

SONY®

DIGITAL PHOTO PRINTER

UP-DP10

SERVICE MANUAL

1st Edition

警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

Table of Contents

Manual Structure

Purpose of this manual	3
Related manuals	3
Trademarks	3

1. Operating Instructions

2. Service Information

2-1. Main Parts Location	2-1
2-1-1. Main Block Location	2-1
2-1-2. Board Location	2-1
2-1-3. Sensor Location and Function Description	2-1
2-2. Removal of Cabinet	2-2
2-2-1. Bottom Cover	2-2
2-2-2. Top Case Assembly and Upper Shield Frame	2-2
2-2-3. Center Case Assembly	2-3

3. Replacement of Main Parts

3-1. Board Replacement	3-1
3-1-1. 1284 Interface Board Assembly	3-1
3-1-2. LED Board Assembly	3-1
3-1-3. Switchboard Assembly	3-1
3-1-4. Main Board Assembly	3-2
3-2. Power Block (100 V System)	3-3
3-3. Fan Replacement	3-3
3-3-1. Head Side	3-3
3-3-2. Power Supply Side	3-4
3-4. Head Assembly	3-4
3-5. Mechanical Deck Assembly	3-6
3-6. Replacement of Interlock Switch Assembly	3-6
3-7. Replacement of Head Up/Down Motor Assembly	3-7
3-8. Replacement of Stepping Motor	3-7
3-9. Paper Feed Motor Assembly	3-8
3-10. Replacement of S Gear 1, S Gear 2, S Pulley Set, and Grip Belt	3-8

4. Test Mode

4-1.	Test Print	4-1
4-2.	Errors	4-2
4-3.	Initializing the Number of Pages to Be Printed when Changing the Head	4-4

5. Spare Parts

5-1.	Notes on Repair Parts	5-1
5-2.	Exploded Views	5-2
5-3.	Electical Parts List	5-4
5-4.	Packing Materials and Accessories	5-4

6. Block Diagram and Frame

Overall	6-1
Frame	6-2

Manual Structure

Purpose of this manual

This manual describes the information required for the maintenance of UP-DP10. This is a manual that describes the information (operation manual, service information, parts replacement, test mode, parts information, board description, and block diagram) required for the maintenance of this unit.

Related manuals

In addition to the “Service Manual”, this unit is provided with the manual below.

- **Operating Instructions**

3-203-973-11

This manual is required for the actual management and operation of UP-DP10.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Communication System Solutions Network Company equipment.

Semiconductors that cannot be searched for on this CD-ROM are listed in the service manual for the corresponding unit. The service manual contains a complete list of all semiconductors and their ID Nos., and thus should be used together with the CD-ROM.

Part number: 9-968-546-XX

Trademarks

- Windows 95, Windows 98 are registered trademarks of Microsoft Corporation.

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3-203-973-11(1)

Digital Photo Printer

Operating Instructions Page 2

GB

Section 1 Operating Instructions

This section is extracted
from operation manual.

UP-DP10

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WARNING
THIS APPARATUS MUST BE EARTHED.

WARNING

**To prevent fire or shock hazard,
do not expose the unit to rain or
moisture.**

**To avoid electrical shock, do not
open the cabinet. Refer servicing
to qualified personnel only.**

*If you have any questions about this product, you
may call : SONY Customer Information Center 1-
800-222-SONY (7669) or write to : Sony
Customer Information Center 1 Sony Drive, Mail
Drop #T1-11, Park Ridge, NJ 07656.*

Declaration of Conformity

Trade Name: SONY
Model No: UP-DP10
Responsible Party: Sony Electronics Inc.
Address: 1 Sony Drive, Park Ridge,
NJ.07656 USA
Telephone No.: 201-930-6972

This device complies with Part 15 of the FCC
Rules. Operation is subject to the following two
conditions: (1) This device may not cause
harmful interference, and (2) this device must
accept any interference received, including
interference that may cause undesired
operation.

For the customers in the USA

This equipment has been tested and found to
comply with the limits for a Class B digital device,
pursuant to Part 15 of the FCC Rules. These
limits are designed to provide reasonable
protection against harmful interference in a
residential installation. This equipment generates,
uses and can radiate radio frequency energy and,
if not installed and used in accordance with the
instructions, may cause harmful interference to
radio communications. However, there is no
guarantee that interference will not occur in a
particular installation. If this equipment does
cause harmful interference to radio or television
reception, which can be determined by turning the
equipment off and on, the user is encouraged to
try to correct the interference by one or more of
the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the
equipment and receiver.
- Connect the equipment into an outlet on a
circuit different from that to which the receiver
is connected.
- Consult the dealer or an experienced radio/TV
technician for help.

This device requires shielded interface cable to
comply with FCC emission limits.

You are cautioned that any changes or
modifications not expressly approved in this
manual could void your authority to operate this
equipment.

Table of Contents

Introduction 4
 What the Digital Photo Printer Can Do 4
 Checking the Packing List 4
 Requirements 5
Names of Parts 6
Setup and Connection 7
 Attaching the Stands to the Printer 7
 Connecting the Printer to a Computer 7
 Connecting the Power Supply 8
 Turning the Power On/Off 8
Installing the Printer Driver 9
 With Windows 98 9
 With Windows 95 12
 With the Macintosh OS 13
Preparing to Print 14
 Preparing a Print Pack 14
 Loading the Ink Ribbon Cartridge and Printing Paper 16
 Removing the Ink Ribbon Cartridge and the Printing Paper 19
Making Printer Setting from your Computer 20
 With Windows 20
 With the Macintosh 25
Miscellaneous 31
 Maintaining the Performance of the Printer 31
 Troubleshooting 31
 If the Paper Jams 33
 Main Specifications 35

Introduction

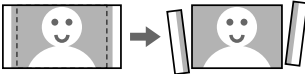
What the Digital Photo Printer Can Do

High-quality Photo Printing

The sublimation printing process used by this printer makes it possible to print images with fine photographic quality.

Prints with no white border

The paper that is used for printing has perforations near both edges that allow you to tear off the blank strips of paper on each edge.



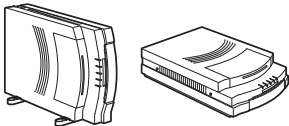
Laminate Patterns

Because laminate processing is performed while photos are printed, the photos will not become discolored over time. You can select from among the following laminate options:

- Glossy: Produces a glossy print.
- Texture: Produces a textured print.
- Matte: Produces a matte print.

Compact, Thin, and Light Design

The printer itself is thin and the size of an A4 sheet. The printer can operate either in a vertical position or in a horizontal position. The printer weighs only 2.7kg, making it light and easy to handle.

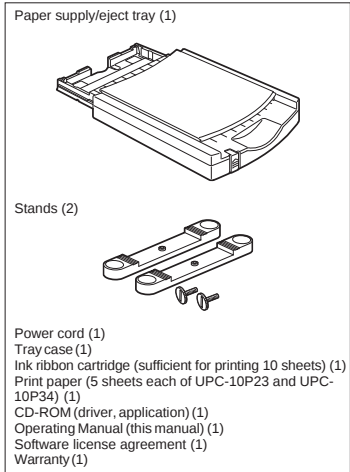


Paper Jams Can Be Cleared Easily

If the paper jams, it can be easily cleared simply by removing the cover.

Checking the Packing List

Check the contents of the box against the packing list.



Notes

- We recommend saving the box and the packing materials in case it is necessary to transport or ship the printer.
- When shipping the printer, remove the ink cartridge and the paper supply/eject tray from the printer.

Requirements

Printing processing is performed faster when there is more memory and hard disk space available. Therefore, we recommend allocating as much memory and hard disk space as possible. The following environment is required in order to use the UP-DP10.

When using a Windows computer

☐ Requirements in order to connect to a USB port:

- A personal computer on which Microsoft Windows 98 runs normally
- At least 32MB of RAM
- At least 30MB of hard disk space
- A USB port*

*Connection requires a USB cable with a male type A connector and a male type B connector. (Refer to the illustration elsewhere on this page.)

☐ Requirements in order to connect to a printer port:

- A personal computer on which Microsoft Windows 98 or Windows 95 runs normally
- At least 32MB of RAM
- At least 30MB of hard disk space
- A printer port*

*Please see the user's manual provided with your computer for the appropriate type of printer cable.

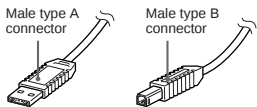
Note

When using device driver (Windows\system\lpt.vxd) version 4.00.953 in Windows 95, normal printing might be impossible. In this event, obtain the most recent driver from your Windows 95 distributor.

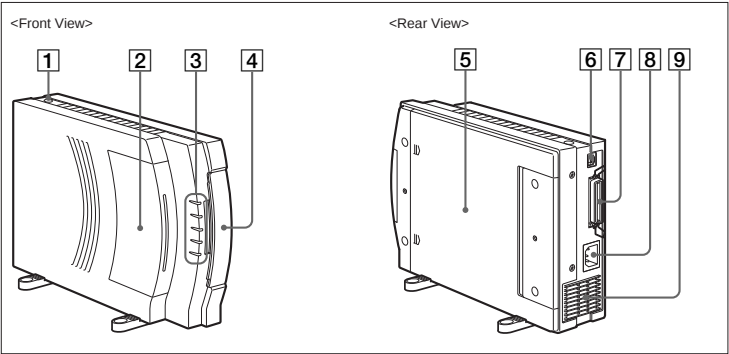
When using a Macintosh

- A Power Macintosh computer running Mac OS 8.6 or later, and which is equipped with a USB port as a standard feature
- ColorSync2.5 or later
- At least 64MB of RAM
- At least 30MB of hard disk space

*Connection requires a USB cable with a male type A connector and a male type B connector. (Refer to the illustration below.)



Names of Parts

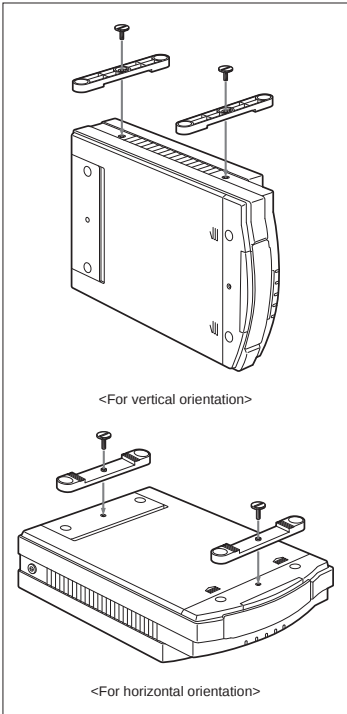


- | | |
|---|--|
| <p>1 Operation switch</p> <p>2 Ribbon cartridge cover</p> <p>3 Lamps
POWER lamp
PRINT lamp
PAPER lamp
RIBBON lamp
ALARM lamp
The lamps indicate the printer status by lighting or flashing. For details, refer to page 32.</p> <p>4 Paper supply/eject tray cover</p> | <p>5 Bottom cover</p> <p>6 USB port</p> <p>7 Parallel port</p> <p>8 AC power inlet</p> <p>9 Ventilation holes</p> |
|---|--|

Setup and Connection

Attaching the Stands to the Printer

The stands can be attached by screws. The mounting of the stands depends on whether the printer is going to be used in the vertical position or the horizontal position. (Refer to the illustration.)

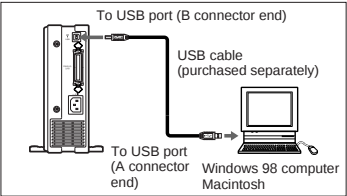


Connecting the Printer to a Computer

Notes

- Before connecting the printer to a computer, be certain to first turn off the power for the printer, the computer, the monitor, etc.
- Read the operating manual for the personal computer carefully.
- When connecting to a printer port, we recommend using a shielded printer cable not more than 2m long and with a double-ended ferrite core.
- Make sure that you insert the cable connectors all of the way when making the connections.
- The driver provided with this printer does not support usage through a network.
- Proper operation can not be assured when USB connection is made through a hub.
- The printer cannot be connected using both a USB cable and a parallel cable. Connect it using one type of cable or the other.

When connecting to a USB port

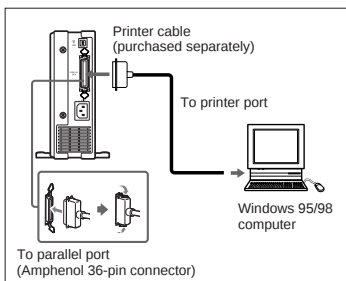


Note

Only the USB port can be used for connection to a Macintosh computer. (This printer cannot be used with a Macintosh that does not have a USB port as a standard feature.)

Setup and Connection

When connecting to a printer port

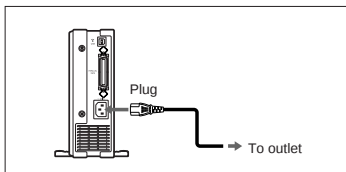


Note

When using the printer in fast transfer mode (ECP mode), use an IEEE1284-compliant cable. Note that in order to use fast transfer mode, the parallel port must be set up on the personal computer side. For details, refer to the operating manual for the personal computer.

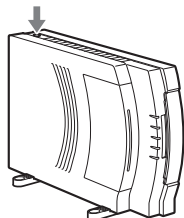
Connecting the Power Supply

Plug the female end of the power cord into the AC power inlet on the printer, and then plug the other end into an AC power outlet.



Turning the Power On/Off

Press the Operation switch so that the POWER lamp is on. To turn the printer off, press the Operation switch again.



Installing the Printer Driver

With Windows 98

Install the printer driver that is contained in the CD-ROM that is provided with the printer. The “printer driver” is the software that allows you to print on the UP-DP10, using the Print function of typical application software. Before installing the printer driver, turn the computer and the printer off, and then connect the printer to the computer.

When the Printer Is Connected by a USB Cable

- 1 Turn the printer on first, and then turn the computer on. Once Windows 98 starts up, the “Add New Hardware Wizard” window appears.



If the “Add New Hardware Wizard” dialog box does not appear when Windows 98 starts up, install the printer by selecting [Start] → [Settings] → [Printers] → [Add Printer].

- 2 Click [Next]. The window changes as shown below.



- 3 Select [Search for the best driver for your device], and then click [Next]. The window changes as shown below.



- 4 Place the “Printer Software UP-DP10” CD-ROM in the CD-ROM drive.

- 5 Select the [Specify a location] option, click [Browse], specify the [Win98/English] folder in the CD-ROM, and then click [Next]. The window changes as shown below.



- 6 Click [Next]. After the file is copied, the window changes as shown below.



Installing the Printer Driver

- 7 Click [Finish].
The window changes as shown below.



- 8 Click [Next].
The window changes as shown below.



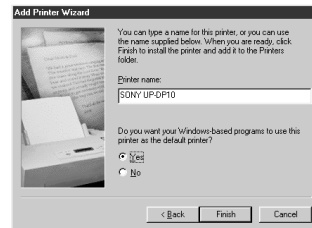
- 9 Select [Search for the best driver for your device], and then click [Next].
The window changes as shown below.



- 10 Select the [Specify a location] option, click [Browse], specify the [Win98\English] folder in the CD-ROM, and then click [Next].
The window changes as shown below.



- 11 Click [Next].
The window changes as shown below.



- 12 If necessary, you can type a name for the printer in the [Printer name] field. Then, click [Finish].
The window changes as shown below.



- 13 Click [Finish].
The wizard ends. Installation is now complete.

When the Printer Is Connected by a Printer Cable

- 1 Turn the printer on first, and then turn the computer on. Once Windows 98 starts up, the “Add New Hardware Wizard” window appears.



If the “Add New Hardware Wizard” dialog box does not appear when Windows 98 starts up, install the printer by selecting [Start] → [Settings] → [Printers] → [Add Printer].

- 2 Click [Next].
The window changes as shown below.



