

COPY BOARD

M-12S/M-12W

SERVICE MANUAL

PLUS

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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 Instruction 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 products by two or more persons to prevent the products from dropping or a person from falling down.

1-2. Cautions during Disassembling and Assembling

1. This equipment contains parts under high voltage. When doing repairs, make sure that power plug is pulled out to insure safety.
2. Make sure that parts, 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.

2. SPECIFICATIONS

2-1. Product Specifications

BOARD TYPE (Model name)		Standard (M-12S)	Wide (M-12W)	
Form	Installation method	Self-standing (T-shaped legs), or wall mounting		
	External dimensions (T-shaped legs*1)	W1470 X D700 X H1970 (Max) mm	W1970 X D700 X H1970 (Max) mm	
	Main unit weight	31 kg (excluding printer)	35 kg (excluding printer)	
	T-shaped legs weight	9.6 kg		
Board	Panel Size	H920 X W1300 mm	H920 X W1800 mm	
	Effective reading size	H900 X W1280 mm	H900 X W1780 mm	
	Number of Pages	2		
	Paging	Endless in one direction (Horizontal scrolling)		
	Drive method	Sheet movement		
	Reading method	CCD sensor reduction optical system		
	Reading illumination Light source	RGB LED		
	Reading resolution	Main scanning direction (vertical sheet surface) 2.4 dots/mm (60 dpi or equivalent) Sub scanning direction (horizontal sheet surface) 2.4 dots/mm (60 dpi or equivalent)		
	Reading time	Black & white: approx. 15 s	Black & white: approx. 20 s	
		Color: approx. 23 s	Color: approx. 31 s	
Memory	Type	USB Flash memory*2		
	Compatible FAT types	FAT 12, 16, 32		
	File format	PNG, JPEG and PDF format		
	Interface	USB1.1 or USB2.0 full-speed mode*3		
Control panel	Control buttons	ON/Standby, +, -, Print, Save, Reprint, Color, Density, Feed/Stop		
	LED Indicators	Density, Color		
	Display	7-Segment (Page, Error #),		
Added functions	Clock	Used for the timestamp and for file dating properties (Includes backup battery for when there is a loss of power)		
	PC connection	Transfer of sheet surface image data via USB (TWAIN supported)		
Power supply	AC power adapter	Input : AC100 - 240V/50 - 60 Hz, Max 1.5A Output : DC24 V, 2.71 A		
Operating conditions	Temperature	10 - 35°C		
	Humidity	30 - 85% (No condensation)		
Recording section	Printer interface	USB1.1 or USB2.0 full-speed mode*3 compliant printers are supported		
Miscellaneous	Ruled lines	50 mm cross-ruled squares		
	Miscellaneous	Special markers (black, red, blue, and green)		

Remarks

*1: The height is adjustable at 1770, 1870 and 1970 mm.

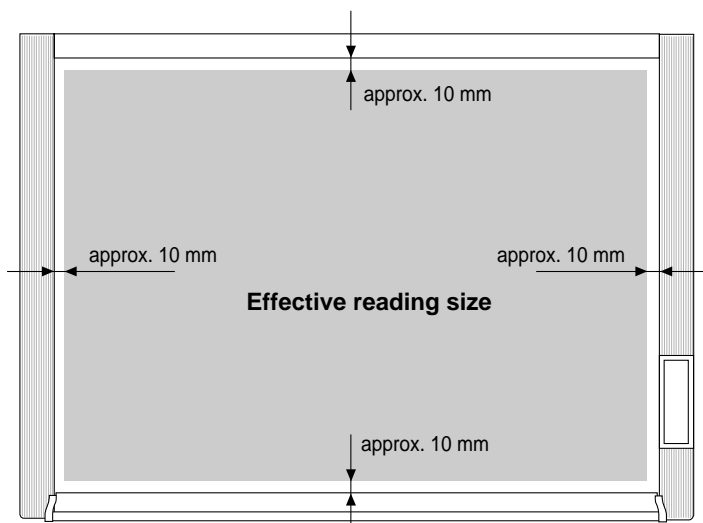
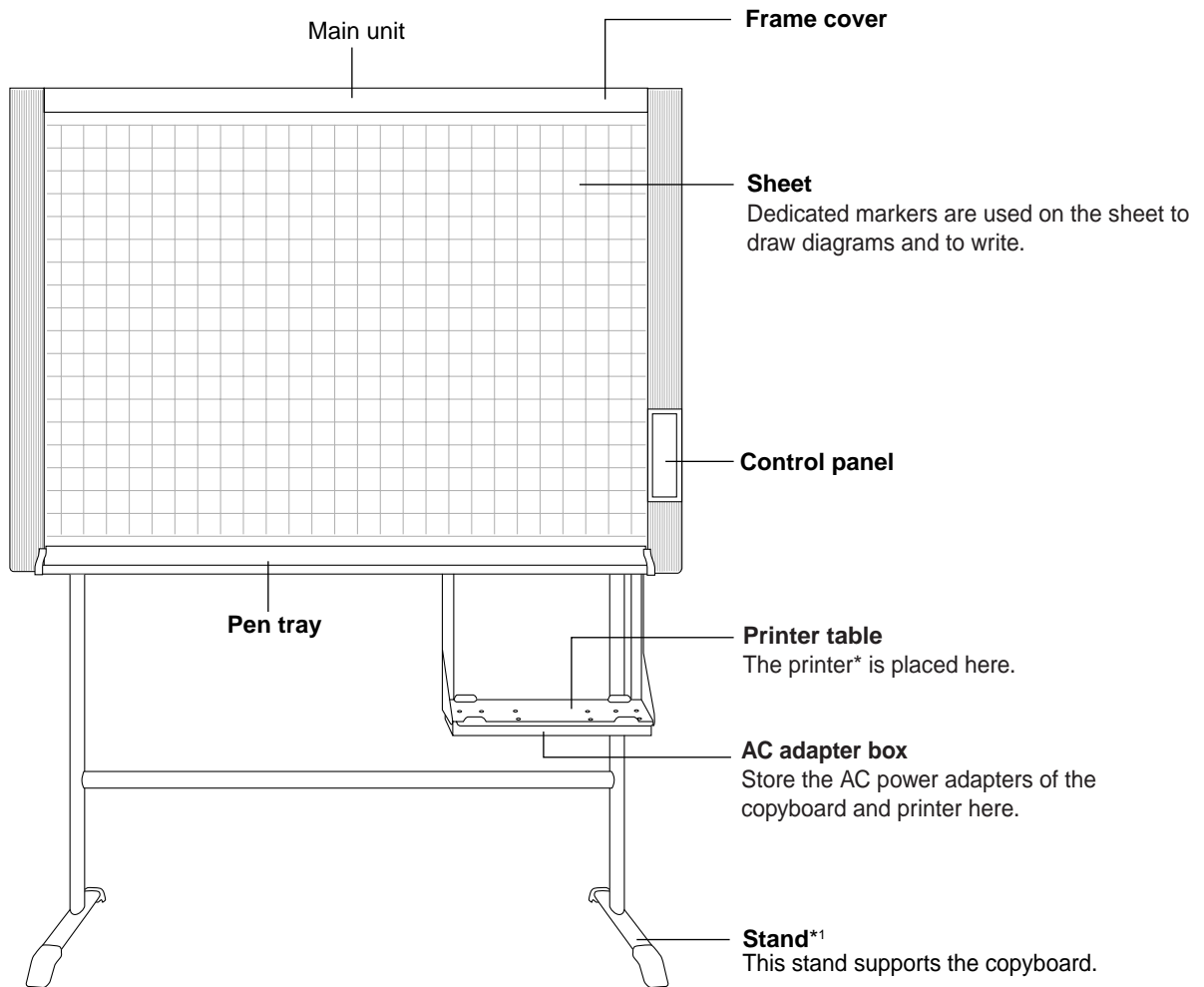
*2: A USB memory is not included in the package.

*3: Does not correspond with, High-speed mode.

- Please note that for quality improvement purposes, specifications and design subject to change without prior notice.
- This machine contains eParts of the eSOL, Co.,Ltd.
- Depending on the product, the printer and T-shaped legs (stand) will be available separately.

2-2. Location of Parts and Controls

Front panel of main unit



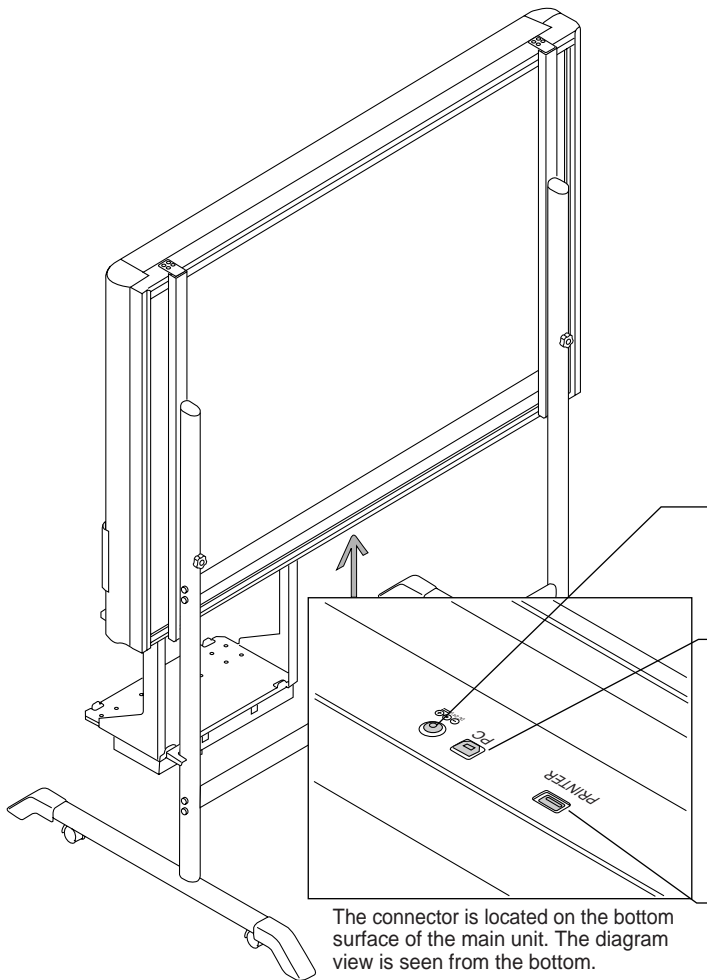
Effective Reading Size

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.

Back panel of main unit



DC input connector

Connect this with the DC plug end of the AC power adapter. (Only connect the supplied AC power adapter; nothing else.)

Personal computer (PC) dedicated USB port (Type B)

Connect this with the USB port (type A) of the PC.

Special software can be used to transfer image data directly to the computer and set the copyboard's operating environment. To use these functions, first install the drivers and software on the included CD-ROM onto the computer.

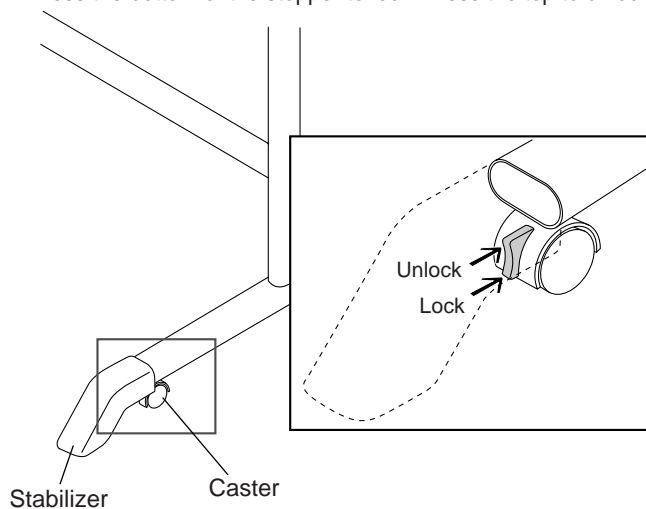
Printer connector (USB port Type A)

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.)

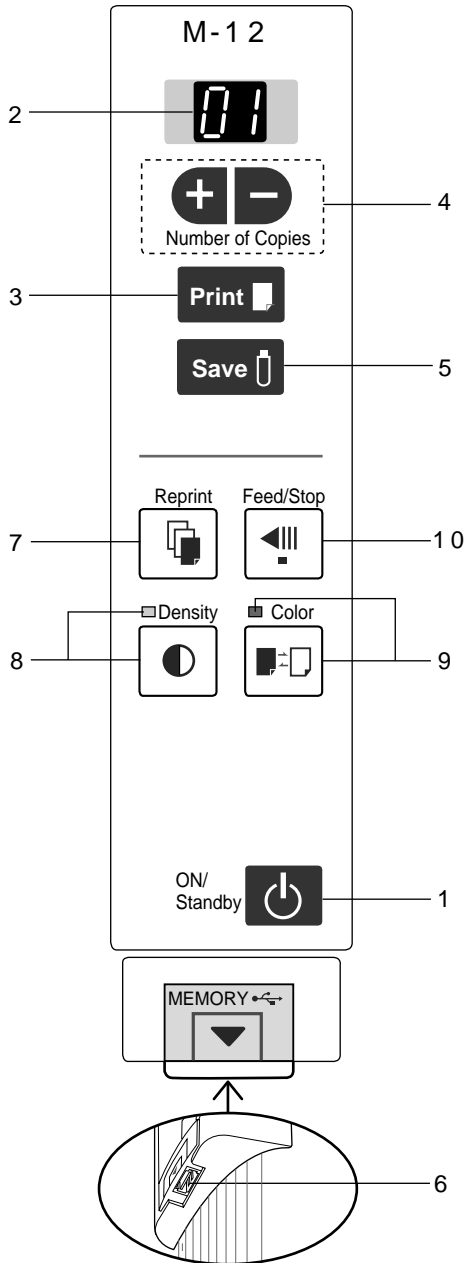
The connector is located on the bottom surface of the main unit. The diagram view is seen from the bottom.

Locking and unlocking the casters of the stand

Lock the casters with the stopper after setup. To move the unit, remove the stabilizers and release the caster stopper. Press the bottom of the stopper to lock. Press the top to unlock.



2-3. Operation Panel of Main Unit



When pressing a button, please press the center area (i.e., the round and protruding portion). 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). The function settings can be made by pressing the Density and ON/Standby buttons simultaneously.

Note:

If the Erase Reminder function has been set, the sheet moves to the surface that has not yet been erased before the power turns off *1.

*1 Depending on the usage method, the Erase Reminder function may not operate properly.

2 Display window

This 7-segment LED displays the number of copies to be printed, the USB memory storage operating condition, and error information.

3 Print button

Moves a one-screen portion of sheet and reads it, then prints the number of copies displayed in the display window.

4 + / - buttons (Number of copies)

Pressing the + button or the - button sets the number of copies to be printed (to a maximum of 20 sheets). The number of copies appears in the display window.

5 Save button (USB memory storage)

Moves a one-screen portion of sheet and reads it, then stores the data on a USB memory.

6 Memory port (USB port Type A)

Saves in commercially-available USB memory images that have been read by the copyboard.

7 Reprint button

Prints the previously printed sheet surface one more time. (The sheet does not move.)

The number of copies can be changed, but the density and the color/monochrome selection cannot be changed.

8 Density button

Selects the copying density, either "standard" or "dark". This function will be effective at time of printing, USB memory storage, and personal computer storage. Density mode lamp

The density mode indicator lights green when "dark" is selected.

9 Color button

Selects whether to print (or store in memory) in "color" or "black & white". Color mode lamp

The color mode indicator lights green when "color" is selected.

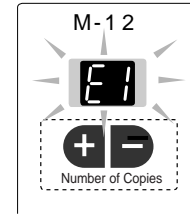
*When a black & white printer is connected, the printout will be in black & white even when "Color" is selected.















10 Feed/Stop button

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

2-4. Error Display

If any of the following flashing indications appear in the display window of the control panel, please check the matters described below.

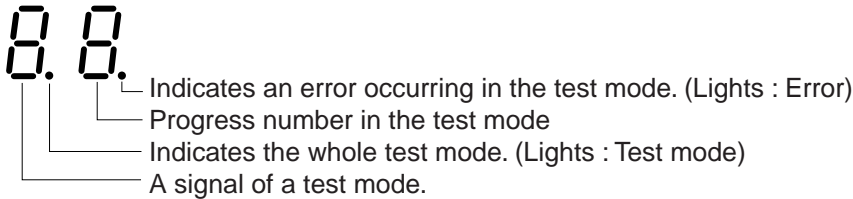


Error display number	Problem and Solution	
 Printer not connected No printing paper Printer problem	<ul style="list-style-type: none"> Is the printer cable connected? Is power being supplied to the printer? When the printer uses an AC power adapter, is the cable disconnected somewhere? 	<ul style="list-style-type: none"> Connect the printer properly and switch on the printer power.
	<ul style="list-style-type: none"> Has paper been set in the printer? 	<ul style="list-style-type: none"> Turn the power of the printer off and then on again, and load the printer with A4 paper.
 USB Memory not recognized	<ul style="list-style-type: none"> Is the USB memory unformatted. 	<ul style="list-style-type: none"> Read the printer instruction manual. This unit supports the FAT and FAT 32 formats. Perform the formatting with the personal computer.
	<ul style="list-style-type: none"> Is a USB memory that is not supported by the copyboard being used? 	<ul style="list-style-type: none"> Please see our home page for information about USB memories that can be used with the copyboard. (http://www.plus-vision.com)
 USB Memory storage problem	<ul style="list-style-type: none"> Is the USB memory device plugged in fully? Is the USB memory damaged? 	<ul style="list-style-type: none"> Please check the operation with a personal computer.
 Reading problem	<ul style="list-style-type: none"> An error occurred during USB memory storage. 	<ul style="list-style-type: none"> Please perform USB memory storage again. Do not insert or remove the USB memory during processing.
 System error	<ul style="list-style-type: none"> There is a lighting fault of the reading light source, or a read signal error. 	<ul style="list-style-type: none"> Unplug the power plug from the power outlet and then plug it in again.
 Page detection error	<ul style="list-style-type: none"> There is a memory or internal fault. 	<ul style="list-style-type: none"> Unplug the power plug from the power outlet and then plug it in again.
 Security protection	<ul style="list-style-type: none"> The pages are not being properly detected. 	<ul style="list-style-type: none"> Unplug the power plug from the power outlet and then plug it in again.
 Restrict color mode	<ul style="list-style-type: none"> You have attempted to use a function disabled by the security settings. 	<ul style="list-style-type: none"> The settings can be changed using the exclusive software. For details, contact your nearby PLUS Vision sales office, dealer or store.
 USB memory not connected	<ul style="list-style-type: none"> Setting for disabling printing/storing in the color mode. 	<ul style="list-style-type: none"> Can be changed in the copyboard's "Function Settings".
When the "USB" letter is flowing... Warning that disconnection of USB memory has been forgotten 	<ul style="list-style-type: none"> USB memory device is not plugged into the main unit. Did you press the ON/Standby button while the USB memory device was plugged into the main unit? 	<ul style="list-style-type: none"> Plug the USB memory device into the USB port. 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.
 No Calibration data	<ul style="list-style-type: none"> This is the state in which calibration data is not written. 	<ul style="list-style-type: none"> Perform calibration.
 USB Memory is full	<ul style="list-style-type: none"> There is no available space. 	<ul style="list-style-type: none"> Please delete unnecessary data using a personal computer.
 An unsupported printer is connected	<ul style="list-style-type: none"> A printer that is not supported by the copyboard has been connected. 	<ul style="list-style-type: none"> Press the ON/Standby button and switch off the power. When a record is required, switch on the power and save to USB memory.
 Time setting error	<ul style="list-style-type: none"> An error has arisen when setting the time. 	<ul style="list-style-type: none"> When the ON/Standby button is pressed, the display switches to "c1". Start the setting over from the year.

