

ENGLISH

**For AMS-F series
Bar code reader
INSTRUCTION MANUAL / PARTS LIST**



CAUTION :

When installing this product, be sure to turn OFF the power of the sewing machine.
Furthermore, read the instruction manual of the sewing machine as well.

CONTENTS

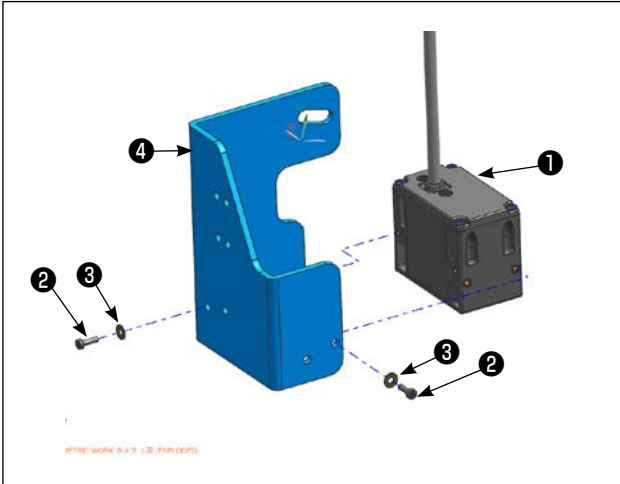
1. Installation procedure.....	1
2. Attaching the bar code	3
3. Bar code function.....	3
4. Setting of the bar code function	4
5. How to use	9
6. Bar code configuration.....	11
7. Malfunction of the bar code reader	12
8. Parts list.....	13



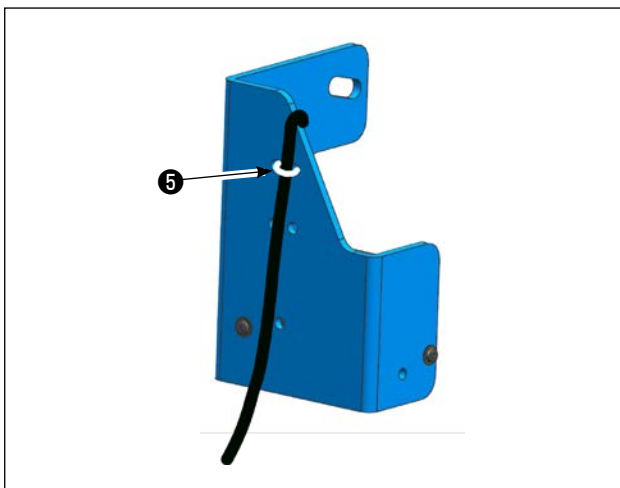
CAUTION :

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

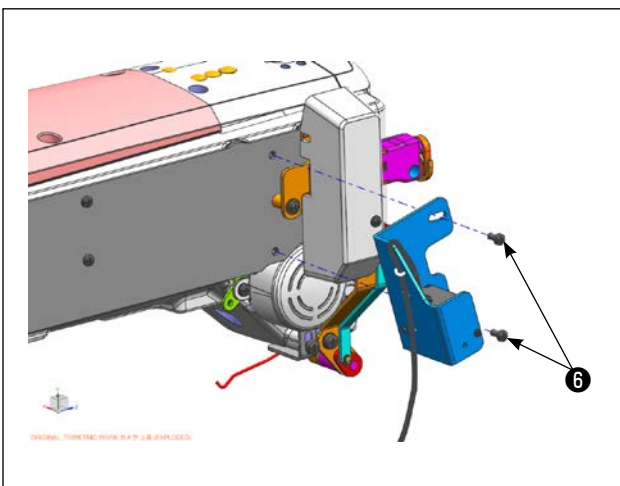
1. Installation procedure



- 1) Install the bar code reader **1** onto the mounting plate **4** using the screws **2** and the washers **3** (two locations) which are included as the accessories.



- 2) Secure the cord with cable band **5**.

