

# **Copyboard**

**K-10S / K-10W**

**SERVICE MANUAL**

**PLUS**

# CONTENTS

|   |           |  |           |
|---|-----------|--|-----------|
| <b>1. COMPLIANCE OF SAFE REPAIR .....</b>             | <b>3</b>  | <b>5. ADJUSTMENT.....</b>                            | <b>20</b> |
| 1-1. Cautions during Product Movement .....           | 3         | 5-1. Calibration.....                                | 21        |
| 1-2. Cautions during disassembling and assembling ... | 3         | 5-2. Confirming (Printing) the firmware version..... | 22        |
| <b>2. SPECIFICATIONS .....</b>                        | <b>4</b>  | <b>6. DEVICE SETTING.....</b>                        | <b>22</b> |
| 2-1. Product Specifications .....                     | 4         | <b>7. CABLE AND CABLE CONNECTION .....</b>           | <b>25</b> |
| 2-2. Names of the Parts.....                          | 5         | <b>8. PARTS LIST .....</b>                           | <b>26</b> |
| 2-3. Operating gents common to all models.....        | 7         | 1. PANEL SIDE .....                                  | 26        |
| 2-4. Power Lamp / Status Indicators .....             | 8         | 2. MAIN BOARD CIS UNIT CABLE .....                   | 28        |
| <b>3. TROUBLE SHOOTING .....</b>                      | <b>9</b>  | 3. SHEET FRAME .....                                 | 30        |
| <b>4. DISASSEMBLY AND ASSEMBLY .....</b>              | <b>10</b> | 4. PRINTER'S .....                                   | 32        |
| 4-1. Tolls Required .....                             | 10        | 5. ACCESSORIES .....                                 | 34        |
| 4-2. Caution.....                                     | 10        | 6. CARTON .....                                      | 35        |
| 4-3. Disassembly and Assembly Procedures .....        | 10        | 7. M-18-ST .....                                     | 37        |
| 4-4. Disassembly and Assembly .....                   | 11        | 8. SCREWS & WASHERS .....                            | 39        |

# 1. COMPLIANCE OF SAFE REPAIR

Be sure to read this Service Manual before providing services. In the PLUS Copyboard, full consideration is taken to ensure the safety for a fire, electric shock, injury, harmful radiation, and substance. Therefore, observe the notice described in this Service Manual so that the safety is kept when providing services. Moreover, be sure to observe the notice described in the User's Manual.

Pay attention to the following during service inspection.

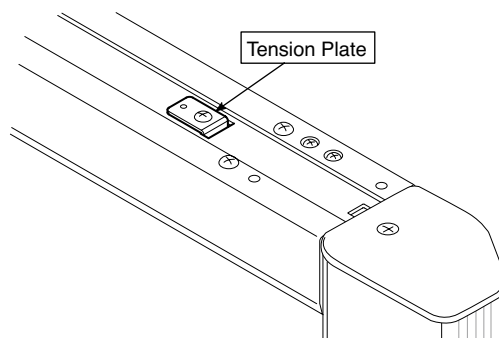
## 1-1. Cautions during Product Movement

- It is necessary to remove the products when making the service of products put on the wall. At that time, hold the product by two or more persons to prevent the product from dropping or a person from falling down.

## 1-2. Cautions during disassembling and assembling

1. When doing repairs, make sure that power plug is pulled out to insure safety.
2. Make sure that parts and screws and wiring, etc. are returned to their original positions. Tube, tape and other insulation materials have been used for safety reasons. The internal wiring has been designed to avoid direct contact with hot parts or parts under high voltage when using clamps or other tools.
3. The parts used in this device have special safety features such as flame-resistance and anti-voltage properties. When replacing parts, always use parts supplied from the factory.
4. After finishing operations make sure that all parts and wires have been returned to their original position and that there has been no deterioration of the area around the location that was worked on.
5. Be sure to use an earth band (wrist band) during repair and inspection.
6. Aluminum is used for this product as materials. During assembling and disassembling, be careful not to mistake the type of screws. Depending on the screw used, the screw hole is damaged and parts may be unable to be fixed properly.

**CAUTION:** Never remove the two tension plates at the top and bottom because they fix a spring.



## 2.SPECIFICATIONS

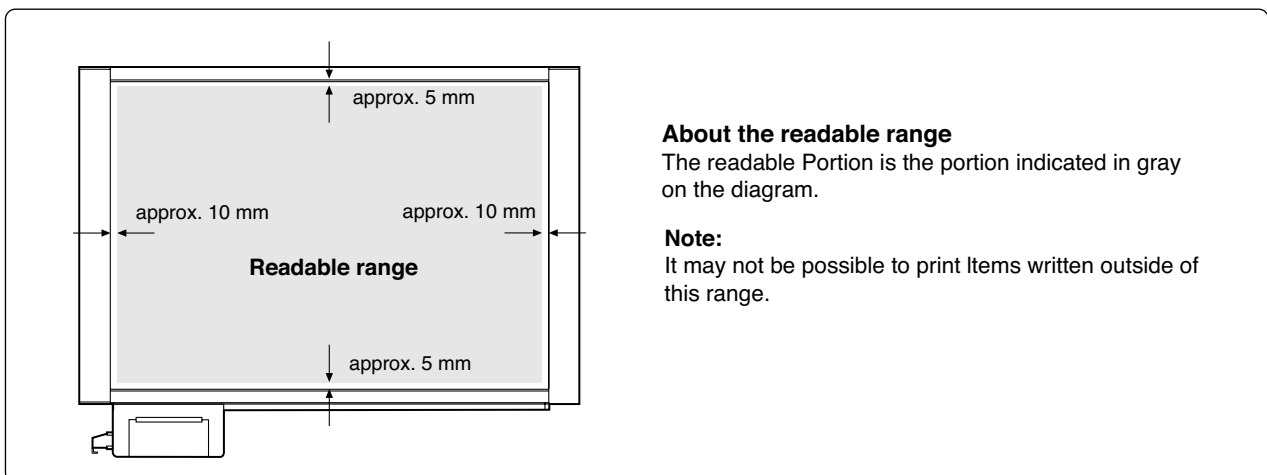
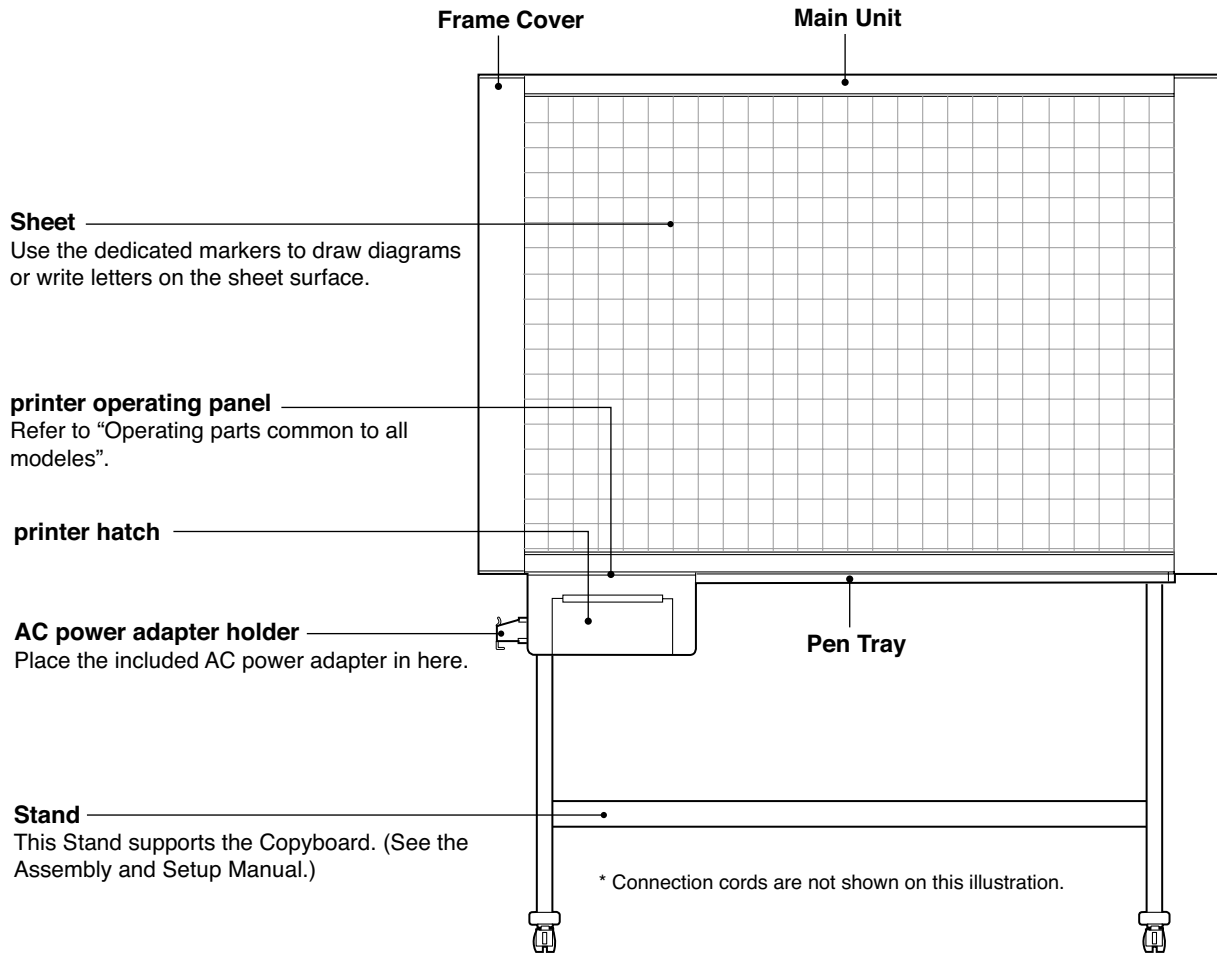
### 2-1. Product Specifications

| BOARD TYPE (Model name) |  | K-10S   | K-10W  |
|-------------------------|--|---|--|
| Exterior                | External dimensions  | W1480 x D675 x H1847  | W1980 x D675 x H1847   |
|                         | weight   | 31.5kg  | 35.5kg   |
| Board                   | Board surface dimension  | W1300 x H910mm  | W1800 x H910mm   |
|                         | Effective reading dimensions   | W1280 x H900mm  | W1780 x H900mm   |
|                         | No. of board surfaces  | 2   |  |
|                         | Sheet feeding  | Unidirectional, endless (Horizontal scrolling)  |  |
|                         | Drive system   | Sheet moving method   |  |
|                         | Reading method   | CIS (Contact Image Sensor)  |  |
|                         | Reading illumination light source  | RGB LED   |  |
|                         | Reading resolution   | 1.92 dots/mm  |  |
|                         | Reading and printing time<br>(* Print time will vary according to the amount of data.) | 1-sheet printing<br>Approx. 10 seconds reading, approx.<br>11 seconds printing<br>2-sheet printing:<br>Approx. 20 seconds reading, approx.<br>22 seconds printing   | A4 compressed printing<br>Approx. 14 seconds reading, approx.<br>15 seconds printing<br>A4-L equal ratio printing:<br>Approx. 14 seconds reading, approx.<br>15 seconds printing |
| Printer                 | Reading method   | Thermal head thermosensitive recording  |  |
|                         | Reading size   | 1 sheet (A4 equal ratio), 2 sheets compressed (A4 compression)  | 1 sheet (A4 compression, A4-L equal ratio)   |
|                         | Reading paper size   | A4 size (W210 x H297 mm)  | A4 size (W210 x H297 mm)<br>A4-L-size (W210 x H405 mm)   |
|                         | Reading color  | Monochrome  |  |
|                         | Print resolution   | 200 dpi   |  |
|                         | No. sheets printed   | 1 sheet   |  |
| Additional functions    | Clock  | Used for time stamps  |  |
|                         | Computer connection  | Device settings   |  |
| Power supply            | AC power adapter   | Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 24V, 2.5A  |  |
|                         | Power consumption  | In power-saving mode: 1W Operating: 50W   |  |
| Usage conditions        | Temperature  | 10°C-35°C   |  |
|                         | Humidity   | 30 to 85% (with no condensation)  |  |
| Others                  | Ruled lines  | 50 mm grid  |  |
|                         | Writing tool   | White board markers (black and red)   |  |
| Functions               | Equal ratio printing   | ○   | ○  |
|                         | 2-sheet printing   | ○   | —  |
|                         | Recording density adjustment   | 3 levels of adjustment in the device settings   |  |
|                         | Manual board surface moving function   | ○   | ○  |
|                         | Accessories  | Dedicated white board markers (black and red), dedicated eraser, 2 eraser replacement sponges, dedicated the rmosensitive paper (30 m roll), AC power adapter (with 2.5 m power cord), instruction manual |  |

\* Please note that product specifications and appearance are subject to change without notice.

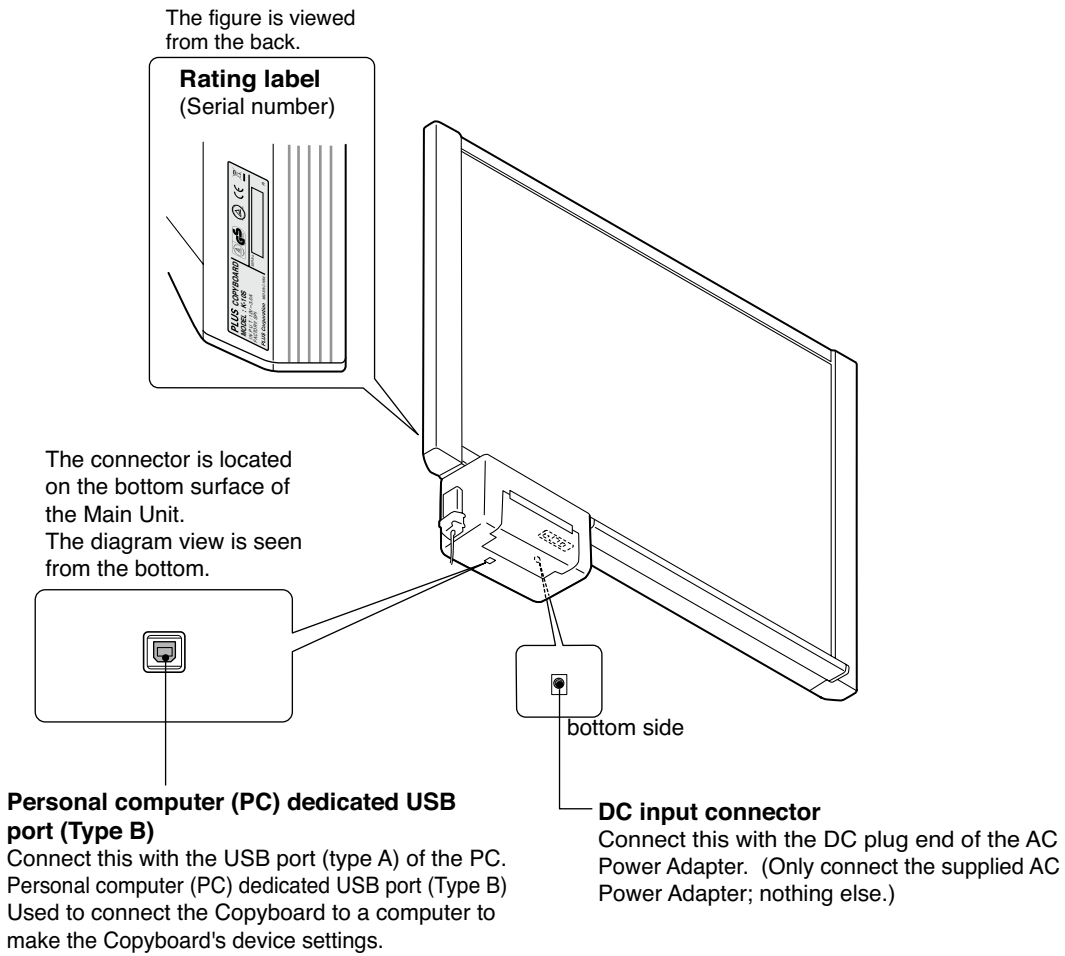
**2-2. Names of the Parts**

**Main unit front**

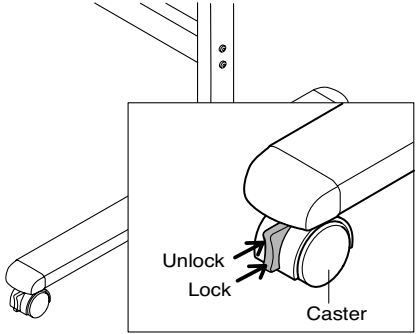


# SPECIFICATION

## Input/output terminals



**Locking/unlocking the Casters of products with stand**  
When the unit is moved to a location, use the stoppers to lock the casters after installing. Release the caster stoppers when moving the unit.  
Press on the bottom of the stopper to lock the caster.  
Press on the top of the stopper to unlock the caster.