- 3 Select [Search for the best driver for your device], and then click [Next].
The window changes as shown below.

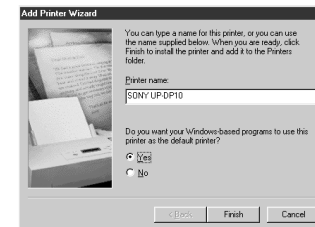


- 4 Place the “Printer Software UP-DP10” CD-ROM in the CD-ROM drive.

- 5 Select the [Specify a location] option, click [Browse], specify the [Win98\English] folder in the CD-ROM, and then click [Next].
The window changes as shown below.



- 6 Click [Next].
The window changes as shown below.



Installing the Printer Driver

- 7 If necessary, you can type a name for the printer in the [Printer name] field. Then, click [Finish]. After the file is copied, the window changes as shown below.



- 8 Click [Finish]. The wizard ends. Installation is now complete.

With Windows 95

Install the printer driver that is contained in the CD-ROM that is provided with the printer. The “printer driver” is the software that allows you to print on the UP-DP10, using the Print function of typical application software. Before installing the printer driver, turn the computer and the printer off, and then connect the printer to the computer.

Notes

- The driver does not support connection with a USB cable under Windows 95. Use a printer cable.
- The installation procedure may differ from the procedure described here, depending on the Windows 95 version that you are using. If that is the case, refer to your Windows 95 operating manual for instructions.

- 1 Turn the printer on first, and then turn the computer on. Once Windows 95 starts up, the “Update Device Driver Wizard” window appears.

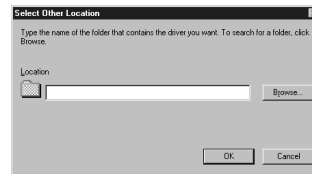


If the “Update Device Driver Wizard” dialog box does not appear when Windows 95 starts up, install the printer by selecting [Start] → [Settings] → [Printers] → [Add Printer].

- 2 Click [Next]. The window changes as shown below.



- 3 Select [Other Locations]. The window changes as shown below.



- 4 Place the “Printer Software UP-DP10” CD-ROM in the CD-ROM drive.

- 5 Click [Browse], specify the [Win95\English] folder in the CD-ROM, and then click [OK]. The window changes as shown below.



- 6 Click [Finish]. The window changes as shown below.



- 7 If necessary, you can type a name for the printer in the [Printer name] field. Then, click [Finish]. After the file is copied, the wizard ends. Installation is now complete.

Hint

If a message such as “Cannot find XX” appears when the file is supposed to be copied, click [Browse], specify the [Win95\English] folder on the CD-ROM again, and then click [OK].

With the Macintosh OS

Install the printer driver that is contained in the CD-ROM that is provided with the printer.

- 1 Place the “PRINTER SOFTWARE UP-DP10” CD-ROM in the Macintosh’s CD-ROM drive. The “PRINTER SOFTWARE” icon appears on the desktop.
- 2 Double-click the “Driver” icon to open the folder.
- 3 Double-click the “Chooser” icon to open the folder.
- 4 Double-click the “UP-DP10 Install-E” icon to start installation.
- 5 Follow the instructions displayed on the screen in order to complete the installation process.
- 6 After installation is complete, restart the Macintosh.

Note

Before using the printer driver, please take a moment to read the “ReadMe” file in the “Chooser” folder.

Preparing to Print

Preparing a Print Pack

In order to print, it is necessary to prepare a Sony Print Pack (printing paper and an ink ribbon cartridge, sold as a set). A Sony Print Pack must be purchased separately. The following table lists the types of Sony Print Packs available.

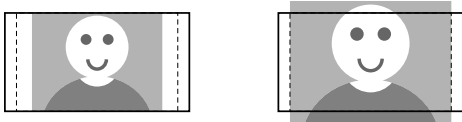
Product No.	Type	Size/number of sheets	Features
UPC-10P23	Photocards	100 × 180 mm (100 × 152 mm after cutting) 25 sheets	These sheets produce prints that have no white border when photos taken with a digital camera that has a 2:3 aspect ratio (V:H) are printed on these sheets and the border is then cut off along the perforations.
UPC-10P34	Photocards	100 × 180 mm (100 × 134 mm after cutting) 25 sheets	These sheets produce prints that have no white border when photos taken with a digital camera that has a 3:4 aspect ratio (V:H) are printed on these sheets and the border is then cut off along the perforations.
UPC-10S01	Glossy photostickers	100 × 180 mm 25 sheets	These sheets have no perforations, and are backed with an adhesive. The maximum printing area is 100 × 155 mm.

Note

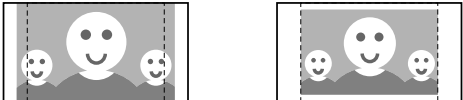
If “Border” is selected in the printer driver, each of the print sizes will be reduced somewhat.

Notes on Using Print Packs

- The ink ribbon cartridge is designed to allow you to print an image on each of the sheets in the Print Pack.
- If photos taken with a digital camera that has a 3:4 aspect ratio (V:H) are printed on the paper in a UPC-10P23 Print Pack, a white border may remain even after cutting along the left and right perforations, or a portion of the top and bottom of the image may not be printed on the paper.



- If photos taken with a digital camera that has a 2:3 aspect ratio (V:H) are printed on the paper in a UPC-10P34 Print Pack, the printed image may extend beyond the left and right perforations, or white border may appear at the top and bottom of the paper.



- Use the ink ribbon cartridge and paper that share the same product number together. Using an ink ribbon cartridge from one type of Print Pack with paper from another type of Print Pack may result in poor image quality, malfunction or other difficulties.
- When changing the ink ribbon cartridge and paper from one type of Print Pack to another, be sure to change BOTH the ink ribbon cartridge and the paper, as a set.
- Never touch the printing side (the blank, glossy side) of the paper or the ink ribbon. Doing so could leave fingerprints, which will harm image quality.
- If it is necessary to change the ink ribbon cartridge or to add more paper while printing is in progress, do not turn off the printer. If you turn off the printer, the image that is stored in the printer's memory will be lost.
- Ink ribbon cartridges cannot be re-used.
- If a paper jam occurs, do not just pull the paper out. Remove the paper by following the procedure described in “If the Paper Jams” (page 33).
- If the ink ribbon breaks, you can tape it back together with cellophane tape. For details, refer to “If the Ink Ribbon Breaks” (page 34).

Notes on Storing Ink Ribbon Cartridges and Paper

- Do not keep partially used ink ribbon cartridges or unused, opened paper in dusty locations. Dust on the printing surfaces will harm image quality.
- If you will not be using a partially used ink ribbon cartridge or unused, opened paper for an extended period of time, place them back in their original bags for storage.
- Do not store ink ribbon cartridges and paper in hot or humid locations, or in direct sunlight.

Preparing to Print

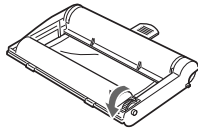
Loading the Ink Ribbon Cartridge and Printing Paper

Loading the Ink Ribbon Cartridge

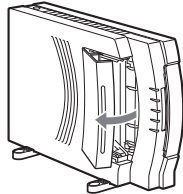
Note

Do not touch the ink ribbon. Fingerprints on the ink ribbon may harm the image quality.

- 1 Take up any slack in the ink ribbon by turning in the direction indicated by the arrow.
The ink ribbon could become damaged if you load the ribbon while it is slack.



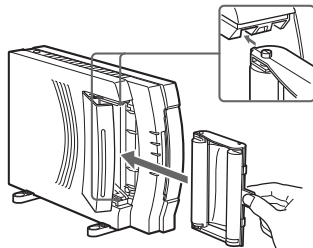
- 2 Open the ribbon cartridge cover.



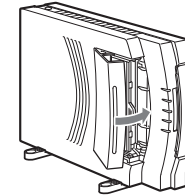
WARNING

Components located behind the ribbon cartridge door become very hot. To avoid burns, never put your hand inside the opening.

- 3 Grasp the handle on the ink ribbon cartridge, and make sure that the ink ribbon cartridge is facing the right way. Align the protuberances on the cartridge with the grooves in the printer and slide the cartridge in as far as it will go.



- 4 Close the ribbon cartridge cover, and then make sure that the RIBBON lamp has turned off.

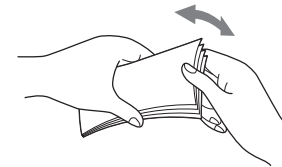


Loading the Printing Paper

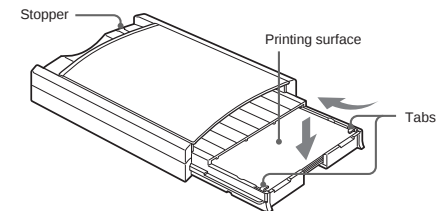
Note

Never touch the printing side (the blank, glossy side) of the paper. Doing so could leave fingerprints, which will harm image quality.

- 1 Fan the paper thoroughly.
If the paper is curled, uncurl it.



- 2 With the printing surface (glossy side) facing up, place the paper in the paper supply/eject tray, making sure that the paper is under the tabs at the end of the tray.

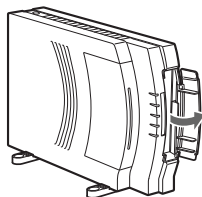


Preparing to Print

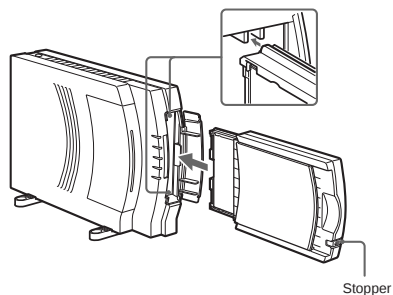
Notes

- Do not place more than 25 sheets in the tray at one time.
- When loading printing paper in the tray, make sure that all of the paper is completely inside of the tray.
- Do not use paper that is significantly curled.
- When outputting multiple sheets of paper to the eject surface of the paper supply/eject tray, raise the stopper.

- 3 Open the paper supply/eject tray cover.



- 4 Align the protuberances on the tray with the grooves in the printer, slide the tray in as far as it will go, and then make sure that the PAPER lamp has turned off.



Notes

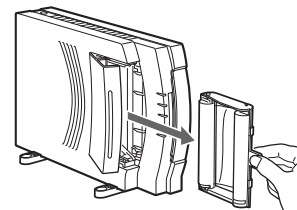
- Do not allow more than 10 sheets of paper to accumulate on the eject surface of the paper supply/eject tray.
- To prevent dust contamination, attach the provided tray cover to the paper supply/eject tray when you take the tray out of the printer.

The printer is now ready to print. To print, first read "Preparing to Print" (page 14). Once printer setup is complete, use the Print function in any typical application software to print.

Removing the Ink Ribbon Cartridge and the Printing Paper

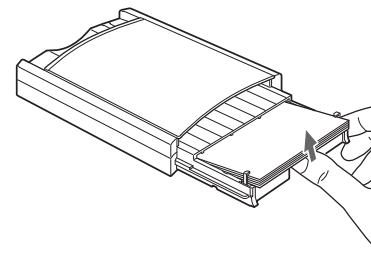
Removing the ink ribbon cartridge

- 1 Open the ribbon cartridge cover.
- 2 Grasp the handle and pull the cartridge out.



Removing the printing paper

- 1 Pull the paper supply/eject tray out of the printer.
- 2 Lift the metal plate at the bottom of the paper supply/eject tray, and then pull out the printing paper.



Making Printer Setting from your Computer

With Windows

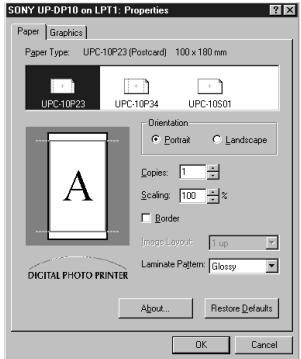
Before printing from an application, it is necessary to set the printer properties. The printer properties can be displayed by means of either of the following methods:

- Select [Start] → [Settings] → [Printers]. Select the UP-DP10 icon, and then select [File] → [Properties]. Settings made through this method become the initial printer settings for printing in all applications.
- From an application's [File] menu, select the item that is used for printer setup. In some applications, these settings can be made in the print dialog box. Settings made by this method are generally only valid until you quit the application.

The "SONY UP-DP10: Properties" dialog box has tabs that are standard for the OS, and tabs that are specific to the UP-DP10. The following section explains the tabs that are specific to the UP-DP10: [Paper] and [Graphics]. Note also that although the sample screens are taken from Windows 98, the setting items, methods, etc., are identical in Windows 95.

[Paper] tab settings

This tab is used to make basic printing settings, such as the paper type, number of copies, the printing quality, etc. Make sure these settings have been made before printing anything.



- ☐ **[Paper Type]**
Select the type of Print Pack that has been loaded in the printer from among Photocard [UPC-10P23], Photocard [UPC-10P34], and Glossy photosticker [UPC-10S01].
- ☐ **[Orientation]**
Select the printing orientation as either [Portrait] or [Landscape].

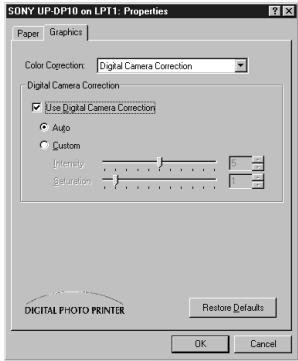
- ☐ **[Copies]**
The number of copies can be set in a range from "1" to "25."
- ☐ **[Scaling]**
Specify the enlargement/reduction ratio. Any integer value ranging from "10%" to "400%" can be set for this ratio.
- ☐ **[Border]**
If this checkbox is checked (on), prints are printed with a white border around the edges. If this option is selected, the image size that can be printed is reduced.
- ☐ **[Image Layout]**
This item becomes valid if "UPC-10S01" is selected for the paper type.
 - If [1 up] is selected, then only one image is printed on each sheet.
 - If [16 up] is selected, then 16 identical thumbnail images are printed on each sheet.
- ☐ **[Laminate Pattern]**
Use this item to select one of the following three laminate processing options for the print surface:
 - If [Glossy] is selected, prints are produced with a glossy finish.
 - If [Texture] is selected, prints are produced with a textured finish.
 - If [Matte] is selected, prints are produced with a matte finish.
- ☐ **[About...]**
Clicking this button displays the version information for the printer driver.
- ☐ **[Restore Defaults]**
Clicking this button restores all of the settings under the [Paper] tab to their initial values.

Making Printer Setting from your Computer

[Graphics] tab settings

This tab is used to make settings related to images, such as the printing color and brightness. Adjust these settings when you are not satisfied with the final results of printing or when you need to make advanced adjustments. Select either [Digital Camera Correction], [Color Balance], [Tone Curve], or [Sharpness] in the [Color Correction] list box. The settings that can be made underneath change, depending on which choice is selected. To cancel any changes you have made and restore the initial settings, click [Restore Defaults] on each screen.

☐ [Digital Camera Correction]

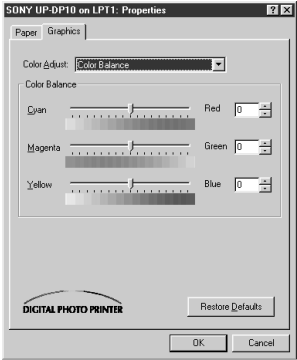


- Select this screen when printing an image from a digital camera in order to correct the intensity and the saturation.
- If you click the [Use Digital Camera Correction] checkbox so that it is in the checked (on) state, image correction processing that is suited for digital camera images is performed on the image.
 - Optimal processing can be performed by selecting [Auto].
 - Selecting [Custom] allows you to manually set [Intensity] and [Saturation].

