Thank you for having purchased the Model ACCU-10.
Before using your ACCU-10, please read the instruction manual and understand the contents well.
After reading the instruction manual, please keep it in a location where it is easily accessible to the operator.
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**Attention**

- This instruction manual is designed mainly for technicians, but it is advisable that also operators read the instructions with 🤔 mark to use the machine properly.
- The numbers in lower left corners of figures are figure numbers. We use them in texts as needed for your reference.

---

**Attention**

The parts used for this product are subject to change without notice. If such a change is made, any part of the contents and illustrations of this instruction manual may not conform to this product.

In preparing the instruction manual, we have made our best efforts for making it free of any error or omission. If any error or omission should yet be found, it might not be rectified immediately.
1. To ensure safe use
Always observe the following instructions to ensure the safe use of the industrial sewing machines and devices.

1-1 Application and purpose
The sewing machine is designed to improve productivity in the sewing industry and must not be used for other applications and purposes. Do not use this sewing machine until it can be confirmed that safety measures for the drive units have been taken.

1-2 Before use
Read all instruction manuals thoroughly before starting the use of this machine and follow them.
Also, read the instruction manual for the installed drive unit.

1-3 Working environment
DO NOT WORK IN THE FOLLOWING ENVIRONMENTS:
- Place where atmosphere temperature and humidity give a bad influence the performance of sewing machines.
- Outdoors and place where the sewing machines are exposed to sunlight directly.
- Atmosphere containing dust, corrosive gases or flammable gases.
- Place where voltage fluctuation exceeds ±10% of the rated voltage.
- Place where power capacity necessary for the used motor specifications cannot be secured.
- Place where strong electric or magnetic fields are generated such as near large-output high frequency transmitters or high frequency welding machines.

1-4 Unpacking and transportation
(1) Unpack from the top.
(2) Never hold the parts near the needle or threading parts when removing the sewing machine head from the buffer of box.
(3) When carrying the sewing machine head, have an assistant.
(4) Pay attention not to get excessive impact or shock when moving the sewing machine head with a pushcart.

2. Installation and preparation
2-1 Instruction and training
Operators and workers, who supervise, repair or maintain the machine head and machine unit, are required to have the adequate knowledge and operation skills to do the job safely. In order to establish such necessary conditions, it needs for the employer to plan and enforce the safety education and training to those workers.

2-2 Sewing table and motor
(1) Prepare a machine table that has enough strength to withstand the weight of the sewing head and any reaction while operating.
(2) Maintain a comfortable working environment with considering the lighting and the arrangement of sewing machine so that the operators can work smoothly.
(3) When installing the control box and the related parts on the sewing machine, take care about the posture of the worker.
(4) Install the drive unit correctly according to the instruction manual.

2-3 Wiring
(1) Never connect the plug for power supply until assembly is finished.
(2) Fix the connectors securely to the sewing machine head, motor, and electric apparatus.
(3) Do not apply excessive force to the connection cords.
(4) Connect the cords away from the driving parts.
(5) Place the ground wire securely to the designated position on the machine head.

2-4 Before operation
(1) Take care not to attach lubricant, silicone oil, and grease on the eyes or skin.
Safety instructions

Keep them away from children.

(2) Be sure to fill or drop lubrication oil before operating the sewing machine. Use the Yamato S? oil as specified.

(3) Never put your hand under the needle or near the moving parts of the machine when turning on power supply switch.

(4) When operating a new sewing machine, make sure the rotating direction of pulley agrees with the rotating-direction mark.

2-5 During operation

(1) Be sure to operate the sewing machine with the safeguards such as belt cover, finger guard, and eye guard.

(2) Never place the finger, hair or objects under the needle or close to the moving parts while operating the sewing machine.

(3) Be sure to turn off the power supply switch when threading or replacing the needles.

(4) Never place your hands close to the knives when operating the sewing machine with the trimming devices.

(5) Be sure to turn off the power supply switch when terminating the sewing work or leaving the sewing machine.

(6) If the sewing machine malfunctions, abnormal sound or smell something unusual while operating, be sure to turn off the power supply switch.

2-6 Removal

(1) Turn off the power supply switch if removed or replaced any parts or during adjustment of sewing machine.

(2) Do not pull the cord when removing the plug. Be sure to hold the plug itself.

(3) A high voltage is applied inside the control box. Turn off the power supply switch and wait more than 5 minutes before opening the cover.

3. Maintenance, inspection, and repair

(1) Follow the instruction manuals for maintenance, inspection, and repair.

(2) Entrust the maintenance, inspection, and repair to specially trained personnel.

(3) Be sure to turn off the power supply switch and make sure the sewing machine and motor completely stop before the maintenance, inspection, and repair. (If using a clutch motor, take care that the motor keeps turning for a while even after turning off the power supply switch.)

(4) Do not modify the sewing machine by the customer's judgment.

(5) Be sure to use original replacement parts for repairs or maintenance.

4. Caution signs and alert pictorial markings

This instruction manual contains the following caution signs and alert pictorial markings to prevent you from injuring yourself or the sewing machine from being damaged.

Please follow the instructions.

4-1 Meanings of caution signs

WARNING indicates potentially hazardous situations which, if not heeded, could result in death or serious injury to you and others.

Caution indicates hazardous situations which, if not heeded, may result in minor or moderate injury to you and others, or may result in machine damage.

NOTE is used to emphasize essential information.
4-2 Alert pictorial markings

This mark indicates the warning which, if not heeded, could result in death or Serious injury.

This mark indicates the caution for high temperature.

This mark indicates the warning which, if not heeded, could result in death or Serious injury.

High-voltage applies in the control box. This label indicates that electric shock may be caused.

This label is affixed on the safeguards. Considering the operation, it is not affixed on the finger guard and eye guard. Be sure to operate with the finger guard and eye guard in position.

Stepping motor and solenoid may overheat if used continuously. To prevent a burn, take care not to touch.

If not connected earth line, static electricity may be generated and inflict injury on person. In addition, the malfunction of electric system may cause injury to person.

Check the rotating direction of machine pulley agrees with 'ROTATING-DIRECTION SYMBOL'.

5. Warning labels on sewing machines

This label indicates that removal of the safeguards and works except for sewing performance while the power supply switch is on are prohibited. (For details, see the next page.)
To open this cover, turn off power supply and wait more than 5 minutes before opening.
1. Introduction

1.1 Functions

1. For common metering device, it controls the feeding amount of tape against the feeding amount of sewing machine. During sewing operation, the feeding amount of tape does not change, but the feeding amount of material changes slightly. This may cause uneven stitch as a result. ACCU-10 device controls the feeding amount of tape to keep the tension for tape fixed, so that a perfect sewing performance can be carried out.

2. For setting tension, 8 types of tension value can be input in one mode, and 50 modes can be memorized.

3. ACCU-10 can also control the following devices on sewing machine and motor function.
   - Air-operated fully automatic tape cutter
   - Thread chain suction (for thread chain cutter)
   - Presser foot lifter (air-operated)
   - Lint suction
   - Automatic motor stop function

4. The present process can proceed to the next process automatically after sewing preset stitch count, when using a rotation detector unit.
   And if a fabric detection switch is also equipped, the process can be shifted to the next automatically even at the beginning or the end of sewing.

