

2. Click ⬚ .

→ The shape of the pointer changes to
▷ .

3. Click the object that you want to edit.

→ The stitch points in the object appear as small empty squares.

4. To select the entry point of the first thread color, press the **(Ctrl)** and **(Home)** keys.

To select the exit point of the last thread color, press the **(Ctrl)** and **(End)** keys.

To select the entry point of a given color, select at least one point in that color, and then press the **(Home)** key.

To select the exit point of a given color, select at least one point in that color, and then press the **(End)** key.

Advanced Opreation
Layout & Editing

141

Changing colors of stitch data

The colors of imported stitch data or objects converted to stitches can be changed in the following way.

Toolbar button:

1. Click , or click **Sew**, then **Sewing Order/Color**.

   → The **Sewing Order/Color** dialog box appears with each data in the pattern in a separate frame.

2. Select the frame for the data whose color you want to change.

3. Click .

   → The **Thread Color** dialog box appears.

4. Select the desired color, and then click **OK**.

   → The object appears in the new color in the **Sewing Order/Color** dialog box and in the Design Page.

5. Repeat steps **2.** to **4.** for each data whose color you want to change.

6. Click **OK**.

   → The pattern is displayed with the new colors.

Converting stitch data to blocks

Imported stitch data or patterns converted to stitch data can be converted into blocks (manual punching data), allowing you to change some of their sewing attributes and to scale individual colors while keeping their stitching quality.

1. Select the stitch data imported into the Design Page where you want to apply the setting.

2. Click **Sew**, then **Stitch to Block**.

   → The **Stitch to Block sensitivity** dialog box appears.

3. Move the slider to select the desired sensitivity.

   📖 **Memo:**
   *The **Normal** setting should provide satisfactory results in most cases, but depending on the complexity of the pattern, you may need to select a setting more towards **Coarse** or **Fine**.*

4. Click **OK**.

   → The data in the blocks are grouped so that any setting change will affect the whole pattern, and the Sewing Attributes bar appears as shown below.

📖 **Memo:**
- *To quit the operation, click **Cancel**.*
- *To modify the sewing attributes of all blocks of the same color within the pattern, hold down the* **Alt** *key while selecting a block whose color or sew type settings you want to change. (An alternate method is to first ungroup the colors of the pattern by selecting the menu command **Edit** – **Ungroup**.) Use the zoom tools to zoom into the design to select the color more easily. All blocks of that color are selected and the block color and sew type appear in the Sewing Attributes bar.*
- *When you scale blocks, the number of stitches sewn automatically adapt to the new size of the blocks, allowing you to keep the original embroidery quality.*
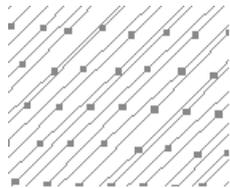
Without **Stitch to Block**
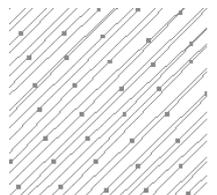
With **Stitch to Block**

⚠ **Note:**
- *The **Stitch to Block** command cannot be used with some stitch data imported from embroidery cards.*
- *Some fill patterns are lost when scaled after setting the Stitch to Block function, therefore it is recommended to scale while holding down the* **Ctrl** *key or by selecting the menu command **Edit** – **Numerical Setting** – **Size**.*

📖 **Memo:**
- *The selected color blocks can be moved or scaled individually, therefore, if you want to move the whole pattern once it has been ungrouped, be sure to carefully regroup each individual color pattern by selecting the menu command **Edit** – **Group**.*
- *You can further modify the pattern by using the Point Edit tool.*

☞ *"Specifying sewing attributes" on page 171, "Scaling patterns" on page 132 and "Selecting points" on page 135*

Splitting off parts of stitch data

The Split stitch tool in the Tool Box allows you to split a pattern after tracing an enclosure around the parts that you want to cut off. You can then move the cutoff sections to rearrange the pattern, combine it with other patterns or even delete it.

📖 **Memo:**
This tool is available only for stitch data, and when the Text, Outline, and Manual Punch tools are not selected.

⚠ **Note:**
Patterns created with the drawing or Text tools of Layout & Editing need to be converted into stitches before they can be cut with the Split stitch tool.

1. Click [icon] on the Tool Box.

2. Click the stitch data that you want to cut a section from.

📖 **Memo:**
You can also click the Split stitch tool after selecting stitch data.

→ All other stitch data disappear from the display, and the shape of the pointer changes to [icon].

3. Click in the Design Page at the point where you want to start drawing the enclosing lines.

📖 **Memo:**
In the Tool Box, only the Zoom tool is available, allowing you to zoom in on the stitch data to better view the area.

4. Continue clicking in the Design Page to specify each corner of the enclosure around the area to be cut off.

Advanced Opreation
Layout & Editing

→ The dotted line that is drawn when you move the pointer changes to a solid line when the next point is specified.
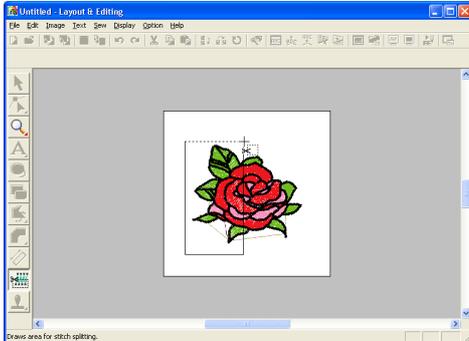
Memo:
- *To remove the last point that was entered, click the right mouse button. Each successive right-click removes points, one by one, in the opposite order that they were entered. Once all points are deleted, the Tool Box buttons are available again, however, the application remains in Split stitch mode.*
- *An enclosure is valid only if it contains stitch data. If it contains no stitch data, an error message appears, and the enclosure is erased, but the application remains in Split stitch mode.*
- *Sections enclosed several times by lines of an intricate figure alternate between being selected and deselected. Therefore, in a figure like a pentagram for instance, only the points are selected, and the center is deselected as it has been enclosed twice.*
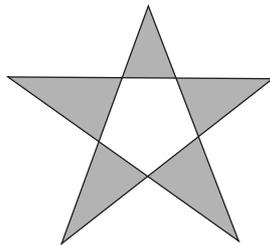
5. Double-click in the Design Page to specify the section to be split off.

6. Edit the cutoff section as desired.

Note:
- *Only one cutoff section can be specified from the pattern at one time. Repeat the procedure for each piece of the pattern that you want to cut off.*
- *The cutoff piece moves to the end of the sewing order and the thread color order appears in the order selected for the original pattern.*

Drawing Circles and Arcs

The Circle or Arc tool allows you to create several curved patterns: regular circles (or ovals), arcs, fan shapes and arc & strings.

Circle	Oval	Arc

Fan shape	Arc & string
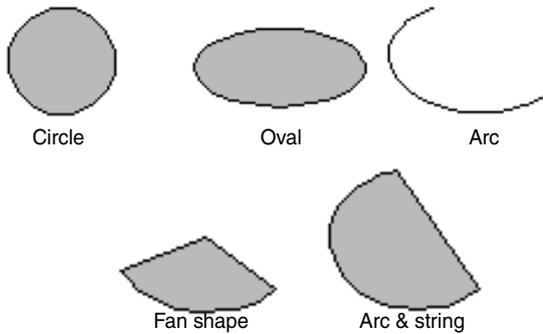
All of these patterns, except arcs have an outline and a inside region, and can independently be assigned different sewing attributes. Arcs are simple outlines.

> **Note:**
>
> *When drawing a shape with this tool, select the shape before drawing. You cannot, for example, draw a circle, then change it to an arc afterward.*
> *The setting is applied to all patterns that you will create with the Circle or Arc tool, until the setting is changed.*

Drawing a circle or an oval

1. Click 🔵 on the Tool Box.

→ The shape of the pointer changes to

$+$⬤, and the Sewing Attributes bar appears similar to the one shown below.

`Circle ▼ ◯ ▣ Zigzag Stitch ▼ ▥ ▣ Fill Stitch ▼`

> 📖 **Memo:**
> • *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 169 and "Sew type" on page 170.*
> • *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then select **Circle**.

3. Drag the pointer in the Design Page.

→ The point where you start dragging is considered a corner of an imaginary rectangle around the oval. The point where you release the mouse button is the diagonally opposite point of the rectangle. The oval will fit inside this imaginary rectangle (its greater axis is along the longer edge of the rectangle, and its smaller axis is along the smaller edge).

> 📖 **Memo:**
>
> *To draw a circle, hold down the* **Shift** *key while dragging the pointer.*

Drawing an arc

1. Click 🔵 on the Tool Box.

→ The shape of the pointer changes to

$+$⬤, and the Sewing Attributes bar appears similar to the one shown below.

`Circle ▼ ◯ ▣ Zigzag Stitch ▼ ▥ ▣ Fill Stitch ▼`

> 📖 **Memo:**
> • *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 169 and "Sew type" on page 170.*
> • *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then click **Arc**.

`Arc ▼ ◯ ▣ Zigzag Stitch ▼`

3. Proceed as you would to draw a circle or an oval.

→ A radial line appears on the oval when the mouse button is released.

4. Move the pointer to the start point of the arc, and then click.

→ The radial line disappears.

5. Move the pointer until the arc has the desired shape, and then click.

Click at start point.

Move to end point.

Click at end point.

Drawing a fan shape

1. Click 🔵 on the Tool Box.

→ The shape of the pointer changes to

╋◯, and the Sewing Attributes bar appears similar to the one shown below.

`Circle ▾ ∿ ■ Zigzag Stitch ▾ ╢╢╢ ■ Fill Stitch ▾`

📖 **Memo:**

- *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 169 and "Sew type" on page 170.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then click **Fan Shape**.
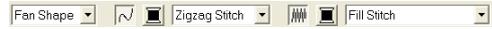
`Fan Shape ▾ ∿ ■ Zigzag Stitch ▾ ╢╢╢ ■ Fill Stitch ▾`

3. Proceed as you would to draw a circle or an oval.

→ A radial line appears on the oval when the mouse button is released.

4. Move the pointer to the start point of the fan shape, and then click.

→ The radial line disappears.

5. Move the pointer until the fan has the desired shape, and then click.

Click at start point.

Move to end point.

Click at end point.

Advanced Opreation
Layout & Editing

Drawing an arc & string

1. Click on the Tool Box.

→ The shape of the pointer changes to

$+$◯, and the Sewing Attributes bar appears similar to the one shown below.

Circle ▾ | ◠ ▮ | Zigzag Stitch ▾ | ∭ ▮ | Fill Stitch ▾

📖 **Memo:**

- *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 169 and "Sew type" on page 170.*
- *You can also use the settings in the Sewing Attribute Setting dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then click **Arc & String**.

Arc & String ▾ | ◠ ▮ | Zigzag Stitch ▾ | ∭ ▮ | Fill Stitch ▾

3. Proceed as you would to draw a circle or an oval.

→ A radial line appears on the oval when the mouse button is released.

4. Move the pointer to the start point of the arc & string, and then click.

→ The radial line disappears.

5. Move the pointer until the arc & string has the desired shape, and then click.

Click at start point.

Move to end point.
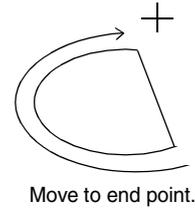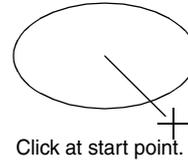
$+$ Click at end point.
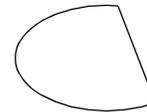
Specifying the geometric attribute

■ Arc shape `Circle ▾`
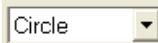
Use this selector to select the type of arc.

📖 **Memo:**

*The **Arc shape** selector appears in the Sewing Attributes bar when* *on the Tool Box is selected.*

1. Click in the **Arc shape** selector.

→ The settings appear.

Circle ▾
Circle
Arc
Fan Shape
Arc & String

2. Click one of the settings.

→ The setting is applied to all patterns that will be created with the Circle or Arc tool, until the setting is changed.

Drawing a Rectangle

With the Rectangle tool, you can draw rectangles with sharp or rounded corners. A rectangle will automatically have an outline and an inside region that can independently be assigned different sewing attributes.
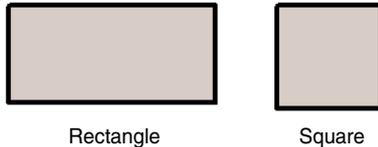
Rectangle　　　　Square

1. Click [icon] on the Tool Box.

→ The shape of the pointer changes to

[icon], and the Sewing Attributes bar appears similar to the one shown below.

`0.0 ▼ mm [icons] Zigzag Stitch ▼ [icons] Fill Stitch ▼`

📖 **Memo:**
- *You can change the edge radius, color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Edge radius" on page 148, "Color" on page 169 and "Sew type" on page 170.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the stitch. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Drag the pointer in the Design Page.

→ The point where you start dragging is considered a corner of the rectangle. The point where the mouse button is released is the diagonally opposite corner of the rectangle.

📖 **Memo:**

To draw a square, hold down the **Shift** *key while dragging the pointer.*

Specifying the geometric attribute

■ Edge radius `0.0 ▼` mm

Use this selector to select the shape of the rectangle corners.

📖 **Memo:**

*The **Edge radius** selector appears in the*

Sewing Attributes bar when [icon] *on the*

Tool Box is selected. It also appears when a rectangle in the Design Page has been selected.

1. Click in the **Edge radius** selector.

```
0.0    ▼
0.0
5.0
10.0
20.0
30.0
50.0
100.0
```
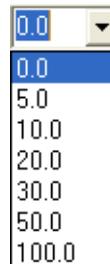
2. Type the desired radius (0 to 100 mm (0 to 3.93 inches)) and press the **Enter** key, or click the desired value.

→ The setting is applied to all patterns that will be created with the Rectangle tool, until the setting is changed.

→ If a rectangle was selected, the setting is also applied to that rectangle.

Example 1　　　　　　　Example 2
Edge radius: 0.0 mm　　Edge radius: 20.0 mm
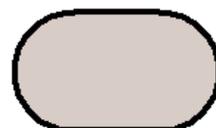
Drawing Straight Lines and Curves

The Outline tools allow you to add straight lines and curves to your pattern.

If the straight line or curve is set to be open (**Open Path**), it will end at the last point entered. Since this type of pattern is a simple outline and does not have an inside region, line sew type and color settings can only be applied to the line itself.

If the straight line or curve is set to be closed (**Close Path**), the last point will automatically connect with the first one. Since this type of pattern has an outline and an inside region, each part can be assigned different sew types and colors. **However, if the line of the pattern crosses itself, the inside region cannot be filled, and the line must be uncrossed so that the fill can be applied.**

While creating the pattern, you can freely switch between drawing straight lines or curves, and once they are drawn, straight lines can be transformed into curves, and curves into straight lines.

Furthermore, if an image is used as a template, one tool can be used to semi-automatically extract the image boundary.

Advanced Opreation
Layout & Editing

End point

Start point

Open line   Closed line

This closed line crosses itself,
so the regions will not be filled.

End point

Start point

Open curve   Closed curve

This closed curve crosses itself,
so the regions will not be filled.
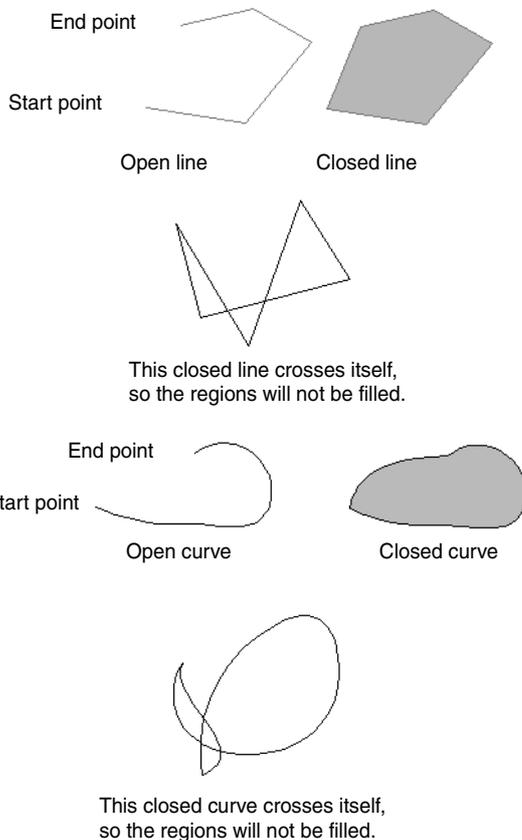
1. Click [icon] on the Tool Box.

→ Three buttons appear: [icons]

[icon] is for drawing straight lines. (Shortcut key: **Z**)

[icon] is for drawing curves. (Shortcut key: **X**)

[icon] is for semi-automatically drawing lines. (Shortcut key: **C**)

2. Click the button for the type of line that you want to draw.

→ The shape of the pointer changes to

$+_S$, $+_S$ or $+_{\square}$, and the Sewing Attributes bar appears similar to the one shown below.

| Close path ▼ | ◢ | ■ | Zigzag Stitch ▼ | ⋙ | ■ | Fill Stitch | ▼ |

📖 **Memo:**

• *You can change the path shape, color and sew type either before or after creating the shape. For more details on changing these settings, refer to "Path shape" on page 150, "Color" on page 169 and "Sew type" on page 170.*

• *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click in the Design Page to specify the start point.

4. Click in the Design Page to specify the next point.

> 📖 **Memo:**
> *To remove the last point that was entered, click the right mouse button.*

5. Continue clicking to specify every point, and then double-click the last end point.

> ⚠ **Note:**
> • *While drawing the pattern, you can freely switch between the different line types either by clicking a different button or by pressing the shortcut key.*
> • *Even after the pattern is drawn, you can transform straight lines into curves and vice versa. For more details, refer to "Transforming straight lines into curves or curves into straight lines" on page 137.*
> • *If **Close Path** is set, double-clicking will automatically draw a line between the last and the first points of the line.*
> • *When drawing a straight line, hold down the* **Shift** *key while moving the pointer to draw vertically or horizontally.*
> • *A template image is needed in order to draw using the Semi-Automatic tool. If there is no image, this tool will draw like the Straight Line tool.*

Specifying the geometric attribute

■ Path shape `Open path ▾`

Use this selector to select whether the broken lines and curves will be open or closed.

> 📖 **Memo:**
> *The **Path shape** selector appears in the Sewing Attributes bar when* 🖰 *on the Tool Box is selected. It also appears when a broken line or curve in the Design Page has been selected.*

1. Click the **Path shape** selector.

　→ The settings appear.

```
Open path ▾
Open path
Close path
```
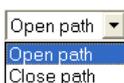
2. Click the desired option.

→ The setting is applied to all patterns that will be created with the Outline tools, until the setting is changed.

→ If a broken line or curve was selected, the setting is also applied to that broken line or curve.

Creating Manual Punching Data

The Manual Punch tools are used to create patterns that look like manual embroidery. With manual punching, you can create data with any sewing order, direction and orientation that you want.

Letters that you design yourself constitute a typical example of patterns that look better using manual punching patterns. The illustrations below show two previews of the letter "O".

The one shown below has been designed using two concentric ovals without a line sewing attribute, filling the larger oval with the fill stitch, and turning off the region sewing attribute inside the small oval. The pair was then set for hole sewing.

Fill stitch
(The stitching has a constant direction.)
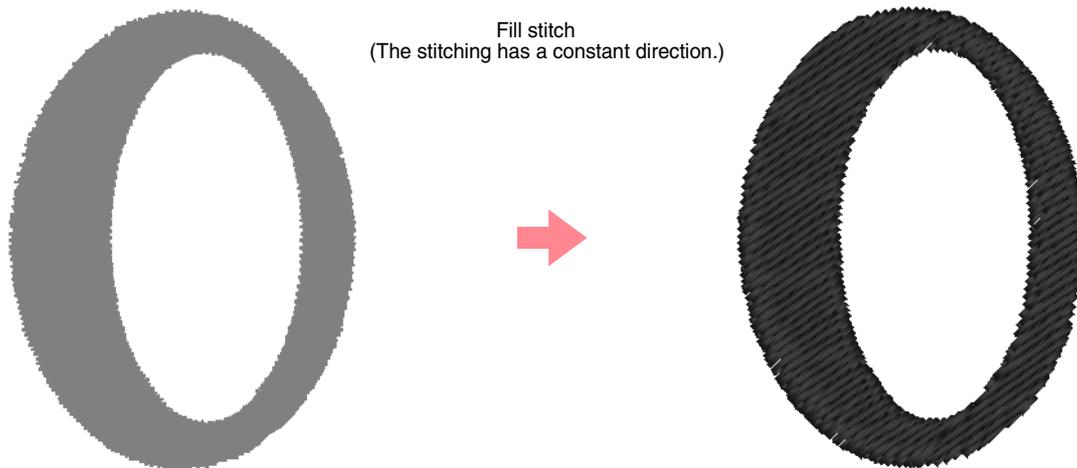
Advanced Opreation
Layout & Editing

The letter shown below has been drawn using the Manual Punch tools. To do this, we duplicated the letter shown above, removed the inside region, and created a manual punching pattern using the outlines of the ovals as guides. The ovals were then deleted.

Manual punching
(The direction of the stitching follows the curve.)
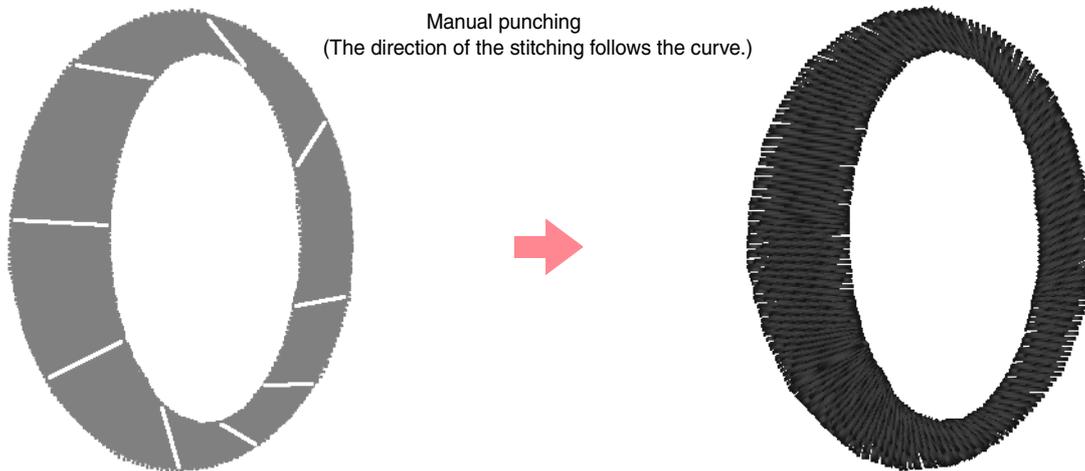
The stitch density for both letters was set to a minimum in order to make it easier to see the difference between the two patterns on the preview display.

When creating a manual punching pattern, it is easier to use an image in the background as a guide. In the above example, we used two ovals that we removed after completing the manual punching pattern.

Another possibility is to load a template image and redraw it using manual punching patterns. The advantage of this method is that you have a better control on the thread orientation.

1. Open a template or prepare an image that you will use as a guide.

2. Click ![icon] on the Tool Box.

→ Five buttons appear:

![five buttons]

![icon] is for creating straight block-type

punching patterns. (Shortcut key: **Z**)

![icon] is for creating curved block-type

punching patterns. (Shortcut key: **X**)

![icon] is for semi-automatically creating block-

type punching patterns. (Shortcut key: **C**)

![icon] is for creating running-type punching

patterns (the broken line is sewn). (Shortcut

key: **V**)

![icon] is for creating feed-type punching

patterns (the broken line is not sewn).

(Shortcut key: **B**)

While creating a manual punching pattern, you can alternate between the various types. For example, you can start with a straight block-type pattern, then switch to a running-type pattern (to draw an outline of the block-type pattern), then switch to the feed type to move to the beginning of the next block-type pattern. The whole pattern, consisting of different types of punching patterns, will be considered a single object (all parts will have the same sew type and color).

In this example, we start with a straight block-type pattern, use the feed-type pattern to move the pointer, and then create a running-type pattern.

3. Click ![icon] to start creating a straight block-

type pattern.

→ The shape of the pointer changes to

![pointer icon] , and the Sewing Attributes bar appears similar to the one shown below.

![Satin Stitch bar]

📖 **Memo:**
- *You can change the color and sew type either before or after creating the pattern. For more details on changing these settings, refer to "Color" on page 169 and "Sew type" on page 170.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the pattern. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

4. Click in the Design Page to specify point 1 (start point).

5. Refer to the illustration below, and click in the Design Page to specify points 2 through 8.
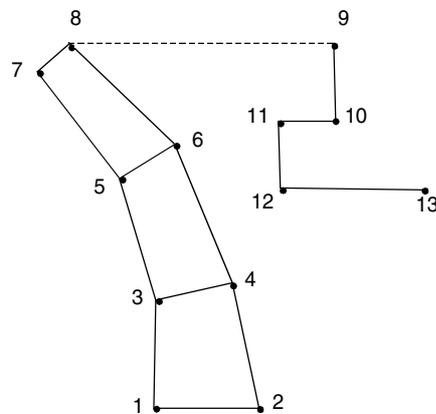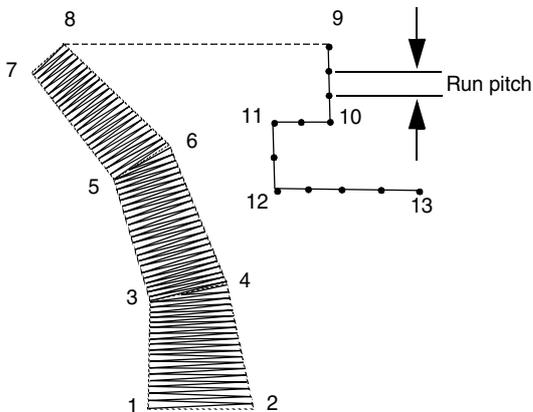
8   9

Run pitch

📖 **Memo:**
To remove the last point that was entered, click the right mouse button.

6. After clicking point 8 (the last point of the block-type pattern), click ![feed-type] (feed-type pattern button), and then in the Design Page

Entering Text

1. Click ![A] on the Tool Box.
→ Two buttons appear: ![A ABC].

2. Click ![A].
→ The shape of the pointer changes to

![I], and the Sewing Attributes bar appears similar to the one shown below.

`01 ABC Aa0-987Aa ▼ | 10.0 ▼ | mm | ▣ | Satin Stitch ▼`

3. If necessary, change the font, text size, color and sew type.

📖 **Memo:**
• You can change the font, text size, color, and sew type either before or after creating the text. For more details on changing these settings, refer to "Font" on page 154, "Text Size" on page 156, "Color" on page 169 and "Sew type" on page 170.

to specify point 9 (the start point of the running-type pattern).

7. Click ![running-type] (running-type pattern button), and then click in the Design Page to specify points 10, 11, and 12, as shown in the above illustration.

8. To complete the pattern, double-click point 13 (the last point of the entire pattern).

📖 **Memo:**
• When entering points, change the punch type by pressing the appropriate shortcut key.
• A template image is needed in order to use the semi-automatic block-type punch tool. If there is no image, this tool will create a punching pattern like the straight block-type punch tool.
• Once the pattern is drawn, you can still transform straight block-type patterns into curved block-type patterns and vice versa. For details, refer to "Transforming straight lines into curves or curves into straight lines" on page 137.

*• You can also use the settings in the **Sewing Attribute Setting** dialog box and the **Text Attribute Setting** dialog box to define other attributes of the text. (For more details, refer to "Specifying sewing attributes" on page 171 and "Specifying text attributes" on page 157.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

⚠️ **Note:**
• If one of the fonts provided with this application (01 to 35) is selected, the line sewing attributes cannot be changed.

4. Click in the Design Page where you want the text to appear.
→ The **Edit Text Letters** dialog box appears, containing a chart with all characters available with the selected font.

Advanced Opreation
Layout & Editing
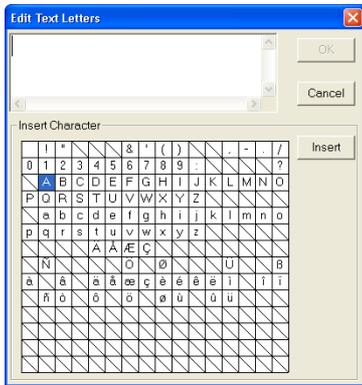
Note:

Text created using certain TrueType fonts may not be converted correctly into an embroidery pattern due to the shape of the character. These characters cannot be embroidered correctly. Before sewing your project, embroider a trial piece of fabric. In addition, text created using some TrueType fonts cannot be converted at all. In this case, the area containing the converted text will be empty or a warning message will appear.

