ENGLISH

SC-922
INSTRUCTION MANUAL

CONTENTS

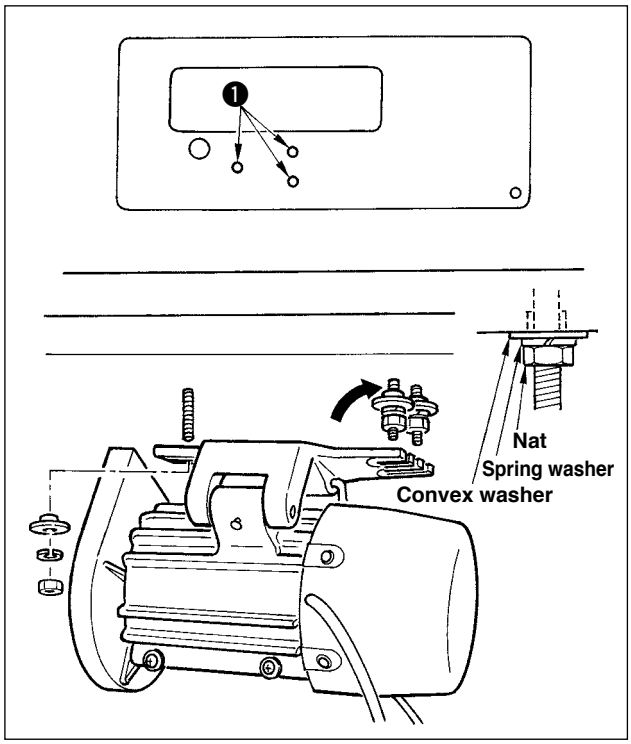
Ⅰ. SPECIFICATIONS

Supply voltage	Single phase 100 to 120V	3-phase 200 to 240V	Single phase 220 to 240V
Frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Operating environment	Temperature : 0 to 40˚C Humidity : 90% or less	Temperature : 0 to 40˚C Humidity : 90% or less	Temperature : 0 to 40˚C Humidity : 90% or less
Input	310VA	310VA	310VA

* The electric power is a reference value for the model equipped with the LU-1510N-7 machine head. It differs by the selected machine head.

Ⅱ. SET-UP

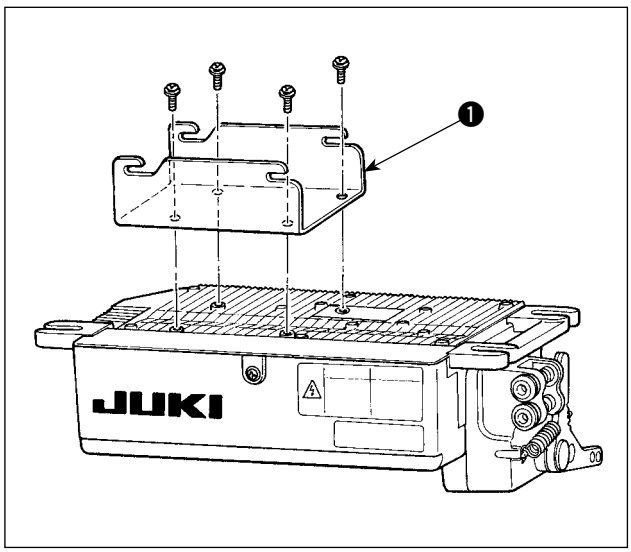
1. Installing the motor unit



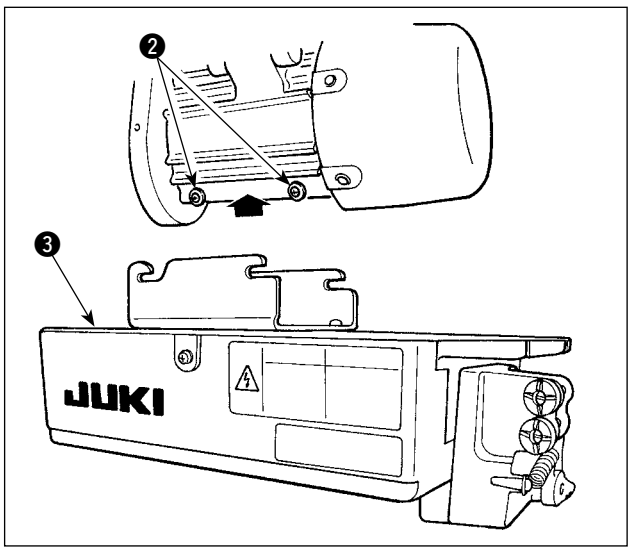
Install the motor unit on the table with the fitting bolt asm. supplied with the unit as accessories.
At this time, insert the nuts and washers supplied with the unit as accessories as shown in the figure so that the motor unit can be securely fixed on the table.

1) Press three bolts ❶ supplied with the unit as accessories into the motor hanging bolt hole in the table and fix them.
2) Temporarily tighten convex washer, spring washer and nut on the side where two bolts are attached.
3) Hang the motor unit to the washer which has been temporarily tightened, and attach convex washer, spring washer and nut to the other bolt on the opposite side.
4) After adjusting the installing position of the motor, securely tighten the respective nuts.

2. Installing the control box

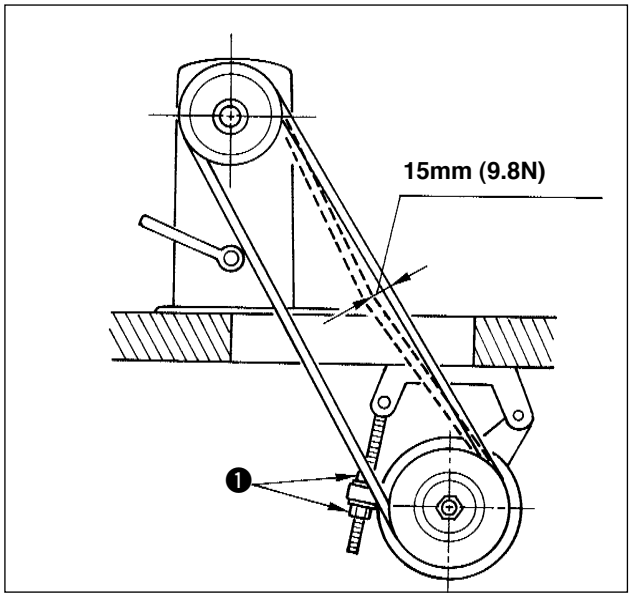


1) Attach bracket ❶ supplied with the unit using four supplied screws (M5 x 10) as shown in the figure.



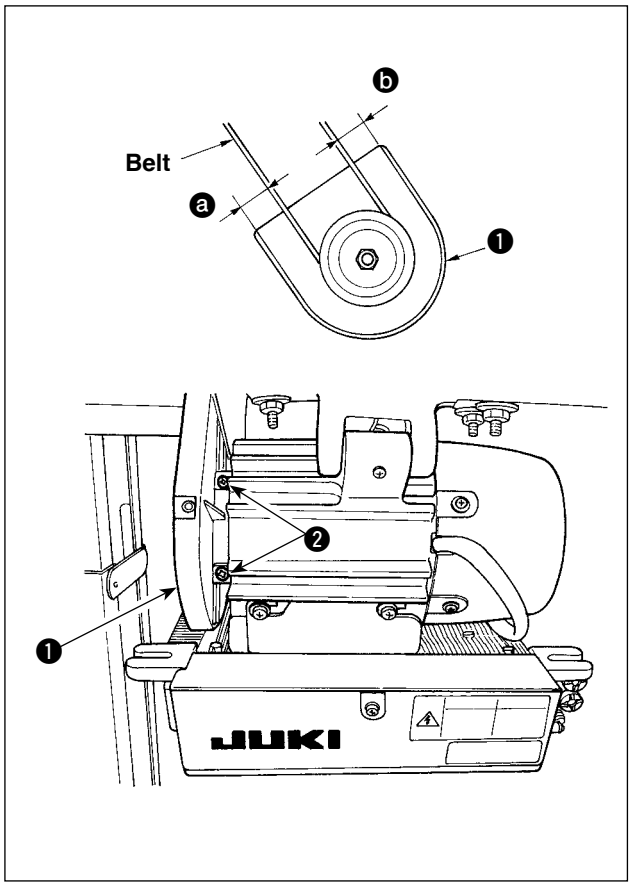
2) Loosen four screws ❷ supplied with the motor unit as accessories, tighten screws ❷ after hanging control box unit ❸ to the screws, and fix control box unit ❸.

3. Installing the belt



1) The belt distance, between sewing machine pulley and motor pulley, must be parallel.
2) The belt tension should be adjusted by turning the tension adjust nuts ❶ to change height of the motor, so that the belt sinks down by about 15 mm (9.8N) when it is depressed by band at the center of the belt span.
   If the belt tension is not tight, speed is unstable at low-speed or medium-speed operation, and the needle will not stop exactly in position.

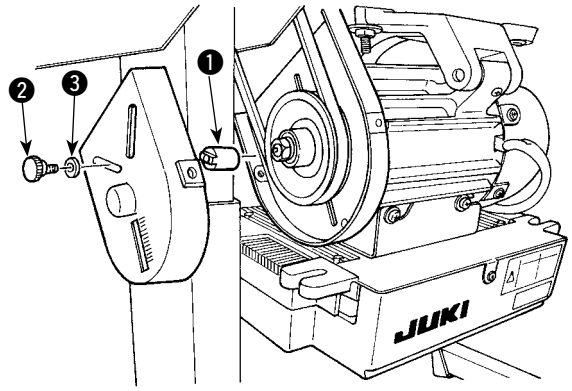
4. Adjusting the pulley cover

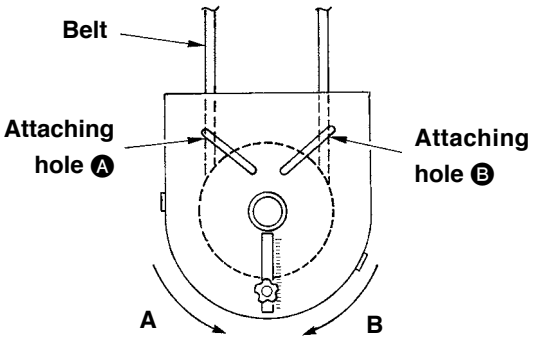


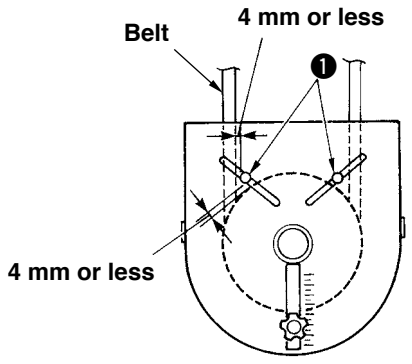
1) After adjusting the belt tension, adjust the pulley cover ❶ so that the clearances between the belt and the pulley cover ❶, ⓐ and ⓑ should be the same.
2) After the completion of adjustment, tighten screws ❷ located on the side of pulley cover ❶ and securely fix the pulley cover ❶ so that it does not slip out of position.

5. Installation and adjustment for the protecting pin and the belt slip-off preventing bracket

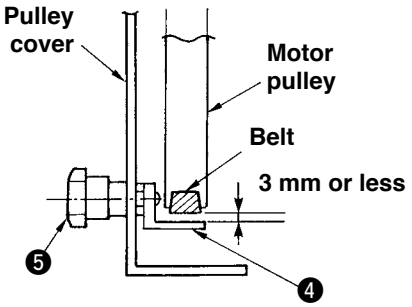
WARNING :
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.







Adjusting position for protecting pin



Adjusting position for belt slip-off preventing bracket

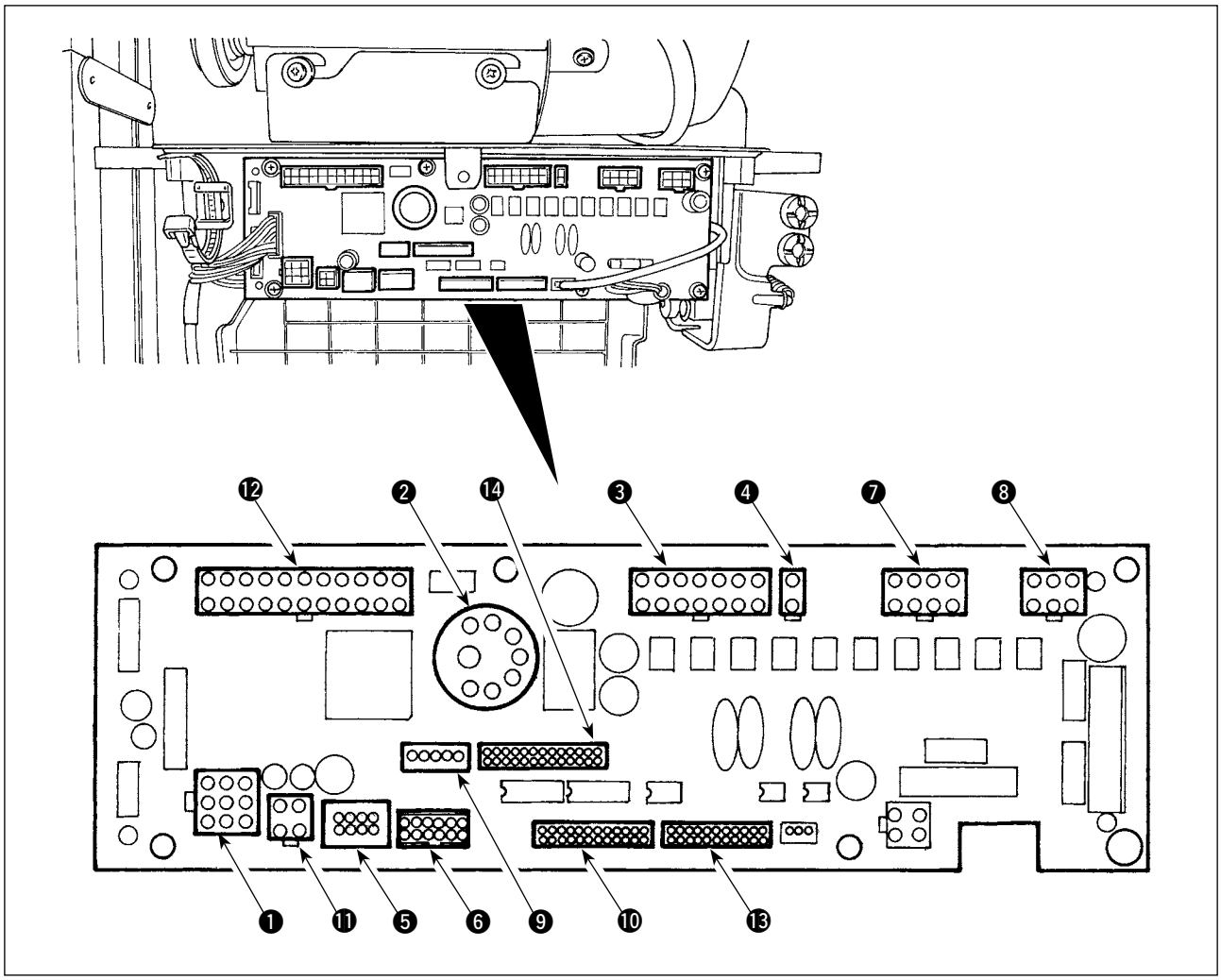
1) Attaching hole for the protecting pin
   To attach protecting pin ❶, select either attaching hole Ⓐ or attaching hole Ⓑ in the motor pulley cover in accordance with the direction of rotation of the sewing machine and attach the pin in the selected hole using screw ❷ and washer ❸ supplied with the unit.
   a) If the motor shaft rotates in direction A in the figure on the above:
      → Attach protecting pin ❶ in attaching hole Ⓐ .
   b) If the motor shaft rotates in direction B in the figure on the above:
      → Attach protecting pin ❶ in attaching hole Ⓑ .

2) Adjustment for the protecting pin and the belt slip-off preventing bracket
   Adjust the position of protecting pin ❶ and belt slip-off preventing bracket ❹ in accordance with the figure on the left.
   a) Adjusting the protecting pin
      Loosen screw ❷ and adjust so that protecting pin ❶ is positioned at the location indicated in the figure on the left.
   b) Adjusting belt slip-off preventing bracket
      Loosen screw ❺ and adjust so that belt slip-off preventing bracket ❹ is positioned at the location indicated in the figure on the left.
      If protecting pin ❶ is not properly adjusted, it is possible that your fingers may be caught in the clearance provided between the pulley and the belt resulting in injury. If belt slip-off preventing bracket ❹ is not properly adjusted, it is possible to allow the belt to slip off causing safety hazard.
3) After the adjustment, tighten screws ❷ and ❺ so as to secure protecting pin ❶ and belt slip-off preventing bracket ❹ to prevent these components to fluctuate because of vibration.
4) Before starting the operation of the sewing machine, ascertain that protecting pin ❶ and belt slip-off preventing bracket ❹ do not come in contact with the pulley and the belt.

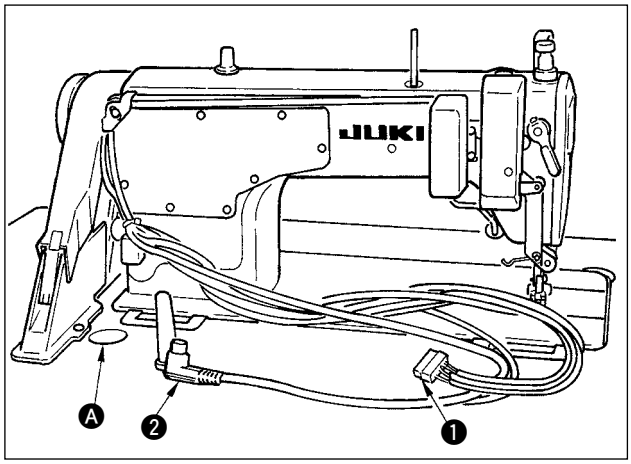
6. Connecting the cords

WARNING :
- **To prevent personal injury caused by abrupt start of the sewing machine, carry out the work after turning OFF the power switch and a lapse of 5 minutes or more.**
- **To prevent damage of device caused by maloperation and wrong specifications, be sure to connect all the corresponding connectors to the specified places.**
- **To prevent personal injury caused by maloperation, be sure to lock the connector with lock.**
- **As for the details of handling respective devices, read carefully the Instruction Manuals supplied with the devices before handling the devices.**

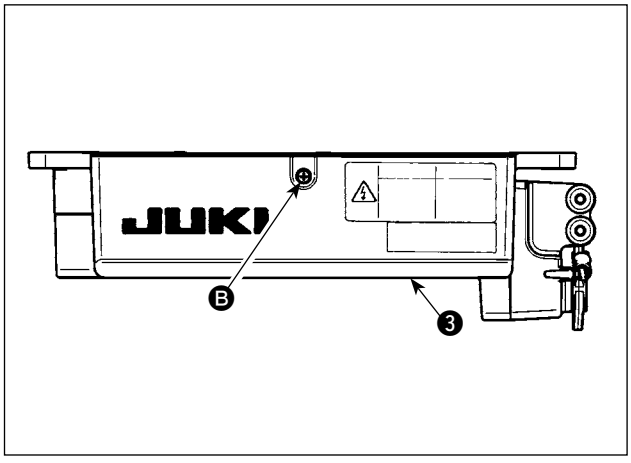
Following connectors are prepared on the SC-922. Connect the connectors coming from the machine head to the corresponding places so as to fit the devices mounted on the machine head.



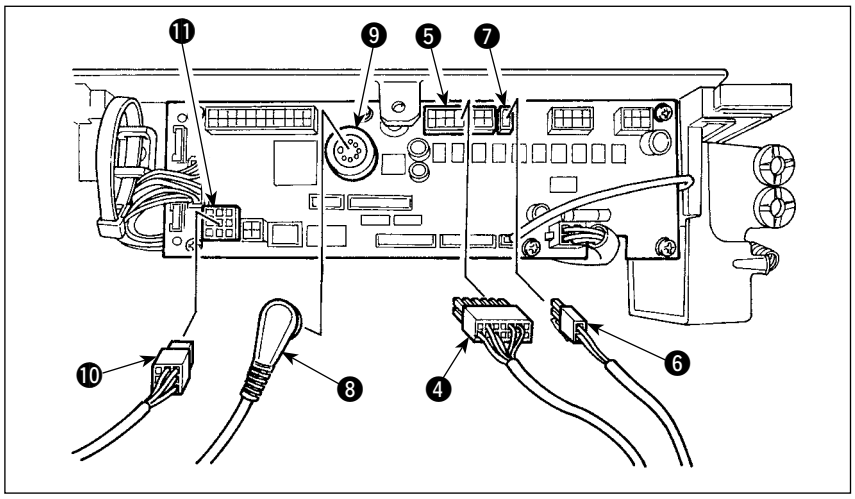
❶ CN30 Motor signal connector
❷ CN33 Needle bar position detector (+5V type): It detects the needle bar position.
❸ CN36 Machine head solenoid: Provided with solenoids for thread trimming, reverse feed stitching, one-touch type reverse feed switch.
❹ CN37 Presser foot lifting solenoid (Only for the automatic presser foot lifter type)
❺ CN38 Operation panel: Various kinds of sewing can be programmed. (For details of the operation panel other than CP-18, refer to the Instruction Manual for the panel to be used.)
❻ CN39 Standing machine pedal : JUKI standard PK70, etc. Sewing machine can be controlled with external signals.
❼ CN40 Single-needle control solenoid: It is used with the LH-4100 sewing machine provided with a single-needle control device.
❽ CN41 Stepping motor: It is used only with the DLU-5494N-7.
❾ CN43 Synchronizer (+12V type) : It detects the needle bar position.
❿ CN44 Hand switch: Hand switch other than the touch-back switch.
⓫ CN48 Safety switch (standard) : When tilting the sewing machine without turning the power OFF, the operation of the sewing machine is prohibited so as to protect against danger.
OPTION switch: Input function can be changed by changing over the internal function with this switch.
⓬ CN51 Extended input/output connector
⓭ CN58 Extended input connector (for the sensor input, etc.)
⓮ CN59 Extended output connector (for the solenoid valve output)



1) Pass cords ❶ of the thread trimmer solenoid, reverse feed solenoid and detector cords ❷ through table hole Ⓐ and route them under the table.