Note

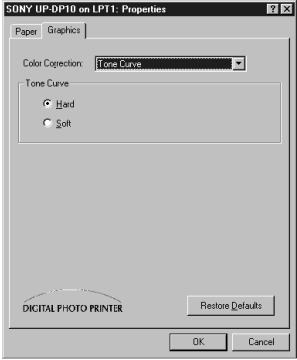
Setting [Saturation] to “0” causes the original saturation component to be used, but setting [Intensity] to “0” does not cause the original intensity component to be used.

☐ [Color Balance]



Use this screen to adjust the color balance of the printer, either by dragging the sliders left or right, clicking on [▲] or [▼], or by inputting a value directly through the keyboard.

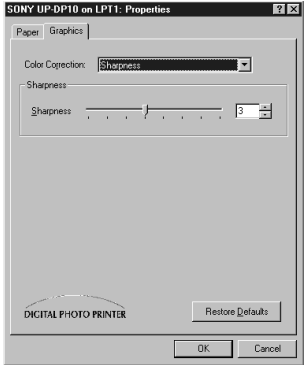
☐ [Tone Curve]



You can adjust values output by the printer with respect to values input by choosing a tone curve setting of [Hard] or [Soft].

Making Printer Setting from your Computer

☐ [Sharpness]



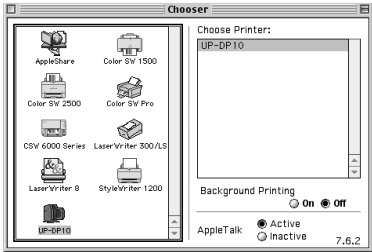
Use this screen to adjust the contour emphasis of the image, either by dragging the sliders left or right, clicking on [▲] or [▼], or by inputting a value directly through the keyboard.
Increasing the setting increases the contour emphasis of the image.

With the Macintosh

Selecting the UP-DP10 with the Chooser

This operation with the Chooser must be performed the first time that you use the UP-DP10,, and whenever you have been using another printer and now want to use the UP-DP10.

- 1 Select the Chooser from the Apple menu.
The Chooser window opens.
- 2 Select the UP-DP10 icon from among the icons displayed on the left side of the Chooser window.
The UP-DP10 printers that are connected are then listed in the listbox on the right side of the Chooser window.
- 3 Select the UP-DP10 name in the listbox.

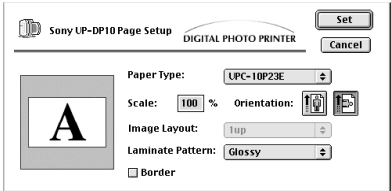


- 4 Close the Chooser window.

Making Printer Setting from your Computer

Page Setup

The “Page Setup” dialog box is used to make basic printing settings, such as the paper type, the printing quality, etc. Make sure these settings have been made before printing anything. To display the “Page Setup” dialog box, select “Page Setup” from the “File” menu. All of the items in the “Page Setup” dialog box are described below.

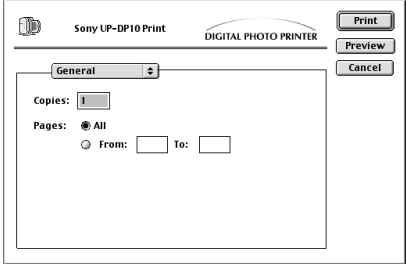


- ☐ **“Paper Type”**
Select the type of Print Pack that has been loaded in the printer from among “UPC-10P23,” “UPC-10P34,” and “UPC-10S01.”
- ☐ **“Scale”**
Specify the enlargement/reduction ratio. Any integer value ranging from “25%” to “400%” can be set for this ratio.
- ☐ **“Orientation”**
Select the printing orientation.
- ☐ **“Image Layout”**
This item becomes valid if “UPC-10S01” is selected for the paper type.
 - If “1 up” is selected, then only one image is printed on each sheet.
 - If “16 up” is selected, then 16 identical thumbnail images are printed on each sheet.
- ☐ **“Laminate Pattern”**
Use this item to select one of the following three laminate processing options for the print surface:
 - If “Glossy” is selected, prints are produced with a glossy finish.
 - If “Texture” is selected, prints are produced with a textured finish.
 - If “Matte” is selected, prints are produced with a matte finish.
- ☐ **“Border”**
If this checkbox is checked (on), prints are printed with a white border around the edges. If this option is selected, the image size that can be printed is reduced.

Printing Settings

The “Print” dialog box appears if “Print” is selected from the “File” menu. Select either “General” or “Color Correction” from the pop-up menu near the top of the dialog box to set various items.

“General” settings



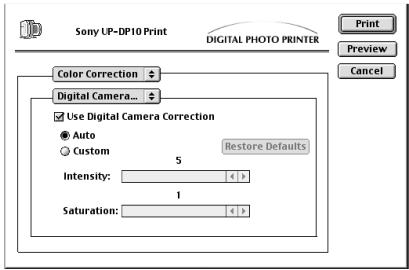
- ☐ **“Copies”**
Set a value from 1 to 25.
- ☐ **“Pages”**
Specify the range of pages to be printed.
 - If “All” is selected, all pages will be printed.
 - If “From: To:” is selected, the specified range of pages is printed. Input the values in these fields through the keyboard.

“Color Correction” settings

The “Color Correction” screen is used to make settings related to images, such as the printing color and brightness. Adjust these settings when you are not satisfied with the final results of printing or when you need to make advanced adjustments. When “Color Correction” is selected in the “Print” dialog box, a new pop-up menu appears. Each if these items is explained below.

Making Printer Setting from your Computer

□ “Digital Camera Correction”



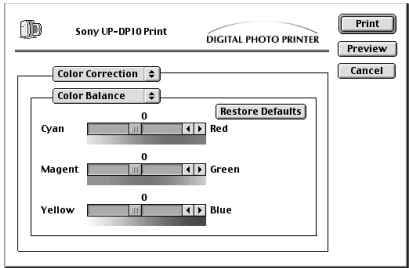
- Select this screen when printing an image from a digital camera in order to correct the intensity and the saturation.
- If you click the “Use Digital Camera Correction” checkbox so that it is in the checked (on) state, image correction processing that is suited for digital camera images is performed on the image.
 - Optimal processing can be performed by selecting “Auto.”
 - Selecting “Custom” allows you to manually set “Intensity” and “Saturation.”

Note

Setting “Saturation” to “0” causes the original saturation component to be used, but setting “Intensity” to “0” does not cause the original intensity component to be used.

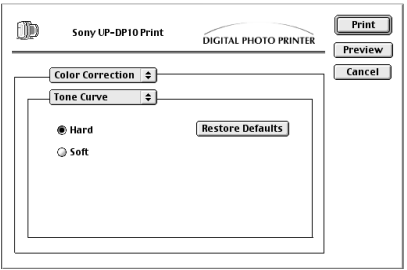
- Click “Restore Defaults” to return all of the settings on this screen to their initial values.

□ “Color Balance”



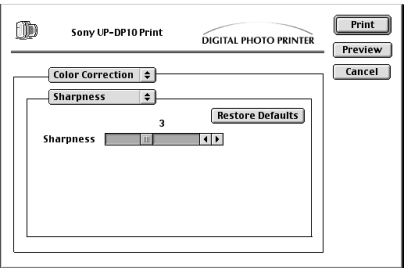
- Use the scroll bars on this screen to adjust the color balance of the printer.
- Click “Restore Defaults” to return all of the settings on this screen to their initial values.

□ “Tone Curve”



You can adjust values output by the printer with respect to values input by choosing a tone curve setting of “Hard” or “Soft”.

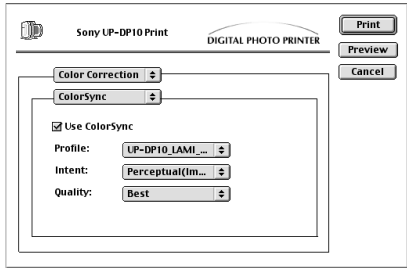
□ “Sharpness”



- Use the scroll bar on this screen to adjust the contour emphasis of the image. Increasing the setting increases the contour emphasis of the image.
- Click “Restore Defaults” to return the settings on this screen to their initial values.

Making Printer Setting from your Computer

☐ "ColorSync"



- The following items can be set if the "Use ColorSync" option is on:
- In the "Profile" pop-up menu, specify the UP-DP10 profile.
 - In the "Intent" pop-up menu, select one of the following for color reproduction mapping:
 - Perceptual (Images)
 - Saturation (Graphics)
 - Relative Colormetric
 - Absolute Colormetric
 - In the "Quality" pop-up menu, select one of the following for the color mapping quality:
 - Best
 - Normal
 - Draft

Miscellaneous

Maintaining the Performance of the Printer

The following items should be noted in order to maintain the performance of the printer. Also refer to the sections "Warning" (page 2).

Notes on Use

- If the printer will not be used for an extended period of time, remove the paper supply/eject tray from the printer and store it in the tray case, turn off the printer, and then unplug the power cord.
- When transporting the printer, remove all accessories from the printer. Carrying the printer while any accessories are still in the printer can result in damage to the printer.

Condensation

Water droplets (called "condensation") may form inside the printer if it is moved from a cold location to a warm one, or if it is placed in a humid room. Operating the printer while condensation is present could not only cause the printer to operate incorrectly, but could also result in damage to the printer. If there is any possibility that there is condensation inside the printer, turn the power off and allow the printer to sit until the condensation evaporates.

Cleaning the Printer

- Before cleaning the printer, turn the power off and unplug the power cord.
- If the cabinet is dirty, dampen a cloth with water or a mild, dilute detergent solution, wring the cloth out thoroughly, and then wipe the dirt away. Afterwards, wipe away any moisture with a dry cloth.
- Do not use paint thinner, benzene, alcohol, chemical dust cloths, or other materials that could harm the finish of the cabinet.

Troubleshooting

What to do

Before sending the printer for repair, repeat the checks. If it still doesn't operate properly, please consult the store from which you purchased the printer or you Sony service center.

Symptom	Cause/Remedy
Power does not go on.	• Check that the printer's power cord is plugged in properly. → Properly connect the power cord as explained in "Connecting the Power Supply" (page 8).
Printer does not print	• Check that the ink ribbon cartridge and printing paper are properly loaded. → Properly load the ink ribbon cartridge and printing paper as explained in "Loading the Ink Ribbon Cartridge and the Printing Paper" (page 16). • Check that the ink ribbon cartridge cover is closed. → Close the ink ribbon cartridge cover. • Check that the bottom cover is closed. → Close the bottom cover. • The printer may have overheated. → Wait for a while, then try printing again.
Cannot remove the ink ribbon cartridge	• Operation of the printer may have been prematurely interrupted, leaving the teeth of the ink ribbon cartridge gear engaged. → Turn the printer's operation switch back on, then remove the ink ribbon cartridge after the sound of operation stops.

Miscellaneous

Symptom	Cause/Remedy
Paper jams	• Check whether you have loaded more than 25 sheets of paper in the paper supply/eject tray. → Load no more than 25 sheets of paper in the paper supply/eject tray at a time. • Check whether more than 10 sheets of paper have accumulated on the eject surface of the paper supply/eject tray. → Do not allow more than 10 sheets of paper to accumulate on the eject surface. • Check whether the paper is wrinkled or curled. → Remove any wrinkled or curled paper.
The ALARM lamp is lit	• Check whether paper has jammed. → Clear the jam as explained in "If the Paper Jams" (page 33). • Check whether the ink ribbon has broken. → Correct the problem as explained in "If the Ink Ribbon Breaks" (page 34).
The printed result does not look clean.	• Check whether you are printing on the right side of the paper. → Properly load the printing paper as explained in "Loading the Printing Paper" (page 17) • Check whether the ink ribbon cartridge or printing paper are dirty. → Load a new ink ribbon cartridge or clean printing paper.

Status Indications

The printer status is indicated by the POWER, PRINT, PAPER, RIBBON, and ALARM lamps lighting or flashing. If the printer is in an abnormal condition, take whatever action is called for by the status indicated by the lamps.

Lamp	Lit	Flashing	Printer status and action
POWER	○		• The power is on.
PRINT	○		• Printing is in progress.
		○	• The printer is receiving image data.
PAPER	○		• The printer is out of paper. → Load more paper in the paper supply/eject tray. (page 17) • There is too much accumulated ejected paper in the paper supply/eject tray. → Remove the accumulated ejected paper from the paper supply/eject tray. • The printer cannot use the type of paper that has been loaded. → Once the paper has been ejected, load the correct type of paper in the paper supply/eject tray. (pages 14, 17)
RIBBON	○		• The end of the ink ribbon has been reached. → Install a new ink ribbon cartridge. (pages 16, 19) • No ink ribbon cartridge has been installed. → Install an ink ribbon cartridge. (page 16) • The ink ribbon cartridge that has been installed is not compatible with this printer. → Install the correct ink ribbon cartridge. (pages 14, 16)

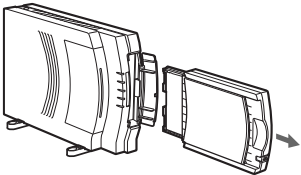
Lamp	Lit	Flashing	Printer status and action
ALARM	○		• There is a paper jam inside the printer. → Remove the jammed paper. (see below) • The ink ribbon has broken. → Repair the ink ribbon with cellophane tape. (page 34)
	○		• The ribbon cartridge cover is open. → Close the cover. • The bottom cover is open. → Close the cover.
All lamps	○		• A problem has occurred that requires repair by service personnel. → Contact your dealer or the nearest Sony Service Center.

If the Paper Jams

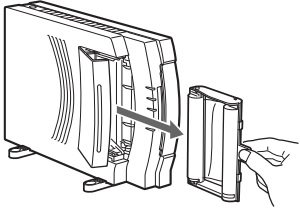
If the paper jams while the printer is printing, the ALARM lamp will light. Press the Operation switch to turn the printer off, and then press the Operation switch to turn the printer on again. The paper inside the printer will be ejected automatically.

If this procedure does not clear the paper jam and the ALARM lamp remains lit, follow the procedure described below to remove the jammed paper.

- 1 Turn the printer off and unplug the power cord.
- 2 If there are any printed sheets in the paper supply/eject tray, remove those sheets, and then remove the tray.



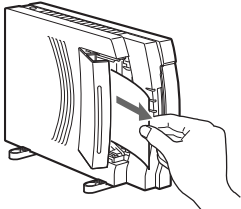
- 3 Open the ribbon cartridge cover, and remove the ink ribbon cartridge.



Note

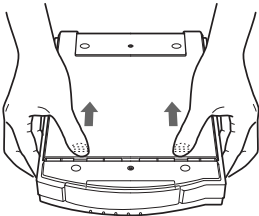
If you cannot remove the ink ribbon cartridge, contact your dealer or the nearest Sony Service Center.

- 4 Remove the jammed paper.



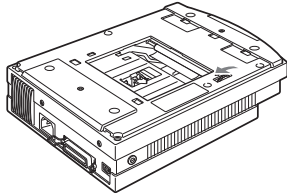
- If you cannot remove the jammed paper, or if you cannot see the jammed paper, follow the procedure described below.
- If you were able to completely remove all of the jammed paper, skip ahead to step 7.

- 5 Remove the bottom cover by pressing on the marks and then sliding the cover down.



Miscellaneous

- 6** Remove the jammed paper.
If it is hard to remove the jammed paper, turn the dial in the direction indicated by the arrow.



Notes

- If you cannot remove the jammed paper, contact your dealer or the nearest Sony Service Center.
- Do not attempt to print again on the jammed paper that you removed.

WARNING

- Never touch components inside the unit.
- Injury can result from sharp edges inside the unit.
 - Burns can result from touching hot internal components.

- 7** Replace the bottom cover, the paper supply/eject tray, and the ink ribbon cartridge.
- 8** Plug the power cord back in, and then turn on the printer.

Note

Any image that was in the printer's memory will have been lost. Perform the print operation on the personal computer again.