5. Type the text.

Memo:

- *Press the (Enter) key to enter a new line of text.*
- *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.*
- *An enlarged image of the character appears below the pointer when it is moved over a character in the character table, providing a better view of the character.*

6. Click **OK**.

→ The text is displayed in the Design Page.

Memo:

- *To quit the operation, click **Cancel**.*
- *If you want to edit the entered text, select it, and then select the menu command **Text – Edit Letters**. Edit the text in the **Edit Text Letters** dialog box that appears. (For more details, refer to "Editing entered text" on page 156.)*

Note:

*If you entered a character that is not available for the selected font, an error message appears. Click **OK** to close the message and return to the **Edit Text Letters** dialog box, where you can correct the text.*

Specifying text attributes

■ Font

Use this selector to select a font for the text.

Memo:

*The **Font** selector appears when* A *on the Tool Box is selected. It also appears when text or a character in the Design Page has been selected.*

1. Click in the **Font** selector.

→ A list of fonts appears.
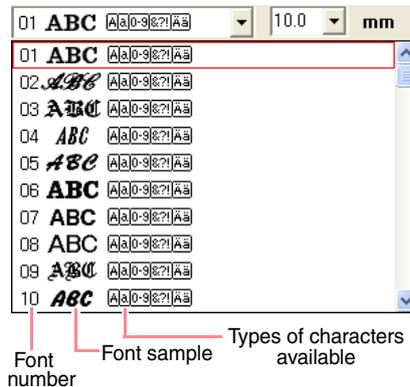
Font number — Font sample — Types of characters available

2. Click the desired font.

→ The setting is applied to all text patterns that you will create, until the setting is changed.

→ If text patterns or characters in a text pattern were selected, the setting is also applied to the selected text.

The available fonts and the types of characters available with each font are listed below.

01 **ABC** Ａａ0-9&?!Ää	
02 *ABC* Ａａ0-9&?!Ää	
03 **ABC** Ａａ0-9&?!Ää	
04 *ABC* Ａａ0-9&?!Ää	
05 *ABC* Ａａ0-9&?!Ää	
06 **ABC** Ａａ0-9&?!Ää	
07 **ABC** Ａａ0-9&?!Ää	
08 ABC Ａａ0-9&?!Ää	
09 **ABC** Ａａ0-9&?!Ää	
10 *ABC* Ａａ0-9&?!Ää	
11 **ABC** Ａａ0-9&?!	
12 *ABC* Ａａ0-9&?!	
13 **ABC** Ａａ0-9&?!	
14 *ABC* Ａａ0-9&?!	
15 **ABC** Ａａ0-9&?!	
16 ABC Ａａ0-9&?!	
17 *ABC* Ａａ0-9&?!	
18 **ABC** Ａ	
19 *ABC* Ａ	
20 **ABC** Ａａ0-9&?!	
21 **ABC** Ａ	
22 **ABC** Ａａ	
23 **A.B.C.** Ａ	
24 **ABC** Ａ	
25 **ABC** Ａ	
26 **ABC** Ａ	
27 **ABC** Ａ	
28 **ABC** Ａ	
29 ABC Ａ 0-9	
30 *ABC* Ａａ0-9&?!Ää	
31 **ABC** Ａａ0-9&?!Ää	
32 **ABC** Ａａ0-9&?!Ää	
33 **ABC** Ａａ0-9&?!Ää	
34 **ABC** Ａａ0-9&?!Ää	
35 *ABC* Ａａ0-9&?!Ää	

Ａ Uppercase letters of the English alphabet

ａ Lowercase letters of the English alphabet

0-9 Numerals

&?! Punctuation marks, brackets and other symbols

Ää Uppercase and lowercase accented letters

The names and samples of installed TrueType fonts appear after the fonts listed in the table above.

01 **ABC** Ａａ0-9&?!Ää ▼	10.0 ▼	mm

T Arial   AaBbYyZz
T Arial Black   **AaBbYyZz**
T Batang   AaBbYyZz
T BatangChe   AaBbYyZz
T Comic Sans MS   AaBbYyZz
T Courier New   AaBbYyZz
T Dotum   AaBbYyZz
T DotumChe   AaBbYyZz
T Estrangelo Edessa   AaBbYyZz
T Franklin Gothic Medium   AaBbYyZz
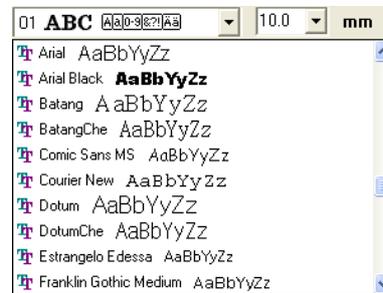
Memo:
*TrueType font settings can be changed in the **TrueType Font Attribute Setting** dialog box, which is displayed by clicking the menu command **Text** – **TrueType Font Attribute Setting**. For more details, refer to "Specifying TrueType text attributes" on page 161.*

Note:
Some TrueType fonts may not convert well into clean embroidery patterns due to their design and shape.

☞ *"Entering Text" on page 153, "Editing Points in Embroidery Patterns" on page 135 and "Specifying TrueType text attributes" on page 161*

■ **Text Size** `10.0 ▼` mm

Use this selector to select the size of the text.

> 📖 **Memo:**
> *The **Text Size** selector appears in the*
> *Sewing Attributes bar when* $\mathbf{A}$ *on the Tool*
> *Box is selected. It also appears when text or*
> *a character in the Design Page has been*
> *selected.*

1. Click in the **Text Size** selector.
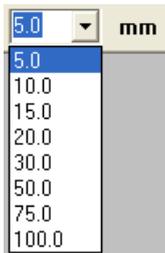
```
5.0    ▼    mm
5.0
10.0
15.0
20.0
30.0
50.0
75.0
100.0
```

2. Type the desired height (5 to 100 mm (0.20 to

3.93 inches)) and press the **Enter** key, or
click the desired value.

→ The setting is applied to all text patterns
that you will create, until the setting is
changed.

→ If text patterns or characters in a text pat-
tern were selected, the setting is also ap-
plied to the selected text.

☞ *"Entering Text" on page 153 and "Editing*
Points in Embroidery Patterns" on
page 135

Editing entered text

Text that has been entered can easily be edited.

1. Select the text that you want to edit.

> ⚠ **Note:**
> *You cannot edit more than one text pattern*
> *at a time. If you select more than one text*
> *pattern, this menu command is not available.*

2. Click **Text**, then **Edit Letters**.

→ The **Edit Text Letters** dialog box ap-
pears.
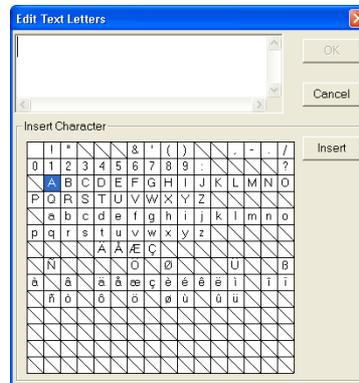
3. The selected text is displayed in the text field.

4. Edit the text as needed.

> 📖 **Memo:**
> • *Press the* **Enter** *key to enter a new line*
>   *of text.*
> • *You can also enter a character by*
>   *selecting it in the character table, then*
>   *clicking **Insert**, or simply by double-*
>   *clicking it. This is particularly useful if you*
>   *have to enter accented characters that are*
>   *not available on your keyboard.*
> • *An enlarged image of the character*
>   *appears below the pointer when it is*
>   *moved over a character in the character*
>   *table, providing a better view of the*
>   *character.*

5. Click **OK**.

→ The edited text is displayed in the Design
Page.

> 📖 **Memo:**
> • *To close the dialog box without applying*
>   *the changes, click **Cancel**.*
> • *If text converted from a TrueType font is*
>   *selected, the list of characters displayed is*
>   *for the font of the first letter in the text.*

> ⚠ **Note:**
> *If you entered a character that is not*
> *available for the selected font, an error*
> *message appears. Click **OK** to close the*
> *message and return to the **Edit Text Letters***
> *dialog box, where you can correct the text.*

☞ *"Entering Text" on page 153*

Selecting characters

1. Click on the Tool Box.

→ Two buttons appear:

2. Click .

→ The shape of the pointer changes to

▷ .

3. Click the text that you want to edit.

→ The points in the text appear as small empty squares.

4. To select a single character, click the point for the character that you want to select.

To select multiple characters, hold down the **Ctrl** key and click each point for the other characters, or drag the pointer over the characters that you want to select.

→ The points for the selected characters appear as a small black squares.

📖 **Memo:**
- *To select all characters between the selected character and the next character selected, hold down the* **Shift** *key while clicking the next character.*
- *To select an additional character in the direction of the last character, hold down the* **Shift** *key and press the → or ↓ key. To select an additional character in the direction of the first character, hold down the* **Shift** *key and press the ← or ↑ key. Holding down the* **Shift** *key and pressing the opposite arrow key deselects the character.*
- *To deselect the current character and select the following character in the direction of the last character, hold down the* **Ctrl** *key and press the → or ↓ key. To deselect the current character and select the following character in the direction of the first character, hold down the* **Ctrl** *key and press the ← or ↑ key.*

5. Change the font, size, color, sew type and other attributes.
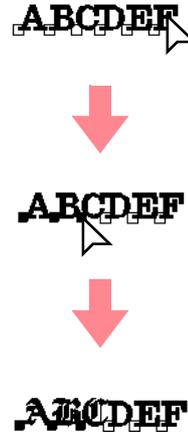
📖 **Memo:**
With TrueType fonts, the outline can be set to be sewn or not, and settings can be selected for the color and sew type.

Specifying text attributes

Various character attributes for text can be set in the **Text Attribute Setting** dialog box.

Toolbar button:

1. Select the text that you want to edit.

2. Click , or click **Text**, then **Text Attribute Setting**.

→ The **Text Attribute Setting** dialog box appears.

Advanced Opreation
Layout & Editing
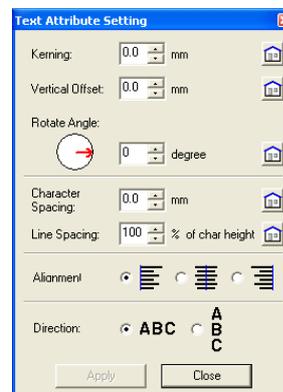
3. If necessary, change the text attributes.

> 📖 **Memo:**
> *To return a parameter to its default setting, click **Default** beside it.*

4. Click **Apply** to confirm the effect of the setting.

> 📖 **Memo:**
> *To close the dialog box, click **Close**.*

Kerning	Sets the spacing between individual characters. Range: -100 to 100 mm (-3.94 to 3.94 inches) Default: 0	0.0 mm **Abcdef** 5.0 mm (between "A" and "b") **A bcdef**
Vertical Offset	Moves the text vertically. Range: -100 to 100 mm (-3.94 to 3.94 inches) Default: 0	0.0 mm **Abcdef** 2.0 mm **Abcdef**
Rotate angle	Rotates the characters. Range: 0 to 359 degrees Default: 0	0 degree **Abcdef** 20 degrees **Abcdef**
Character Spacing	Sets the spacing between all characters. Range: -100 to 100 mm (-3.94 to 3.94 inches) Default: 0	0.0 mm **Abcdef** 2.0 mm **A b c d e f**
Line Spacing	Sets the spacing between lines as a percentage of the character height. Range: 0–1000% Default: 0	100% **A b c d e f g h i j k l** 150% **A b c d e f g h i j k l**
Alignment	Aligns several lines of text to the left, center or right.	Center **A b c d e f g h i j k l** Right **A b c d e f g h i j k l**

Direction	Specifies whether characters will be positioned horizontally or vertically.	Horizontal A B C Vertical A B C

> 📖 **Memo:**
> • *Vertical text will be displayed in vertically on the Design Page.*
> • *Both **Kerning** and **Character Spacing** set the spacing between characters. **Character Spacing** is always applied to the entire text pattern, while **Kerning** can be applied to individual characters. Applying **Kerning** to the entire text in the pattern is the same as specifying **Character Spacing**. Refer to "Selecting characters" on page 157 for more details about selecting individual characters in a text pattern.*

☞ *"Specifying text arrangement" below and "Transforming text" on page 160*

Specifying text arrangement

A line of text can be arranged along a path.

Toolbar button: 🔘

1. Select the text and a path.

Abcdef
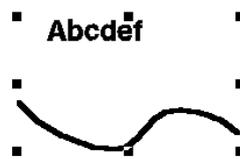
2. Click 🔘 , or click **Text**, then **Fit Text to Path Setting**.

→ The **Fit Text to Path Attribute Setting** dialog box appears.

Fit Text to Path Attribute Setting

Horizontal Alignment: Vertical Alignment: Text Orientation:

ABC ▾   ABC ▾   A B C ▾

☐ the other side   OK   Cancel
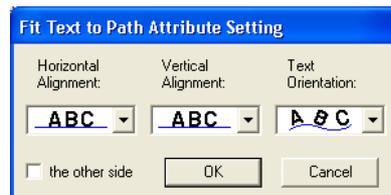
3. From the **Horizontal Alignment**, **Vertical Alignment** and **Text Orientation** selectors, select the desired settings.

> 📖 **Memo:**
> *To position the text on the other side of the path, select **the other side** check box.*

4. Click **OK** to apply the settings.

> 📖 **Memo:**
> *To quit the operation, click **Cancel**.*

> ❗ **Note:**
> *When text arrangement is specified, the text transformation is cancelled. Only one string of text can be arranged on a single path.*

Horizontal Alignment	Sets the distribution of characters along the path.	
Vertical Alignment	Sets the distance between the text and the path.	
Text Orientation	Sets the orientation of the characters relative to the path.	
The other side	Reverses the characters.	

☞ *"Canceling text arrangement" on page 160*

159

■ Canceling text arrangement

The text arrangement on a path can be cancelled.

Toolbar button:

1. Select text that is arranged on a path (Fit to Path).

2. Click , or click **Text**, then **Release Text from Path**.

☞ *"Specifying text arrangement" on page 158*

Transforming text

A preset transform shape can be applied to text.

Toolbar button:

1. Select the text that you want to transform.

2. Click , or click **Text**, then **Transform Text**.

   → The **Text Transform Setting** dialog box appears.
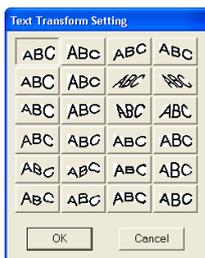
3. Select the desired transformation shape, and then click **OK**, or double-click the shape to apply the transformation.

   ABCDE → ABCDE

> **Memo:**
> • *To quit the operation, click Cancel.*
> • *If necessary, set the level of transformation. For details, refer to "Transform level" on this page.*

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

☞ *"Canceling text transformation" below*

■ Transform level

Use this selector to select the level of transformation.

> **Memo:**
> *The Transform level selector appears in the Sewing Attributes bar when transformed text in the Design Page has been selected.*

1. Click in the **Transform level** selector

2. Type the desired value (0 to 100%) and press the **(Enter)** key, or click the desired value.

   → The setting is applied to all transformed text patterns that you will create, until the setting is changed.

   → If a text pattern was selected, the setting is applied to the selected text.

   AAAAA   ₐₐAAA

   50%   100%

☞ *"Entering Text" on page 153 and "Transforming text" on this page*

■ Canceling text transformation

The original shape of the text can be restored.

Toolbar button:

1. Select the transformed text.

2. Click , or click **Text**, then **Clear Transformation**.

Specifying TrueType text attributes

Various character attributes, such as the style, can be specified for TrueType fonts converted to an embroidery pattern.

1. Select the TrueType text that you want to edit.

2. Click **Text**, then **TrueType Font Attribute Setting**.

→ A dialog box similar to the one shown below appears. If any characters converted from a TrueType font are selected, the attributes for the selected characters are displayed.

📖 **Memo:**
- *The name of the selected font appears beside **Font**.*
- *The **Sample** box shows a sample of the font with the selected attributes.*

3. To change the font style, select the desired style from the **Font Style** list.

4. To change the character set for the font, select the desired character set from the **Script** selector.

5. Click **OK** to set the attributes and to close the dialog box.

→ The attribute settings are applied to all text patterns that you will create from a TrueType font, until the setting is changed.

→ If a text pattern converted from a True-Type font was selected, the attribute settings are also applied to the selected text.

📖 **Memo:**
*To close the dialog box without changing any settings, click **Cancel**.*

⚠️ **Note:**
- *The settings for **Font Style** and **Script** differ depending on the TrueType font that is selected.*
- *If text created from multiple TrueType fonts is selected, this command is not available.*
  In addition, if text of the same font but different font styles or scripts is selected, this dialog box appears with the attribute settings for the first letter in the text.
  In either case mentioned above, selecting only one character from within text displays a dialog box containing only that character's attributes.

☞ *"Entering Text" on page 153 and "Specifying text attributes" on page 157*

Converting text to outline data

Outline data can be created from text converted to a TrueType font.

1. Select the text pattern that has been converted to a TrueType font.

2. Click **Text**, then **Convert to Outline Object**.

→ The selected text pattern is converted to outlines.

No sewing attributes are specified for the converted outline; therefore, it appears as dotted lines. Specify the sewing attributes as necessary.

📖 **Memo:**
In order to prevent the pattern from losing its shape, group the objects or specify hole sewing.

Advanced Opreation
Layout & Editing

Entering Monograms

The monogram function allows you to create monograms composed of one to three uppercase letters and arrange a decorative pattern around them.

1. Click [A] on the Tool Box.

→ Two buttons appear: [A] [ABC] .

2. Click [ABC] .

→ The shape of the pointer changes to

] , and the Sewing Attributes bar appears similar to the one shown below.

[Mc Diamond ABABCC ▾ 20.0 ▾ mm ▣ Satin Stitch ▾]

3. If necessary, change the font, text size, color and sew type.

> 📖 **Memo:**
> • *You can change the font, text size, color, and sew type either before or after creating the monogram. For more details on changing these settings, refer to "Monogram Font" on page 163, "Monogram Size" on page 163, "Color" on page 169 and "Sew type" on page 170.*
> • *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the monogram. (For more details, refer to "Specifying sewing attributes" on page 171.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

4. Click in the Design Page where you want the monogram to appear.

→ The **Edit Monogram Letters** dialog box appears.
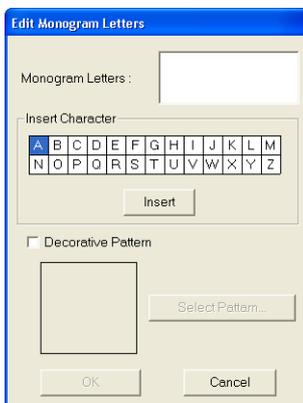
5. Type the monogram text (uppercase characters).

> 📖 **Memo:**
> • *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it.*
> • *You can enter up to three uppercase characters with the monogram function.*

> ⚠ **Note:**
> *You cannot insert line feeds. If you press the* (Enter) *key, the dialog closes and the monogram is displayed in the Design Page.*

6. To add a decorative pattern around or at the sides of the monogram, select the **Decorative Pattern** check box.

→ The currently selected pattern appears in the preview window.
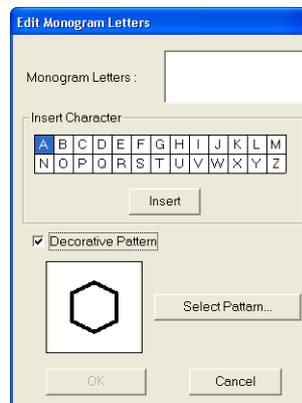
7. To change the decorative pattern, click **Select Pattern**.

→ The **Browse** dialog box appears. The new decorative pattern can be selected.
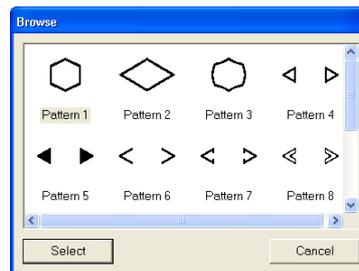
8. Click a decorative pattern to select it, and then click **Select** (or double-click the pattern) to close the **Browse** dialog box and display the pattern in the preview window.

9. After selecting the desired settings, click **OK**.

→ The monogram is displayed in the Design Page with the selected decorative pattern.

📖 **Memo:**
*To quit the operation, click **Cancel**.*

Specifying monogram attributes

■ Monogram Font Ⓜ Diamond AABBCC ▾

Use this selector to select a font for the monograms.

📖 **Memo:**
*The **Monogram Font** selector appears in the*

Sewing Attributes bar when ABC *on the*

Tool Box is selected. It also appears when a monogram in the Design Page has been selected.

1. Click in the **Font** selector.

→ A list of monogram fonts appears.

Ⓜ Diamond **AABBCC** ▾
Ⓜ Diamond **AABBCC** ⌃
Ⓜ Script ***AABBGG*** ⌄

Monogram font name — Monogram font sample
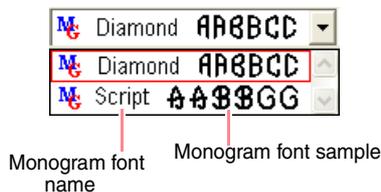
2. Click the desired font.

→ The setting is applied to all monogram patterns that you will create, until the setting is changed.

→ If a monogram was selected, the setting is also applied to the selected monogram.

■ Monogram Size 10.0 ▾ mm

Use this selector to select the size of the monogram.

📖 **Memo:**
*The **Monogram Size** selector appears in the*

Sewing Attributes bar when ABC *on the*

Tool Box is selected. It also appears when a monogram in the Design Page has been selected.

1. Click in the **Monogram Size** selector.
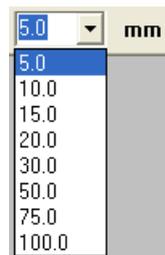
5.0 ▾ mm
5.0
10.0
15.0
20.0
30.0
50.0
75.0
100.0

2. Type the desired height (5 to 100 mm (0.20 to 3.93 inches)) and press the **Enter** key, or click the desired value.

→ The setting is applied to all text patterns that you will create, until the setting is changed.

→ If a monogram was selected, the setting is also applied to the selected monogram.

Editing monograms

A monogram that has been entered can easily be edited.

1. Select the monogram that you want to edit.

⚠ **Note:**
You cannot edit more than one monogram at a time. If you select more than one monogram, this menu command is not available.

Advanced Opreation
Layout & Editing

163

2. Click **Text**, then **Edit Letters**.

→ The **Edit Monogram Letters** dialog box appears, where the characters of the selected monogram are displayed in the text field and the selected decorative pattern is displayed in the preview window.
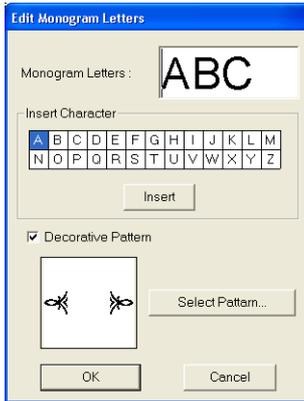
3. Edit the text as needed.

📖 **Memo:**
- *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it.*
- *To change the decorative pattern, click **Select Pattern**, and then select the new pattern in the **Browse** dialog box that appeared.*
- *To remove the decorative pattern, clear the **Decoration** check box.*

⚠ **Note:**
You cannot insert line feeds. If you press the **Enter** *key, the dialog closes and the monogram is displayed in the Design Page.*

4. Click **OK**.

→ The edited monogram is displayed in the Design Page.

📖 **Memo:**
- *To close the dialog box without applying the changes, click **Cancel**.*

☞ *"Entering Monograms" on page 162*

Editing monogram characters and the decorative pattern

1. Click ![icon] on the Tool Box.

→ Two buttons appear: ![icons].

2. Click ![icon].

→ The shape of the pointer changes to ▷ .

3. Click the monogram that you want to edit.

→ The points in the monogram appear as small empty squares.

4. To select a single character or the decorative pattern, click the point for the character that you want to select or for the decorative pattern.

To select multiple characters and the decorative pattern, hold down the **Ctrl** key and click each point for the other characters or decorative pattern, or drag the pointer over the characters or the decorative pattern that you want to select.

→ The points for the selected characters or decorative pattern appear as a small black squares, and the Sewing Attributes bar appears similar to the one shown below.

![Satin Stitch]

5. Change the color or sew type.
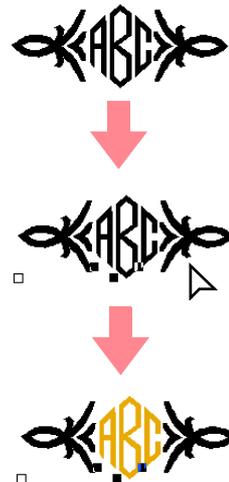
Applying and Editing Stamps

Stamps can be applied to regions of objects drawn with the Circle or Arc tool, Rectangle tool, Outline tools, Text tools and the Manual Punch tools. Some stamp patterns are provided with this application; however, by using Programmable Stitch Creator, you can edit the patterns that are provided or you can create your own.

Applying a stamp

1. Click ![stamp icon] on the Tool Box.

→ Two buttons appear: ![two buttons] .

2. Click ![stamp icon] .

→ The shape of the pointer changes to

![pointer icon] , and the **Stamp Attribute Setting**

dialog box appears.

![Stamp Attribute Setting dialog box]

3. In the dialog box, select a stamp pattern (.pas file with stamp settings applied).

📖 **Memo:**
- *Engraving and embossing stamp settings appear as red- and blue-filled areas.*
- *.pas files with no stamp settings are also listed.*

- *To select a different folder, click ![folder icon] .*

![Browse for Folder dialog box]

*In the **Browse for Folder** dialog box that appeared, select the desired folder, and then click **OK** (or double-click the folder) to close the **Browse for Folder** dialog box and display the stamp patterns from the selected folder in the preview window.*

4. To change the width and height of the stamp, type or select the desired size (1 to 100 mm (0.04 to 3.94 in.)) under **Size** in the **Stamp Attribute Setting** dialog box.

5. To change the orientation of the stamp, move the pointer over the red arrow inside of the circle under **Direction**, and then drag the red arrow to the desired angle.

📖 **Memo:**
- *The dialog box remains displayed so that the size and orientation of the stamp can be adjusted at any time.*
- *To close the dialog box, click **Close**.*
- *To open the dialog box again after closing*

  it, click ![icon] .

6. Click the object where you want to apply the stamp to select it.

→ "Marching lines" appear around the se-lected object, and the shape of the pointer

changes to ![stamp icon] whenever it is moved over the selected object.

7. Click the desired locations within the object where you want to apply the stamp.

→ The stamps appear as dotted lines in the object.

![heart dotted line image]

Advanced Opreation
Layout & Editing

165
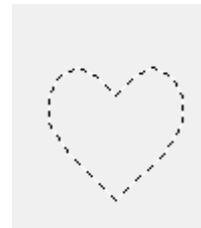
📖 **Memo:**
- *The whole stamp appears, even if it is larger than the object that it has been applied to, however, only the parts that are enclosed within the object will be sewn.*
- *Stamps can only be applied to objects drawn with the Circle or Arc tool, Rectangle tool, Outline tools, Text tools and the Manual Punch tools and that have the satin stitch, fill stitch and programmable fill stitch applied.*
- *To apply several stamps within the same object, continue clicking the object as often as needed.*
- *If the pointer cannot fit within the selected object, the stamp cannot be applied.*
- *The **Stamp Attribute Setting** dialog box appears only after a stamp tool is selected.*
- *Stamps are only sewn within the object that they have been applied to.*

Editing a stamp

1. Click 🔖 on the Tool Box.

→ Two buttons appear: 🔖 🔖 .

2. Click 🔖 .

→ The shape of the pointer changes to

🔖 , the **Stamp Attribute Setting** dialog box appears, and stamps that have been applied are indicated by pink dotted lines.
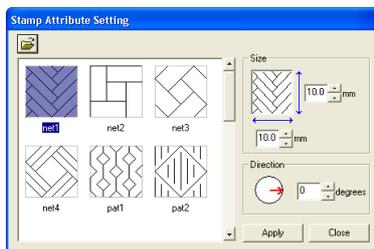
📖 **Memo:**
If an object was already selected, "marching lines" appear around the region, and its stamps are indicated by dotted lines.

