SONY

5-056-874-**11** (1)
2025-07

Hybrid Graphic Printer

Instructions for Use

Before operating the unit, please read this manual thoroughly and retain it for future reference.

UP-X899MD

CE UK CA

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Indications for Use/Intended Use

The Sony UP-X899MD printer is a compact, medical grade black and white digital printer. It is designed to be connected to medical imaging systems such as mobile c-arm, ultrasound, cardiac catheterization laboratory and other compatible imaging systems. The printer produces hard copy prints of still images captured by these systems for the patient record or for referrals.

Regulatory Information relevant under the European Medical Device Regulation 2017/745 as amended (MDR)

The printer is intended to produce hard copy prints of still images captured by medical imaging systems for review and to support further clinical decisions.

Notes

- Output images from this equipment cannot be used for diagnostic use.
- This equipment is for medical professionals.
- This equipment is intended for use in medical environments, such as clinics, examination rooms, and operating rooms.

Contraindications

There are no known specific situations that contraindicate the use of this device.

Patient population

Patient population is not subject to any restrictions.

Warning

To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

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

No modification of this equipment is allowed.

Warning

To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

Warning

To disconnect the main power, unplug the power plug.
When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power plug to an easily accessible socket-outlet near the unit.
Do not position the ME equipment where it is difficult to unplug the power plug.
If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power plug.

Symbols on the product



Consult the instructions for use
Follow the directions in the instructions for use for parts of the unit on which this symbol appears.



This symbol indicates the manufacturer, and appears next to the manufacturer's name and address.



This symbol indicates the Importer, and appears next to the Importer's name and registered office address.



This symbol indicates the European Community representative, and appears next to the European Community representative's name and address.



This symbol indicates the UK Responsible Person, and appears next to the UK Responsible Person's name and address.



This symbol indicates the Swiss authorized representative, and appears next to the Swiss authorized representative's name and address.



This symbol indicates the medical device in the European Community.



This symbol indicates the date of manufacture.



This symbol indicates the serial number.



This symbol indicates the Unique Device Identifier (UDI), and appears next to the bar code representation of the Unique Device Identification.



This symbol indicates the equipotential terminal which brings the various parts of a system to the same potential.



Storage and transport temperature
This symbol indicates the acceptable temperature range for storage and transport environments.



Storage and transport humidity
This symbol indicates the acceptable humidity range for storage and transport environments.



Storage and transport pressure
This symbol indicates the acceptable atmospheric pressure range for storage and transport environments.



This symbol indicates sharp edges.

For accessories



This symbol indicates the batch code.



This symbol indicates “Do not reuse”.

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.
All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of part 15 of FCC Rules.

If you have any questions about this product, you may call;
Sony Customer Information Service Center 1-800-222-7669 or http://www.sony.com/

Supplier’s Declaration of Conformity

Trade Name	: SONY
Model	: UP-X899MD
Responsible party	: Sony Electronics Inc.
Address	: 16535 Via Esprillo, San Diego, CA 92127 U.S.A.
Telephone Number	: 858-942-2230

For customers in the U.S.A.

Caution

Federal law (United States of America) restricts this device to sale by or on the order of a licensed healthcare practitioner.

℞
ONLY

For customers in the U.S.A.

For the glossary of symbols, visit:
https://rd1.sony.net/help/med/symbols/en/

For customers in Canada

This unit has been certified according to Standard CAN/CSA-C22.2 No. 60601-1.

For customers in Europe

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Important safeguards and notices for use in the medical environments

1. All devices connected to the unit must be certified or compliant according to IEC 60601-1, IEC 60950-1, IEC 62368-1 and IEC 60065 standards and other IEC/ISO standards applicable to the devices.

2. Furthermore, the system as a whole must comply with IEC 60601-1 standards. All peripheral devices connected to the signal input/output sections of the unit constitute the medical-use system, and therefore, the user is responsible for ensuring that the system as a whole complies with IEC 60601-1 standards. If in doubt, consult qualified Sony service personnel.

3. Connecting the unit to other devices may increase the leakage current.

4. For all peripheral devices connected to the unit that operate on commercial power supplies and do not comply with IEC 60601-1 standards, incorporate an isolation transformer that complies with IEC 60601-1 standards and connect to the commercial power supply via the transformer.