5. The process shifting and the process proceeding can be monitored by process indicator.

6. The automatic tape feeding function (corresponding to YAMATO AEF) is included as standard.

7. The learning function, combining modes function, detecting tape seams and knots function and connection self test function are included as well.

8. We strongly recommend you to use this ACCU-10 device with Yamato sewing machines. The combination with other brands is also possible.

1.2 Description of ACCU-10 types

ACCU-10-A 1 T-3 0

1. Base type
2. Applicable sewing machines
   A: For interlock stitch sewing machine
   B: For Zigzag stitch sewing machine
   C: For overlock stitch sewing machine

3. Version number
4. Installation position
   T: Tape feeding from top (Fig. 1-1)
   S: Tape feeding from the right side (Fig. 1-2)
   L: Tape feeding from bottom

5. Types of rotation detection unit
   0: None
   1: Hall IC
   2: Intermediate cable (for OEM motor)
   3: Hall IC, pulley

6. Tension free switch
   0: None
   1: With presser foot lifter pedal (without presser foot lifter device)
   2: With presser foot lifter device (for servo motor)
   3: Knee lifter knee plate (for LG)
1.3 Name of each part

In case of ACCU-10-□□T

- Distangle roller
- Stay
- Tension roller
- Clamp lever
- Tape feeder
- Sub roller
- Sub pole
- Main pole
- Clamp
- Operating control box
- Control panel of operating control box
- Guide roller arm
- Supporting bar
- Main roller
- Guide rollers
- Power cord
- Control box
- Switch
- Knee switch

Fig. 1-1
2. Installation

For installation, the top feeding type ACCU-10-□□T is explained as an example.
For the parts according to the type of sewing machines and the installation positions, refer to "2.7 Installation of other parts".
For installing the right side feeding type, refer to Fig. 1-2.

2.1 Assembling poles

1. Fix the clamp① onto the table with the bolts②. (Fig. 2-1)
   Insert a stick into the holes on the head of bolts② respectively, and tighten them.
   ○The bolts for clamp① can be installed from both up and down sides. (Fig. 2-1)
   ○The main pole③ can be installed to a position the main pole③ and the bolts② of clamp don’t obstruct sewing by changing the position of clamp (rear)④.

2. Install the joint⑤ onto the main pole③ with the screws⑥. (Fig. 2-2)

3. Install the main pole③ onto the clamp① with the screws⑦. (Fig. 2-2)

4. Insert the sub pole⑧ into the joint⑤, and tighten the screws⑨. (Fig. 2-3)
2.2 Installation of control box

There are 3 ways to install the control box①.
1. Install it onto the bottom of the table with wood screws② directly. (Fig. 2-4)
2. Install it onto the bottom of the table with clamps (screws under the table), so that the control box can be removed easily. (Fig. 2-5, 2-7)
3. Install it onto the bottom of the table with clamps (screws above the table), so that the control box can be removed easily. (Fig. 2-6, 2-8)

Procedures for 2 and 3
1. Install the clamp③ onto the control box①.

![Fig. 2-5]

2. Install the control box① onto the bottom of the table with the clamps③. Insert a stick into the holes on the head of screws④ respectively, and tighten them.

![Fig. 2-7]
2. Installation

2.3 Installing parts

1. Install the tape feeder③ onto the tape feeder bracket ④ with the screw⑤.

Note: Lie the tape feeder down, when installing ACCU-10 to the right side of the sewing machine.

![Fig. 2-10](image1)

Tape feeder

Fig. 2-10

2. Install the operating control box⑥ to the tape feeder ③ with the screws⑦. (Fig. 2-11)

Note: In case that want to install ACCU-10 to the right side of the sewing machine, set up a stand on the table and install the operating control box⑥ onto the stand. The operating control box⑥ can also be installed onto the upper cover of sewing machine. (Refer to Fig. 2-38.)

![Fig. 2-9](image2)

![Fig. 2-11](image3)

3. Install the stay⑧ to the tape feeder bracket④ with the screws⑨. (Fig. 2-12)

![Fig. 2-12](image4)
4. Insert the supporting bar(10) into the guide roller arm(11) of the tape feeder (3), and tighten the screw(12). (Fig. 2-13)

Note: In case that want to install ACCU-10 to the right side of the sewing machine, remove the guide stopper(13). Then, remove the process indicator(14) and the switch holder(15) from the supporting bar(10). (Fig. 2-14)

For reinstalling the process indicator, refer to Fig. 2-40 in "2.7 Installation of other parts".

![Fig. 2-14](image1)

5. Install the knee switch holder(17) onto the bottom of the table with the wood screw(18) by referring to Fig. 2-14. Then, install the knee switch(process shifting switch)(19) onto the knee switch holder(17).

![Fig. 2-15](image2)
2.4 Adjusting installation position

1. Loosen the bolts\(^2\) to adjust the right-and-left position of main pole\(^1\) and do not let the main pole obstruct sewing operation. (Fig. 2-16)
   ○ The main pole\(^1\) can be installed to a position that does not obstruct sewing operation by changing the position of clamp (rear)\(^3\).

2. Adjust the position of tape feeder\(^4\) to where the tape can be supplied to the presser foot smoothly and the tape feeder does not obstruct sewing operation.
   ○ For the right-and-left position and the height, adjust the sub pole by loosening the screws\(^5\). (Fig. 2-17)
     And the right-and-left position of tape feeder can be adjusted by loosening the screw\(^6\). (Fig. 2-18)
   ○ For the back-and-forth direction, adjust the sub pole by loosening the screw\(^7\). (Fig. 2-19)
   ○ Loosen the wing bolt\(^8\) of tape feeder bracket\(^9\), and adjust the tape feeder\(^4\) to make tape feeding and sewing head toward the same direction. (Fig. 2-20)
3. Adjust the position of guide rollers⑨⑩ to where the tape can be supplied to the presser foot smoothly and do not let the guide rollers obstruct sewing operation. (Fig. 2-21)

For the back-and-forth position, loosen the screw⑪ to adjust the position of the guide stopper③ which for limiting the angle of guide roller arm⑪.

For the up-and-down position, loosen the screw⑬ to adjust the supporting bar⑭ up and down.

The up-and-down position for guide roller⑩ can also be adjusted by loosening the screws⑩.

4. To adjust the height of the distangle roller, loosen the screws⑭ and change the angle of the stay⑮. (Fig. 2-21)

5. The installation angle of the operating control box⑯ can be adjusted by the screws⑯. (Fig. 2-22)
2. Installation

2.5 Wiring

1. Connect the connectors on the control box① with the connectors from the tape feeder②, operating control box③, knee switch④ and process indicator⑤. Make sure that they are the same in shape, color or mark.

2. Connect the intermediate cable⑥ with the control box①, tape feeder② (two connectors) and distangle roller⑦ (one connector).