3. Click the object with the stamp that you want to edit.

→ "Marching lines" appear around the selected object.

4. Click the stamp that you want to edit.

→ Round handles appear around the stamp, and a rotation handle appears at the top of the stamp.

Rotation handle

Handles
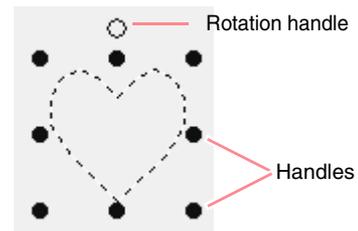
⚠️ **Note:**
Only one stamp can be selected at a time. If you select another stamp, the previously selected stamp becomes deselected.

5. To change the stamp pattern, select a different pattern in the **Stamp Attribute Setting** dialog box, and then click **Apply**.

To change the stamp size and orientation, specify the desired settings in the **Stamp Attribute Setting** dialog, or adjust it by dragging the handles or rotation handle.

To move a stamp, drag it to another location within the object or partially positioned on the object.

To delete the stamp, select the menu command **Edit** – **Delete**, or press the

Delete key.

📖 **Memo:**
- *When a pattern with a stamp applied is moved, the stamp is moved together with the pattern. However, changes to the size and orientation of the pattern do not affect the size and orientation of the stamps. After editing the shape of an object, it may be necessary to check the region and adjust the stamps.*
- *Stamps appear only after a stamp tool is selected.*
- *Stamps are only sewn within the region that they have been applied to.*
- *To close the dialog box, click **Close**.*

☞

Applying Sewing Attributes to Lines and Regions

The Sewing Attributes bar allows you to set the following attributes:

- geometric attributes (arc shape, rectangle edge radius, and path shape)
- text attributes (font, size and transformation level)
- embroidery attributes (thread color and sew type, outline and inside region on/off)

The sewing attributes that are available depend on the tool selected in Tool Box, and the type of embroidery pattern selected.

Example 1: When the Select Object tool is selected, but no object or pattern is selected

| □ | ■ | Zigzag Stitch ▼ | ▥ | ■ | Fill Stitch ▼ |

Example 2: When a text tool is selected, or text is selected

| 01 **ABC** Aa0-9&?!Aa ▼ | 10.0 ▼ | mm | ■ | Satin Stitch ▼ |

When the pointer is positioned over a button or selector in the Sewing Attributes bar, a label indicating the name of that element appears. In the following instructions, we will refer to the elements of the Sewing Attributes bar according to these labels.

As a general rule, the different characteristics available for a given pattern can be set either just before creating the pattern, or after the pattern is created. For example, when drawing a rectangle, you can set the colors and the corner radius just after starting the rectangle drawing mode. When the rectangle is created, you can select it and change its characteristics.

The only exception to that rule is when you use the circle and arc drawing mode: you must decide what kind of pattern you want (circle, arc, etc.) before actually creating it. In addition, you will not be able to change the pattern type once the pattern is created.

Geometric attributes

Circle ▼	**Arc shape**: Selects the type of arc.	page 145
0.0 ▼ mm	**Edge radius**: Sets the corner radius of rectangles.	page 148
Open path ▼	**Path shape**: Opens and closes broken lines and curves.	page 150

Text attributes

01 **ABC** Aa0-9&?!Aa ▼	**Font**: Selects a font for text.	page 154
10.0 ▼ mm	**Text Size**: Selects the size for text.	page 156
50 ▼ %	**Transform level**: Selects the level of transformation.	page 160

Embroidery attributes

□	**Line sew**: Switches on/off sewing for the line. When sewing for the outline is switched off, it is not sewn (and you cannot set its color or sew type).	page 168
▥	**Region sew**: Switches on/off sewing for the region. When sewing for the inside region is switched off, it is not sewn (and you cannot set its color or sew type).	page 169
■	**Line color**, **Region color**, **Text color**, **Punch color**: Sets the thread color for outlines, inside regions, text and manual punching patterns.	page 169
	Special colors	page 170
Zigzag Stitch ▼	**Line sew type**: Sets the sew type for the outlines.	page 170
Fill Stitch ▼	**Region sew type**: Sets the sew type for an inside region, text and manual punching patterns.	page 170

Setting the thread color and sew type

All patterns can be assigned at least one color and sew type. Patterns with an outline and an inside region can be assigned two different thread colors and sew types. If a gradation is set, an additional color can be added to the region. (For details on gradations, refer to "Creating a gradation" on page 179.) In addition, each character in a text pattern can be assigned individual thread colors and sew types.

Patterns with an outline and a inside region: text converted from TrueType fonts, circles, fan shapes, arcs & strings, rectangles, closed broken lines, and closed curves. For these patterns, it is possible to switch on and off sewing for the outline and the regions.

Patterns with only an outline: arcs, open broken lines, and open curves. For these patterns, it is still possible to switch on and off sewing for the outline.

Patterns with only a region: text created with fonts provided with this software and manual punching patterns. For these two types of patterns, it is not possible to switch on and off sewing of the inside region.

Manual punching patterns: You can set a color for three manual punching pattern types (block, semi-automatic block and running), but you can only set a sew type for manual punching block patterns.

■ **Line sew**

Clicking this button switches on/off sewing for an outline.

> 📖 **Memo:**
> * The **Line sew** button is available only when the Select Object tool is selected and no patterns are selected, when you select a pattern that has an outline (text converted from a TrueType font, circles, arcs, fan shapes, arcs & strings, rectangles, broken lines, curves), or when you click $\mathbf{A}$, 🍥 , 🔲 , or 🔩 on the Tool Box to start drawing such a pattern.
> * When line sewing is switched off, the line is not sewn (and you cannot set its color or sew type).

1. Click the **Line sew** button.

    This button has two settings:

    On: The **Line color** button and the **Line sew type** selector are displayed.

    Off: The **Line color** button and the **Line sew type** selector are not displayed.

    Clicking the button switches between the two settings.

    Line sew
        Line color   Line sew type
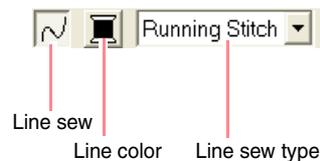
    → The settings are applied to all patterns that you will create with an outline, until the setting is changed.

    → If a pattern is selected, the settings are applied to the selected pattern.

    Line sewing on: Line sewing off:

2. To switch on outline sewing, click the **Line sew** button again.

    > ⚠️ **Note:**
    > *If one of the fonts included in this software (font number 1 through 35) are selected, the line sewing attributes cannot be changed.*

    ☞ *"Color" on page 169 and "Sew type" on page 170*

■ Region sew 〰️

Clicking this button switches on/off sewing for an inside region.

> 📖 **Memo:**
> - *The **Region sew** button is available only when the Select Object tool is selected and no patterns are selected, when you select a pattern that has an inside region (text, fan shapes, arcs & strings, rectangles, closed broken lines, curves),*
>
>   *or when you click* $\boxed{A}$ *,* $\boxed{☉}$ *,* $\boxed{⬒}$ *, or*
>
> $\boxed{⬓}$ *on the Tool Box to start drawing such a pattern.*
> - *When region sewing is switched off, the region is not sewn (and you cannot set its color or sew type).*

1. Click the **Region sew** button.

This button has two settings:

On: The **Region color** button and the **Region sew type** selector are displayed.

Off: The **Region color** button and the **Region sew type** selector are not displayed.

Clicking the button switches between the two settings.

〰️ ⬛ | Fill Stitch ▼ |

Region sew
    Region color   Region sew type
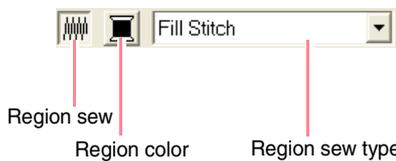
→ The settings are applied to all patterns that you will create with an inside region, until the setting is changed.

→ If a pattern is selected, the settings are applied to the selected pattern.

2. To switch on region sewing, click the **Region sew** button again.

☞ *"Color" on page 169 and "Sew type" on page 170*

■ Color ⬛

Click this button to set the thread color for outlines, inside regions, texts and manual punching patterns.

> 📖 **Memo:**
> - *The **Line color** and **Region color** buttons appear in the Sewing Attributes bar (if they have not been switched off with the **Line sew** or **Region sew** buttons) when the Select Object tool is selected and no patterns are selected.*
> - *When you enter one of the drawing modes or text input mode, or select an existing pattern, the color button for the corresponding pattern appears.*

1. Click the **Color** button.

→ A **Thread Color** dialog box similar to the one shown below appears.
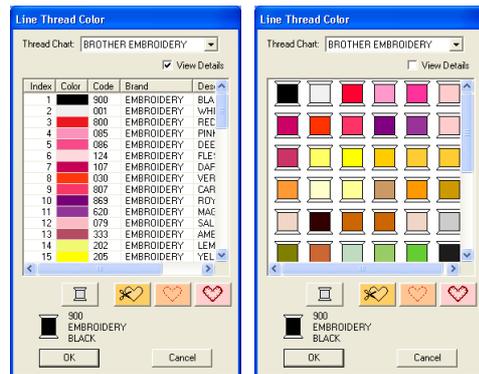
> 📖 **Memo:**
> *To view a list of only the thread colors, clear the **View Details** check box.*

2. From the **Thread Chart** selector, select a system chart or a user thread chart.

3. From the list of thread colors, select the desired color.

> 📖 **Memo:**
> - *The color can also be selected by double-clicking it.*
> - *For details on the four buttons under the list, refer to "Special colors" on page 170.*

4. Click **OK**.

> 📖 **Memo:**
> *To quit the operation, click **Cancel**.*

→ This setting is applied to all patterns of the same type that you will create, until the setting is changed. The color button of each category shows the current color for that category.

→ If a pattern is selected, the setting is applied to the selected pattern.

☞ For details on specifying a user thread chart or for information on how machines handle thread colors, refer to "Editing User Thread Color Lists" on page 190.

☞ "Line sew" on page 168 and "Region sew" on page 169

■ Special colors

NOT DEFINED

APPLIQUE

APPLIQUE POSITION

APPLIQUE MATERIAL
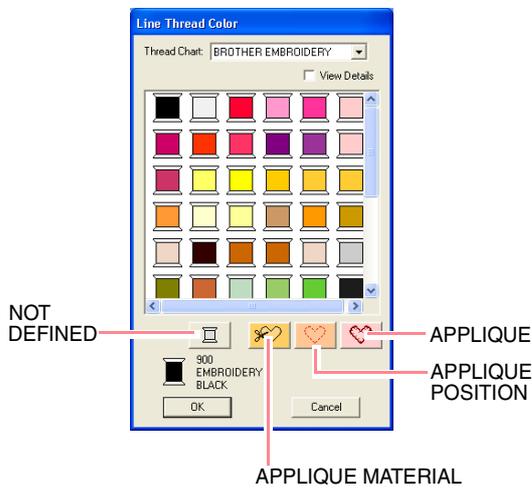
- **NOT DEFINED**: Sewing machines that feature automatic thread color display will automatically switch the display to the specified color. If you are using such a machine and if you want to be able to select manually the color for a monochrome pattern, you can select **NOT DEFINED**.

- **Colors for creating appliqués**: You can create appliqués using the three special colors shown in the above illustration. **APPLIQUE MATERIAL** marks the outline of the region to cut from the appliqué material. **APPLIQUE POSITION** marks the position on the backing material where the appliqué must be sewn. **APPLIQUE** sews the appliqué on the backing material.

📖 **Memo:**
By using the Applique Wizard, appliqués can easily be created. For details, refer to "Using the Applique Wizard" on page 181.

■ Sew type

| Zigzag Stitch ▼ | Fill Stitch ▼ |

Use these to set the sew type for outlines, inside regions, text, and manual punching patterns.

📖 **Memo:**
- *The **Line sew type** and **Region sew type** selectors appear in the Sewing Attributes bar (if they have not been switched off with the **Line sew** or **Region sew** buttons) when the Select Object tool is selected.*
- *When you enter one of the drawing modes or select an existing pattern, the sew type selector for the corresponding pattern appears.*

1. Click in a sew type selector.

→ The available settings that appear differ depending on the object that is selected.

Object type	**Line sew type** settings	**Region sew type** settings
Text (built-in fonts)	None	**Satin Stitch**, **Fill Stitch**, and **Prog. Fill Stitch** (programmable fill stitch)
Text (TrueType fonts)	**Zigzag Stitch**, **Running Stitch Motif Stitch**, and **E/V Stitch**	
Manual punching pattern	None	**Satin Stitch**, **Fill Stitch**, and **Prog. Fill Stitch** (programmable fill stitch), **Piping Stitch**
Others	**Zigzag Stitch**, **Running Stitch Motif Stitch**, and **E/V Stitch**	**Satin Stitch**, **Fill Stitch**, **Prog. Fill Stitch** (programmable fill stitch), **Motif Stitch**, **Cross Stitch**, **Concentric Circle Stitch**, **Radial Stitch** and **Spiral Stitch**

2. Click the desired sew type.

→ This setting is applied to all patterns of the same type that you will create, until the setting is changed.

→ If a pattern is selected, the setting is applied to the selected pattern.

❗ **Note:**
*You can set the sewing attributes for the selected line and region sew types in the **Sewing Attribute Setting** dialog box. When you select **Prog. Fill Stitch** or **Motif Stitch**, you also need to select a pattern in the **Sewing Attribute Setting** dialog box, as there is no default pattern setting.*

☞ *"Line sew" on page 168, "Region sew" on page 169 and "Specifying sewing attributes" below*

Specifying sewing attributes

Various sewing attributes for lines and regions can be set in the **Sewing Attribute Setting** dialog box

Toolbar button: 🖼️

1. Click one of the Tool Box buttons used to draw or select objects.

2. Click 🖼️ in the Toolbar

→ The **Sewing Attribute Setting** dialog box appears.

Beginner mode:
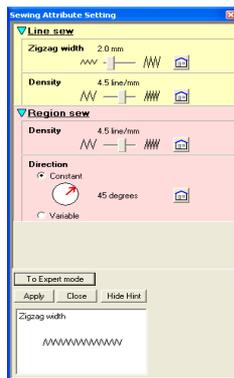
Expert mode:
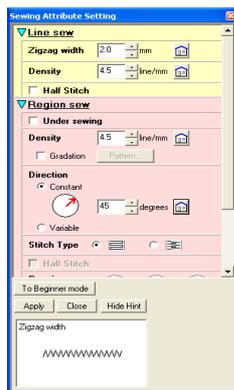
📖 **Memo:**
- *An alternate method is to select the menu command **Sew** – **Setting Attribute**.*
- *The sewing attributes displayed in the dialog box depend on the selected sew type.*

3. To display only basic sewing attributes and simpler settings, click **To Beginner mode**. To display all of the sewing attributes and settings available for the selected sew type, click **To Expert mode**.

📖 **Memo:**
- *Settings that cannot be selected in Beginner mode are retained from the previous setting in Expert mode.*
- *To hide the preview box, click **Hide Hint**. To display the preview box, click **Show Hint**.*
  *When the **Hide Hint** button is displayed, the preview box is displayed, allowing you to view a stitching sample when the pointer is moved over the setting. The preview box shows the setting changes that you make.*

4. If necessary, change the sewing attributes displayed under **Line Sew** or **Region Sew**.

📖 **Memo:**
- *In some cases, you may need to scroll through the settings, or resize the dialog box by dragging one of its corners in order to view all of the sewing attributes.*
- *The method for entering settings varies according to the attribute. When entering numerical values in Expert mode, click the arrow buttons to select the value or enter the value directly. In Beginner mode, use the slider to change the settings. If 🏠 appears, click the button to return to the default setting.*

☞ *For details on the different sewing attributes and settings, refer to "Line sewing attributes" on page 172 and "Region sewing attributes" on page 173.*

⚠️ **Note:**
All settings made in the dialog box are retained and will be applied regardless of the mode, until they are changed.

5. Click the **Apply** button in the dialog box to apply the new sewing attributes.

6. Click **Close** to close the dialog box.

Advanced Opreation
Layout & Editing

■ Line sewing attributes

The available attributes differ depending on the selected sew type.

Zigzag stitch

Zigzag width	Sets the width of the zigzag. Range: 1–10 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Density	Sets the number of lines per millimeter (inch). Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Half Stitch	Sets half stitching on or off. If one side of the zigzag stitching is dense, a half stitch could be sewn automatically to provide a more even density. Available for text and objects created with the drawing tools. Default: Off

Running stitch

Run pitch	Sets the pitch of the line sewing. Range: 1–10 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Run times	Sets the number of times that the border will be sewn. Range: 1–5 Default: 1

Motif stitch

Run pitch		Sets the pitch of the line sewing. Range: 1–10 mm (0.04–0.39 inch) Default: 10.0 mm (0.39 inch)
Motif		Select a pattern for the motif stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pmf file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
	Width (horizontal length)	Sets the pattern width (the direction along the line). Range: 2–10 mm (0.08–0.39 inch) Default: 5.0 mm (0.20 inch)
	Height (vertical length)	Sets the pattern height (the direction perpendicular to the line). Range: 2–10 mm (0.08–0.39 inch) Default: 5.0 mm (0.20 inch)
	H-Arrange (horizontal arrangement)	Sets the horizontal arrangement of the pattern. For patterns like , the patterns will be arranged along the line as shown at the right.
	V-Arrange (vertical arrangement)	Sets the vertical arrangement of the pattern. For patterns like , the patterns will be arranged along the line as shown at the right.

E/V stitch

<table>
<tr>
<td rowspan="6">E Stitch
V Stitch</td>
<td colspan="3">Selects the E stitch or V stitch.</td>
</tr>
<tr>
<td>Interval</td>
<td>Sets the distance between stitches.
Range: 1.0–20.0 mm (0.04–0.79 inch)
Default: 5.0 mm (0.20 inch)</td>
<td>E stitch   V stitch</td>
</tr>
<tr>
<td>Stroke width</td>
<td>Sets the pattern height (the direction per-
pendicular to the line).
Range: 1.0–10.0 mm (0.04–0.39 inch)
Default: 2.5 mm (0.10 inch)</td>
<td>E stitch   V stitch</td>
</tr>
<tr>
<td>Run pitch</td>
<td>Sets the pitch of the line sewing.
Range: 1.0–10.0 mm (0.04–0.39 inch)
Default: 2.0 mm (0.08 inch)</td>
<td>E stitch   V stitch</td>
</tr>
<tr>
<td>Run time(s)</td>
<td colspan="2">Sets the reverse stitching for the running stitches. With the V stitch, the "V" is
included in the run times.
Range: 1, 3, 5
Default: 1</td>
</tr>
<tr>
<td>Stroke times</td>
<td colspan="2">Sets the number of strokes of the yarn carrier.
Available only if E Stitch is selected.
Range: 1–3
Default: 1</td>
</tr>
<tr>
<td></td>
<td>Arrange</td>
<td>Sets the inside/outside arrangement of
the E stitch or V stitch.</td>
<td>E stitch   V stitch</td>
</tr>
</table>
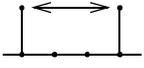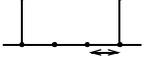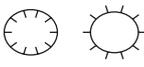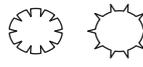
<div style="text-align:right"><i>Advanced Opreation</i>
Layout & Editing</div>

■ Region sewing attributes

The available attributes differ depending on the selected sew type.

Satin stitch

<table>
<tr>
<td>Under sewing</td>
<td>Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to pre-
vent shrinking during stitching. Depending on the shape of the region, however, it may not be
possible to select this setting.
On: Underlay stitching will be sewn.
Off: Underlay stitching will not be sewn.</td>
</tr>
<tr>
<td>Density</td>
<td>Sets the number of lines per millimeter.
Range: 1–7 lines per mm (25–178 lines per inch)
Default: 4.5 lines per mm (114 lines per inch)</td>
</tr>
<tr>
<td>Gradation</td>
<td>Sets the density gradation setting on or off.
Available when the type of sewing direction is set to Constant.
Click Pattern to set the gradation pattern.
Default: Off
For details on this attribute, refer to"Creating a gradation" on page 179.</td>
</tr>
<tr>
<td>Direction</td>
<td>[Type] Specifies the type of sewing direction.
Constant: Sews at a fixed angle. The angle is specified by the angle setting.
Variable: Varies the sewing direction according to the object being sewn.
[Angle] Specifies the sewing angle.
Available only when the sewing direction type is
set to Constant.
Range: 0–359 degrees
Default: 45 degrees</td>
</tr>
</table>

Half Stitch	Sets half stitching on or off. Available for text, manual punching patterns and objects created with the drawing tools, and for geometric shapes when the type of sewing direction is set to **Variable**. If one side of the satin stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off	On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region	Inside of region: Along outline: Onto outline:
Pull Compensation	Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 0–2 mm (0.00–0.08 inch) Default: 0.0 mm (0.00 inch)	

Fill stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. Depending on the shape of the region, however, it may not be possible to select this setting. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn.
Density	Sets the number of lines per millimeter. Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to"Creating a gradation" on page 179.
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 90° 135° 45° 180° 0° 225° 315° 270°
Stitch Type	Specifies the shape of stitching on the edges. Available settings: 目 , 目 Default: 目 (for all objects other than text) 目 (for text)
Half Stitch	Sets half stitching on or off. Available for text, manual punching patterns and objects created with the drawing tools, and for geometric shapes when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:

Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region	Inside of region: Along outline: Onto outline:
Step Pitch	Sets the pitch of the stitching. Range: 1–10 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch)	Step pitch
Frequency	Sets the spacial frequency steps. Range: 0–99% Default: 30%	30%　　0%
Pull Compensation	Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 0–2 mm (0.00–0.08 inch) Default: 0.0 mm (0.00 inch)	

Programmable fill stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. Depending on the shape of the region, however, it may not be possible to select this setting. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn.
Density	Sets the number of lines per millimeter. Range: 1–7 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to"Creating a gradation" on page 179.
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 90° 135° 45° 180° 0° 225° 315° 270°
Half Stitch	Sets half stitching on or off. Available for text, manual punching patterns and objects created with the drawing tools, and for geometric shapes when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:

Advanced Opreation
Layout & Editing

Pull Compensation			Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 2–10 mm (0.08–0.39 inch) Default: 0.0 mm (0.00 inch)
Programmable fill	📂		Select a pattern for programmable fill stitch. Click 📂 , and then, in the **Browse** dialog box that appeared, select the folder containing the .pas file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
	Width (horizontal length)		Sets the stitch pattern width. Range: 2–10 mm (0.08–0.39 inch) Default: 7.5 mm (0.30 inch)
	Height (vertical length)		Sets the stitch pattern height. Range: 5–10 mm (0.20–0.39 inch) Default: 7.5 mm (0.30 inch)
	Direction		Allows you to rotate the angle of the stitch patterns. Range: 0–359 degrees Default: 0 degrees
	Offset	Direction	Sets the direction of the offset as **row**/**column**. **row** **column**
		Value	When the pattern's arrangement is offset, sets the amount of offset. Range: 0–99% Default: 0%
	Base Sew Specifies the base stitching.	**Stitch Type**	Specifies the shape of stitching on the edges. Available only when the **Base Sew** check box is selected. Available settings: ▤ , ▤ Default: ▤ (for all objects other than text) ▤ (for text)
		Step Pitch	Sets the pitch of the stitching for the base of a programmable fill stitch. Available only when the **Base Sew** check box is selected. Range: 1–10 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch) Step pitch
		Frequency	Sets the spacial frequency steps of the stitching for the base of a programmable fill stitch. Available only when the **Base Sew** check box is selected. Range: 0–99% Default: 30% 30% 0%

Pattern

The stitching for the base (area other than the pattern indicated by the diagonal lines) of the programmable fill stitch can be set.

The pattern is sewn with the specified stitching.

Motif stitch

Motif	Selects whether to use pattern 1 or pattern 2 for the motif stitch. If you choose to use both patterns, the data is created to sew alternating rows of the two. **Pattern1 only**: Uses only pattern 1 (Default) **Pattern2 only**: Uses only pattern 2 **Pattern1 and 2**: Uses pattern 1 and pattern 2			
	Pattern1 Pattern 2		Select a pattern for the motif stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pmf file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.	
		Width (horizontal length)	Sets the pattern width (the direction along the line). Range: 2–10 mm (0.08–0.39 inch) Default: 5.0 mm (0.20 inch)	
		Height (vertical length)	Sets the pattern height (the direction perpendicular to the line). Range: 2–10 mm (0.08–0.39 inch) Default: 5.0 mm (0.20 inch)	
		H-Arrange (horizontal arrangement)	Sets the horizontal arrangement of the pattern. For patterns like ◇, the patterns will be arranged along the line as shown at the right.	Normal: Mirror: Alternate:
		V-Arrange (vertical arrangement)	Sets the vertical arrangement of the pattern. For patterns like ▷, the patterns will be arranged along the line as shown at the right.	Normal: Mirror: Alternate:
	Direction		Allows you to rotate the angle of the motif stitch. Range: 0–359 degrees Default: 0 degrees	
	Row Offset		Sets the amount of offset for each row. Range: 0–10 mm (0.00–0.39 inch) Default: 0.0 mm (0.00 inch)	
	Run Pitch		Sets the pitch of the sewing. Range: 1–10 mm (0.04–0.39 inch) Default: 10.0 mm (0.39 inch)	

Cross stitch

Size	Sets the horizontal and vertical size of the pattern. In Expert mode, the set value is converted automatically and displayed in the box for the other measurement units. Range: 1.5–5.0 mm (0.06–0.20 inch) or 5–17 counts Default: 2.5 mm (0.10 inch) or 10 counts
Times	Sets the number of times that the pattern will be sewn. Sews twice per time. Range: **Single**, **Double**, **Triple** Default: **Single**

Concentric circle stitch, radial stitch and spiral stitch

For details on moving the center point of the concentric circle stitch and the radial stitch, refer to "Moving the center point" on page 139.

Density	Sets the number of lines per millimeter. Range: 0.5–7.0 lines per mm (13–178 lines per inch) Default: 2.0 lines per mm (51 lines per inch)
Run pitch	Sets the pitch of the line sewing. Range: 1–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)

Advanced Operation
Layout & Editing

Piping stitch

Stitches run parallel through the length of adjacent blocks.

Available only for manual punching patterns.
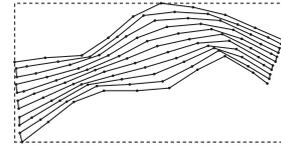
Density	Sets the number of lines per millimeter. Range: 0.5–7.0 lines per mm (13–178 lines per inch) Default: 2.0 lines per mm (51 lines per inch)
Run pitch	Sets the pitch of the line sewing. Range: 1–10.0 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch)
Frequency	Sets the spacial frequency steps. Range: 0–99% Default: 30%

30%   0%

Manual punch

Feathered edge	Sets which edge of the stitching that the feathered edge is applied to. Top: Feathered edge is sewn on the top edge. Bottom: Feathered edge is sewn on the bottom edge. When creating data with a Manual Punch tool, the top edge is the side containing the first and third points, and the bottom edge is the side containing the second and fourth points.	Feather edge applied to the top:
		Select a pattern for the feathered edge. Click , and then, in the **Browse** dialog box that appeared, double-click the desired pattern, or select it, and then click **OK**.
	Length	Sets the length of the feathered edge. Range: 0.2–100 mm (0.01–3.94 inches) Default: 3 mm (0.12 inch)
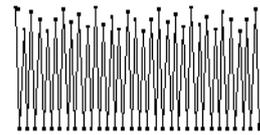
Notes on programmable fill stitches and stamps

When setting the sew type and pattern directions of a programmable fill stitch or a stamp, lines will not be sewn if the sew type and pattern direction settings cause a stitch to be sewn in the same direction as a line in the stitch pattern.

Use the Preview function to view exactly how the stitch pattern will be sewn, and then set the stitch direction and pattern direction according to the selected sew type or to the effect that you want to produce. 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°
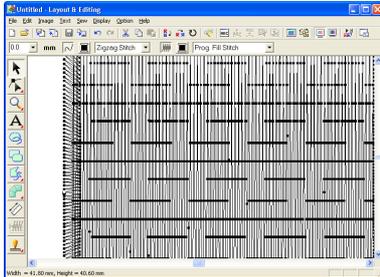
Example 3
Stitch direction: 0°
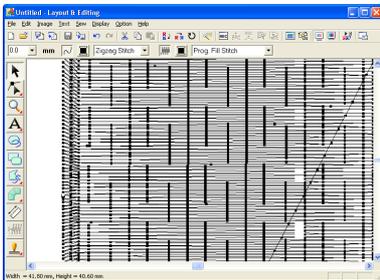
☞ *"Previewing the Sewing Image" on page 187 and "Programmable Stitch Creator" on page 208*

Creating a gradation

The density of one or two colors can be adjusted at various locations to create a custom gradation pattern.

