Copyboard

N-31S/N-31W

SERVICE MANUAL

PLUS

7/24.2015. Ver.1.0

CONTENTS

1. COMPLIANCE OF SAFE REPAIR 3
1-1. Cautions during Product Movement 3
1-2. Cautions during disassemblying and assembling ...3
2. SPECIFICATIONS 4
2-1. Product Specifications 4
2-2. Names of the Parts.....5
2-3. Control Panel 7
2-4. Keypad Panel 8
2-5. Meaning of Error Messages 9
3. TROUBLE SHOOTING 10
4. DISASSEMBLY AND ASSEMBLY 12
4-1. Tolls Required 12
4-2. Caution.....12
4-3. Disassembly and Assembly Procedures 10
4-4. Disassembly and Assembly 13
5. ADJUSTMENT.....20
5-1. Calibration.....20
5-2. Changing the Internal Program of N-31 Main Set.....21
5-3. Test mode.....22
6. DEVICE SETTING.....23
6-1. Basic setting operation.....23
6-2. Table of Function Numbers and Setting 24
7. CABLE AND CABLE CONNECTION 26
8. PARTS LIST 27
1. PANEL SIDE 27
2. MAIN BOARD CIS UNIT CABLE 29
3. SHEET FRAME 31
4. ACCESSORIES 33
5. CARTON 35
6. N-31-T 37
7. N-18/N-20-T(USA Only) 39
8. SCREWS & WASHERS 41

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.

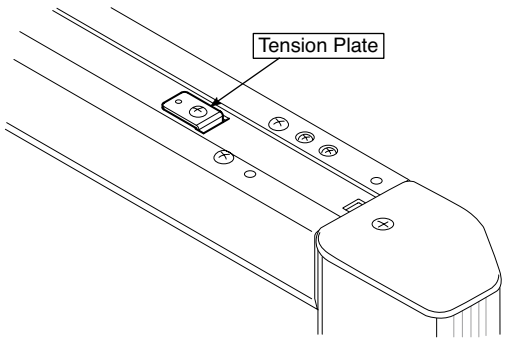
1-1. Cautions during Product Movement

• 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 (N-31S)	Wide (N-31W)
Form	Installation method		Self-standing (T-shaped legs), or wall mounting	
	IExternal 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		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		Bi-directional, endless (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,PNG,PDF	
		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 *4	
		Interface	USB2.0	
	Network	LAN port	RJ-45(10Base-T/100Base-TX)	
		Supported protocol	TCP/IP (FTP/FTPS, HTTP/HTTPS, DHCP, NetBIOS Name Service)	
	Printing	Printing resolution	300 dpi or equivalent	
		No. print colors	Eight colors or two color monochrome	
		Printer interface	Conforming to USB 2.0 standards / LAN port	
		Supported network printer	FTP supported printer *5	
Added functions	Clock		Used for the timestamp and for file dating properties	
	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	Web browser		Windows :Internet Explorer 8.0 or greater Macintosh : Safari 5 or greater * Enable JavaScript	

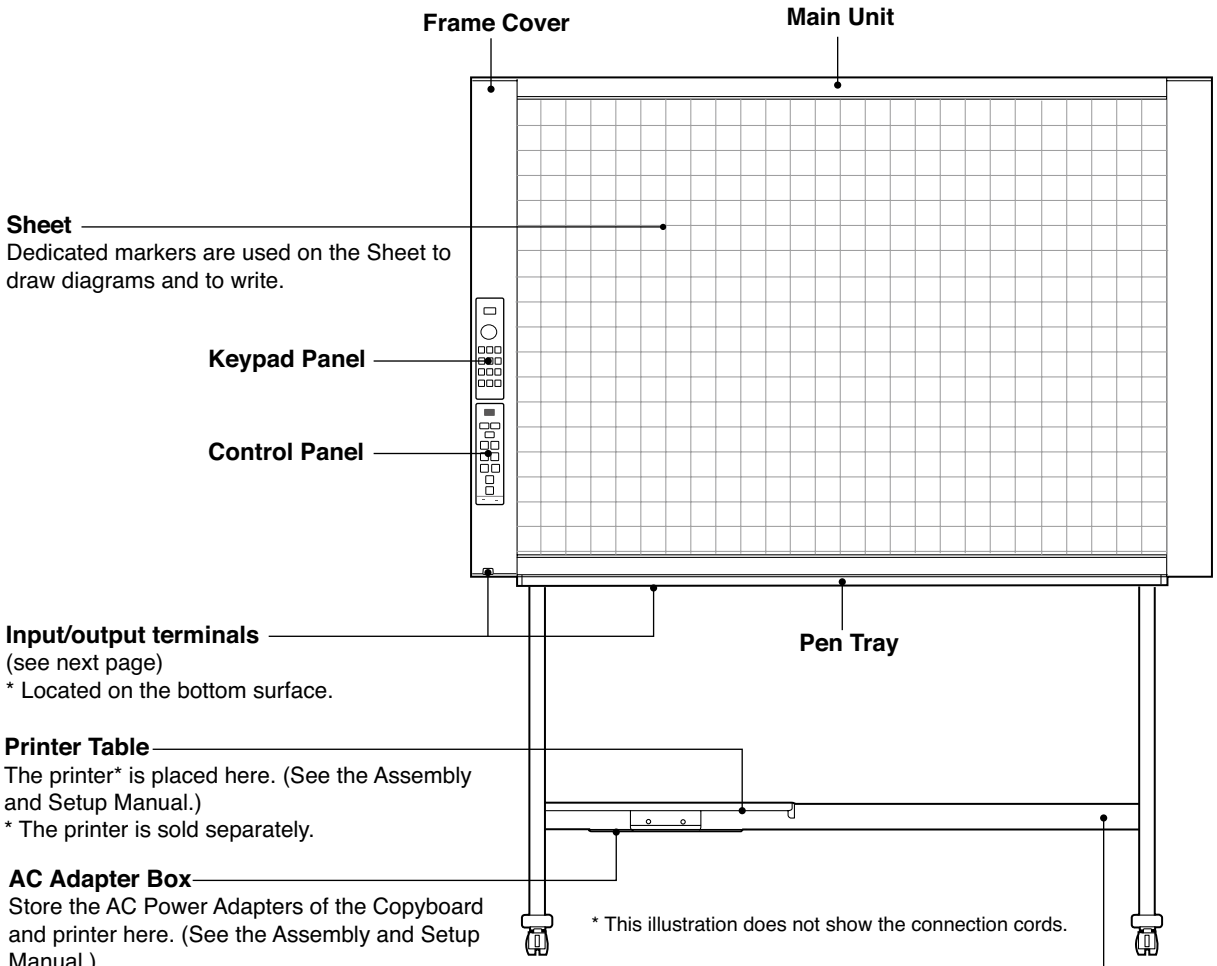
Remarks

*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.
*5: Some printer may not be compatible.

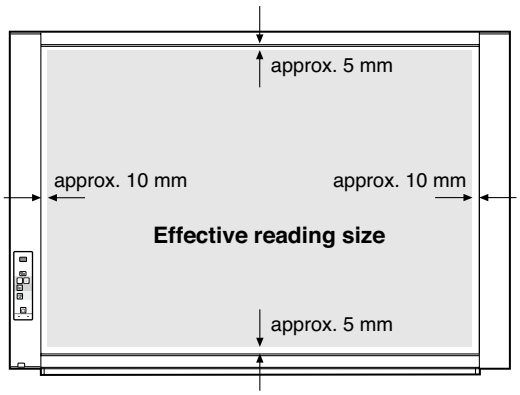
• Please note that for quality improvement purposes, specifications and design are subject to change without prior notice.

2-2. Names of the Parts

Front



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

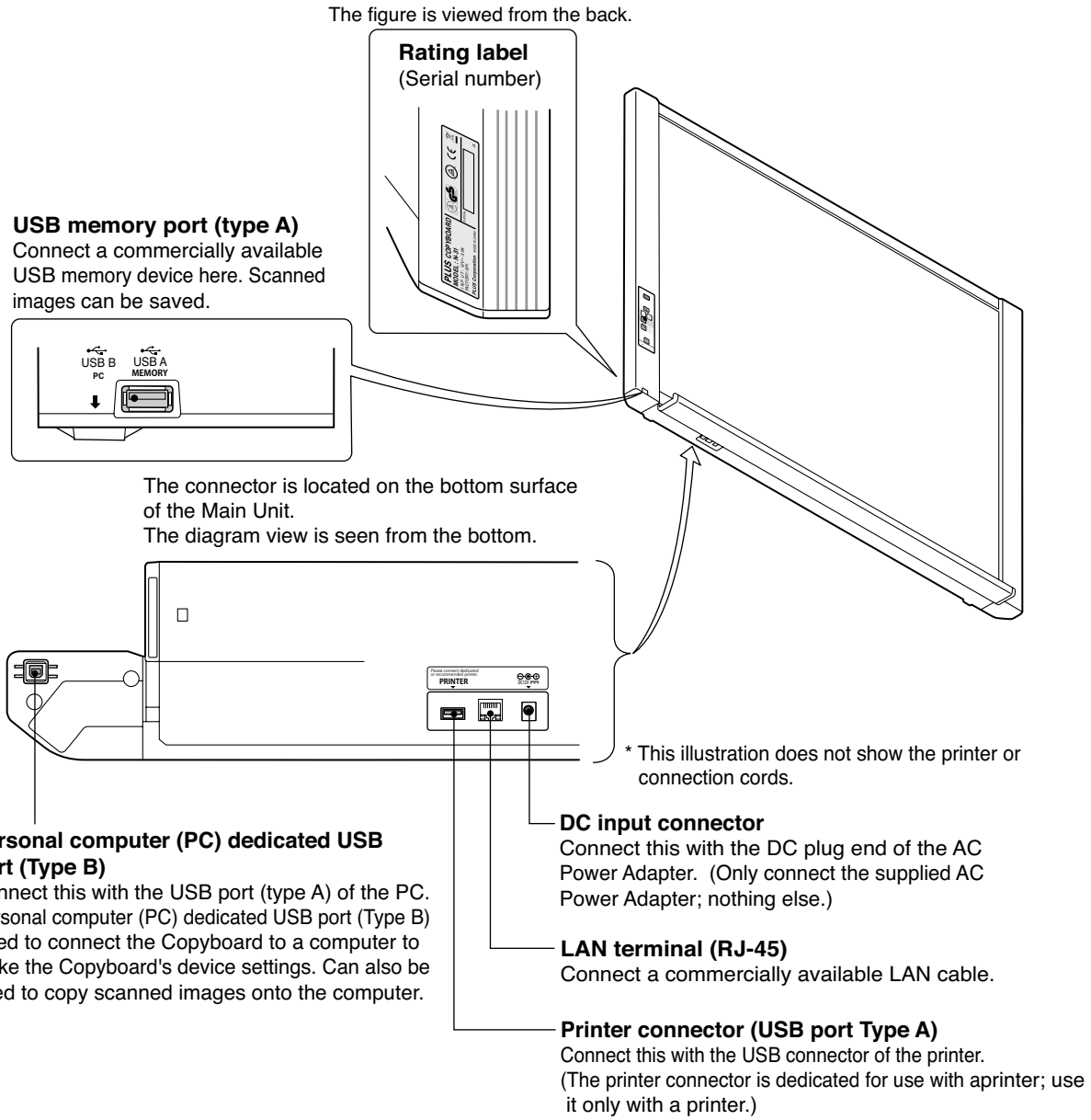


Effective Reading Size
The area that can be copied is the gray area of the diagram.

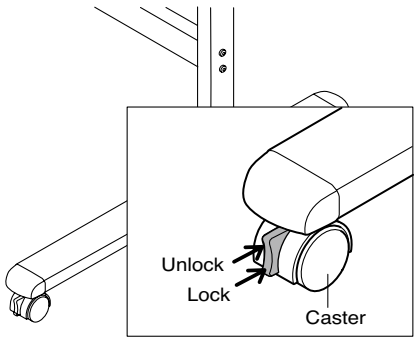
Note:
It might not be possible to print or copy when storing to USB Memory or personal computer any portions that are drawn outside of this range.

SPECIFICATION

Input/output terminals

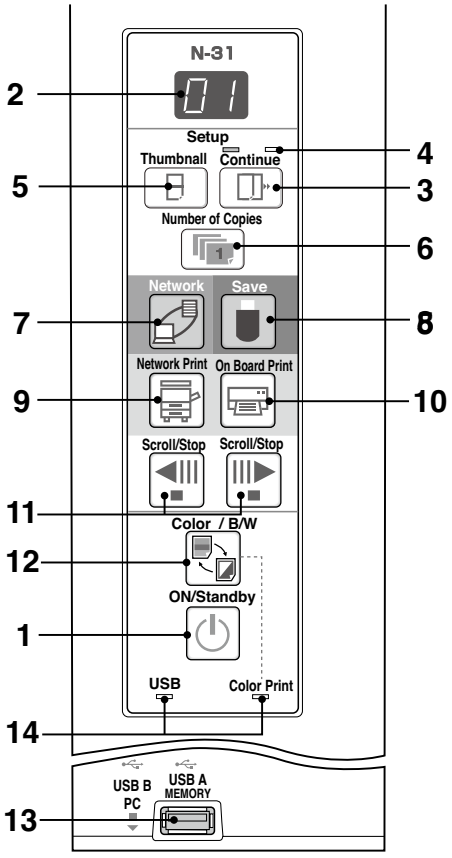


Locking/unlocking the stand's Casters
After installation, Lock the Casters with the stoppers. When moving the stand, Unlock the Caster's stoppers.
The stoppers are locked when the bottom is pressed. Press the top to Unlock them.



