MITSUBISHI ELECTRIC

Industrial Sewing Machine

MODEL

PTN-JX

OPERATION MANUAL

Software for creating sewing data

Contents

1. Recommended environment for PTN-JX software

Items	Specifications
OS	Windows® 7 SP1 (32/64bit version) Windows® 8 / 8.1 (32/64bit version) Windows® 10 (32/64bit version)
CPU	1.5GHz or higher 32bit(x86) or 64bit(x64) processor
System memory	32bit version : 1GB or more 64bit version : 2GB or more
Hard drive	32bit version : At least 16GB available space 64bit version : At least 20GB available space
Display	1024 x 768 or higher resolution

Peripheral devices	CD-ROM drive (for installing the software)
	 USB port (used 1 port for a copy protect key /
	       used 1 port for a sewing data medium for electronic sewing machine /
	       used 1 port for connecting PC and electronic sewing machine)

*Sufficient specifications of CPU, system memory and hard drive are different by data size to process.

*It needs high performance PC to use it more comfortably.

2. Protect key

To use PTN-JX software, the attached protect key must be connected to USB port. Please read the following instructions to familiarize yourself with proper use of the protect key.

2-1. Protect key driver

Please note that the protect key driver (Sentinel System Driver) is automatically installed when the PTN-JX software is set up. Set it up at the time of the first running of the PTN-JX software. Follow the instruction messages of the setup program displayed.

[Caution!] Do not connect the protect key until the setup of the protect key driver is completed.

2-2. Precautions for use and restrictions

Restrictions on connection

The maximum number of connectable units conforms to the USB specifications.

In the kind of USB units, there is a product that receives power from a USB port. If such units are used together with the protect key via a USB-HUB, each USB unit consumes the power supplied. Depending on the specifications of the USB units or if many units are connected, the number of units to be connected or the specifications of the USB-HUB (self-power type, bus power type) to be used.

3. Setting up the PTN-JX software

(1) **If an older version of PTN-JX/GX is already setup, uninstall it.**

   To uninstall, use "Programs Features" found in the "Control Panel".

(2) Before starting setup, exit all other software applications running.

(3) Insert the setup CD in the CD-ROM drive.

(4) The web browser automatically opens and it displays "Language selection" window. Click the language you want to set up (English/Japanese/Chinese (Simplified)).

   *If "Language selection" window does not open, display files in the CD-ROM using Explorer, and double-click "start.html".

(5) Click "PTN-JX/PTN-GX". Then, the install starts.

   (To view the manual, click "PTN-JX manual (pdf file).")

   *If does not start the installation, please click "setup_**.exe" in CD-ROM and Install. ("**" depends on language.)

(6) If the web browser displays the warning message, allow the execution.

(7) If the file download window was displayed, click "Run" button.

(8) If the security warning window was displayed, click "Run" button.

(9) If the message to reboot the PC while installing it is displayed, click "Yes" button. After PC is rebooted, it returns to (3) and install again.

(10) If the message to install ".Net Framework 4.6.2" while installing it is displayed, click "Install" button and install it.

* If using PC offline (not connect to network) and not enough Windows Update, ".Net Framework 4.6.2" may not be installed. In such a case, it use PC online (connect to network) and execute Windows Update, or read the following home page to solve the problem.

   [Windown7 SP1] (Please do "Method 4" or "Method 5" of the following home page)
   <https://support.microsoft.com/en-us/help/3149737/
   known-issue-for-security-update-3136000-for-the--net-framework-4-6-1-4>

[Windows8.1] (Please update security of the following home page)
  <https://support.microsoft.com/en-us/help/2919442/
        march-2014-servicing-stack-update-for-windows-8-1-and-windows-server-2>
  <https://support.microsoft.com/en-us/help/2919355/
        windows-rt-8-1--windows-8-1--and-windows-server-2012-r2-update-april-2>

(11) If the message to install "Visual C++® 2008 / 2017 Runtime Libraries" while installing it is
   displayed, click "Install" button and install it.

(12) Please read the "Software License Agreement" after the "License Agreement" screen will open.
   If you agree with the terms of use, please check the item "I Agree" and click on "Next Check ".
   (If you don't agree with the terms of use, can't continue installation.)

(13) Finish the installation by instructions of computer.

4. Starting

(1) Insert the protect key to USB port on the PC.

(2) Double-click the "PTN" shortcut ( ) that is on the desktop.

(3) Click ( ) button.

- The PTN-JX software starts. -

* If check "Do not display next time", displaying the dialog is omitted.
  If want to display it again, double-click the shortcut by pressing the "Ctrl" key.

Notes

Please make the following settings depending on the type of Windows operating system before using.

Please open "Control Panel" ( ), and confirm that "Decimal symbol" setting of

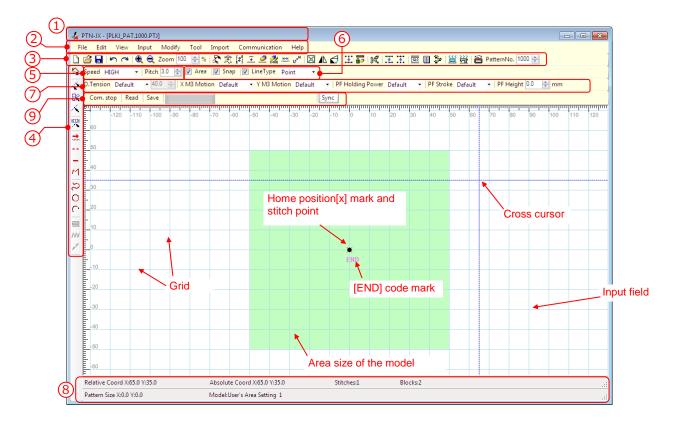**the "Region and Language" ( ) is ".(period)".**

If the setting is not period, it causes the following problems.

- The run-time error (No.13) might be displayed while converting DXF file.
- The numerical value might not be normally displayed such as "Stitch List".

5. Explanation of main screen

Part names

①Title bar

This displays the software name "PTN-JX" and name of sewing data that is being edited now.

②Menu bar

Menu list

File	Edit	Input
New	Undo	Return
Open	Redo	Feed
Close	Selection Range	Point
Save	Selection Parts	Linear
Save As	Selection Stitch	Broken Line
Connection	Selection All	Curve
Print	Selection JOG	Circle
Quit PTN-JX	**View**	Arc
	Zoom In	Multiple/Offset
	Zoom Out	Zigzag
	Adjust by the Center	Back Tacking
	Grid	

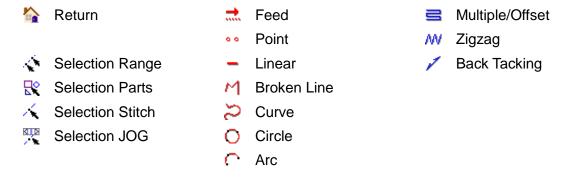| Modify	Tool
Replace	JOG
Move	Input by Num
Move	Stitch List
Setting of Move	Trace
Change Sewing Direction	Trace Setting
Add Stitch	Model
Add Stitch	General Setting
Setting of Add Stitch	MT Tracer Viewer
Delete Stitch	**Import**
Delete Stitch	Import DXF File
Setting of Delete Stitch	Import Embroidery File
Code Edit	**Communication**
Change Pitch	Receive Data…
Change Speed	Send Data…
Enlarge/Reduce	Pattern Switching
Symmetry	**Help**
Rotation	Help
Change Line Type	About PTN-JX
Change Attribute	
Modify sewing quality items	
Unblock	
Selected block	
All stitch	

③ **Tool bar (upper side)**

Icon list

- New
- Open
- Save
- Undo
- Redo
- Zoom In (+50%)
- Zoom Out (-50%)
- "Zoom" Input (20% - 5000%)

- Move
- Replace
- Change Sewing Direction
- Add Stitch
- Delete Stitch
- Code Edit
- Change Pitch
- Change Speed
- Enlarge/Reduce
- Symmetry
- Rotation
- Change Line Type
- Change Attribute

- Modify sewing quality items
- Unblock(Selected block)
- Unblock(All stitch)
- Input by Num
- Stitch List
- JOG
- Receive Data…
- Send Data…
- Pattern Switching

④ Tool bar (left side)

Icon list

🏠	Return	➡	Feed	☰	Multiple/Offset
		∘∘	Point	⋀⋁	Zigzag
⟁	Selection Range	—	Linear	╱	Back Tacking
▧	Selection Parts	M	Broken Line		
↖	Selection Stitch	⟳	Curve		
▦	Selection JOG	○	Circle		
		⌒	Arc		

⑤ Sewing Settings

Speed HIGH ▾ …Sewing Speed Setting ("HIGH", "MD1", "MD2", "LOW")

Pitch 10.0 ⇅ …Pitch Setting (0.1mm - 20.0mm)

⑥ Display / Control switching

☑ Area …If this checkbox is checked, input field displays light green square that shows the area size of the set model. It uses it to know the area size while inputting or correcting it.
The model can set at menu "Tool" - "Model".

☑ Snap …If this checkbox is checked, cross cursor moves to the stitch point near it automatically.
It is useful to input to same stitch point or select stitch point.

☑ LineType Point ▾ …If this checkbox is checked, the selected stitches of line type is displayed
blue. It is useful to select the stitches while checking the line type.

⑦ Sewing quality items

D.Tension Default ▾ 50.0 ⇅ …Digital tension Setting ("Default", "Sel1", "Sel2", "Custom")
* The setting of "Default" , "Sel1" and "Sel2" depends on "DTST" , "DTS1" and "DTS2" setting of the sewing machine.

X M3 Motion Default ▾ …X axis M3 Motion ("Default", "Sel1", "Sel2")
* The setting of "Default" , "Sel1" and "Sel2" depends on "XUNW" , " XUN1" and " XUN2" setting of the sewing machine.

Y M3 Motion Default ▾ …Y axis M3 Motion ("Default", "Sel1", "Sel2")
* The setting of "Default" , "Sel1" and "Sel2" depends on "YUNW" , " YUN1" and " YUN2" setting of the sewing machine.

PF Holding Power Default ▾ …PF Holding Power ("Default", "Sel1", "Sel2")
* The setting of "Default" , "Sel1" and "Sel2" depends on "ZPWR" , " ZPW1" and " ZPW2" setting of the sewing machine.

PF Stroke Default ▾ …PF Stroke ("Default", "Sel1", "Sel2")
* The setting of "Default" , "Sel1" and "Sel2" depends on "ZSTK" , " ZST1" and " ZST2" setting of the sewing machine.

PF Height 0.0 ⇅ mm …PF Height (-12.7mm - +12.7mm)
* Please input the PF height setting to considering the range of "ZTHK" of the sewing machine.
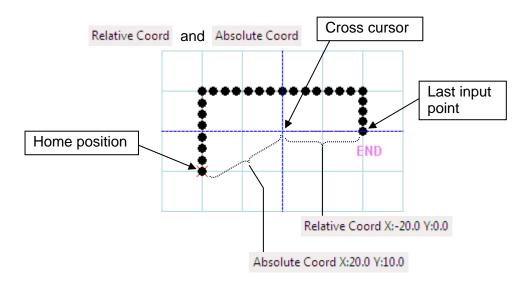
⑧ **Status bar**

Relative Coord …Coordinates of cross cursor position start from the last input point is displayed.
    (Refer to the following figure)

Absolute Coord …Coordinates of cross cursor position start from the home position is displayed.
    (Refer to the following figure)

Stitches …Total stitch point of the sewing data is displayed.

Blocks …Basic unit number (block number) of J data is displayed.

Pattern Size …Size (max value of X/Y axis) of the sewing data is displayed.

Model …The set model is displayed. The model can be set at menu "Tool" - "Model". To display the
    area of the set model, check "☑ Area Area" in "Display/Control switching".

Relative Coord and Absolute Coord   Cross cursor

Home position   Last input point

Relative Coord X:-20.0 Y:0.0

Absolute Coord X:20.0 Y:10.0

⑨ **Sync mode**

Com. stop …It is stopped the communication of "Read".

Read …It is read the sewing data from PLK-J control box connected by USB cable.

Save …It is saved the sewing data to PLK-J control box connected by USB cable.

Sync …It synchronize with PLK-J control box connected by USB cable and possible to modify and
    sewing.

6. Basic Operations

This section explains basic operations and functions.

6-1. Basic operation of input

(1) Start PTN-JX.

(2) Click "📄 New" icon.

(3) If you want to display the area size of the model, click "☑ Area Area" checkbox. (Model setting can be done by selecting "Tool" - "Model" on the menu bar.)

(4) Select (click) line type that you want to make.
   →Clicked icon turns into selected state.
   (In this example, "Feed" is being selected.)

* By clicking the selected line type icon, the icon selection is cleared.

Line type

(5) Set "Pitch" and "Speed".
   But, neither setting is reflected to "Feed".
   "Pitch" setting is not reflected to "Point".
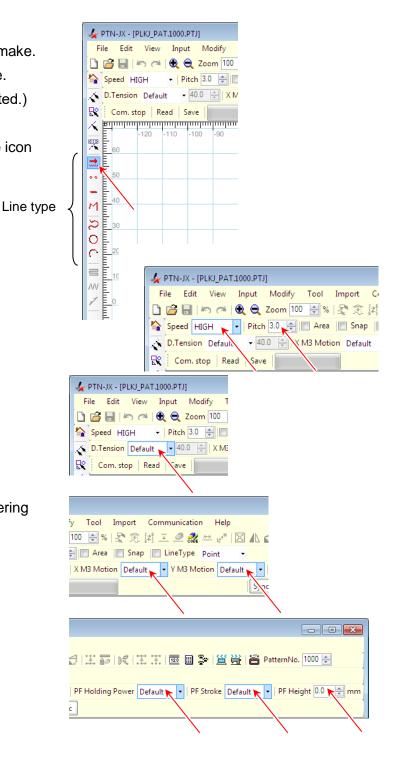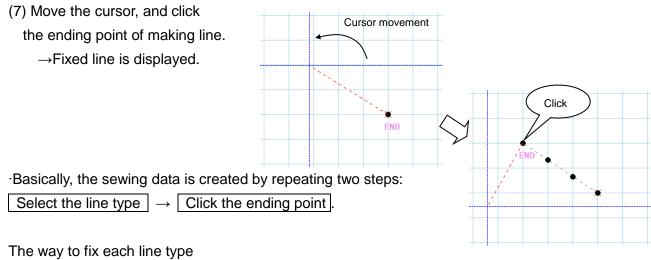
(6) Set "D.Tension" ,
   "X M3 Motion" , "Y M3 Motion" ,
   "PF Holding Power" , "PF Stroke" and
   "PF Height".

* Please the PF height setting input considering the range of "ZTHK" of sewing machine.

* If it not need to change these settings, please select "Default" and input.

(7) Move the cursor, and click
the ending point of making line.
→Fixed line is displayed.

Cursor movement

Click

END

END

END

·Basically, the sewing data is created by repeating two steps:

 Select the line type → Click the ending point .

The way to fix each line type

"Feed", "Point", "Linear"	Fixed by input of 1 input point
"Circle", "Arc"	Fixed by input of 2 input point
"Broken Line", "Curve"	Fixed by using right-click menu or selecting other line type or Enter key

6-2. Example of input
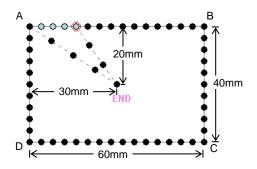
This example explains how to create following sewing data that is rectangle-shaped and that has overlap back tacking.

Explanation of following sewing data

·"Feed" from home position to point A.

·"Broken Line" from point A to same point through point B, C and D. This part is set "Speed" to "MD1" and "Pitch" to "4.0mm".

·Overlap back tacking type is "V mode" and has 4 stitch points.

·"Feed" to home position.

(1) Start PTN-JX.

(2) Click " New" icon.

(3) Click " Feed" icon.

