How to use this online Help

This online Help consists of the following three chapters. Refer to the chapter appropriate for finding the information you need.

Chapter 1: Windows and icons

This chapter gives you brief descriptions about the windows, icons and other items that appear in the main window of PS-300B. Details about each icon are described in Chapter 3.
For example, you can find the name of the item you want to learn about in this chapter, then you can search for a more detailed explanation by using the Help INDEX or Keyword tool.

Chapter 2: Tutorial

You can learn the procedure for using PS-300B by making and exporting sewing data for the four typical sewing machine's media. This chapter may be useful especially for beginners. If you are more experienced, you may need only Chapter 3.

Chapter 3: Reference

Refer to this chapter for details about all the functions of PS-300B. The function descriptions are basically classified according to the groups shown in the menu.

Chapter 1: Windows and icons

This chapter gives you brief descriptions about the windows, icons and other items that appear in the main window of PS-300B.

Main window items

When starting up PS-300B, the main window and a new design area appear. In the design area, you will create designs or modify existing ones. All of the tools and functions for creating designs can be selected in this window. The following gives you brief descriptions of the windows and items shown in the main window.
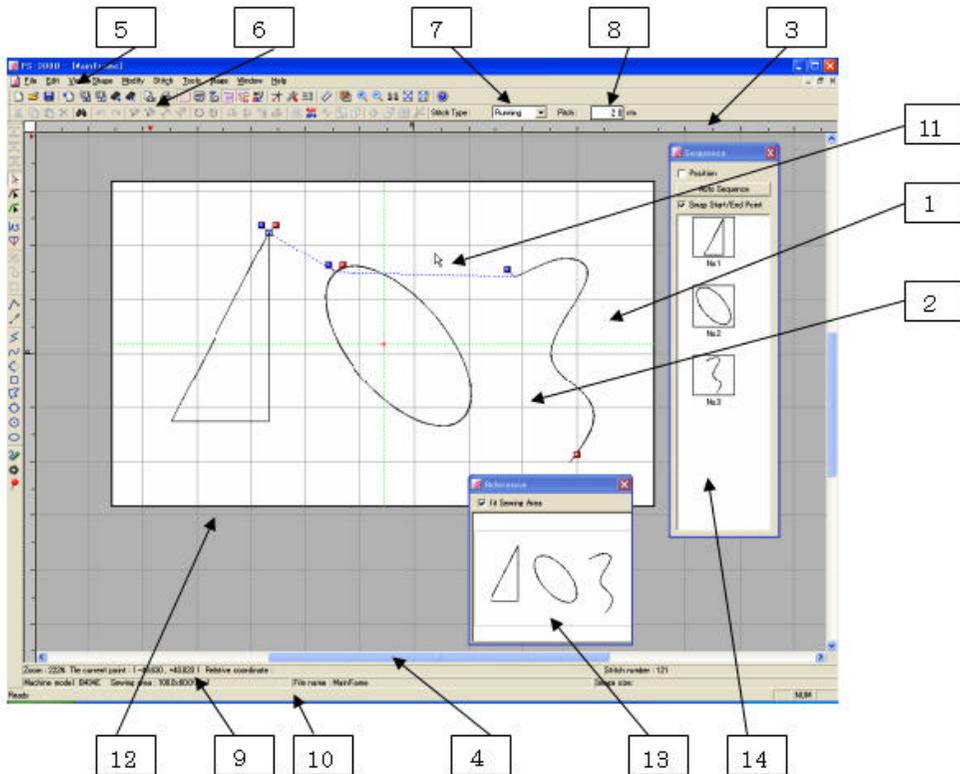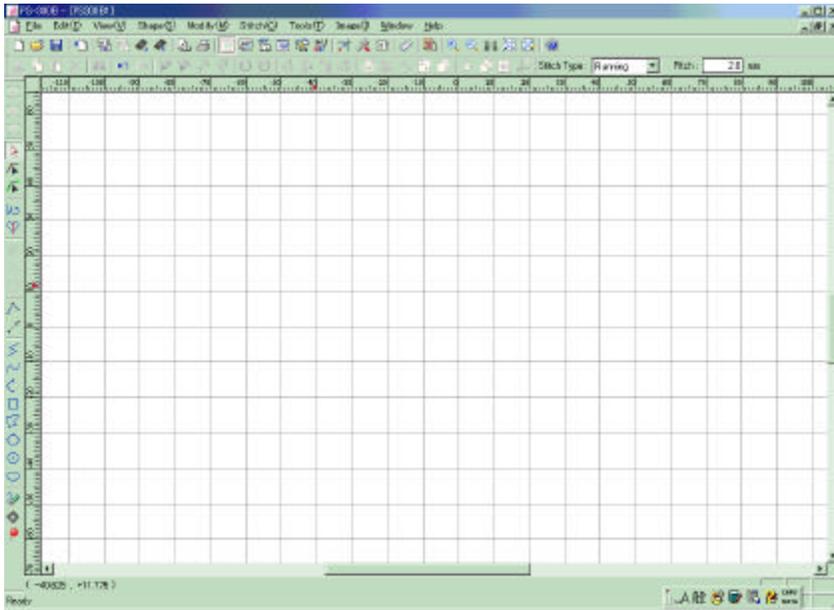
1. Design area

   Create designs for sewing data in this area.

2. Gridlines

   Useful for drawing or moving a design element to the desired position. The gridlines can also be hidden if you do not require them.

3. Rulers

   Useful for specifying the coordinates of a point where you will make or move a design element. Rulers are also useful for checking the size of a design element or resizing it.

4. Scroll bars

   Drag and move the vertical or horizontal scroll bar to view the desired part of the design area.

5. Menu bar

   All functions of PS-300B can be selected from the drop-down menus in the menu bar. Refer to "Chapter 3. Reference" for details about the functions.

6. Toolbar

   Almost all of the functions of PS-300B can be selected simply by clicking the corresponding icon in the toolbar. Refer to "Icons in the toolbar" below for the names of all icons.

7. **Stitch Type** drop-down list

   You can select the stitch type (either **Running** or **Border**) for the outline you will draw in this selection box.

8. **Pitch** input box

   You can specify the stitch pitch for the outline you will draw by inputting a value in this input box.

9. Coordinate value display

   Displays the coordinates of the current position of the pointer.

10. Status bar

    Displays a brief explanation of the icon the pointer is pointing at.

11. Pointer

    This can be controlled with the mouse.

    Displayed when create outlines, stitch and feed data in the design area. The pointer is also used to select a command from the menu bar or toolbar. The shape of the pointer changes depending on the selected command.

12. Sewing area frame

Displayed in the design area when a model of sewing machine is specified in **Machine Model Setting** on the **Tools** drop-down menu.

13. **Reference** window

Can be displayed by clicking **Reference Window** on the **View** drop-down menu. This window shows all the design.

14. **Sequence** window

Can be displayed by clicking **Sequence Window** on the **View** drop-down menu. This window shows all the design elements separately in the sewing order.

Icons in the toolbar

The following indicates the names of icons in the toolbar. For details about each icon, refer to "Chapter 3. Reference" or search for the desired icon by using the Help INDEX or Keyword tool.

Tool bar on the left side

1. Generate Select
2. Clear Stitch
3. Clear Outline
4. Select
5. Select Punch point
6. Select Point
7. Continue
8. Symmetry
9. Close Outline
10. Smooth Arc
11. Baste
12. Stitch
13. Feed
14. Straight Line
15. Spline

16. Arc
17. Rectangle
18. Polygon
19. Circle
20. Center Circle
21. Ellipse
22. Trace
23. Pattern
24. Code

Tool bar on the upper side

1. New
2. Open
3. Save
4. Import
5. Import From Machine
6. Export To Machine
7. Read From ROM
8. Write To ROM
9. File Info
10. Print
11. Gridlines
12. Pseudo 3D
13. Property
14. Reference Window
15. Sequence Window
16. Slow Draw
17. Snap Setting

18. Option

19. Machine Model Setting

20. Measure

21. Import From File

22. Zoom In

23. Zoom Out

24. Actual size   1:1

25. Fit To Window

26. Fit Sewing Area To Window

27. Help

28. Cut

29. Copy

30. Paste

31. Delete

32. Search

33. Undo

34. Redo

35. Split

36. Connect

37. Smooth

38. Cusp

39. Rotate By Drag

40. Rotate By Point

41. Flip Horizontally

42. Flip Vertically

43. Flip By Reference Line

44. Mirror Copy

45. Offset

46. Swap Start/End Point

47. Change Data Type

48. Resize

49. Copy To

50. Move To

51. Pivot

52. Align To Sewing Area Center

53. Align To Coordinate Original Point

Design elements (types of lines, points, etc.)

On PS-300B, stitch data used on the sewing machine will be automatically generated from outline data. You can also create stitch data directly without creating outline data. However, in general, you will create outline data first. You can create both outline and manual stitch data in the same window, although it is possible for PS-300B to display the data separately. You can recognize outline data, manual stitch data, manual feed data, and codes respectively in the design area, by their shapes, colors and so on as indicated below:

In the normal display mode:
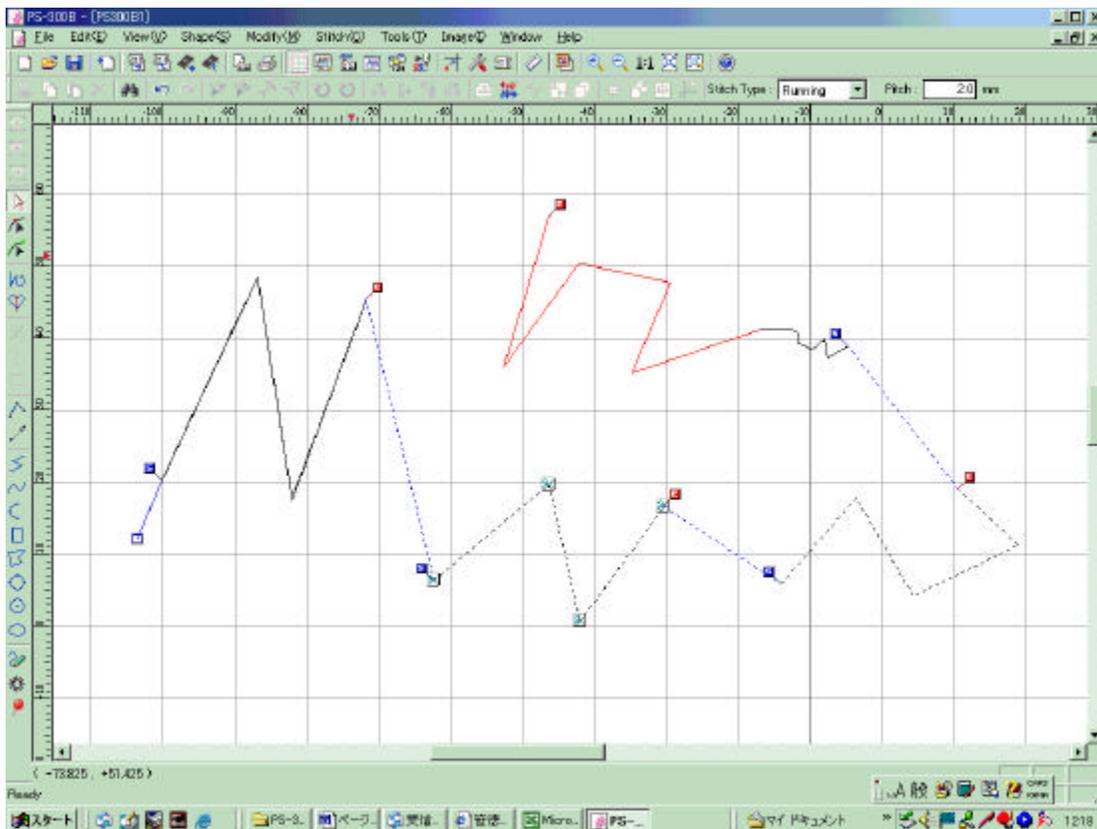
No.	Data type	Shape	Default color*
1	Outline	Solid line	Black
2	Connection Stitch/Feed	Solid line /Dotted line	Blue
3	Manual stitch	Solid line	Black (The path of a line longer than the maximum stitch length is shown in red.)
4	Manual feed	Dotted line with Trim code	Black
5	Basting	Dotted line without Trim code	Black
6	Sewing start point	Square	Blue
7	Start point of an outline	Blue square with "S"	Blue
8	End point of an element	Red square with "E"	Red

*: If you prefer, the color of lines can be changed in **Property** on the **View** drop-down menu.

When the Select Punch Point tool is selected:
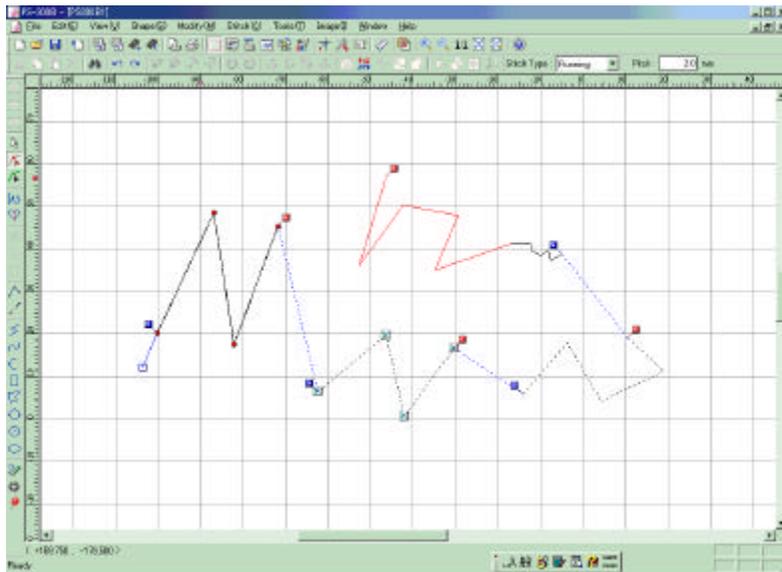
When the Select Point tool is selected:
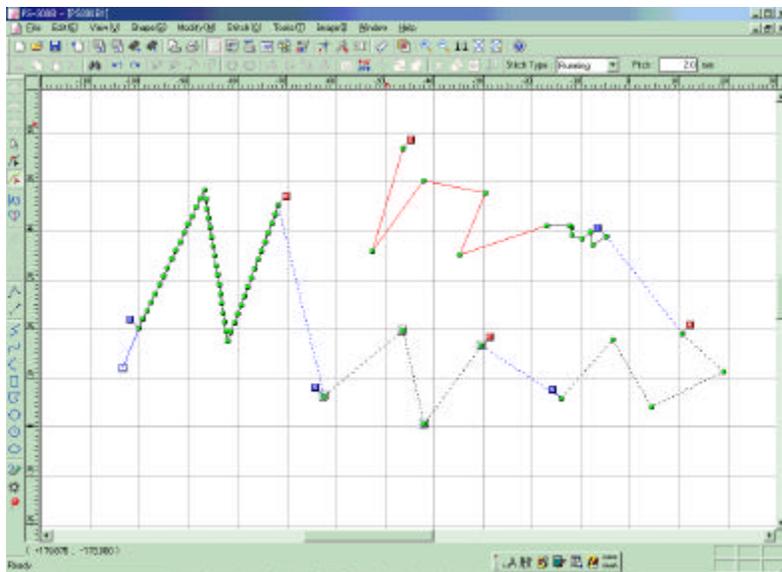
No.	Data type	Shape	Default color
9	Punch point of outline data	Circle	Red
10	Stitch point	Circle	Green

List of mouse and shortcut keys

Some functions of PS-300B can be used with the mouse and/or shortcut keys including the computer's default shortcut keys.

Mouse/shortcut keys	Action/Outcome
Left-button of mouse	● Selects an object. ● Specifies a point in the design area for creating a design for sewing data. ● Determines the current operation.
Right button of mouse	● Quits the current operation. ● Displays the context menu. ● Determines the current design being created.
Mouse wheel	Enlarges/reduces a view.
"Shift" + Mouse wheel	Moves the design area from side to side.
"Ctrl" + Mouse wheel	Moves the design area up and down.
Arrow keys	● Moves the design area in the direction of the arrow. ● Move the selected object by 0.1mm ● Show the previous/next search result
"Shift" **"Ctrl"**	Works in different ways according to the operating status. (Refer to **Chapter 3. Reference**.)
"Shift" +Ctrl"	● Temporarily cancels the current setting in **Snap Setting** in the **View** drop-down menu. ● The center of a imported design will align with the center of the design in design area.
"ESC"	Deletes all punch points when drawing an outline.
"Backspace" **Space key**	Deletes the last punch point when drawing an outline.
"Ctrl" + "A"	Selects all of the design element(s).
"Ctrl" + "Z"	Undoes the last operation.
"Ctrl" + "R"	Redoes the previously undone operation.
"Ctrl" + "X"	Cuts the selected design element(s).
"Ctrl" + "C"	Copies the selected design element(s).

"Ctrl" + "V"	Pastes the cut or copied design element(s).
"Delete"	Deletes the selected design element(s).
"Enter"	Determine the current creating outline.
"Ctrl" + "N"	Opens a new window.
"Ctrl" + "O"	Opens an existing file.
"Ctrl" + "S"	Saves the current file.
"Ctrl" + "P"	Prints the current file.
"Ctrl" + "T"	Opens the **Option Setting** dialog box.
"Ctrl" + "M"	Opens the **Machine Model Setting** dialog box.

Chapter 2. Tutorial

The Brother PS-300B software provides numerous functions to enable you to easily create sewing patterns for a wide variety of Brother electronic sewing machines. In addition to creating your own sewing data, you can change preset patterns to fit your needs. Your custom-made sewing designs and patterns can be printed or exported for sewing on your specific machine.

This tutorial describes examples for machine models KE430D, BAS311F, BAS311A and B430E respectively.

This tutorial, however, provides basic information for the use of the PS-300B software. For details on the various functions, refer to **Chapter 3. Reference**.

2-1. Creating KE430D data

The following procedure explains how to edit and modify a preset pattern or previously-created data imported from model KE430D, and export the result to a CF card.

2-1-1. Opening a new design area

When starting up PS-300B, an empty design area automatically opens. You can also open a new design area at any time by doing one of the following.

- Click **New** on the **File** drop-down menu, or the New icon 🗋 in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **N** key.

### 2-1-2. Specifying a sewing machine model

Specify the sewing machine model that you are creating design elements for, and then put its sewing area frame into the design area after applying some attributes to it.

NOTE: We recommend that you specify the machine model before creating a design, since the sewing area differs with each model.

1. Do one of the following:

   - Click **Machine Model Setting** on the **Tools** drop-down menu (or the context menu that appears when right-clicking), or the Machine Model Setting icon ⌸ in the toolbar.

   - On the keyboard, while holding down the **Ctrl** key, press the **M** key.

     The Machine Model Setting dialog box appears.
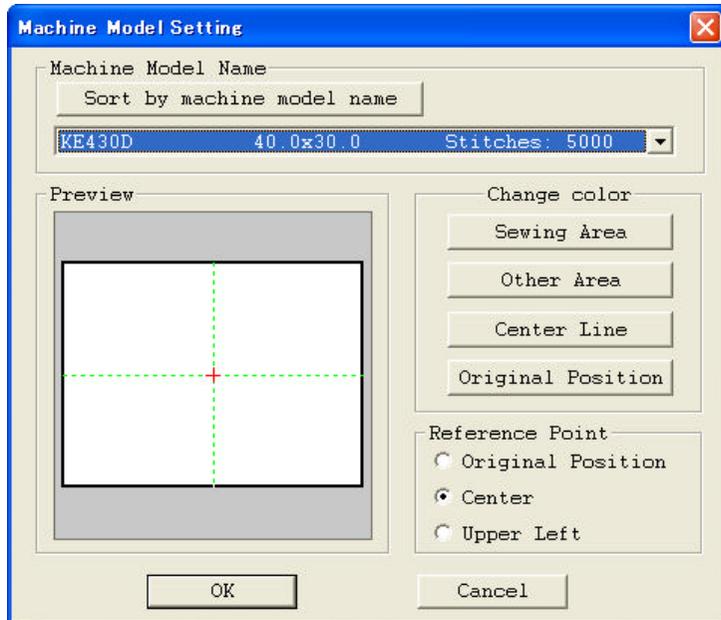
2. Select **KE430D** from the **Machine Model Name** drop-down list.

   The Preview window shows how the selected model's sewing area and the design area will appear.

3. In the **Reference Point** box, specify the reference point for positioning the sewing area frame in the design area.

   Also, make settings in th e Change color group box if you prefer.

4. Click the **OK** button to apply the specified settings.

5. While holding down the keyboard's **Shift** key, click on the design area.

   The sewing area frame is placed at the origin (0) of the design area's coordinates.

   NOTE: The sewing area frame can be placed at any position. Refer to **3-7-5. Specifying a sewing machine model** for details.

2-1-3. Adding a preset pattern

You can add any of the preset patterns in the current design area, and modify it by specifying its length, width, number of stitches, and so on.
(This section selects an eyelet pattern.)

 NOTE: The available preset patterns differ with each sewing machine model.


1. Click **Pattern** on the **Shape** drop-down menu, or the Pattern icon ❀ in the toolbar.

   The Pattern Select dialog box appears.
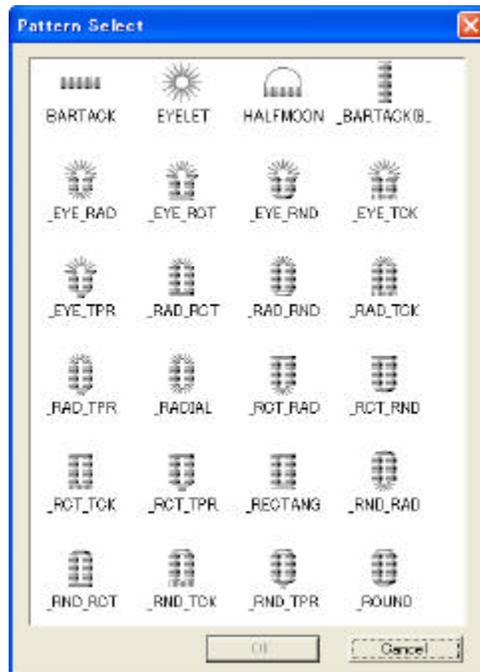
2. Select **EYELET** in the **Pattern Select** dialog box, and then click the **OK** button.

   The Pattern Wizard dialog box for the selected pattern appears.

Pattern Parameters Setting

EYELET

EYELET

Outside diaA.(a)
`10.0` mm

Inside dia.(b)
`2.0` mm

Punched hole dia.
`3.0` mm

No. of stitches
`40` Stitch

Start securing stitches
`2` Stitch

End securing stitches
`2` Stitch

Start feed
- ⦿ ON
- ○ OFF

#Rotation
- ⦿ 1
- ○ 2
- ○ 3

[OK] [キャンセル]
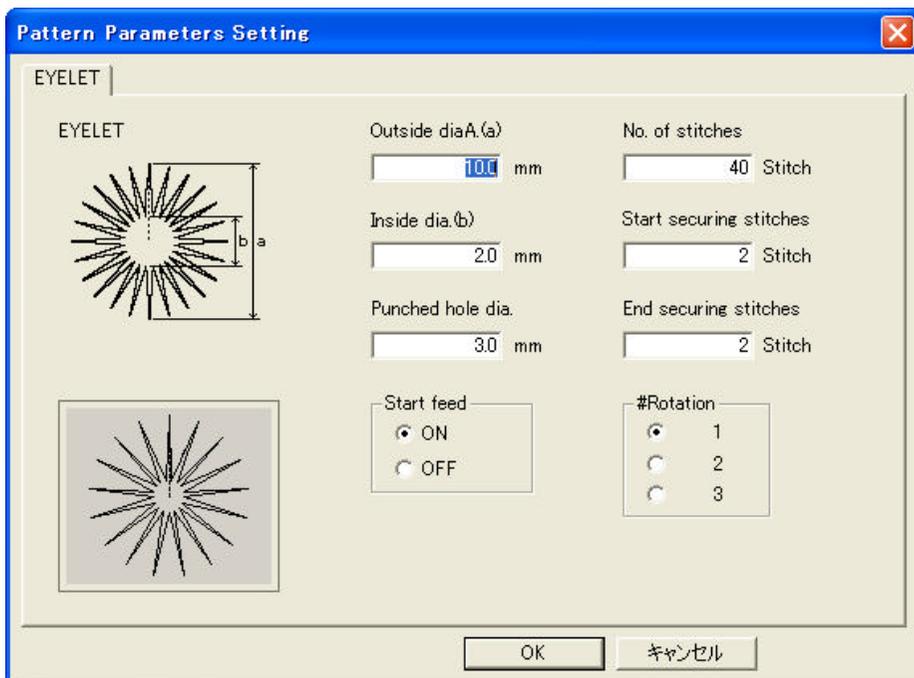
3. Adjust the parameters as desired, and then click the **OK** button.

   The selected pattern appears in the design area.
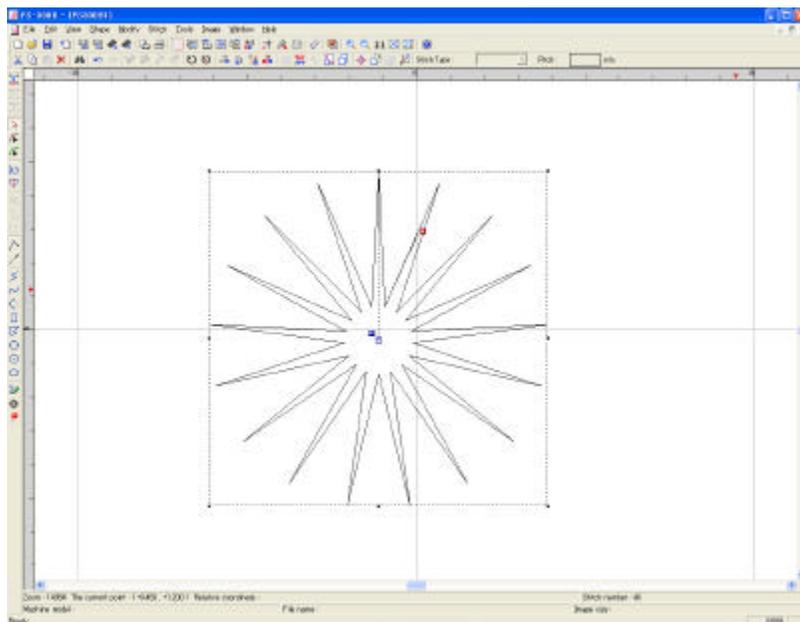
   NOTE: Refer to the instruction manual for the machine model you specified for details about the
   parameter settings.

2-1-4. Importing sewing data from a sewing machine

You can import sewing data saved in the storage media of a sewing machine. The following
describes a procedure for importing sewing data from a CF (Compact Flash) card.

To import sewing data from a CF card:

NOTE: In order to connect to a CF card writer, the CF Drive must be correctly set in **Option Setting** on the **Tools** drop-down menu.

1. Click **Import from Machine** on the **File** drop-down menu, or the Import from Machine icon 🔧 in the toolbar.

   The Import from Machine dialog box appears.

2. Click the **Browse** button to specify the folder containing the data you want to import.

   The Data list shows all data in the specified folder.

   * Click the program number of the data to show the detailed information on the data.

   * Click the 🔲 button to display icon images for all data in the Data list.

3. Click the program number you want to import, and then click the **Import** button.

If there is some other data in the design area, or another machine model has already been specified, the following message appears:

There are some data in current design. Click any of the button below to read the data.

4. Click the **Open as a new design** button to replace the current data in the design area with the selected data.

   * Click the **Import to the current design** button to add the selected data to the current data in the design area.

   * Click the **Cancel** button to cancel the current operation.

## 2-1-5. Editing the added pattern

This section uses some of the PS-300B's editing functions to edit the added eyelet pattern.

Creating two cycle data:

Copy the pattern and paste it at the same position as the original to create two cycle data.

1. Use the **Select** ▶ tool to select the pattern.

2. Click **Copy To** on the **Modify** drop-down menu, or the Copy To icon 🔲 in the toolbar.

   The Input Point dialog box appears.

   ```
   Input Point                              [X]

      ☑ Relative Coordinate

      X :        [        ]  mm        [    OK    ]

      Y :        [        ]  mm        [  Cancel  ]

      Length :   [        ]  mm

      Angle :    [        ]  Degree(s)
   ```
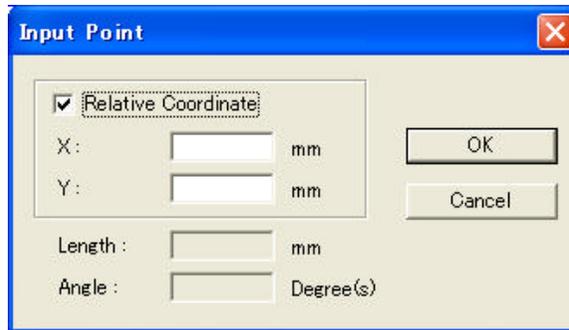
3. Input "0" in both the **X** and **Y** input boxes, and click the **OK** button.

   The copy of the pattern is pasted at the same position as the original.

Selecting a stitch point hidden beneath another point:

To select a stitch point of the original pattern beneath a copied point:

1. Use the **Select Point** 🖈 tool to click the point.

   The following list box appears showing information about all the stitch points beneath the clicked point.