If the Ink Ribbon Breaks

- 1** Use scissors to cut off any segment of the ribbon that is crinkled, and then use clear cellophane tape to mend the ink ribbon.
- 2** Turn the ink ribbon cartridge over, turn the gear in the direction indicated by the arrow, and advance the ribbon until the cellophane tape is no longer visible.



Main Specifications

- Power supply**
100 to 120 VAC (50 Hz/60 Hz)
- Current consumption**
1.0 Amax. at 120 VAC
- Operating temperature**
5 to 35 °C
- Storage/transport temperature**
-20 to 60 °C
- Operating humidity**
20 to 80 %
- Maximum dimensions**
208 × 303 × 71 mm
(W × H × D)
- Weight**
Approximately 2.7 kg (main unit only)
- Printing method**
Four-surface sequential sublimation thermal transfer process
(yellow, magenta, cyan, laminate)
- Printing resolution**
295 × 295 dpi
- Printing gradations**
256 gradations
(yellow, magenta, cyan)
Approximately 16.77 million colors
- Number of printing pixels (maximum)**

Print Pack Type	Effective printing pixels	Image transfer pixels
UPC-10P23	1162 × 1765 dots	1200 × 1800 dots
UPC10P34	1162 × 1563 dots	1200 × 1600 dots
UPC10S01	1162 × 1800 dots	1200 × 1800 dots

- Printing time**
85 seconds or less
(during full printing; excludes image transfer time)
- Number of copies that can be set**
1 to 25 sheets
- Paper supply method**
Autofeed from paper supply tray
- Maximum capacity of paper supply tray**
25 sheets
- Paper eject method**
Front ejection
Sheets are ejected in order on top of paper supply tray

- Ribbon cartridge**
Can print 25 sheets
- Inputs**
AC IN (power inlet)
- Thermal head**
11.6 dots/mm
- Accessories**
Paper supply/eject tray (1)
Power cord (1)
Stands (2)
Tray case (1)
Ink ribbon cartridge (sufficient for printing 10 sheets) (1)
Print paper (5 sheets each of UPC-10P23 and UPC-10P34) (1)
CD-ROM (1)
Operating Manual (1)
Software license agreement (1)
Warranty (1)
- Supplies sold separately**
Photocard Print Pack UPC-10P23
Photocard Print Pack UPC-10P34
Glossy Photostickers Print Pack UPC-10S01

Parallel Interface

- Control connectors**
IEEE1284-B connector (D-sub 36 pin)
Input: 5V maximum (TTL)
Output: 5V maximum (TTL)
- Data transfer method**
8 bits, parallel, IEEE STD 1284-1994 compliant
- Compatible
 - Reverse Nibble
 - ECP
- Logic level**
TTL

Miscellaneous

Parallel Interface Connector Pin Assignments

Pin No.	I/O	Signal		
		Interface mode		
		Compatible	Nibble	ECP
1	I	nStrobe	HostClk	HostClk
2	I/O	Data1 (LSB)		
3	I/O	Data2		
4	I/O	Data3		
5	I/O	Data4		
6	I/O	Data5		
7	I/O	Data6		
8	I/O	Data7		
9	I/O	Data8 (MSB)		
10	O	nACK	PtrClk	PeriphClk
11	O	Busy	PtrBusy	PeriphAck
12	O	PError	AckDataReq	nAckReverse
13	O	Select	Xflag	Xflag
14	I	nAutoFd	HostBusy	HostAck
15		Not defined		
16-17		GND		
18	O	Peripheral Logic High (pull up to +5V with 1k Ω)		
19-30		GND		
31	I	nInit	nInit	nReverseRequest
32	O	nFault	nDataAvail	nPeriphRequest
33		Not defined		
34		Not defined		
35		Not defined		
36	I	nSelectIn	IEEE 1284 Active	IEEE 1284 Active

Within the bi-directional parallel interface (IEEE STD 1284-1994) standard, the UP-DP10 supports Compatible mode, Reverse Nibble mode, and ECP mode.

USB Interface

Data transfer method
Complies with Universal Serial Bus
Specification Revision 1.0

USB Interface Connector Pin Assignments

Pin No.	I/O	Signal	Function
		VCC	Cable power, maximum current
	I/O	-Data	Data
	I/O	+Data	Data, pull up to +3.3V by a 1.5 Ω resistor
		Ground	Cable ground

The specifications and appearance of this printer are subject to change without notice.

Sony Corporation Printed in Japan

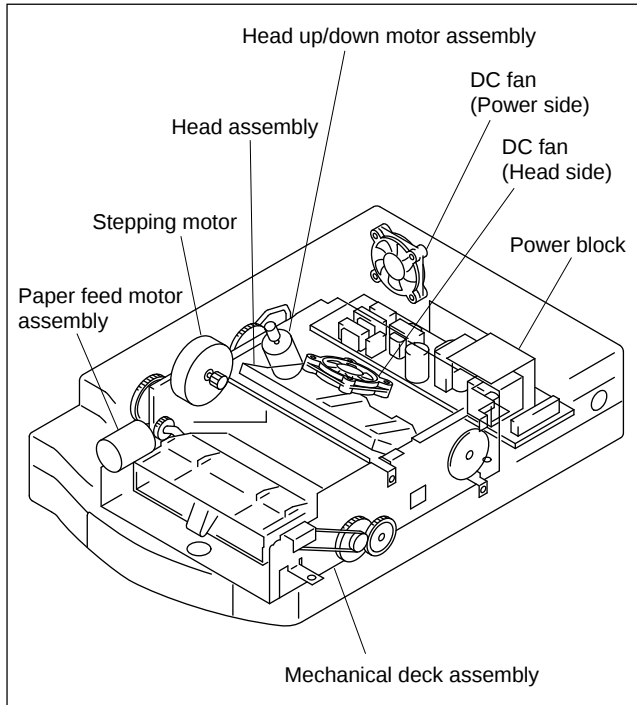
Sony  line
<http://www.world.sony.com/>
Printed on recycled paper
Imprimé sur papier recyclé

Section 2

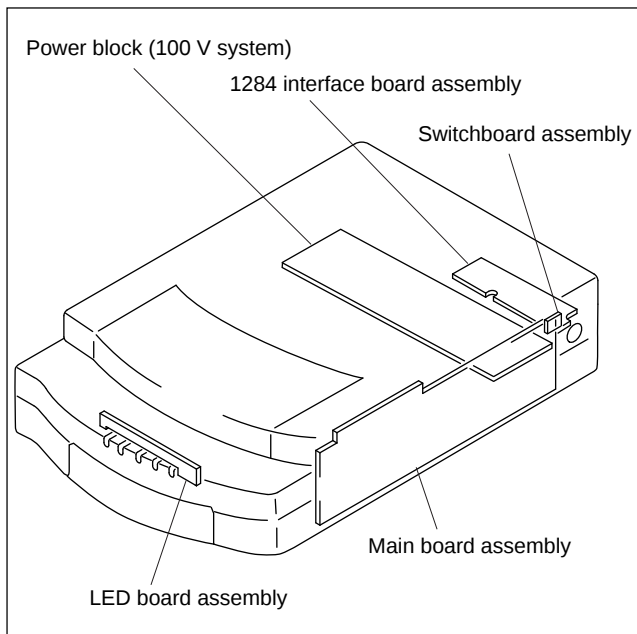
Service Information

2-1. Main Parts Location

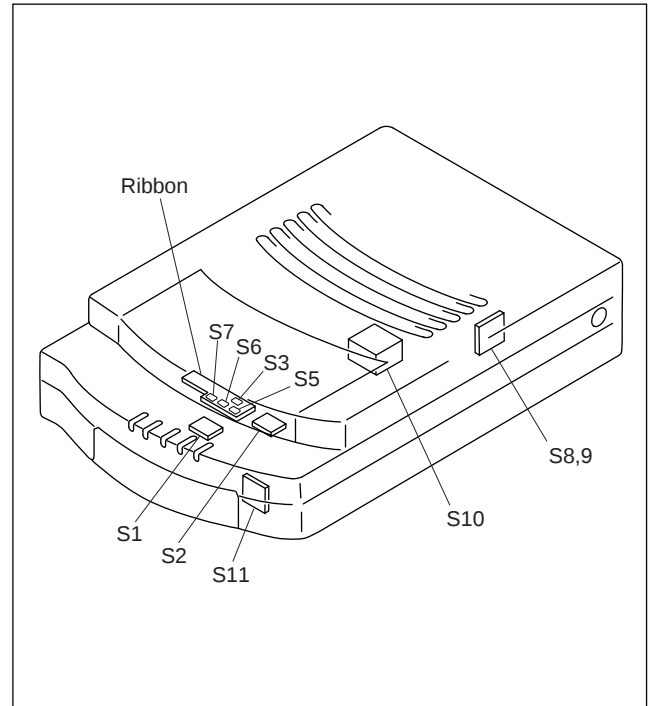
2-1-1. Main Block Location



2-1-2. Board Location



2-1-3. Sensor Location and Function Description

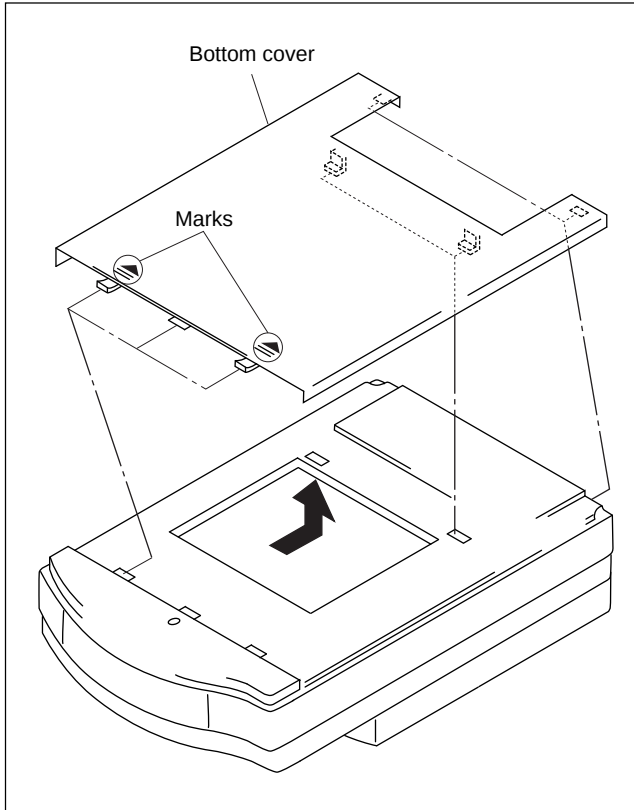


Name	Function	Related error
S1	Detects the existence of the paper in a paper tray.	No paper error
S2	Detects the beginning of paper. Detects an error in the timing with an S10 sensor.	Carrier system error
S8, 9	Detects the head position.	Head up/down error
S10	Detects the existence of paper in a printer. Detects an error in the timing with an SZ sensor.	Carrier system error
S11	Detects the number of stackers.	Stacker full error
RIBBON S3	Detects the beginning (mark) of a ribbon.	Ribbon rewinding error
RIBBON S5 S6 S7	Detects the ribbon type.	Ribbon type error

2-2. Removal of Cabinet

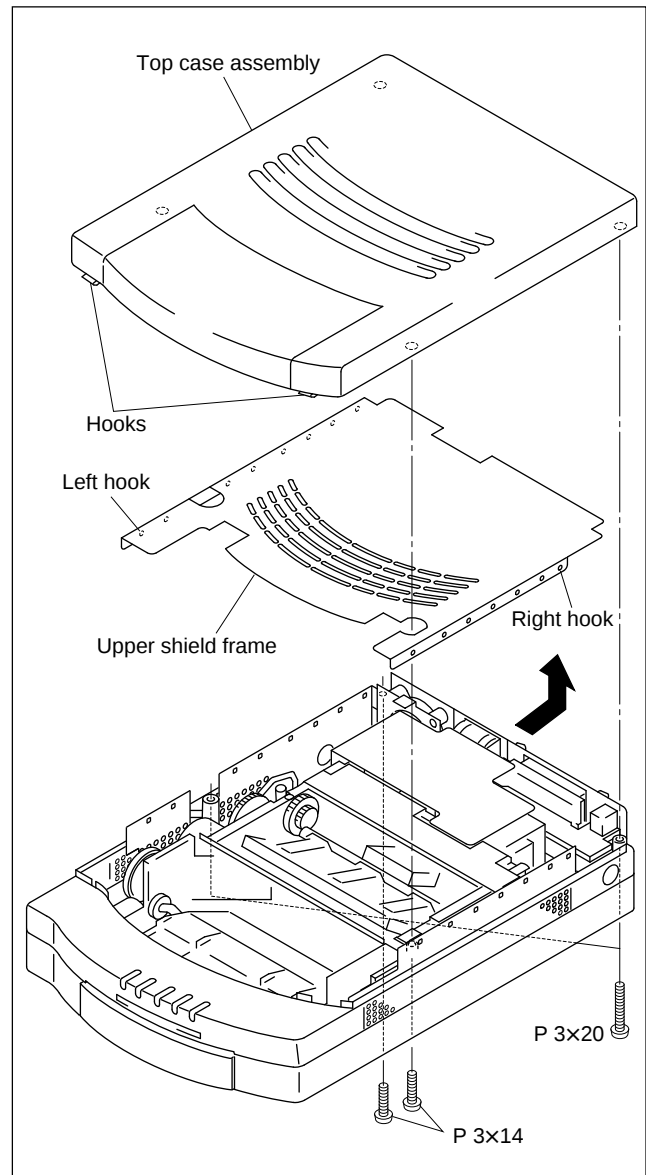
2-2-1. Bottom Cover

1. Put the bottom up.
2. Remove it in the direction indicated by the arrow while pushing the marks of the bottom cover.



2-2-2. Top Case Assembly and Upper Shield Frame

1. Remove the four screws.
2. Remove the two hooks and then remove the top case assembly in the direction indicated by the arrow.
3. Remove the seven hooks on the right and eight hooks on the left and then remove the upper shield frame.



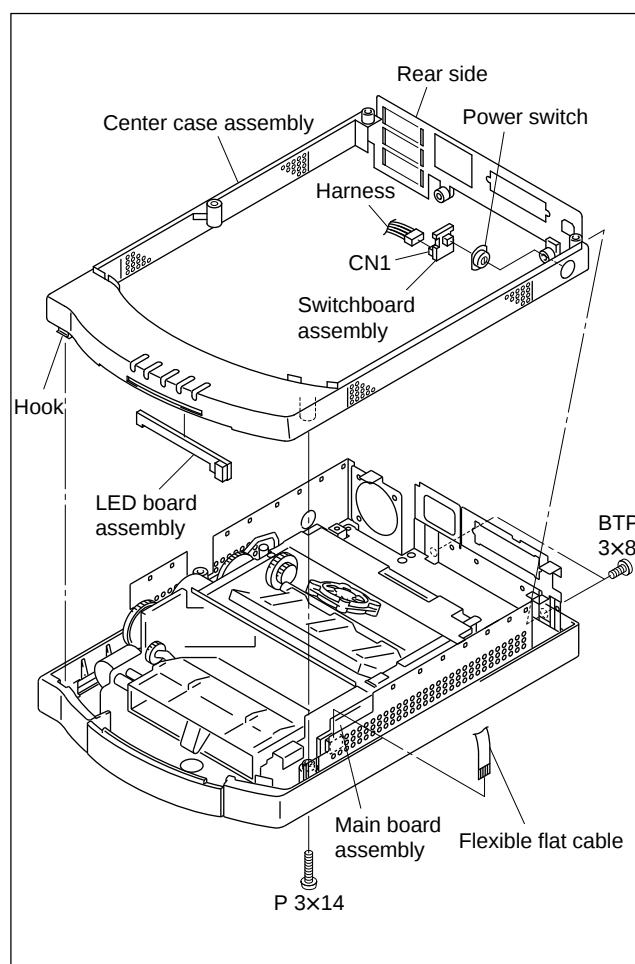
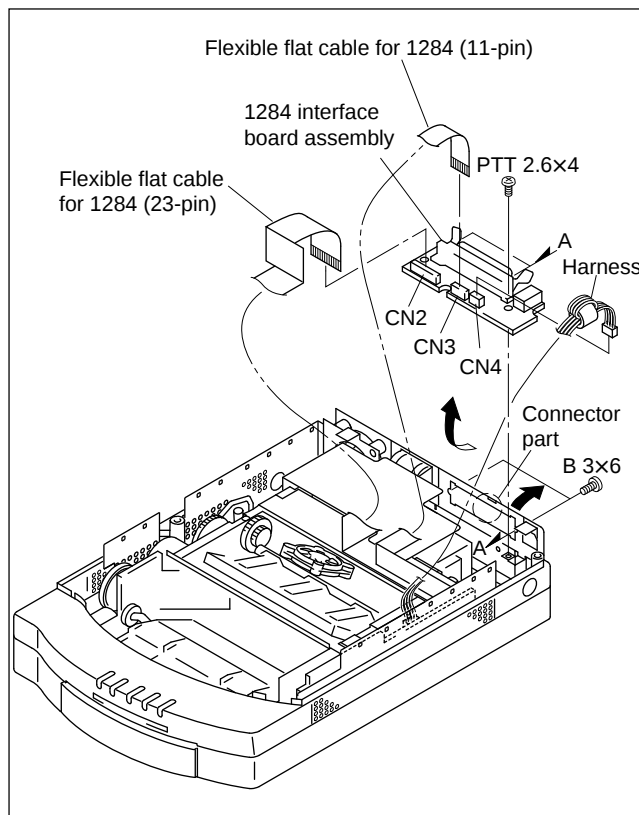
4. Install the top case assembly in the opposite procedure of steps 1 to 3.