2) Loosen screw Ⓑ in cover ❸ with a screwdriver to open the cover.



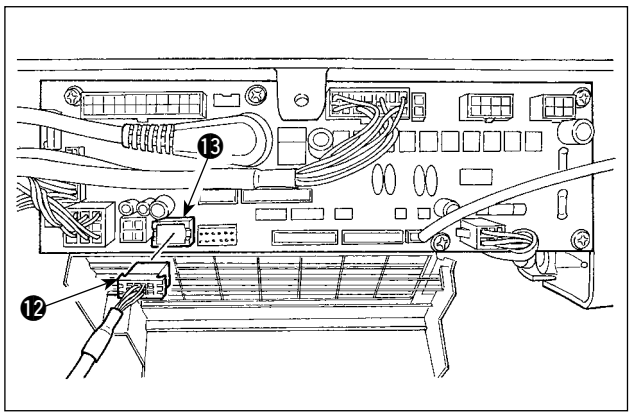
3) Connect 14P code ❹ coming from the machine head to connector ❺ (CN36).
4) When the optional AK device is attached, connect 2P connector ❻ coming from the AK device to connector ❼ (CN37).
5) Insert connector ❽ coming from the detector into connector ❾ (CN33).

6) Connect connector ❿ coming from the motor to connector ⓫ (CN30) on the circuit board.

(Caution) 1. When using the AK device, set whether to use the AK device after confirming how to select the auto-lifter function. (Refter to "Ⅲ-11. Setting of the auto lifter function" p. 43.)

2. Be sure to securely insert the respective connectors after checking the inserting directions since all connectors have the inserting directions. (When using a type with lock, insert the connectors until they go to the lock.) The sewing machine is not actuated unless the connectors are inserted properly. In addition, not only the problem of error warning or the like occurs, but also the sewing machine and the control box are damaged.

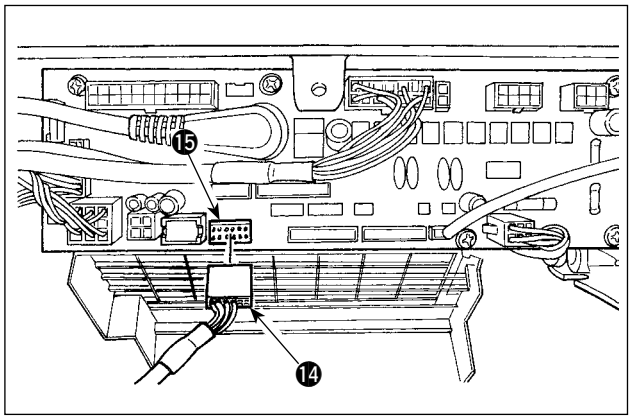
[Connecting the connector for the operation panel]



The connector for the operation panel is provided.
Paying attention to the orientation of the connector ⓬, connect it to connector (CN38) ⓭ located on the circuit board. After connecting, securely lock the connector.

(Caution) Be sure to turn OFF the power before connecting the connector.

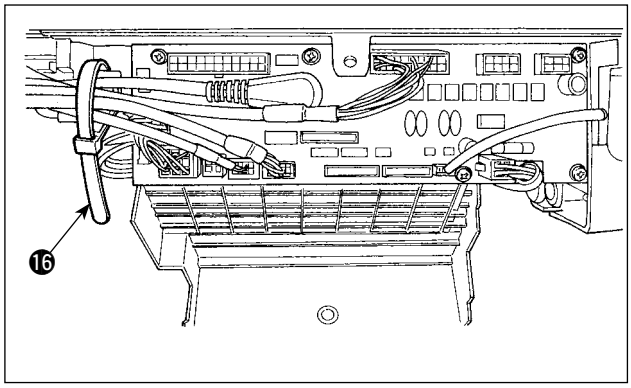
[Connection of the pedal of standing-work machine]



Insert PK70 connector ⓮ into connector ⓯ (CN39: 12P) on the PWB.

(Caution) Be sure to turn OFF the power before connecting the connector.

[How to bundle all cords]

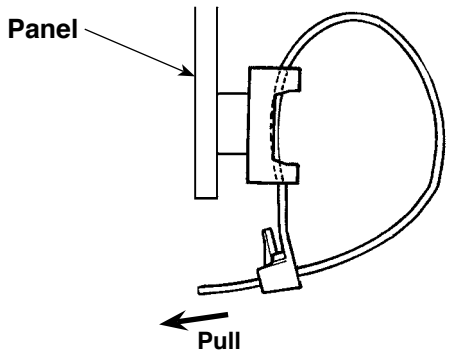


7) After inserting the connector, put all cords together with cable clip band ⓰ located on the side of the box.

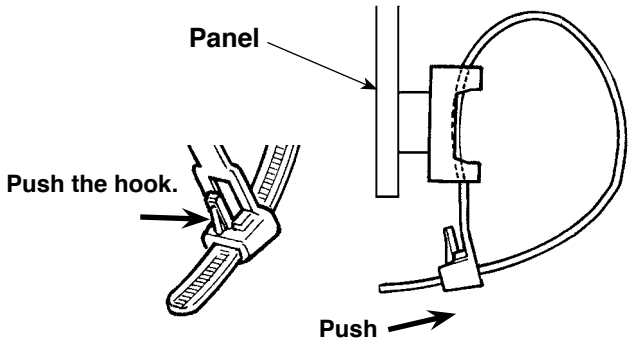
(Caution) 1. Fix the cord clamp and the cable clip band following the attaching procedure.

2. When removing the connector, remove it from the wire saddle and remove it while pressing the hook of the cable clip band.

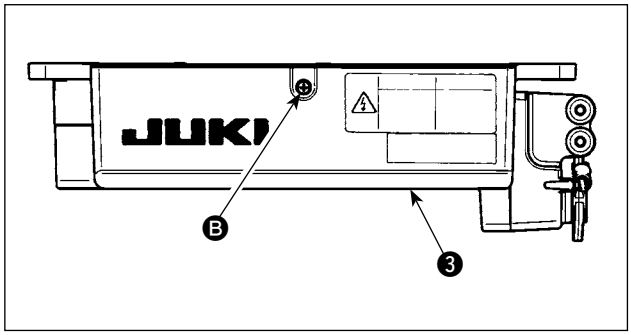
How to fix cable clip band ⓰



How to remove cable clip band

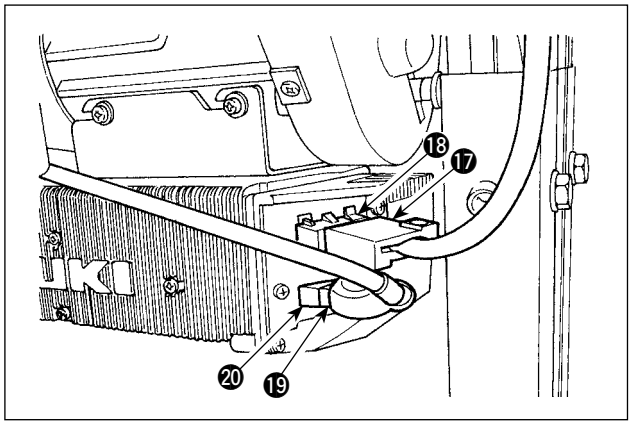


Pushing the hook portion, push the band to remove it.



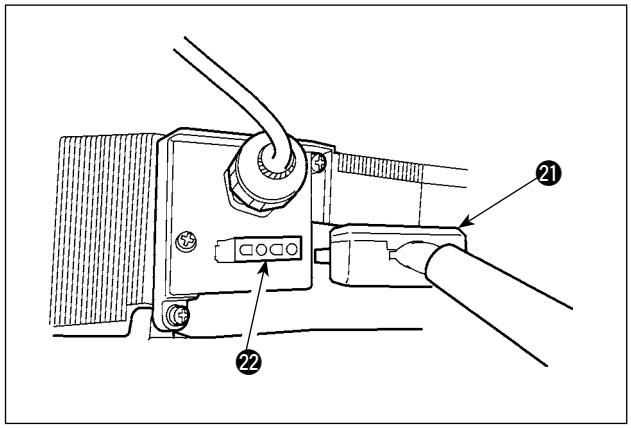
8) Close cover ❸ and fix the cover by tightening screw Ⓑ with a screwdriver.

(Caution) Take care not to allow the cord to be caught under cover ❸.

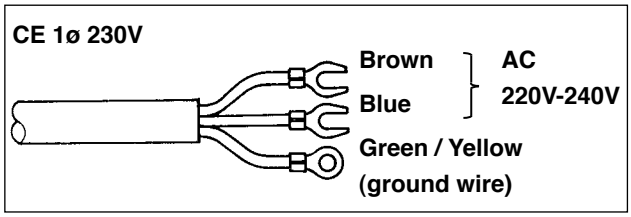


9) Connect connector 4P ⓱ to connector ⓲ located on the side of the box.
10) Connect motor output cord ⓳ of the power switch to connector ⓴.

[For CE specifications only]



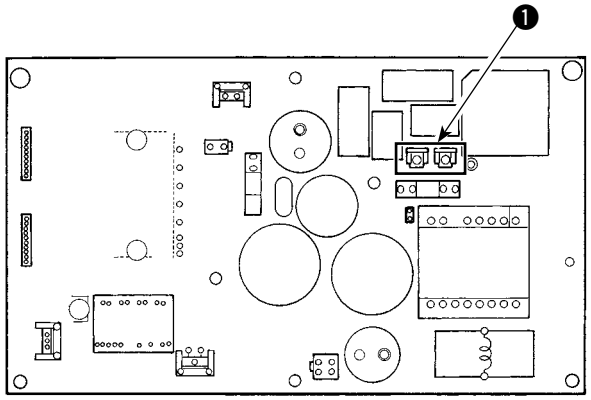
Connect motor output cord ㉑ to connector ㉒ located on the side of the box.



Installing power switch
Connect power supply cord to the power switch.
[CE specifications]
Single phase 230V : Power supply cords : Brown, Blue, and green/yellow (ground wire)

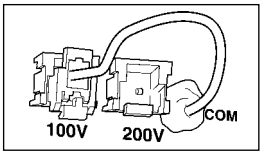
[Changing over the voltage between 100 V and 200 V]

WARNING :
To prevent personal injuries caused by electric shock hazards or abrupt start of the sewing machine, carry out the work after turning OFF the power switch and a lapse of 5 minutes or more. To prevent accidents caused by unaccustomed work or electric shock, request the electric expert or engineer of our dealers when adjusting the electrical components.

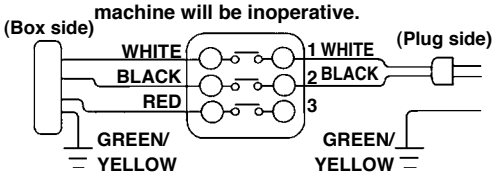


*** The illustration below shows the PWR-T PCB. The type of PCB differs by destination.**

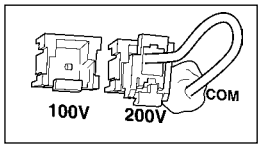
A



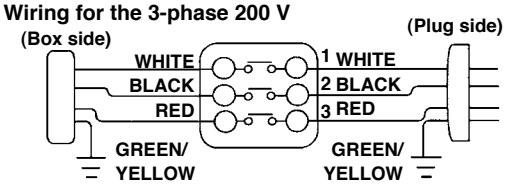
Wiring for the single-phase 100 V
Be sure to connect the wire between 1 and 2. If it is connected between 1-3 or 2-3, the sewing machine will be inoperative.



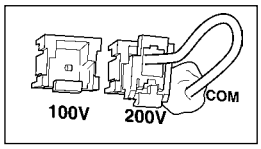
B



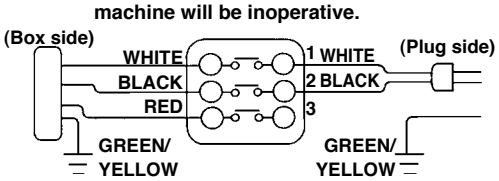
Wiring for the 3-phase 200 V



C



Wiring for the single-phase 200 V
Be sure to connect the wire between 1 and 2. If it is connected between 1-3 or 2-3, the sewing machine will be inoperative.



By making the following two changes, the SC-922 can be used with three different power supplies, i.e., single-phase 100 - 120 V, single-phase 200 to 240 V and 3-phase 200 to 240 V.

* Only the control box which uses PWR-T PCB can be changed.

① Replacement of the power cords

② Changing-round of connector ❶ on the PWR PCB

1) Turn OFF the power with the power switch after checking that the sewing machine has stopped.
2) Draw out the power cord from the power receptacle after checking that the power switch has been turned OFF. Then wait for 5 minutes or more.
3) Loosen the screws which are used to secure the rear lid of the control box cover. Carefully open the rear cover.
4) Changing procedure of the power voltage

(Caution) If the supply power changing is carried out in a wrong manner, the control box can break. Be extremely careful when taking the supply voltage changing procedure.

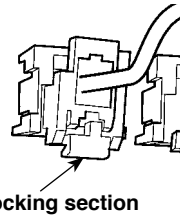
A. To change over the supply voltage from 200 - 240 V to 100 - 120 V

- Change the power cord with the JUKI genuine cord with the part number (M90355800A0). Change the earth cord with the one with the part number (M90345800A0).
- Change over supply voltage changeover connector ❶ mounted on the PWR PCB with the connector for 100 V.
- Connect the crimp style terminal of AC input cord to the power plug as shown in the figure A.

B,C. To change over the supply voltage from 100 - 120 V to 200 - 240 V

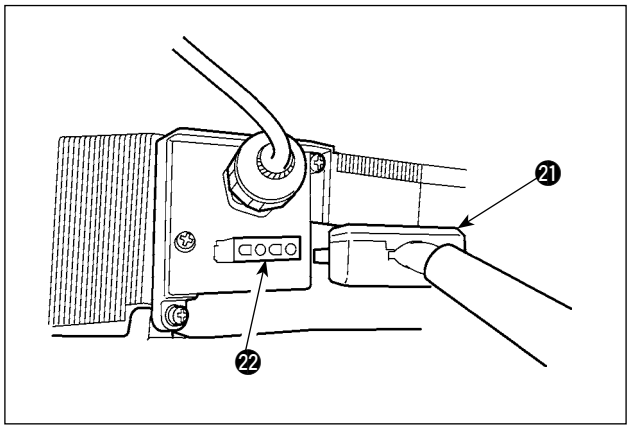
- Change the power cord with the JUKI genuine cord with the part number (M90175800A0).
- Change over supply voltage changeover connector ❶ mounted on the PWR PCB with the connector for 200 V.
- Connect the crimp contact of the AC input cord to the power plug as illustrated in Fig. B for the 3-phase power supply or as illustrated in Fig. C for the single-phase one.

5) Before closing the rear lid of the cover, ascertain again that the relevant parts have been correctly changed without fail.
6) Close the read lid while pressing it, taking care not to allow the wiring to be caught between the read lid of the cover and the main body of the control box. Then, secure the lid with the screws.

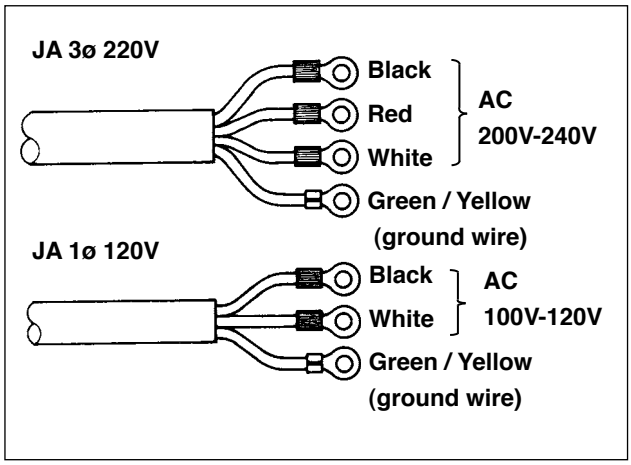


(Caution) Be sure to remove the connector while holding its locking section with your fingers. Be extremely careful not to pull the connector forcibly.

[In case of using the power switch for LA]



Connect motor output cord ㉑ to connector ㉒ located on the side of the box.



Installing power switch

Connect power supply cord to the power switch.

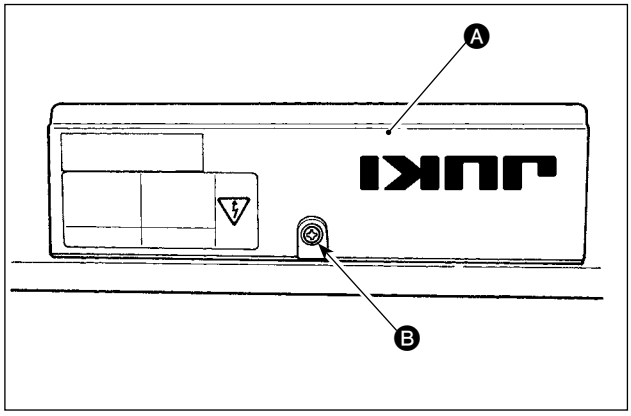
[JA specifications]

3-phase 220 V : Power supply cords : black, white, red and green/yellow (ground wire)

Single phase 120V : Power supply cords : black, white, and green/yellow (ground wire)

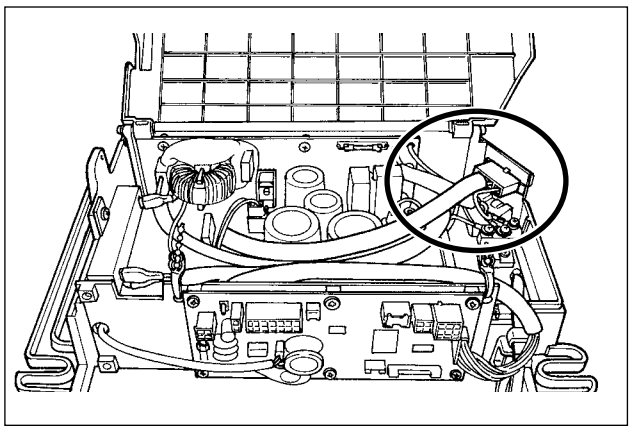
When the metallic conduit is used, be sure to change over the power cord section following the steps of procedure described below.

(Caution) Be sure to carry out this procedure before installing the control box on the machine table.

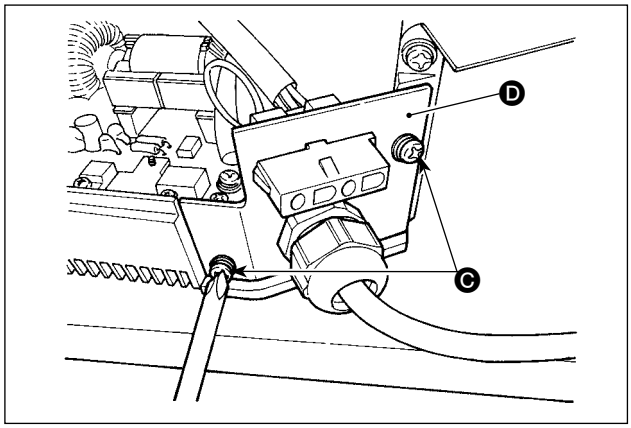


① Place the control box with its frame side down on the machine table as illustrated in the sketch.

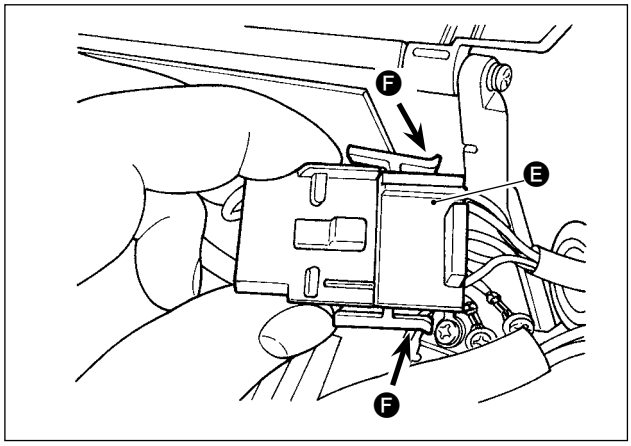
② Loosen screw Ⓑ in underside cover Ⓐ to open the cover.



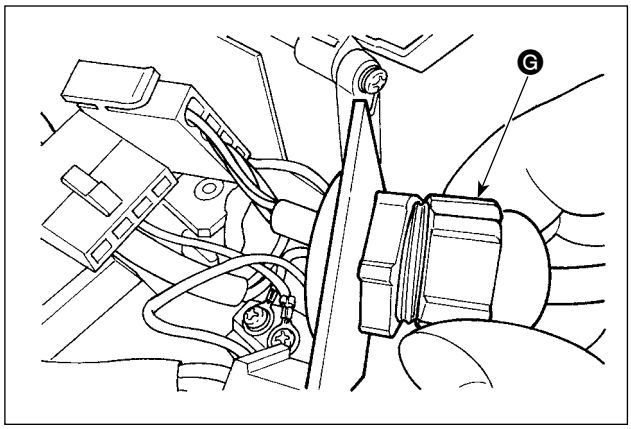
③ Change over the cord shown in the red-line circle following the steps of procedure described below.



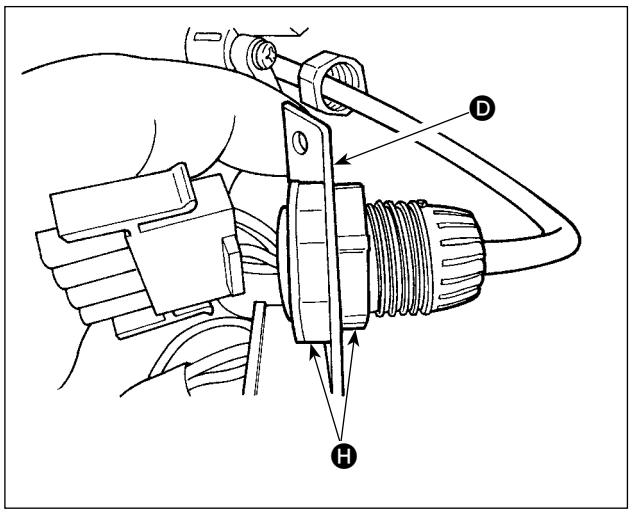
④ Remove two screws Ⓒ to remove clamping plate Ⓓ from the main body of the control box.