2-3. 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.



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 Continue ( ) button
Used to select the number of screens when printing or storing multiple screens consecutively.
Model: N-31S/N-31W (single and double screens)

4 Consecutive printing number indicators
These light yellow to indicate the number of screens selected with the consecutive button.

5 Thumbnail ( ) button
Used to select the layout for printing thumbnails of multiple screens on a single page.
The selected layout is indicated on the display window.
(Page E-18, "Printing Thumbnails")

6 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.

7 Network ( ) button
Scrolls and scans the sheet one screen's worth and saves the data in the folder for saving.
The data is saved either on the copyboard or in a folder on the FTP server, as previously set.
- If you have set "Plural Registration", go on to enter another ID number using the keypad panel. For details, refer to "N-31 Series Network Manual".

8 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.

9 Network Print ( ) button
The sheet is moved by 1 screen and read, and the image is printed out to the network printer on the same network.
The number of copies is displayed on the display window.
* FTP supported printer

10 On Board Print ( ) button
The sheet is moved by 1 screen and read, and the image is printed out to the printer connected with the network board.
The number of copies is displayed on the display window.

11 Scroll/Stop ( ) button
When the ◀ button is pressed, the sheet scrolls one screen's worth to the left (to the next screen) and stops automatically.
When the ▶ button is pressed, the sheet scrolls one screen's worth to the right (to the previous screen) and stops automatically.
When pressed during scrolling, scrolling stops.

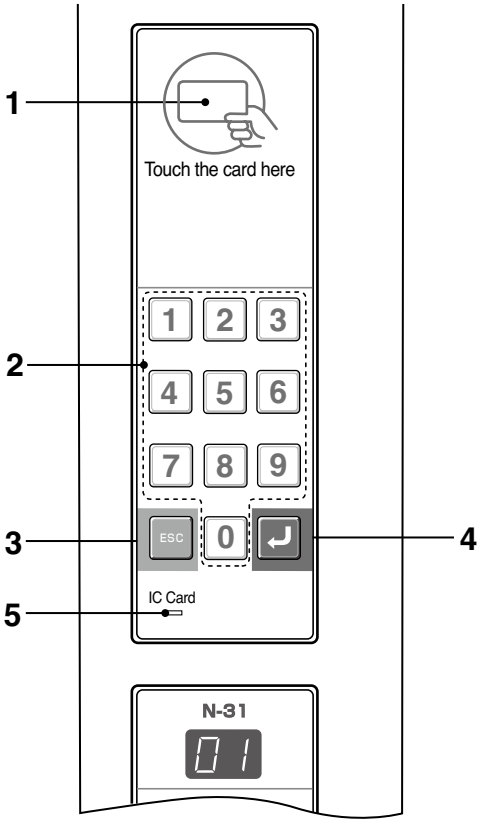
12 Color / B/W ( ) button
Changes print color (Color / Monochrome).
Selection status is shown according to whether the Color Print status indicator is lit or off and how it lights.
Color: Green steady light
Monochrome: Off

13 USB A Memory port (USB Type A)
Saves in commercially-available USB memory images that have been read by the network board.
The USB status indicator lights green when the USB memory device is recognized.

14 Status
Connection setting status is shown by turning on/off the indicator.
For details, see pages E-27 and E-28.

2-4. Keypad panel

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



1 IC card read/write part
Touch the supplied IC card here.
Reads or writes data to the IC card.
Touch the touch mark with the IC card. Touching other places than the touch mark may cause an error.

2 Numeric (0 thru 9) button
Enter the ID number for network storage.

3 Escape (ESC) button
Cancels entries on the keypad panel.

4 Enter (↵) button
Starts network storage.

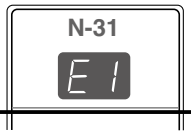
5 IC Card indicator
Shows status of read/write to the IC card according to whether it is lit or off and how it lights.

IC Card indicator	Status of IC card
Lit green	Accept IC card • Turning on the power lights green.
Flashing green	Preparing for writing to IC card
Lit red	IC card error in read/write (3 seconds)
Off	Not accept IC card The indicator lights off in the following condition: • “Network Setting” is not done. • “Network Storage” in “Security Setting” is set to “Invalid”. • In operation

SPECIFICATION

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?	• The file formats for USB memory devices that can be used on this copyboard areFAT and FAT32.
	• Is the USB Memory device plugged in fully?	• Please check the operation with a personal computer.
	• Is the USB Memory damaged?	—
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 lighting fault of the reading light source, or a read signal error.	• Unplug the power plug from the power outlet and then plug it in again.
E5 **System error**	• There is a Memory or internal fault.	• Unplug the power plug from the power outlet and then plug it in again.
E8 **Security protection**	• The operation is set to “Disable” in the security settings.	• Change the setting of the desired item to “Enable”.
E9 **Color printing prohibited**	• Coloring printing is set to “Disable”.	• Change the color printing setting to “Enable”.
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 **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	• 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.
L1 **LAN cable disconnected**	• No cable is connected to the LAN terminal.	• Connect the LAN cable properly.
L2 **FTP server recognition error**	• The user name or password is wrong.	• Input the correct user name and password.
L3 **FTP server connection failure**	• The FTP server’s IP address is wrong.	• Consult the network administrator then set the FTP server’s IP address.
L4 **FTP server writing failure**	• There is no FTP storage folder.	• Consult the network administrator then set the FTP storage folder.
L5 **IP address not set, other network error**	• An error other than one indicated by L1 to L4 has occurred.	• Unplug the power cord from the power outlet then plug it back in.
LC **IP address not set, other network error**	• The FTP printing error has occurred.	• Check if the settings for FTP printing are correct. (refer to the separate “N-31Series Network Manual”.)
LE **Network settings reset errorfailure**	• An error has occurred in resetting the network settings.	• The network reset number is wrong. Input the correct number and repeat the operation.
HE **Header/footer writing errorfailure**	• This occurs when the size of the inserted image is too large.	• Adjust the image then repeat the operation. operation.

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

Network-related errors indicate errors in access between the network board and network. In some cases they are related to thenetwork system, so consult the network administrator. If the problem persists, it may be due to a network board malfunction. Contact your store of purchase.

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 2-5. Error Messages)
     • 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 Print button (when a printer is used).
   Does the error display (E1) appear?
   - Printer failure. (See section 2-5. Error Messages)
     • 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.
   - No ↓ • The Main Board Assy is defective.

   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.
     • 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).
   - Yes ↓ • The ink of a printer is exhausted.
     • The ink cartridge of a printer is defective.

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 2-5. Error Messages)
     • A USB Memory is not formatted.
     • An incompatible USB Memory is used.
     • A USB Memory is defective.
     • A USB Memory port is defective.

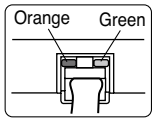
     Error display: E3 is displayed.
   - No ↓ • Memory storage error: Repeat save operation again.
     • The Main Board Assy is defective.

   Is the object written in the board stored normally?
   - No → black line is put in a picture.
     • Foreign matter adheres to the CIS Unit.
     • The CIS Unit is defective: Replace the CIS Unit for improvement.

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

5. Confirm the Main board Assy and LAN Port, (RJ-45), LED display. (During network connection)

*The LED (green, orange) of a LAN port can be confirmed when you remove the cable cover of a main board.
The current communication state can be grasped by confirming the LED.



- When a network can be connected normally → Green blinks, Orange Off (During 10Base-X)
- When a network can be connected normally → Green blinks, Orange Lit (During 10Base-X)
- When a network cannot be connected → Green Off, Orange Off (During non-connection such as disconnection the LAN cable)

Normal operation

6. Confirm the LED display of the Keypad Panel Unit (during network connection).

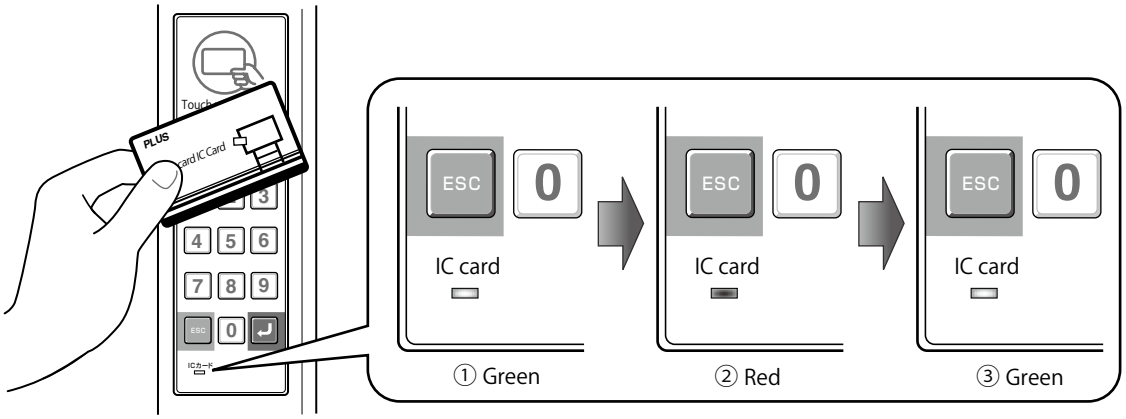
*Confirm that a network is set so that an IC card can be used.

Bring an operation confirmation IC card (not including any data) in touch with an IC card reader/writer.

• Does an IC card indicator light (in the order of ① green →② red →③ green)?

No → The Keypad Panel Unit is defective.

Yes → Normal operation



Touch using a card.

*Are numeric characters changed in a test/adjustment mode using a keypad button (of 0 to 9)?

• Insert the plug of an AC adapter into the main set to apply an electric current (in the Standby state).

• Press the “Save” button three times while pressing and holding the “Power” button.

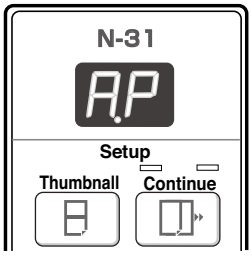
→ Test/adjustment mode segment display: <A.P>

Press any numeric key.

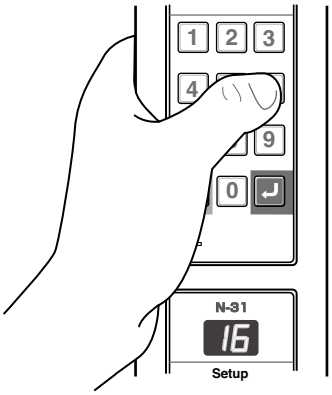
No → The keypad panel cable is disconnected.

The Keypad Panel Unit is defective.

Yes → Normal operation



Test/adjustment mode <A.P>



•Press any keypad.

Display on display window
(Numeric character)

4.DISASSEMBLY AND ASSEMBLY

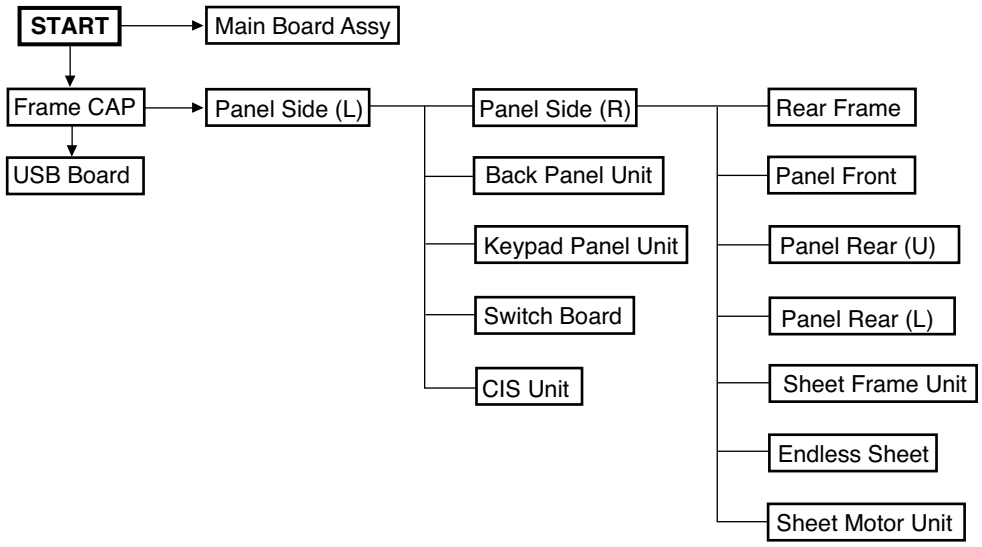
4-1. Tools Required

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

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”.

* 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.

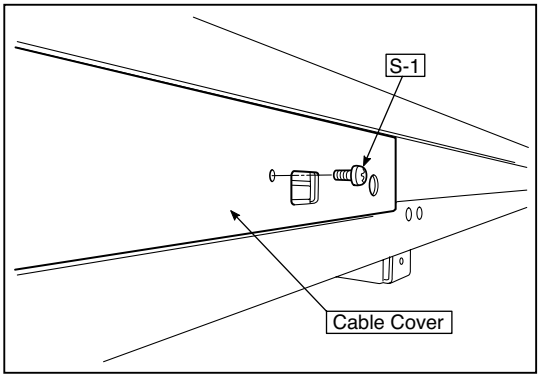


Fig.1

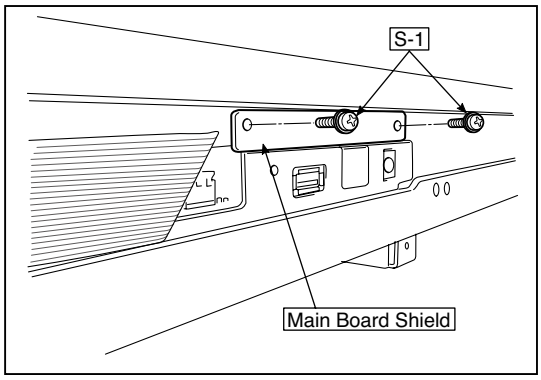


Fig.2

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 Assy are not damaged.