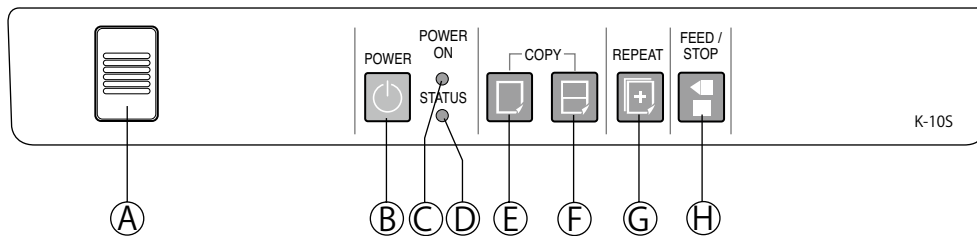
Unlock  
Lock  
Caster

**2-3. Operating pents common to all models**

|                          |  |
|--------------------------|--|
| <b>A : Open button</b>   | When this button is pressed, the printer hatch opens. Press this to replace the recording paper.               |
| <b>B : POWER key</b>     | This turns the power supply on and off.  |
| <b>C : POWER ON lamp</b> | This lamp lights (green) when the power is turned on, and turns off when the power is turned off.              |
| <b>D : STATUS lamp</b>   | This indicates the unit's operating status or error status. The lamp flashes green when the unit is operating. |

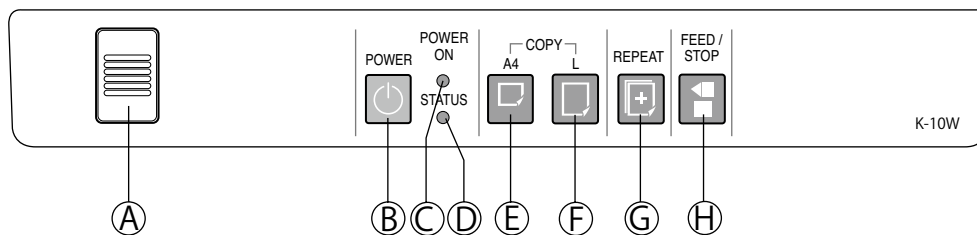
|  |  |
|--|--|
| <b>G : Additional print key (REPEAT)</b> | Use this key to make additional prints. The sheet does not move when this key is pressed.  |
| <b>H : Sheet FEED/STOP key</b>           | Use this key to move the sheet to the left. When the key is pressed, the sheet moves one frame. When the key is pressed again while the sheet is moving, the sheet stops moving immediately. Use this to stop reading before printing. |

**K-10S operating panel**



|   |   |
|---|---|
| <b>E : Print key</b>                      | Use this to print one sheet's worth of data in A4 size. The aspect ratio of the data on the sheet is maintained.                              |
| <b>F : Two-sheet compressed print key</b> | Use this to compress two sheet's worth of data and print it in A4 size. The data on the two sheets is compressed in the horizontal direction. |

**K-10W operating panel**



|                                       |  |
|---------------------------------------|--|
| <b>E : Compressed print key</b>       | Use this to compress one sheet's worth of data and print it in A4 size (210 × 297 mm). The data is compressed in the horizontal direction. |
| <b>F : A4-L equal ratio print key</b> | Use this to print one sheet's worth of data in A4 L size (210 × 405mm). The aspect ratio of the data on the sheet is maintained.           |

## SPECIFICATION

### 2-4.Power Lamp / Status Indicators

| Status  | Power LED     | Status LED                      |
|---|---------------|---------------------------------|
| Sleep   | OFF           | OFF                             |
| During transition to power-on state (During main board start) | Flases orange | OFF                             |
| Standby   | OFF           | OFF                             |
| Power ON  | Lights green  | OFF                             |
| During normal operation                                       | Lights green  | Flases green                    |
| Additional printing alarm                                     | Lights green  | Flases green (for five seconds) |
| Out-of-paper error  | Lights green  | Lights orange                   |
| Temperature error   | Lights green  | Flases orange                   |
| Motor error   | Lights green  | Lights red                      |
| System error  | Lights green  | Flases red                      |
| White calibration mode  | Flases green  | OFF                             |
| Execution of white calibration                                | Flases green  | Flases green                    |
| Normal termination of white calibration                       | Flases green  | Lights green                    |
| White calibration system error                                | Flases green  | Lights red                      |
| Printer test standby  | Flases red    | OFF                             |
| Printer test execution  | Flases red    | Flases green                    |
| Printer test out-of-paper error                               | Flases red    | Lights orange                   |
| Printer test temperature error                                | Flases red    | Flases orange                   |
| Printer test motor error                                      | Flases red    | Lights red                      |



## 3.TROUBLE SHOOTING

By checking operations, it is possible to carry out judgments on malfunction to a certain extent. Carry out the following checks before disassembling the equipment.

1. Press the Standby (On) button and turn on the power.

Is the power turned on?

- No →
- The AC Adapter is disconnected from the wall outlet.
  - The AC Adapter is defective.
  - The Main Board Assy DC jack part is defective.
  - The Thermal printer Board is defective.
  - The connectors of P-M DC cable is disconnected.
- Yes

2. Press the Scroll / Stop button.

Does the sheet operate normally?

- No →
- The connectors of the Motor Harness is disconnected.
  - The loser of the Timing Belt, the slack.
  - The Sheet Motor Unit is defective.
  - The Main Board Assy is defective.
  - The Thermal printer Board is defective.
- Yes

3. Press the Copy button.

Is it printed?

- No →
- The peper sensor is defective.
  - The Thermal printer Board is defective.
  - The Thermal head is defective.
  - A Printer is not connected definitely.
  - Not connected.
  - The Main Board Assy is defective.
- Yes

Is the object written in the board printed normally?

- No →
- A part of image is displayed black.
- The Main Board Assy is defective.
  - Misalignment of CIS Unit: Replace the CIS Unit for improvement.  
(In a subtle case, improved by white calibration.)
  - Foreign matter adheres to the CIS Unit.
  - The Thermal head is defective.
- Yes
- An image (print) is rubbed.
- Deterioration of CIS Unit.
  - The marker (written character) becomes blurred.
  - The Thermal head is disconnected.

# 4. DISASSEMBLY AND ASSEMBLY

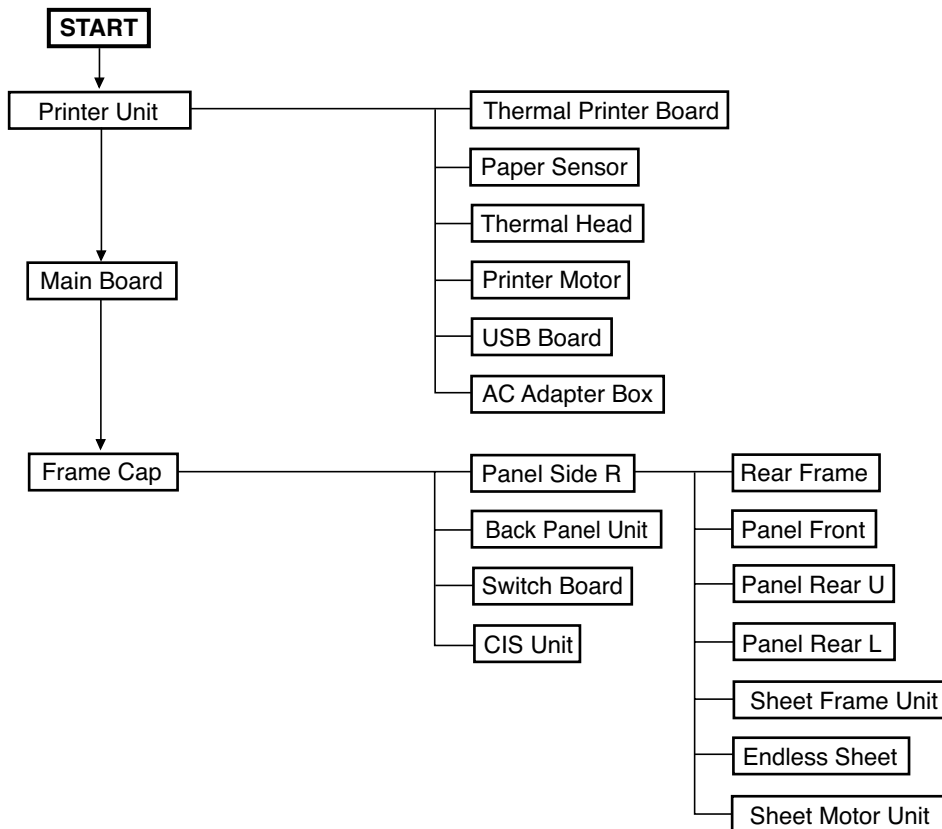
## 4-1. Tools Required

- Phillips screwdriver (+) No. 2
- Phillips screwdriver (-)
- Phillips screwdriver (+) No. 0

## 4-2. Caution

- See “1. Compliance of Safety Repair and Safety Inspection” before disassembling and assembling.
- Put on gloves so that you do not cut your hand at the sharp edge of a frame during disassembly and assembly.
- See “7. Wiring Diagram” and “8. Parts List” for the parts name or wiring.
- The point especially requiring attention when handling parts or performing disassembly and assembly contains a caution. Be sure to follow this caution.

## 4-3. Disassembly and Assembly Procedures



**4.4. Disassembly and Assembly**

This section describes one example of disassembly and assembly procedures. For the actual operation, disassemble and assemble the required parts with reference to “4-3. Disassembly and Assembly Procedures”.

\* Take care that no load is applied to the Printer Unit in a state where a Printer Unit is not removed.

Before removing the Printer Unit, be sure to remove the Printer Back Panel and wiring and remove the Printer Unit.

\* Remove the main set from the stand and proceed with the Endless Sheet. (Perform the operation on a mat.)

\* Remove the Pen Tray before performing the procedure below.

**1) Remove the Printer UNIT. (See Figs.1)**

- 1.Remove the "S-3" screws shown in the figure 1 and then remove the Printer Back Panel.
- 2.Disconnect the connector (CN1,5,7) from the Thermal Printer Board.
- 3.Remove the DC jack from the main set and then disconnect the connector (CN1) from the USB Board.
- 4.Remove the "S-4" screws and then remove the Printer Unit.

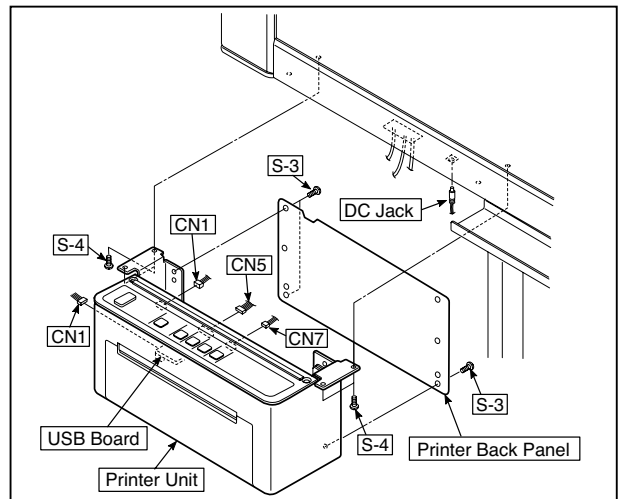


Fig.1

**2) Remove the Front Cover UNIT. (See Figs.2 and 3.)**

- 1.Remove the Front Cover Spring shown in Figure 2 and portion A.
- 2.Remove the "S-13" E-ring shown in Figure 2 and portion B and then remove the Hinge Plate Assy.
- 3.Remove the Front Cover Unit while pressing the Cover button shown in Figure 3.
- 4.Remove the "S-3" screws and then remove the Platen Roller.

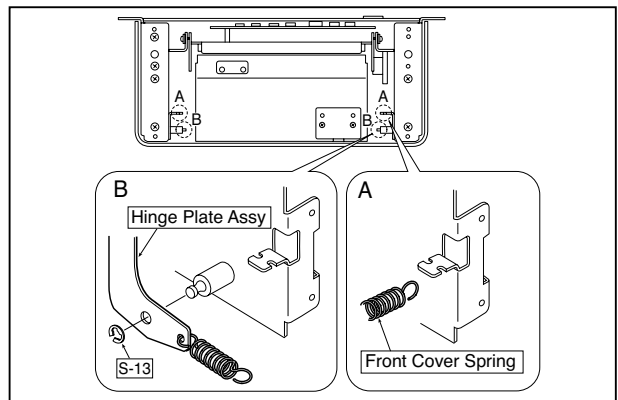


Fig.2

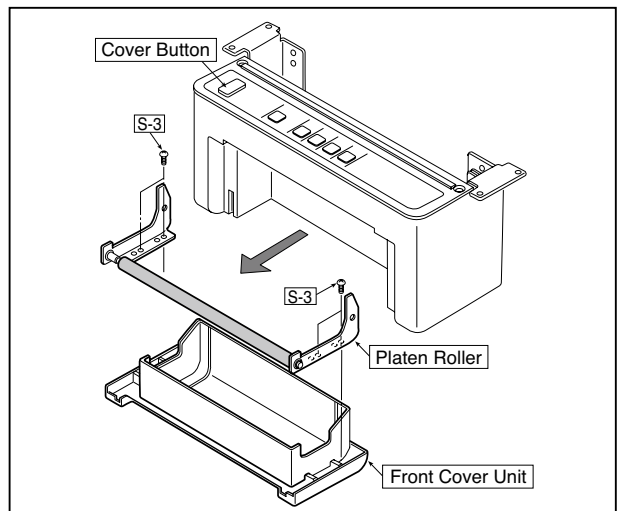


Fig.3

## DISASSEMBLY AND ASSEMBLY

### 3) Remove the Thermal Printer Board. (See Figs.4)

- 1.Remove the "S-4" screws shown in the figure 4 and then remove the Printer top Cover.
- 2.Disconnected the connector (CN2,3,4,6) from the Thermal printer Board and then remove the Thermal printer Board.