3. Fix the cords by the wrapping bands⑧ as shown in Fig. 2-24.

4. A plug that matches the outlet needs to be prepared separately. Connect the plug with the power cord⑨. Then, insert it into the control box①.

5. Make sure that the switch⑩ on the control box① has been turned off. Then, insert the plug into the outlet.

---

**WARNING**

Use a single phase AC 100-240V power source.

---

**WARNING**

Do not pull the cords strongly when banding them.

Fix the cords to a place away from rotating parts and moving parts.

---

Fig. 2-23

---

Fig. 2-24

To distangle roller (cord with mark B)

To tape feeder

Mark B

To control box
2.6 When tape can not be fed straightly

Pass a tape(1) between the sub roller(2) and main roller(3). If the tape(1) slide to the right or the left because the sub roller(2) is not parallel to the main roller(3), loosen the screws(5) on the sub roller shaft arm(4), and turn the screw(6) of the sub roller(2), so that the tape(1) can be fed straightly.

The main roller(3) is not parallel to the sub roller(2).

---

**WARNING**

If the system has no neutral point, then the device is not suitable for this connection.

---

Connecting to a 3-phase/380V power source

![Diagram of 3-phase 380V power source connection](image)

Fig. 2-25

Power cord of ACCU-10

---

Fig. 2-26

Fig. 2-27
2. Installation

2.7 Installation of other parts

The standard parts and extra parts (special order parts) may be different according to the type of sewing machines and the installation positions.

NOTE:
A rotation detector unit needs to be equipped when using the automatic process shifting function and the teaching mode.

2.7.1 Parts for all types

**ACCU-10-□□□-□1 (Standard)**

Tension free switch (Presser foot lifter pedal)

Fig. 2-28

**ACCU-10-□□□-□2 (Standard)**

For sewing machines using servo motor and equipped with presser foot lifter device

Tension free switch, C. Se: (with pitman)

Fig. 2-29

**ACCU-10 all types (Extra)**

Manual switch

This can be used as a process shifting switch or a cutter switch (refer to P.41). Connect it with the connector from process indicator.

Fig. 2-30

**ACCU-10 all types (Extra)**

Tape guides

Fig. 2-31
2. Installation

2.7.2 ACCU-10-A □□ (For interlock)

ACCU-10-A □□-3 □ (Standard)
ACCU-10-A □□-1 □ (Standard)

Rotation detector unit (Hall IC)

ACCU-10-A □□-3 □ (Standard)

Fig. 2-33

ACCU-10-A □□ (Standard)

Tape guides

Install the tape guide bar of the sewing machine.

Fig. 2-34

ACCU-10-A □□ (Standard)

Eye guard

Fig. 2-35

ACCU-10

Intermediate cable for motor
(Y motor, GY100 motor)

Using the synchronizer of motor as a rotation detector unit.
2. Installation

2.7.3 ACCU-10-A1T (For interlock)

**ACCU-10-A1T (Extra)**

Cutter switch

Connect it to the connector from process indicator.

Fig. 2-37

2.7.4 ACCU-10-A1S (For interlock)

**ACCU-10-A1S (Standard)**

Box supporting bar

Operating control box

Fig. 2-38

**ACCU-10-A1S (Extra)**

Manual switch

Connect it to the connector from process indicator.

Fig. 2-41
2.7.5 ACCU-10-B1T (LG)

ACCU-10-B1T (Standard)

Tension free switch, C. Set.
Rotation detector unit

This has been included in the knee switch knee plate.

Fig. 2-42

ACCU-10-B1T (Extra)

Rotation detector unit

Fig. 2-43

2.7.6 ACCU-10-C1T (AZ8451)

Accessories for CIT type

Fig. 2-44
3. Proper operation

Term Explanation
Mode : A group of processes when sewing a part of material.
Process : Sewing operation under one sewing condition (tension and stitch count).
Code : Condition of process proceeding (manual, automatic, end).

3.1 Process shifting switch

The present process can be switched to the next by pressing process shifting switch.
The function of process shifting switch has been built into the knee switch as standard. The manual switch (extra parts) can also be used as a process shifting switch. For switching over, perform the steps in "Select switch cutter" of "4.11 Control functions".

**NOTE**

When the manual switch is used as a process shifting switch, the knee switch can be used as a cutter switch.

3.2 Process Indicator

The process indicator usually displays process number. (Fig. 3-2)  
When using the automatic tape feeding function, it will display “A”. (Fig. 3-3)  
When the clamp lever is pressed up, it will display “C”. (Fig. 3-4)  
When the presser foot is raised up, the process number will be blinking. (In case of using tension free switch, C. Set) (Fig. 3-5)  
When a seam or a knot is detected, or there is an error, it will display “E”. (Fig. 3-6)  

When using the function of automatic process shifting (refer to "4.3.2 Setting code", code B or C), the timing of process proceeding can be monitored. (Fig. 3-7)  
Lamp① lights up when the process is going to proceed to the next automatically.  
Lamp② lights up when less than 100 stitches left before shifting to the next process.  
Lamp③ lights up when less than 60 stitches left before shifting to the next process.  
Lamp④ lights up when less than 30 stitches left before shifting to the next process.  
Lamp①-⑤ will be blinking together when less than 10 stitches left.
3.3 Passing tape

- Pass a tape as shown in Fig. 3-8. Refer to the instruction manual for sewing machine to find out how to pass the tape from the guide roller ③ to the machine. (In case of ACCU-10-□□□, refer to Fig. 3-12.)
- Press the clamp lever ② up, then the tape can be passed between the main roller ④ and the sub roller ③.
- Adjust the right and left position of the tape guides (bottom) ⑤, (front) ⑥ by hand. Adjust the tape guides (rear) ⑦ by loosening the screws ⑧. (Fig. 3-9, 3-10)
- Release the clamp lever after the tape has been passed.

NOTE:
(1) When the clamp lever is pressed up, the mark in Fig. 3-11 will be shown on the process indicator.
(2) Release the clamp lever only by spring tension. If press it strongly, the sub roller will be opened, and the tape can not be fed.

Fig. 3-8

Supplement
Threading can be performed easily and adjustment can be made smoothly if pull the guide rollers up (in case of the right side feeding, to operator side).

Fig. 3-9

Fig. 3-10

As viewed from top

Operator

Fig. 3-11
3. Proper operation

⚠️ CAUTION ⚠️

- In case of using the function of detecting seams and knots, set the machine up by referring to "4.8.5 Using function of detecting tape seams and knots".
- When the type of tape is changed:
  1. Make sure the tape can be fed straightly. If not, adjust the tape by referring to "2.6 When tape can not be fed straightly".
  2. The function of detecting tape seams and knots needs to be set up again. If not, seams and knots can not be detected correctly. For setting, refer to "4.8.5 Using function of detecting tape seams and knots".

3.4 Tension free switch, c. set

When the presser foot is raised up, the tension free switch(1) starts to work. The tape will be without tension, and the process number on the process indicator will be blinking. (Fig. 3-11)
When the presser foot is lowered down, the tape will be with tension again.