2-5. Test and Adjustment Functions

The specifications for inspection and the calibration program are described below.

1) Seven-segment display specifications.



2) To shift to the test/adjustment mode, press the “+” and “-” buttons simultaneously in the sleep mode and then press the Power button.

The numeric LED display is <AP>.

3) Shift to each test mode by the button operation below.

① Printer test mode <4. SPC> (*1)

A test print is made from the printer connected to a copy board when you press the Feed/Stop button and then the print button during button operation.

② Calibration mode start <2. SPC> (*1)

Calibration is executed when you press the Print button during button operation.

③ CCD adjustment mode <6. SPC> (*1)

An RGB adjustment mode sequence is performed (LED lights in red during CCD adjustment) when you press the additional Reprint button during button operation.

④ Program version display & Internal Information write. <1.SPC>

The major version of a program is displayed when you press the “.” button once.

The minor version of a program is displayed when you press the “.” button second.

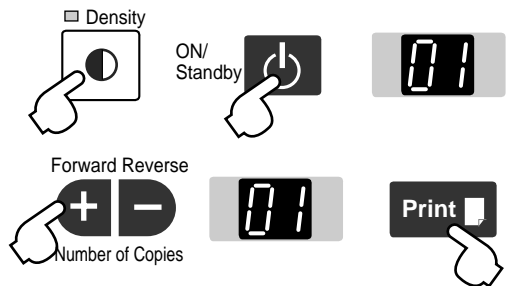
Printing in the same ratio as the sheet surface (Model M-12W)

The M-12W has a wide screen, so when printing, the image is reduced in the horizontal direction and printed over the entire sur-face of the A4 sheet (so for example circles become ovals). If you wish to print with the same vertical-to-horizontal aspect ratio as the sheet surface (with the same image as on the sheet), change the printing ratio. Upon shipment from the factory (by default), the copyboard is set to compress the image in the horizontal direction.

Check that the power is turned on (that the display window is lit).

1. While pressing in the Density button, press the ON/Standby button to switch to the function settings mode.

"F1" appears on the display window.

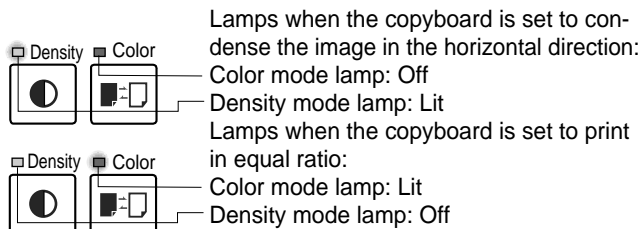


2. Press the + or – button (the display switches each time one of the buttons is pressed) to display "F4", then press the Print button to finalize.

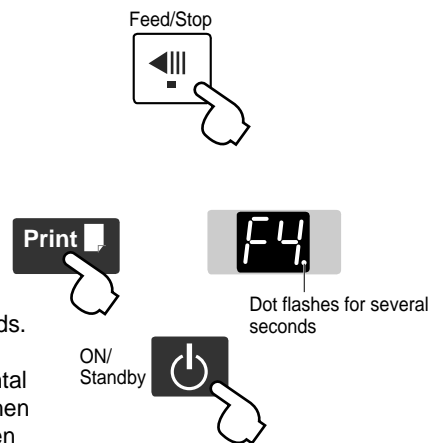
When "F4" is displayed, the copyboard is in the printing ratio setting mode.



3. Press the Feed/Stop button to select the equal ratio mode.



Check that the lamps are lit or off as indicated at " Lamps when the copyboard is set to print in equal ratio" above, then press the Print button to finalize. The dot next to the "F4" dot flashes for several seconds.



•To restore the copyboard to print with the image condensed in the horizontal direction, switch the mode so that the lamps are as indicated at "Lamps when the copyboard is set to condense the image in the horizontal direction", then press the print button.

This completes the setting. Press the ON/Standby button to return to the normal mode.

3. SOFTWARE PLUS TOOLBOX

3-1. Installation of the Software

When "Install Software" on the included CD-ROM's menu is clicked, the "PLUS TOOLBOX", TWAIN driver and USB driver are installed.

Check Prior to Installation

1. Check whether your personal computer satisfies the operating environment.
2. Check that your personal computer is not currently connected to this machine via USB.
3. At the time of installation, install with Administrator rights (i.e., a user having administrator rights) for Windows 2000, or with a Computer Administrator rights (account) for Windows XP/Vista.
4. Close all other applications that are running.

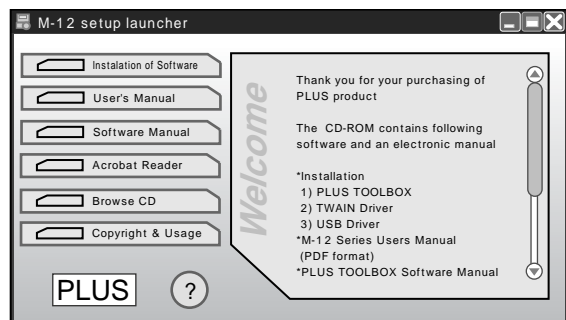
Installation of the PLUS TOOLBOX

1 Insert the supplied CD-ROM into the CD-ROM drive of the personal computer.

The menu screen will be displayed automatically.
If the menu screen is not displayed automatically, double click CD-ROM icon and double click "autorun.exe".

2 Click "Installation of Software".

The installer will start.



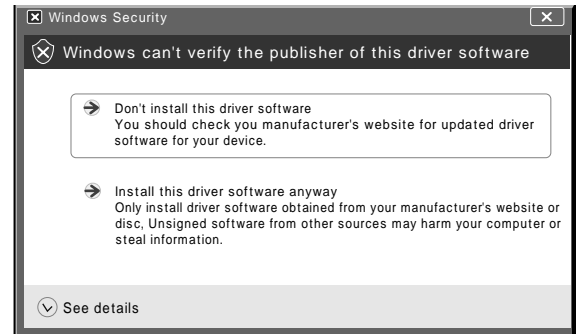
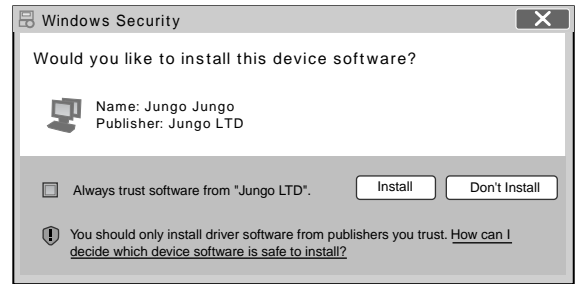
3 Follow the instructions of the installer and start the installation.

The PLUS TOOLBOX, the TWAIN driver, the USB driver will be installed at the same time.



Note:

- * The Windows Security dialog box will be displayed with Windows Vista.
Select "Install this driver software (I)".
- * When using Windows Vista, each time the installer is started, the User Account Control dialog box is displayed.
Select "Continue" and continue with the installation.



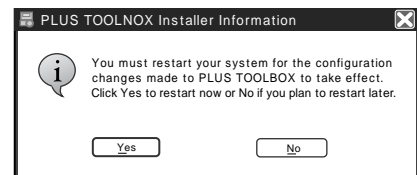
4 Click "Finish".

The "Installer Information Dialog Box" will be displayed.



Click "Yes (Y)" and restart the personal computer.

When this software is installed in the personal computer for the first time, continue to make the following connections and operations.



■ Installing the USB Driver

The USB driver is installed in the computer with the installer, but this does not complete association with the USB port. In order to use PLUS TOOLBOX, install using the procedure described below with the copyboard connected.

- Preparation**
1. Press the ON/Standby button of the Copyboard to turn on the power.
 2. Use a USB cable to connect the USB port of the personal computer with the PC dedicated USB port of the Copyboard.
The New Hardware Search Wizard will be displayed.

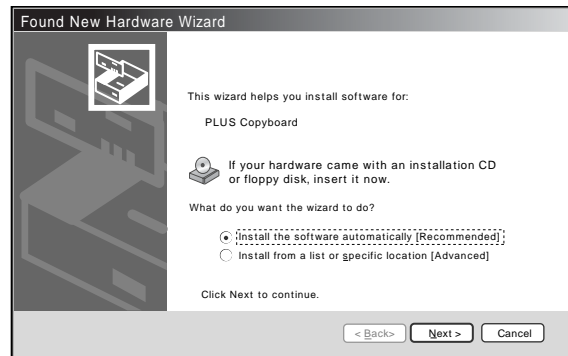
Install according to the New Hardware Search Wizard.

- 1 Select “Install Software Automatically (Recommended) (T)” and click “Next (N)” (when using Windows XP).

Start the installation of the USB driver.

Note:

- * Installation will be completed automatically with Windows 2000/Windows Vista.



- 2 Click “Finish”.

This software can now be used.



Uninstallation of the PLUS TOOLBOX

- 1 Selecting [Start] → [Control Panel] will display the Control Panel screen.
Check that your personal computer and the Copyboard are not currently connected by USB.
- 2 Double click “Add or Remove Programs or Applications” (this will differ depending on the OS) to display the “Add or Remove Programs Properties” screen.
- 3 Select PLUS TOOLBOX from among the list displayed and click [Change / Remove] to display the Add or Remove wizard screen.
- 4 Selecting the [Remove] radio button of the wizard and clicking [Next] will start the uninstallation.

Note:

- * “Add or Remove Programs” will be displayed for Windows XP/Vista.
- * When using Windows Vista, each time the uninstaller is started, the User Account Control dialog box is displayed.
Select “Continue” and continue with the uninstallation.

4. TROUBLE SHOOTING

By checking operations normal usage time, 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 ON/Standby button and turn on the power.

Is the power turned on?

- No →
- The power cord is disconnected from the wall outlet.
 - The AC Adapter is defective.
 - The Main Board Assy is defective.
 - The Switch Box Unit is defective.
 - The connector of the Switch Harness is disconnected.

Yes

Does the error display appear?

- Yes → The error display (E4) appears.
- The connectors of the CCD Harness Assy is disconnected.
 - The CCD Unit is out of adjustment.
 - The CCD Unit is defective.
 - The Main Board Assy is defective.
- The error display appears.
- The Main Board Assy is defective.

No

2. Press the Feed/Stop button.

Does the sheet operate normally?

- No →
- The connector of the Motor Harness are disconnected.
 - The Timing Belt is disconnected or loosened.
 - The Sheet Motor Assy 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?

- Yes → Printer failure
- The printer is defective. (See the Instruction Manual of a printer.)
 - The power of a printer is not turned on.
 - The paper of a printer is exhausted.
 - The printer is not connected.
 - The Main Board Assy is defective.

No

Is the object written in the board printed normally?

- No → A black line is put in printing.
- Out-of-adjustment of CCD Unit: Slight (It is improved by calibration.)
 - Out-of-adjustment of CCD Unit: Severe (Perform the CCD adjustment again.)
 - Dust adheres to the mirror of the board body.
- Printing becomes blurred.
- The marker (written character) becomes blurred
 - The ink (toner) of a printer 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 and E3) appear?

- Yes → Error display: E2 is displayed.
- A USB memory is not formatted.
 - An incompatible USB memory is used.
 - A USB memory is defective.
- Error display: E3 is displayed.
- Memory storage error: Repeat storage again.
 - The Main Board Assy is defective.

No

Is the object written in the board stored normally?

- No → A black line is put in a picture.
- Out-of-adjustment of CCD Unit: Slight (It is improved by calibration. See section 9-2.)
 - Out-of-adjustment of CCD Unit: Severe (Perform the CCD adjustment again. See section 9-1.)
 - Dust adheres to the mirror of the board body.
- A picture becomes blurred.
- Out-of-installation of CCD Unit. (It is improved by calibration.)
 - The marker (written character) becomes blurred.

Yes

Normal operation

5. DISASSEMBLY AND ASSEMBLY

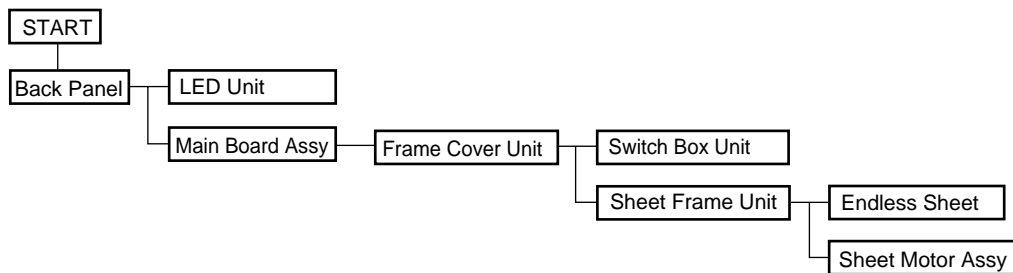
5-1. Tools Required

- Phillips screwdriver (+) No. 2
- Cutting pliers
- Locking tie (Cable tie)

5-2. 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 “10. Wiring Diagram” and “11. 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.

5-3. Disassembly and Assembly Procedures



5-4. 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 “5-3. Disassembly and Assembly Procedures”.

1) Remove the Back Panel. (See Figs. 1 and 2.)

1. Remove the “S-7” screws shown in Fig. 1 and then remove the Back Panel Corner.
2. Remove the Back Panel as shown in Fig. 2.

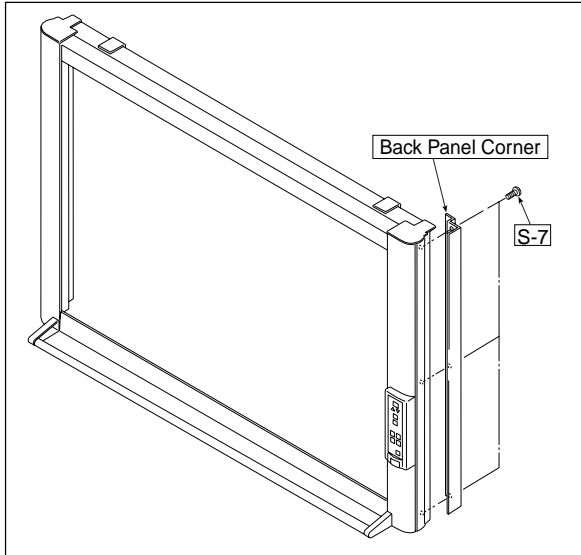


Fig. 1

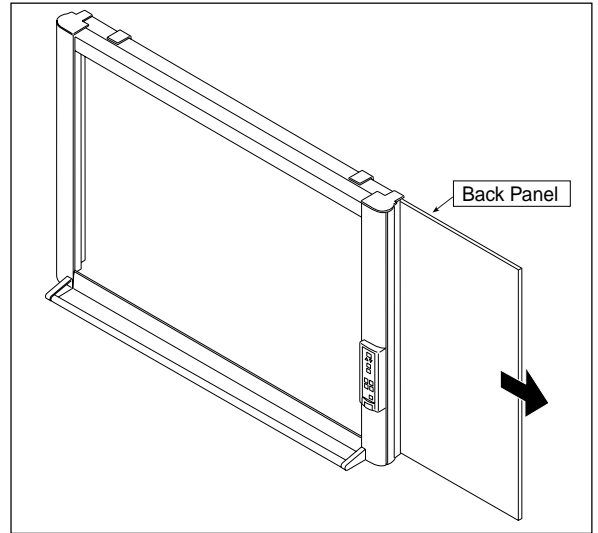


Fig. 2

2) Remove the Main Board Assy. (See Figs. 3 and 4.)

1. Disconnect the connectors connected to the Main Board Assy shown in Fig. 3.
2. Remove the “S-3” screws shown in Fig. 4 and then remove the Main Board Assy.

Note:

Be careful when the screws are removed and installed. It is recommended to use a stubby driver. (No.2 Phillips screwdriver length: 45 mm)

* The battery installed in the Main Board Assy can be used without any functional problem for ten years or more.

* For a new Main Board Assy of M-12 type, volume control R82 is not installed because of automatic adjustment.