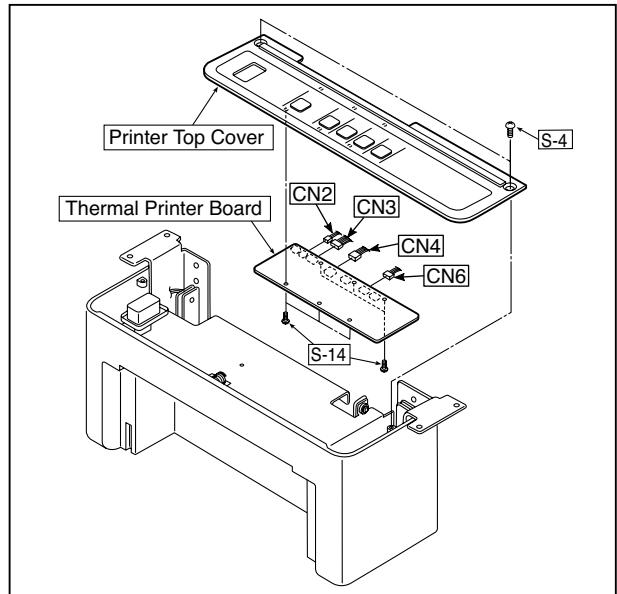


Fig.4

### 4) Remove the USB Board and Paper Sensor Board. (See Figs.5)

- 1.Remove the "S-3" screws shown in the figure 5 and then remove the USB Board
- 2.Remove the "S-15" screws and then remove the Paper Sensor Board.
- 3.Remove the "S-20" screws and then remove the Adapter Box.

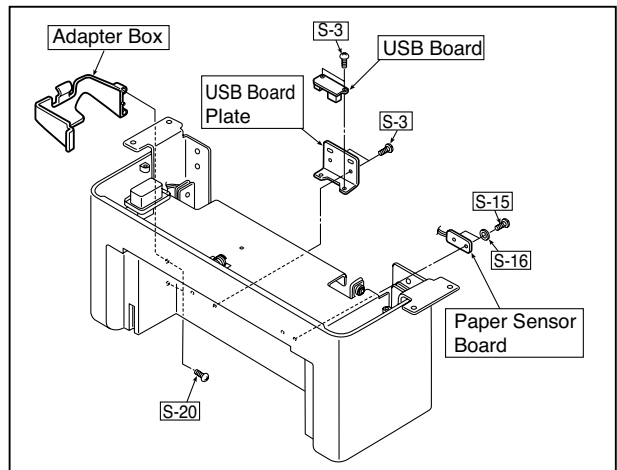


Fig.5

### 5) Remove the Printer Frame UNIT. (See Figs.6)

- 1.Remove the Cover Button shown in Figure 6.
- 2.Remove the "S-3" screws and then remove the Printer Frame Unit.

**Caution:** Be careful not to forget to install the Cover Button during assembling.

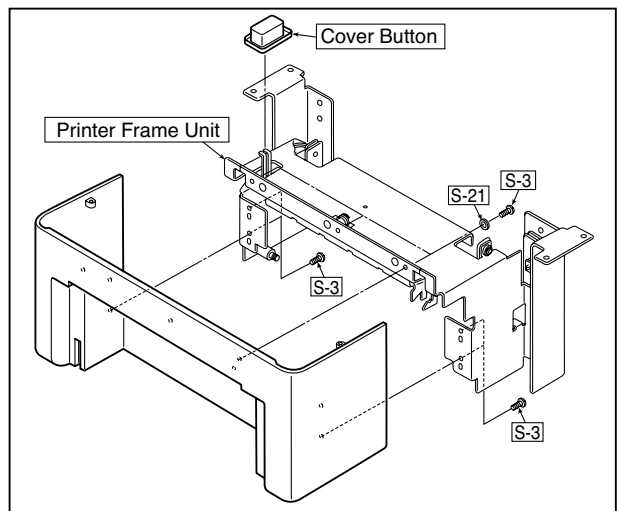


Fig.6

## DISASSEMBLY AND ASSEMBLY

### 6) Remove the Thermal Head. (See Figs.7)

- 1.Remove the "S-17" screws shown in the figure 7.
- 2.Remove the Thermal Head Base while paying attention to the Thermal Head Spring.
- 3.Remove "S-18" screws and then remove the Thermal Head Unit from the Thermal Head Base.
- 4.Remove the Thermal Head Unit.

**Caution:** Be careful not to forget to install the Thermal Head color during assembling.

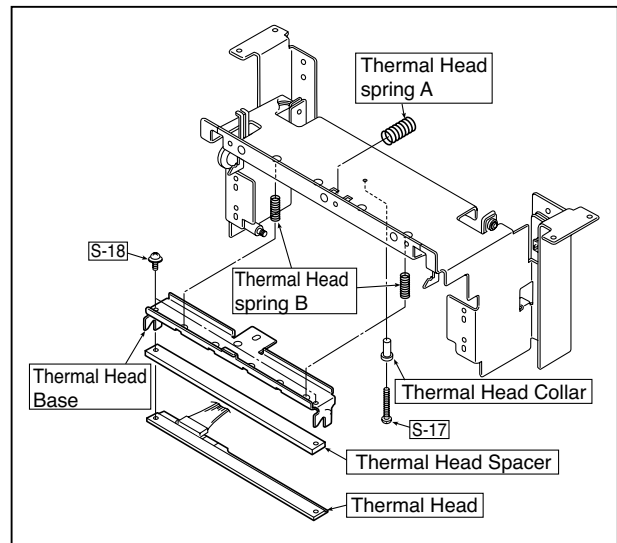


Fig.7

### 7) Remove the Lock Base. (See Figs.8.)

- 1.Remove the "S-18" screws shown in the figure 8.
2. Remove the Lock Spring fixed in A to A' and B to B'.
- 3.Remove the Lock Base.

**Caution:** Be careful not to forget to install the Lock Base color during assembling.

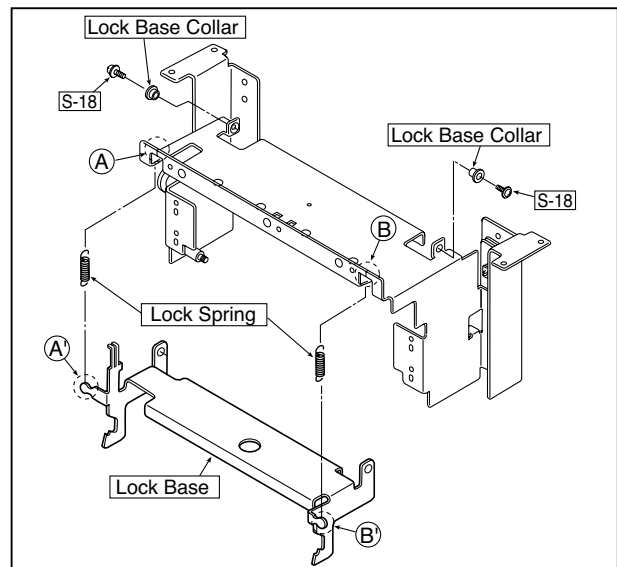


Fig.8

### 8) Remove the Printer Plate (L/R). (See Figs.9.)

- 1.Remove the "S-2" screws shown in the figure 9. and then remove the Printer Plate (L/R).
- 2.Remove the DC Jack Assy installed in a Printer Plate (L).

**Caution:** Remove the nut and ring fixing the DC Jack Assy and then remove the DC Jack Assy.

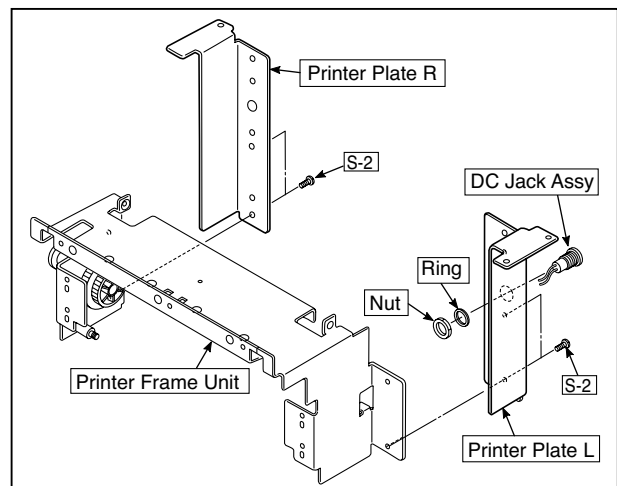


Fig.9

## DISASSEMBLY AND ASSEMBLY

### 9) Remove the Printer Motor Middle Gear UNIT. (See Figs.10)

- 1.Remove the "S-19" screws shown in the figure 10 and then remove the Printer Motor Unit.
- 2.Remove the "S-13" E-ring and then remove the Middle Gear.

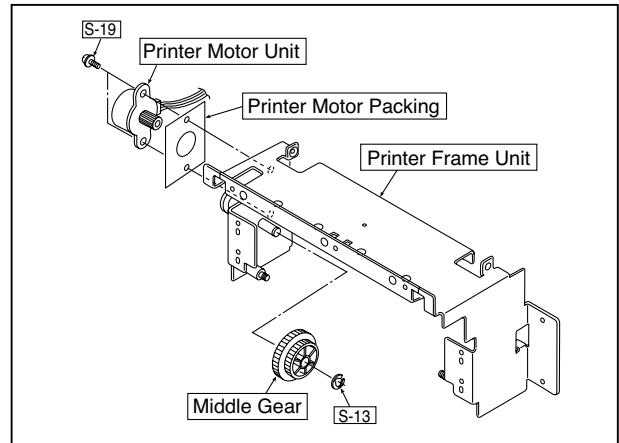


Fig.10

### 10) Remove the Main Board Assy. (See Figs. 11 and 12.)

- 1.Remove the "S-1" screws shown in the figure 11 and then remove the Cable Cover.
- 2.Remove the "S-3" screws shown in the figure 12 and then remove the Main Board Shield.

**Note: If a screw is tightened too tightly, a screw hole may be broken.**

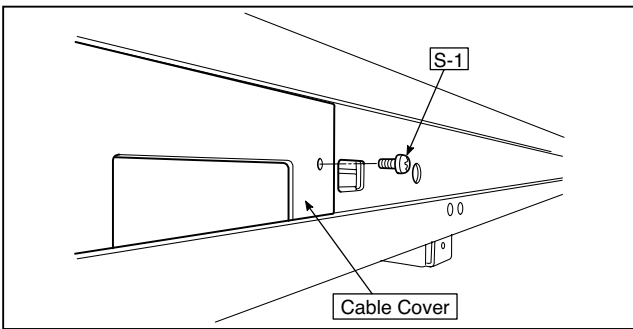


Fig.11

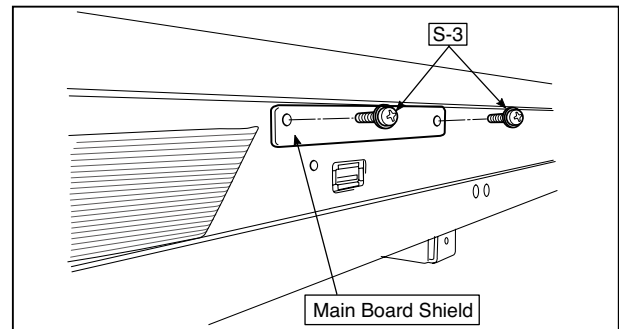


Fig.12

- 3.Disconnect the connector (CN1,2,3,6) connected to the Main Board Assy shown in the figure 13.(See Figs. 13 and 14,15.)

- 4.Remove the "S-1" screw shown in the figure 14 and then remove the Main Board Assy from the Main Board Shield.

- 5.When replacing the Main Board Assy shown in the figure 15, insert the Main Board Assy from the oblique direction so that the parts mounted at the rear of the Main Board Assy are not damaged.

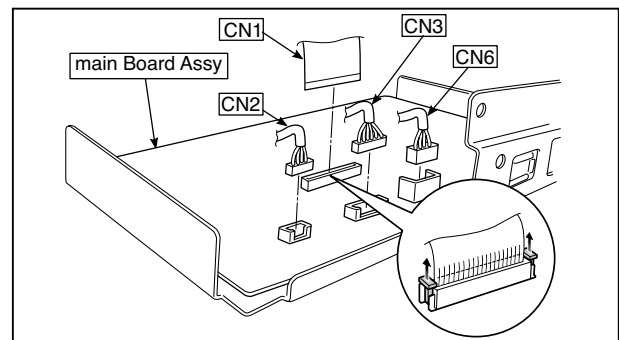


Fig.13

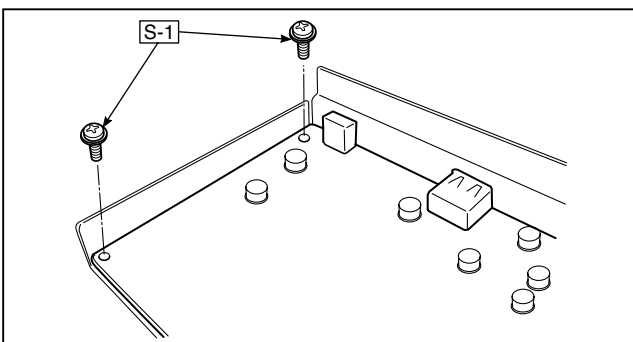


Fig.14

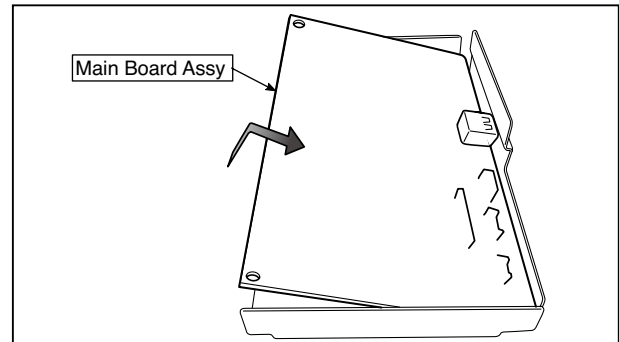


Fig.15

## DISASSEMBLY AND ASSEMBLY

### 11) Remove the Frame Cap C. (See Fig. 16.)

1. Remove the "S-2" screws shown in the figure 16 and then remove the Frame Cap C.

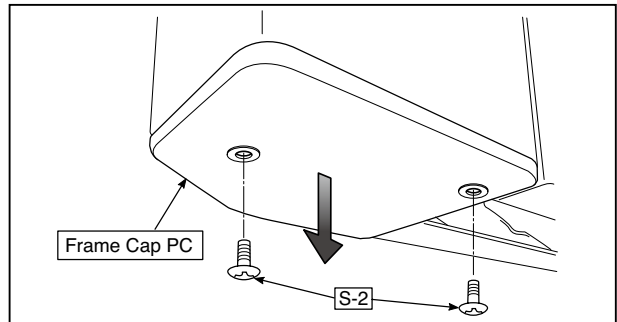


Fig.16

### 12) Remove the Frame Cap A/B. (See Fig. 17.)

1. Remove the "S-2" screws shown in the figure 17 and then remove the Frame Cap A/B.

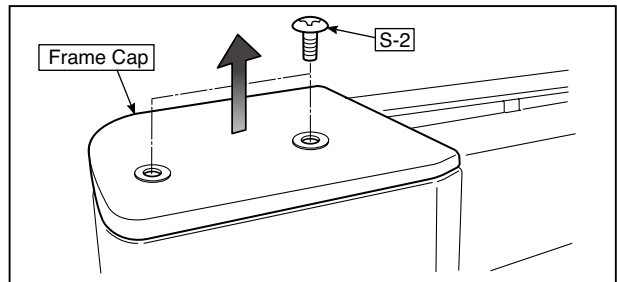


Fig.17

### 13) Remove the Panel side. (See Fig. 18)

1. Remove the "S-4" screws shown in the figure 18 and then remove the Panel Side.

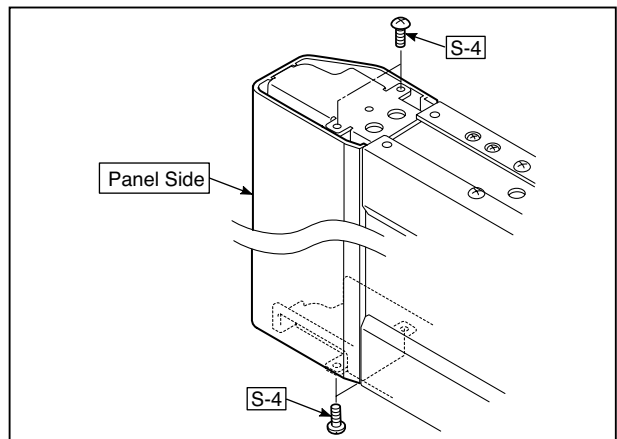


Fig.18

### 14) Remove the Panel Side. (See Fig. 19)

- 1 Remove the "S-4" screws shown in the figure 19 and then remove the Panel Side.