2-2-3. Center Case Assembly

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Disconnect one connector (CN4) of the 1284 interface board assembly and the two flexible flat cables of connectors (CN2 and CN3).
4. Remove the two screws (B3×6) fixing the center case assembly and 1284 interface board.
5. Remove one screw (PTT2.6×4).
6. Remove the 1284 interface board assembly in the direction indicated by the arrow.
7. Remove one screw (P3×14) on the front side.
8. Remove the two screws (BTP3×8) on the rear side.
9. Disconnect one flexible flat cable on the main board.
10. Raise the rear side slightly, remove the hook on the front side, and then remove the center case assembly.
11. Disconnect the connector (CN1) of the switchboard assembly.
12. Remove the switchboard assembly. (Refer to Section 3-1-3.)
13. Remove the LED board assembly. (Refer to Section 3-1-2.)

Note

Remove the 1284 interface board assembly gradually while raising the connector (CN2) using a standard screwdriver. Do not remove it forcibly. This may destroy the board.



14. Install the center case assembly in the opposite procedure of steps 1 to 13.

Note

When installing the center case assembly, be careful not to interpose the LED board FFC.

Section 3

Replacement of Main Parts

3-1. Board Replacement

Note

Before installing or removing the board, be sure to set to the POWER switch to OFF.

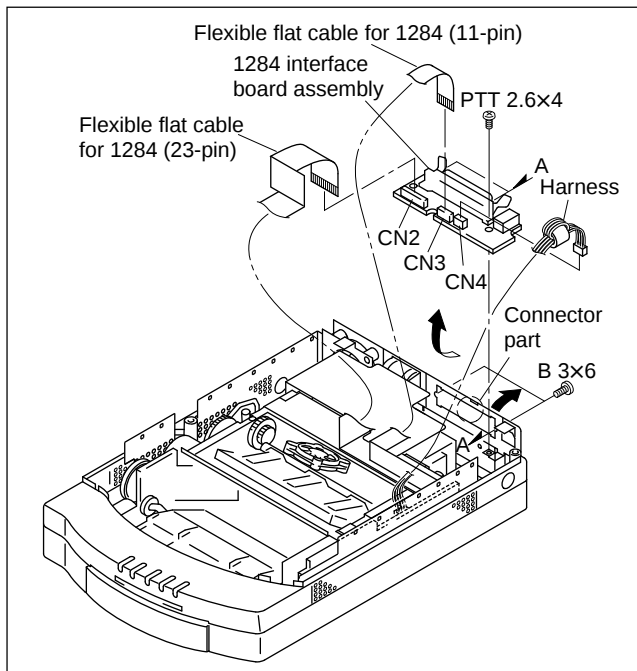
Do not remove or install the board with the power turned on. This may cause an electric shock or destroy the board.

3-1-1. 1284 Interface Board Assembly

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the two screws (B3×6) fixing the center case assembly and connector.
4. Disconnect one connector (CN4) of the 1284 interface board assembly and the two flexible flat cables of connectors (CN2 and CN3).
5. Remove one screw (PTT2.6×4).
6. Remove the 1284 interface board assembly in the direction indicated by the arrow.

Note

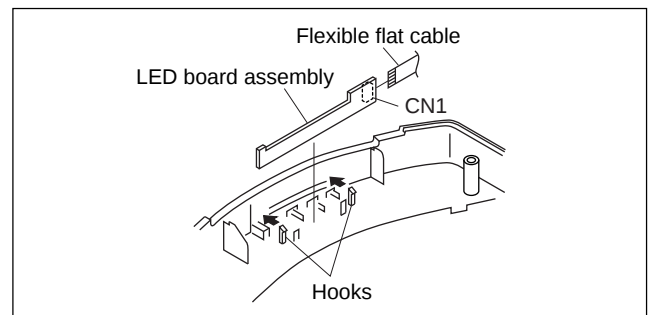
Remove the 1284 interface board assembly gradually while raising the connector (CN2) using a standard screwdriver. Do not remove it forcibly. This may destroy the board.



7. Install the 1284 interface board assembly in the opposite procedure of steps 1 to 6.

3-1-2. LED Board Assembly

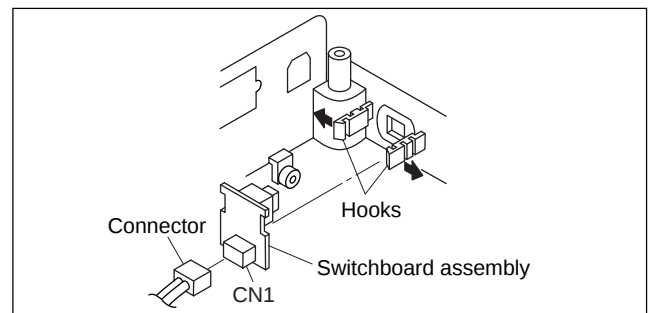
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the two hooks and then remove the LED board assembly.
5. Disconnect the flexible flat cable from the connector (CN1) of the LED board assembly.



6. Install the LED board assembly in the opposite procedure of steps 1 to 5.

3-1-3. Switchboard Assembly

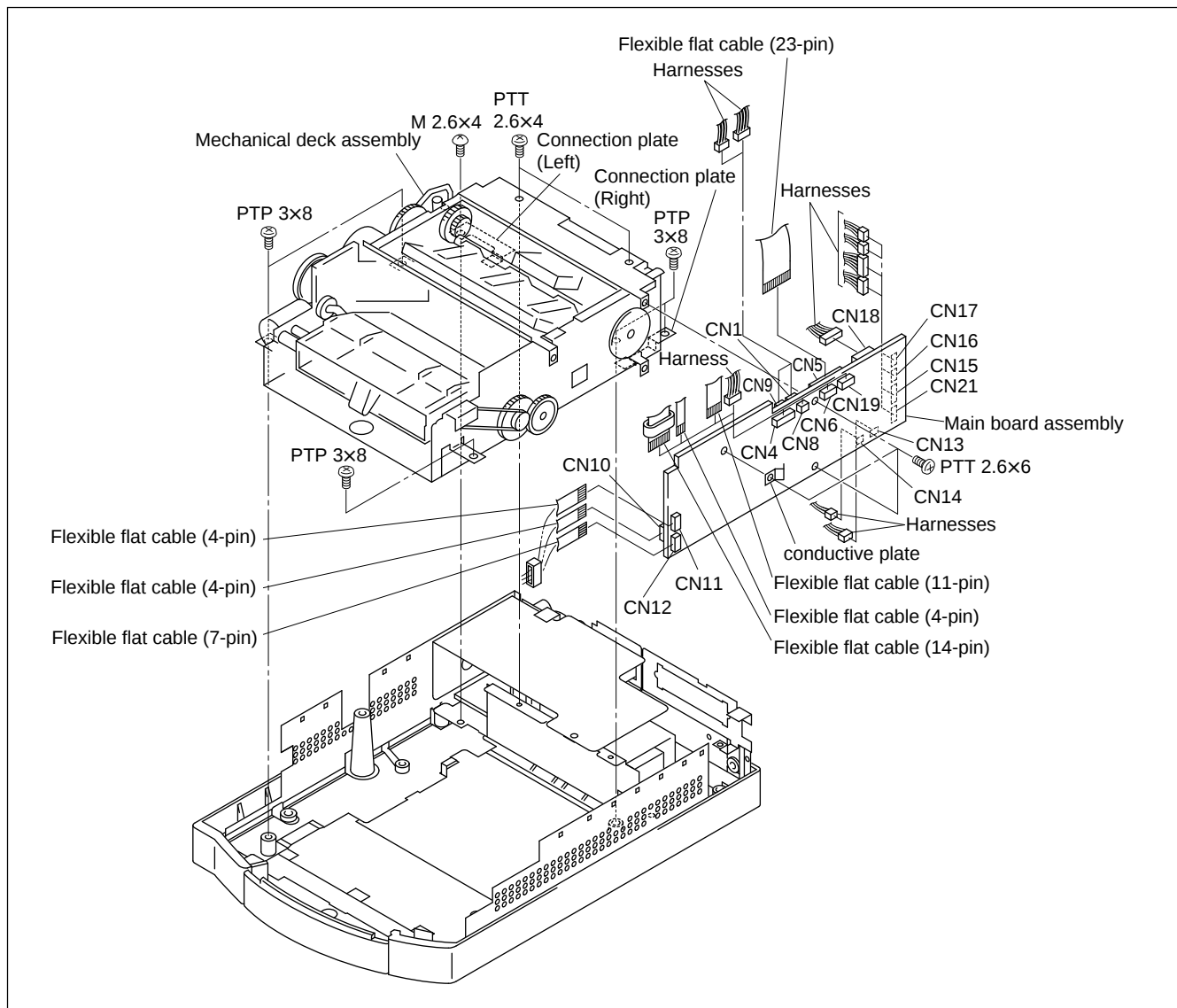
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Disconnect the connector (CN1) of the switchboard assembly.
5. Open the two hooks and remove the switchboard assembly.



6. Install the switchboard assembly in the opposite procedure of steps 1 to 5.

3-1-4. Main Board Assembly

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield case. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the three screws (PTT2.6×4) and five screws (PTP3×8) and then remove the mechanical deck assembly.
5. Remove the three screws (PTT2.6×6) and conductive plate and then remove the main board assembly.
6. Disconnect the seven flexible flat cables from the connectors (CN4 to CN6, CN8, and CN10 to CN12) of the main board assembly.
7. Disconnect the ten harnesses from the connectors (CN1, CN9, CN13 to CN19, and CN21) of the main board assembly.



8. Install the main board assembly in the opposite procedure of steps 1 to 7.

Notes

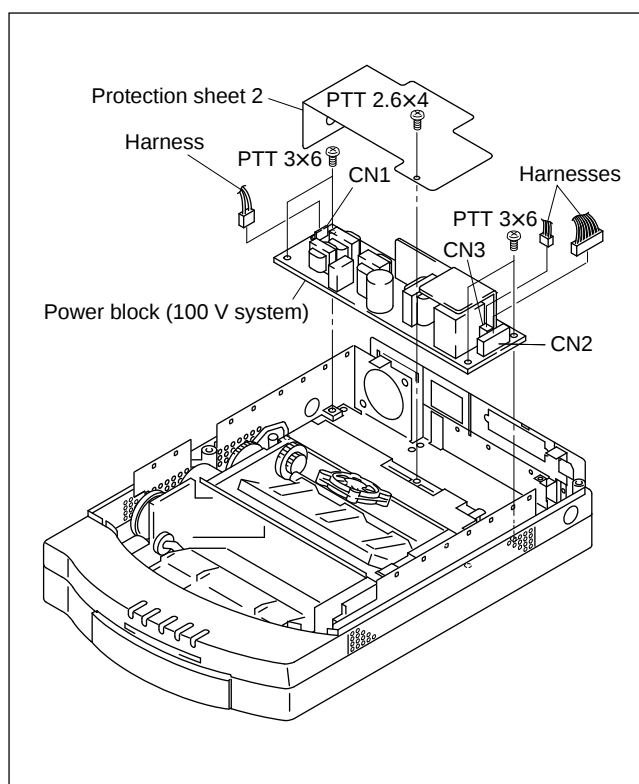
1. Be careful not to catch the connection plates (left) and (right).
2. Be careful not to catch the three flexible flat cables on the front side.

3-2. Power Block (100 V System)

Note

The output voltage of power supply is separately set depending on the printer used. Therefore, the output voltage must be set when the power is replaced.

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the 1284 interface board assembly. (Refer to Section 3-1-1.)
4. Remove one screw (PTT2.6×4) and then remove the protection sheet.
5. Disconnect the three connectors (CN1 to CN3) of the power block (100 V system).
6. Remove the four screws (PTT3×6) and then remove the power block (100 V system).

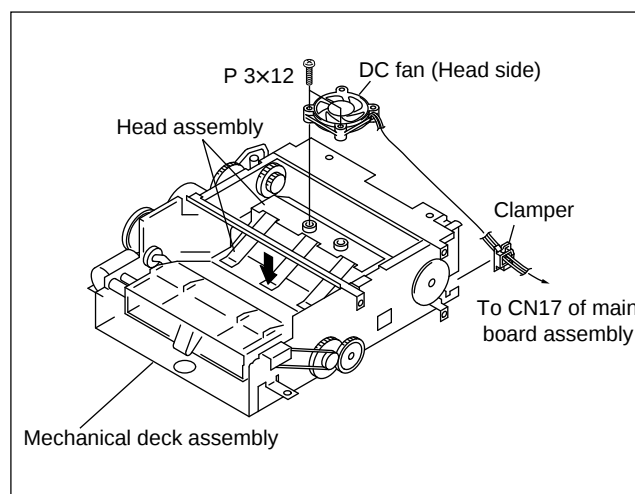


7. Install a new power block (100 V system) in the opposite procedure of steps 1 to 6.
8. Set the output voltage. (Refer to Section 3-4-2.)

3-3. Fan Replacement

3-3-1. Head Side

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and shield frame assembly. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-5.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Disconnect the connector (CN17) of the main board assembly.
7. Remove the two screws (P3×12) while pushing the head assembly downward.
8. Disconnect the harness of the DC fan from the clamber and remove the DC fan.



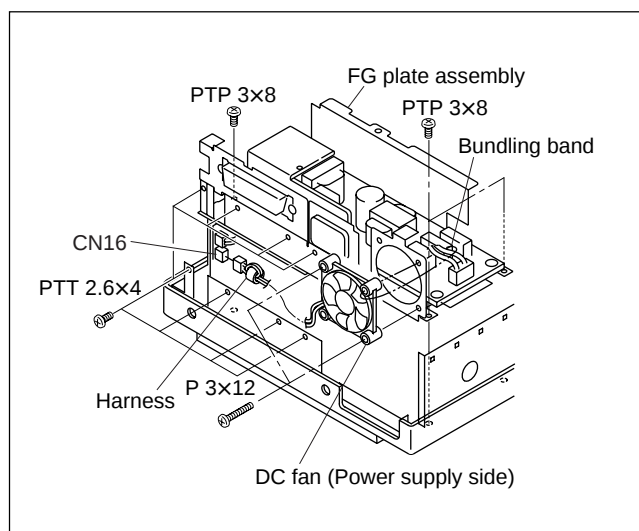
9. Install a new DC fan in the opposite procedure of steps 1 to 8.

