Copyboard

M-18S/M-18W
M-17S/M-17W

SERVICE MANUAL

PLUS

02.04.2012. Ver.1.0

CONTENTS

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.

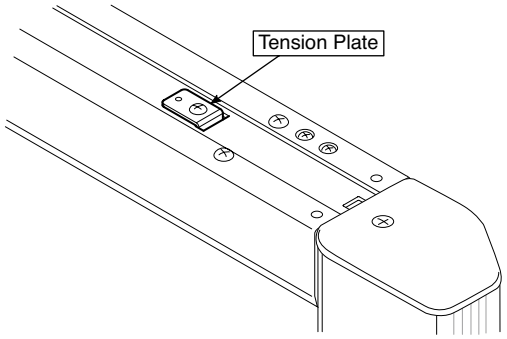
1-1. Cautions during Product Movement

• 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)			**Standard (M-18S)**	**Wide (M-18W)**
Form	Installation method		Self-standing (T-shaped legs), or wall mounting	
	External dimensions (T-shaped legs*1)		W1480 × D675 × H1947*2 mm	W1980 × D675 × H1947*2 mm
	Main unit weight		20 kg*3	25 kg*3
	T-shaped legs weight		10.5 kg	
Board	Panel size		H910 × W1300 mm	H910 × W1800 mm
	Effective reading size		H900 × W1280 mm	H900 × W1780 mm
	Number of Pages		2	
	Paging		Endless in one direction (Horizontal scrolling)	
	Drive method		Sheet movement	
	Reading method		CIS (Contact Image Sensor)	
	Reading illumination light source		RGB LED	
	Reading resolution		Main scanning direction (vertical sheet surface) 1.92 dots/mm (50 dpi or equivalent) Sub scanning direction (horizontal sheet surface) 1.92 dots/mm (50 dpi or equivalent)	
	Reading time		Black & white: approx. 15 s Color: approx. 15 s	Black & white: approx. 21 s Color: approx. 21 s
Interface	Board	File format	JPEG format	
		Screen size	Standard type: 2458 x 1728 dots (fixed) Wide type: 3418 x 1728 dots (fixed)	
	External memory	Type	USB Flash memory	
		Compatible FAT types	FAT 16, 32	
		Interface	USB1.1 or USB2.0 *4	
	Printing	Printing resolution	300 dpi or equivalent	
		No. print colors	16 or grayscale	
		Printer interface	Conforming to USB 2.0 standards	
Added functions	Clock		Used for the timestamp and for file dating properties (Includes backup battery for when there is a loss of power. Battery life: Approx. 00 hours)	
	PC connection		Images can be acquired and device settings made via USB (using a browser)	
Power supply	AC power adapter		Input : AC100–240V/50–60 Hz, Max 0.75 A Output : DC 12 V, 3.0 A	
	PC consumption		In standby: 3W, During operation: 12W (not including printer)	
Operating conditions	Temperature:		10–35°C	
	Humidity:		30–85% (No condensation)	
Miscellaneous	Ruled lines		50 mm cross-ruled squares	
	Miscellaneous		Dedicated markers (black, red, blue, and green)	
Operating environment	OS		Microsoft Windows 2000 Professional (Service Pack 4 or greater)/ XP (Home Edition /Professional Edition, Service Pack 2 or greater)/ Vista (32-bit version), Windows7 (32-bit/64-bit version) Or, Apple Macintosh computer with standard USB port Mac OS X 10.5 or greater	
	Web browser		Windows :I nternet Explorer 6.0 or greater Macintosh : Safari 4 or greater * With Adobe Flash Player 10 installed	

Remarks

*1: The height is adjustable at 1747, 1847 and 1947 mm.

*2: The value indicated for “H” (height) is the maximum height.

*3: Not including the weight of the printer.

*4: USB Memory device not included. The memory capacity corresponds to 32GB or less.

• Please note that for quality improvement purposes, specifications and design are subject to change without prior notice.

2-2. Product Specifications

BOARD TYPE (Model name)			Standard (M-17S)	Wide (M-17W)
Form	Installation method		Self-standing (T-shaped legs), or wall mounting	
	External dimensions (T-shaped legs*1)		W1480 × D675 × H1947*2 mm	W1980 × D675 × H1947*2 mm
	Main unit weight		15 kg*3	20 kg*3
	T-shaped legs weight		12.5 kg	
Board	Panel size		H910 × W1300 mm	H910 × W1800 mm
	Effective reading size		H900 × W1280 mm	H900 × W1780 mm
	Number of Pages		2	
	Paging		Endless in one direction (Horizontal scrolling)	
	Drive method		Sheet movement	
	Reading method		CIS (Contact Image Sensor)	
	Reading illumination light source		RGB LED	
	Reading resolution		Main scanning direction (vertical sheet surface) 1.92 dots/mm (50 dpi or equivalent) Sub scanning direction (horizontal sheet surface) 1.92 dots/mm (50 dpi or equivalent)	
	Reading time		Black & white: approx. 15 s	Black & white: approx. 21 s
Interface	Board	File format	JPEG format (or PDF format *4	
		Screen size	Standard type: 2458 x 1728 dots (fixed) Wide type: 3418 x 1728 dots (fixed)	
	External memory	Type	USB Flash memory	
		Compatible FAT types	FAT 16, 32	
		Interface	USB1.1 or USB2.0 *5	
	Printing	Printing resolution	300 dpi or equivalent	
		No. print colors	Monochrome	
		Printer interface	Conforming to USB 2.0 standards	
Added functions	Clock		Used for the timestamp and for file dating properties (Includes backup battery for when there is a loss of power. Battery life: Approx. 00 hours)	
	PC connection		Images can be acquired and device settings made via USB (using a browser)	
Power supply	AC power adapter		Input : AC100–240V/50–60 Hz, Max 0.75 A Output : DC 12 V, 3.0 A	
	PC consumption		In standby: 3W, During operation: 12W (not including printer)	
Operating conditions	Temperature:		10–35°C	
	Humidity:		30–85% (No condensation)	
Miscellaneous	Ruled lines		50 mm cross-ruled squares	
	Miscellaneous		Dedicated markers (black, red, blue, and green)	
Operating environment	OS		Microsoft Windows 2000 Professional (Service Pack 4 or greater)/ XP (Home Edition /Professional Edition, Service Pack 3 or greater)/ Vista (32-bit version), Windows7 (32-bit/64-bit) Or, Apple Macintosh computer with standard USB port Mac OS X 10.5 or greater	
	Web browser		Windows :I nternet Explorer 8.0 or greater Macintosh : Safari 5 or greater *Enable JavaScript. * With Adobe Flash Player 10 installed	

Remarks

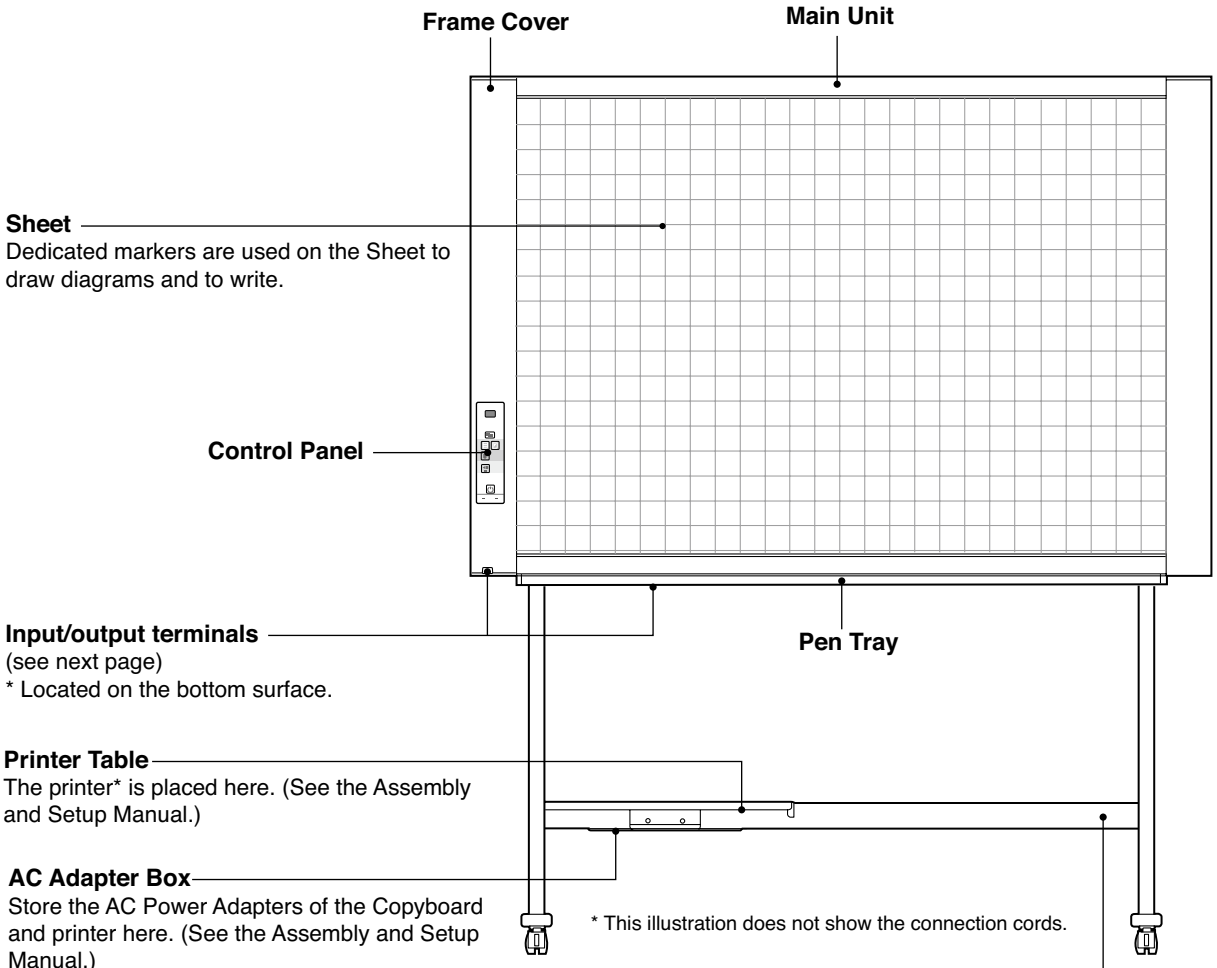
*1: The height is adjustable at 1747, 1847 and 1947 mm.
*2: The value indicated for “H” (height) is the maximum height.
*3: Not including the weight of the printer.
*4: North America Only.
*5: USB Memory device not included. The memory capacity corresponds to 32GB or less.

• Please note that for quality improvement purposes, specifications and design are subject to change without prior notice.

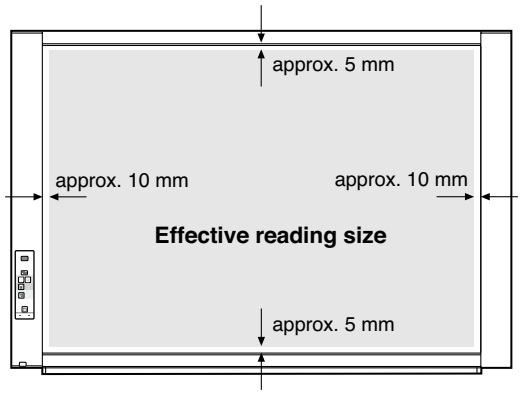
SPECIFICATION

2-3. Names of the Parts

Front



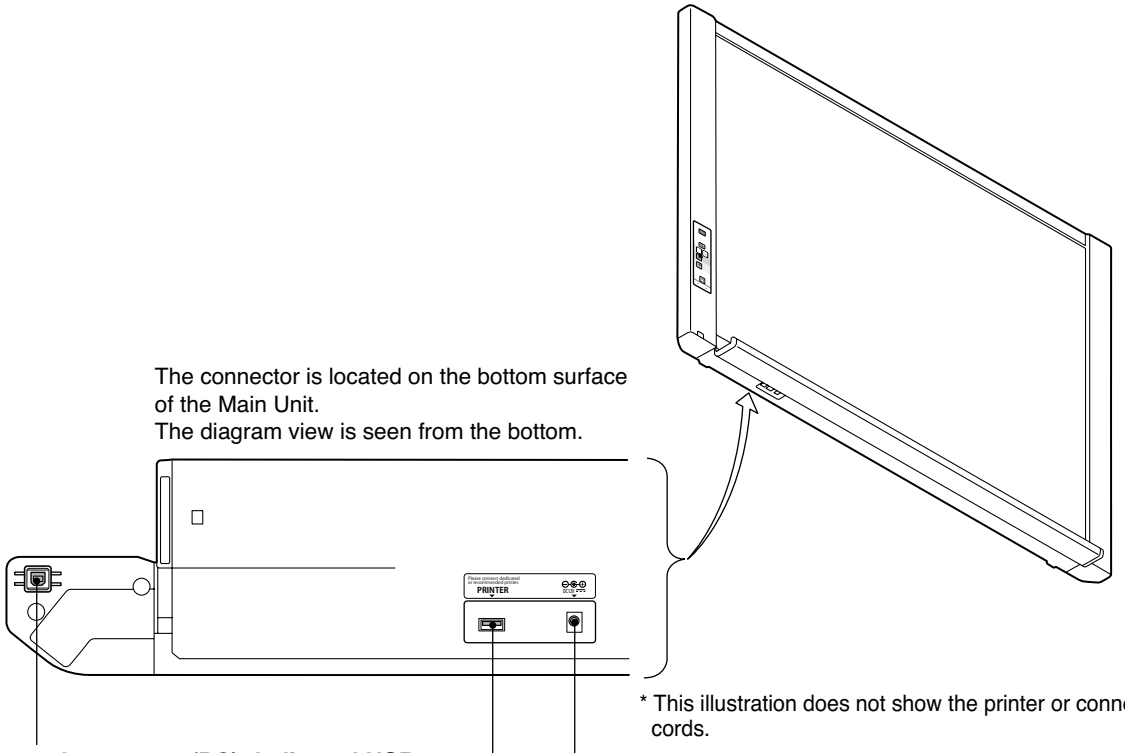
* Depending on the product you have purchased, the printer may be sold separately.