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```
Outline 1 : 36 Point
Outline 2 : 36 Point
```
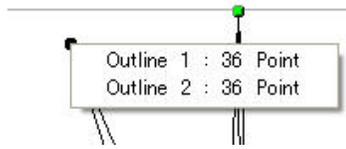
This shows the outline number of the patterns and the sewing order of the point from the start of the outline for every point.

* The outline number can be checked with the Sequence window. (The Sequence window can be displayed by clicking "Sequence Window" on the View drop-down menu.)
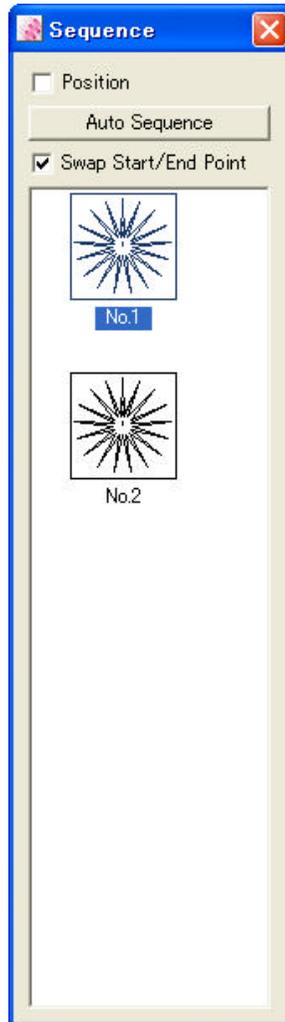
2. Select the desired point from the list and click it.

The selected point turns black.

Adding codes

Add any of the various sewing machine codes to the point you selected in the previous steps. (Refer to "**3-2-6. Adding codes**" for details on codes.)

1. Do one of the following:

    - Click **Code** on the **Shape** drop-down menu, or the Code icon 📌 in the toolbar.

    - Right-click, and on the context menu that appears, click **Code**.

    The Code Setting dialog box appears.
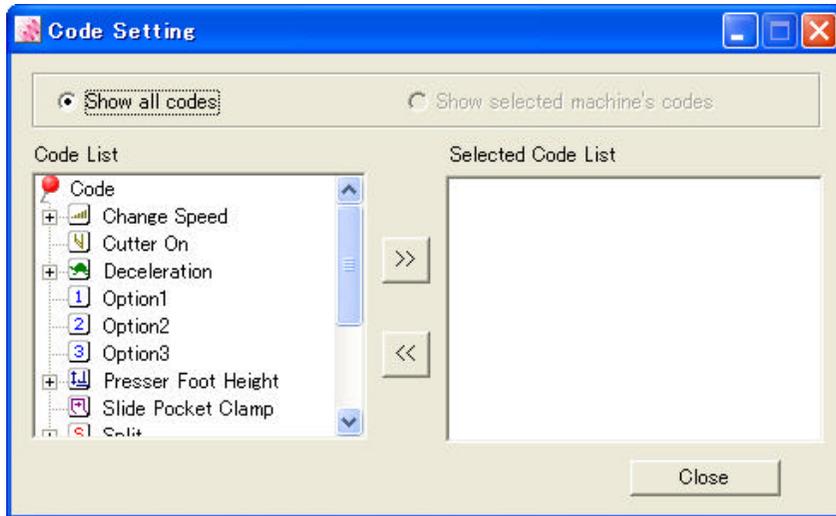
2. Do any of the following:

    - To add a code to the point, select the code in the **Code List** box, and then click 》.

    - To remove a code from the point, select the code in the **Selected Code List** box, and then click 《.

3. If you want to add codes to another point, select the point and follow step 2. Repeat this step as desired.

4. Click the **Close** button to close the dialog box.

To check the codes applied to the specified point:

Use the **Select Point** (🔍) tool to select the point, then while holding down the keyboard's **Shift** key, move the pointer onto the point.

*A list appears to show the codes applied to the point.*
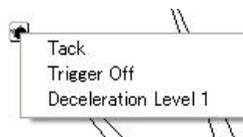
Checking or editing the sewing data

You can check or edit the sewing data of the pattern. You can also move the point by changing its coordinates.

1. Click the **Select Point** ![tool] tool and then Click **Sequence Window** on the **View** drop-down menu, or the Sequence window icon ![icon] in the toolbar.

   The Sequence window appears.
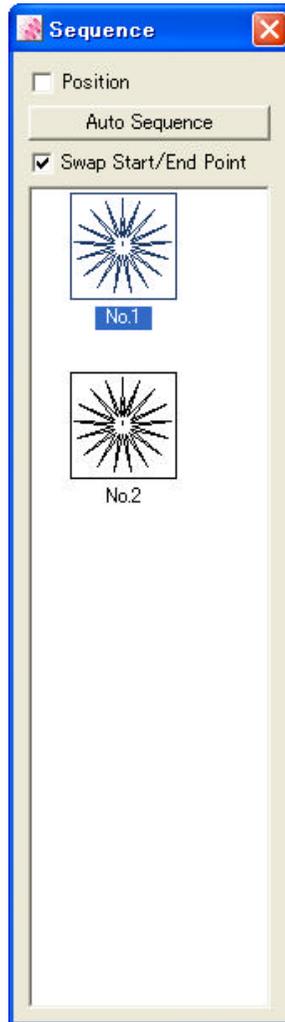
2. Click to select the pattern in the **Sequence** window, and then press any of the numeric keys on the keyboard.

   The Sewing Data List dialog box appears, and the coordinates of all points and codes are shown in the list.
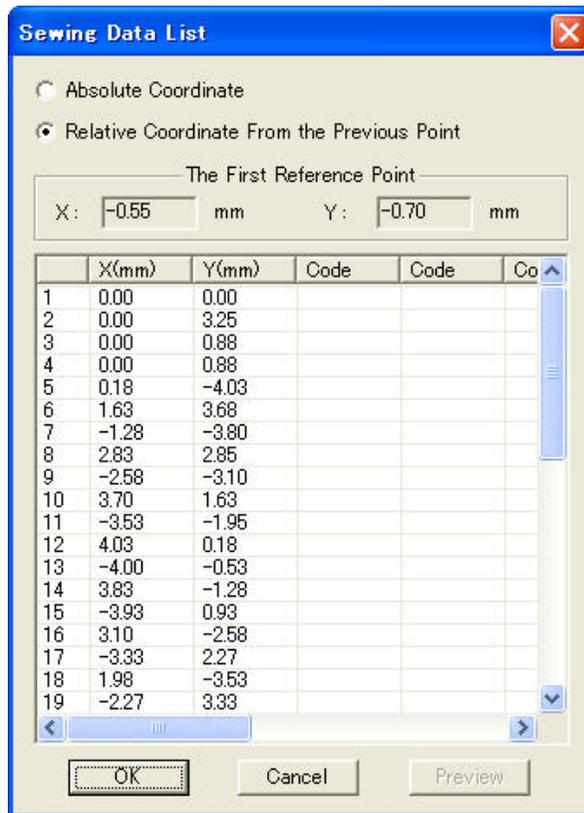
3. To move the desired point:

   Change the coordinates of the point you want to move. (Click the desired cell to highlight the existing value, and then input a new value to replace it.)

4. To delete the desired code:

   Click the cell that shows the code you want to delete to highlight the cell, and then press the **Delete** button on the keyboard.

   NOTE: You cannot add a code to a point.

5. Click the **OK** button.

   The edited result is applied to the sewing data.

Changing the sewing start point of the sewing data:

You can change the sewing start point (the blue square connected with the start point of the first design element) of the sewing data.
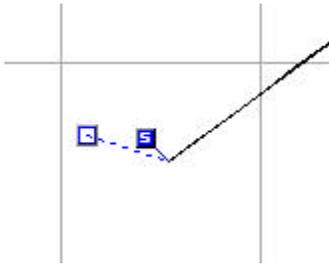
1. Use the **Select Point** ⬚ tool to click the sewing start point.

2. To change the sewing start point, do one of the following:

   - Drag the sewing start point and drop it at the desired position.

   - Dragging the sewing start point, click any of the numeric keys.

     The Input Point dialog box appears.
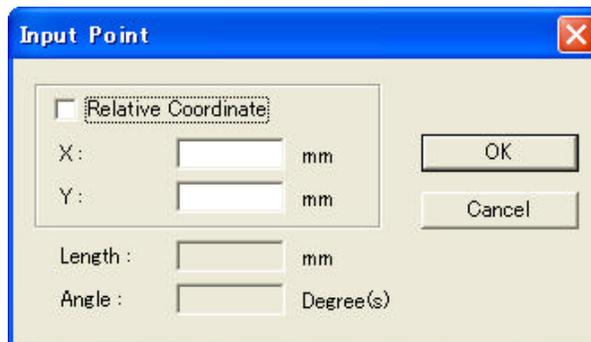
   Input the coordinates and click the **OK** button.

   The sewing start point will move to the specified position.

   - To align the sewing start point to the start point of the first outline:
     While holding down the keyboard's **Ctrl** key, drag the sewing start point.

   - To align the sewing start point to the center of all the sewing data:
     While holding down the keyboard's **Shift** key, drag the sewing start point.

## 2-1-6. Exporting the data to a sewing machine

You can export the data you created to the storage media of a sewing machine.
(KE430D uses CF cards.)

1. Click **Export to Machine** on the **File** drop-down menu, or the Export to Machine icon 🖳

    in the toolbar.

    The Export to Machine dialog box appears.

2. Click the **Browse** button to specify the folder to which you want to export the data.

    The Data list shows all program number that KE430D can support.

    * Click the program number to display information for the program. (No information will appear
      if the program number has no data.)

    * Click the 🖳 button to display icon images for all data in the Data list.

3. Click the program number to which you want to export the data, and then click the
    Export button.

    If the program number already has data, the following message appears.

Message dialog box (Do you really want to overwrite the data?)

Click the **Yes** button if you will overwrite the existing data, or the **Cancel** button to cancel the exporting process and retain the existing data.

2-2. Creating BAS311F data

This section describes the procedure for creating original sewing data like the following for model BAS311F, and exporting it to a floppy disk or a folder in the computer.
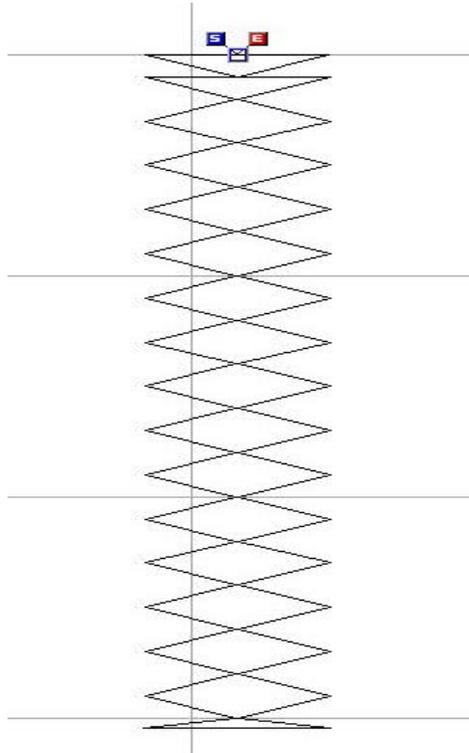
2-2-1. Opening a new design area

When starting up PS-300B, an empty design area automatically opens. You can also open a new design area at any time by doing one of the following.

- Click **New** on the **File** drop-down menu, or the **New** icon ⬜ in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **N** key.

2-2-2. Creating original sewing data

PS-300B provides you with various tools for creating, editing and modifying design elements for the sewing data. Let's begin with a basic straight line.

Drawing a vertical straight outline:

1. Click **Straight Line** on the **Shape** drop-down menu, or the Straight Line icon ⟩ in the toolbar.

   When the pointer is moved into the design area, its shape changes to $+_\gtrless$.

2. In the design area, click to specify the desired location for the start point of the straight outline (1 in figure below).

3. While holding down the keyboard's **Shift** key, click to specify the desired location for the end point of the straight outline (2 in figure below).

4. Right-click once to finish the outline.

   The start point marker ("S") and end point marker ("E") for the outline appear.
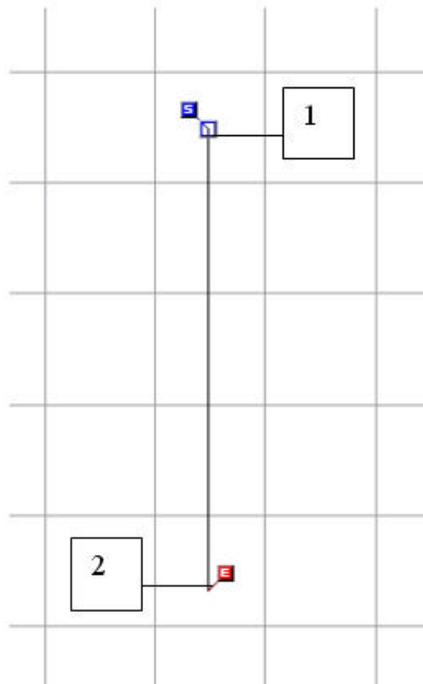

NOTE: To keep the straight line vertically or horizontally, hold down the keyboard's **Shift** key while moving the pointer in the design area.

Changing the stitch type to "Border" with a width of 3 mm:

NOTE: The stitch type is set to **Running** by default.

1. Click **Select** on the **Shape** drop-down menu, or the Select icon ⬉ in the toolbar. Then click on the outline to select it.

   A selection frame of "dashes" appears around the outline to show that it is selected.

2. Change the stitch type to **Border** in the **Stitch Type** drop-down list in the tool bar.
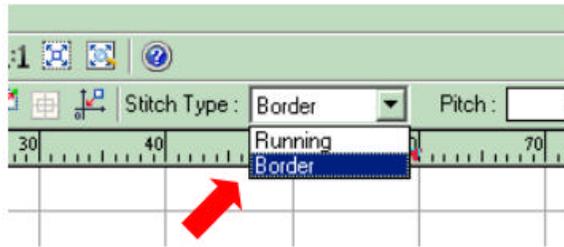
3. Click **Property** on the **View** drop-down menu (or the context menu that appears when right-clicking), or the Property icon 🖼 in the toolbar.

   The Property dialog box appears.

4. Click the **Border** tab, and input "3.0" in the **Width** input box that appears. Then click the **Close** button to close the property dialog box.
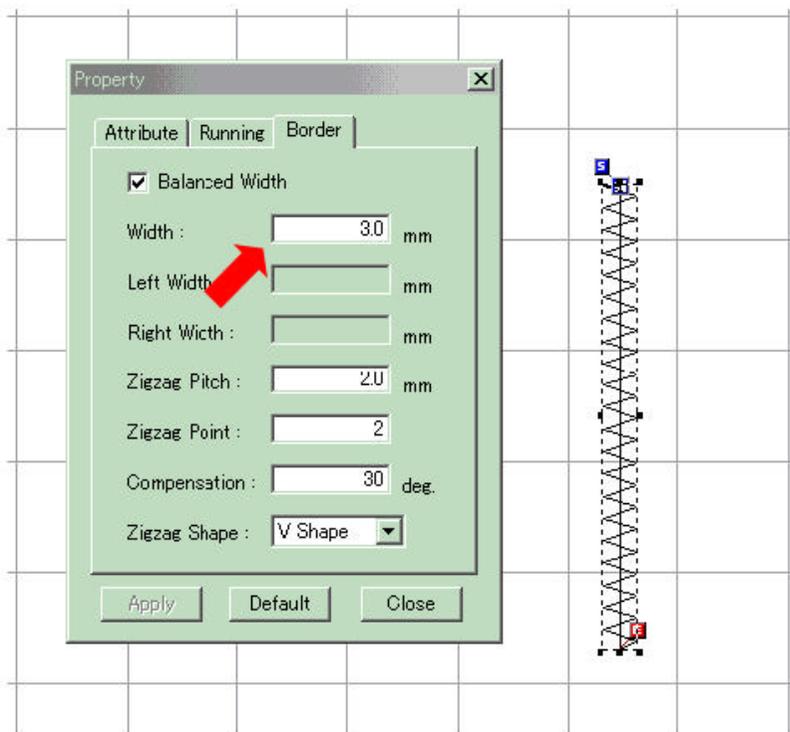

Adding stitch points

Add two stitch points. (Add one point just after the first point and the other just before the end point of the outline).

1. Click **Select Point** on the **Shape** drop-down menu, or the Select Point icon (↖) in the toolbar.

   *All stitch points appear as small green circles.*
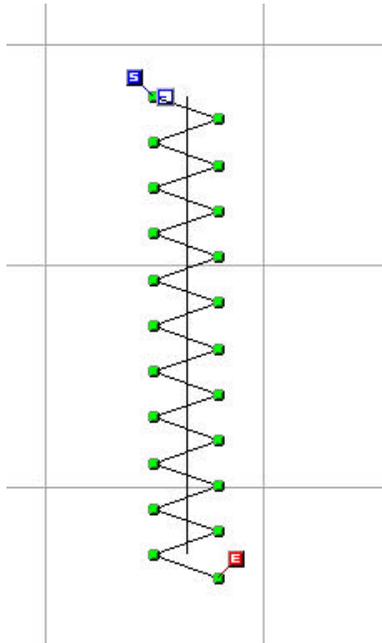
2. Select the first stitch point of the outline.

    The point changes to a black circle.
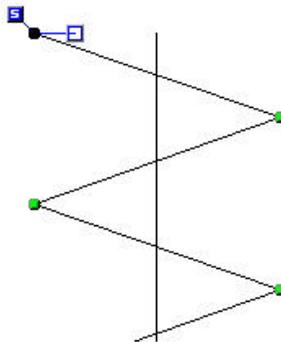
3. Click **Add** on the **Modify-Point** drop-down sub-menu (or the context menu that appears when right-clicking).

    A new point is added in the center position between the selected and next points.
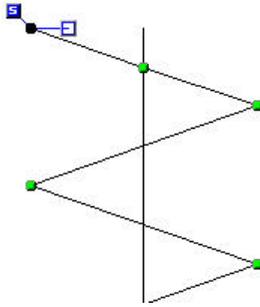
4. Select the stitch point just before the end point of the outline.

   The point changes to a black circle.
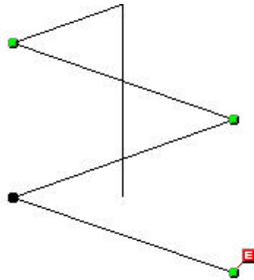
5. Repeat step 3.

   A new point is added in the center position between the selected and end points.
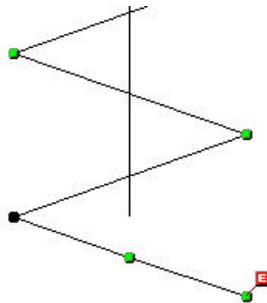
Moving the added stitch points:

Drag and move the points by following the steps shown in the figure below.

1. Click to select the first added point "1" in the figure.

   The selected point turns black.

2. Drag and move the point to position "2" as shown in the figure.

3. Drag and move the point "3" to position "4".
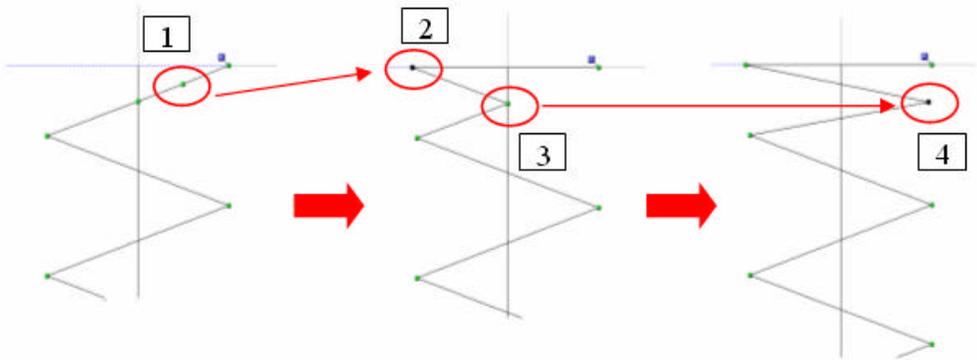
4. Drag and move the point "5" to position "6".

5. Drag and move the point "7" to position "8".

6. Drag and move the point "9" to position "10".
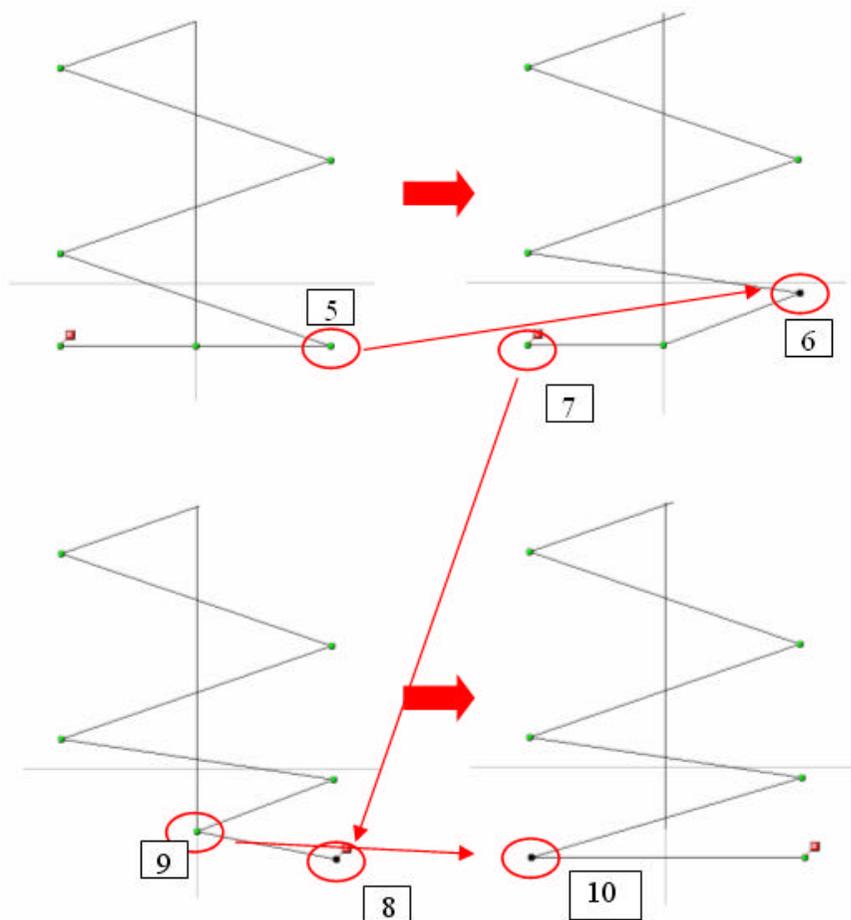
NOTE: To display an enlarged or reduced view quickly:
Place the pointer near the area to be enlarged or reduced, and then rotate the mouse wheel forward or backward.

To scroll the design area upward and downward quickly:
While holding down the keyboard's **Ctrl** key, rotate the mouse wheel.

To move the design area from side to side quickly:
While holding down the keyboard's **Shift** key, rotate the mouse wheel.

Clearing the outline:

1. Click **Select** on the **Shape** drop-down menu, or the Select icon ![select icon] in the toolbar. Then click on the outline to select it.

   A selection frame of "dashes" appears around the outline to show that it is selected.
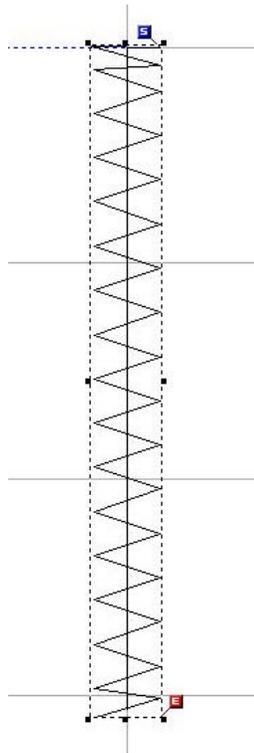
2. Click **Clear Outline** on the **Stitch** drop-down menu, or the Clear Outline icon ![icon] in the toolbar.

   The outline data is cleared and the stitch data remains. The outline's property is removed.

Editing the sewing data (making fine adjustments of the stitch points).

1. Use the **Select** ![select icon] tool to select the data, then click any of the numeric keys on the keyboard.

The Sewing Data List dialog box appears, and the coordinates of all points are shown in the list. (When the radio button for "Relative Coordinate From the Previous Point" is checked, the coordinates of each point show the relative distance from the previous point.)
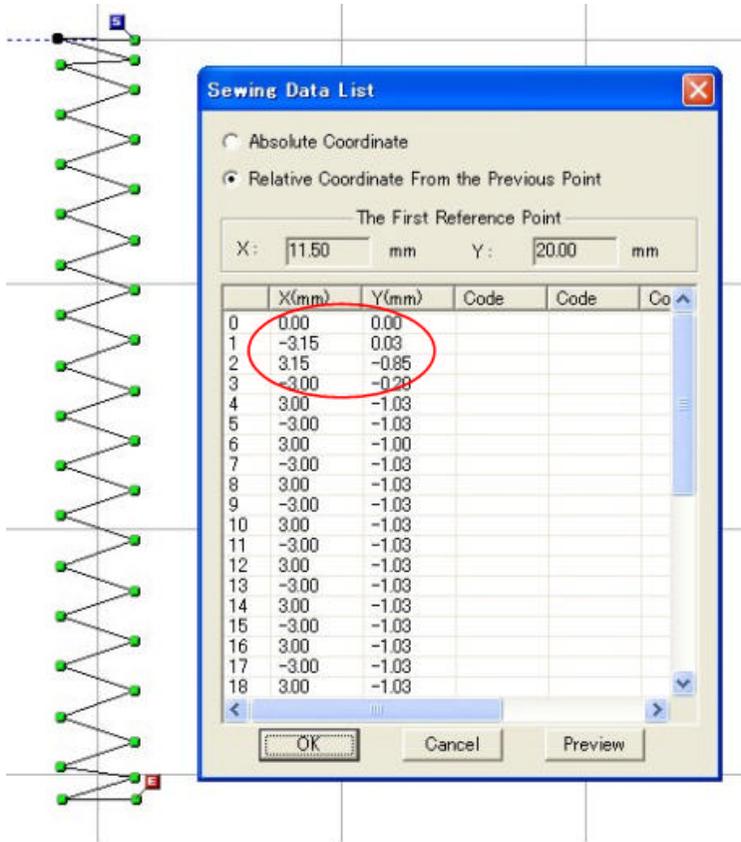
2. Change the coordinates of the points you want to move. (Click the desired cell to highlight the existing value, and then input a new value to replace it.) .

3. Click the **OK** button when you have finished moving the points.

The edited result is applied to the sewing data.

Sewing Data List

○ Absolute Coordinate
⊙ Relative Coordinate From the Previous Point

The First Reference Point

X: 11.50 mm   Y: 20.00 mm

	X(mm)	Y(mm)	Code	Code	Co
0	0.00	0.00			
1	-3.00	0.00			
2	3.00	-0.85			
3	-3.00	0.00			
4	3.00	-1.03			
5	-3.00	-1.03			
6	3.00	-1.00			
7	-3.00	-1.03			
8	3.00	-1.03			
9	-3.00	-1.03			
10	3.00	-1.03			
11	-3.00	-1.03			
12	3.00	-1.03			
13	-3.00	-1.03			
14	3.00	-1.03			
15	-3.00	-1.03			
16	3.00	-1.03			
17	-3.00	-1.03			
18	3.00	-1.03			

OK   Cancel   Preview
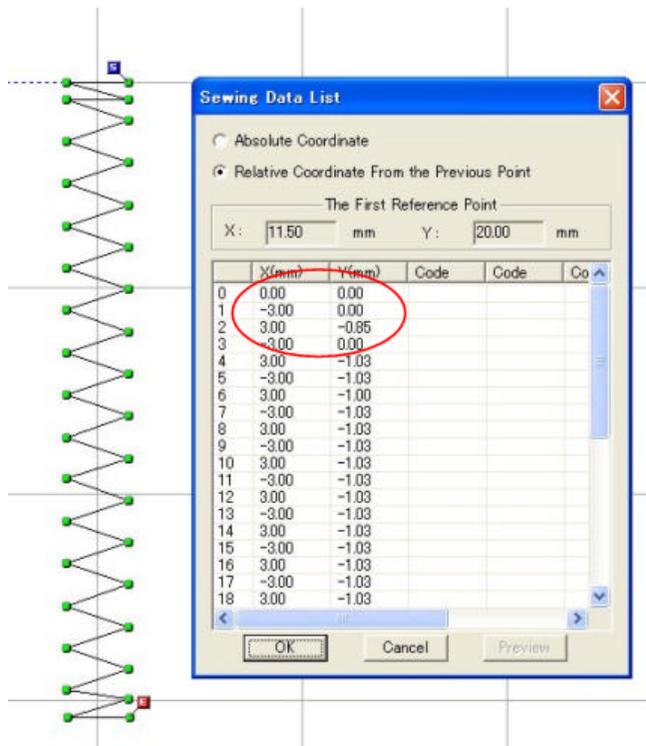
Making a symmetrical copy of the data:

You can duplicate the data symmetrically on the basis of a reference line (mirror axis).

1. Use the **Select** ( ) tool to select the data.

2. Click **Mirror Copy** on the **Modify** drop-down menu, or the Mirror Copy icon in the toolbar.

3. Draw a mirror axis in the design area by clicking the desired two points.
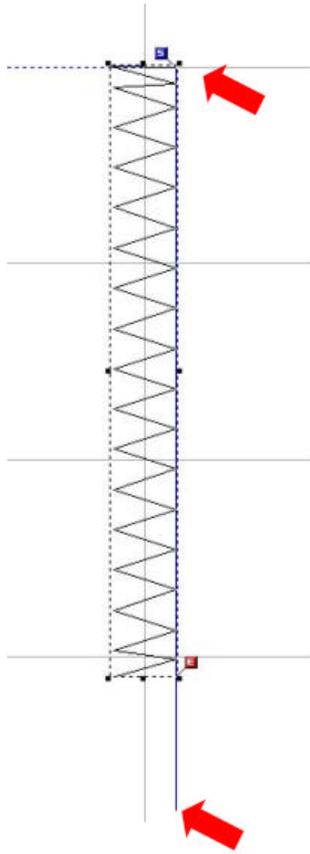
A symmetrical copy of the data is created on the basis of the mirror axis.
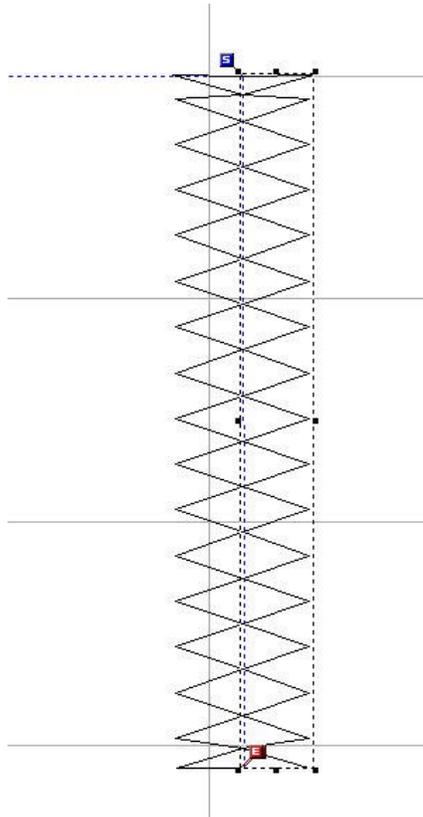
Reversing the sewing direction of the data:

The current link of the two design elements (the original data and its copy) is not proper for sewing. By reversing the start and end points of the second element, it can be improved.

1. Use the **Select** ⬓ tool to select the second design element.

2. Click **Swap Start/End Point** on the **Modify** drop-down menu (or the context menu that appears when right-clicking), or the Swap Start/End Point icon ⬓ in the toolbar.

   The start and end points of the selected design element are switched.
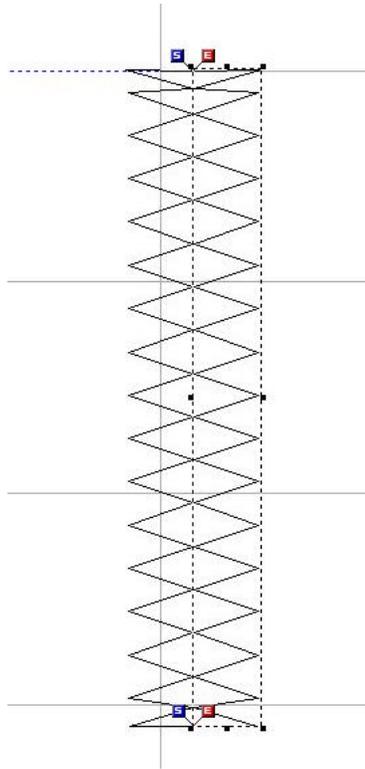
Connecting design elements so that they are joined at a point:

You can connect two end points of design elements allowing you to convert them into one.

1. Use the **Select Point** tool 🏹 to select the end point of the first one.

   The selected point changes to a black square.

2. Click **Connect** on the **Modify-Point** drop-down sub-menu (or the context menu that appears when right-clicking), or the Connect icon 🖉 in the toolbar.

   NOTE: The **Connect** command is available only when a point at the end of the sewing data is selected.

3. Click the start point of the second element.

   The two points are connected into one.
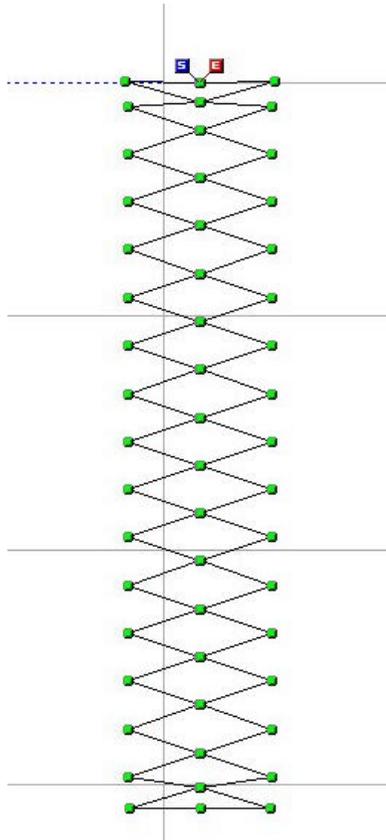
2-2-3. Specifying a sewing machine model

Specify a sewing machine model that you created sewing data for, and then put its sewing area frame into the design area.

NOTE: We recommend that you specify the machine model before creating a design, since the sewing area differs with each model.

1. Do one of the following:

   ▪ Click **Machine Model Setting** on the **Tools** drop-down menu (or the context menu that appears when right-clicking), or the Machine Model Setting icon 🖳 in the toolbar.

   ▪ On the keyboard, while holding down the **Ctrl** key, press the **M** key.

   The Machine Model Setting dialog box appears.
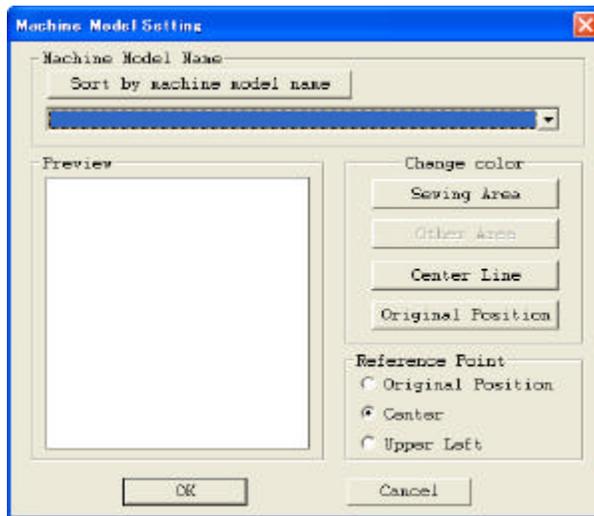
2. Select **BAS311F** from the **Machine Model Name** drop-down list.

   The Preview window shows how the selected model's sewing area and the design area will appear.

3. In the **Reference Point** box, specify the reference point for positioning the sewing area frame in the design area.

   Also, make settings in the Change color group box if you prefer.

4. Click the **OK** button to apply the specified settings.

5. While holding down the keyboard's **Shift** key, click on the design area.

   The sewing area frame is placed at the center of the data created in the above procedure.

   NOTE: The sewing area frame can be placed at any position. Refer to **3-7-5. Specifying a sewing machine model** for details.

6. If necessary, adjust the size of the data according to the sewing area frame.

   (Refer to "**3-5-3. Resizing design elements**" for details.)

2-2-4. Exporting the data to a sewing machine

You can save the data you have created to a storage media (a floppy disk etc.) or a folder on the computer.

1. Click **Export to Machine** on the **File** drop-down menu, or the Export to Machine icon 🖳 in the toolbar.

   The Export to Machine dialog box appears.
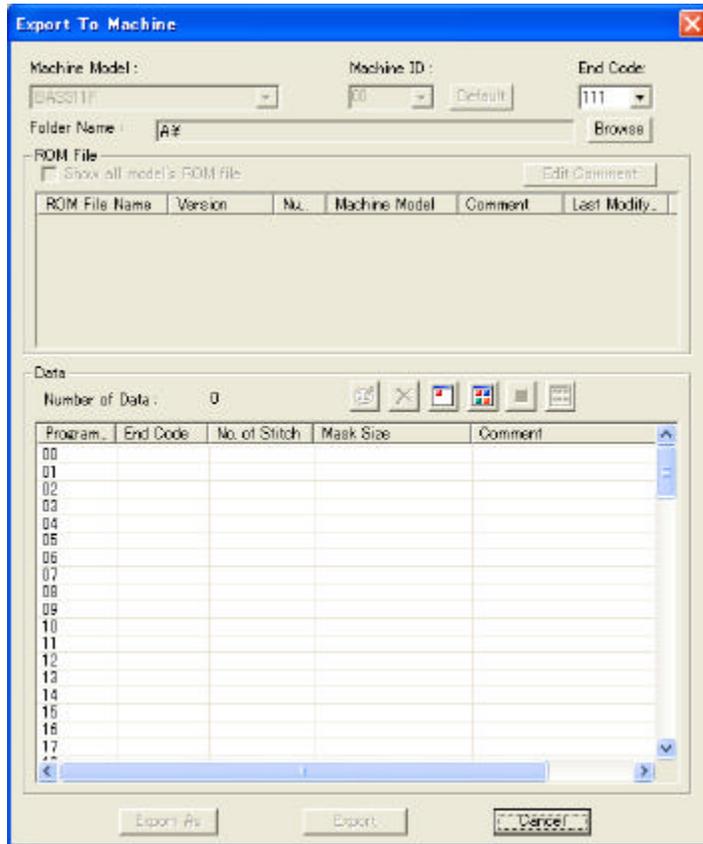
2. Specify the folder in which you want to save the data.

- To save the data on a floppy disk:

    The A drive of the computer is selected as the default folder. If your computer's A drive is assigned as the floppy disk drive, you can save the data to a floppy disk.

- To save the data in a folder on the computer:

    Click the **Browse** button to specify the folder.

The Data list shows all program number available for BAS311F.

* Click the program number to display information for the program. (No information will appear if the program number has no data.)

* Click the ⊞ button to display icon images for all data in the Data list.

3. Click the program number to which you want to save the data, and then click the **Export** button.

If the program number already has data, the following message appears:

    Message dialog box (Do you really want to overwrite the data?)

Click the **Yes** button if you will overwrite the existing data, or the **Cancel** button to cancel saving the data and keep the existing data.

2-3. Creating BAS311A data

This section describes the procedure for creating original sewing data like the following for model BAS311A, and exporting it to a floppy disk.
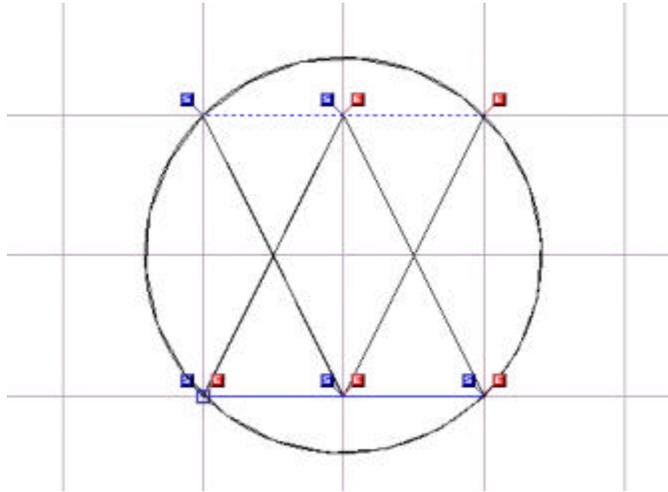
2-3-1. Opening a new design area

When starting up PS-300B, an empty design area automatically opens. You can also open a new design area at any time by doing one of the following.

- Click **New** on the **File** drop-down menu, or the New icon ☐ in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **N** key.

2-3-2. Creating original sewing data

PS-300B provides you with various tools for creating, editing and modifying design elements for the sewing data. Let's begin with a basic triangle.

Drawing a triangle:

Draw a triangle by changing the stitch pitch for every path (line).

1. Click **Snap Setting** on the **View** drop-down menu (or the context menu that appears when right-clicking), or the Snap Setting icon ⊿ in the toolbar.

   The Snap Setting dialog box appears.

2. Check the **Gridline** check box, and then click the **OK** button to close the dialog box.
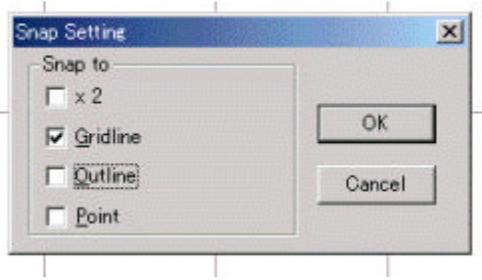
This setting makes the pointer snap to the intersections of gridlines.

3. Click **Straight Line** on the **Shape** drop-down menu, or the Straight Line icon $\lesssim$ in the toolbar.

   When the pointer is moved into the design area, its shape changes to $^{+}\!\!\lesssim$.

4. Set the stitch pitch to **2 mm** by inputting "2.0" in the **Pitch** input box in the tool bar.
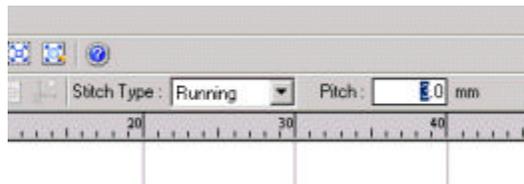
5. In the design area, click to specify the start point of the triangle (click at an intersection of gridlines).

6. Click to specify the second point of the triangle (click at another intersection in the horizontal direction).
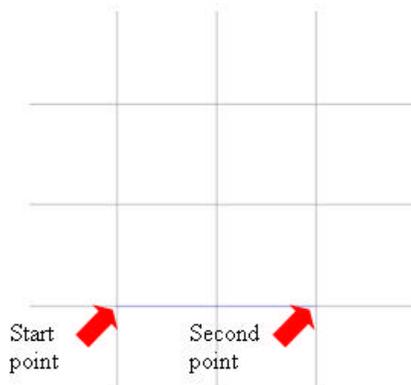
7. Set the stitch pitch of the second path to **3 mm** by inputting "3.0" in the **Pitch** input box.

8. Specify the third point of the triangle (click at another intersection).
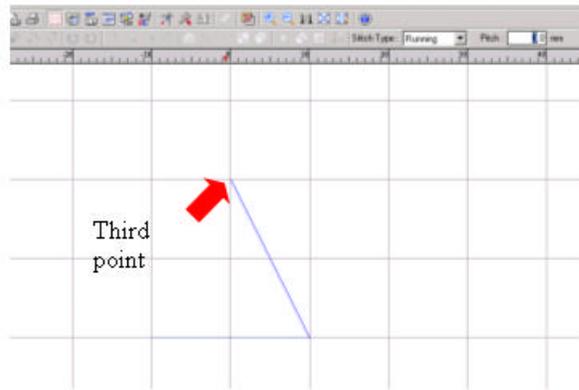
9. Set the stitch pitch of the third path to **4 mm** by inputting "4.0" in the **Pitch** input box.

10. Click the start point again to finish the triangle.

The start point marker ("S") and end point marker ("E") appear for every path of the triangle.
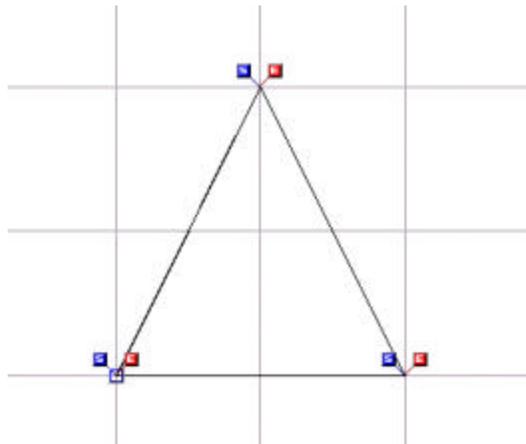
11. Click **Select Point** on the **Shape** drop-down menu, or the Select Point icon in the toolbar to check all the stitch points of the triangle

You can check that the stitch points are arranged in a different pitch for every path.
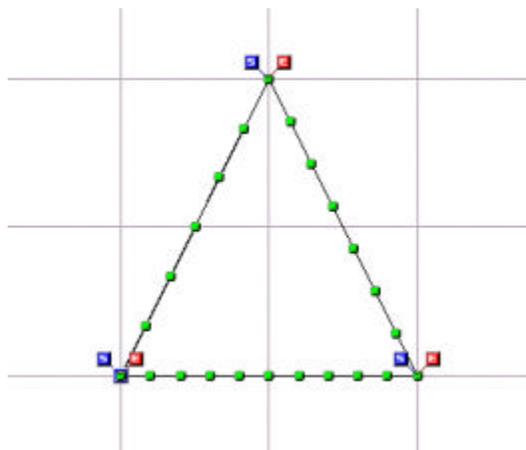
NOTE:

- When a polygon is drawn with the stitch pitch for every path changed in this way, every path is an individual outline.
- The **Polygon** tool is useful for drawing a triangle, though the pitch cannot be changed for every path.
- To keep the straight line vertically or horizontally, hold down the keyboard's **Shift** key while moving the pointer in the design area.

Adding an inverted triangle:

1. Use the **Select** ▶ tool to select the triangle.

2. Click **Copy To** on the **Modify** drop-down menu, or the Copy To icon ⬚ in the toolbar.

   The Input Point dialog box appears.
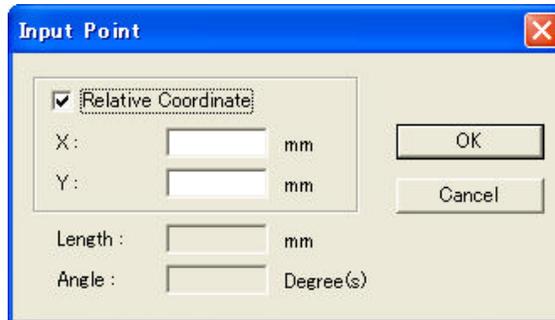
3. Input "0" in both the **X** and **Y** input boxes, and click the **OK** button.

   The copy of the triangle is pasted at the same position as the original.

4. Click **Vertically** on the **Modify-Flip** drop-down sub-menu (or the context menu that appears when right-clicking), or the Vertically icon ▣ in the toolbar.

   The copy is inverted.
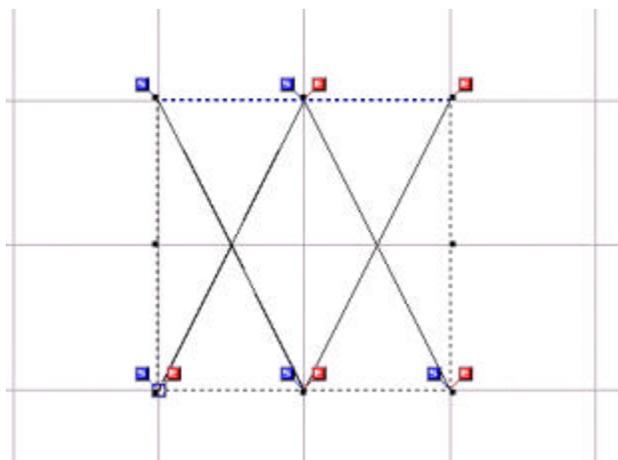
Enclosing the current outlines with a circle:

1. Click **Circle** on the **Shape** drop-down menu, or the Circle icon ◯ in the toolbar.

2. Click the two points in the red circles consecutively as illustrated below.
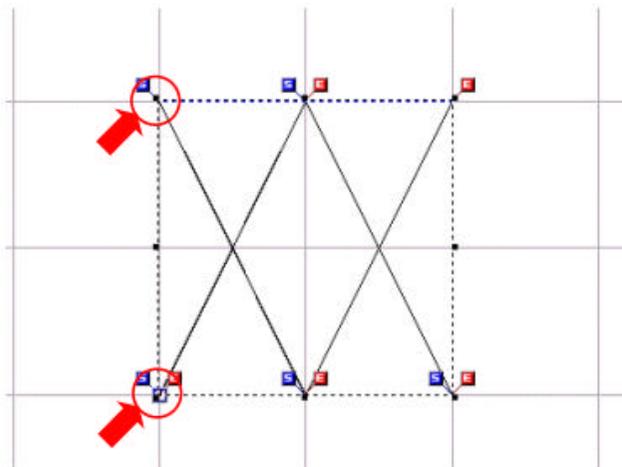
3. Move the pointer and specify the location for the third point so that the circle encloses the current outlines.
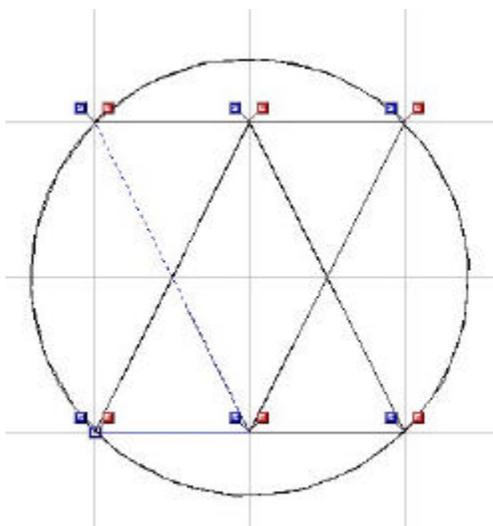
NOTE: You can also use the **Center Circle** tool to draw a circle.

Moving the punch point of the circle:

You can align the punch point of the circle with a punch point of a triangle to improve sewing efficiency.

1. Use the **Select Punch Point** tool to select the punch point of the circle.
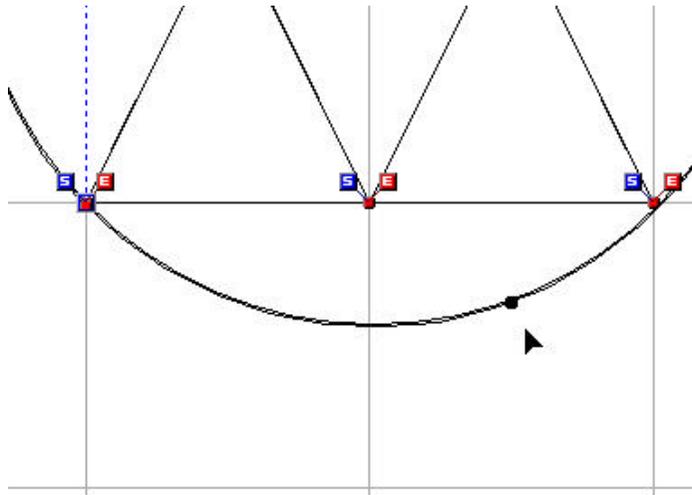
2. While holding down the keyboard's **Shift** key, drag the punch point of the circle and drop it on a punch point of a triangle.

   The punch point of the circle can only be moved along the circumference of the circle.

Changing the sewing order for all the design elements
You can change the sewing order for all the design elements to increase the sewing efficiency.

1. Click **Sequence Window** on the **View** drop-down menu, or the Sequence window icon in the toolbar.

   The Sequence window appears. All the design elements are shown in separate frames, and arranged in the actual sewing order.

2. Click the **Auto Sequence** button in the **Sequence** window.

   The design elements are re-arranged in the order suitable for sewing.

   * If you check the **Swap Start/End Point** check box, the sewing direction (the start and end points) of each design element is also reversed automatically to increase efficiency.
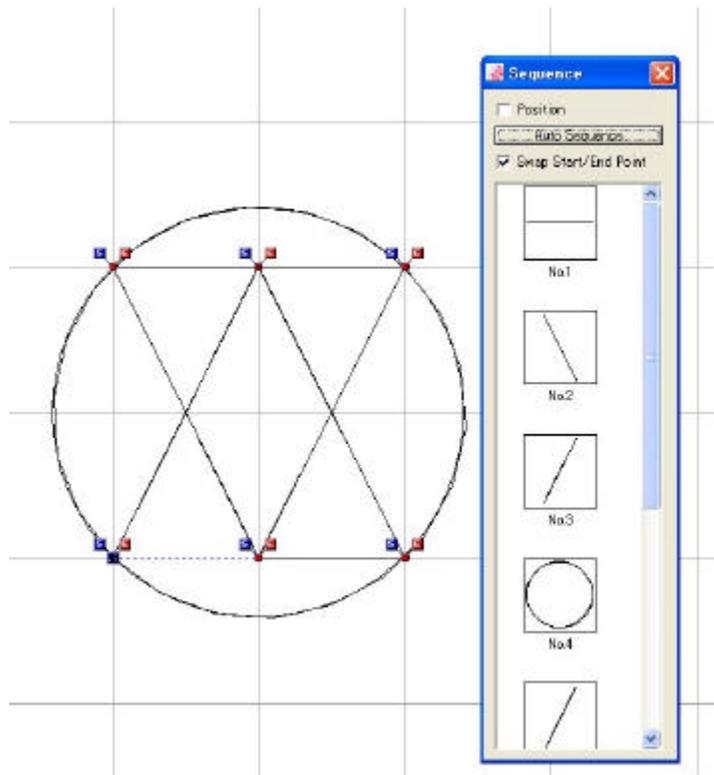
3. Click the Close [X] button on the upper right corner of the **Sequence** window to close the **Sequence** window.

Viewing a simulation of the stitching

Use the **Slow Draw** command to view a simulation of the stitching in order to check for any possible problems.

1. Click **Slow Draw** on the **Tools** drop-down menu, or the Slow Draw icon in the toolbar.

   The Slow Draw dialog box appears.

2. Check both the **Count** and **Marker** check boxes if they have not been checked.

3. Click the Play button.

   Drawing of the stitching begins. The stitch points are also shown while drawing.

   * *The values in the blue boxes show how many stitch points are created. They are counted in tens.*
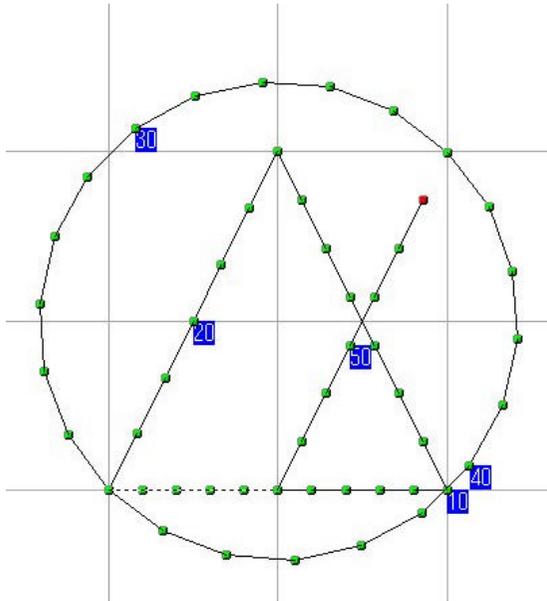
4. Click the close [X] button to close the **Slow Draw** dialog box when the drawing is finished.

2-3-3. Specifying a sewing machine model

Specify the sewing machine model that you create sewing data for, and then put its sewing area frame into the design area.

NOTE: We recommend you that specify the machine model before creating a design, since the sewing area differs with each model.

1. Do one of the following:

- Click **Machine Model Setting** on the **Tools** drop-down menu (or the context menu that appears when right-clicking), or the Machine Model Setting icon 🖳 in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **M** key.

  The Machine Model Setting dialog box appears.
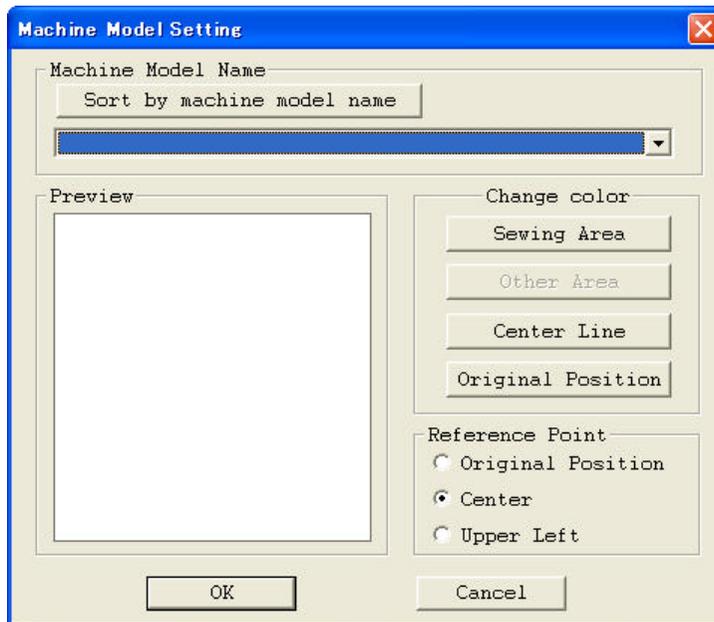
2. Select **BAS311A** from the **Machine Model Name** drop-down list.

   The Preview window shows how the selected model's sewing area and the design area will appear.

3. In the **Reference Point** box, specify the reference point for positioning the sewing area frame in the design area.

   Also, make settings in the Change color group box if you prefer.

4. Click the **OK** button to apply the specified settings.

5. While holding down the keyboard's **Shift** key, click on the design area.

   The sewing area frame is placed at the center of the data created in the above procedure.

   NOTE: The sewing area frame can be placed at any position. Refer to **3-7-5. Specifying a sewing machine model** for details.

6. If necessary, adjust the size of the data according to the sewing area frame.
   (Refer to "**3-5-3. Resizing design elements**" for details.)

2-3-4. Exporting the data to a sewing machine

You can export the data you created to the storage media of a sewing machine.
(BAS311A uses the floppy disc drive FD300.)

 NOTE: In order to connect to FD300, the COM Port must be correctly set in **Option Setting** on the **Tools** drop-down menu.

1. Click **Export to Machine** on the **File** drop-down menu, or the Export to Machine icon 🖼
   in the toolbar.

   The Export to Machine dialog box appears.
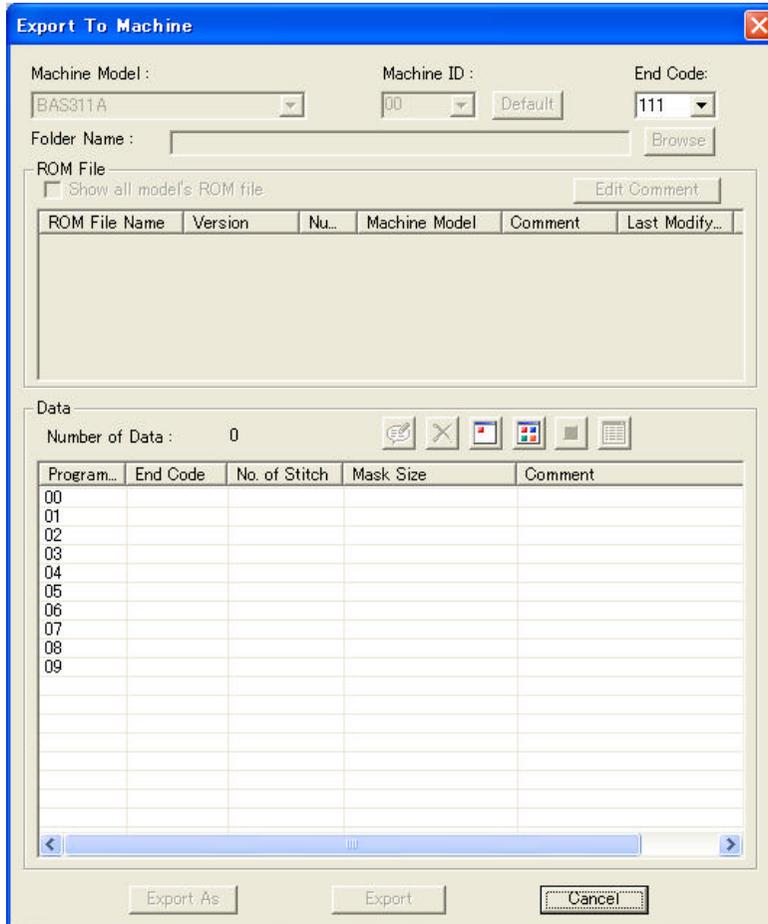
2. Click the program number to which you want to export the data, and then click the
   Export button.

   If the program number already has data, the following message appears.

   Message dialog box (Do you really want to overwrite the data?)

   Click the **Yes** button if you will overwrite the existing data, or the **Cancel** button to
   cancel exporting the data and keep the existing data.

2-4. Creating B434E data

The following procedure describes how to create manual stitch data by tracing an imported image and exporting it to a ROM.

2-4-1. Opening a new design area

When starting up PS-300B, an empty design area automatically opens. You can also open a new design area at any time by doing one of the following.

- Click **New** on the **File** drop-down menu, or the New icon ⬜ in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **N** key.

2-4-2. Specifying a sewing machine model

Specify the sewing machine model that you are creating sewing data for, and then put its sewing area frame into the design area after applying some attributes to it.

NOTE: We recommend you specify the machine model before creating a design, since the sewing area differs with each model.

1. Do one of the following:

   - Click **Machine Model Setting** on the **Tools** drop-down menu (or the context menu that appears when right-clicking), or the Machine Model Setting icon 🖳 in the toolbar.

   - On the keyboard, while holding down the **Ctrl** key, press the **M** key.

     The Machine Model Setting dialog box appears.
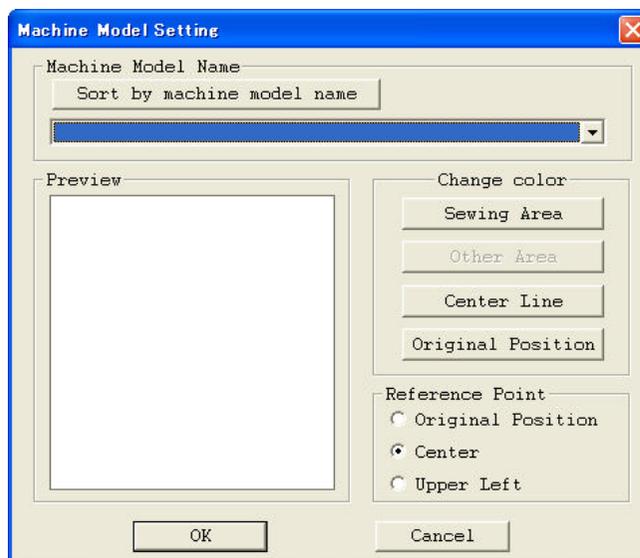
2. Select **B434E** from the **Machine Model Name** drop-down list.

The Preview window shows how the selected model's sewing area and the design area will appear.

3. In the **Reference Point** box, specify the reference point for positioning the sewing area frame in the design area.

    Also, make settings in the Change color group box if you prefer.