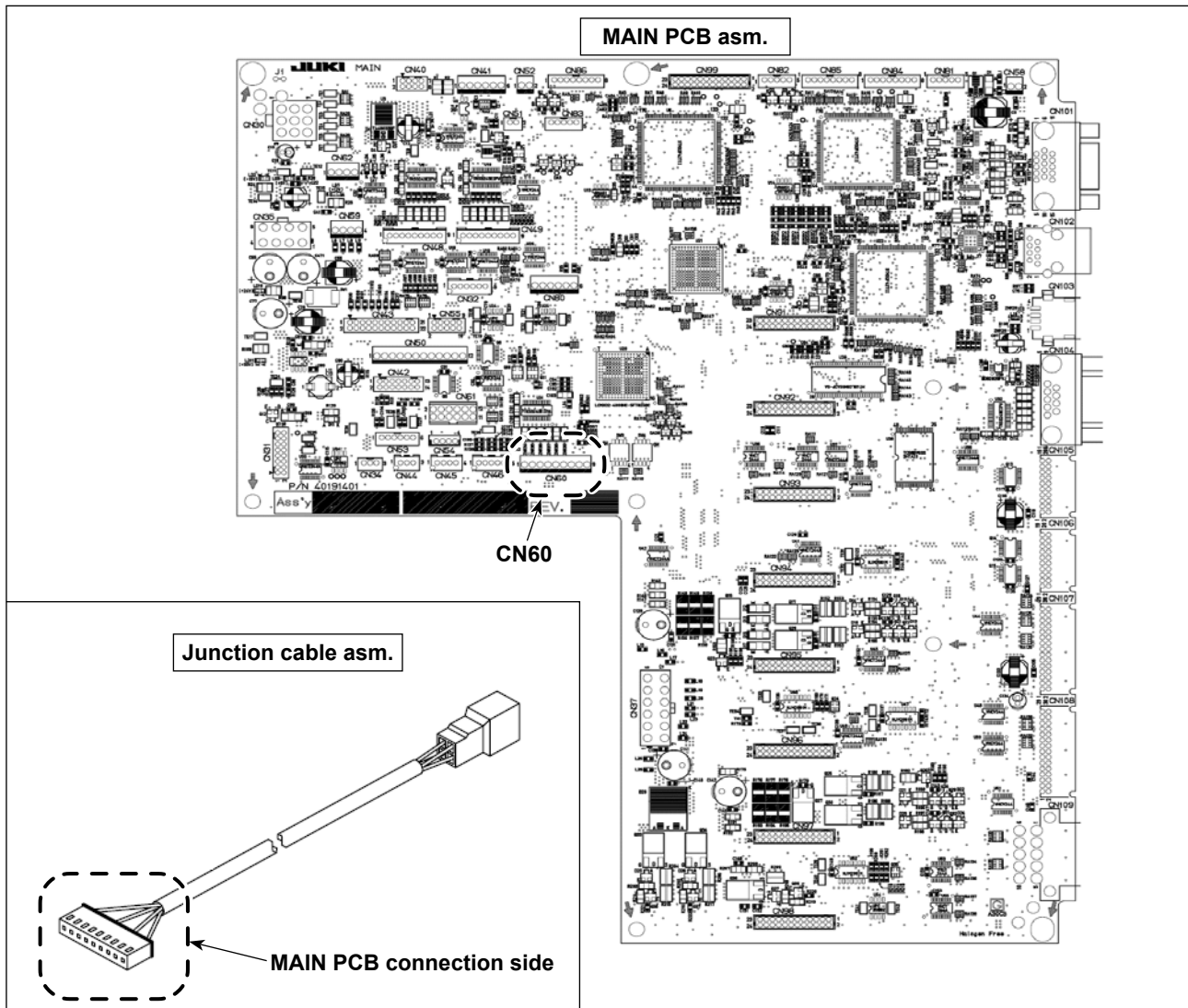


- 3) Remove the fixing screws **6** (two locations) of the intermediate presser cover of the sewing machine, install the mounting plate **4**, and fix with screws again to install onto the sewing machine.



DANGER :

1. To avoid electrical shock hazards, turn OFF the power and open the control box cover after about five minutes have passed.
2. Be sure to turn OFF the power switch first. Then, open the control box cover and carry out the work.