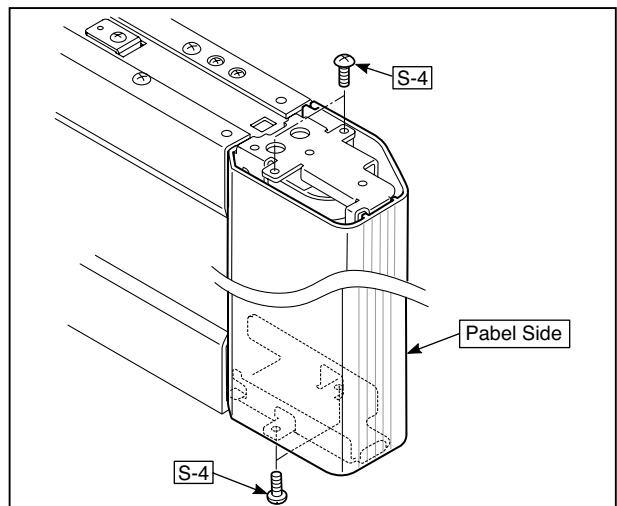


Fig.19

## DISASSEMBLY AND ASSEMBLY

### 15) Remove the Back Panel Unit. (See Fig. 20 and 21)

1. Remove the "S-5" screws shown in the figure 20.  
Remove 2 screws which are located on both sides of the Back Panel center.
2. Slide the Back Panel Center and remove it while pushing the Back Panel Unit corner shown in the figure 21 forward.

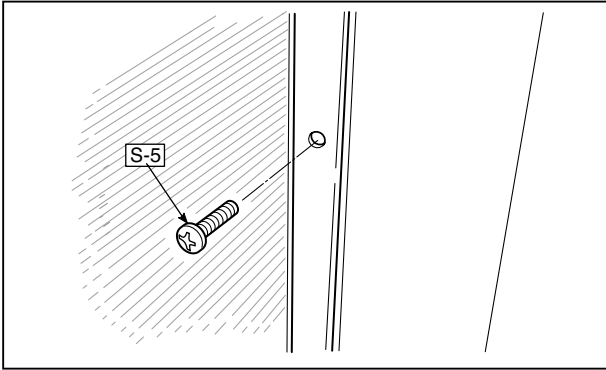


Fig.20

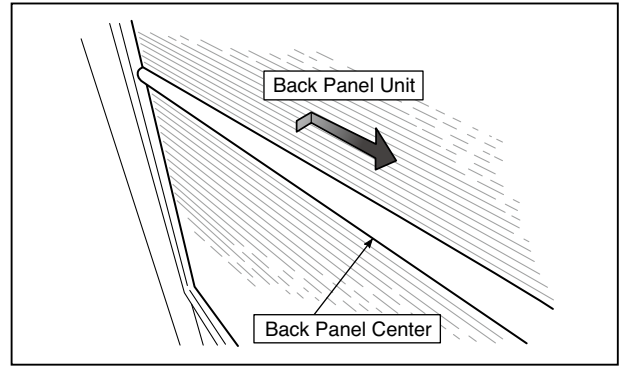


Fig.21

### 16) Remove the CIS Unit. (See Figs. 22~25)

1. Disconnect the CIS Cable (FFC), shown in the figure 22, from a connector.
  2. Remove the "S-2" screws shown in the figures 23 and 24 and then remove the CIS Unit.
- \* At that time, operate while holding it with hands so that the CIS Unit does not fall.  
Pay attention to the top and bottom when installing the CIS Unit.
  - \* The CIS Unit with a CIS Support (see Fig. 25) is located in the upper position.
  - \* When a CIS Unit is replaced, be sure to perform White level calibration.  
See page 24 3.White level calibration

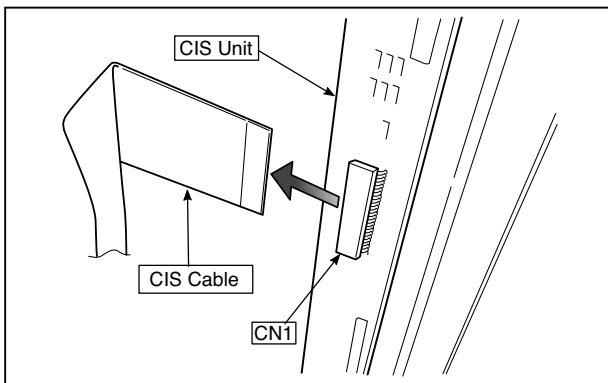


Fig.22

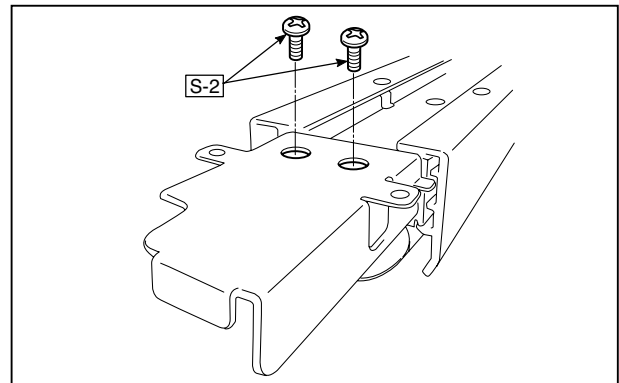


Fig.23

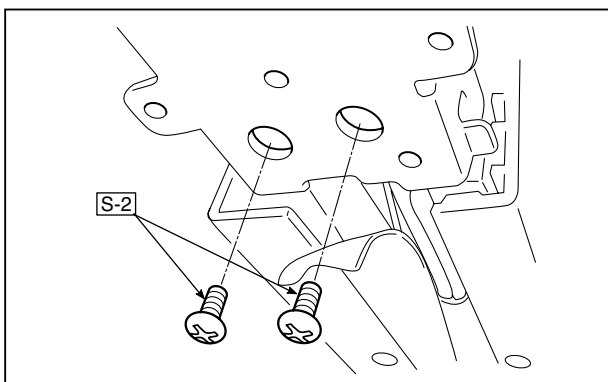


Fig.24

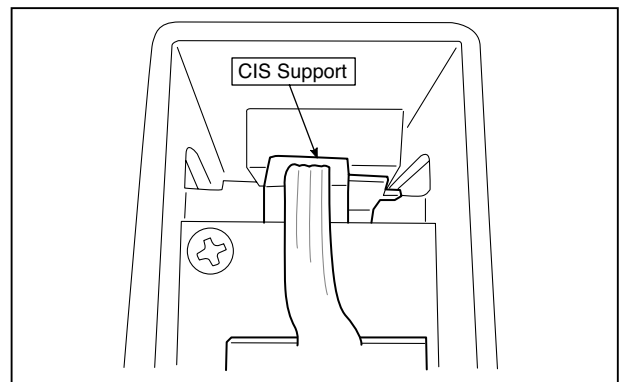


Fig.25



## DISASSEMBLY AND ASSEMBLY

### 17) Remove the Rear Frame. (See Fig. 26)

1. Remove the "S-6" screws shown in the figure 26 and then remove the Rear Frame (two).

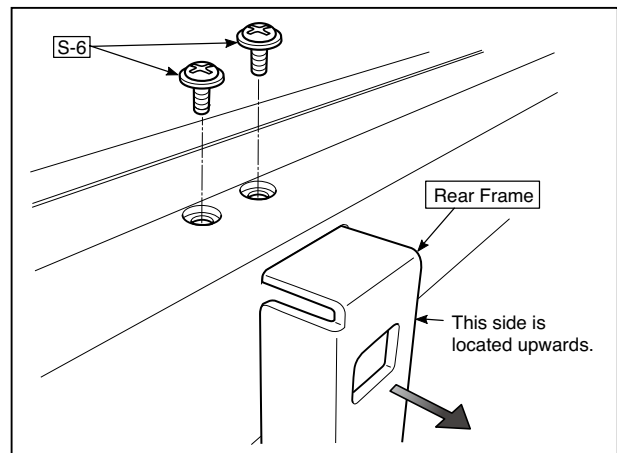


Fig.26

### 18) Remove the Panel Upper. (See Fig. 27)

1. Remove the "S-4" screws shown in the figure 27 and then remove the Panel Front.

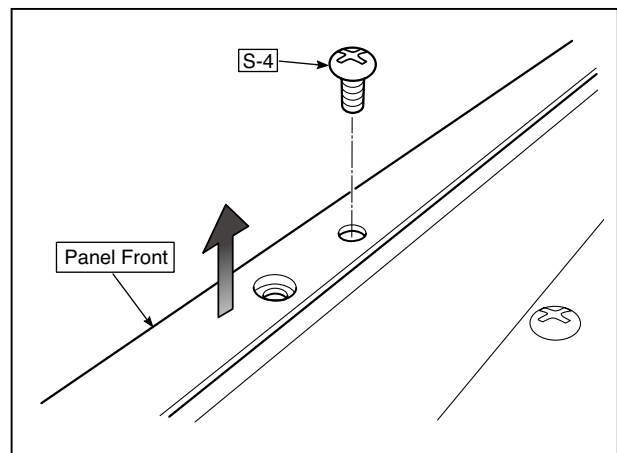


Fig.27

### 19) Remove the Panel Rear. (See Fig. 28 and 29)

1. Remove the "S-4" screws shown in the figure 28 and then remove the Panel Rear (U).
2. Remove the "S-4" screws shown in the figure 29 and then remove the Panel Rear (L).

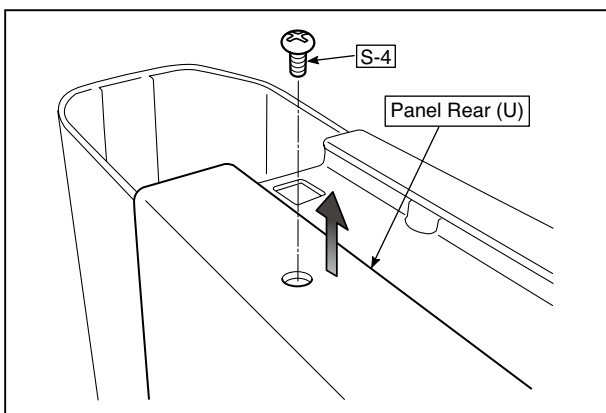


Fig.28

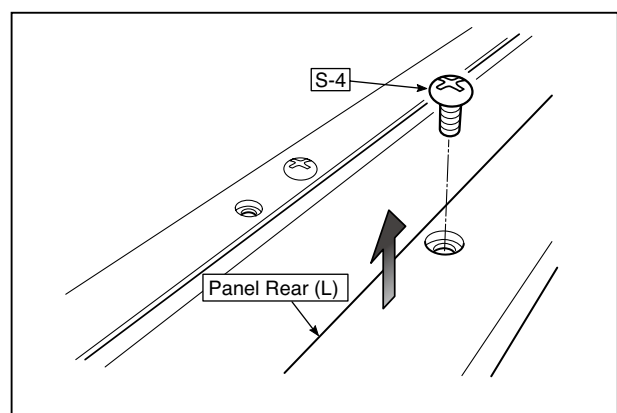


Fig.29

## DISASSEMBLY AND ASSEMBLY

### 20) Replace the Endless sheet.

1. Remove the "S-2" screws shown in the figure 30.
2. Remove the Panel Plate shown in the figure 31.
3. Remove the stopper "S-4" screws in the (two upper and lower) Tension Roller Bases shown in the figure 32.
4. Push the Tension Roller Base block shown in the figure 33 into the inside and fix the Tension Roller Bases.

#### Notes:

- Be careful not to damage or fold it when handing the Endless Sheet.
- Replace it by two persons during replacement of the Endless Sheet.