Notes

1. Be careful not to catch the connection plates (right) and (left).
2. Be careful not to catch the three flexible flat cables on the front side.

3-3-2. Power Supply Side

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly.
(Refer to Section 2-2-2.)
3. Remove the center case assembly.
(Refer to Section 2-2-3.)
4. Remove one screw (PTT 2.6×4) and then remove the two protection sheets. (Refer to Section 3-2.)
5. Remove the mechanical deck assembly.
(Refer to Section 3-5.)
6. Disconnect the connector (CN16) of the main board assembly.
7. Remove the four screws (PTT2.6×4).
8. Remove the three screws (PTP3×8).
9. Remove the FG plate assembly.
10. Cut the bundling band fixing the harness of the AC inlet.
11. Remove the two screws (P3×12) and then remove the DC fan.



12. Install a new DC fan in the opposite procedure of steps 1 to 11.

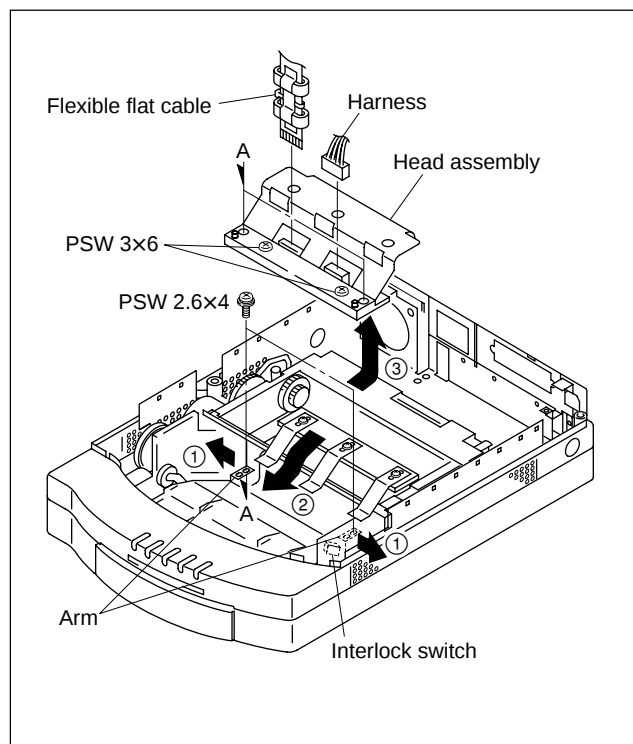
3-4. Head Assembly

Replacement

1. Output test pattern “Stair Step” from PRINTERutility before replacing the head assembly. (Refer to section 4-1.)
2. Set the power switch to OFF.
3. Remove the bottom cover. (Refer to section 2-2-1.)
4. Remove the top case assembly and shield frame.
(Refer to section 2-2-2.)
5. Remove the DC fan (on the head side).
(Refer to section 3-3.)
6. Disconnect one connector and one flexible flat cable from the head assembly.
7. Remove the two screws (PSW2.6×4) and then remove the head assembly in the order of the directions of arrows ② and ③ while opening the arm in the direction indicated by arrow ①.

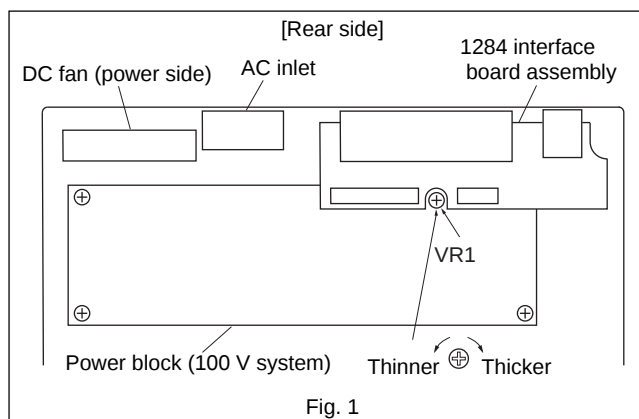
Note

Be careful not to remove the two screws (PSW×6) of the head assembly.

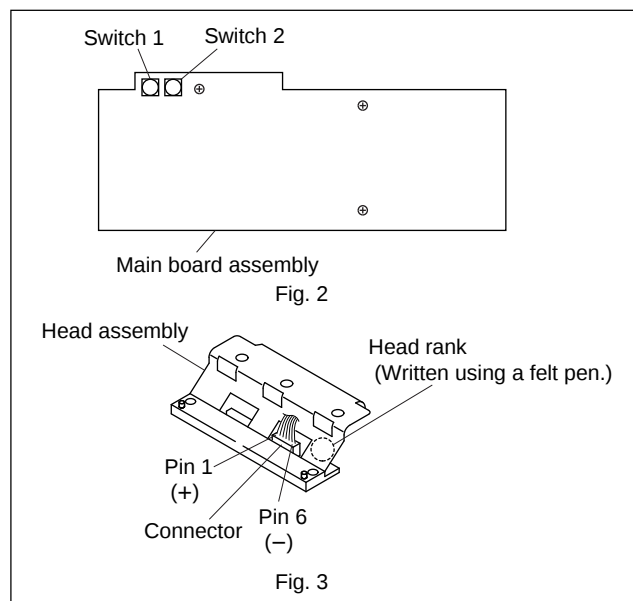


8. Install a new head assembly in the opposite procedure of steps 5 to 7.

Adjustment



9. Install the bottom cover.
10. Fix the interlock switch (upper position) with tape and set it to ON.
11. Set the power switch to ON while pressing the switch (SW2) of the main board assembly. The ERROR and RIBBON LEDs then blink and the POWER LED lights.
12. After the ERROR and RIBBON LEDs go off, press the switch (SW1).
13. Connect a digital voltmeter to the connector (pin 1: + side, pin 6: – side) of the head assembly, measure the voltage using VR1 according to the head rank, and adjust it to the standard voltage value. (Refer to Table 1.)
14. Set the power switch to OFF.
15. Set the power switch to ON again and output a test pattern. (Refer to section 4-1.)
16. Compare the density of black between the test patterns in steps 1 and 15 and adjust it using VR1. If the density of the test patterns is not the same, repeat steps 11 to 15 for measurement. (If the test pattern is thin, turn VR1 clockwise and raise the voltage.)
17. After adjustment is completed, perform “4-3. Initializing the Number of Pages to Be Printed when Changing the Head”.
18. After adjustment is completed, remove the tape of the interlock switch (upper position) and the bottom cover.
19. Install the top case assembly, upper shield frame, and bottom cover in the opposite procedure of steps 3 and 4.



Setting the Standard Voltage

Setting the Standard Voltage by Resistor Rank of Head
Adjust the voltage in the range not exceeding the upper-limit value of a voltage.

Head rank	Standard voltage	Upper limit of voltage
A	22.74	22.96
B	22.88	23.12
C	23.02	23.27
D	23.16	23.42
E	23.29	23.57
F	23.43	23.71
G	23.56	23.86
H	23.69	24.01
I	23.83	24.15
J	23.96	24.29
K	24.09	24.44
L	24.22	24.58
M	24.35	24.72
N	24.48	24.86
O	24.61	25

Table 1

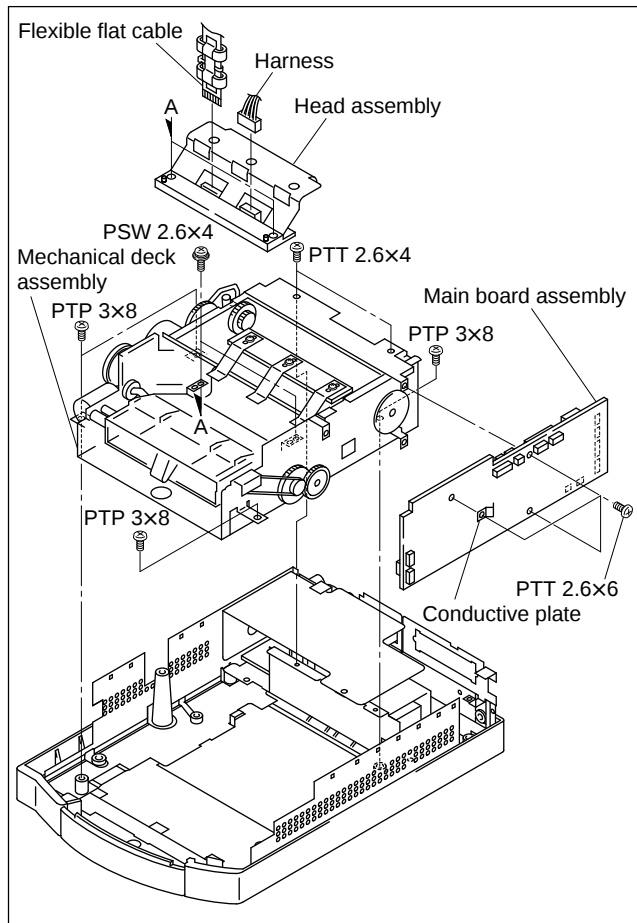
3-5. Mechanical Deck Assembly

Note

When replacing the mechanical deck assembly, install a new head assembly after the mechanical deck assembly is installed because no head assembly is installed. In this case, the adjustment after head replacement is required. (Refer to Section 3-4-2.)

However, no adjustment is required when the head assembly is not replaced.

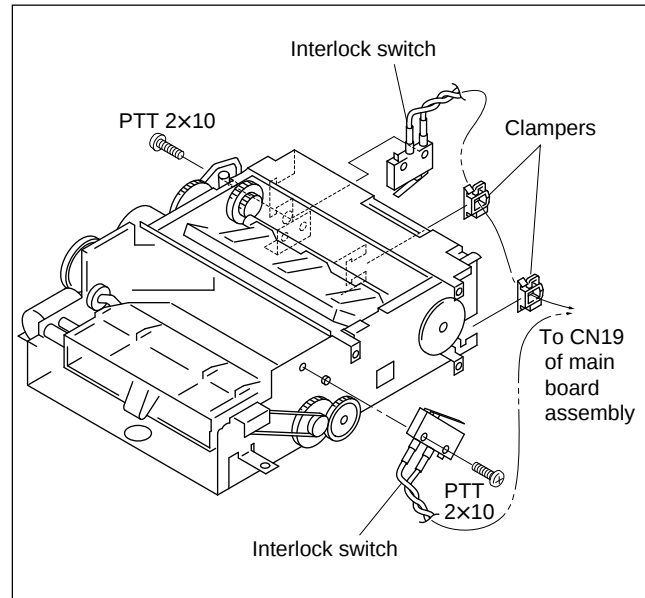
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-1-4.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Remove the head assembly. (Refer to Section 3-4-1.)



7. Install a new mechanical deck assembly in the opposite procedure of steps 1 to 7.

3-6. Replacement of Interlock Switch Assembly

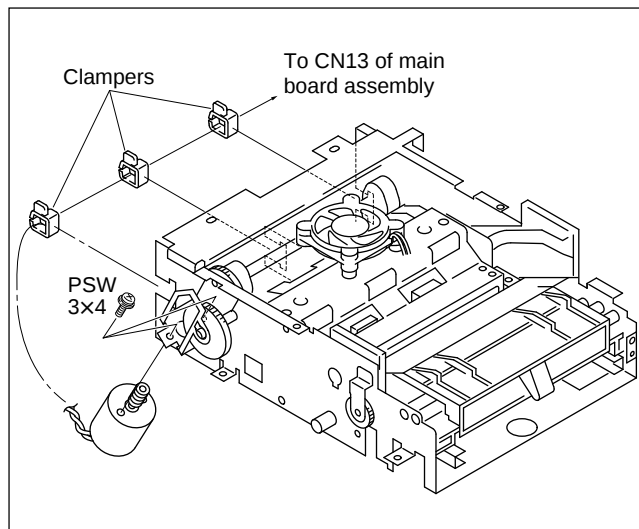
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-5.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Remove the two screws (PTT2x10).
7. Disconnect the harnesses of two interlock switch assemblies from the clampers.
8. Disconnect the connector (CN19) of the main board assembly.



9. Install a new interlock switch assembly in the opposite procedure of steps 1 to 8.

3-7. Replacement of Head Up/Down Motor Assembly

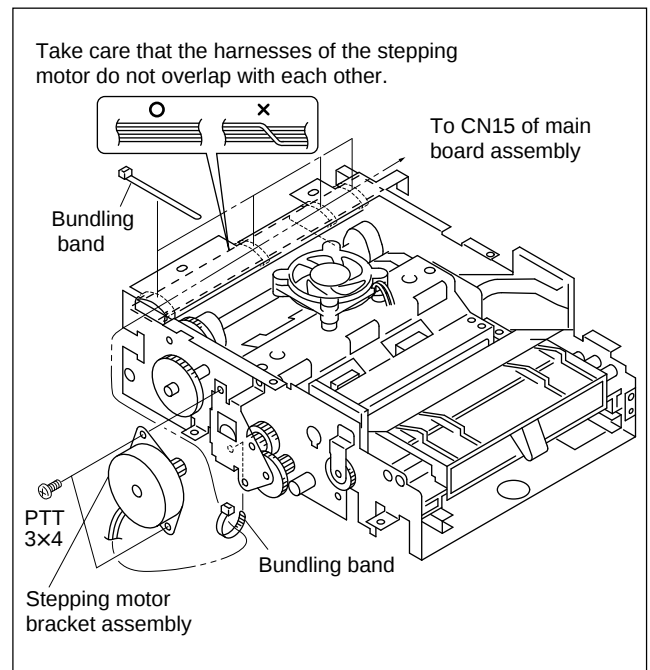
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-5.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Remove the two screws (PSW3×4) and then remove the head up/down motor assembly.
7. Disconnect the harnesses of the head up/down motor assembly from the clampers.
8. Disconnect the connector (CN13) of the main board assembly.



9. Install a new head up/down motor assembly in the opposite procedure of steps 1 to 8.

3-8. Replacement of Stepping Motor

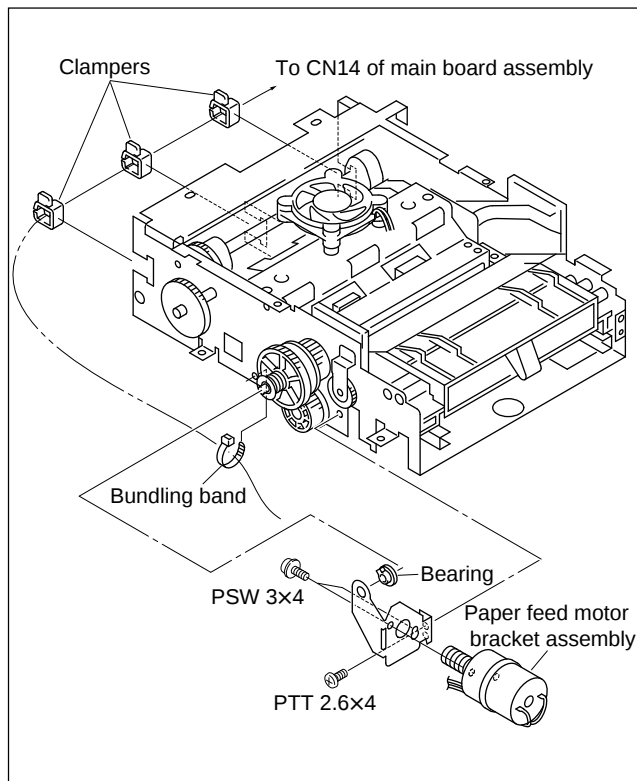
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly and upper shield frame. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-5.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Cut the five bundling bands and disconnect the harnesses.
7. Remove the two screws and then remove the stepping motor.
8. Disconnect the connector (CN15) of the main board assembly.