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(4) Move cross cursor to point A.

(5) Click point A ((X = -30.0, Y = 20.0) in absolute coordinate).

(Step (4) and (5) can also do using "📇 Input by Num".)

Refer to "6-4.Input by Num"

(6) Set "Speed" to "MD1" and "Pitch" to "4.0mm".

* The upper and lower arrow key and ten keys can input directly the value of "Pitch".

(7) Set the following parameter.

"D.Tension" = "Default" ,

"X M3 Motion" = "Default" ,

"Y M3 Motion" = "Default" ,

"PF Holding Power" = "Default" ,

"PF Stroke" = "Default" ,

"PF Height" = "0.0mm"

(8) Click "M Broken Line" icon

(9) Click "✓ Back Tacking" icon.
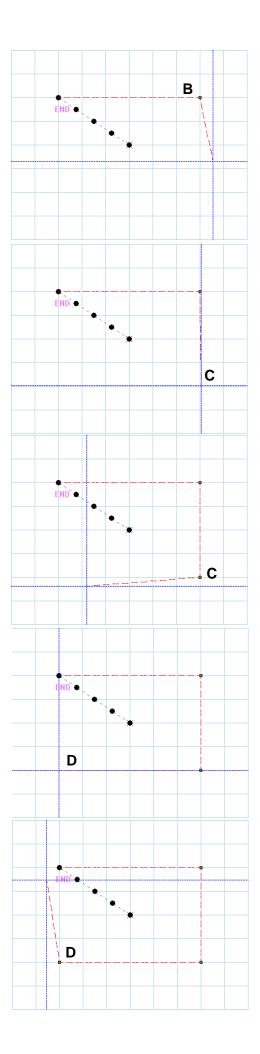
(10) "Back Tacking" dialog box is displayed.

(11) Set "Overlap back tacking" configuration.

   Type: 2 (Overlap back tacking)
   End/Overlap Back Tacking mode: 2 (V mode)
   Stitch: 4

(12) Click "OK" button.

(13) Move the cross cursor to point B.
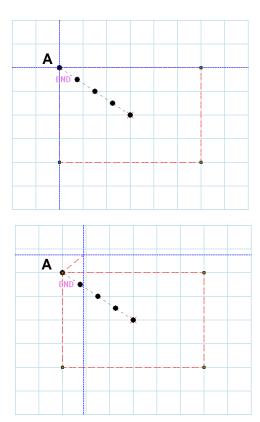
(14) Click point B ((X = 30.0, Y = 20.0) in absolute coordinate).

(15) Move the cross cursor to point C.

(16) Click point C ((X = 30.0, Y = -20.0) in absolute coordinate).

(17) Move the cross cursor to point D.

(18) Click point D ((X = -30.0, Y = -20.0) in absolute coordinate).

(19) Move the cross cursor to point A.

(20) Click point A ((X = -30.0, Y = 20.0) in absolute
coordinate).
(Step (12) through (19) can also be done using "123
Input by Num".)

Refer to "6-4.Input by Num"
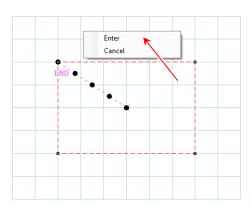
* It is necessary to match it to point A ((X:-30.0, Y:20.0)
in absolute coordinate) exactly.
("Snap" is useful to do step (19))
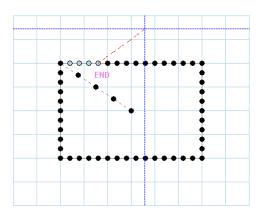
Refer to"6-5.Snap"

(21) Right-click I n input field.
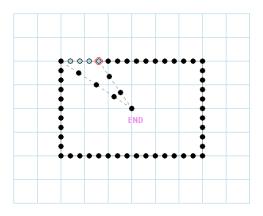
(22) Click "Enter" on the right-click menu.
Then, the broken line is fixed.

(23) Click "🏠 Return" icon.

(24) "Trim" code is inserted to last stitch point of "Overlap Back Tacking", and "Feed" to home position is created.

- The sample sewing data creation is finished. -

6-3. Save sewing data

The way how to save the created sewing data is explained below.

·Save by menu "File" - "Save As".

·To overwrite sewing data file, click "💾 Save" icon.

When you save sewing data for the first time, the following dialog box is displayed for selection of sewing data type. Select "J data".

"J data" : It is possible to save from No.0100 to 9999.

* As for "G data", only reading is possible.

They will be saved by "J data" after "G data" is read.

6-4. Input by Num

If you know input coordinates to input points, "Input by Num" function permits easy input.

Step (3) - (5) of "6-2. Example of input" using "Input by Num" function is explained below.

(1) Click " ➡ Feed" icon.

(2) Click " 123 Input by Num" icon.

*" 123 Input by Num" is not available when the line type has not been selected.

(3) "Input by Num" dialog box is displayed.

Set coordinate type to "Absolute Coord".

(If you want to input by "Relative coordinates", set coordinate type to "Relative Coord".)

Input "X Coord" to "-30.0" and "Y Coord" to "20.0".

Refer to 5.⑧ "Relative Coord" and "Absolute Coord"
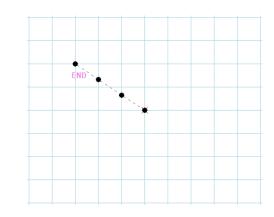
(4) Click the "OK" button in "Input by num" dialog box, "Feed" to absolute coordinates (X: -30.0, Y: 20.0) is displayed.

As described above, data is created by repeating two

Steps: Select the line type → Input coordinates

6-5. Snap
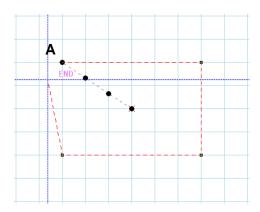
If "Snap" function is used, and when the cursor is approached to the stitch point, the cursor is overlapped to that point. This function is useful to input to the coordinates that have stitch points or to select the stitch point.

An example of snap using step (18) in "6-2. Example of input" is described below.
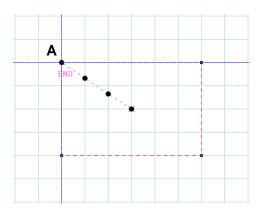
(1) Check the "Snap" checkbox before use "Snap" function.

(2) Move the cross cursor to point A where a stitch point already exists.
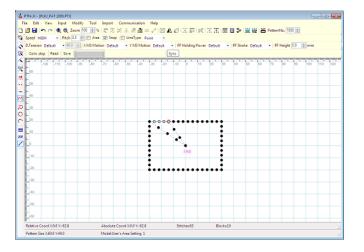
(3) As the cursor is approaching to the stitch point on point A, it is overlapped to point A.
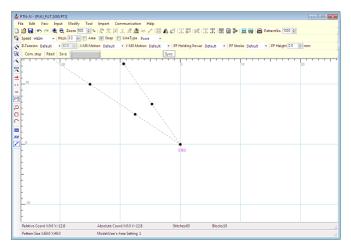
6-6. Scroll of screen

The displaying of the sewing data may not fit into the input field (For example, when the input field displays the zoomed sewing data). The way to scroll the displaying of the input field is explained below.
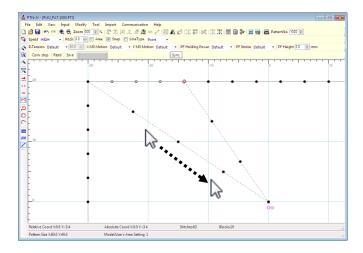
(1) In "100%" magnification, the sewing data is displayed as shown in right figure.

(2) In "500%" magnification, only a part of the sewing data is displayed as shown in right figure. In right figure, the input field displays only the home position and the surroundings.

(3) By pressing ⌐Ctrl⌐ key, the displaying of the cross cursor is changed to "arrow". At this time, by holding down ⌐Ctrl⌐ key and right mouse button, and moving mouse, the input field is scrolled.

6-7. Basic operation of modification

(1) Start PTN-JX.

(2) Click "🗁 Open" icon.

(3) Select the sewing data to modify it.

(4) Select the function to select stitches that are
    the target of modification.

    3 functions:

    (It is six kinds when combining with the

      "Selection JOG" and using it.)

      …Selection Range

      …Selection Parts

      …Selection Stitch

    When the "Selection JOG" is used, "Selection JOG"

    is selected with these selections.

    Because the dialog is displayed when "Selection JOG"

     specification is selected, the correction place is

    selected.

(5) Select stitches to modify it.

(6) Select the modification function and execute it.

  (Select by "Modify" on the menu bar or by icons

).)
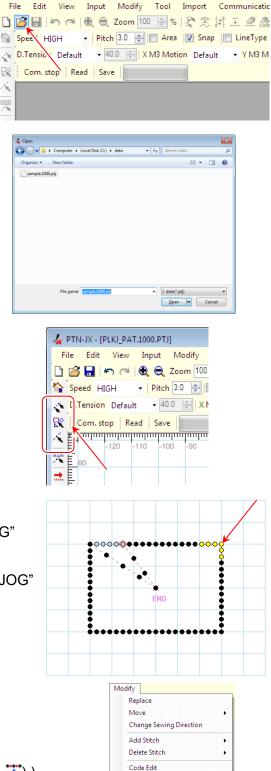
·As described above, the sewing data is modified

  by using two steps:

    | select stitches | → | modify |.

* However, step (4) and (5) in this operation is skipped at "Symmetry" function.

    ("Symmetry" can execute for only the whole sewing data.)

    (Refer to "6-9. Relation between stitch selection and available modification")

6-8. Type of modification

    Replace.................................... Remake selected stitches.

    Move .... Move selected stitches.

    Change Sewing Direction....... Reverse sewing direction of selected stitches.

    Add Stitch.............................. Add a stitch at front/back of a selected stitch.

    Delete Stitch .... Delete stitches of selected stitches.

    Code Edit................................ Add/Delete codes.

    Change Pitch........................... Change pitch of selected stitches.

    Change Speed......................... Change sewing speed of selected stitches.

    Enlarge/Reduce....................... Enlarge/Reduce selected stitches.

    Symmetry .... Make a symmetric sewing data.

    Rotation.................................. Rotate selected stitches.

    Change Line Type .... The line type in a specified range is changed and it unites with one part.

    Change Attribute....................... Attribute of one part is changed.

    Modify sewing quality items ... Change Digital tension, M3 Motion and Presser foot of selected stitches.

       * Please the PF height setting input considering the range of "ZTHK" of sewing machine.

    Unblock (Selected block) .... The specified range is converted to "point data" in parts unit.

    Unblock (All Stitch)................. Entire sewing data is converted to "point data".

6-9. Relation between stitch selection and available modification

Following table shows the relation between stitch selection and available modification.
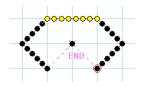
Stitch selection / Modification	Not selected	[Selection Stitch]		[Selection Range],[Selection Parts]		
		Single	Multiple	Single	Discontinuous multiple	Continuous multiple
Replace	-	-	-	o	-	o
Move	-	o	-	o	-	o
Change Sewing Direction	-	-	-	o	-	o
Add Stitch	-	o	-	-	-	-
Delete Stitch	-	o	-	o	o	o
Code Edit	o	o	o	o	o	o
Change Pitch	-	-	-	o	o	o
Change Speed	-	-	-	o	o	o
Enlarge/Reduce	-	-	-	o	-	o
Symmetry	o	-	-	-	-	-
Rotation	-	-	-	o	-	o
Change Line Type	-	-	-	o	-	o
Change Attribute	-	-	-	▲	-	-
Modify sewing quality items	-	-	-	o	-	o
Unblock(Selected block)	-	o	o	o	o	o
Unblock(All stitch)	o	-	-	-	-	-

"-": unavailable, "o": available, "▲": available only [Selection Parts]
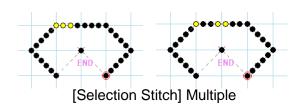
Examples of stitch selection
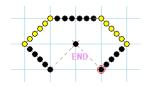
[Selection Stitch] Single
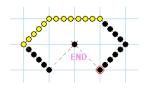

[Selection Stitch] Multiple

[Selection Range/Parts]
Single

[Selection Range/Parts]
Discontinuous multiple
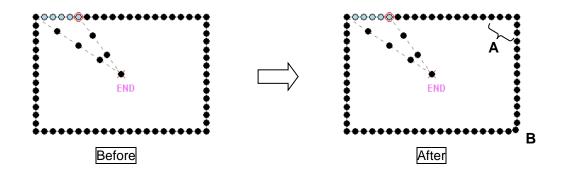

[Selection Range/Parts]
Continuous multiple

6-10. Example of basic modification Ⅰ

This example explains how to modify following sewing data that is rectangle-shaped.

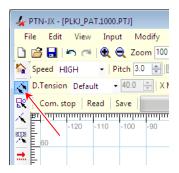Explanation of modification items

·"Speed" of range A: "HIGH" →"LOW"

·Stitch point B at the corner: Move to inside

Before ⟹ After

This example starts from the state where the sewing data was opened.

(1) Click " ⊀ Selection Range" icon.
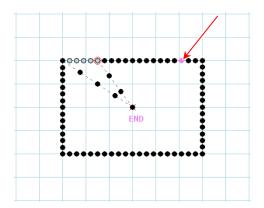
(Please release it when "Selection JOG" has been selected.)
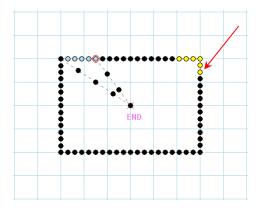
(2) Click the starting point of range A.

("Snap" is useful to do step (2) and (3).)
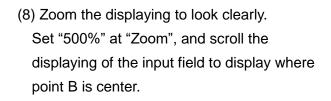
Refer to"6-5.Snap"

(3) Click the ending point of range A.

*When you want to cancel the selected range, select same range again, or click " ⊀ Selection Range" icon again.

(4) Click "⌐H Change Speed" icon.

(5) "Change Speed" dialog box is displayed. Set "LOW" at "Setting of Speed", and click "Execute" button.

- Changing speed of range A has finished. -

- Next, modification of point B is shown below. -

(6) Click "✕ Selection Stitch" icon.
   (Please release it when "Selection JOG" has been selected.)

(7) Click point B.

(8) Zoom the displaying to look clearly.
   Set "500%" at "Zoom", and scroll the displaying of the input field to display where point B is center.
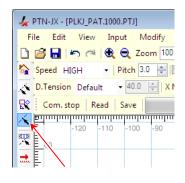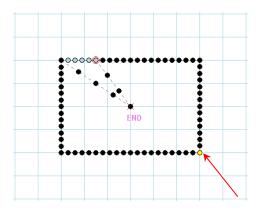
Refer to "6-6.Scroll of screen"
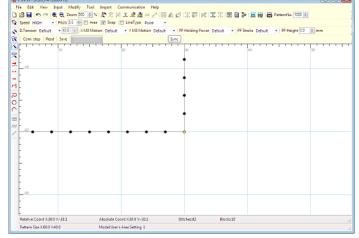
 (There are 3 methods to zoom displaying:
·Inputting "Zoom".
·Clicking 🔍 🔍 icons.
·Using the scroll wheel of the mouse.)

(9) Click " Move" icon.

(10) "Move" dialog box is opened. Check "Renews only one stitch" at "Method of Connection of Both Ends", and click "Execute" button.

(11) Drag the selected stitch point. And drop at the target position.
(Moving also can do at arrow key (↑, →, ↓, ←) (The point can be moved 0.1mm by pressing arrow keys once or " Input by Num".))