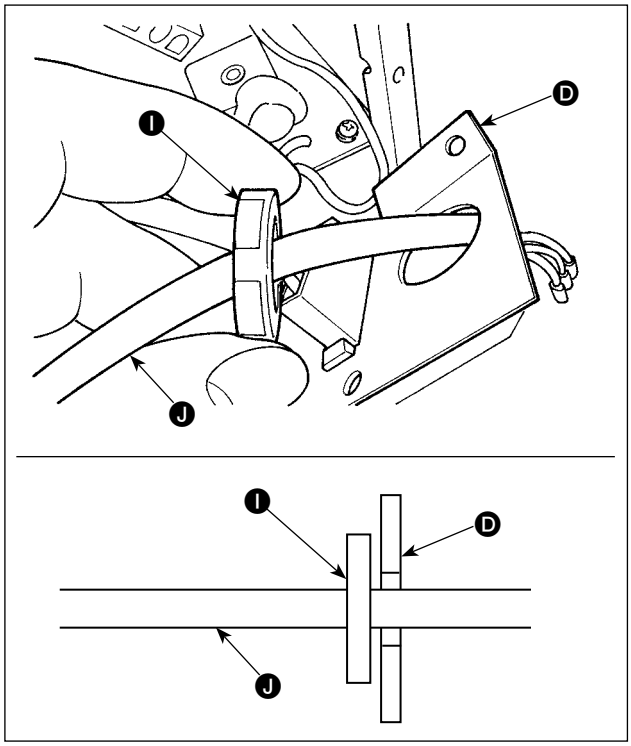
⑤ Remove connector Ⓔ while holding its locking section Ⓕ with your fingers.



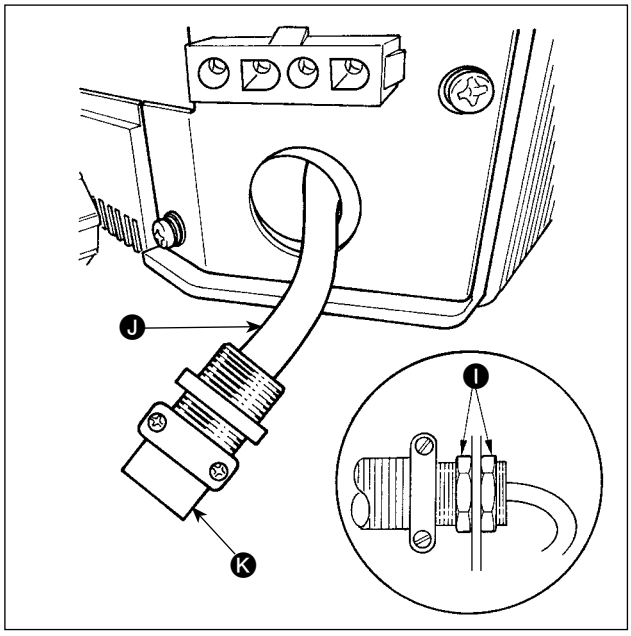
⑥ Turn connector Ⓖ to remove the cord locking section.



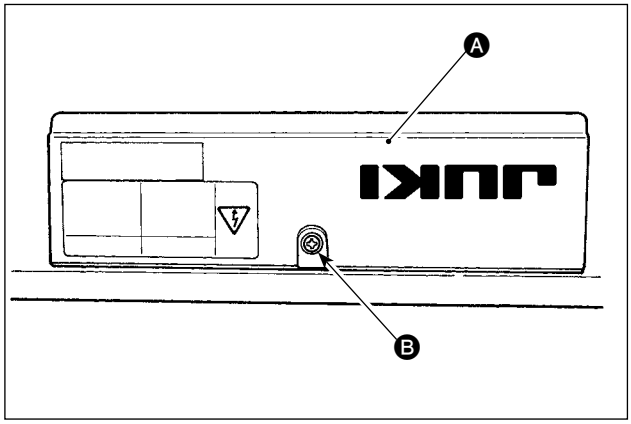
⑦ Loosen nut Ⓗ to remove the connector from clamping plate Ⓓ.



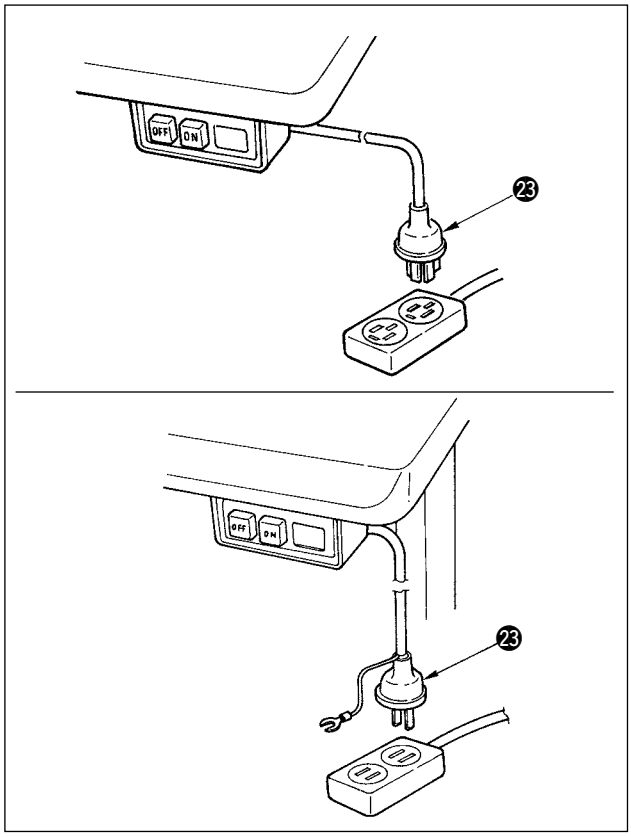
⑧ Put locknut ❶ on the power cord and draw out the cord ❶ from inside clamping plate ❶.



⑨ Install clamping plate ❶ back to the control box.
⑩ Pass power cord ❶ through conduit ❶.
⑪ Fix conduit ❶ with locknuts ❶ with clamping plate ❶ placed between the locknuts.



⑫ Close underside cover ❶ and secure the cover with screw ❶.

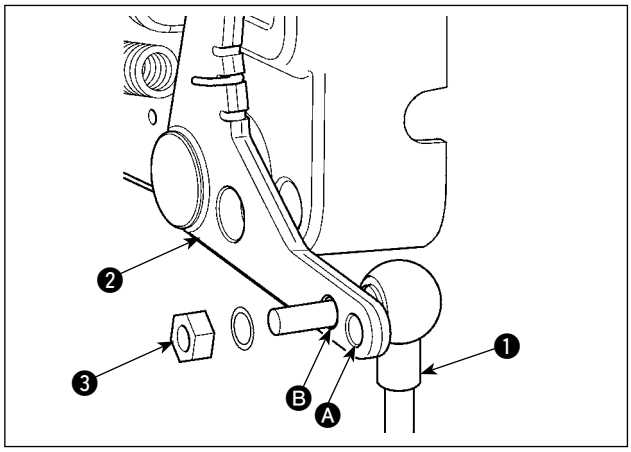


11) Make sure that the power switch is turned OFF and insert power supply cord coming from the power switch into the power plug socket.

(Caution)
1. **Top end of power supply cord varies in accordance with destination or supply voltage. Check again the supply voltage and the voltage designated on the control box when installing the switch.**
2. **Be sure to prepare power plug ㉓ conformed to the safety standard.**
3. **Be sure to connect the ground wire (green / yellow).**

7. Attaching the connecting rod

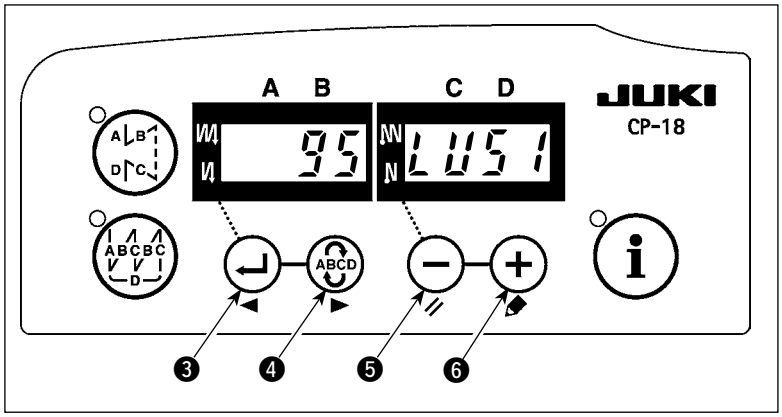
WARNING :
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and a lapse of 5 minutes or more.



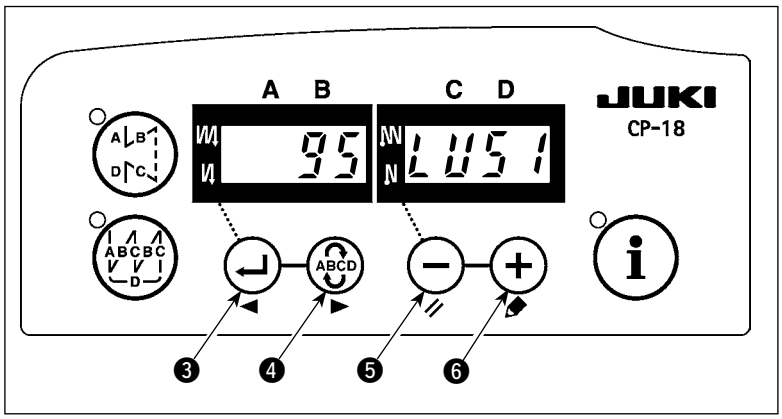
1) Fix connecting rod ❶ to installing hole Ⓑ of pedal lever ❷ with nut ❸.
2) Installing connecting rod ❶ to installing hole Ⓐ will lengthen the pedal depressing stroke, and the pedal operation at a medium speed will be easier.

8. Setting procedure of the machine head

(Caution) For the operation panel other than CP-18, refer to the Instruction Manual for the operation panel to be used for the setting procedure of the machine head.

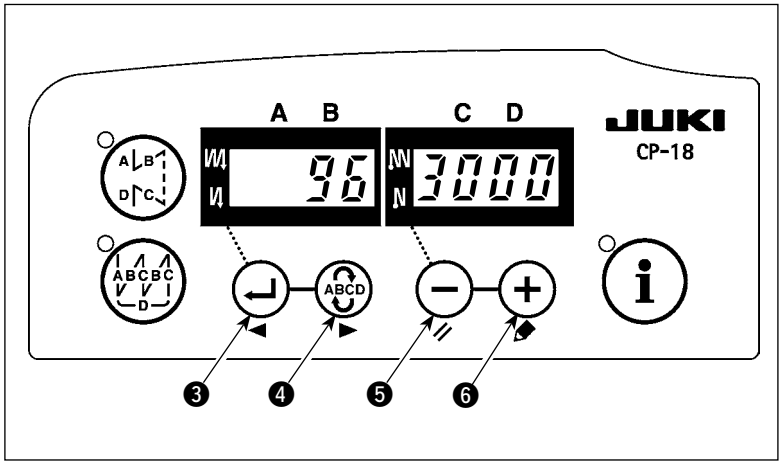


1) Refer to **"Ⅲ-6. Setting of functions of SC-922" p.23**, and call the function setting No. 95.



2) The type of machine head can be selected by pressing ⊖ switch ❺ (⊕ switch ❻).

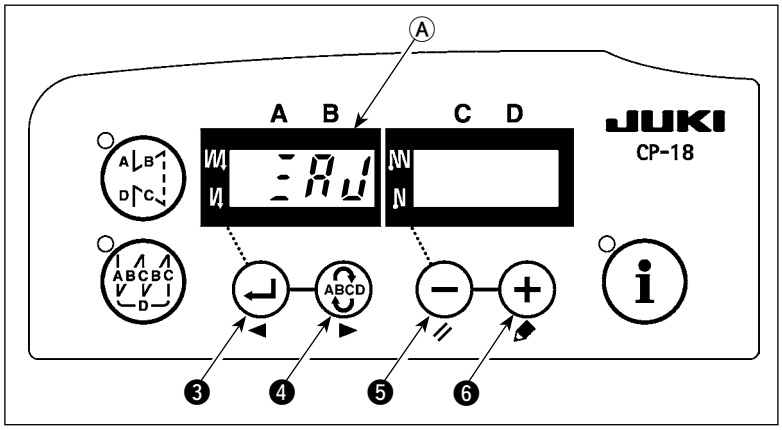
* Refer to the "List of machine heads" on the separate sheet or the Instruction Manual for the machine head of your sewing machine for the type of the machine head.



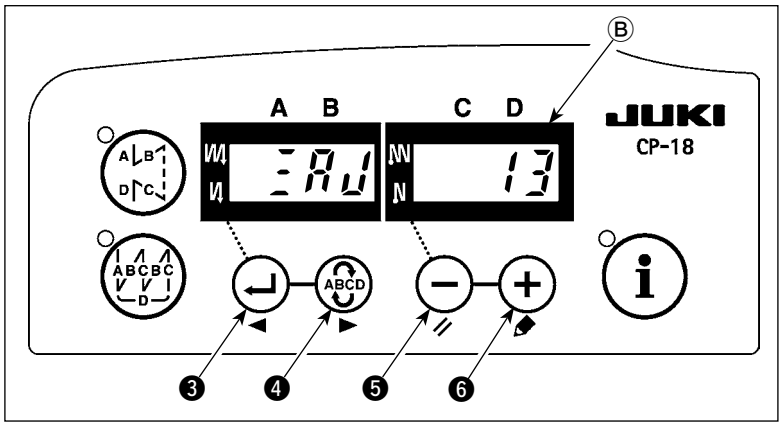
3) After selecting the type of machine head, by pressing ↵ switch ❸ (ABCD ▶ switch ❹), the step proceeds to 94 or 96, and the display automatically changes to the contents of the setting corresponding with the type of machine head.

9. Adjusting the machine head (direct-drive motor type sewing machine only)

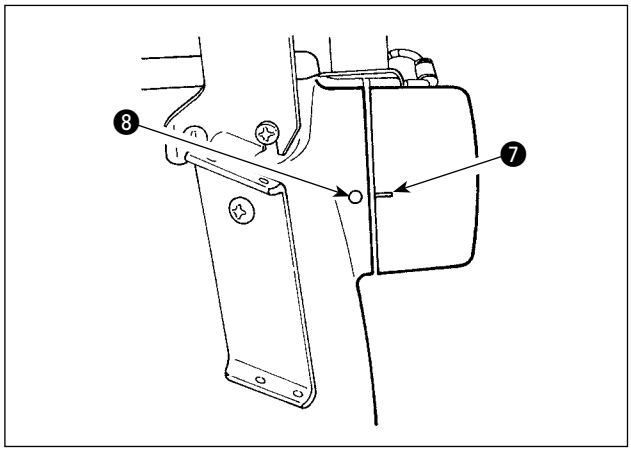
(Caution) 1. When the slip between the marker dot on the handwheel and the concave of the cover is excessive after thread trimming, adjust the angle of the machine head by the operation below.
2. The machine head parts of which are connector to CN33 or CN43 does not need adjustment. (Refer to "Ⅱ-6. Connecting the cords" p. 4.)



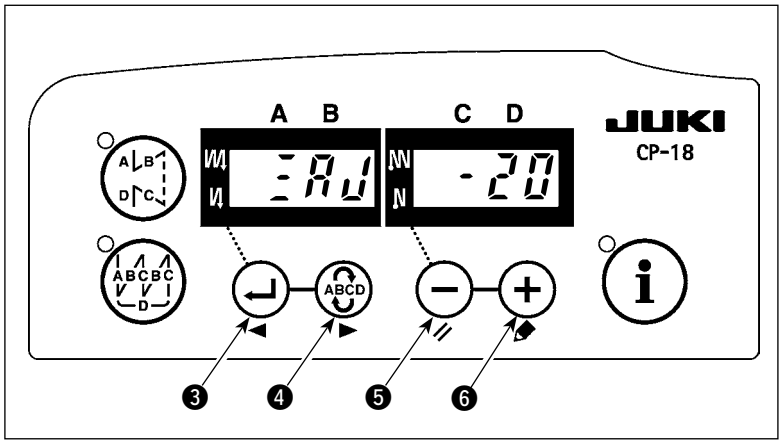
1) Simultaneously pressing (ABCD) switch ❹ and (−) switch ❺, turn ON the power switch.
2) "-AU" is displayed (Ⓐ) in the indicator and the mode is changed over to the adjustment mode.



3) Turn the pulley of the machine head by hand until the main-shaft reference signal is detected. At this time, the degree of an angle from the main-shaft reference signal is displayed on the indicator Ⓑ.
(The value is the reference value.)



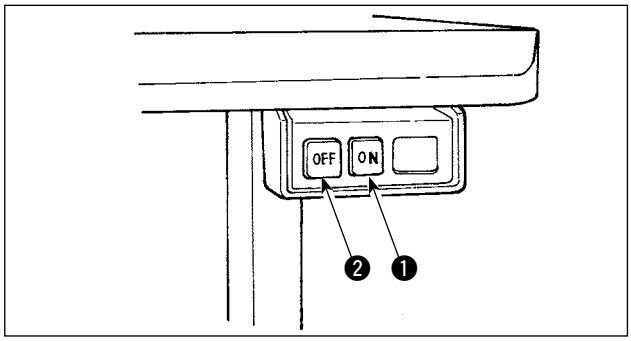
4) In this state, align marker dot ❼ on the pulley with recess ❽ on the pulley cover.



5) Press (+) switch ❻ to finish the adjustment work. (The value is the reference value.)

Ⅲ. FOR THE OPERATOR

1. Operating procedure of the sewing machine

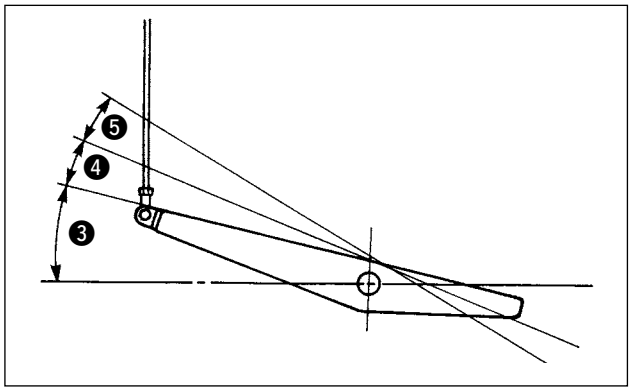


1) Press ON button ❶ of the power switch to turn ON the power.

(Caution) If the power indication LED does not light up even when turning ON the power switch, immediately turn OFF the power switch and check the voltage.
In addition, in such a case as this, return ON the power switch when 2 to 3 minutes or more have passed after turning OFF the power switch.

2) For some machine head installed, the needle bar automatically rotates to its upper position if the needle bar is not there.

(Caution) When the power to the sewing machine is turned ON for the first time after installation, it may require a longer time to get ready for operation since it carries out initialization procedure. In addition, be sure not to place hands or any other article under the needle since the needle bar may move when the power is turned ON.

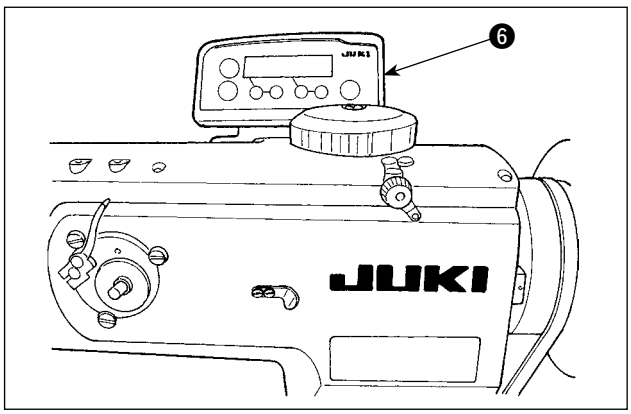


3) When depressing front part ❸ of the pedal, the sewing machine rotates at the number of revolutions in accordance with the depressing amount. When the pedal is returned to the neutral position, the sewing machine stops.

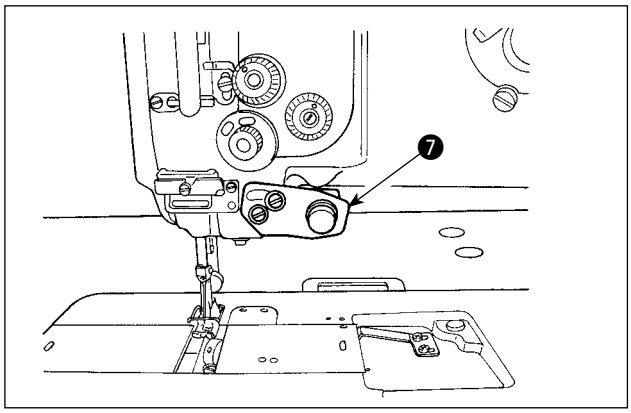
4) When lightly depressing back part ❹ of the pedal, the presser goes up. (PFL type only)

5) When strongly depressing back part ❺ of the pedal, thread trimming is performed.

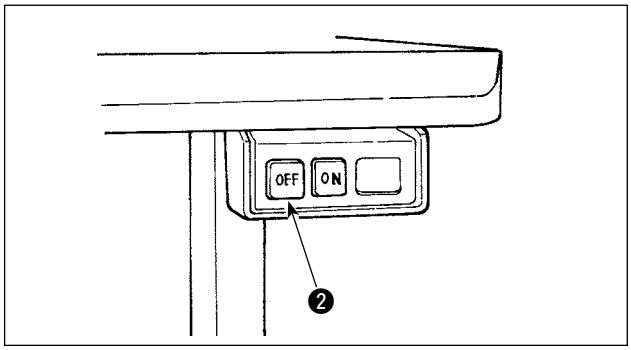
	PFL	KFL
Presser foot operation by pedal	Enabled	Disabled
Pedal depressing depth for thread trimming	Deep	Shallow



6) For some types of the sewing machine heads, it is possible to program various sewing patterns, using the operation panel, such as the reverse feed stitching at sewing start and that at sewing end. When you use CP-18 ❻ with your sewing machine, refer to **"Ⅲ-3. Operating procedure of the sewing pattern" p.17** for details. When you use any other operation panel with your sewing machine, refer to the Instruction Manual for the respective operation panel. (The figure given illustrates the case of the LU-1510N-7.)