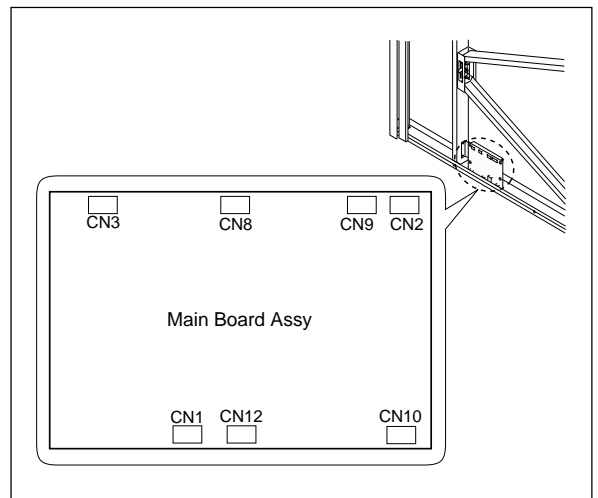


Fig. 3

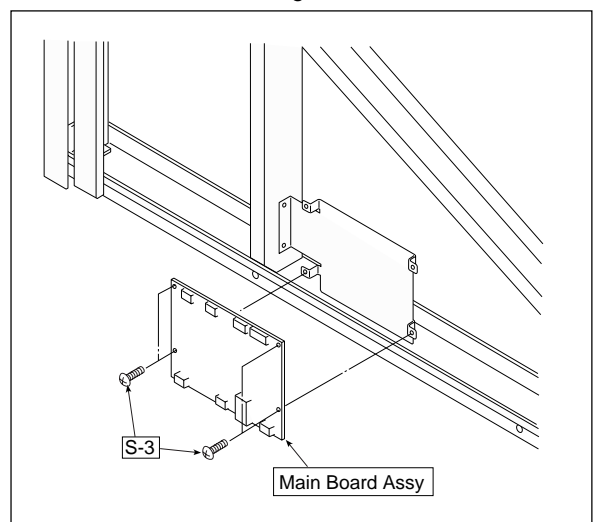


Fig. 4

3) Remove the CCD Unit. (See Fig. 5.)

1. Remove the "S-3" screws shown in Fig. 5.
2. Remove the "S-4" screws shown in Fig. 5 and then remove the CCD Unit.

Note:

The CCD Unit requires adjustment when it is replaced and removed. (See 9. Adjustment.)

* Be sure to install a ferrite core. (Model name: M-12W)

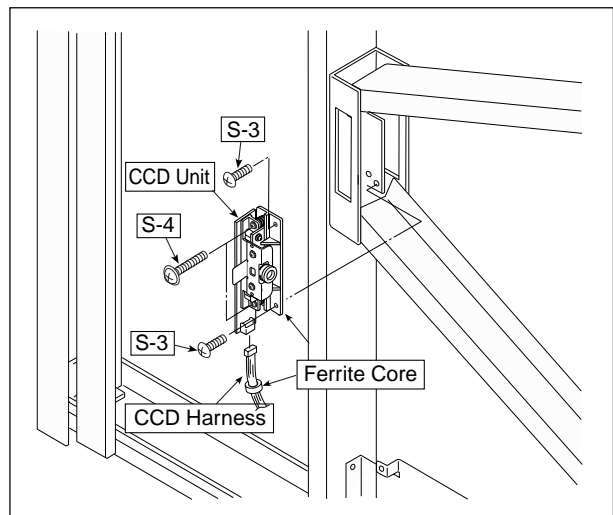


Fig. 5

Core installation

■ Ferrite core (Wide only)

① Pass the CCD harness securely through the core using a cable tie (SG-SP100) and fix them to the stiffener.

Core (TR-25-12)

② Fix the core so that it does not move.

③

Note: Pass only a CCD cable through the DK core. Do not wind a cable as in a standard model.

■ DK core installation and wiring

① DK core

CCD harness
Wind the CCD harness onto the DK core by one turn.

* Pay attention to the winding direction of a cable.

② Put the clutch of the DK core.

③ Hole of DK core

Pass the SW harness (S) or SW harness (W) through the hole of a DK core using a cable tie (SG-SP100) and fix it to the stiffener.

④

Put the SW harness (S) or SW harness (W) upon a CCD harness and pass it through the DK core.

⑤

Fix the DK core and SW harness (S) or SW harness (W) securely so that they are put as shown in the figure.

4) Remove the Frame Cover Section. (See Fig. 6.)

1. Remove the "S-2" and "S-9" screws shown in Fig. 6.

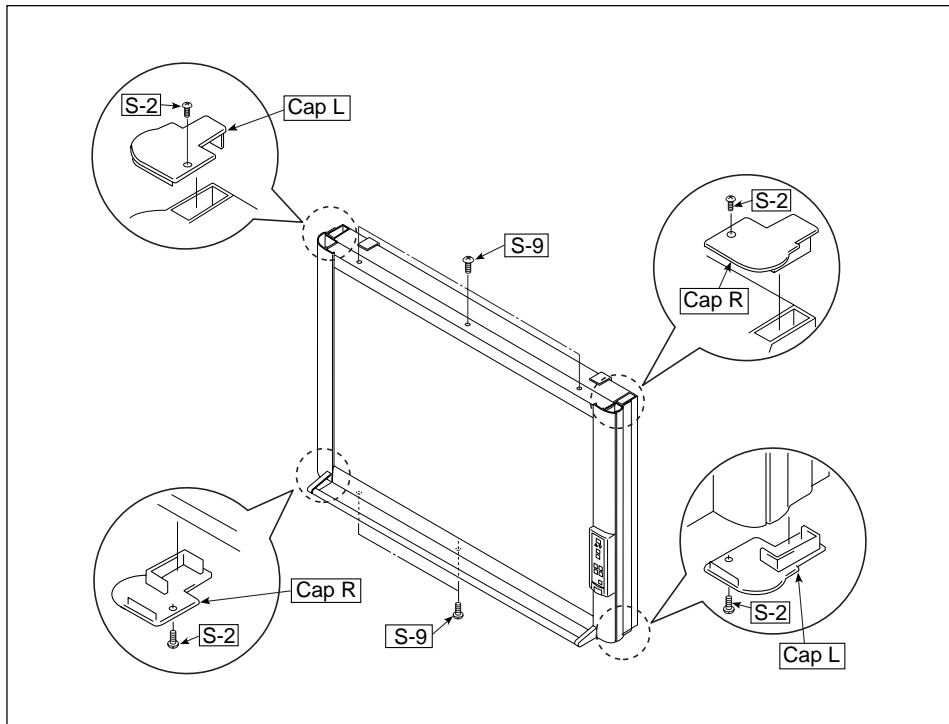


Fig. 6

5) Remove the Switch Box Unit. (See Fig. 7.)

1. Remove the "S-8" and "S-10" screws shown in Fig. 7.

2. Remove the "S-5" screws shown in Fig. 7 and then remove the Switch Box Unit.

Notes:

- Be careful not to mistake the hole through which the Switch Harness is passed. (See Fig. 8.)
- Pay attention to a kind of screw.

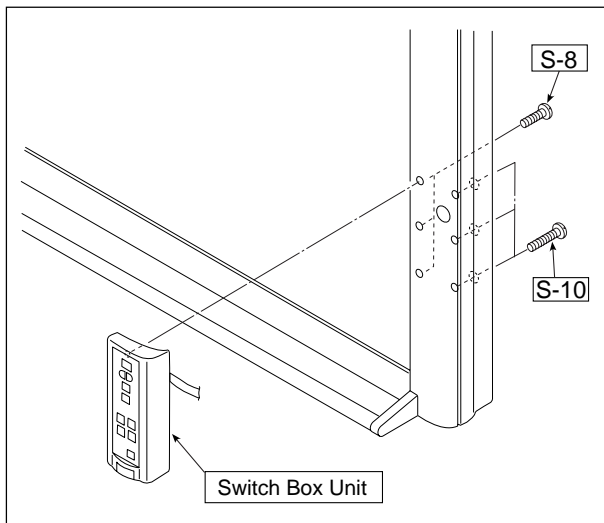


Fig. 7

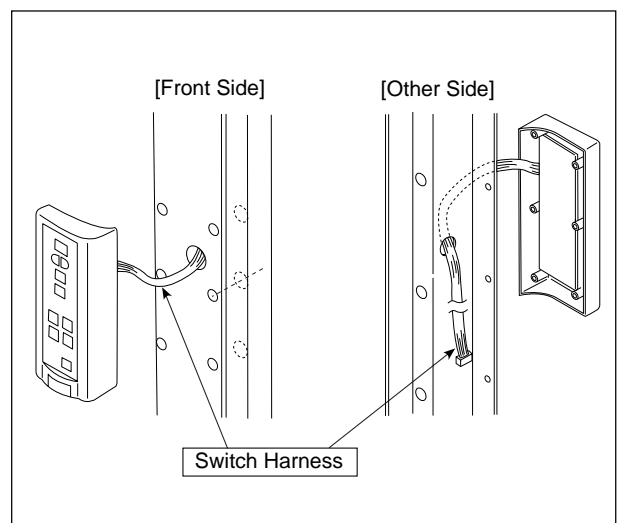


Fig. 8

DISASSEMBLY AND ASSEMBLY

6) Disassemble the Frame Cover Section. (See Fig. 9.)

Remove the "S-1", "S-6" and "S-11" screws shown in Fig. 9 and disassemble the Frame Cover.

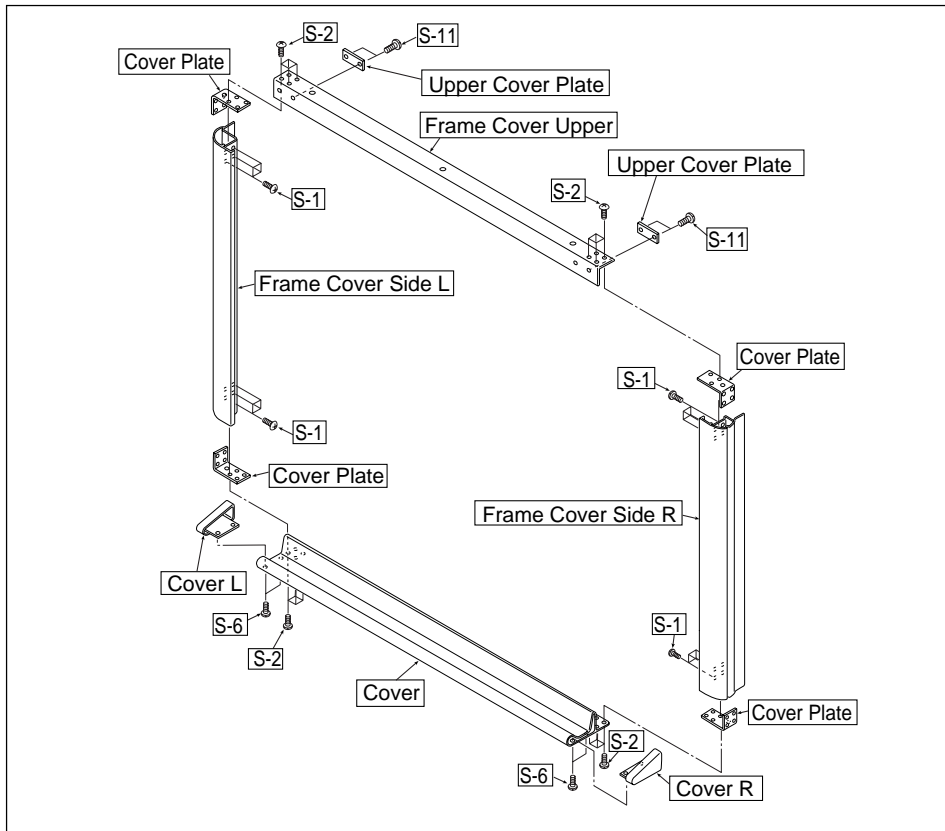


Fig. 9

7) Remove the Sheet Frame Unit. (See Figs. 10 and 11.)

1. Remove the "S-1" screws shown in Fig. 10.
2. Remove the Sheet Frame Unit as shown in Fig. 11.

Notes:

- The Sheet Frame Unit is caught on a hook as shown in the portion A of Fig. 10.
- Remove the Motor Harness earlier when the Sheet Frame Unit is removed.

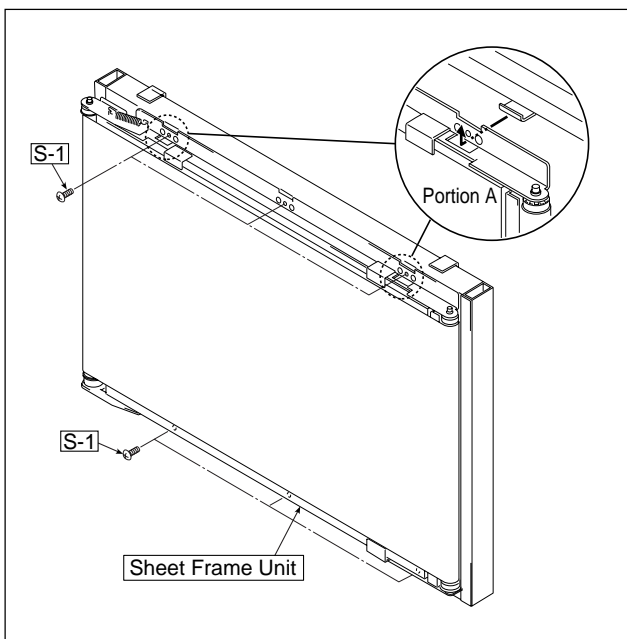


Fig. 10

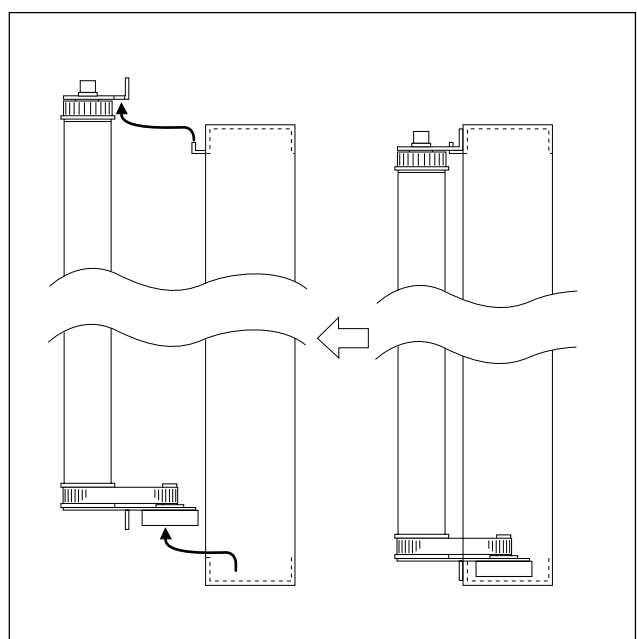


Fig. 11

DISASSEMBLY AND ASSEMBLY

8) Remove the Sheet Motor Assy. (See Fig. 12.)

1. Remove the "S-3" screws shown in Fig. 12.

Note:

Adjust the tension of the Timing Belt when the Sheet Motor Assy is installed. (See 9. Adjustment.)

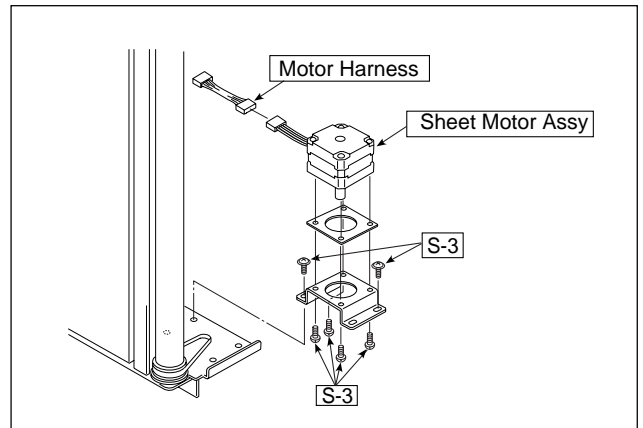


Fig. 12

9) Remove the Endless Sheet. (See Figs. 13, 14, and 15.)

1. Push the sheet roller section inside as shown in Figs. 13 and 14.
2. Remove the Endless Sheet as shown in Fig. 15.

Note:

- Be careful not to damage or fold it when handling the Endless Sheet.

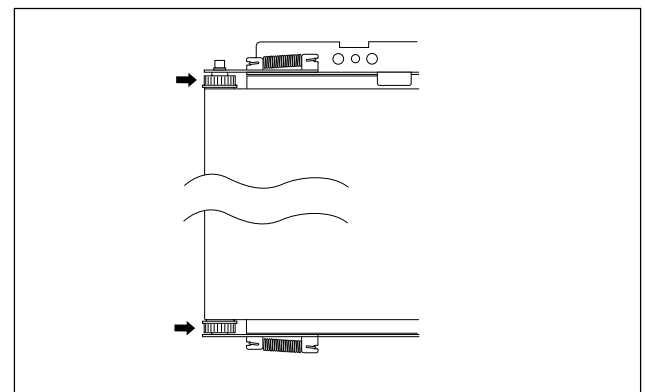


Fig. 13

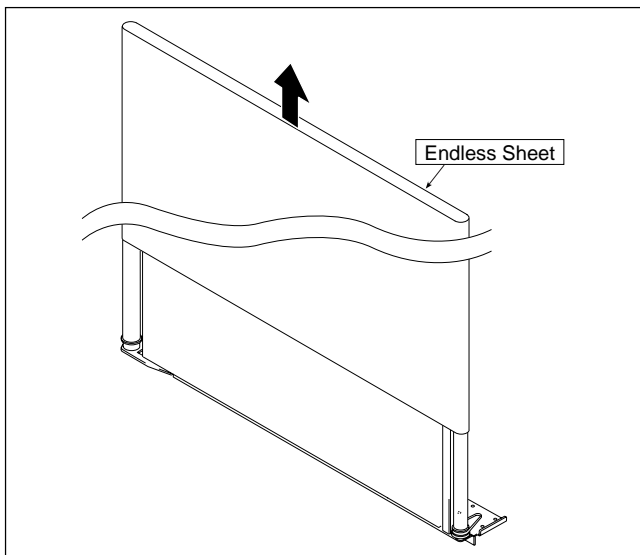


Fig. 15

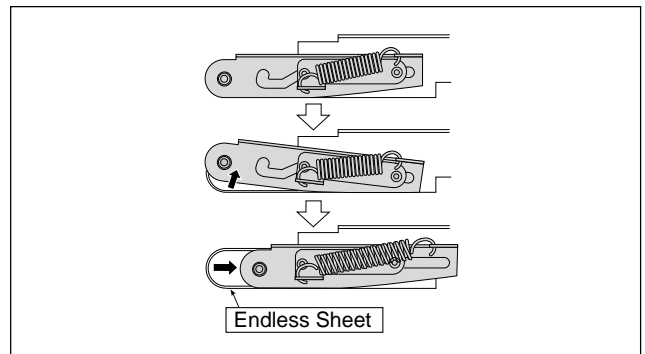


Fig. 14

10) Remove the LED Unit. (See Fig. 16.)