4) Open the electrical control box. Connect the junction cable (40105094) to the CN60 on the MAIN PCB.



Though the junction cable connector has the marking "CN50", connect it to the "CN60" on the MAIN PCB.

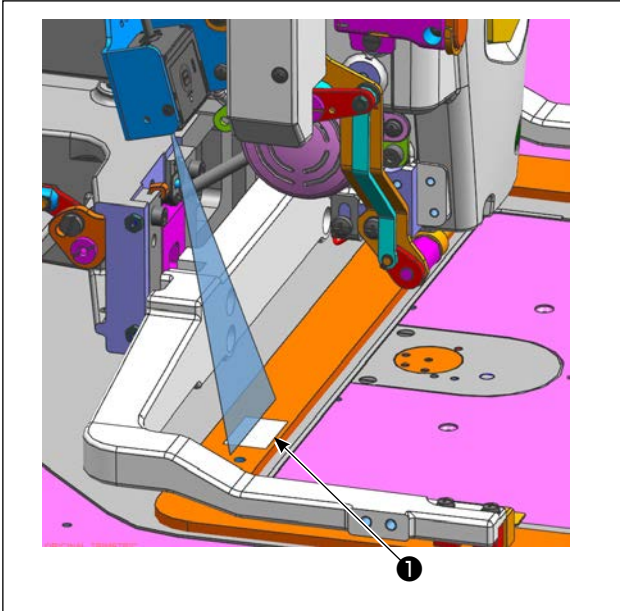
5) Connect the junction cable to the bar code reader and secure with the supplied cable clip band.



CAUTION :

- Be sure to use the sewing machine within the specified temperature range and the specified humidity range.
- Do not connect/remove connectors with the power supplied to the sewing machine.

2. Attaching the bar code



- 1) Copy the bar code ❶ attached at the end of the instruction manual for use.
- 2) To attach the bar code to the feeding frame, adjust the position of the feeding frame so that the laser beam irradiated from bar code reader hits the bar code as shown in the figure. (Refer to "4-3. Setting of the fixed escape position" P.6.)

3. Bar code function

Bar code function is a function to read the bar code and to switch to the corresponding sewing pattern for the applications such as the cassette identification etc.

By reading the bar code, switching to 999 user patterns stored in the sewing machine memory and to 50 sewing data registered in the pattern button can be made.

Specifications for the barcode reader

CMOS area sensor

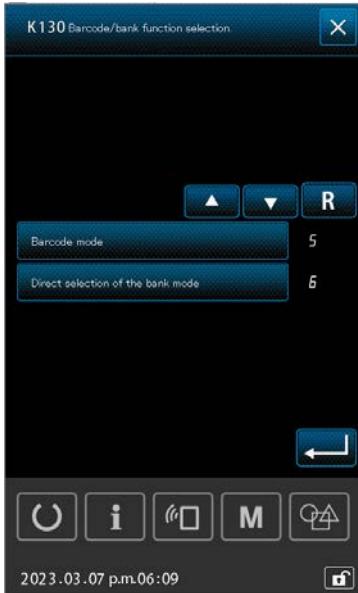
WVGA (360,000 pixels)

4. Setting of the bar code function

4-1. Setting of the bar code function

Select the bar code mode with the memory switch K130 "Select the bar code/bank function".