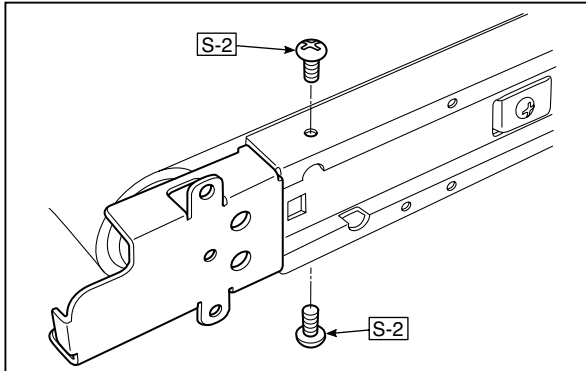


Fig.30

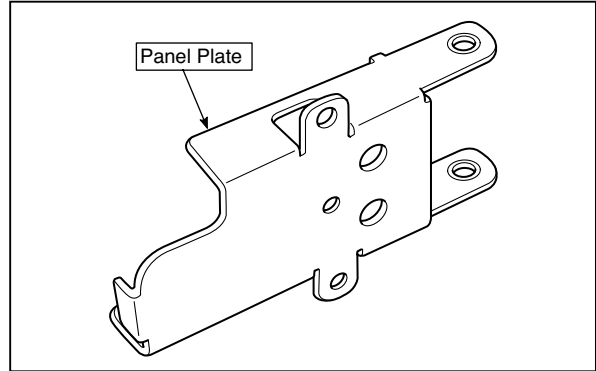


Fig.31

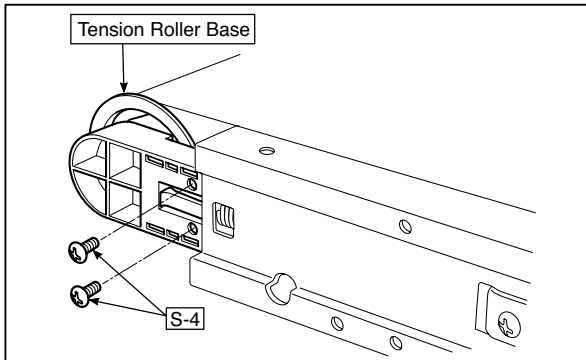


Fig.32

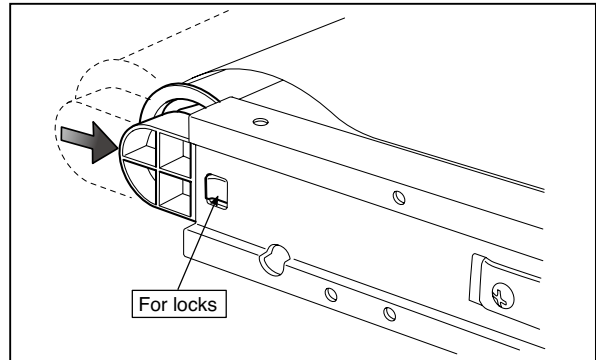


Fig.33

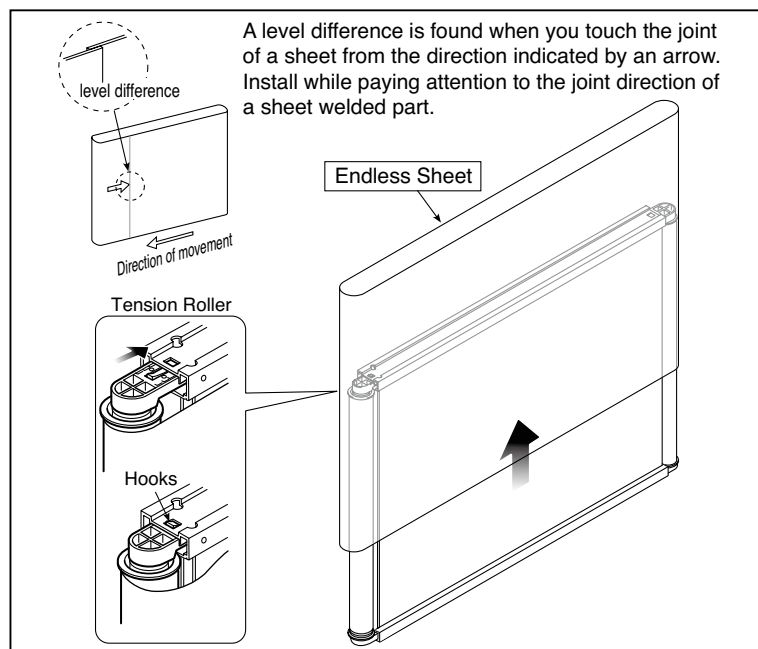


Fig.34

**21) Replace the Sheet Motor Unit. (See Fig. 35)**

1. Remove the "S-4" screws shown in the figure 35.
2. Disconnect the connector of the Sheet Motor Unit.

**Note:** Be careful not to interfere with the Sheet Guide Bar when installing the Sheet Motor Unit.

\*Doing so causes vibration or strange noise to occur.

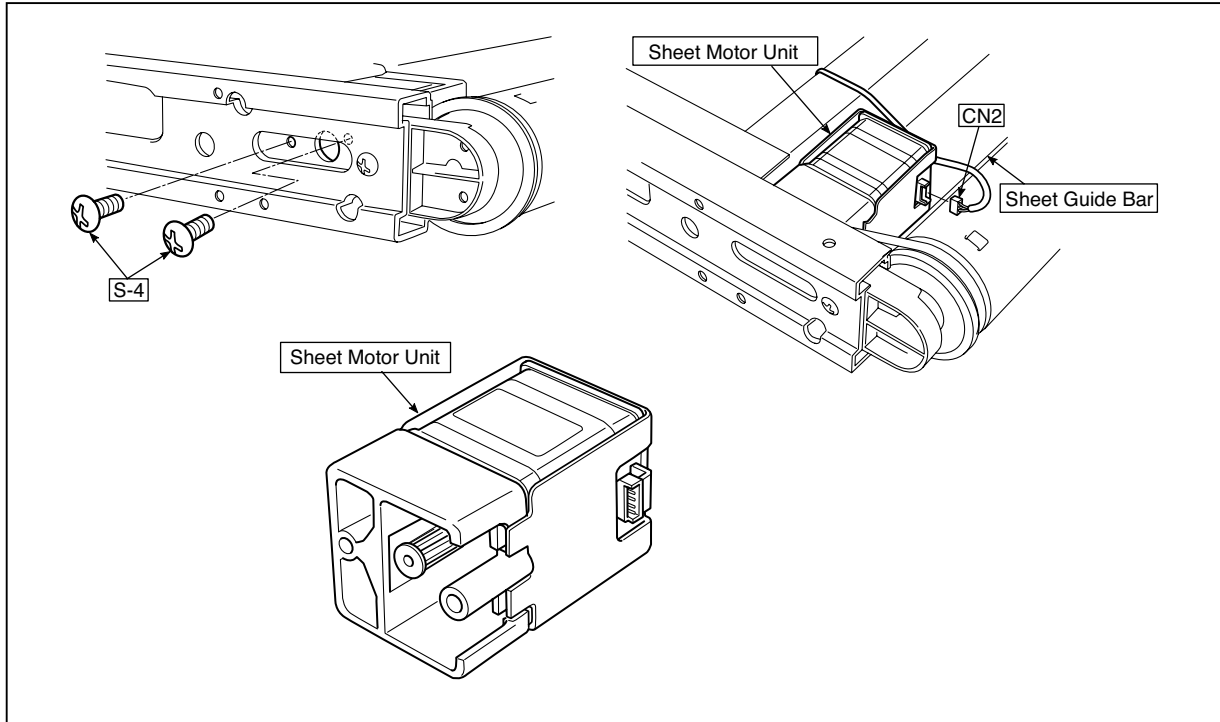


Fig.35

## 5. ADJUSTMENT

### 5-1. Calibration

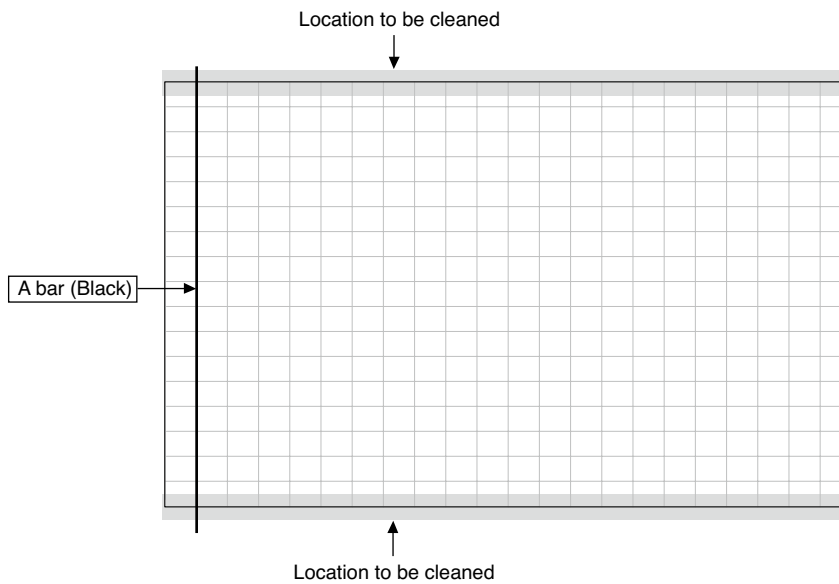
Calibration is required in the following cases.

- When a Main Board Assy is replaced
- When an Endless Sheet is replaced
- When a Sheet Frame Unit is replaced

For the replacement of a CIS Unit in the market, usually, use a unit that has been adjusted at a factory.

\* When any failure occurs in an image, be sure to replace the CIS Unit in case where no improvement is shown even if white level calibration is readjusted.

#### [Calibration]



#### [Preparation]

Enter one vertical line (black) between the upper and lower ends of an Endless Sheet.

\* Clean the Endless Sheet (the top and bottom outside a ruled line) and then perform calibration.

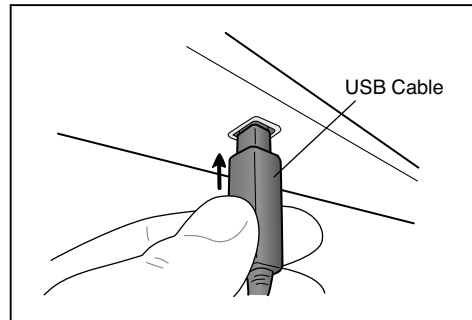
#### Calibration mode]

- Confirm that the Power ON lamp lights (in green).
- Press the Copy button (S)/L-size Geometric Print button (W) three times pressing the Copy key.  
→ The Power ON lamp lights (in orange).
- Press the Print key (S)/Compressed Print key (W).  
→ The Endless Sheet automatically moves. → Completed when the Status lamp lights (in green).
- The Power ON lamp lights (in orange).
- The Status lamp blinks (in green).
- Press the Feed/Stop key (common in S/W) once. → The Power ON lamp lights (in orange). Press the Feed/Stop key (common in S/W) again. → The current display returns to a normal mode when the Power ON lamp lights (in green).

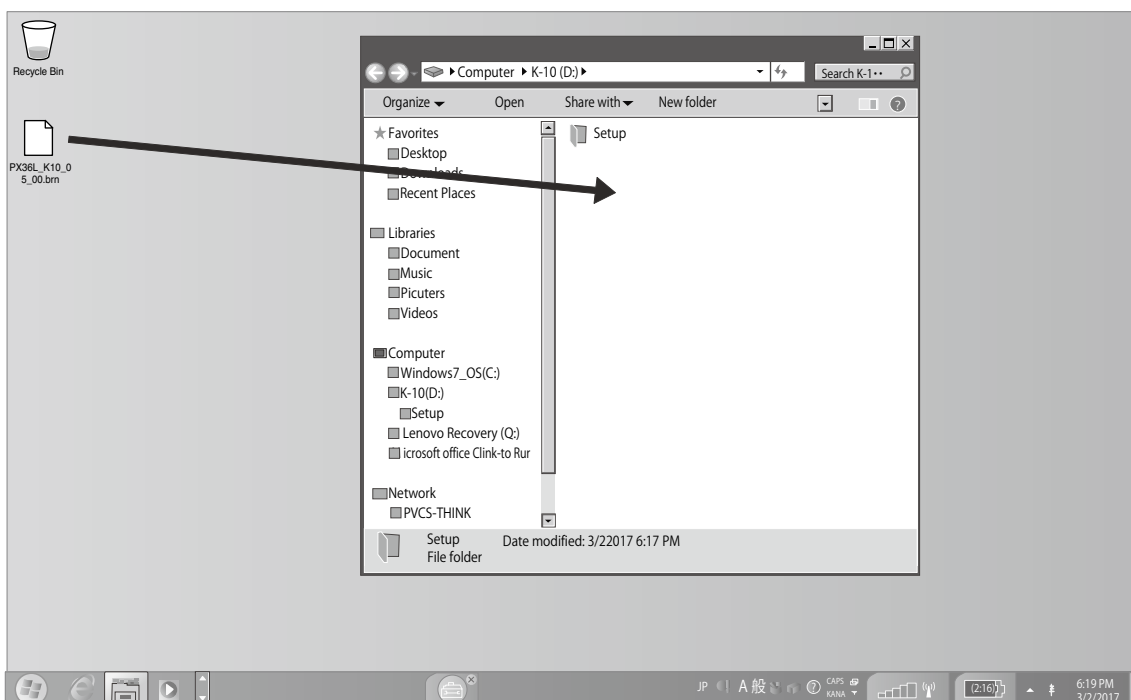
**5-2. Confirming (printing ) the firmware version**

**Equipment used: PC and USB cable (type A-B)**

- Download K-10 firmware and save it in PC.  
PX36L\_K10-\*\*.\*\*.brn
- 1. Confirm that the power of the main unit is turned on.
- 2. onnect the USB port of PC to that (type B) of the main unit using a USB cable.



- 3. Drag and drop the firmware below "setup folder" in the window of the removable disk of the main unit.  
→ Power ON lamp: Lights in red.



- 4. Press the Copy key.  
→ Status lamp: Blinks in green (during rewrite operation).  
→ Status lamp: Lights in green (during completion of rewrite operation).
- 5. Press the Feed/Stop button (S/W).
- 6. Press the Power key after about 10 seconds pass and confirm that the current display returns to a normal mode (the Power ON lamp lights in green).

## 6.DEVICE SETTINGS

### Device settings (Via USB)

**1. Turn on the unit's power and connect the USB port (Type B) and computer by USB cable.**

· The standard drivers are installed automatically, and the unit is recognized by the computer as a removable device.

**2. Launch Windows Explorer and open the removable device (this unit).**

Double-click on the removable device (this unit, displayed as "K-10") to open it.

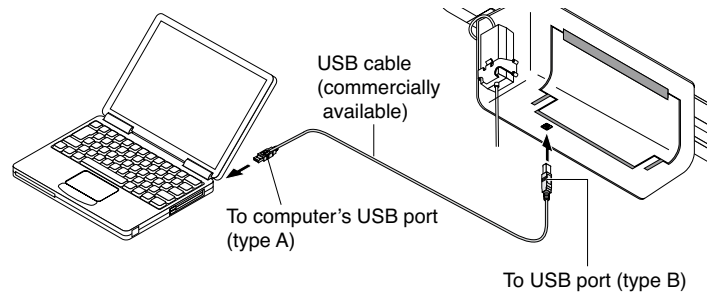
**3. Open the "setting.ini" file in the "setup" folder using the computer's Notepad application, etc.**

(1) Double-click the setup folder to open it.

(2) Open the "setting.ini" file (text format) located in this folder using the computer's Notepad application, etc., and rewrite the contents of the settings file directly.

\* Only single-byte numbers, the slash, colon, and equal signs can be entered. Do not use any spaces.

\* There is no function to save scan data to the computer via USB.