5. The unit generates, uses, and may radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause interference on other devices. If the unit causes interference (which can be determined by disconnecting the power cord from the unit), try the following.
   – Relocate the unit with respect to the affected devices.
   – Connect the unit and the affected devices to different branch circuits.

   For more information, consult qualified Sony service personnel.
   (Applicable standard: IEC 60601-1-2)

Important EMC notices for use in medical environments

- The UP-X899MD needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the instructions for use.
- The UP-X899MD is intended for use in a professional healthcare facility environment.
- Portable and mobile RF communications equipment, such as cellular phones, can affect the UP-X899MD.

Warning

- Portable RF communications equipment should be used no closer than 30 cm (12 inches) to any part of the UP-X899MD. Otherwise, degradation of the performance of this equipment could result.
- If the UP-X899MD will be used adjacent to or stacked with other equipment, normal operation of the UP-X899MD under such configurations should be verified via observation.
- The use of accessories and cables other than those specified, with the exception of replacement parts sold by Sony Corporation, may result in increased emissions or decreased immunity of the UP-X899MD.

<table>
<tr><th colspan="3">Guidance and manufacturer's declaration – electromagnetic emissions</th></tr>
<tr><td colspan="3">The UP-X899MD is intended for use in the electromagnetic environment specified below. The customer or the user of the UP-X899MD should assure that it is used in such an environment.</td></tr>
<tr><td>Emission test</td><td>Compliance</td><td>Electromagnetic environment – guidance</td></tr>
<tr><td>RF emissions

CISPR 11</td><td>Group 1</td><td>The UP-X899MD uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td></tr>
<tr><td>RF emissions

CISPR 11
CISPR 32</td><td>Class B</td><td rowspan="3">The UP-X899MD is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td></tr>
<tr><td>Harmonic emissions

IEC 61000-3-2</td><td>Class A</td></tr>
<tr><td>Voltage fluctuations/ flicker emissions

IEC 61000-3-3</td><td>Complies</td></tr>
</table>

Guidance and manufacturer's declaration – electromagnetic immunity			
The UP-X899MD is intended for use in the electromagnetic environment specified below. The customer or the user of the UP-X899MD should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, a relative humidity of at least 30% is recommended.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/ output lines	±2 kV for power supply lines ±1 kV for input/ output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% U_T (100% dip in U_T) for 0.5/1 cycles [a] 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25/30 cycles [a] (for 0.5 sec) 0% U_T (100% dip in U_T) for 250/300 cycles [a] (for 5 sec)	0% U_T (100% dip in U_T) for 0.5/1 cycles [a] 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25/30 cycles [a] (for 0.5 sec) 0% U_T (100% dip in U_T) for 250/300 cycles [a] (for 5 sec)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the UP-X899MD requires continued operation during power mains interruptions, it is recommended that the UP-X899MD be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Proximity magnetic fields IEC 61000-4-39	65 A/m 134.2 kHz Pulse modulation 2.1 kHz 7.5 A/m 13.56 MHz Pulse modulation 50 kHz	65 A/m 134.2 kHz Pulse modulation 2.1 kHz 7.5 A/m 13.56 MHz Pulse modulation 50 kHz	Proximity magnetic fields of the UP-X899MD should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the a.c. mains voltage prior to application of the test level.			
a For example, 10/12 means 10 cycles at 50 Hz or 12 cycles at 60 Hz.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The UP-X899MD is intended for use in the electromagnetic environment specified below. The customer or the user of the UP-X899MD should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the UP-X899MD, including cables, than the recommended separation distance calculated from the equation appliance to the frequency of the transmitter. **Recommended separation distance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz outside ISM bands [c]	3 Vrms	$d = 1.2\sqrt{P}$
	6 Vrms 150 kHz to 80 MHz in ISM bands [c]	6 Vrms	
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz	3 V/m	IEC 60601-1-2: 2007 $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2.5 GHz IEC 60601-1-2: 2014 + A1: 2020 $d = 2.0\sqrt{P}$ 80 MHz to 2.7 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range. [b] Interference may occur in the vicinity of equipment marked with following symbol: 
NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the UP-X899MD is used exceeds the applicable RF compliance level above, the UP-X899MD should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the UP-X899MD.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

c The ISM (industrial, scientific and medical) bands between 150 kHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz.