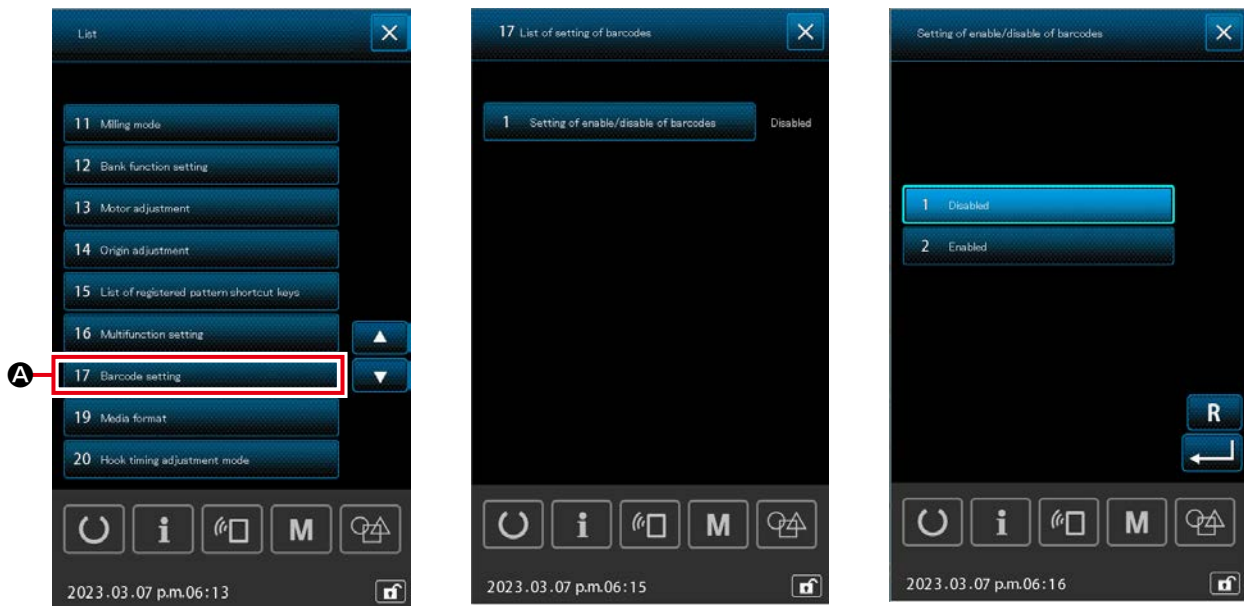
Refer to the Engineer's Manual for how to select the memory switch Kxxx (Level 2).



Content	Explanation
None	Bank/bar code function is not used.
Bank mode 2 patterns	Two patterns are set as the number of banks.
Bank mode 4 patterns	Four patterns are set as the number of banks.
Bank mode 8 patterns	Eight patterns are set as the number of banks.
Bank mode 16 patterns	Sixteen patterns are set as the number of banks.
Bar code mode	Bar code mode is used.
Direct selection of the bank mode	The bank number is set as the pattern number as is.
Pattern setting is not necessary.	

4-2. Enabling the bar code mode

When you have selected the bar code mode with the memory switch K130, "BAR CODE SETTING" button **A** on the list screen is enabled. Press this button to display the bar code setting list screen. Enable/disable of the bar code can be changed over with the "BAR CODE ENABLE/DISABLE SETTING" button.



When you have enabled the bar code, the "BAR CODE READING POSITION TEACHING" button is displayed on the bar code setting list screen. Refer to **"4-3-2. Fixed retraction position teaching" P.7** for how to use the bar code reading position teaching function.

4-3. Setting of the fixed escape position

For the bar code function, the "Fixed retraction position coordinates" of the memory switches K117 and K118 are enabled. It is not necessary to set the memory switch K90 "Select enable/disable of the fixed retraction position".

If it is necessary to adjust the bar code reading position stuck to the feeding frame, set the coordinate position of the fixed retraction position.

The fixed retraction position can be set by two different methods, i.e., directly inputting the coordinates, and saving the coordinate position of the destination to which the feeding frame is moved (the latter method is "teaching").

4-3-1. Inputting coordinates of the fixed retraction position

When you have selected the memory switches K117 and K118, you can directly enter numerical values of the coordinates on the numeric keypad screen.