Effective Reading Size
The area that can be copied is the gray area of the diagram.

Note:
It might not be possible to print or copy when storing to USB Memory or personal computer any portions that are drawn outside of this range.

Input/output terminals



The connector is located on the bottom surface of the Main Unit.
The diagram view is seen from the bottom.

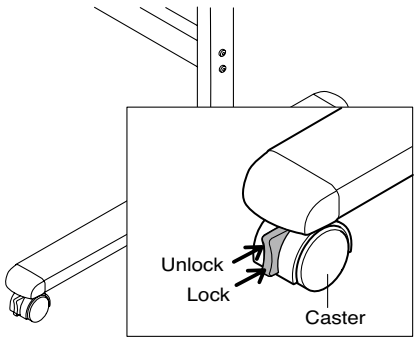
* This illustration does not show the printer or connection cords.

Personal computer (PC) dedicated USB port (Type B)
Connect this with the USB port (type A) of the PC.
Personal computer (PC) dedicated USB port (Type B)
Used to connect the Copyboard to a computer to make the Copyboard's device settings. Can also be used to copy scanned images onto the computer.

DC input connector
Connect this with the DC plug end of the AC Power Adapter. (Only connect the supplied AC Power Adapter; nothing else.)

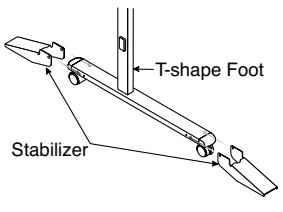
Printer connector (USB port Type A)
Connect this with the USB connector of the printer. (The printer connector is dedicated for use with a printer; use it only with a printer.)

Locking/unlocking the stand's Casters
After installation, Lock the Casters with the stoppers. When moving the stand, Unlock the Caster's stoppers.
The stoppers are locked when the bottom is pressed. Press the top to Unlock them.



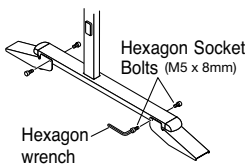
Alignment of the screw holes of the T-shape Feet with those of the stabilizers.
Slide the stabilizers on the T-shaped feet to align with the holes.

CAUTION : To prevent toppling, be sure to install the stabilizers at each of the 4 locations. The toppling of this machine could cause bodily injury or damage the machine.



Secure the stabilizers on the T-shape feet by Hexagon Bolts using Hexagon wrench.
Attach the 4 stabilizers on the feet.

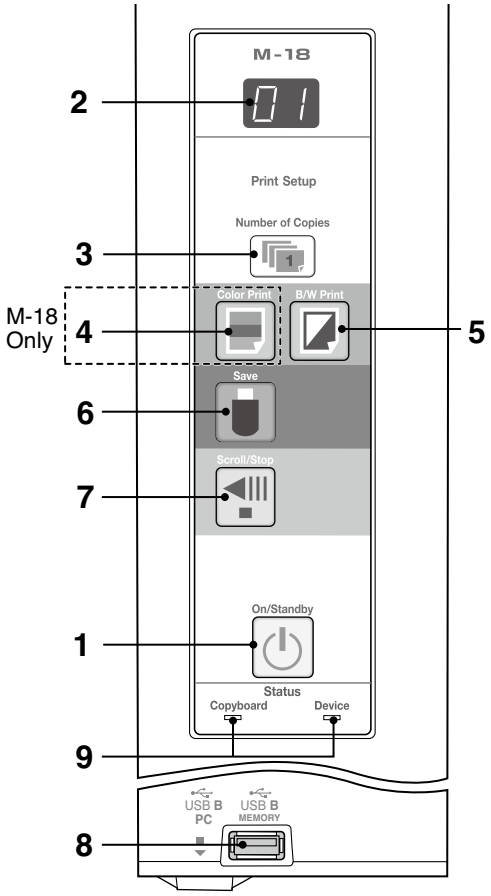
CAUTION : Do not lift the stand to work on it. This may lead to toppling or bodily injury.



SPECIFICATION

2-4. Control Panel

When pressing a button, please press the center area (the square bulge). The button may not work if it is pressed on a corner.



Display window	Meaning	Copyboard indicator	Device indicator
E1	Printer problem	Off	On
E2	USB Memory not recognized		
E3	USB Memory storage problem		
US	USB Memory not connected		
FL	USB Memory is full		
EL	An unsupported printer is connected		
USb *	Warning that disconnection of USB Memory has been forgotten		
E4	Reading problem	On	Off
E5	System error		
EH	Time setting error		

* The letters "USB" scroll on the display.

1 ON/Standby button
Turns the Copyboard's power on and off (standby mode).

2 Display window
The number of copies, operating status and error messages are displayed on the 7-segment LEDs.

3 Number of Copies/Test print button
Press this button to set the number of copies to be printed (max. 10). The number of copies is displayed on the display window.
* "P" is displayed during test printing.

M-18 Only

4 Color Print ( ) button
The sheet is moved by 1 screen and read, and the image is printed in color in the number of copies indicated on the display window.

5 B/W Print ( ) button
The sheet is moved by 1 screen and read, and the image is printed in black and white in the number of copies indicated on the display window.

6 Save ( ) button (USB memory storage)
The sheet is moved by 1 screen and read, and the image is stored on the USB Memory device.
When connected to a computer by USB Cable, the image is stored in the Copyboard's internal memory.

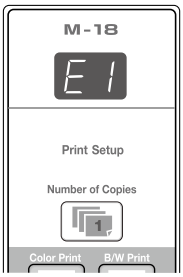
7 Scroll/Stop button
Scrolls the sheet one screen portion left, then stops automatically.
A press of this button while scrolling will stop the scrolling.

8 USB A Memory port (USB Type A)
Saves in commercially-available USB Memory images that have been read by the Copyboard.

9 Status
These indicators light or turn off to indicate errors with the Copyboard, USB Memory device or printer.
(See table at left)
Also check the error message on the display window.

2-5. Meaninig of Error Messages

If any of the following flashing indications appear in the display window of the control panel, please check the matters described below.
Error messages flash for 5 seconds, then stop flashing, remaining lit.



Error Display Number	Problem and Solution	
E1 **Printer not connected No printing paper Printer problem**	• Is the printer cable connected? • Is power being supplied to the printer? • When the printer uses an AC Power Adapter, is the cable disconnected somewhere?	• Connect the printer properly and switch on the printer power.
	• Has paper been set in the printer?	• Turn the power of the printer off and then on again, and load the printer with A4 or Letter size paper.
	• Is the printer error indicator flashing (or lit)?	• Read the printer instruction manual.
E2 **USB Memory not recognized**	• Is the USB Memory unformatted.	• This unit supports the FAT and FAT 32 formats. Perform the formatting with the personal computer.
	• Is a USB Memory that is not supported by the Copyboard being used?	• Please see our home page for information about USB Memories that can be used with the Copyboard.
	• Is the USB Memory device plugged in fully? • Is the USB Memory damaged?	• Please check the operation with a personal computer.
E3 **USB Memory storage problem**	• An error occurred during USB Memory storage.	• Please perform USB Memory storage again. • Do not insert or remove the USB Memory during processing.
E4 **Reading problem**	• There is a read signal error.	• Unplug the power plug from the power outlet and then plug it in again. • The CIS Unit is defective. • The Main Board Assy is defective.
E5 **System error**	• There is a Memory or internal fault.	• Unplug the power plug from the power outlet and then plug it in again.
US **USB Memory not connected**	• USB Memory device is not plugged into the Main Unit.	• Plug the USB Memory device into the USB port.
FL **USB Memory is full**	• There is no available space.	• Please delete unnecessary data using a personal computer.
EL **An unsupported printer is connected**	• A printer that is not supported by the Copyboard has been connected.	• Press the ON/Standby button and switch off the power. When a record is required, switch on the power and save to USB Memory.
EH **Time setting error**	• An error has arisen when setting the time.	• Start setting the date/time over from the beginning.
When the "USB" letter display is flowing...Warning that disconnection of USB Memory has been forgotten US → Sb → b	• Did you press the ON/Standby button while the USB Memory device was plugged into the Main Unit?	• A USB Memory device is plugged into the main unit. When the USB Memory device is disconnected, the power will be switched off and the unit will enter the standby mode.

If the problem persists, please contact your nearby PLUS Corporation sales office, dealer, or store.

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 SW Board Assy is defective.
   - The connectors of the SW Harness is disconnected.

   ↓ Yes

   Does the Error display appear?

   Yes → The error display (E5) appears. (See section 2-4. Error display)
   - The Main Board Assy is defective.

   ↓

   Flashing indicator keeps "rotating" sequentially.

   Yes →
   - The Main Board Assy is defective.
   - The SW Board Assy is defective.

   ↓ No

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.

   ↓ Yes

3. Press the Color print / B/W Print button (when a printer is used).
   Does the error display (E1) appear?

   Printer failure. (See section 2-4. Error display.)
   - The printer is defective. (See the Instruction manual of a printer.)
   - The power of a printer is not turned on.
   - Printer paper is exhausted.
   - A Printer is not connected definitely.
   - The Main Board Assy is defective.

   ↓ No

   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: Slight (It is improved by calibration.)
   - Misalignment of CIS Unit: Severe (Replace the CIS Unit for improvement.)
   - Foreign matter adheres to the CIS Unit.

   An image (print) is rubbed.
   - Deterioration of CIS Unit.
   - The marker (written character) becomes blurred.
   - The ink cartridge (Drum Unit) is exhausted.

   A specific color is not printed or the printed color is improper (when a color printer is used).
   - The ink of a printer is exhausted.
   - The ink cartridge of a printer is defective.

   ↓ Yes

4. Press the Save button (when a USB Memory is used).
   Do the error displays (E2, E3 and US) appear?

   Yes → Error display: E2 is displayed. (See section 2-4. Error display)
   - A USB Memory is not formatted.
   - An incompatible USB Memory is used.
   - A USB Memory is defective.
   - A USB Memory port is defective.

   Error display: E3 is displayed.
   - Memory storage error: Repeat save operation again.
   - The Main Board Assy is defective.

   ↓ No

   Is the object written in the board stored normally?

   No → black line is put in a picture.
   - Dust adheres to the CIS Unit.
   - Misalignment of CIS Unit: Slight (It is improved by calibration.)
   - The CIS Unit is defective: Serious (Replace the CIS Unit for improvement.)

   An image is rubbed.
   - Deterioration of CIS Unit.
   - The marker (written character) becomes blurred.

   ↓ Yes

   Normal operation

4.DISASSEMBLY AND ASSEMBLY

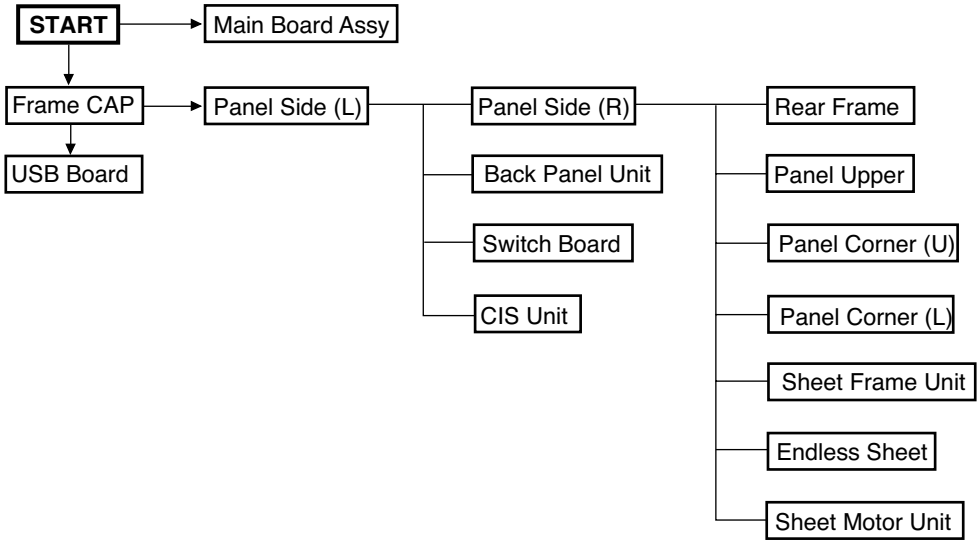
4-1. Tools Required

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

4-2. Caution

- See “1. Compliance of Safety Repair” 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. Cable and Cable connection” 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



DISASSEMBLY AND ASSEMBLY

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”.

* 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 Main Board Assy. (See Figs. 1 and 2.)

1.Remove the”S-1" screws shown in the figure 1 and then remove the Cable Cover.

2.Remove the”S-1" screws shown in the figure 2 and then remove the Main Board Shield.