9. Install a new stepping motor in the opposite procedure of steps 1 to 8.

3-9. Paper Feed Motor Assembly

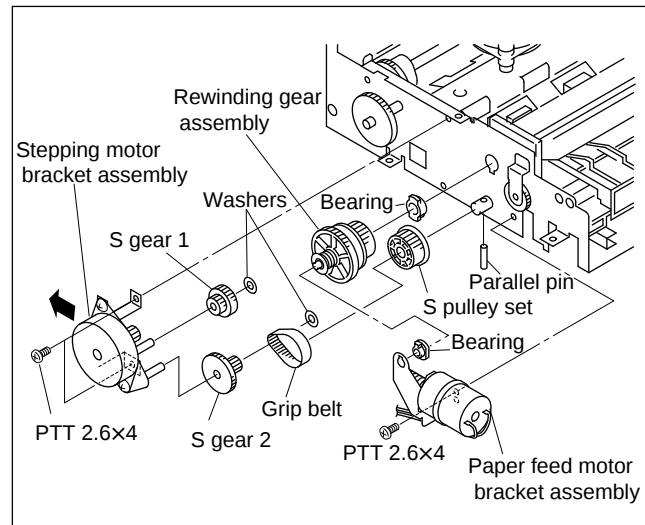
1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-5.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Remove one screw (PTT2.6×4) and then remove the paper feed motor bracket assembly.
7. Remove the two screws (PSW3×4) and then remove the paper feed motor assembly.
8. Cut the bundling band and disconnect the harnesses from the clampers.
9. Disconnect the connector (CN14) of the main board assembly.



10. Install a new paper feed motor assembly in the opposite procedure of steps 1 to 9.

3-10. Replacement of S Gear 1, S Gear 2, S Pulley Set, and Grip Belt

1. Remove the bottom cover. (Refer to Section 2-2-1.)
2. Remove the top case assembly. (Refer to Section 2-2-2.)
3. Remove the center case assembly. (Refer to Section 2-2-3.)
4. Remove the mechanical deck assembly. (Refer to Section 3-5.)
5. Remove the main board assembly. (Refer to Section 3-1-4.)
6. Remove the stepping motor. (Refer to Section 3-8.)
7. Remove the paper feed motor assembly. (Refer to Section 3-9.)
8. Remove one screw (PTT2.6×4) and then remove the paper feed motor bracket assembly.
9. Remove the rewinding gear assembly.
10. Remove the two screws (PTT2.6×4) and then remove the stepping motor bracket assembly.
11. Remove the washers and then remove S gear 1 and S gear 2.
12. Remove the grip belt and S pulley set.



13. Install new parts in the opposite procedure of steps 1 to 12.

Notes

- When installing the S pulley set, adjust it to the parallel pin S pulley set and then install.
- When installing the stepping motor bracket assembly, pull it in the direction indicated by the arrow and tighten the grip belt.

Gears corresponding to the pitch of irregular paper feed

Pitch of irregular paper feed (mm)	Corresponding gears	Remedy
2.09	Stepping motor Pinion gear	Replace the stepping motor assembly.
4.19	S gear 1	Replace S gear 1.
11.73	S gear 2	Replace S gear 2.
21.99	Pinch roller	Replace the mechanical deck assembly.
26.39	S pulley set	Replace the S pulley set.

Section 4

Test Mode

You can check the following items by using the application software “PRINTERutility”.

- Test print: **Test Print** button
- Errors: **Current Status** button
- Initializing the number of pages to be printed when changing the head: **Reset** button

Note

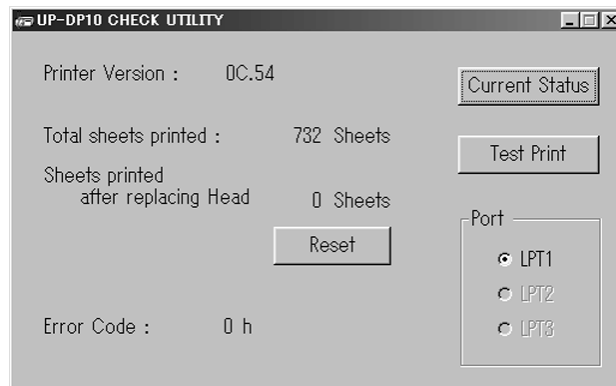
If you want to obtain application software “PRINTERutility”, consult a Sony service facility.

Fixtures

IEEE1284 interface cable (commercially available)

How to use

Connect the computer with Windows 95/98 installed and the printer (UP-DP10) by the IEEE1284 interface cable. And then, double-click the PRINTERutility file icon. The “screen 1” shown below appears.

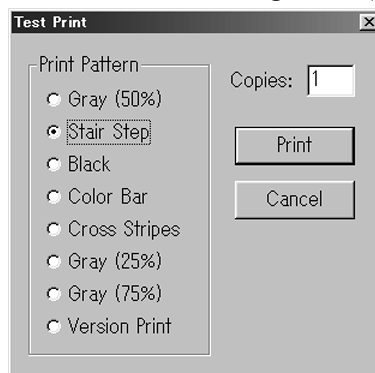


Screen 1

4-1. Test Print

You can check the print density setting.

If you click the **Test Print** button on screen 1, the following screen (screen 2) appears.



Screen 2

Select “Stair Step” and click the **Print** button. The printed stair step is output.

If the shades of gray become unacceptable, adjust the print density. (Refer to Section 3-4.)

4-2. Errors

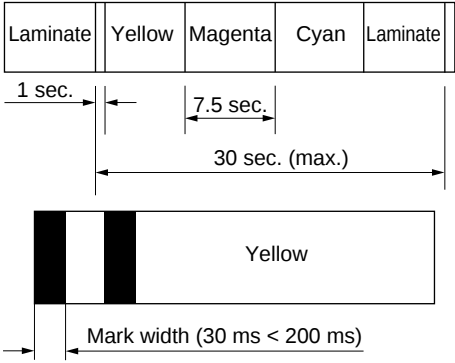
You can check failures and malfunctions of the printer with error codes.

Click the **Current Status** button on screen 1. The appropriate number (error code) is displayed in the “Error Code” section at the bottom of Screen 1. Take an action according to the table below.

Head up-and-down errors (motor or sensor troubles)

Error code	Name of error	Cause	Error location	Action
80	Head up error (Motor or Sensor Trouble)	The head cannot be moved to the standby position (where the ribbon cassette can be removed) within the defined period of time (five seconds).	- Head up-and-down motor (DC motor) - S8/S9 sensor	- Change the head up/down motor. - Change the S8/S9 sensor board. - Change head UDFFC.
81	Head down error (Motor or Sensor Trouble)	The head cannot be moved from the standby position to the midpoint (where the start of the ribbon can be located and paper can be fed) within the defined period of time (five seconds).	- Head up-and-down motor (DC motor) - S8/S9 sensor	- Change the head up/down motor. - Change the S8/S9 sensor board. - Change head UDFFC.
82	Head print error (Motor or Sensor Trouble)	The head cannot be moved from the midpoint to the printing position (where the print can be executed) within the defined period of time (five seconds).	- Head up-and-down motor (DC motor) - S8/S9 sensor	- Change the head up/down motor. - Change the S8/S9 sensor board. - Change head UDFFC.
83	Head wait error (Motor or Sensor Trouble)	The head cannot be moved from the printing position to the midpoint within the defined period of time (five seconds).	- Head up-and-down motor (DC motor) - S8/S9 sensor	- Change the head up/down motor. - Change the S8/S9 sensor board. - Change head UDFFC.

Ribbon rewinding error

Error code	Name of error	Cause	Error location	Action
84	Ribbon setup 1 error (Motor or Sensor Trouble)	The Yellow starting mark cannot be detected within the defined period of time (with four retires). Defined period of time (See the chart below for more details): Between pages 30 sec (Max: 7.5 sec. × 4) (7.5 sec. if no mark is detected.) Between colors 7.5 sec. (from the time when the mark of the first color is detected to the time when the mark of the second color is detected) Between marks 1 sec. (Yellow mark) Mark width 30 ms < 200 ms 	- Nonconforming ribbon - Ribbon/pick motor (DC motor) - B3 sensor	- Change the ink ribbon. - Change the ribbon/pick motor. - Change the ribbon sensor board. - Change head UDFFC.

(Continue)

(Continued)

Error code	Name of error	Cause	Error location	Action
85	Ribbon setup 2 error (Jamming)	The Magenta, Cyan, and Laminate starting marks cannot be detected within the defined period of time. Defined period of time (See the chart below for more details): Between colors 7.5 sec.(until the mark of the next color is detected.)	• Nonconforming ribbon • Ribbon/pick motor (DC motor) • B3 sensor	• Change the ink ribbon. • Change the ribbon/pick motor. • Change the ribbon sensor board. • Change head UDFFC.

Head print control system error

Error code	Name of error	Cause	Error location	Action
86	HDC error (Motor or Sensor Trouble)	The status register does not show the expected value when the head control circuit (ASIC) is initialized.	• ASIC (HDC)	• Change the main board.
87	Print data wait error (Motor or Sensor Trouble)	The data transfer is not completed when the next data transfer to the ASIC (HDC) is started (approximately 6.2 ms). (This error was used for debugging.)	None	None
88	Head cool down error (Motor or Sensor Trouble)	During the cool down operation for lowering the head temperature, the head temperature cannot become 55 degrees or less within the defined period of time (ten minutes).	• Head thermostat • Failure ADC within MCU	• Change the head. • Change the main board. • Change head FFC.
89	Head preheat error (Motor or Sensor Trouble)	During the preheat operation for raising the head temperature, the head temperature cannot become 25 degrees or more within the defined period of time (30 seconds) or the A/D value is not changed after five seconds from the start of the preheat.	• Head thermostat • Failure ADC within MCU	• Change the head. • Change the main board. • Change head FFC.

Transfer system error

Error code	Name of error	Cause	Error location	Action
91	Paper feed error (Jamming)	If you set to feed at the defined number of lines (3,000) during the paper feed operation, the paper does not move to the sensor position.	• Transfer motor (stepping motor) • S10 sensor	• Change the transfer motor. • Change the S10 sensor.
92	Paper print back error (Jamming)	During the paper back operation for the paper being printed, if you set to feed at the defined number of lines (2,000), the paper does not move to the sensor position.	• Transfer motor (stepping motor) • S10 sensor	• Change the transfer motor. • Change the S10 sensor.
93	Paper out error (Jamming)	When paper is fed, if you set to feed at the defined number of lines (2,000), the paper cannot be removed from the sensor position.	• Transfer motor (stepping motor) • S2 sensor	• Change the transfer motor. • Change the S2 sensor board. • Change the S2FFC.
94	Paper inject error (Jamming)	When paper is transferred into the printer (after the pick-up), if you set to feed at the defined number of lines (3,000), the paper does not move to the sensor position.	• Transfer motor (stepping motor) • S2/S10 sensors	• Change the transfer motor. • Change the S10 sensor. • Change the S2 sensor board. • Change the S2FFC.

Recoverable errors

Error code	Name of error	Cause	Error location	Action
95	Stacker full error	More than defined number (10 or less) of paper is stacked in the paper stacker.	None	None
96	Ribbon cassette error	No ribbon cassette is installed in the printer.	None	None
97	Ribbon end error	The ink ribbon inside the ribbon cassette is used up.	None	None
98	Ribbon type error	The type of the ribbon cassette is wrong.	None	None
99	No paper error	There is no paper or the paper tray is not set.	None	None
9B	Rear paper error	Paper is left inside the printer.	None	None
9C	Pick mistake error	The pick-up operation cannot be performed even when there is paper in the tray.	None	None
9E	Interlock off 1 error	When you start printing, the cover (the rear cover or ribbon cassette door) is open.	None	None
9E	Interlock off 2 error	The cover is opened during the printing operation.	None	None

4-3. Initializing the Number of Pages to Be Printed when Changing the Head

After you change the head, click the **Reset** button shown in Figure 1, and then set “Sheet printed after replacing Head” to “0 Sheets.”

Note

If you click the **Reset** button, the number of paper for “Total sheets printed” that indicates the total number of pages is not set to “0.”

Section 5

Spare Parts

5-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked △ are critical to safe operation.
Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

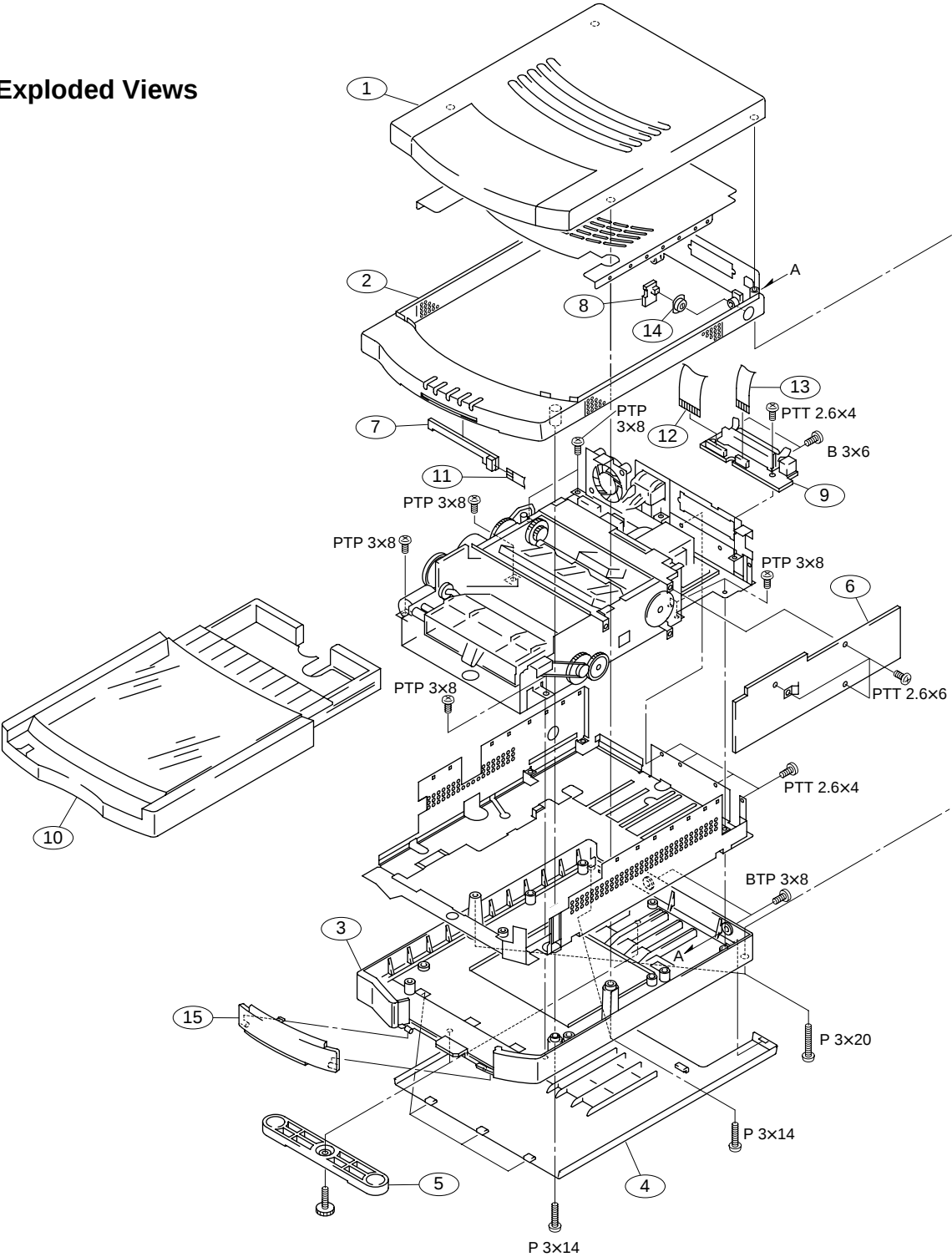
3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