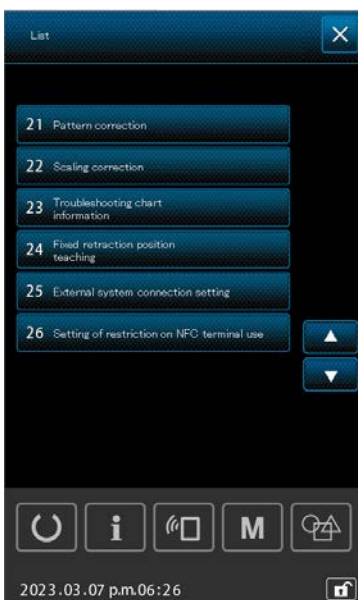
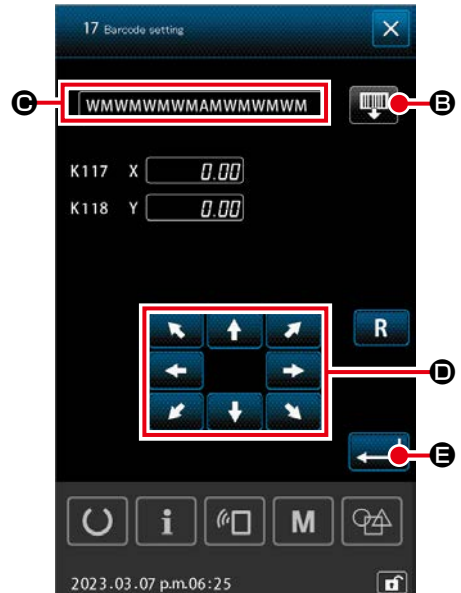
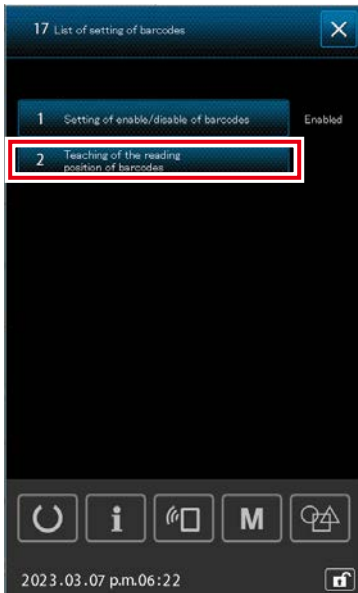


Content	Explanation
X coordinate position of the fixed retraction position	Setting is made for the fixed escape position in X axis.
Y coordinate position of the fixed retraction position	Setting is made for the fixed escape position in Y axis.

4-3-2. Fixed retraction position teaching


The fixed retraction position teaching function works in such a way as to move the feeding frame to the position indicated by the bar code that is stuck to the feeding frame and to save its coordinate position to the memory switches K117 and K118. If the coordinate position to read the bar code is unknown, this function helps set the coordinate position with ease.

When the bar code function is enabled, select the "BAR CODE READING POSITION TEACHING" button on the bar code setting list screen to carry out the fixed retraction position teaching.








The fixed retraction position teaching can also be carried out by selecting the "FIXED RETRACTION POSITION TEACHING" button on the list screen.


The position of the feeding frame can be changed using eight directional button **D** on the fixed retraction position teaching screen. When you stop the feeding frame, the coordinates of the stop position are displayed. Press ENTER button **E** to save the coordinate position to the memory switches K117 and K118.


When the bar code mode is enabled, the "BAR CODE READING" button  **B** is displayed on the fixed retraction position teaching screen. Press this button to allow the bar code reader to read the bar code. You can check whether the bar code can be read correctly at the position to which you have moved the feeding frame. The result of reading of the bar code is displayed with read character string **C**. As many as 16 characters can be displayed. If the number of characters consisting the bar code exceeds 16, 16 characters from the beginning of the character string will be displayed.