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

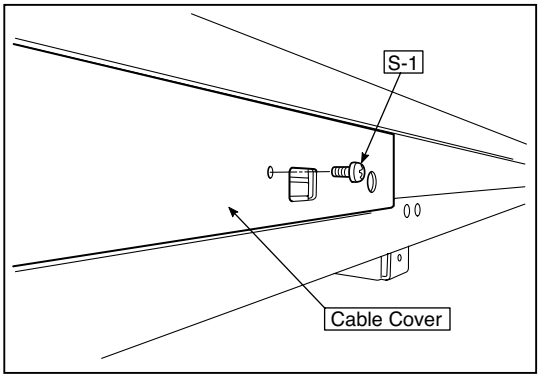


Fig.1

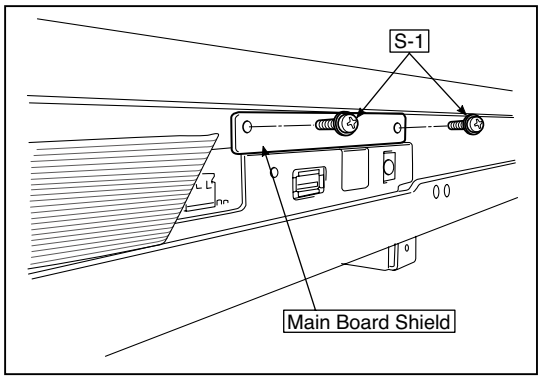


Fig.2

3.Disconnect the connector (CN1,2,3,6) connected to the Main Board Assy shown in the figure 3.(See Figs. 3 and 4,5.)

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

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

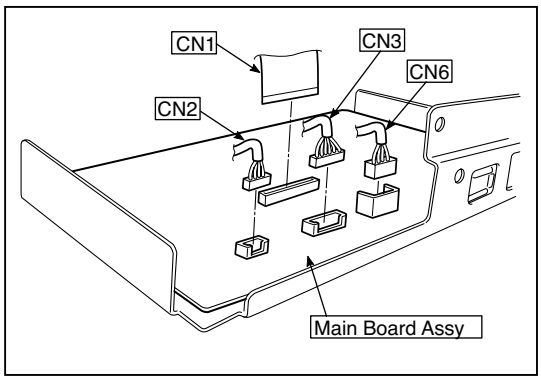


Fig.3

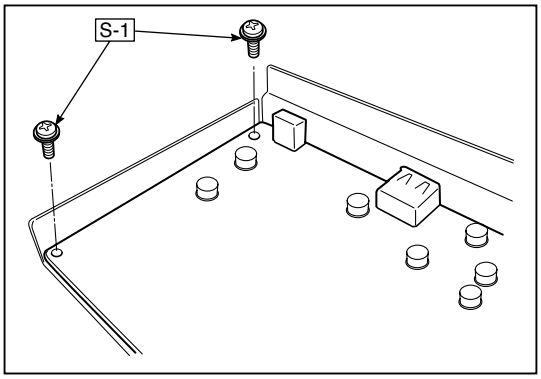


Fig.4

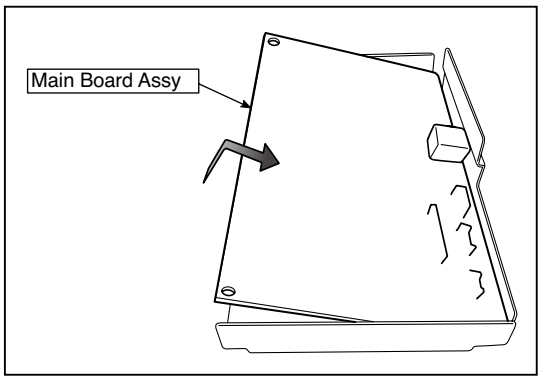


Fig.5

2) Remove the Frame Cap PC. (See Fig. 6.)

1.Remove the “S-2” screws shown in the figure 6 and then remove the Frame Cap PC.

2.Disconnect the connector connected to the USB Board shown in the figure 7.

3.Remove the “S-3” screws shown in the figure 8 and then remove the USB Board.

Note: Fix an insulating sheet to the screws when installing the USB Board.

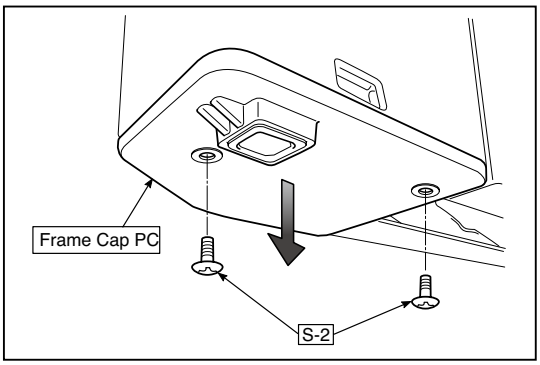


Fig.6

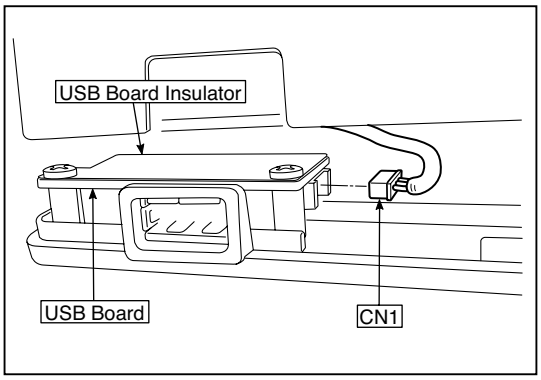


Fig.7

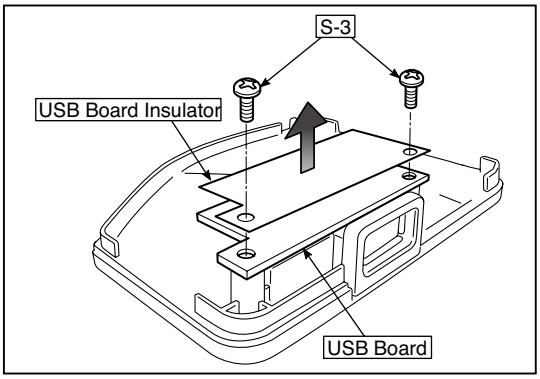


Fig.8

3) Remove the Frame Cap. (See Fig. 9.)

1.Remove the “S-2” screws shown in the figure 9 and then remove the Frame Cap.

Note: An adhesive double-sided tape is required when replacing and removing the Frame Cap.

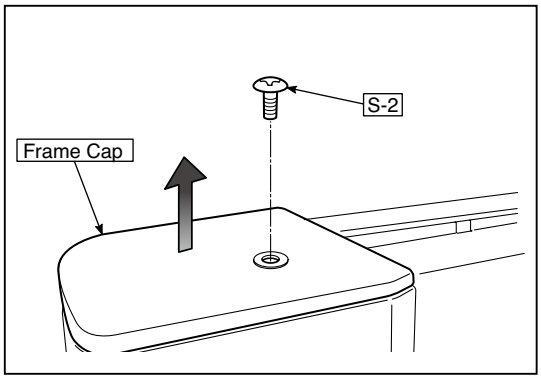


Fig.9

4) Remove the Panel side L. (See Fig. 10.11)

1.Remove the “S-4” screws shown in the figure10. Disconnect the connector connected to the Switch Board and then remove the Panel Side L.

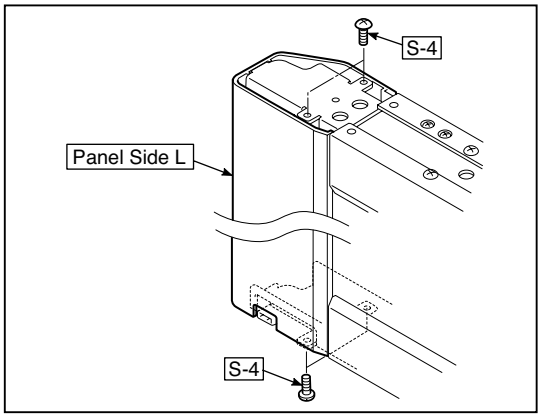


Fig.10

2. Remove the Panel Side R.
   1 Remove the “S-4” screws shown in the figure 11 and then remove the Panel Side R.

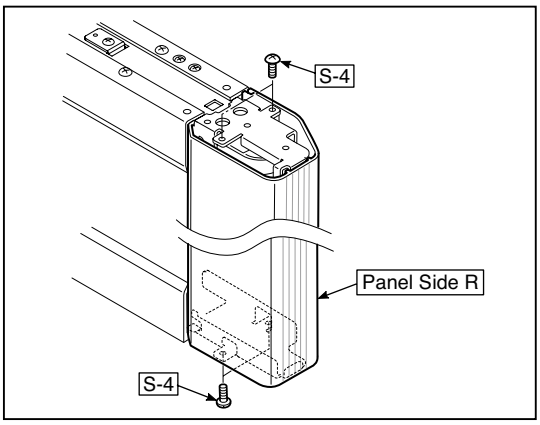


Fig.11

5) Remove the Back Panel Unit. (See Fig. 12.13)

1.Remove the “S-5” screws shown in the figure12.
Remove two screws which are located on both sides of the Back Panel center.

2.Slide the Back Panel and remove it while pushing the Back Panel Unit corner shown in the figure 13 forward.

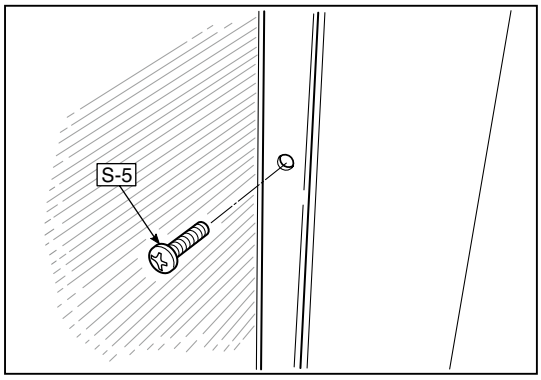


Fig.12

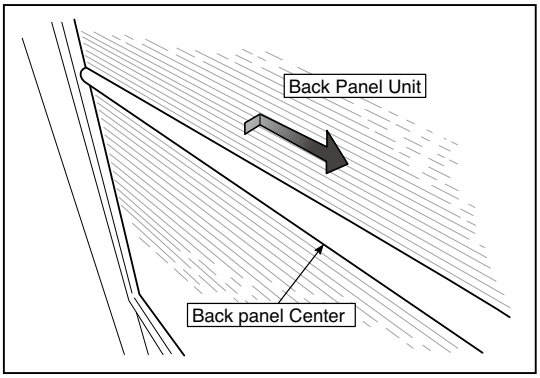


Fig.13

6) Remove the SW Board. (See Fig. 14.15.16.17)

1.Slide the white protrusion (resin) at the rear of a SW Panel from the top of the SW Panel surface to the bottom while pushing it with fingers.

2.Remove the SW Panel shown in the figure15.

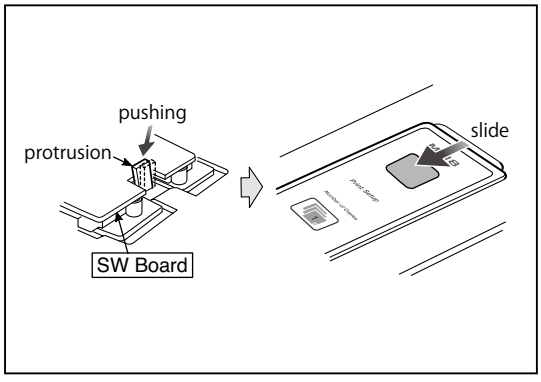


Fig.14

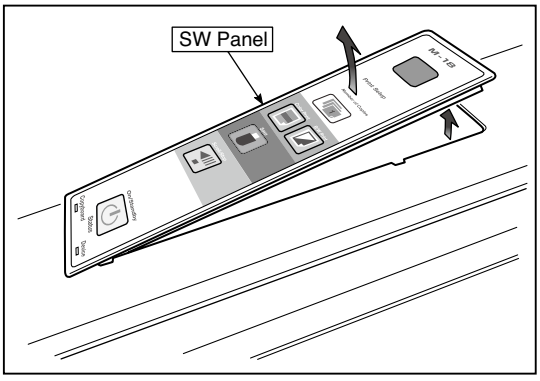


Fig.15

3.Remove the “S-3” screws shown in the figure 16 and then remove the SW Board.

Note: Pay attention to the wire drawing of the SW Cable during assembling.

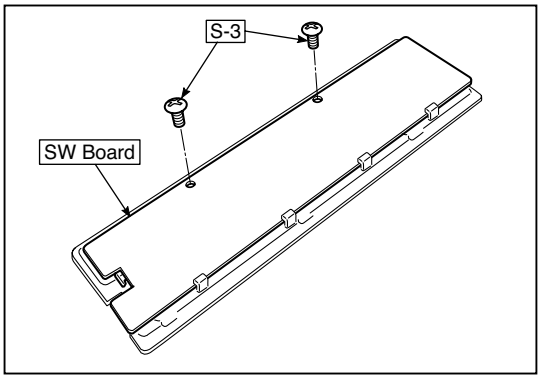


Fig.16

[When installed]

1.Put the protrusion from the bottom of the SW Panel when returning the SW Panel to the former position.
2.Slide the protrusion in the direction indicated by the arrow.
3.Confirm that the hook of the SW Panel is completely put in the notch of the Panel Side (L).

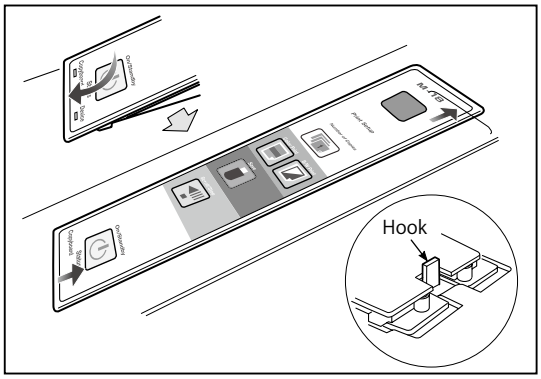


Fig.17

7) Remove the CIS Unit. (See Fig. 18.19)

1.Disconnect the CIS Cable (FFC), shown in the figure 16, from a connector.
2.Remove the “S-2” screws shown in the figures19 and 20 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. 21) is located in the upper position.