1. Remove the LED Harness as shown in Fig. 16.
2. Remove the "S-3" screws as shown in Fig. 16.
3. Remove the LED Unit as shown in Fig. 16.

Note:

Use the parts assembled in a factory during replacement of an LED unit.

* Calibration is required after replaced.

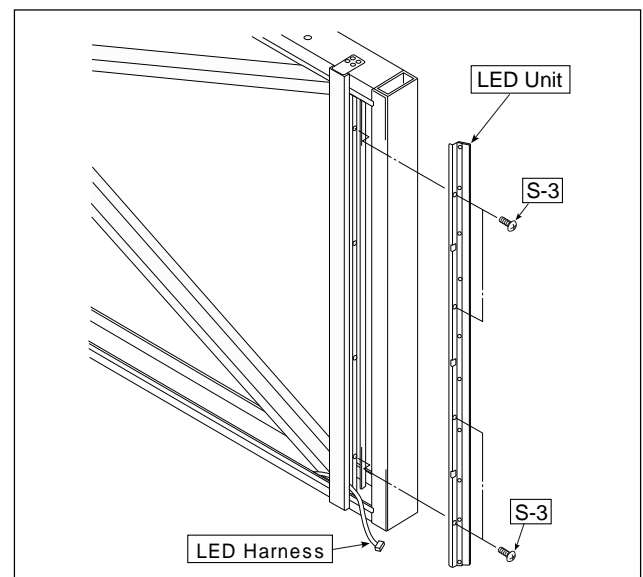
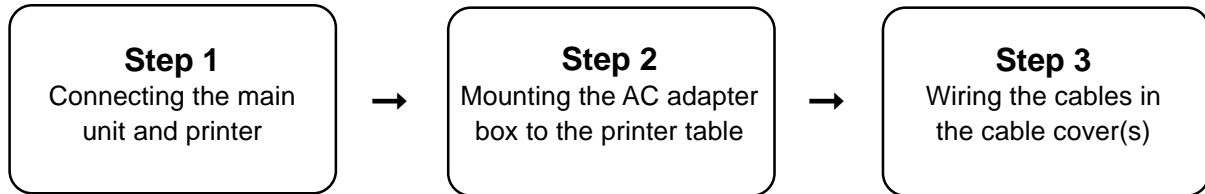


Fig. 16

6. CONNECTION TO THE SET

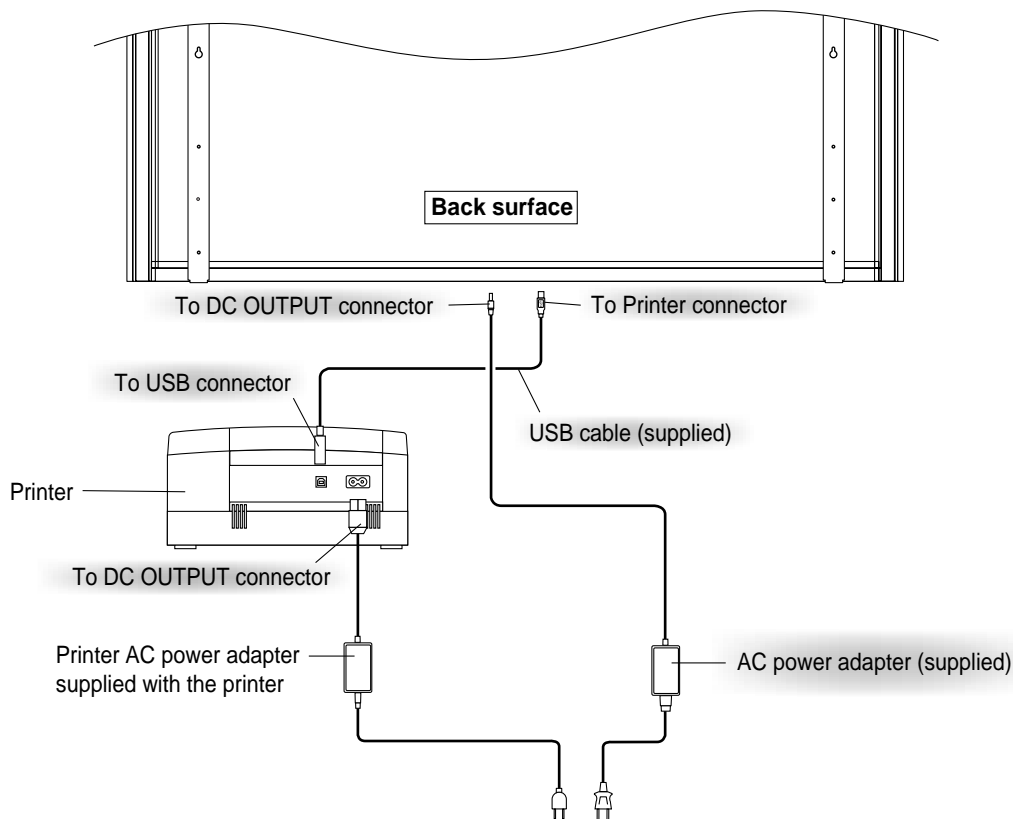
After connecting the main unit and printer, place the AC power adapters in the AC adapter box.

• Flow of connection operations



6-1. Connecting the main unit and printer

Connect as shown on the diagram below. Do not yet connect the AC power plugs of the AC power adapters to wall power outlets.



Note:

When an AC power adapter is used with a printer that has been verified to be operational, although the printer type may differ from that of the connection diagrams (e.g., a built-in type, or assembled type), the connections should be performed based on the same main points. (In accordance with the printer specifications)

* Appearance of printer is for illustration purposes.

6-2. Mounting the AC adapter box to the printer table

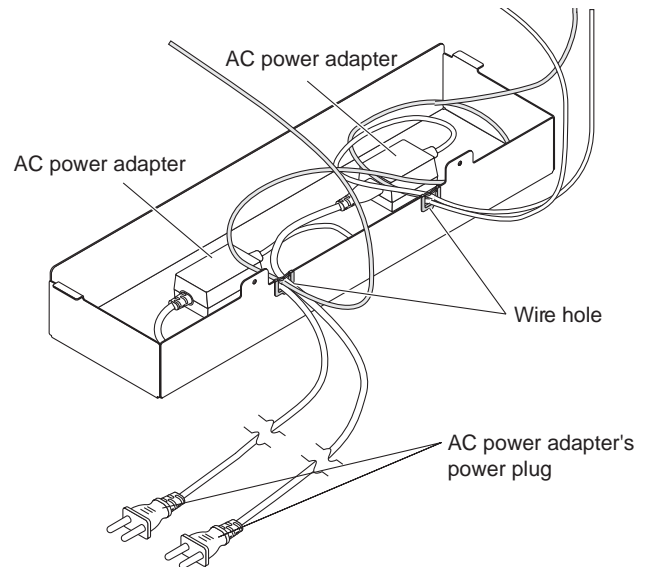
After placing the AC power adapters of the main unit and printer in the AC adapter box, mount the AC adapter box to the printer table.

WARNING

- The AC power adapters and the power cords generate heat. Be sure to wire them in such a way that they keep apart. Do not bundle the cables together. Doing so could cause them to heat up, leading to fire.

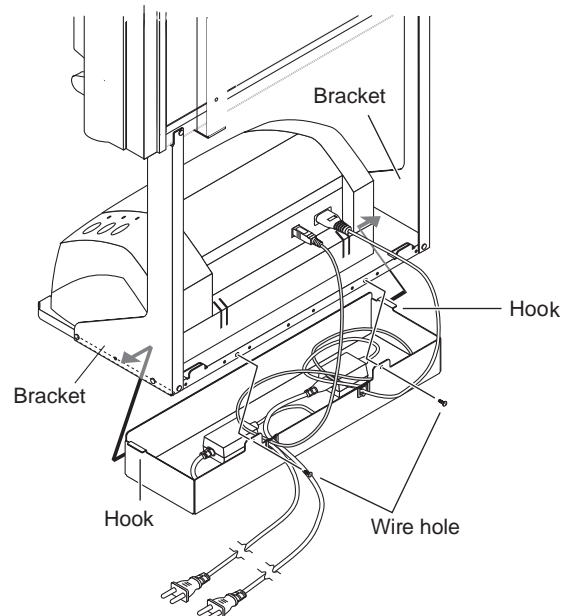
(1) Place the AC power adapters of the main unit and printer in the AC adapter box.

- Place the AC power adapter's DC and AC side cords in the AC adapter box's wire holes (push them in).
- The USB cable connecting the main unit and printer should not hang down. Place any extra cable inside the AC adapter box.



(2) Place the AC power adapters of the main unit and printer in the AC adapter box.

- Catch the hooks on the ends of the AC adapter box onto the bottom of the left and right brackets (the L-shaped part).
To catch the hooks, insert the AC adapter box from the front of the printer table and pull to the rear. This catches the left and right hooks.
- After adjusting the length of the AC power adapter's cords, fasten the AC power adapter to the printer table using the two masking screws.



WARNING

- Be sure the power cords and USB cable do not get caught when mounting the AC adapter box. Doing so could damage the cords, leading to fire or electric shock.

6-3. Wiring the cables in the cable cover(s)

The place of installation of the cable covers included with the main unit differs for the standard type and wide type. (Note that they cannot be attached to the stand.) Also, the cable cover included with the stand and designed specifically for the stand cannot be attached to the main unit.

Standard type: One cable cover specifically for the main unit

Wide type: Two cable covers specifically for the main unit

Stand: Two cable covers specifically for the stand (Narrow type x 1, Broad type x 1)

Narrow type: Use this for a 100V power cord

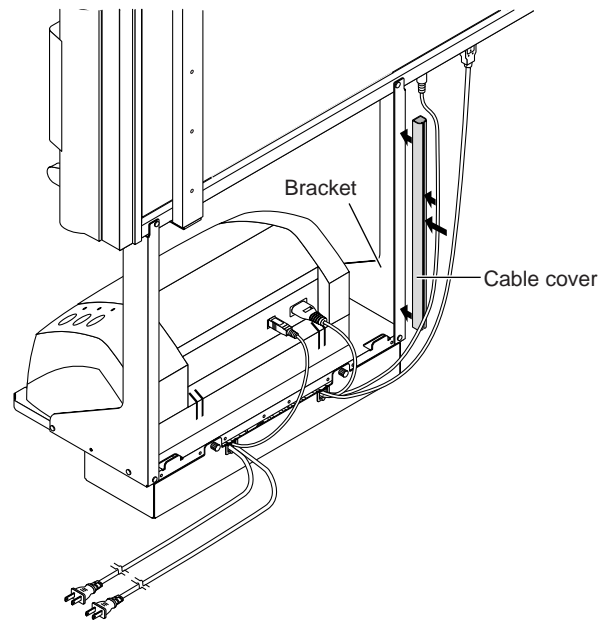
Broad type: Use this for a 200V power cord

(1) Attach the cable cover(s) according to the type you have purchased.

- Peel off the backing paper from the cable cover and attach the cable cover firmly to the bracket.
[When the main unit is installed on a wall]
Attach the cable cover to the side of the bracket.
- For the wide type, also attach one of the cable covers specifically for the main unit to the bottom of the main unit.
- Insert the cable/cord into the slit in the cable cover.
* If the cable/cord is too short or too long, remove the screws from the AC adapter box and adjust the length.

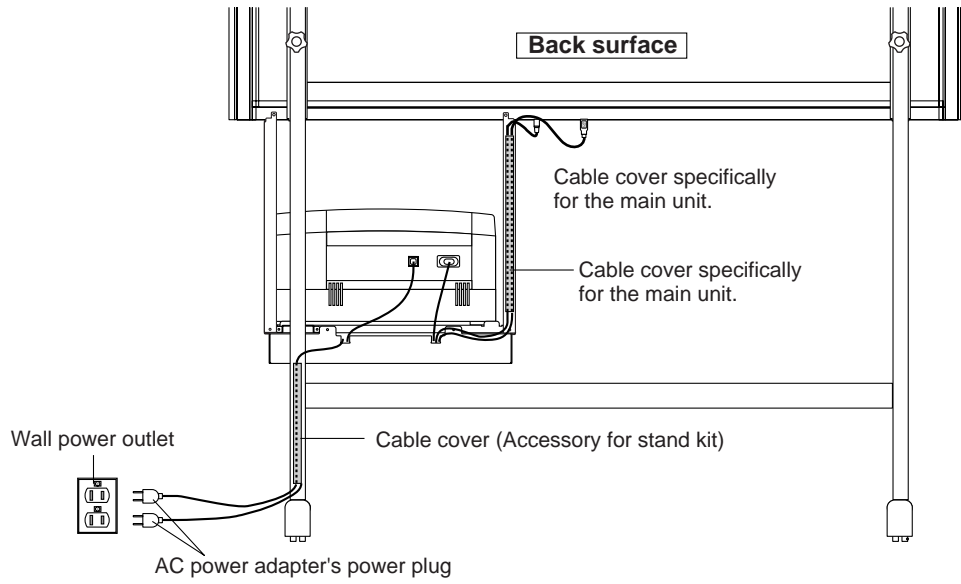
Notice

- The included cable covers use a powerful adhesive seal.
The cable cover may be damaged or deformed if you try to remove it and attach it in a different position.
Check the position of installation of the printer table before attaching the cable cover.

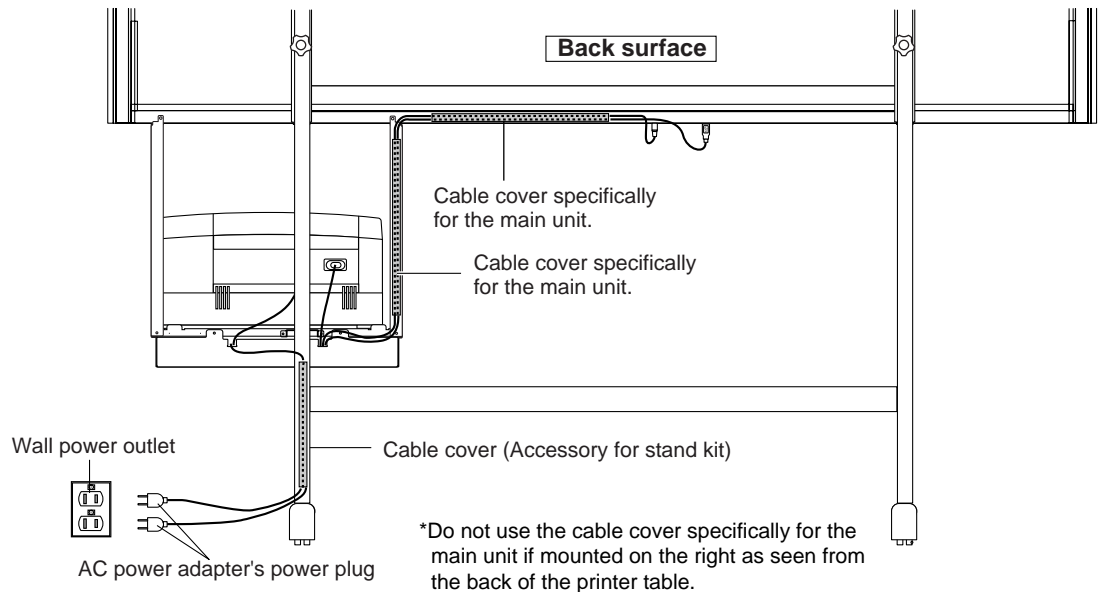


● Example of connection cable wiring

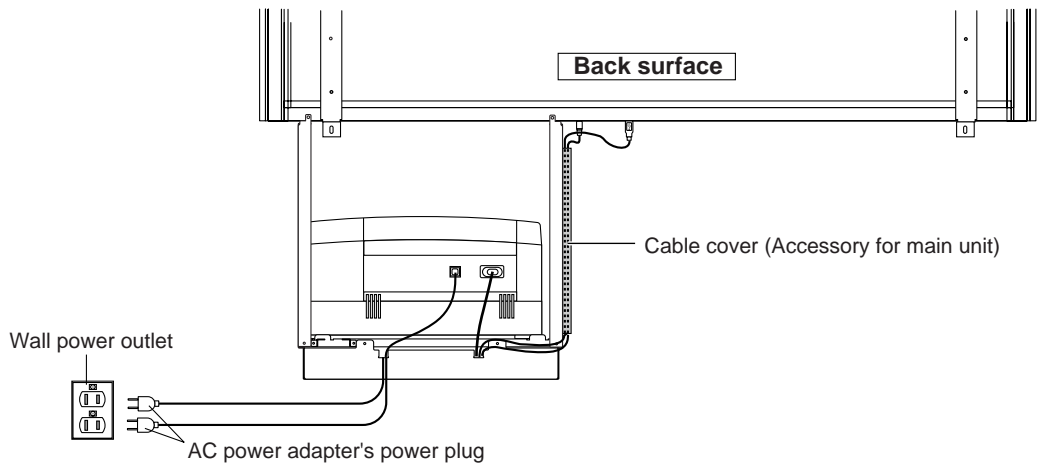
Standard type + stand installation



Wide type + stand installation



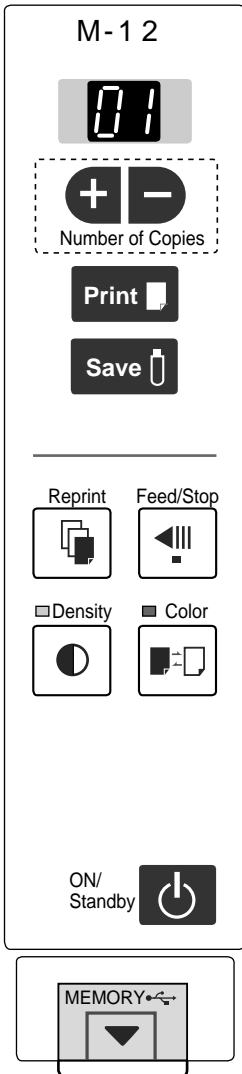
Standard type + wall installation



7. SETTING THE TIME

Set the copyboard's clock properly. The date and time are printed in the header/footer when printing and recorded in the file data when saving the file.