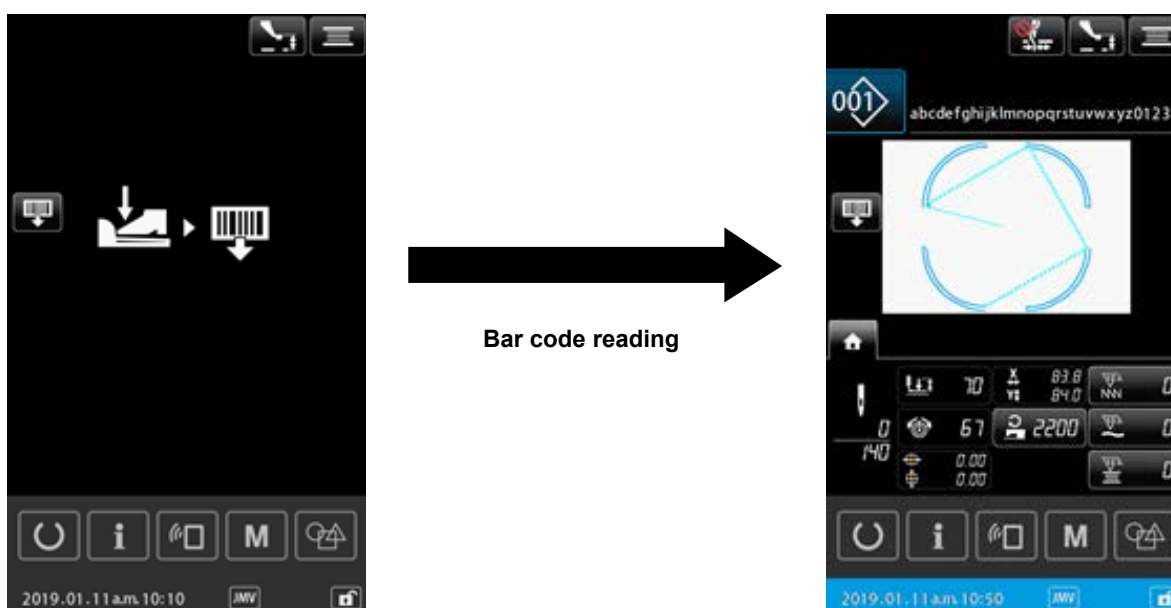
	Content	Explanation
	BAR CODE READING EXECUTION button	This button is used for reading the bar code. If the bar code reader is not connected, "Inoperative" buzzer will sound.
	Eight directional button	This button is used for moving the feeding frame.
	RESET button	Short press: The button is used for moving the feeding frame to the coordinate position displayed on the screen. Long press: The button is used for moving the feeding frame to its origin position.
	ENTER button	This button is used for saving the coordinate position displayed on the screen to the memory switches K117 and K118.
	CLOSE button	This button used for discarding the edited coordinate position and closing the screen.

5. How to use

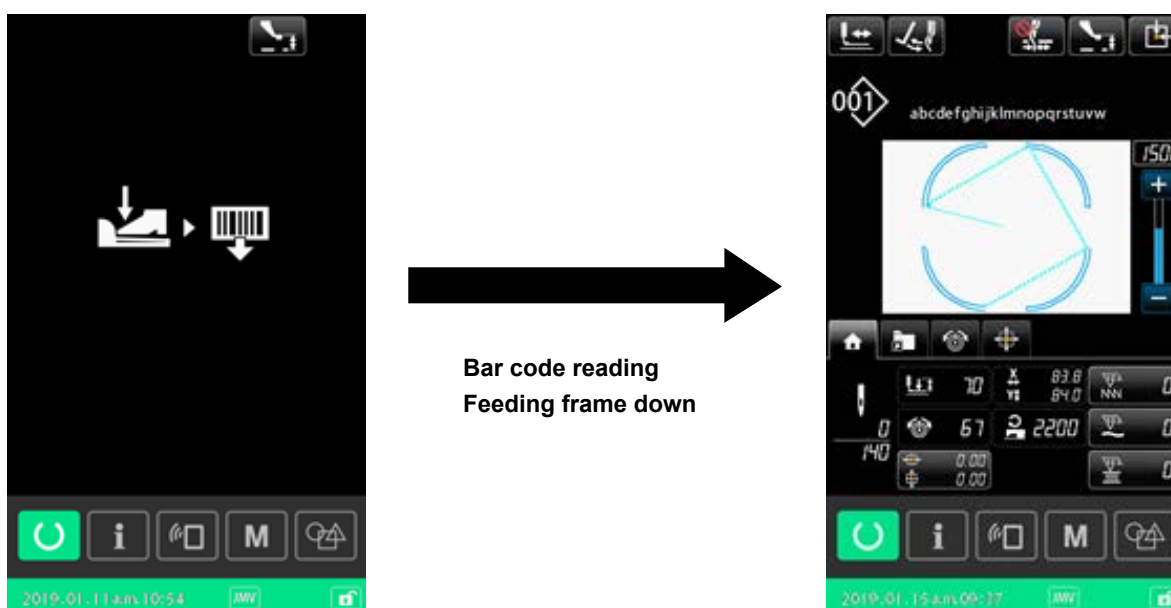
The list screen is closed. If the bar code mode is enabled, pictograph  that indicates ON state will be displayed.