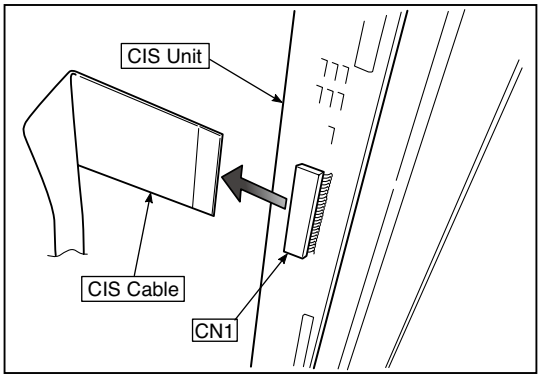


Fig.18

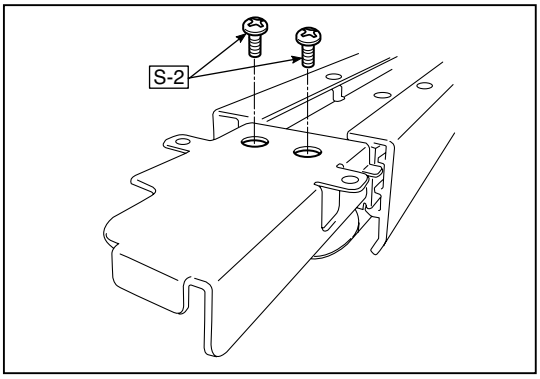


Fig.19

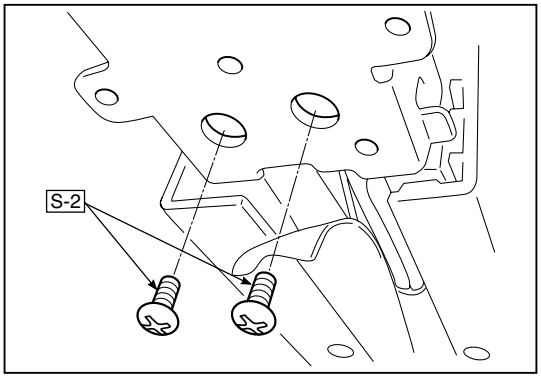


Fig.20

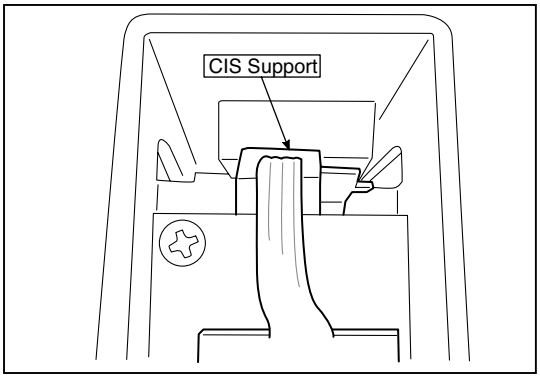


Fig.21

8) Remove the Rear Frame. (See Fig. 22)

1.Remove the “S-6” screws shown in the figure 22 and then remove the Rear Frame (two).

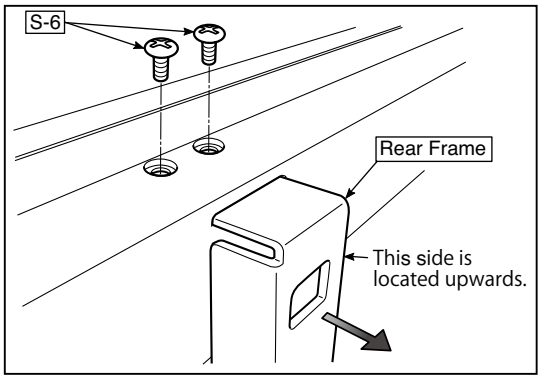


Fig.22

9) Remove the Panel Upper. (See Fig. 23)

1.Remove the “S-4” and “S-7”screws shown in the figure 23 and then remove the Panel Upper.

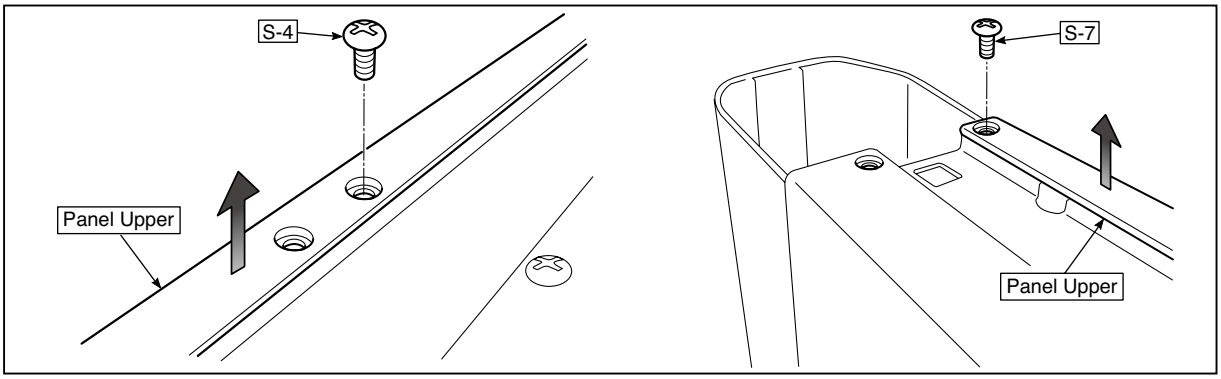


Fig.23

10) Remove the Panel Corner.

1.Remove the “S-4” and “S-7”screws shown in the figure 24 and then remove the Panel Cornner (U).

2.Remove the “S-4” and “S-7”screws shown in the figure 25 and then remove the Panel Cornner (L).

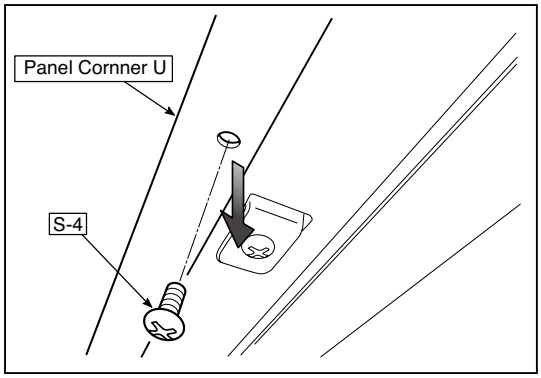


Fig.24

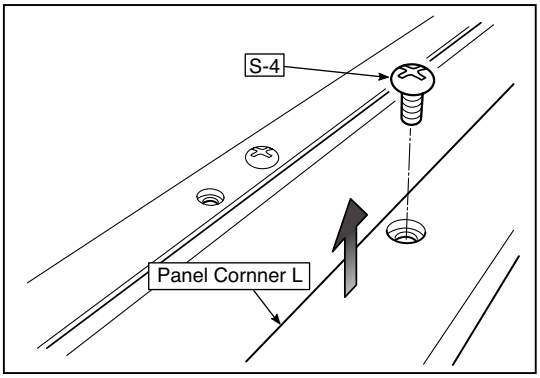


Fig.25

11) Replace the Endless sheet.

1. Remove the “S-2” screws shown in the figure 26.
2. Remove the Panel Plate shown in the figure 27.
3. Remove the stopper “S-4” screws in the (two upper and lower) Tension Roller Bases shown in the figure 28.
4. Push the Tension Roller Base block shown in the figure 29 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.

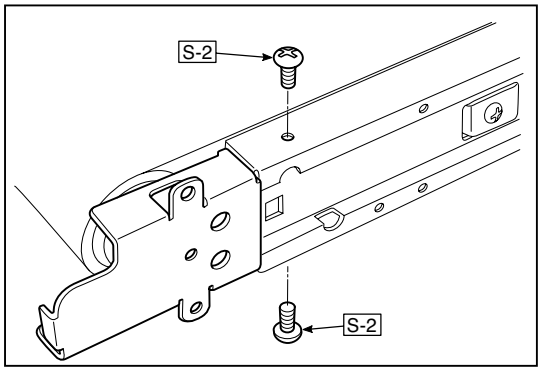


Fig.26

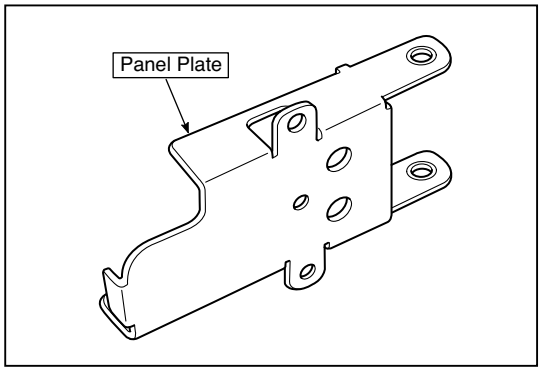


Fig.27

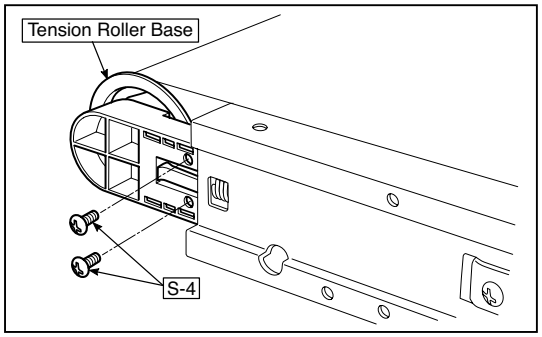


Fig.28

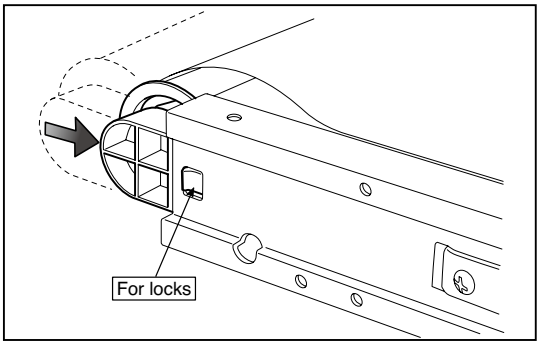


Fig.29

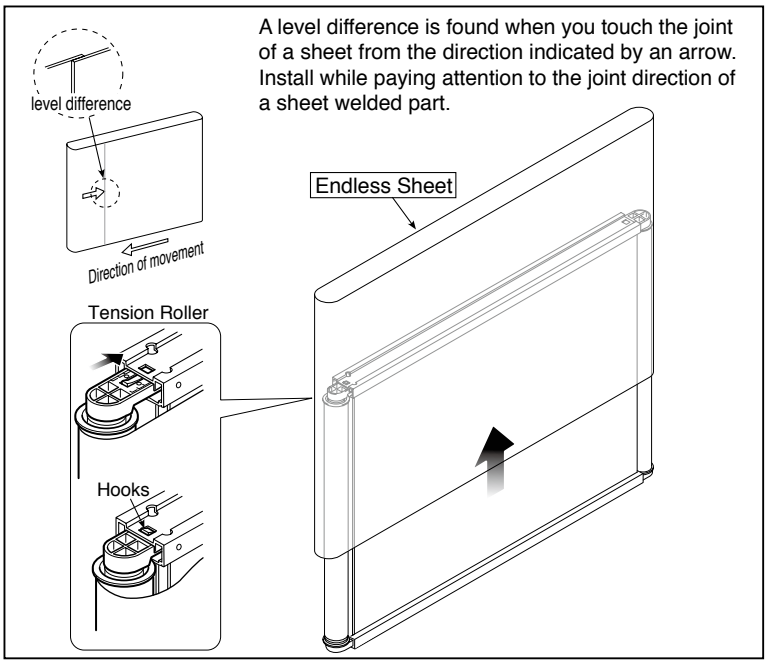


Fig.30

12) Replace the Sheet Motor Assy. (See Fig. 30)

1. Remove the “S-4” screws shown in the figure 30.
2. Disconnect the connector of the Sheet Motor Assy.

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

*Doing so causes vibration or strange noise to occur.

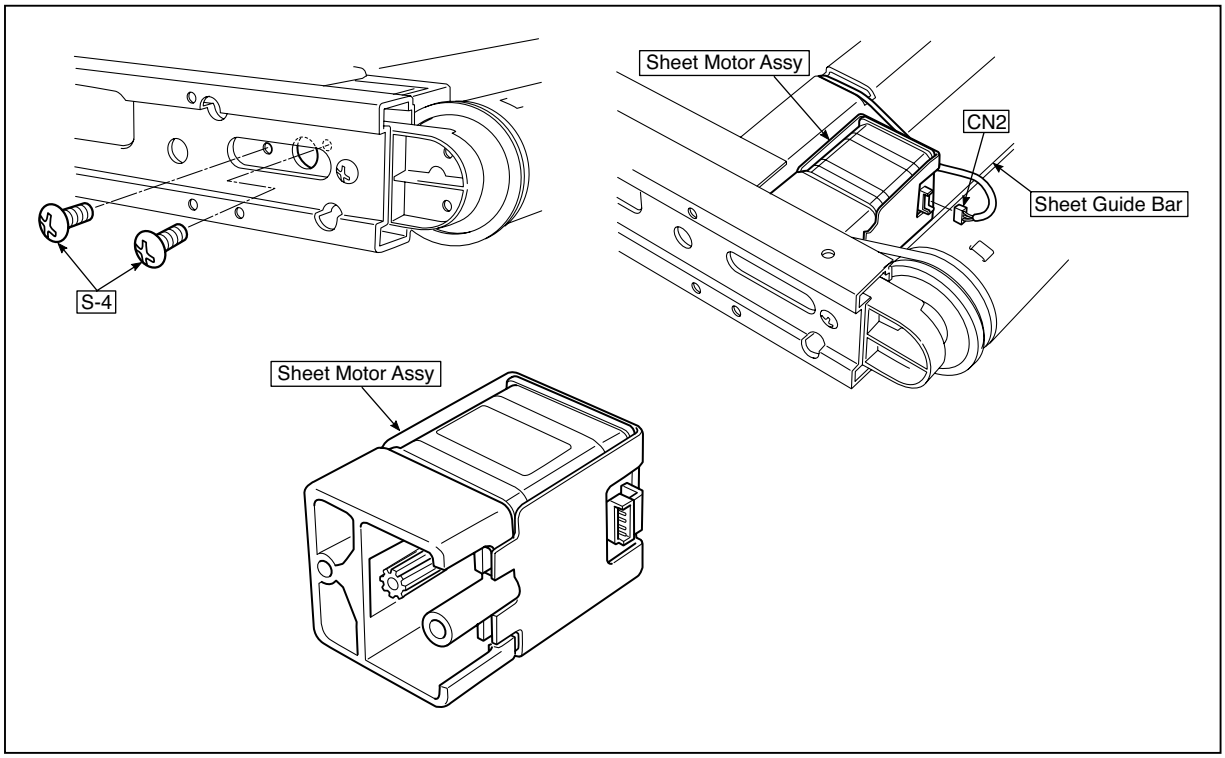


Fig.30

5. ADJUSTMENT

5-1. Calibration

Calibration is required in the following cases.