4. Click the **OK** button to apply the specified settings.

5. While holding down the keyboard's **Shift** key, click on the design area.

    The sewing area frame is placed at the origin (0) of the design area's coordinates.

    NOTE: The sewing area frame can be placed at any position. Refer to **3-7-5. Specifying a sewing machine model** for details.

2-4-3. Importing an image

An existing image file can be imported to the design area in order to create manual stitch data.

NOTE: PS-300B can only import BMP or JPG format image files.

1. Click **Import From File** on the **Image** drop-down menu, or the Import From File icon ![icon] in the toolbar.

    The Open dialog box appears.

2. In the **Look in** drop-down list and the list below it, select the folder that contains the image file you want to use, and then select the file.

3. Click the **Open** button.

    The image is imported to the design area. The image is positioned at the center of the design area.

    (This section uses the following image.)
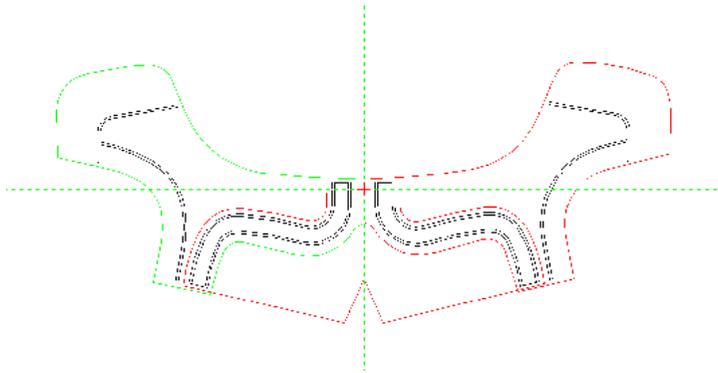
2-4-4. Adjusting the size of the image:

If the image is either too large or too small for the sewing area frame of the specified machine model, you can reduce or enlarge the size of the image so that it fits into the sewing area.

1. Click **Select** on the **Shape** drop-down menu or click the Select icon 🡦 in the toolbar.

2. Click the image.

   A selection frame (of dashes) appears around the image to show that it is selected, and handles

   (small squares) also appear on each corner and at the center of each side of the selection frame.

3. Drag and move any of the handles until the image is enlarged or reduced to the desired size.

4. Click **Resize** on the **Modify** drop-down menu or click the **Resize** icon 🔧 in the toolbar. Input the desired size of the image, then close the dialog box.

2-4-5. Tracing the image

This image is symmetrical. First draw the left half of the image with the **Trace** tool, and then create the right half using the **Mirror Copy** tool in the next procedure.

With the **Trace** tool, you can easily create manual stitch data by tracing the imported image. Before tracing the image, the tracing pitch and margin must be specified.

1. Set the tracing pitch and margin:

   (a) Do one of the following:

   - Click **Option Setting** on the **Tools** drop-down menu (or the context menu that appears when right-clicking), or the Option button 🔧 in the toolbar.

   - On the keyboard, while holding down the **Ctrl** key, press the **T** key.

   The Options Setting dialog box appears.
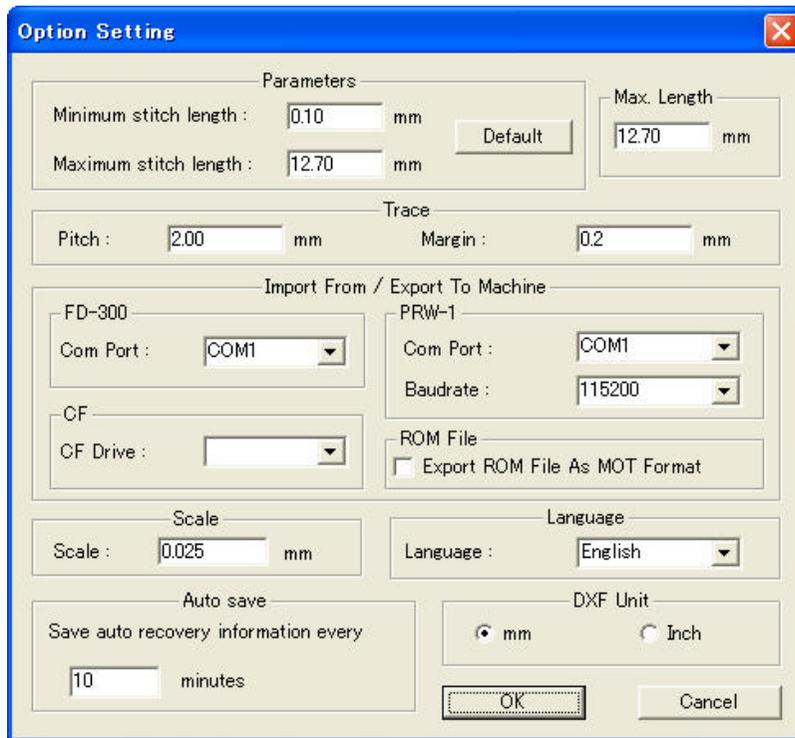
(b) If necessary, change the pitch of stitches made with the **Trace** tool by inputting a value in the **Trace Pitch** input box.

(c) If necessary, change the precision for tracing with the **Trace** tool by inputting a value in the **Trace Margin** input box.

   NOTE: Reducing the value in the **Trace Margin** box increases the precision for tracing the image; however, the image will need to be traced slowly. Adjust the setting to match the desired tracing speed.

(d) Click the **OK** button to apply the specified settings.

2. Click **Trace** on the **Shape** drop-down menu, or click the Trace icon 🖉 in the toolbar.

3. Click on the image to specify the desired tracing-start point.

4. Move the pointer to trace the image.

   Manual stitches are created with the specified pitch and margin.

5. Right-click once to specify the end point to finish the tracing.

   The start point marker ("S") and end point marker ("E") for the created data appear.

6. Check the newly created data by hiding the image using the following steps.

   (a) Click **Show/Hide** on the **View** drop-down menu, or context menu that appears when right-clicking.

   (b) Check the **Image** check box in the **Show/Hide** dialog box that appears.

(c) Click the **OK** button to close the dialog box.
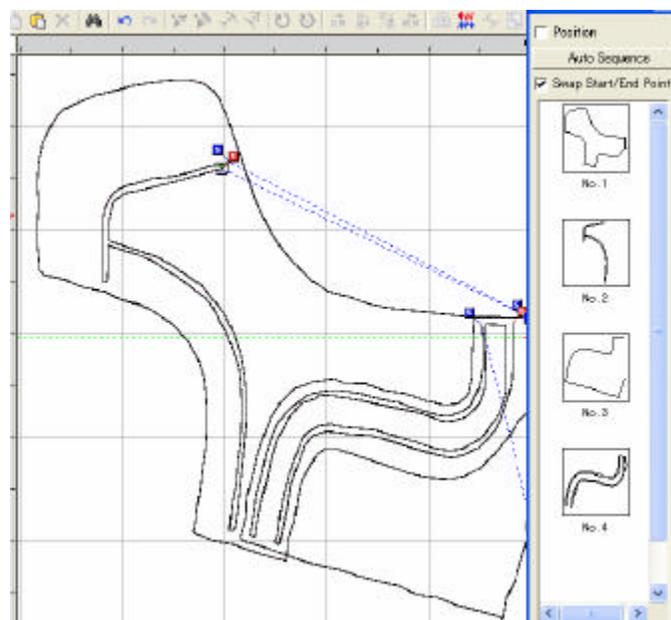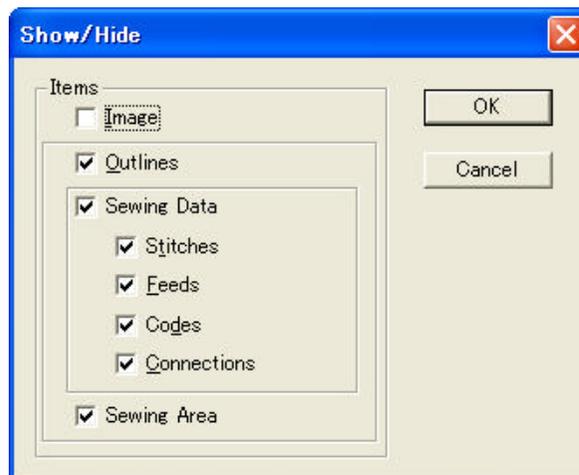
Tips for making fine tracing:

Making a stitch point at the desired position
Stitch points cannot always be made at the desired positions (a corner of the image, etc.) with the specified pitch. You can also make stitch points at the desired positions using the following procedure.

While holding down the keyboard's **Shift** key, click the left mouse button at the position where you want to make a stitch point.

Drawing a smooth curve
You may not be able to draw a smooth curve with the specified pitch. In that case, you can draw a smooth curve with shorter pitches using the following procedure.

While holding down the keyboard's **Shift** key, click the left mouse button at the position where you want to make a stitch point. Repeat this operation until a smooth curve is created.

Deleting the last stitch point

If you make any errors during tracing, you can delete the last stitch point by using the following procedure.

Press the keyboard's **Backspace** or **space** key.

Repeat the above to delete more points.

Adjusting the stitch points after the tracing is finished

You can move any stitch point to the desired position by selecting it with the **Select Point** tool.

2-4-6. Making a symmetrical copy of the data

You can duplicate the manual stitch data symmetrically on the basis of a reference line (mirror axis).

1. Use the **Select** tool to select the current manual stitch data.

2. Click **Mirror Copy** on the **Modify** drop-down menu, or the Mirror Copy icon in the toolbar.

3. Draw a mirror axis in the design area by clicking the desired two points.
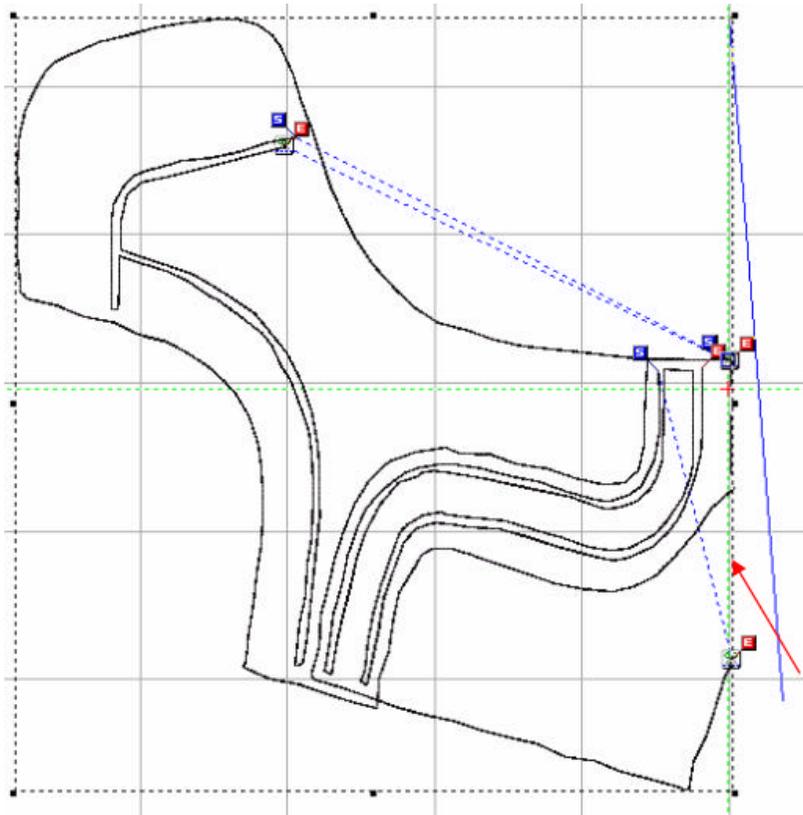
A symmetrical copy of the data is created on the basis of the mirror axis.
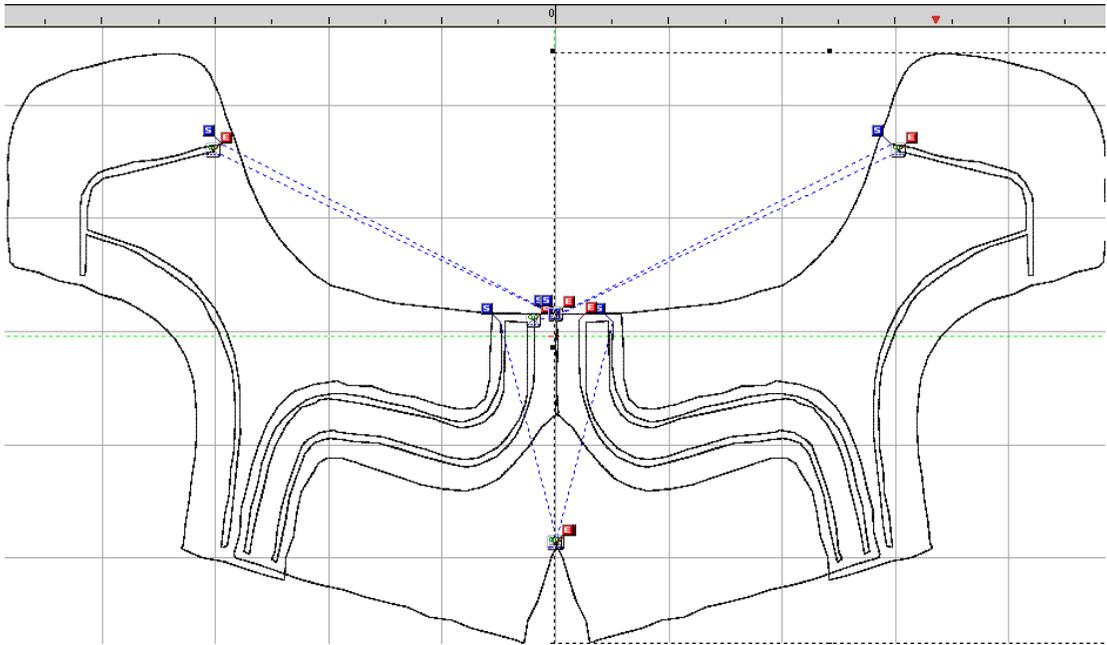
2-4-7. Converting two design elements into one

The following procedure explains how to connect the current data (two design elements) and convert them into one.

Reversing the sewing direction of design elements:

The current link of the two design elements (the original and its copy) is not proper for sewing. By reversing the start and end points of the second element, it can be improved.

1. Use the **Select** ⟍ tool to select the second design element.

2. Click **Swap Start/End Point** on the **Modify** drop-down menu (or the context menu that appears when right-clicking), or the Swap Start/End Point icon ⟍ in the toolbar.

   The start and end points of the selected design element are switched.

Aligning the end point of the first element to the start point of the second element:

1. Use the **Select** ⟍ tool to select the second design element.

2. Click **Pivot** on the **Modify** drop-down menu, or the Pivot icon ⟍ in the toolbar.

   The stitch points of both design elements are shown, and the shape of the pointer changes to ⟍

3. Click to select the start point of the second element.

The selected point turns black.

4. Click to select the end point of the first element.

The second element moves so that the specified two points are overlapped.

Connecting the design elements so that they are joined at a point:

You can connect the end points of both design elements allowing you to convert two design elements into one.

1. Using the **Select Point** tool , click to select the end point of the first design element. (On the list box that appears, select the proper one.)

   The selected point turns black.

2. Click **Connect** on the **Modify-Point** drop-down sub-menu (or the context menu that appears when right-clicking), or the Connect icon in the toolbar.

3. Click the same point again.

   The two points are connected into one.

2-4-8. Reading data from a sewing machine

Read the desired data from a sewing machine ROM by using a ROM reader/writer and save it as a ROM file in the computer.

NOTE: In order to connect to the ROM reader/writer (PRW-1), the baud rate and COM port must be correctly set in **Option Setting** on the **Tools** drop-down menu.

1. Click **Read From ROM** on the **File** drop-down menu, or the Read From ROM icon in the toolbar.

   The Read From ROM dialog box appears.

2. Insert a sewing machine ROM into the ROM reader/writer, and Click the **Read** button.

   All data in the sewing machine ROM is read and displayed in the Read from ROM dialog box.

3. In the **Read From ROM** dialog box, make settings for the ROM file to which you want to store the data you created.
   (Refer to "**3-1-8. Reading data from a sewing machine ROM**" of "**Chapter 3. Reference**" for details.)

4. In the **Save To ROM File** dialog box, make the following settings.

   - Specify the desired folder where you will store the ROM file with the **Browse** button at the right of the **Folder Name** box.

   - Input the desired file name for the ROM file in the **ROM File** input box.

5. Click the **Save** button.

   The ROM file is stored in the specified folder.

2-4-9. Exporting the data to a ROM file

Export the data you created to the ROM file stored in the above procedure.

1. Click **Export to Machine** on the **File** drop-down menu, or the Export to Machine icon 🔁 in the toolbar.

   The Export to Machine dialog box appears.

2. Click the **Browse** button and select the folder where the ROM file is stored.

   The ROM File list shows only the files and their associated information that is available for B434E in the folder.

3. Click the **Export** button to save the data to the selected ROM file. The data is added to the end of the ROM file.

   NOTE: To export the data to a new ROM file you create:
   Click the **Export As** button. In the **Import ROM File Name** dialog box that appears, input the new ROM file name and comments, and then click the **OK** button. By using this function, you can keep the ROM file you selected as a master file.

2-4-10. Writing the ROM file to a sewing machine ROM

You can write the ROM file you saved in the above procedure to a sewing machine ROM by using a ROM reader/writer.

1. Click **Write to ROM** on the **File** drop-down menu, or the Write to ROM icon ![icon] in the toolbar.

   The Write to ROM dialog box appears.
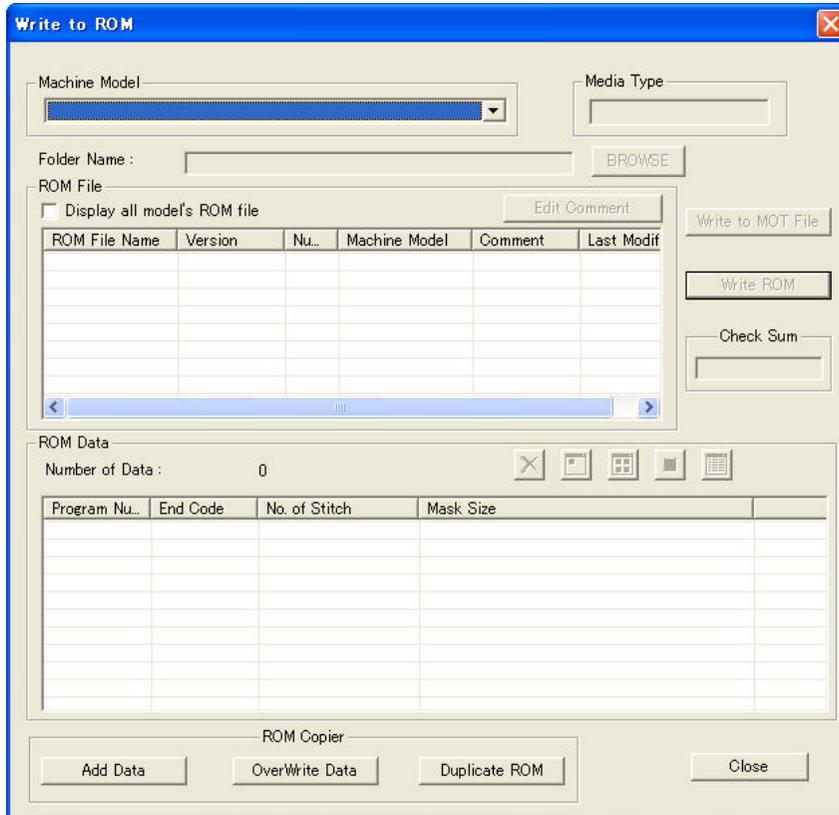
2. Click the **Browse** button to select the folder where you stored the ROM file.

   The ROM File list shows only the files and their associated information that is available for the B434E in the folder.

3. Click on the ROM file name in the **ROM File** list to select it.

   The selected file name is highlighted, and all program numbers in the file are shown in the ROM Data list.

4. If you have the PRW-1(SW-1), click the **Write ROM** button.

   All data in the specified ROM file is written to the ROM of the specified sewing machine.

5. If you don't have the PRW-1(SW-1), click the **Write to MOT File** button, the selected file will be converted to MOT file which you can write it to machine ROM by any ROM reader/writer.

Chapter 3. Reference

This chapter describes all the functions of PS-300B. Descriptions of each command are basically classified according to the groups shown in the Menu.

3-1. File

Almost all the functions described here can be selected from the **File** drop-down menu. The parenthesis following each title includes the name of the command on the drop-down menu, the icon on the toolbar, and/or the shortcut keys.

3-1-1. Creating a new design area (File-New, ▢, Ctrl+N)

To create a new design for sewing data, first create a new design area in the PS-300B main window by doing one of the following:

- On the **File** drop-down menu, click **New.**

- Click the New icon ▢ in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **N** key.

3-1-2. Opening an existing file (File-Open, 📂, Ctrl+O)

PS-300B supports the file formats of the following extensions:

Extension	File type
emb	Brother embroidery file
dxf	Auto CAD DXF file
dst, .dsb, .dsz	TFD stitch file
if2	Satra format

To open a file that has previously saved:

1. Do one of the following:

   - On the **File** drop-down menu, click **Open**.

   - Click Open icon 📂 in the toolbar.

   - On the keyboard, while holding down the **Ctrl** key, press the **O** key.

   The Open PS-300B File dialog box appears.
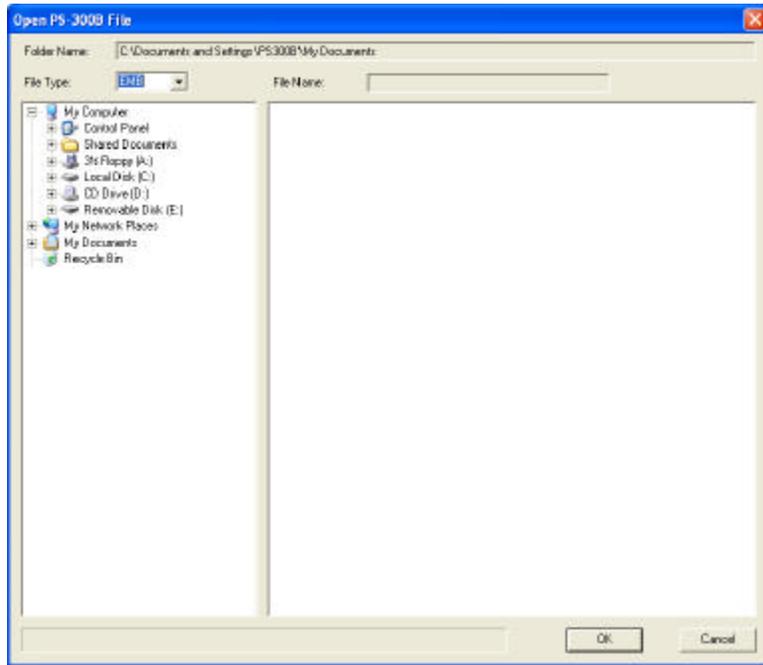
2. In the drop-down list at the top left corner of the dialog box, select the format for the file that you want to open.

3. In the list in the left window of the dialog box, select the folder containing the desired file.

    The images of the available files contained in the folder are previewed in the right window of the dialog box.

    NOTE: The images of files in the format designated in step 2 only are previewed.

4. Select and click on the file that you wish to open, then click the **OK** button.

    The selected file is opened in the main window.

    NOTE: If there are too many files in the folder that you have selected, it may take a little longer time until you can view all of the previews. In that case, please check the progress with the progress bar at the bottom of the dialog box.

3-1-3. Closing the current data (File-Close)

To close the current data

Click the **Close** on the **File** drop-down menu.

If there are unsaved changes in the current data, a message appears asking if you want to save the changes. Do one of the following:

-   To save the changes, click the **Yes** button.

-   To close the data without saving the changes, click the **No** button.

- To quit trying to close the data, click the **Cancel** button.

3-1-4. Saving the current data in a file

Design data can be saved in the emb format.

Note: Sewing data can be saved in the dxf format. Sewing data saved in the dxf format can only be read by CAD software.

To save the data in the current format (File-Save, 🖫):

Do one of the following:

- On the **File** drop-down menu, click **Save**.

- Click the **Save** icon 🖫 in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **S** key.

If the data has already been named, it will be overwritten with the current file name.
If the data is still unnamed (i.e. it has never been saved as a file) or if, for some reason, the original file cannot be found, the **Save As** dialog box appears.
In the **Save As** dialog box, follow the procedure for **To save the data with a desired name and in the desired format** below.

To save the data with a desired name and in the desired format (File-Save As):

1. On the **File** drop-down menu, click **Save As**.

   The Save As dialog box appears.

2. In the **Save in** drop-down list and the list below it, select the folder where you want to save the data as a file.

3. In the **File name** box, input the desired file name.

4. In the **Save as type** drop-down list, select the emb format in which you want to save the file. (It is also possible to export sewing data in dxf format.)

5. Click the **Save** button.

   The data is saved in a file of the selected format.

3-1-5. Importing an existing file (File-Import, 🗋)

A data file with any of the following extensions can be imported in the current design area. The data is automatically adjusted to the proper size for the current data.

Extension	Description
emb	Brother embroidery file
dxf	Auto CAD DXF file
dst, .dsb, .dsz	TFD stitch file
if2	Satra format

To import a file:

1. Do one of the following:

   - On the **File** drop-down menu, click **Import**.

   - Click the Import icon in the toolbar.

   The Open PS-300B File dialog box appears.

2. In the drop-down list at the top left corner of the dialog box, select the format for the file that you want to import.

3. In the list in the left window of the dialog box, select the folder containing the desired file.

   The images of the available files contained in the folder are previewed in the right window of the dialog box.

   NOTE: The images of files in the format designated in step 2 only are previewed.

4. Select and click on the file that you want to open, then click the **OK** button.

5. Click on the point where you want to place the imported file in the design area of the main window.

   The imported file is placed at the specified point.

   Follow the instructions below to place the imported file correctly:

   1. If a sewing area of a specified machine model is set in the design area:

      - While holding down the keyboard's **Shift** key, click the left mouse button. The center of the imported file aligns with the center of the sewing area.

      - While holding down the keyboard's **Ctrl** key, click the left mouse button. The center of the imported file aligns with the original point of the specified machine model.

2. If a sewing area of a specified machine model is not set in the design area:

    While holding down the keyboard's **Ctrl** or **Shift** key, click the left mouse button. The center of the imported file aligns with the origin (0) of the design area's coordinates.

    *   For details on setting a sewing area of a specified machine, refer to **3-7-5. Specifying a sewing machine model**.

3. Click any of numeric keys on the keyboard to display the **Input Point** dialog box. Then you can input the absolute coordinates of the imported file's center point, and click the **OK** button to execute. The center of the imported file will be placed at the specified point.

4. While holding down the keyboard's **Ctrl** and **Shift** key, click the left mouse button. The center of the imported file aligns with the center of the design element(s) in the design area.

3-1-6. Importing data from a sewing machine (File-Import From Machine, 🔄)

You can import data that is saved in the storage media of a sewing machine.

 NOTE: In order to connect to the floppy disk drive FD300, the COM port must be correctly set in **Option Setting** on the **Tools** drop-down menu.

In order to import data from the CF card, set the CF drive in the **Option Setting** dialog box first.

To import data from a sewing machine:

1. Do one of the following:

    *   On the **File** drop-down menu, click **Import from Machine**.

    *   Click the Import from Machine icon 🔄 in the toolbar.

    The Import from Machine dialog box appears.

Import From Machine

Machine Model :

Machine ID : 00   Default

Folder Name :   Browse

ROM File

☐ Show all model's ROM file   MOT,HEX

ROM File Name	Version	Nu...	Machine Model	Comment	Last Modify...

Data

Number of Data :   0

Program...	End Code	No. of Stitch	Mask Size	Comment

Import   Cancel
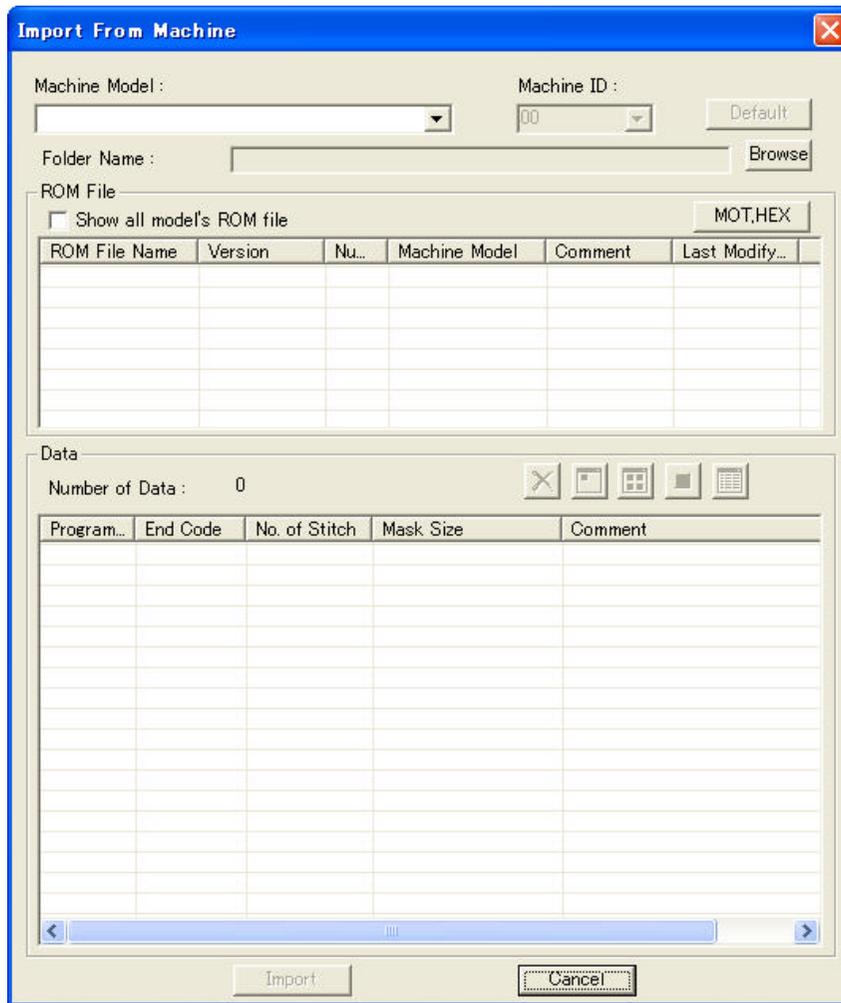
2. In the Import from Machine dialog box, specify the machine model and make settings for selecting the data you want to import.

Item	Description
Machine Model	Select the model from this drop-down list. NOTE: Depending on the type of media for the selected model, some items in the dialog box will be unavailable.
Machine ID	Available when a model that supports the ISM format (KE430D or BE438D) is selected. If the drop-down list is available , Default button can be used. Select the ID of the machine model from the drop-down list. (Setting range: 00 to 99) NOTE: If the Machine ID is changed, the Folder Name will be changed automatically.
Default	Available when a model that supports the ISM format (KE430D or BE438D) is selected. Specify the default folder with this button. When this button is clicked, the CF drive specified in the **Option Setting** dialog box on the **Tools** menu is

	selected as the default drive.
Folder Name	Shows the folder where available data is stored. (Default is the folder that had been selected the last time the same machine model was selected.) Click the **Default** button to show the default folder. The desired folder can also be selected with the **Browse** button.
Browse	Click this button to select a different folder. In the **Browse for Folder** dialog box that appears, select the desired folder, and then click the **OK** button.

ROM File	Available when the media of the selected model is the ROM type.
	
	The ROM files under the specified folder are shown.
	
	Show all model's ROM file:
	The ROM File list shows only the files and their information available for the selected machine model in the folder. Check this box to show all files in the folder.
	
	MOT.HEX:
	If the ROM files are MOT or HEX format, they should be converted to BIN files for them to be displayed in the ROM file list. When this button is clicked, the dialog box appears. MOT or HEX files selected in the dialog box are converted to BIN files and displayed in the ROM file list.
	
	ROM file list:
	Shows the following information for ROM files.
	
	  ROM file name
	  ROM version
	  Number of programs (amount of data)
	  Machine model name
	  Comments
	  Last modified date
	
	Click the head of each column to sort its contents.

Data	**Data list:**
	If the media of the selected model is ROM type, it shows all data (programs) in the selected ROM files. If the media of the selected model is FD-300, it shows all the program numbers that the selected model can support. If the media is a different type, it shows the program number which has data in the specified folder. Clicking a program number shows the following information for the program. (If the clicked program No. has no data, no information will be shown.)
	
	  Program No.
	  End Code
	  Number of Stitches
	  Mask Size
	  Comments
	
	Number of Stitch:
	Shows the total number of stitches in the file.

	Available if the selected program number has data. Click this to delete the selected data from the media.
	If there is too much data, it may take a little longer for all the icon images to be displayed. By using this function, all the data will be shown in default icons. When a program number is selected, its data will be shown in an icon.
	Click this to view icons for all data. Depending on the amount of data, it may take a long time to display all the icons.
	Click this to quit displaying icon images for all data (after the All button is clicked).
	Click this to display all data's information as a list.

3. In the **Data** list, select the data to be imported, and then click the **Import** button.

   The selected data is imported to the current design area.

   NOTE: If the current design area already contains data, you can select whether to merge the imported data to the existing one or to import the data as a new file. You can also place the imported data at any position in the design area.

If you import the data as a new file, follow the instructions below to place the imported file correctly:

1. If a sewing area of a specified machine model is set in the design area:

   ▪ While holding down the keyboard's **Shift** key, click the left mouse button. The center of the imported file aligns with the center of the sewing area.

   ▪ While holding down the keyboard's **Ctrl** key, click the left mouse button. The center of the imported file aligns with the original point of the specified machine model.

2. If a sewing area of a specified machine model is not set in the design area:
   While holding down the keyboard's **Ctrl** or **Shift** key, click the left mouse button. The center of the imported file aligns with the origin (0) of the design area's coordinates.

   * For details on setting a sewing area of a specified machine, refer to **3-7-5. Specifying a sewing machine model**.

3. Click any of numeric keys on the keyboard to display the **Input Point** dialog box. Then you can input the absolute coordinates of the imported file's center point, and

click the **OK** button to execute. The center of the imported file will be placed to the specified point.

4. While holding down the keyboard's **Ctrl** and **Shift** key, click the left mouse button. The center of the imported file aligns with the center of the design element(s) in the design area.

3-1-7. Exporting data to a sewing machine (File-Export To Machine, 🔧)

You can export data created in PS-300B to the storage media of a sewing machine.

NOTE: In order to connect to the floppy disk drive FD300, the COM port must be correctly set in **Option Setting** on the **Tools** drop-down menu.

In order to import data from the CF card, set the CF drive in the **Option Setting** dialog box first.

To export data to a sewing machine:

If you have not selected a machine model, select one first.

NOTE: If you start the following operation without selecting a machine model, a dialog box appears prompting you to select a machine model.

To select a machine model, refer to

1. Do one of the following:

- On the **File** drop-down menu, click **Export to Machine**.

- Click the Export to Machine icon 🔧 in the toolbar.

The Export to Machine dialog box appears.
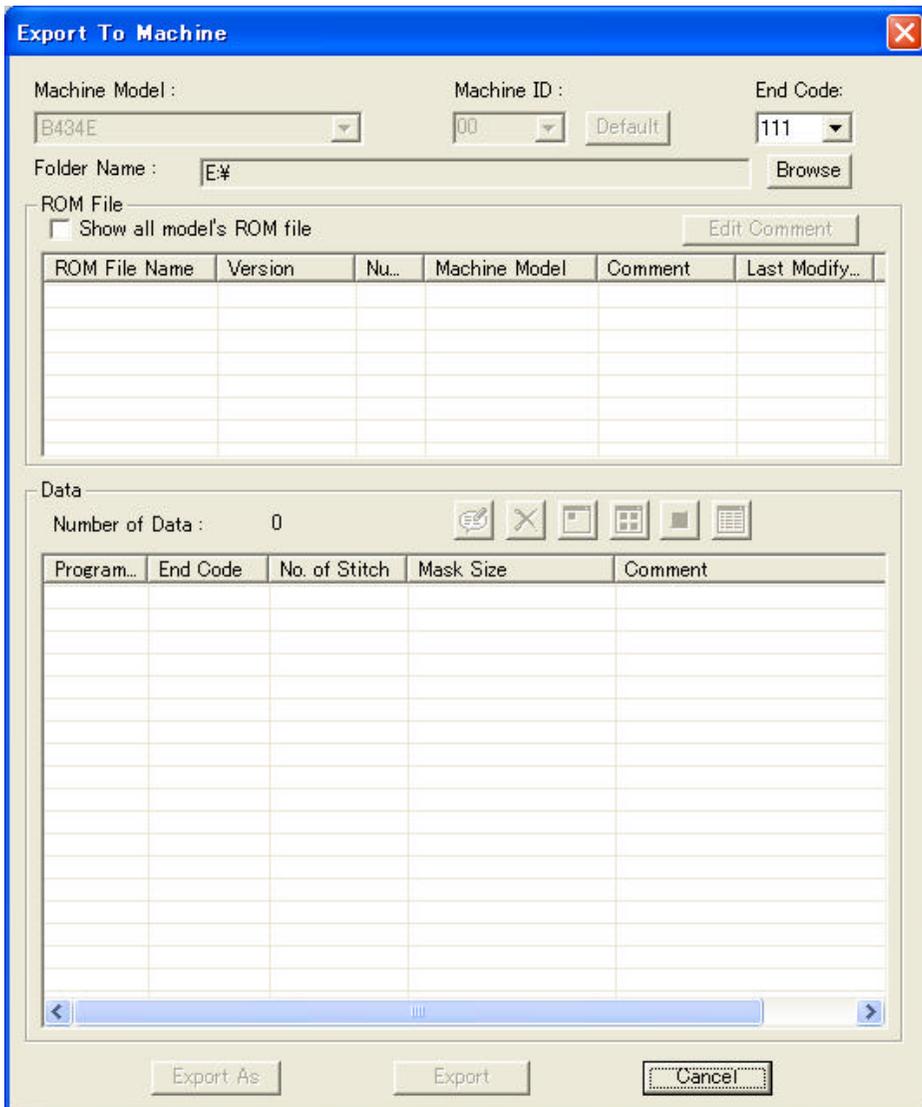
2. In the Export to Machine dialog box, make settings for selecting the data you want to export

Item	Description
Machine Model	Selected model name is displayed here. NOTE: Depending on the type of media for the selected model, some items in the dialog box will be unavailable.
End Code	Specify the end code of the data you will export by selecting it from the drop-down list.
Data	**Data** list: Shows all the program numbers that the selected model can support in the list. Clicking a program number shows the following information for the program. (If the clicked program number has no data, no information will be shown.)

	Program No. End Code Number of Stitches Mask Size Comments ![icon] If the selected machine model supports the ISM format, you can store comments to each data. First select the program No., and then click this button. In the dialog box that appears, edit comments. When exporting the data, the comments will be exported with the data.

NOTE: The other items in this dialog box are the same as **Import From Machine** dialog box.

3. In the **Data** list, select the data to be exported, and then click the **Export** button.

The selected data is exported to the specified folder.

NOTE: To export the data to a new ROM file you create:

Click the **Export As** button. In the **Import ROM File Name** dialog box that appears, input the new ROM file name and comments, and then click the **OK** button. By this function, you can keep the ROM file which you selected as a master file.

If you want to export a ROM file in the MOT format, click **Option Setting** on the **Tools** drop-down menu. In the **ROM File** group box, check the **Export ROM File As MOT Format** check box. When you select a ROM file and export data to it, it will create a MOT file with the same name of the selected ROM file in the same folder. You can write the MOT file to PROM by any ROM writer.

3-1-8. Reading data from a sewing machine ROM (File-Read From ROM,)

You can read sewing data from a sewing machine ROM by using a ROM reader/writer. The data read can be saved as a ROM file.

 NOTE: In order to connect to the ROM reader/writer (PRW-1), the baud rate and COM port must be correctly set in **Option Setting** on the **Tools** drop-down menu. It will take a little while to read data from a PROM. Do not click anywhere while reading data from a PROM otherwise, it may fail to read data.

To read data from a sewing machine ROM:

1. Do one of the following:

   ▪ On the **File** drop-down menu, click **Read From ROM**.

   ▪ Click the Read From ROM icon in the toolbar.

   The Read From ROM dialog box appears.

2. Insert a sewing machine ROM into the ROM writer, and Click the **Read** button.

All data in the sewing machine ROM is read and displayed in the Read from ROM dialog box.

3. In the **Read From ROM** dialog box, make settings for the ROM file to which you want to store the data.

Item	Description
Read From ROM	**Model Name** : Shows the machine model name for which the read ROM file is used. **ROM Version**: Shows the version number of the read ROM file. **Number of Data**: Shows the total number of data in the read ROM file. **Check Sum**: Shows the check sum value when the ROM file is read. Data list: Shows the all data (programs) in the ROM file. Clicking a program number shows the information for the program. NOTE: The other items are the same as **Import From Machine** dialog box.

4. In the **Save To ROM File** dialog box, specify the ROM file to which you will store the ROM file.

Item	Description
Folder Name /Browse	The **Folder Name** box shows the folder where you will store the ROM file. The desired folder can also be selected with the **Browse** button in the right of the box. To select a different folder, click the **Browse** button. In the **Browse for Folder** dialog box that appears, select the desired folder, and then click the **OK** button.
ROM File /Browse	Specify the file name for storing the ROM file here. You can input a file name directly in this box. An existing file can also be selected with the **Browse** button in the right of the box. To select an existing file, click the **Browse** button. In the **Browse for File** dialog box that appears, select the desired file, and then click the **OK** button.
Comment	Input comments for the ROM file you will store here.

5. Click the **Save** button.

The selected ROM file is stored in the specified folder.

3-1-9. Writing data to a sewing machine ROM (File-Write to ROM, 🐦)

You can write data to a sewing machine ROM by using a ROM reader/writer.

NOTE: In order to connect to the ROM writer (PRW-1), the baud rate and COM port must be correctly set in **Option Setting** on the **Tools** drop-down menu. It will take a little while to write data to a PROM. Do not click anywhere while writing data to a PROM otherwise, it may fail to write data.

To write data to a sewing machine ROM:

1. Do one of the following:

   - On the **File** drop-down menu, click **Write to ROM**.

   - Click the Write to ROM icon 🐦 in the toolbar.

   The Write to ROM dialog box appears.
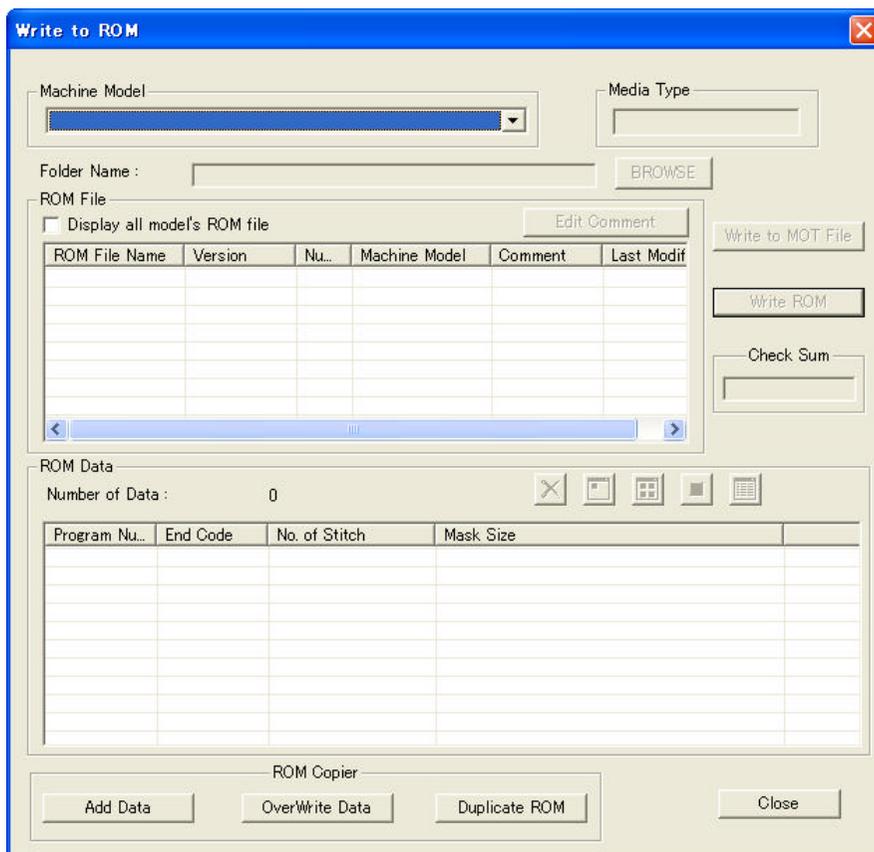
2. In the **Write to ROM** dialog box, specify the machine model and make settings for writing data to a sewing machine ROM.

Item	Description
ROM Type	Specify the type of sewing machine ROM to be used.

ROM File	**Edit Comment:** Edit comments for the selected ROM file. Select a ROM file from the list, and then click this button. In the dialog box that appears, edit comments. If the ROM file already has comments, they are also shown.
Write to Mot File	Click this to convert the selected ROM file to MOT format which can be write to a machine ROM by any PROM reader/writer (not only the SW-1).
Write ROM	Click this to write the selected ROM file to a sewing machine ROM.
Check Sum	After the data is written to the ROM, the corresponding check sum appears in this box.

3. Click on the ROM file name in the **ROM File** list to select it.

    The selected file name is highlighted, and all program numbers in the file are shown in the ROM Data list.

4. Click the **Write ROM** button.

    All data in the specified ROM file is written to the ROM of the specified sewing machine.

    NOTE: The other items in this dialog box are the same as **Import From Machine** dialog box.

To copy data from a ROM (or ROM file) and write it to a ROM (or ROM file):

1. Do one of the following:

    - On the **File** drop-down menu, click **Write to ROM**.

    - Click the Write to ROM icon ⚡ in the toolbar.

    The Write to ROM dialog box appears.

2. In the **ROM Copier** group box, click the appropriate button.

Group	Description
ROM Copier	**Add Data:** Click this to add copied data to a ROM or ROM file (in the last order). **OverWrite Data:** Click this to overwrite all data in a ROM or ROM file with the copied data. **Duplicate ROM:** Click this to copy data from a ROM to a blank ROM.

*When the **Add Data** or **OverWrite Data** button is clicked, a message appears, allowing you to select the location of the ROM data to be copied.*

3. Do one of the following:

- If the data to be copied is on a ROM, insert the ROM into the ROM reader/writer, and then click the **ROM** button.

  A message appears, instructing you to insert the ROM into the ROM reader/ writer.

  Then, click the **OK** button.

- If the data to be copied is in a ROM file, click the **FILE** button.
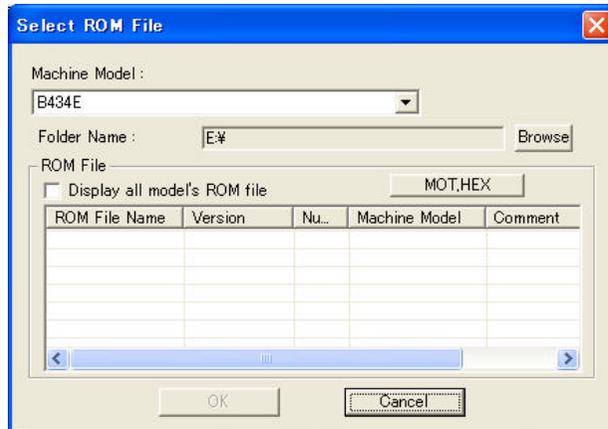
  The Select ROM File dialog box appears.

  In the **Select ROM File** dialog box, specify the machine model and make settings for selecting a ROM file.

  Select the desired ROM file, and then click the **OK** button.

  A message appears, allowing you to select the location where the ROM data is to be copied to.

4. Do one of the following:

- If the data is to be copied to a ROM, insert the ROM into the ROM reader/writer, and then click the **ROM** button.

  A message appears, instructing you to insert the ROM into the ROM writer.

  Then, click the **OK** button.

- If the data is to be copied to a ROM file, click the **FILE** button.

  The Select ROM File dialog box appears.

  In the **Select ROM File** dialog box, specify the machine model and select the ROM file where the data is to be copied to, and then click the **OK** button.

  A message appears, allowing you to select the location where the ROM file is to be stored. Continue with step 5.

5. Do one of the following:

- If the data is to be stored on a ROM, insert the ROM into the ROM reader/writer, and then click the **ROM** button.

    A message appears, instructing you to insert the ROM into the ROM reader/writer.

    Click the **OK** button.

- If the data is to be stored in a ROM file, click the **FILE** button.

    The Select ROM File dialog box appears.

    In the **Select ROM File** dialog box, specify the machine model and select the ROM file where the data is to be stored, and then click the **OK** button.

    A message appears, showing the result of the copy operation.

To copy data from a ROM to a blank ROM:

1. Do one of the following:

    - On the **File** drop-down menu, click **Write to ROM**.

    - Click the Write to ROM icon in the toolbar.

    The Write to ROM dialog box appears.

2. In the **ROM Copier** group box, click the **Duplicate ROM** button.

    A message appears, instructing you to insert the ROM containing the data to be copied into the ROM reader/writer.

3. Insert the ROM containing the data into the ROM reader/writer, and then click the **OK** button.

    A message appears, instructing you to insert the destination ROM into the ROM reader/writer.

4. Insert the destination ROM into the ROM reader/writer, and then click the **OK** button.

    All data on the source ROM is copied onto the destination ROM.

3-1-10. Making setup for printing (File-Print Setup)

Before printing the current data, the printing settings must be specified.

To make the printing settings:

1. On the **File** drop-down menu, click **Print Setup**.

The Print Setup dialog box appears.
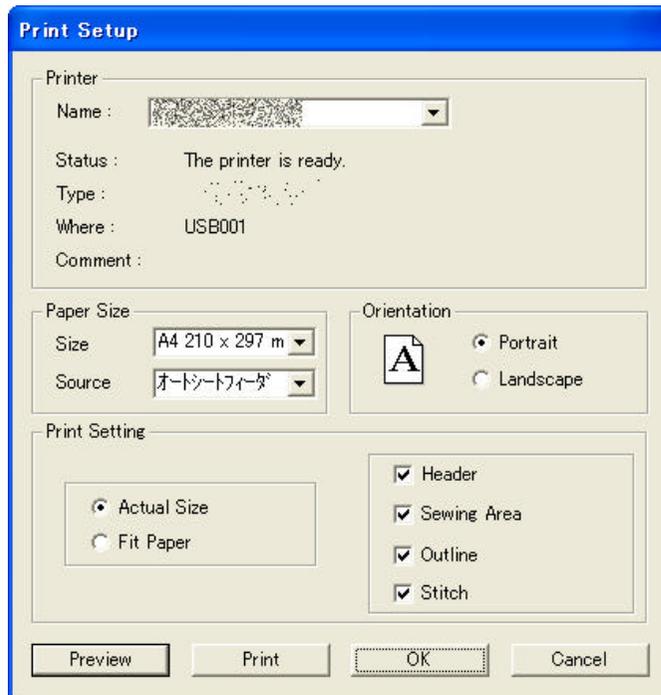
2. In the **Print Setup** dialog box, make settings for printing the current data.

Item/group box	Description
Printer group box	**Name:** Select the **Printer** from the drop-down menu. **Status:** Displays current status of the printer. **Type:** Displays a printer type. **Where:** Displays either the place where the printer is set or IP address. **Comment:** Display comments.
Paper Size group box	**Size:** Select a paper size to be printed from drop-down menu. **Source:** Select a tray to be used from drop-down menu.
Orientation	**Portrait:** Click this to print papers in lengthways. **Landscape:** Click this to print papers in sideways.

Print Setting group box	**Header:** Check the **Header** check box to print the information of the design such as the file name, comment, the number of stitch, last modified date and the data size.
	Sewing Area: Check the **Sewing Area** check box to print the sewing area of the selected machine model.
	Outline: Check the **Outline** check box to print outlines.
	Stitch: Check the **Stitch** check box to print stitch data. **Stitch Info** is also printed.
	Actual Size: Select this to print the current design in its actual size. If the current design can be printed on one sheet of paper, it is printed on the center of the sheet. If two or more sheets are needed for printing, the sheet number is also printed automatically on the upper right part of each sheet. The **Sheet Info** is printed on another sheet.
	Fit Paper: Select this to print both the current design and the **Sheet Info** on one sheet. The enlarged/reduced size differs depends on the type and size of papers.
Preview	The same with the **Print Preview** command on the **File** drop-down menu. To preview the data, click this button. The preview window for the data appears. For more details, refer to **Print Preview**.
Print	The same with the **Print** command on the **File** drop-down menu. To print the data with the specified settings, click this button. The **Print** dialog box appears. For more details, refer to **Print**.
OK	Click this to apply the specified settings.
Cancel	Click this to cancel the specified settings.

3. Click the **OK** button to apply the specified settings.

3-1-11. Previewing printing image (File-Print Preview)

To preview the printing image:

1. On the **File** drop-down menu, click **Print Preview**.

   The preview window appears to show the printing image.

2. Use the buttons in the toolbar above the preview window if you prefer.

   The buttons and their functions are as follows.

Button	Description
Zoom In	Click this button to enlarge the preview size, or click on the preview image when the pointer's shape is 🔍.
Zoom Out	Click this button to reduce the preview size, or click on the preview image when the pointer's shape is 🔍.
Print	The same with the **Print** command on the **File** drop-down menu. To print the data with the specified settings, click this button. The **Print** dialog box appears. For more details, refer to **Print**.
Close	Click this to close the preview window.

3-1-12. Printing the current data (File-Print, 🖨, Ctrl+P)

To print the current data:

1. Do one of the following:

   - On the **File** drop-down menu, click **Print**.

   - Click the **Print** button 🖨 in the toolbar.

   - On the keyboard, while holding down the **Ctrl** key, press the **P** key.

   The Print dialog box appears.

2. In the **Print** dialog box, make settings for printing the current data.

Item/group box	Description
Printer group box	**Name:** Select the printer from the drop-down list. **Properties:** Click this button to specify the printer properties. (The printer's P**roperties** dialog box appears. For more details, refer to the user's manual for the printer.)
Page Range group box	Select the pages you want to print. Select **All** to print all pages. To print the desired page(s) only, input the range of pages you want to print.
Number of copies group box	In the input box, input or select the desired number of copies. To collate, check the **Collate** check box.
OK	Click this button to start printing the current data with the specified settings.
Cancel	Click this button to close this dialog box without starting printing.

NOTE: If the printer has not yet been set up, a warning message appears. If the **OK** button is clicked, the **Print Setup** dialog box appears. Refer to **Print Setup** for more details. If the **Cancel** button is clicked, the **Print** dialog box appears.

3-1-13. Viewing the file information (File-Design Info 📄)

To view the properties for the current data:

Do one of the following:

- 🔘 On the **File** drop-down menu, click **Design Info**.

- 🔘 Click the Design Info icon in the toolbar.

- 🔘 Right-click to display the context menu, and then click **Design Info**.

The Design Information dialog box appears.
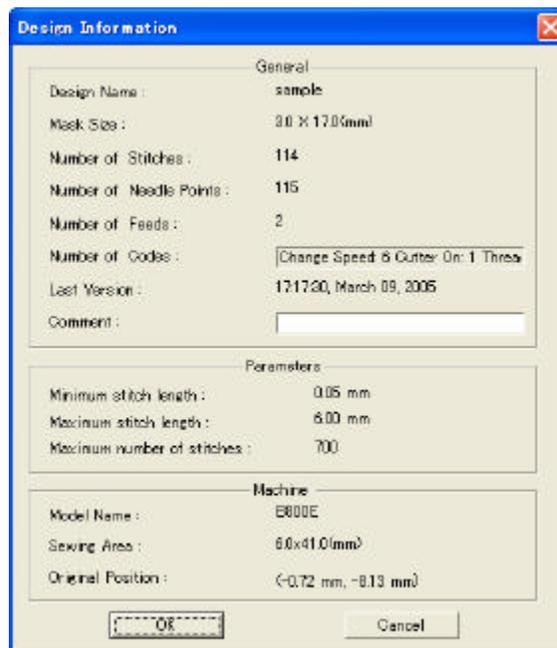
The details of the information are as follows.

Item/group box	Description
General group box	**Design Name:** Shows the design name of the current design. **Mask Size:** Shows the mask size of the whole data in the design area. **Number of Stitches:** Shows the total number of stitches. **Number of Needle Points:**

	Shows the total number of needle drop points.
	Number of Feeds: Shows the total number of feeds.
	Number of Codes: Shows how many times each code is used. (The number of levels for each code will not be counted.)
	Last Version: Shows the date and time that the file was last changed.
	Comment: The designer's name, the design name and other comments can be inputted in this box.
Parameters group box	**Maximum stitch length:** Shows the maximum stitch length. (Default: The maximum pitch of the selected machine model or 12.7 mm if no machine model is selected.)
	Minimum stitch Length: Shows the minimum stitch length. (Default: The minimum pitch of the selected machine model or 0.05 mm if no machine model is selected.)
	Maximum number of stitches: Shows the maximum number of stitches that can be created for the selected machine model.
Machine group box	**Model Name:** Shows the name of the selected machine model.
	Sewing Area: Shows the frame size of the sewing area of the selected machine model.
	Original Position: Shows the sewing start point of the frame.
OK	Click this button to close the dialog box saving the comment you inputted.
Cancel	Click this button only to close the dialog box.

3-1-14. Opening the recently used files (File-Recent Files)

You can open a maximum of 16 most recently used files.

To open a file that has recently been used:

Point to **Recent Files** on the **File** drop-down menu, and then click the name of the file that you want to open.

 NOTE: The extensions of the supported file formats are **emb, dst, dsb, dsz, dxf** and **if2**.

3-1-15. Quitting the PS-300B application (File-Exit)

To quit the PS-300B application:

Click **Exit** on the **File** drop-down menu.

If there are unsaved changes in the current design, a message appears asking if you want to save the changes. Do one of the following:

- To save the changes, click the **Yes** button.

- To close the data without saving the changes, click the **No** button.

- To quit trying to close the design, click the **Cancel** button.
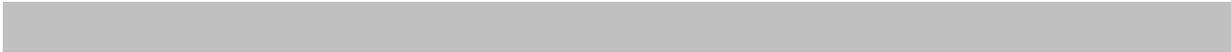
3-2. Shape

This section describes how to create design elements (outline data, manual stitch data and manual feed data).

Basically, you will create outline data at first. (Stitch data is automatically generated from the outline data.) You can create outline data applying necessary attributes to it, such as stitch type (running stitch or zigzag stitch), and stitch pitch.

In addition, PS-300B allows you to create manual stitch data directly without creating outline data.

Almost all the functions described here can be selected from the **Shape** drop-down menu. The parenthesis following each title includes the name of the command on the drop-down menu and/or the icon on the toolbar.

3-2-1. Creating outline data

PS-300B is able to create various types of outlines: straight lines, circles, curved lines, ellipses, and arcs. The eight drawing commands in the table below are available from the **Shape** drop-down menu or icons in the toolbar.

The basic operation to create outline data is: (1) draw lines with the mouse manually, (2) use the **Input Outline (Stitch, Feed)** dialog box, and (3) use the **Input Point** dialog box. You can change the drawing methods and the commands in the middle of an operation.

| Command on the Shape menu	Icon	Function
Straight Line	$\leqslant$	Draws a straight line.
Spline	$\sim$	Draws a curved line.
Arc	◐	Draws an arc. (You can also draw an arc connected to the previous data smoothly.)
Rectangle	□	Draws a rectangle or a square.
Polygon	◁	Draws a polygon.
Circle	○	Draws a circle from the specified 3 points.
Center Circle	⊙	Draws a circle from a specified point as the center and radius.
Ellipse	⬭	Draws an ellipse.

To draw an outline manually:

1. Do one of the following:

   - On the **Shape** drop-down menu, click one of the above eight commands for drawing the desired shape of outline.

- In the toolbar, click the icon for drawing the desired shape of outline.

When the pointer is moved into the design area, its shape changes to the one corresponding to the selected command.

NOTE: For details on drawing the desired shape of outline, refer to "3-2-2 Selecting commands for drawing the desired outlines".

2. In the design area, click to specify the start point of the outline (1 in the figure below), and then continue clicking at the points that will define the path of the outline (2 through 6 in the figure below).
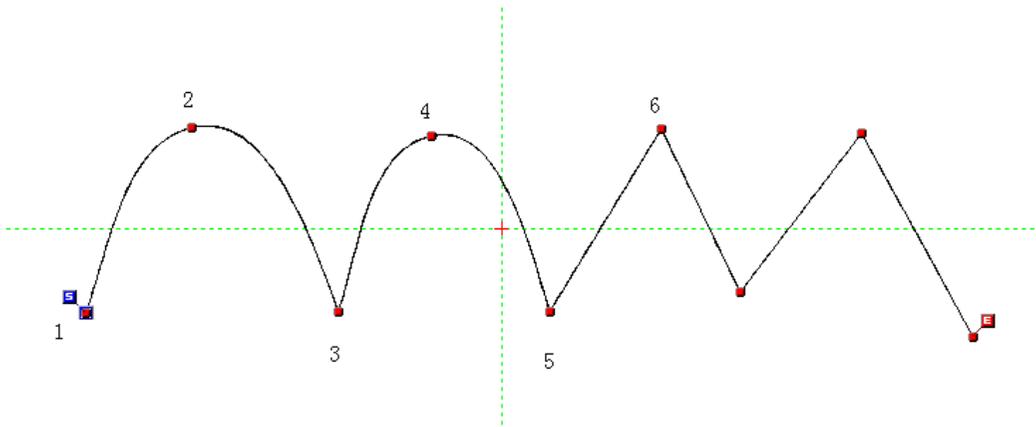
NOTE: When **Snap Setting** on the **View** drop-down-menu is active, the pointer snaps to the specified target.

To delete the last point you have inputted, press the keyboard's **Backspace or Space** key. Repeat pressing the **Backspace** or Space key to delete more points.
To delete all points, press the keyboard's **Esc** key.

3. After specifying the end point of the outline, right-click once to finish the outline.

The start point marker ("S") and end point marker ("E") for the outline appear.

NOTE: To close an outline connecting the end point to the start point, click **Close Outline** on the **Shape** drop-down menu or click the Close icon ✂ in the toolbar before finishing the outline.

4. Repeat steps 1 to 3 to draw more outlines.

The end point of the previous outline and the start point of the current outline are connected with a feed or a stitch that is specified in Property on the View drop-down menu.

NOTE: To create another outline linked with the current outline, click **Continue** on the **Shape** drop-down menu or click the Continue icon 〰 in the toolbar.

To draw an outline using the Input Outline (Stitch, Feed) dialog box:

You can draw an outline by specifying the coordinates of points configuring the outline on the design area.

1. Do one of the following:

   - On the **Shape** drop-down menu, click one of the eight commands in the above table for drawing the desired shape of outline.

   - In the toolbar, click the icon for one of the eight commands in the above table for drawing the desired shape of outline.

   When the pointer is moved into the design area, its shape changes to the one corresponding to the selected command.

   NOTE: For details on drawing the desired shape of outline, refer to "<u>3-2-2 Selecting commands for drawing the desired outlines</u>".

2. Press any of the numeric keys on the keyboard.

   The Input Outline (Stitch, Feed) dialog box appears.
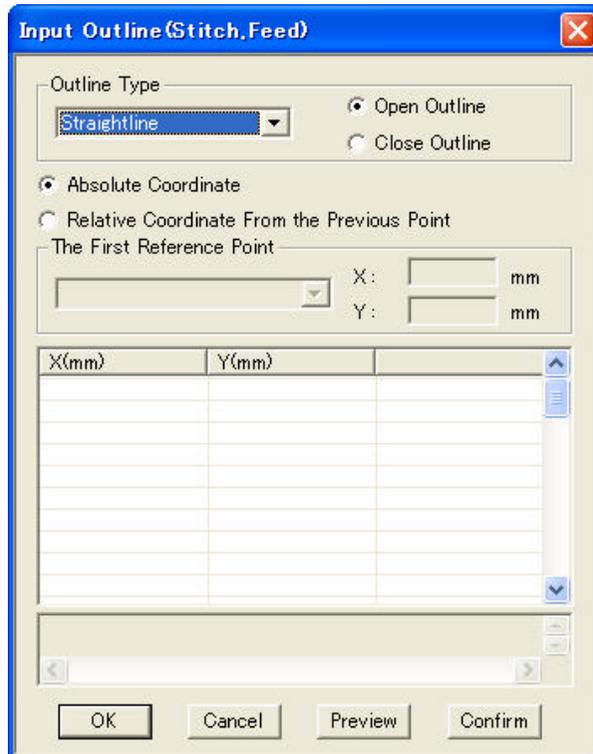
3. Make necessary settings and input values in the **Input Outline (Stitch, Feed)** dialog box to create the desired shape of outline.

Item/group box	Description
Outline Type group box	The selected outline type is shown in the drop-down list. You can change the outline type by selecting the desired type from

the list.

The items to which you can input values differ from the selected outline type as follows.

Straight Line, Spline, Arc, Polygon	The coordinates of the maximum of 50 points can be inputted continuously.
Rectangle	Only two points (for the upper-left and lower right corners, or the lower-left and upper-right corners) can be inputted.
Circle	Only three points on the circumference of a circle can be inputted.
Center Circle	The coordinates of the center of a circle and the radius can be inputted.
Ellipse	The coordinates of the center of an ellipse, the length of major and minor axes and the tilt angle can be inputted. (+ in the clockwise direction, - in the counterclockwise direction.)

Open Outline/Close Outline
Select **Close Outline** to close an outline. Select **Open Outline** to leave it open.

Absolute Coordinate	When this is selected, values you input will be the distance from the origin (0) of the design area's X-Y coordinates.
Relative Coordinate From the Previous Point	The relative distance from the point specified previously. When this is selected, **The Reference Point** group box just below is available.
The First Reference Point group box	Select the reference point of the data from the drop-down list for inputting relative coordinates. The absolute values of the specified point are shown in the boxes at right. When **Sewing Area Center** is selected for example, the first point's values you input in the input box below will be the relative distance from the center of the sewing area. NOTE: If nothing has been selected in the drop-down list, specify the first reference point by inputting the absolute value in the boxes at right. If no value is inputted, (0, 0) is automatically applied.
X(mm)/Y(mm) /Angle/Length(mm) input box	Input values for points to define the paths of the outline. (One row/point.) **X(mm):** The horizontal distance **Y(mm):** The vertical distance **Angle(°)/Length(mm):** Specify the angle and length of the

	path.
	NOTE: Refer to "<u>Example of inputting values</u>" below. The keyboard's **Tab** key and arrow keys can be used to determine the inputted value and move to the next cell.
OK	Click this button to create an outline with the settings you have made, and close this dialog box.
Cancel	Click this button to cancel the settings you made in this dialog box, and close this dialog box. NOTE: However, you cannot cancel the settings which have been confirmed by clicking the **Confirm** button.
Preview	Click this button to preview the outline created with the settings you have made.
Confirm	Click this button to create an outline with the settings you have made. Continue inputting values to create more outlines.

NOTE: The right side in horizontal direction is positive, the left negative; the upper part in the vertical direction is positive, the lower negative.
As for angles, the horizontal line (the X axis) indicates 0°, angles in the clockwise direction are 0 to 360°, and angles in the counterclockwise direction are 0 to -360°.

4. When you have completed the box, click the **OK** button.

5. Repeat steps 1 to 4 to draw more outlines.

The end point of the previous outline and the start point of the current outline are connected with a feed or a stitch that is specified in Property on the View drop-down menu.

Example of inputting values

Example 1

To specify a point at the position where it is moved 50 mm to the right in the X direction and 30 mm up in the Y direction, input "50" in the X cell and "30" in the Y cell.
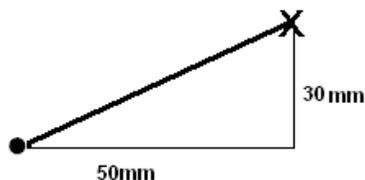
Example 2

To specify a point at the position -30.5° and 60 mm, input '-30.5" in the Angle cell

and "60" in the Length cell.
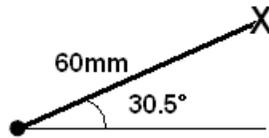
Example 3

To specify a point at the position 120° and 50.2 mm to the left from the previous point, input "120" in the Angle cell and "-50.2" in the X cell.
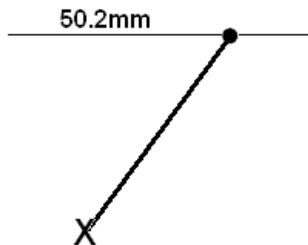
Example 4

To specify a point at the position -80° and 60.5 mm up in the Y direction, input "-80" in the Angle cell and "60.5" in the Y cell.
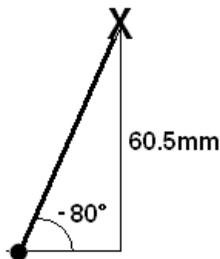
To draw an outline using the Input Point dialog box:

You can draw an outline manually or by specifying the coordinates of points configuring the outline on the design area.

1. Do one of the following:

   ■ On the **Shape** drop-down menu, click one of the eight commands in the above table for drawing the desired shape of outline.

- In the toolbar, click the icon for one of the eight commands in the above table for drawing the desired shape of outline.

When the pointer is moved into the design area, its shape changes to the one corresponding to the selected command.

NOTE: For details on drawing the desired shape of outline, refer to "3-2-2 Selecting commands for drawing the desired outlines."

2. In the design area, click to specify the start point of the outline.

3. Press any of the numeric keys on the keyboard.

   The Input Point dialog box appears.
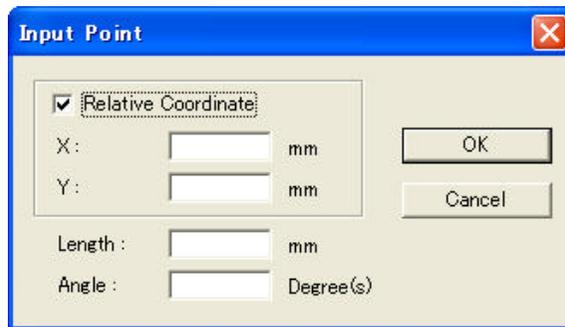
4. Input values in the **Input Point** dialog box to specify the next point.

   When you have completed this dialog box, click the **OK** button.

Item	Description