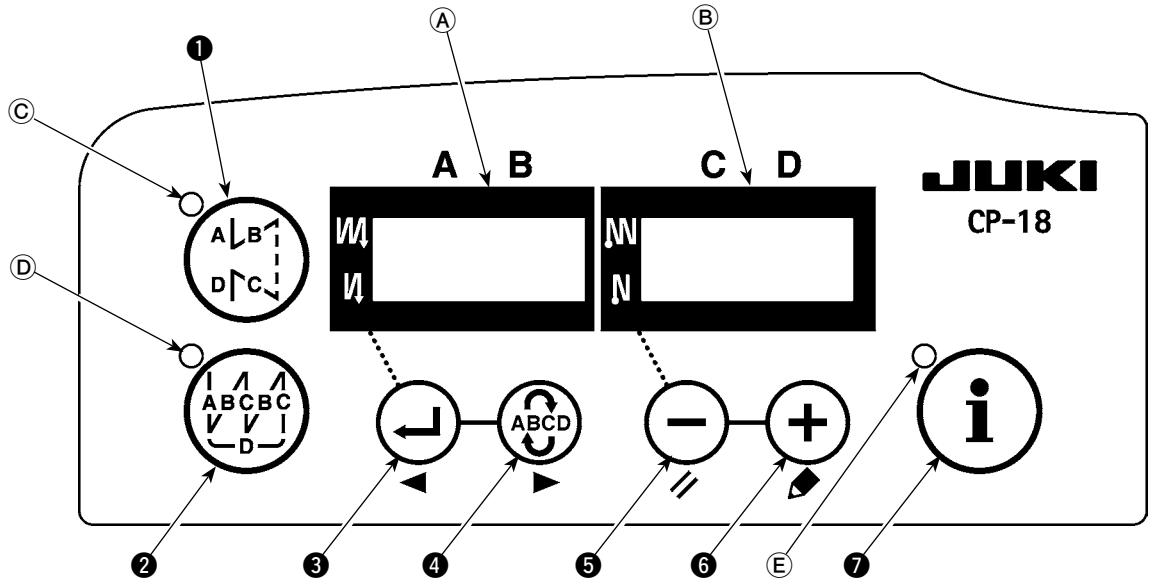


7) For some types of the sewing machine heads, reverse feed is performed by pressing touch-back switch ❼. (The figure given illustrates the case of the LU-1510N-7.)



8) When sewing is completed, press OFF button ❷ of the power switch to turn OFF the power switch after confirming that the sewing machine has stopped.

2. Operation panel (CP-18)



❶ switch : Used for changing over effective/ineffective of the reverse feed stitching pattern.

❷ switch : Used for changing over effective/ineffective of the overlapped stitching pattern.

❸ switch : Used for confirming the contents of setting and for changing over effective/ineffective of the reverse feed stitching at sewing start.

❹ switch : Used for selecting the process (A, B, C, D) the number of stitches for which is to be changed.
* The selected process flashes on and off.

❺ switch : Used for changing the content of the selected display (flashing section) and for changing over effective/ineffective of the reverse stitch at sewing end.

❻ switch : Used for changing the content of the selected display (flashing section).

❼ switch : Used for calling the production support function (by keeping the switch held pressed for two seconds).

Indicators Ⓐ and Ⓑ : Various pieces of information are displayed.

LED Ⓒ : Lights up when the reverse feed stitching pattern is effective.

LED Ⓓ : Lights up when the overlapped stitching pattern is effective.

LED Ⓔ : Lights up when the production support function is displayed.
Flashes on and off when invoking the one-touch setting.

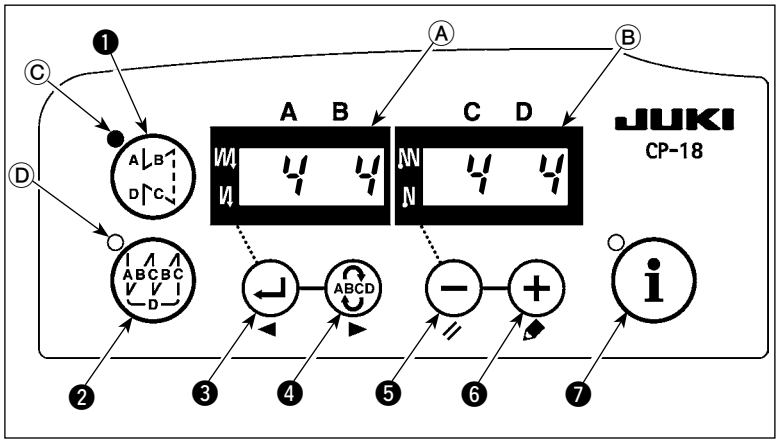
3. Operating procedure of the sewing pattern

(Caution) 1. For the operation panel other than CP-18, refer to the Instruction Manual for the operation panel to be used.

2. For some machine heads, reverse-stitching pattern cannot be used.

(1) Reverse feed stitching pattern

Reverse feed stitching at sewing start and reverse feed stitching at sewing end can be separately programmed.



[Setting procedure of the reverse feed stitching]

1) Effective/ineffective of the reverse feed stitching pattern can be changed over by pressing switch ❶.

When the reverse feed stitching pattern is rendered effective, LED Ⓒ lights up, the number of stitches of the reverse feed stitching at sewing start is displayed on Ⓐ, and the number of stitches of the reverse feed stitching at sewing end is displayed on indicator Ⓑ.

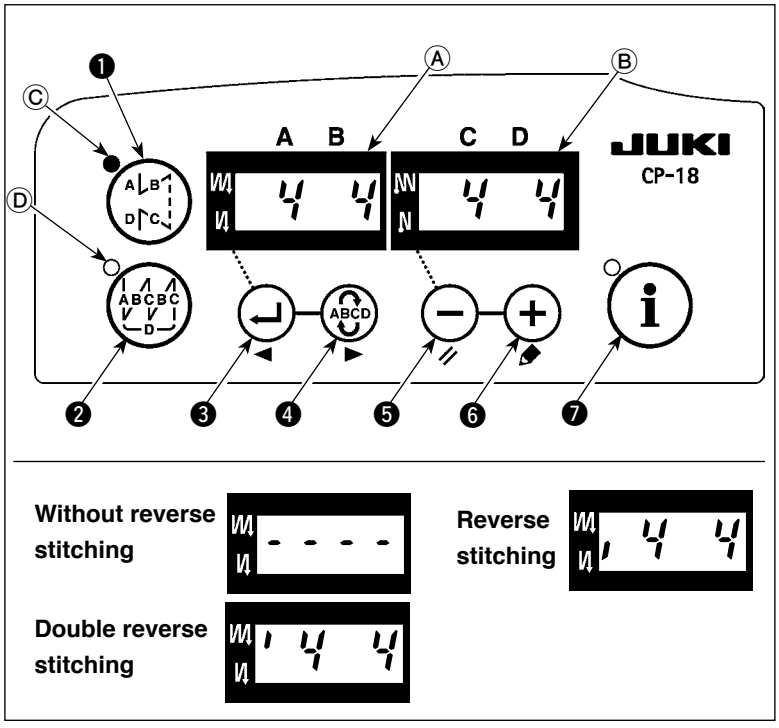
Select a process (A, B, C or D) the number of stitches for which is to be changed by using switch ❹.

The number which is flashing on and off represents the process which is being set.

Change the number of stitches for the selected process by using ⊖ switch ❺ and ⊕ switch ❻.

Press ↵ switch ❸ to confirm the change you have made. (The number of stitches that can be set is 0 to 15.)

(Caution) The sewing machine cannot perform sewing when the display of the number of stitches for a process is flashing on and off.

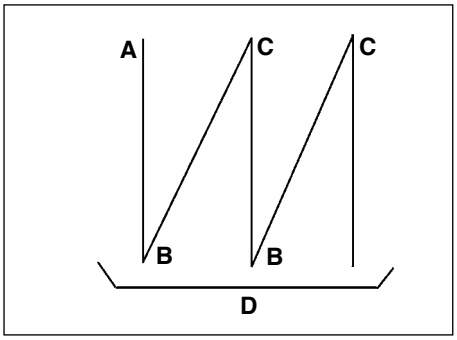


2) When the number of reverse feed stitches display is not flashing on and off, every press on ↵ switch ❸ changes over the reverse feed stitching mode from the "reverse feed stitching at sewing start," "double reverse feed stitching at sewing start" and "no reverse feed stitching at sewing start."

In addition, every time ⊖ switch ❺ is pressed, the reverse feed stitching feature changes over from the reverse feed stitching at sewing end to the double reverse stitch at sewing end, then to no reverse feed stitching at sewing end, in turn.

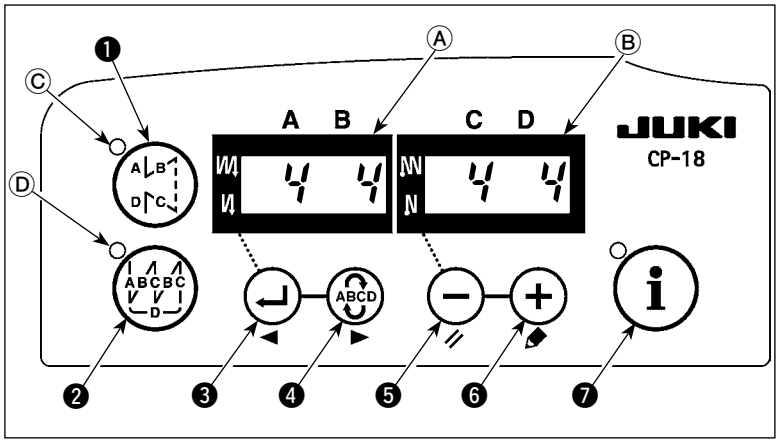
(2) Overlapped stitching pattern

Overlapped stitching pattern can be programmed.



A : Number of stitches of normal stitching setting
0 to 15 stitches
B : Number of stitches of reverse stitching setting
0 to 15 stitches
C : Number of stitches of normal stitching setting
0 to 15 stitches
D : Number of times of repetition
0 to 9 times

(Caution) When process D is set to 5 times, the sewing is repeated as A → B → C → B → C.



[Setting procedure of the overlapped stitching]

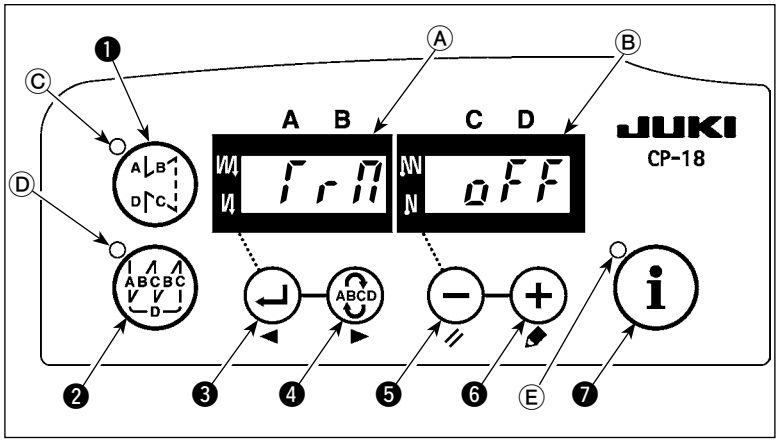
1) Effective/ineffective of the overlapped stitching pattern can be changed over by pressing switch ❷.
When the overlapped stitching pattern is rendered effective, LED Ⓓ lights up.
2) Select a process (A, B, C or D) the number of stitches for which is to be changed by using switch ❹.
The number which is flashing on and off represents the process which is being set.
3) Change the number of stitches for the selected process by using switch ❺ and switch ❻.
4) Press switch ❸ to confirm the change you have made.
(The sewing machine does not run unless the setting has been confirmed by pressing switch ❸.)

(Caution) The overlapped stitching pattern is carried out under automatic operation mode. Once the pedal is depressed, the sewing machine will automatically perform sewing of the number of overlapped stitches.

4. One-touch setting

A part of function setting items can be easily changed in the normal sewing state.

(Caution) For the setting of functions other than those covered in this part, refer to "Ⅲ-6. Setting of functions of SC-922" p.23.



[One-touch setting procedure]

1) Keep (i) switch ❼ held pressed for one second to place the panel in the function setting mode.
2) Change over the item to be set by using (↵) switch ❸ or (ABCD) switch ❹. Then, the set value can be changed by using (−) switch ❺ and (+) switch ❻.
3) To return to the normal sewing state, press (i) switch ❼.

(Caution) The setting is confirmed by pressing (i) switch ❼.

① Thread trimming function (trM)

- oFF : Thread trimming operation is not performed (solenoid output prohibition: Thread trimmer, wiper)
- on : Thread trimming operation is effective.

② Wiper function (WiP)

- oFF : Wiper does not operate after thread trimming
- on : Wiper operates after thread trimming

③ One-shot automatic stitching function (SHot)

- oFF : One-shot automatic stitching function is ineffective.
- on : One-shot automatic stitching is effective.

(Caution) This function is rendered effective when the material end sensor function is set. It is not possible to prohibit the one-shot operation during overlapped sewing operation. The number of revolution is the value which is set for setting No. 38.

④ Setting of the max. speed of stitch (SPd)

The highest speed of stitch of the machine head is set. The upper limit of the set value differs with the type of machine head to which the SC is connected.

Setting range : 150 - Max. value [sti/min]

⑤ Material end sensor function (Ed)

- oFF : Material end sensor function is ineffective.
- on : Once the material end is detected, the sewing machine stops running after having sewn the number of stitches set with ⑦ (EdSt).

* This function is rendered effective when the optional material end sensor is connected to the sewing machine.

⑥ Thread trimming function by material end sensor (EdTr)

- oFF : Automatic thread trimming function after the detection of material end is ineffective.
- on : Once the material end is detected, the sewing machine performs thread trimming after having sewn the number of stitches set with ⑦ (EdSt).

* This function is rendered effective when the optional material end sensor is connected to sewing machine.

⑦ Number of stitches for material end sensor (EdSt)

The number of stitches to be sewn from the detection of material end to the stop of the sewing machine

Number of stitches that can be set: 0 to 19 (stitches)

(Caution) If the number of stitches specified is inadequate, the sewing machine can fail to stop within the preset number of stitches depending on the number of revolutions of the sewing machine.

5. Production support function

The production support function consists of three different functions (six different modes) such as the production volume management function, operation measuring function and bobbin counter function. Each of them has its own production support effect. Select the appropriate function (mode) as required.

■ **Production volume management function**

Target No. of pcs. display mode [F100]

Target/actual No. of pcs difference display mode [F200]

The target number of pieces, actual number of pieces and the difference between the target and actual number of pieces along with the operation time are displayed to notify the operators of a delay and advance in real time. Sewing machine operators are allowed to engage sewing while constantly checking his/her work pace. This helps raise target awareness, thereby increasing productivity. In addition, a delay in work can be found at an early stage to enable early detection of problems and early implementation of corrective measures.

■ **Operation measuring function**

Sewing machine availability rate display mode [F300]

Pitch time display mode [F400]

Average number of revolutions display mode [F500]

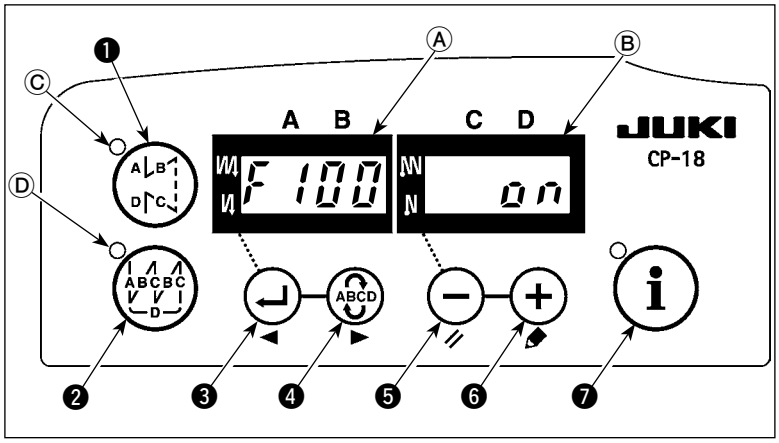
Sewing machine availability status is automatically measured and displayed on the control panel. The data obtained can be used as basic data to perform process analyses, line arrangement and equipment efficiency checkup.

■ **Bobbin counter function**

Bobbin counter display mode [F600]

In order to change bobbins before the current bobbin runs out of thread, the time for replacing the bobbin is notified.

[To display the production support modes]



(Caution) F100 to F500 modes have been factory-set to HIDE at the time of delivery.
For F600 mode, display/hide is changed over according to the setting of the bobbin counter function (function setting No. 6). (F600 has been factory-set to DISPLAY at the time of delivery.)

Keep (i) switch ❼ held pressed (one second) in the normal sewing state to call the one-touch setting screen.

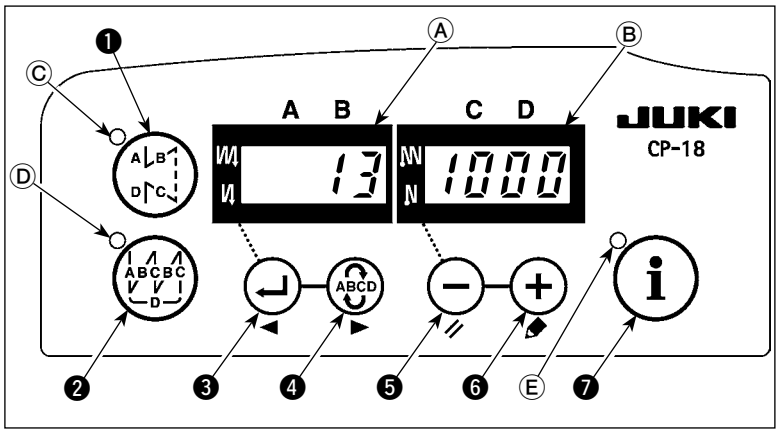
Then, press (A B C D) switch ❶ or (ABCBC D) switch ❷ on the one-touch setting screen to display/hide the production support modes.

Select the mode to be displayed/hidden by pressing (↵) switch ❸ or (ABCD) switch ❹. ON/OFF of the display can be changed over by pressing (−) switch ❺ or (+) switch ❻.

To return to the normal sewing state, press (i) switch ❼.

Sewing can be performed with the production support data displayed on the control panel.

[Basic operation of the production support modes]



1) When (i) switch ❼ is pressed in the normal sewing state, LED Ⓔ lights up to enter the production support mode.
2) Production support function [F100 to F600] can be changed over by pressing (↵) switch ❸ or (ABCD) switch ❹.
3) Data attached marked with (*1) in Table 1 "Indicator Ⓐ" can be changed by means of (−) switch ❺ and (+) switch ❻.
4) When you keep (+) switch ❻ held pressed for two seconds, indicator Ⓑ and LED Ⓔ flash on and off. While they are flashing on and off, data marked with (*2) in Table 1 "Display under modes" can be changed by pressing (−) switch ❺ and (+) switch ❻.

   When you press (i) switch ❼, the value marked with (*2) is confirmed and indicator Ⓑ and LED Ⓔ stop flashing on and off. Not that value marked with (*1) is automatically reset by changing the value marked with (*2).
5) The value with a sharp mark (*3) in Table 1 "Display of modes" can be changed only immediately after resetting by using (−) switch ❺ and (+) switch ❻.
6) Refer to the table "Mode resetting operation," for the resetting procedure of data.
7) To return to the normal sewing state, press (i) switch ❼.

Data to be displayed under the respective modes are as described in the table below.

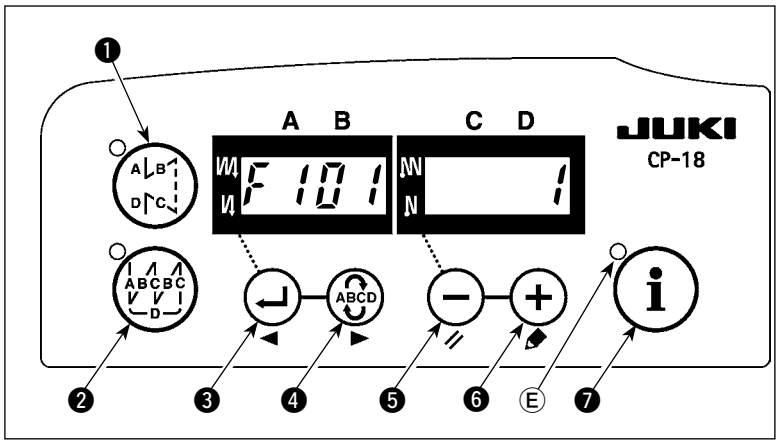
Table 1: Display of modes

Mode name	Indicator Ⓐ	Indicator Ⓑ	Indicator Ⓑ (when (−) switch ❺ is pressed)
Target No. of pcs. display mode [F100]	Actual number of pieces (Unit : piece) (*1)	Target number of pieces (Unit : piece) (*2)	-
Target/actual No. of pcs. difference display mode [F200]	d & Difference between the target number of pieces to be produced and the actual number of pieces produced (Unit : piece) (*1)	Target pitch time (Unit : 100 msec) (*2)	-
Sewing machine availability rate display mode [F300]	oP-r	Sewing machine availability rate in the previous sewing (Unit : %)	Display of average availability rate of sewing machine (Unit : %)
Pitch time display mode [F400]	Pi-T	Pitch time in the previous sewing (Unit : 1sec)	Display of average pitch time (Unit : 100 msec)
Average number of revolutions display mode [F500]	ASPd	Average number of revolutions in the previous sewing (Unit : sti/min)	Display of average number of revolutions (Unit : sti/min)
Bobbin counter display mode [F600]	bbn	Bobbin counter value (*3)	-

Table 2: Mode resetting operation

Mode name	⊖ Switch ❺ (held pressed for 2 seconds)	⊖ Switch ❺ (held pressed for 4 seconds)
Target No. of pcs. display mode [F100]	Resets the actual number of pieces Resets the difference between target number of pieces and actual number of pieces	-
Target/actual No. of pcs. difference display mode [F200]	Resets the actual number of pieces Resets the difference between target number of pieces and actual number of pieces	-
Sewing machine availability rate display mode [F300]	Resets average availability rate of sewing machine	Resets average availability rate of sewing machine. Resets average pitch time. Resets average number of revolutions of sewing machine.
Pitch time display mode [F400]	Resets average pitch time	Resets average availability rate of sewing machine. Resets average pitch time. Resets average number of revolutions of sewing machine.
Average number of revolutions display mode [F500]	Resets average number of revolutions of sewing machine.	Resets average availability rate of sewing machine. Resets average pitch time. Resets average number of revolutions of sewing machine.
Bobbin counter display mode [F600]	Resets the bobbin counter value (Note that only the bobbin counter is immediately reset by pressing ⊖ switch ❺.)	-

[Detailed setting of production volume management function [F101], [F102]]



When ⓘ switch ❼ is held pressed (for three seconds) under the target No. of pcs. display mode [F100] or the target/actual No. of pcs. difference display mode [F200], the detailed setting of the production volume management function can be carried out.