- When a Main Board is replaced
- When a CIS Unit is replaced
- When an Endless Sheet is replaced
- When a Sheet Frame Unit is replacedFor 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 perform calibration after replacing the CIS Unit.

[Calibration]

[Preparation]

Enter a vertical line of about 10 cm in the center of an Endless Sheet using a marker pen (black). (50-mm graph paper x 2 measures)

[Calibration mode]

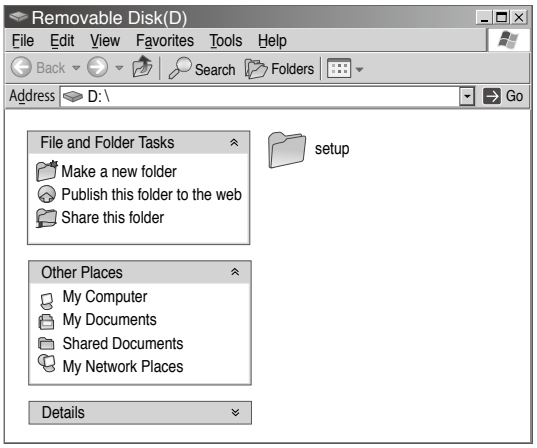
- Insert the plug of an AC Adapter into the main set so as to apply an electric current (in the Standby state).
- Press the Save button three times while pressing and holding the Power (ON/Standby) button.
  Segment display in test adjustment mode: <AP>
- Press the Feed/Stop button. Segment display: “01”.
- Press the Save button.
- Segment display appears when the Endless Sheet rotates for normal termination: <AA>

1) Calibration is started, ·····<1. >
2) Initialization,·····<1.0>
3) The first vertical line is being detected,·····<1.1>
4) The vertical line after one cycle is being detected,·····<1.2>
5) When no vertical line can be detected, and·····<1.2.>
6) When calibration succeeds·····<AA >

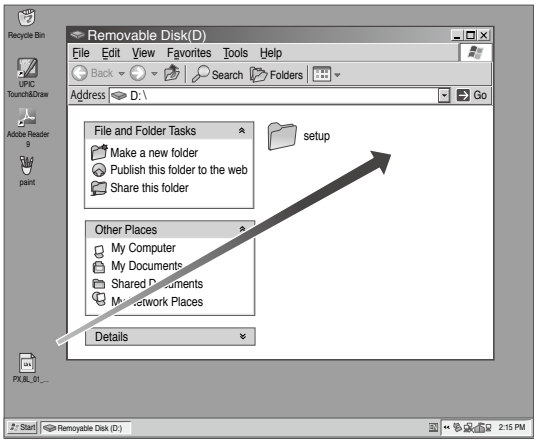
5-2. Changing the Internal Program of M-18 Main Set
[How to rewrite program using PC]

Equipment used
1) Firmware data for M-18 / M-17
2) PC main set (OS: Windows XP/Windows Vista/Windows7)
3) USB Cable

1. Connect the PC and Copyboard main set using a USB Cable.
2. Insert the plug of an AC Adapter into the DC jack of the Copyboard main set and turn on the power.
3. A screen appears when the Copyboard is recognized as a removable disk.
   If any screen is not opened, open the removable disk of the Copyboard using Explorer.



4. Copy the firmware data “PX08L_M18_XX_XX. brn”, to be updated, to the removable disk. (Drag & Drop)



5. The display window of the Copyboard main set automatically changes to “UP” blinking display.
6. Press the Save button. The display window changes to rotation display. A program then begins to be rewritten.
7. Rewrite operation is completed when the display window changes to “AA” blinking display.
8. Pull out the plug of the AC Adapter once, turn on the power gain, and then confirm the version of firmware in a test mode.

5-3. Test mode

1. Program version display

- Insert the plug of an AC Adaptor into the main set to apply the electric current (in the Standby state).
- Press the Save button three times while pressing and holding the Power (ON / Standby) button.
  Test / adjustment mode segment display: <A.P>
- Press the (Feed / Stop) button three times. Segment display: <03>
- The segment display changes every time you press the Save button.

The first : Application major version
The second : Application minor version
The third : Boot loader major version
The fourth : Boot loader minor version
The fifth : Switch major version
The sixth : Switch minor version
The seventh : Date setting: US: North America: EU: Other than North America
The eighth : Result indication: (Blinking) <AA> : Success <EE> : Failure

* To terminate the segment display, press the Power (ON / Standby) button two times and set the display window to <01>.

2. Printer test mode

- Insert the plug of an AC Adaptor into the main set to apply the electric current (in the Standby state).
- Press the Save button three times while pressing and holding the Power (ON / Standby) button.
  Test/adjustment mode segment display: <A.P>
- Press the Feed / Stop button eight times. Segment display: <08>
- Press the Save button.
- Segment display appears after confirming a printing result: <AA> blinking
- Press the Power (ON / Standby) button. The current state returns to test mode <A.P>.

* A test pattern (based on color-bar dot display) of yellow, magenta, cyan, and black is printed when a color ink jet printer is connected.

3. Factory-setting data clear

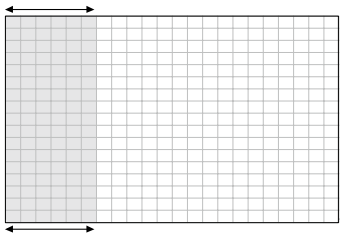
- Insert the plug of an AC Adaptor into the main set to apply the electric current. (in the Standby state).
- Press the Save button three times while pressing and holding the Power (ON / Standby) button.
  Test/adjustment mode segment display: <A.P>
- Press the Feed / Stop button two times. Segment display: <02>
- Press the Save button.
- Operation is completed when the segment display changes to <F. > and when <AA> display appears.

* Reset only the user setting values.
  Default setting → Print rate: Compression, paper
  Paper setting: A4
  Date format: dd-mmm-yyy

White level calibration

Preparation

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



- Insert the plug of an AC Adaptor into the main set to apply the electric current (in the Standby state).
- Press the Save button three times while pressing and holding the Power (ON / Standby) button.
  Test / adjustment mode segment display: <A.P>
- Press the (Feed / Stop) button sixteen times. Segment display: <16>
- Press the Save button.
- Segment display: <AA> blinks after the endless sheet is moved by about half.
- Press the Power (ON / Standby) button. The current state returns to test mode <A.P>.

6.DEVICE SETTINGS

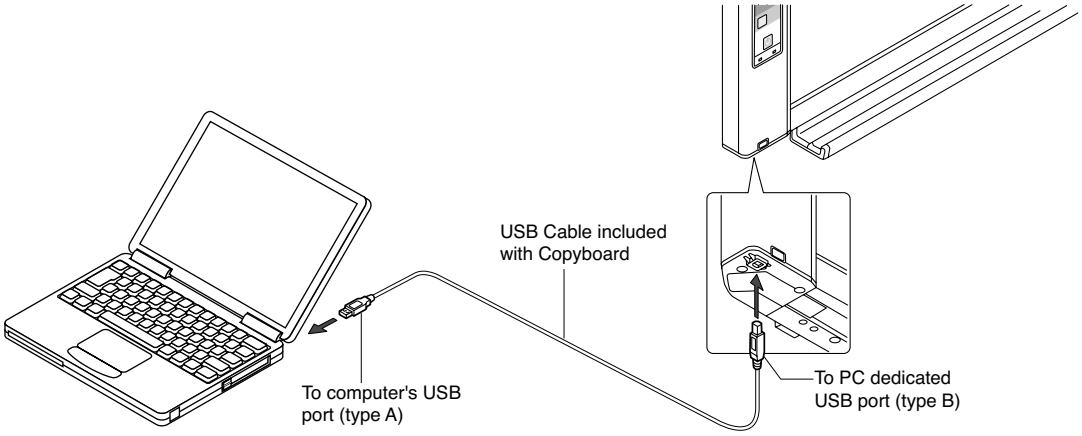
Make the Copyboard's device settings (paper size, aspect ratio setting and time setting) using a computer.
When the Copyboard and a computer are connected using a USB Cable, the Copyboard is automatically recognized as an external memory device (removable disk).

Before making the device settings

The Copyboard's device settings screen is created using Adobe® Flash®. Settings are made by opening a web browser.
Because of this, a web browser and Adobe Flash Player 10 for displaying the device settings screen must be installed on the computer. If Adobe Flash Player 10 is not installed on the computer, download it (free of charge) from the Adobe website.

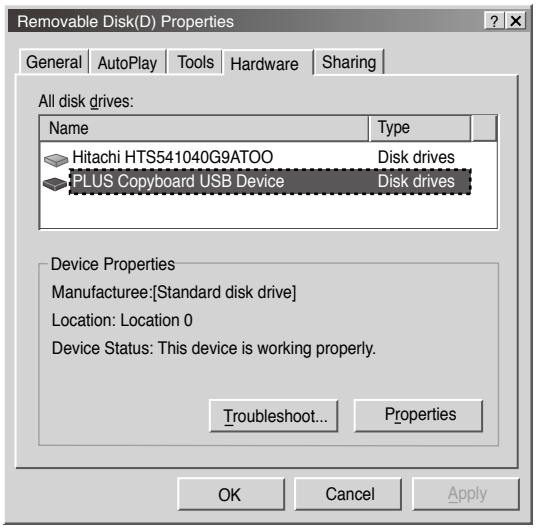
1. Turn on the Copyboard's power and connect the PC dedicated USB port (type B) and computer using the USB Cable.

- Usually, with Windows XP/Windows Vista/Windows 7, the standard driver is installed automatically and the Copyboard is identified by the computer as a removable device.



2. Open [My Computer], and from there open the copyboard identified as a removable device.

For the Copyboard's device (displayed as a removable disk), right-click [My Computer] to display the menu, then at [(Properties) -> [Device Manager], check that "PLUS Copyboard USB Device" is displayed as the disk drive name.

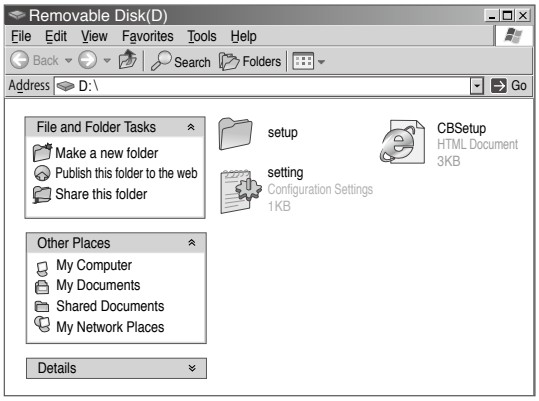


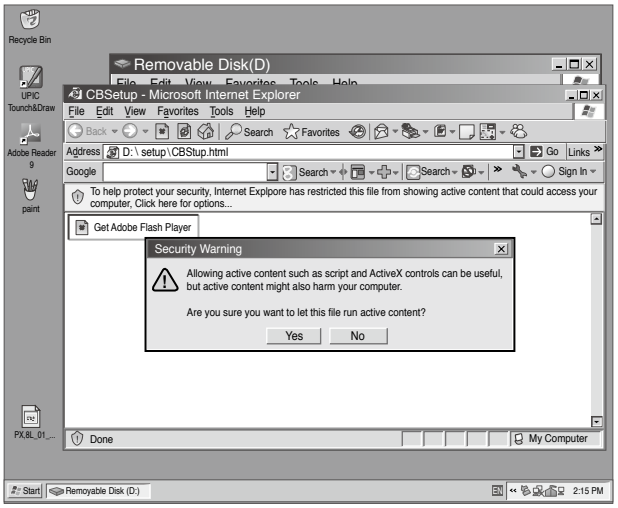
3. Open the "CBSetup" file in the "setup" folder.

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

(2) Open the “CBSetup” file in the “setup” folder using your Web browser.
Double-click the CBSetup file to open it.

* Depending on the browser’s version, etc., the file may not open.
* Follow the displayed instructions when security protection display appears.





Execute active contents?
→ Click Yes ([Y])

4. Make the device settings and save the "setting.ini" settings file, overwriting the previous file.

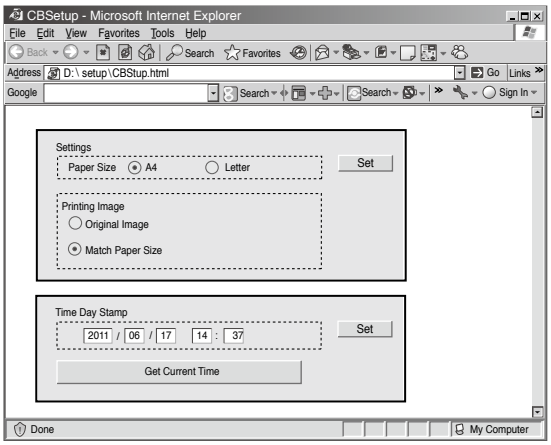
(1) Make the settings.