1. In Expert mode of the **Sewing Attribute Setting** dialog box, select the **Gradation** check box under **Region sew**.

2. Click **Pattern**.

→ The **Gradation Pattern Setting** dialog box appears.
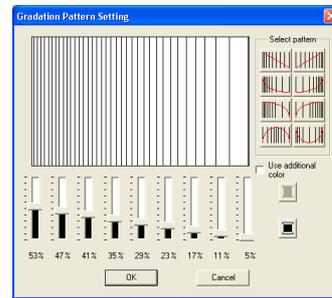
3. To change the thread color, click [ ] . Select a color in the **Thread Color** dialog box that appeared, and then click **OK**.

4. To select a preset gradation pattern, click the desired pattern under **Select pattern**.

5. Move the sliders to adjust the density of the gradation pattern.

> 📖 **Memo:**
> *The preview area shows the setting changes that you make.*

6. To blend two colors, select the **Use additional color** check box, click [ ] under **Use additional color**. Select a color in the **Thread Color** dialog box that appeared, and then click **OK**.

7. Click **OK**.

> 📖 **Memo:**
> • *If the **Use additional color** check box is cleared, the gradation settings are applied to the remaining color.*
> • *To close the dialog box without applying the changes to the gradation pattern, click **Cancel**.*

Advanced Opreation
Layout & Editing

Specifying 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.

1. Select a pair of patterns, for example, a circle included in an oval.

> 📖 **Memo:**
> *For a pair to be valid, one of the patterns must be completely enclosed within the other pattern, and not contain text, manual punching patterns or stitch data.*

Valid
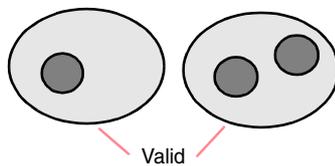
2. Click **Sew**, then **Set Hole Sewing**.

Invalid
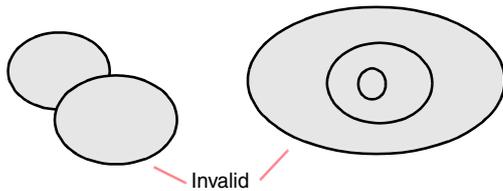
→ If the selected pair can be set for hole sewing, the following message appears.

> **Layout & Editing**
> ⚠ Setting hole sewing was completed.
> [OK]

→ If the selected pair cannot be set for hole sewing, the following message appears.

> **Layout & Editing**
> ⚠ Invalid pair was selected!!
> [OK]

Sewn twice　　　　　Sewn once

Hole sewing not set　　　Hole sewing set
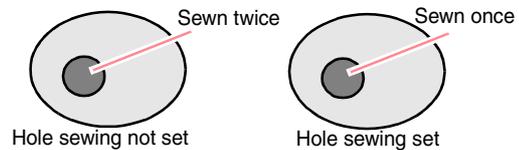
3. Click **OK** to remove the message.

> 📖 **Memo:**
> • *Once a pair of patterns has been set for hole sewing, they will move together if you try to move one of the patterns. To select only one pattern to be moved or resized, hold down the* **Alt** *key while selecting it. (An alternate method is to cancel hole sewing.)*
> • *The outline of patterns created with the Outline, Fan Shape and Arc & String tools can be edited with the Point Edit tool if they are first selected while the* **Alt** *key is held down.*

> ❗ **Note:**
> *To see better what the hole sewing setting does, previewing the patterns before and after setting hole sewing (For details, refer to "Previewing the Sewing Image" on page 187.)*

■ Canceling hole sewing

1. Select a pattern that has been set for hole sewing.

2. Click **Sew**, then **Cancel Hole Sewing**.

The pair of patterns can now be moved independently.

Using the Applique Wizard

The Applique Wizard provides instructions for easily creating appliqués.

1. Select a pattern with a closed shape, such as a circle or square.

> 📖 **Memo:**
> • *A pattern with lines that cross over themselves cannot be selected.*
> • *The pattern selected for creating the appliqué will be deleted after the Applique Wizard is used.*

2. Click **Sew**, then **Applique Wizard**.

→ The **Applique Wizard** dialog box appears.
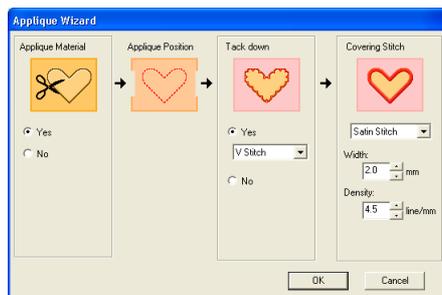
3. Under **Applique Material**, select whether (**Yes**) or not (**No**) the outline of the appliqué is to be sewn onto the appliqué fabric as a guide for cutting it out.

4. Under **Applique Position**, select whether or not the outline of the appliqué positioning outline is to be sewn onto the base fabric.

5. Under **Tack down**, select whether (**Yes**) or not (**No**) the appliqué is to be basted onto the base fabric. If **Yes** is selected, select the basting stitch from the selector. You can also select which stitch (satin stitch, E stitch or V stitch) to use for the basting.

Satin stitch	E stitch	V stitch
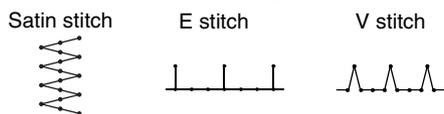
6. Under **Covering Stitch**, select the sew type and other attributes for finishing the appliqué.

7. Click **OK** to finish the Applique Wizard and display the design in the Design Page.

> 📖 **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

Measuring the Distance Between Two Points

1. Click [ruler icon] on the Tool Box.

→ The shape of the pointer changes to
[cross with ruler icon].

2. Move the pointer to the beginning of the part of the object that you want to measure, and then hold down the mouse button.

→ A small circle appears, indicating the start point of the measurement.

3. Drag the pointer to view the measurement in the status bar. The value beside **Length** shows the length along a straight line between the start point and the end point. The value beside **Width** shows the horizontal distance between the start point and the end point. The value beside **Height** shows the vertical distance between the start point and the end point.

Length = 16.27 mm (Width = 11.20 mm, Height = 11.80 mm)
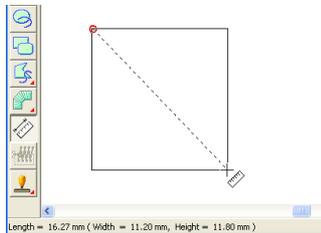
Specifying the Sewing Area

The sewing area can be specified.

1. Click **Sew**, then **Select Sewing Area**.

→ The following dialog box appears.

Select sewing area

○ Design Page area
◉ Use existing design area
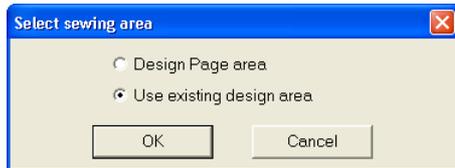
OK   Cancel

2. Select the desired sewing area (**Design Page area** or **Use existing design area**).

3. Click **OK**.

📖 **Memo:**
*To quit the operation, click **Cancel**.*

→ If **Design Page area** was selected, the patterns will be sewn so that the needle position when you start sewing is aligned with the center of your Design Page.

📖 **Memo:**
*When **Design Page area** is selected, the dimension of the pattern matches the size of the Design Page, therefore reducing the ability to move a pattern around the layout screen of your embroidering machine.*

→ If **Use existing design area** was selected, the patterns will be sewn so that the needle position when you start sewing is aligned with the center of the actual patterns.

📖 **Memo:**
*When **Use existing design area** is selected, the actual pattern size is maintained, therefore allowing greater mobility when using the layout functions of your embroidering machine.*

A
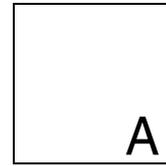
Design Page (on your screen)

A
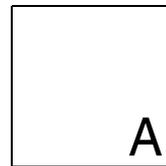
Sewing area = Design Page area

A
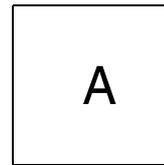
Sewing area = Use existing design area

☞ *"Specifying the Design Page" on page 108*

Advanced Opreation
Layout & Editing

183

Checking and Editing the Sewing Order/ Color

The sewing order of pattern colors as well as the sewing order of pattern objects of the same color can be checked and modified as necessary.

Toolbar button: [icon]

1. Click [icon] , or click **Sew**, then **Sewing Order/ Color**.

   → A **Sewing Order/Color** dialog box similar to the one shown below appears.

   [image: Sewing Order / Color dialog box]

   📖 **Memo:**
   The dialog box can be made longer so that all parts of the pattern can be viewed.

   To enlarge each pattern to fill its frame, click

   [icon] .

   To display in one frame all patterns of the same color that will be sewn together, click

   [icon] .
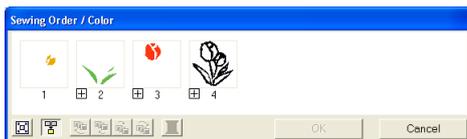
2. Click **OK** to apply the settings and to close the dialog box.

📖 **Memo:**
• *When multiple patterns are combined into*

one frame, ⊞ *appears to the left of the number of that frame.*

Click ⊞ *to display the combined 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 patterns back into one frame.*
• *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Selecting data

1. Select a pattern in the **Sewing Order/Color** dialog box.

   → The selected pattern has a pink line around it, and "marching lines" appear around the corresponding pattern in the Design Page.

📖 **Memo:**
• *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.*
• *When the **Sewing Order/Color** dialog box is closed, the pattern that was selected in the dialog box remains selected in the Design Page, unless it is a locked pattern.*

Editing the sewing order

The sewing order can be changed by selecting the frame containing the pattern that you want to move, then dragging the frame to the new location. A vertical red line appears, indicating the position where the frame is being moved.
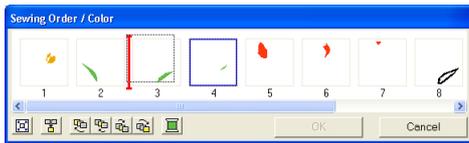
An alternative method for moving the frames is by clicking the buttons at the bottom of the dialog box.

> To move the selected pattern to the beginning
>
> of the sewing order, click 🔲 .
>
> To move the selected pattern ahead one
>
> position in the sewing order, click 🔲 .
>
> To move the selected pattern back one
>
> position in the sewing order, click 🔲 .
>
> To move the selected pattern to the end of the
>
> sewing order, click 🔲 .

📖 **Memo:**

When dragging a frame containing combined patterns, the patterns will display in separate

frames after you release them. Click ⊟ to the left of the first pattern for that color to recombine them into one frame. Dropping a frame containing combined patterns next to another frame containing combined patterns of the same color displays all patterns in separate frames.

⚠ **Note:**

- *Pieces of patterns that have been cut with the Split stitch tool appear at the end of the sewing order, depending on the sewing order of the original pattern and can be edited as any other pattern.*
- *The sewing order of the separate pattern sections cannot be edited. It is automatically determined by the order set for the whole design.*
- *Objects with no sewing attributes appear in a dotted frame, and there is no number for the sewing order below the frame.*

Combining patterns of the same color

When a Design Page contains a combination of patterns, those patterns with the same color can be grouped together from the **Sewing Order/Color** dialog box. Simply drag the frame of the patterns with the same color to position them beside each other.

📖 **Memo:**

Check the stitching after changing the sewing order to be sure that overlapping patterns will not be sewn in the wrong order.

Editing the color

1. Select the frame for the pattern whose color

   you want to change, and then click 🔲 .

   → The **Thread Color** dialog box appears.

2. Select the desired color, and then click **OK**.

   → The object appears in the new color in the **Sewing Order/Color** dialog box and in the Design Page.

3. Click **OK**.

   → The pattern is displayed with the new color.

📖 **Memo:**

*To close the dialog box without applying the changes to the settings, click **Cancel**.*

Advanced Opreation
Layout & Editing

185

Zooming

You can zoom in to work on details of the embroidery pattern or you can zoom out to work on any part of the embroidery pattern that cannot be viewed in the work area.

Zooming in

1. Click 🔍 on the Tool Box.

→ Five buttons appear: 🔍 🔍 1:1 🔍 🔍 .

2. Click ⊕ .

→ The shape of the pointer changes to

⊕ .

3. Click the area that you want to view enlarged.

> **Memo:**
> *To zoom in on a specific area, move the pointer near the desired area, and then drag the pointer diagonally over the desired area.*

Zooming out

1. Click 🔍 on the Tool Box.

→ Five buttons appear: 🔍 🔍 1:1 🔍 🔍 .

2. Click ⊖ .

→ The shape of the pointer changes to

⊖ .

3. Click the area that you want to view reduced.

Zooming to actual size

1. Click 🔍 on the Tool Box.

→ Five buttons appear: 🔍 🔍 1:1 🔍 🔍 .

2. Click 1:1 .

→ The Design Page is displayed at its actual size.

Zooming on selected objects

1. Select the objects that you want to zoom on.

2. Click 🔍 on the Tool Box.

→ Five buttons appear: 🔍 🔍 1:1 🔍 🔍 .

3. Click 🔍 .

→ The Design Page is zoomed to display only the selected objects.

Zooming Design Page to window

1. Click 🔍 on the Tool Box.

→ Five buttons appear: 🔍 🔍 1:1 🔍 🔍 .

2. Click 🔍 .

→ The entire Design Page is displayed to fit within the window.

Previewing the Sewing Image

Once the embroidery pattern is complete, you can display a preview of it in order to see how the stitching is connected, or you can display a realistic preview of it in order to see how the pattern will appear once it is sewn.

1. To display a preview of the embroidery pattern, click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.

Preview

→ A preview of the embroidery pattern appears.

📖 **Memo:**

To zoom in (or out), click 🔍 on the Tool Box, click ⊕ (or ⊖), and then click the desired area of the embroidery pattern.

2. To leave the preview display, repeat step **1.**, or press the **Esc** key.

3. To display a realistic preview of the embroidery pattern, click **Display** on the menu bar, and then click **Realistic Preview**.
An alternate method is to click the Toolbar button indicated below.

Realistic Preview

→ A realistic preview of the embroidery pattern appears.

📖 **Memo:**

To zoom in (or out), click 🔍 on the Tool Box, click ⊕ (or ⊖), and then click the desired area of the embroidery pattern.

4. To leave the realistic preview display, repeat step **3.**, or press the **Esc** key.

❗ **Note:**

- *The embroidery pattern cannot be edited while the realistic preview is displayed.*
- *The Realistic Preview function cannot display a clean preview of the pattern if the monitor is set to 256 colors or less. The monitor should be set to at least 16-bit High Color (65536 colors).*

Advanced Opreation
Layout & Editing

Changing realistic preview settings

Set the realistic preview settings for the desired realistic preview display.

1. Click **Display**, then **Realistic Preview Attribute Setting**.

→ A **Realistic Preview Attribute** dialog box similar to the ones shown below appears.

When a realistic pre-view is displayed   When a realistic pre-view is not displayed

2. Use the **Thread Width** slider to set how wide the thread will appear.

3. Use the **Contrast** slider to set the contrast.

4. Use the **Brightness** slider to set how bright the display is.

5. Click **Apply** to display a realistic preview of the patterns with the new settings (when the realistic preview is displayed).

Or, click **OK** to save the settings for the next time that the Realistic Preview function is select (when the realistic preview is not displayed).

📖 **Memo:**
*To close the dialog box without applying the changes to the settings, click **Close** or **Cancel**.*

☞ *"Previewing the Sewing Image" on page 187*

Checking the Stitching

The actual stitching as it will be performed by the sewing machine can be viewed using the stitch simulator. You can choose to view the stitching simulation of whole designs or, for large patterns created on a custom-sized Design Page, view it by pattern section.

Toolbar button: 🪡

1. Click 🪡 , or click **Display**, then **Stitch Simulator**.

The **Stitch Simulator** dialog box appears, and the embroidery pattern is cleared from the Design Page.
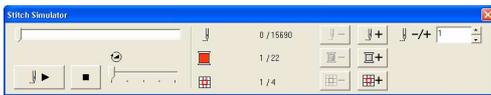
To begin the stitching simulation, click ⬇▶ .

📖 **Memo:**
• *During the stitching simulation, the play button (⬇▶) changes to a pause button (⬇‖).*
• *A marker (✛) indicates the current position in the simulation.*
• *To get a better view of the stitching, zoom in on the design before opening the **Stitch Simulator** dialog box.*

To reverse the simulation to the beginning of the previous color, click 目− .

To advance the simulation to the beginning of the next color, click 目+ .

To reverse the stitching by a specific number of stitches, type or select the desired number of stitches, and then click ⬇− .

To advance the stitching by a specific number

of stitches, type or select the desired number of stitches, and then click ⬇+ .

To reverse the stitching to the previous pattern section, click ⊞− .

To advance the stitching to the next pattern section, click ⊞+ .

📖 **Memo:**

⊞− *and* ⊞+ *appear only for patterns created on custom-sized Design Pages.*

To stop the simulation and return to the previous display, click ■ .

📖 **Memo:**
The slider shows the current location in the simulation. In addition, the slider can be moved to change the position in the simulation.

Drag the slider indicated by ⊘ to adjust the simulation stitching speed.

📖 **Memo:**

• *The first number beside ⬇ indicates the number of the current stitch, and the second number indicates the total number of stitches.*

• *The first number beside ◼ indicates the number of the color being drawn, and the*

second number indicates the total number of colors used.

- *The first number beside ⊞ indicates the pattern section that is displayed, and the second number indicates the total number of hoop sections in the pattern. This indicator appears only for patterns created on custom-sized Design Pages.*

2. Click ✖ in the upper-right corner of the dialog box to close the dialog box.

📖 **Memo:**
*If a pattern was selected when the **Stitch Simulator** dialog box was displayed, only the selected pattern is drawn in the simulation.*

Checking Embroidery Pattern Information

Sewing information such as dimensions, needle count, color count and color order of patterns can be checked in the **Design Property** dialog box.

1. Click **Option**, then **Design Property**.

→ The **Design Property** dialog box appears.
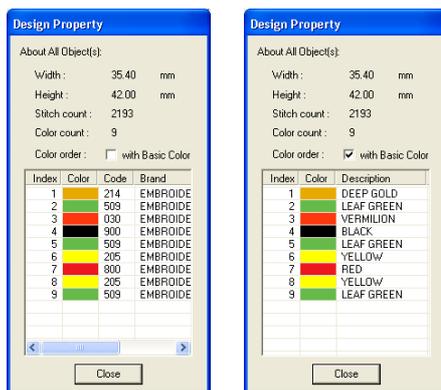
📖 **Memo:**
- *You can select and check the properties of individual objects within the embroidery pattern by selecting the pattern before opening this dialog box.*
- *To display the colors as the machine's preset color names, select the **With Basic Color** check box.*
- *This dialog box can be resized. The size of the dialog box is retained until it is changed again.*
- *To close the dialog box, click **Close**.*

→ If the Design Page was set to **Custom Size** and no object in the Design Page is selected, the sewing information for the entire Design Page is displayed hoop by

hoop, and a **Design Property** dialog box similar to the one shown below appears.
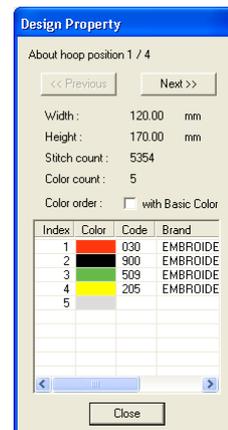
⚠ **Note:**
If a pattern is larger than the Design Page or if it is positioned so that it does not completely fit within the Design Page, the error message "Please change the object size or position." appears instead of this dialog box. After the pattern causing the error is displayed selected, change its size or position. (If more than one pattern causes the error message to appear, they will be displayed in the sewing order.)

📖 **Memo:**
- *The Design Page is automatically zoomed in on or zoomed out from to fit in the entire window.*
- *The first line of the dialog box shows the position of the displayed pattern section within the embroidery hoop installation order.*
- *Only the patterns within the corresponding section appear in the Design Page and are outlined in red.*

189

• *To display information for other pattern sections, click **Previous** or **Next**.*
• *The pattern sections are displayed in order from left to right, top to bottom. Pattern sections that do not contain any stitching will not be displayed.*
• *To close the dialog box, click **Close**.*

> **Note:**
> *The **Previous** button cannot be clicked when the design corresponding to the first hoop is already displayed. In addition, the **Next** button cannot be clicked when the design corresponding to the last hoop is already displayed.*

Editing User Thread Color Lists

Original thread color charts can be created and edited.

1. Click **Option**, then **Edit User Thread Chart**.

    → A dialog box similar to the one shown below appears.
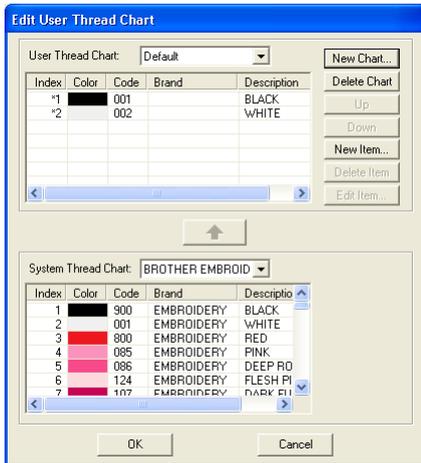
User thread charts can be created and edited to contain a list of threads that are used most often or a list of all threads that you have. Thread data from system thread charts can be included or new thread data can be added.

Creating a new thread chart

1. Click **New Chart**.

    → The **New Thread Chart** dialog box appears.
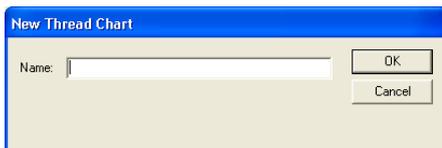
2. Type in the name of the chart, and then click **OK** to save the chart with the entered name.

> **Memo:**
> *A saved chart can be selected from the **User Thread Chart** selector, then edited.*

Deleting a chart

1. From the **User Thread Chart** selector, select the chart that you want to delete.

2. Click **Delete Chart** to delete the selected chart.

Editing a chart

1. From the **User Thread Chart** selector, select the chart that you want to edit.
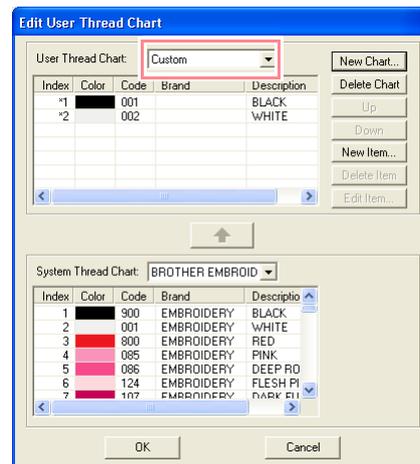
> **Note:**
> *If no chart is selected, the editing operation cannot be performed.*

Adding an item from a system thread chart

1. From the **System Thread Chart** selector, select the brand of thread that you want to add.

2. From the list at the bottom of the dialog box, click the thread colors that you want to add.

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

3. Click ⬆ .

→ The selected items are added to the list in the user thread chart.
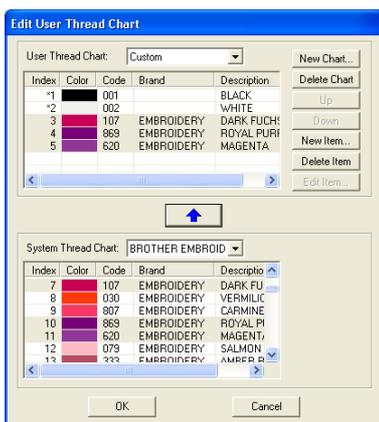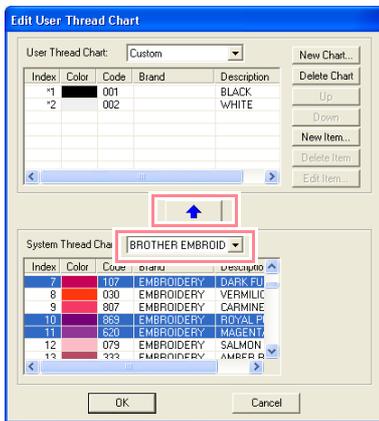
Adding a new item

1. Click **New Item**.

→ The **Edit Thread** dialog box appears.

2. To create a new color, click **Mix**.

→ A dialog box similar to the one shown below appears.
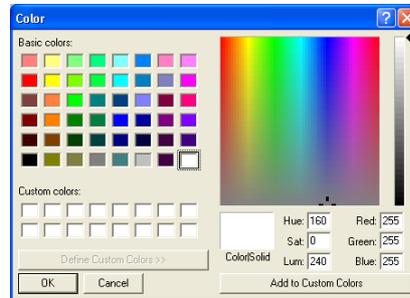
3. Specify the color, and then click **OK** to add the specified color to the **Edit Thread** dialog box.

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

> 📖 **Memo:**
> *Only numbers can be entered for the code.*

191

5. Click **OK** to add the new item to the user thread chart.
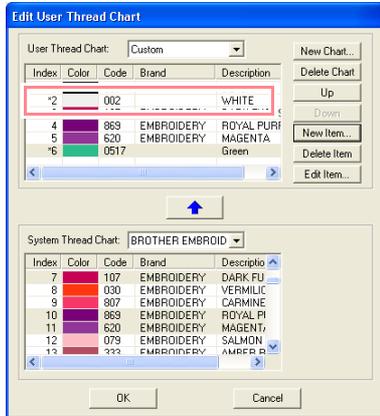
📖 **Memo:**
An asterisk (*) appears in front of the index number of newly added items.

Deleting an item

From the list for the user thread chart, select the item to be deleted, and then click **Delete Item** 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, select the item to be edited, and then click **Edit Item**.
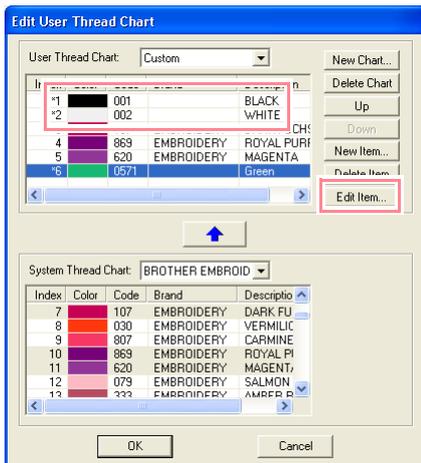
→ The following dialog box appears.
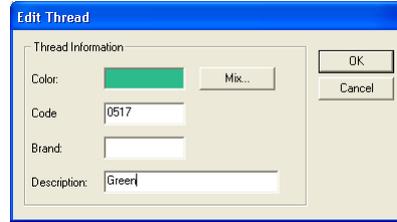
2. Edit the item details in the same way as adding an item.

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

Changing the order of items

From the list for the user thread chart, select the item to be moved, and then click **up** or **down** to change the order of the item.

⚠️ **Note:**
Thread colors in embroidery patterns created with this software may appear differently on the embroidering machine.
1. Embroidering machines without a function for displaying thread color information
The specified thread information cannot be displayed on some machines.
2. Embroidering machines with a function for displaying thread colors
Of the thread information specified in the embroidery pattern, only the thread colors are displayed on the machine. However, the thread color names that are displayed are limited to the machine's preset thread color names. Therefore, use thread color names in the embroidery pattern that are closest to the machine's preset thread color names.
3. Machines with a thread color index
Some machines can display the thread information (such as the color, the color name as well as the brand name and thread number) specified with this software. The machines can display the color, the color name as well as the brand name and thread number.
However, for items edited or added by the user (items marked with an asterisk (*)), only the thread number is displayed.

Viewing Patterns in the Reference Window

All outlines and patterns in the Design Page are displayed in the Reference Window, giving you an overall view of the pattern while you work on a detailed area. The display area frame (red rectangle) indicates the part of the pattern displayed in the Design Page.

Zooming

The pattern displayed in the Reference Window can be reduced to fit completely within the Reference Window or enlarged to display only the pattern.

1.   Click ![icon].

     → The pattern is displayed so that it fills the Reference Window.