\* Use a commercially available A-B type USB cable.

```
Version=04.00
A4Page=1

Date=2016/11/14
Time=15:57:19
Format=0
DatePrint=1
Density=1
```

| Item                     | Item name | Setting value  | Initial setting                  |
|--------------------------|-----------|--|----------------------------------|
| Time setting             | Date      | (Example) Input in the following format:<br>2016/08/24<br>09:13:00 | Time currently set for the board |
|                          | Time      |  |                                  |
| Date format              | Format    | 0=YYYY/M/D<br>1=DD-MMM-YYYY<br>2=MMM-DD-YYYY                       | YYYY/M/D                         |
| Print date               | DatePrint | 0=NO<br>1=Yes  | Yes                              |
| Print density adjustment | Density   | 0=Thin<br>1=Normal<br>2=Darker                                     | Normal                           |

**4. Save (overwrite) the "setting.ini" setting file.**

Destination: This unit's (the removable device's) "setup" folder

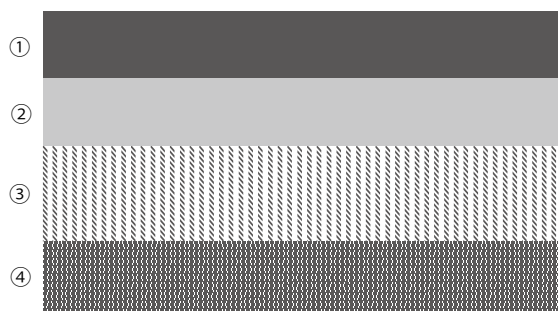
File name: setting.ini

\*To check the settings, reconnect the USB cable then open the "setting.ini" file again.

**Entering the Printer test mode]**

- Insert a DC plug into the DC input terminal at the rear of a Printer Unit while pressing the Repeat button and Feed/Stop button.  
⇒ The Power ON lamp blinks (in red).
- Output (four type of) print test patterns to the thermal recording paper.  
\*During printing, the Status lamp blinks (in green) simultaneously with when the Power ON lamp blinks (in red).

- ① Print (Copy) button: All black
- ② Copy (Geometric Print) button: Test print pattern 1
- ③ Repeat button: Test print pattern 2
- ④ Feed/Stop button: Test print pattern 3



To stop printing, press the Power button. → The Power ON lamp blinks (in red).

\*The same pattern is continuously printed when you do not press the Power button to stop printing.

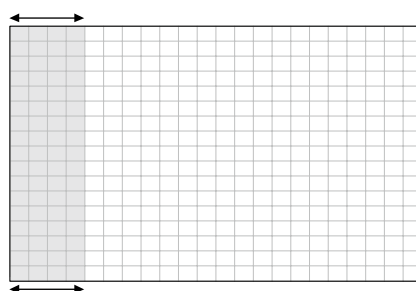
When a sudden rise in temperature is detected due to the continuous printing, the Status lamp is turned on and off (in orange) and any test printing cannot be performed until the temperature decreases.

To return to a normal mode, press the Power button. After paper is ejected, the Power lamp and Status lamp go off. Confirm that the Power ON lamp lights (in green).

**5. White level calibration**

Preparation

1. Clean the for-measure area on the left of an endless sheet.
2. Feed the endless sheet manually in the left direction by about three measures.



- Confirm that the Power ON lamp lights (in green).
- Press the Feed/Stop button while pressing the Copy key.  
→ The Power ON lamp blinks (in green).
- Press the Copy key once.
- The Power ON lamp blinks (in green).
- The Status lamp blinks (in green).
- The Power ON lamp blinks (in green) + the Status lamp lights (in green) : OK.
- The Power ON lamp blinks (in green) + the Status lamp lights (in red) : NG.
- Press the Feed/Stop button once for termination.  
→ The Power ON lamp lights (in green).
- \*The current display returns to a normal mode.

## DEVICE SETTINGS

---

### 6. Confirming (printing ) the firmware version

- Confirm that the power of the main unit is turned on. (Power ON lamp: Lights in green.)
- Press the Copy button (S)/L-size Geometric Print button (W) three times while pressing the Copy key.  
→ Power ON lamp: Lights in orange.
- Internal information (firmware version) is printed in thermal recording paper when you press the Repeat button (S/W)  
\*Internal information cannot be printed in thermal recording paper when a personal computer is connected with the main unit using a USB cable.  
“AppVersion:\*\*. \*\*” => “. \*\*.” in the upper third line of a printed result corresponds to the current firmware version.  
Power ON lamp: Lights in orange.  
Status lamp: Lights in green.
- Press the Feed/Stop button (S/W) two times to return to a normal mode. (Power ON lamp: Lights in green.)

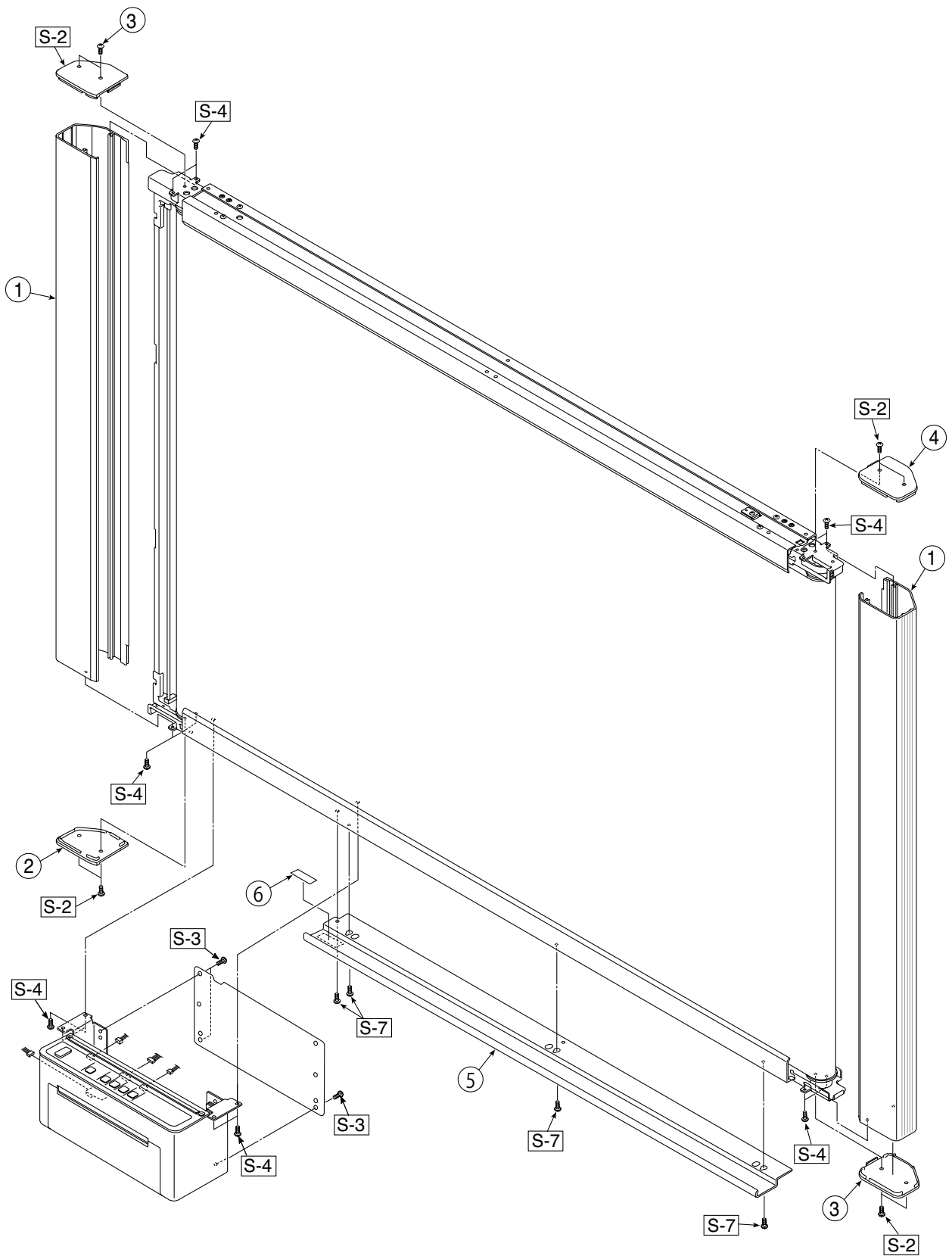
```
Model : K-10
Boot Version : 01 . 01
App Version : 05 . 00
Printer Version : 02 . 00
Specitication : PLUS Standard Specification
Width : 3456
Length : 2496
Motor Step : 45622
```





# 8. PARTS LIST

## 1. PANEL SIDE



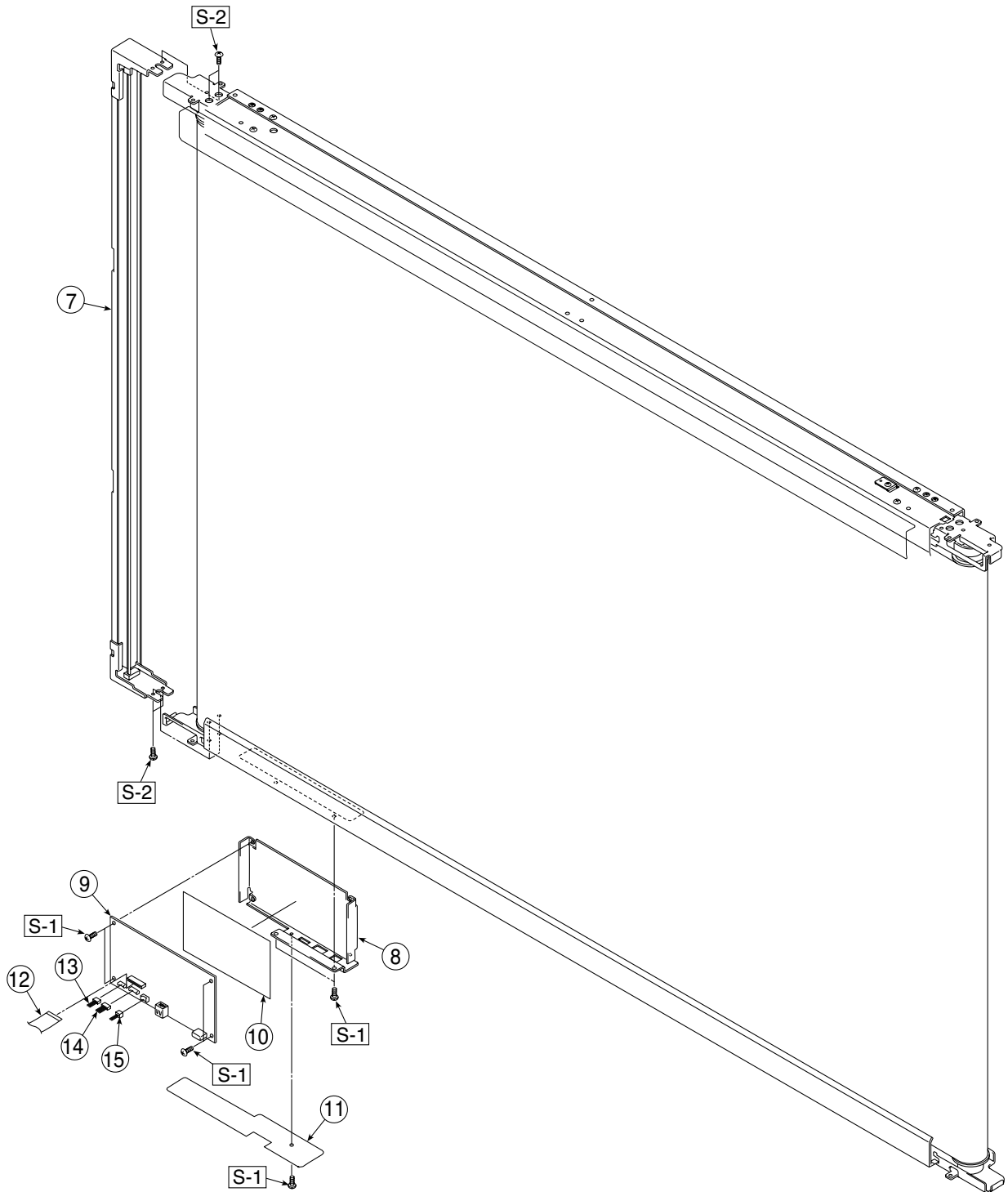
## PARTS LIST

---

| 1. PANEL SIDE |                         |           |       |                  |
|---------------|-------------------------|-----------|-------|------------------|
| No            | PARTS NAME              | PARTS No. | Q' ty | REMARK           |
| 1             | Panel Side R            | 726110200 | 2     | N-20/C-20 common |
| 2             | Frame Cap C             | 732120500 | 1     | K-10 Only        |
| 3             | Frame Cap B N-21/C-21   | 726128100 | 2     |                  |
| 4             | Frame Cap A N-21/C-21   | 726127900 | 1     |                  |
| 5             | Tray S K-10             | 732120100 | 1     | K-10S Only       |
|               | Tray W K-10             | 732120200 | 1     | K-10W Only       |
| 6             | Caution Label N-31(O/S) | 726163400 | 1     | N-31 common      |

# PARTS LIST

## 2. MAIN BOARD. CIS UNIT. CABLE

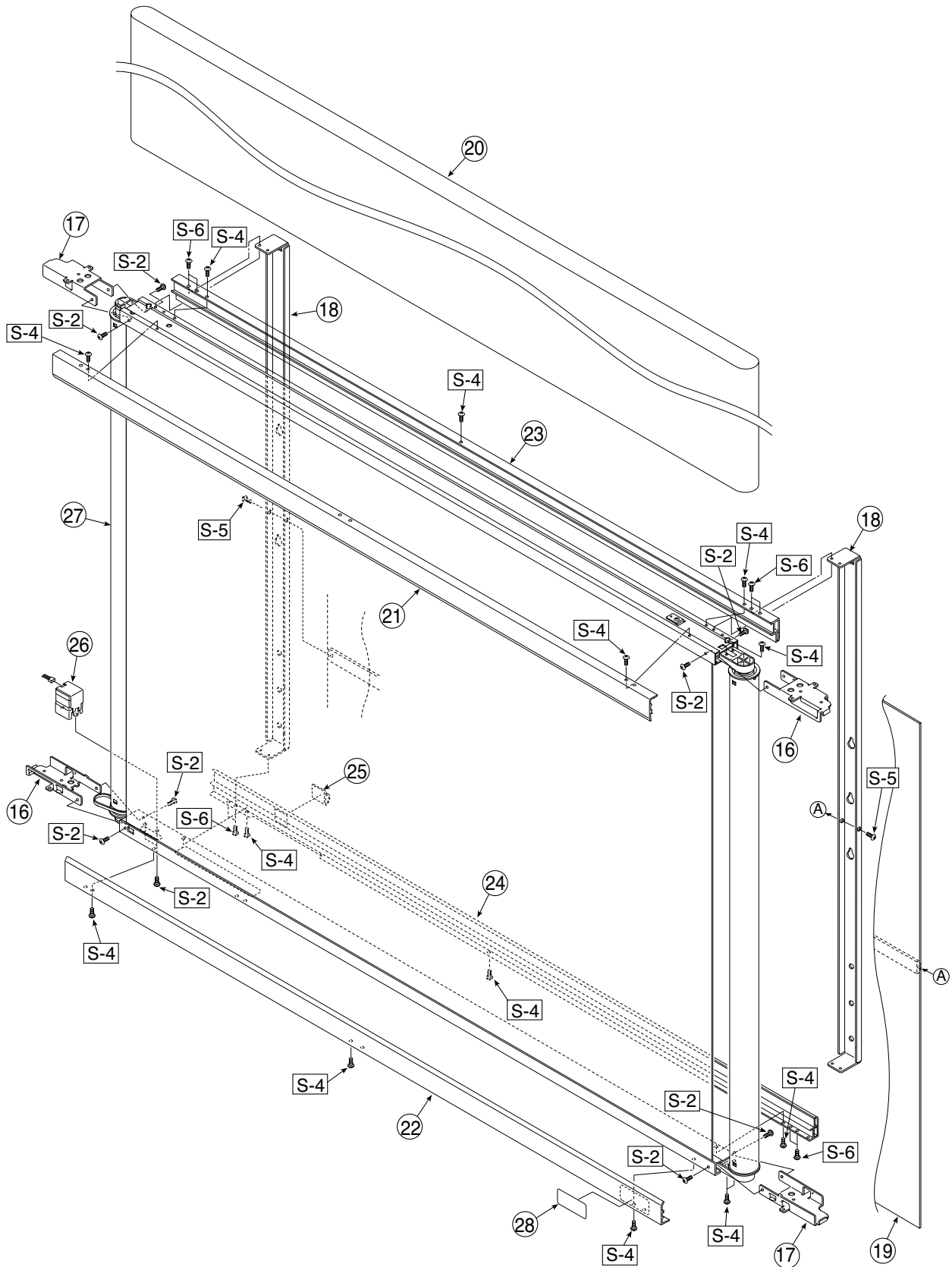


**PARTS LIST**

| <b>2. MAIN BOARD. CIS UNIT. CABLE</b> |                   |                  |              |                  |
|---------------------------------------|-------------------|------------------|--------------|------------------|
| <b>No</b>                             | <b>PARTS NAME</b> | <b>PARTS No.</b> | <b>Q' ty</b> | <b>REMARK</b>    |
| 7                                     | CIS UNIT          | 302008           | 1            | 726090008        |
| 8                                     | Main Board Shield | 726135500        | 1            | N-20/C-20 common |
| 9                                     | Main Board K-10   | 732581700        | 1            | K-10 Only        |
| 10                                    | Main Board Sheet  | 726951100        | 1            | M-18/N-20 common |
| 11                                    | Cabel Cover K-10  | 732121000        | 1            | K-10 Only        |
| 12                                    | CIS Cable         | 726590200        | 1            | M-18/N-20 common |
| 13                                    | Motor Cable       | 726590100        | 1            | M-18/N-20 common |
| 14                                    | M-P Cable SW      | 732580500        | 1            | K-10 Only        |
| 15                                    | M-P Cable USB     | 732580400        | 1            | K-10 Only        |