The setting state of the number of times of thread trimming [F101] and that of the target achievement buzzer [F102] can be changed over by pressing ↵ switch ❸ or ABCD switch ❹.

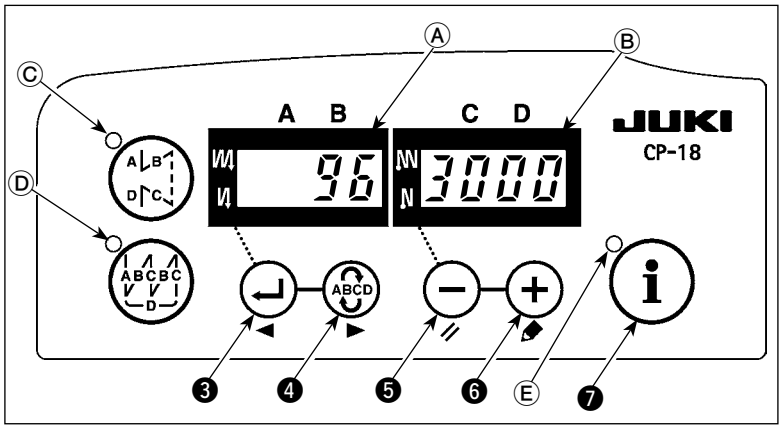
The number of times of thread trimming for sewing one piece of garment can be set by pressing ⊖ switch ❺ or ⊕ switch ❻ in the setting state of the number of times of thread trimming [F101].

It is possible to set whether the buzzer sounds or not when the actual number of pieces has reached the target volume by pressing ⊖ switch ❺ or ⊕ switch ❻ in the setting state of the target achievement buzzer [F102].

6. Setting of functions of SC-922

Functions can be selected and specified.

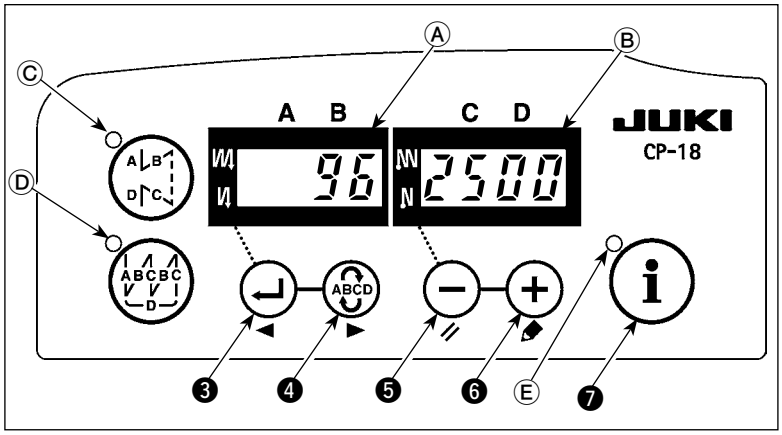
(Caution) For the function setting procedure of any operation panel other than CP-18, refer to the Instruction Manual for the operation panel to be used.



1) Turn ON the power with ⓘ switch ❼ held pressed.
(The item which has been changed during the previous work is displayed.)

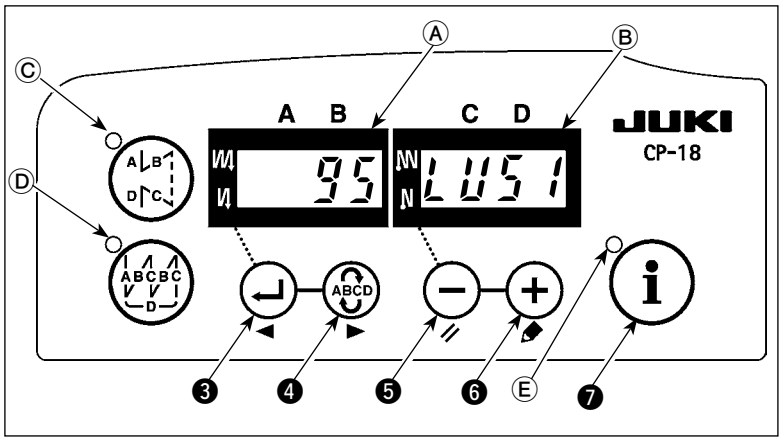
* If the screen display does not change, re-carry out operation described in step 1).

(Caution) Be sure to re-turn ON the power switch when one or more seconds have passed after turning it OFF. If the power switch is re-turned ON immediately after turning it OFF, the sewing machine may fail to operate normally. In such a case, be sure to turn ON the power switch again properly.



2) To move the setting No. forward, press ABCD ▶ switch ❹. To move the setting No. backward, press ↵ ◀ switch ❸.

(Caution) If the setting No. is moved forward (or backward), the previous (or subsequent) content of the setting is confirmed. Be careful when the content of a setting is changed (when the ⊖ / ⊕ switch is touched).



Example) Changing the maximum number of revolutions (setting No. 96)

Press ↵ ◀ switch ❸ or ABCD ▶ switch ❹ to call setting No. "96."
The current set value is displayed on indicator Ⓑ.
Press ⊖ switch ❺ 10 times to change the set value to "2500."

* The content of setting of the setting No. returns to the initial value by pressing ⊖ switch ❺ and ⊕ switch ❻ simultaneously.

3) After completion of the changing procedure, press ↵ ◀ switch ❸ or ABCD ▶ switch ❹ to confirm the updated value.

(Caution) If the power is turned OFF before carrying out this procedure, the changed content is not updated. When ↵ ◀ switch ❸ is pressed, the display on the panel changes to the previous setting No. When ABCD ▶ switch ❹ is pressed, the display on the panel changes to the subsequent setting No. After completion of the operation, the machine is returned to the normal sewing state by turning OFF the power and re-turning it ON.

7. Function setting list

	No	Item	Description	Setting range	Indication of function setting	Ref. page
	1	Soft start function	The number of stitches to be sewn at a low speed when the soft-start function is used at the start of sewing. 0 : The function is not selected. 1 to 9 : The number of stitches to be sewn under the soft-start mode.	0 to 9 (Stitches)	1 1	29
	2	Material end sensor function	Material end sensor function (to be used only with CP-18). 0 : Material end detection function is not operative. 1 : After detecting material end, the specified number of stitches (No. 4) will be sewn, and the sewing machine will stop.	0/1	2 0	29
	3	Thread trimming function by material end sensor	Thread trimming function by material end sensor (to be used only with CP-18). 0 : Automatic thread trimming function after detection of material end is not operative. 1 : After detecting material end, the specified number of stitches (No. 4) will be sewn, and the sewing machine will stop and perform automatic thread trimming.	0/1	3 0	29
	4	Number of stitches for material end sensor	Number of stitches for material end sensor (to be used only with CP-18). Number of stitches from detection of material end to stop of the sewing machine.	0 to 19 (Stitches)	4 5	29
	5	Flicker reducing function	Flicker reducing function 0 : Flicker reducing function is not operative. 1 : Flicker reducing function is effective	0/1	5 0	29
	6	Bobbin thread counting function	Bobbin thread counting function 0 : Bobbin thread counting function is not operative. 1 : Bobbin thread counting function is operative.	0/1	6 1	29
*	7	Unit of bobbin thread counting down	Unit of bobbin thread counting down 0 : 1 Count/10 stitches 1 : 1 Count/15 stitches 2 : 1 Count/20 stitches 3 : 1 Count/thread trimming	0 to 3	7 0	
*	8	Number of rotation of reverse feed stitching	Sewing speed of reverse feed stitching	150 to 3,000 (sti/min)	8 6 0 0	
	9	Thread trimming prohibiting function	Thread trimming prohibiting function (to be used only with CP-18). 0 : Thread trimming is effective. 1 : Thread trimming is prohibited. (Output of solenoid is prohibited. : Thread trimmer and wiper)	0/1	9 0	29
	10	Setting of needle bar stop position when the sewing machine stops.	Position of needle bar is specified when the sewing machine stops. 0: The needle bar stops at its lower position. 1: The needle bar stops at its upper position.	0/1	1 0 0	29
	11	Operation confirmation sound for operation panel	Operation confirmation sound for operation panel 0 : Operation confirmation sound is not generated 1 : Operation confirmation sound is generated.	0/1	1 1 1	29
	12	Optinal switch function selection	Switching of function of optional switch. Refer to **"Ⅲ-8. Detailed explanation of selection of functions" p. 29.**		1 2 o P T _	30
*	13	Function of prohibiting start of the sewing machine by bobbin thread counter	Function of prohibiting start of the sewing machine by bobbin thread counting 0 : When counting is out (-1 or less) Function of prohibiting start of the sewing machine is not operative. 1 : When counting is out (-1 or less) Function of prohibiting start of the sewing machine after thread trimming is operative. 2 : When counting is out (-1 or less), the sewing machine stops once. Function of prohibiting start of the sewing machine after thread trimming is operative.	0 to 2	1 3 0	
	14	Sewing counter	Counting function of sewing (number of completion of process) 0 : Sewing counter function is not operative. 1 : Sewing counter function is operative. (Every time thread trimming is performed) 2 : With the sewing counting switch input function	0 to 2	1 4 1	34
	15	Thread wiping function after thread trimming	Thread wiping operation after thread trimming is specified. 0 : Thread wiping is not carried out after thread trimming 1 : Thread wiping is carried out after thread trimming	0/1	1 5 0	
	21	Function of neutral presser lifting	Function of needle up/down compensating switch on the operation panel can be changed. 0 : Needle up/down compensation 1 : Provided with selectable function of automatic presser foot lifting at neutral position of pedal 2 : Provided with the function of automatic presser foot lifting at neutral position of pedal when enabled and added with the function of conducting alternate operation by depressing the back part of pedal (This function is disabled when No. 93 Needle up/down switch additional function setting is "2.")	0 to 2	2 1 0	34

*** Do not change the set values with asterisk (*) mark as they are functions for maintenance. If the standard set value set at the time of delivery is changed, it is in danger of causing the machine to be broken or the performance to be deteriorated. If it is necessary to change the set value, please purchase the Engineer's Manual and follow the instructions.**

	No	Item	Description	Setting range	Indication of function setting	Ref. page
	22	Needle up/down correction switch changeover function	Function of the needle up/down correction switch is changed over. 0 : Needle up/down compensation 1 : One stitch compensation	0/1	22 0	34
	25	Thread trimming operation after turning the handwheel by han	Thread trimming operation after moving the needle away from its upper or lower position by turning the handwheel by hand is specified. 0 : Thread trimming operation is carried out after turning the handwheel by hand 1 : Thread trimming operation is not carried out after turning the handwheel by hand	0/1	25 1	
	29	Setting of one-touch type reverse feed solenoid pull-in time	This function sets the suction time of initial motion of back-tack solenoid. 50 ms to 500 ms	50 to 500 (ms)	29 250	34
	30	Function of reverse feed stitching on the way	Function of reverse feed stitching on the way 0 : Normal one-touch type reverse feed stitching function 1 : Function of reverse feed stitching on the way is operative.	0/1	30 0	35
	31	Number of stitches of reverse feed stitching on the way	Number of stitches of reverse feed stitching on the way.	0 to 19 (Stitches)	31 4	35
	32	Effective condition of reverse feed stitching on the way when the sewing machine is stopping.	Effective condition of reverse feed stitching on the way 0 : Function is not operative when the sewing machine stops. 1 : Function is operative when the sewing machine stops.	0/1	32 0	35
	33	Thread trimming function by reverse feed stitching on the way	Thread trimming function by reverse feed stitching on the way 0 : Automatic thread trimming function after completion of reverse feed stitching on the way is not operative. 1 : Automatic thread trimming after completion of reverse feed stitching on the way is performed.	0/1	33 0	35
*	35	Number of rotation at a low speed	Lowest speed by pedal (The MAX value differs by machine head.)	150 to MAX (sti/min)	35 170	
*	36	Number of rotation of thread trimming	Thread trimming speed (The MAX value differs by machine head.)	100 to MAX (sti/min)	36 170	
	37	Number of rotation of soft-start	Sewing speed at the start of sewing (soft-start) (The MAX value differs by machine head.)	100 to MAX (sti/min)	37 170	29
	38	One-shot speed	One-shot speed (The max. value depends on the number of rotation of the sewing machine head.)	150 to MAX (sti/min)	38 1500	35
*	39	Pedal stroke at the start of rotation	Position where the sewing machine starts rotating from pedal neutral position (Pedal stroke)	10 to 50 (0.1 mm)	39 30	
*	40	Low speed section of pedal	Position where the sewing machine starts accelerating from pedal neutral position (Pedal stroke)	10 to 100 (0.1 mm)	40 60	
*	41	Starting position of lifting presser foot by pedal	Position where the cloth presser starts lifting from pedal neutral position (Pedal stroke)	– 60 to –10 (0.1mm)	41 –21	
*	42	Starting position of lowering presser foot	Starting position of lowering presser foot Stroke from the neutral position	8 to 50 (0.1 mm)	42 10	
*	43	Pedal stroke 2 for starting thread trimming	Position 2 where the thread trimming starts from pedal neutral position (When the function of lifting presser foot by pedal is provided.) (Pedal stroke) (Effective only when Item No. 50 is set at 1.)	– 60 to –10 (0.1 mm)	43 –51	
*	44	Pedal stroke for reaching the maximum number of rotation	Position where the sewing machine reaches its highest sewing speed from pedal neutral position (Pedal stroke)	10 to 150 (0.1 mm)	44 150	
*	45	Compensation of neutral point of the pedal	Compensation value of the pedal sensor	–15 to 15	45 0	
	47	Auto-lifter selecting function	Limitation time of waiting for lifting solenoid type auto-lifter device	10 to 600 (second)	47 60	36
*	48	Pedal stroke 1 for starting thread trimming	Position where thread trimming starts from pedal neutral position (Standard pedal) (Pedal stroke) (Effective only when Item No. 50 is set at 0.)	– 60 to – 10 (0.1 mm)	48 –35	
	49	Lowering time of presser foot	Lowering time of presser foot after the pedal has been depressed. (Start of rotation of the sewing machine is delayed during this time.)	0 to 500 (10 ms)	49 140	38

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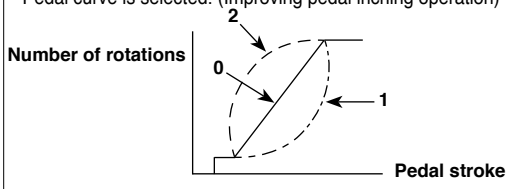
No	Item	Description	Setting range	Indication of function setting	Ref. page
50	Pedal specification	Type of pedal sensor is selected. 0 : KFL 1 : PFL Refer to **"Ⅲ-10. Selection of the pedal specifications" p. 42.**	0/1	5 0 ... 1	
51	Compensation of solenoid-on timing of reverse feed stitching at the start of sewing	Compensation of starting the solenoid for reverse feed stitching when reverse feed stitching at the start of sewing is performed.	– 36 to 36 (10°)	5 1 ... 1 1	36
52	Compensation of solenoid-off timing of reverse feed stitching at the start of sewing	Compensation of releasing the solenoid for reverse feed stitching when reverse feed stitching at the start of sewing is performed.	– 36 to 36 (10°)	5 2 ... 1 3	36
53	Compensation of solenoid-off timing of reverse feed stitching at the end of sewing	Compensation of releasing the solenoid for reverse feed stitching when reverse feed stitching at the end of sewing is performed.	– 36 to 36 (10°)	5 3 ... 4	36
55	Foot lift after thread trimming	Function of lifting presser foot at the time of (after) thread trimming 0 : Not provided with the function of automatic lifting of work-clamp after thread trimming 1 : Provided with the function of lifting presser foot automatically after thread trimming	0/1	5 5 ... 1	36
56	Reverse revolution to lift the needle after thread trimming	Function of reverse revolution to lift the needle at the time of (after) thread trimming 0 : Not provided with the function of reverse revolution to lift the needle after thread trimming 1 : Provided with the function of reverse revolution to lift the needle after thread trimming	0/1	5 6 ... 1	37
58	Function of holding predetermined upper/lower position of the needle bar	Function of holding predetermined upper/lower position of the needle bar 0 : Not provided with the function of holding predetermined upper/lower position of the needle bar 1 : Provided with the function of holding predetermined upper/lower position of the needle bar (holding force is weak.) 2 : Provided with the function of holding predetermined upper/lower position of the needle bar (holding force is medium.) 3 : Provided with the function of holding predetermined upper/lower position of the needle bar (holding force is strong.)	0 to 3	5 8 ... 0	37
59	Function of Auto/Manual change-over of reverse feed stitching at the start of sewing	This function can specify the sewing speed of reverse feed stitching at the start of sewing. 0 : The speed will depend on the manual operation by pedal, etc. 1 : The speed will depend on the specified reverse feed stitching speed (No. 8).	0/1	5 9 ... 1	37
60	Function of stop immediately after reverse feed stitching at the start of sewing	Function at the time of completion of reverse feed stitching at the start of sewing 0 : Not provided with the function of temporary stop of the sewing machine at the time of completion of reverse feed stitching at the start of sewing 1 : Provided with the function of temporary stop of the sewing machine at the time of completion of reverse feed stitching at the start of sewing.	0/1	6 0 ... 0	37
61	Needle bar home position retaining time	Sets the period of time in which the needle bar is retained at its home position after the sewing machine has stopped. 0 : The function is disabled (the needle bar home position retaining function is enabled at all times) 100 - 3000 ms	0 : Disabled 100 to 3000 (100ms)	6 1 ... 0	37
64	Change-over speed of condensation stitch or EBT (end back tack)	Initial speed when starting condensation stitch or EBT	0 to 250 (sti/min)	6 4 ... 5 0	
70	Function of soft-down of presser foot	Presser foot is slowly lowered. 0 : Presser foot is rapidly lowered. 1 : Presser foot is slowly lowered.	0/1	7 0 ... 0	38
71	Double reverse feed stitching function	Effective/ineffective of double reverse feed stitching is changed over. (to be used only with CP-18) 0 : Ineffective 1 : Effective	0/1	7 1 ... 1	
72	Sewing machine startup selecting function	Current limit at the startup of sewing machine is specified. 0 : Normal (Current limit is applied during startup) 1 : Rapid (Current limit is not applied during startup)	0/1	7 2 ... 1	
73	Retry function	This function is used when needle cannot pierce materials . 0 : Normal 1 : Retry function is provided.	0/1	7 3 ... 1	38
* 74	With/without thread trimmer for MF	With/without thread trimmer for MF is selected. 0 : Not provided with the tread trimmer 1 : Provided with the thread trimmer	0/1	7 4 ... 0	
76	One-shot function	One-shot operation up to the material end is specified. (to be used only with CP-18) 0 : One-shot operation is not performed. 1 : One-shot operation is performed.	0/1	7 6 ... 0	29

*** Do not change the set values with asterisk (*) mark as they are functions for maintenance. If the standard set value set at the time of delivery is changed, it is in danger of causing the machine to be broken or the performance to be deteriorated. If it is necessary to change the set value, please purchase the Engineer's Manual and follow the instructions.**

No	Item	Description	Setting range	Indication of function setting	Ref. page
* 84	Initial motion suction time of presser foot lifting solenoid	Suction motion time of presser foot lifting solenoid	50 to 500 (ms)	8 4 2 5 0	38
87	Function of pedal curve selection	Pedal curve is selected. (Improving pedal inching operation)  	0/1/2	8 7 0	38
90	Initial motion up stop function	Automatic UP stop function is set immediately after turning ON the power. 0 : off 1 : on	0/1	9 0 0	38
91	Function of prohibiting compensation operation after turning handwheel by hand	It is effective in combination with the machine head provided with tension release function. 0 : Tension release function is ineffective. 1 : Tension release function is effective.	0/1	9 1 1	
92	Function of reducing speed of reverse feed stitching at the start of sewing	Function to reduce speed at the time of completion of reverse feed stitching at the start of sewing. 0 : Speed is not reduced. 1 : Speed is reduced.	0/1	9 2 0	38
93	Function added to needle up/down compensating switch	Operation of needle up/down compensating switch is changed after turning ON the power or thread trimming. 0 : Normal (needle up/down compensating stitching only) 1 : One stitch compensating stitching is performed only when aforementioned changeover is made. (Upper stop → upper stop) 2 : Needle-down function operates after thread trimming. 3 : Function of needle-down with operation of 2 plus presser lowering operation and needle-up with thread trimming operation is added.	0 to 3	9 3 0	39
94	Continuous + One-shot nonstop function	The function that does not stop the sewing machine by combining continuous stitching with one-shot stitching using the program sewing function which is available in the IP operation panel. 0 : Normal (The sewing machine stops when a step is completed.) 1 : The sewing machine does not stop when a step is completed and proceeds to next step.	0/1	9 4 0	39
95	Head selection function	Machine head to be used is selected. (When the machine head is changed, each setting item is changed to the initial value of the machine head.)		9 5 L U 5 1	
96	Max. number of rotation setting	Max. number of rotation of the sewing machine head can be set. (The MAX value differs by machine head.)	150 to MAX (sti/min)	9 6 3 0 0 0	39
103	Needle cooler output OFF delay time	Delay time from the stop of sewing machine to the output OFF is specified using the needle cooler output function.	100 to 2000 ms	1 0 3 5 0 0	
120	Main shaft reference angle compensation	Main shaft reference angle is compensated.	–60 to 60	1 2 0 0	39
121	Up position starting angle compensation	Angle to detect UP position starting is compensated.	–15 to 15	1 2 1 0	39
122	DOWN position starting angle compensation	Angle to detect DOWN position starting is compensated.	–15 to 15	1 2 2 0	39
124	Setting of energy-saving function during standby	Setting to reduce the power consumption while the sewing machine is in standby state 0 : Energy-saving mode is ineffective 1 : Energy-saving mode is effective	0/1	1 2 4 0	39
144	Alternate up/down output cancelling stitch number setting	Sets the number of stitches to be sewn before the alternate up/down output is automatically cancelled 0 : Disabled 1 - 30 stitches	0 to 30 (stitch)	1 4 4 0	39
146	Alternate up/down output selection after thread trimming	Selects the status of the alternate up/down output to be forcibly output after thread trimming 0 : Output status is remained 1 : OFF is output 2 : ON is output	0 to 2	1 4 6 0	39
147	Alternate up/down initial output	Sets the status of the alternate up/down output upon turning the power on to either ON or OFF 0: The previous power-off state is restored 1: OFF is output 2: ON is output	0 to 2	1 4 7 0	40