Moving the display area frame

The part of the pattern displayed in the Design Page can be selected from the Reference Window.

1.   Move the pointer over the display area frame.

     → The shape of the pointer changes to ⊕.

2.   Drag the display area frame so that it surrounds the desired part of the pattern.

     → The selected part of the pattern is displayed in the Design Page.

Redrawing the display area frame

Instead of moving the display area frame, the frame can be redrawn to display the desired part of the pattern in the Design Page.

1.   Drag the pointer over the desired part of the pattern in the Reference Window.

     → The display area frame is redrawn, and the selected part of the pattern is displayed in the Design Page.

Scaling the display area frame

1.   Move the pointer over a corner of the display area frame.

     → The shape of the pointer changes to ↖

     or ↗ , depending on the corner that the pointer is over.

📖 **Memo:**

↖ *and* ↗ *are for scaling the height and width.*

2.   Drag the corner to adjust the display area frame to the desired size.

Advanced Opreation
Layout & Editing

Saving

Overwriting

Once the image or pattern has been saved, changes can easily be saved so that the latest version can be retrieved later.

Toolbar button: 🖫

1. Click 🖫 , or click **File**, then **Save**.

→ If the image or pattern has already been saved at least once, the file is saved immediately.

→ 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

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same image or pattern. The files are saved as .pes files.

1. Click **File**, then **Save As**.

→ A **Save As** dialog box similar to the one shown below appears.
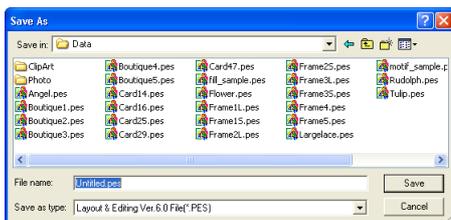
2. Select the drive and the folder, and then type in the file name.

⚠ **Note:**
- *If you select a file type of a previous software version, saved .pes files can be opened with that version of the software; however, all saved data will be converted to stitch data.*
- *Custom-sized Design Pages cannot be saved in a software version prior to version 6.*
- *Custom-sized Design Pages will be saved in one file, but the stitch data is saved separately for all hoop sizes.*

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

📖 **Memo:**
- *To quit the operation, click **Cancel**.*
- *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*
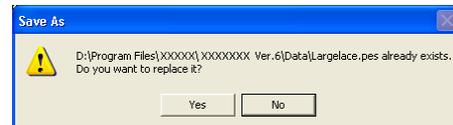
- *To overwrite the file, click **Yes**.*
- *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

→ The new file name appears in the title bar of the Layout & Editing window.

Outputting data in a different format

The data shown in the Design Page can be exported as a file of a different format (.dst, .hus, .exp, and .pcs).

1. Click **File**, then **Export**.

   → A dialog box similar to the one shown below appears.
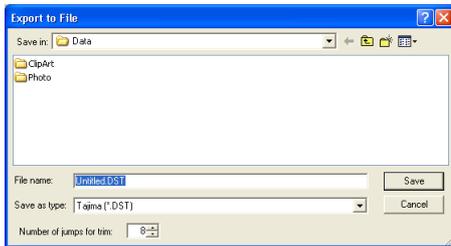
2. Select the drive and the folder, and then type in the file name.

3. Select the format (.dst, .exp, .pcs, or .hus) in which you want to export the file.

   📖 **Memo:**
   *With the DST format, jump codes are used to indicate when the thread must be cut in order to change the thread color. Since the number of codes differ depending on the sewing machine being used, type or select the appropriate value in the **Number of jumps for trim** box. (This setting can only be specified if the .dst format is selected.)*

   ❗ **Note:**
   • Some patterns imported from embroidery cards cannot be exported.
   • Patterns designed on a custom-sized Design Page will be exported as a simple file, and will not be split into sections.

Writing an embroidery pattern to an original card

You can save a displayed embroidery pattern onto an original card in order to transfer it to a sewing machine.

❗ **Note:**
Be sure that the hoop size of the pattern does not exceed the hoop that will be used on the embroidering machine.

Toolbar button: 📇

1. Insert an original card into the USB card writer module.

   ❗ **Note:**
   • The original card is inserted correctly when you hear it snap into place.
   • The sewing machine must be turned off before original cards are inserted or removed. However, it is not necessary to turn off the computer when original cards are inserted or removed from the USB card writer module.

2. Click 📇 , or click **File**, then **Write to Card**, then **Current Design**.

   → The following message appears.

   ❗ **Note:**
   • If the original card is not brand new, make sure that the patterns already stored on the card are no longer needed.
   • If no original card is inserted, the following message appears

   *• Correct the problem, and then click **Retry**.*
   *• To quit the operation, click **Cancel**.*
   • If a .pes file is saved with objects extending off the Design Page or with the number of stitches or number of colors for the objects exceeding the Design Page limitations, the patterns cannot be saved on an original card.

Advanced Opreation
Layout & Editing

📖 **Memo:**
Patterns created on a custom-sized Design Page are written to cards split into their various sections.
If the total size of the pattern exceeds the capacity of the original card or if your Design Page is set to a custom size of 90 × 90 cm (3.54" × 3.54"), and is split into over 80 sections, you will need to split the pattern into sections and write them onto several original cards.
*In this case, the **Select Hoop Sections** dialog box appears to let you select the sections that can be written in the available space on the card.*

The progress bar at the top of the dialog box shows the available space on the card as you select pattern sections to be written to the card. The space used by the selected pattern sections appears in blue. If, however, you select a pattern section that exceeds the size limit, the space used appears in yellow, and if you select several pattern sections which exceed the size limit, the space used appears in red.
*Click each pattern section to select it, and then click **Write** to write the selected pattern sections to the card. To deselect a pattern section, simply click it again. (The **Write** button is available only when a section is selected and the space on the card is sufficient to receive the selected patterns.)*

3. Click **OK**.

→ The message "Now writing" appears while the current embroidery pattern is transferred to the original card, and then the following message appears.

📖 **Memo:**
*To quit the operation, click **Cancel**.*

4. Click **OK** to close the message.

📖 **Memo:**
"Overwriting" on page 194 and "Saving with a new name" on page 194

Writing multiple embroidery files to an original card

You can save multiple .pes files to an original card at the same time.

1. Insert an original card into the USB card writer module.

⚠ **Note:**
- *The original card is inserted correctly when you hear it snap into place.*
- *The sewing machine must be turned off before original cards are inserted or removed. However, it is not necessary to turn off the computer when original cards are inserted or removed from the USB card writer module.*

2. Click **File**, then **Write to Card**, then **Other PES files**.

→ The following dialog box appears with the contents of the last folder accessed displayed in the available patterns list.
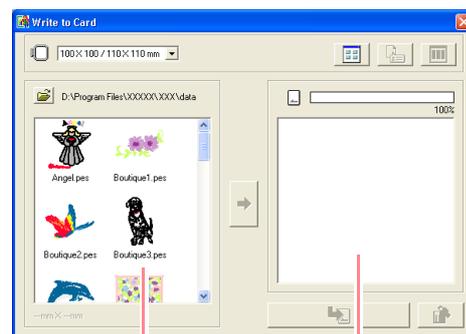
Available patterns   Selected patterns

📖 **Memo:**
- *Patterns that are either too large or have too many stitches for the embroidery hoop size selected with the Hoop size selector, are displayed with a red crossed-out hoop (🚫).*
- *Patterns created for the optional extra-large embroidery hoop are displayed with the ☐ symbol.*
- *Patterns created on a custom-sized Design Page are displayed with the ⊞ symbol.*

3. From the Hoop size selector, select the appropriate size of embroidery hoop.

    | 100 × 100 / 110 × 110 mm | ▼ |

📖 **Memo:**
- *Do not select a hoop size larger than the embroidery hoop that can be used with your embroidering machine. Otherwise, the created original card will not work correctly with the embroidering machine.*
- *Make sure to select a hoop size that is the same or larger than the largest hoop size of the files you want to write to the card, otherwise the pattern cannot be written to a card and "×" appears.*

4. Click 📂 , and then select the folder where the desired pattern file (.pes) is saved. The available pattern list displays the image of the embroidery pattern files (.pes).

📖 **Memo:**
If an original card was selected, the patterns saved on the inserted card are displayed.

5. In the available patterns list, click the pattern that you want to write onto a card to select it.

📖 **Memo:**
- *To deselect a file, simply click it again.*
- *To switch between the large and small display size of the embroidery pattern images shown in the lists, click 🔳 .*
- *To display the information (size, number of stitches, and colors) for the pattern selected in either list, click 📄 . (This button is available only if a single pattern is selected.)*
- *To display a three-dimensional image of the pattern selected in either list, click 🔳 . (This button is available only if a single pattern is selected.)*
- *📊 shows the capacity of the patterns selected in the selected patterns list.*

6. To add the embroidery pattern selected in the available patterns list to the selected patterns list, click ➡ .
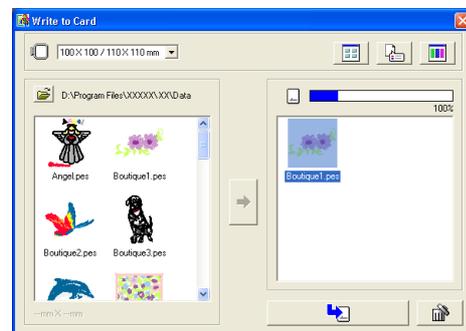
📖 **Memo:**
- *To remove the embroidery pattern selected in the selected patterns list, click*

   🗑️ *.*

- *Patterns created on a custom-sized Design Page are written to cards split into their various hoop sections.*
  If the total size of the pattern exceeds the capacity of the original card or if your hoop size is 90 × 90 cm (3.54" × 3.54") and the Design Page is split into over 80 sections, the available space appears in yellow on the progress bar. When ➡️ *is clicked, the* **Select Hoop Sections** *dialog box appears, allowing you to select the pattern sections to be written in the available space on the card.*

The progress bar at the top of the dialog box shows the available space on the card as you select pattern sections to be written to the card. The space used by the selected pattern sections appears in blue. If, however, you select a pattern section that exceeds the size limit, the space used appears in yellow, and if you select several pattern sections which exceed the size limit, the space used appears in red.
Click each pattern section to select it, and then click **Write** *to write the selected pattern sections to the card. To deselect a pattern section, simply click it again. (The* **Write** *button is available only when a section is selected and the space on the card is sufficient to receive the selected patterns.)*

7. Continue until all embroidery patterns that you want to write to an original card are selected.

📖 **Memo:**
During this process, the card capacity indicator allows you to plan which patterns you would like to save on an original card. The space used by patterns in the selected patterns list appears in blue. The space used by the files selected in the available patterns list appears in light blue. If several files exceed the available space, the progress bar appears in yellow.
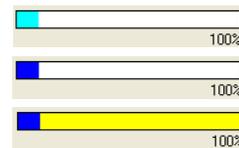
8. After the embroidery patterns to be written to the original card appear in the selected

patterns list, click 📇 to write the patterns to

the card.

→ The patterns are written to an original card in the order that they are listed after all data already on the card is erased. After the patterns are written to the original card, the card containing the patterns can be used with the embroidery machine.

⚠️ **Note:**
- *Since original cards are erased completely before patterns are written to it, it is useful to keep a copy with the contents of each card in the card folder that comes with the software so that you can easily recover the files that were on the card.*
- *To check the contents of the original card, open the* **Browse** *dialog box, and then*

  click 📄*, which appears at the top of the list in the* **Browse** *window. The patterns saved on the inserted card appear in the available patterns list.*
- *Do not remove the card or unplug the USB cable while patterns are being written to the card (while the LED indicator is flashing).*

9. Click ✖️ in the upper-right corner of the

dialog box to close the dialog box.

Adding comments to saved .pes files

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

1. Click **File**, then **Property**.

    → The **File Property** dialog box appears.

📖 **Memo:**
The stitch count is the total of all stitches.

2. To enter or change the information, type it in.

3. Click **OK** to save the entered information.

📖 **Memo:**
- *The entered information will be saved to the file the next time that it is saved.*
- *To quit the operation and close the dialog box, click **Cancel**.*
- *Files can be searched for in Design Database according to the entered information.*

Advanced Opreation
Layout & Editing

Printing

Specifying print settings

Before printing, you may need to change the print settings for the embroidery pattern files that you want to print.

1. Click **File**, then **Print Setup**.

   → A **Print Setup** dialog box similar to the one shown below appears.
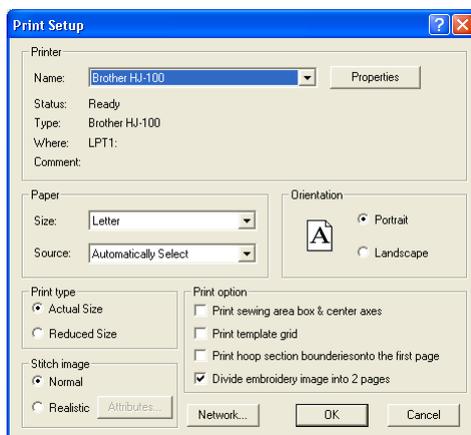
2. Under **Paper** and **Orientation**, select the appropriate settings.

3. Under **Print type**, **Print Option** and **Stitch image**, select how the data is to be printed.

   Print type
   Actual Size: Select this option to print the pattern in actual size and the sewing information (dimensions of the embroidery, the sewing color order and the stitch count, the hoop position) on separate pages. If the pattern size is larger than the paper size, depending on the Design Page settings, a reduced version of the large pattern and the different pattern sections in actual size are printed.
   Reduced Size: Select this option to print a reduced image together with all of the above-mentioned information on a single page for Design Pages set to **Hoop Size**, and on the same page as the image for each hoop section of custom-sized Design Pages.

   Print option
   Print sewing area box & center axes: Select this check box to print black lines to indicate the sewing area (refer to "Specifying the Sewing Area" on page 183) 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.

Print hoop section boundaries onto the first page: Select this check box to print the pattern sections of a pattern for which the Design Page has been set to a custom size or to a multi-position hoop. The pattern sections are printed in red.

Divide embroidery image into 2 pages: Select this check box to print in actual size and on A4- or Letter-size paper patterns that are larger than the paper size by dividing them 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 [300×200 mm (11 3/4" $\times$ 7 3/4"), 200×300 mm (7 3/4" $\times$ 11 3/4"), 180×300 mm (7" $\times$ 11 3/4"), 300×180 mm (11 3/4" $\times$ 7") when set to **Hoop Size**, and 175×295 mm (180×300 mm) 6.89" $\times$ 11.61" (7" $\times$ 11 3/4") or 295×195 mm (300×200 mm) 11.61" $\times$ 7.68" (11 3/4" $\times$ 7 3/4") when set to **Custom Size**].) With this split

printing feature, ▢ / ▣ or ▣ / ▢ is printed in the lower-right corner of the paper to indicate which half is printed.

Stitch image
Normal: Select this option to print the pattern as lines and dots.
Realistic: Select this option to print a realistic image of the pattern. To change the settings of the realistic image, click **Attributes**. (For details, refer to "Changing realistic preview settings" on page 187.)

⚠ **Note:**
- *If the **Divide embroidery image into 2 pages** check box is cleared and you print on a larger paper size, the pattern does not print in two halves. Likewise, if you print on a smaller paper size, the pattern might be cut off.*
- *The stitch and hoop position information is printed on a separate page, after the image or pattern section halves.*

4. Click **OK**.

📖 **Memo:**
- *To change the printer settings, click* **Properties***.*
- *To quit the operation, click* **Cancel***.*

☞ *"Previewing the Sewing Image" on page 187*

Checking the print image

You can preview the contents of the Design Page, including the separate hoop sections of large-size embroidery patterns, and check the sewing color order, the dimensions and the stitch count before printing.

1. Click **File**, then **Print Preview**.

→ If **Actual Size** was selected in the **Print Setup** dialog box, the Layout & Editing window appears as shown below.
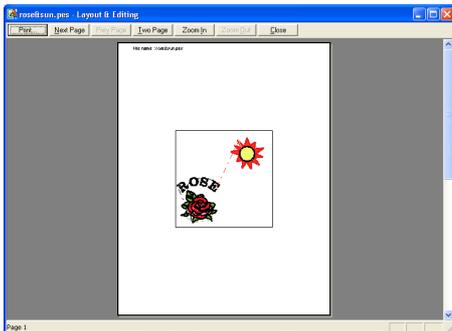
📖 **Memo:**
- *To enlarge and reduce the page, click* **Zoom In** *or* **Zoom Out***. Enlarge the image either by clicking* **Zoom In***, or by clicking directly the location that you want to enlarge. To reduce the size of the image, click* **Zoom Out***.*
- *To display the following page, click* **Next Page***. (For Design Pages set to* **Hoop Size***, this button is not available if* **Reduced Size** *was selected in the* **Print Setup** *dialog box.)*
- *To go back to the display of the embroidery, click* **Prev Page***. (For Design Pages set to* **Hoop Size***, this button is not available if* **Reduced Size** *was selected in the* **Print Setup** *dialog.)*
- *To display two pages at the same time, click* **Two Page***. (The* **Two Page** *button becomes the* **One Page** *button.)*
- *To display one page at a time, click* **One Page***.*

- *To open the* **Print** *dialog box, click* **Print***.*
- *If you need to view an image in detail, displaying only one page at a time allows you to enlarge it more. If you want to check the sewing information for individual objects in your embroidery pattern, select the menu command* **Option** *–* **Design Property***.*

☞ *"Specifying print settings" on page 200, "Printing" below and "Checking Embroidery Pattern Information" on page 189*

Printing

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

1. Click **File**, then **Print**.

→ A **Print** dialog box similar to the one shown below appears.
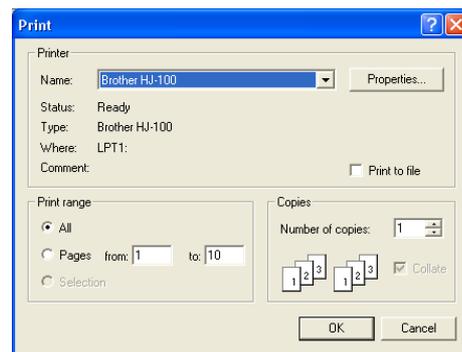
2. Select the necessary settings.

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

📖 **Memo:**
- *To change the printer settings, click* **Properties***.*
- *To quit the operation, click* **Cancel***.*

4. Follow the instructions for the printer to finish printing.

→ Depending on the **Print Type** setting, one or two pages will be printed for one pattern or one hoop position.

Advanced Opreation
Layout & Editing

Layout & Editing

Changing the Settings

Changing the grid settings

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

1. Click **Display**, then **Grid Setup**.

→ The **Grid Setting** dialog box appears.

2. To display the grid, select the **Show Grid** check box.
To hide the grid, clear the **Show Grid** check box.

3. To use the grid for aligning patterns or creating patterns of the same size, select the **Snap to Grid** check box.

📖 **Memo:**
The pointer will move by the amount set in ***Grid interval***.
The snap feature works whether or not the grid is displayed.

4. To set the grid spacing, type or select a value in the **Grid interval** box. (The setting range is 0.1 to 25.4 mm (0.04 to 1.0 inch).)

5. To display the grid as solid lines, select the **with Axes** check box.
To display the grid as dotted lines, clear the **with Axes** check box.

⚠ **Note:**
When the ***Show grid*** *check box is selected and the* ***with Axes*** *check box is cleared, only the intersecting points of the grid will be displayed.*

6. Click **OK** to apply the changes and to close the dialog box.

📖 **Memo:**
To close the dialog box without applying the changes to the grid, click ***Cancel***.

☞ *"Changing the measurement units" below*

Changing the measurement units

The measurements for values displayed in the application can be in either millimeters or inches.

1. Click **Option**, then **Select System Unit**, and then select the desired measurement units (**mm** or **inch**).

☞ *"Changing the grid settings" on this page and "Specifying the Design Page" on page 108.*

Layout & Editing

Information for Optional Large-Size Hoop Users

Creating Patterns for Multi-Position Hoops

This program enables you to create multi-position patterns that you can stitch in any multi-position hoop attached to your sewing machine.
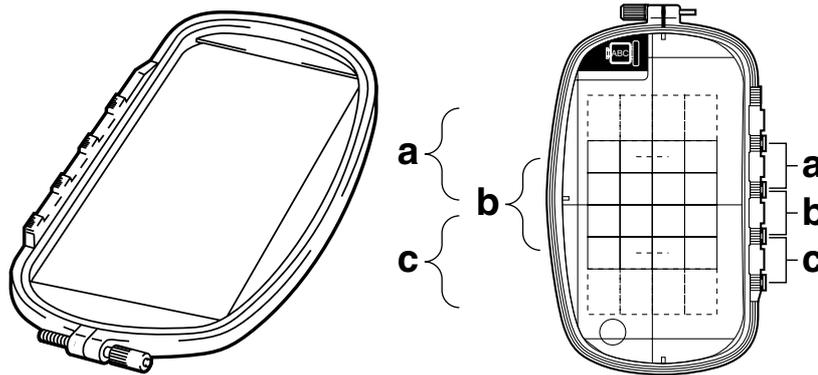
Example of multi-position hoop: 100 × 172 mm hoop

Although the size of the pattern that can be embroidered using an multi-position hoop is 130 × 180 mm (or 100 × 100 mm, depending on the sewing area of the embroidering 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 pattern.

When creating the pattern, each pattern section can only be as large as the sewing field of the machine.

Selecting the Design Page size

1. In Layout & Editing, click **Option**, then **Design Page Property**.

→ The **Design Page Property** dialog box appears.
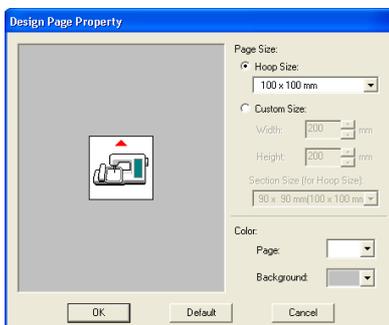
2. Select **Hoop Size**, and then choose a Design Page size of 130 × 300 mm, 300 × 130 mm, 100 × 172 mm, or 172 × 100 mm from the selector.

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

⚠ **Note:**
Multi-position hoop settings are not available in the Design Page Property dialog box of Design Center.

Creating the pattern

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

← a

← b

← c
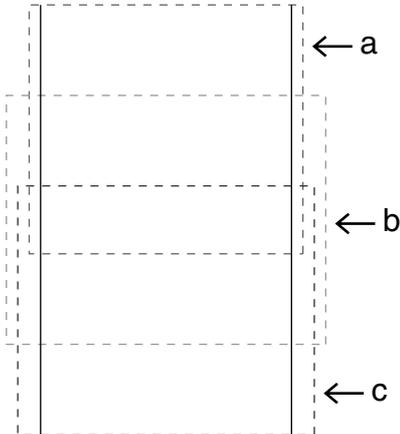
📖 **Memo:**

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.

2. Create the pattern, 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). (If the pattern is imported from Design Center, only these size settings are available.)

← a

← b

← c
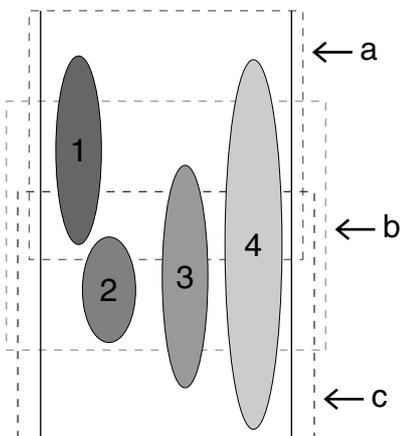
• Each pattern must completely fit within a single area (a, b, or c).

   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.
   4: This pattern must be corrected since it is too large.

⚠ **Note:**
If a pattern does not meet the conditions mentioned above, a warning will appear when continuing to the next step.

Optimizing hoop changes

With the Optimize hoop change function, the sewing order of patterns in a Design Page for multi-position hoops is automatically optimized, therefore reducing the risk of the embroidery being sewn incorrectly or the fabric not feeding evenly when the hoop position is changed too often.

1. Click **Sew**, then **Optimize hoop change**.

📖 **Memo:**
• A check mark appears when this function is turned on; no check mark is displayed when this function is turned off.

← a

← b

← c

• When the Optimize hoop change function is selected, 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 page 204, 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 not selected, each pattern is sewn according to the sewing order that you have set. 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.
For the example shown on page 204, the sewing order is: a (pattern 1) → b (pattern 2) → a (pattern 3) → c (pattern 4) → a (pattern 5) → c (pattern 6)

⚠ Note:
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 selecting the Optimize hoop change function. Selecting this function will change the sewing order that you have set, therefore, check the sewing order before you begin embroidering.

Checking the pattern

⚠ Note:
Make sure that no pattern has been selected before clicking this command. If a pattern has already been selected, only the information for that pattern is displayed.

1. Click **Option**, then **Design Property**.

   → At the same time that the **Design Property** dialog box appears, the Design Page is automatically enlarged or reduced to fit in the entire window.

Design Property

About hoop position 1 / 4

| << Previous | Next >> |

Width : 120.00 mm
Height : 170.00 mm
Stitch count : 5354
Color count : 5
Color order : ☐ with Basic Color

Index	Color	Code	Brand
1		030	EMBROIDE
2		900	EMBROIDE
3		509	EMBROIDE
4		205	EMBROIDE
5			

Close

📖 Memo:
• *The first line of the dialog box shows the position in the hoop installation order for the currently displayed pattern.*
• *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.*
• *To display information for patterns at other positions in the hoop installation order, click **Previous** or **Next**. At this time, the corresponding pattern and hoop position appear in the Design Page.*

Note:

• If 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 "Please change the object size or position." appears instead of this dialog box. After the pattern causing the error is displayed selected, change its size or position. (If more than one pattern causes the error message to appear, they will be displayed in the sewing order.)

2. To preview the image, click **Display**, then

   Preview, or click 🖳 on the Toolbar.

Saving the pattern

1. Click **File**, then **Save** or **Save As**, and then save the pattern.

   → The entire pattern is saved as a single file (.pes).

   Memo:

   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 message "Please change the object size or position. Do you want to save the data anyway?" appears.

   Note:

   • The saved file cannot be opened in Layout & Editing versions 1 and 2.0x.

Writing the pattern to an original card

1. If your pattern is displayed in the Design Page,

   click **File**, then **Write to Card**, or click 🖳 on

   the Toolbar, and then write the pattern to an original card.

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

   Therefore, when this type of pattern is written to an original card, one multi-position hoop

pattern is saved as a combination of multiple patterns.
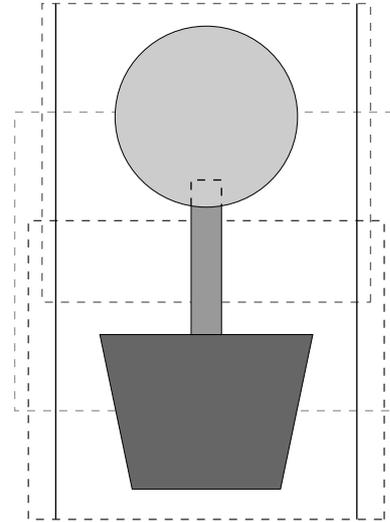
If the pattern shown above is written to an original card and the written pattern is checked on the embroidery machine, it appears as shown below.
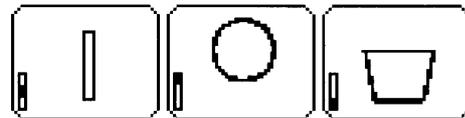
▯ : This pattern is sewn when the hoop is installed at the top installation position (position a).

▮ : 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.

2. After the embroidery pattern is saved on the computer, click **File**, then **Write to Card**, then **Other PES files** to write the embroidery pattern to an original card.

   As with the **Current Design** command, all embroidery patterns are written to the original card at the same time.

   Furthermore, if there is space on the original card, other embroidery patterns can be written to it at the same time.

Notes on embroidering using the multi-position hoop

- Before embroidering your project, sew a trial sample of the pattern on a scrap piece of fabric from your project, 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.

- See page 63 "Attaching stabilizer to the fabric" for more ways to stabilize large designs.