Settings:

For the paper size and aspect ratio, click the radio button for the desired item to select it.

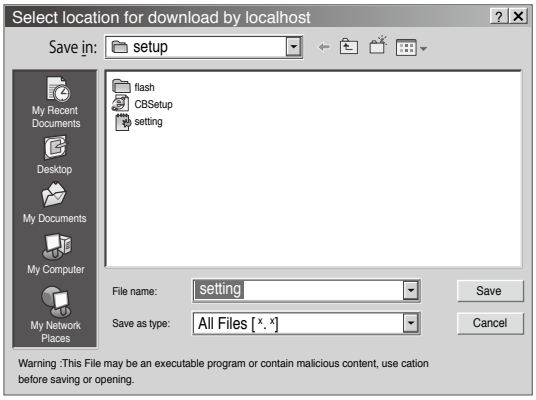
Time Day Stamp:

For the time day stamp, use the computer's number keys to input the current date and time.



DEVICE SETTINGS

(2) If you have changed the Copyboard's device settings, click the "Set" button for the "Settings" section.
(3) The save file screen appears when one of the "Set" buttons is pressed.
Save the "setting.ini" file (overwriting the previous file) in the following location:
Save to location: "setup" folder for the Copyboard (removable disk)
File name: setting.ini



(4) Terminate the Web browser. The device settings are completed.

[Device setting items]

Item Name	Description	Default Setting
Paper Size	Sets whether to print on the printer in A4 or letter size. A4 size printing range: Equal ratio – 145 x 287, Compressed – 195 x 287 Letter size printing range: Equal ratio – 136 x 269, Compressed – 206 x 269	North America: Letter Others: A4
Printing Image	This is only selectable on wide type çopyboards. This selects the vertical:horizontal aspect ratio of the image when printing. Original Image: Image is printed with the same aspect ratio as on the Copyboard's sheet surface. Match Paper Size: Image is compressed horizontally to the A4 or letter size paper's aspect ratio (ex.: circles become ovals).	Match Paper Size
Time Day Stamp	Input the current date and time. The entry fields are as follows (in order): Year / Month / Day / Hours: Minutes Input as follows: Year: 4 digits, Month: 2 digits (ex.: 03 for March), Day: 2 digits (ex.: 06 for the sixth), Hours: 2 digits in 24-hour format (ex.: 14 for 2:00 pm, 06 for 6:00 am), Minutes: 2 digits (ex.: 00 for 0 minutes) * Do not input spaces. If this is done, the file will be recognized as corrupt when the Copyboard is started and the settings well be reset to the defaults. Get Current Time : When “Get Current Time” button is clicked, the display switches to the computer’s current time. This eliminates the need to set the current time on the Copyboard.	

[Way to rewrite the setting file directly]

Rewriting the "setting.ini" settings file directly

Depending on the browser's version, etc., the file may not open. In this case, open the "setting.ini" file (in text format) using Notepad or another application on the computer and rewrite the contents of the settings file directly.

Description example:

```
Date=2011/02/03 ····· Date
Time=00:00 ····· Time
A4Page=0 ····· Paper size
Stretch=1 ····· Printing Image
```

Item	Item Name	Setting Value (numbers to be input)	Restrictions
Date	Date	Current date	Use "/" to separate the year, month and day.
Time	Time	Current time (24-hour mode)	Use ":" to separate the hours and minutes.
Paper size	A4page	Set to "0" for letter size, "1" for A4 size.	
Printing Image	Stretch	Stretch Set to "0" to print the image as it is on the sheet surface. Set to "1" to fit the image to the printing paper.	Only Settable for Wide type Copyboards.

* See the previous page for details on the settings.
* Do not input spaces. If this is done, the file will be recognized as corrupt when the copyboard is started and the settings well be reset to the defaults.

(1) After the file has been rewritten, save it, overwriting the previous "setting.ini" settings file.
Save to location: "setup" folder for the copyboard (removable disk)
File name: setting.ini

(2) This completes the device Settings.

How to change the Date format

In order to chande the Date format, type "Format=1" or "Format=2" in an existing "Setting. ini" file and save it.

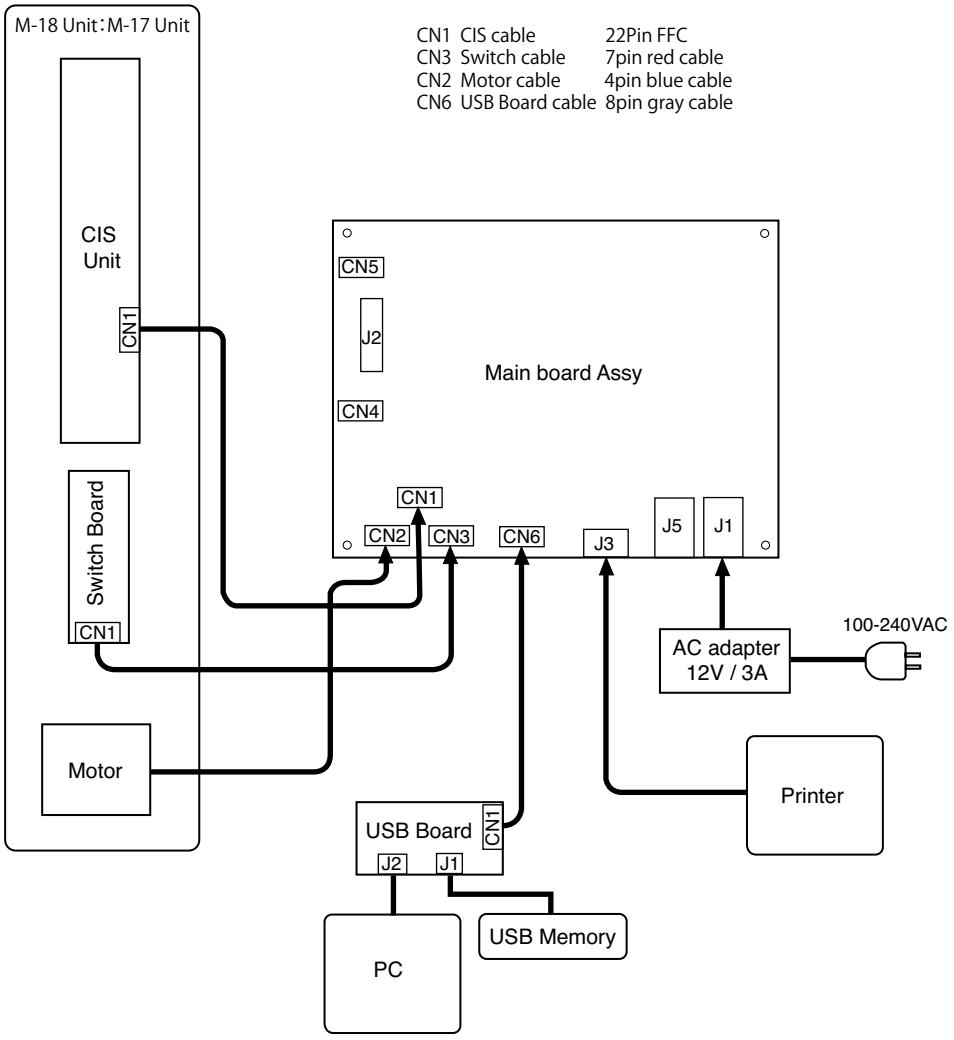
dd-mmm-yyy:Format=1
mmm-dd-yyy:Format=2

Description example:

```
Date=2011/02/03
Time=00:00
A4Page=0
Stretch=1
Format=1
```

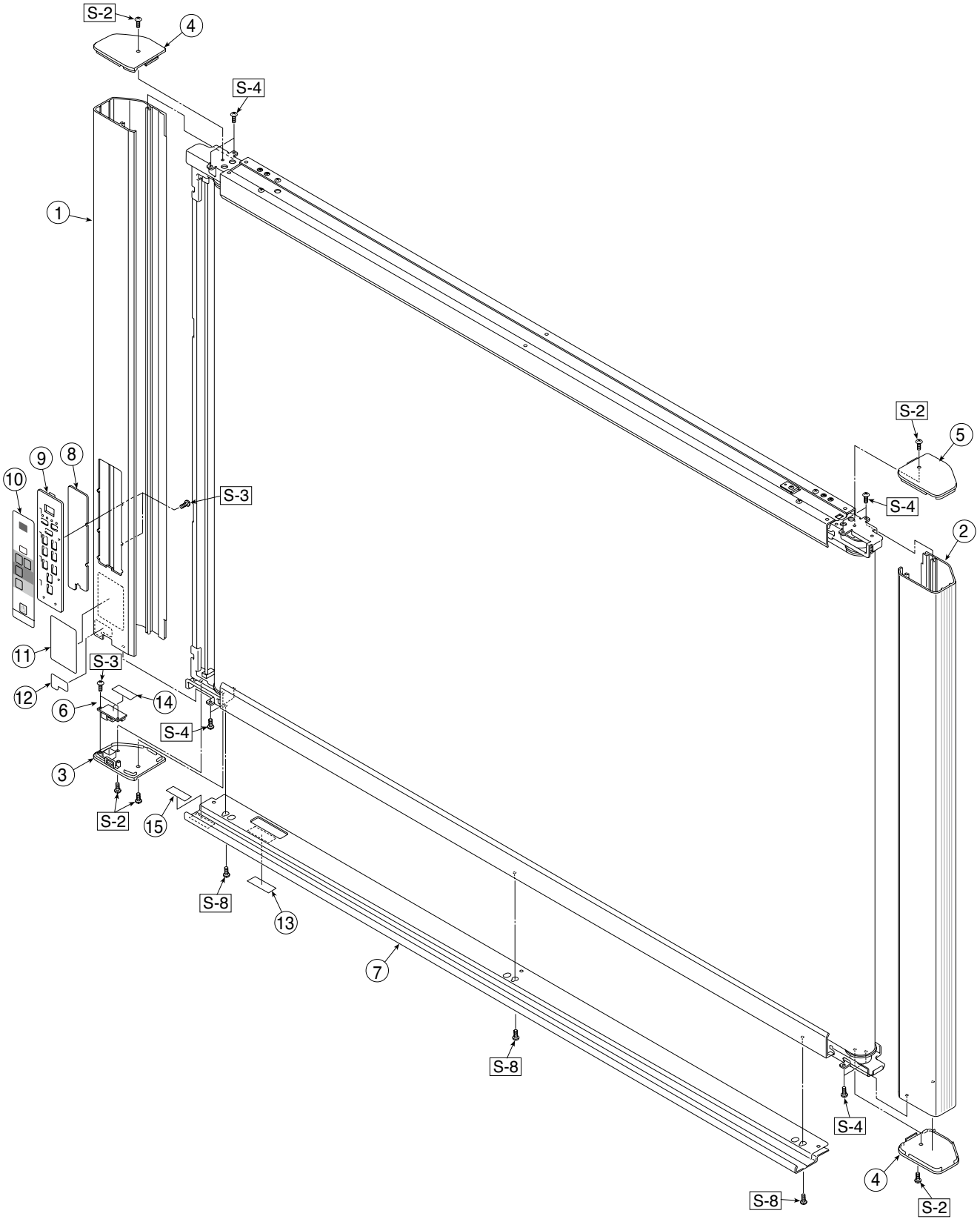
* Please note that once disconnecting a USB cable after the setting, your typed "Format" in "Setting. ini" is not show again, however, the changed Date format is stamped on a printout properly.