Relative Coordinate	When the **Relative Coordinate** check box is checked, values you input will be the relative distance from the previous point. When the check box is cleared, the absolute coordinate is applied and values you input will be the distance from the origin (0) of X-Y coordinates.
X(mm)/Y(mm)	Input values of the next point. **X(mm):** The horizontal distance **Y(mm):** The vertical distance Refer to "Example of inputting values".
Angle (Degree(s)) /Length(mm)	Available when the **Relative Coordinate** check box is checked. You can specify the next point by inputting the angle and/or length of the path of outline. Refer to "Example of inputting values".
OK	Click this button to apply the values you have inputted in this dialog box and close the dialog box.

Cancel	Click this button to cancel the values you have inputted in this dialog box.

NOTE: The right side in horizontal direction is positive, the left negative; the upper part in the vertical direction is positive, the lower negative.
As for angles, the horizontal line (the X axis) indicates 0°, angles in the clockwise direction are 0 to 360°, and angles in the counterclockwise direction are 0 to -360°.

When you have made the settings that conflict, PS-300B automatically applies the values in the following priority.
  1. X and Y-coordinates
  2. X-coordinate + Angle
  3. Y-coordinate + Angle
  4. Length + Angle

5. Repeat step 2 or 3-4 to add more points to the outline.

NOTE: To delete the last inputted point, press the keyboard's **Backspace** or **Space** key. To delete all points, press the keyboard's **Esc** key.

6. After specifying the last point in the outline, right-click once to finish the outline.

   The start point marker ("S") and end point marker ("E") for the outline appear.

NOTE: To close an outline connecting the end point to the start point, click **Close Outline** on the **Shape** drop-down menu or click the Close icon ✄ in the toolbar before finishing the outline.

7. Repeat steps 1 to 6 to draw more outlines.

   The end point of the previous outline and the start point of the current outline are connected with

   a feed or a stitch that is specified in Property on the View drop-down menu.

NOTE: To create another outline linked with the current outline, click **Continue** on the **Shape** drop-down menu or click the Continue icon �'⁵ in the toolbar before finishing the current outline.

3-2-2. Selecting commands for drawing the desired outlines

To draw a straight line (Shape-Straight Line, ⟨):

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Straight Line**.

   - Click the Straight Line icon ⟨ in the toolbar.

   When the pointer is moved into the design area, its shape changes to $^+_⟨$.

2. In the design area, specify the desired location for the start point of the straight line (1 in the figure below).

3. Specify the desired location for every other corner of the straight line (2 through 4 in the figure below).

> NOTE: To keep the straight line vertically or horizontally, hold down the keyboard's **Shift** key while moving the pointer in the design area.
> The angle of a line can be adjusted in increments of 15 degrees, by holding down the keyboard's **Ctrl** key while moving the pointer in the design area.
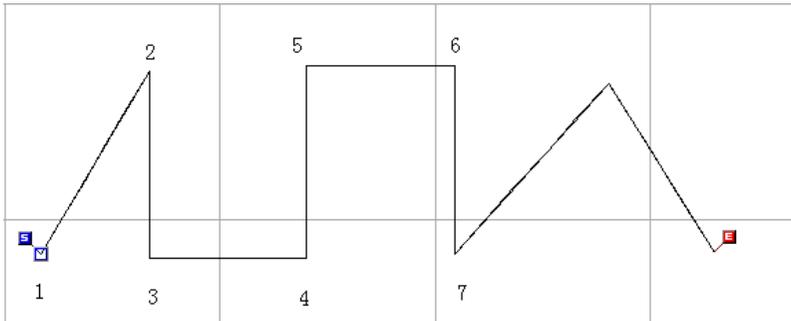
4. Right-click once to finish the straight line.

To draw a curved line (Shape-Spline, $\sim$):

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Spline**.

   - Click the Spline icon $\sim$ in the toolbar.

   When the pointer is moved into the design area, its shape changes to $+\sim$.

2. In the design area, specify the desired location for the start point of the curved line (1 in the figure below).

3. Specify the desired location for every other bend in the curved line (2 through 4 in the figure below).
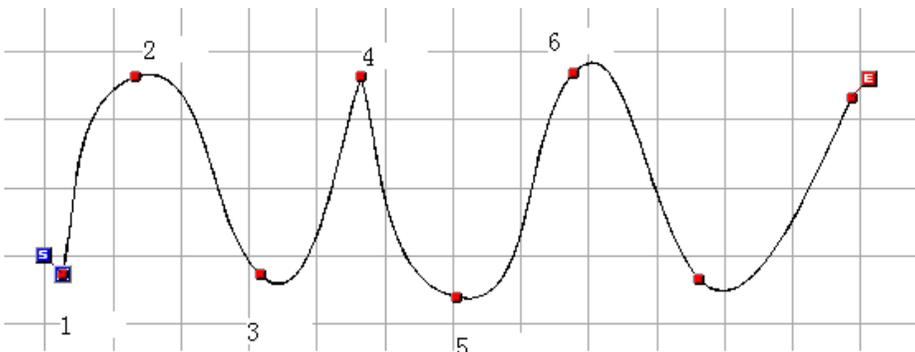
   * Clicking the Spline icon again during creating a curved line makes a sharp angle.

4. Right-click once to finish the curved line.

To draw an arc (Shape-Arc, ⬤):

1. Do one of the following:

   ● On the **Shape** drop-down menu, click **Arc**.

   ● Click the Arc icon ⬤ in the toolbar.

   When the pointer is moved into the design area, its shape changes to ⬤ .

2. In the design area, specify the desired location for the start point of the arc (1 in the figure below).

3. Specify the desired location for a second point of the arc (2 in the figure below).

4. Specify the desired location for a third point until the arc has the desired size and shape (3 in the figure below).

5. To draw more arcs so that they are all linked together, repeat steps 3 and 4.

   ● If you want to create a smooth arc linked with the previous arc, click **Smooth Arc** on the **Shape** drop-down menu or click the Smooth Arc icon ⬤ in the toolbar after step 1. An arc will be created smoothly off the tangent. This method is not available when the previous outline is a circle or ellipse.
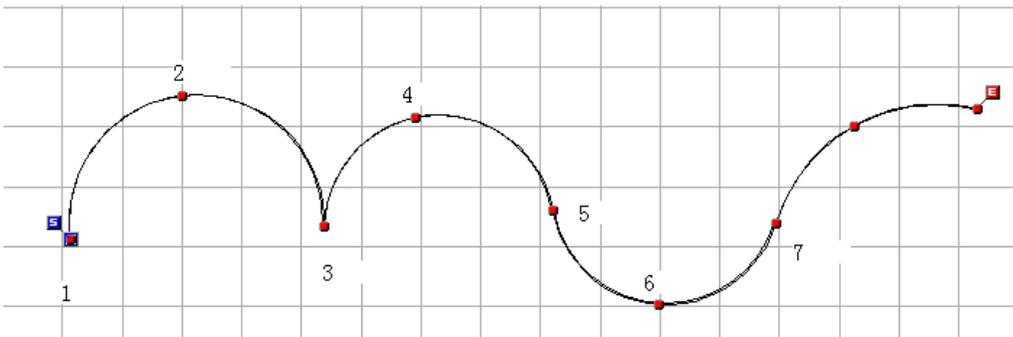
6. Right-click once to finish drawing arcs.

To draw a rectangle (Shape-Rectangle, ▢):

1. Do one of the following:

   ● On the **Shape** drop-down menu, click **Rectangle**.

   ● Click the Rectangle icon ▢ in the toolbar.

When the pointer is moved into the design area, its shape changes to $\stackrel{+}{\square}$.

2. In the design area, specify the desired location for one corner of the rectangle (1 in the figure below).

   NOTE: To cancel drawing the rectangle, press the keyboard's **Backspace** or **Space** key or the right mouse button.

3. Specify the second point until the rectangle has the desired size and shape (2 in the figure below).

   NOTE: To draw a square, hold down the keyboard's **Shift** key while moving the pointer.
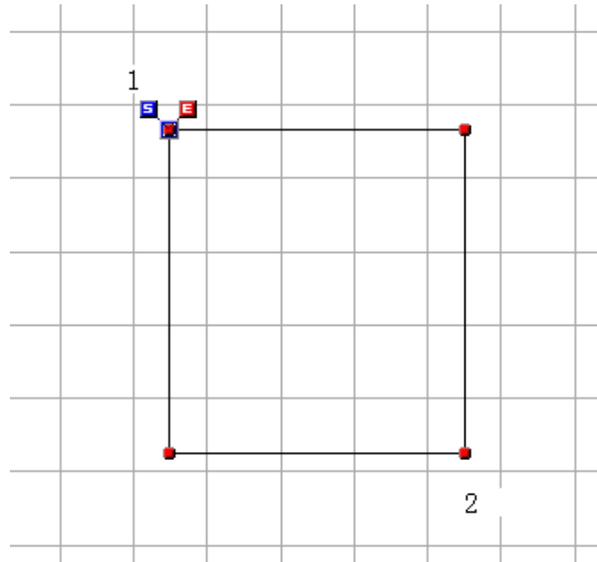
To draw a polygon (Shape-Polygon, ⬚):

1. Do one of the following:

   ◘ On the **Shape** drop-down menu, click **Polygon**.

   ◘ Click the Polygon icon ⬚ in the toolbar.

   When the pointer is moved into the design area, its shape changes to $\stackrel{+}{\triangleright}$.

2. In the design area, specify the desired location for one corner of the polygon (1 in the figure below).

3. Specify the desired location for every other corner of the polygon (2 through 5 in the figure below).

   NOTE: To keep the next path of the outline vertically or horizontally, hold down the keyboard's **Shift** key while moving the pointer in the design area.
   The angle of a path can be adjusted in increments of 15 degrees, by holding down the keyboard's **Ctrl** key while moving the pointer in the design area.

4. Right-click once to close the polygon.
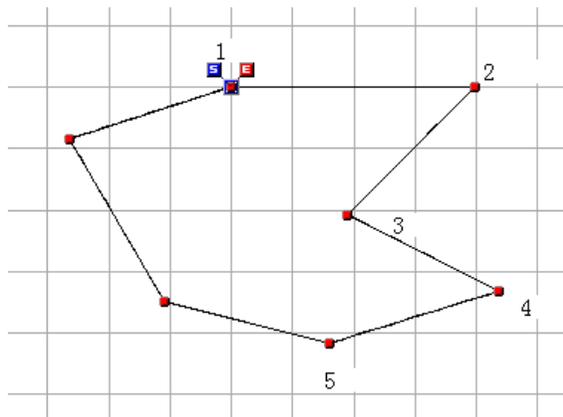
To draw a circle by specifying three points (Shape-Circle, ⭕):

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Circle**.

   - Click the Circle icon ⭕ in the toolbar.

   When the pointer is moved into the design area, its shape changes to ⁺⊘ .

2. In the design area, specify the desired location for a point of the circle (1 in the figure below).

3. Specify the desired location for the second point (2 in the figure below), which also determines the minimum diameter of the circle.

4. Specify the desired location for the third point (3 in the figure below), so that the circle is the desired size.
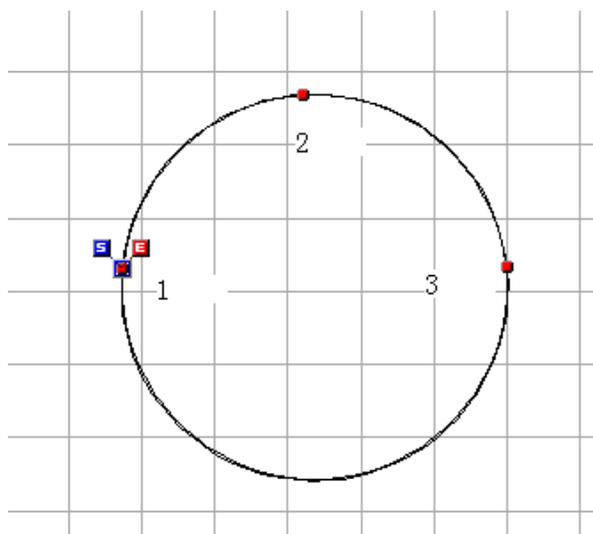
To draw a circle by specifying the center of the circle (Shape-Center Circle, ⊙):

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Center Circle**.

   - Click the Center Circle icon ⊙ in the toolbar.

   *When the pointer is moved into the design area, its shape changes to ⊕⊙.*

2. In the design area, specify the desired location for the center point of the circle (1 in the figure below).

3. Specify the desired location for the second point. (This determines the radius of the circle.) (2 in the figure below.)
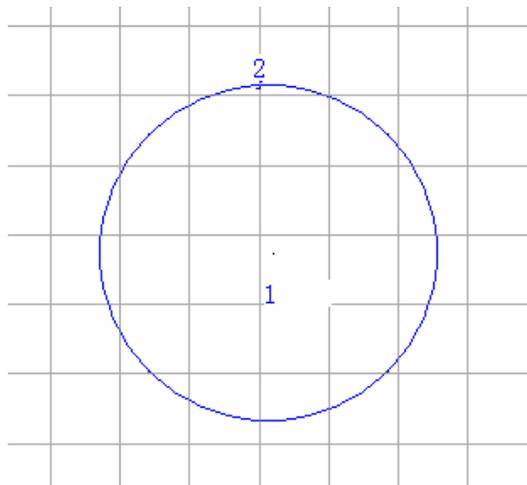
To draw an ellipse (Shape-Ellipse, ⬭):

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Ellipse**.

   - Click the Ellipse icon ⬭ in the toolbar.

   When the pointer is moved into the design area, its shape changes to ⊕⬭.

2. In the design area, draw the major axis of the ellipse by specifying two points (1 in the figure below).

3. Specify the third point to decide the minor axis of the ellipse (2 in the figure below).

   NOTE: To keep the next path of the outline vertically or horizontally, hold down the keyboard's **Shift** key while moving the pointer in the design area.
   The angle of a path can be adjusted in increments of 15 degrees, by holding down the keyboard's **Ctrl** key while moving the pointer in the design area.
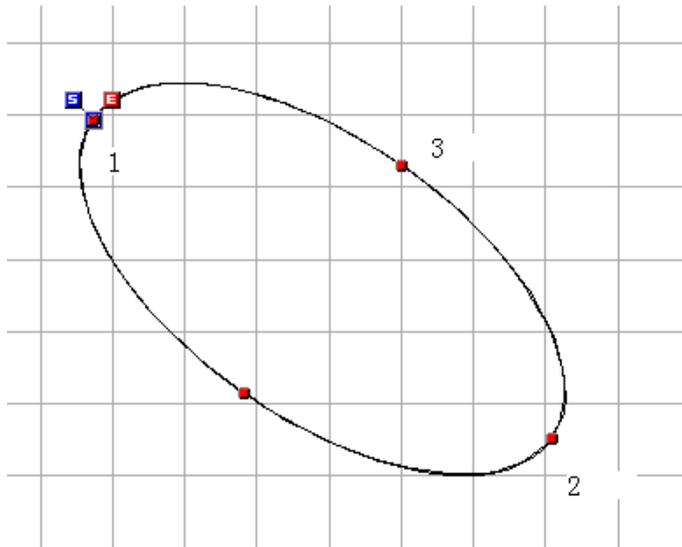
To create a symmetrical shape of outline (Shape-Symmetrical, ♈):

This command can be used only with **Straight Line**, **Spline** or **Arc**.

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Symmetry**.

   - Click the Symmetry icon ♈ in the toolbar.

2. On the **Shape** drop-down menu, select **Straight Line**, **Spline** or **Arc** (or click the corresponding icon for each of them).

3. In the design area, specify two points (1 and 2 in the figure below) to make the reference line (in blue) in the desired location.

4. In the design area, draw the desired outline.

   The symmetrical shape of the outline is automatically created on both sides of the reference line.

3-2-3. Creating manual stitch and manual feed data

Sewing data is the general term for the stitch, feed, basting data, and code that controls information you specify.
This section describes how to create sewing data manually.
NOTE:The sewing data created in the way are all open outline types.

Creating manual stitch data (Shape-Stitch, ⌒)

In PS-300B, stitch data is basically generated from outline data. In this way, stitch points are automatically created with the pitch you specified in **Property** on the **View** drop-down menu.

With the **Stitch** command, individual stitch (needle-drop) points can be added in order to control the stitch length or provide intricate details to an outline (such as a small copyright or trademark symbol or extra securing stitches).

In this case, however, you must be careful not to create stitches exceeding the maximum stitch length you specified in **Option** on the **Tools** drop-down menu. Stitches that exceed the maximum stitch length or less than the minimum stitch length are shown as red lines to enable you to distinguish them easily.

Creating manual feed data (Shape-Feed, ✐)

With the **Feed** command, you can create manual feed data. The manual feed data is shown as dotted black lines enabling you to distinguish this data from connection feed data. (These are shown as dotted blue lines.)

Creating basting data (Shape-Baste, ▢)

With the **Baste** command, you can create basting data connecting the previous point and the desired position.

(The basting data is shown as dotted black lines without Trim codes.)

How to create manual stitch, manual feed and basting data

The basic operation to create these stitch data is the same as outline data: (1) draw lines with the mouse manually, (2) use the **Input Outline (Stitch, Feed)** dialog box, and (3) use the **Input Point** dialog box. (Refer to 3-2-1. Creating Outline Data for details.)

1. Do one of the following:

    - To create manual stitch data, click **Stitch** on the **Shape** drop-down menu, or click the Stitch icon ⋀ in the toolbar.

        When the pointer is moved into the design area, its shape changes to ⁺⋀ *.*

    - To create manual feed data, click **Feed** on the **Shape** drop-down menu, or click the Feed icon ✐ in the toolbar.

        When the pointer is moved into the design area, its shape changes to ⁺✐ *.*

    - To create basting data, first select the **Feed** command, then click **Baste** on the **Shape** drop-down menu, or click the Baste icon ▢ in the toolbar.

        When the pointer is moved into the design area, its shape changes to ⁺✐ *.*

2. Do one of the following:

    - In the design area, click to specify the start point of the data, and then continue clicking at the points where you want to create the data.

    - Press any of the numeric keys on the keyboard.

        The Input Outline (Stitch, Feed) dialog box appears.

Complete the **Input Outline (Stitch, Feed)** dialog box to specify the points creating the desired shape of data.

- In the design area, click to specify the start point of the data. Then press any of the numeric keys on the keyboard.

  The Input Point dialog box appears.

  Input values in the **Input Point** dialog box to specify the next point.

3. After specifying the last point, right-click once to finish the data.

   The start point marker ("S") and end point marker ("E") for the data appear.

   NOTE: Stitches that exceed the maximum stitch length or less than the minimum stitch length are shown in red. You should change such stitches in allowable length of pitch, or create stitches again. As default, feed data will not make needle drop, and basting data will make needle drop. If you want to change it, select a point with the **Select Point** tool, click the **Code** icon , then add/delete the Trim code on the point in the **Code Setting** dialog box that appears.

4. Repeat steps 1 to 3 to add more data.

   The end point of the previous data and the start point of the current one are connected with a feed or a stitch that is specified in Property on the View drop-down menu.

   NOTE: To create another data linked with the current data, click **Continue** on the **Shape** drop-down menu or click the Continue icon in the toolbar before finishing the current data.

3-2-4. Drawing manual stitch data by tracing an image (Shape-Trace,)

The **Trace** command allows you to draw manual stitch data with the trace pitch specified in **Option** on the **Tools** drop-down menu.

1. Import an image to the design area.

   For importing an image, refer to "3-8. Image."

2. Do one of the following:

   - On the **Shape** drop-down menu, click **Trace**.

   - Click the Trace icon in the toolbar.

3. In the design area, click to specify the start point of the image you will trace.

4. Move the pointer in the design area to trace the image.

   Manual stitches are created with the specified trace pitch.

5. Right-click once to finish the tracing.

The start point marker ("S") and end point marker ("E") for the data appear.

NOTE: If you want to make a needle-drop point with a pitch other than specified, while holding the keyboard's **Shift** key, click the left mouse button at the desired point. To delete the last inputted point, press the keyboard's **Backspace** or **Space** key.

NOTE: To scroll the screen during tracing, do one of the following:

- Press the keyboard's arrow keys to scroll the screen up and down or left to right.

3-2-5. Adding and modifying a preset pattern (Shape-Pattern, ✺)

You can add any of the preset patterns in the current design, and modify it by specifying its length, width, number of stitches, and so on.

1. Do one of the following:

- On the **Shape** drop-down menu, click **Pattern**.
- Click the Pattern icon ✺ in the toolbar.

   The Pattern Select dialog box appears.

2. Select the pattern that you want to add to the current design, and then click the **OK** button.

   The Pattern Wizard dialog box for the selected pattern, like the one shown below, appears.

3. Adjust the parameters for the pattern as desired, and then click the **OK** button.

   A frame for the patte rn appears, and it can be moved with the mouse.

4. Click on the position where you want to paste the pattern.

   The pattern is pasted on the design area.

   NOTE: Refer to the instruction manual for the machine model you specified for the parameter settings needed. (A machine model can be specified in **Machine Model Setting** on the **Tools** drop-down menu.)

   Follow the instructions below to place the imported pattern correctly:

1. When a sewing area of a specified machine model is set in the design area:

   - While holding down the keyboard's **Shift** key, click the left mouse button. The center of the pattern aligns with the center of the sewing area.

   - While holding down the keyboard's **Ctrl** key, click the left mouse button. The center of the pattern aligns with the original point of the specified machine model.

2. When a sewing area of a specified machine model is not set in the design area:

While holding down the keyboard's **Ctrl** or **Shift** key, click the left mouse button. The center of the pattern aligns with the origin (0) of the design area's coordinates.

   * For details on setting the sewing area of a specified machine, refer to "**3-7-5. Specifying a sewing machine model and set its sewing area**".

3. Click a numeric key on the keyboard to display the **Input Point** dialog box. Then you can input the absolute coordinates of the pattern's center point, then click the **OK** button. The center of the pattern will be placed at the specified point.

4. While holding down the keyboard's **Ctrl** and **Shift** key, click the left mouse button. The center of the pattern aligns with the center of the design element(s) in the design area.

3-2-6. Adding codes (Shape-Code,)

The **Code Setting** dialog box allows you to easily add any of the various sewing machine codes for operations such as changing the sewing speed, pausing or cutting the thread.

NOTE: Codes can only be added to stitches and feeds. To add codes to an outline for which stitches have not yet been generated, first generate stitches by selecting the outline, and then click **Generate Select** on the **Stitch** drop-down menu.

1. Using the **Select Point** tool , select the point in the stitch or feed data where you want to add a code.

   The selected point turns black.

2. Do one of the following:

   ▪ On the **Shape** drop-down menu, click **Code**.

   ▪ Click the Code icon in the toolbar.

   ▪ Right-click, and on the context menu that appears, click **Code**.

   The Code Setting dialog box appears. (Refer to the table below for the function of each code.)
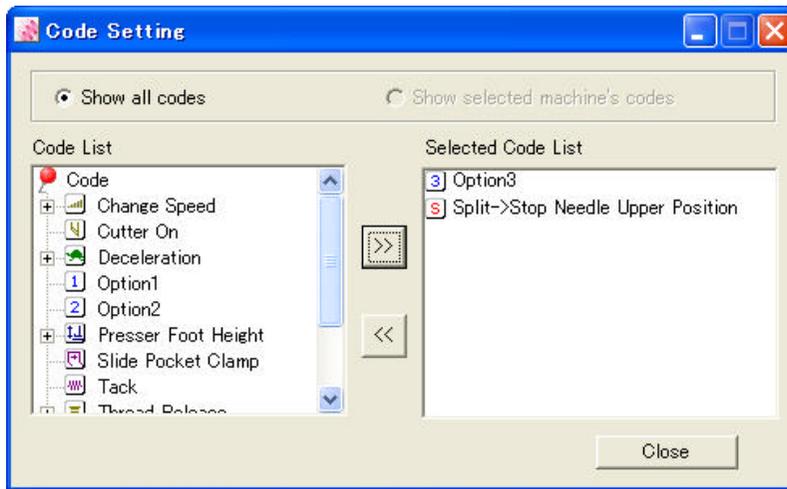
3. Do any of the following:

   ■ To add codes to a point, select a code in the **Code List** box, and then click ⟩⟩ .

   ■ To remove a code from a point, select the code in the **Selected Code List** box, and then click ⟨⟨ .

4. Repeat step 3 if needed.

5. If you want to add codes to another point, click the point and follow step 3. Repeat this step if you prefer.

6. Click the **Close** button to close the window.

   NOTE: If a machine model is already specified, **Show selected machine 's codes** is selected as default when opening the **Code Setting** dialog box. Select **Show all codes** if you want to use codes other than those specified for the selected model. When outputting, the codes which are not specified for the selected model cannot be outputted.

   NOTE: To show the codes of the specified point without opening the **Code Setting** dialog box: Select the point with the **Select Point** tool, then while holding down the keyboard's **Shift** key, move the pointer onto the point. A list appears to show the codes applied to the point. Right-click to clear the list.

The codes and their functions

Code	Function
Trim	Trims threads.
Tack	Activates/Deactivates the needle deflection.
Deceleration	Decelerates the maximum sewing speed. Select the desired speed from 8 levels. Select "OFF" to set the maximum sewing speed to the max.

Change Speed	Changes the sewing speed to the selected level (for 800 series).
	Select the desired speed from 8 levels.
Presser Foot Height	Changes the height of the presser foot.
	Select the desired height from 7 levels.
Split	Inserts split points.
	Select "Stop Needle Upper Position" to stop a needle at the upper position.
	Select "Stop Needle Lower Position" to stop a needle at the lower position.
Trigger	Sets the timing of an optional output.
	Select "Pause OFF" or "Pause ON".
Optional Output	Controls the electric output of a sewing machine.
	Select Option 1 to option 3 for the Optional Output 1 to 3.
Two Step Tension	Controls the thread tension.
Slide Pocket Clamp	Switches the pocket clamp setting.
Cutter ON	Controls the cutter operation.
Thread Release	Controls the operation of the thread releasing device.
	Select "ON" or "OFF".

3-2-7. Selecting & editing design elements

In order to move or change design elements, such as resizing them or changing their color, the elements must first be selected.

To select a design element (Shape-Select, ⬚):

The selectable design elements and the priority sequence for selecting them are as follows.

Priority sequence	Elements
1	Outline
2	Sewing start point of the data
3	The sewing area frame of the specified machine model

4	Image

NOTE: When selecting two or more outlines, the one whose sewing order is earlier is given high priority.

The design elements not displayed by the setting in **Show/Hide** on the **View** drop-down menu will not be selected.

To select a design element:

1. Do one of the following:

   - On **the Shape** drop-down menu, click **Select**.

   - Click the Select icon ⬚ in the toolbar.

2. Click the design element.

   A selection frame of "dashes" appears around the design element to show that it is selected.

To select two or more design elements:

1. Do one of the following:

   - On **the Shape** drop-down menu, click **Select**.

   - Click the Select icon ⬚ in the toolbar.

2. Do one of the following:

   A selection frame of "dashes" appears around the elements to show that they are selected.

   - Hold down the keyboard's **Shift** or **Ctrl** key while clicking design elements one by one.

   - Dragging the pointer over the design elements from upper left to lower right (shown below) selects only the design elements enclosed by the selection frame.
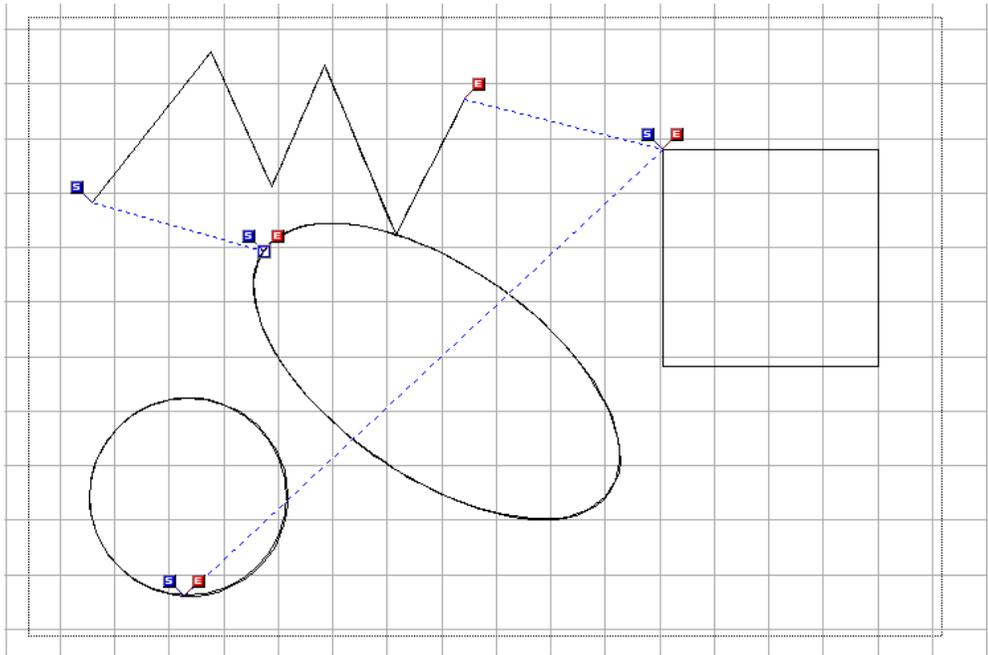
- Dragging the pointer over the design elements in the direction other than above (shown below) selects all design elements that are either fully enclosed or partially enclosed by the selection frame.
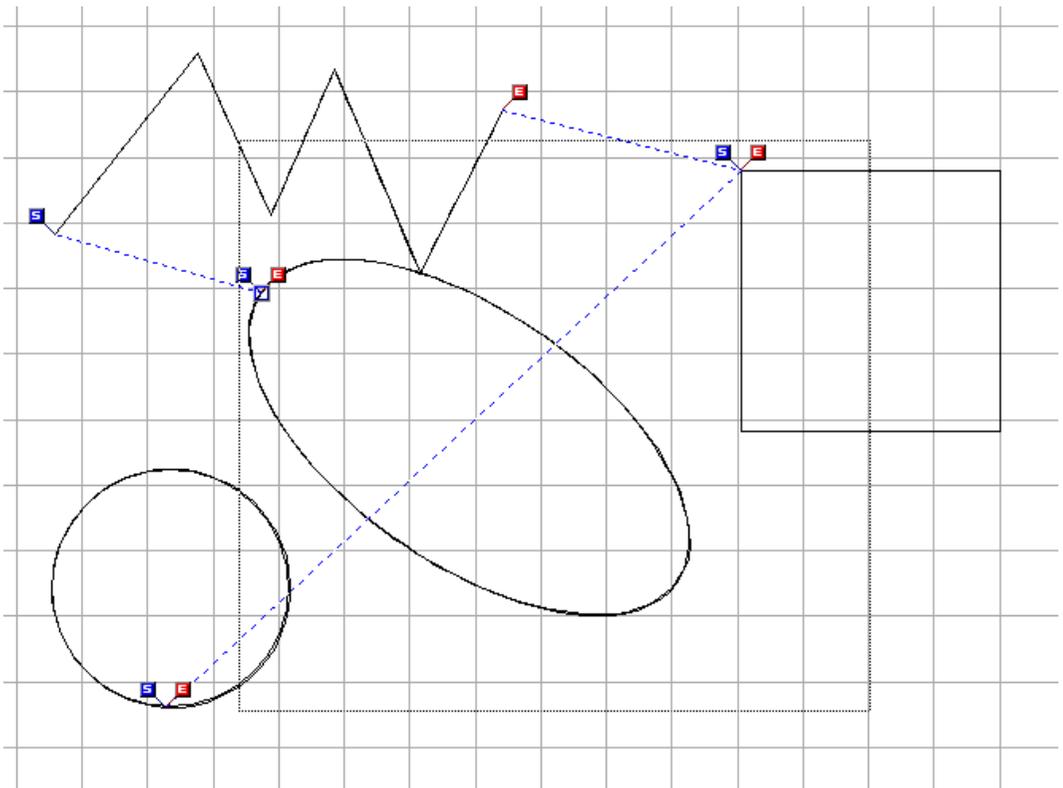
NOTE: If other design elements were accidentally selected, click outside the selection frame, and then try selecting the design elements again.

To select and edit the sewing start point of the data:

You can select and edit the sewing start point (the blue square connected with first outline's start point) of the data.

1. Do one of the following:

    - On **the Shape** drop-down menu, click **Select**.

    - Click the Select icon ⇲ in the toolbar.

2. To change the sewing start point, do one of the following:

    - Drag the sewing start point and drop it at the desired position.

    - Dragging the sewing start point, click any of the numeric keys.

        The Input Point dialog box appears. Input the coordinates of the desired position and click the OK button. The sewing start point will be moved to the specified position.

    - To align the sewing start point to the first outline's start point:
      While holding down the keyboard's **Ctrl** key, drag the sewing start point.

    - To align the sewing start point to the center of all the sewing data:
      While holding down the keyboard's **Shift** key, drag the sewing start point.

To select a stitch point (Shape-Select Point, ⬚)

In order to change the shape of stitch or feed data by adding, deleting or moving individual points, the points must first be selected.

1. Do one of the following:

    - On the **Shape** drop-down menu, click **Select Point**.

    - Click the Select Point icon ⬚ in the toolbar.

    The stitch points in all the sewing data appear as small green circles.

2. Select one or more points by doing any of the following:

    - To select a point:
      Click the point.

    - To select points those are in sequence:
      Hold down the keyboard's **Shift** key and click the first and last point in the sequence.

    - To select points those are not in sequence:
      Hold down the keyboard's **Ctrl** key while clicking each additional point.

- To select more than one point in a specific area of the data:

  Drag the pointer over the points so that the selection frame encloses them.

  The small circles change to black to show that they are selected.

To select the desired point from where two or more points (outlines) are complicated:

Click the point under which some other points are complicated. A list box like the following appears to show all the selectable points and their attributes (the outline number, the sewing order of the point from the start of the outline.). Select the desired one from the list box and click it.
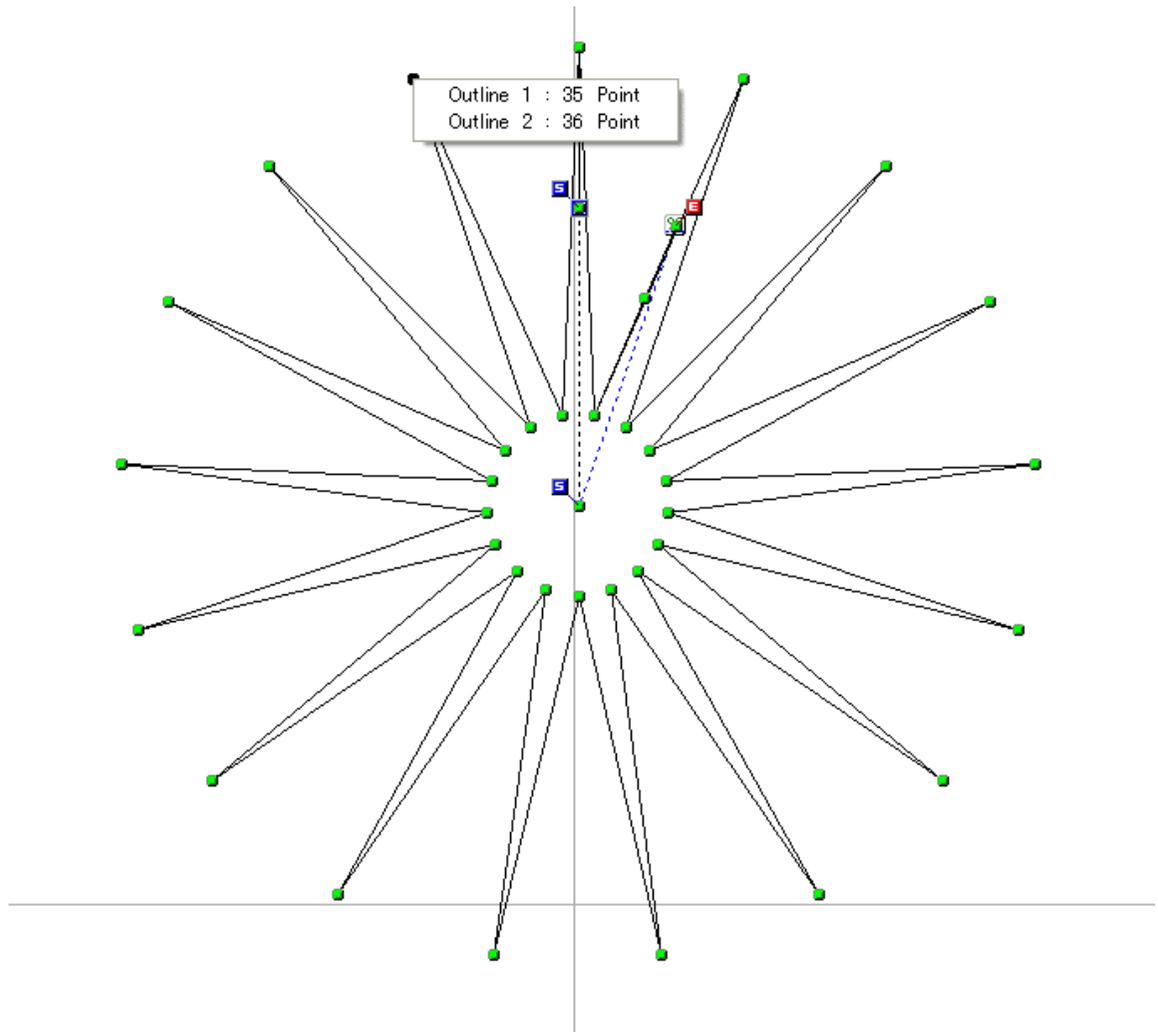
To move or delete the selected points manually:

- Place the pointer on the selected point(s) and drag it (them) to the desired position. You can use the keyboard's arrow keys to move them in the desired direction in 0.1 mm increments.
- Click any of the numeric keys to display the **Input Point** dialog box. Input the coordinates and click the **OK** button. The selected point(s) will be moved to the specified position(s).

  NOTE:

When **Snap Setting** on the **View** drop-down-menu is active, the pointer snaps to the specified target.

- To delete the selected points, select **Delete** on the **Edit** drop-down menu, or click the Delete icon or the keyboard's **Delete** button.

To select a punch point (Shape-Select Punch Point, ⬈)

In order to change the shape of an outline by adding, deleting or moving individual punch points, the points must first be selected.

1. Do one of the following:

   - On the **Shape** drop-down menu, click **Select Punch Point**.

   - Click the Select Punch Point icon ⬈ in the toolbar.

   The punch points in all the outline data appear as small red circles.

2. Select one or more punch points by doing any of the following:

   - To select a punch point:
     Click the punch point.

   - To select punch points those are in sequence:
     Hold down the keyboard's **Shift** key and click the first and last points in the sequence.

   - To select punch points that are not in sequence:
     Hold down the keyboard's **Ctrl** key while clicking each additional point.

   - To select more than one punch point in a specific area of the data:
     Drag the pointer over the points so that the selection frame encloses them.

   The small circles change to black to show that they are selected.

   To move or delete the selected punch points manually:
   - Place the pointer on the selected punch point(s) and drag it (them) to the desired position. You can use the keyboard's arrow keys to move them in the desired direction in 0.1 mm increments.
   - Click any of the numeric keys to display the **Input Point** dialog box. Input the coordinates and click the **OK** button. The selected punch point(s) will be moved to the specified position(s).
     NOTE: When **Snap Setting** on the **View** drop-down-menu is active, the pointer snaps to the specified target.

     On a circle, a punch point can be moved on the circumference freely by dragging it while holding down the keyboard's **Shift** key.

- To delete the selected punch points, select **Delete** on the **Edit** drop-down menu, or click the Delete icon or the keyboard's **Delete** button.

NOTE: The outline will be re-generated if its punch point is edited. If the outline's sewing data was already edited, a message appears asking if you really want to re-generate it. Click the **Yes** button to re-generate the outline. The previously-edited contents (added codes, edited points etc.) will all be cleared. Click the **No** button to cancel re-generation.

To select all data in the design area (Edit-Select All, "Ctrl+A")

Do one of the following:

- On the **Edit** drop-down menu, click **Select All**.

- On the keyboard, while holding down the **Ctrl** key, press the **A** key.

A selection frame of "dashes" appears around all the data to show that they are selected.

NOTE: To deselect all data, click outside of the selection frame.

The design elements not displayed by the setting in **Show/Hide** on the **View** drop-down menu will not be selected.

To check and edit punch points or a sewing data's needle-drop points:

You can display the coordinates of all points on the selected outline or sewing data, and move the desired punch points by changing the coordinates of them.

1. Select an outline with the **Select** tool.

2. Click any of the numeric keys on the keyboard.

   The Select Data Type dialog box appears.

3. Select the data type you want to display.

   (a) If you want to show the outline's punch points, click the **Show Punch Point of the Outline** radio button. Then click the **OK** button.

   The Input Outline (Stitch, Feed) dialog box appears, and the coordinates of all punch points of the selected outline are shown in the list. (Refer to the items and their functions in the dialog box below.)

   (b) If you want to show the sewing data's needle-drop points, click the **Show Sewing Data of the Outline** radio button. Then click the **OK** button.

   The Sewing Data List dialog box appears, and the coordinates of all points are shown in the list. (Refer to the items and their functions in the dialog box below.)

4. To move the desired punch points:

   Change the coordinates of the points you want to move. (Click the desired cell to

highlight the existing value, and then input a new value to replace it.) Then click the **OK** button.

The points are moved to the specified coordinates.

Input Outline (Stitch, Feed) dialog box

Item	Description
Absolute Coordinate	When this is selected, values you input will be the distance from the origin (0) of the design area's X-Y coordinates.
Relative Coordinate From the Previous Point	When this is selected, the coordinates of the points are relative distances from the previous point. The first point's coordinates are the relative distance from **The First Reference Point** above the list. (The absolute coordinates of the first reference point are shown in **The First Reference Point**'s Coordinate **X/Y** input boxes.)
OK	Click this button to move points with the specified settings.
Cancel	Click this button to cancel the specified settings.
Preview	Click this button to preview the settings.

Sewing Data List dialog box

Item	Description
Absolute Coordinate	When this is selected, values you input will be the distance from the origin (0) of the design area's X-Y coordinates.
Relative Coordinate From the Previous Point	When this is selected, the coordinates of the points are relative distances from the previous point. The first point's coordinates are the relative distance from **The First Reference Point** above the list. (The absolute coordinates of the first reference point are shown in **The First Reference Point**'s Coordinate **X/Y** input boxes.
Edit Code	If there are code data in the point, the code data will be shown in the list. If you want to delete the code data, click to highlight it and press the **Delete** key on the keyboard. You cannot add code data to the specified point.
OK	Click this button to move points with the specified settings.
Cancel	Click this button to cancel the specified settings.

3-3. Viewing

This section describes the various ways of displaying design element(s), the design area and other windows of PS-300B.

Almost all the functions described here can be selected from the **View** drop-down menu. The parenthesis following each title includes the name of the command on the drop-down menu and/or the icon on the toolbar.

3-3-1. Displaying an enlarged/reduced view

To display an enlarged view (View-Zoom In, 🔍):

The design element(s) in the design area can be enlarged so that finer details can be viewed and edited.

1. Click **Zoom In** on the **View** drop-down menu, or the Zoom In icon 🔍 in the toolbar.

   When the pointer is moved into the design area, its shape changes to 🔍 .

2. Do one of the following:

   - Click on a point near the area to be enlarged repeatedly until the desired view is obtained. (One click enlarges the current view by a factor of 1.25.)

   - To select a specific area to be enlarged, move the pointer near the area to be enlarged, and then drag the pointer until the desired area is enclosed in the selection box.

To display an reduced view (View-Zoom Out, 🔍):

The design element(s) in the design area can be reduced so that an overall view is displayed.

1. Click **Zoom Out** on the **View** drop-down menu, or the Zoom Out icon 🔍 in the toolbar.

   When the pointer is moved into the design area, its shape changes to 🔍 .

2. Click on a point near the area to be reduced repeatedly until the desired view is obtained. (One click reduces the current view by a factor of 0.8.)

To quickly display an enlarged or reduced view:

Place the pointer near the area to be enlarged or reduced, and then rotate the mouse wheel forward or backward.

To display design element(s) in their actual size (View-Zoom-Actual Size, 1:1):

You can adjust the view of the design to its actual size.

Do one of the following:

- On the **View** drop-down menu, click **Zoom**. On the **Zoom** sub-menu, click **Actual Size**.

- Click the Actual Size icon ![1:1] in the toolbar.

To enlarge design element(s) to fill the window (View-Zoom-Fit To Window, ![icon]):

You can enlarge the view of the selected design element(s) to fill the window.

Do one of the following:

- On the **View** drop-down menu, click **Zoom**. On the **Zoom** sub-menu, click **Fit To Window**.

- Click the Fit To Window icon ![icon] in the toolbar.

  NOTE: If no design element is selected, all the design element(s) in the design area are enlarged to fill the window.

To display the sewing area in the size fit in the window (View-Zoom-Fit Sewing Area To Window, ![icon]):

You can adjust the size of the sewing area of the machine model you specified so that it will fit within the window. This command is available only when the sewing area of a specified machine model is displayed.

NOTE: The sewing area of a specified machine model can be displayed by the setting in **Machine Model Setting** on the **Tools** drop-down menu.

Do one of the following:

- On the **View** drop-down menu, click **Zoom**. On the **Zoom** sub-menu, click **Fit Sewing Area To Window**.

- Click the Fit Sewing Area To Window icon ![icon] in the toolbar.

3-3-2. Displaying the desired part in the center of the main window

You can move the design area up and down or from side to side to display the desired part in the center of the main window.

To move the design area up and down:

Do one of the following:

- Drag the vertical scroll bar of the main window up and down.

- Press the keyboard's $\boxed{\uparrow}$ or $\boxed{\downarrow}$ key repeatedly or continuously.

To move the design area from side to side:

Do one of the following:

- Drag the horizontal scroll bar of the main window from side to side.

- Press the keyboard's $\boxed{\leftarrow}$ or $\boxed{\rightarrow}$ key repeatedly or continuously.

3-3-3. Showing/hiding design elements in the window

Showing/hiding the gridlines (View-Gridlines, ▦):

The gridlines are useful for aligning and measuring design element(s) in the design area.

To show or hide the gridlines:

- On the **View** drop-down menu, click **Gridlines**.

- Click the Gridline icon ▦ in the toolbar.

    NOTE: You can change the size and color of the gridlines in **Grid Setting** on the **Tools** drop-down menu.

Displaying sewing data in a three dimensional image (View-Pseudo 3D,):

You can display the sewing data in the design area so that they are thicker, giving them a more three-dimensional feel.

To switch the display mode from normal to pseudo 3D, and vice versa, do one of the following:

- On the **View** drop-down menu, click **Pseudo 3D**.

- Click the Pseudo 3D icon in the toolbar.

Displaying the Reference window (View-Reference window,):

The **Reference** window displays all the design elements. With this window, you can create elements while checking the overall image of the sewing data.

To display the **Reference window**, do one of the following:

- On the **View** drop-down menu, click **Reference Window**.

- Click the Reference Window icon ⭐ in the toolbar.

The Reference window appears.
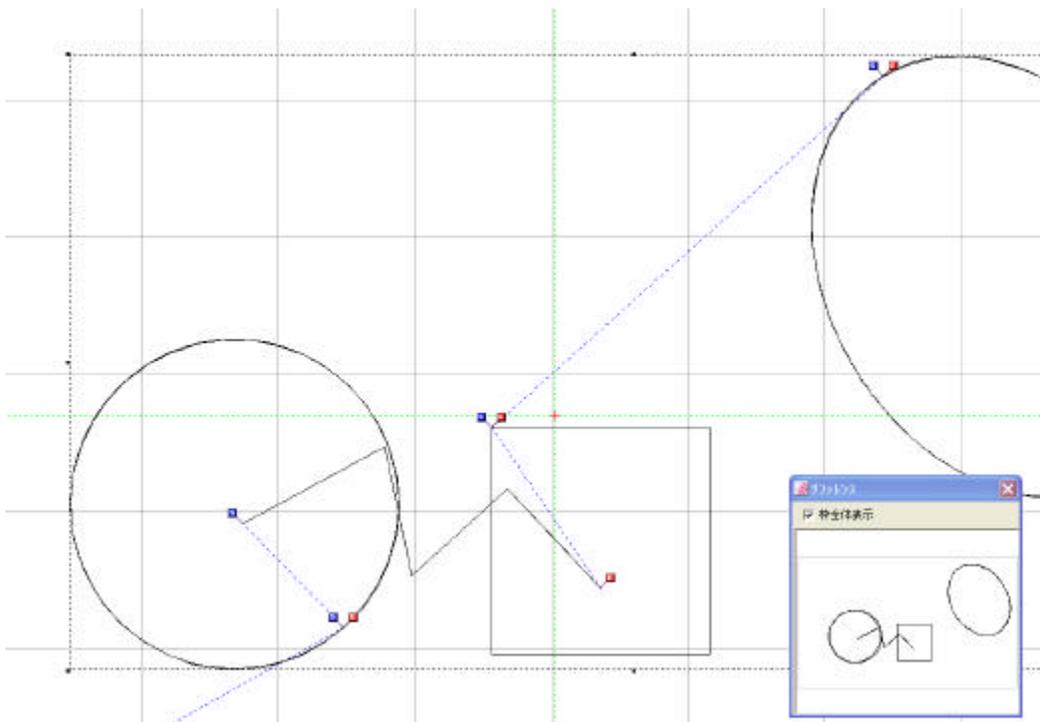
NOTE: The **Reference window** also shows the elements that are not displayed in the design area by the setting in **Show/Hide** on the **View** drop-down menu.

When the sewing area of a specified machine model is displayed in the design area, the frame of the sewing area is also shown in the **Reference window**.

To display the design elements to fill the window:

Clear the **Fit Sewing Area** check box on the **Reference window**.

NOTE:

If the **Fit Sewing Area** check box is checked:

When the sewing area is larger than the design elements, the sewing area will fit to fill the window, and when the design elements' size is larger than the sewing area, the design elements will fit to fill the window.

To hide the **Reference window**, do one of the following:

- Click the Close button [**X**] on the upper right corner of the **Reference** window.

- Click **Reference Window** on the **View** drop-down menu, or the Reference Window icon ▦ in the toolbar.

Displaying the Sequence window (View-Sequence window, 🔢):

The **Sequence window** displays all the design elements in the design area separately. With this window, you can check the shape and position of each element, and their sewing order. This window also allows you to edit or change the sewing order of design elements.

To display the **Sequence window**, do one of the following:

- On the **View** drop-down menu, click **Sequence Window**.
- Click the Sequence window icon 🔢 in the toolbar.

The Sequence window appears. The design elements are shown in separate frames, and arranged in the actual sewing order.
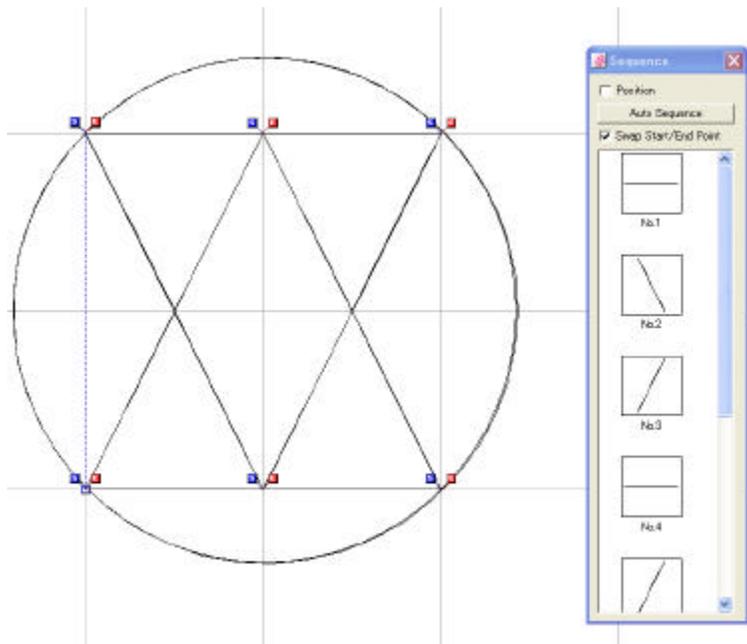
To check the positions of the design elements:

Check the **Position** check box on the **Sequence window**.

To automatically change the sewing order for all the elements to increase efficiency:

Click the **Auto Sequence** button in the **Sequence window**.

* If you check the **Swap Start/End Point** check box, the sewing direction (the start and end points) of each element is also reversed automatically to increase efficiency.

NOTE: The sewing order and direction of the first element will not be changed.

To delete the undesired element(s):

Click the element you want to delete in the **Sequence window**. (Its number is highlighted.) Then press the keyboard's **Delete** key. To delete more elements, repeat this operation.

To manually change the sewing order for the desired elements:

Drag the element whose sewing order you want to change and drop it in the desired position. (The **Sequence** window shows the new order of the design elements.)

To hide the **Sequence** window, do one of the following:

- Click the Close [X] button on the upper right corner of the **Sequence** window.

- Click **Sequence Window** on the **View** drop-down menu, or click the Sequence window icon 🖿 in the toolbar.

Showing/hiding various types of design elements (View-Show/Hide):

In order to edit or view sewing data better, you can hide the desired data.

To hide or show the specified types of design elements:

1. Do any of the following:

    - On the **View** drop-down menu, click **Show/Hide**.

    - Right-click to display the context menu, and then click **Show/Hide**.

    The Show/Hide dialog box appears.
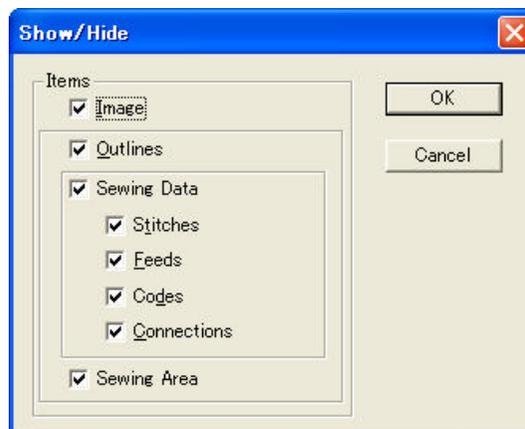
2. Clear the check box for the item you want to hide, and check the box for the item you want to show.

    The details of the items in the Show/Hide dialog box are as follows:

Item	Explanation
Image	Set to show or hide the image.
Outlines	Set to show or hide all outlines. When hidden, outlines cannot be selected.
Stitches	Set to show or hide all stitches. When hidden, stitches cannot be selected.
Feeds	Set to show or hide all feeds. When hidden, feeds cannot be selected.
Codes	Set to show or hide all codes.
Connections	Set to show or hide all connection data (feeds or stitches).
Sewing Area	Set to show or hide the frame of the sewing area when the sewing area of a specified machine model is displayed in the design area.

3. Click the **OK** button to apply the specified settings.

3-3-4. Making design elements snap to the specified target

When creating or editing design elements, they can be aligned on (snapped to) the gridlines, outlines or points for greater precision.

To specify the snap setting (View-Snap Setting, ⤢):

1. Do any of the following:

   - ◘ On the **View** drop-down menu, click **Snap Setting**.

   - ◘ Click the Snap Setting icon ⤢ in the toolbar.

   - ◘ Right-click to display the context menu, and then click **Snap Setting**.

   The Snap Setting dialog box appears.
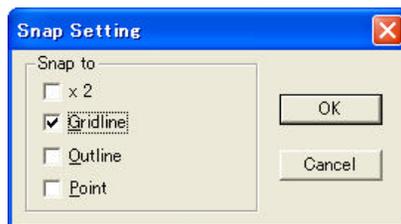
2. Do any of the following:

   - ◘ To snap to the intersections of the gridlines, check the **Gridline** check box.

   - ◘ To snap to the outlines, check the **Outline** check box.

   - ◘ To snap to points of outline, stitch or feed data, check the **Point** check box.

- To double the maximum distance for this command to respond to the specified target, check the **x 2** check box.

3. Click the **OK** button to apply the specified setting.

   NOTE: If you have checked two or more check boxes, **Gridline** is given top priority.

3-3-5. Setting sewing attributes (View-Property, 📖):

You need to set sewing attributes to design element(s). Use the **Property** dialog box to set or change sewing attributes.
When you create a design element successively, the previously set sewing attributes will be automatically applied to it.

To set or change sewing attributes:

NOTE: If you want to change sewing attributes for a design element, first select it, and then follow the procedure below.

1. Do one of the following:

   - On the **View** drop-down menu, click **Property**.

   - Click the Property icon 📖 in the toolbar.

   - Right-click to display the context menu, and then click **Property**.

   The Property dialog box appears.
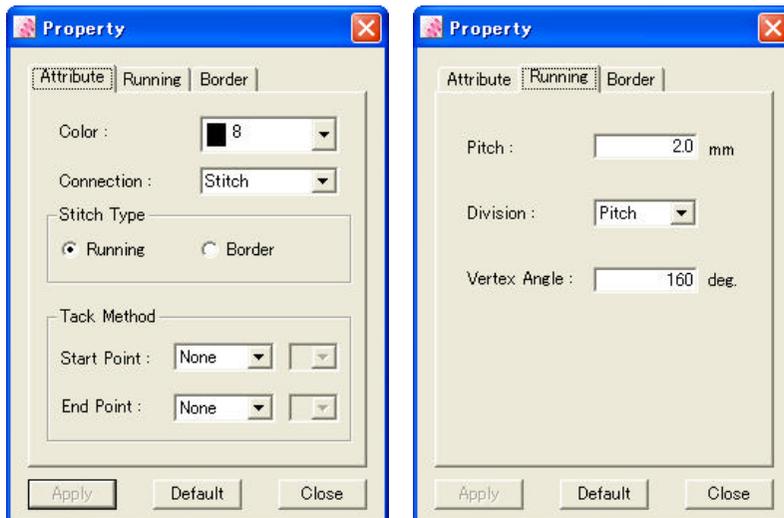
2. Make setting changes in any of the items in the **Property** dialog box.

   The details of the items are described below.

3. Click the **Apply** button to apply the specified settings.

NOTE: Click the **Default** button if you want to restore the default settings.
Click the **Close** button if you want to close this dialog box without applying the setting changes you made.

NOTE: You can also change the **Stitch Type** and **Pitch** from the toolbar directly.

Descriptions of the items in the Property dialog box

Attribute tab

Click the **Attribute** tab to make basic settings in the **Attribute** group box. If you select **Running** for the **Stitch Type**, you can then make setting changes in the **Running** group box. If you select **Border**, you can make setting changes in the **Border** group box.

Color:
Select the color for the outline data from the drop-down list.

Connection:
When a design element is created or edited, or its attributes are changed, the connection between the element and the adjacent element may not be appropriate. You can specify how to connect them using either feed or stitch.
Select **FEED** on the drop-down list to connect design elements using feed or select **STITCH** to connect design elements using stitch.

NOTE: When you select **STITCH** on the drop-down list:
When the interval between the design elements is more than the **Max. Length** set in the **Option Setting** dialog box, design elements will be connected using feed.

Stitch Type:
Select the stitch type you use before drawing an outline.

Stitch Type	Explanation
Running	Creates stitch data whose outline is sewn with running stitching.
Border	Creates stitch data required to stitch the outline with zigzag stitching of the specified width.

NOTE: The stitch type can also be selected with the **Stitch Type** drop-down list in the toolbar.

Tack Method:
You can set the securing stitching method at the start and end points of an element.
Select the desired securing stitching method from each drop-down list, and specify the number of stitches both for the start and end points.

Tack Method	Explanation
None	No setting for securing stitching.

Overlap	Creates overlap stitching in a closed outline such as a polygon, rectangle, circle or ellipse.
N Back	Creates N-shaped back-tack stitching.
V Back	Creates V-shaped back-tack stitching.

Running tab

Click the **Running** tab to make settings for running stitches in the **Running** group box.

Pitch:
You should set the pitch (interval of needle-drop points) for the design element(s).
You can input a value in 0.1 mm increments. (Default setting range: 0.1 to 12.7 mm)

NOTE: The setting range of pitch differs by the machine model specified in **Machine Model Setting** on the **Tools** drop-down menu. The pitch can be set within the maximum and minimum stitch length specified in **Option** Setting on the **Tools** drop-down menu.

NOTE: The pitch can also be set by inputting a value in the **Pitch** input box in the toolbar.

Division:
When stitch data is generated from outline data, the outline can be divided into stitches in two methods: **Equal** or **Pitch**.
Select either **Equal** or **Pitch** from the drop-down list.

Division	Explanation
Equal	Creates stitch data so that needle drops on all the punch points. Stitches are divided equally and the specified pitch may not be kept.
Pitch	Creates stitch data with the specified pitch. However, if the angles of corners are smaller than the specified vertex angle, the method of "**Equal**" will be applied.

Vertex Angle:
Available only when **Pitch** is selected for the **Division** setting.
This is used to specify the angle of the punch point at which you want to make the needle drop.
If the angle of a corner of the outline excesses the specified vertex angle, the paths are divided with the specified pitch equally, and the shape of the corner may change.
You can input a value from 1° to 160° in 1° increment.

Border tab

Click the **Border** tab to make settings for border stitches in the **Border** group box.
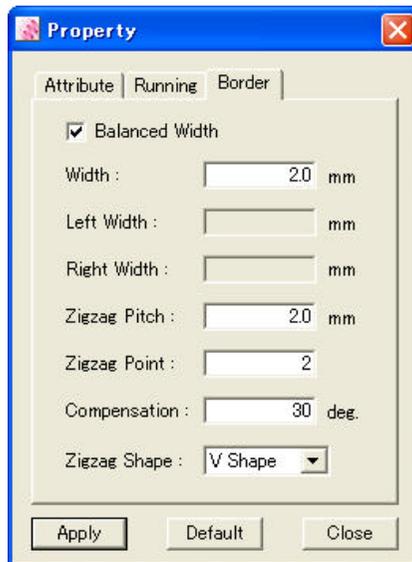
Balanced Width:
If you want to set a zigzag width in the center of the outline, check the box for this item. If you do not want to, clear this check box and set the values for the **Right Width** and **Left Width**.

Width:
When you set zigzag width in the center of the outline, set the width of the zigzag.

Left Width:
When the zigzag width is not set in the center of the outline, set the width from the center of the outline to the left peak.

Right Width:
When the zigzag width is not set in the center of the outline, set the width from the center of the outline to the right peak.

Zigzag Pitch:
This is used to set the interval of zigzag peaks. You can input a value from 0.1 to 40 mm in 0.1 mm increments.

Zigzag Point:
Set the number of stitches from one zigzag peak to the next zigzag peak.
NOTE: Zigzag points could increase more than preset number depending on the shape of outline.

Compensation (Zigzag compensation angle):
Ordinarily, zigzag stitching at the punch point is performed as shown in (a) in the figure below, however, if the angle of the punch point is smaller than the zigzag compensation angle, zigzag stitching is performed as shown in (b) in the figure below.
You can input a value anywhere from 1° to 90° in 1° increments.

A   **B**
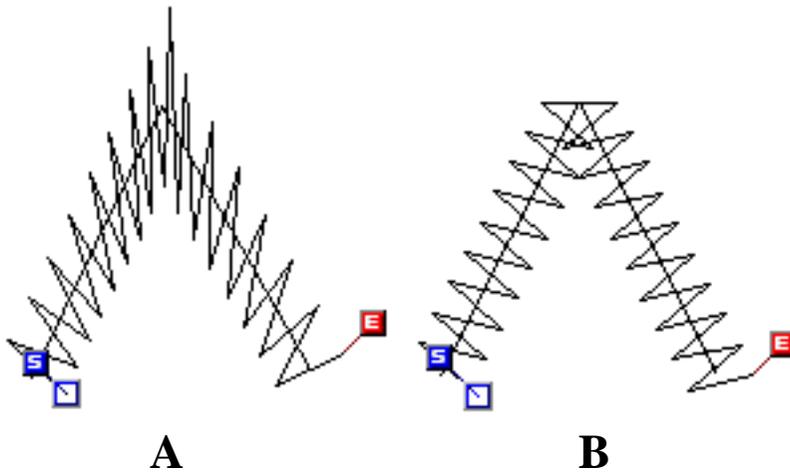
Zigzag shape:
You can specify a zigzag shape for the stitch data from the drop-down list.

Zigzag shape	Explanation
N Shape	Makes zigzag stitching like letter N.
V Shape	Makes zigzag stitching like letter V.

3-4. Editing

This section describes how to edit design elements.

Almost all the functions described here can be selected from the **Edit** drop-down menu. The parenthesis following each title includes the name of the command on the drop-down menu, the icon on the toolbar, and/or the shortcut keys.

3-4-1. Undoing/redoing actions

To reverse the previous action (Edit-Undo, ↶, Ctrl+Z):

This command is useful if, for example, you accidentally deleted a design element.

Do one of the following:

- On the **Edit** drop-down menu, click **Undo**.

- Click the Undo icon ↶ in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **Z** key.

To reverse more than one action, repeat one of the above operations until all of the desired actions are reversed.

NOTE: If no operation has been performed, there is no action that can be reversed.

To reverse the previous Undo operation (Edit-Redo, ↷, Ctrl+R):

This command is useful if, for example, you used the **Undo** command to delete a design element that you just added, then decided that you did not want to delete it after all.

Do one of the following:

- On the **Edit** drop-down menu, click **Redo**.

- Click the Redo icon ↷ in the toolbar.

- On the keyboard, while holding down the **Ctrl** key, press the **R** key.

To reverse more than one Undo operation, repeat one of the above operations until all of the desired actions are performed again.

NOTE: If no operation has been undone, there are no Undo operations that can be reversed.

3-4-2. Cutting/copying/pasting design elements

To cut design elements from the design area: (Edit-Cut, ✂, Ctrl+X):

With this command, design elements can be removed from the design area. The removed elements are temporarily stored in memory for later use.

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

   NOTE: If no design element is selected, the **Cut** command will not be available. For details on
   selecting design element, refer to " **3-2-7. Selecting & editing design elements**".

2. Do one of the following:

   - On the **Edit** drop-down menu, click **Cut**.

   - Click the Cut icon in the toolbar.

   - Right-click to display the context menu, and then click **Cut**.

   - On the keyboard, while holding down the **Ctrl** key, press the **X** key.

To copy design elements (Edit-Copy, , Ctrl+C):

With this command, design elements can be copied without removing the original from the
design area. The copied elements are temporarily stored in memory for later use.

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

   NOTE: If no design element is selected, the **Copy** command will not be available. For details on
   selecting design element, refer to "3**-2-7. Selecting & editing design elements**".

2. Do one of the following:

   - On the **Edit** drop-down menu, click **Copy**.

   - Click the Copy icon in the toolbar.

   - Right-click to display the context menu, and then click **Copy**.

   - On the keyboard, while holding down the **Ctrl** key, press the **C** key.

To paste the design elements that have been cut or copied (Edit-Paste, , Ctrl+V):

A copy of the last design element(s) stored in memory can be added to the current design area.

1. Do one of the following:

   - On the **Edit** drop-down menu, click **Paste**.

   - Click the Paste icon in the toolbar.

   - Right-click to display the context menu, and then click **Paste**.

   - On the keyboard, while holding down the **Ctrl** key, press the **V** key.

A frame for the copy of design elements appears, and it can be moved with the mouse.

2. Click on the position where you want to paste the design elements

    The design elements are pasted on the design area.

    NOTE:

    The pasted design elements are sewn at the end.

    If no design element was recently stored in memory, the **Paste** command is not available.

    Follow the instructions below to paste the design element(s) on a correct position:

    1. If the sewing area of a specified machine model is set in the design area:

        ■   While holding down the keyboard's **Shift** key, click the left mouse button. The center of the design element(s) aligns with the center of the sewing area.

        ■   While holding down the keyboard's **Ctrl** key, click the left mouse button. The center of the design element(s) aligns with the original point of the specified machine model.

    2. If the sewing area of a specified machine model is not set in the design area:
        While holding down the keyboard's **Ctrl** or **Shift** key, click the left mouse button. The center of the design element(s) aligns with the origin (0) of the design area's coordinates.

        *   For details on setting the sewing area of a specified machine, refer to "**3-7-5. Specifying a sewing machine model**".

    3. Click a numeric key on the keyboard to display the **Input Point** dialog box. Then you can input the absolute coordinates of the design element's center point, then click the **OK** button. The center of the design element(s) will be placed to the specified point.

    4. While holding down the keyboard's **Ctrl** and **Shift** key, click the left mouse button. The center of the design element(s) aligns with the center of the design element(s) in the design area.

3-4-3. Inserting/Deleting/Duplicating design elements

To insert design elements which have been cut or copied (Edit-Insert, Insert):

With this command, the design elements that have been cut or copied can be inserted in front of the specified element.

1. Select design element in front of which you want to insert the design elements that have been cut or copied.

2. Do one of the following:

   - On the **Edit** drop-down menu, click **Insert**.

   - On the keyboard, press the **Insert** key.

   - Right-click to display the context menu, and then click **Insert**.

   NOTE: If no design element has recently been stored in memory, the **Insert** command will not be available.

   Follow the instructions below to place the design element(s) correctly:

   1. If the sewing area of a specified machine model is set in the design area:

      - While holding down the keyboard's **Shift** key, click the left mouse button. The center of the design element(s) aligns with the center of the sewing area.

      - While holding down the keyboard's **Ctrl** key, click the left mouse button. The center of the design element(s) aligns with the original point of the specified machine model.

   2. If the sewing area of a specified machine model is not set in the design area: While holding down the keyboard's **Ctrl** or **Shift** key, click the left mouse button. The center of the design element(s) aligns with the origin (0) of the design area's coordinates.

      * For details on setting a sewing area of a specified machine, refer to "**3-7-5. Specifying a sewing machine model**".

   3. Click a numeric key on the keyboard to display the **Input Point** dialog box. Then you can input the absolute coordinates of the design element's center point, then click the **OK** button. The center of the design element(s) will be placed to the specified point.

   4. While holding down the keyboard's **Ctrl** and **Shift** key, click the left mouse button. The center of the design element(s) aligns with the center of the design element(s) in the design area.

To delete design elements from the design area (Edit-Delete, ✕, Delete):

With this command, the following design elements and points can be removed from the design area: Outline data, manual stitch data, manual feed data, images, stitch points and outline's punch points.

1. Select one or more design elements or points.

   NOTE: The **Delete** command is not available if no point or design element is selected. For details on selecting design elements and points, refer to "**3-2-7. Selecting & editing design elements**".

2. Do one of the following:

   - On the **Edit** drop-down menu, click **Delete**.

   - Click the Delete icon ✖ in the toolbar.

   - Right-click to display the context menu, and then click **Delete**.

   - On the keyboard, press the **Delete** key.

   NOTE: The deleted elements or points are not stored in memory and can only be reversed if the **Undo** command on the **Edit** drop-down menu is clicked. For more details, refer to the **Undo** command.

To duplicate design elements (Edit-Duplicate):

This command is available only for outlines, manual stitches and manual feeds.

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

   NOTE: If no design element is selected, the **Duplicate** command will not be available. For details on selecting design elements, refer to "**3-2-7. Selecting & editing design elements**".

2. Do one of the following:

   - On the **Edit** drop-down menu, click **Duplicate**.

   - Right-click to display the context menu, and then click **Duplicate**.

   The selected elements are duplicated and added under the right of the originals in the design area.

To duplicate design elements manually:

You can duplicate design element(s) manually.

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

2. While holding down the keyboard's **Ctrl** key, drag the elements to the desired position.

   The selected element(s) is duplicated and positioned where the mouse button is released.

3-4-4. Searching for the desired sewing data

You can search for the desired sewing data (manual stitches, manual feeds and codes) in the design area by specifying the criteria (the type or length of stitch and others). Search is performed on the selected outline data. If no outline is selected, search will be performed on all the data in the design area.

NOTE: You cannot search the data not displayed in the design area by using the setting in **Show/Hide** on the **View** drop-down menu.

To search for the desired sewing data (Edit-Search):

1. Select design element(s). To search all the data in the design area, do not select any design element.

2. Do one of the following:

    - On the **Edit** drop-down menu, click **Search**.

    - Click the Search icon 🔍 in the toolbar.

    - Right-click to display the context menu, and then click **Search**.

    The Search dialog box appears.
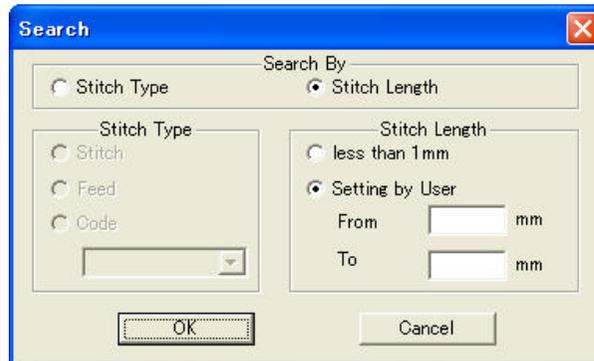
3. Set the criteria for search in the **Search** dialog box.

Item	Sub-items and descriptions
Search By	Select the search criteria from either **Stitch Type** or **Stitch Length**. (Default: **Stitch Length**)
Stitch Type	Available when **Stitch Type** is selected. Select the stitch type, **Stitch**, **Feed** or **Code**.
Stitch Length	Available when **Stitch Length** is selected. Select **less than 1 mm** or **Setting by User**. When you select **Setting by User**, input the minimum and maximum stitch lengths in the input boxes.

4. When the setting is completed, click the **OK** button.

    When the search is finished, all of the search results are displayed in red.

5. To display one of the search results, press the keyboard's ⬅ or ➡ key.

    To display the next search result, press the keyboard's ➡ key. To display the previous result, press the keyboard's ⬅ key.

    To select the currently displayed data, press the keyboard's **Enter** key.

3-5. Modifying

This section describes how to modify design elements.
Almost all the functions described here can be selected from the **Modify** drop-down menu.
The parenthesis following each title includes the name of the command on the drop-down
menu and/or the icon on the toolbar.

NOTE: If no design element is selected, almost all the commands on the **Modify** drop-down menu will
not be available. For details on selecting design elements, refer to " **3-2-7. Selecting &
editing design elements** " .

3-5-1. Changing feed data to stitch data, and vice versa

To change feed data to stitch data, and vice versa (Modify-Change Data Type, 🐦):

You can change any feed data to stitch data, and any stitch data to feed data. The data between
the selected point(s) to the next point(s) is converted.

1. Click **Select Point** on the **Shape** menu, or click the Select Point icon 🕊 on the toolbar.

   All stitch points are displayed. Stitch data is shown in solid lines, and feed data in dotted lines.

2. Select the point(s) of feed (or stitch) you want to convert to stitch (or feed) data.

3. Do one of the following:

   - On the **Modify** drop-down menu, click **Change Data Type** .

   - Click the Change Data Type icon 🐦 in the toolbar.

   *Selected data is converted. You can confirm that the conversion was successful by seeing how the
   data is displayed.*

3-5-2. Editing single points

PS-300B is provided with various ways of modifying single stitch and punch points on a
design element, for example, to add or split points at the desired positions, or to change a
rectangle to one with rounded corners.

To add a new point (Modify-Point-Add):

With the **Add** command, you can add a new point to the center position between the specified
and next points.

1. Using the **Select Point** tool 🕊 or **Select Punch Point** tool 🕊, select the point just before
   the position where you want to add a new point.

The selected point changes to a black circle.

> NOTE: The **Add** command is available only if a point that is not at the end of a design element is
> selected.

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Point**. On the **Point** sub-menu, click **Add**.

   - Right-click to display the context menu, and then click **Add**.

   A new point is added in the center position between the specified and next points.
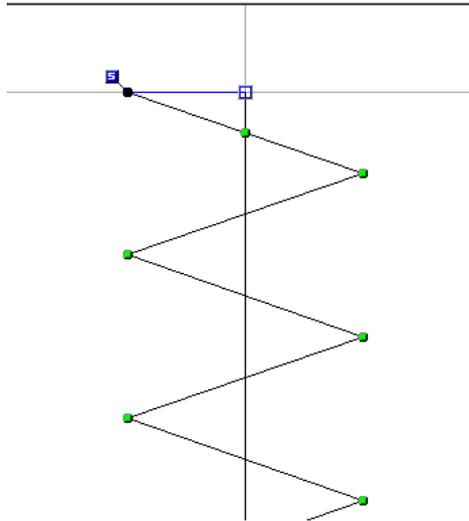
> NOTE: If you try to add a point on an arc, two other points are automatically added to both sides
> of the specified point to maintain the shape of the arc.
> You cannot add a point on a circle or an ellipse.

To separate a design element at a point (Modify-Point-Split,):

With the **Split** command, you can split a design element at individual points, allowing it to be
split or edited. This operation changes an open outline to two open outlines, and a closed
outline to an open outline.

1. Using the **Select Point** tool or **Select Punch Point** tool , select the point where you
   want to split the design element.

   The selected point changes to a black circle.

   > NOTE: The **Split** command is available only if a point that is not at the end of a design element is
   > selected.

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Point**. On the **Point** sub-menu, click **Split**.

- Click the Split icon 🔭 in the toolbar.

- Right-click to display the context menu, and then click **Split**.

Each design element can be moved separately.

NOTE: After splitting stitch data, stitches should be inserted to form securing stitching in order to prevent the stitching from unraveling. For details on inserting manual stitches, refer to "**3-2-3. Creating manual stitch and manual feed data**".
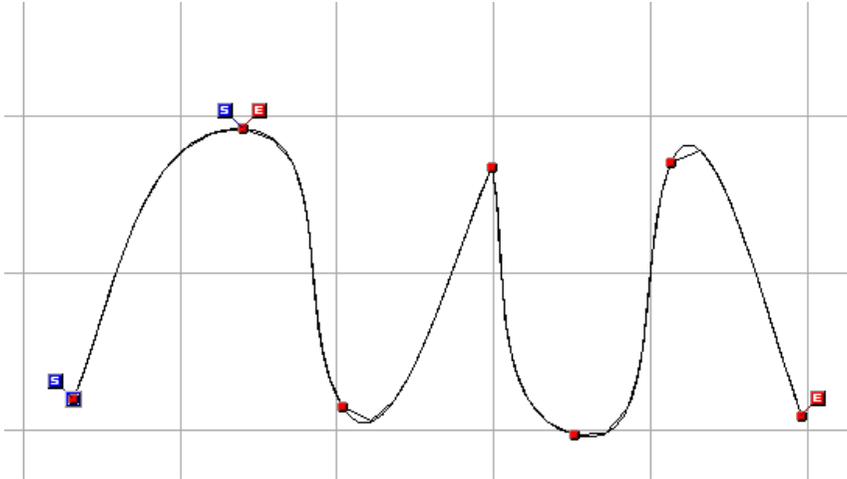
To connect design elements so that they are joined at a point (Modify-Point-Connect, 🔭):

The **Connect** command allows you to join two end (start) points of design elements (outline, manual stitch and manual feed data) allowing you to connect two design elements or close an open outline.

1. Using the **Select Point** tool 🔭 or **Select Punch Point** tool 🔭, select the point at the end of a design element that you want to connect to another point.

   The selected point changes to a black circle.

   NOTE: The **Connect** command is available only if a point at the end of a design element is selected.

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Point**. On the **Point** sub-menu, click **Connect**.

   - Click the Connect icon 🔭 in the toolbar.

   - Right-click to display the context menu, and then click **Connect**.

3. Click the point to which you want to connect the point selected in step 1.

   The two points are connected.

   NOTE: The shape of mouse pointer will be changed when the pointer is moved over a point at the end of a design element which can connect to the point selected in step 3.

You cannot connect a point on a closed outline to a separate design element.

When two punch points are connected, the property of the last-selected outline is applied to the new one.
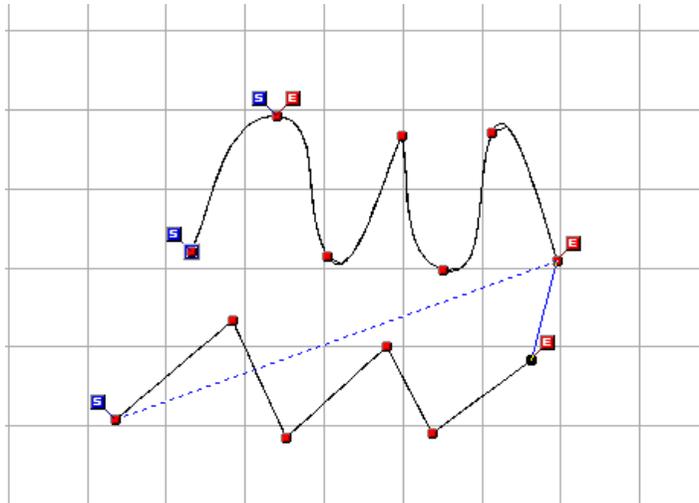
To smooth out a punch (corner) point (Modify-Point-Smooth, ⚡):

The **Smooth** command allows you to round off a punch (corner) point between two straight paths of an outline.

1. Using the **Select Punch Point** tool ⚡, select the punch point that you want to round off.

   The selected punch point changes to a black circle.

   NOTE: The **Smooth** command is available only when a punch point of an outline is selected.

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Point**. On the **Point** sub-menu, click **Smooth**.
   - Click the Smooth icon ⚡ in the toolbar.
   - Right-click to display the context menu, and then click **Smooth**.

   The two straight paths of an outline that meet at the punch point are smoothed out and the direction line that ends with the direction point appears. The direction of the curve can be adjusted by dragging the direction point to change the angle of the direction line.
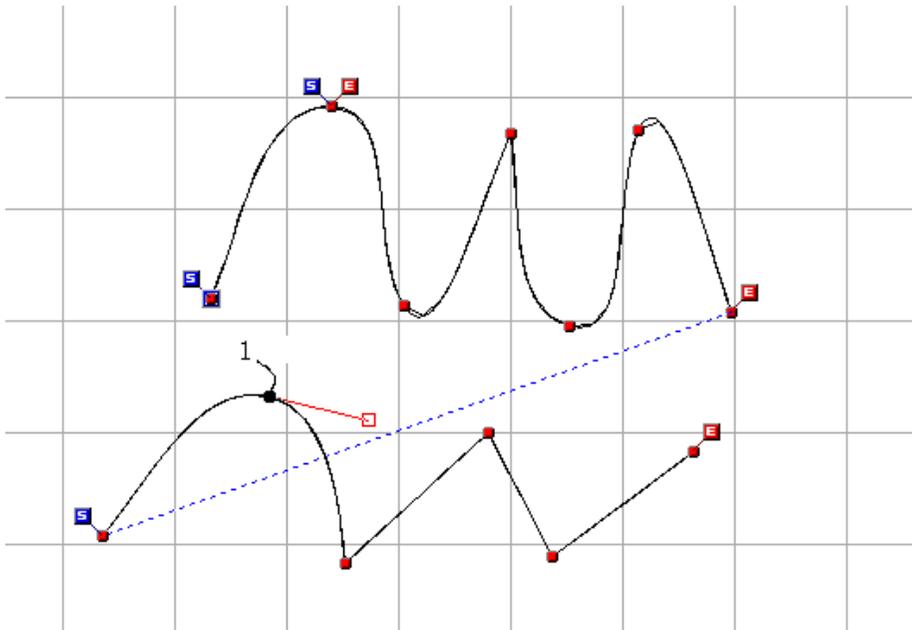
To straighten a smooth punch point (Modify-Point-Cusp, ⬹):

The **Cusp** command allows you to straighten a smooth punch point between two rounded paths of an outline.

1. Using the **Select Punch Point** tool ⬹, select the smooth punch point that you want to straighten.

    The selected punch point changes to a black circle.

    NOTE: The **Cusp** command is available only when a smooth punch point of an outline is selected.

2. Do one of the following:

    - On the **Modify** drop-down menu, click **Point**. On the **Point** sub-menu, click **Cusp**.
    - Click the Cusp icon ⬹ in the toolbar.
    - Right-click to display the context menu, and then click **Cusp**.

    The two rounded paths of outlines that meet at the smooth point are straightened out.
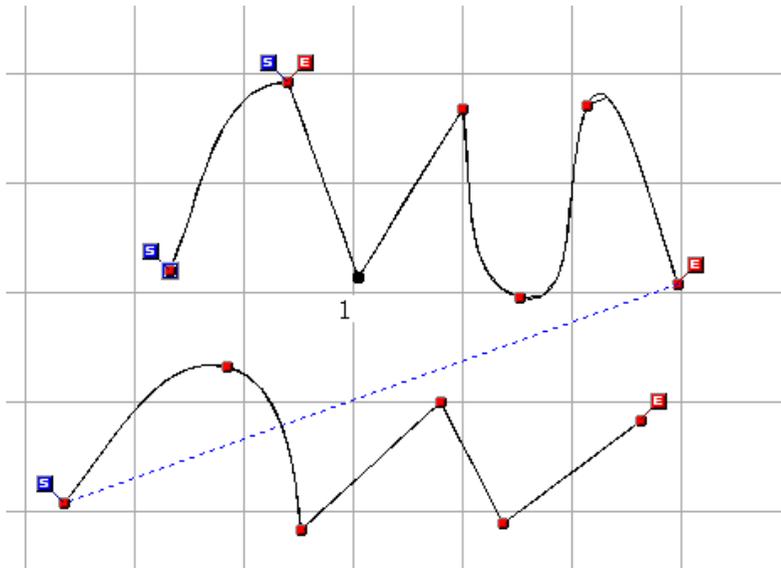
3-5-3. Resizing design elements

With the **Resize** command, the size of design elements can be enlarged or reduced to specific dimensions or to a percentage of the original size.
The design elements can also be enlarged or reduced manually.

To resize design elements (Modify-Resize, 🔃):

Design elements (outline, manual stitch and manual feed data) can be resized by inputting values.

1. Select one or more design elements.

    A selection frame of "dashes" appears around the element(s).

2. On the **Modify** drop-down menu, click **Resize** or click the resize icon in the toolbar.

    The Resize dialog box appears.
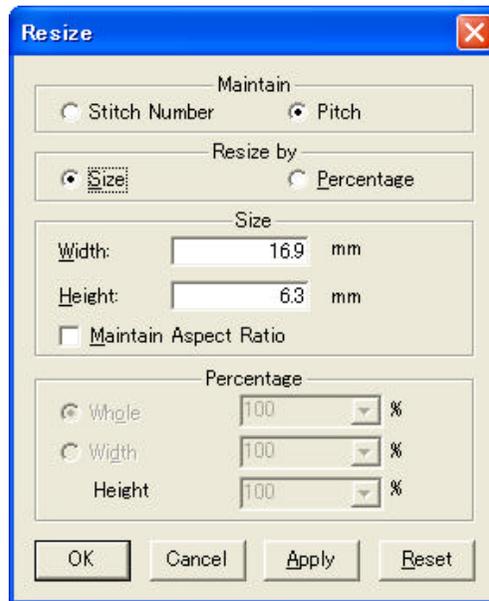
3. In the **Maintain** group box, select whether to keep the number of stitches (**Stitch Number**) or the pitch (**Pitch**) of the original data.

Item	Explanation
Stitch Number	Select this to keep the number of stitches. (The pitch will be changed.)
Pitch	Select this to keep the pitch. (Stitch generation will be done again.)

NOTE: If you resize a shape of manual stitch or manual feed, the stitch number will not change even when you select **Pitch**.

4. In the **Resize by** group box, select whether to resize the design eleme nts to a specific dimension (**Size**) or to a percentage of the original size (**Percentage**).

5 Do one of the following:

- If **Size** is selected, type the desired width in the **Width** input box and the desired height in the **Height** input box. To maintain the design elements' current height-to-width proportion, check the **Maintain Aspect Ratio** check box.

- If **Percentage** is selected, select **Whole** or **Width/Height**, then select the desired percentage.

Item	Explanation
Whole	Select this to resize both the width and height of the design elements, and select the desired percentage from the drop-down list, or input the desired percentage directly.
Width Height	Select this to resize the width and height of the design elements separately, and select the desired percentage for each from the drop-down lists, or input the desired percentage directly.

NOTE: To revert the settings in the **Resize** dialog box to the settings that were originally displayed, click the **Reset** button.

6. Click the **OK** button.

NOTE: To apply the new settings without closing the **Resize** dialog box, click the **Apply** button.

To resize design elements manually:

Design elements can also be enlarged or reduced manually. When one or more design elements are selected and the selection frame of "dashes" appears, handles (small squares) also appear on each corner and at the center of each side of the selection frame. By dragging each of these handles, you can enlarge or reduce the overall size of the design elements or make the elements longer or wider.

 NOTE: With this method, you can also resize imported images.

 NOTE: Using this method, the design elements will be resized while maintaining the pitch. To resize them while maintaining stitch number, hold down the keyboard's **Shift** key while dragging a handle.

3-5-4. Flipping design elements

The **Flip** command allows you to flip the selected design elements (outline, manual stitch, manual feed data) vertically or horizontally, or by using a reference line so that they appear as mirror images.

To flip design elements vertically or horizontally (Modify-Flip-Vertically/Horizontally,):

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Flip**. On the **Flip** sub-menu, click **Vertically** or **Horizontally**.

   - Click the Vertically icon or Horizontally icon in the toolbar.

To flip design elements by using a reference line (Modify-Flip-Reference Line,):

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

2. Do one of the following:

- On the **Modify** drop-down menu, click **Flip**. On the **Flip** sub-menu, click **Reference Line**.

- Click the Reference Line icon ⚞ in the toolbar.

3. Do one of the following:

   - Draw a reference line in the design area by clicking the desired two points.

   - Follow the next steps (a) to (d) to draw a reference line by inputting values in the **Input Point** dialog box.

     (a) Press any of the numeric keys on the keyboard to display the **Input Point** dialog box.

     (b) Input values in the **X** and **Y** input boxes to specify the absolute coordinates of the first point for the line, and then click the **OK** button.

     (c) Press any of the numeric keys on the keyboard to display the **Input Point** dialog box again.

     (d) Input value s to specify the end point for the line, and then click the **OK** button.

     NOTE: Refer to **How to use the Input Point dialog box** below for inputting.

How to use the Input Point dialog box

The items in the **Input Point** dialog box and their explanations are as follows.

| Item	Description
Relative Coordinate	When the **Relative Coordinate** check box is checked, values you input will be the relative distance from the previous point.
	When the check box is cleared, the absolute coordinate is applied and values you input will be the distance from the origin (0) of X-Y coordinates.
X(mm)/Y(mm)	Input values of the next point.
	X(mm): The horizontal distance
	Y(mm): The vertical distance
Angle (Degree(s)) /Length(mm)	Available when the **Relative Coordinate** check box is checked.
	You can specify the next point by inputting the angle and/or length of the reference line.
OK	Click this button to apply the values you have inputted in this dialog box and close the dialog box.

Cancel	Click this button to cancel the values you have inputted in this dialog box.

NOTE: The right side in horizontal direction is positive, the left negative; the upper part in the vertical direction is positive, the lower negative.

As for angles, the horizontal line (the X axis) indicates 0°, angles in the clockwise direction are 0 to 360°, and angles in the counterclockwise direction are 0 to -360°.

When you have made the settings that conflict, the PS-300B automatically applies the values in the following priority.

   1. X and Y-coordinates
   2. X-coordinate + Angle
   3. Y-coordinate + Angle
   4. Length + Angle
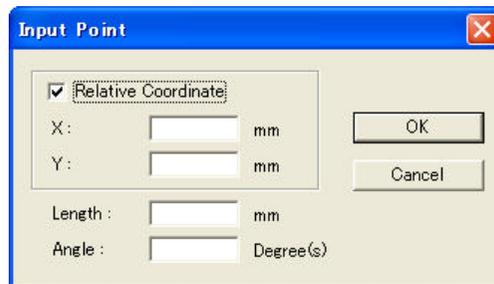
3-5-5. Rotating design elements

Design elements can be rotated in any direction by specifying the rotation angle. You can also rotate design elements by dragging the rotation handle (the square that extends from the selection frame around the selected elements).

To rotate design elements by specifying the rotation angle (Modify-Rotate):

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. On the **Modify** drop-down menu, click **Rotate**. On the **Rotate** sub-menu, do one of the following:

   ▪ To rotate the design element(s) clockwise, click the desired rotation angle, +**30°, +45°, +60°, +90°** or +**180°.**
   To rotate the design element(s) counterclockwise, click the desired rotation angle, **-30°, -45°, -60°, -90°** or **-180°.**

   ▪ To specify the rotation angle and direction for the design element(s), click **Other.**

The Rotate dialog box appears.
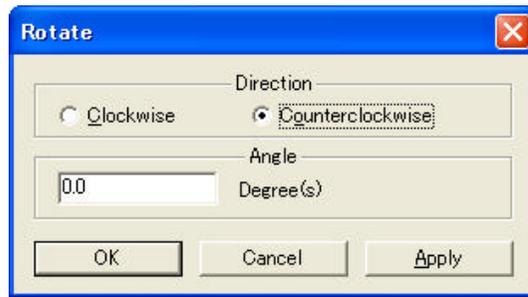
In the **Direction** group box, select the desired rotation direction, and in the **Angle**
group box, input the desired rotation angle. Then, click the **OK** button to apply the
specified settings.

NOTE: To apply the new settings without closing the **Rotate** dialog box, click the **Apply**
button.

To rotate design elements manually (Modify-Rotate By Drag, ↻):

You can rotate the selected design elements manually by dragging the rotation handle. The
center of rotation is fixed to the center of the selected design elements.

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Rotate By Drag**.

   - Click the Rotate By Drag icon ↻ in the toolbar.

*The center point of rotation is displayed in red at the center of the selected design elements, and
the rotation handle also appears in red on the circumference of the rotation circle.*
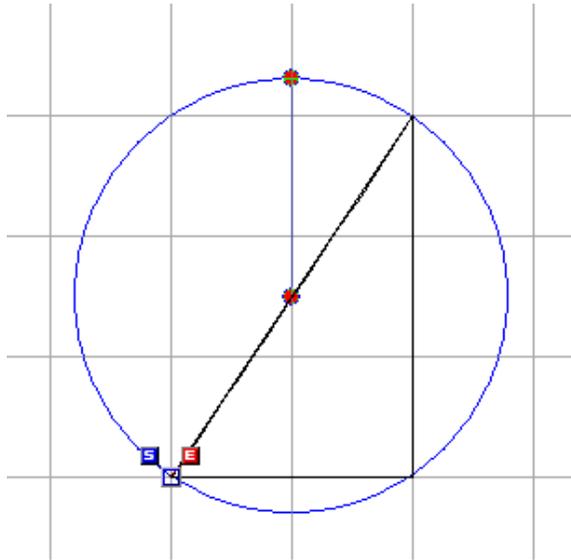
3. Drag the rotation handle until the design elements are rotated to the desired angle.

   The current rotation angle is shown near the center of the rotation.

   NOTE: To rotate the design elements in increments of 90 degrees, hold down the keyboard's **Shift** key while dragging the rotation handle.

   To rotate the design elements in increments of 15 degrees, hold down the keyboard's **Ctrl** key while dragging the rotation handle.

To rotate design elements manually by specifying the center of rotation (Modify-Rotate By Point, ⟳):

You can rotate the selected design elements manually by dragging the rotation handle. The center of rotation can be specified at the desired point in the design area.

1. Select one or more design elements.

   A selection frame of "dashes" appears around the element(s).

2. Do one of the following:

   ▪ On the **Modify** drop-down menu, click **Rotate By Point**.

   ▪ Click the Rotate By Point icon ⟳ in the toolbar.

3. Click the desired point in the design area where you want to set the center of rotation.

   The center point of rotation is displayed in red at the specified position, and the rotation handle also appears in red on the circumference of the rotation circle.
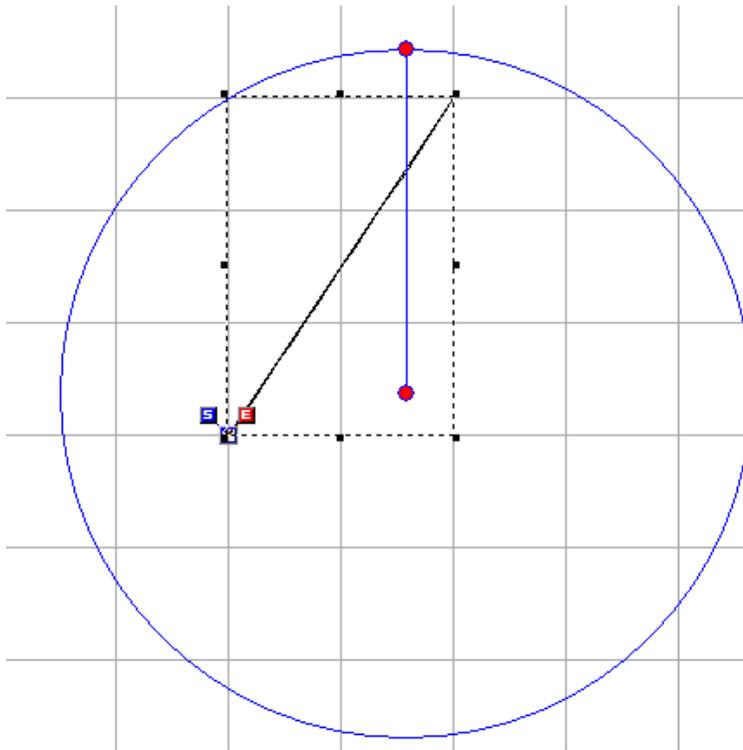
4. Drag the rotation handle until the design elements are rotated to the desired angle.

   The current rotation angle is shown in the dialog box.

   NOTE: To rotate the design elements in increments of 15 degrees, hold down the keyboard's
   Shift key while dragging the rotation handle.

3-5-6. Making an offset copy of the selected outlines

To make an offset copy of the selected outlines (Modify-Offset, ⬛):

With the **Offset** command, a copy of the selected outlines can be created with a specified offset.

1. Select one or more outlines.

   A selection frame of "dashes" appears around the outline(s).

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Offset**.

   - Click the Offset icon ⬛ in the toolbar.

   The Offset dialog box appears.

3. In the **Offset** group box, specify the conditions for creating a copy.

Item	Explanation
Maintain	**Pitch:** Select this to maintain the pitch of the original. (The number of stitches will be changed.) **Stitch Number:** Select this to maintain the number of stitches of the original. (Stitch pitch will be changed.)
Offset	Select **Left (In)** to create a copy on the left of the creating direction, or **Right (Out)** to create a copy on the right of the creating direction. Input the desired offset value (mm) in the input box.

4. Click the **OK** button when the setting in the **Offset** group box is completed.

   The copy of the specified settings is automatically created.

   NOTE: The original outlines are not deleted.

3-5-7. Making a copy of design elements at the specified position

You can make a copy of the desired design elements (outline, manual stitch, manual feed data) at the specified position.

To make a copy of design elements (Modify-Copy To, ⬜):

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Copy To**.

   - Click the Copy To icon ⬜ in the toolbar.
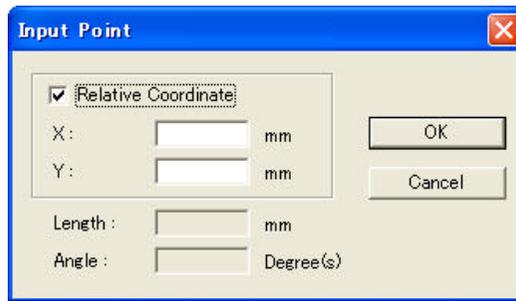
   The Input Point dialog box appears.

Input Point

☑ Relative Coordinate

X: [   ] mm

Y: [   ] mm

Length: [   ] mm

Angle: [   ] Degree(s)

OK

Cancel

3. Do any of the following:

  - Check the **Relative Coordinate** check box to position the copy using the original position as the base of relative coordinates.
    Clear the **Relative Coordinate** check box to position the copy using absolute coordinates. (Base point: X=0, Y=0)

  - Input values in the X and Y input boxes to specify the position of the copy.

4. Click the **OK** button.

   The selected design elements are copied and positioned at the specified position.

NOTE: Refer to **How to use the Input Point dialog box** if necessary.

To make a symmetrical copy of design elements (Modify-Mirror Copy, 🔳):

You can duplicate the desired design elements symmetrically by specifying a reference line (mirror axis).