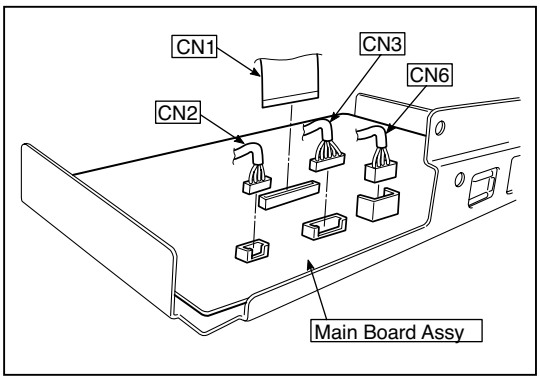


Fig.3

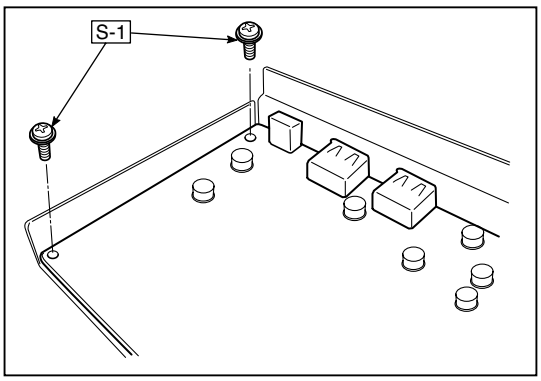


Fig.4

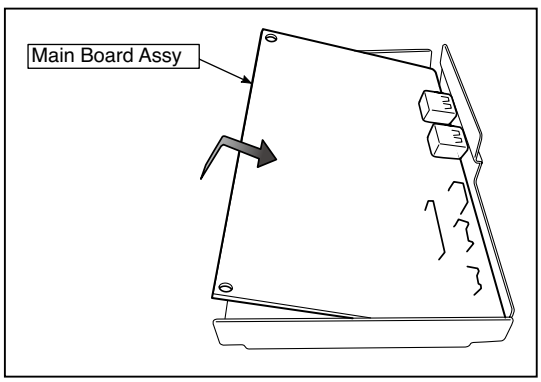


Fig.5

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 Cover.

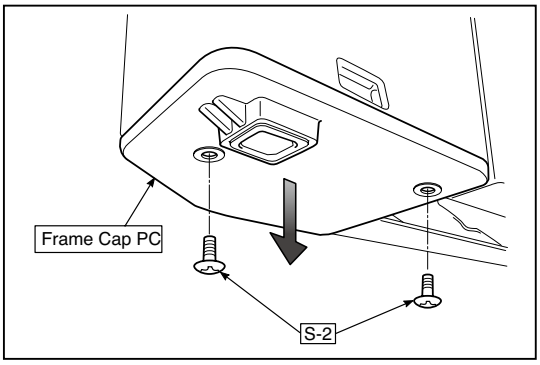


Fig.6

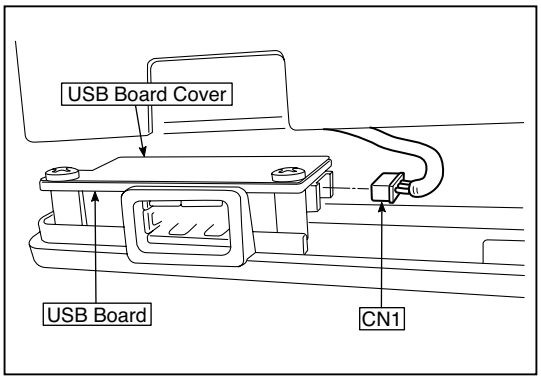


Fig.7

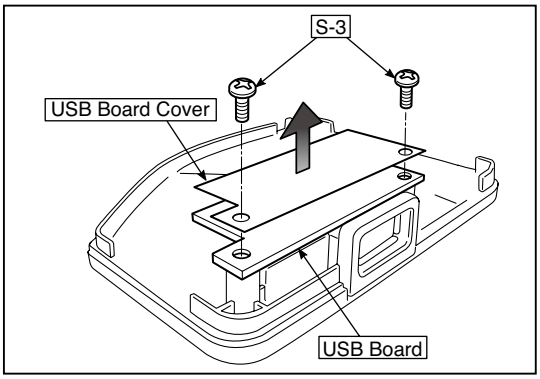


Fig.8

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.

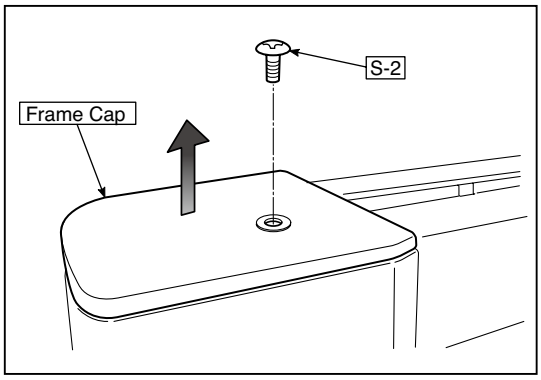


Fig.9

4) Remove the Panel side L. (See Fig. 10)

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.

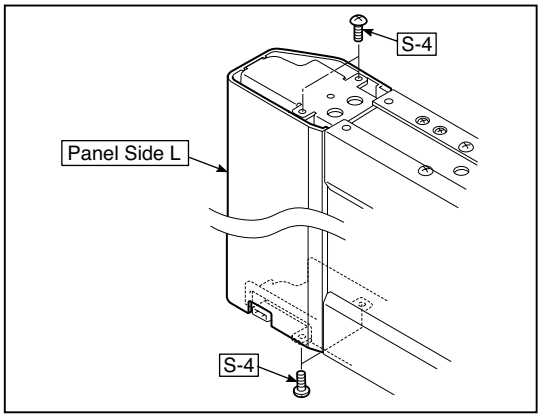


Fig.10

5) Remove the Panel Side R. (See Fig. 11)

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

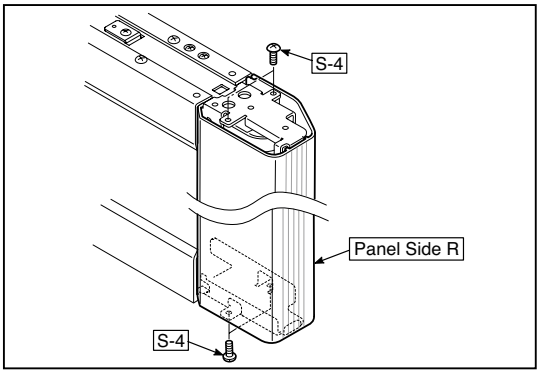


Fig.11

7) Remove the Back Panel Unit. (See Fig. 14)

1.Remove the “S-5” screws shown in the figure12.
Remove 2 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.

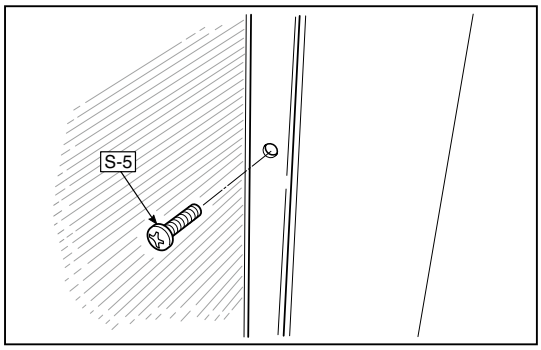


Fig.12

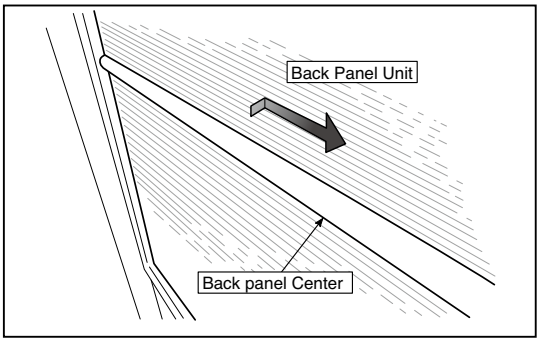


Fig.13

7) Remove the Keypad Panel. (See Fig. 14)

1.Push the (five) hooks of the resin shown in Figure 14 and remove the Keypad Panel Unit on the front side.

2.Disconnect the connector of a keypad panel cable.

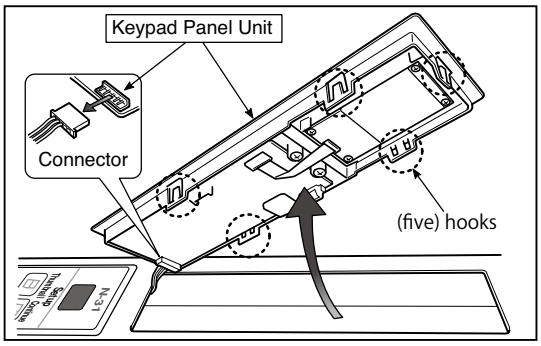


Fig.14

8) Remove the SW Board. (See Fig. 15.16)

1.Remove the SW Panel shown in the figure15.

2.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.

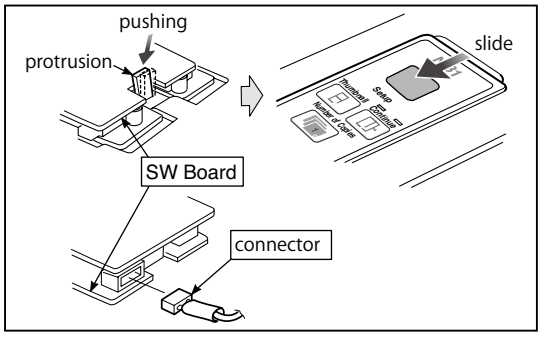


Fig.15

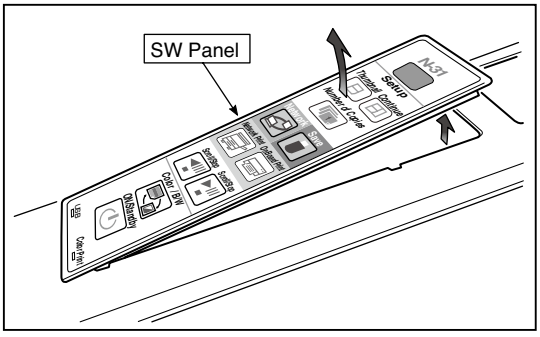


Fig.16

3.Remove the “S-3” screws shown in the figure 17 and then remove the SW Board.

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

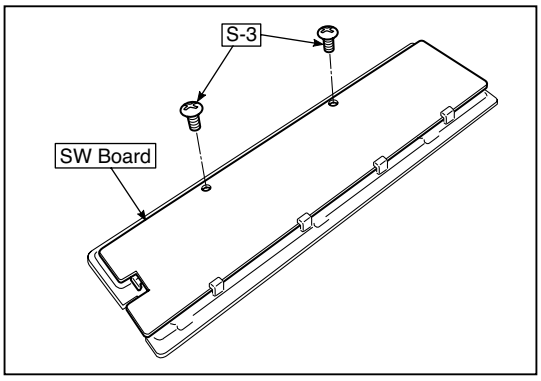


Fig.17

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).

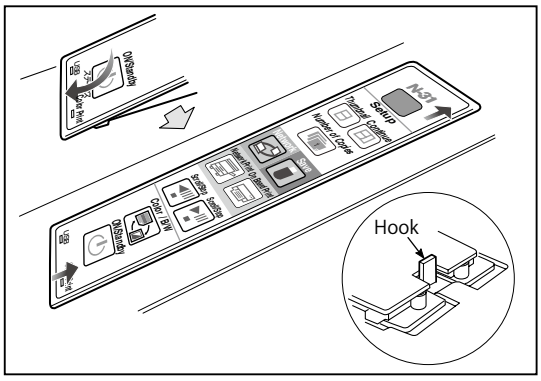


Fig.18

9) Remove the CIS Unit. (See Fig. 19.20)

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. 22) is located in the upper position.
* When a CIS Unit is replaced, be sure to perform White level calibration.
See page 20 3.White level calibration

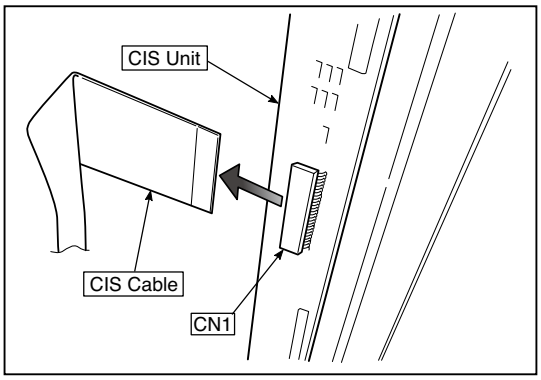


Fig.19

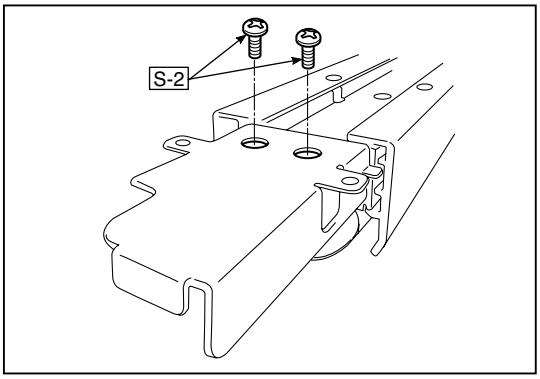


Fig.20

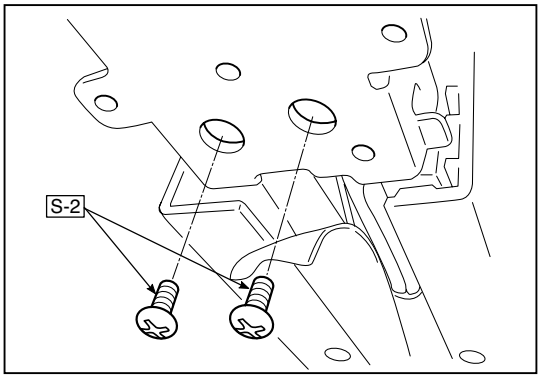


Fig.21

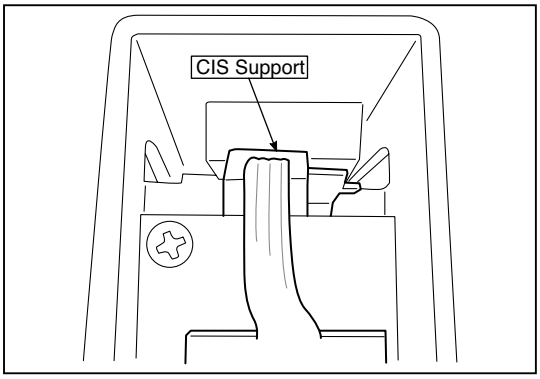


Fig.22

DISASSEMBLY AND ASSEMBLY

10) Remove the Rear Frame. (See Fig. 23)

1.Remove the “S-6” screws shown in the figure 23 and then remove the Rear Frame (two).