Refer to "6-4.Input by Num"
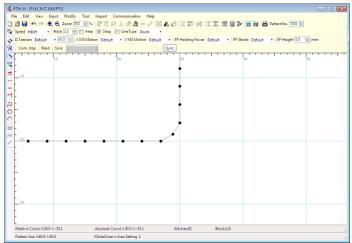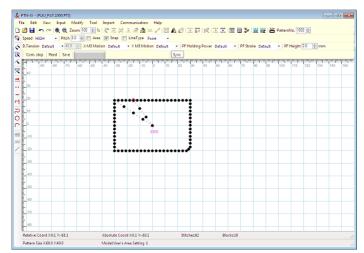
(12) When the stitch point is moved to the target position, click the input field that is not the stitch point. Then the stitch point is fixed. The movement can be fixed by mouse's right-clicking menu, too.

(13) Set "Zoom" to "100%", and check the sewing data.

- Modification has finished. -
* But, sewing speed cannot be checked by watching the input field. For this case, the way to check the sewing data is explained in section 6-11 and 6-12.

6-11. JOG

"JOG" function shows the information of a given stitch in the sewing data displaying the stitch's position on the input field.

(1) Click " JOG" icon. Then "JOG" dialog box is displayed.

(2) Check stitch's information by changing the target stitch point.

Backward

Forward

Auto forward

Speed of auto forward

Detailed→

Simplified→
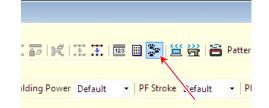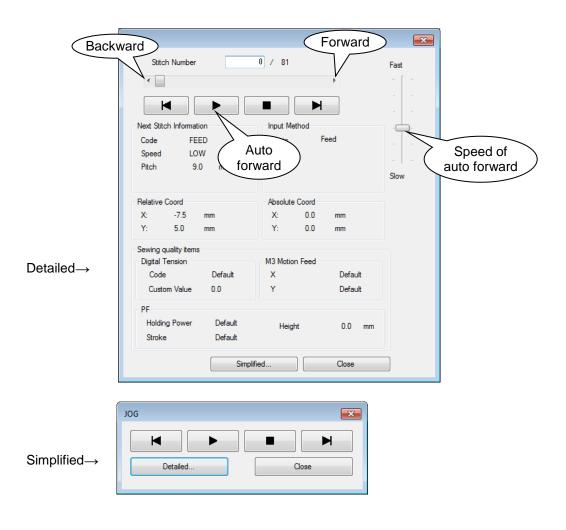
6-12. Stitch List

"Stitch List" function shows information of stitches of the sewing data by the tabular form.

(1) Click " ▦ Stitch List" icon. Then "Stitch List" dialog
   box is displayed.

① When "Stitch List" is opened specifying stitch, the cell of "Stitch Number" is displayed in red.
   If the stitch number is "DFTH" code, it is displayed setting values of "DFTH" code.

② In this case, "Speed" , "Pitch" , "Relative Code X" , "Relative Code Y" , "Absolute Code X" and
   "Absolute Code Y" do not matter.

③ "Table Number" of sewing data that is editing is displayed at the bottom left in the dialog box.

④ The part input at point is displayed "*" in "point" field.
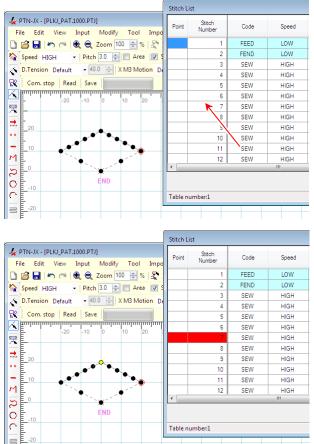
It is possible to select the stitches by double clicking the cell in the dialog box.

(1) Select the function to select stitches from menu
   or icon.

(2) Click " ▦ Stitch List" icon and open "Stitch List"
   dialog box.
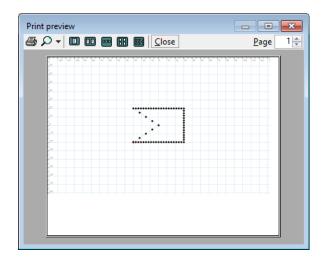
(3) Double click the cell of stitch which want to select.
(Double click the cell of start and end stitch
when selected "Selection Range".)

(4) It is displayed "Point" and "Stitch Number" cells
in red.

* It is not change color of cell when does not select
the function to select stitches.
* It is possible to execute the modify function after
close the "Stitch List" dialog box.

- Stitches are selected. -

6-13. Print

"Print" function can print the sewing data that is displayed on
the input field.

(1) Click "File" - "Print" on the menu bar. Then, "Print preview"
window is displayed.

(2) By clicking "🖨 Print" icon, print is executed.
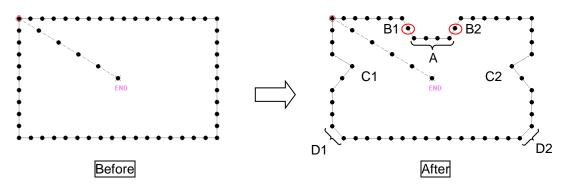
6-14. Example of basic modification Ⅱ

This example explains how to modify following sewing data that is rectangle-shaped.
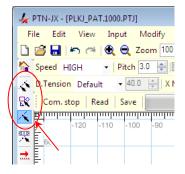
Explanation of modification items

·Range A: Move to down

·Stitch point B1 and B2: Add one stitch

·Range C1 and C2: One side fixed and move

·Stitch point D1 and D2: Delete one stitch
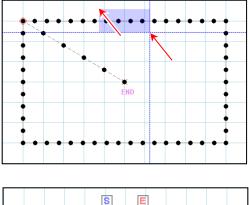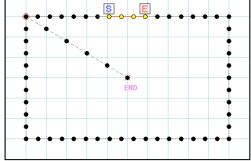
Before · After

This example starts from the state where the sewing data was opened.

(1) Click " Selection Range" icon
or " Selection Stitch" icon.
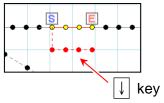
(2) Keep on the click and move the mouse cursor.
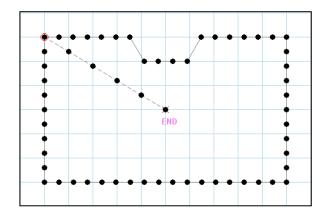
(3) The stitches within the selection range are
changed yellow and displayed [S] and [E]
in the start and end position.

* By pressing Esc key, it is released the stitches.

(4) It is possible to move the stitches each 0.1mm by pressing arrow keys once.

  In this case, input the $\boxed{\downarrow}$ key.

$\boxed{\downarrow}$ key
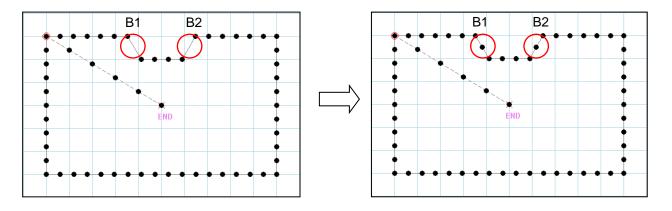
(5) By pressing $\boxed{\text{Enter}}$ key , movement of stitches is fixed.
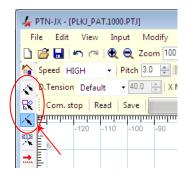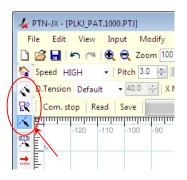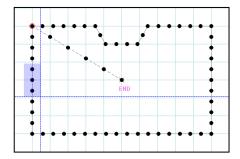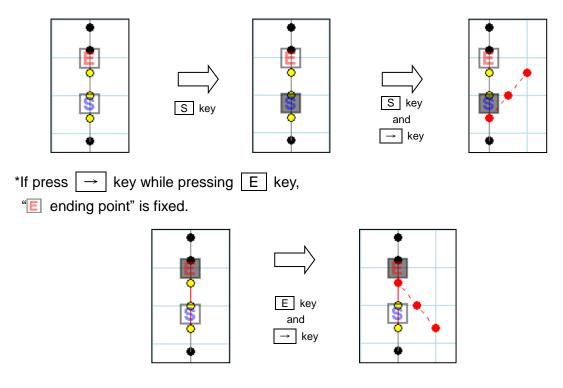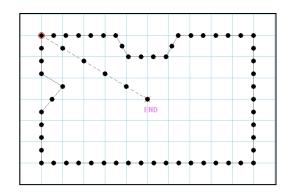

  Modification of "Range A" has finished.
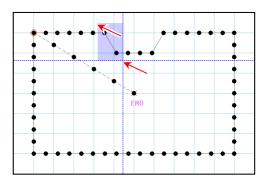
- Next modification is that add one stitch between B1 and B2. -
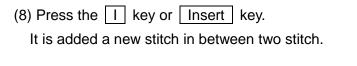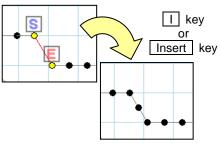
(6) Click " Selection Range" icon
  or " Selection Stitch" icon.

(7) Keep on the click and move the mouse cursor.
   Please select two adjacent stitches.

(8) Press the ⬛ I ⬛ key or ⬛ Insert ⬛ key.
   It is added a new stitch in between two stitch.

⬛ I ⬛ key
or
⬛ Insert ⬛ key
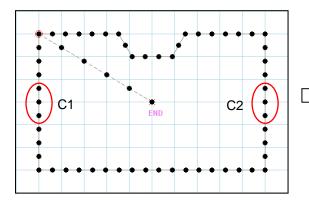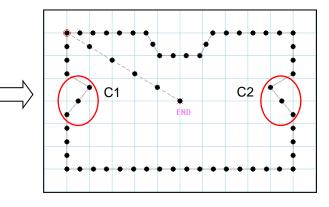
   Modification of "Stitch point B1" has finished.
   About modification of "Stitch point B2", please return to the (7) and modify like the same.

   - Next modification is that "one side fixed" movement of C1 and C2. -

C1   C2   ⟹   C1   C2

(9) Click " Selection Range" icon
   or " Selection Stitch" icon.

PTN-JX - [PLKJ_PAT.1000.PTJ]
File   Edit   View   Input   Modify
Zoom 100
Speed HIGH   Pitch 3.0
D.Tension Default   40.0   X
Com. stop   Read   Save
-120   -110   -100   -90

(10)Keep on the click and move the mouse cursor.

(11) By pressing S key, " S starting point" is changed black " S ".

　　　Please input → key while pressing S key.

S key

S key
and
→ key

　　　*If press → key while pressing E key,

　　　　" E ending point" is fixed.

E key
and
→ key
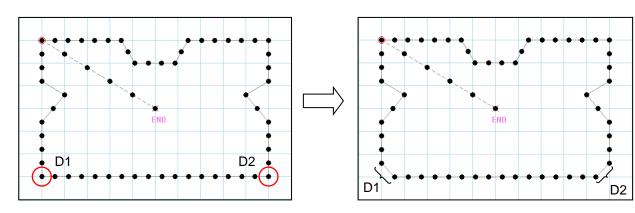
(12) By pressing Enter key , movement of stitches is fixed.

END

　　　Modification of C1 has finished.

　　About modification of C2, please return to the (10) and modify like the same.
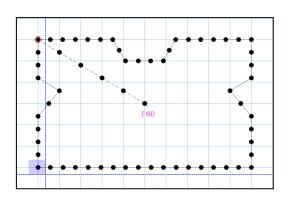
　- Last modification is that delete stitch of D1 and D2. -

D1　　　　　　　　　　　　D2

END

D1　　　　　　　　　　　　D2

END

(13) Click "✕ Selection Stitch" icon.

(14) Keep on the click and move the mouse cursor.
    Please select one stitch only.
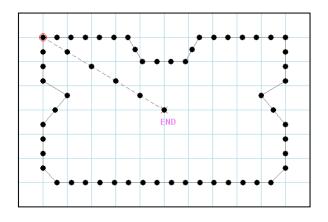
(15) Press the ☐D☐ key or ☐Delete☐ key.
    It is deleted one stitch in the corner.

D key
or
Delete key

    Modification of D1 has finished.
    About modification of D2, please return to the (14) and modify like the same.

- Modification has finished. -
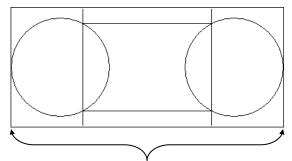
7. Advanced Operations

This chapter shows special function and modification example.

7-1. Trace
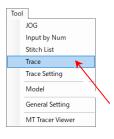
"Trace" function displays an image data to the input field. "Trace" is useful to create the sewing data by input that traces the image.

An input example using "Trace" is shown below. This example uses following bitmap data.
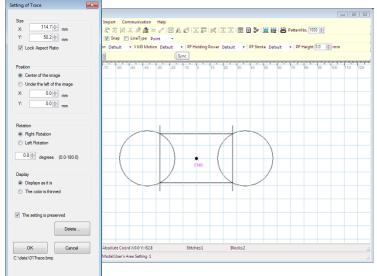
A bitmap file that modified width and height to fit figure's size (for size control).

(1) Start PTN-JX and Click "New" icon.

(2) Click "Tool" – "Trace" on the menu bar.

(3) Select the image data file, and click "Open" button.

(4) The image data is displayed to the input field. Then "Setting of Trace" dialog box is displayed.
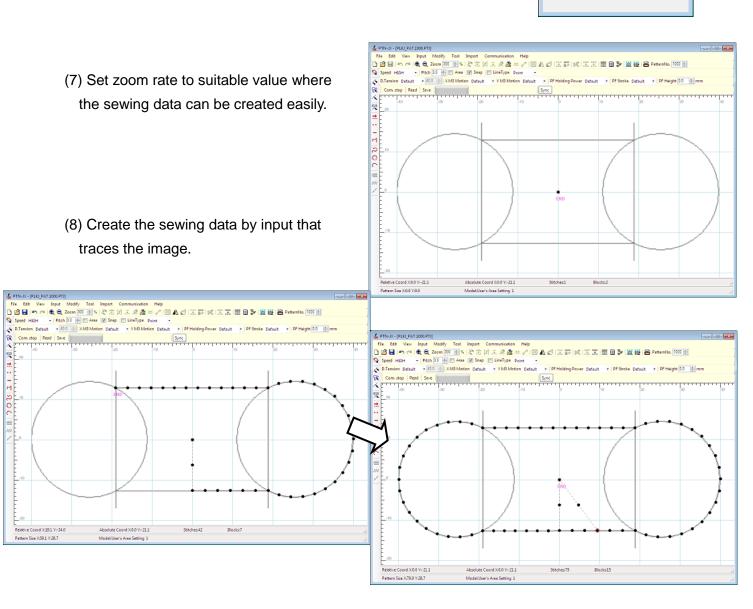
(5) Adjust image size. (check "Look Aspect Ratio", and set size X to "80.0mm".)

And select "Display" to "The color is thinned". (If the image is hard to see, select "Display" to an item where the image is easy to see.)

(6) Click "OK" button.
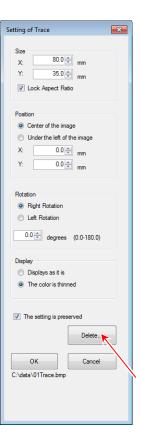
(7) Set zoom rate to suitable value where the sewing data can be created easily.

(8) Create the sewing data by input that traces the image.
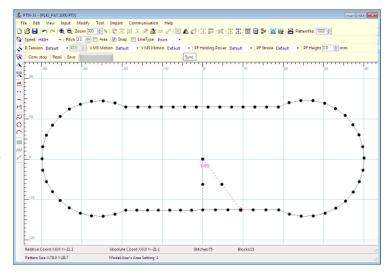
(9) Check the sewing data without image data displaying.

Click "Tool" – "Trace Setting" on menu bar.

"Setting of Trace" dialog box is displayed. Click "Delete…" button.
(The sewing data can be saved without erasing the image data.
In this case, only the sewing data is saved. The image data is not
saved.)
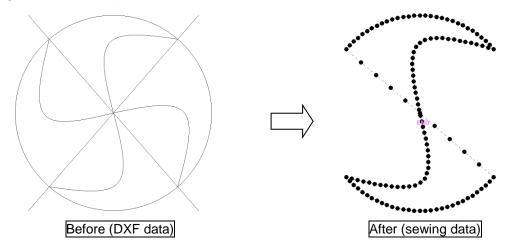
(10) The image data is deleted and the
sewing data is remained.