Overview of the Operation



1 Switch to the function settings.

With the power turned on, press and hold in the Density button, then press the ON/Standby button.

F1

2 Press the Print button to switch to the time setting.

3 Display the day and hour setting mode

Setting mode information indicated in the display window

c1 → c2 → c3 → c4 → c5 → c6

(First 2 digits) (Last 2 digits)
Year Month Day Hour Minute

4 Set the date and time of the setting mode

One press of the + or the - button will enable the settings to be made. Press the + or - button and make the adjustment.

5 Press the Print button to confirm

There is a change to the next setting mode. Repeat steps 4 and 5 to set the current time.

- Pressing the ON/Standby button during operations 3 to 5 will cancel the incomplete settings and return to the time prior to starting the settings.

6 Completion

When the Print button is pressed after setting the minutes setting mode ("c.6" is displayed), the display returns to "F1" (function settings), then after 10 seconds automatically returns to the normal mode ("01" is displayed).

Preparation: Connect the copyboard's AC power plug to a wall power outlet. E-15

Example: Set the time to 2:16 pm, November 8, 2008 (2008.11.08 14:16).

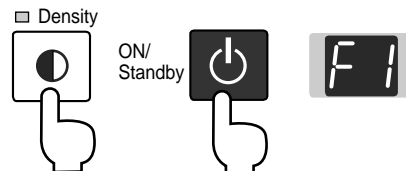
1 Press the ON/Standby button to switch on the power.

The LED of the display window will light and the power will be switched on.



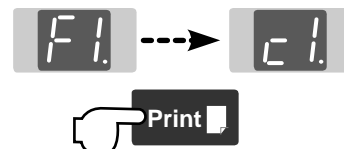
2 Press the ON/Standby button while holding down the Density button to switch to "Function Settings"

The LEDs on the display window display "F1". If no button is operated for 10 seconds, the set returns to the normal mode.



3 Press the Print button while "F1" is displayed to finalize.

The mode switches to the time setting mode (c.1). If no button is operated for 10 seconds while in the time setting mode, the mode switches to the function settings mode.

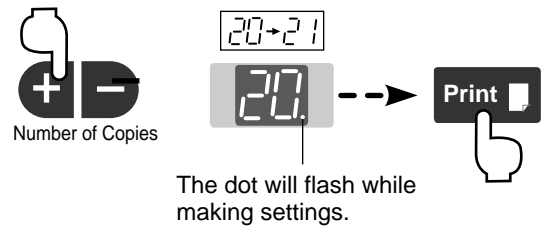


SETTING THE TIME

4 Press the + button or the - button, select 20 (the first 2 digits of the year), and press the Print button to finalize.

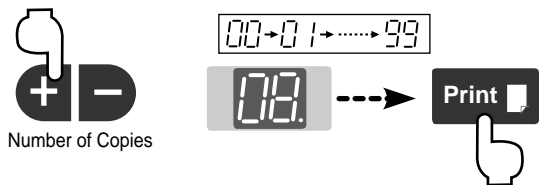
There will be a change to the "last 2 digits of the year" setting mode (20 display).

- The factory default setting is 20. Pressing the Print button in this condition will result in a change to the "last 2 digits of the year" setting mode.



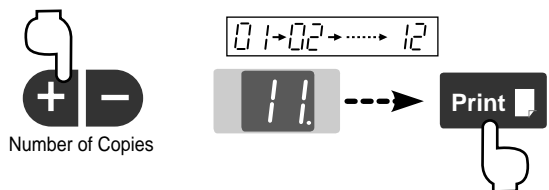
5 Press the + button or the - button, select 08 (the last 2 digits of the year), and press the Print button to finalize.

There will be a change to the "month" setting mode (08 display).



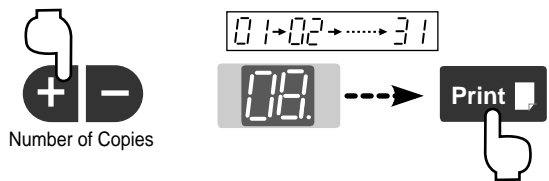
6 Press the + button or the - button, select 11 (the month), and press the Print button to finalize.

There will be a change to the "day" setting mode (11 display).



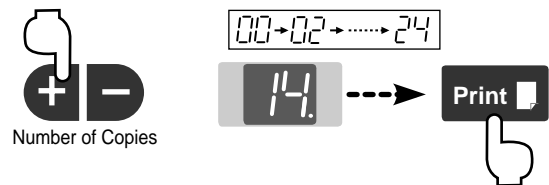
7 Press the + button or the - button, select 08 (the day), and press the Print button to finalize.

There will be a change to the "hour" setting mode (08 display).



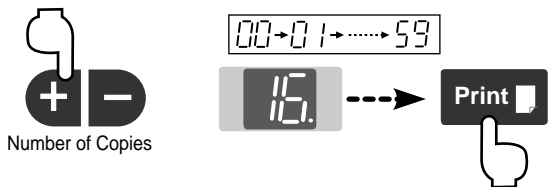
8 Press the + button or the - button, select 14 (the hour of the 24-hour display), and press the Print button to finalize.

There will be a change to the "minute" setting mode (14 display).

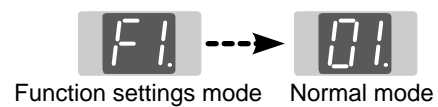


9 Press the + button or the - button, select 16 (the minutes), and press the Print button to finalize.

The display returns to "F1" (function settings mode).



The display returns to the normal mode (the number of copies ("01") is displayed) if you wait 10 seconds or press the ON/Standby button.



This completes the time setting.



8. FUNCTION SETTING

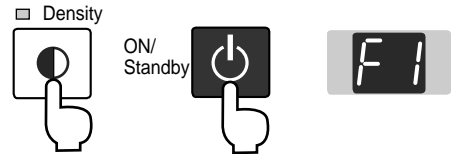
The copyboard includes such advanced functions as the Erase Reminder function that can be set directly using the operation buttons on the copyboard. The advanced functions can also be set from the function settings in the "TOOLBOX" menu installed in a computer (See the separate "Software Operation Manual".)

8-1. Basic Setting Operations


- Check that the power is turned on (that the display window is lit).
- When in the Function Settings mode, the copyboard returns to the normal mode if no button is operated for 10 seconds.

1 Switching to the function settings mode

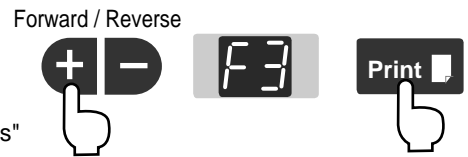
Press and hold in the Density  button, then press the ON/Standby  button. "F1" appears on the display window.





2 Selecting the function number

Press the + or - button to display the desired function number (the number changes each time one of the buttons is pressed), then press the Print  button to finalize.


See the "Table of Function Numbers, Selected Modes and Lamp Statuses" on the following page.

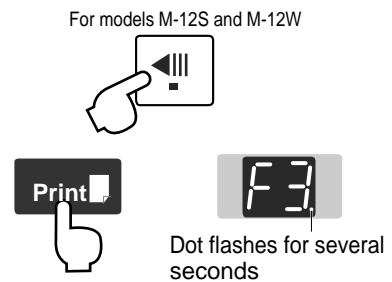


3 Selecting the function's setting

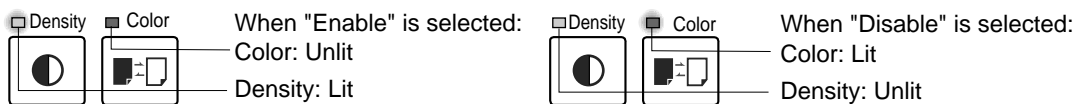
Press the Feed/Stop  button to select the function's setting, then press the Print  button to finalize.

When finalized, the dot next to the function number ("F3." for example) flashes for several seconds.

- When the Feed/Stop  button is pressed, the selected mode is indicated by whether the Density mode and Color mode lamps are on or off. For details, see the "Table of Function Numbers, Selected Modes and Lamp Statuses".



Ex.: Lamp statuses when selecting the Erase Reminder function's mode



- Use the + and - buttons to select the date and time when setting the clock.

4 Quitting the function settings mode Press the ON/Standby button to return to the normal mode.

The number of copies reappears on the display window.



8-2. Table of Function Numbers, Selected Modes and Lamp Status

When at step 2 under “Basic Setting Operations” on the previous page, display the number of the function you want to set on the display window.

At step 3, check whether the lamps are lit or off as indicated for the desired mode.

Function number (Display window)	Function name	Description of function	Selected mode	Density mode lamp	Color mode lamp
F1	Time setting	Setting of the date and time for the time stamp	See page 22		
F2	Header/footer	Setting of the time stamp written when saving: By factory default Header/footer data output:: Original editing *1	Disable	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			Enable	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
F3	Erase reminder	Sheet rear surface erase reminder function	Disable	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			Enable	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
F4	Printing ratio	Setting of images aspect ratio when printing (Model M-12W)	Compressed horizontally	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			Equal ratio	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
F5	Data rate	Setting of rate for images stored in the memory and images transferred to the computer (Model M-12W)	Compressed horizontally	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			Equal ratio	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
F6	Paper size	Setting of printing paper size	A4	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			Letter	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
F7	Resolution	Setting of resolution for images stored in the memory and images transferred to the computer	Standard	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			High	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
F8	Image format	Setting of format of images stored on the USB memory device	JPEG	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
			PNG	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			PDF	<input checked="" type="checkbox"/> Density Lit	<input checked="" type="checkbox"/> Color Lit
F9	Test print	Print copyboard's pre-stored test pattern	———		
Fb	Restrict color mode	Setting for disabling printing/storing in the color mode	Enable	<input type="checkbox"/> Density Unlit	<input checked="" type="checkbox"/> Color Lit
			Disable	<input checked="" type="checkbox"/> Density Lit	<input type="checkbox"/> Color Unlit
Fc	Factory reset	Reset all the settings to their factory defaults	———		

: Factory defaults.

*1) For instructions on editing the header/footer, see the "Software Operation Manual".

8-3. Factory Defaults

The "Settings" menu of the "PLUS TOOLBOX" software in the included CD-ROM can be used to change the copyboard's settings.

For setting instructions, see the separate "Software Operating Instructions". Below are the setting items and factory defaults.

Setting item	Description	Factory default
Date/time setting	Set of the date and time for the time stamp	Japan Standard Time
File Format	Sets the format of the images stored on the USB memory device. JPEG/PNG/DF	PNG
Paper Size	A4/Letter	A4
Aspect Ratio	Sets the aspect ratio for printed images. Original Image/Match Paper Size	Match Paper Size
Erase Reminder	Sheet rear surface erase reminder function: Disable/Enable	Disable
Restrict color mode	Setting for disabling printing/storing in the color mode	Disable
Resolution	Selection of resolution for images stored in the memory and images transferred to the computer : Standard Standard : 1/2 the vertical/horizontal size of the scanned image High : 1/1 the vertical/horizontal size of the scanned image	Standard
Header/footer (date/time stamp)	Upon shipment from factory : Writing of date/time when printing/storing : Enabled/Disabled Original editing : Header/footer data output *	Enabled

* The date/time stamp can be displayed at the user's discretion as part of the header/footer data.
Upon shipment from the factory, only the time stamp is displayed.

8-4. Updating the Internal Program of a Main Set

Update an internal program from PC using software PLUS TOOLBOX or update a program using USB memory. Rewrite a program in the procedure below using PC or USB flash memory (hereinafter referred to as USB memory).

m12XX_XX.mot. Major version: XX/Minor version: XX

Example: m12_01_00.mot

- Connect PC, in which software PLUS TOOLBOX was installed, using a USB cable when updating the internal program of this set from PC.

[Program updating during use of PC]

Equipment required (including software)

- Program file for M-12
- PC main set (USB terminal 1.1 or more: Software M-12 series PLUS TOOLBOX has been installed.)
- USB cable

1. Save a program file (example: m12_01_00) for M-12 in PC.
2. Display the main menu of software "PLUS TOOLBOX" in PC.
3. Pull out the power plug when the power plug of the main set is connected to the wall outlet.
4. Connect the power plug of the main set to the wall outlet while pressing and holding the "Save" button.
5. "UP" blinks on the display window.
6. Click [Open file] and display the screen for opening a file.
7. Display an update file for M-12, select a file (example: C:XXXX.m12_01_00.mot), and click the [Open] button.
8. Click the [Update] button and start the updating of an internal program.
During program rewrite: The display window rotates during display. (Time required: Approx. two minutes)
9. Updating is completed when "AA" blinks on the display window. Click [Close] on the PC screen display for termination.
10. Pull out the AC adaptor of the M-12 main set once, insert the AC adaptor again, and press the "Power" button of the M-12 main set.

* Do not turn off the power during write operation.

* The indication on the display window may vary depending on the program version or IPL version of the main set.

[Program updating during use of USB memory]

Equipment required (including software)

- Program file for M-12
 - USB memory
1. Save a program (m12_01_00) in the route of USB memory.
 2. Press the “Power” button of the M-12 main set to turn on the power and insert the USB memory into the USB memory port.
 3. The USB memory is recognized, a file is automatically detected, and the current software version shown on the display blinks during updating. Display example: “01” ...
 4. A program is updated when you press the “Save” button of the M-12 main set. (During program rewrite: The display window blinks during display.)
 5. A new program version is shown on the display when update is completed. Display example: “01”
 6. Remove the USB memory and press the “Power” button of the M-12 main set to turn off the power.
 7. Pull out the AC adaptor of the M-12 main set once, insert the AC adaptor again, and press the “Power” button of the M-12 main set.
- * Do not turn off the power during updating operation.
- Segment display “E.E.”: Indicates the state in which no sheet length and white level data exist. In this case, perform calibration.

9. ADJUSTMENT

9-1. CCD Adjustment

Tools Required

- Phillips screwdriver (+) No.2
- Oscilloscope

Adjustment is required in the following cases. (Calibration operation is also required after adjustment.)

- When a CCD Board Assy is replaced
- When adjustment got out of order due to the failure during arrival of products
- When the picture quality deteriorates remarkably

Preparation

Turn ON the power of an oscilloscope. Clean the plate surface.

* Insufficient cleaning influences the subsequent calibration. Color irregularity may sometimes occur in this case.

CCD adjustment procedure

- 1) Shift the rear panel to the right side (LED side) so that the Main Board Assy can be viewed.
At that time, put a Back Panel completely to the end of the main board Assy so that the outer light does not influence the CCD waveform. (See Figure 10.)
- 2) Connect the probe of an oscilloscope to the Main Board Assy. (See Figure 1.)
 - Connect GND in Ch1 to J2, connect the measurement pin in Ch1 to J1.
 - Connect GND in trigger (or Ch2) to J4.
 - Connect the measurement pin in trigger (or Ch2) to J3.
 - Set the Ch1 mode to 1.0 V/DIV AC.
 - Set the trigger to 2 V/DIV DC.
 - Set the sweep to 400 ~ 500 μ sec/DIV.

* Set the trigger to EXT or Ch2. Only Ch1 is displayed.
* For a new Main Board Assy of M-12 type, volume control R82 is not installed because of automatic adjustment.

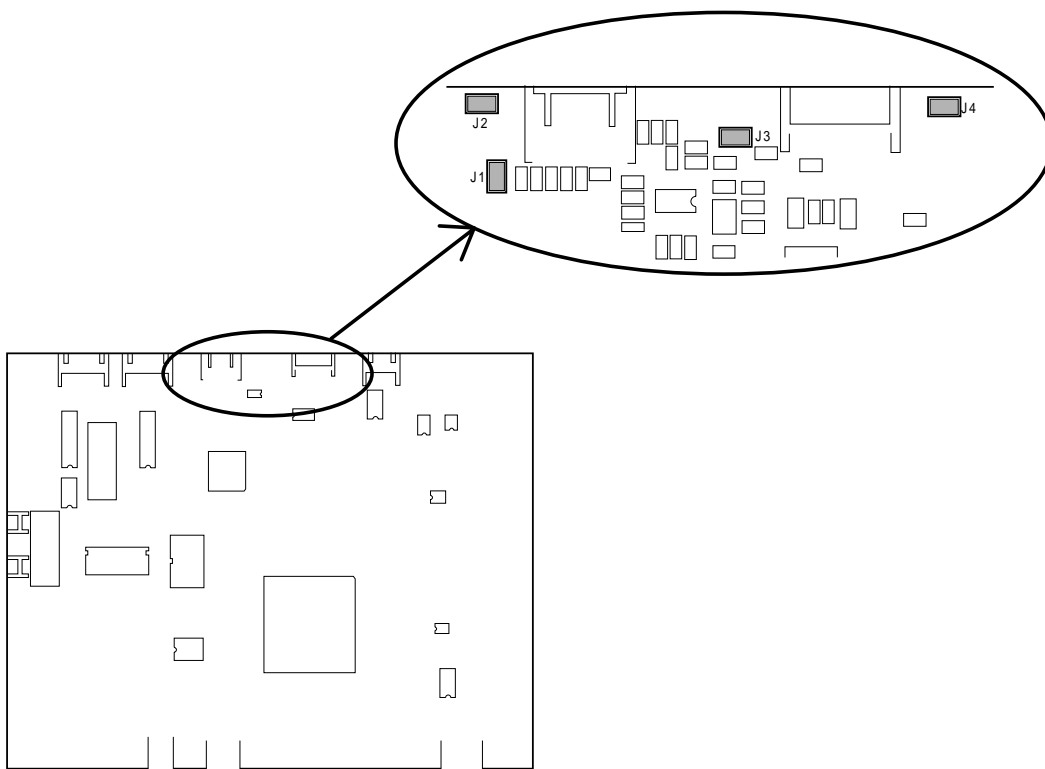


Fig. 1 Main Board Assy

3) Temporary focus adjustment

Adjust the lens to the reference position and fix the two lens fixing screws temporarily. (See Figure 2.)