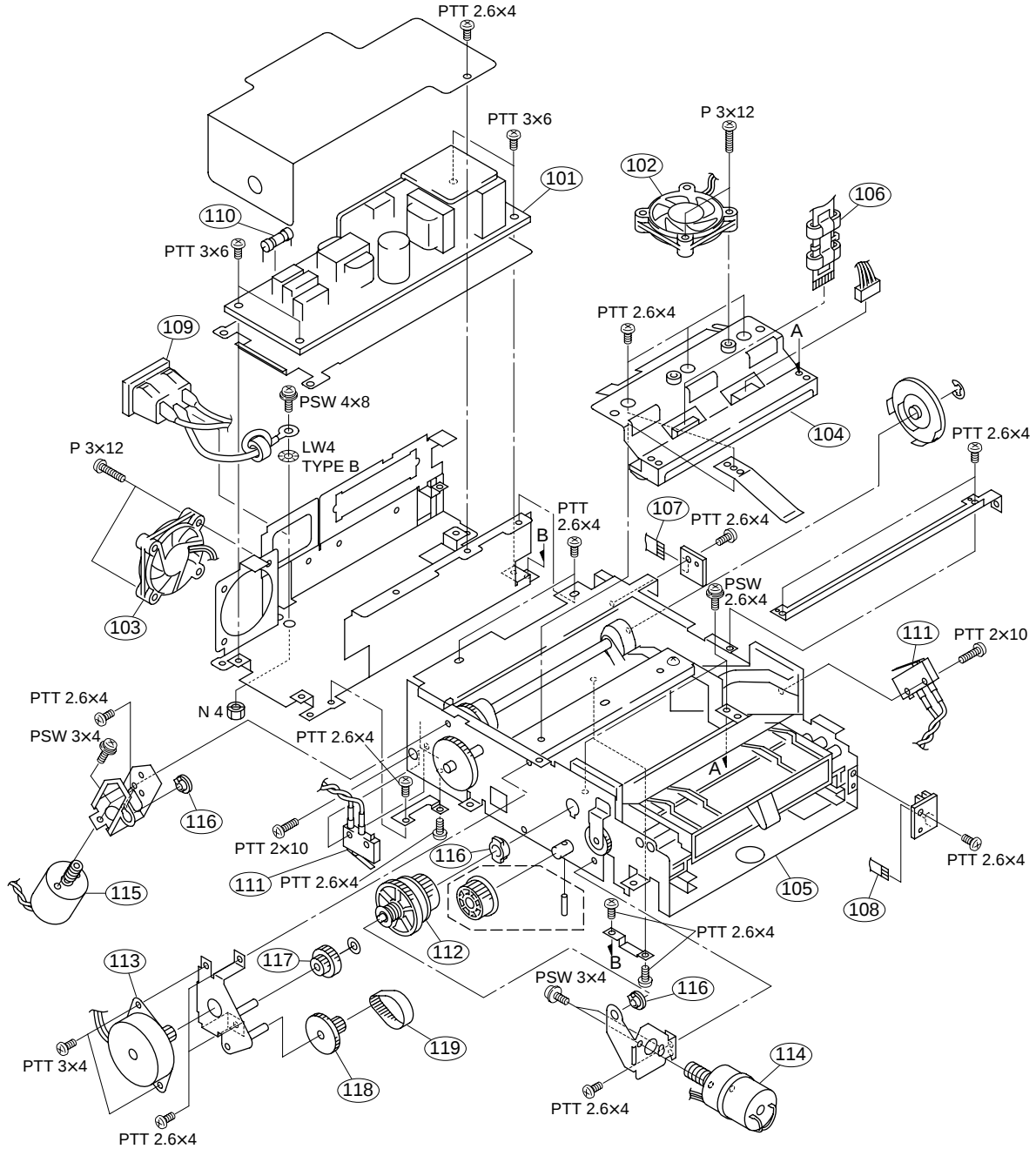
Harnesses with no part number are not registered as spare parts.
In need of repair, get components shown in the list and repair using them.

5-2. Exploded Views



No.	Part No.	SP Description
1	9-885-001-44	s ASSY, TOP CASE
2	9-885-001-45	s CASE ASSY, CENTER
3	9-885-001-46	s CASE, BOTTOM
4	9-885-001-47	s COVER, BOTTOM
5	9-885-001-48	s ASSY, STAND
6	9-885-001-49	o BOARD ASSY, MAIN
7	9-885-001-50	o BOARD ASSY, LED
8	9-885-001-51	o BOARD ASSY, SWITCH
9	9-885-001-52	o BOARD ASSY, 1284 I/F
10	9-885-001-59	s ASSY, PAPER PREPARE TRAY

No.	Part No.	SP Description
11	9-885-003-15	s BOARD (FFC), LED
12	9-885-003-16	s 1284 FFC (23 CORE)
13	9-885-003-17	s 1284 FFC (11 CORE)
14	9-885-003-24	o POWER (SW)
15	9-885-003-25	o COVER, FRONT



No. Part No. SP Description

101 ▲ 9-885-001-54 s POWER, 200V METER
 102 9-885-001-55 s FAN (HEAD SIDE), DC
 103 9-885-001-56 s FAN (POWER SIDE), DC
 104 9-885-001-57 s ASSY (W BOLT M2.5X4 TO), HEAD
 105 9-885-001-58 s DECK (HEAD NON), MECHANICAL

106 9-885-003-18 s HEAD (FFC)
 107 9-885-003-19 s HEAD POINT (FFC)
 108 9-885-003-20 s FFC, DISCHARGE BLANK
 109 ▲ 9-885-003-21 s HARNESS ASSY, AC POWER
 110 ▲ 9-885-004-30 s FUSE (200V USE), POWER

No. Part No. SP Description

111 9-885-003-26 o LOCK ASSY, INTER
 112 9-885-003-27 s ASSY, INTERLOCK
 113 9-885-003-28 s MOTOR, STEPPING
 114 9-885-003-29 s ASSY, PAPER PREPARE MOTOR
 115 9-885-003-30 s ASSY, HEAD (U/D) MOTOR

116 9-885-003-31 s BEARING
 117 9-885-003-32 s GEAR (1), S
 118 9-885-003-33 s GEAR (2), S
 119 9-885-003-34 s BELT, GRIP

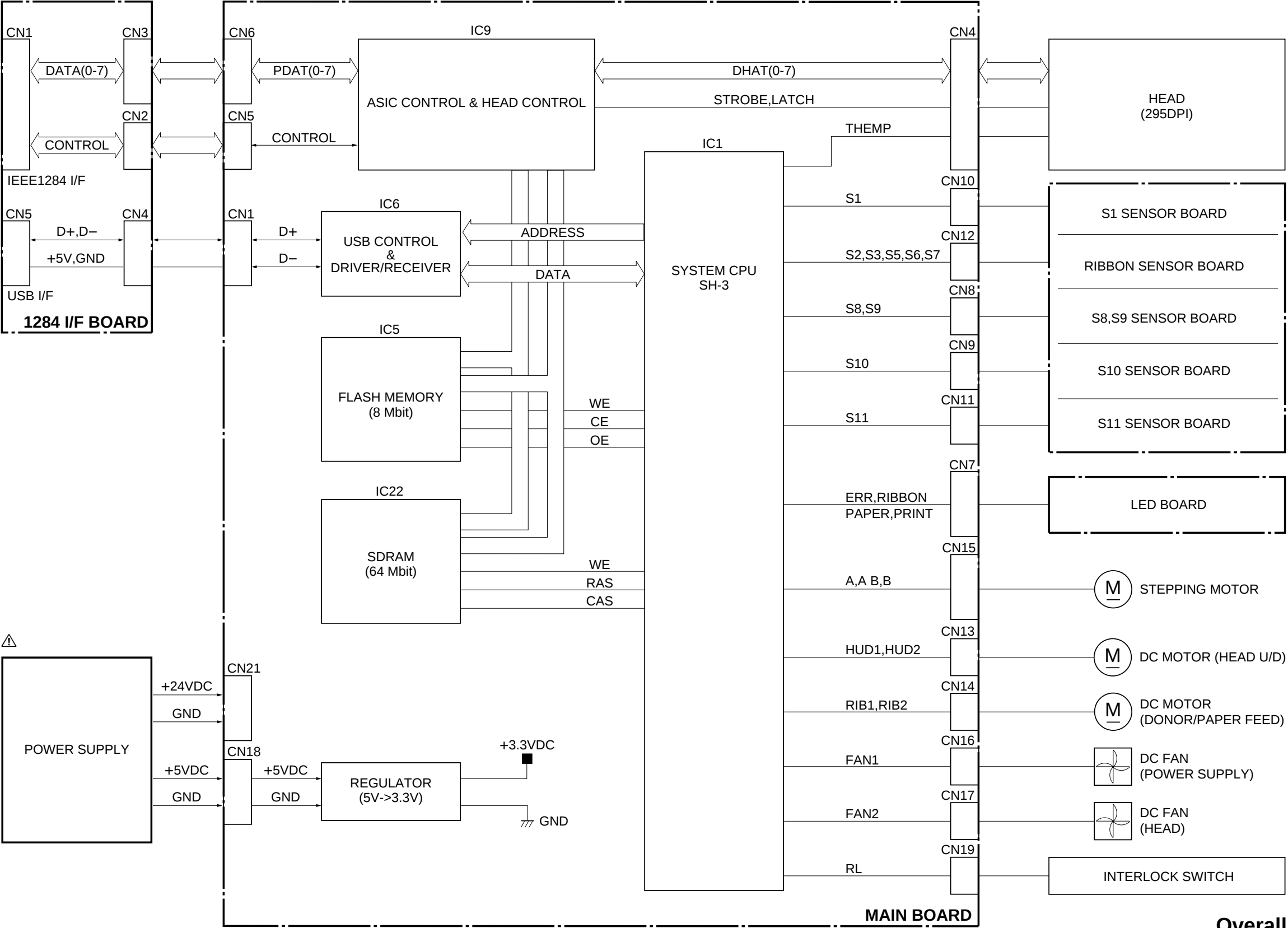
5-3. Electical Parts List

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-885-001-49	o BOARD ASSY, MAIN
1pc	9-885-001-50	o BOARD ASSY, LED
1pc	9-885-001-51	o BOARD ASSY, SWITCH
1pc	9-885-001-52	o BOARD ASSY, 1284 I/F

5-4. Packing Materials and Accessories

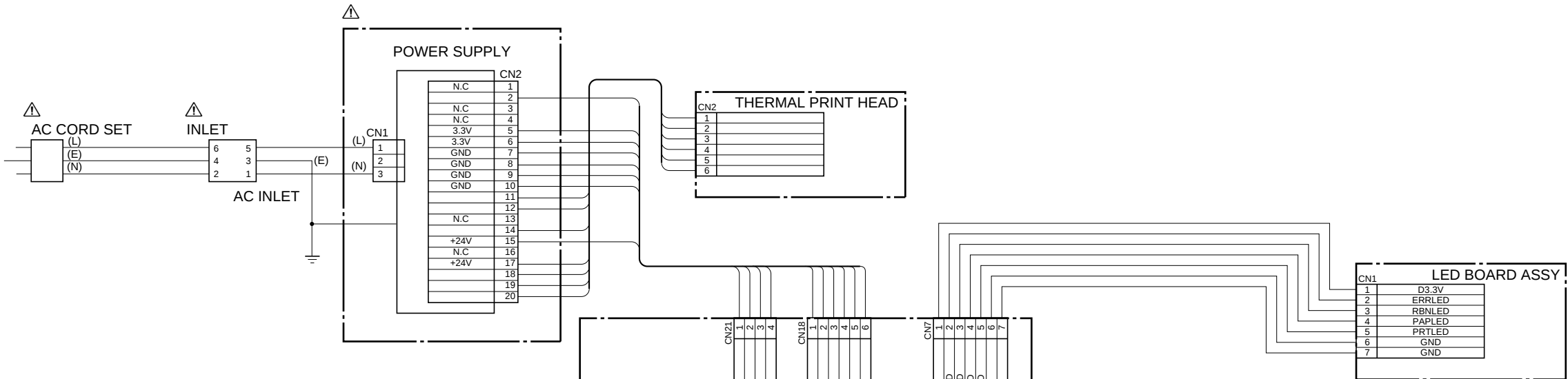
Ref. No. or Q'ty	Part No.	SP Description
1pc	3-203-973-11	s MANUAL, INSTRUCTION (for UC)
1pc	3-203-973-21	s MANUAL, INSTRUCTION (for CE)
1pc	3-203-973-61	s MANUAL, INSTRUCTION (for CE)
1pc	9-885-005-78	o CASE, TRAY
1pc	△ 9-885-005-80	o AC CABLE (for UC)
1pc	△ 9-885-005-81	o AC CABLE (for CE)

Section 6
Block Diagram and Frame

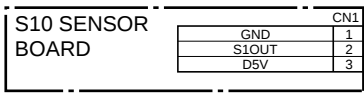
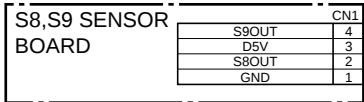
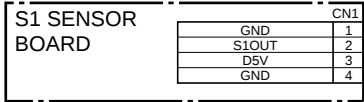
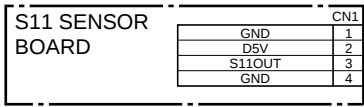
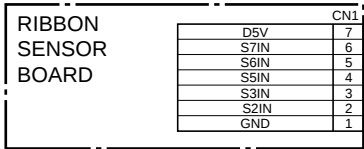


Overall

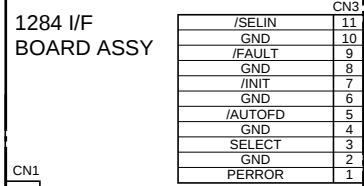
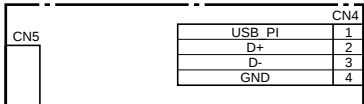
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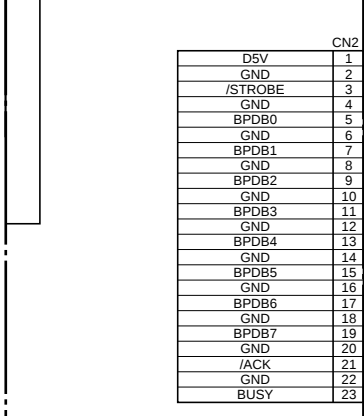
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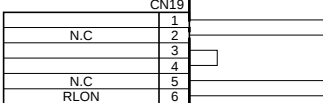
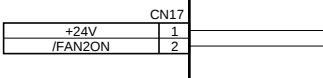
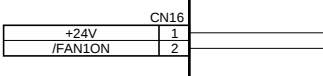
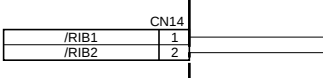
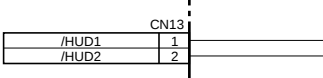
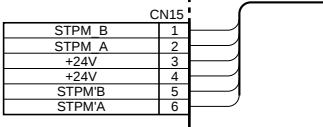
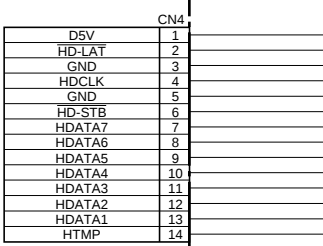
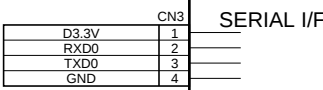
USB I/F



1284 I/F



MAIN BOARD ASSY



Frame

6-2

6-2

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer :

Check the metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 3.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 5.25 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 20 V AC range are suitable. (See Fig. A)