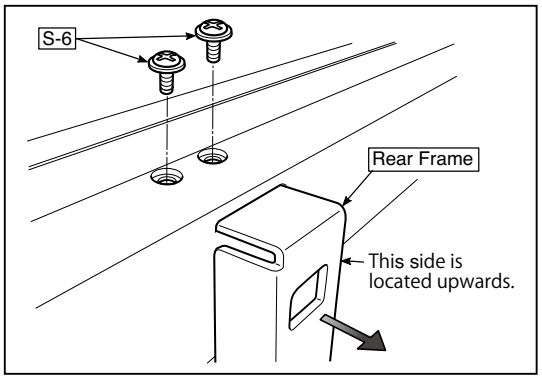


Fig.23

11) Remove the Panel Upper. (See Fig. 24)

1.Remove the “S-4” screws shown in the figure 24 and then remove the Panel Front.

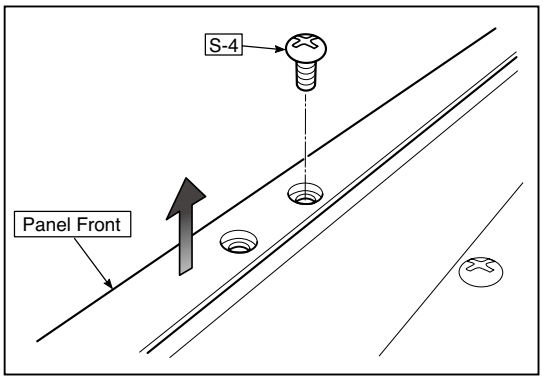


Fig.24

12) Remove the Panel Rear. (See Fig. 25.26)

1.Remove the “S-4” screws shown in the figure 25 and then remove the Panel Rear (U).

2.Remove the “S-4” screws shown in the figure 26 and then remove the Panel Rear (L).

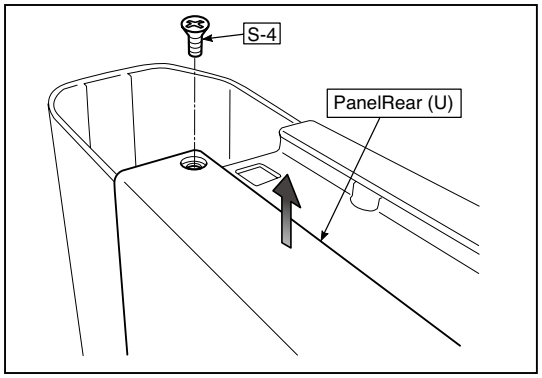


Fig.25

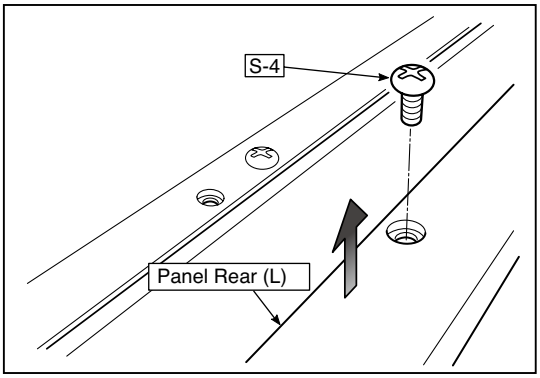


Fig.26

DISASSEMBLY AND ASSEMBLY

13) Replace the Endless sheet.

1. Remove the “S-2” screws shown in the figure 27.
2. Remove the Panel Plate shown in the figure 28.
3. Remove the stopper “S-4” screws in the (two upper and lower) Tension Roller Bases shown in the figure 29.
4. Push the Tension Roller Base block shown in the figure 30 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.

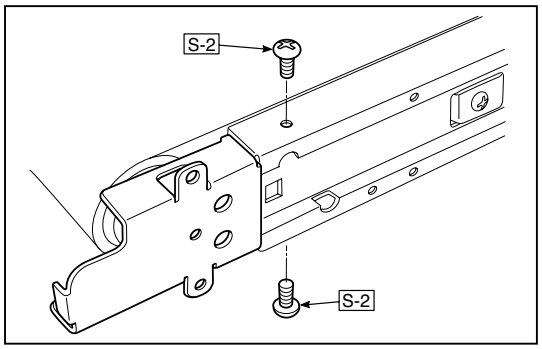


Fig.27

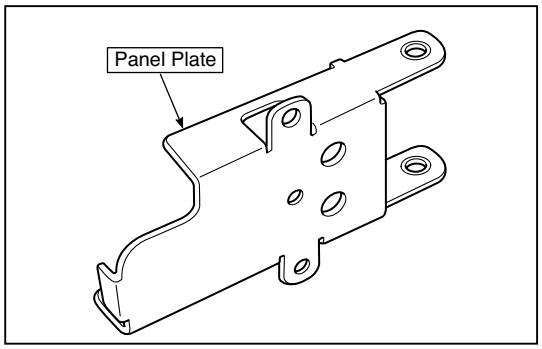


Fig.28

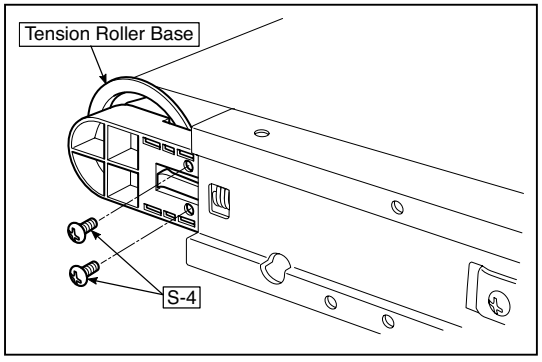


Fig.29

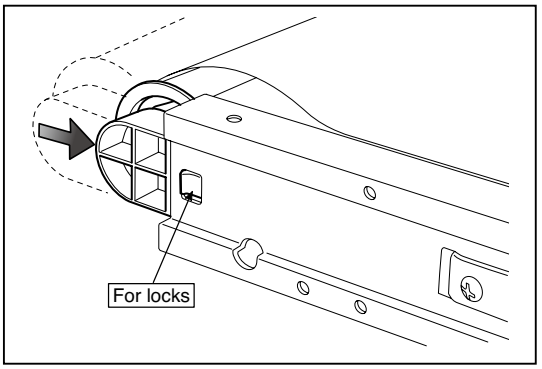


Fig.30

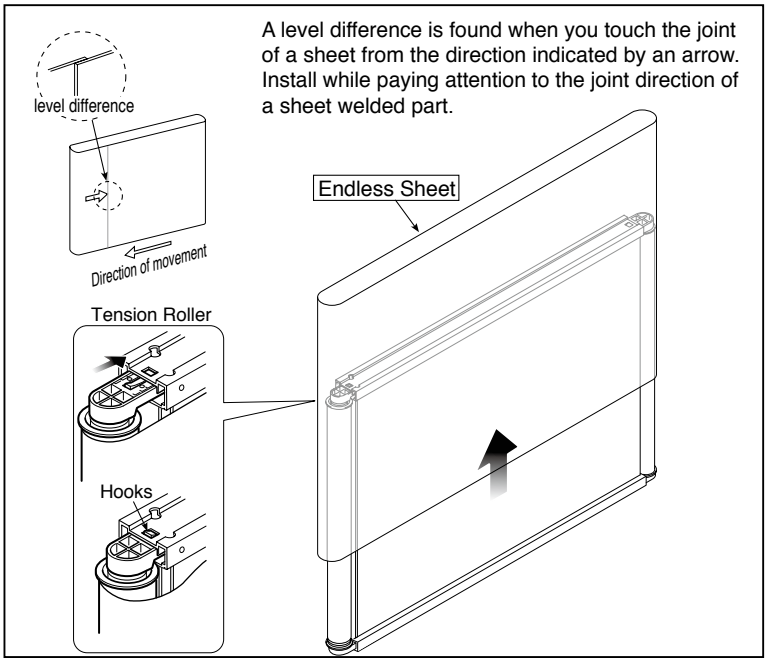


Fig.31

14) Replace the Sheet Motor Unit. (See Fig. 32)

1. Remove the “S-4” screws shown in the figure 32.
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.

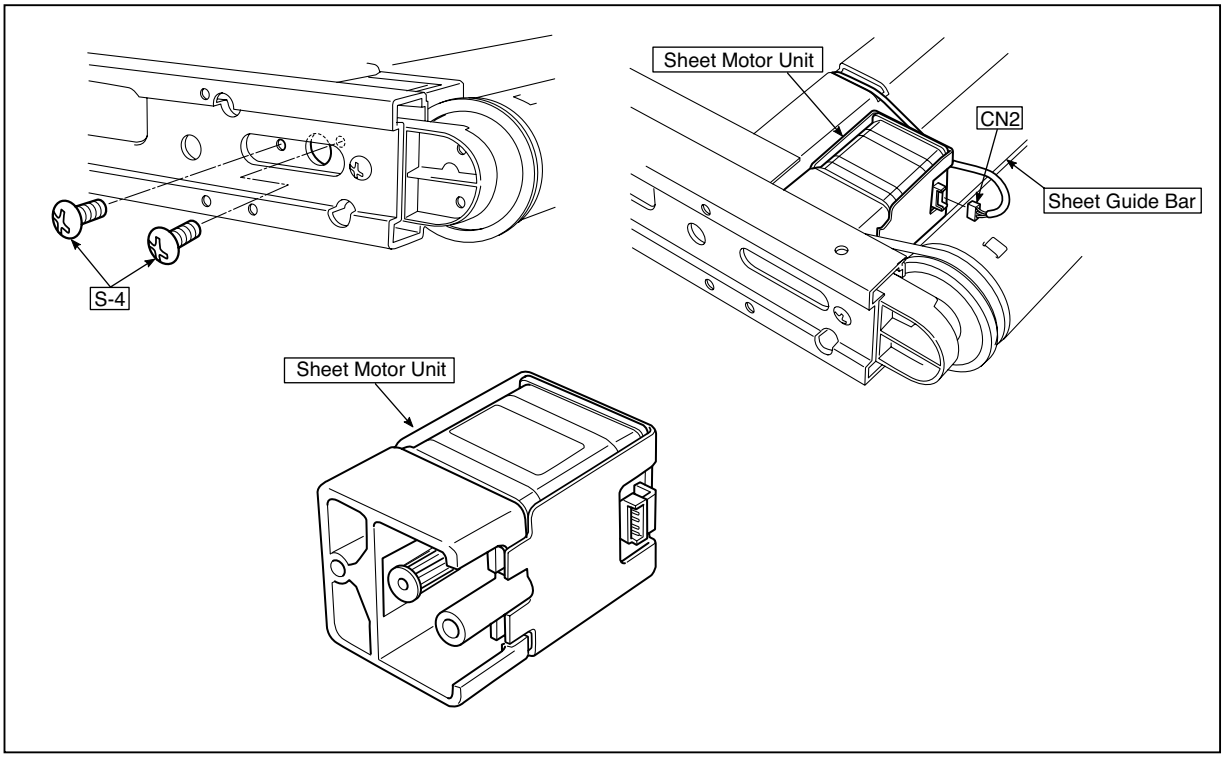


Fig.32

5. ADJUSTMENT

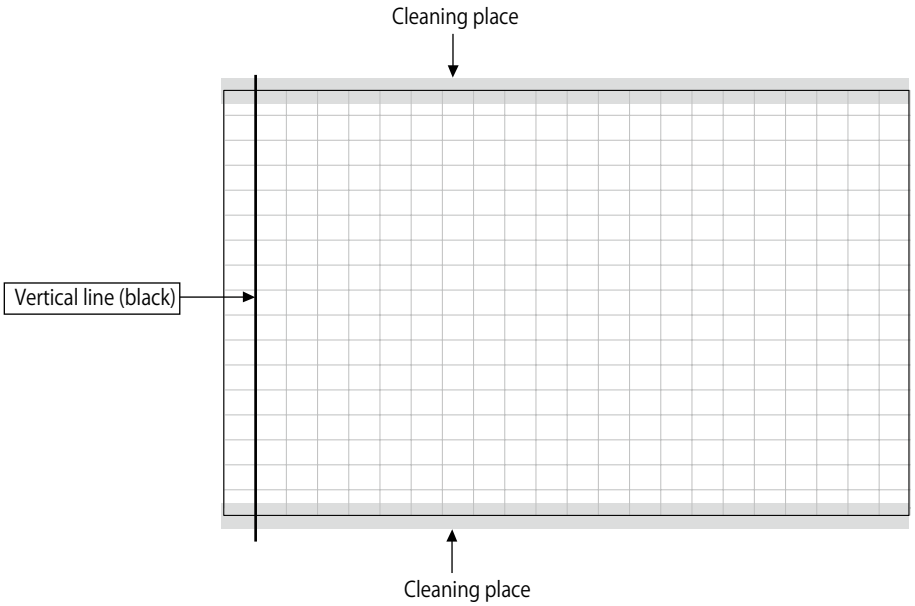
5-1. Calibration

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.
* Be sure to replacing the CIS Unit when any failure occurs in an image.