NOTE

The tension for tape can also be adjusted, when the presser foot is raised up. For adjusting, refer to "4.9.7 Adjusting tension when the presser foot is up".
3.5 Cutter switch (Extra parts)

The cutter starts working when pressing the cutter switch down. The function of cutter switch is usually built into the manual switch. The knee switch can also be used as a cutter switch. For switching over, perform the steps in “Select switch cutter” of “4.11 Control functions”.

---

**NOTE**

- When the knee switch is used as a cutter switch, the manual switch can be used as a process shifting switch.
- ACCU-10 can only control air-operated cutter device.

A cord to connect the solenoid (for cutter) with the control box needs to be prepared separately.

---

**Fig. 3-16**

Manual switch  Knee switch

**For ACCU-10-A1T**

**Fig. 3-17**

Cutter switch
4. Operating control panel

Term Explanation

Mode : A group of processes when sewing a part of material.
Process : Sewing operation under one sewing condition (tension and stitch count).
Code : Condition of process proceeding (manual, automatic, end).

4.1 Name of each part

Fig. 4-1

1. Power lamp This lamp lights up when power supply ON.
2. Process switch This is used to select process (1-8).
3. + switch This is used to increase a setting value.
4. - switch This is used to decrease a setting value.
5. Start switch As long as the lamp(LED) on the start switch is on, the sewing operation is possible.
6. Reset switch This is used to return to the first process.
7. Function switch This is used to change the settings related to functions.
8. Lock switch This is used to disable switches in order to prevent mis-operation during operation.
9. Mode switch This is used to shift mode (50 modes).
10. Code switch This is used to shift codes (3 codes).
11. Size setting switch This is used to set the size when using automatic processes proceeding function.
12. Automatic tape feeding switch This is used to feed the tape without controlling tension.
13. Fabric detector lamp This lamp lights up when there is no material. (In case of fabric detection, fabric detection switch, c. set needs to be equipped.)
14. LCD Setting values etc. will be shown on this display.
15. LED This lamp lights up when the switch is turned on.
4.2 Display Processes

○ 8 processes or less can be set in one mode. LCD can only display 4 processes at one time. Only the available processes will be displayed.
○ Press the switch① to select a process. (Fig. 4-7) The tension value of the selected process will be blinking and marked with [>][<]. At the same time, the setting value of size and code will be displayed. (Fig. 4-5) In case of code A, the value of size will not be displayed.
○ Hold down the switch① for three seconds or more to select and display processes 5 - 8, during processes 1 - 4 are displayed. The tension value of the selected process will be marked with [>][<]. (Fig. 43) Hold down the switch① for three seconds or more to select and display processes 1 - 4, during processes 5 - 8 are displayed.
○ The process indicator displays corresponding process number.

4.2.1 Setting tension

1. Press the switch① to select a process, the value of tension blinks.
2. Change the tension value by pressing the switches② and ③.
   Setting value “999” is the weakest, and “001” is the strongest tension.
   When changing the tension values of other processes, repeat the steps mentioned above.
3. Press the start switch④ (LED⑤ On) to start sewing.

Fig. 4-7
4. Operating control panel

4.2.2 Setting code

There are 3 ways to switch the present process to the next process during sewing operation: manual (Code A), automatic (Code B, C).

Setting method

1. 15263748  Select a process.


3. +/−  Change the code.

4. (LED On) Finished.

○ Set the code to [A], the processes will be switched by pressing process shifting switch (knee switch or manual switch). In case of using manual switch, refer to “4.10 Control functions”.

○ Set the code to [B], the stitch count will be measured at the point that the process is changed. After sewing preset stitch count, the present process will proceed to the next process automatically. In case that code [B] is used in process 1, the start point of sewing may not be very stable. (A rotation detector unit needs to be equipped.)

○ Set the code to [C], ACCU-10 will work with the fabric detection switch together. The stitch count will be measured when the sewing machine starts to sew the material. After sewing the preset stitch count, the present process will proceed to the next process automatically. (Rotation detector unit or Hall IC, and fabric detection switch need to be equipped.)

○ Set the code to [■], the following processes (including the present one) will be invalid. For example, set the code of process 3 to ■, processes 1 and 2 are effective, but the processes 3-8 will be ineffective. (Fig. 4-11)

In this case, the processes 3-8 will not be displayed during sewing procedure. (Fig. 4-12)

When want to select process 4, change the code of process 3 to “A”, “B” or “C”.

When the process proceed to 8, then it will go back to process 1 automatically. It is not necessary to set the code to “■”.

Fig. 4-8

Fig. 4-9

Fig. 4-10

Fig. 4-11 Setting code

Fig. 4-12 During sewing procedure
4.2.3 Setting size

To set how many stitches the sewing machine sews before proceeding to the next process (Code B, C).

1. **Select a process.**

2. **Change the code to "B" or "C".**
   
   (Refer to "4.2.2 setting code")

3. 

4. **Change the value of size.**

5. **(LED On) Finished.**

4.3 Changing mode

1. **Select a new mode number.**

2. **(The number can be selected from 1 to 50.)**

3. **(LED On) Finished.**
4. Operating control panel

4.4 Setting examples

Example 1: Mode 1, One Process

<table>
<thead>
<tr>
<th>Process</th>
<th>Tension</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>985</td>
<td>A</td>
</tr>
</tbody>
</table>

1. **Mode**
2. **+/−**  Set the mode number to “1”.
3. **15**  Select process 1.
4. **+/−**  Set the tension value to “985”.
5. **Code**
6. **+/−**  Set the code to “A”.
7. **26**  Select process 2.
8. **Code**
9. **+/−**  Set the code to “□”.
10. ****  Finished.

Process 1

![Diagram](image)

Fig. 4-15
Example 2: Mode 2, Two Processes

<table>
<thead>
<tr>
<th>Process</th>
<th>Tension</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>985</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>880</td>
<td>A</td>
</tr>
</tbody>
</table>

1. **Mode**

2. **+/-** Set the mode number to "02".

3. **15** Select process 1.

4. **+/−** Set the tension value to "985".

5. **Code**

6. **+/−** Set the code to "A"

7. **26** Select process 2.

8. **+/−** Set the tension value to "880".

9. **Code**

10. **+/−** Set the code to "A"

11. **37** Select process 3.

12. **Code**

13. **+/−** Set the code to "■".

14. **Finish** Finished.

During sewing operation

- Press the manual switch or the knee switch at the end of the process 1 to shift to the next process.
- Press the manual switch or the knee switch again at the end of the sewing operation.