- Use the zigzag stitch for sewing the outlines in order to prevent embroidering outside the outlines.
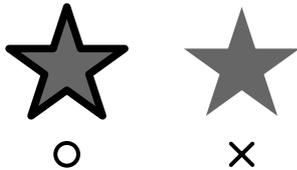
- For patterns that require the hoop to be installed at different installation positions, design the embroidery pattern so that the various parts of the pattern overlap in order to prevent misalignment while embroidering.
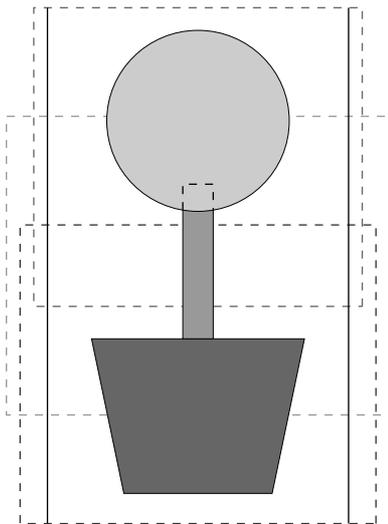
Printing a Design Page for a multi-position hoop

If a Design Page for a multi-position hoop is selected, a complete image of the Design Page is printed on the first page, followed by an image of each pattern section and its sewing information (dimensions of the embroidery, the hoop position, the sewing color order and the stitch count), so the number of pages depends on your pattern.

- If a 130×300 mm or 300×130 mm Design Page is selected, the pattern is divided into sections of 130×180 mm or 180×130 mm with each section printed on a separate page.

- If a 100×172 mm or 172×100 mm Design Page is selected, the pattern is divided into sections of 100×100 mm with each section printed on a separate page.

The Design Page is printed as described below.

When **Actual Size** is selected:

On the first page, the entire Design Page is printed at actual size. (However, for a 130×300 mm or 300×130 mm Design Page, a reduced image of the Design Page is printed.) Afterwards, the pattern in each section of the Design Page is printed, starting with that sewn with the first hoop installation position, and is followed by the sewing information for that pattern on separate pages.

When **Reduced Size** is selected:

On the first page, the entire Design Page is printed at actual size. (However, for a 130×300 mm or 300×130 mm Design Page, a reduced image of the Design Page is printed.) Afterwards, the pattern in each section of the Design Page is printed, starting with that sewn with the first hoop installation position, on the same page as the sewing information for that pattern.

> **Memo:**
> *When the menu command **File** – **Print Preview** is selected, each section of the pattern is displayed as described above.*

Advanced Operation
Layout & Editing

Programmable Stitch Creator

Programmable Stitch Creator allows you to design your own fill/stamp and motif stitch patterns that can be applied to a programmable fill stitch or motif stitch, both in Design Center and Layout & Editing. When applied to enclosed regions, the fill/stamp or motif stitch pattern fills the region in a tile-like manner, resulting in more decorative embroidery patterns. In addition, the fill/stamp stitch patterns can be applied as an individual stamp to enclosed regions in Design Center and Layout & Editing. You can create your own fill/stamp and motif stitch patterns or use the many stitch patterns provided with this application, with or without editing them.

Main Window
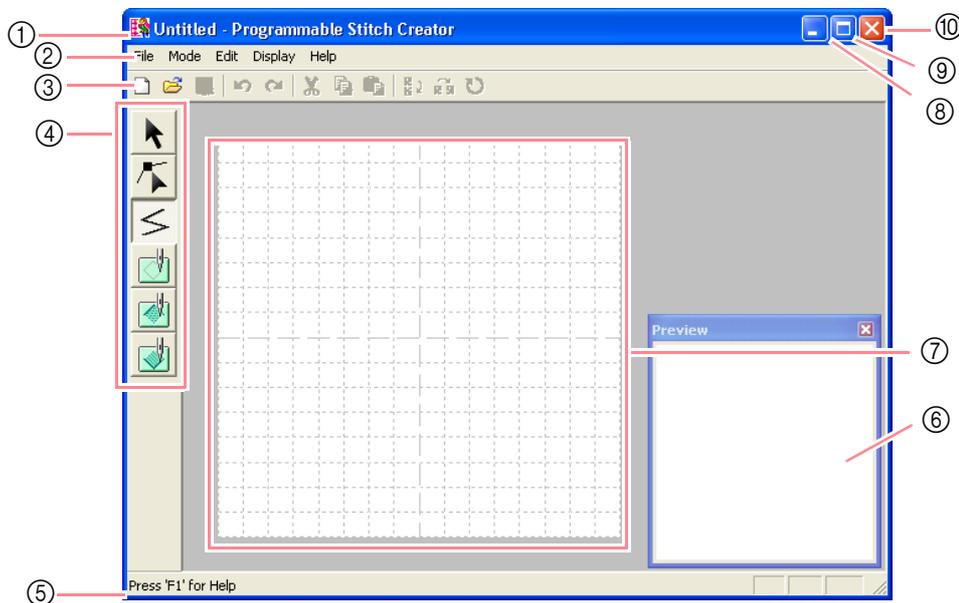
① **Title bar**

② **Menu bar**

Provides access to the functions.

③ **Toolbar**

Provides shortcuts for the menu commands.

④ **Tool Box**

Used to select and create fill and motif stitch patterns and stamps.

(The bottom four buttons do not appear in Motif mode.)

⑤ **Status bar**

Provides helpful information.

⑥ **Preview window**

Shows how the stitch pattern will be sewn.

⑦ **Work area**

⑧ **Minimize button**

⑨ **Maximize button**

⑩ **Close button**

Opening a Pattern File

Creating a new pattern

You can begin with a blank work area in order to design a new stitch pattern.

Toolbar button: 🗋

1. Click 🗋, or click **File**, then **New**.

   → If the current work area has already been saved or has not been edited, a new work area appears immediately.

   → If the current work area has not been saved, you will be asked whether you want to save the changes.

   Programmable Stitch Creator ✕
   ⚠ Save changes to Untitled?
   [Yes] [No] [Cancel]

   📖 **Memo:**
   • *To save the work area, click **Yes**.*
   • *To abandon the work area, click **No**.*
   • *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

   ☞ *"Opening a pattern file" on this page, "Overwriting" on page 221 and "Saving with a new name" on page 221*

Opening a pattern file

A previously saved programmable stitch file can be opened to be edited.

Toolbar button: 📂

1. Click 📂, or click **File**, then **Open**.

   → An **Open** dialog box similar to the one shown below appears.
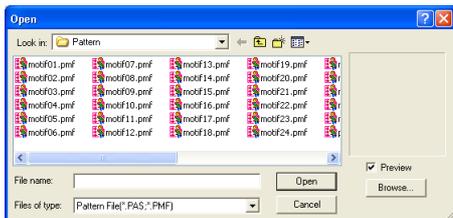
   Open ⁇✕
   Look in: 📁 Pattern ▾ ← 🔼 📅 🔳
motif01.pmf	motif07.pmf	motif13.pmf	motif19.pmf
motif02.pmf	motif08.pmf	motif14.pmf	motif20.pmf
motif03.pmf	motif09.pmf	motif15.pmf	motif21.pmf
motif04.pmf	motif10.pmf	motif16.pmf	motif22.pmf
motif05.pmf	motif11.pmf	motif17.pmf	motif23.pmf
motif06.pmf	motif12.pmf	motif18.pmf	motif24.pmf
   File name: [ ] [Open] ☑ Preview
   Files of type: Pattern File(*.PAS,*.PMF) ▾ [Cancel] [Browse...]

2. Select the drive and the folder.

   📖 **Memo:**
   • *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*
   • *To quit the operation and close the dialog box, click **Cancel**.*

   ⚠ **Note:**
   To open a fill/stamp stitch pattern, be sure to select a folder that contains .pas file. To open a motif stitch pattern, be sure to select a folder that contains .pmf files.

3. To view the contents of the .pas and .pmf files in the currently selected folder, click **Browse**.

   → A **Browse** dialog box similar to the one shown below appears.

   Browse ✕
   motif01 motif02 motif03
   motif04 motif05 motif06
   [Open] [Cancel]
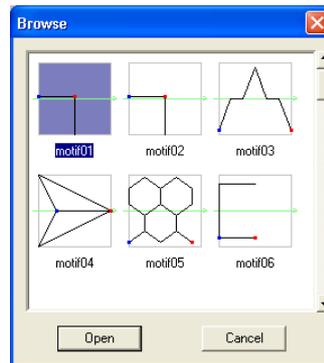
   📖 **Memo:**
   • *To return to the **Open** dialog box, click **Cancel**.*
   • *A green arrow through the middle of the stitch pattern indicates motif stitch patterns (.pmf). Otherwise, the data is a fill/stamp stitch pattern (.pas).*
   • *Stamps are identified by the red- (engraving effect sewn with the fill stitch) and blue-filled areas (embossing effect sewn with satin stitching).*

4. To open a file, select it, and then click **Open**, or double-click the file's icon.

   → If the current work area has already been saved or has not been edited, the contents of the selected file immediately appear in the work area.

Advanced Opreation
Programmable Stitch Creator

📖 **Memo:**

*The mode will automatically change to match that of the selected pattern (**Fill/Stamp** for .pas files or **Motif** for .pmf files).*

→ If the current work area has not been saved, you will be asked whether you want to save the changes.

📖 **Memo:**

- *To save the work area, click **Yes**.*
- *To abandon the work area, click **No**.*
- *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

☞ *"Creating a new pattern" on page 209, "Overwriting" on page 221 and "Saving with a new name" on page 221*

Opening an image in the background

You can open a background image that can be used as a guide to draw a new fill/stamp and motif stitch pattern. The file name extension must be one of the following: Windows bitmap (.bmp), Exif (.tif, .jpg), ZsoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).

1. Click **File**, then **Template Open**.

→ An **Open template file** dialog box similar to the one shown below appears.
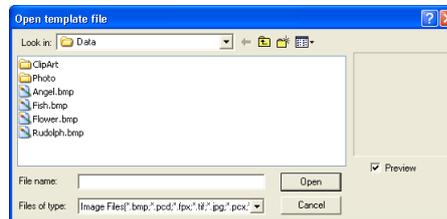
2. Select the drive, the folder and the desired file.

📖 **Memo:**

*If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

3. Click **Open** to open the file.

→ The image fills the work area.

📖 **Memo:**

- *Double-clicking the file name also opens the file and closes the dialog box.*
- *To quit the operation, click **Cancel**.*
- *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
  - *To display the original image, click **On**.*
  - *To display a faded copy of the image, click **Faded**.*
  - *To hide the original image, click **Off**.*

⚠ **Note:**

- *With .pcd and .fpx files containing many pages, only the first page can be opened. Tiff files with LZW compression cannot be opened.*
- *Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.*

Selecting a Pattern To Be Created

You can use Programmable Stitch Creator to create patterns for programmable fill stitches, stamps, motif fill stitches, motif line stitches. The method and work area are slightly different for each. Use the commands on the **Mode** menu to select the type of pattern that you want to create.

1. To enter Fill/Stamp mode, click **Mode**, then **Fill/Stamp**.
   To enter Motif mode, click **Mode**, then **Motif**.

→ If the current work area has already been saved or has not been edited, a blank work area immediately appears in the selected mode.

→ If the current work area has not been saved, you will be asked whether you want to save the changes.

Memo:
- *To save the work area, click Yes.*
- *To abandon the work area, click No.*
- *To return to the work area, for example, to modify it or save it with another file name, click Cancel.*

■ Fill/Stamp mode

In Fill/Stamp mode, you can make a stitch pattern out of a single line or sets of lines, and you can then choose to fill the areas enclosed by the lines to create an embossing/engraving effect. Both types of stitch patterns can be set as a programmable fill stitch in addition to being applied as individual stamps to regions of patterns in Design Center as well as Layout & Editing.

The Line tool in the Tool Box allows you to draw the lines of a fill stitch pattern or a stamp, and the Region (engrave), the Region (emboss) and the Region (reset) tools allow you to fill and edit the enclosed areas of the stitch or stamp that you draw.

The sewing method for a programmable fill stitch is different from the regular fill stitch, where the thread is constantly sewn in a set direction. Instead, the pattern will be sewn in such a way that the needle drops directly over the created pattern.
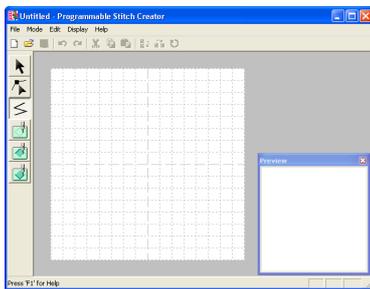
Example of a pattern
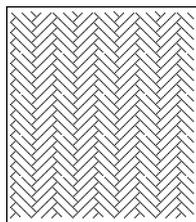
■ Motif mode

In Motif mode, you can create original stitch patterns by changing the shape of a single line. These stitch patterns can be applied in line sewing and region sewing in Layout & Editing, and region sewing in Design Center.

A green arrow appears at the center of the work area, showing the direction that the pattern (stitch) will be sewn.

A single pink line appears along with the green arrow. This line indicates the base for the motif stitch, which can be altered by inserting points with the Edit Point tool, and then moving them to form original designs.

The blue square at the left edge of the work area indicates the start point of that line and the red square at the right edge indicates the end point of the stitch.
The start and end points cannot be deleted, and they must be aligned vertically. Therefore, if you move one point up or down, the other point will automatically move in the same direction.
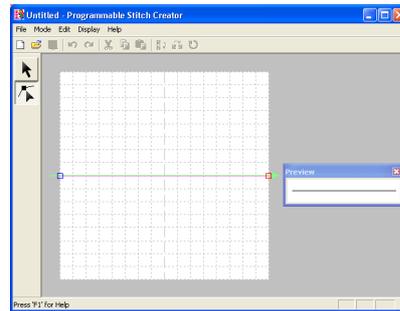
Example of a pattern
Line sewing
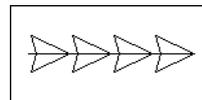
Region sewing
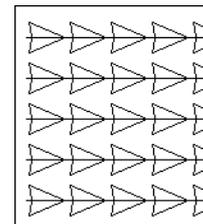
Advanced Opreation
Programmable Stitch Creator

Viewing the Stitch Pattern While Creating It

You can display the Preview window to view a repeating image of the stitch pattern as you create it.

1. If the Preview window isn't displayed, click **Display**, then **Preview**.

The Preview window for the selected **Mode** setting appears, as shown in the examples below, and a check mark appears to the left of the menu command **Display** – **Preview**.

Fill/Stamp mode

Motif mode

The image in the Preview window is updated as you enter the changes in the work area.

2. To close the Preview window, click its close button, or click the menu command **Display** – **Preview** to remove the check mark.

> 📖 **Memo:**
> • *The Preview window can be resized.*
> • *The setting for displaying the Preview window is retained, until it is changed.*

Drawing a Stitch Pattern in Fill/Stamp Mode

The Line tool allows you to draw broken lines to create your fill/stamp stitch pattern. A broken line is made of one or more connected straight lines with the end point of one straight line being the start point of the next line.

The horizontal and vertical lines that you draw on the work area always follow the grid. The points that you create by clicking the mouse button are inserted at the intersection of the horizontal and vertical lines of the grid, enabling you to draw diagonal lines as well. Regardless of where you click, a point will automatically be inserted at the nearest intersection.

Depending on the stitch pattern that you want to draw, you may need to select a grid of a different size. In addition, by selecting **None**, the point will no longer be inserted at the nearest intersection, allowing you to create curved patterns. For details on the grids and adjusting them, refer to "Changing the grid settings" on page 222.

1. Click ⩽ on the Tool Box.

→ When the pointer is moved over the work area, the shape of the pointer changes to ⁺⩽.

> ⚠️ **Note:**
> *This tool can only be used in Fill/Stamp mode.*

2. Click in the work area to specify the start point.
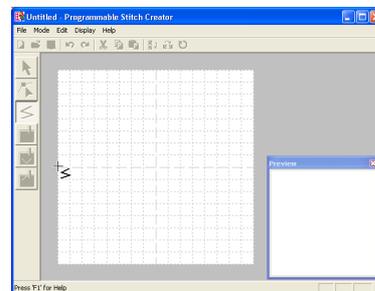
3. Click in the work area to specify the next point.
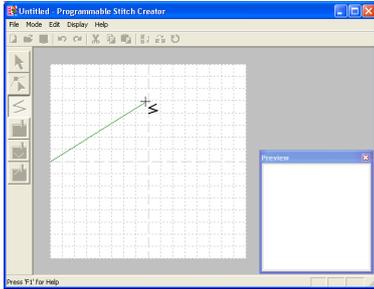
📖 **Memo:**
To remove the last point that was entered, click the right mouse button.

4. Continue clicking to specify every point, and then double-click the last point.
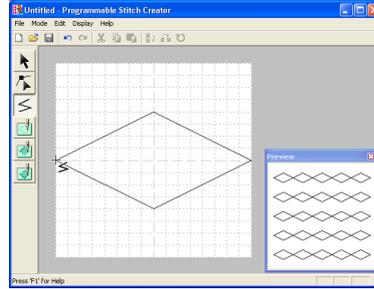
5. Repeat the entire procedure until the fill/stamp stitch pattern is completed.

Editing a Stitch Pattern in Fill/Stamp Mode

Selecting patterns

1. Click ▶ on the Tool Box.

→ The shape of the pointer changes to ▷ .

2. Click the pattern that you want to select.

→ Handles appear around the pattern to show that it is selected.
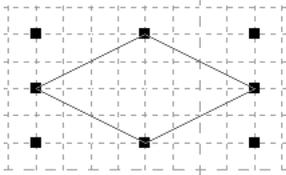
⚠️ **Note:**
A pattern will not be selected if you do not click one of its lines.

📖 **Memo:**
To deselect the pattern, select a different one, click a blank area of the work area, or click a button in the Tool Box other than

▶ .

3. To select an additional pattern, hold down the **Ctrl** key and click the other pattern.

📖 **Memo:**
• *You can also select patterns by dragging the pointer across the pattern that you want to select. As you drag the pointer, a selection frame is drawn. All patterns that are contained in that selection frame are selected when the mouse button is released.*
• *If you selected patterns that you did not want, click a blank area of the work area to deselect all patterns, and start again.*

■ Selecting all patterns

1. Make sure that ▶ on the Tool Box is selected.

2. Click **Edit**, then **Select All**.

Moving patterns

1. Move the pointer over a selected pattern or group of selected patterns.

→ The shape of the pointer changes to ✥ .

2. Drag the pattern to the desired location.

> 📖 **Memo:**
> - *To move the pattern horizontally or vertically, hold down the* **Shift** *key while dragging it.*
> - *Pressing the arrow keys moves the selected pattern one grid mark in the direction of the arrow on the key. If the grid is not displayed, the pattern moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*

Scaling patterns

1. Move the pointer over one of the handles of a selected pattern or group of patterns.

→ The shape of the pointer changes to

↔ , ↕ , ↘ or ↗ , depending on the handle that the pointer is over.

> 📖 **Memo:**
> - ↔ *is for scaling the width.*
> - ↕ *is for scaling the height.*
> - ↘ *and* ↗ *are for scaling both dimensions at the same time.*

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

Deleting patterns

1. Select the pattern to be deleted.

2. Press the **Delete** key, or click **Edit**, then **Delete**.

Cutting out patterns

Selected pattern(s) can be removed from the screen while saving a copy in the Clipboard.

Toolbar button: ✂

1. Select one or more patterns.

2. Click ✂ , or click **Edit**, then **Cut**.

→ The selected patterns are removed from the work area.

> 📖 **Memo:**
> *Since the removed patterns are saved on the Clipboard, you can paste them back using the menu command* **Edit** – **Paste**.

☞ *"Copying patterns" on this page, "Pasting a cut or copied pattern" on this page and "Deleting patterns" on this page*

Copying patterns

Selected pattern(s) can be saved on the Clipboard without being removed from the work area.

Toolbar button: 📋

1. Select one or more patterns.

2. Click 📋 , or click **Edit**, then **Copy**.

→ The selected patterns are copied onto the Clipboard and are ready to be pasted.

☞ *"Cutting out patterns" on this page, "Duplicating patterns" on this page and "Pasting a cut or copied pattern" on this page*

Duplicating patterns

A copy of the selected pattern(s) can be added to the work area.

1. Select one or more patterns.

2. Click **Edit**, then **Duplicate**.

→ A copy of the pattern(s) are added to the work area.

☞ *"Copying patterns" on this page and "Pasting a cut or copied pattern" on this page*

Pasting a cut or copied pattern

The patterns on the Clipboard can be pasted into the work area.

Toolbar button: 📋

1. Click 📋 , or click **Edit**, then **Paste**.

→ The patterns saved on the Clipboard (using the **Cut** or **Copy** command) are pasted into the work area.

☞ *"Cutting out patterns" on page 214, "Copying patterns" on page 214 and "Duplicating patterns" on page 214*

Flipping patterns vertically

You can flip the selected pattern(s) vertically (up/down).

Toolbar button:

1. Select one or more patterns.

2. Click , or click **Edit**, then **Mirror**, then **Horizontal**.

→ The selected pattern(s) are replaced by their horizontal mirror image (top and bottom inverted).

📖 **Memo:**

*To restore the image to its original orientation, select the menu command **Edit** – **Mirror** – **Horizontal** again.*

☞ *"Flipping patterns horizontally" on this page and "Rotating patterns" on this page*

Flipping patterns horizontally

You can flip the selected pattern(s) horizontally (left/right).

Toolbar button:

1. Select one or more patterns.

2. Click , or click **Edit**, then **Mirror**, then **Vertical**.

→ The selected pattern(s) are replaced by their vertical mirror image (left and right inverted).

📖 **Memo:**

*To restore the image to its original orientation, select the menu command **Edit** – **Mirror** – **Vertical** again.*

☞ *"Flipping patterns vertically" on this page and "Rotating patterns" on this page*

Rotating patterns

You can manually rotate the selected pattern(s) by an arbitrary angle.

Toolbar button:

1. Select one or more patterns.
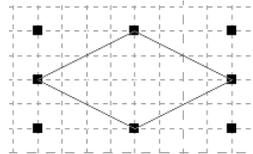
2. Click , or click **Edit**, then **Rotate**.

→ The handles around the selected pattern are replaced by empty squares at the four corners of the selected pattern.
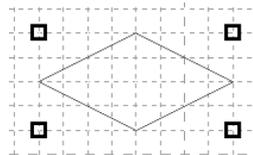
3. Move the pointer over one of the four rotation handles.

→ When the pointer is moved over a rotation handle, the shape of the pointer changes to .
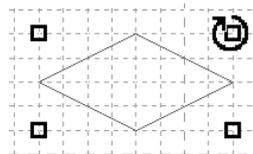
4. Drag the rotation handle clockwise or counterclockwise to rotate the pattern to the desired angle.
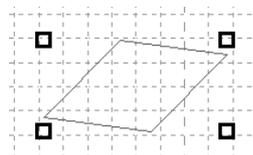
📖 **Memo:**

• *Simply dragging the pointer rotates the pattern in 1° increments.*

• *To rotate the pattern in 15° increments, hold down the (**Shift**) key while dragging the rotation handle.*

Advanced Opreation
Programmable Stitch Creator

215

Editing Points in Fill/Stamp Mode

The points that you move or insert are positioned at the intersection of the horizontal and vertical lines of the grid. Regardless of where you drag a point to or insert a point on the line, it will automatically be positioned at the nearest intersection.

Depending on the stitch that you want to create, you may need to select a grid of a different size. For details on the grids and adjusting them, refer to "Changing the grid settings" on page 222.

Moving points

1. Click on the Tool Box.

   → The shape of the pointer changes to

   ▷ .

2. Click the broken line that you want to edit.

   → The points in the broken line appear as small empty squares.
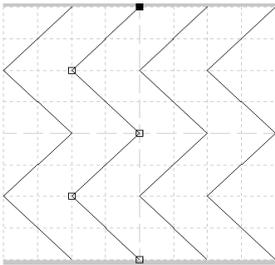
> 📖 **Memo:**
> *You can only select one broken line at a time.*

3. Click the point that you want to move.

   → The selected point appears as a small black square.

   > 📖**Memo:**
   > • *To select additional points, hold down the* **Ctrl** *key and click each point, or drag the pointer over the points that you want to select.*
   > • *To select the previous (or next) point in the line, hold down the* **Ctrl** *key and press the → (or ←) key.*

   > ⚠ **Note:**
   > *If you click the line of the pattern instead of a point, a new point is inserted.*

4. Drag the point to the new location.

   → All of the selected points move in the same direction.

   > 📖**Memo:**
   > • *To move the point horizontally or vertically, hold down the* **Shift** *key while dragging it.*
   > • *Pressing the arrow keys moves the selected point one grid mark in the direction of the arrow on the key. If the grid is not displayed, the point moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*

Inserting points

1. Click on the Tool Box.

   → The shape of the pointer changes to

   ▷ .

2. Click the broken line that you want to edit.

   → The points in the broken line appear as small empty squares.

   > 📖 **Memo:**
   > *You can only select one broken line at a time.*

3. Click the line to add a new point.

   → A new point appears selected (as a small black square).

Deleting points

1. Click ![tool icon] on the Tool Box.

→ When the pointer is moved over the work area, the shape of the pointer changes to ▷ .

2. Click the broken line that you want to edit.

> 📖 **Memo:**
> *You can only select one broken line at a time.*

→ The points in the broken line appear as small empty squares.

3. Click the point that you want to delete.

→ The selected point appears as a small black square.

> 📖 **Memo:**
> *To select additional points, hold down the* **Ctrl** *key and click each point, or drag the pointer over the points that you want to select.*

4. Click **Edit**, then **Delete**, or press the **Delete** key to remove the point.

> 📖 **Memo:**
> *If a line is composed of two points and you delete one of them, the entire line is deleted.*

Creating a Stamp

Stamps are composed of line stitches that, when they form enclosed areas or regions, the regions can be filled with different types of stitching in order to create a pattern with an embossing/engraving effect. Stamps can be applied to regions of patterns with the Stamp tool, and they can be used as a fill pattern for a programmable fill stitch in both Design Center and Layout & Editing. In Layout & Editing, the regions of patterns where stamps can be applied are those created with the Circle or Arc, Rectangle, Outline, Text or Manual Punch tools.

Advanced Opreation
Programmable Stitch Creator

1. Open an existing fill/stamp pattern file (.pas file) or draw a new stitch pattern with the Line tool in the Fill/Stamp mode.

> ⚠️ **Note:**
> *In order to apply the stamp settings (embossing/engraving effects), make sure that the lines of the stitch pattern form an enclosed area.*
> *The edge of the work area does enclose regions. In order to use the edge of the work area as a limit for regions, lines must be drawn over it first.*
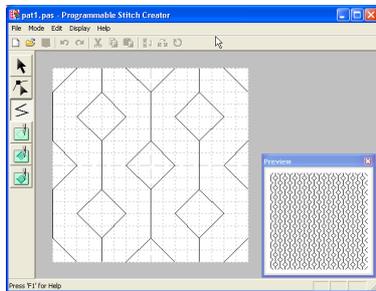
2. To create an engraving effect, click ![icon] (**Region (engrave)**).

→ The shape of the pointer changes to ▷.

3. Click each region where you want to apply the engraving setting.

→ The regions appear in red, which is the color for the tool.
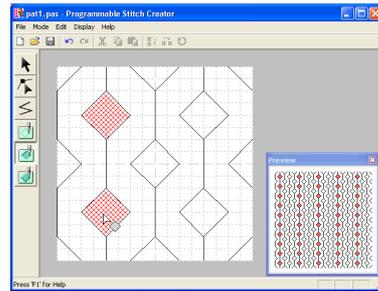
> 📖 **Memo:**
> *This type of region will be sewn with the fill stitch set to a pitch of 2.0 mm (0.16 in) and a frequency of 30%, and the needle drop point will be set on the outline.*

4. To create an embossing effect, click ![icon] (**Region (emboss)**).

→ The shape of the pointer changes to ▷.

5. Click each region where you want to apply the embossing setting.

→ The regions appear in blue, which is the color for the tool, and will be sewn with stitching that appears like satin stitching.
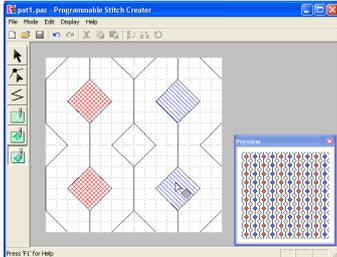
6. To remove the stamp effect applied to a

region, click 🖼️ (**Region (reset)**).

→ The shape of the pointer changes to ▷◇.

7. Click each region where you want to remove the engraving or embossing setting.

→ The region appears in white, which is the color for the tool, and will be sewn in the direction set for the base stitch.