- Input using "Trace" function is finished. -

7-2. Import DXF File
(* Version 12, 13 and 14 is supported.)

The procedure where the DXF data (left of figure below) is converted to the sewing data (right of figure below) is explained below.

Before (DXF data)

After (sewing data)

(1) Click "Import" – "Import DXF File" on menu bar.
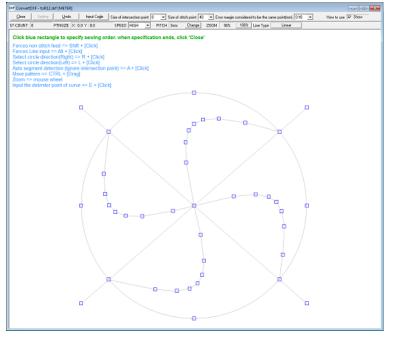
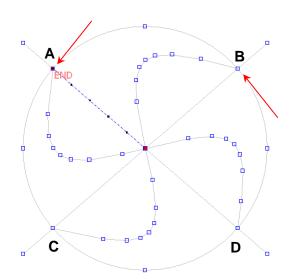(2) Select the DXF File and click "Open" button.

(3) After "Level of thinning out" is specified, click "Convert" button.

Low.......Level of thinned out.......High
0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10

(4) "Convert DXF" screen is displayed.
(On this screen, blue square mark is clicked according to the sewing data to create.)

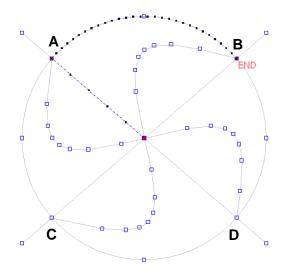(5) Click the point that made a home position.

(6) Click point A holding down "shift key". (This operation makes "Feed".)

(7) Click point B.

(8) "Circle direction" dialog box is displayed.
   Click "Right" button.
     ("Left" from point A : A-C-D-B
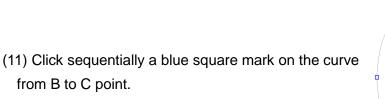   "Right" from point A : A-B)

Circle direction
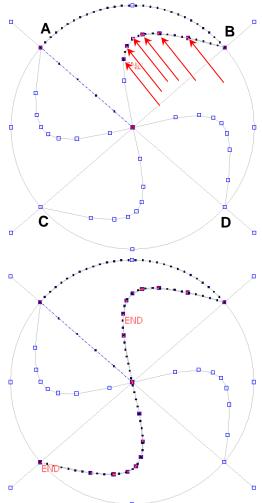Specify sewing direction.
Left   Right

(9) Stitch from point A to point B is created.

(10) "Line Type" is switched to "Curve".
*The pitch can be uniformly converted when inputting it
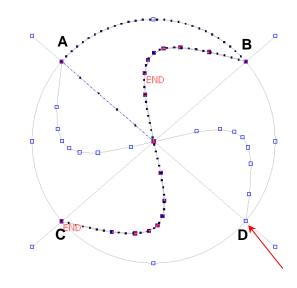 by "Curve" though the part of the curve can be input
 even by "Linear".

Line Type   Curve

(11) Click sequentially a blue square mark on the curve
     from B to C point.
* When "Curve" is input, the delimiter point can be input
   by [E key + left-click].

(12) "Line Type" is switched to "Linear" after clicking point C.
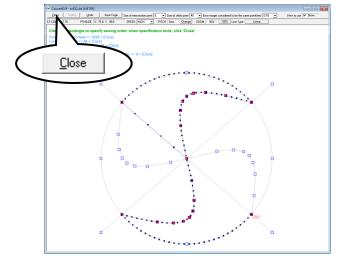
Line Type | Linear

(13) Click point D.

(14) "Circle direction" dialog box is displayed. Click "Left" button.

("Left" from position C : C-D

"Right" from position C : C-A-B-D)

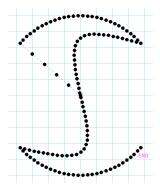Circle direction

Specify sewing direction.

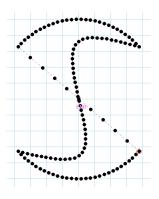Left | Right

(15) Stitch from point C to point D is created.
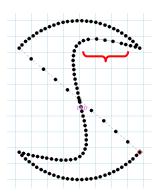
(16) Click "Close" button on "Convert DXF" screen.

(17) "Convert DXF" screen is closed. And the sewing data is displayed on the input field.

- "Import DXF File" is finished. -

- After converting, it keeps inputting it with the main screen.

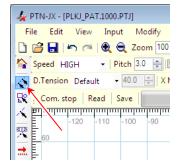(18) Click "🏠 Return" icon. Then "Feed" to home position is created.

(19) When a curve part is input by using "Linear" of the line type, pitch might not become uniform as shown in a right side picture.
For this case, it corrects it by using "Change Line Type" according to the following procedure.
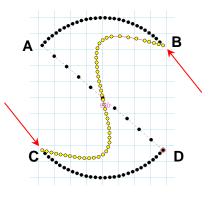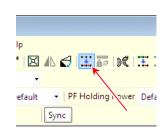
(20) Click "Selection Range" icon.

(Please release it when "Selection JOG" has been selected.)

(21) After clicking point B, click point C.

(22) Click " Change Line Type" icon.

(23) After "Curve" is selected
in the line type,
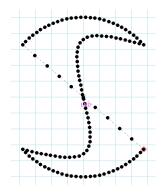"Pitch" and "Speed" are set,
and click "Execute" button.

(If need to set "Digital Tension",
"M3 Motion Feed" and "PF",
set each item. If not need to set,
set all item to "Default".)

(24) After it converts it, pitch becomes uniform.

- If the pitch cannot be uniformly converted by this function,
  please try "Replace".
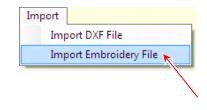   (Please refer to **7-5**)

[Limitation of "Import DXF File"]

* The text data can not be converted.

* It is not likely to be able to convert the block data.

7-3. Import Embroidery File

This function can convert the embroidery data (*.dst file) to the sewing data.

(1) Click "Import" - "Import Embroidery File" on the menu bar.

(2) Select the embroidery data (*.dst file) and click "Open" button.

(3) The sewing data converted from the embroidery data is displayed.

[Limitation of "Import Embroidery File"]

* The data that exceeds 20000 stitches can not be converted.

* Only the data of DST form of TAJIMA can be converted.

* Because the converted data becomes data for which two or more "Parts" is connected with the stitches, the pitch can not be corrected. For this case, please try correcting it by the "Replace" or "Change Line Type".

When "Replace" is used, it is easy to trace the track of old stitches by using "Snap".

7-4. Communication

Send and receive sewing data by connecting PLK-J control box and PC with USB cable.

* The USB cable is not included. Please use a commercially available cable.
  Cable type : USB A type ⇔ USB mini-B type
* The PLK-J control box side connects to "CON H" USB port.

7-4-1. Installing the USB driver

Please install the USB driver from the setup CD before connecting PC and the PLK-J control box.

(1) Insert the setup CD in the CD-ROM drive.
(2) The web browser automatically opens and it displays "Language selection" window. Click the language you want to set up (English/Japanese/Chinese (Simplified)).
  *If "Language selection" window does not open, display files in the CD-ROM using Explorer, and double-click "start.html".
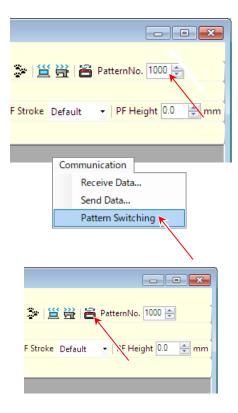

(3) Click "USB Driver".

(4) Click the installed operating system. Then, the install starts.
(5) If the web browser displays the warning message, allow the execution.
(6) If the file download window was displayed, click "Run" button.
(7) If the security warning window was displayed, click "Run" button.

7-4-2. Pattern Switching

(1) Input the number of the sewing data
    saved in the PLK-J control box to
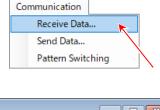   the "Pattern No." input field of the
    tool bar.
    (Input numbers No.0100 to 9999)

(2) Click "Communication" – "Pattern
    Switching" or icon on the menu bar.

(3) The sewing data in PLK-J control box is
    switched to the sewing data of
    the selected number.

    * If the clamp is not home position,
       it is not possible to switch.

    * If the standard screen is not displayed in PLK-J control panel, it is not possible to switch.

    * If the sewing data number is selected that is not saved in PLK-J control box, it is not possible
       to switch.

7-4-3. Receive method
(1) Click "Communication" – "Receive Data..."
   or icon on the menu bar.

(2) The sewing data selected in
   PLK-J control box is received and
   displayed in the input field.

   The sewing data name and number
    selected in PLK-J control box are
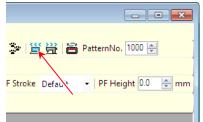   displayed in the title bar.

   * If the sewing data is not selected in
    PLK-J control box, it is not possible to
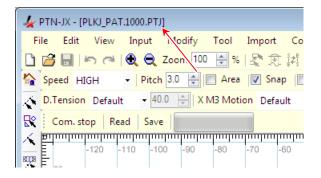   receive the sewing data.
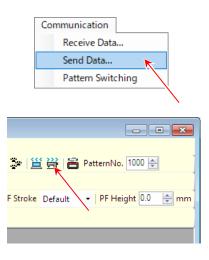

7-4-4. Transmission method
(1) Click "Communication" – "Send Data..."
   or icon on the menu bar.

(2) The sewing data being edit in the input
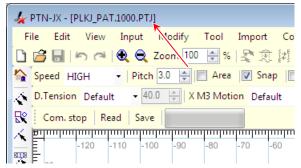   field is sent to PLK-J control box.

   It is saved in PLK-J control box
   by the name and number displayed in
   the title bar.

   * If the clamp of sewing machine is not
    home position, it is not possible to send
    the sewing data.

* If the standard screen is not displayed in PLK-J control panel, it is not possible to send
   the sewing data.

* If the same number is in PLK-J control box, it is not saved.
   If want to save to same number in PLK-J control box, please set "PTOW" setting of
   PLK-J control box to "ON" and enable overwiting.

7-5. Sync mode

It is synchronized between PLK-J control box and PC by USB communication and is possible sewing while modifying the sewing data.

* The USB cable is not included. Please use a commercially available cable.
   Cable type : USB A type ⇔ USB mini-B type
* The PLK-J control box side connects to "CON H" USB port.
* The sync mode is supported in system software version "S200W009" or later.

7-5-1. Installing the USB driver

Please install the USB driver from the setup CD before connecting PC and the PLK-J control box.
Please refer to "**7-4-1.Installing the USB driver**".

7-5-2. Read

Push "Read" button and receive the sewing data that is selecting in PLK-J control box.

7-5-3. Sync

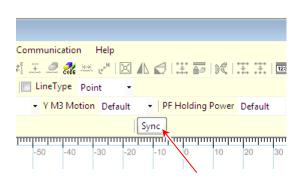Push the "Sync" button and synchronized with PLK-J control box.

* If it is not finished the home positioning, it is not possible to synchronize.
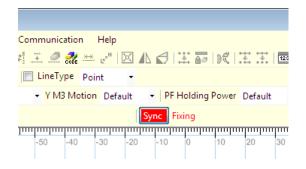
When modify the stitch in sewing data, "Fixing" is displayed next to "Sync" button and the modified part is updated to the PLK-J control box.

Because sewing is possible in a state synchronized with the PLK-J control box, it is possible sewing while modifying the sewing data.
(It is not possible to control from PC, when the sewing. If want to control from PC, please stop the sewing.)
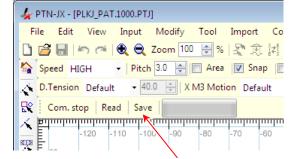
7-5-4. Save

(1) Click "Save" button and
"Save" dialog box is displayed.

(2) Input any sewing data name into "Pattern Name".
Input any sewing data number into "Pattern No."

Click "OK" button and the sewing data is saved
to the PLK-J control box with the input sewing
data name and number.

* Click "Free No." button and the sewing data
number that is not used in sewing machine is
displayed to "Pattern No.".

* The sewing data name and number displayed
by the title bar of the main screen are displayed
to "Pattern Name" and "Pattern No." first.

* If close PTN-JX or power off the PLK-J control box before pushing the save button,
the sewing data is discarded.

* Please "PTOW" set to "ON" in PLK-J control box and enable overwriting.

*If a sewing data is saved in "Save" dialog box, the sewing data is saved to the PLK-J
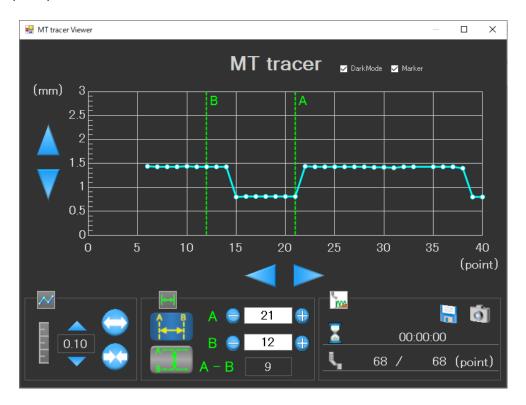control box.
The sewing data is not saved to the PC.
If it is necessary to save sewing data to the PC, please refer to "6-3.Save sewing data".

7-6. MT Tracer Viewer

The measured value of the MT tracer can be displayed on the "PTN-JX" in real time by USB communication between the PLK-J control box and the PC.

The measured values can be saved as a CSV file, and the displayed graph can be saved as an image (BMP).

7-6-1. Installing the USB driver

Please install the USB driver from the setup CD before connecting PC and the PLK-J control box.
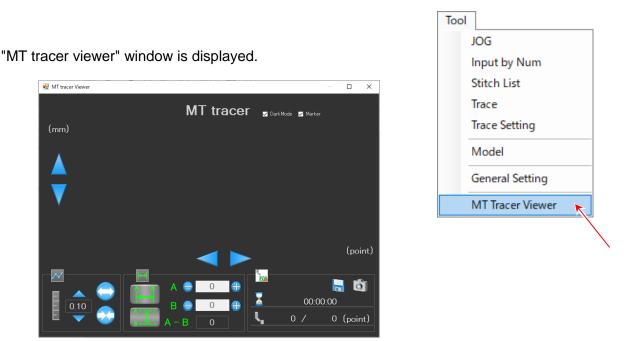
Please refer to "**7-4-1.Installing the USB driver**".

7-6-2. How to use

(1) Connect the PLK-J control box and PC with a USB cable.

The PLK-J control box side connects to "CON H" USB port.
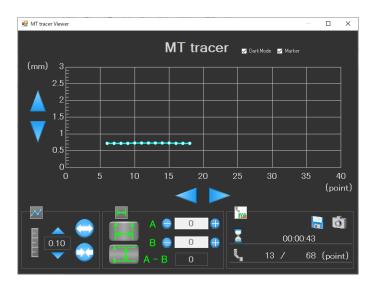
* The USB cable is not included. Please use a commercially available cable.

Cable type : USB A type ⇔ USB mini-B type

* The sync mode is supported in system software version "S200W019" or later.

(2) Start PTN-JX and click "Tool" - "MT tracer viewer" on the menu bar.