**SUPPLEMENT**

If the fabric detection switch is equipped, perform the steps in "4.9 Controlling devices on sewing machine" to turn on "FINISH" ( "4.9.1 List of cutter device functions" ). The process 1 can be shift to the process 2 without pressing the process shifting switch.
Example 3: Mode 3, Three Processes, Automatic process proceeding (from process 2 to process 3)

<table>
<thead>
<tr>
<th>Process</th>
<th>Tension</th>
<th>Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>985</td>
<td>A</td>
<td>—</td>
</tr>
<tr>
<td>2</td>
<td>880</td>
<td>B</td>
<td>85</td>
</tr>
<tr>
<td>3</td>
<td>980</td>
<td>A</td>
<td>—</td>
</tr>
</tbody>
</table>

The rotation detector unit needs to be equipped.

1. Set the mode number to “03”.
2. Set the tension value to “985”.
4. Set the code to “A”.
5. Select process 2.
6. Set the tension value to “880”.
7. Set the code to “B”.
8. Set the size to “0085”.
10. Set the tension value to “980”.
12. Set the code to “A”.
13. Finished.

During sewing operation
- Press the manual switch or the knee switch at the end of process 1 to shift to the process 2.
- The process will proceed to the process 3 automatically at the end of process 2.
- Press the manual switch or the knee switch at the end of sewing.
Example 4 Mode 4 Automatic process proceeding (from process 1 to 2, process 2 to 3)

<table>
<thead>
<tr>
<th>Process</th>
<th>Tension</th>
<th>Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>985</td>
<td>C</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>880</td>
<td>B</td>
<td>85</td>
</tr>
<tr>
<td>3</td>
<td>980</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

The rotation detector unit and fabric detection switch need to be equipped.

1. \( M_0 \)
2. \( +/\) Set the mode number to "04".
3. \( 15 \) Select process 1.
4. \( +/\) Set the tension value to "985"
5. \( C_0 \)
6. \( +/\) Set the code to "C".
7. \( \) Select process 2.
8. \( +/\) Set the size to "0120".
9. \( 26 \) Select process 2.
10. \( +/\) Set the tension value to "880".
11. \( C_0 \)
12. \( +/\) Set the code to "B".
13. \( \) Select process 3.
14. \( +/\) Set the size to "0085".
15. \( 37 \) Select process 3.
16. \( +/\) Set the tension value to "980".
17. \( C_0 \)
18. \( +/\) Set the code to "A".

Fig. 4-18
4. Operating control panel

19. 48 Select process 4.

20. Code Set the code to “■”.

21. 3 Finishing Finished.

Perform the following steps to turn on “FINISH”:

1. Press this switch 3 times.

2. 1 5 / 3 7 Select “FINISH”.

3. +/− Select: “ON”.

4. 1 5 / 3 7 Select “FINISH CUT”.

5. +/− Set the desired setting value.

6. 3 Finished.

During sewing operation

○ The process 1 shifts to process 2, the process 2 shifts to process 3 automatically.

○ At the end of process 3, the fabric detection switch detects the end of material, and shifts back to process 1 automatically.
4. Operating control panel

4.5 Key lock

To activate the locking mechanism:
Press (LED On).

To release the locking mechanism:
Hold down for more than 3 seconds.

During lock switch on:
All switches except for will be disabled.

4.6 Reset switch

If you made a mistake during sewing operation:
Press to go back to process 1 and continue sewing.
4. Operating control panel

4.7 Automatic tape feeding

To feed a tape without controlling tension:
Press \[ \text{LED On} \] and start sewing.

To feed a tape with controlling tension:
Press \[ \text{LED Off} \] and start sewing.

4.7.1 Setting detection level

This is used when the tape is too heavy or too light than the previous one. The start timing of tape feeding can be adjusted by performing the following steps.

1. \[ \text{LED On} \]

2. \[ \text{48} \] The setting value of detection level blinks.

3. \[ +/ - \] Change the setting value.

4. \[ \text{End} \] Finished.

When the tape is heavier than the previous one, increase the setting value.
When the tape is lighter than the previous one, decrease the setting value.
Set the setting value as low as possible and make sure the tape will not be fed by its gravity force.

4.7.2 Setting feeding amount

This is used to adjust the feeding amount of tape.

1. \[ \text{LED On} \]

2. \[ \text{Code} \] The setting value of time (feeding amount) blinks.

3. \[ +/ - \] Set a proper feeding amount.

4. \[ \text{End} \] Finished.

To increase the feeding amount, set a bigger setting value.
To decrease the feeding amount, set a smaller setting value.
4.8 Convenient functions

4.8.1 Learning function (Teaching mode)

When the learning function is used, the stitch count of the material is measured by the device. The device will memorize the stitch count and the tension value which has been set manually. The following sewing operation will be carried out by using the memorized setting. 8 processes are available in this teaching mode.

Setting method

1. Mode

2. +/− Select a new mode number.
   (Refer to “4.3 Changing mode”.)

3.  


5. Set a proper tension value according to the material and tape. The device starts counting stitches. The default has been input in each process (total 8 processes). And the code has been set to “B”. Stop sewing at the point that tension needs to be changed, and shift to the next process by pressing the process shifting switch (the manual switch or the knee switch).

6. After setting the last process, press the process shifting switch (the manual switch or the knee switch) twice during the sewing machine is stopped to finish teaching. Then the setting will be saved.

7. For fine adjustment of the stitch count, tension and code changing, refer to each setting method.

NOTE
When using the learning function, a rotation detector unit or a HALL IC needs to be equipped.
4. Operating control panel

4.8.2 Mode copy function

When sewing similar material, it is easier to program by using mode copy function.
After making the copy, be sure to change the sewing conditions (tension, stitch count) according to the material.
Before making copy, shift to the mode that needs to be copied.

Example Make a copy of mode 2 to build up mode 4.

1. \[ \text{Mode} \]
2. \[ +/– \] Select mode “02”.
3. \[ \text{Rec} \]
4. \[ 15/37 \] Select “MODE COPY”
5. \[ +/– \] Select a new mode number “04”.
6. \[ \text{Copy finished.} \]
7. \[ \text{Finished.} \]
4.8.3 Combining modes

Sewing can be carried out from one mode to another by using two different mode alternately, or using different modes sequentially.

For example, such a combination of modes is useful for right and left leg opening (sewing is carried out while two modes are being used alternately) or right and left around leg opening and around waist (three modes are used in sequence).

This function also can be used in case that the sewing operation needs more than 8 processes.

1. Select "TEACHING MODE"

2. Select "NEXT MODE NO".

3. Select the mode number that needs to be combined.

4. Finished.

(In case of continue combining, press [Code].)

NOTE

The process will not go back to the first mode automatically. Combine the last mode to the first one to make a cycle.

Fig. 4-29

Fig. 4-30

Fig. 4-31
Example of Combining modes:
Make a cycle of mode 3 → mode 4 → mode 1 (in case the setting values have been input in each mode).

<table>
<thead>
<tr>
<th>Mode 3</th>
<th>Mode 4</th>
<th>Mode 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>985</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>880</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>980</td>
<td>A</td>
</tr>
</tbody>
</table>

1. Select the beginning mode number "03".

2. Select the beginning mode number "03".

3. Select "NEXT MODE NO".

4. Select the next mode number "04".

5. Select the next mode number "04".

6. Select the next mode number "04".

7. Select the beginning mode number "03".

8. Select the beginning mode number "03".

9. Select the beginning mode number "03".

10. Finished.

Fig. 4-32
4.8.4 Setting distangle roller

○ Setting the rotation speed of distangle roller (Default: 05)
  Item name: MOTOR SPEED  F2  00
  ◆ To make the speed faster, increase the setting value.
  ◆ To make the speed slower, decrease the setting value.