> ⚠️ **Note:**
> • *If you edit stitch lines after a region has been filled, make sure that the lines still form a region, otherwise the embossing/engraving effects are canceled.*
> • *Stamp files cannot be used with versions of the software earlier than version 6, but .pas files created with an earlier version can be used as a base to create stamp files.*

Creating a Stitch Pattern in Motif Mode

In Motif mode, stitch patterns are created by inserting points on the base line of the motif stitch, then moving them in order to change the shape of the stitch and give it the look of a single-stroke drawing.

The points you move or insert are positioned at the intersection of the horizontal and vertical lines of the grid. Regardless of where you drag a point to or insert a point on the line, it will automatically be positioned at the nearest intersection.

Depending on the stitch you want to create, you may need to select a grid of a different size. For details on the grids and adjusting them, refer to "Changing the grid settings" on page 222.

1. Click 📐 on the Tool Box.

→ The shape of the pointer changes to

▷ .

> 📖**Memo:**
> *The Point Edit tool is selected automatically when Motif mode is entered.*

2. Click the base line between the start point (blue square) and end point (red square).

→ A new point appears selected (as a small black square). The new point can be edited.
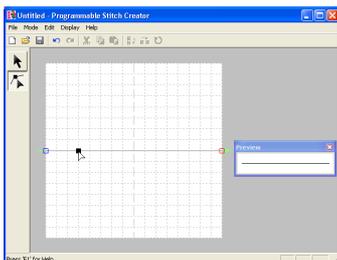
3. Drag the point that you want to move to a new position.

→ The stitch line moves with the newly created point.
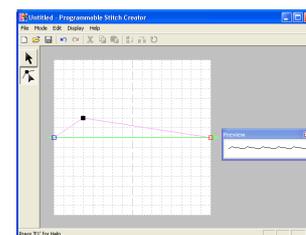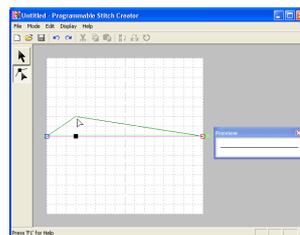
📖 **Memo:**

- *To move the point horizontally or vertically, hold down the* **Shift** *key while dragging it.*
- *Pressing the arrow keys moves the selected point one grid mark in the direction of the arrow on the key. If the grid is not displayed, the pattern moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*
- *To delete a selected point, press the* **Delete** *key.*

4. Repeat steps **2.** and **3.** until the motif stitch pattern is completed.

📖 **Memo:**

- *If you move the start point (blue square) or the end point (red square), the other point will automatically move in the same direction.*
- *The start and end points cannot be moved closer together than a certain fixed distance.*

Editing a Stitch Pattern in Motif Mode

After creating a stitch pattern, or after opening an existing motif file, you may want to change its shape or position. To do so, you can proceed in the same way as described above, but in addition, you can select and move or delete several points at the same time.

Moving and deleting several points at a time

1. Click 🔧 on the Tool Box.

→ The shape of the pointer changes to

▷ .

📖 **Memo:**

The Point Edit tool is selected automatically when Motif mode is entered.

2. Click the base line between the start point (blue square) and end point (red square).

→ The selected point appears as a small black square.

📖 **Memo:**

- *To select additional points, hold down the* **Ctrl** *key and click each point, or drag the pointer over the points that you want to select.*
- *To select the previous (or next) point in the line, hold down the* **Ctrl** *key and press the → (or ←) key.*

❗ **Note:**

If you click the line of the pattern instead of a point, a new point is inserted.

3. To move the point(s), drag them to the desired location.

→ All of the selected points move in the same direction.

4. To delete the selected points, press the

Delete key.

→ All of the selected points are deleted.

❗ **Note:**

The start point (blue square) and end point (red square) can not be deleted.

Advanced Opreation
Programmable Stitch Creator

Scaling patterns

1. Click ▶ on the Tool Box.

→ The motif stitch is selected.

2. Move the pointer over one of the handles of the pattern.

→ The shape of the pointer changes to

↔ , ↕ , ↖ or ↗ , depending on the handle that the pointer is over.

> 📖 **Memo:**
> * ↔ *is for scaling the width.*
> * ↕ *is for scaling the height.*
> * ↖ *and* ↗ *are for scaling both dimensions at the same time.*

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

Flipping a pattern horizontally or vertically

You can flip selected patterns horizontally (up/down) or vertically (left/right).

1. Click ▶ on the Tool Box.

→ The motif stitch is selected, and 🔲 and

🔲 are available in the Toolbar.

2. To replace the stitch pattern by its horizontal mirror image (top and bottom inverted), select **Edit**, then **Mirror**, then **Horizontal**, or click

🔲 in the Toolbar.

To replace the stitch pattern by its vertical mirror image (left and right inverted), select

Edit, then **Mirror**, then **Vertical**, or click 🔲

in the Toolbar.

> 📖 **Memo:**
> *To restore the image to its original orientation, select the same menu command again, or select the menu command **Edit** – **Undo**.*

Saving

Overwriting

Once the stitch pattern has been saved, changes can easily be saved so that the latest version can be retrieved later.

Toolbar button: 🖫

1. Click 🖫 , or click **File**, then **Save**.

→ If the pattern has already been saved at least once, the file is saved immediately.

→ 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" on this page*

Saving with a new name

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same image or pattern. The files are saved as.pas files in Fill/Stamp mode, and as .pmf files in Motif mode.

1. Click **File**, then **Save As**.
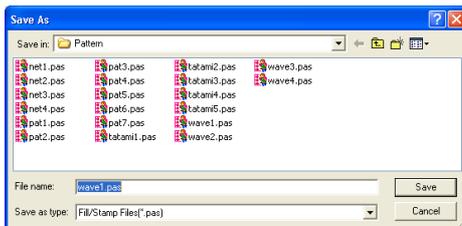
→ A **Save As** dialog box similar to the one shown below appears.

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

> 📖 **Memo:**
> *The correct extension is automatically selected.*

3. Click **Save** to save the pattern.
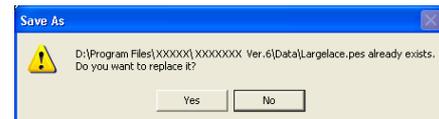
> 📖 **Memo:**
> • *To quit the operation, click **Cancel**.*
> • *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*
>
> • *To overwrite the file, click **Yes**.*
> • *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

☞ *"Overwriting" on this page*

> ⚠️ **Note:**
> *Stamp files cannot be used with versions of the software earlier than version 6, but .pas files created with an earlier version can be used as a base to create stamp files.*

Advanced Opreation
**Programmable
Stitch Creator**

Changing the Settings

Changing the display of the background image

The template image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed.

1. Click **Display**, then **Template**, and then select the desired setting.

   To display the template image, click **On**.

   To display a faded copy of the image, click **Faded**.

   To hide the template image, click **Off**.

   📖 **Memo:**
   - *This function is not available if no template image has been imported into the work area.*
   - *Press the shortcut key (F6) to switch between displaying the image to displaying it faded to hiding the image.*

   ☞ *"Opening an image in the background" on page 210*

Changing the grid settings

The line spacing in the grid displayed in the work area can be adjusted.

1. Click **Display**, then **Grid**.

   → A submenu showing the current grid setting appears.

2. Click the grid setting that you need for the stitch pattern that you are creating or editing.

   To select a grid interval of 1/8 of a work area's edge, click **Wide**.

   To select a grid interval of 1/16 of a work area's edge, click **Medium**.

   To select a grid interval of 1/32 of a work area's edge, click **Narrow**.

   To hide the grid, click **None**.

   📖 **Memo:**
   - *You can also change the grid setting while you are working on a stitch pattern.*
   - *The setting for the grid setting is retained, until it is changed.*

Example 1: **Wide** grid
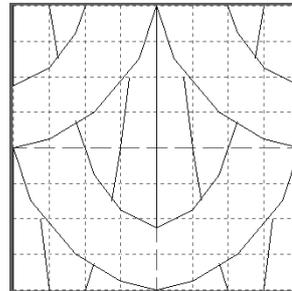
Example 2: **Medium** grid
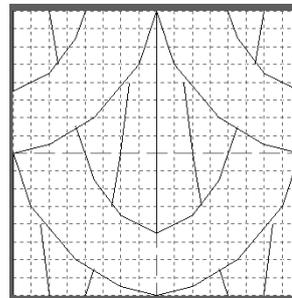
Example 3: **Narrow** grid
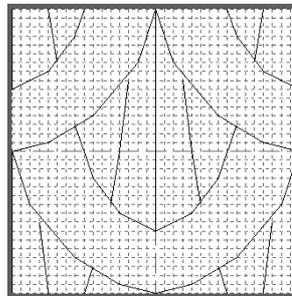
The horizontal and vertical lines that you draw in the work area always follow the grid. The points you create by clicking in the work area are inserted at the intersection of the horizontal and vertical lines of the grid, enabling you to draw diagonal lines as well. Regardless of where you click, a point will automatically be inserted at the nearest intersection. Select a different grid size according to the type of stitch that you want to draw. Select a narrower grid for drawing finer details or to give a curved or circular appearance to your stitch lines, and select a wider grid if you want to draw a simpler stitch pattern. Select **None** to turn off the snap to grid feature, allowing you to create curved patterns.

Design Database

Design Database is used to organize the embroidery pattern files on your computer so that you can easily preview and search for the desired pattern. In addition, embroidery patterns can be opened with or imported into Layout & Editing or converted into other file formats (.pes, .dst., .exp., .pcs or .hus). Images of the embroidery patterns in a selected folder can be printed or outputted as an HTML file for quick reference. The sewing information for the embroidery patterns in a selected folder can be outputted as a CSV file (the data in each category is separated with a comma) for use in other database applications, such as Microsoft Excel.

Main Window
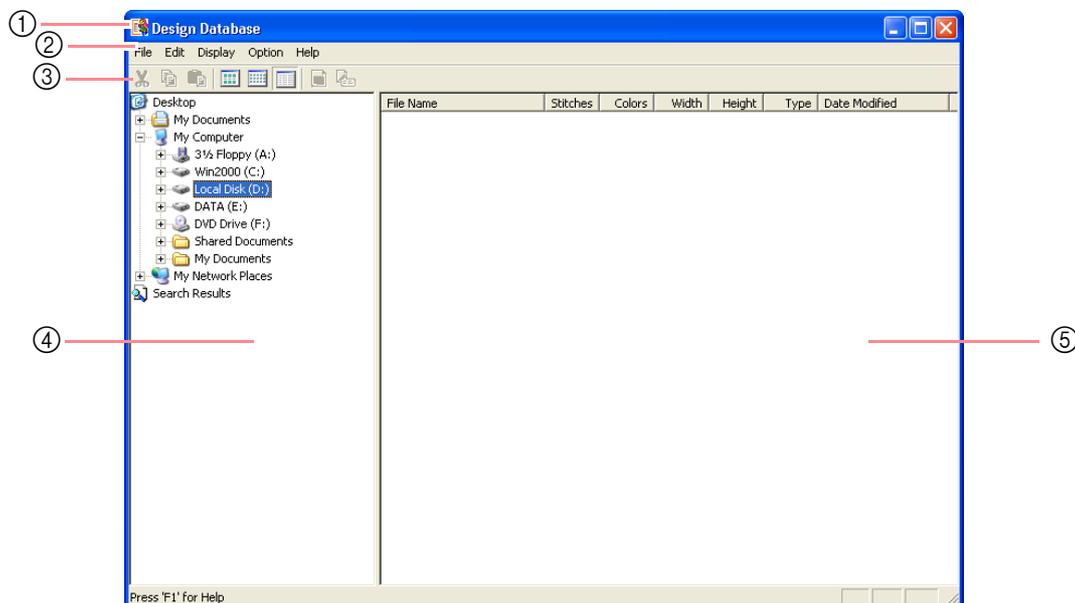
① **Title bar**

② **Menu bar**
Gives access to the functions.

③ **Toolbar**
Provides shortcuts for the menu commands.

④ **Folder pane**
Provides access to the folders on the computer and the results of any searches that were performed.

⑤ **Contents pane**
Displays thumbnails of all embroidery patterns in the selected folder.

Advanced Opreation
Design Database

Starting Up Design Database

1. Click , select **All Programs**, then
PE-DESIGN Ver 6. Select **Design Database**
to open the Design Database window.

> 📖 **Memo:**
> *If a shortcut for Design Database was
> created, for example, on the desktop,
> double-click it to start up the application.*

Design
Database

→ The Design Database window appears.

> 📖 **Memo:**
> *To fill the entire screen with the Design
> Database window, click the maximize button
> on the right end of the title bar.*

2. Click a folder in the folder pane.

→ All embroidery files in the folder are dis-
played in the contents pane.
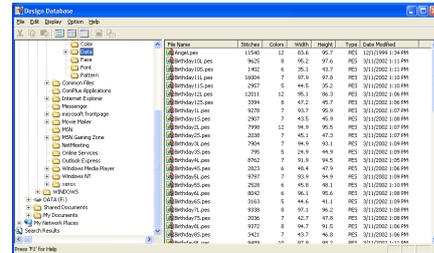
> 📖 **Memo:**
> *Only .pes, .dst, .exp, .pcs, .hus and .phc files
> are displayed.*

Organizing Embroidery Patterns

You can move your embroidery patterns to different folders in order to organize them. In addition, you can
choose to display the embroidery patterns by thumbnails or by the pattern details.

Creating new folders

New folders can be created in order to better
organize the embroidery patterns.

1. In the folder pane, select the folder where you
want to create a new folder.

2. Click **File**, then **Create New Folder**.

→ A new folder appears as a sub-folder of
the one that was selected.
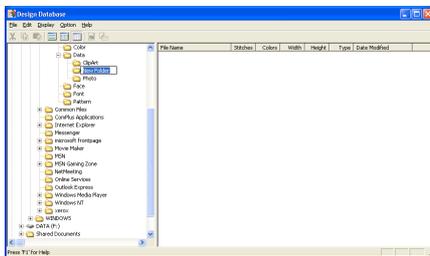
3. Type in the name of the new folder, and then

press the (**Enter**) key.

→ The name of the folder changes to the one
that was typed in.

Moving/copying embroidery patterns to a different folder

From Design Database, embroidery patterns can
easily be moved from one folder to another.

1. In the folder pane, display the folder where
you want to move the embroidery pattern.

2. In the folder pane, click the folder that contains
the embroidery pattern that you want to move.

3. Drag the embroidery pattern in the contents
pane to the desired folder in the folder pane.

224
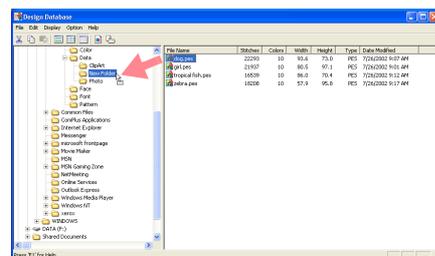
→ If the two folders are on the same drive, the selected embroidery pattern is moved to the other folder.

→ If the two folders are on separate drives, the selected embroidery pattern is copied into the other folder.

📖 **Memo:**
- *To copy the file from one folder to another on the same drive, hold down the* **Ctrl** *key while dragging the embroidery pattern.*
- *To move the file from one folder to another on different drives, hold down the* **Shift** *key while dragging the embroidery pattern.*
- *The file can also be removed from the current folder (or copied) by selecting the menu command* **Edit** – **Cut** *(or* **Edit** – **Copy***).Then, the file can be added to the new folder by selecting it in the folder pane, then selecting the menu command* **Edit** – **Paste***.*

Changing the name of the embroidery pattern

From Design Database, the names of embroidery patterns can easily be changed.

⚠️ **Note:**
The names of embroidery patterns can be changed from Design Database only when the sewing information (menu command **Display** – **Details***) is displayed. (Refer to "Changing the contents pane display" on this page.)*

1. In the folder pane, select the folder containing the embroidery pattern that you want to rename.

2. In the contents pane, select the embroidery pattern that you want to rename.

→ The embroidery pattern is highlighted.

3. Click the name of the embroidery pattern that you want to rename.

→ The name of the embroidery pattern is highlighted.
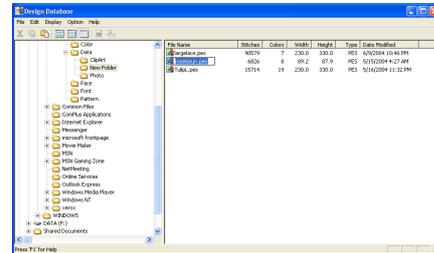
4. Type in the new name of the embroidery pattern, and then press the **Enter** key.

📖 **Memo:**
The file extension cannot be changed.

Deleting an embroidery pattern

From Design Database, embroidery patterns can easily be deleted.

1. In the folder pane, select the folder containing the embroidery pattern that you want to delete.

2. In the contents pane, select the name of the embroidery pattern that you want to delete.

3. Press the **Delete** key.

→ The file is moved to the Recycle Bin.

📖 **Memo:**
- *You can also delete embroidery pattern by using the menu command* **File** – **Delete***.*
- *To immediately remove the file without first moving it to the Recycle Bin, hold down the* **Shift** *key before pressing the* **Delete** *key.*

Advanced Opreation
Design Database

225

Changing the contents pane display

The embroidery patterns in the contents pane can be displayed as large thumbnails or small thumbnails, or they can be listed by their sewing information.

1. Click **Display**, and then click the display setting from the menu that appeared.

   To display the embroidery patterns as large images, click **Large Thumbnails**.

   📖 **Memo:**
   You can also display the embroidery patterns as large thumbnails by clicking 🔲 *in the Toolbar.*
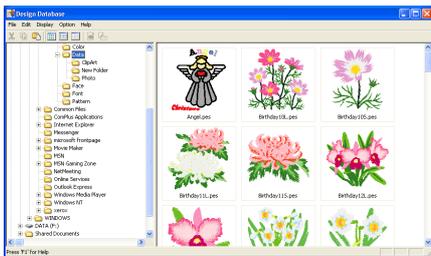
   To display the embroidery patterns as small images, click **Small Thumbnails**.

   📖 **Memo:**
   You can also display the embroidery patterns as small thumbnails by clicking 🔲 *in the Toolbar.*
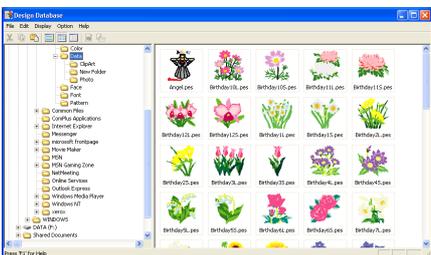
   To display the sewing information for the embroidery patterns, click **Details**.

📖 **Memo:**
You can also display the sewing information for the embroidery patterns by clicking 🔲 *in the Toolbar.*
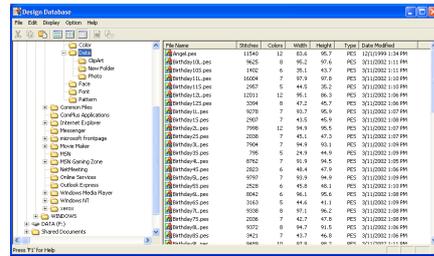
Opening Embroidery Patterns

Opening embroidery patterns with Layout & Editing

You can easily open any selected .pes file with Layout & Editing.

1. In the folder pane, select the folder containing the embroidery pattern that you want to open in Layout & Editing.

2. In the contents pane, select the embroidery pattern that you want to open.

> **Note:**
> *Be sure to select a folder that contains .pes files.*

3. Click **File**, then **Open in Layout & Editing**.

> **Memo:**
> *Double-clicking the file name also opens the embroidery pattern in a new Design Page of the Layout & Editing window.*

→ If the current Layout & Editing work area has already been saved or has not been edited, the selected embroidery pattern immediately appears in a new Design Page of the Layout & Editing window.

→ If the current Layout & Editing work area has not been saved, you will be asked whether you want to save the changes.
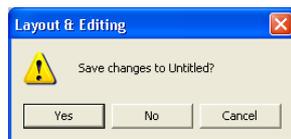
> **Memo:**
> • *To save the work area, click **Yes**.*
> • *To abandon the work area, click **No**.*
> • *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

☞ *"Overwriting" on page 194 and "Saving with a new name" on page 194*

Importing embroidery patterns into Layout & Editing

You can easily import any selected embroidery pattern into Layout & Editing.

1. In the folder pane, select the folder containing the embroidery pattern that you want to import into Layout & Editing.

2. In the contents pane, select the embroidery pattern that you want to import.

3. Click **File**, then **Import Into Layout & Editing**.

→ The selected embroidery pattern appears in the Layout & Editing window.

> **Memo:**
> *Double-clicking the file name also imports the embroidery pattern into the Design Page in the Layout & Editing window.*

Advanced Opreation
Design Database

Checking Embroidery Patterns

Previewing embroidery patterns

A preview of the embroidery pattern can be displayed.

Toolbar button: [icon]

1. In the folder pane, select the folder containing the embroidery pattern that you want to preview.

2. In the contents pane, select the embroidery pattern that you want to preview.

3. Click [icon], or click **Display**, then **Preview**.

→ A **Preview** dialog box similar to the one shown below appears.

📖 **Memo:**
*To close the dialog box, click **Close**.*

Checking embroidery pattern information

Sewing information such as the file name, size, stitch count, color count and modification date can be checked in the **File Property** dialog box. With .pes file, additional information about the embroidery pattern can be viewed.

Toolbar button:

1. In the contents pane, select the embroidery pattern corresponding to the information that you want to view.

2. Click , or click **Display**, then **File Property**.

→ The **Property** dialog box appears.

Non-PES files

PES files

📖 **Memo:**
- *The thread colors are displayed as basic colors. Thread colors in .pes files are displayed according to the thread colors set when the file was read by Layout & Editing.*
- *To close the dialog box, click **Close**.*

→ If the Design Page was set to **Custom Size**, a **Property** dialog box similar to the one shown below appears.

📖 **Memo:**
- *The first line of the dialog box shows the position of the displayed pattern section within the embroidery hoop installation order.*
- *To display information for other pattern sections, click* *or* *.*
- *The pattern sections are displayed in order from left to right, top to bottom. Pattern sections that do not contain any stitching will not be displayed.*
- *To close the dialog box, click **Close**.*

⚠ **Note:**
 cannot be clicked when the design corresponding to the first hoop is already displayed. In addition, *cannot be clicked when the design corresponding to the last hoop is already displayed.*

Searching for an Embroidery Pattern

The Search function allows you to quickly search for the desired embroidery pattern (.pes, .phc, .dst., .exp., .pcs or .hus file) within the selected folder according to the various search conditions that you can specify.

1. In the folder pane, select the folder that you want to search.

2. Click **Edit**, then **Search**.

→ The **Search** dialog box appears.

3. Specify the search conditions.

To search for a file with a specific file name, select the **File Name** check box, and then type the file name in the box beside **File Name**.

📖 **Memo:**

The wildcard characters "" and "?" can be used to represent one or multiple characters.*

To search for a file with a specific format, select the **Format** check box, and then select the check box beside the desired format.

To search for a file with a number of stitches within a specified range, select the **Stitches** check box, and then type the range in the boxes beside **Stitches**.

To search for a file with a number of colors within a specified range, select the **Colors** check box, and then type the range in the boxes beside **Colors**.

To search for a file with a width within a specified range, select the **Width** check box, and then type the range in the boxes beside **Width**.

To search for a file with a height within a specified range, select the **Height** check box, and then type the range in the boxes beside **Height**.

To search for a file with a modification date within a specified range, select the **Date Modified** check box, and then type or select the range in the boxes beside **Date Modified**.

To search for a .pes file with a design name that contains specific characters, select the **Design Name** check box, and then type the desired characters in the box beside **Design Name**.

To search for a .pes file with a category that contains specific characters, select the **Category** check box, and then type the desired characters in the box beside **Category**.

To search for a .pes file with an author name that contains specific characters, select the **Author** check box, and then type the desired characters in the box beside **Author**.

To search for a .pes file with a keyword that contains specific characters, select the **Keywords** check box, and then type the desired characters in the box beside **Keywords**.

To search for a .pes file with a comment that contains specific characters, select the **Comment** check box, and then type the desired characters in the box beside **Comment**.

📖 **Memo:**

*• To also search through the subfolders (folders within the selected folder), select the **Search Subfolders** check box.*

*• All characters entered in the box beside **File Name** will be considered as a single set of characters. However, you can search for files matching multiple words in the boxes below **Search Conditions (only for PES files)** by separating the words with a space.*

• With search conditions that contain a range, values must be entered for the start and end of the range.

To clear the search conditions, click **Clear all**.

4. Click **Search Now**.

→ A list of files matching the specified search conditions appears.

📖 **Memo:**

*To quit the search, click **Search Cancel** in the message box that appeared during the search.*

Advanced Opreation
Design Database

Converting Embroidery Patterns to Different Formats

Embroidery files can easily be converted to a file of one of the other formats (.pes, .dst., .exp., .pcs or .hus).

1. In the folder pane, select the folder containing the embroidery pattern that you want to convert.

2. In the contents pane, select the embroidery file that you want to convert.

3. Click **File**, then **Convert Format**.

→ The **Convert Format** dialog box appears.
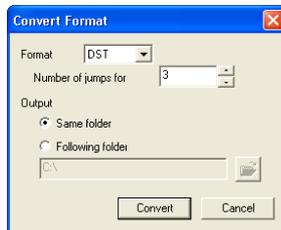
4. From the **Format** selector, select the format that you want to convert the file to.

> 📖 **Memo:**
> *With the DST format, jump codes are used to indicate when the thread must be cut in order to change the thread color. Since the number of codes differ depending on the sewing machine being used, type or select the appropriate value in the **Number of jumps for trim** box. (This setting can only be specified if the .dst format is selected.)*

5. Under **Output**, select whether the new file is added to the same folder as the original file (**Same folder**) or to a specified folder (**Following folder**).

> 📖 **Memo:**
> • *If multiple files with different formats are selected to be converted while **Same folder** is selected, any file with the same format as the new one will not be converted. However, if the files are being added to a different folder than the original one, any file with the same format as the new one will be copied to the different folder, instead of being converted.*

• *To change the folder where the new file will be added, click* 📂 *.*

*In the **Browse for Folder** dialog box that appeared, click the folder, and then click **OK** (or double-click the folder) to select it and to close the **Browse for Folder** dialog box.*

• *To create a new folder, click **New Folder**, and then type in the name of the new folder.*

6. Click **Convert**.

→ The file is converted, and the new file is added to the specified folder.

> 📖 **Memo:**
> • *If the file is converted to a .pes file, the thread colors are converted as if the file was imported into Layout & Editing.*
> • *If the path to a folder that does not exist was typed in, a message appears, asking if you want to create the folder.*
> • *If a file with the same name already exists, a message appears, asking if you want to overwrite the original file.*
> • *The name of the file after the conversion is the same as the name before the conversion, except the extension is changed to the one corresponding to the selected file format.*

> ⚠ **Note:**
> *Files cannot be converted to the .phc format.*

Outputting a Catalog of Embroidery Patterns

Printing

Images of all embroidery patterns in the selected folder can be printed as a catalog.

1. In the folder pane, select the folder containing the embroidery patterns that you want to catalog.

2. Click **File**, then **Print Setup**.

→ A **Print Setup** dialog box similar to the one shown below appears.
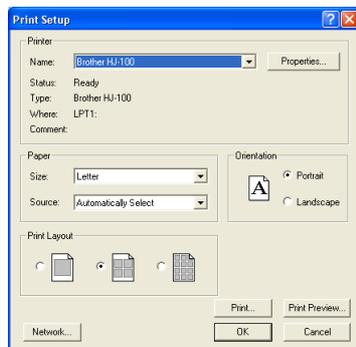
3. Under **Print Layout**, select whether each pattern is printed on a separate page, 4 patterns are printed on a page or 12 patterns are printed on a page.

4. Click **Print**.

→ Images of the selected patterns are printed.

📖 **Memo:**

- *If one or more embroidery patterns were selected in the contents pane, only the selected patterns are printed.*
- *The catalog can be printed immediately by clicking the menu command **File** – **Print**. The embroidery patterns are printed according to the settings already selected in the **Print Setup** dialog box.*

Outputting as an HTML file

Instead of being printed, the catalog of embroidery patterns can be outputted as an HTML file.