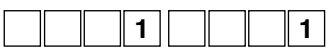
*** Do not change the set values with asterisk (*) mark as they are functions for maintenance. If the standard set value set at the time of delivery is changed, it is in danger of causing the machine to be broken or the performance to be deteriorated. If it is necessary to change the set value, please purchase the Engineer's Manual and follow the instructions.**

No	Item	Description	Setting range	Indication of function setting	Ref. page
148	2-pitch (2-stitch length) output during reverse feed stitching at beginning/end of sewing	Carries out 2-pitch output during reverse feed stitching at the beginning and end of sewing 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	148 0	40
149	2-pitch inverted output during alternate up/down output	Sets the inverted output of 2-pitch output is carried out or not in synchronism with alternate up/down output 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	149 0	40
150	2-pitch initial output	Selects the status of the 2-pitch output upon turning the power on between ON and OFF 0 : The previous power-off state is restored 1 : OFF is output 2 : ON is output	0 to 2	150 0	40
151	Pause and stitch alignment function	Temporarily stops at every corner of the sewing pattern at the beginning and end of sewing and during overlapped stitching 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	151 0	40
154	Condensation stitching function for beginning/end of sewing	Enabled when the SC-922 is used in combination with the machine head provided with condensation stitching function for thread trimming leaving shorter thread on the material The sewing machine performs condensation stitching at the beginning and end of sewing (Condensation stitching is performed instead of automatic reverse feed stitching.) 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	154 0	40
155	Setting of the position of carrying out automatic presser foot lifting at neutral position of pedal	Automatic presser foot lifting at neutral position of pedal is carried out only when the sewing machine stops with its needle down. 0 : The function of automatic presser foot lifting at neutral position of pedal is enabled at all times 1 : The automatic presser foot lifting at neutral position of pedal is only enabled when the sewing machine stops with its needle down (Disabled when No. 93 Needle up/down correction switch adding function setting is "2.")	0/1	155 0	34
156	Needle thread grasping function	Enabled when the SC-922 is used in combination with the machine head provided with the needle thread grasping function Selects the status of the needle thread grasping function 0 : ON/OFF with the operation enabling switch 1 : Disables the needle thread grasping function 2 : Forcibly enables the needle thread grasping function	0 to 2	156 0	40
158	Condensation stitching function during thread trimming	Enabled when the SC-922 is used in combination with the machine head provided with condensation stitch function for thread trimming leaving shorter thread on the material Selects whether or not the condensation stitch for thread trimming leaving shorter thread on the material is output 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	158 0	
163	Alternate up/down speed limitation enable	Limits the maximum sewing speed by means of the alternate up/down amount Refer to the Engineer's Manual for details.	0/1	163 0	
164	Standing operation pedal input high-speed switch function	Runs the sewing machine at a high speed whenever the standing operation pedal input exists 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	164 0	
167	With/without bobbin thread remaining amount detection	Bobbin thread remaining amount detecting device is used. However, the bobbin thread counter operates normally regardless of the setting of the bobbin thread remaining amount detection. 0 : The function is in the OFF state 1 : The function is in the ON state	0/1	167 1	41
168	Bobbin thread remaining amount detecting function	Sets the function of the bobbin thread remaining amount detecting device Carry out setting referring to the Instruction Manual for the bobbin thread remaining amount detecting device.	0/1	168 0	41

8. Detailed explanation of selection of functions

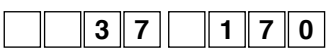
① Selection of the soft-start function (Function setting No. 1)

The needle thread may fail to interlace with the bobbin thread at the start of sewing when the stitching pitch (stitch length) is small or a thick needle is used. To solve such problem, this function (called “soft-start”) is used to limit the sewing speed, thereby assuring successful formation of the starting stitches.



0 : The function is not selected.
1 to 9 : The number of stitches to be sewn under the soft-start mode.

The sewing speed limited by the soft-start function can be changed. (Function setting No. 37)



Data setting range
100 to MAX sti/min <10 sti/min> (The MAX value differs by machine head.)

② Material end sensor (ED : optional) function (Function setting No. 2 to 4, 76)

This function is possible when the material end sensor (ED) is attached.
As for the details, refer to the instruction manual for the material end sensor.

(Caution) This function is rendered effective only with the CP-18.

③ Flicker reducing function (Function setting No. 5)

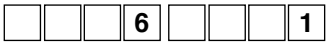
The function reduces flickering of the hand lamp at the start of sewing.

0 : Flicker reducing function is ineffective
1 : Flicker reducing function is effective

(Caution) When the flicker reducing function is set at the "Flicker reducing function is effective," the startup speed of the sewing machine decreases.

④ Bobbin thread counting function (Function setting No. 6)

When the control panel is used, the function subtracts from the predetermined value and indicates the used amount of bobbin thread.
For the details, refer to the instruction manual for the control panel.



0 : Bobbin thread counting function is not operative.
1 : Bobbin thread counting function is operative.

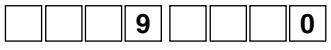
(Caution) If “0” is set, the LCD indication on the control panel will go out and the bobbin thread counting function will be invalid.

⑤ Thread trimming prohibiting function (Function setting No. 9)

This function turns OFF thread trimming solenoid output and wiper solenoid output when thread trimming is actuated.

(Caution) This function is rendered effective only with the CP-18.

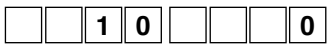
By this function, separate sewing material can be spliced and sewn without trimming thread.



0 : off Thread trimming is operative. (thread can be trimmed).
1 : on Thread trimming is inoperative. (thread can not be trimmed).

⑥ Setting of the needle bar stop position when the sewing machine stops (Function setting No. 10)

The position of the needle bar when the pedal is in its neutral position is specified.

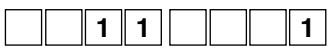


0 : Down The needle bar stops in the lowest position of its stroke.
1 : Up The needle bar stops in the highest position of its stroke.

(Caution) If the stop position of the needle bar is set to the highest position, the thread trimming action will be taken after the needle bar comes down once to the lowest position.

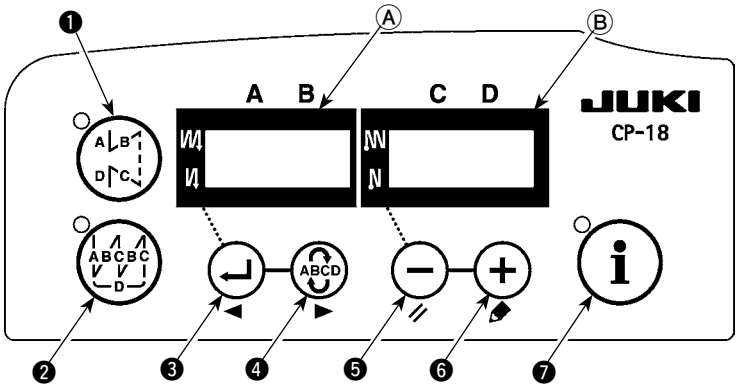
⑦ Panel operating sound (Function setting No. 11)

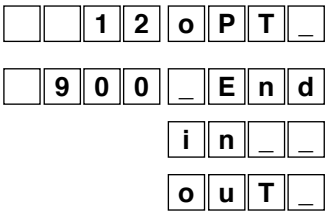
Whether the panel operation generates sound or not can be selected.



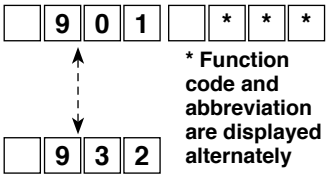
0 : off Operation confirmation sound is not generated
1 : on Operation confirmation sound is generated.

⑧ Selection of the optional input/output function (Function setting No. 12)



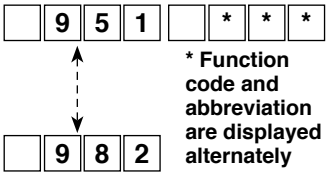


Select function setting No. 12 with the operating procedure of function setting procedures 1) through 3).
Select the items of "End", "in" and "ouT" with keys ❺ and ❻.



*** Function code and abbreviation are displayed alternately**

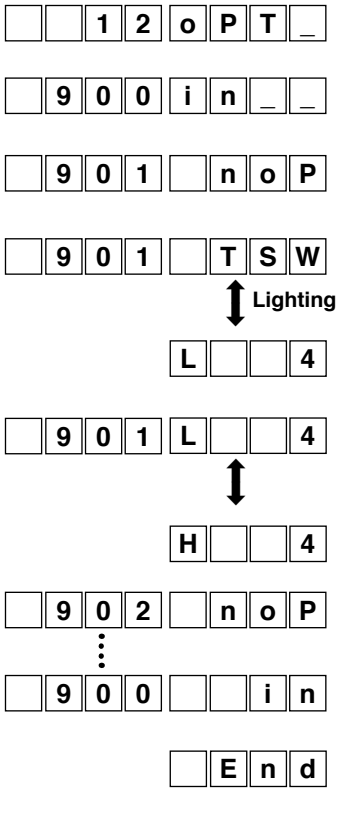
[When "in" is selected]
The input function setting connector display number is displayed on indicator Ⓐ. Specify the display number with key ❸ or ❹. Specify the connector pin function corresponding to the displayed number by means of key ❺ or ❻. Function code and abbreviation are displayed alternately on indicator Ⓑ. (Refer to the appendix for the relation between display numbers and connector pins assignment.)



*** Function code and abbreviation are displayed alternately**

[When "ouT" is selected]
The output function setting connector display number is displayed on indicator Ⓐ. Specify the display number with key ❸ or ❹. Specify the connector pin function corresponding to the displayed number by means of key ❺ or ❻. Function code and abbreviation are displayed alternately on indicator Ⓑ. (Refer to the appendix for the relation between display numbers and connector pins assignment.)

*** Example) Setting the thread trimming function for the display No. 1 of the input function setting connector**



1. Select function setting No. 12 with the operating procedure of function setting procedures 1) through 3).
2. Select the item of "in" with keys ❺ and ❻.
3. Select display No. 901 with key ❹.
4. Select the thread trimming function, "TSW" with keys ❺ and ❻.
5. Determine the thread trimming function, "TSW" with key ❹.
6. Set ACTIVE of the signal with keys ❺ and ❻.
   Set the display to "L" when the signal is "Low" and performing thread trimming, and set the display to "H" when the signal is "High" and performing thread trimming.
7. Determine the aforementioned function with key ❹.
8. Finish the optional input with key ❹.
9. Select the item of "End" with keys ❺ and ❻ to return to the function setting mode.

Input function list

Function code	Abbreviation	Function item	Remarks
0	noP	No function	(Standard setting)
1	HS	Needle up / down compensating stitching	Every time the switch is pressed, normal feed stitching by half stitch is performed. (Same operation as that of up / down compensating stitching switch on the panel.)
2	bHS	Back compensating stitching	Reverse feed stitching is performed at low speed while the switch is held pressing. (It is effective only when a constant-dimension sewing is selected.)
3	EbT	Function of canceling once reverse feed stitching at the end of sewing	By depressing the back part of the pedal after pressing the switch, operation of reverse feed stitching is canceled once.
4	TSW	Thread trimming function	This function is actuated as the thread trimming switch.
5	FL	Presser foot lifting function	This function is actuated as the foot lifter switch.
6	oHS	One stitch compensating stitching	Every time the switch is pressed, one stitch stitching operation is executed.
7	SEbT	Function of cancel of reverse feed stitching at start/end	By operating the optional switch, ineffective/effective can be alternately changed over.
8	PnFL	Presser lifting function when pedal is neutral	Every time the switch is pressed, the function whether automatically lifting the presser foot when the pedal is neutral or not can be selected.
9	Ed	Material edge sensor input	This function works as the input signal of material edge sensor.
10	LinH	Function of prohibiting depressing front part of pedal	Rotation by pedal is prohibited.
11	TinH	Function of prohibiting thread trimming output	Output of thread trimming is prohibited.
12	LSSW	Low speed command input	This function works as low speed switch for standing sewing machine.
13	HSSW	High speed command input	This function works as high speed switch for standing sewing machine.
14	USW	Needle lifting function	UP stop motion is performed when switch is pressed during DOWN stop.
15	bT	Reverse feed stitching switch input	Reverse feed stitching is output as long as the switch is held pressed.
16	SoFT	Soft start switch input	The speed of stitch is limited to the predetermined soft-start speed as long as the switch is held pressed.
17	oSSW	One-shot speed command switch input	This function works as one-shot speed command as long as the switch is pressed.
18	bKoS	Backward one-shot speed command switch input	Reverse feed stitching is performed in accordance with the one-shot speed command as long as the switch is held pressed.
19	SFSW	Safety switch input	Rotation is prohibited.
20	MES	Thread trimming safety switch input	It operates as an input signal of the thread trimmer safety switch.
21	AUbT	Automatic reverse feed stitching cancellation/addition switch	Every time the switch is pressed, reverse feed stitching at sewing start or reverse feed stitching at sewing end is cancelled or added.
22	CUnT	Sewing counter input	Every time the switch is pressed, the sewing counter value is increased.
23	rSW	Reverse-rotation needle-up function	When the switch is pressed while the sewing machine is at rest with its needle up, the machine rotates in reverse direction and brakes to stop at the specified angle. When the switch is pressed while the sewing machine is at rest with its needle down, the machine rotates in normal direction and brakes to stop at the specified angle.
24	vErT	Alternate up/down amount conversion panel switch input	Alternate up/down conversion output is inverted every time the switch is pressed.
25	vSW	Alternate up/down amount conversion knee switch input	Alternate up/down conversion is output as long as the switch is held pressed
26	2PiT	2-pitch alternate input	2-pitch output is inverted every time the switch is pressed
27	2PSW	2-pitch momentary switch input	2-pitch is output as long as the switch is held pressed
28	bbCG	Bobbin replacement switch input	Startup of the sewing machine is disabled when the switch is turned ON for the first time. (Bobbin replacement) The presser foot is lowered and the normal operation is restored when the switch is turned ON for the second time.
29	CGUd	Center guide switch input	Center guide output is inverted every time the switch is pressed.
30	TCSW	Thread grasping switch input	Enable/disable of the thread grasping function is changed over every time the switch is pressed.
31	ALFL	Presser lifter alternate switch input	Presser lifter output is inverted every time the switch is pressed.
32	CAbT	S/EBT 1-time cancellation input	Reverse feed stitching at the beginning or end of sewing, to be performed after a press on the switch, is cancelled once.
33	SToP	Stop switch input	The sewing machine is stopped and the operation is prohibited as long as the switch is held pressed.
34	bCGP	Bobbin replacement P-switch input	When the switch is turned ON for the first time, the sewing machine stops with its needle up, then presser foot goes up and the start-up of the sewing machine is disabled. (Bobbin replacement) The presser foot is lowered and the normal operation is restored when the switch is turned ON for the second time.

Output function list

Function code	Abbreviation	Function item	Remarks
0	noP	No function	(Standard setting)
1	TrM	Thread trimming output	Output of thread trimming signal
2	WiP	Thread wiper output	Output of thread wiper signal
3	TL	Thread release output	Output of thread release signal
4	FL	Presser lifter output	Output of presser lifting signal
5	bT	Reverse feed stitching output	Output of reverse feed stitching signal
6	EbT	EBT cancel monitor output	State of one time cancel of reverse feed stitching at end function is output.
7	SEbT	Reverse feed stitching at start/end cancel monitor output	State of cancel of reverse feed stitching at start/end is output.
8	AUbT	Sewing start/end cancellation/addition monitor output	State of cancel or addition of automatic reverse feed stitching is output.
9	SSTA	Sewing machine stop state output	Sewing machine stop state is output.
10	CooL	Needle cooler output	Output for needle cooler
11	bUZ	Buzzer output	It is output when the bobbin counter set value has been exceeded, an error has occurred or the bobbin thread remaining amount is detected.
12	LSWo	Revolution command output	Revolution demanding command state is output.
13	vErT	Alternate up/down amount conversion (monitor) output	Alternate up/down amount conversion signal is output.
14	2PiT	2-pitch output	2-pitch signal is output.
15	bCGo	Bobbin replacement monitor output	Sewing machine start-up prohibition state during bobbin replacement is output.
16	TC	Thread grasping enabled state monitor output	Thread grasping enabled state is output.
17	CAbT	S/EBT 1-time cancellation monitor output	One-time cancellation state of the reverse feed stitching at the beginning or end of sewing is output.
18	SToP	Stop state monitor output	Sewing machine operation prohibition state is output.

Input function setting connectors

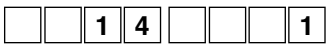
Connector No.	Pin No.	Display No.	Initial value of function setting
CN44	4	901	Machine head switch 1 input
	5	902	Machine head switch 2 input
	6	903	Machine head switch 3 input
	7	904	Machine head switch 4 input
	8	905	Machine head switch 5 input
	9	906	Machine head switch 6 input
	10	907	Machine head switch 7 input
	11	908	Machine head switch 8 input
CN58	15	909	Option 1 input
	16	910	Option 2 input
	17	911	Option 3 input
	18	912	Option 4 input
	19	913	Option 5 input
	20	914	Option 6 input
	21	915	Option 7 input
	22	916	Option 8 input
CN51	4	917	Option 9 input
	5	918	Option 10 input
	6	919	Option 11 input
	7	920	Option 12 input
	8	921	Option 13 input
	9	922	Option 14 input
	10	923	Option 15 input
	11	924	Option 16 input
CN39	7	925	TSW (thread trimming switch input)
	11	926	LSSW (low speed switch)
	9	927	HSSW (high speed switch)
	5	928	FL (presser lifter switch input)
CN48	2	929	SFSW (safety switch input)
	1	930	noP (no function is assigned)
CN36	4	931	FL (presser lifter switch input)
	5	932	bT (reverse feed stitching switch input)

Output function setting connector

Connector No.	Pin No.	Display No.	Initial value of function setting
CN44	15	951	Machine head LED 1 output
	16	952	Machine head LED 2 output
	17	953	Machine head LED 3 output
	18	954	Machine head LED 4 output
	19	955	Machine head LED 5 output
	20	956	Machine head LED 6 output
	21	957	Machine head LED 7 output
	22	958	Machine head LED 8 output
CN59	11	959	Option 1 output
	12	960	Option 2 output
	13	961	Option 3 output
	14	962	Option 4 output
	15	963	Option 5 output
	16	964	Option 6 output
	17	965	Option 7 output
	18	966	Option 8 output
	19	967	Option 9 output
	20	968	Option 10 output
	21	969	Option 11 output
	22	970	Option 12 output
	23	971	Option 13 output
	24	972	Option 14 output
	25	973	Option 15 output
	26	974	Option 16 output
CN51	15	975	Option 17 output
	16	976	Option 18 output
	17	977	Option 19 output
	18	978	Option 20 output
	19	979	Option 21 output
	20	980	Option 22 output
	21	981	Option 23 output
	22	982	Option 24 output

⑨ **Sewing counting function (Function setting No. 14)**

The function counts up every time thread trimming is completed and counts the number of completion of the sewing process.



0 : off Sewing counting function is inoperative.
1 : on Sewing counting function is operative. (Every time thread trimming is performed)
2 : on External sewing counter switch input.

(Caution) The sewing counter can only be operative when the CP-180 is used with the sewing machine.

The counter indication changes as shown below according to the combination of setting No. 6 and setting No. 14.

Setting No. 6	Setting No. 14	Counter
1	1	Bobbin counter
1	0	Bobbin counter
0	1	Sewing counter (only with CP-180)
0	0	Counter function is ineffective.

⑩ **Neutral automatic presser lifting function (with AK device only) (Functionsetting No. 21 and No.155)**

This function can automatically lift the presser foot when the pedal is in the neutral position.

The automatic lifting time depends on the No. 47 Automatic presser foot lifter retaining time. In the case the presser foot automatically comes down, the presser foot automatically goes up by bringing it to the neutral position after it has moved away from that position. (Solenoid type only)

(Caution) This function is disabled when No. 93 Needle up/down switch additional function setting is "2."

Function of automatic presser foot lifting at neutral position of pedal (function setting No. 21)

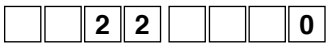
0 : Not provided with the function of automatic presser foot lifting at neutral position of pedal
1 : Provided with selectable function of automatic presser foot lifting at neutral position of pedal
2 : Provided with the function of automatic presser foot lifting at neutral position of pedal when enabled and added with the function of conducting alternate operation by depressing the back part of pedal
(Caution) The alternate function is carried out regardless of the setting of No. 155.

Setting of the position of carrying out automatic presser foot lifting at neutral position of pedal (function setting No.155)

0 : The function of automatic presser foot lifting at neutral position of pedal is enabled at all times
1 : The automatic presser foot lifting at neutral position of pedal is only enabled when the sewing machine stops with its needle down

⑪ **Needle up/down switch function changeover function (Function setting No. 22)**

The needle up/down switch function can be changed over between the needle up/down compensation and one stitch compensation.