* Install the lens so that the lens marking is located horizontally and toward you.

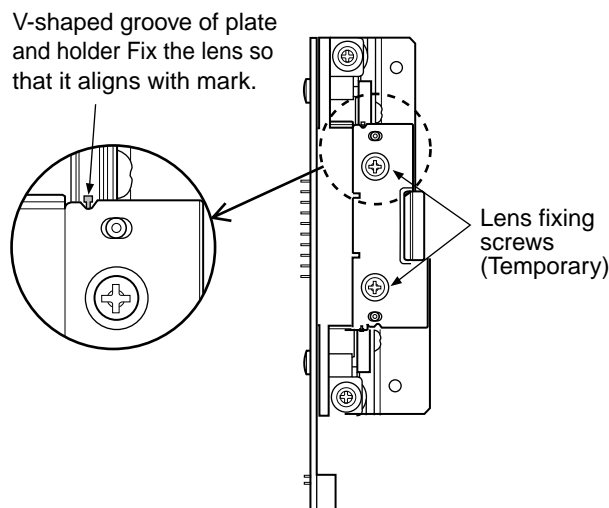


Fig. 2 Temporary focus adjustment

4) Clean the plate surface and then write an adjustment pattern.

(Clean the plate surface sufficiently. If not, the subsequent calibration cannot be performed accurately.)

- ① Place the joint of a sheet in the switch panel position.
- ② As shown in Figure 3, write the adjustment pattern using a black marker.
- ③ Write three horizontal lines of 100 mm long in the upper, middle, and lower positions according to the rule.
- ④ Write a vertical line of 100 mm long (thickness 4 ~ 5 mm) in the center 100 mm away from the middle position, and write two vertical lines of 50 mm long in the upper, lower positions by one of them.
- ⑤ Move the sheet so that the two horizontal lines at the top and bottom are located in the center of the LED irradiation range of the sheet surface.

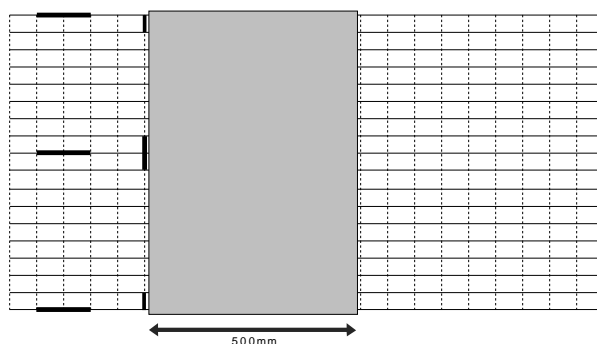
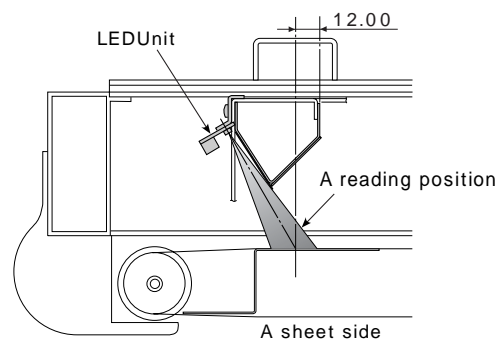


Fig. 3 CCD Adjustment pattern

Note:

1. Draw the three vertical lines so that they become vertical in the same line.
2. If it is difficult to perform adjustment, draw the vertical lines more boldly and perform tentative adjustment. After that, return the vertical lines to the former state and perform accurate adjustment.



Scanning position

5) Put the set into the CCD adjustment mode.

Turn OFF the POWER.

- Turn ON the ON/Standby button while pressing and holding the “+” and “-” buttons, so the LED display is “AP”.
- Press the “Reprint” button, so the set is put into the CCD adjustment mode. (LED display is “6”.)
- The light-source LED lights in red when you press the Reprint button.
- The LED repeatedly lights in green, blue, and red when you press the Reprint button. (See Figure 4.)

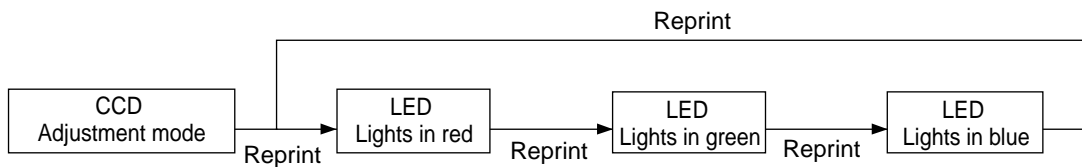


Fig. 4 Adjustment mode sequence

6) Adjustment of oscilloscope

Adjust the trigger level and Ch1 vertical position so that a CCD waveform appears on the oscilloscope display with the light-source LED turned on in red. Adjust the horizontal position, luminance, and focus. (See Figure 5.)

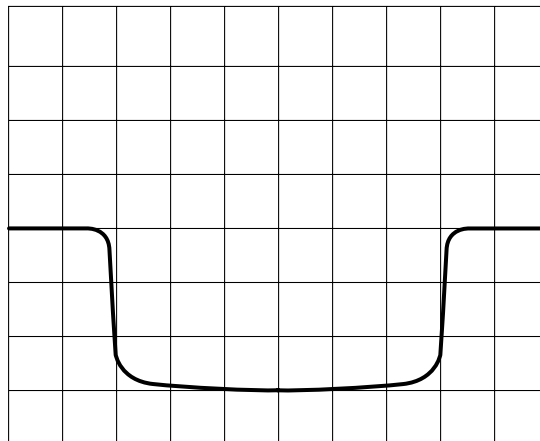


Fig. 5 CCD waveform (Adjustment of oscilloscope)

7) CCD monitoring angle adjustment

Turn the CCD position adjustment screws (see Figure 6.) so that the waveform on the oscilloscope is symmetric on the right and left and so that the three vertical lines at the upper, middle, and lower positions can be read in the same level. Then, fix the screws. (See Figure 6.)

Note:

Fix the CCD fixing screw tentatively so that the CCD Holder smoothly moves and does not float from the Lens Holder.

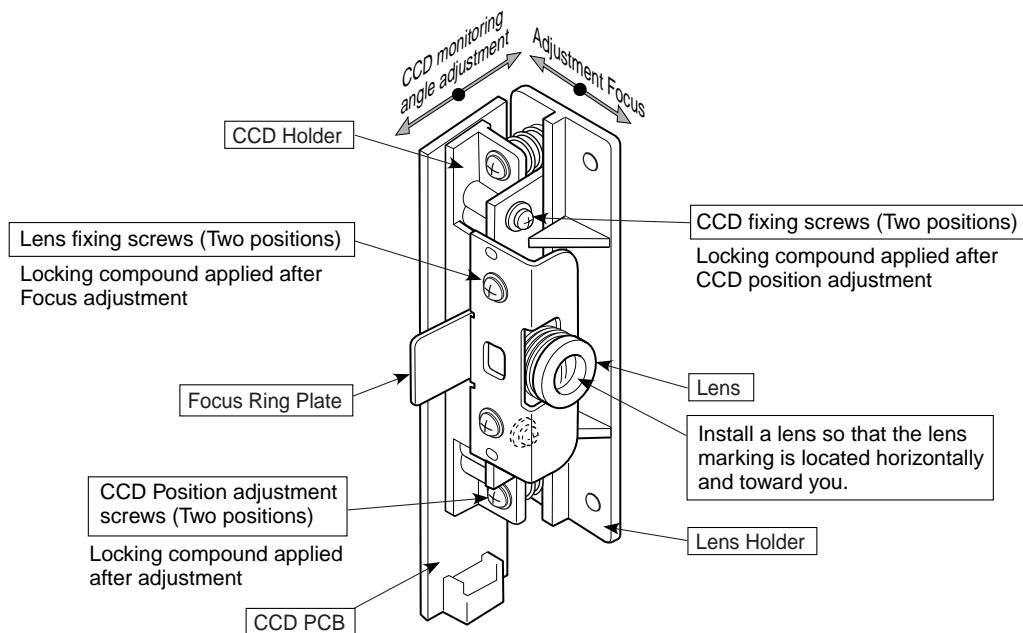


Fig. 6 CCD adjustment screws



Fig.7 CCD waveform (Monitoring angle adjustment)

8) Focus adjustment

Move the sheet so that an adjustment pattern is displayed on the oscilloscope. (See ② in step 4) for how to move the sheet.)

Move the sheet so that three horizontal adjustment patterns are displayed on the oscilloscope.

Monitor the display on the oscilloscope and move the lens so that the displayed waveform is sharp. Adjust the focus and fix the lens fixing screws (see Figure 2). (See Figure 8.)

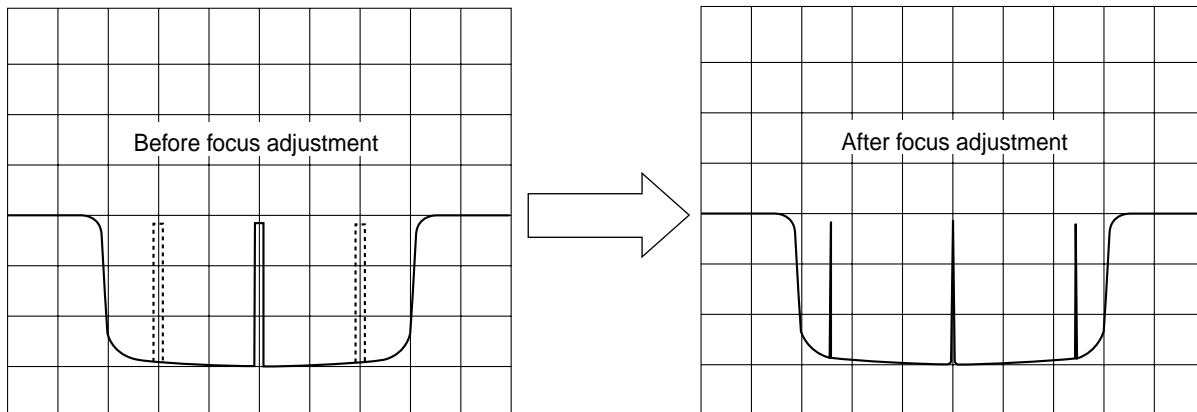


Fig.8 CCD waveform (Focus adjustment)

9) Waveform confirmation

The brightness of the light-source LED is automatically adjusted by CPU when you press the Feed/Stop button in the CCD adjustment mode.

Confirm that the shape of the waveform automatically adjusted for each color (R.G.B) is equal on the right and left.

9-2. Calibration procedure

1) Write a calibration adjustment pattern. (See Figure 3.)

Clean the sheet (on two planes) before performing calibration, and be sure to return the back panel to the prescribed position.

* Move an adjustment pattern so that it is located on the left when viewed from the front.

* Take care that outer light is not put with the Back Panel completely closed when performing calibration.

2) Start calibration.

- Press the ON/Standby button and turn off the power.
- Turn ON the ON/Standby button while pressing and holding the “+” and “-” keys.
- LED display is “AP”.
- Press the Print button, so calibration starts. (LED display “2.”)

Start Calibration

- | | Display |
|---|----------|
| a. When Calibration is started. | <2.SPC>* |
| b. LED for light quantity adjustment. | <2.0> |
| c. Search the place where a vertical line is written. | <2.2> |
| d. Turn by one cycle and move the sheet until a vertical line appears again. | <2.2> |
| e. Move the sheet to the position where reference data is gotten. | <2.3> |
| f. Adjust the light quantity of LED again in the position where reference data is gotten. | <2.4> |
| g. Get the reference data. | <2.5> |
| h. Move the sheet so that the center of a horizontal line is almost put in the image pickup range of CCD. | <2.6> |
| i. Write the following data into flash ROM. | <2.7> |

Operation is normally terminated when <A A> display appears. Turn off the power in this case.

* SPC indicates the non-lighting state.

* <0.0.> is displayed respectively when an error occurred.

Confirmation of printing

Make a copy using four-color markers.

At that time, confirm that the data written in the inner position about 10 mm away from the portion where the upper and lower sheets can be viewed is printed.

* The outside range (about 30 mm) of a ruled line is also valid.

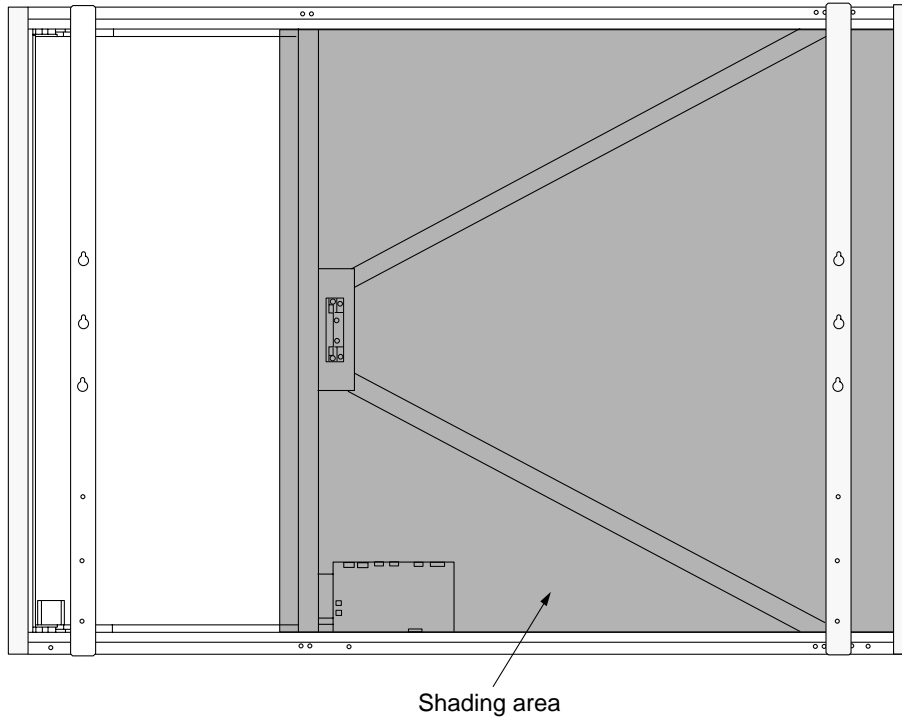


Fig.10 Shading area

9-3. Tension Adjustment of Timing Belt

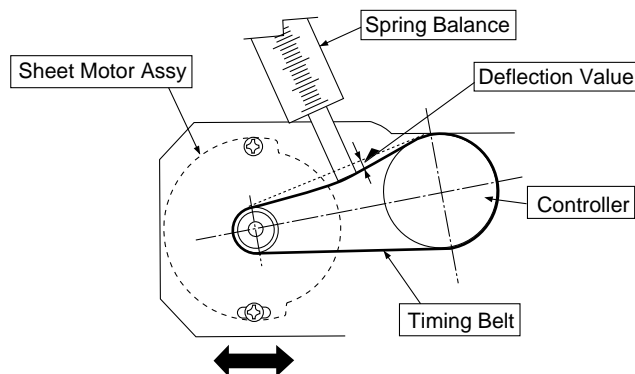
The tension of a timing belt must be adjusted when the Sheet Motor Assy is replaced and removed.

Tool required

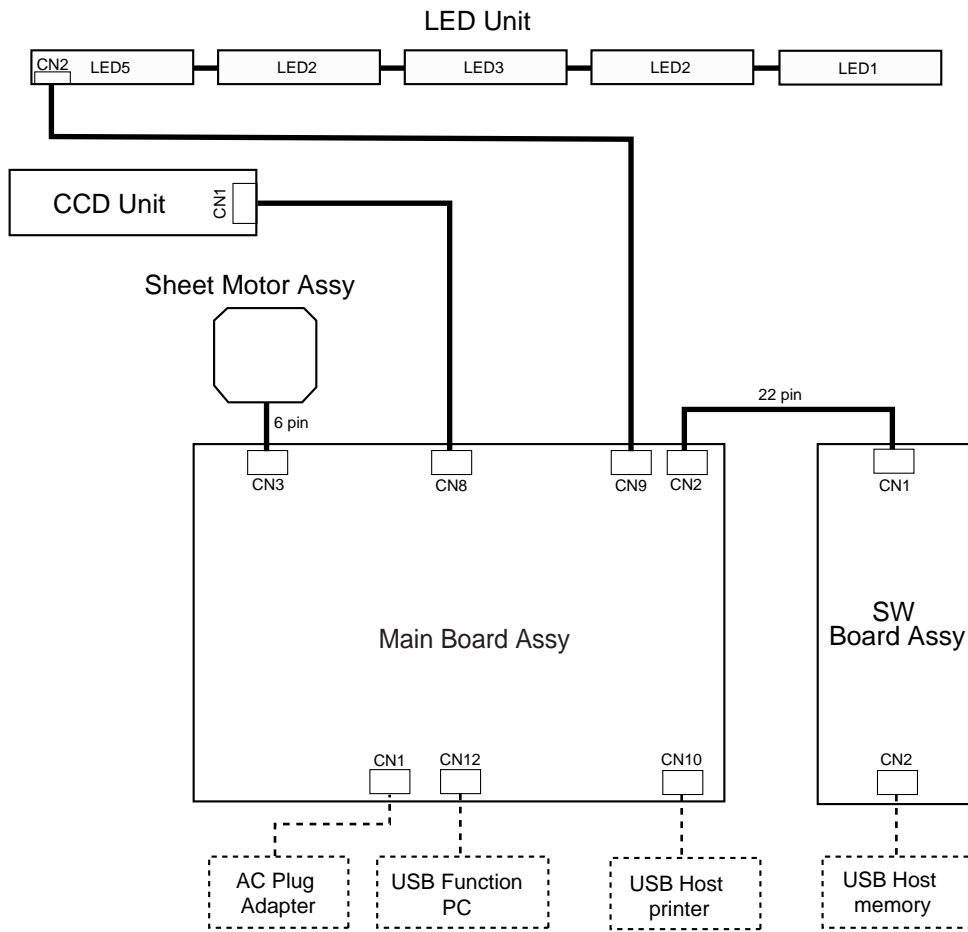
- Spring balance

Adjustment (See the illustration shown below.)