Recommended separation distances between portable and mobile RF communications equipment and the UP-X899MD

The UP-X899MD is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the UP-X899MD can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the UP-X899MD as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m				
	IEC 60601-1-2 : 2007			IEC 60601-1-2 : 2014 + A1: 2020	
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3\sqrt{P}$	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 2.7 GHz $d = 2.0\sqrt{P}$
0.01	0.12	0.12	0.23	0.12	0.20
0.1	0.38	0.38	0.73	0.38	0.63
1	1.2	1.2	2.3	1.2	2.0
10	3.8	3.8	7.3	3.8	6.3
100	12	12	23	12	20

For transmitters rated a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Guidance and manufacturer's declaration – electromagnetic immunity					
The UP-X899MD is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. Portable RF communications equipment should be used no closer than 30 cm (12 inches) to any part of the UP-X899MD. Otherwise, degradation of the performance of this equipment could result.					
Immunity test	Band [a]	Service [a]	Modulation	IEC 60601 test level	Compliance level
Proximity fields from RF wireless communications equipment IEC 61000-4-3	380 – 390 MHz	TETRA 400	Pulse modulation 18 Hz	27 V/m	27 V/m
	430 – 470 MHz	GMRS 460 FRS 460	FM ±5 kHz deviation 1 kHz sine	28 V/m	28 V/m
	704 – 787 MHz	LTE Band 13, 17	Pulse modulation 217 Hz	9 V/m	9 V/m
	800 – 960 MHz	GSM 800/900 TETRA 800 iDEN 820 CDMA 850 LTE Band 5	Pulse modulation 18 Hz	28 V/m	28 V/m
	1,700 – 1,990 MHz	GSM 1800 CDMA 1900 GSM 1900 DECT LTE Band 1, 3, 4, 25 UMTS	Pulse modulation 217 Hz	28 V/m	28 V/m
	2,400 – 2,570 MHz	Bluetooth WLAN 802.11 b/g/n RFID 2450 LTE Band 7	Pulse modulation 217 Hz	28 V/m	28 V/m
	5,100 – 5,800 MHz	WLAN 802.11 a/n	Pulse modulation 217 Hz	9 V/m	9 V/m
NOTE: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.					
a For some services, only the uplink frequencies are included.					

Caution

When you dispose of the unit or accessories, you must obey the laws in the relative area or country and the regulations in the relative hospital regarding environmental pollution.

Warning on power connections

Use a proper power cord for your local power supply.

1. Use the approved Power Cord (3-core mains lead) / Appliance Connector / Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
2. Use the Power Cord (3-core mains lead) / Appliance Connector / Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord / Appliance Connector / Plug, please consult a qualified service personnel.

Warning on power connections for medical use

Customers in the U.S.A. and Canada should use the following type of power cord.
Customers in other countries or regions should use the power cord prescribed by their country or region.

	U.S.A. and Canada
Plug type	HOSPITAL GRADE*
Cord type	Min. Type SJT
	Min. 18 AWG
Minimum rating for plug and appliance couplers	10 A / 125 V
Safety approval	UL Listed and CSA

* Note: Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked “Hospital Only” or “Hospital Grade”.

Important

The nameplate is located on the bottom.

Caution

Do not use the device in a MR (Magnetic Resonance) environment.
It may cause a malfunction, fire, and unwanted movement.

This equipment is not suitable for use in locations where children are likely to be present.

For customers in Canada (including in the province of Quebec)

- Use the unit with the specified mains voltage. If you use the unit with a different mains voltage from the unit specification, there is a risk of fire or electric shock.
- Damage to the power cord may cause a fire or electric shock.
  - When installing, do not wedge the unit between a wall, rack, shelf, etc.
  - Do not modify or damage the power cord.
  - Do not place heavy objects on the unit or pull the unit.
  - Do not place the unit close to heating appliances or otherwise expose it to heat.
  - When unplugging the power cord, always hold the plug.
- If the unit becomes wet, it may cause an electric shock or fire due to electrical leakage.
- Not using the specified power cord may cause a fire or electric shock.
- Installing the unit on an unstable or inclined surface may cause the unit to fall and result in injury. Make sure that the installation/mounting location is sufficiently strong.
- If you connect/disconnect the power plug with wet hands, it may cause an electric shock.
- Do not step on the unit or place heavy objects on the unit. The unit may tip over, fall, or break, resulting in injury.
- Tripping over the power cord or connection cables may cause the unit to fall or tip over and result in injury. Exercise caution when connecting and installing the unit.
- Failing to insert the power cord plug/connector all the way in straight may cause a fire or electric shock.
- Always remove the power cord and connection cables when moving the unit. If any connection cable becomes snagged, it may cause the unit to tip over or fall. Moving the unit with cord still connected may damage the cords and result in a fire or electric shock.