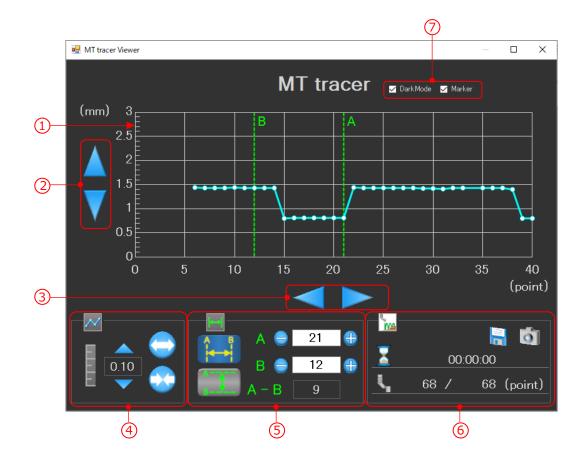"MT tracer viewer" window is displayed.

* The graph is not displayed immediately after the "MT tracer Viewer" window opens.

(3) The graph is displayed while measuring by operating the sewing machine and executing the MT tracer.

*For details on how to use the MT tracer, refer to the PLK-J technical document "Operation Panel [8] MT Tracer".

* Each time MT tracer is executed, the previously created graph is deleted and a new graph is created. Save the graph data as necessary.
(refer to 7-6-3.⑥"Progress display / save function")

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7-6-3. Screen display and various icon operations

① Graph area

Displays the data measured by MT tracer.

The vertical axis represents the thickness of the sewing product.
　　Range: -30.00mm to 30.00mm

The horizontal axis represents the number of measuring needles.
　　Range: 0 to the number of measuring needles (maximum 20000 points)

Click on the needle point of the data to display the data on the graph.

②Move graph (vertical direction)

▲ : Click to move the graph display upward.

▼ : Click to move the graph display downward.

③Move graph (horizontal direction)
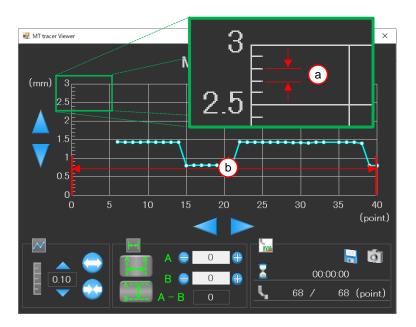
◀ : Click to move the graph display to the left.

▶ : Click to move the graph display to the right.

④Graph zoom function (〽)

ⓐ Changes the interval of one vertical scale.

Range: 0.01 to 1.00 (mm)

▲ : Click to increase the scale interval value on the vertical axis.

▼ : Click to decrease the scale interval value on the vertical axis.

0.10 : Displays the current value of the scale interval of the vertical axis.

ⓑ Changes the display range of the horizontal axis.
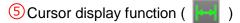
Range: 10 to 20000 (needle)
(12 levels from 10 × 2^0 to 10 × 2^11)

⬅ : Click to increase the scale interval on the horizontal axis.

◄► : Click to narrow the scale interval on the horizontal axis.

⑤ Cursor display function ( )
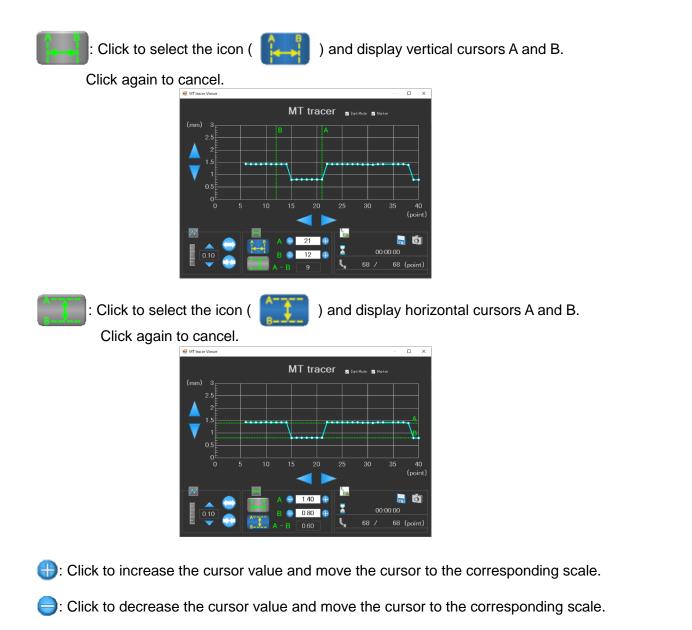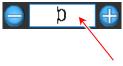
When the cursor icon is selected, two cursors A and B can be displayed on the graph.

The cursor displays only one of vertical or horizontal.

: Click to select the icon ( ) and display vertical cursors A and B.

Click again to cancel.

: Click to select the icon ( ) and display horizontal cursors A and B.

Click again to cancel.

⊕: Click to increase the cursor value and move the cursor to the corresponding scale.

⊖: Click to decrease the cursor value and move the cursor to the corresponding scale.
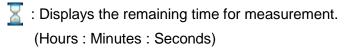
* You can also move to any location by directly entering a numerical value.
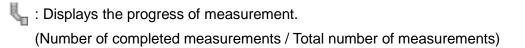
* A－B shows the difference between A and B.

⑥ Progress display / save function ( )

⏳ : Displays the remaining time for measurement.
    (Hours : Minutes : Seconds)

    * This is a guideline. May vary depending on
        measurement conditions.

📶 : Displays the progress of measurement.
    (Number of completed measurements / Total number of measurements)

💾 : Save the graph data as a CSV file.
    Click to open the "Save As" dialog.
    The default file name is the time when the measurement was started.

    Example   20191114_113025.csv

📷 : Save the displayed "MT tracer Viewer" window as a BMP file.
    Click to open the "Save As" dialog.
    The default file name is the time when the measurement was started.
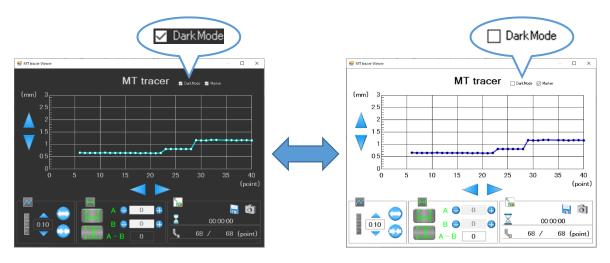
    Example   20191114_113025.bmp
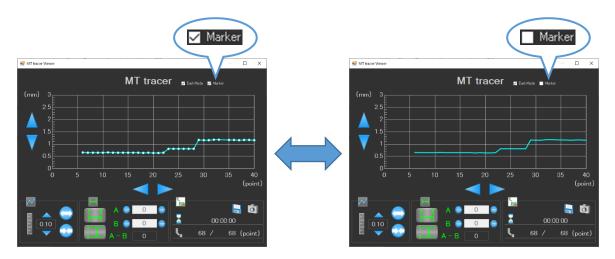
⑦Checkbox

☑ DarkMode : When the checkbox is cleared, the background is white, and when the checkbox is checked, the background is black. The default is checked.

☑ Marker : When the checkbox is cleared, the measured needle point is hidden, and when the checkbox is checked, the measured needle point is displayed.
The default is checked.

7-7. Modification example 1 (Replace 1)
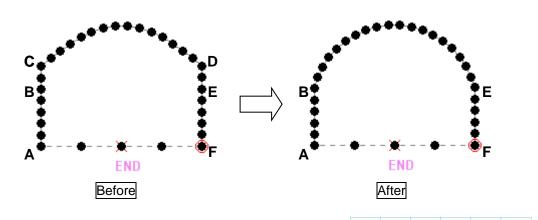
Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.

About left sewing data:

・"Feed" from home position to point A.
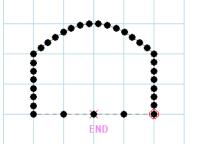
・"Line" from point A to point C.

・"Curve" from point C to point D.

・"Line" from point D to point F.

・"Trim" and "Feed" from point F to home position.

About modification:
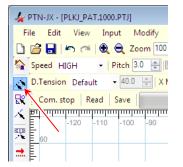
・Ranges from point A to point B and from point E to point F are stay the same.

・Range from point B to point E is modified to arc.
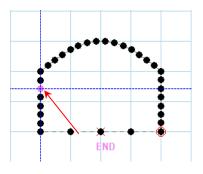
Before

After

(1) Open the sewing data that is modification target.

(2) Click " Selection Range" icon.
(Please release it when "Selection JOG" has been selected.)

(3) Click start point of modification range.
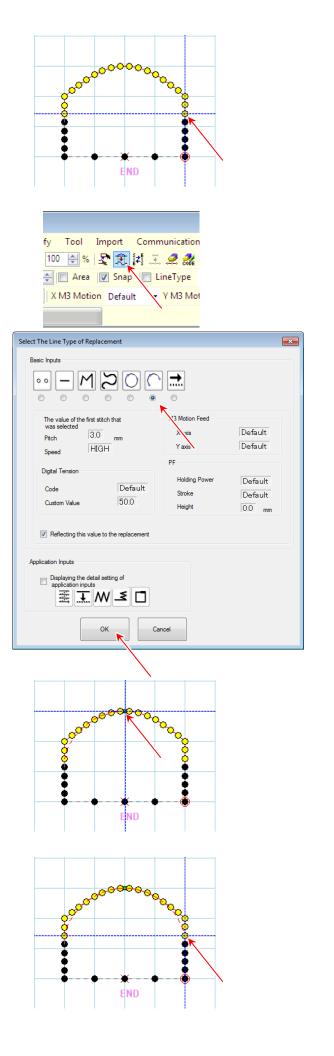
(4) Click end point of modification range.
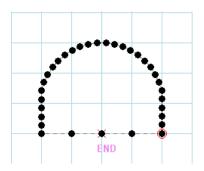
(5) Click "⬇ Replace" icon.

(6) "Select The Line Type of Replacement" dialog box is displayed. Click "Arc" on "Basic Inputs".

(7) Click "OK" button.

(8) Click the first point of "Arc".

(9) Click the second point of "Arc".

(10) "Arc" is displayed at selected range.

- Replace is finished. -

7-8. Modification example 2 (Replace 2)
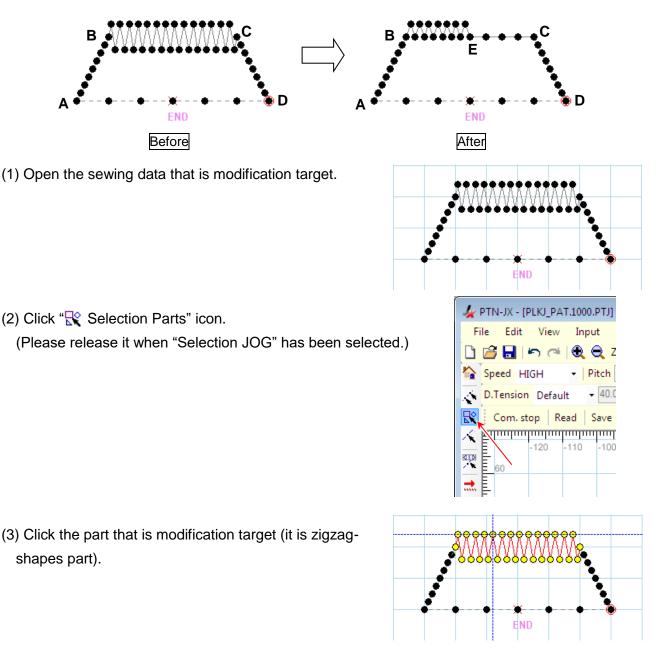
Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.
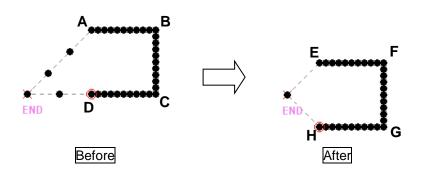
About left sewing data:

·"Feed" from home position to point A.

·"Line" from point A to point B.

·"Line" + "Zigzag (Travel direction center (Start from left side), Zigzag width = "8.0mm", Zigzag pitch = "3.0mm")" from point B to point C.

·"Line" from point C to point D.

·"Trim" and "Feed" from point D to home position.

About modification:

·Ranges from point A to point B and from point C to point D are the same.

·"Zigzag Line" from point B to point C is split to 2 parts: Part from point B to point E is "Zigzag line (Travel direction left side, Zigzag width = "4.0mm", Zigzag pitch = "3.0mm")", and Part from point E to point C is "Line (Pitch = "5.0mm")".

·Modifications are executed to 2 parts: from point B to point E, and from point E to point C.


Before   After

(1) Open the sewing data that is modification target.

(2) Click "⬚ Selection Parts" icon.

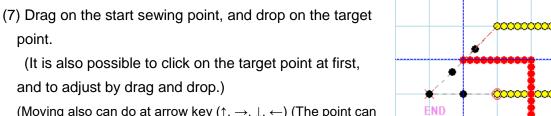(Please release it when "Selection JOG" has been selected.)

(3) Click the part that is modification target (it is zigzag-shapes part).

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(4) Click " ⬇ Replace" icon.

(5) "Select The Line Type of Replacement" dialog box is
displayed. Click "Linear" on "Basic Inputs". And check
"Displaying the detail setting of application inputs".

(6) Click "OK" button.
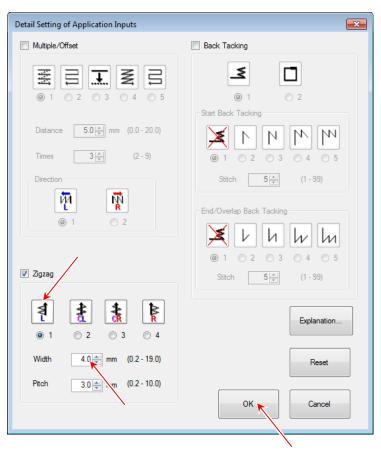
(7) "Detail Setting of Application Inputs"
dialog box is displayed. Set "Left" on
zigzag direction and "4.0mm" on "Width".
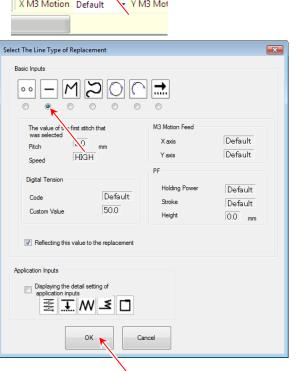
(8) Click "OK" button.
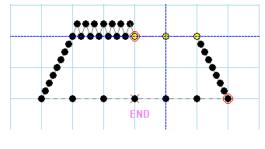
(9) Click point E. And range from point E to point C is connected by "Feed".

(10) Click " Selection Parts" icon again.
(Please release it when "Selection JOG" has been selected.)

(11) Click part that is modification target. (It is "Feed" part.)
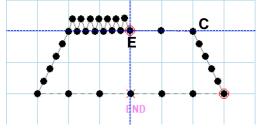
(12) Click " Replace" icon.

(13) "Select The Line Type of Replacement" dialog box is displayed. Click "Linear" on "Basic Inputs".

(14) Click "OK" button.
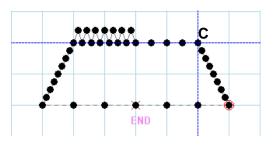
(15) Set "Pitch" to "5.0mm".

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(16) Click Point C.

- Replace is finished. -

7-9. Modification example 3 (Modification of start sewing position)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.

<u>About left sewing data:</u>
- "Feed" from home position to point A.
- "Linear" from point A to point B.
- "Linear" from point B to point C.
- "Linear" from point C to point D.
- "Trim" and "Feed" from point D to home position.
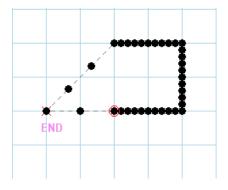
<u>About Modification:</u>
- The start sewing position is moved from point A to point E.
- As point A is moved, points B, C and D are moved to points F, G and H.
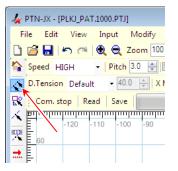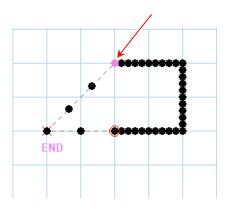
Before   After

(1) Open the sewing data that is modification target.