- Fix the Sheet Motor Assy tentatively and measure the tension of a timing belt using a spring balance.
- Move the Sheet Motor Assy and fix it in the position where proper load is obtained.
- The proper load is 7.9N = 500g with the timing belt bent by approximately 5 mm ~ 7 mm.

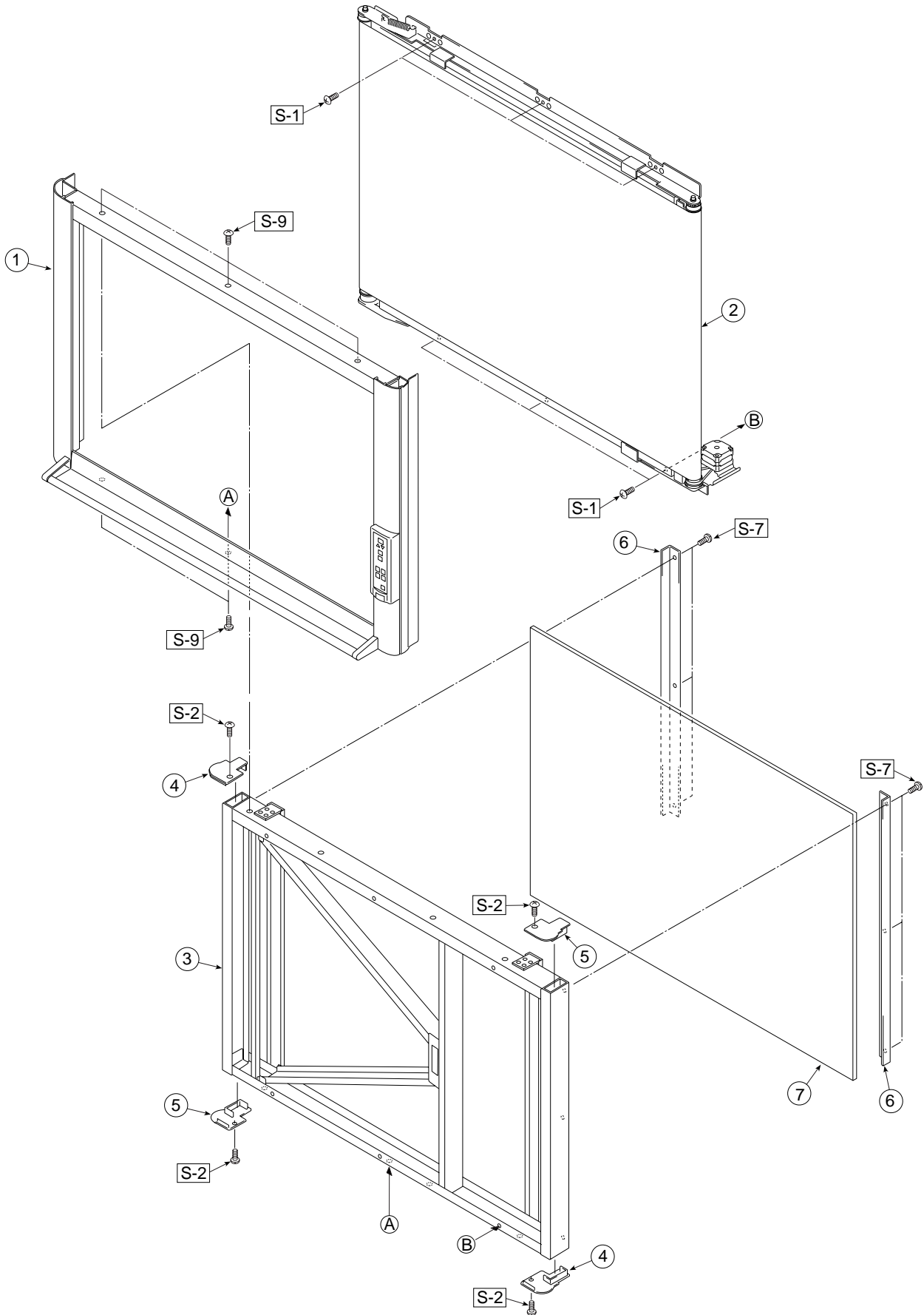


10. CABLE AND CABLE CONNECTION



11. PARTS LIST

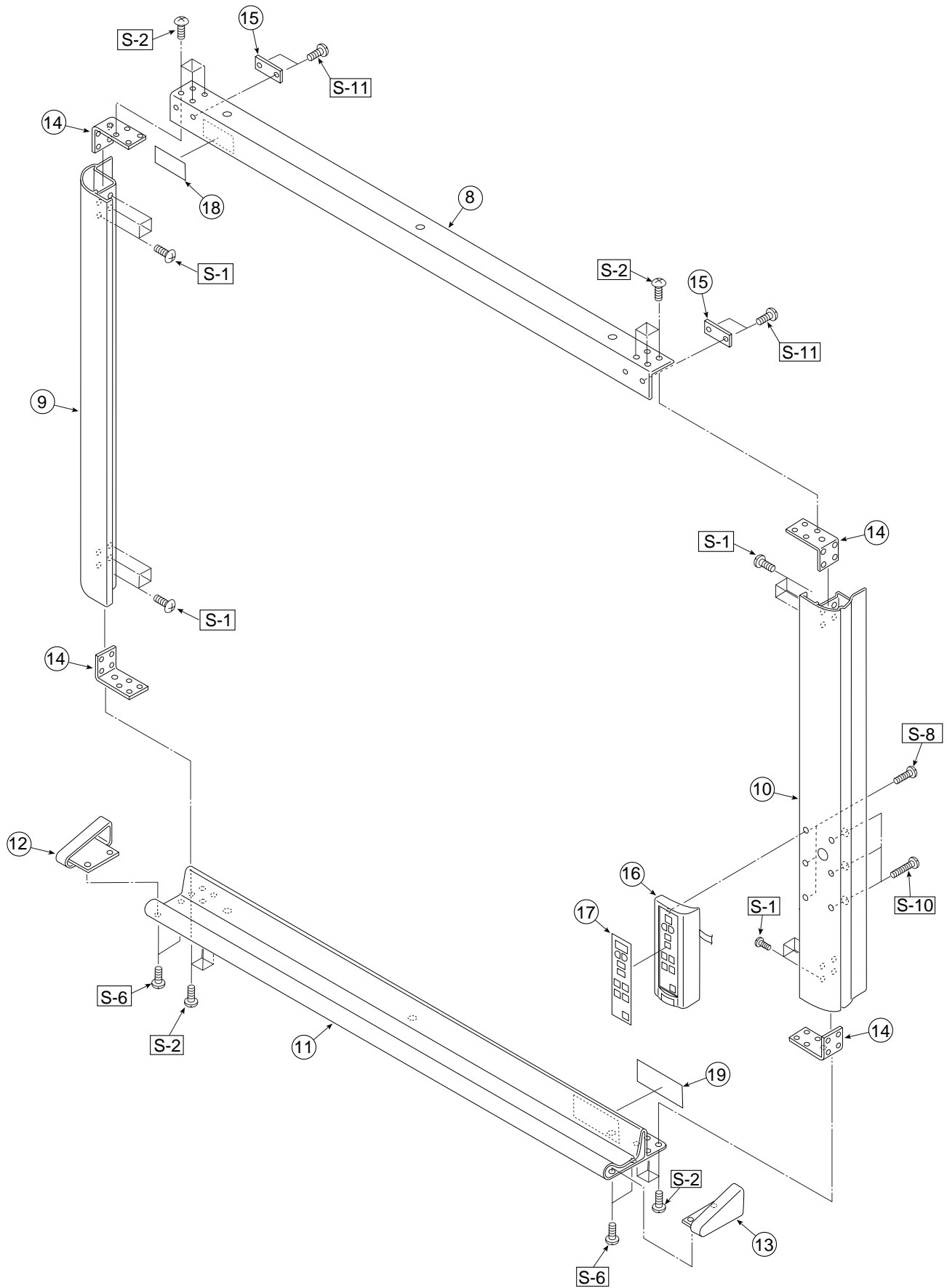
1. Overall configuration



PARTS LIST

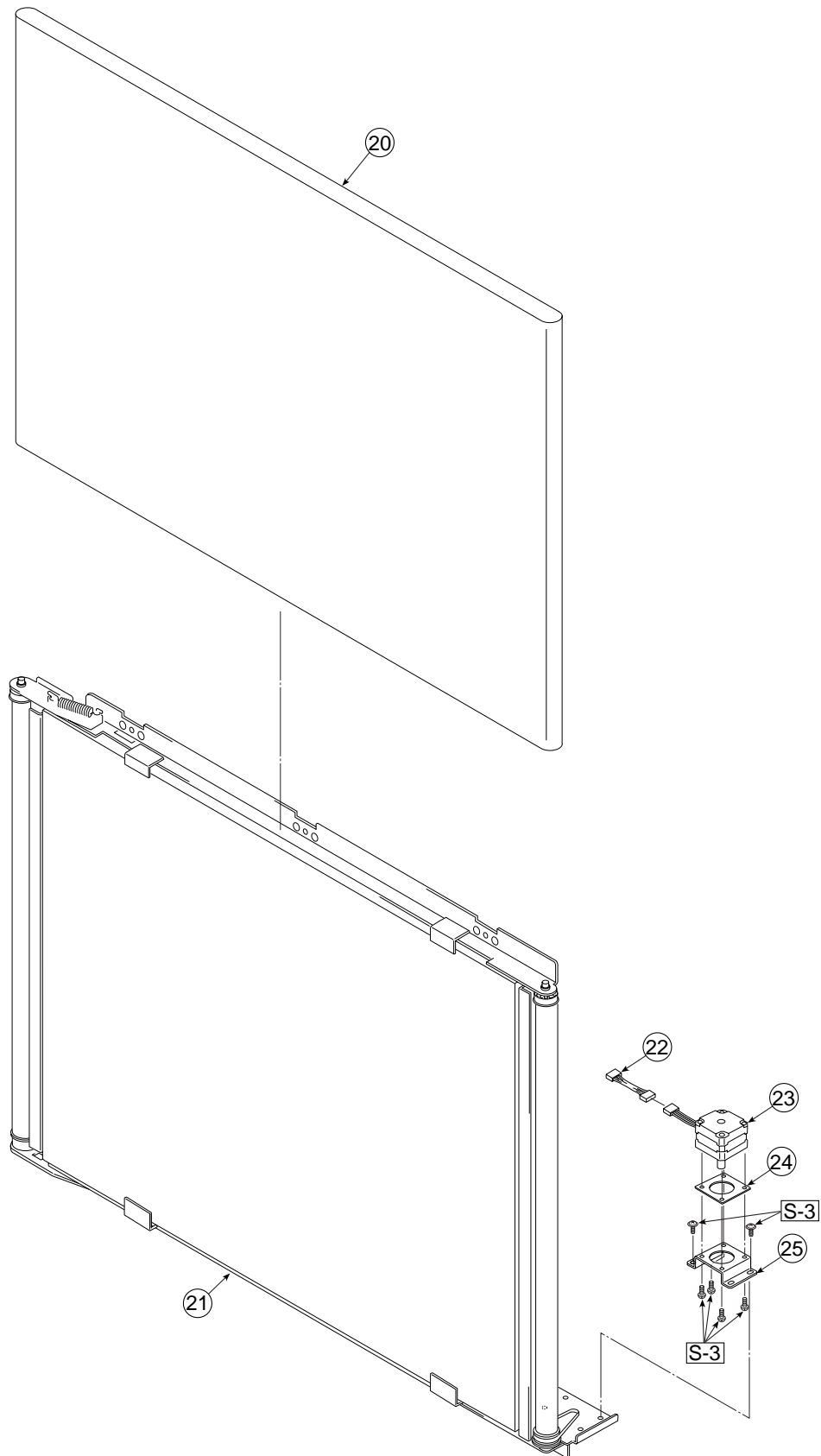
1.Overall configuration					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
1	Frame Cover	-	-	1	
2	Sheet Unit	-	-	1	
3	Board Unit	-	-	1	
4	Cap L	723122100	723122100	2	
5	Cap R	723122200	723122200	2	
6	Back Panel Corner	-	-	2	
7	Back Panel (S)	301101	-	1	
	Back Panel (W)	-	301102	1	

2. Frame Cover Section



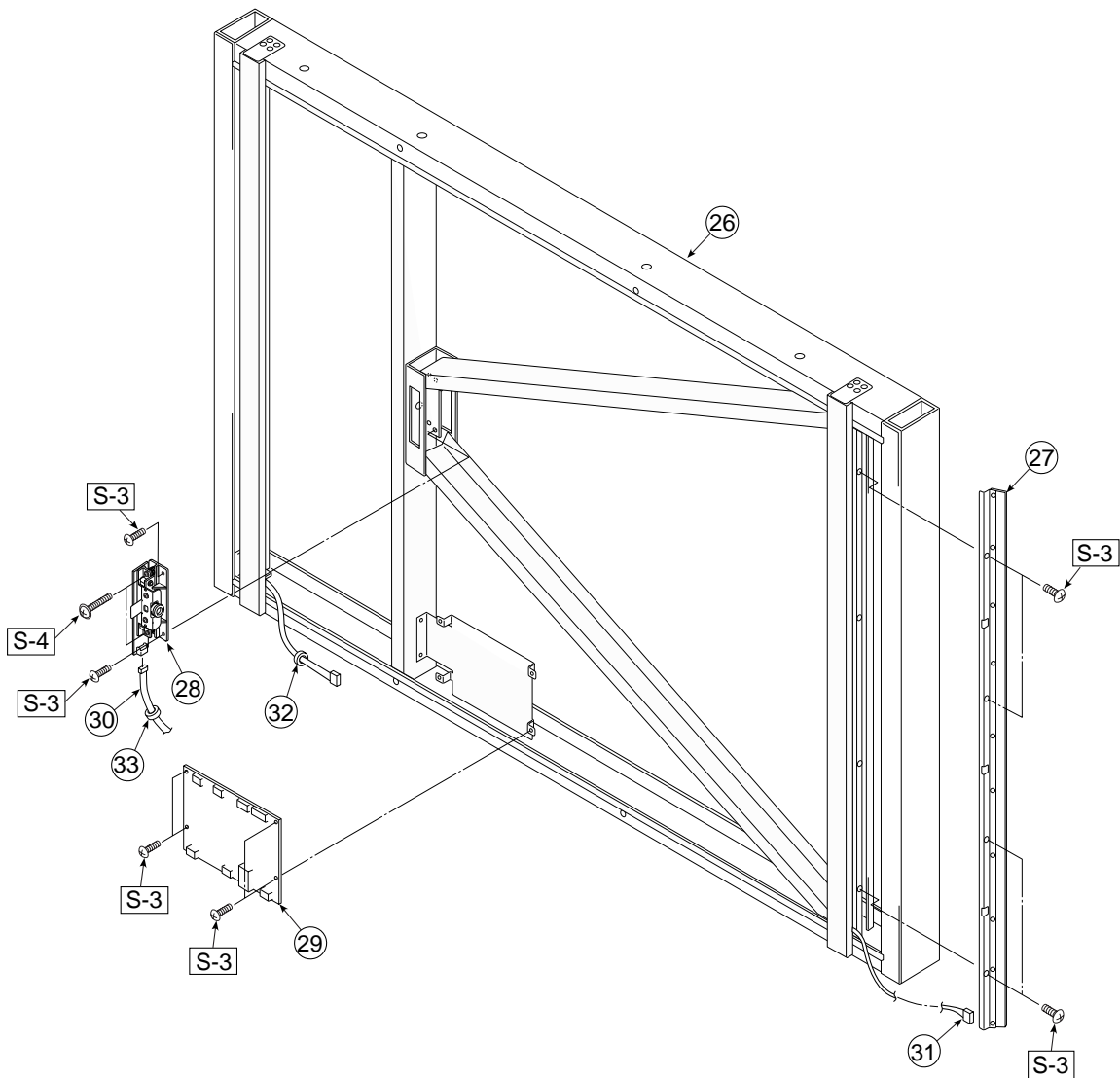
2. Frame Cover Section					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
-	Frame Cover UNIT (S)	301203	-	1	
	Frame Cover UNIT (W)	-	301204	1	
8	Frame Cover Upper (S)	-	-	1	
	Frame Cover Upper (W)	-	-	1	
9	Frame Cover Side L	-	-	1	
10	Frame Cover Side R	-	-	1	
11	Frame Cover Lower Unit (S)	-	-	1	
	Frame Cover Lower Unit (W)	-	-	1	
12	Cover L	723120700	723120700	1	
13	Cover R	723120800	723120800	1	
14	Cover Plate	715201000	715201000	4	
15	Upper Cover Plate	723131300	723131300	2	
16	Switch Box Unit M-12S (J)	-	-	1	Japan Only
	Switch Box Unit M-12W (J)	-	-	1	Japan Only
	Switch Box Unit M-12S (O/S)	723090003	-	1	
	Switch Box Unit M-12W (O/S)	-	723090004	1	
17	Switch Panel M-12 (J)	-	-	1	Japan Only
	Switch Panel M-12 (O/S)	723156200	723156200	1	
18	Name Plate	723150100	723150100	1	
19	Maintenance Label CW (J)	-	-	1	Japan Only
	Maintenance Label CW (O/S)	723153200	723153200	1	