FOR CUSTOMERS IN CANADA (INCLUDING IN THE PROVINCE OF QUEBEC)

ALL INSTRUCTIONS AND STATEMENTS WHICH ARE NECESSARY FOR CANADIAN CUSTOMERS ARE PROVIDED IN ENGLISH AND FRENCH. OTHER INSTRUCTIONS AND STATEMENTS NOT PROVIDED IN ENGLISH AND FRENCH ARE NOT FOR CANADIAN CUSTOMERS (INCLUDING IN THE PROVINCE OF QUEBEC).

For the customers in the U.S.A.

SONY LIMITED WARRANTY - Please visit www.sony.com/psa/warranty for important information and complete terms and conditions of Sony's limited warranty applicable to this product.

For the customers in Canada

SONY LIMITED WARRANTY - Please visit www.sony.com/psa/warranty for important information and complete terms and conditions of Sony's limited warranty applicable to this product.

For the customers in Europe

Sony Europe B.V. - Standard Warranty and Exceptions on Standard Warranty. Please visit https://pro.sony/support-services/primesupport/support-professional-solutions-europe-standard-product-warranty for important information and complete terms and conditions.

For the customers in Korea

SONY LIMITED WARRANTY - Please visit https://pro.sony/ko_KR/support-services for important information and complete terms and conditions of Sony's limited warranty applicable to this product.

Overview

This unit is a printer that prints images by heating a thermal head, according to the input image data, and pressing the head against special thermal printing paper to print the image on the paper. It features the following characteristics.

Quiet, high quality, fast printing

- A thin-film thermal head with a built-in high speed drive IC is equipped, and printing high resolution images of 12.8 dots/mm is available.
- High quality image (960 × 1280 dots) printing is available in approx. 2 seconds per print when printing at high speed (when [HI] is selected in [-SPEED] of the [CONFIG.] menu).
- Monochrome printing with up to 256 shades of gradation is available.
- Built-in temperature correction circuits prevent temperature changes which could cause blurred prints.

Note

Printing drops to power saving mode (LOW) at ambient temperatures of 15 °C (59 °F) or less.

Printable from the video equipment or computer

You can print from the video inputs of both NTSC and PAL. Also, this unit has a USB connector (type C) corresponding to the Hi-Speed USB (USB 2.0 compliant), so you can print a digital image from the computer.
There is no operation you need to perform to switch to printing from video equipment or computers.

Enhanced gamma curve

Four new gamma curves are now available. You can also switch to the gamma curve corresponding to the previous model by selecting [898/897] in [-DRIVER] of the [DIGITAL] menu.

Image storage to USB flash drive

This unit has the OPTION connector (USB type A) corresponding to the Hi-Speed USB (USB 2.0 compliant), so you can store a printed image to a USB flash drive.
Note that adjustments using the CONTR/BRIGHT button are not applied to images saved on a USB flash drive.

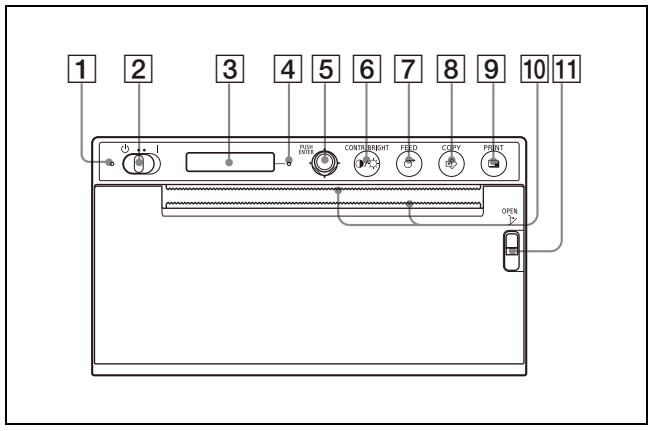
Easy paper loading

Free access to the door panel allows you to drop paper into the unit for easy loading.