○ Setting the rotation direction of distangle roller
  Item name: SELECT CW/CCW  F2  01
  ◆ Clockwise: CW (Default)
  ◆ Counter Clockwise: CCW
  ◆ Stop: STOP
  Set it to “CCW”, in case that ACCU-10 has been installed onto the bottom of the table.

○ Setting the delay time between the stop timing for tape feeder and distangle roller. (Default:03)
  Item name: DELAY TIME  F2  02
  ◆ To make the distangle roller stop slowly, increase the setting value.
  ◆ To make the distangle roller stop rapidly, decrease the setting value.

Setting method

1. Press this switch twice.

2. Select an item.
   MOTOR SPEED
   SELECT CW/CCW
   DELAY TIME

3. Change the setting value.

4. Finished.

MOTOR SPEED
F2  00  05

SELECT CW/CCW
F2  01  CW

DELAY TIME
F2  02  03
4.8.5 Using function of detecting tape seams and knots

The function of detecting tape seams and knots is not effective at shipment. To activate this function, perform the following steps. If the type of tape is changed, the function of detecting tape seams and knots needs to be set up again. If not, seams and knots can not be detected correctly.

1. Set the tension value of process 1 to “999”.

2. Remove the tape from the rollers, and release the clamp lever.

3. Press this switch 4 times.

4. Switch to “CLAMP LEVER SET”.

5. The setting value will be decided automatically.

6. Set the tape correctly. (Refer to “3.3 Passing tape”)

7. Switch to “TAPE SET”.

8. The setting value will be decided automatically.


When a seam or a knot is detected, tape feeding stops. The error messages will be displayed as shown in Fig. 4-40 and the buzzer starts ringing. Stop the buzzer by pressing the clamp lever up.

NOTE
For the function of detecting tape seams and knots, because the device reacts to the thickness of tape, flat seams can not be detected.

NOTE
After performing the steps in “2.5 When tape can not be fed straightly”, the function of detecting tape seams and knots needs to be set up again.

Perform the following steps to inactivate the function of detecting seams and knots.

1. Press this switch 4 times.

2. Press during the clamp lever is up.

   The setting value will be decided automatically.
4.8.6 Correcting detection level for tape seams and knots

If the function of detecting tape seams and knots works unstable, for example, tape seams and knots can not be detected, or the device can detect seams or knots at where no seam or knot exits, correct the setting value.

- If seams or knots can not be detected, decrease the setting value.
- If the device detects seams or knots, even though no seam or knot exits, increase the setting value.

Setting method

1. Press this switch 4 times.
2. Correct the setting value.
3. Finished.

### 4.9 Controlling devices on sewing machine

When using devices such as tape cutter, tension releaser or thread chain trimmer with ACCU-10 together, ACCU-10 can control these devices.

**Attention**

Cables, sensors and switches may need to be changed.

The devices that can be controlled by ACCU-10 have been listed in table 1-5. For setting up, perform the following steps.

1. Press this switch 3 times.
2. Select an item. (Refer to Table 1-5.)
3. Change the setting. (Refer to Table 1-5.)
4. Finished.

**Supplement**

Be sure to change the settings in each mode.

![Diagram](image)

Fig. 4-44 Timing for tape cutting and tension releasing.

Fig. 4-45 An example of slant fabric.
### 4.9.1 List of cutter device functions

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3 00 FRONT</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>ON: The knife functions at the beginning of sewing. OFF: The knife does not function at the beginning of sewing.</td>
</tr>
<tr>
<td>F3 01 FINISH</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>ON: The knife functions at the end of sewing. OFF: The knife does not function at the end of sewing.</td>
</tr>
<tr>
<td>F3 03 SLANT FABRIC</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>Make the cutter device function when sewing slant fabrics like Fig. 4-45. ON: In case of sewing slant fabrics, the knife functions at the beginning of sewing even though the fabric detection switch has detected the material. OFF: The knife will not function at the beginning of sewing if the fabric detection switch has detected the material. <strong>WARNING</strong> In case of SLANT FABRIC &quot;ON&quot;, the knife also functions when you try to sew the material again.</td>
</tr>
<tr>
<td>F3 05 FRONT CUT</td>
<td>000-250</td>
<td>5</td>
<td>The length of the tape at the beginning of sewing. Stitch count by that the knife cuts the tape at the beginning of sewing, after the fabric detection switch starts to detect the material. (Refer to Fig 4-44.) To make the length of tape shorter, increase the value. To make the length of tape longer, decrease the value. Do not set the value too high. If not, the material may be cut.</td>
</tr>
<tr>
<td>F3 06 FINISH CUT</td>
<td>000-250</td>
<td>30</td>
<td>The length of the tape at the end of sewing. Stitch count by that the knife cuts the tape at the end of sewing, after the fabric detection switch stop detecting the material. (Refer to Fig 4-44.) To make length of tape shorter, decrease its value. To make length of tape longer, increase its value. Do not set the value too low. If not, the material may be cut.</td>
</tr>
<tr>
<td>F3 15 CUTTER TIMER</td>
<td>000-250</td>
<td>70</td>
<td>Operating time of the cutter device. To shorten the operating time of cutter, decrease the value. To extend the operating time of cutter, increase the value. Do not set the value too low. If not, the tape may not be cut.</td>
</tr>
</tbody>
</table>

**Table 1**

### 4.9.2 List of tension releaser functions

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3 07 FRONT TR</td>
<td>000-250</td>
<td>5</td>
<td>Stitch count by that the thread tension releaser tightens the needle thread after fabric detector switch detects the material. (Refer to Fig. 4-44.) If set the value too high, the needle thread may be loosened in the material at the beginning of sewing.</td>
</tr>
<tr>
<td>F3 08 FINISH TR</td>
<td>000-250</td>
<td>20</td>
<td>Stitch count by that the thread tension releaser loosens the needle thread after fabric detector switch stops detecting the material. (Refer to Fig. 4-44) If set the value too low, the needle thread may be loosened in the material at the end of sewing.</td>
</tr>
</tbody>
</table>

**Table 2**
### 4.9.3 List of thread chain trimmer functions

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3 09 C DEV OFF</td>
<td>000–250</td>
<td>20</td>
<td>Stitch count before K device stops, after the fabric detection switch detected the material.</td>
</tr>
<tr>
<td>F3 10 C DEV ON</td>
<td>000–250</td>
<td>20</td>
<td>Stitch count before K device starts working, after the fabric detection switch stop detecting the material.</td>
</tr>
</tbody>
</table>

Table 3

### 4.9.4 List of lint suction device functions

For overlock machines with SC10 device and interlock stitch machines with right hand trimming knife or left hand trimming knife.