3. Sheet Frame Section



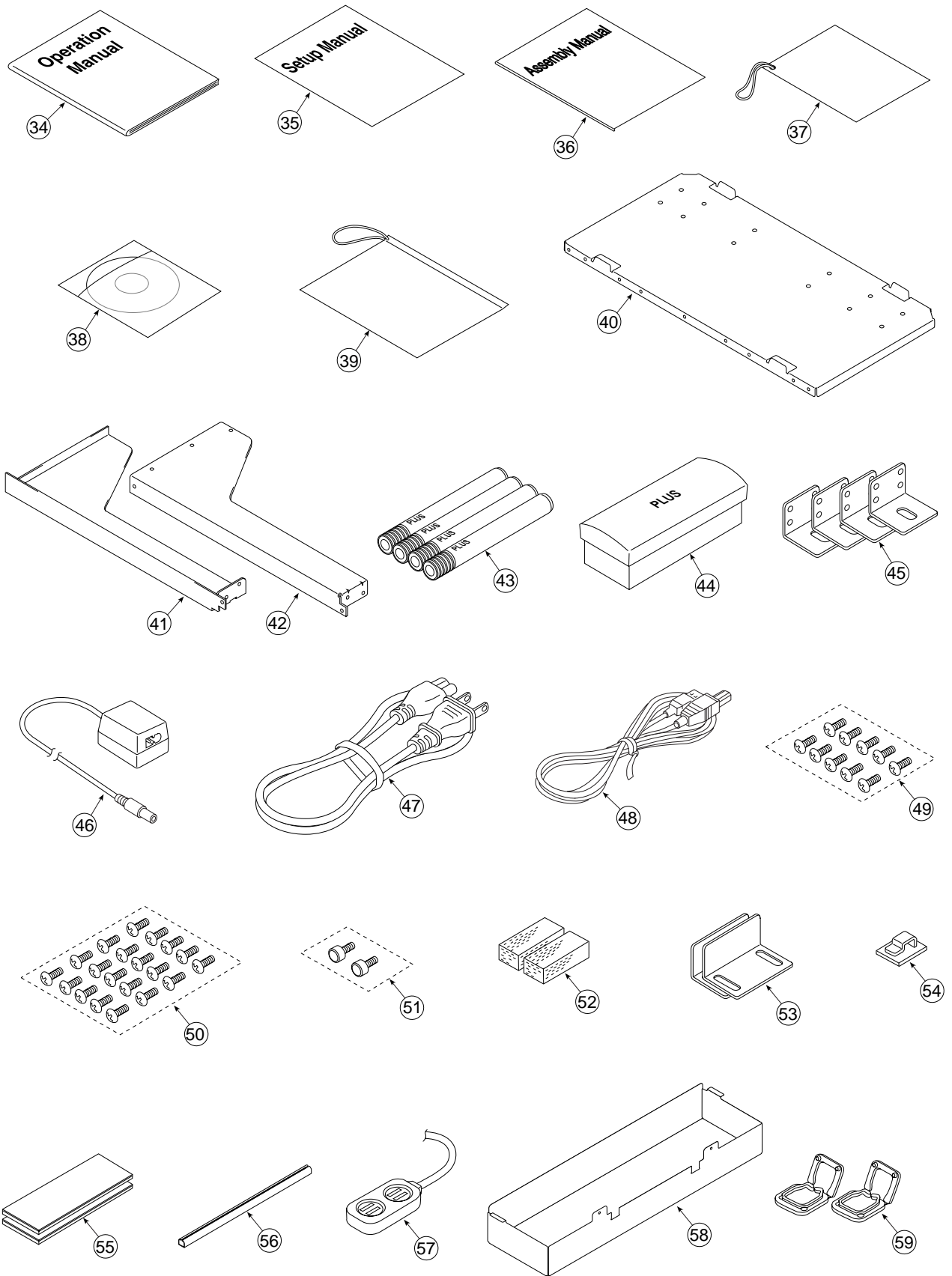
3. Sheet Frame Section					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
20	Endless Sheet M-11/12S	301123	-	1	
	Endless Sheet M-11/12W	-	301124	1	
21	Sheet Frame M-11/12S	-	-	1	
	Sheet Frame M-11/12W	-	-	1	
-	Sheet Frame Unit M-11/12S	301127	-	1	
	Sheet Frame Unit M-11/12W	-	301128	1	
22	Motor Harness (S)	715257800	-	1	
	Motor Harness (W)	-	715258300	1	
23	Sheet Motor Assay	718501200	718501200	1	
24	Vibration Proof Rubber	718209300	718209300	1	
25	Motor Bracket	715353300	715353300	1	

4. Board Frame Section



4. Board Frame Section					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
26	Board Frame Unit (S)	-	-	-	No Parts Supply
	Board Frame Unit (W)	-	-	-	No Parts Supply
27	LED Unit	301109	301109	1	
28	CCD Unit	715090013	715090013	1	
29	Main Board Assy M-12	723511100	723511100	1	
30	CCD Harness	715257700	715257700	1	
31	LED Harness	715257900	715257900	1	
32	DK Core	714890100	714890100	1	
33	Ferrite Core	-	715251512	1	Wide Only

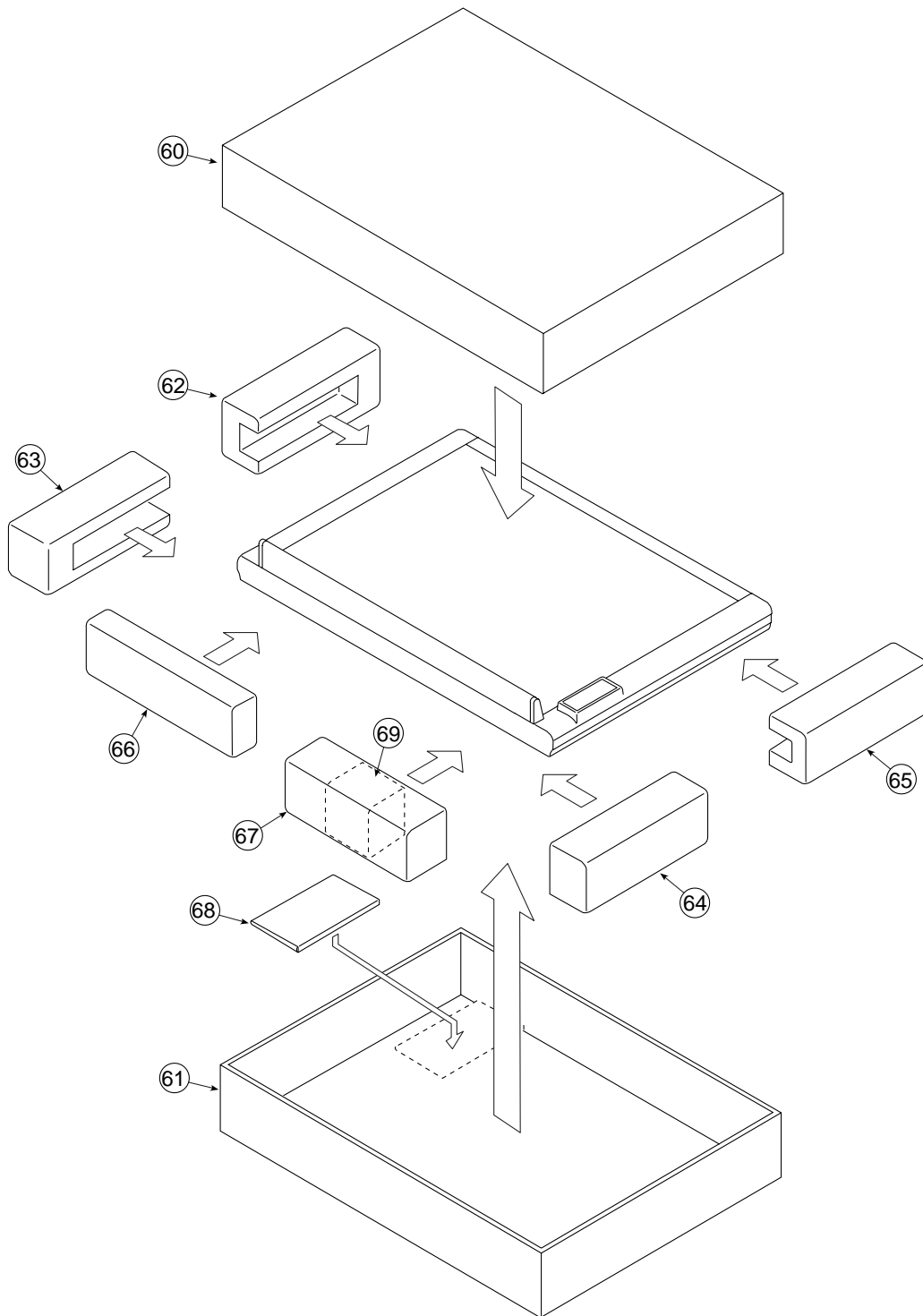
5. Accessories Section



PARTS LIST

5. Accessories Section					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
34	Operation Manual M-12/125 (J)	-	-	1	Japan Only
	Operation Manual M-12/125 (O/S)	723460300	723460300	1	
35	Software Manual M-12/125 (J)	-	-	1	Japan Only
	Software Manual M-11/125 (O/S)	723463800	723463800	1	
36	Assembly Manual M-12/125 (J)	-	-	1	Japan Only
	Assembly Manual M-12/125 (O/S)	723460400	723460400	1	
37	Quick Guide M-12 (J)	-	-	1	Japan Only
	Quick Guide M-12 (O/S)	723463100	723463100	1	
38	CD-ROM M-12	723555100	723555100	1	
39	Manual Case	-	-	1	Japan Only
40	Printer Platform	715353600	715353600	1	
41	Printer Bracket L	715358200	715358200	1	
42	Printer Bracket R	715358100	715358100	1	
43	Marker Set	-	-	1	No Parts Supply
44	Eraser ER-44369	44369	44369	1	
45	Wall Mount Plate	715359900	715359900	4	
46	AC Adapter	715259000	715259000	1	
	AC Adapter	723582100	723582100	1	USA,Oceania Only
47	Power Cable (2.5m) EU	715259200	715259200	1	
	Power Cable (2.5m) UK	715259300	715259300	1	
	Power Cable (2.5m) US	715259400	715259400	1	
	Power Cable (2.5m) AU	715259500	715259500	1	
	Power Cable (0.5m) JP	-	-	1	Japan Only
	Power Cable (2.5m) CH	-	-	1	No Parts Supply
48	USB Cable	715258900	715258900	1	
49	M3-6 B-Tight Cross Recessed Binding Head	953430650	953430650	10	
50	M4-8 Cross Recessed Binding Head	951240850	951240850	20	
51	Hand Screw M4 X 10	723171100	723171100	2	
52	Printer Bracket Spacer	715217700	715217700	2	
53	Printer Guide Unit	715090025	715090025	2	
54	Quick Guide Hang	715354600	715354600	1	
55	Fastener Layer Set 50 X 100	722090012	722090012	1	
56	Cable Cover (330mm)	723129100	723129100	1/2	Standard: 1 Wide: 2
57	Power Strip	-	-	1	Japan Only
58	Adapter Box	723131201	723131201	1	
59	Edge Folder	723191100	723191100	2	

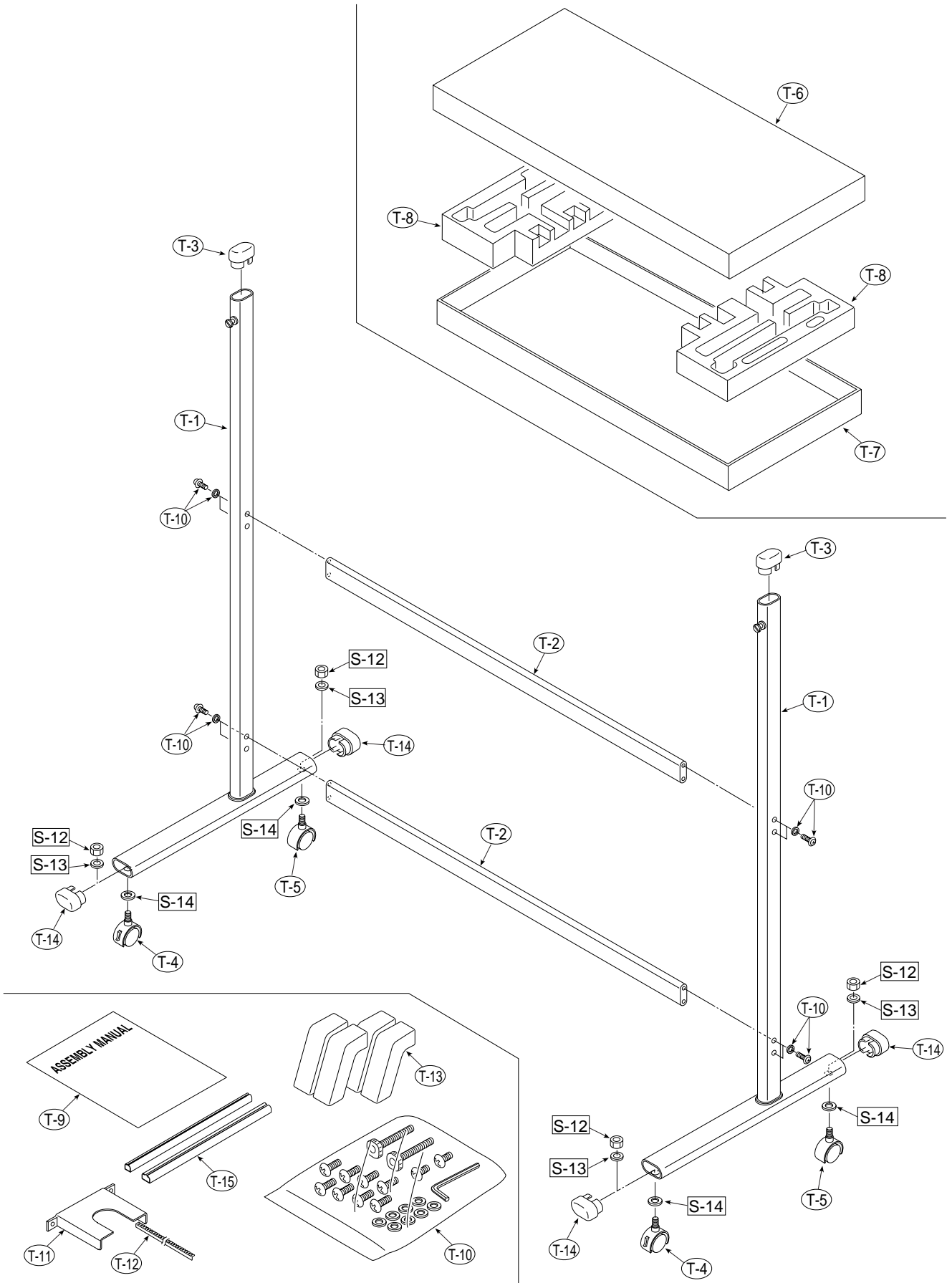
6. Carton & Packing



PARTS LIST

6. Carton & Packing					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
-	Carton UNIT M-12S	301205	-	1	
-	Carton UNIT M-12W	-	301206	1	
60	Carton Upper M-12S	-	-	1	
	Carton Upper M-12W	-	-	1	
61	Carton Lower M-12S	-	-	1	
	Carton Lower M-12W	-	-	1	
62	Corner Packing Upper (L)	-	-	1	
63	Corner Packing Lower (L)	-	-	1	
64	Corner Packing Upper (R)	-	-	1	
65	Corner Packing Lower (R)	-	-	1	
66	Accessory Box	-	-	1	
67	Push Accessory Box (S)	-	-	1	
	Push Accessory Box (W)	-	-	1	
68	Printer Platform Pad A	-	-	1	
69	Push Adapter Box	-	-	1	

7. M-12-T



PARTS LIST

7. M-12-T					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
T-1	T-Shaped Stand Assy	-	-	2	No Parts Supply
T-2	Side Bar Assy	-	-	2	No Parts Supply
T-3	Pipe Frame Cap	723321200	723321200	2	
T-4	Front Caster	714660400	714660400	2	
T-5	Back Caster	714660500	714660500	2	
-	Carton UNIT (Stand)	301207	301207	1	
T-6	Carton Upper (Stand)	-	-	1	
T-7	Carton Lower (Stand)	-	-	1	
T-8	Packing Set (Stand)	-	-	2	
T-9	Assembly Manual (Stand) O/S	-	-	1	No Parts Supply
	Assembly Manual (Stand) JPN	-	-	1	No Parts Supply
T-10	Screw Unit	723090012	723090012	1	
T-11	Printer Steady (Stand)	715353700	715353700	1	
T-12	Edge Bush	715353800	715353800	1	
T-13	Stabilizer UNIT (M-12)	301208	301208	1	
T-14	Pipe Cap	723321100	723321100	4	
T-15	Cable Cover UNIT M-12 (Stand)	723090014	723090014	1	

PARTS LIST

8. Screws & Washers					
No	PARTS NAME	PARTS No.		Q' ty	REMARK
		S	W		
S-1	M4-8 Cross Recessed Binding Head	951240850	951240850	42	
S-2	M4-8 Cross Recessed Binding Head (Low Profile)	961540850	961540850	20	
S-3	M3-8 Cross Recessed 3-Point Type	952530810	952530810	20	
S-4	M3-25 Cross Recessed 3-Point Type	952532510	952532510	2	
S-5	M3-6 P-Tight Cross Recessed Binding Head	953230610	953230610	8	
S-6	M3-8 P-Tight Cross Recessed Binding Head	953230850	953230850	6	
S-7	M3-6 Cross Recessed Binding Head	951230650	951230650	28	
S-8	M4-10 P-Tight Cross Recessed Binding Head	953241010	953241010	3	
S-9	M4-12 Cross Recessed Binding Head	951241250	951241250	6/10	Standard: 6 Wide: 10
S-10	M4-15 P-Tight Cross Recessed Binding Head	953241510	953241510	3	
S-11	M4-6 Cross Recessed Binding Head	961240610	961240610	4	
S-12	W3-8 Hexagonal Stop Bolt	955217610	955217610	4	
S-13	"No, 2-10 Spring Washer"	957410210	957410210	4	
S-14	"No, 2-10 Flat Washer"	957210210	957210210	4	

12. REVISION HISTORY

No	Revision History	Revision page	Date
1			
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