(2) Click " ![icon] Selection Range" icon.
   (Please release it when "Selection JOG" has been selected.)

(3) Click start point of modification range.

(4) Click end point of modification range.

(5) Click "⚡ Move" icon.

(6) Displaying of selected range is changed to red.
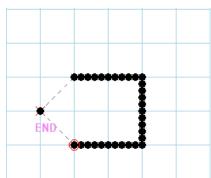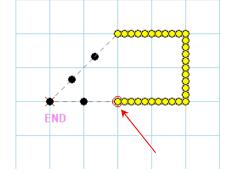
(7) Drag on the start sewing point, and drop on the target
   point.
     (It is also possible to click on the target point at first,
   and to adjust by drag and drop.)
   (Moving also can do at arrow key (↑, →, ↓, ←) (The point can
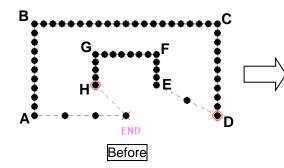   be moved 0.1mm by pressing arrow keys once
   or "123 Input by Num".))
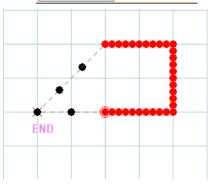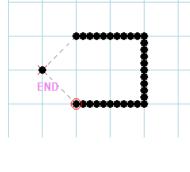
(8) Click on the area on the input field where stitches are
   not displayed. Then, moving data is fixed.

- Modification of start sewing point is finished. -

7-10. Modification example (Change sewing direction)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.
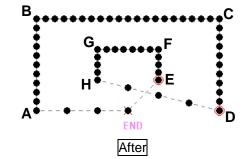
About left sewing data:
・"Feed" from home position to point A
・"Linear" from point A to point B
・"Linear" from point B to point C
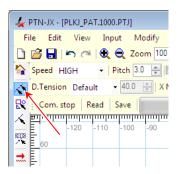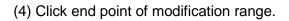・"Linear" from point C to point D
・"Trim" and "Feed" from point D to point E
・"Linear" from point E to point F
・"Linear" from point F to point G
・"Linear" from point G to point H
・"Trim" and "Feed" from point H to home position
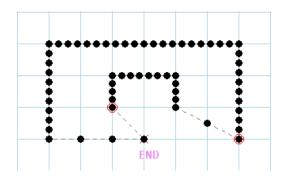
About Modification:
・Sewing direction through points E-F-G-H is changed to H-G-F-E.

Before   After

(1) Open the sewing data that is modification target.

(2) Click " ↖ Selection Range" icon.
(Please release it when "Selection JOG" has been selected.)

(3) Click start point of modification range.

(4) Click end point of modification range.

(5) Click "⁵ᶠ Change Sewing Direction" icon.

(6) Warning message about executing "Change Sewing Direction" is displayed. If you understood it, click "OK" button.
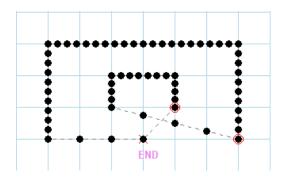
CAUTION

⚠ CAUTION CODE300:
The insertion place and setting of the code is not changed when the sewing direction is changed.
There is a possibility of influencing following operation.
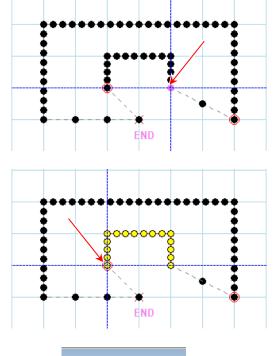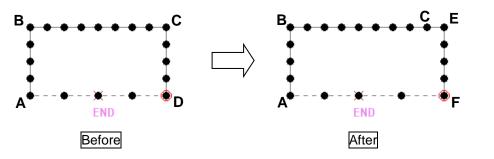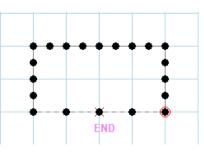 code, step, counter, delay etc.
The equipment might be damaged, please change very carefully.

OK   Cancel

   * When "Change Sewing Direction" is executed to the sewing data including "DFTH" code, "DFTH" code is deleted.

(7) Modification is executed.

- "Change Sewing Direction" is finished. -

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7-11. Modification example (Add Stitch)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.

About left sewing data:
- "Feed" from home position to point A.
- "Linear" from point A to point B.
- "Linear" from point B to point C.
- "Linear" from point C to point D.
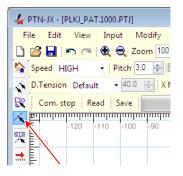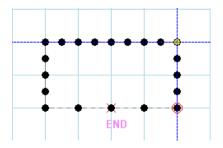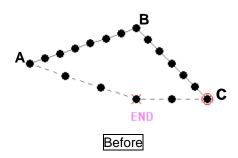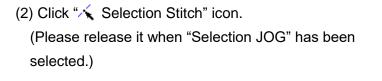- "Trim" and "Feed" from point D to home position.

About modification:
- Add point E behind point C.
- By adding point E, "Linear" C-D moves to E-F.
- "Feed" that connects point D and home position is replaced to "Feed" that connects point F and home position.

Before ⟹ After

(1) Open the sewing data that is modification target.

(2) Click "✎ Selection Stitch" icon.
(Please release it when "Selection JOG" has been selected.)
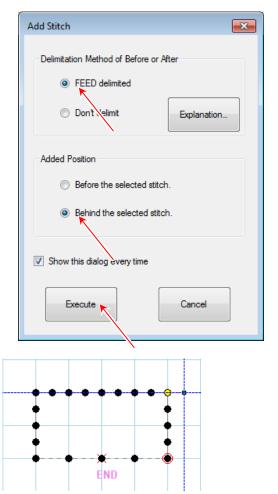
(3) Click the stitch that is the insert point of "Add Stitch".

(4) Click "⊥ Add Stitch" icon.
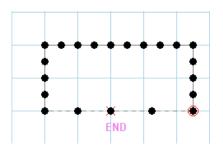
(5) "Add Stitch" dialog box is displayed. Set "Delimitation
    Method of Before or After" to "FEED delimited" and
    "Added Position" to "Behind the selected stitch".

(6) Click "Execute" button.

(7) Click the position to add a stitch. After that, the stitch
    position can be adjusted using drag & drop.
    (It is possible even to use drag & drop from the
    beginning.)

(8) Click on the area on the input field where stitches are
    not displayed. Then, the stitch is fixed.

- "Add Stitch" is finished. -

7-12. Modification example 6 (Code Edit)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.

<u>About left sewing data:</u>

·"Feed" from home position to point A.

·"Linear" from point A to point B.

·"Linear" from point B to point C.

·"Trim" and "Feed" from point C to home position.
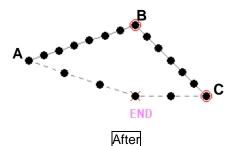
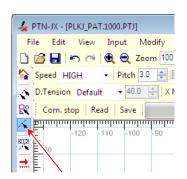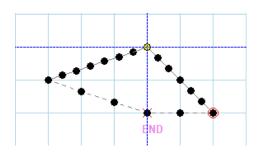<u>About Modification:</u>

·Insert "USTP" code to point B.

Before   After

(1) Open the sewing data that is modification target.

(2) Click "🖊 Selection Stitch" icon.

(Please release it when "Selection JOG" has been selected.)
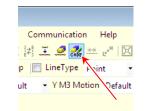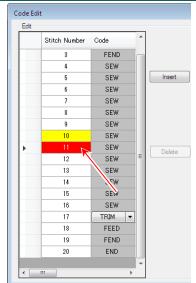
(3) Click the stitch that is the insert point of "Code Edit".

(4) Click "🎨 Code Edit" icon.

(5) "Code Edit" dialog box is displayed. The Cell that is the insert point selected by "Selection Stitch" is displayed in yellow.
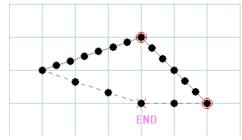

(6) Click the cell displayed "11". That is under the yellow-color cell. When the cell is clicked, the stitch in the input field is displayed in red.

(7) Click "Insert" button. And select "USTP" code in the code list.

(8) Click "OK" button.

(9) The code is inserted.

- "Code Edit" is finished. -

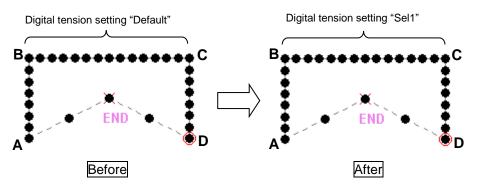## 7-13. Modification example 7 (Modification of sewing quality items 1)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.
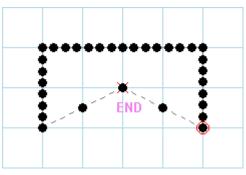
    About left sewing data:

      ·"Feed" from home position to point A.

      ·"Linear" from point A to point B.

      ·"Linear" from point B to point C.

      ·"Linear" from point C to point D.

      ·"Trim" and "Feed" from point D to home position.

    About Modification:
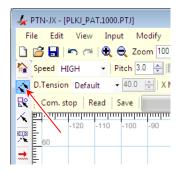
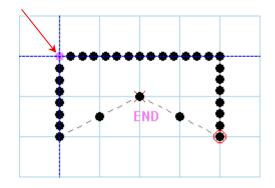   ·Digital tension setting between point B to point C changes "Default" to "Sel1".

Before   After

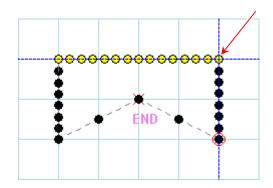(1) Open the sewing data that is modification target.

(2) Click "🔧 Selection Range" icon.
 (Please release it when "Selection JOG" has been
   selected.)

(3) Click start point of modification range.

(4) Click end point of modification range.

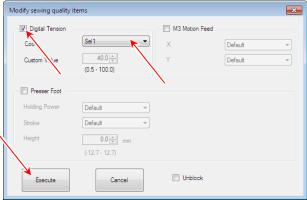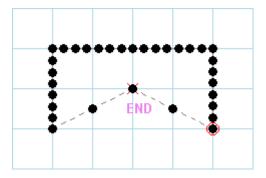(5) Click "🐛 Modify sewing quality items" icon.

(6) Check "Digital Tension" and set the "Code" to "Sel1".
   (The item that not checked will not be modified.)

(7) Click "Execute" button.

- "Modification of sewing quality items" is finished. -

7-14. Modification example 8 (Modification of sewing quality items 2)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.
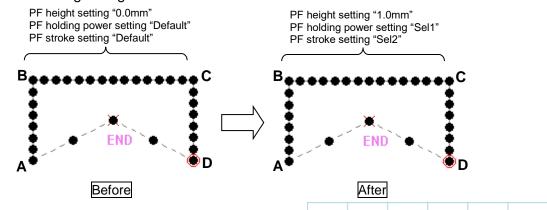
About left sewing data:

・"Feed" from home position to point A.

・"Linear" from point A to point B.

・"Linear" from point B to point C.

・"Linear" from point C to point D.

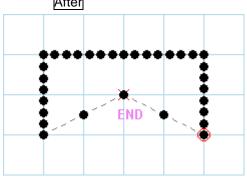・"Trim" and "Feed" from point D to home position.

About Modification:

・PF height setting between point B to point C changes "0.0mm" to "1.0mm",

PF holding power setting changes "Default" to "Sel1",

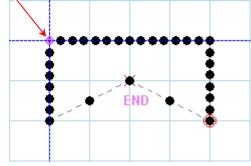PF stroke setting changes "Default" to "Sel2".

PF height setting "0.0mm"
PF holding power setting "Default"
PF stroke setting "Default"

PF height setting "1.0mm"
PF holding power setting "Sel1"
PF stroke setting "Sel2"

Before
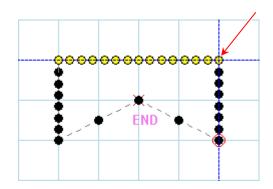
After

(1) Open the sewing data that is modification target.

(2) Click " Selection Range" icon.

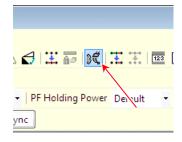(Please release it when "Selection JOG" has been selected.)

(3) Click start point of modification range.

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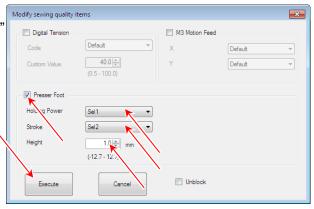(4) Click end point of modification range.

(5) Click " Modify sewing quality items" icon.
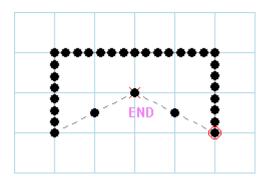

(6) Check "Presser Foot" and set the "Holding Power"
    setting to "Sel1".
    Set the "Stroke" setting to "Sel2".
    Set the "Height" setting to "1.0mm".
    (The item that not checked will not be modified.)

(7) Click "Execute" button.

- "Modification of sewing quality items" is finished. -

7-15. Modification example 9 (Modification of sewing quality items 3)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.
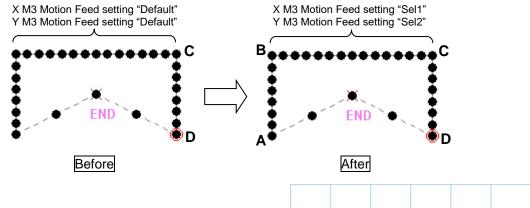
About left sewing data:

·"Feed" from home position to point A.

·"Linear" from point A to point B.

·"Linear" from point B to point C.

·"Linear" from point C to point D.

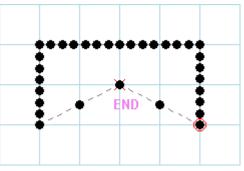·"Trim" and "Feed" from point D to home position.

About Modification:

·X M3 Motion Feed setting between point B to point C changes "Default" to "Sel1",

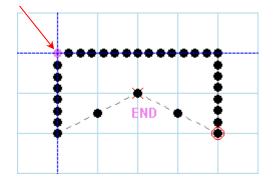　Y M3 Motion Feed setting changes "Default" to "Sel2"

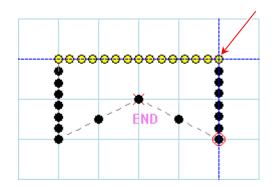(1) Open the sewing data that is modification target.

(2) Click " ✨ Selection Range" icon.
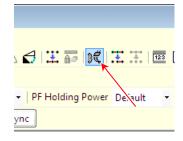　(Please release it when "Selection JOG" has been selected.)

(3) Click start point of modification range.

(4) Click end point of modification range.

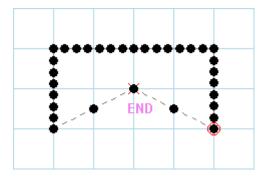(5) Click "⬚ Modify sewing quality items" icon.

(6) Check "M3 Motion Feed" and set the "X" to "Sel1".
Set the "Y" to "Sel2".
(The item that not checked will not be modified.)

(7) Click "Execute" button.

- "Modification of sewing quality items" is finished. -

7-16. Modification example 10 ("DFTH" Code Edit)

Step where the sewing data (left of figure below) is modified to the sewing data (right of figure below) is explained below.
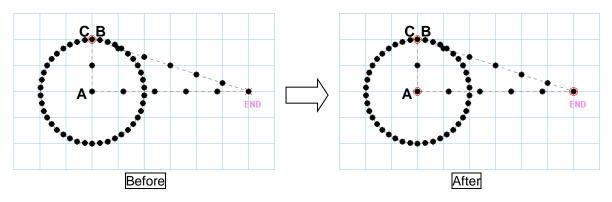
About left sewing data:

·"Feed" from home position to point A.

·"Feed" from point A to point B.

·"Circle" from point B to point C.

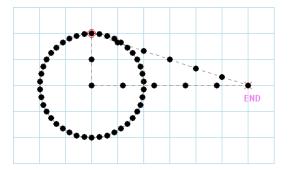·"Trim" and "Feed" from point C to home position.