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3 11 LINT SUC ON</td>
<td>000–250</td>
<td>20</td>
<td>Stitch count before that the suction pipe starts to suction the lint, after the fabric detection switch detected the material.</td>
</tr>
<tr>
<td>F3 12 LINT SUC OFF</td>
<td>000–250</td>
<td>20</td>
<td>Stitch count before that the suction pipe stops suctioning, after the fabric detection switch detected the end of material.</td>
</tr>
</tbody>
</table>

Table 4

### 4.9.5 List of other functions

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3 04 RESTART</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>The machine can run without using material. When using AUTO STOP (F3 02) function OFF: The motor will start running after the fabric detection switch detected the material. ON: The motor will start running in either case that the fabric detection switch detected or did not detect the material.</td>
</tr>
<tr>
<td>F3 13 MESH TIMER</td>
<td>000–250</td>
<td>0</td>
<td>To prevent malfunction of the knife and the thread tension releaser, increase the value when sewing mesh or lace material.</td>
</tr>
<tr>
<td>F3 02 AUTO STOP</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>The motor can be stopped automatically. OFF: Not using this function.</td>
</tr>
<tr>
<td>F3 14 AUTO STOP TIMER</td>
<td>000–250</td>
<td>50</td>
<td>Stitch count by the motor stops, after the fabric detection switch detected the end of the material. (Note: A motor which can be stopped by external signals need to be used.)</td>
</tr>
<tr>
<td>F3 16 AUTO FL DOWN</td>
<td>000–250</td>
<td>50</td>
<td>The timing of lowering the presser foot after the fabric detection switch detected the material.</td>
</tr>
</tbody>
</table>

Table 5
4. Operating control panel

4.9.6 Function of linking with AZ8451

Perform the steps in "4.10 Control functions" and turn on "AZ8451+", the functions in Table 6 will be activated.

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F5 01 BLINK SIZE</td>
<td>00-99</td>
<td>5</td>
<td>Stitch count by that ACCU-10 starts to control the tension of tape, after the tape is inserted under the presser foot and the sewing machine starts running. If the setting is incorrect, the tape may come out of the presser foot when ACCU-10 tightens the tape.</td>
</tr>
<tr>
<td>F5 02 DELAY CUT TIME</td>
<td>00-99</td>
<td>0</td>
<td>Time delay between pressing the tape cut switch and the knife cut the tape.</td>
</tr>
</tbody>
</table>

Table 6

Setting method

1. Press this switch 5 times.
2. Select a item.
3. Change the setting value.
4. Finished.

4.10 Adjusting tension when the presser foot is up

In case that the tension free switch, c. set is equipped, the tape will be without tension when the presser foot is raised up. But, the tension for tape can also be adjusted. Perform the following steps to set the tension.

Setting method

1. Press this switch 5 times.
2. Change the setting value. (Default: 999)
3. Finished.

- To increase the tension, set a smaller setting value.
- To decrease the tension, set a bigger setting value.

BLINK TENSION
F5 00 999

Fig. 4-46
4.11 Control functions

Control functions and setting method are as below.

<table>
<thead>
<tr>
<th>Item name</th>
<th>Adjustable range</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SENSOR LEVEL</td>
<td></td>
<td></td>
<td>After changing the sensors, electronic boards, and the direction of tape feeder, the base level of tension sensor need to be reset. The setting method has been shown on the lower right of this page.</td>
</tr>
<tr>
<td>STYLE NO</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>Do not use this function.</td>
</tr>
<tr>
<td>AZ8451+</td>
<td>ON/OFF</td>
<td>OFF</td>
<td>When want to link ACCU 10 with AZ8451, set to &quot;ON&quot;.</td>
</tr>
<tr>
<td>PEDAL SW TYPE</td>
<td>NC/NO</td>
<td>NO</td>
<td>To set the electric characteristic for tension free switch C. Set. In case of using the parts of Yamato, set the value to &quot;NO&quot;.</td>
</tr>
<tr>
<td>COUNT PULSE</td>
<td>01~99</td>
<td>1</td>
<td>The number of signals that the rotation detector sends during sewing machine runs for 1 revolution. Set the value to &quot;1&quot; on normal occasion. Set the value to &quot;34&quot; in case of AZ8451 class. Set the value to &quot;35&quot; in case of VP2429, VP2459.</td>
</tr>
<tr>
<td>SELECT SWITCH</td>
<td>CUTTER/PROCESS</td>
<td>PROCESS</td>
<td>Switch the function from &quot;manual switch&quot; to &quot;knee switch&quot;. (Refer to Table 8.)</td>
</tr>
<tr>
<td>CUTTER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SENSOR SW TYPE</td>
<td>LIGHT ON/DARK ON</td>
<td>LIGHT ON</td>
<td>Change the logic for fabric detection switch. Set it to &quot;LIGHT ON&quot; on normal occasion.</td>
</tr>
<tr>
<td>LANGUAGE</td>
<td>インガスポ/ENGLISH</td>
<td>ENGLISH</td>
<td>Switch the language from &quot;Japanese&quot; to &quot;English&quot;.</td>
</tr>
<tr>
<td>BUZZER PATTERN</td>
<td>0~4</td>
<td>1</td>
<td>The buzzer patterns 0~4 can be selected. The buzzer sounds in each pattern. In case of &quot;0&quot;, the buzzer does not sound.</td>
</tr>
</tbody>
</table>

Table 7

Setting method

1. [Image] Hold down this switch for more than 3 seconds.
2. [Image] Select a item.
3. [Image] Change the setting value.
4. [Image] Hold down for more than 3 seconds.

Finished.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Manual switch</th>
<th>Knee switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCESS</td>
<td>Cutter switch</td>
<td>Process shifting switch</td>
</tr>
<tr>
<td>CUTTER</td>
<td>Process shifting switch</td>
<td>Cutter switch</td>
</tr>
</tbody>
</table>

Table 8

Setting the base level

1. Remove the tape from the tape feeder.
2. [Image] Hold down this switch for more than 3 seconds.
3. [Image] The setting value will be decided automatically.
4. [Image] Hold down this switch for more than 3 seconds.

Finished.
4. Operating control panel

4.12 Connection test

The control panel allows you to test the connections of input devices such as switches and output devices such as solenoid valves.

4.12.1 Input test

1. 

Turn the power supply ON

while holding down the switch.

2. 

Press this switch to display the input devices in Table 9.

3. Either "ON" or "OFF" is displayed at the right end of the display depending on the current condition of the input device.

4. Upon completion of the test, turn OFF the power switch.

4.12.2 Output test

1. 

Turn ON the power supply

while holding down the switch.

2. 

Press the switch to display the input devices in Table 10.

3. 

The device is displayed will start to function.

4. Upon completion of the test, turn OFF the power switch.

⚠️ CAUTION

Never place finger, hair or objects close to the moving parts while doing connection test.