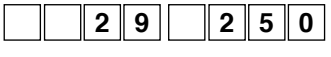
0 : Needle up / down compensating stitching
1 : One stitch compensating stitching

⑫ **Setting of the suction time of the back-tack solenoid (Function setting No. 29)**

This function can change the suction time of the back-tack solenoid.

It is effective to decrease the value when the heat is high.

(Caution) When the value is excessively decreased, failure of motion or defective pitch will follow. Be careful when changing the value.



Setting range : 50 to 500 ms <10 / ms>

⑬ Function of reverse feed stitching on the way (Function setting Nos. 30 to 33)

Functions of the limit of number of stitches and thread trimming command can be added to the touch back switch on the sewing machine head.

Function setting No. 30

		3	0				0

Function of reverse feed stitching on the way is selected.
0 : off Normal back-tack function
1 : on Function of reverse feed stitching on the way

Function setting No. 31

		3	1				4

Number of stitches performing reverse feed stitching is set.
Setting range
0 to 19 stitches

Function setting No. 32

		3	2				0

Effective condition of reverse feed stitching on the way
0 : off Inoperative when the sewing machine stops. (Reverse feed stitching on the way functions only when the sewing machine is running.)
1 : on Operative when the sewing machine stops.
(Reverse feed stitching on the way functions both when the sewing machine is running and stops.)

(Caution) Either condition is operative when the sewing machine is running.

Function setting No. 33

		3	3				0

Thread trimming is performed when reverse feed stitching on the way is completed.
0 : off Without thread trimming
1 : on Thread trimming is executed.

Application	Function setting			Output function
	No.30	No.32	No.33	
❶	0	0 or 1	0 or 1	It works as normal touch-back switch.
❷	1	0	0	When operating touch-back switch at the time of depressing front part of the pedal, reverse feed stitching as many as the number of stitches specified by the function setting No. 31 can be performed.
❸	1	1	0	When operating touch-back switch at the time of either stop of the sewing machine or depressing front part of the pedal, reverse feed stitching as many as the number of stitches specified by the function setting No. 31 can be performed.
❹	1	0	1	When operating touch-back switch at the time of depressing front part of the pedal, automatic thread trimming is performed after reverse feed stitching as many as the number of stitches specified by the function setting No. 31 has been performed.
❺	1	1	1	When operating touch-back switch at the time of either stop of the sewing machine or depressing front part of the pedal, automatic thread trimming is performed after reverse feed stitching as many as the number of stitches specified by the function setting No. 31 has been performed.

Actions under each setting state

❶ Used as the normal reverse feed stitching touch-back switch.
❷ Used for reinforcing seam (press sewing) of the pleats. (It works only when the sewing machine is running.)
❸ Used for reinforcing seam (press sewing) of the pleats.
(It works either when the sewing machine stops or when the sewing machine is running.)
❹ Used as starting switch for reverse feed stitching at the sewing end.
(Used as the substitute for thread trimming by depressing back part of the pedal. It works only when the sewing machine is running. It is especially effective when the sewing machine is used as the standing-work machine.)
❺ Used as starting switch for reverse feed stitching at the sewing end.
(Used as the substitute for thread trimming by depressing back part of the pedal. It works either when the sewing machine stops or when the sewing machine is running. It is especially effective when the sewing machine is used as the standing-work machine.)

⑭ Number of rotation of one-shot stitching (Function setting No. 38)

This function can set, by the pedal operation of one time, the sewing speed of one-shot stitching when the sewing machine continues stitching until completing the number of stitches specified or detecting the material end.

		3	8	1	5	0	0

Setting range
150 to MAX. sti/min. <50 / sti/min>

(Caution) The max. number of rotation of one-shot stitching is limited by the model of the sewing machine head.

⑮ **Holding time of lifting presser foot (Function setting No. 47)**

This function automatically lowers the presser foot when the time set with the setting No. 47 has passed after lifting the presser foot.

When the pneumatic type presser foot lifter is selected, the holding time control of lifting presser foot is limitless regardless of the set value.

□□**4**|**7**□□**6**|**0**

Setting range

10 to 600 sec <10 / sec>

⑯ **Compensation of timing of the solenoid for reverse feed stitching (Function setting No. 51 to 53)**

When the normal and reverse feed stitches are not uniform under the automatic reverse feed stitching action, this function can change the ON / OFF timing of the solenoid for back tack and compensate the timing.

(Caution) These functions are enabled when the function setting No. 151 Fastening stitch alignment is set to OFF.

❶ Compensation of on-timing of solenoid for reverse feed stitching at the start of sewing (Function setting No. 51)

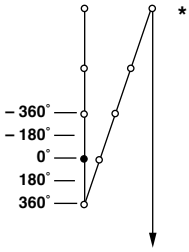
On-timing of solenoid for reverse feed stitching at the start of sewing can be compensated by the unit of angle.

□□**5**|**1**□□**1**|**1**

Adjusting range

– 36 to 36 <1 / 10˚>

Set value	Compensation angle	Number of stitches of compensation
− 36	− 360 ˚	− 1
− 18	− 180 ˚	− 0.5
0	0 ˚	0
18	180 ˚	0.5
36	360 ˚	1



*** When the point before 1 stitch is regarded as 0˚, compensation is possible by 360˚ (1 stitch) in front and in the rear.**

❷ Compensation of off-timing of solenoid for reverse feed stitching at the start of sewing (Function setting No. 52)

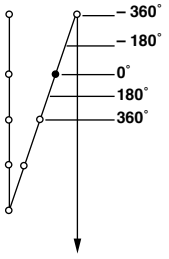
Off-timing of solenoid for reverse feed stitching at the start of sewing can be compensated by the unit of angle.

□□**5**|**2**□□**1**|**3**

Adjusting range

– 36 to 36 <1 / 10˚>

Set value	Compensation angle	Number of stitches of compensation
− 36	− 360 ˚	− 1
− 18	− 180 ˚	− 0.5
0	0 ˚	0
18	180 ˚	0.5
36	360 ˚	1



❸ Compensation of off-timing of solenoid for reverse feed stitching at the end of sewing (Function setting No. 53)

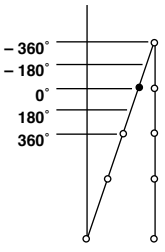
Off-timing of solenoid for reverse feed stitching at the start of sewing can be compensated by the unit of angle.

□□**5**|**3**□□□|**4**

Adjusting range

– 36 to 36 <1 / 10˚>

Set value	Compensation angle	Number of stitches of compensation
− 36	− 360 ˚	− 1
− 18	− 180 ˚	− 0.5
0	0 ˚	0
18	180 ˚	0.5
36	360 ˚	1



⑰ **Foot lift function after thread trimming (Function setting No. 55)**

This function can automatically lift the presser foot after thread trimming. This function is effective only when it is used in combination with the AK device.

□□**5**|**5**□□□|**1**

0 : off Function of automatically lifting the presser foot is not provided.
(Presser foot does not automatically go up after thread trimming.)

1 : on Function of automatically lifting the presser foot is provided.
(Presser foot automatically goes up after thread trimming.)

⑱ Reverse revolution to lift the needle after thread trimming (Function setting No. 56)

This function is used to make the sewing machine rotate in the reverse direction after thread trimming to lift the needle bar almost to highest position. Use this function when the needle appears under the presser foot and it is likely to make scratches on the sewing products of heavy-weight material or the like.

		5	6				1

0 : off Function of making the sewing machine rotate in the reverse direction to lift the needle after thread trimming is not provided.

1 : on Function of making the sewing machine rotate in the reverse direction to lift the needle after thread trimming is provided.

(Caution) The needle bar is raised, by rotating the machine in the reverse direction, almost to the highest dead point. This may result in slip-off of the needle thread. It is therefore necessary to adjust the length of thread remaining after thread trimming properly.

⑲ Function of holding predetermined upper / lower position of the needle bar (Function setting Nos. 58 and 61)

When the needle bar is in its upper or lower position, the sewing machine slightly brakes to keep the needle bar at the current position.

Function of holding predetermined upper/lower position of the needle bar (Function setting No. 58)

		5	8				0

0 : off Not provided with the function of holding predetermined upper/lower position of the needle bar

1 : on Provided with the function of holding predetermined upper/lower position of the needle bar (holding force is weak.)

2 : on Provided with the function of holding predetermined upper/lower position of the needle bar (holding force is medium.)

3 : on Provided with the function of holding predetermined upper/lower position of the needle bar (holding force is strong.)

Needle-bar home position retaining time (function setting No. 61)

This function automatically cancels the function No. 58 after the lapse of the set time when the latter is in the ON state.

This function should be used when you want to turn the sewing machine pulley after the completion of sewing.

		6	1				0

0 : Function is disabled The needle-bar up/down home position retaining function is enabled at all times.

100 - 3000 ms

⑳ Change-over function of AUTO / Pedal for sewing speed of the reverse feed stitching at the start of sewing (Function setting No. 59)

This function selects whether the reverse feed stitching at the start of sewing is performed without a break at the speed set by the function setting No. 8 or the stitching is performed at the speed by the pedal operation.

		5	9				1

0 : Manual The speed is indicated by the pedal operation.

1 : Auto Automatic stitching at the specified speed

(Caution) 1. The max. sewing speed of the reverse feed stitching at the start of sewing is limited to the speed set by the function setting No. 8 regardless of the pedal.

2. When "0" is selected, stitches of reverse feed stitching may not match those of normal feed stitching.

㉑ Function of stop immediately after the reverse feed stitching at the start of sewing (Function setting No. 60)

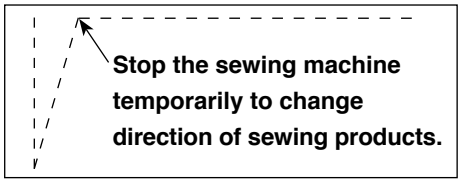
This function temporarily stops the sewing machine even when keeping depressing the front part of the pedal at the time of completion of process of reverse feed stitching at the start of sewing.

It is used when sewing a short length by reverse feed stitching at the start of sewing.

		6	0				0

0 : Not provided with the function of temporary stop of the sewing machine immediately after the reverse feed stitching at the start of sewing

1 : Provided with the function of temporary stop of the sewing machine immediately after the reverse feed stitching at the start of sewing



㉒ Function of soft-down of presser foot (with AK device only) (Function setting Nos. 70 and 49)

This function can softly lower the presser foot.

This function can be used when it is necessary to decrease contact noise, cloth defect, or slippage of cloth at the time of lowering the presser foot.

Note : Change the time of function setting No. 49 together at the time of selecting the function of soft-down since the sufficient effect cannot be obtained unless the time of function setting No. 49 is set longer when lowering the presser foot by depressing the pedal.

		4	9		1	4	0

0 to 500 ms
10 ms/Step

		7	0				0

0 : Function of soft-down of presser foot is not operative. (Presser foot is rapidly lowered.)
1 : Selection of function of soft-down of presser foot

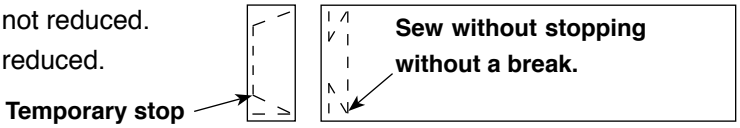
㉓ Function of reducing speed of reverse feed stitching at the start of sewing (Function setting No. 92)

Function to reduce speed at the time of completion of reverse feed stitching at the start of sewing : Normal use depending on the pedal condition (Speed is accelerated to the highest without a break.)

This function is used when temporary stop is used properly. (Cuff and cuff attaching)

		9	2				0

0 : Speed is not reduced.
1 : Speed is reduced.



㉔ Retry function (Function setting No. 73)

When the retry function is used, if the sewing material is thick and not pierced with needle, this function makes the needle pierce in the material with ease.

		7	3				1

0 : Normal
1 : Retry function is provided.

㉕ Presser foot lifting solenoid suction time setting (Function setting No. 84)

Suction time of presser foot lifting solenoid can be changed. When heating is great, it is effective to lessen the value.

(Caution) When the value is excessively small, malfunction will be caused. So, be careful when changing the value.

		8	4		2	5	0

Setting range : 50 to 500ms <10/ms>

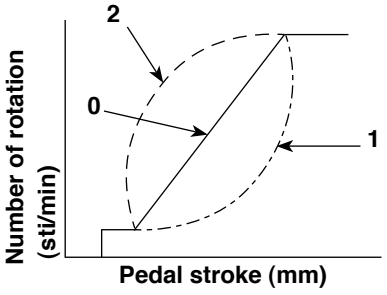
㉖ Function of pedal curve selection (Function setting No. 87)

This function can perform the selection of the curve of number of rotation of the sewing machine against the depressing amount of the pedal.

Change to this function when you feel that inching operation is hard or that pedal response is slow.

		8	7				0

0 : Number of rotation of the sewing machine in terms of the depressing amount of the pedal increases linearly.
1 : Reaction to intermediate speed in terms of the depressing amount of the pedal is delayed.
2 : Reaction to intermediate speed in terms of the depressing amount of the pedal is advanced.



㉗ Initial motion UP stop position move function (Function setting No. 90)

Effective/ineffective of automatic return to UP stop position immediately after turning ON the power can be set.

		9	0				0

0 : Ineffective
1 : Effective

㉘ **Function added to the needle up / down compensating switch (Function setting No. 93)**

Operation of needle up/down compensating switch is changed after turning ON the power or thread trimming.

□□**9**|**3**□□□|**0**

0 : Normal (needle up/down compensating stitching only)

1 : One stitch compensating stitching is performed only when aforementioned changeover is made. (Upper stop / upper stop)

2 : Needle-down function operates after thread trimming.

3 : Function of needle-down with operation of 2 plus presser lowering operation and needle-up with thread trimming operation is added.

㉙ **Continuous stitching + one shot stitching nonstop function (Function setting No. 94)**

This function is used to proceed a step to the next one without stopping the sewing machine at the end of the step when performing sewing with the continuous sewing and one-shot sewing combined using the programming function of the operation panel IP.

□□**9**|**4**□□□|**0**

0 : Normal (Stop when a step has completed.)

1 : The sewing machine proceeds to next step without stopping after a step has completed.

㉚ **Setting of max. number of rotation of the sewing machine head (Function setting No. 96)**

This function can set the max. number of rotation of the sewing machine head you desire to use.

Upper limit of the set value varies in accordance with the sewing machine head to be connected.

□□**9**|**6**|**3**|**0**|**0**|**0**

150 to Max. [sti/min] <50 / sti/min>

㉛ **Main shaft reference angle compensation (Function setting No. 120)**

Main shaft reference angle is compensated

□|**1**|**2**|**0**□□□|**0**

Setting range – 60 to 60˚ <1 / ˚>

㉜ **UP position starting angle compensation (Function setting No. 121)**

Angle to detect UP position starting is compensated.

□|**1**|**2**|**1**□□□|**0**

Setting range – 15 to 15˚ <1 / ˚>

㉝ **DOWN position starting angle compensation (Function setting No. 122)**

Angle to detect DOWN position starting is compensated.

□|**1**|**2**|**2**□□□|**0**

Setting range – 15 to 15˚ <1 / ˚>

㉞ **Setting of energy saving function during standby (Function setting No. 124)**

It is possible to reduce power consumption while the sewing machine is in standby state. It should be noted that the startup of the sewing machine may delay for a moment if this function is set.

□|**1**|**2**|**4**□□□|**0**

0 : Energy-saving mode is ineffective.

1 : Energy-saving mode is effective.

㉟ **Number of stitches setting for automatic cancellation of alternate up/down output (function setting No. 144)**

Alternate up/down output is cancelled when the set number of stitches has been sewn (0: Automatic cancellation is disabled). After the alternate up/down output is output by the set number of stitches, output is turned OFF. When "0" is set, this function does not work. (However, the number of stitches actually sewn may be larger than the set one according to the sewing speed.)

□|**1**|**4**|**4**□□□|**0**

0 : Automatic cancellation is disabled

1 : 1- 30 (1 stitch)

㊱ **Selection of alternate up/down output after thread trimming (function setting No. 146)**

Alternate up/down output is forcibly turned ON or OFF after thread trimming.

When this function is set to disable, the alternate up/down output retains the state before thread trimming.

When the set value is "1," the alternate up/down output is brought into the OFF state. When the set value is "2," the output is brought into the ON state.

□|**1**|**4**|**6**□□□|**0**

0 : Disabled

1 : OFF

2 : ON

㊲ **Selection of alternate up/down initial output (function setting No. 147)**

Alternate up/down output is forcibly turned ON or OFF when the power is turned ON.

When this function is set to disable, the alternate up/down output is restored to the state in which the function has been set before the last turn-OFF of the power.

When the set value is "1," the alternate up/down output is brought into the OFF state. When the set value is "2," the output is brought into the ON state.

	1	4	7				0

0 : Disabled
1 : OFF
2 : ON

㊳ **2-pitch output during reverse feed stitching at the beginning/end of sewing (function setting No. 148)**

2-pitch output is set in the ON state during control of reverse feed stitching at the beginning/end of sewing.

	1	4	8				0

0 : The function is in the OFF state
1 : The function is in the ON state

㊴ **2-pitch output inversion during alternate up/down output (function setting No. 149)**

The 2-pitch output status is output with inverted in synchronism with the alternate up/down output.

2-pitch output is changed over to "OFF" if it is set in the ON state or to "ON" if it is set in the OFF state when changing over the alternate up/down output.

	1	4	9				0

0: The function is in the OFF state
1: The function is in the ON state

㊵ **2-pitch initial output selection (function setting No. 150)**

2-pitch output is forcibly turned ON or OFF when the power is turned ON.

When this function is set to disable, the 2-pitch output is restored to the state in which the function has been set before the last turn-OFF of the power.

When the set value is "1," the alternate up/down output is brought into the OFF state. When the set value is "2," the output is brought into the ON state.

	1	5	0				0

0 : Disabled
1 : OFF
2 : ON

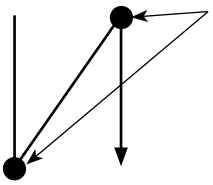
㊶ **Pause and stitch alignment function (function setting No. 151)**

When the reverse feed stitching/multi-layer stitching is specified, the sewing machine temporarily stops at every corner of the sewing pattern at the beginning and end of sewing and during overlapped stitching.

(Caution) When this function is brought into ON state, functions setting numbers 51 to 53 are disabled.

	1	5	1				0

0 : The function is in the OFF state
1 : The function is in the ON state



Temporarily stops at these points.

㊷ **Condensation stitching function for beginning/end of sewing (function setting No. 154)**

In the case of the sewing machine head provided with the condensation stitching function, the sewing machine performs condensation stitching instead of automatic reverse feed stitching.

This function should be used when you do not want to carry out reverse feed stitching but want to prevent thread from slipping off the material at the beginning and end of sewing.

	1	5	4				0

0 : The function is in the OFF state
1 : The function is in the ON state

㊸ **Needle thread grasping function (function setting No. 156)**

Selection between enable/disable of the needle thread grasping function

	1	5	6				0

0 : Enable/disable is changed over with the operation enabling switch
1 : The function is disabled
2 : The function is enabled.

㊹ Bobbin thread remaining amount detecting function (function setting Nos. 167 and 168)

Enable/disable of the bobbin thread remaining amount detecting function (function setting No. 167)

Enable/disable of the bobbin thread remaining amount detecting function is set in the case the bobbin thread remaining amount detecting device is used.

	1	**6**	**7**				**1**

0 : Disabled

1 : Enabled

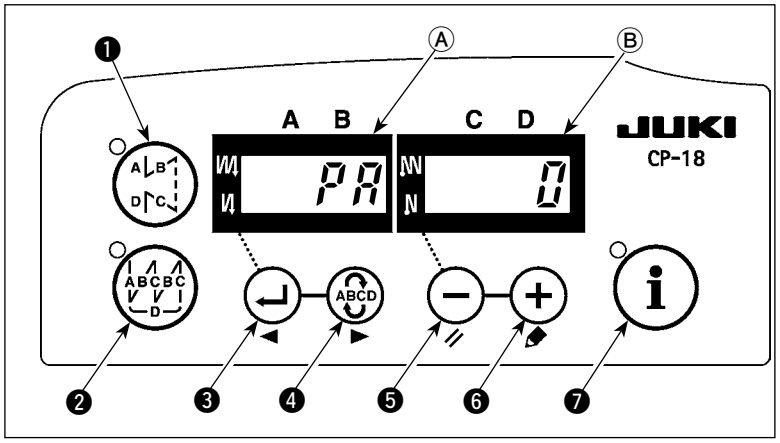
Bobbin thread remaining amount detecting function (function setting No. 168)

Refer to the Instruction Manual for the device for details about the setting.

	1	**6**	**8**				**0**

9. Automatic compensation of neutral point of the pedal sensor

Whenever the pedal sensor, spring, etc. are replaced, be sure to perform following operation :



1) Pressing switch ABCD ❹, turn ON the power switch.
2) Compensated value is displayed on indicator Ⓑ.

(Caution) 1. At this time, the pedal sensor does not work properly if the pedal is depressed. Warning sound "blips" and the correct compensation value is not displayed.

2. If any display ("-0-" or "-8-") other than a numeric value appears on indicator Ⓑ, refer to the Engineer's Manual.

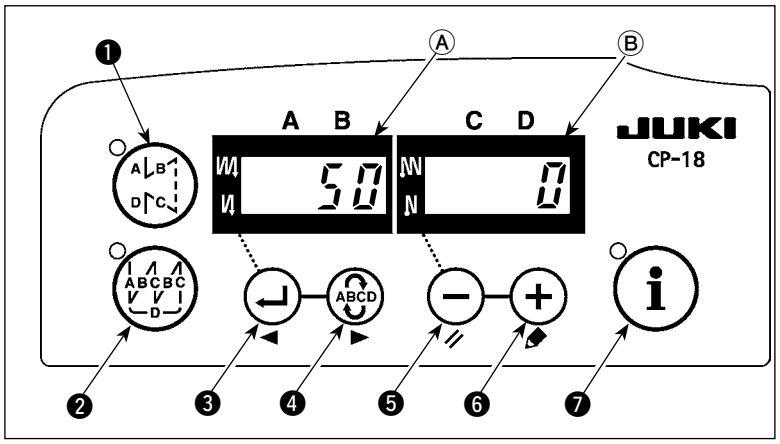
3) Turn OFF the power switch, and turn ON the power switch again to return to the normal mode.