In the setting state, sewing patterns can be confirmed by reading the bar code. Press BAR CODE READING button  or FEEDING FRAME switch (pedal) to read the bar code.

It should be noted, however, this reading operation in the setting state will be enabled only after the origin retrieval operation. In addition, the feeding frame will not be operated by pressing the FEEDING FRAME switch. Only the bar code reading operation is performed. The sewing pattern read in the setting state will be discarded when the sewing machine shifts into the set ready state.



In the preparation state, trading on the work clamp foot switch (pedal) will initiate the actions of bar code reading, pattern reading and feeding frame down.



The sewing pattern will be read, and the sewing can be started when the feeding frame has been lowered.

List of error codes

Error code	Displayed message	Error content	How to recover	Place of recovery
E010	Designated pattern does not exist.	The pattern designated by bar code is not registered.	Possible to re-start after reset.	Previous screen
E058	Bar code reading error	There is no bar code at the reading position. Bar code decoding failed. Communication time out.	Possible to re-start after reset.	Previous screen
E921	Bar code reader communication error	Bar code reader is not connected to the sewing machine. Bar code format error.	Turn OFF the power	

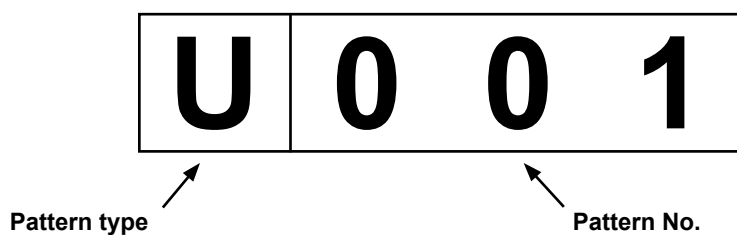
6. Bar code configuration

By reading the bar code sheet attached at the end of this manual, the sewing pattern can be switched to the one corresponding to the selected bar code. Separate the attached bar code sheet for your use. This bar code sheet is compatible to Code39.

When creating bar codes to a standard other than Code39, create the codes according to the following format.

- 4 byte ASCII code
- “Pattern type”, “hundreds place”, “tens place”, “ones place”

Example



Pattern type

U or 0 : Corresponds to the user patterns

D or 1 : Corresponds to the sewing data registered in the pattern button

Pattern No.

User pattern : No. 001 to No. 999

Both the pattern type and the numbers shall be written in ASCII code.

In the case of U001 as shown above, it will be described as 0x55 0x30 0x30 0x31.

Start/stop character etc. shall be created according to the bar code standard used.

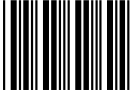


If the margin at both sides of the bar code is small, there is a possibility of reading error. Therefore, try to have as much margin as possible on both sides. If the bar codes at the end of this manual are used, make a copy of the sheet, and then cut along the dotted lines.

7. Malfunction of the bar code reader

When the bar code reader does not work, push the SCAN button on the side of the bar code reader to check if there is laser emission or not.

If there is no laser emission even if the SCAN button is pushed, the bar code reader may be defective.