About Modification:

·Insert "DFTH" code that "Parameter" setting is "0.00mm" to home position.
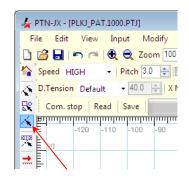
·Insert "DFTH" code that "Parameter" setting is "0.05mm" to point A.
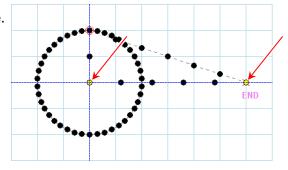

Before ⟹ After

(1) Open the sewing data that is modification target.
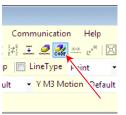

(2) Click " Selection Stitch" icon.
   (Please release it when "Selection JOG" has been selected.)

(3) Click the stitch that is the insert point of "DFTH" code.

(4) Click "⚙ Code Edit" icon.

(5) "Code Edit" dialog box is displayed.
The Cell that is the insert point selected
by "Selection Stitch" is displayed in
yellow.
(If the home position is selected by
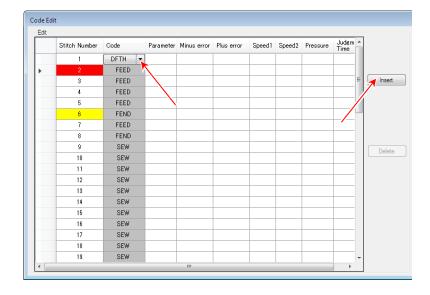"Selection Stitch", the insert point is not
displayed.)

(6) Click the cell displayed "1". When the cell is clicked,
the stitch in the input field is displayed in red.
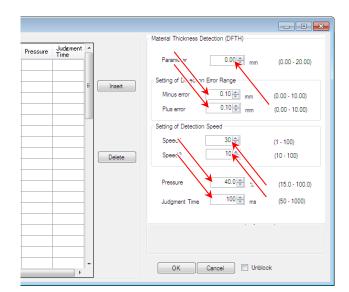
(7) Click "Insert" button. And select
"DFTH" code in the code list.

(8) Set the following parameter.

　"Parameter" = "0.00mm" ,

　"Minus error" = "0.10mm" ,

　"Plus error" = "0.10mm" ,

　"Initial Speed (Speed1)" = "30" ,

　"Detection Speed (Speed2)" = "10" ,

　"Pressure" = "40.0%" ,

　"Judgment Time of

　　　　Material Thickness Detection" = "100ms"
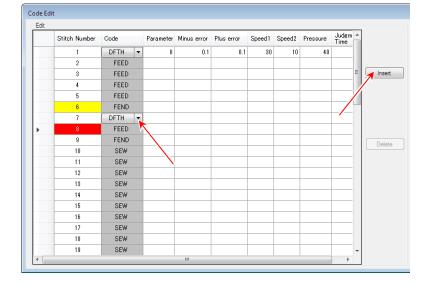
(9) Click the cell displayed "7". That is under the yellow-
color cell. When the cell is clicked,
the stitch in the input field is displayed in red.
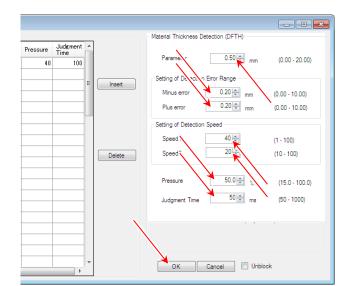
(10) Click "Insert" button. And select
"DFTH" code in the code list.
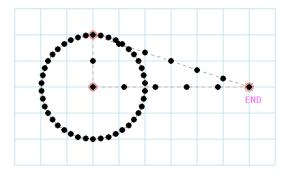
(11) Set the following parameter.

　"Parameter" = "0.50mm" ,

　"Minus error" = "0.20mm" ,

　"Plus error" = "0.20mm" ,

　　"Initial Speed (Speed1)" = "40" ,

　"Detection Speed (Speed2)" = "20" ,

　"Pressure" = "50.0%" ,

　"Judgment Time of

　　　　Material Thickness Detection" = "50ms"

(12) Click "OK" button.

(13) The "DFTH" code is inserted.

- "DFTH" Code Edit is finished. -

[Limitation of "DFTH" code]

* When the stitch including "DFTH" code modify direction using "Change Sewing Direction",
　"DFTH" code is deleted.
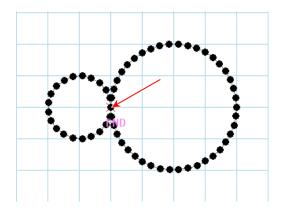
8. Frequently Asked Questions
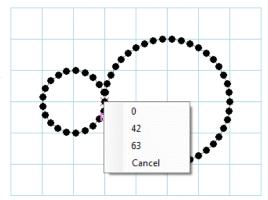
(Q - 1) Selecting stitch at stitch-overlapped point

Please explain how to select the specific stitch in the point where multiple stitches exist.

(A - 1)

(1) Like home position at left figure, sewing data may have multiple stitches that exist on single point.

(2) By clicking overlapped point using "⚲ Selection Stitch", the list shown at right figure is displayed. The list displays stitch numbers that exist on the clicked point. By selecting specific stitch number on the list, the corresponding stitch is selected.
  (In right figure's case, stitch 0, 42 and 63 are overlapped on the home position.)
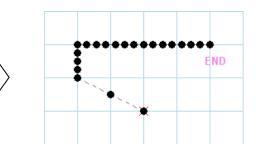
(Q - 2) Orthonormal tracking

Is there a way to anchor the red tracking line to the grid so the inputting of x axis or y axis parallel line is easier?

(A - 2)
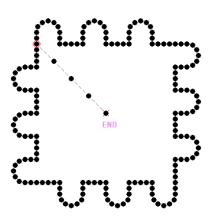
Please input holding "Shift Key".

"Shift Key" ON

(Q - 3) Connection

   I think the following sewing data is made by the same shape parts. Is there a way to copy and paste?
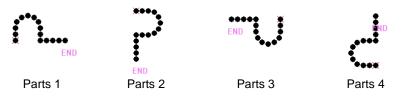
(A - 3)

   In this case, "Connection" function is useful. Tom make above sewing data using "Connection" has 2 major steps.
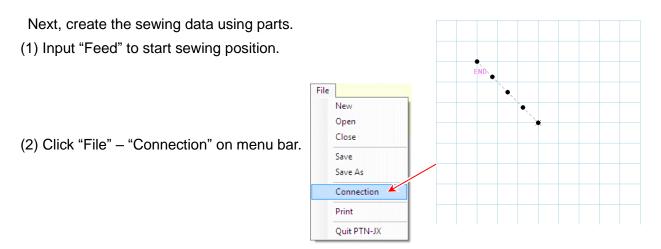
   · Create the parts of the sewing data. Created parts are saved to file.
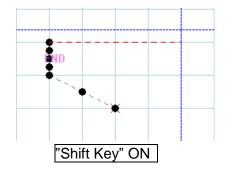   · Paste the parts to making sewing data using "Connection" when needed.

   The specific procedure to make the sewing data that is shown above is explained below.

   At first, create following parts.

| Parts 1 | Parts 2 | Parts 3 | Parts 4 |

(After Parts 1 is created, Parts 2, 3 and 4 can be created by using "Rotate" function.)

   Next, create the sewing data using parts.

(1) Input "Feed" to start sewing position.

(2) Click "File" – "Connection" on menu bar.

(3) Select "Parts 1" sewing data.

   Click "OK" button though the dialog box is displayed.
   (Please refer to Q-13 for details of this dialog box.)

By repeating this step 2 more times, the sewing data is formed as shown in right figure.

(4) Import "Parts 2" sewing data 3 times.

(5) Import "Parts 3" sewing data 3 times.

(6) Import "Parts 4" sewing data 3 times.

(7) Click " Return" icon.

By above procedure, creation of the sewing data is finished.
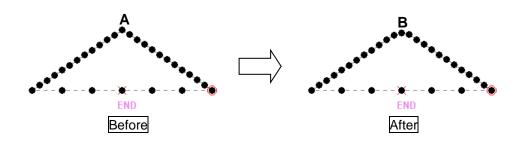
(Q - 4) Modification using arrow key/Input by Num

Please tell me how to use "Arrow key" or "Input by Num" function when using "Move" function.
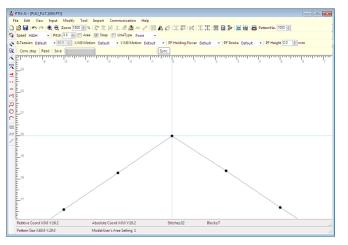
(A - 4)

The method is explained using example below.
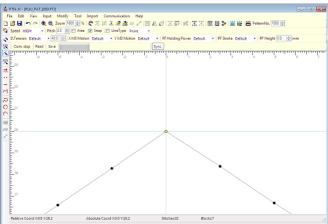
(About modification: To round off vertex, point A is moved to point B.)

Before

After

(1) Zoom input field and adjust displaying position where point A is displayed at the center.
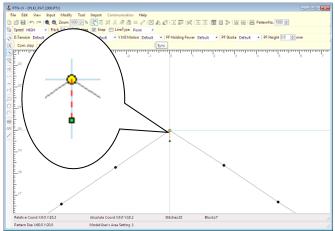
(2) Select point A using " Selection Stitch".

(3) Execute " Move".

(4) Press the "Down Arrow key". Then, temporary placed point is moved 0.1mm to lower direction. Repeat this step 4 more times, then the point is moved 0.4mm more to lower direction.

In some modification functions, by pressing arrow keys, the temporary placed point can be moved 0.1mm to corresponding direction.

(5) Next, click " 123 Input by Num" icon.
    In "Input by Num" dialog box, value of the "Y
    Coord" is "-0.5mm". It is the value where the
    temporary placed point has been moved up
    to now.
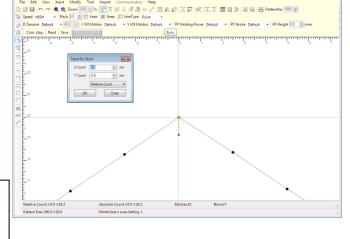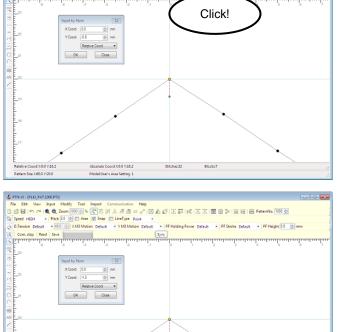
(6) Set "Y Coord" to "-0.8mm".

(7) Click "OK" button. Then, temporary placed
    point is moved to the corresponding position.

> In some modification functions, the temporary
> placed point can be moved to the position that is
> set by "Input by Num".

(8) When using "Arrow key" after using "Input by
    Num", the focus must be switched to the input
    field. Click the title bar of the main window.

Click!
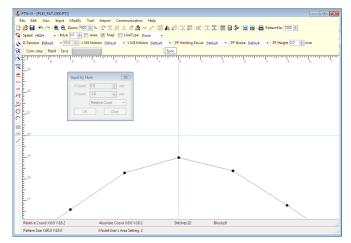
(9) Press "Down Arrow key" twice.

(10) Click on the area on the input field where stitches are not displayed. Then the stitch is fixed.

The stitch on point A is moved to point B that is 1.0mm below from point A.

(Q - 5) Undo

When I use "Rotate" function, angle may not be fixed at once. So, I want to retry it until the optimal angle is found. Is there a way to do this?

(A - 5)

Please use "⤺ Undo" function.

"Undo" can get the sewing data back to the status that is before last action is executed. So, even if the result of operation cannot be expected, you can execute it as a trial.

(Q - 6) Backspace key and Esc key

When using "Broken Line" input, "⤺ Undo" is usable to delete last input point. But, when using "Replace", "⤺ Undo" is unusable. How can I delete last input point in this case?

(A - 6)

By pressing "Backspace key" the last input point is deleted.

Additionally, by pressing "Esc key", all input point is deleted.

(Note: This operation is usable at only "Replace".)

(Q - 7) Correction that moves only a part of pattern
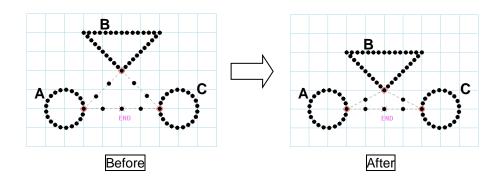
I want to move only a part of the pattern that was connected by feed excepting other pattern.
How can the pattern be corrected ?

(A - 7)

It explains by the example of correcting the pattern from the following left side figure to the following right side figure.

(It wants to move only B in the pattern of A, B and C and doesn't want to move A and C.)

(A and C are the circle pattern. B is the triangle that was input by the broken line.)

Before   After
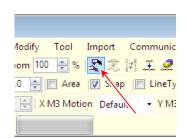
(1) Click " Selection parts" icon.

(2) A triangular patterned is selected.

(3) Click " Move" icon.

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(4) Displaying of selected range is changed to red.

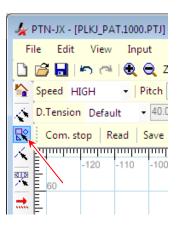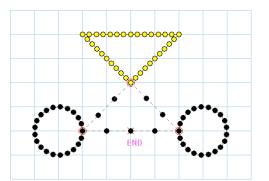(5) Click " 123 Input by Num" icon.
(It is possible even to move it using mouse's drag & drop or arrow keys)

(6) It is input by relative coordinates as "X:0.0,Y:-10.0" and clicks "OK" button.
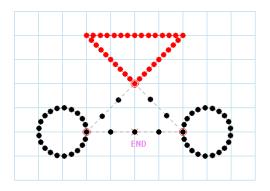
(7) The preview under the movement can be confirmed.
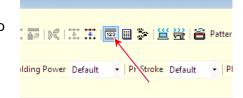
(8) It right-clicks on the input field, and "Enter" is left-clicked. (It is possible to fix it even if it left-clicks in the place without the pattern of the input field.)

(9) The movement of triangular pattern is completed. (The feed that is adjacent to a triangular pattern is renewed.)

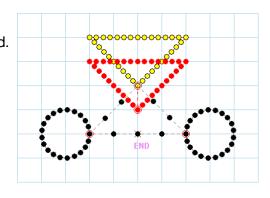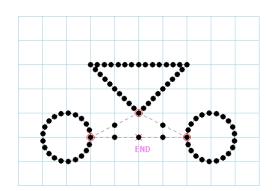## (Q - 8) Restriction matter of moving the zigzag pattern with "Everything is renewed".
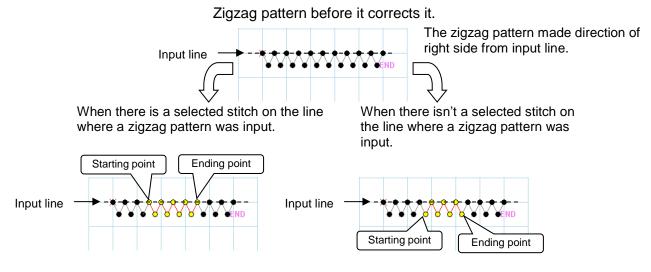
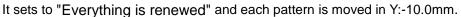A part of a zigzag pattern was moved with "Everything is renewed". But a different correction resulted.

Why?
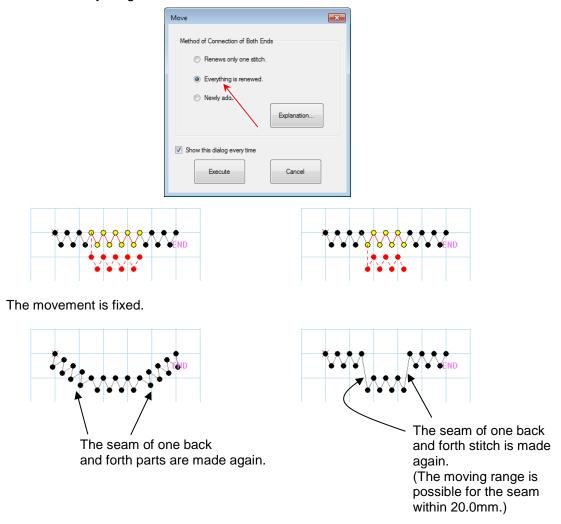
(A - 8)

"Everything is renewed" is becoming effective in the correction that moved a zigzag pattern only selected stitch on the line where a zigzag pattern was input.