7. CABLE AND CABLE CONNECTION



8. PARTS LIST

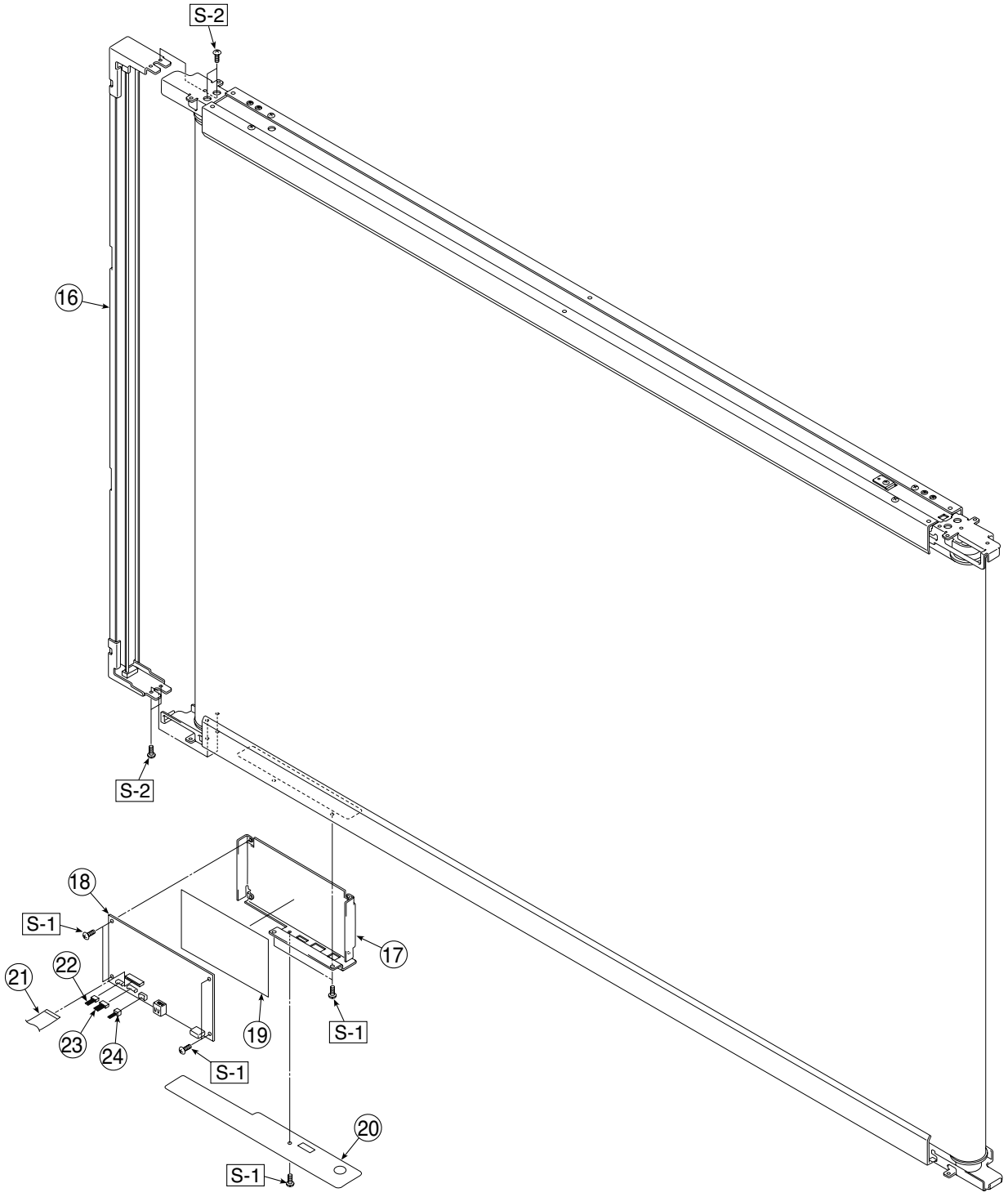
1. PANEL SIDE



PARTS LIST

1. PANEL SIDE				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
1	Panel Side L	726110100	1	
2	Panel Side R	726110200	1	
3	Frame Cap PC	726120400	1	
4	Frame Cap B	726120600	2	
5	Frame Cap A	726120500	1	
6	USB Board Assy	726580200	1	
7	Tray Unit S	302009	1	
	Tray Unit W	302010	1	
8	SW Board M-17/18	726580500	1	
9	SW Panel	726121100	1	
10	SW Sheet M-18	726150100	1	M-18 Only
	SW Sheet M-17	726157500	1	M-17 Only
11	Status Guide Label (O/S)	726460200	1	
12	USB Label	726152900	1	
13	I/F Label M-17/18	726153200	1	
14	USB Board insulator	726951200	1	
15	Caution Label (O/S)	726153800	1	

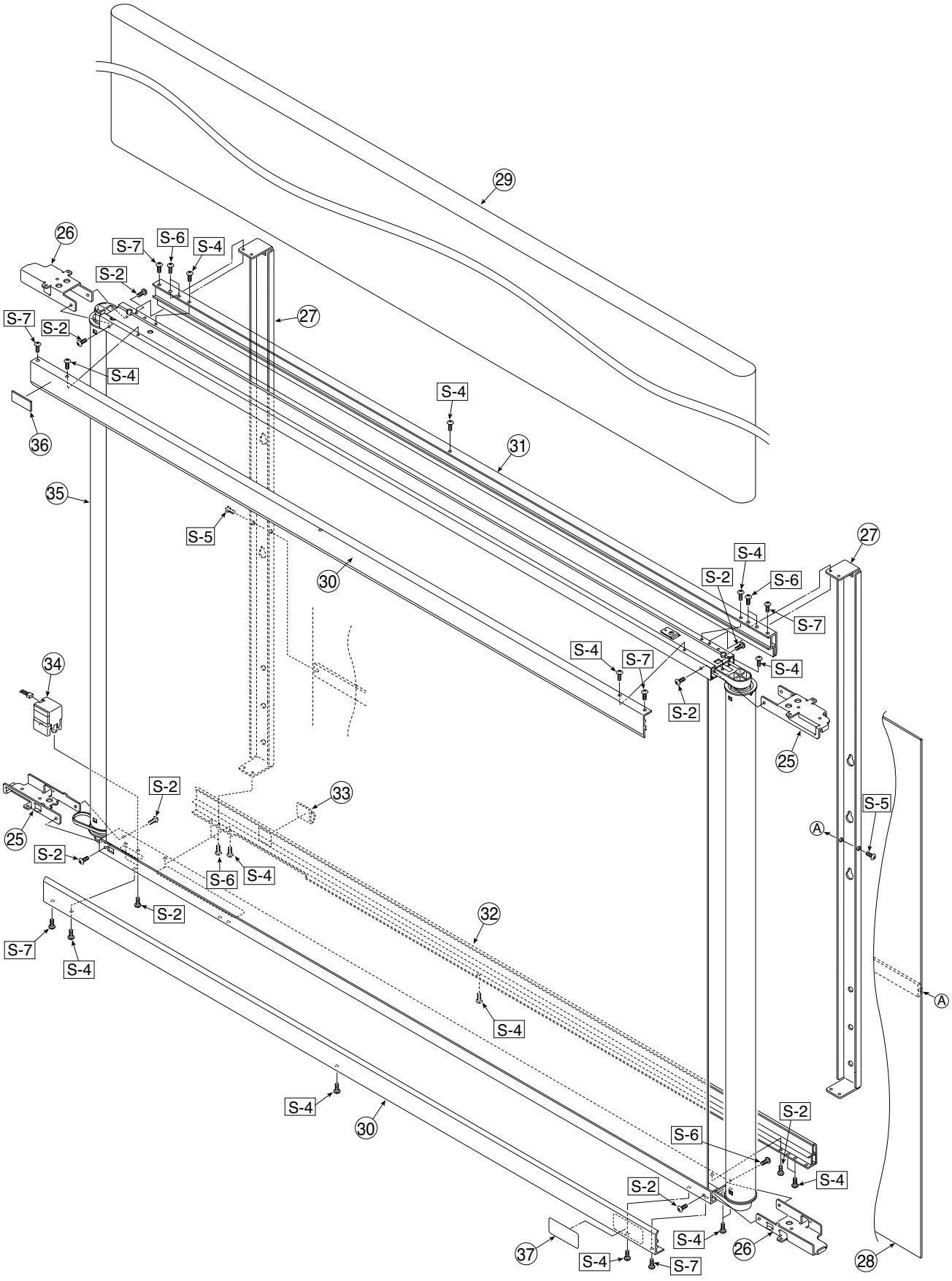
2. MAIN BOARD. CIS UNIT. CABLE



PARTS LIST

2. MAIN BOARD. CIS UNIT. CABLE				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
16	CIS Unit	302008	1	
17	Main Board Shield	726135500	1	
18	Main Board M-18	726581400	1	M-18 Only
	Main Board M-17	726581407	1	M-17 Only
19	Main Board Sheet	726951100	1	
20	Cable Cover	726123100	1	
21	CIS Cable	726590200	1	
22	Motor Cable	726590100	1	
23	SW Cable	726590300	1	
24	USB Cable	726590500	1	

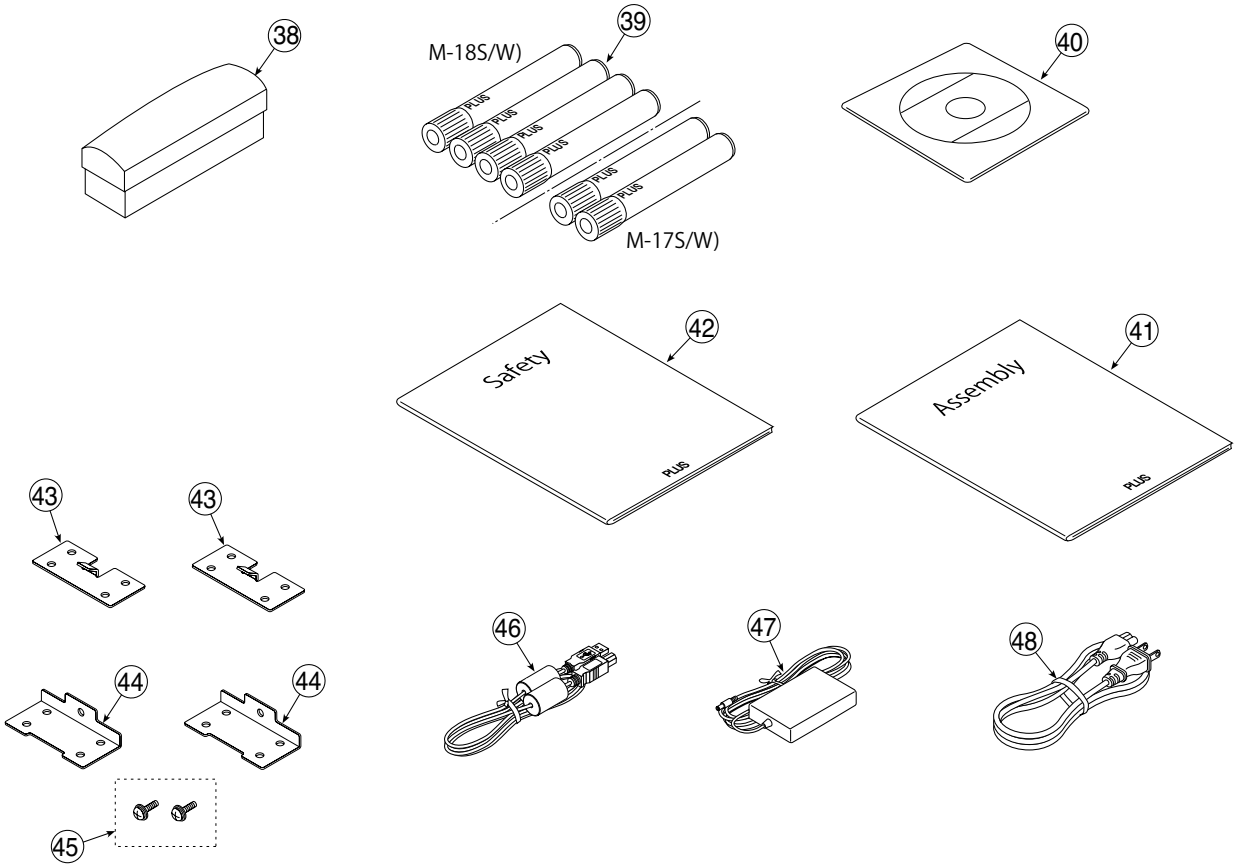
3. SHEET FRAME



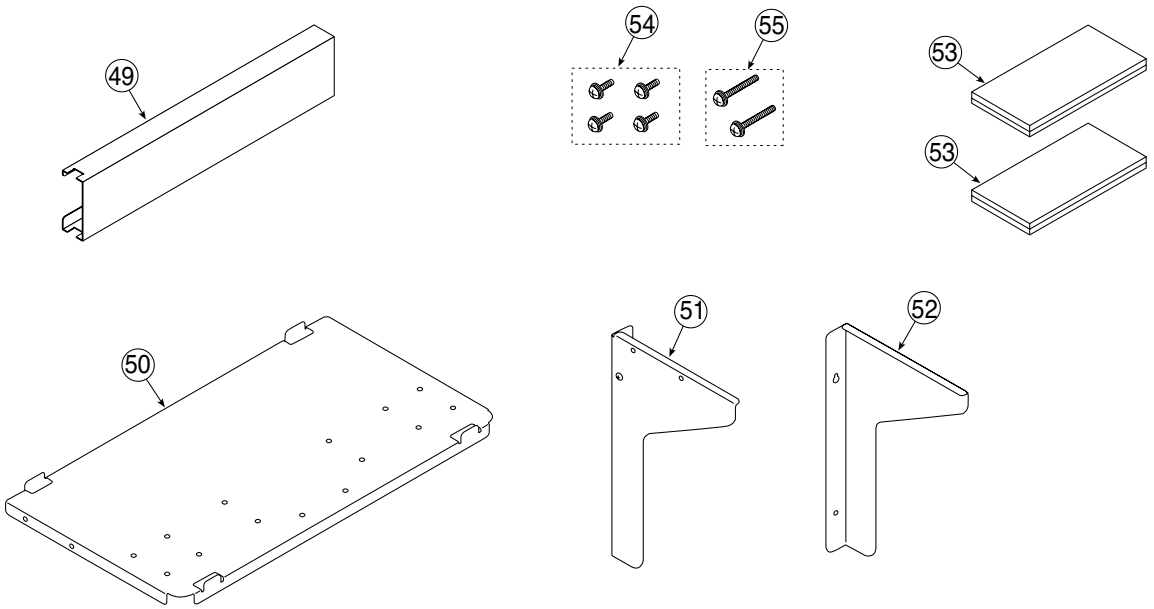
PARTS LIST

3. SHEET FRAME				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
25	Panel Plate A	726130100	2	
26	Panel Plate B	726130200	2	
27	Rear Frame	726310100	2	
28	Back Panel Unit S	302001	1	
	Back Panel Unit W	302002	1	
29	Endless Sheet S M-17/18/N-20	302005	1	
	Endless Sheet W M-17/18/N-20	302006	1	
30	Panel Front S M-17/18	726120100	2	Upper-Lower common
	Panel Front W M-17/18	726120800	2	Upper-Lower common
31	Panel Rear S Upper	726120900	1	
	Panel Rear W Upper	726121200	1	
32	Panel Rear S Lower	726121000	1	
	Panel Rear W Lower	726121300	1	
33	Cable Clamp	726129100	1	
34	Sheet Motor Unit	726090007	1	
35	Sheet Frame Unit S M-18/N-20	302003	1	
	Sheet Frame Unit S M-17	302025	1	
	Sheet Frame Unit W M-18/N-20	302004	1	
	Sheet Frame Unit W M-17	302026	1	
36	Logo Label	726152700	1	
37	Cleaning Label	726153500	1	