[Calibration]



[Preparation]

Enter a vertical line (black) between the upper and lower ends of an Endless Sheet.
* Clean the (both sides of) endless sheet and then perform calibration.

[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>

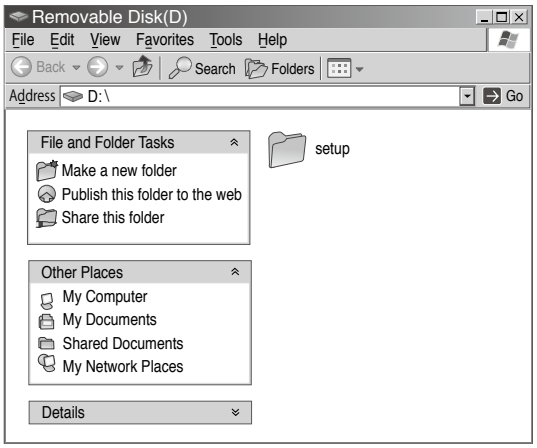
1) Calibration is started, ·····<1. >
2) Initialization,·····<1.0>
3) The first vertical line is being detected,·····<1.1>
4) The vertical line after one cycle is being detected,·····<1.2>
5) When no vertical line can be detected, and·····<1.2.>
6) When calibration succeeds·····<AA >

5-2. Changing the Internal Program of N-31 Main Set
[How to rewrite program using PC]

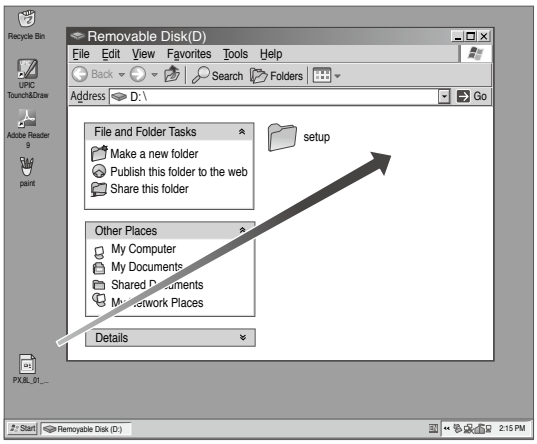
Equipment used
1) Firmware data for N-31(holder name: PX26H_N31_**_**.brn)
2) PC main set (OS: Windows 7/8)
3) USB Cable

Preparation
Save the extracted N-31 program holder on the desktop screen of PC used.

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 “PX26H_N31_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.

ADJUSTMENT

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 : Keypad Panel version (NFC)
  The eighth : Date setting: US: North America: EU: Other than North America
  The ninth : 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

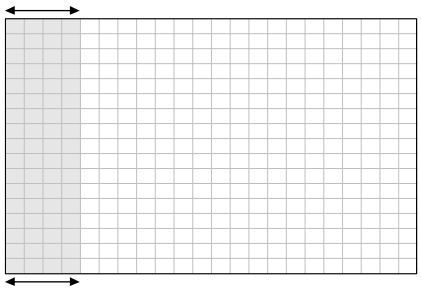
- Insert the plug of an AC Adaptor into the main set to apply the electric current (in the Standby state).
- Press the Save button three times while pressing and holding the Power (ON / Standby) button.
  Test/adjustment mode segment display: <A.P>
- Press the Feed / Stop button eight times. Segment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

*The Endless sheet does not move during White level calibration.

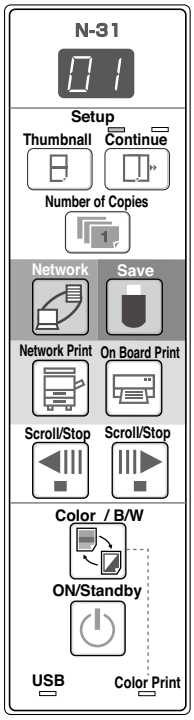
6.DEVICE SETTINGS

There are two ways to make the device settings: using the network board's operation buttons to make the settings ("CB Setup") and making the settings via the web on the computer connected to a network.
The description here provides operation using the network board's buttons.
For using the network board connected to a network, refer to the separate "N-31 Series Network Manual".

CB Setup (operating the copyboard's buttons)

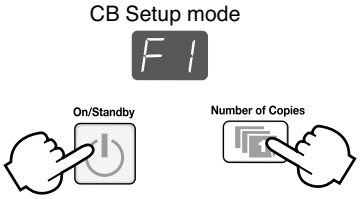
6-1. Basic setting operation

- Check that the power is on (that the display window is lit).
- When in the "CB Setup" mode, the copyboard will return to the normal mode if no buttons are operated for 10 seconds, so operate the buttons within 10 seconds.



1 Switch to the CB Setup mode

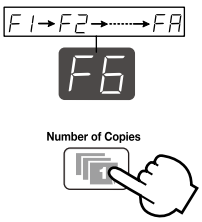
While pressing the ON/Standby button, press the Number of Copies button, then release the ON/Standby button. The network board switches to the CB Setup mode.
"F1" appears on the display window.
"F1" is the time setting. For instructions on the time setting, see page E-13.



2 Select "the function number", then press the Save button

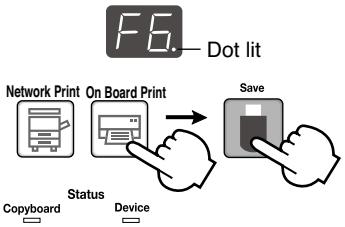
Press the Number of Copies button (the function switches each time the button is pressed, returning to F1 after FF) to select the desired function number, then press the Save button to set that function number.
For the item names of the function numbers, see the "Table of Function Numbers and Settings" on the following page.

- When the Save button is pressed, the function number to be changed is set and a dot lights (ex.: "F6.").



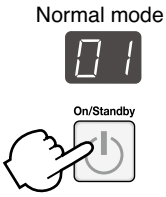
3 Select "the setting", then press the Save button

Press the Network Print or On Board Print button, check the setting, then press the Save button to set.
Check the setting according to whether the USB and Printer Status indicators are lit or off. See the "Table of Function Numbers and Settings" on the following page.



4 Exit the CB Setup mode

Press the ON/Standby button. The network board returns to the normal mode. The display window returns to the number of



DEVICE SETTINGS

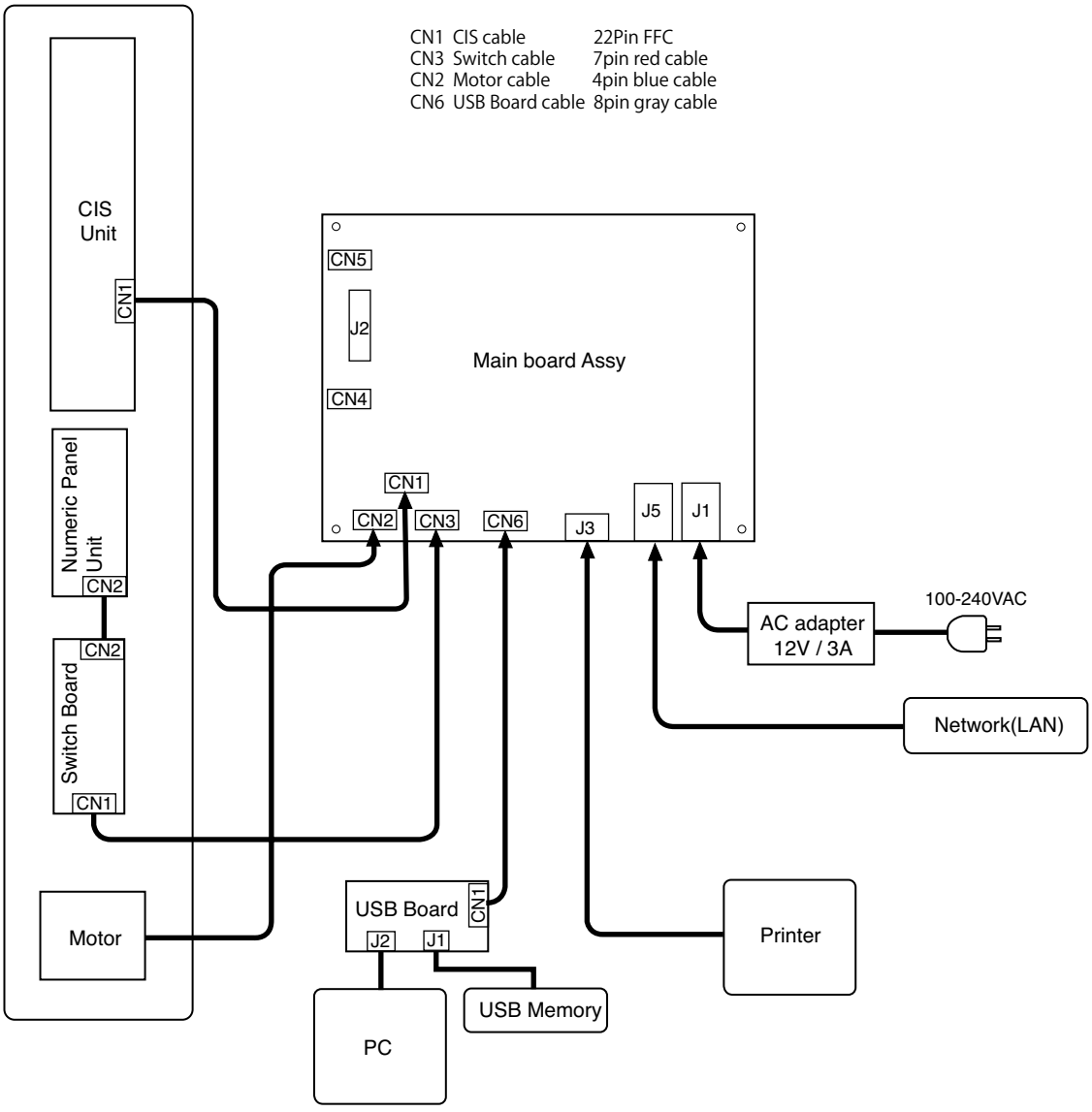
6-2. Table of Function Numbers and Settings

Function Number	Setting Item	Description	Setting	Status Indicators	
F1	Time Setting	The date and time are stamped on the printing paper and recorded in the file information when files are stored.	Year, month, day, hours, minutes	Not lit	
F2	Paper Size	Selection of whether to print in A4 paper size or letter size. • This operates when the copyboard is connected to a printer.	A4*	USB ■ (Lit)	Color Print □ (Off)
			Letter	USB □ (Off)	Color Print ■ (Lit)
F3	Aspect Ratio Setting	Selection of the image's vertical-to-horizontal ratio (aspect ratio) when printing. Equal Ratio: The image is printed with the same ratio as the copyboard's sheet surface. Compressed: The image is compressed in the horizontal direction to the ratio of A4 or letter size paper for printing (ex: circles become ellipses).	Compressed*	USB ■ (Lit)	Color Print □ (Off)
			Equal Ratio*	USB □ (Off)	Color Print ■ (Lit)
F4	Color Printing	If this is set to [Invalid], color printing is not possible. Valid: When this is set, color printing is possible. Invalid: When this is set, color printing is not possible.	Valid*	USB ■ (Lit)	Color Print □ (Off)
			Invalid	USB □ (Off)	Color Print ■ (Lit)
F5	Resolution	Selection of the image file's resolution. Standard: The vertical/horizontal size of the scanned image is set to 1/2. The amount of data is 1/4 that of when "High Resolution" is selected. High Resolution: The image file has the same resolution as the scanned mage (vertical/horizontal size of 1/1). The picture quality is better than when "Standard" is selected.	Standard	USB ■ (Lit)	Color Print □ (Off)
			High Resolution	USB □ (Off)	Color Print ■ (Lit)
F6	Graphics File Format	Selection of the format in which image files are saved. Scanned images are converted into JPEG (extension ".jpg"), PNG (extension ".png") or PDF (extension ".pdf") format.	JPEG*	USB ■ (Lit)	Color Print □ (Off)
			PNG	USB □ (Off)	Color Print ■ (Lit)
			PDF	USB ■ (Lit)	Color Print ■ (Lit)
F7	Header/Footer	Setting of whether or not to output the header/footer information registered on the copyboard. "Off": The header/footer information is not output. "On": The header/footer information is output when printing and when saving image files. Note: • Headers and footers refer to the information at the top and bottom margins, respectively, of printed pages or images. Titles, company names or other characters or images can be inserted so that the same information is provided on all pages. • For instructions on creating and registering headers and footers, see "Creating and Registering Headers and Footers". • Depending on the type of printer, the colors may differ from the actual graphic image.	Off*	USB ■ (Lit)	Color Print □ (Off)
			On	USB □ (Off)	Color Print ■ (Lit)