Location and Function of Parts and Controls

For more details, see the referenced page numbers enclosed in parentheses ( ).

Front Panel



1 **Standby LED**
Lights in orange while in standby.
Turns off when the standby/ON switch is set to on and the power is turned on.

2 **⏻ (Standby) / I (ON) switch (19, 21, 28, 33)**
Set the switch to the **I** side, the power is turned on and the backlight on the LCD lights in white. Set the switch to the ⏻ side to enter standby.

Note

When the standby/ON switch is set to standby or when turning the main power off then on again, wait about five seconds and turn on the unit.

3 **LCD (21, 25)**
During menu operations, menu items and settings are displayed.

4 **Alarm LED**
Lights in orange when an error occurs.
The error message appears on the LCD.

5 **Menu lever (28, 34)**
Use to make menu operations.

6 **◑/☼ CONTR/BRIGHT (contrast/brightness) button (24)**
Adjust the contrast and brightness of the printouts.
Each press of the button switches between the [CONT] (contrast) and [BRIG] (brightness) menus.

7 **FEED button (20, 23)**
Hold down to feed paper.
The unit will continue to feed paper as long as you hold down the FEED button. While a print job is in progress, press to cancel the print job.

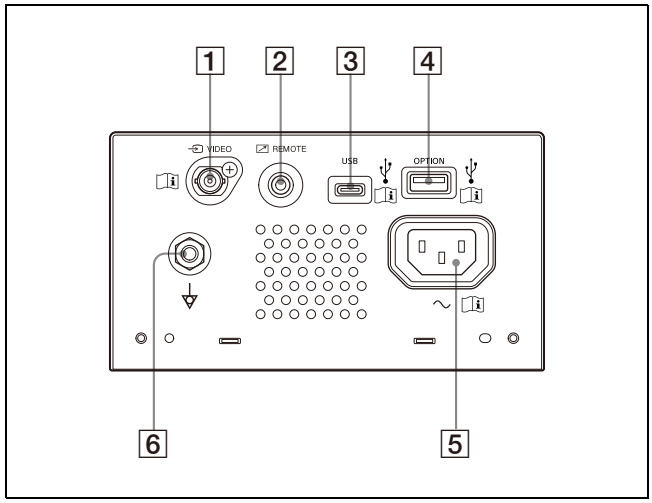
8 **COPY button (23)**
Press to print another copy of the previous printout.
You can make only one copy each time you press this button regardless of the print quantity set using the menu.

9 **PRINT button (21, 31)**
Press to print the image currently displayed on the video monitor when a video signal is input.

10 **Paper cutters**
Use to cut the paper after printing.
There are cutters positioned above and below the output slot.

11 **OPEN lever (19)**
Press the lever down to open the door panel.
The lever can be operated even when the power cord is not connected and when the unit is in standby.

Rear Panel



1 **VIDEO input connector (BNC type)**
Connect to the video output connector of the video equipment.

Caution
Do not come into contact with this terminal and patients at the same time.
Doing so may result in a generation of voltage that can be harmful to patients if the unit is malfunctioning.
Always disconnect the power cord before connecting and disconnecting connectors.

2 **REMOTE (remote control) connector (16)**
Use to control with a remote switch, etc.

3 **USB connector (type C)**
Connects to a computer equipped with the USB interface, using a USB cable compatible with Hi-Speed USB (sold separately).

4 **OPTION connector (USB type A) (31)**
Connect a USB flash drive.
This connector also supplies power to optional accessories.

Note

Use a USB flash drive formatted with FAT32.

5 **AC IN connector**
Use a specified power cord.

6 **Equipotential terminal**
Used to connect to the equipotential plug to bring the various parts of a system to the same potential.

Note

A USB connector and OPTION connector are both used to connect to the Wireless Print System UPA-WU10 (sold separately).

For connection instructions, see "Connecting to the UPA-WU10" (page 17).