# PARTS LIST

## 3. SHEET FRAME

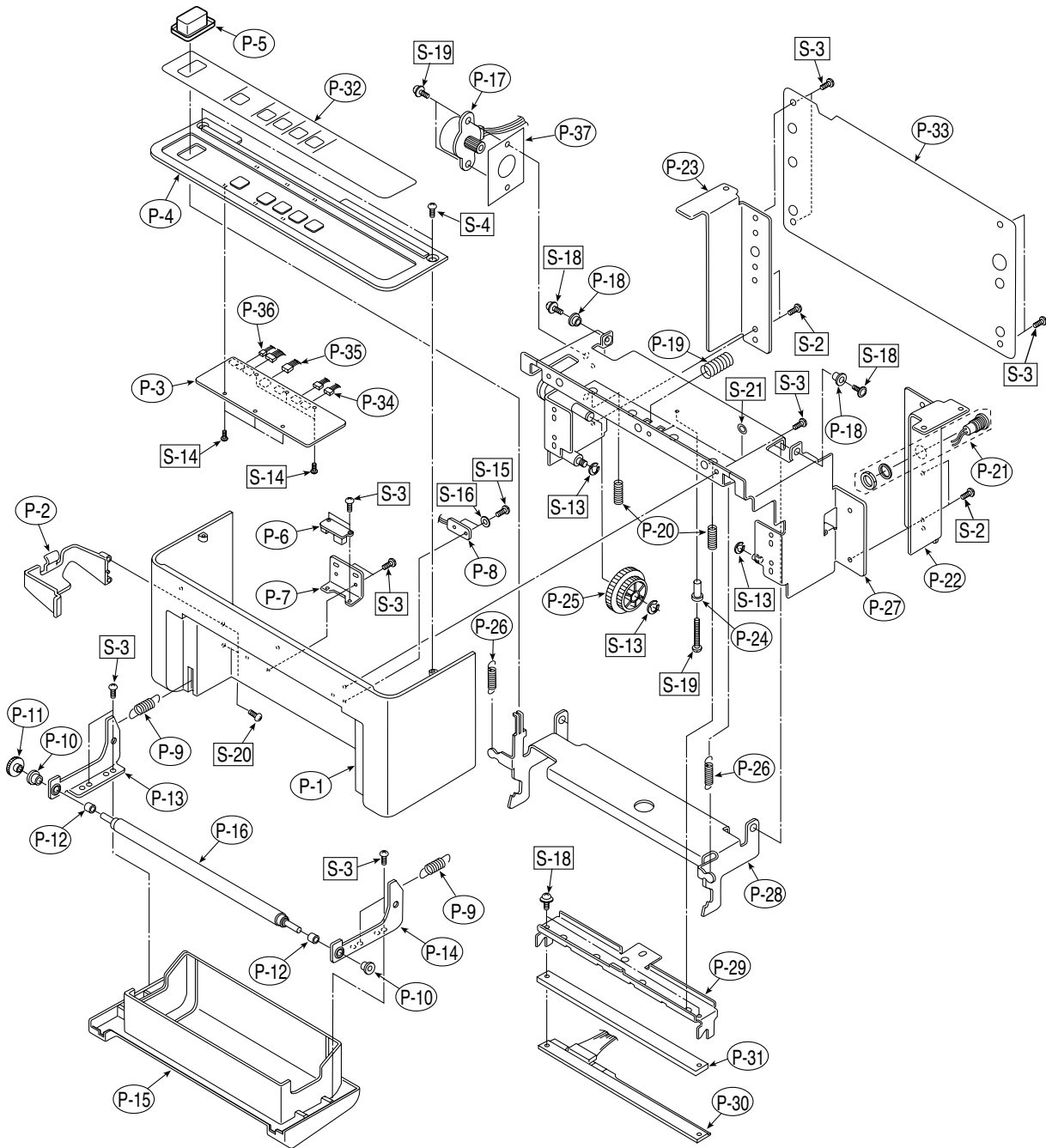


**PARTS LIST**

| <b>3. SHEET FRAME</b> |                                    |                  |              |                   |
|-----------------------|------------------------------------|------------------|--------------|-------------------|
| <b>No</b>             | <b>PARTS NAME</b>                  | <b>PARTS No.</b> | <b>Q' ty</b> | <b>REMARK</b>     |
| 16                    | Panel Plate A                      | 726130100        | 2            | M-18/N-20 common  |
| 17                    | Panel Plate B                      | 726130201        | 2            | M-18/N-20 common  |
| 18                    | Rear Frame                         | 726310100        | 2            | M-18/N-20 common  |
| 19                    | Back Panel UNIT S                  | 302001           | 1            | 726090001         |
|                       | Back Panel UNIT W                  | 302002           | 1            | 726090002         |
| 20                    | Endless Sheet S M-18/N-20          | 302005           | 1            | 726090005         |
|                       | Endless Sheet W M-18/N-20          | 302006           | 1            | 726090006         |
| 21                    | Panel Front S Upper N-31           | 726118700        | 1            | N-31/N-314 common |
|                       | Panel Front W Upper N-31           | 726118800        | 1            | N-31 common       |
| 22                    | Panel Front S Lower K-10           | 732117500        | 1            | K-10S Only        |
|                       | Panel Front W Lower K-10           | 732117600        | 1            | K-10W Only        |
| 23                    | Panel Rear S Upper N-20/N-204/C-20 | 726120900        | 1            |                   |
|                       | Panel Rear W Upper N-20/C-20       | 726121200        | 1            |                   |
| 24                    | Panel Rear S Lower K-10            | 732121700        | 1            | K-10 Only         |
|                       | Panel Rear W Lower K-10            | 732121800        | 1            | K-10 Only         |
| 25                    | Cabel Clamp                        | 726129100        | 1            | M-18/N-20 common  |
| 26                    | Sheet Motor UNIT                   | 726090007        | 1            | M-18/N-20 common  |
| 27                    | Sheet Frame UNIT S K-10            | 302065           | 1            | 726090065         |
|                       | Sheet Frame UNIT W K-10            | 302066           | 1            | 726090066         |
| 28                    | Cleaning Label N-31(OS)            | 726163400        | 1            | N-31 common       |

# PARTS LIST

## 4. PRINTER UNIT SECTION



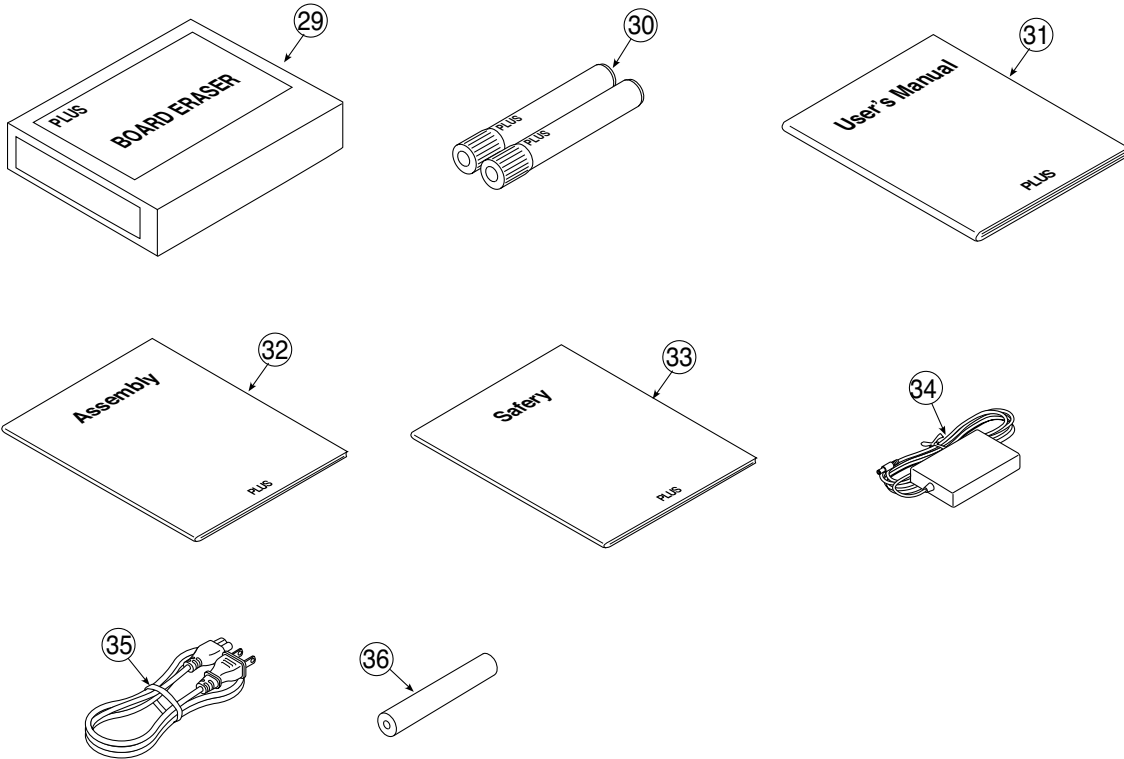


**PARTS LIST**

| <b>4. PRINTER UNIT SECTION</b> |                         |                  |              |                         |
|--------------------------------|-------------------------|------------------|--------------|-------------------------|
| <b>No</b>                      | <b>PARTS NAME</b>       | <b>PARTS No.</b> | <b>Q' ty</b> | <b>REMARK</b>           |
| -                              | Printer Unit K-10       | 302060           | 1            | 726090060               |
| P-1                            | Printer Cover K-10      | 732120600        | 1            | K-10 Only               |
| P-2                            | Adapter Box K-10        | 732120800        | 1            | K-10 Only               |
| P-3                            | Thermal Printer Board   | 732580100        | 1            | K-10 Only               |
| P-4                            | Printer Top Cover       | 732120700        | 1            | K-10 S/W common         |
| P-5                            | Cover Button            | 732120900        | 1            | K-10 Only               |
| P-6                            | USB Board Assy          | 726580200        | 1            | M-18/N-20 common        |
| P-7                            | USB Board Base Plate    | 732130400        | 1            | K-10 Only               |
| P-8                            | PE Sensor Board         | 732580200        | 1            | K-10 Only               |
| P-9                            | Front Cover Spring      | 714141700        | 2            | BF-041S/W common        |
| P-10                           | Oiles Bushing           | 716100200        | 2            | BF-041S/W common        |
| P-11                           | Platen Gear             | 714140800        | 1            | BF-041S/W common        |
| P-12                           | Platen Coller           | 714140700        | 2            | BF-041S/W common        |
| P-13                           | Hinge Plate (R)         | 714341104        | 1            | BF-041S/W common        |
| P-14                           | Hinge Plate (L)         | 714341404        | 1            | BF-041S/W common        |
| P-15                           | Front Cover Unit K-10   | 726090063        | 1            | K-10 Only               |
| P-16                           | Platen Roller K-10      | 732150700        | 1            | K-10 Only               |
| P-17                           | Printer Motor Assy (42) | 732580900        | 1            | K-10 Only               |
| P-18                           | Lock Base Collar        | 714131400        | 2            | BF-041S/W common        |
| P-19                           | Thermal Head Spring (A) | 714131100        | 1            | BF-041S/W common        |
| P-20                           | Thermal Head Spring     | 714131200        | 2            | BF-041 common           |
| P-21                           | DC Jack Assy            | 732580300        | 1            | K-10 Only               |
| P-22                           | Printer Plate (L)       | 732130100        | 1            | K-10 Only               |
| P-23                           | Printer Plate (R)       | 732130200        | 1            | K-10 Only               |
| P-24                           | Thermal Head Collar     | 714131000        | 1            | BF-041S/W common        |
| P-25                           | Middle Gear             | 714130800        | 1            | BF-041S/W common        |
| P-26                           | Lock Spring             | 714131500        | 2            | BF-041S/W common        |
| P-27                           | Printer Frame K-10      | 732131000        | 1            | K-10 Only               |
| P-28                           | Lock Base               | 714331305        | 1            | BF-041S/W common        |
| P-29                           | Thermal Head Base K-10  | 732131100        | 1            | K-10 Only               |
| P-30                           | Thermal Head Unit K-10  | 726090064        | 1            | With Thermal Head Cable |
| p-31                           | Thrmal Head Spacer      | 732110100        | 1            | K-10 Only               |
| P-32                           | SW Sheet K-10 S (O/S)   | 732150600        | 1            | K-10S Only (O/S)        |
|                                | SW Sheet K-10W (O/S)    | 732150900        | 1            | K-10W Only (O/S)        |
| P-33                           | Printer Back Panel K-10 | 732121900        | 1            | K-10 Only               |
| P-34                           | P-M DC Cable K-10       | 732580800        | 1            | K-10 Only               |
| P-35                           | Thermal Head Cable K-10 | 732580600        | 1            | K-10 Only               |
| P-36                           | Paper Sensor Board K-10 | 732580700        | 1            | K-10 Onry               |
| P-37                           | Printer Motor Packing   | 741495400        | 1            |                         |