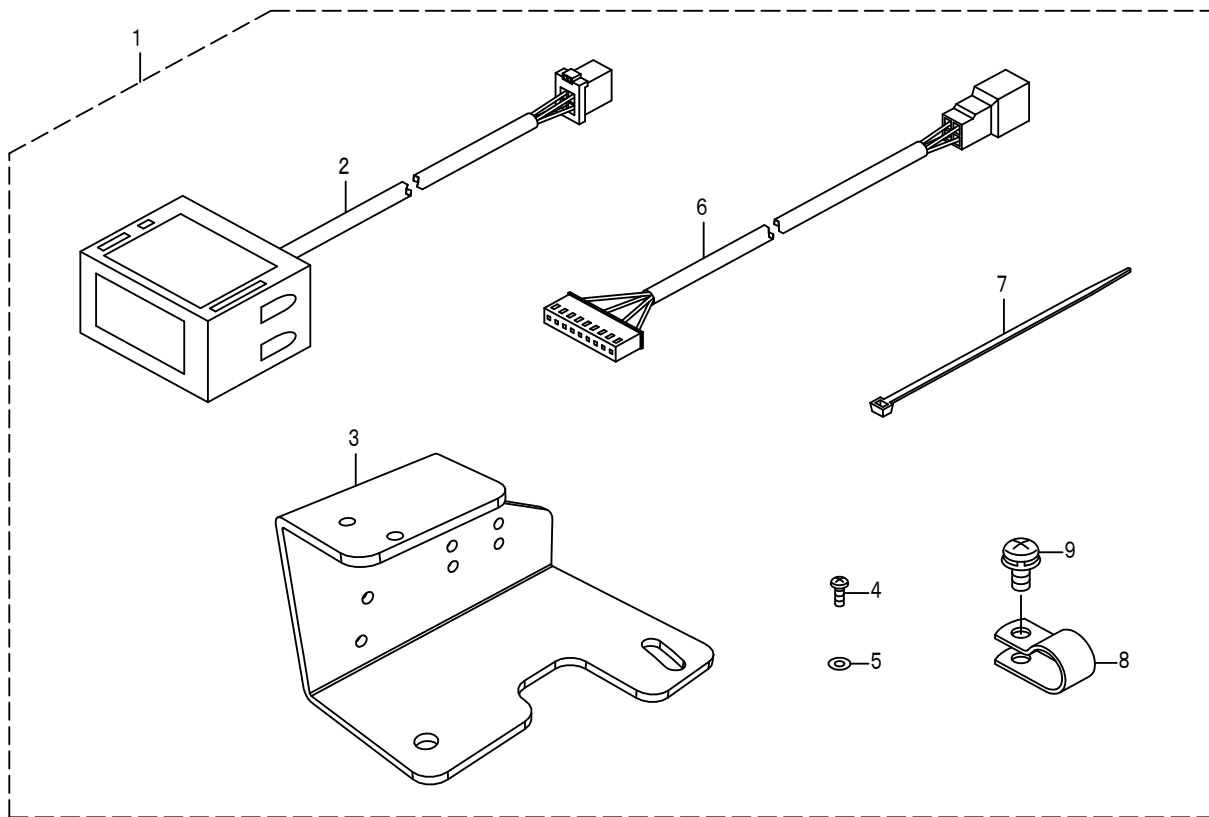
If the laser is emitted, read the following bar codes in the order of ① → ② → ③, and restart the sewing machine.

①	 Z Z	Start of setting
②	 U 2	Initialization
③	 Z Z	End of setting

8. Parts list

1. BAR CODE SET

バーコードセット



REF.NO	NOTE	PART NO	DESCRIPTION	品名	Qty
1		402-18934	BAR CODE SET B ASSY	バーコードセットB組	1
2		401-65216	BAR CODE READER ASSY	バーコードリーダ組	(1)
3		402-19049	BAR_CODE_READER_BRACKET	バーコードリーダ ブラケット	(1)
4		SM-4020601-SC	SCREW M2 L=6	ナベコネジ M2 L=6	(2)
5		WP-0220301-SC	WASHER M2	ヒラザガネ ミガキマル M2	(2)
6		401-05094	BAR CODE SET B ASSY	バーコードセットB組	(1)
7		EA-9500B01-00	CABLE BAND	ソクセンバンド	(2)
8		HX-0015000-0D	CABLE CLIP	ケーブルクリップ	(1)
9		SL-4041091-SC	SCREW M4 L=10	座金付きなべ小ねじ M4 L=10	(1)