<table>
<thead>
<tr>
<th>Display</th>
<th>Input device</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 00</td>
<td>MATERIAL SENSOR Fabric detector</td>
</tr>
<tr>
<td>0 01</td>
<td>KNEE SW Knee SW</td>
</tr>
<tr>
<td>0 02</td>
<td>HEEL ON Tension free SW (toe down)</td>
</tr>
<tr>
<td>0 03</td>
<td>HEEL BACK Tension free SW (heel back)</td>
</tr>
<tr>
<td>0 04</td>
<td>HAND SWITCH Manual SW or cutter SW</td>
</tr>
<tr>
<td>0 05</td>
<td>NEEDLE SWITCH Rotation detector unit</td>
</tr>
<tr>
<td>0 06</td>
<td>INPUT 6 Not used</td>
</tr>
<tr>
<td>0 07</td>
<td>INPUT 7 Not used</td>
</tr>
<tr>
<td>0 08</td>
<td>INPUT 8 Not used</td>
</tr>
<tr>
<td>0 09</td>
<td>INPUT 9 Not used</td>
</tr>
<tr>
<td>0 10</td>
<td>INPUT 10 Not used</td>
</tr>
<tr>
<td>0 11</td>
<td>INPUT 11 Not used</td>
</tr>
</tbody>
</table>

Table 9

<table>
<thead>
<tr>
<th>Display</th>
<th>Output device</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 00</td>
<td>CUTTER Tape cutter</td>
</tr>
<tr>
<td>0 01</td>
<td>C DEV Thread chain suction</td>
</tr>
<tr>
<td>0 02</td>
<td>LINT SUC Lint suction</td>
</tr>
<tr>
<td>0 03</td>
<td>TR Tension release</td>
</tr>
<tr>
<td>0 04</td>
<td>FOOT LIFT Press foot lifter</td>
</tr>
<tr>
<td>0 05</td>
<td>OUTPUT5 Not used</td>
</tr>
<tr>
<td>0 06</td>
<td>OUTPUT6 Not used</td>
</tr>
<tr>
<td>0 07</td>
<td>OUTPUT7 Not used</td>
</tr>
<tr>
<td>0 08</td>
<td>OUTPUT8 Not used</td>
</tr>
<tr>
<td>0 09</td>
<td>OUTPUT9 Not used</td>
</tr>
<tr>
<td>0 10</td>
<td>OUTPUT10 Not used</td>
</tr>
<tr>
<td>0 11</td>
<td>M MOTOR CW Motor of tape feeder clockwise</td>
</tr>
<tr>
<td>0 12</td>
<td>M MOTOR CW Motor of tape feeder counterclockwise</td>
</tr>
<tr>
<td>0 13</td>
<td>S MOTOR CW Motor of distangle roller clockwise</td>
</tr>
<tr>
<td>0 14</td>
<td>S MOTOR CW Motor of distangle roller counterclockwise</td>
</tr>
</tbody>
</table>

Table 10
## Trouble Shooting

<table>
<thead>
<tr>
<th>Error display</th>
<th>Remedy/Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNSETTING</td>
<td>[SENSOR LEVEL] has not been set. (Refer to the part &quot;Setting basic level&quot; in &quot;4.11 Control functions&quot;)</td>
</tr>
<tr>
<td>POWER OFF</td>
<td>Feeding roller motor(^2) error: repair or exchange the feeding roller motor(^2) or electronic board A. (Refer to the part &quot;Setting basic level&quot; in &quot;4.11 Control functions&quot;)</td>
</tr>
<tr>
<td>E01 POWER OFF</td>
<td>Distangle roller motor(^1) error: repair or exchange the distangle roller motor(^1) or electronic board A. (Refer to the part &quot;Setting basic level&quot; in &quot;4.11 Control functions&quot;)</td>
</tr>
<tr>
<td>E02 POWER OFF</td>
<td>Feeding roller motor error(^2) and distangle roller motor(^1): Repair or exchange both feeding roller motor(^2) and distangle roller motor(^1) or electronic board A. (Refer to the part &quot;Setting basic level&quot; in &quot;4.11 Control functions&quot;)</td>
</tr>
<tr>
<td>E03 POWER OFF</td>
<td>Feeding roller motor(^2) error: repair or exchange the feeding roller motor(^2) or electronic board A. (Refer to the part &quot;Setting basic level&quot; in &quot;4.11 Control functions&quot;)</td>
</tr>
<tr>
<td>M01 TAPE CHECK</td>
<td>Detecting seams and knots: Check the tape. Press the [CLAMP LEVER] up to silence the buzzer.</td>
</tr>
</tbody>
</table>

Table 11

Fig. 5-1

Electronic board A
## 6. Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>ACCU-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>Control box: 270 (L) × 65 (W) × 215 (H) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>11 kg</td>
</tr>
<tr>
<td>Tape tension adjustable range</td>
<td>0.05-7N</td>
</tr>
<tr>
<td>Maximum tape width</td>
<td>75mm</td>
</tr>
<tr>
<td>Tape feeding speed</td>
<td>0-42m/min.</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC100V-240V 50/60Hz (Automatic change)</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>+5℃～+40℃</td>
</tr>
<tr>
<td>Humidity</td>
<td>90% RH or less</td>
</tr>
<tr>
<td>Power consumption</td>
<td>200 VA</td>
</tr>
<tr>
<td>Output current</td>
<td>Less than 100mA</td>
</tr>
<tr>
<td>Saving capacity for settings</td>
<td>8 processes/mode, 50 modes for maximum</td>
</tr>
</tbody>
</table>
7. Information

7.1 Description of connectors and input signals

Control box

Process indicator

Motor (distangle roller)

Motor (Main roller)

Knee switch
1. Process shifting input
2. OV

Free tension switch
1. OV
2. Heel back input
3. Toe down input

Tension sensor
(Tape detector unit)

Fabric detection switch
1. 12V
2. Fabric detection switch
3. 0V

Output (option)
1. 24V
2. 24V
3. 24V
4. 0V
5. OUT0 Cutter
6. OUT1 K device
7. OUT2 Lint suction
8. OUT3 Tension release
9. OUT4 Presser foot lifter
10. OUT5 Motor stop
11. OUT6 Roller (for AZ8451)
12. OUT7 Spare
13. Spare
14. Spare
15. Spare

Rotation detector unit
1. 12V
2. 5V
3. Needle up/down input
4. 0V

Fig. 7-1
7.2 Connecting AZ8451 with ACCU-10-C1T device

- **T** process shifting switch
- **P** presser foot lifter switch
- **blue connector**
- **to AZ8451 control box**
- **blue connector**
- **to AZ8451 presser foot lifter switch connector**
- **Q**
- **to sewing machine**
- **1200266**
- **knee switch for tape cutter**
- **1200267**
- **AZ8451/MA**
- **AZ8451 and AZ8451/MC**
- **female terminal**
- **male terminal**
- **Hall IC sensor signal**
- **J1(J2,J3)**
- **view from this side**
- **cable**
- **1200268**
- **to AZ8451 control box**
- **to AZ8451 knee switch connector**
- **to air solenoid valve for open roller**