Connecting to a Computer

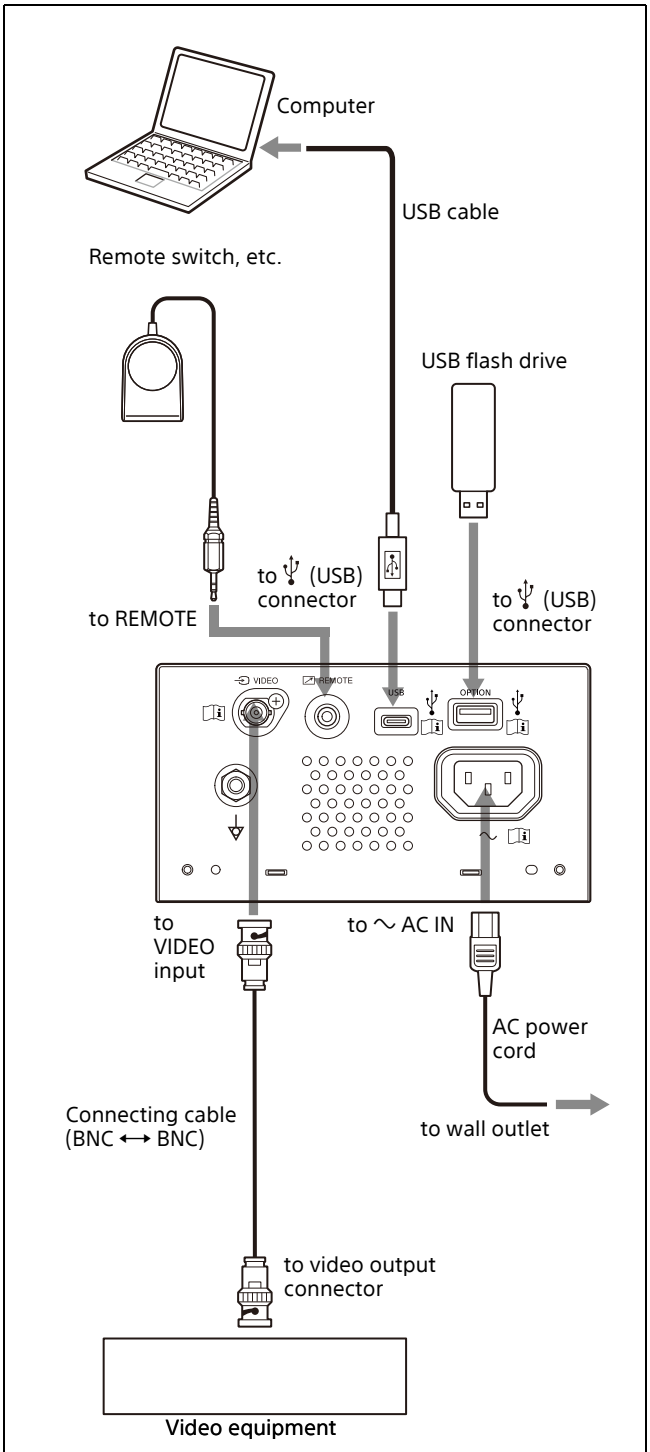
Warning

Using this unit for medical purposes

The connectors on this unit are not isolated.
Do not connect any device other than one which conforms to IEC 60601-1 standards.
When an information technology device or AV device that uses an alternating current is connected, current leakage may result in an electric shock to the patient or operator.
If use of such a device is unavoidable, isolate its power supply by connecting an isolation transformer, or by connecting an isolator between the connecting cables.
After implementing these measures, confirm that the reduced risk now conforms to IEC 60601-1 standards.

Notes

- Connect the unit after disconnecting the power cord.
- Connect the power cord last.
- Before connecting the unit to the computer, turn off the unit, computer, monitor, and all peripheral devices connected to the computer.
- Before connecting the unit to the computer, disconnect the power cord from the unit. Connect the power cord to the unit only after connecting the unit and the computer.
- Follow the connection procedures described in the computer manual.
- Make sure that the cables are connected securely at both ends.
- The unit drive software provided with the unit is not suitable for using the unit connected to a network.
- Printer operation is not guaranteed when connecting to the computer using the USB cable via a hub.
- Two or more units cannot be connected to a single computer.



For details on connecting to the Wireless Print System UPA-WU10, see "Connecting to the UPA-WU10" (page 17).

Installing the Printer Driver to the Computer

When you use Windows 10/11, install the supplied printer driver on the computer before connecting this unit to the computer. For installation instructions, see the “Installation & Setup Guide” on the supplied CD-ROM and the Readme file. You can also print using the driver for UP-X898MD, UP-D898MD, or UP-D897 by selecting [DRV:898] or [DRV:897] in [-DRIVER] of the [DIGITAL] menu (page 26).