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. Do one of the following:

  - On the **Modify** drop-down menu, click **Mirror Copy**.

  - Click the Mirror Copy icon 🔳 in the toolbar.

3. Do one of the following:

  - Draw a mirror axis in the design area by clicking the desired two points.

  - Follow the next steps (a) to (d) to draw a mirror axis by inputting values in the **Input Point** dialog box.

    (a) Press any of the numeric keys on the keyboard to display the **Input Point** dialog box.

(b) Input values in the **X** and **Y** input boxes to specify the absolute coordinates of the start point for the mirror axis, and then click the **OK** button.

(c) Press any of the numeric keys on the keyboard to display the **Input Point** dialog box again.

(d) Input values to specify the end point for the mirror axis, and then click the **OK** button.

A symmetrical copy of the design elements is created on the basis of the mirror axis.

NOTE: Refer to **How to use the Input Point dialog box** for inputting values.

3-5-8. Moving design elements to the specified position

You can move the desired design elements to the specified position.

To move design element(s) (Modify-Move To, ⊕):

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. Do one of the following:

   - On the **Modify** drop-down menu, click **Move To**.
   - Click the Move To icon ⊕ in the toolbar.

   The Input Point dialog box appears.

3. Do any of the following:

   - Check the **Relative Coordinate** check box to move using the current position as the base of relative coordinates.
     Clear the **Relative Coordinate** check box to move using absolute coordinates. (Base point: X=0, Y=0)
   - Input values in the X and Y input boxes to specify the position where the design elements are to be moved.

4. Click the **OK** button.

   The design elements are moved to the specified position.

NOTE: Refer to **How to use the Input Point dialog box** if necessary.

To move design element(s) by aligning a specified point to another (Modify-Pivot,):

You can move one or more design elements by aligning the specified point on them with another point.

1. Select one or more design elements you want to move.

   A selection frame of "dashes" appears around the element(s).

2. Do one of the following:

   ◾ On the **Modify** drop-down menu, click **Pivot**.

   ◾ Click the Pivot icon in the toolbar.

   The stitch points of all design elements are shown, and the shape of the pointer changes

   to .

3. Click to select a point (on the selected design elements) you want to move.

   The selected point turns black.

4. Click a point (on a design element not selected) to which you want to align the point specified in step 3.

   The selected design elements move so that the specified two points are overlapped.

   NOTE: The specified two points are simply overlapped, and not connected.

   ### To specify the point by inputting values:
   Press any of the numeric keys on the keyboard to display the **Input Point** dialog box.
   In the dialog box, input the coordinates of the position where you want to move the point specified in step 3, and then click the **OK** button.

   * Check the **Relative Coordinate** check box to move the point using the current position as the base of relative coordinates.

   Clear the **Relative Coordinate** check box to move the point using absolute coordinates. (Base point: X=0, Y=0)

   The design elements are moved to the specified position.

3-5-9. Reversing the sewing direction of design elements

The **Swap Start/End Point** command reverses the sewing direction of the selected design elements, in other words, the positions of the start and end points are switched.

To reverse the sewing direction of design elements (Modify-Swap Start/End Point, ⚒):

To reverse the sewing direction of the selected design elements:

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. Do one of the following:

   ▪ On the **Modify** drop-down menu, click **Swap Start/End Point**.

   ▪ Click the Swap Start/End Point icon ⚒ in the toolbar.

   ▪ Right-click to display the context menu, and then click **Swap Start/End Point**.

   The start and end points of the selected design element(s) are switched.

NOTE: If no design element is selected in step 1, the sewing direction of all the design elements in the design area is reversed.

This command will not reverse the **Tack Method** for the start and end points set in **Property** on the **View** drop-down menu. This means the tack methods for the start and end points are exchanged.

3-5-10. Aligning design elements

Use the commands on the **Alignment** sub-menu to align design elements.

To align design elements (Modify-Alignment-"sub-menu"):

1. Select one or more design elements.

   A selection frame of "dashes" appears around the design element(s).

2. On the **Modify** drop-down menu, click **Alignment**. On the **Alignment** sub-menu, click the desired command.

   Refer to the table below for details on the sub-menu commands and their functions.

Sub-menu command	Function
Align To Left	Aligns the two or more design elements on the left side of the selection frame.
Align To Right	Aligns the two or more design elements on the right side of the selection frame.
Align To Top	Aligns the two or more design elements on the top edge of the selection frame.
Align To Bottom	Aligns the two or more design elements on the bottom edge of the

	selection frame.
Align To Center	Aligns the two or more design elements on the center of the selection frame.
Align To Sewing Area Center	Aligns the center of the selected design element(s) with the center of the sewing area.
	NOTE: Select a machine model in **Machine Model Setting** on the **Tool** drop-down menu to use this command.
Align To The Origin Of The Coordinate	Aligns the center of the selected design element(s) with the origin of the design area's X-Y coordinates.

NOTE: **Align To The Origin Of The Coordinate** can also be selected by clicking the icon in the toolbar.

Align To Sewing Area Center can also be selected by clicking the icon in the toolbar. Moreover, these two commands can be selected on the context menu that appears when right-clicking.

3-6. Stitch

Stitch data is automatically generated when drawing outlines. The original outline data remains after stitch data is generated.

This section describes how to generate stitch data from the selected outline data, and to clear stitch data or outline data.

Almost all the functions described here can be selected from the **Stitch** drop-down menu. The parenthesis following each title includes the name of the command on the drop-down menu and/or the icon on the toolbar.

3-6-1. Generating stitch data manually

By default, stitch data is automatically generated as you draw outlines. You can clear the stitch data and regenerate it.

To generate stitch data for the selected outline data (Stitch-Generate Select,):

1. Using the **Select** tool , select one or more outlines.

   A selection frame of "dashes" appears around the outline(s).

   NOTE: This command is available only for outlines with no stitch data.

2. Do one of the following:

   - On the **Stitch** drop-down menu, click **Generate Select**.

   - Click the Generate Select icon in the toolbar.

3-6-2. Clearing stitch data or outline data

To clear stitch data for the selected outline data (Stitch-Clear Stitch,):

1. Using the **Select** tool , select one or more outlines.

   A selection frame of "dashes" appears around the outline(s).

   NOTE: This command is available only for outlines that have stitch data.

2. Do one of the following:

   - On the **Stitch** drop-down menu, click **Clear Stitch**.

   - Click the Clear Stitch icon in the toolbar.

To clear the selected outline data (Stitch-Clear Outline,):

1. Using the **Select** tool ![icon], select one or more outlines.

   A selection frame of "dashes" appears around the element(s).

   NOTE: This command is available only for outlines that have stitch data

2. Do one of the following:

   ▪ On the **Stitch** drop-down menu, click **Clear Outline**.

   ▪ Click the Clear Outline icon ![icon] in the toolbar.

   The property of the outlines is removed when outlines are cleared and only stitches remain.

3-7. Tools

This section describes various settings and tools useful for creating design elements for sewing data.
Almost all the functions described here can be selected from the **Tools** drop-down menu. The parenthesis following each title includes the name of the command on the drop-down menu and/or the icon on the toolbar.

3-7-1. Viewing a simulation of sewing data

Use the **Slow Draw** command to view a simulation of the sewing data in order to check for any possible problems.

To view a simulation of sewing data (Tools-Slow Draw,):

1. Do one of the following:

   - On the **Tools** drop-down menu, click **Slow Draw**.

   - Click the Slow Draw icon in the toolbar.

     The Slow Draw dialog box appears.
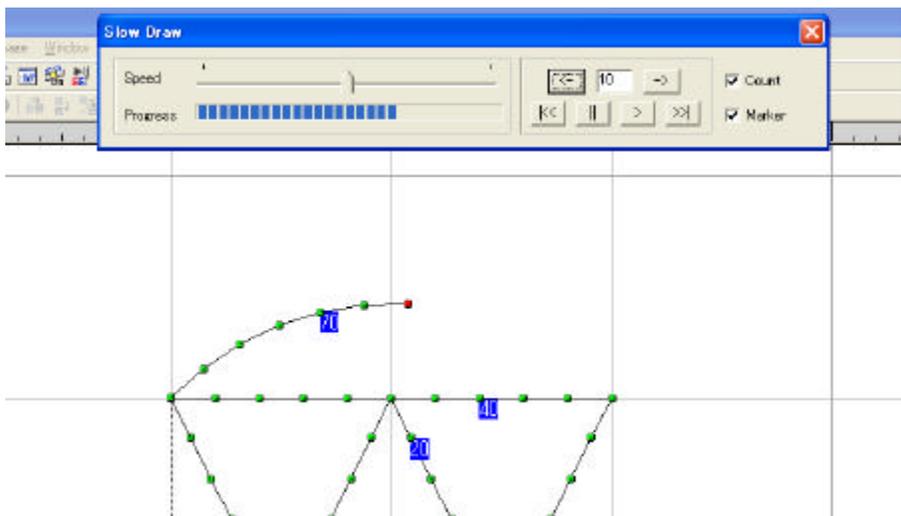
2. Use the items in the **Slow Draw** dialog box to perform a simulation.

   Refer to the table below for details on the items and their functions in the Slow Draw dialog box.

Item	Description
Speed slider	Move this **Speed** slider to adjust the drawing speed. Click on the bar, or drag and drop the slider tab to obtain the desired speed.
Progress bar	Shows the progress of the drawing.

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Play $\boxed{>}$	Click this to begin drawing all of the sewing data.
Pause $\boxed{\|}$	Click this to pause the drawing of sewing data.
Home $\boxed{K<}$	Click this to locate the start of sewing data.
End $\boxed{>>|}$	Click this to locate the end of sewing data.
Forward $\boxed{->}$ Back $\boxed{<-}$ input box	Click $\boxed{->}$ to skip in the forward direction the number of stitch points specified in the input box. Click $\boxed{<-}$ to skip in the reverse direction the number of stitch points specified in the input box. Input the desired value in the input box. (Default: 1)
Count	Check the **Count** check box to see how many stitch points are created. They are counted in tens.
Marker	Check the **Marker** check box to show the stitch points while drawing. If the check box is cleared, only the outlines are shown.

3. Click the close (**X**) check box to close the **Slow Draw** dialog box.

3-7-2. Measuring the distance between two points

The **Measure** tool allows you to measure the distance between two points.

### To measure the distance between two points (Tools-Measure, ✐):

1. Do one of the following:

   - On the **Tools** drop-down menu, click **Measure**.

   - Click the Measure icon ✐ in the toolbar.

     When the pointer is moved into the design area, its shape changes to $+_{\diagdown}$.

2. Click in the design area to specify the desired location for the start point (1 in the figure below).

   The appeared textbox shows the distance (the length and relative coordinate) from the start point to the pointer.

3. Click to specify the desired location for the end point (2 in the figure below).

16.08mm (X = 15.90mm, Y = -2.43mm)
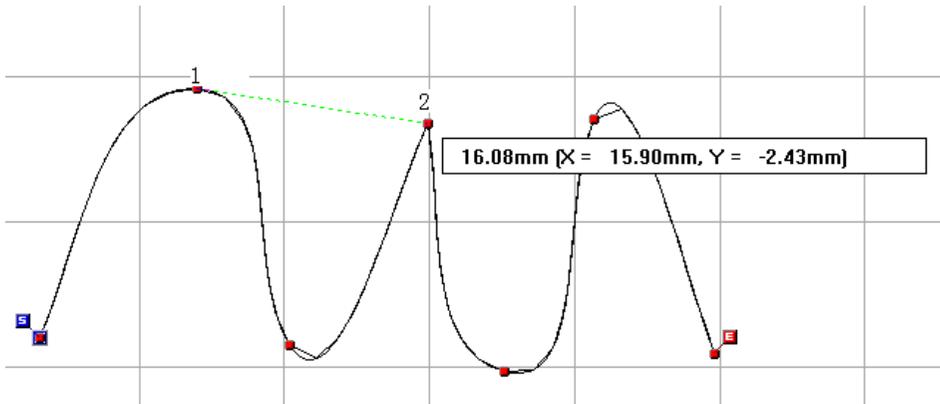
NOTE:

- To continue measuring from the end point of the previous measurement, click again to quit the previous measurement, and then click the same point once more as the start point for the next measurement.

- If **Snap Setting** on the **View** menu is active, the **Measure** tool snaps to the specified target (except the gridlines).

- To quit using the **Measure** tool, right-click once. If no design element has been measured, it will quit directly. If a design element has been measured, click **Cancel** on the context menu.

To change the size of the design elements:

You can change the size of all the design elements in the design area with the **Measure** tool.

1. After specifying the end point with the **Measure** tool, right-click once, and then click **Resize** on the context menu.

    The Resize dialog box appears and shows the current length measured.
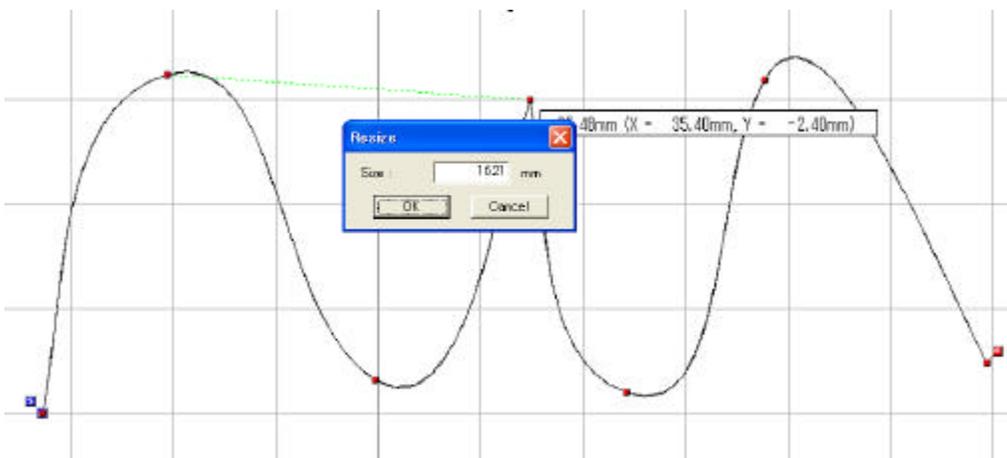
2. Type in the desired length, and then click the **OK** button.

    A message dialog box appears.

3. Click the **OK** button to perform resizing all the design elements.

All the design elements in the design area are enlarged or reduced in accordance with the ratio of the current and desired lengths.

3-7-3. Setting the space and color of gridlines

You can change the space and color of the gridlines in the **Gridline Setting** dialog box.

To change the space and color of gridlines (Tools-Gridline Setting):

1. Do one of the following:

   - On the **Tools** drop-down menu, click **Gridline Setting**.

   - Right-click to display the context menu, and then click **Gridline Setting**.

   The Gridlines Setting dialog box appears.
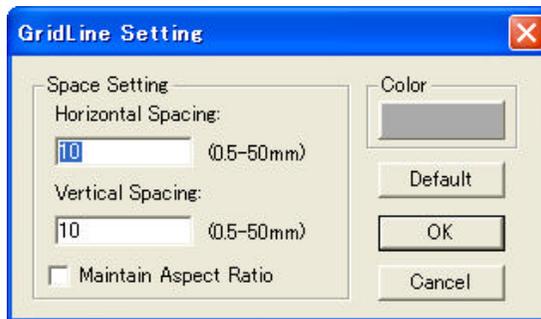
2. Make the following settings in the **Gridline Setting** dialog box.

   To change the color of the gridlines:

   (1) Click **Color**.

   The Color dialog box appears.

   (2) Do one of the following:

   - Select the desired color from the **Basic colors** or **Custom colors** list, and then click the **OK** button.

   - To add a new color in the **Custom colors** list, click the **Custom Color** button.

   The Color dialog box changes as follows.

   Either click inside the color spectrum and move the luminosity pointer, or type values in the Hue, Sat (saturation), Lum (luminosity), Red, Green and Blue boxes, and then click the **Add to Custom Colors** button.

To change the space of the gridlines:

- To change the horizontal interval of the gridlines, type the desired width (in millimeters or inches) in the **Horizontal Spacing** input box. (Setting range: 0.5 to 50 mm, default: 10 mm)

- To change the vertical interval of the gridlines, type the desired width (in millimeters or inches) in the **Vertical Spacing** input box. (Setting range: 0.5 to 50 mm, default: 10 mm)

- To maintain the same horizontal and vertical distances in the gridlines, check the **Maintain Aspect Ratio** check box.

3. Click the **OK** button to apply the settings you made and close this dialog box.

   NOTE: Click the **Cancel** button to cancel the settings you made and close this dialog box.

   Click the Default button to revert all the settings to the software defaults.

## 3-7-4. Specifying various default settings of PS-300B

You can specify various default settings of PS-300B, for example the maximum and minimum stitch lengths.

To change default settings (Tools-Option Setting, 🛠, Ctrl+T):

1. Do one of the following:

   - On the **Tools** drop-down menu, click **Option Setting**.

   - Click the Option button 🛠 in the toolbar.

- Right-click to display the context menu, and then click **Option Setting**.
- On the keyboard, while holding down the **Ctrl** key, press the **T** key.

The Option Setting dialog box appears.
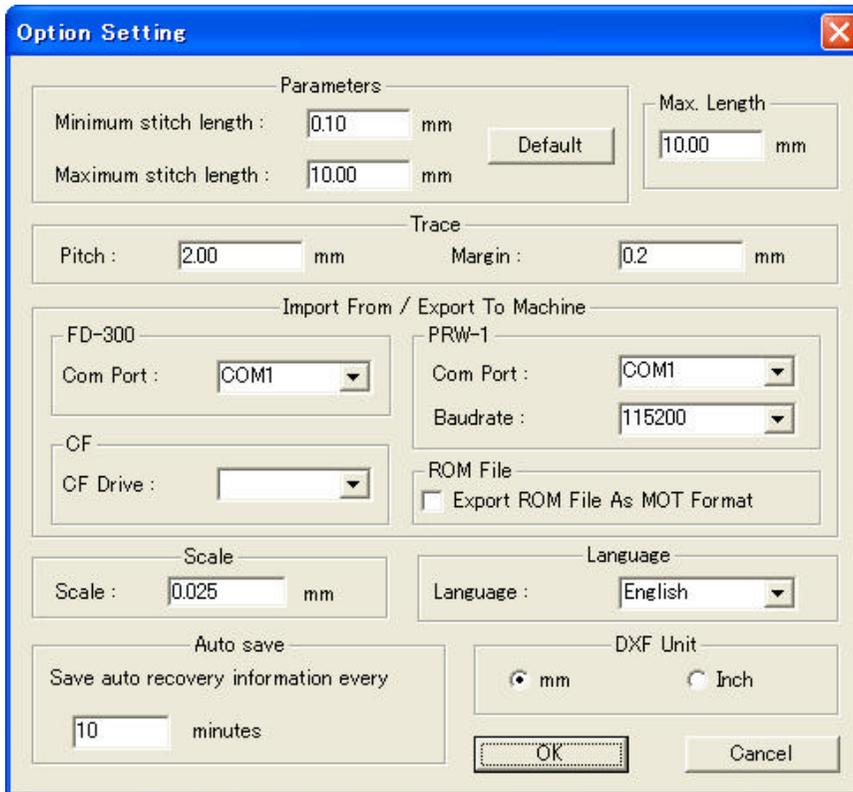
2. Change the default setting for each item in the **Option Setting** dialog box.

Refer to the table below for details on the items and their functions.

Item	Description
Parameters	**Minimum stitch length**: Type the desired value in the input box to change the minimum stitch length. [Setting range: 0.05 to 12.7 mm, software default: 0.05 mm. (If a machine model is specified, the setting range and the default value will change according to the model's setting.)] **Maximum stitch length**: Type the desired value in the input box to change the maximum stitch length. [Setting range: 0.05 to 12.7 mm, software default: 12.7 mm. (If a machine model is specified, the setting range and the default value will change according to the model's setting.)] **Default**: Click this button to revert the settings to the software defaults.
Max. Length	Specify the maximum length of the interval between stitch data. This is available when **Stitch** is selected for connecting data in the **Property**

	. NOTE: If the connection length exceeds the maximum stitch length, it will be automatically changed to a feed. (Software default: the maximum stitch length)
Trace	Specify the settings for the **Trace** tool. **Pitch:** Type the desired value in the box to change the pitch for manual stitches created with the **Trace** tool. (Setting range: 0.05 to 12.7 mm, software default: 0.2 mm) **Margin:** Type the desired value in the box to change the precision for tracing with the **Trace** tool. (Setting range: 0.0 to 1.0, software default: 0.2 mm) NOTE: If the trace pitch is less than 2.0 mm, the setting range will be 0.0 to half of the pitch.
Import From /Export To Machine	Specify settings for floppy disk drive FD-300, ROM writer PRW-1, and the drive for CF card writer. **FD-300 Com Port:** Select the desired COM port for floppy disk drive FD300 from the Com Port list box. **CF Drive:** Select the drive connecting with the CF (Compact Flash) writer from the CF Drive list box. (The A and C drives cannot be selected.) **PRW-1(SW-1) Com Port:** Select the desired COM port for ROM writer PRW-1 from the Com Port list box. **PRW-1(SW-1) Baudrate:** Select the desired baud rate for ROM writer PRW-1 from the Baudrate list box. (Software default: 115200 bps) **ROM File:** Check this box to convert a ROM file in the MOT format when exporting it to a ROM writer, so that you can write the ROM file to a ROM writer which is not the PRW-1. NOTE: To find the COM port, click the Windows' Start button, and then click Control Panel. In Control Panel, double-click the System icon, click the Hardware tab, and then click the Device Manager button. In the Device Manager dialog box, click a plus sign to the left of Ports (COM & LPT), and then check the COM port number of the floppy disk drive (FD-300) and the ROM writer (PRW-1(SW-1)).
Scale	Set the resolution for displaying the design area. [Setting range: 0.005 to 0.05 mm, software default: 0.025 mm (This means

	the length of 1 coordinate is 0.025 mm.)] If the selected machine model's sewing area is small, it is recommended that this value be reduced.
Language	Select the language used in menus and dialog boxes. The change will be applied when starting PS-300B the next time.
Auto Save	The current design is automatically saved. Type in the time interval at which the data is automatically saved. (Setting range: 0 to 30 minutes, software default: 10 minutes. If you set it to 0, the current design will not be automatically saved.)
DXF Unit	Select the unit (**mm** or **Inch**) to scale the DXF file you will import.

3. Click the **OK** button to apply the settings you made and close this dialog box.

    NOTE: Click the **Cancel** button to cancel the settings you made and close this dialog box.

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3-7-5. Specifying a sewing machine model

You can specify the sewing machine model that you are creating a design for. Then you can put its sewing area frame on the design area after applying some attributes to it.

To specify a sewing machine model and make settings for its sewing area (Tools-Machine Model Setting, 🖼, Ctrl+M):

1. Do one of the following:

    - On the **Tools** drop-down menu, click **Machine Model Setting**.

    - Select the Machine Model Setting icon 🖼 in the toolbar**.**

    - On the keyboard, while holding down the **Ctrl** key, press the **M** key.

    - Right-click to display the context menu, and then click **Machine Model Setting**.

    The Machine Model Setting dialog box appears.
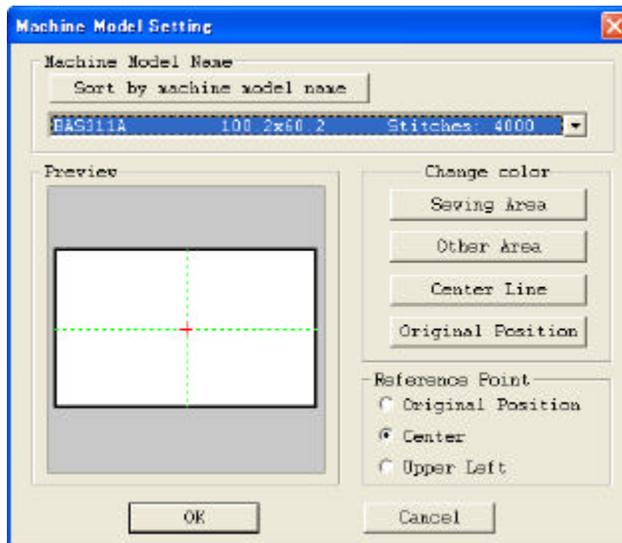
2. Select the sewing machine model that you are creating a design for, and make settings for its sewing area in the Machine Model Setting dialog box.

Refer to the table below for details on the items and their functions.

Item	**Description**
Machine Model Name	Select a sewing machine model from the drop-down list. ■ The list shows the model names for sewing machines that are applicable to PS-300B. ■ The size of sewing area and the maximum number of stitches for the model are also shown on the right of the model name.
Sort by machine model name	If select the sewing machine model from the drop-down list, the selected model name will come to the top of the list. Click this button to sort the model name list by machine model name.
Preview	Shows how the selected model's sewing area and the design area will appear.
Change color	Change the colors for the following elements. For creating a custom color, refer to **To change the color of the gridlines**. **Sewing Area:** Press this to change the color of the sewing area. **Other Area:** Press this to change the color of the design area except the sewing area. **Center Line:** Press this to change the color of the sewing area's center line. **Original Position:** Press this to change the machine's original position.
Reference Point	Specify the reference point for positioning the sewing area frame in the design area. Select from the following. (Default: Center. Only for the model B800E, the default is Original

	position.)
	Original Position:
	The machine's original position.
	Center:
	The center position of the sewing area
	Upper Left:
	The upper left corner of the sewing area

3. Click the **OK** button to apply the specified settings.

4. Specify the position of the sewing area

   The sewing area frame appears and the pointer is set on the selected reference point.

   NOTE: If the frame does not appear, scroll the mouse wheel to reduce the view size of the design area, then move the pointer to check if the frame appears.

   NOTE: If the machine model B856E, ZE856A or ZE8580 is selected, the frame will not appear.

   To specify the frame position correctly, follow one of the methods below.

Method	Result
Hold down the keyboard's **Shift** key.	**When there is no design element in the design area:** The frame reference point will be shifted to the X and Y origins of the coordinates. **When there is design element(s) in the design area:** The frame reference point will be shifted to the center of the element(s) you are currently edited.
Hold down the keyboard's **Ctrl** key.	**When there is no design element in the design area:** The frame reference point will be shifted to the X and Y origins of the coordinates. **When there is design element(s) in the design area:** The frame reference point will be shifted to the sewing start point of the element(s).
Press any of the numeric keys on the keyboard.	The **Input Point** dialog box appears. Input values of the X-Y coordinates where the frame reference point is to be shifted. NOTE: When there is another frame in the design area, the **Relative Coordinate** check box will be available. Check this box to specify X-Y coordinates of the relative distance from the reference point of another frame.

5. Click on the desired position.

   The sewing area frame is fixed to the position.

   NOTE: Once the frame is pasted on the design area, it can be repositioned by clicking on it. At this time, the **Relative Coordinate** check box in the **Input Point** dialog box will be

available. If the **Relative Coordinate** check box is checked, the inputted value will be the distance from the current frame center.

3-8. Image

You can import an image file that you want to trace, and edit(move ,resize) it for creating a design element.

To import an image from a file (Image-Import From File, 🖼️):

1. Do one of the following:

   - On the **Image** drop-down menu, click **Import From File**.

   - Click the Import From File icon 🖼️ in the toolbar.

     The Open dialog box appears.
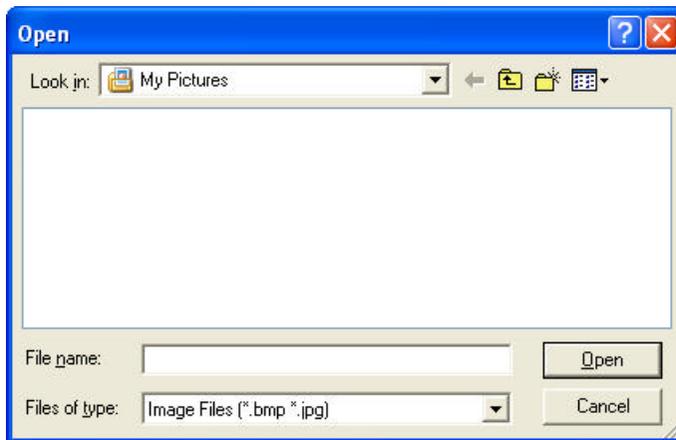
2. In the **Files of type** drop-down list, select the format for the image file that you want to import.
   The formats supported by PS-300B are BMP and JPG.

3. In the **Look in** drop-down list and the list below it, select the folder containing the desired file, and then select the image file that you want to use.

4. Click the **Open** button.

   The selected image is added to the design area. (The image is placed at the center of the current view if no sewing area of a specified machine is displayed in the design area. When the sewing area of a specified machine is displayed, the image will be placed at the sewing area's center.)

NOTE:

- The imported image can be moved, deleted, and resized.

- The **Undo** and **Redo** commands on the **Edit** menu are available for editing the image. The **Resize** commands on the **Modify** menu is available for resize the image.

- The imported image is not displayed if the check box for "Image" is not checked in the **Show/Hide** dialog box on the **View** menu.

- If you save a file you have created with an image imported, the image will be displayed again the next time you open the file.

3-9. Window

With the **Window** menu, you can display two or more design windows in the following manners.

To open a new design window (Window-New Window):

On the **Window** drop-down menu, click **New Window**.

To cascade all design windows (Window-Cascade):

On the **Window** drop-down menu, click **Cascade**.

To arrange all design windows in a tile arrangement (Window-Tile):

On the **Window** drop-down menu, click **Tile**.

To select a design window from the list of the currently open files

A list at the bottom of the **Window** drop-down menu shows the names of all windows that are open. Click the name of the window you want to display.

3-10. Help

With the **Help** menu, you can display the online Help and the information on the version of PS-300B.

To start up the online Help feature (Help-Help, 🕐):

Do one of the following:

- On the **Help** drop-down menu, click **Help**.
- Click the Help icon 🕐 in the toolbar.

The online Help starts.

To display the information on the version of PS-300B (Help-About PS-300B):

On the **Help** drop-down menu, click **About PS-300B**.

A dialog box containing information about the version of this application appears.