1. In the folder pane, select the folder containing the embroidery patterns that you want to catalog.

2. Click **File**, then **Create HTML**.

→ A **Save As** dialog box similar to the one shown below appears.
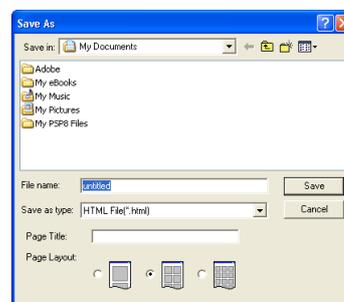
3. Select the drive and the folder, and then type in the name of the HTML file.

4. To add a title at the top of the file and in the title bar, type the title in the **Page Title** box.

5. Under **Page Layout**, select how the patterns appear on the page.

6. Click **Save**.

→ The HTML file and a folder containing images of the embroidery patterns are outputted to the selected folder.

Advanced Opreation
Design Database

231

Outputting as a CSV file

A .csv file containing the sewing information (file name, dimensions, number of stitches, number of colors, file path, file properties (.pes files only) and the names of thread colors) for selected embroidery patterns can be outputted.

1. In the folder pane, select the folder containing the embroidery patterns that you want to catalog.

2. Click **File**, then **Create CSV**.

→ A **Save As** dialog box similar to the one shown below appears.
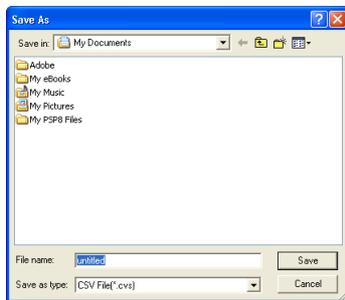
3. Select the drive and the folder, and then type in the name of the .csv file.

4. Click **Save**.

→ A CSV file containing the sewing information for the embroidery patterns is outputted to the selected folder.

Chapter 3
Reference

Design Center

List of Tool Box Buttons

Stage 2 (Line Image stage)

In stage 2 (Line Image stage), the Tool Box is used to modify the line image generated from the original image or to create a line image from scratch.

Selecting a button on the Tool Box changes the pointer mode and shape. A description of each tool appears at the left side of the status bar.

Tool Box	Purpose	See page
	The five first buttons are used as pens and erasers of different thicknesses. Pointer shape when moved or dragged over the work area: for the pens and for the erasers (when the right mouse button is held down). When you start up the application, the second Pen tool is selected.	p. 32
	Sets the pointer in zoom-in mode. Pointer shape:	p. 102
	Maximizes the selected Design Page to fit in the window.	p. 34
	Sets the pointer in zoom-out mode. Pointer shape:	p. 102

Stage 3 (Figure Handle stage)

In stage 3 (Figure Handle stage), outline data that has been generated automatically can be edited using the Tool Box.

Selecting a button on the Tool Box changes the pointer mode and shape. A description of each tool appears at the left side of the status bar.

Tool Box	Purpose	See page
	Sets the pointer in selection mode.When you start up the application, the selection mode is selected. Pointer shape:	p. 78

Tool Box	Purpose	See page
	Sets the pointer in point edit mode. Pointer shape:	p. 81
	Sets the pointer in line drawing mode. Pointer shape:	p. 82
	Sets the pointer in zoom-in mode. Pointer shape:	p. 102
	Maximizes the selected Design Page to fit in the window.	p. 32
	Sets the pointer in zoom-out mode. Pointer shape:	p. 102
	Fills the display with the selected objects.	

Stage 4 (Sew Setting stage)

In stage 4 (Sew Setting stage), outline data from stage 3 (Figure Handle stage) are assigned line and region sewing attributes. This is done by using the Tool Box and the Sewing Attributes bar.

Selecting a button on the Tool Box changes the pointer mode and shape. A description of each tool appears at the left side of the status bar.

Tool Box	Purpose	See page
	Sets the pointer in region sewing mode. When you start up the application, this tool is selected. Pointer shape:	p. 84
	Sets the pointer in line (all) sewing mode. Pointer shape:	p. 85
	Sets the pointer in line (part) sewing mode. Pointer shape:	p. 86
	Sets the pointer in hole sewing mode. Pointer shape:	p. 97
	Sets the pointer in zoom-in mode. Pointer shape:	p. 102
	Maximizes the selected Design Page to fit in the window.	p. 32

Reference
Design Center

Tool Box	Purpose	See page
	Sets the pointer in zoom-out mode. Pointer shape:	p. 102
	Sets the pointer in stamp input mode. Pointer shape:	p. 98
	Sets the pointer in stamp edit mode. Pointer shape:	p. 99

List of Menus

📖 **Memo:**
Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling file input/output, such as opening and saving.

Menu	Toolbar	Purpose	Shortcut key	See page
New Line Image		Creates a new Design Page and switches to stage 2 (Line Image stage).	Ctrl + N	p. 71
New Figure Data	—	Creates a new Design Page and switches to stage 3 (Figure Handle stage).	—	p. 71
Wizard	—	Gives a step-by-step guide for creating pattern data, according the type of data you want to create.	F3	p. 71
Open		Opens a previously saved file (.pem, .pel) or image file (Windows bitmap (.bmp), Exif (.tif, .jpg), ZSoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k). ⚠ **Note:** *For .pcd and .fpx files containing many pages, only the first page can be displayed. Tiff files that have used LZW compression cannot be opened.*	Ctrl + O	p. 31
Select TWAIN device	—	Selects which TWAIN device installed in the computer to use.	—	p. 72
Input from TWAIN device	—	Operates a TWAIN standardized scanner or other device to import an image.	—	p. 72
Input from Clipboard	—	Opens a new Design Page in stage 1 (Original Image stage), and imports the image data on the Clipboard.	—	p. 72

Design Center

Menu	Toolbar	Purpose	Shortcut key	See page
Output to Clipboard	—	Copies the stage 1 (Original Image stage) image data to the Clipboard.	—	p. 114
Import Figure	🔲	Adds a .pem file to your Design Page (available only in stage 3 (Figure Handle stage)).	F8	
Save	💾	Saves your Design Page on the disk as latest version file (default).	Ctrl + S	p. 104
Save As	—	Saves the current file under a new file name. Savable files are: in stage 1 (Original Image stage), Bitmap files (.bmp); in stage 2 (Line Image stage), .pel files; and in stage 3 (Figure Handle stage) and stage 4 (Sew Setting stage), .pem files.	—	p. 104
Exit	—	Exits the application.	Alt + F4	

Edit menu

The **Edit** menu contains commands for performing simple actions on selected patterns, such as cutting and pasting.

Menu		Toolbar	Purpose	Shortcut key	See page
Undo		↺	Undoes the last operation.	Ctrl + Z	
Redo		↻	Cancels the effect of the last Undo.	Ctrl + A	
Cut		✂	Removes the selected data from the screen while saving a copy in the Clipboard.	Ctrl + X	p. 214
Copy		📋	Saves the selected data in the Clipboard without removing them from the screen.	Ctrl + C	p. 214
Duplicate		—	Makes a copy of the selected data.	Ctrl + D	p. 214
Paste		📋	Pastes the contents of the Clipboard on the screen.	Ctrl + V	p. 214
Delete		—	Removes the selected data from the screen without saving them in the Clipboard.	Delete	p. 214
Mirror	Horizon-tal	🔄	Flips the selected data up/down.	Ctrl + H	p. 79
	Vertical	🔄	Flips the selected data left/right.	Ctrl + J	p. 79
Rotate		↻	Allows you to change the direction of the pattern.	Ctrl + Y	p. 79

Reference
Design Center

237

Menu		Toolbar	Purpose	Shortcut key	See page
Numerical Setting	Size	—	Resizes the selection numerically.	—	p. 79
	Rotate	—	Rotates the selected pattern numerically.	—	p. 80
Select All		—	Selects all of the data.	Ctrl + E	p. 130

Sew menu

The **Sew** menu contains commands for controlling the way the pattern will be sewn.

Menu	Toolbar	Purpose	Shortcut key	See page
Sewing Attributes	🖼	Sets the sewing attributes for outlines and regions.	Ctrl + W	p. 89
Sewing Order	🖼	Allows you to check and modify the sewing order of the different colors of a pattern as well as the sewing order of each color individually.	F10	p. 100

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu	Toolbar	Purpose	Shortcut key	See page
Grid Setup	—	Allows you to set up the grid, to switch it on or off, and to display it with or without the horizontal and vertical lines.	—	p. 105
Preview	🖥	Specifies whether the patterns appear as stitches or in the normal view.	F9	p. 102
Realistic Preview	🖥	Displays a realistic image of how the patterns will look after being embroidered.	Shift + F9	p. 102
Refresh Window	—	Updates the screen.	Ctrl + R	
Stitch Simulator	🖥	Displays a simulation of the machine stitching.	—	p. 101
Reference Window	—	Hides/displays the Reference window.	F11	p. 103
Realistic Preview Attribute Setting	—	Sets the preview attributes for Realistic Preview.	—	p. 102
Toolbar	—	Hides/displays the Toolbar.	—	p. 70
Status Bar	—	Hides/displays the status bar.	—	p. 70

Option menu

The **Option** menu contains commands for selecting the Design Page size and the unit system.

Menu		Toolbar	Purpose	Shortcut key	See page
Layout & Editing		—	Starts up Layout & Editing and displays its window up front.	F5	p. 39
Programmable Stitch Creator		—	Starts up Programmable Stitch Creator and displays its window up front.	—	p. 54
Design Page Property		—	Allows you to change the size of the Design Page and the color of the Design Page and the background.	—	p. 77
Select System Unit	**mm**	—	Allows you to change the system units to millimeters.	—	p. 105
	inch	—	Allows you to change the system units to inches.	—	p. 105

Stage menu

The **Stage** menu contains commands for moving from one stage to the next or to a previous one.

Menu	Toolbar	Purpose	Shortcut key	See page
To Original Image		Moves back to stage 1 (Original Image stage). **Note:** *This function can only be used if there is image data in stage 1 (Original Image stage), for example, if image data was opened or if image data was pasted from the Clipboard. If you have started with a new file from stage 2 (Line Image stage), for example, the function is not available.*	—	p. 71
To Line Image		Moves to stage 2 (Line Image stage). **Note:** *If you have started with a new figure handle file from stage 3 (Figure Handle stage), this function is not available.*	—	p. 73
To Figure Handle		Moves to stage 3 (Figure Handle stage).	—	p. 76
To Sew Setting		Moves from stage 3 (Figure Handle stage) to stage 4 (Sew Setting stage).	—	p. 83

Reference
Design Center

Design Center

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	See page
Contents	—	Starts up the on-screen help information for this application.	F1	
Customer Support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **❗ Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	
About Design Center	—	Gives information about the version of this application.	—	

Layout & Editing

List of Tool Box Buttons

Tool Box	Purpose	See page
	Sets the pointer in selection mode. When you start up the application, the selection mode is selected. Pointer shape:	p. 130
	Sets the pointer in point edit mode. Pointer shape: △ or ▶	p. 135 p. 139
	Sets the pointer in zoom mode. Pointer shape: ⊕ or ⊖	p. 186
	Sets the pointer in text and monogram input mode. Pointer shape:	p. 153
	Sets the pointer in circle, arc, fan shape and arc & string drawing mode. Pointer shape: +	p. 145
	Sets the pointer in rectangle drawing mode. Pointer shape: +	p. 148
	Sets the pointer in outline drawing mode. Pointer shape: +, + or +	p. 149
	Sets the pointer in manual punching mode. Pointer shape: +, +, +, + or +	p. 152
	Sets the pointer in measure mode. Pointer shape: +	p. 182
	Sets the pointer in split stitch mode. Pointer shape: +	p. 143
	Sets the pointer in stamp input or stamp edit mode. Pointer shape:	p. 165

List of Menus

📖 **Memo:**
Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling file input/output, such as opening, saving and printing.

Menu		Toolbar	Purpose	Shortcut key	See page
New		🗋	Creates a new Design Page.	Ctrl + N	p. 108
Open		📂	Opens a previously saved embroidery pattern.	Ctrl + O	p. 109
Import	**from File**	🖼	Imports embroidery patterns from embroidery cards (.pec), original cards (.pes) and files created in the Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna (.hus) and embroidery sewing machine (.phc) formats and adds them to your current Design Page.	F8	p. 127
	from Design Center	🖼	Imports an embroidery pattern from Design Center.	F7	p. 128
	from Card	—	Imports an embroidery pattern from an embroidery card.	—	p. 128
Save		💾	Saves your embroidery pattern on the computer's hard disk as a latest version file (default).	Ctrl + S	p. 194
Save As		—	Saves your embroidery pattern on the computer's hard disk under a new file name.	—	p. 194
Export		—	Exports the data shown in the Design Page as a file of a different format (.dst, .hus, .exp, and .pcs).	—	p. 195
Write to Card	**Current Design**	🖼	Writes your embroidery pattern to an original card.	F4	p. 195
	Other PES files	—	Writes multiple .pes files to an original card at the same time.	Shift + F4	p. 196
Property		—	Used to enter comments in the .pes file being edited.	—	p. 199
Print Setup		—	Allows you to change the printing settings for previewed embroidery.	—	p. 200
Print Preview		—	Allows you to preview the contents of the Design Page and check the sewing color order, the dimensions and the needle count before printing.	—	p. 201
Print		—	Prints your Design Page and some sewing information.	Ctrl + P	p. 201

Menu	Toolbar	Purpose	Shortcut key	See page
Exit	—	Exits the application.	Alt + F4	p. 24

Edit menu

The **Edit** menu contains commands for performing simple actions on selected patterns, such as cutting and pasting.

Menu		Toolbar	Purpose	Shortcut key	See page
Undo		↰	Undoes the last operation.	Ctrl + Z	
Redo		↱	Cancels the effect of the last Undo.	Ctrl + A	
Group		—	Turns several selected objects into one object.	Ctrl + G	p. 134
Ungroup		—	Cancels the grouping for grouped objects.	Shift+ G	p. 134
Cut		✂	Removes the selected pattern(s) from the screen while saving a copy in the Clipboard.	Ctrl + X	
Copy		🗐	Saves the selected pattern(s) in the Clipboard without removing them from the screen.	Ctrl + C	
Duplicate		—	Makes a copy of the selected pattern(s).	Ctrl + D	
Paste		📋	Pastes the contents of the Clipboard on the screen.	Ctrl + V	
Delete		—	Removes the selected pattern(s) from the screen without saving them in the Clipboard.	Delete	p. 114 p. 137
Change to Straight		—	Straightens the two rounded lines that meet at a smooth point.	—	p. 137
Change to Curve		—	Rounds off the two straight lines that meet at a corner point.	—	p. 137
Mirror	**Horizontal**	⬚	Flips the selected pattern(s) up/down.	Ctrl + H	p. 133
	Vertical	⬚	Flips the selected pattern(s) left/right.	Ctrl + J	p. 133
Rotate		↻	Allows you to manually rotate the selected pattern(s) by an arbitrary angle.	Ctrl + Y	p. 133

Reference
Layout & Editing

243

Layout & Editing

Menu		Toolbar	Purpose	Shortcut key	See page
Numerical Setting	**Size**	—	Resizes the selected pattern numerically.	—	p. 132
	Rotate	—	Rotates the selected pattern numerically.	—	p. 134
Center		—	Moves the selected pattern to the center of the Design Page.	Ctrl + M	p. 131
Align	**Left**	—	Aligns the selected patterns on their left sides.	—	p. 131
	Center	—	Aligns the selected patterns on their left/right centers.	—	p. 131
	Right	—	Aligns the selected patterns on their right sides.	—	p. 131
	Top	—	Aligns the selected patterns on their top edges.	—	p. 131
	Middle	—	Aligns the selected patterns on their top/bottom centers.	—	p. 131
	Bottom	—	Aligns the selected patterns on their bottom edges.	—	p. 131
Select All		—	Selects all of the patterns.	Ctrl + E	p. 130

Image menu

The **Image** menu contains commands for importing and exporting image data and creating embroidery data from image data.

Menu		Toolbar	Purpose	Shortcut key	See page
Input	**from File**	—	Imports image data from an existing file so that it can be used as a guide for creating embroidery data. **⚠ Note:** *The file name extension must be one of the following: Windows bitmap (.bmp), Exif (.tif, .jpg), ZSoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).*	—	p. 111
	from TWAIN device	—	Operates a TWAIN standardized scanner or other device to import an image.	—	p. 111
	from Portrait	—	Combine images of facial features that are provided with the application to create an original portrait.	—	p. 112
	from Clipboard	—	Import image data from the Clipboard.	—	p. 113
Output	**to File**	—	Saves the image data as a file.	—	p. 114
	to Clipboard	—	Copies the image data onto the Clipboard.	—	p. 114
Select TWAIN device		—	Selects which TWAIN device installed in the computer to use.	—	p. 111
Modify		—	Adjusts the size and position of the image data.	—	p. 114
Image to Stitch Wizard		🖼️	Gives step-by-step instruction for creating embroidery data from image data.	—	p. 115
Display Image	**On**	—	Displays the template image.	F6	p. 113
	Faded	—	Displays a faded copy of the template image.	F6	p. 113
	Off	—	Hides the template image.	F6	p. 113

Reference
Layout & Editing

Text menu

The **Text** menu contains commands for performing actions on text patterns, such as fitting text to a curved path.

Menu	Toolbar	Purpose	Shortcut key	See page
Edit Letters	—	Allows you to edit entered text.	Ctrl + L	p. 156
Text Attribute Setting	ABC	Allows for precise control of character attributes.	Ctrl + K	p. 157
Fit Text to Path Setting	ABC	Fits a line of text along a path.	Ctrl + T	p. 158
Release Text from Path	ABC	Releases the text from the path.	Ctrl + Q	p. 160
Transform Text	ABC	Applies a preset transformation to text.	F2	p. 160
Clear Transformation	ABC	Restores the original shape of the text.	F3	p. 160
TrueType Font Attribute Setting	—	Sets the attributes, such as the style, for TrueType fonts that are converted to embroidery data.	—	p. 161
Convert to Outline Object	—	Creates outline data from text data converted from a TrueType font.	—	p. 161

Sew menu

The **Sew** menu contains commands for controlling the way each pattern will be sewn.

Menu	Toolbar	Purpose	Shortcut key	See page
Sewing Attribute Setting	▦	Sets the sewing attributes of the regions and the outlines of a pattern.	Ctrl + W	p. 171
Sewing Order/Color	▦	Allows you to check and change the sewing order of pattern colors and individual patterns.	F10	p. 184
Set hole sewing	—	Sets a pair of patterns for hole sewing (to avoid sewing twice at the same place when a pattern encloses another one).	—	p. 180
Cancel hole sewing	—	Cancels hole sewing.	—	p. 180
Stitch to Block	—	Converts imported stitch patterns into blocks (manual punching data), allowing you to set sewing attributes and to keep the stitching quality when scaling.	—	p. 142
Convert to Stitch	—	Converts a shape object to a stitch object.	—	p. 140

Menu	Toolbar	Purpose	Shortcut key	See page
Applique Wizard	—	Provides step-by-step instructions for easily creating appliqués.	—	p. 181
Select Sewing Area	—	Sets the sewing area.	—	p. 183
Optimize hoop change	—	Optimizes the sewing order of patterns in a Design Page for multi-position embroidery frames (100 × 172 mm, 172 × 100 mm, 130 × 300 mm, or 300 × 130 mm).	—	p. 204
Optimize Entry/ Exit points	—	Optimizes the positions of the entry points and the exit points for the sewing data.	—	p. 139

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu	Toolbar	Purpose	Shortcut key	See page
Grid Setup	—	Controls the display and characteristics of the grid.	—	p. 202
Preview		Specifies whether the patterns appear as stitches or in the normal view.	F9	p. 187
Realistic Preview		Displays a realistic image of how either selected patterns or all patterns will look after being embroidered. **⚠ Note:** *The Realistic Preview function cannot display a clean preview of the pattern if the monitor is set to 256 colors or less. The monitor should be set to at least 16-bit High Color (65536 colors).*	Shift + F9	p. 187
Realistic Preview Attribute Setting	—	Sets the preview attributes for the Realistic Preview function.	—	p. 187
Refresh Window	—	Updates the screen.	Ctrl + R	
Stitch Simulator		Displays a simulation of the machine stitching.	—	p. 188
Reference Window	—	Hides/displays the Reference window.	F11	p. 193
Toolbar	—	Hides/displays the Toolbar.	—	p. 107
Status Bar	—	Hides/displays the status bar.	—	p. 107

Reference
Layout & Editing

247

Option menu

The **Option** menu contains commands for providing additional options.

Menu		Toolbar	Purpose	Shortcut key	See page
Design Center		—	Starts up Design Center and displays its window up front.	F5	p. 30
Programmable Stitch Creator		—	Starts up Programmable Stitch Creator and displays its window up front.	—	p. 54
Design Property		—	Displays a dialog box containing sewing information for the selected pattern(s).	—	p. 189
Design Page Property		—	Allows you to change the size of the Design Page, and the color of the Design Page and the background.	—	p. 108
Edit User Thread Chart		—	Allows original thread charts to be created and edited.	—	p. 190
Select System Unit	**mm**	—	Allows you to change the system units to millimeters.	—	p. 202
	inch	—	Allows you to change the system units to inches.	—	p. 202

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	See page
Contents	—	Starts up the on-screen help information for this application.	F1	
Customer support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **⚠ Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	
Online Registration	—	Displays the online registration page from our Web site. **⚠ Note:** *This function is available only if the Internet browser is correctly installed and an Internet connection can be established. *Online registration is not possible in certain countries and regions.*	—	p. 13
About Layout & Editing	—	Gives information about the version of this application.	—	

Programmable Stitch Creator

List of Tool Box Buttons

Tool Box	Purpose	See page
	Sets the pointer in selection mode. Pointer shape:	p. 213
	Sets the pointer in point edit mode. Pointer shape:	p. 216
	Sets the pointer in line drawing mode. When you start up the application, the drawing mode is selected. Pointer shape:	p. 212
	Sets the pointer in region (reset) mode. Pointer shape:	p. 218
	Sets the pointer in region (engrave) mode. Pointer shape:	p. 217
	Sets the pointer in region (emboss) mode. Pointer shape:	p. 217

List of Menus

📖 **Memo:**
Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling files, such as opening and saving.

Menu	Toolbar	Purpose	Shortcut key	See page
New		Creates a new work area.	Ctrl + N	p. 209
Open		Opens a previously saved programmable stitch file.	Ctrl + O	p. 209

Menu	Toolbar	Purpose	Shortcut key	See page
Template Open	—	Opens a background image file that can be used as a guide to draw a new pattern for a programmable fill or motif stitch. **⚠ Note:** *The following file formats can be opened: Windows bitmap (.bmp), Exif (.tif, .jpg), ZsoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).*	—	p. 210
Save	💾	Saves your work area on the disk.	Ctrl + S	p. 221
Save As	—	Saves the current stitch pattern under a new file name.	—	p. 221
Exit	—	Exits the application.	Alt + F4	p. 58

Mode menu

You can use Programmable Stitch Creator to create patterns for programmable fill stitches, motif fill or motif line stitches, and stamps. However, the method and work area are different for each. Use the **Mode** menu to select the mode for the pattern that you want to create.

Menu	Toolbar	Purpose	Shortcut key	See page
Fill/Stamp	—	Enters Fill/Stamp mode for creating stitch patterns for programmable fill stitches and stamps.	—	p. 210
Motif	—	Enters Motif mode for creating stitch patterns for motif stitches.	—	p. 210

Edit menu

The **Edit** menu contains commands for performing simple actions on selected lines and patterns, such as cutting and pasting.

Menu	Toolbar	Purpose	Shortcut key	See page
Undo	↩	Undoes the last operation.	Ctrl + Z	
Redo	↪	Cancels the effect of the last Undo.	Ctrl + A	
Cut	✂	Removes the selected line(s) from the screen while saving a copy in the Clipboard.	Ctrl + X	p. 214

Menu		Toolbar	Purpose	Shortcut key	See page
Copy		🗐	Saves the selected line(s) in the Clipboard without removing them from the screen.	Ctrl + C	p. 214
Duplicate		—	Adds a copy of the selected line(s) to the work area.	Ctrl + D	p. 214
Paste		🗐	Pastes the lines of the Clipboard on the screen.	Ctrl + V	p. 214
Delete		—	Removes the selected line(s) from the screen without saving them in the Clipboard.	Delete	p. 214, p. 217
Mirror	**Horizontal**	🔃	Flips the selected line(s) up/down.	Ctrl + H	p. 215
	Vertical	🔁	Flips the selected line(s) left/right.	Ctrl + J	p. 215
Rotate		↻	Allows you to manually rotate the selected line(s) by an arbitrary angle.	Ctrl + Y	p. 215
Select All		—	Selects all of the patterns.	Ctrl + E	p. 213

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu		Toolbar	Purpose	Shortcut key	See page
Grid		—	Selects the work grid.	—	p. 222
Template	**On**	—	Displays the template image.	F6	p. 210
	Faded	—	Displays a faded copy of the template image.	F6	p. 210
	Off	—	Hides the template image.	F6	p. 210
Preview		—	Hides/displays the repeating image display of the pattern being created.	—	p. 212
Toolbar		—	Hides/displays the Toolbar.	—	p. 208
Status Bar		—	Hides/displays the status bar.	—	p. 208

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	See page
Contents	—	Starts up the on-screen help information for this application.	F1	
Customer support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. ⚠ **Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	
About Programmable Stitch Creator	—	Gives information about the version of this application.	—	

Design Database

List of Menus

📖 **Memo:**
Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling files, such as opening, importing and converting, and for creating catalogs.

Menu	Toolbar	Purpose	Shortcut key	See page
Open in Layout & Editing	—	Opens the embroidery file with Layout & Editing. ⚠ **Note:** *Only .pes files can be opened.*	—	p. 227
Import into Layout & Editing	—	Imports the embroidery pattern into Layout & Editing. ⚠ **Note:** *The following file formats can be imported.: .pes, Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna (.hus), and embroidery sewing machine (.phc).*	—	p. 227
Create Folder	—	Creates a new folder in the selected folder.	—	p. 224
Convert Files	—	Converts the embroidery file to one of a different format.	—	p. 230
Delete	—	Deletes the selected embroidery file.	—	p. 225
Print Setup	—	Allows you to change the printing settings for catalogs of embroidery patterns.	—	p. 231
Print Preview	—	Allows you to preview the catalog of embroidery patterns before printing.	—	
Print	—	Prints the catalog of embroidery patterns.	Ctrl + P	p. 231
Create HTML	—	Outputs the catalog of embroidery patterns as an HTML file.	—	p. 231
Create CSV	—	Outputs the catalog of embroidery pattern sewing information as a CSV file.	—	p. 232
Exit	—	Exits the application.	Alt + F4	

Design Database

Edit menu

Menu	Toolbar	Purpose	Shortcut key	See page
Cut	✂	Removes the selected embroidery pattern(s) from the folder while saving a copy in the Clipboard.	Ctrl + X	p. 225
Copy	📋	Saves the selected embroidery pattern(s) in the Clipboard without removing them from the folder.	Ctrl + C	p. 225
Paste	📋	Pastes the embroidery patterns from the Clipboard into the selected folder.	Ctrl + V	p. 225
Search	—	Allows the desired embroidery file to be searched for.	Ctrl + F	p. 229

Display menu

Menu	Toolbar	Purpose	Shortcut key	See page
Large Thumbnails	⊞	Lists the embroidery patterns in the contents pane as large thumbnails.	—	p. 226
Small Thumbnails	▦	Lists the embroidery patterns in the contents pane as small thumbnails.	—	p. 226
Details	▤	Lists the embroidery patterns in the contents pane by their sewing information.	—	p. 226
Preview	🖼	Displays a preview of the selected embroidery pattern.	—	p. 227
File Property	🗎	Displays the sewing information for the selected embroidery pattern.	—	p. 228
Refresh	—	Refreshes the display of embroidery patterns in the contents pane.	Ctrl + R	
Toolbar	—	Hides/displays the Toolbar.	—	p. 223
Status Bar	—	Hides/displays the status bar.	—	p. 223

Option menu

The **Option** menu contains a command for changing the units of measure.

Menu		Toolbar	Purpose	Shortcut key	See page
Select System Unit	mm	—	Allows you to change the system units to millimeters.	—	p. 202
	inch	—	Allows you to change the system units to inches.	—	p. 202

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	See page
Contents	—	Starts up the on-screen help information for this application.	F1	
About Design Database	—	Gives information about the version of this application.	—	

Index

Index

Index

Index

Index

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