DEVICE SETTINGS

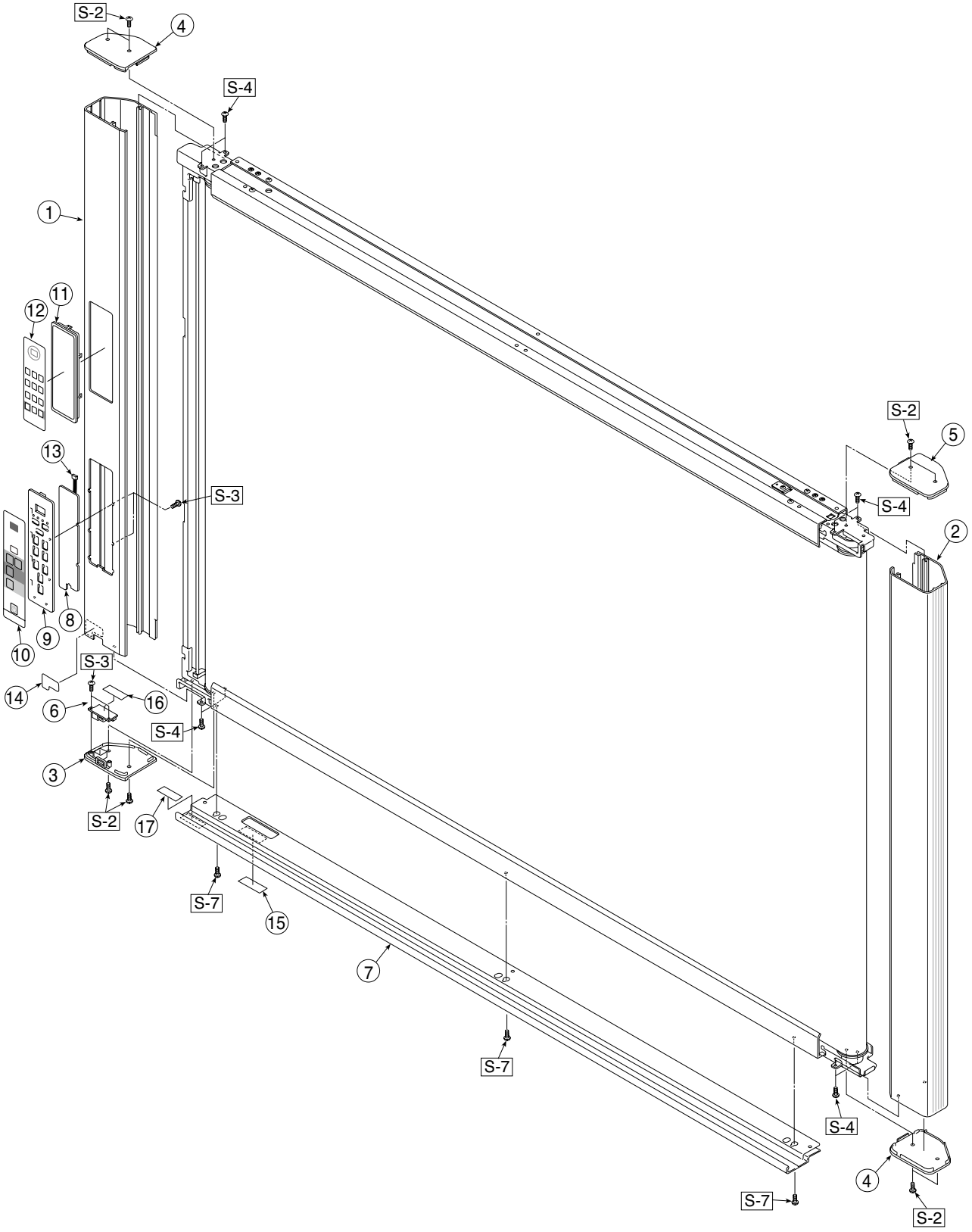
Function Number	Setting Item	Description	Setting	Status Indicators	
F8	Erase Reminder	Setting of whether or not to notify the user that characters or diagrams drawn on the back side of the copyboard's sheet surface have not been erased. This is effective for confidential meetings, etc. Disable: The Erase Reminder function does not work. (Setting upon factory shipment) Enable: When the Power button is pressed to turn the power off, the display window on the copyboard's operation panel flashes and the copyboard automatically moves to the non-erased surface, after which the power turns off. • The Erase Reminder function may not work properly due to dirt on the sheet adhesive or marker traces.	Disable*	USB ■ (Lit)	Color Print □ (Off)
			Enable	USB □ (Off)	Color Print ■ (Lit)
F9	Time Day Stamp Format	Selection of the format in which the date and time are displayed. Examples of displays: YYYY/M/D 2011/1/23 01:23 DD-MMM-YYYY 23-Jan-2011 01:23 MMM-DD-YYYY Jan-23-2011 01:23	YYYY/M/D*	USB ■ (Lit)	Color Print □ (Off)
			DD-MMM-YYYY	USB □ (Off)	Color Print ■ (Lit)
			MMM-DD-YYYY	USB ■ (Lit)	Color Print ■ (Lit)
FA	Reset Device Settings	This restores the copyboard device settings at F2 to F9 to their defaults (settings upon factory shipment). The settings marked " * " are the defaults. (1) Select FA, then press the Save button. "FA." is displayed (with the dot lit). (2) Press the Save button again. The settings are reset.	—	—	—

7. CABLE AND CABLE CONNECTION



8. PARTS LIST

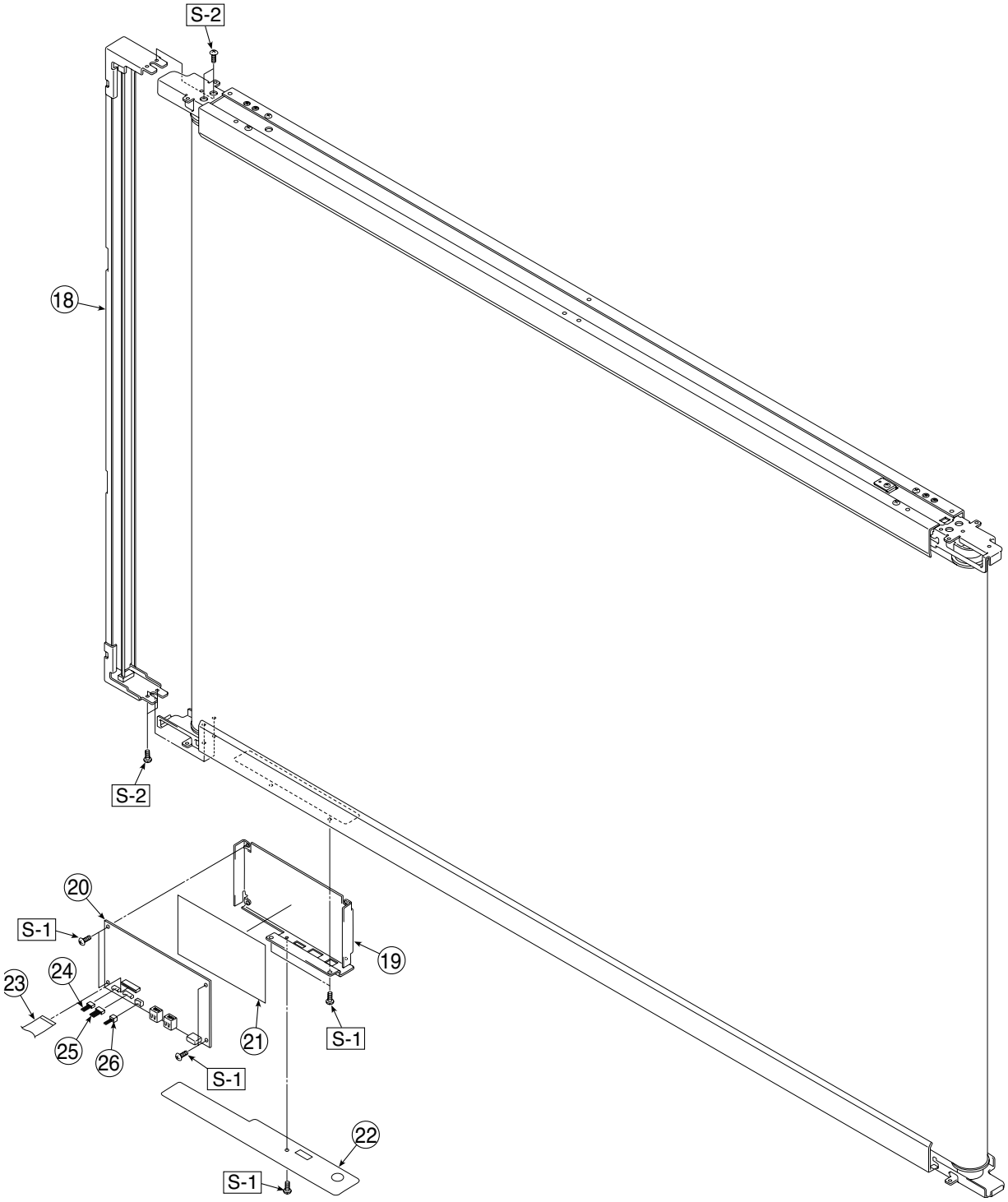
1. PANEL SIDE



PARTS LIST

1. PANEL SIDE				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
1	Panel Side L N-31	726117700	1	
2	Panel Side R	726110200	1	
3	Frame Cap PC N-31	726127800	1	
4	Frame Cap B N-31	726128100	2	
5	Frame Cap A N-31	726127900	1	
6	USB Board Assy	726580200	1	
7	Tray Unit S N-31/N-314	302040	1	
	Tray Unit W N-31	302041	1	
8	SW Board N-31/N-314	726582000	1	N-31/N-314 common
9	SW Panel	726121100	1	
10	SW Sheet N-31 (O/S)	726161100	1	
11	Numeric Panel Unit N-31/N-314	726090043	1	N-31/N-314 common
12	Numeric Panel Sheet N-31	726162900	1	
13	Numeric Panel Cable N-31	726591300	1	
14	USB Label (O/S)	726152900	1	N-31/N-314 common
15	I/F Label N-31 (O/S)	726163200	1	N-31/N-314 common
16	USB Board Insulator	726951200	1	
17	Caution Label N-31 (O/S)	726163300	1	N-31/N-314 common

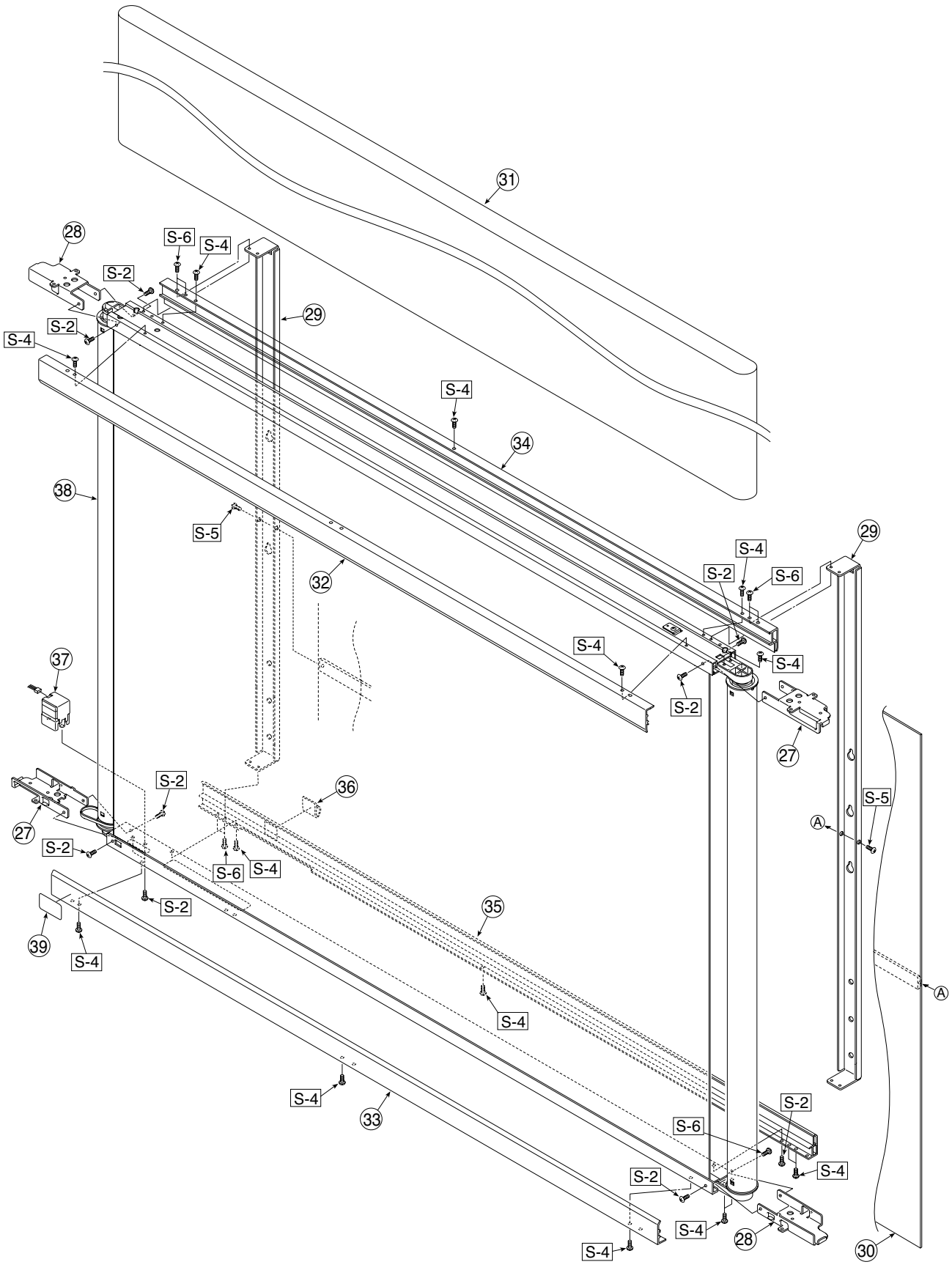
2. MAIN BOARD. CIS UNIT. CABLE



PARTS LIST

2. MAIN BOARD. CIS UNIT. CABLE				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
18	CIS Unit	302008	1	
19	Main Board Shield	726135500	1	
20	Main Board N-31	726581131	1	
21	Main Board Sheet	726951100	1	
22	Cable Cover N-20 / C-20	726123200	1	
23	CIS Cable	726590200	1	
24	Motor Cable	726590100	1	
25	SW Cable	726590300	1	
26	USB Cable	726590500	1	