4. ACCESSORIES



USA Only (M-18S•W)

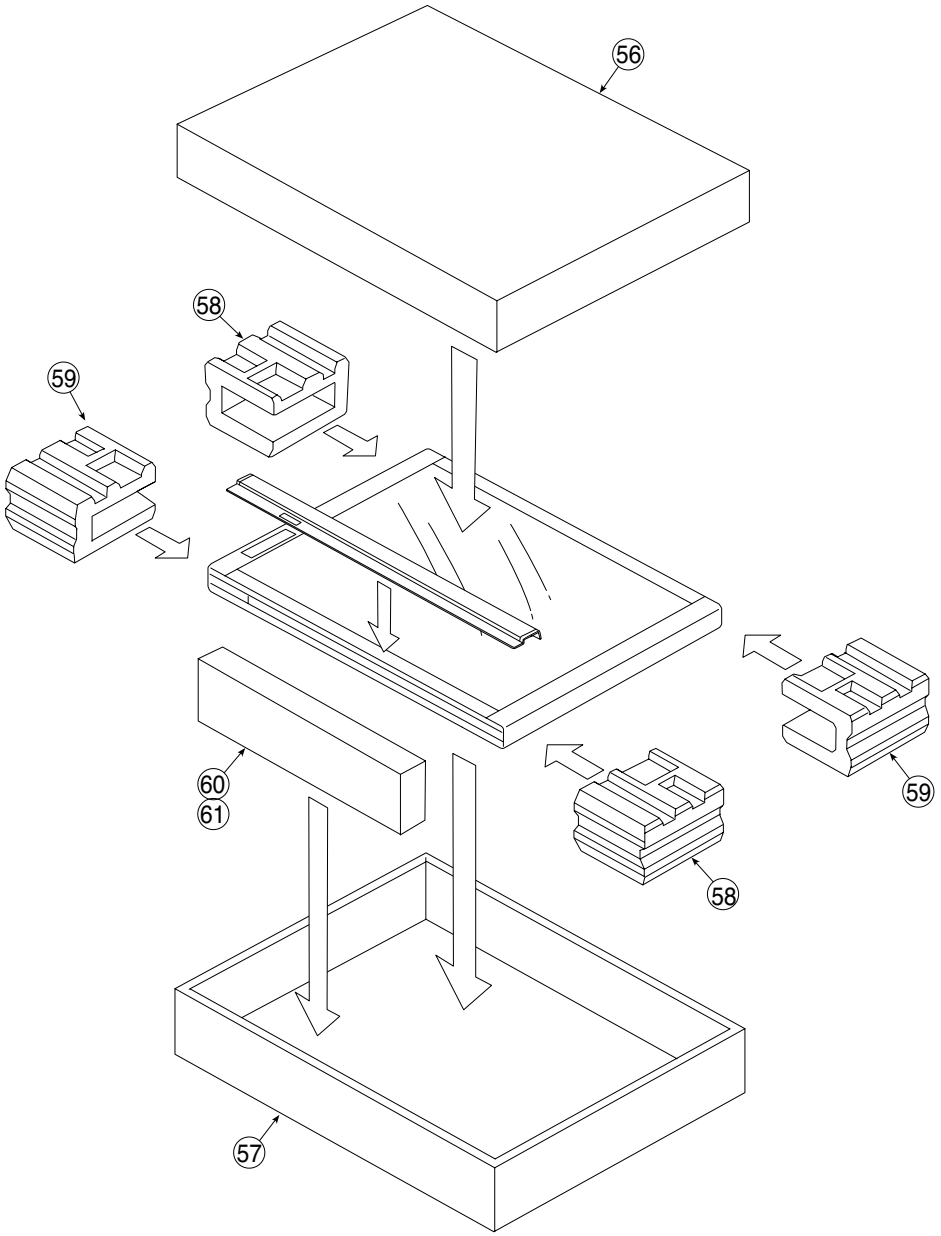


PARTS LIST

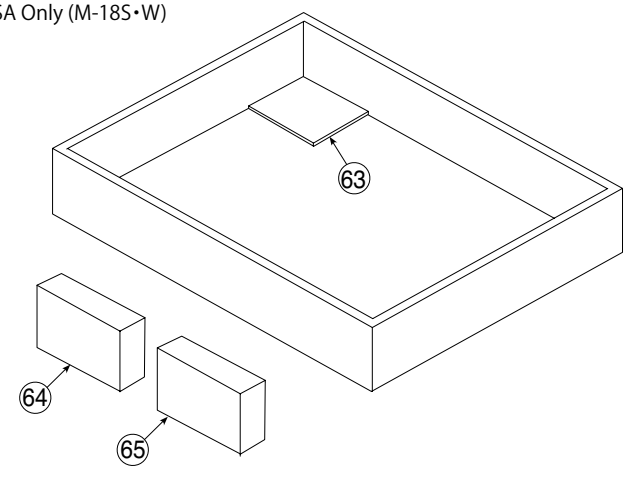
4. ACCESSORIES

No	PARTS NAME	PARTS No.	Q' ty	REMARK
38	Eraser 51-058	51058	1	
39	Marker Set	-	1	NO Parts Supply
	Marker Set for M-17	-	1	NO Parts Supply
40	Manual CD-ROM M-18	726461500	1	M-18 Only
	Manual CD-ROM M-17	726461300	1	M-17 Only
41	Assembly Manual M-17/18 (O/S)	726460300	1	
42	Safety Guide	726460800	1	
43	Wall Mount Plate Upper	726325100	2	
44	Wall Mount Plate Lower	726325200	2	
45	M4-12 Cross Recessed Binding Head	951241250	2	
46	USB Cable	715258900	1	
47	AC Adapter	726590400	1	
48	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	715261302	1	South Korea Only
49	Adapter Holder (Wall Mount)	-	1	NO Parts Supply
50	Printer Platform (Wall Mount)	-	1	NO Parts Supply
51	Printer Bracket L (Wall Mount)	-	1	NO Parts Supply
52	Printer Bracket R (Wall Mount)	-	1	NO Parts Supply
53	Fastener Layer Set 50×100	-	1	NO Parts Supply
54	M4-8 Cross Recessed Binding Head	-	4	NO Parts Supply
55	M4-20 Cross Recessed Binding Head	-	2	NO Parts Supply

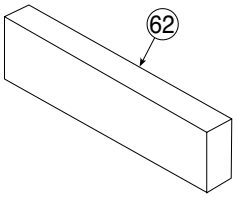
5. CARTON



USA Only (M-18S・W)



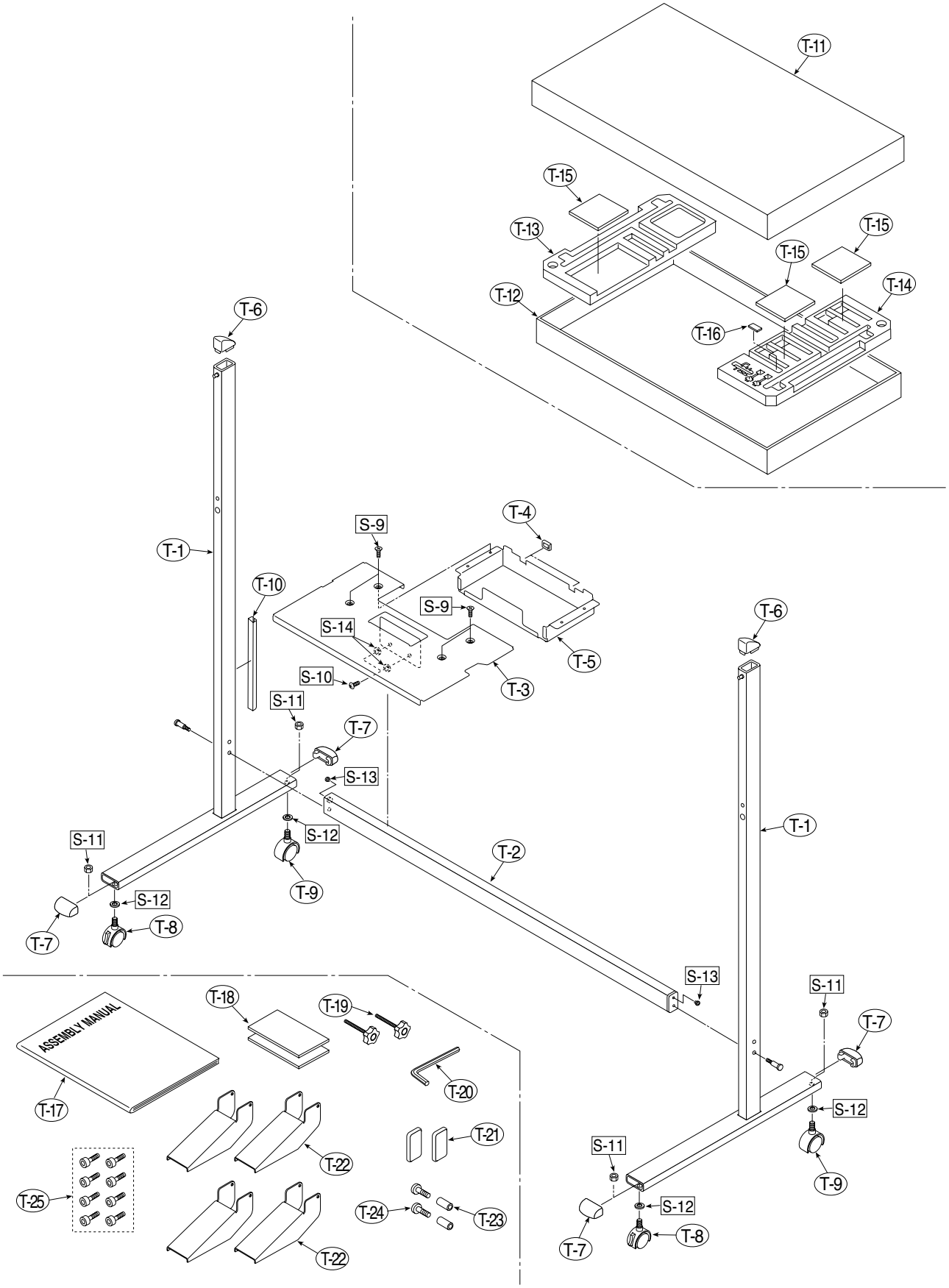
W type



PARTS LIST

5. CARTON				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
-	Carton Unit S M-17/18/N-20/C-20	302011	1	
-	Carton Unit W M-17/18/N-20/C-20	302012	1	
56	Carton S Upper	-	1	NO Parts supply
	Carton W Upper	-	1	NO Parts supply
57	Carton S Lower	-	1	NO Parts supply
	Carton W Lower	-	1	NO Parts supply
58	Packing A	-	2	NO Parts supply
59	Packing B	-	2	NO Parts supply
60	Accessary Box	-	1	NO Parts supply
61	Spacer For Accessary Box	-	1	NO Parts supply
62	Spacer For Wide Carton	-	0/1	NO Parts supply
63	Printer Table Stand Carton	-	1	USA Only
64	Parts Pad L	-	1	USA Only
65	Parts Pad R	-	1	USA Only

6. M-18/M-17/N-20-T



PARTS LIST

6. M-18/M-17/N-20-T				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
T-1	T Stand (O/S)	-	2	No Parts Supply
T-2	Side Bar	726332000	1	
T-3	Printer Table (Stand Type)	726135900	1	
T-4	Edge Holder	723191100	2	
T-5	Adapter Holder	726136100	1	
T-6	Stand Cap Upper	726321200	2	
T-7	Stand Cap Lower	726321100	4	
T-8	Front Caster	714660400	2	
T-9	Back Caster	714660500	2	
T-10	Cable Cover (Stand)	726129200	1	
-	Carton Unit (Stand) M-17/18/N-20-T (O/S)	302013	1	
T-11	Stand Carton Upper	-	1	No Parts Supply
T-12	Stand Carton Lower	-	1	No Parts Supply
T-13	Stand Packing A	-	1	No Parts Supply
T-14	Stand Packing B	-	1	No Parts Supply
T-15	Stand Packing C	-	3	No Parts Supply
T-16	Stand Packing D	-	1	No Parts Supply
T-17	Assembly Sheet (Stand) M17/18/N-20-T (O/S)	726462600	1	
T-18	Fastener Layer Set 50×100	722090012	1	
T-19	Fixed Knob	715204500	2	
T-20	Hexagon Wrench	959030050	1	
T-21	Screw Cap	726334500	2	
T-22	Stand Stabilizer	726334700	4	
-	Screw Unit (Stand) M-18/N-20-T	726090014	1	
T-23	M5 Collar	-	2	No Parts Supply
T-24	M5-40 Low head Hexagon Bolt	-	2	No Parts Supply
T-25	M5-8 Thin Head Hexagon Bolt	964250870	8	

PARTS LIST

7. SCREWS & WASHERS				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
S-1	M3-6 Cross Recessed Pan Head Double Sems	952530610	7	
S-2	M4-8 Cross Recessed Low Head	961540810	19	
S-3	M3-8 P-tight Cross Recessed Bind Head	963230810	10	
S-4	M4-12 Cross Recessed Low Head	963941210	30	
S-5	M4-40 B-tight Cross Recessed Bind Head	963444010	1	
S-6	M4-10 Cross Recessed Pan Head Sems	962141010	8	
S-7	M3-8 P-tight Cross Recessed Frat Head	963330830	8	
S-8	M4-20 P-tight Cross Recessed Truss Head	963742010	3/4	Standard: 3 Wide: 4
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	M5-20 Hexagon Bolt	964352050	2	
S-14	M5 Spring Lock Washer	957350030	2	