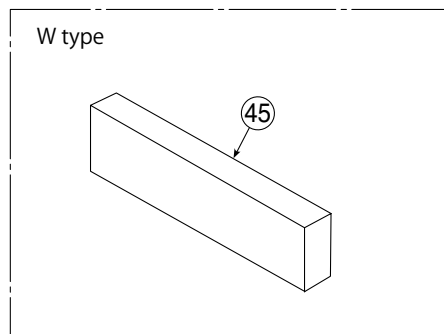
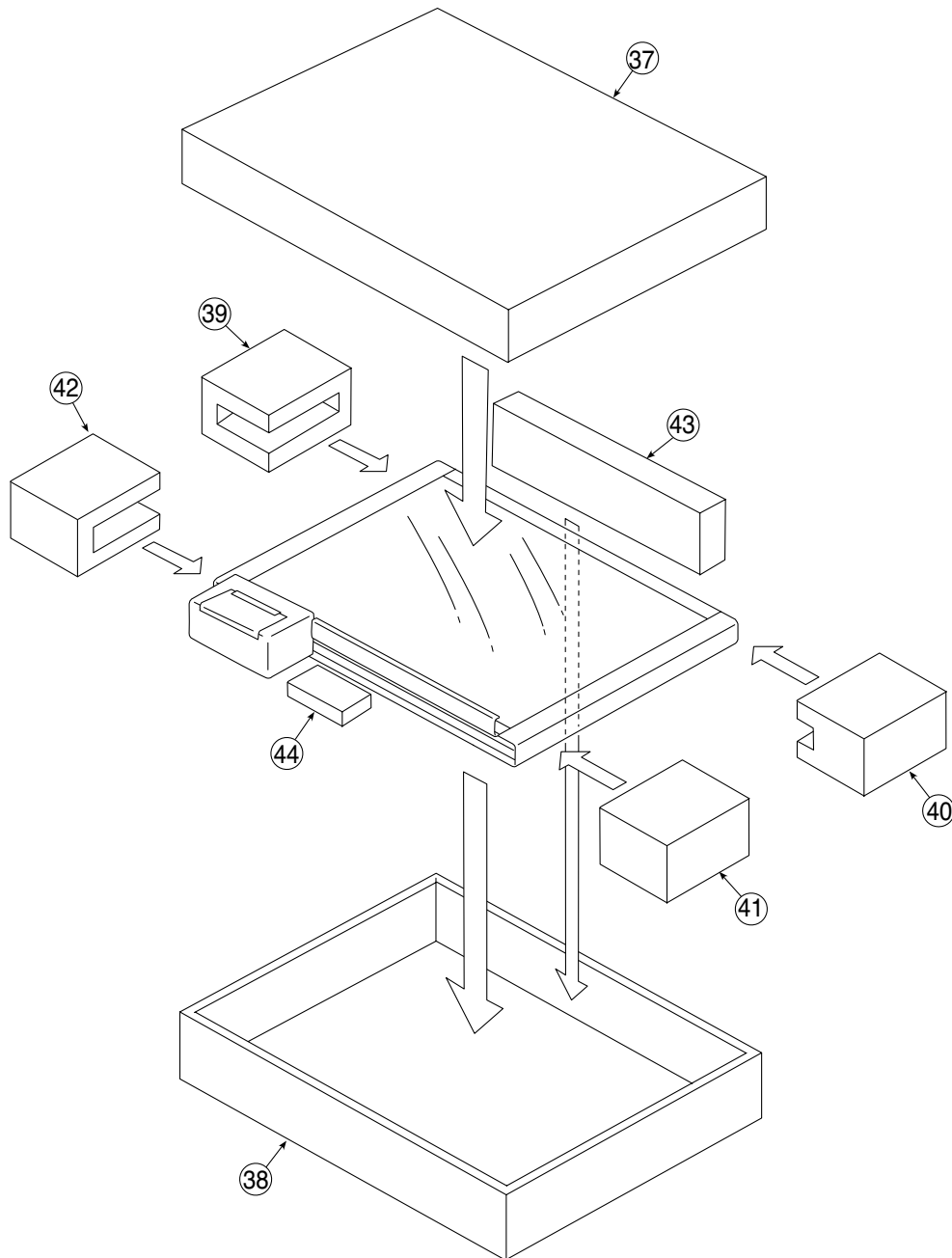
## PARTS LIST

### 5. ACCESSORIES



| 5. ACCESSORIES |                            |           |       |                  |
|----------------|----------------------------|-----------|-------|------------------|
| No             | PARTS NAME                 | PARTS No. | Q' ty | REMARK           |
| 29             | Eeaser ER-44369            | 44-369    | 1     |                  |
| 30             | Marker Set                 | -         | 1     | No Parts Supply  |
| -              | Marker Black               | 423283    | 1     |                  |
| -              | Marker Red                 | 423284    | 1     |                  |
| 31             | Manyual (O/S) K-10         | 732460400 | 1     | K-10 Only        |
| 32             | Assembly Manual K-10 (O/S) | 732460300 | 1     | K-10 Only        |
| 33             | Safety Guide               | 726460800 | 1     |                  |
| 34             | AC Adapter                 | 732590100 | 1     | K-10 Only        |
| 35             | Power Cable (2.5m) BS      | 715259300 | 1     |                  |
|                | Power Cable (2.5m) CEE     | 715259200 | 1     |                  |
|                | Power Cable (2.5m) SAA     | 715259500 | 1     |                  |
|                | Power Cable (2.5m) UL      | 715259400 | 1     |                  |
|                | Power Cable (2.5m) GB      | -         | 1     | No Parts Supply  |
|                | Power Cable (2.5m) EK      | 715261300 | 1     | South Korea Only |
| 36             | Thermal Roll Paper A4(30m) | -         | 1     | No Parts Supply  |

6. CARTON



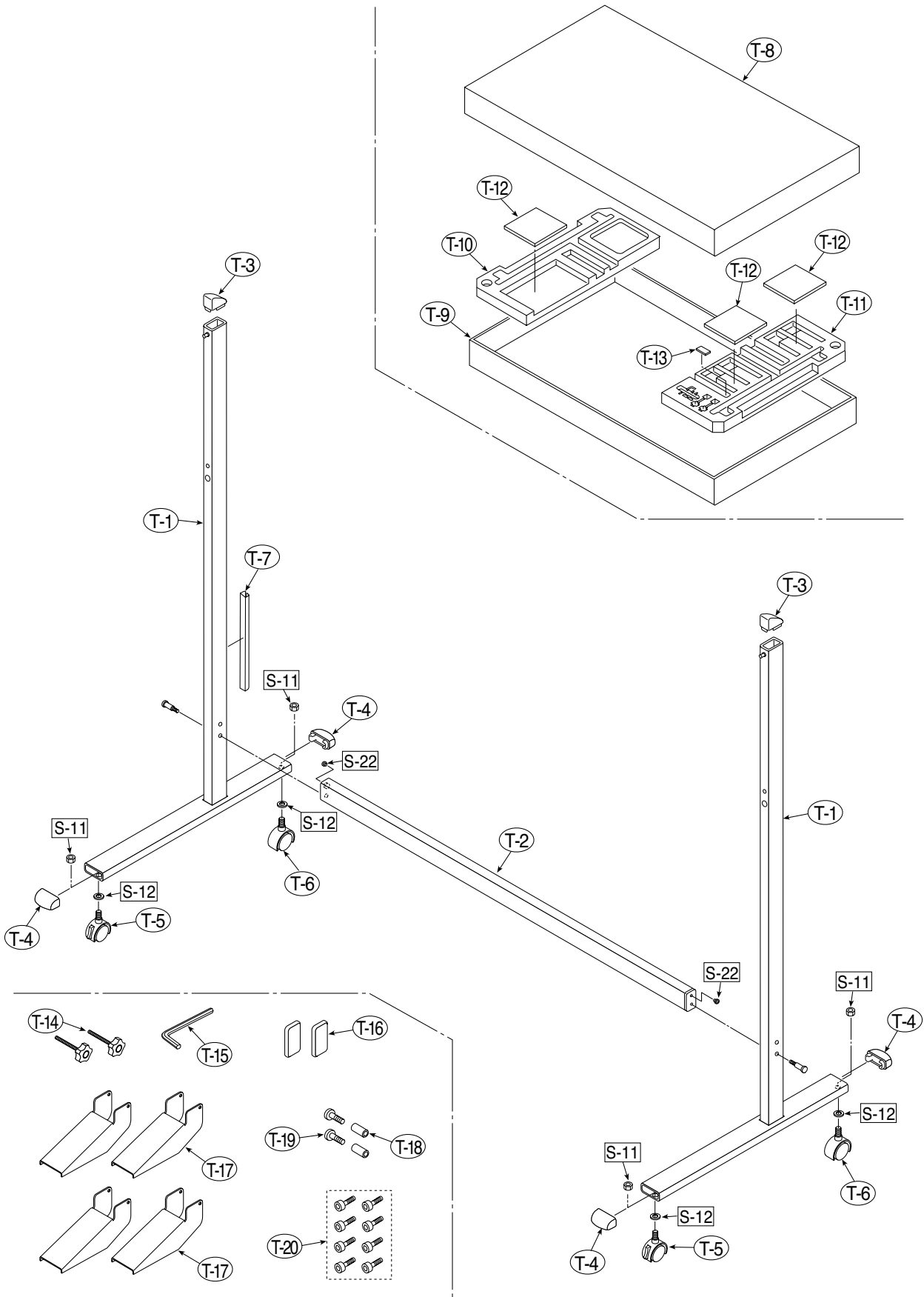
## PARTS LIST

---

| 6. CARTON |                     |           |       |                 |
|-----------|---------------------|-----------|-------|-----------------|
| No        | PARTS NAME          | PARTS No. | Q' ty | REMARK          |
| 37        | Carton Upper S K-10 | -         | 1     | No Parts Supply |
|           | Carton Upper W K-10 | -         | 1     | No Parts Supply |
| 38        | Carton Lower S      | -         | 1     | No Parts Supply |
|           | Carton Lower W      | -         | 1     | No Parts Supply |
| 39        | Packing A           | -         | 1     | No Parts Supply |
| 40        | Packing B           | -         | 1     | No Parts Supply |
| 41        | Packing C           | -         | 1     | No Parts Supply |
| 42        | Packing D           | -         | 1     | No Parts Supply |
| 43        | Accessory Box K-10S | -         | 1     | No Parts Supply |
| 44        | Spacer W            | -         | 1     | W Type Only     |
| 45        | Packing E           | -         | 1     | No Parts Supply |

PARTS LIST

7. M-18-ST



## PARTS LIST

| 7. M-18-ST |                                    |           |       |                    |
|------------|------------------------------------|-----------|-------|--------------------|
| No         | PARTS NAME                         | PARTS No. | Q' ty | REMARK             |
| T-1        | T Stand(O/S)                       | -         | 2     | No Parts Supply    |
| T-2        | Side Bar                           | 732343000 | 1     |                    |
| T-3        | Stand Cap Upper                    | 726321200 | 2     | M-18/N-20-T common |
| T-4        | Stand Cap Lower                    | 726321100 | 4     | M-18/N-20-T common |
| T-5        | Front Caster                       | 714660400 | 2     | M-18/N-20-T common |
| T-6        | Back Caster                        | 714660500 | 2     | M-18/N-20-T common |
| T-7        | Cable Cover (Stand)                | 726129200 | 1     |                    |
| -          | Carton Unit (Stand) M-18-ST        | -         | 1     | No Parts Supply    |
| T-8        | Stand Carton Upper (O/S)           | -         | 1     | No Parts Supply    |
| T-9        | Stand Carton Lower (O/S)           | -         | 1     | No Parts Supply    |
| T-10       | Stand Packing A                    | -         | 2     | No Parts Supply    |
| T-11       | Stand Packing B                    | -         | 1     | No Parts Supply    |
| T-12       | Stand Packing C                    | -         | 1     | No Parts Supply    |
| T-13       | Stand Packing D                    | -         | 1     | No Parts Supply    |
| T-14       | Fixed Knob                         | 715204500 | 2     |                    |
| T-15       | Hexagon Wrench M3                  | 959030050 | 1     | M-18/N-20-T common |
| T-16       | Screw Cap                          | 726334500 | 1     | M-18/N-20-T common |
| T-17       | Stand Stabiliser                   | 726334700 | 4     | M-18/N-20-T common |
| -          | Screw Unit(Stand) M-18/N-20-T(O/S) | 726090014 | 1     | M-18/N-20-T common |
| T-18       | M5 Coller                          | -         | 4     | No Parts Supply    |
| T-19       | M5-40 Low Head Hexagon Boit        | -         | 2     | No Parts Supply    |
| T-20       | M5-8 Thin Head Hexagon Bolt        | 964250870 | 8     |                    |

**PARTS LIST**

| <b>8. SCREW &amp; WASHER</b> |  |                  |              |               |
|------------------------------|--|------------------|--------------|---------------|
| <b>No</b>                    | <b>PARTS NAME</b>                              | <b>PARTS No.</b> | <b>Q' ty</b> | <b>REMARK</b> |
| S-1                          | M3-6 Cross Recessed Pan Head Double Sems       | 952530610        | 5            |               |
| S-2                          | M4-8 Cross Recessed Low Head                   | 961540810        | 24           |               |
| S-3                          | M3-8 P-tight Cross Recessed Bind Head          | 963230810        | 14           |               |
| S-4                          | M4-12 Cross Recessed Low Head                  | 963941210        | 26           |               |
| S-5                          | M4-40 B-tight Cross Recessed Bind Head         | 963444010        | 2            |               |
| S-6                          | M4-10 Cross Recessed Pan Head Sems             | 962141010        | 10           |               |
| S-7                          | M4-20 P-tight Cross Recessed Truss Head        | 963742010        | S:3/W:4      |               |
| S-8                          | M5 Flat Washer $\varphi$ 5.5 $\varphi$ 10T:1.0 | 957150930        | 2            |               |
| S-9                          | M4-8 Cross Recessed Bind Head                  | 951240850        | 4            |               |
| S-10                         | M5-40 Low Head Hexagon Bolt                    | 964254070        | 2            |               |
| S-11                         | W3/8 Hexagon Nut                               | 965216810        | 4            |               |
| S-12                         | No2-10 Flat Washer                             | 957210210        | 4            |               |
| S-13                         | E-Ring $\varphi$ 4                             | 958140010        | 3            |               |
| S-14                         | M3-6 P-Tight Cross Recessed Binding Head       | 953230610        | 6            |               |
| S-15                         | M2-5 P-Tight Cross Recessed Binding Head       | 963220530        | 2            |               |
| S-16                         | Flat Washer $\varphi$ 2.3- $\varphi$ 6         | 967120630        | 2            |               |
| S-17                         | M3-25 Cross Recessed 3-Point Type Screw        | 952532510        | 1            |               |
| S-18                         | M3-10 Cross Recessed 3-Point Type Screw        | 952531010        | 4            |               |
| S-19                         | M3-6 Cross Recessed Bind Head                  | 951230610        | 2            |               |
| S-20                         | M4-10 P-tight Pan Head                         | 953141010        | 2            |               |
| S-21                         | Cover Coller                                   | 732121400        | 3            |               |
| S-22                         | M5-20 Hexagon Bolt                             | 964352050        | 2            |               |

**PLUS Corporation  
Stationery Company**