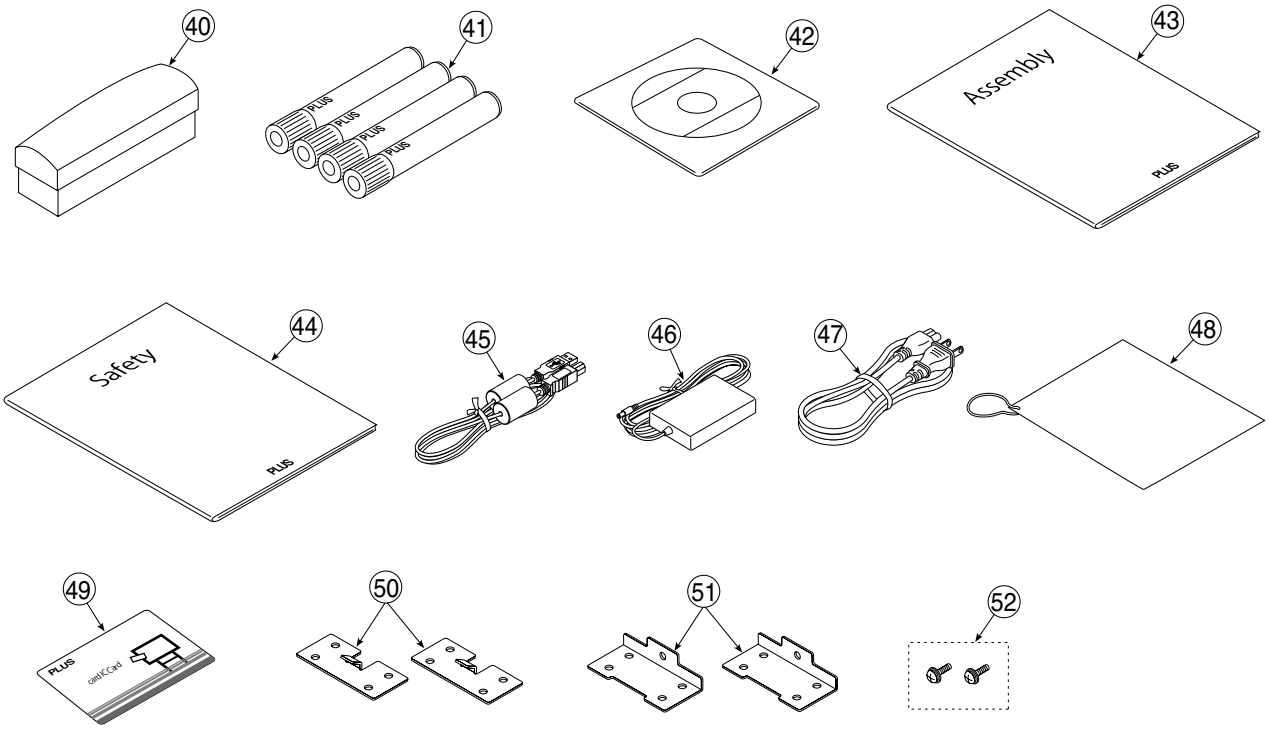
3. SHEET FRAME



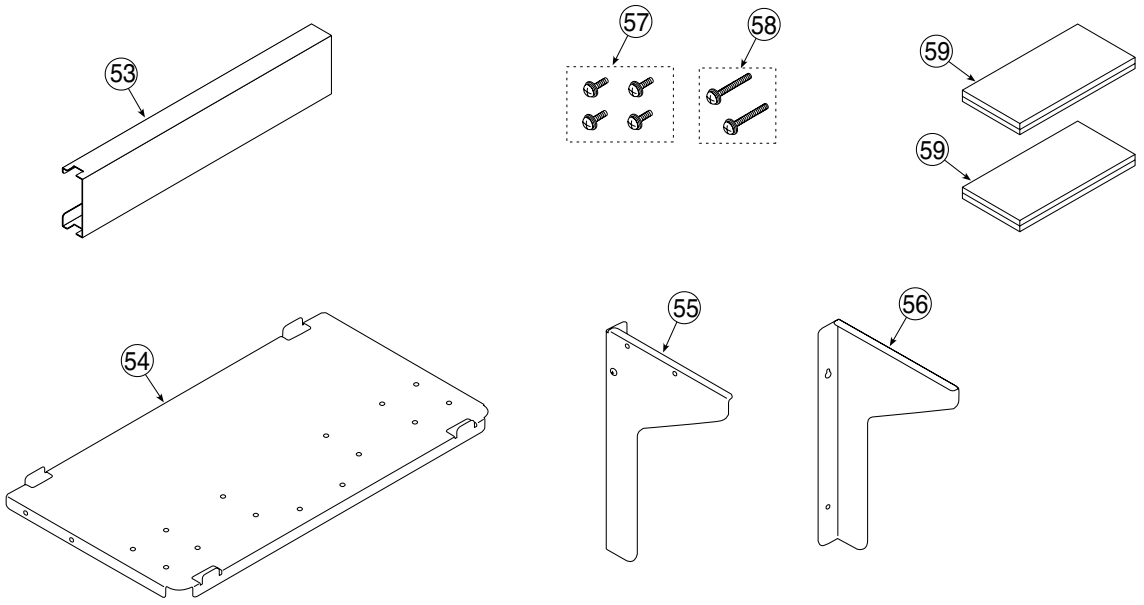
PARTS LIST

3. SHEET FRAME				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
27	Panel Plate A	726130100	2	
28	Panel Plate B	726130201	2	
29	Rear Frame	726310100	2	
30	Back Panel Unit S	302001	1	
	Back Panel Unit W	302002	1	
31	Endless Sheet S M-18/N-20	302005	1	
	Endless Sheet W M-18/N-20	302006	1	
	Endless Sheet S N-31 USA (DI)	302015	1	USA Only
	Endless Sheet W N-31 USA (DI)	302016	1	USA Only
32	Panel Front S Upper N-21	726118700	1	N-31/N314 common
	Panel Front W Upper N-21	726118800	1	
33	Panel Front S Lower N-21	726117500	1	N-31/N314 common
	Panel Front W Lower N-21	726117600	1	
34	Panel Rear S Upper	726120900	1	
	Panel Rear W Upper	726121200	1	
35	Panel Rear S Lower	726121000	1	
	Panel Rear W Lower	726121300	1	
36	Cable Clamp	726129100	1	
37	Sheet Motor Unit	726090007	1	
38	Sheet Frame Unit S M-18/N-20	302003	1	
	Sheet Frame Unit W M-18/N-20	302004	1	
	Sheet Frame Unit S N-31 USA (DI)	302017	1	USA Only
	Sheet Frame Unit W N-31 USA (DI)	302018	1	USA Only
39	Cleaning Label N-31 (O/S)	726163400	1	N-31/N314 common

4. ACCESSORIES



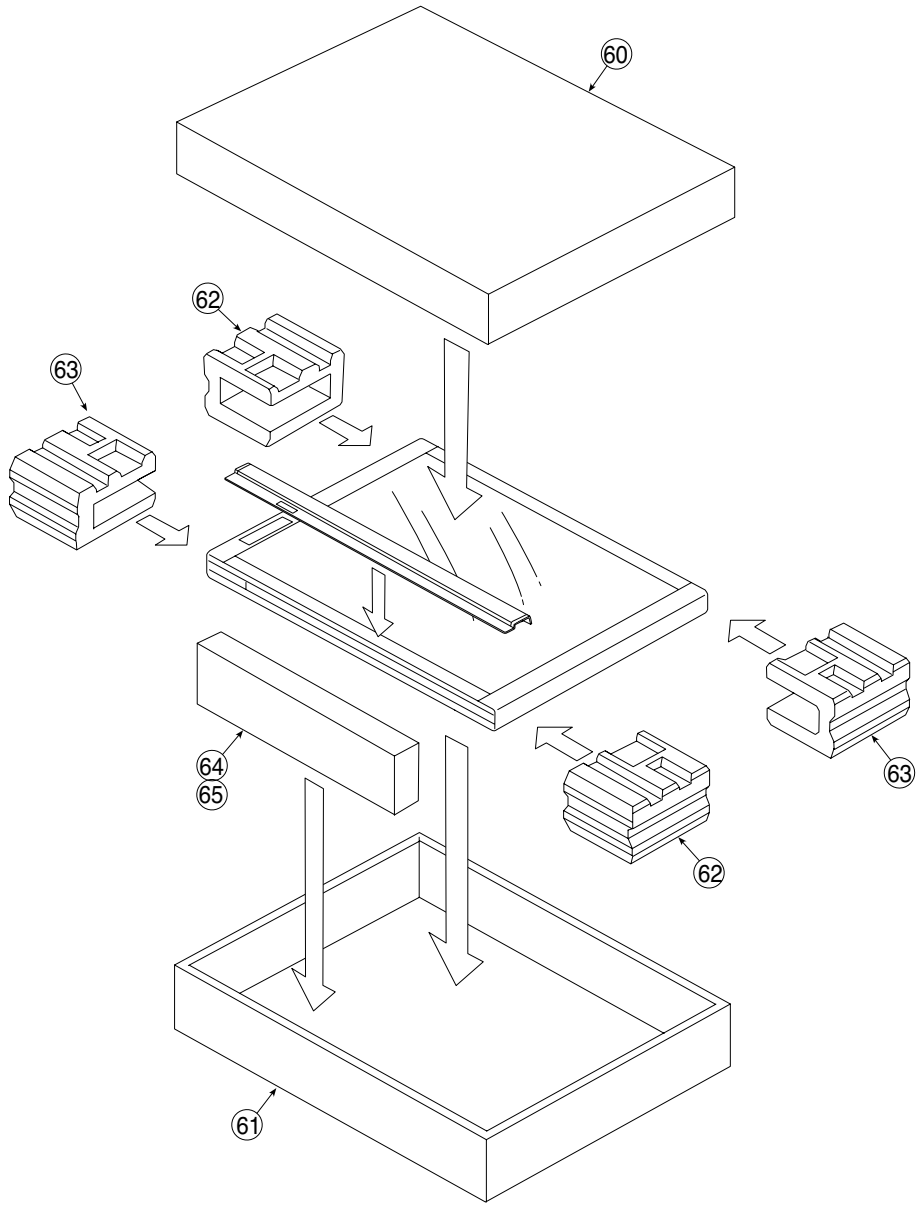
USA Only

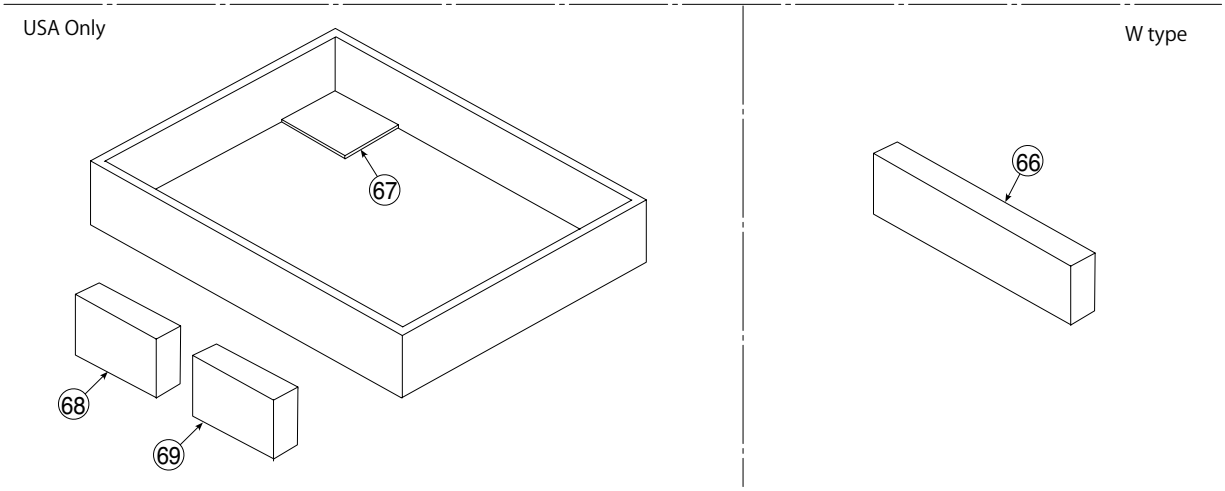


PARTS LIST

4. ACCESSORIES				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
40	Eraser	44369	1	
41	Marker Set	-	1	NO Parts Supply
-	Marker Black	423283	1	
-	Marker Red	423284	1	
-	Marker Blue	423285	1	
-	Marker Green	423286	1	
42	Manual CD-ROM N-31	726469500	1	N-31/N-314 common
43	Assembly Manual N-31	726469300	1	
44	Safety Guide	726460800	1	
45	USB Cable	715258900	1	
46	AC Adapter	726590400	1	
47	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) EK	715261302	1	South Korea Only
48	Quick Guide N-31 (O/S)	726470500	1	
49	IC Card	000423499	1	5pcs
50	Wall Mount Plate Upper	726325100	2	
51	Wall Mount Plate Lower	726325200	2	
52	M4-12 Cross Recessed Binding Head	951241250	2	
53	Adapter Holder (Wall Mount)	-	1	USA Only
54	Printer Platform (Wall Mount)	-	1	USA Only
55	Printer Bracket L (Wall Mount)	-	1	USA Only
56	Printer Bracket R (Wall Mount)	-	1	USA Only
57	M4-8 Cross Recessed Binding Head	-	4	USA Only
58	M4-20 Cross Recessed Binding Head	-	2	USA Only
59	Fastener Layer Set 50×100	-	1	USA Only