(Caution) Be sure to re-turn ON the power switch when one or more seconds have passed after turning it OFF.
(If the ON-OFF operation is carried out faster than the above, the setting may not change normally.)

10. Selection of the pedal specifications

When the pedal sensor has been replaced, change the set value of function setting No. 50 according to the newly connected pedal specifications.

0 : KFL
1 : PFL

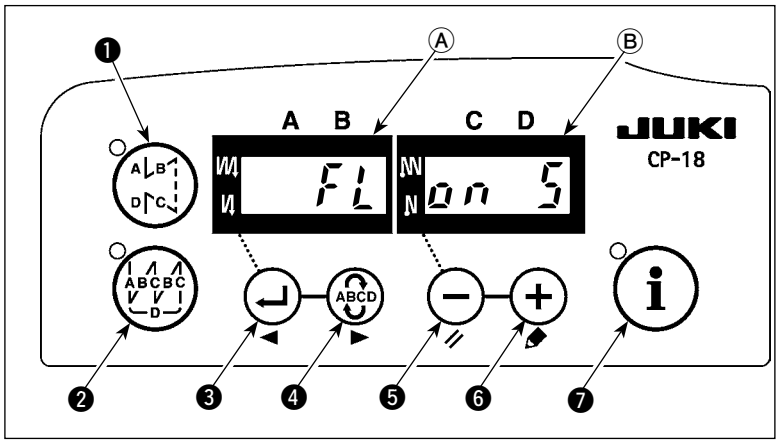


(Caution) Pedal sensor with two springs located at the back part of the pedal type is PFL, and that with one spring type is KFL. Set the pedal sensor to PFL when lifting the presser foot by depressing the back part of the pedal.

11. Setting of the auto lifter function

WARNING :
When the solenoid is used with the air drive setting, the solenoid may be burned out. So, do not mistake the setting.

When the auto-lifter device (AK) is attached, this function makes the function of auto-lifter work.



1) Turn ON the power switch with ⊖ switch ❺ held pressed.
2) "FL ON" is displayed on indicators Ⓐ and Ⓑ with a blip to make the auto lifter function effective.
3) Turn OFF the power switch, and turn ON the power switch again to return to the normal mode.
4) Repeat the operation 1) to 3), and LED display is turned to (FL OFF). Then, the function of auto-lifter does not work.

FL ON : Auto-lifter device becomes effective. Selection of the auto-lifter device of solenoid drive (+33V) or of air drive (+24V) can be performed with ⊕ switch ❻.
(Changeover is performed to drive power +33V or +24V of CN37.)

Solenoid drive display (+33V)

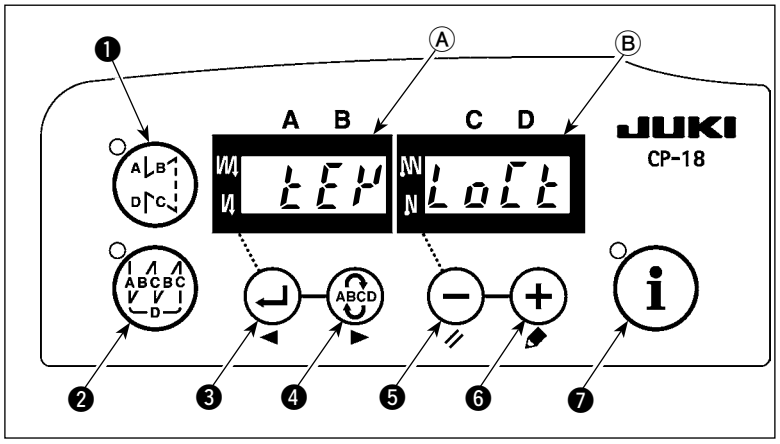
Air drive display (+24V)

FL OFF : Auto-lifter function does not work. (Similarly, the presser foot is not automatically lifted when programmed stitching is completed.)

(Caution) 1. To perform re-turning ON of the power, be sure to perform after the time of one second or more has passed.
(If ON / OFF operation of the power is performed quickly, setting may be not changed over well.)
2. Auto-lifter is not actuated unless this function is properly selected.
3. When "FL ON" is selected without installing the auto-lifter device, starting is momentarily delayed at the start of sewing. In addition, be sure to select "FL OFF" when the auto-lifter is not installed since the touch-back switch may not work.

12. Selecting procedure of the key-lock function

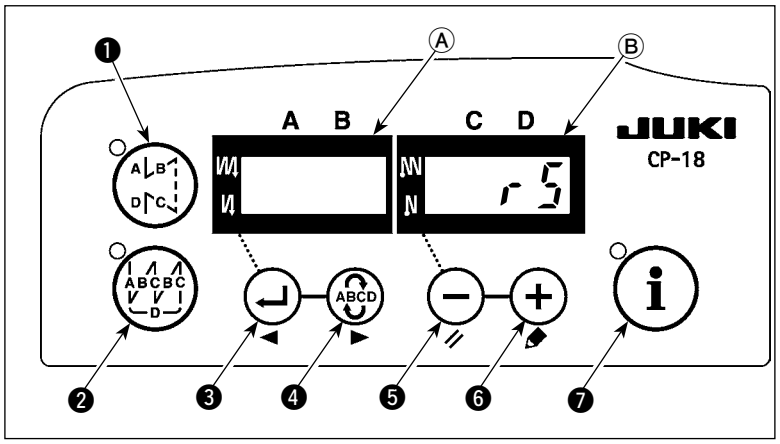
Setting of the number of stitches for a pattern can be prohibited by enabling the key lock function.



1) Turn ON the power switch with ⊖ switch ❺ and ⊕ switch ❻ held pressed.
2) "KEY LOCK" is displayed on indicators Ⓐ and Ⓑ with a blip to make the key-lock function effective.
3) The panel returns to the normal operation after displaying "KEY LOCK" on the indicators.
4) While the key lock function is effective, "KEY LOCK" is displayed on the indicators when turning the power ON.
5) When you carry out steps 1) to 3) in repetition, "KEY LOCK" is not displayed when turning the power ON and the key lock function is rendered ineffective.
   • KEY LOCK display when turning the power ON
   Display appears: The key lock function is effective.
   Display does not appear: The key lock function is ineffective.

13. Initialization of the setting data

All contents of function setting of SC-922 can be returned to the standard set values.



1) Turn ON the POWER switch with all of ABCD switch ❹, ⊖ switch ❺ and ⊕ switch ❻ held pressed.
2) "rS" is displayed on indicator Ⓑ with a blip to start initialization.
3) The buzzer sounds after approximately one second (single sound three times, “peep”, “peep”, and “peep”), and the setting data returns to the standard setting value.

(Caution) Do not turn OFF the power on the way of initializing operation. Program of the main unit may be broken.

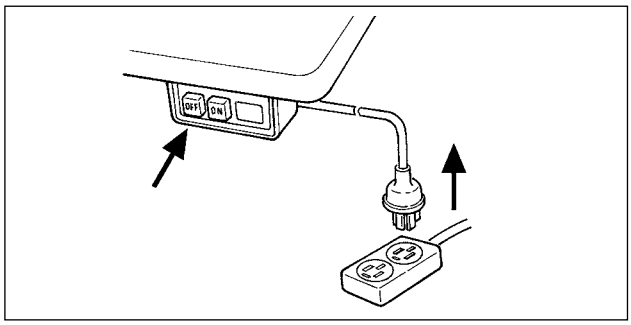
4) Turn OFF the power switch and turn ON the power switch after closing the front cover. The machine returns to the normal motion.

(Caution)
1. **When you carry out the aforementioned operation, the neutral position correction value for the pedal sensor is also initialized. It is therefore necessary to carry out automatic correction of the pedal sensor neutral position before using the sewing machine. (Refer “Ⅲ-9. Automatic compensation of neutral point of the pedal sensor” p. 42.)**
2. **When you carry out the aforementioned operation, the machine-head adjustment values are also initialized. It is therefore necessary to carry out adjustment of the machine head before using the sewing machine. (Refer “Ⅱ-9. Adjusting the machine head” p. 14.)**
3. **Even when this operation is performed, the sewing data set by the operation panel cannot be initialized.**

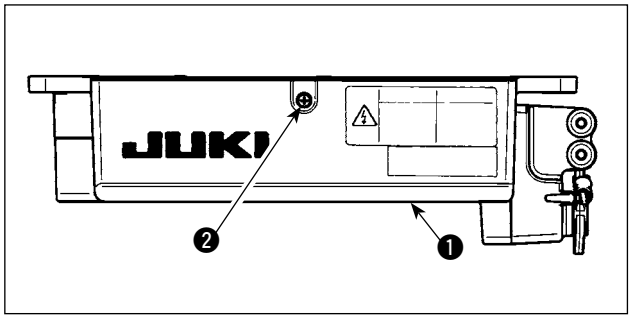
Ⅳ. MAINTENANCE

1. Removing the rear cover

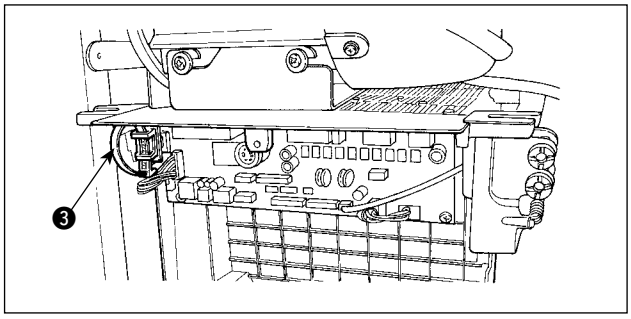
WARNING :
To prevent personal injuries caused by electric shock hazards or abrupt start of the sewing machine, remove the cover after turning OFF the power switch and a lapse of 5 minutes or more. To prevent personal injuries, when a fuse has blown out, be sure to replace it with a new one with the same capacity after turning OFF the power switch and removing the cause of the blown-out of the fuse.



1) Press the OFF button of the power switch to turn OFF the power after confirming that the sewing machine has stopped.
2) Draw out the power cord coming from the power plug socket after confirming that the power switch is turned OFF. Perform the work of step 3) after confirming that the power has been cut and it has passed for 5 minutes or more.



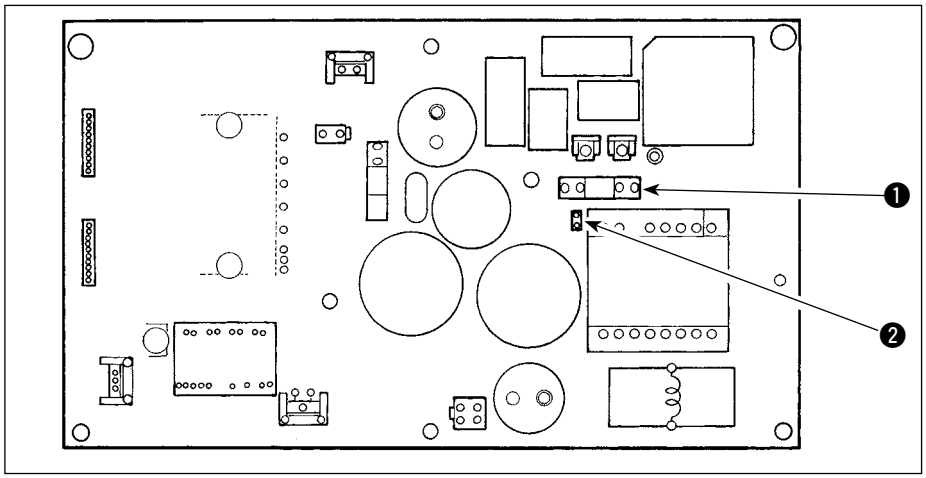
3) Loosen setscrew ❷ in cover ❶. Open cover ❶.



4) To close cover ❶, re-tighten setscrew ❷ while paying attention to the orientation of cable clip band ❸ mounted on the side face of the box.

2. Replacing the fuse

(Caution) The illustration below shows the PWR-T PCB. The type of PCB differs by destination.



1) Remove all the cables which are connected to the control box.
2) Remove the connecting rod.
3) Remove the control box from the table stand.
4) Holding the glass section of fuse ❶, remove the fuse.

(Caution) There is a risk of electrical shock when removing the fuse. Be sure to remove the fuse after LED ❷ has totally gone out.

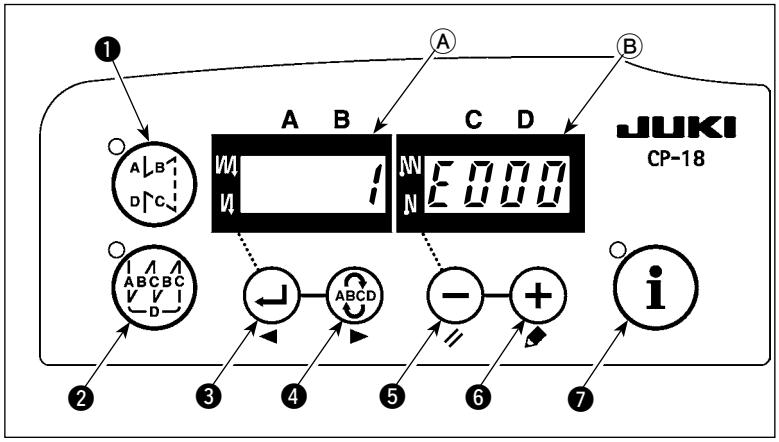
5) Be sure to use a fuse with the designated capacity.
   ❶ : 3.15 A/250 V Time-lag fuse (Power circuit protective fuse)
   Part number: KF000000080
6) Install the control box on the table stand. (Refer to **"Ⅱ-2. Installing the control box" p. 1**.)
7) Connect all the cables to the control box. (Refer to **"Ⅱ-6. Connecting the cords" p. 4**.)
8) Fit the connecting rod back in place. (Refer to **"Ⅱ-7. Attaching the connecting rod" p. 12**.)

3. Error codes

In case of the following, check again before you judge the case as trouble.

Phenomenon	Cause	Corrective measure
When tilting the sewing machine, the buzzer beeps and the sewing machine cannot be operated. Solenoids for thread trimming	When tilting the sewing machine without turning OFF the power switch, Action given on the left side is taken for safety sake.	Tilt the sewing machine after turning OFF the power.
Solenoids for thread trimming, reverse feed, wiper, etc. fail to work. Hand lamp does not light up.	When the fuse for solenoid power protection has blown out	Check the fuse for solenoid power protection.
Even when depressing the pedal immediately after turning ON the power, the sewing machine does not run. When depressing the pedal after depressing the back part of pedal once, the sewing machine runs.	Neutral position of the pedal has varied. (Neutral position may be shifted when changing spring pressure of the pedal or the like.)	Execute the automatic neutral correction function of the pedal sensor.
The sewing machine does not stop even when the pedal is returned to its neutral position.		
Stop position of the sewing machine varies (irregular).	When tightening the screw in the handwheel is forgotten at the time of adjustment of needle stop position.	Securely tighten the screw in the handwheel.
Presser foot does not go up even when auto-lifter device is attached.	Auto-lifter function is OFF.	Select “FL ON” by auto-lifter function selection.
	Pedal system is set to KFL system.	Change the jumper to PFL setting to lift the presser foot by depressing the back part of the pedal.
	Cord of auto-lifter device is not connected to connector (CN37).	Connect the cord properly.
Touch-back switch fails to work.	Presser foot is going up by auto-liter device.	Operate the switch after the presser foot lowered.
	Auto-lifter device is not attached. However, auto-lifter function is ON.	Select “FL OFF” when auto-lifter device is not attached.
UP position move fails to work when all lamps on the panel light up.	The mode is in the function setting mode. The switch on the CTL p.c.b. is pressed by the bound cords and the aforementioned mode resulted.	Remove the under cover. Bundle the cables by routing them according to the normal routing method as described in the Instruction Manual.
Sewing machine fails to run.	Motor output cord (4P) is disconnected.	Connect the cord properly.
	Connector (CN30) of motor signal cord is disconnected.	Connect the cord properly.

In addition, there are the following error codes in this device. These error codes interlock (or limit function) and inform the problem so that the problem is not enlarged when any problem is discovered. When you request our service, please confirm the error codes.



[Checking procedure of the error code]

1) Turn ON the power switch with switch ❸ held pressed.
2) The latest error number is displayed on indicator Ⓑ with a blip.
3) Contents of previous errors can be checked by pressing switch ❸ or switch ❹.
   (When the confirmation of the contents of previous error advanced to the last, the warning sound peeps in single tone two times.)

(Caution) When switch ❸ is pressed, the previous error code of the currently displayed one is displayed. When switch ❹ is pressed, the next error code of the currently displayed one is displayed.

Error code list

No.	Description of error detected	Cause of occurrence expected	Items to be checked
E000	Execution of data initialization (This is not the error.)	• When the machine head is changed. • When the initialization operation is executed	
E003	Disconnection of synchronizer connector	• When position detection signal is not input from the sewing machine head synchronizer.	• Check the synchronizer connector (CN33) for loose connection and disconnection.
E004	Synchronizer lower position sensor failure	• When the synchronizer has broken.	• Check whether the synchronizer cord has broken since the cord is caught in the machine head.
E005	Synchronizer upper position sensor failure	• Belt is loose. • Machine head is not proper. • Motor pulley is not proper.	• Check the belt tension. • Check the setting of the machine head. • Check the setting of the motor pulley.
E007	Overload of motor	• When the machine head is locked. • When sewing extra-heavy material beyond the guarantee of the machine head. • When the motor does not run. • Motor or driver is broken.	• Check whether the thread has been entangled in the motor pulley. • Check the motor output connector (4P) for loose connection and disconnection. • Check whether there is any holdup when turning the motor by hand.
E070	Slip of belt	• When the machine head is locked. • Belt is loose.	• Check whether there is any holdup when turning the motor by hand. • Check the belt tension.
E071	Disconnection of motor output connector	• Disconnection of motor connector	• Check the motor output connector for loose connection and disconnection.
E072	Overload of motor at the time of thread trimming motion	• Same as E007	• Same as E007
E220	Grease-up warning	• When the predetermined number of stitches has been reached.	• Replenish the specified places with grease and reset. (For the details, refer to the data of the machine head.)
E221	Grease-up error	• When the predetermined number of stitches has been reached and the sewing is not possible.	• Replenish the specified places with grease and reset. (For the details, refer to the data of the machine head.)

No.	Description of error detected	Cause of occurrence expected	Items to be checked
E302	Fall detection switch failure (When the safety switch works)	• When fall detection switch is input in the state that the power is turned ON.	• Check whether the machine head is tilted without turning OFF the power switch (sewing machine operation is prohibited for safety sake). • Check whether the fall detection switch cord is caught in the sewing machine or the like. • Check whether the fall detection switch lever is caught in something. • Check whether the contact of the tilt detection switch lever with the machine table is inadequate. (The table has a dent or the mounting location of the bed strut is too far)
	(MF : Thread trimming knife sensor)	• Improper position of the MF thread trimmer	• Adjustment of the position of MF thread trimming sensor. • When MF head is not mounted with the thread trimming device, set the function setting No. 74 to "0".
E303	Semicircular plate sensor error	• Semicircular plate sensor signal cannot be detected.	• Check whether the machine head corresponds with the machine type setting. • Check whether the motor encoder connector is disconnected.
E499	Simplified program data fault	• Command parameter data is out of specified range.	• Re-enter the relevant simplified program. • Set the simplified program in disable.
E704	Simplified program, sewing machine data type fault	• Program data type of which is different has been read.	• Turn the power OFF.
E730	Encoder failure	• When the motor signal is not properly inputted.	• Check the motor signal connector (CN39) for loose connection and disconnection. • Check whether the motor signal cord has broken since the cord is caught in the machine head. • Check whether the inserting direction of the motor encoder connector is wrong.
E731	Motor hole sensor failure		
E733	Inverse rotation of motor	• This error occurs when the motor is running at 500 sti/min or more in the opposite direction of that of rotation indication during motor is running.	• Connection of the encoder of main shaft motor is wrong. • Connection for the electric power of main shaft motor is wrong.
E799	Predetermined time for thread trimming sequence is exceeded	• Thread trimming sequence control is not completed within the predetermined time (three seconds).	• Check whether the machine head actually installed is different from the machine head selection. • Check whether the actual motor pulley diameter is different from the motor pulley setting (effective diameter). • Check whether the belt has slackened.
E808	Solenoid short circuit	• Solenoid power does not become normal voltage.	• Check whether the machine head cord is caught in the pulley cover or the like.
E809	Holding motion failure	• Solenoid is not changed over to holding motion.	• Check whether the solenoid is abnormally heated. (CTL circuit board asm. Circuit is broken.
E810	Solenoid current abnormality	• Solenoid rare short-circuit.	• Solenoid resistance
E811	Abnormal voltage	• When voltage higher than guaranteed one is inputted. • 200V has been inputted to SC-922 of 100V specifications. • JA : 220V is applied to 120V box. • CE : 400V is applied to 230V box.	• Check whether the applied power voltage is higher than the rated voltage + (plus) 10% or more. • Check whether 100V/200V changeover connector is improperly set. In the aforementioned cases, POWER p.c.b is broken.
		• When voltage lower than guaranteed one is inputted. • 100V has been inputted to SC-922 of 200V specifications. • JA : 120V is applied to 220V box • Inner circuit is broken by the applied overvoltage	• Check whether the voltage is lower than the rated voltage - (minus) 10% or less. • Check whether 100V/200V changeover connector is improperly set. • Check whether fuse or regenerative resistance is broken.
E906	Operation panel transmission failure	• Disconnection of operation panel cord • Operation panel has broken.	• Check the operation panel connector (CN38) for loose connection and disconnection. • Check whether the operation panel cord has broken since the cord is caught in the machine head.
E924	Motor driver failure	• Motor driver has broken.	
E942	Faulty EEPROM	• Data cannot be written on the EEPROM.	• Turn the power OFF.

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