It explains the example of moving each case as follows.

Zigzag pattern before it corrects it.

The zigzag pattern made direction of right side from input line.

Input line

END

When there is a selected stitch on the line where a zigzag pattern was input.

When there isn't a selected stitch on the line where a zigzag pattern was input.

Starting point   Ending point

Input line

END

Input line

END

Starting point   Ending point

It sets to "Everything is renewed" and each pattern is moved in Y:-10.0mm.

Move

Method of Connection of Both Ends

○ Renews only one stitch.

● Everything is renewed.

○ Newly add.

Explanation...

☑ Show this dialog every time

Execute   Cancel

END

END

The movement is fixed.

END

END

The seam of one back and forth parts are made again.

The seam of one back and forth stitch is made again.
(The moving range is possible for the seam within 20.0mm.)

(Q - 9) Pitch change in zigzag pattern

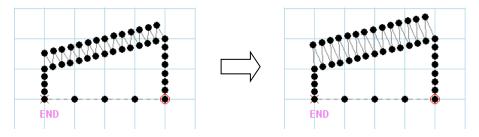It was not possible to do though it tried to correct a zigzag, patterned part by the pitch change. How should I correct it ?

(A - 9)

The pitch and width of a zigzag pattern cannot be changed by "Pitch change".
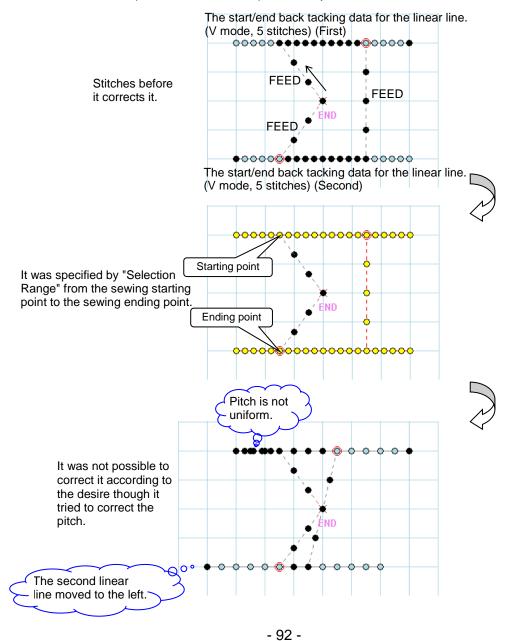
In this case, please make zigzag to which pitch and width are changed by "Change Attribute".

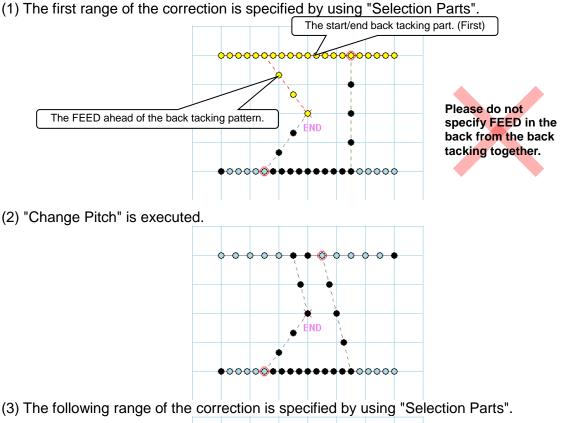Pitch and width of a zigzag pattern was changed by "Change Attribute".

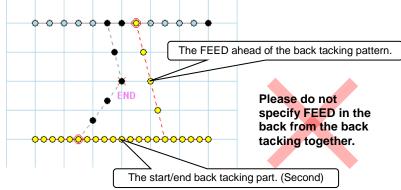## (Q - 10) Pitch change in back tacking (V, M) pattern

It was not possible to correct it according to the desire though the start/end back tacking data for the linear line of the figure below tried to correct the pitch. I want to change the start/end back tacking data for the linear line (V mode, 5 stitches) of 3mm pitch into 5 mm. How should I correct it ?
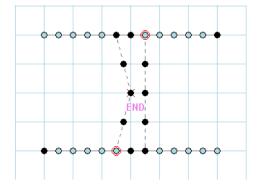
For this case, please correct the back tacking data for the linear line one by one separately.

In addition, a method specified of the corrected range is important. For V or M mode back tacking, please specify the range of the correction including FEED that is before back tacking. As an easy specification method, it is possible to select it easily by using "Selection Parts" only by specifying a part of the back tacking and the FEED ahead of the back tacking pattern.
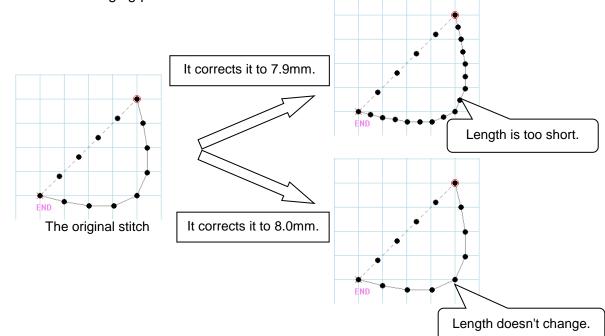
It explains the procedure of the correction as follows.

(1) The first range of the correction is specified by using "Selection Parts".

The start/end back tacking part. (First)

The FEED ahead of the back tacking pattern.

END

Please do not specify FEED in the back from the back tacking together.

(2) "Change Pitch" is executed.

END

(3) The following range of the correction is specified by using "Selection Parts".

The FEED ahead of the back tacking pattern.

END

Please do not specify FEED in the back from the back tacking together.

The start/end back tacking part. (Second)

(4) "Change Pitch" is executed again. The correction was completed.

END

(Q - 11) After converting DXF data, "Change Line Type" is executed.
(Two or more parts are united with one)

After converting DXF data, "Change Pitch" is executed. However, it was not possible to correct it according to the desire. For instance, when the pattern of 10.3 - 10.4mm in pitch is corrected to 7.9mm, it is corrected to 5.1 - 5.2mm. Moreover, when the pattern of 10.3 - 10.4mm in pitch is corrected to 8.0 mm, it is not corrected.

Isn't there method of changing pitch?

It corrects it to 7.9mm.

Length is too short.

The original stitch

It corrects it to 8.0mm.

Length doesn't change.

(A - 11)

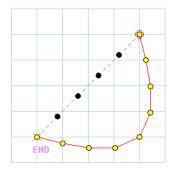For this case, it corrects it by using "Change Line Type".

The reason why cannot change thinking of length is that two or more "Parts" is connected with the stitches.

This problem can be solved by uniting the part where it wants to correct pitch evenly with one "Parts".

(When the Embroidery data is converted into the sewing data, it is often made by two or more "Parts".)

It explains the procedure of the correction as follows.

(1) The range where it wants to correct pitch is specified by using "Selection Range".

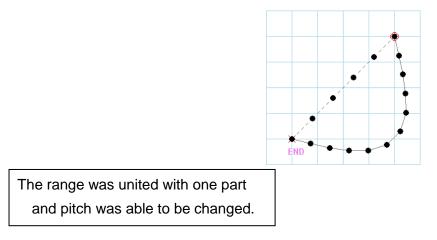(2) Click " ⋮ Change Line Type" icon.

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(3) Select the line type and set "Pitch" and "Speed".

(If need to set "Digital Tension" , "M3 Motion Feed" and "PF", set each item. If not need to set, set all item to "Default".)

(4) Click "Execute" button.

The range was united with one part
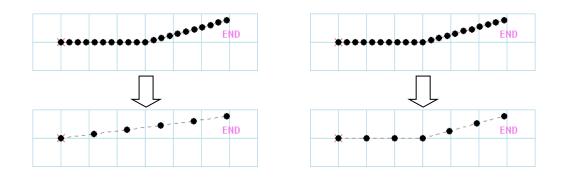and pitch was able to be changed.

[Limitation of "Change Line Type"]

- The range with Circle/Arc input, Multiple/Offset, Zigzag and Back tacking can't be converted.

- This function is converted in each parts. When parts are stepped over by the "Selection Range", it is automatically delimited with parts.

- When the "closed pattern" is converted into the line, it becomes one point.

(The "closed pattern" seems to have been deleted.)

(Q - 12) Feature of Change Line Type

The same did not result though these two patterns were changed to feed. Why is the result different?
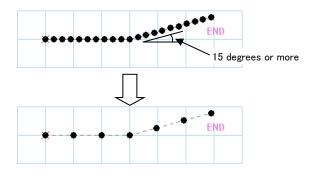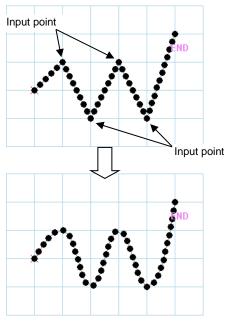

(A - 12)

This is due to the specification to search for the corner by Feed and Broken Line.

The specification to search for the corner by Feed and Broken Line is whether the angle is curved by 15 degrees or more.

Therefore, because the angle is less than 15 degrees in left figure, and right figures are 15 degrees or more, it becomes such a result.
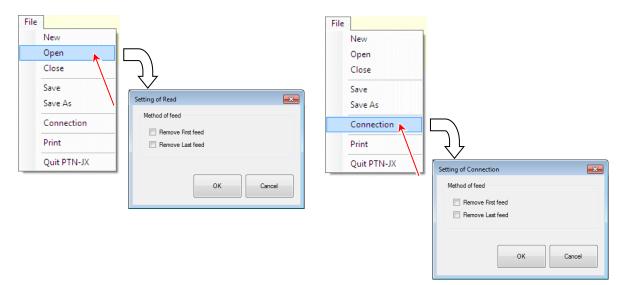

* On the other hand, it changes to the curve looking for the input point when changing to curve by Change Line Type.
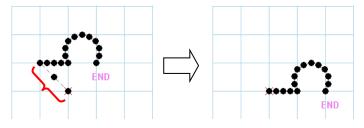
(Q - 13) About "Setting of Read" and "Setting of Connection" dialog box

What is the dialog box displayed when the file is opened or "connection" is used?
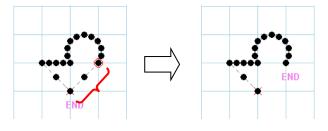

(A - 13)

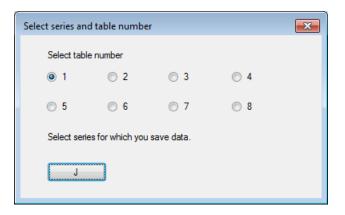"Remove first feed" is deleted from home position to first stitch point.

"Remove last feed" is deleted from last stitch point to end point.

*This setting is invalid when there is not feed in first and last.

(Q - 14) About "Table number" in dialog box

What is the "Table number" in dialog box when the sewing data is saved?

(A - 14)

Selects setting table change action at the pattern data change when pattern data contains setting "Table number" information.
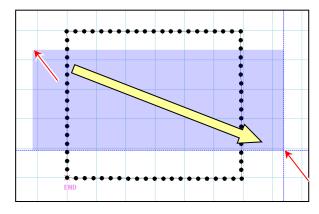
Usually , please select the "No.1".

The "Table number" of the sewing data that is editing can confirm in "Stitch List".

(Q - 15) "Selection Range" of using mouse

I moved the mouse cursor while clicking. But it was not possible to select the stitches.
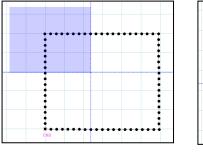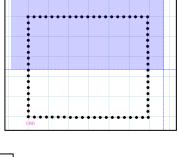
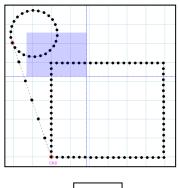Why I can not select stitches?

(A - 15)

It can not select if the selected stitches is not continuous.

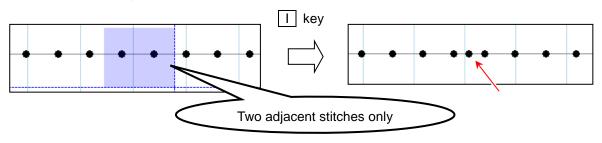Please select the consecutive of stitches.

OK

NG

(Q - 16) "Add Stitch" of using keyboard

I pressed the $\boxed{\text{I}}$ key or $\boxed{\text{Insert}}$ key after selecting stitch.

But it was not possible to add a stitch. Why I can not add?

(A - 16)

It can not add a stitch when it is selected more than three stitches.
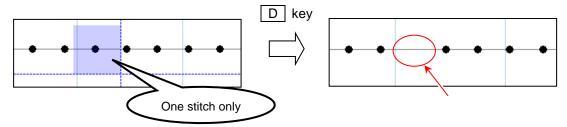
Please select two adjacent stitches.

Two adjacent stitches only

(Q - 17) "Delete Stitch" of using keyboard

It was not possible to delete a stitch. I pressed $\boxed{\text{D}}$ key or $\boxed{\text{Delete}}$ key after selecting stitch.

Why I can not delete?

(A - 17)

It can not delete a stitch when it is selected more than two stitches.

Please select one stitch only.

One stitch only

(Q - 18) Connection with the sewing machine

PC and PLK-J control box were connected with USB cable. However, the communication did not work. Why?

(A - 18)

* Does the system software of PLK-J control box correspond to the communication?

The communication is supported in system software version "S200W004" or later.

The sync mode is supported in system software version "S200W009" or later.

MT Tracer Viewer is supported in system software version "S200W019" or later.

If the system software is old, please consult the sewing machine agency about update.

* Is there connected PC and PLK-J control box with the long USB cable?

If the USB cable is long, the USB driver may not be recognized properly.

Please try to connect with the short USB cable.

If there is the equipment that generates noise near, please try to connect with the noise countermeasured USB cable.

* Has the security problem been solved with Windows Update?

If there is installed Windows7 SP1 64bit, it is neccesally to have been solved the security problem with Windows Update. It use PC online (connect to network) and execute Windows Update, or download and install two kind of security program from the following home page.

[Windows7 SP1 64bit security program]

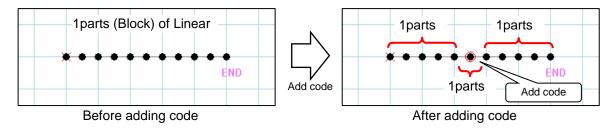Update1 <https://www.microsoft.com/en-US/download/details.aspx?id=46009>

Update2 <https://www.microsoft.com/en-US/download/details.aspx?id=46148>

(Q - 19) Unblock

What is different when "Unblock" in the dialog of "Speed", "Code Edit" and "Sewing quality items" is enabled ?

(A - 19)

The parts is break down when modify the pattern composed of parts(block).

For example, when a code added to the linear input with 1 parts, it is break down to 3 parts.

When the parts is break down, stitches may be moved slightly.

In this case, if it is enabled "Unblock", it is able to modify without moving stitches.

Modification example : When a code added to the curve input with 1 parts.

* It is different from the actual pattern to show the difference.

"Unblock" is also possible to execute from the menu of modify or icon.

If it is berak down the parts using "Unblock" before modifying in advance, it is possible to modify that does not move stitches without enabling "Unlock" of "Speed", "Code Edit" and "Sewing quality items" dialog.

* If unblock the parts, it can not change pitch in "Change Pitch" .
   In this case, it can change pitch by changing the line type
   in "Change Line Type".
   (Please refer to **(Q-11)** about "Change Line Type")

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