5. CARTON



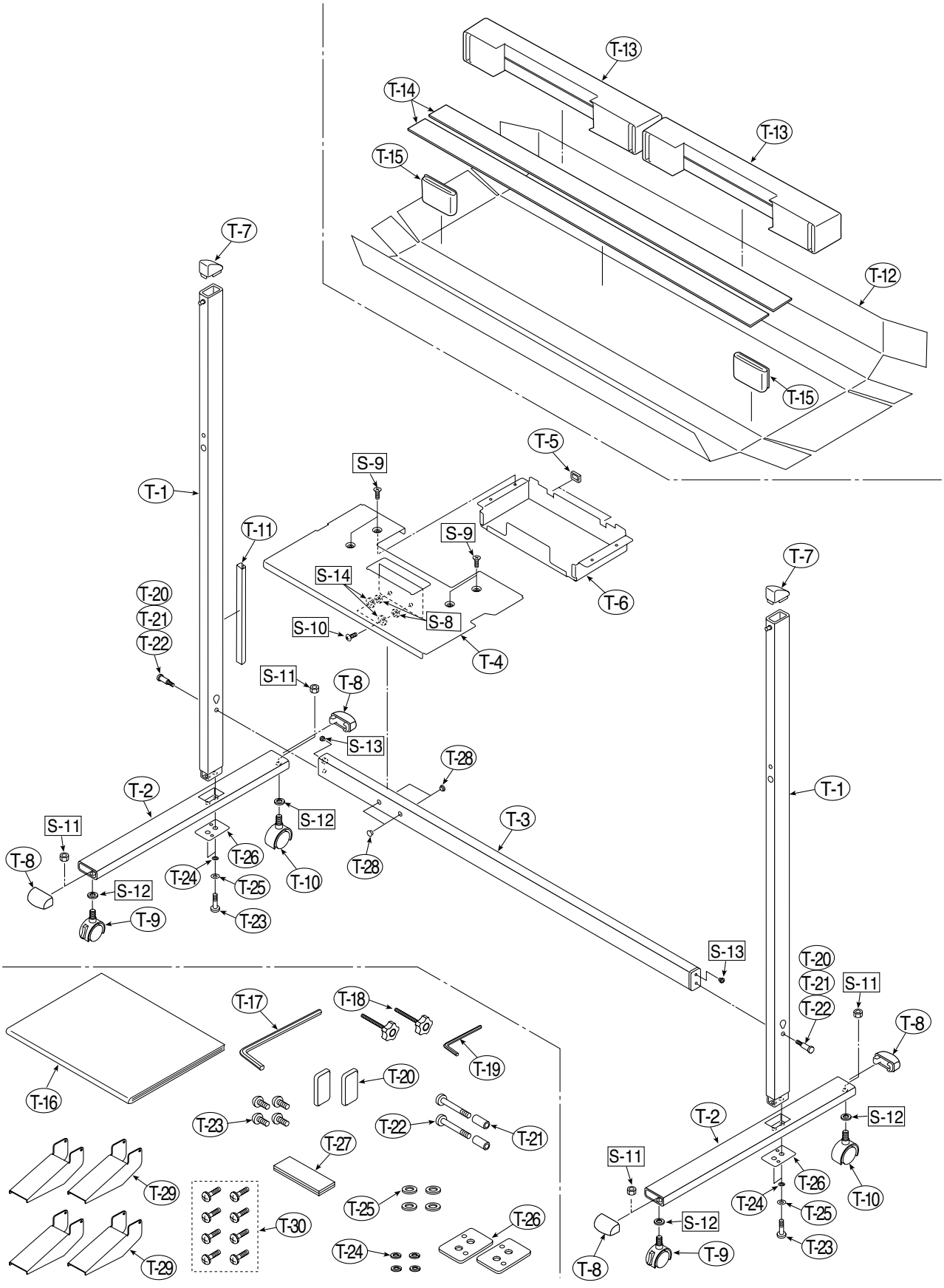


PARTS LIST

5. CARTON

No	PARTS NAME	PARTS No.	Q' ty	REMARK
-	Carton Unit S N-31 (OEM)	302011	1	
	Carton Unit W N-31 (OEM)	302012	1	
60	Carton S Upper	-	1	
	Carton W Upper	-	1	
61	Carton S Lower	-	1	
	Carton W Lower	-	1	
62	Packing A	-	2	
63	Packing B	-	2	
64	Accessary Box	-	1	
65	Spacer For Accessary Box	-	1	
66	Spacer For Wide Carton	-	0/1	W tupe Only
67	Printer Table Stand Carton	-	1	USA Only
68	Parts Pad L	-	1	USA Only
69	Parts Pad R	-	1	USA Only
		-		
		-		

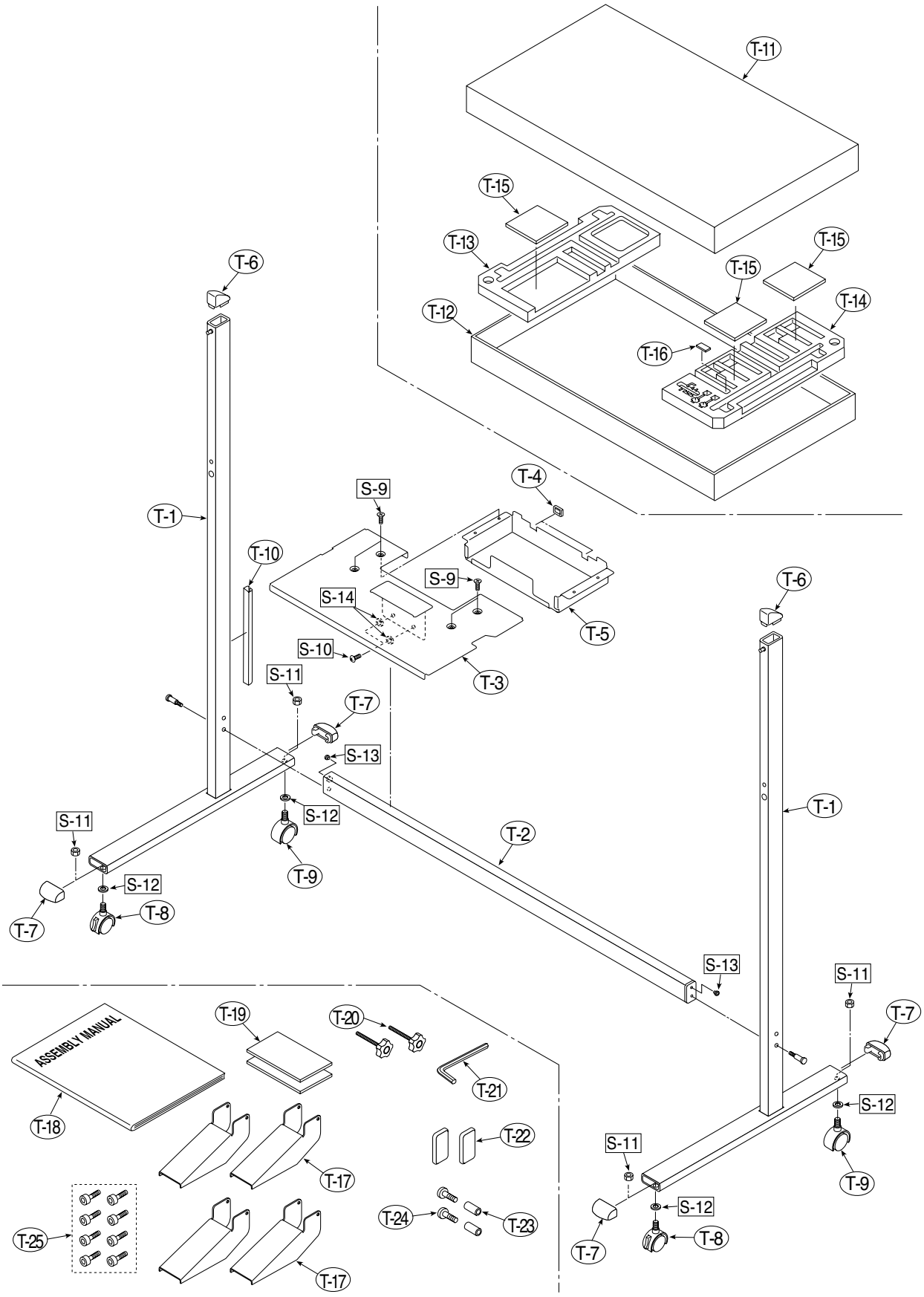
6. M-31-T


T-13
T-14
T-13
T-15
T-12
T-15
T-7
T-1
T-11
T-20
T-21
T-22
S-9
S-14
S-10
S-8
T-5
S-9
T-6
T-4
S-11
T-8
S-13
T-28
T-2
S-11
T-8
S-12
T-26
T-24
T-25
T-23
T-10
T-9
T-28
T-3
T-7
T-1
S-13
T-20
T-21
S-11
T-22
T-8
T-2
S-12
T-26
T-24
T-25
T-23
T-10
S-11
S-12
T-9
T-8
T-16
T-17
T-18
T-19
T-20
T-23
T-22
T-21
T-27
T-29
T-29
T-30
T-25
T-26
T-24

PARTS LIST

6. N-31-T				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
T-1	Stand Bar (O/S)	726341000	2	No Parts Supply
T-2	Caster Bar Unit N-31-T	726090045	2	
T-3	Side Bar N-31-T	726338000	2	
T-4	Printer Table (Stand Type)	726135900	1	
T-5	Edge Holder	723191100	2	
T-6	Adapter Holder	726136100	1	
T-7	Stand Cap Upper	726321200	2	
T-8	Stand Cap Lower	726321100	4	
T-9	Front Caster	714660400	2	
T-10	Back Caster	714660500	2	
T-11	Cable Cover (Stand)	726129200	1	
-	Carton UNIT (Stand) N-31-T	302046	1	
T-12	Stand Carton	-	1	No Parts Supply
T-13	Caster Bar Packing	-	2	No Parts Supply
T-14	Spacer	-	2	No Parts Supply
T-15	Stand Packing D	-	2	No Parts Supply
T-16	Assembly Sheet (Stand) N-31-T	726469300	1	
T-17	Hexagon Wrench M5	714170500	1	
T-18	Fixed Knob	715204500	2	
T-19	Hexagon Wrench M3	959030050	1	
T-20	Screw Cap	726334500	2	
-	Screw Unit (Stand) N-31-T	726090044	1	Set No. T-21-26
T-21	M5 Collar	-	2	No Parts Supply
T-22	M5-40 Low head Hexagon Bolt	-	2	No Parts Supply
T-23	M8-20 Hexagon Bolt	-	4	No Parts Supply
T-24	M8 Plain Washer	-	4	No Parts Supply
T-25	M8 Spring Rock Washer	-	4	No Parts Supply
T-26	Stand Plate N-31-T	-	2	No Parts Supply
T-27	Fastener Rayer Se t25x80	726090039	1	
T-28	Grommet	726951500	4	
T-29	Stand Stabilizer	726334700	4	
T-30	M5-8 Thin Head Hexagon	964250870	8	

7. M-18/N-20-T USA Only



PARTS LIST

7. M-18/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-18/N-20-T (O/S)	302013	1	
T-11	Stand Carton Upper (O/S)	-	1	No Parts Supply
T-12	Stand Carton Lower (O/S)	-	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	Stand Stabiliser	726334700	4	
T-18	Assembly Sheet (Stand) M-18/N-20-T (O/S)	726462600	1	
T-19	Fastener Layer Set 50x100	722090012	1	
T-20	Fixed Knob	715204500	2	
T-21	Hexagon Wrench	959030050	1	
T-22	Screw Cap	726334500	2	
-	Screw Unit (Stand) M-18/N-20	726090014	1	Set No. T-22-24
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	

8. SCREWS & WASHERS				
No	**PARTS NAME**	**PARTS No.**	**Q' ty**	**REMARK**
S-1	M3-6 Cross Recessed Pan Head Double Sems	952530610	5	
S-2	M4-8 Cross Recessed Low Head	961540810	19	
S-3	M3-8 P-tight Cross Recessed Bind Head	963230810	2	
S-4	M4-12 Cross Recessed Low Head	963941210	20	
S-5	M4-40 B-tight Cross Recessed Bind Head	963444010	2	
S-6	M4-10 Cross Recessed Pan Head Sems	962141010	10	
S-8	M4-20 P-tight Cross Recessed Truss Head	963742010	3/4	Stand : 3 Wide : 4
S-9	M4-8 Cross Recessed Bind Head	951240850	4	
S-10	M5-40 Low Head Hexagon Bolt	964254070	4	
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	

PLUS Corporation
Stationery Company