Note

When this unit is turned on, do not make the computer which is connected to this unit standby (suspended) or pause mode. It may occur the malfunction.

Connecting to the UPA-WU10

To use the Wireless Print System UPA-WU10 (sold separately), two USB cables are required to connect the printer to the UPA-WU10 Wireless Print Receiver (UPA-WU10R).

Note

Before connecting the printer to the UPA-WU10, make sure to install the printer driver on your computer.

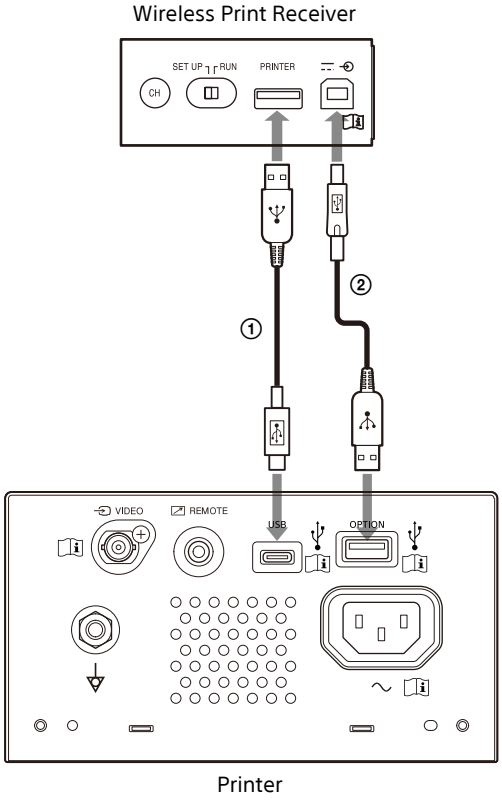
Cables

- Hi-Speed USB compatible USB Type-A to Type-C cable (not included)
- USB cable included with the UPA-WU10 (USB Type-A to Type-B)

1 Use the above USB cables to connect the printer to the Wireless Print Receiver.

① Use the USB Type-A to Type-C cable to connect the printer’s USB connector (Type-C) to the UPA-WU10 PRINTER connector (Type-A).

② Use the USB cable included with the UPA-WU10 to connect the printer’s OPTION connector (Type-A) to the Wireless Print Receiver’s ⎓ (DC IN) connector (Type-B).



2 Set up the UPA-WU10 as described in the Instruction for Use for the UPA-WU10.

Paper

Use only Sony UPP-110S/110HD/110HG paper designed for use with this unit. High print quality cannot be guaranteed if any other paper is used with this unit, and such paper could damage the unit.
You cannot use the UPP-110HA as specified for the UP-880/890MD series printer.

Paper You Can Use

Print paper characteristics are as follows.

Print Characteristics	Paper Type
TYPE I (Normal)	UPP-110S
TYPE II (High Density)	UPP-110HD
TYPE V (High Glossy)	UPP-110HG

Notes on storing and handling paper



Do not re-use
Doing so may result in malfunction and negatively affect printing results.

Storing unused paper
Store paper in the following locations. Storing it anywhere else can result in paper discoloration.
- A cool, dark location under 30 °C (86 °F)
- A dark, dry location away from sunlight and indoor lighting
- A location out of contact with alcohol or other volatile organic solvents, cellophane tape, vinyl chloride, etc.

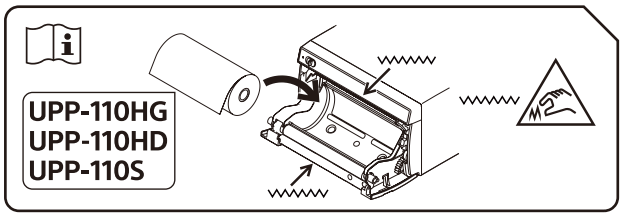
Loading paper
- Handle the paper carefully when loading not to touch the printing surface with your fingers. Inspection gel, fingerprints or perspiration could cause pictures to blur.
- After removing the label from the leading edge of the paper, pull the paper out 15 cm – 20 cm (6 in – 8 in) before printing. Label adhesive remaining on the paper could spoil a picture.
- If you reuse paper that has been removed once, pull out 15 cm – 20 cm (6 in – 8 in) before printing. If the dust, etc. exists, it could spoil a picture.

Storing printouts
- Store paper in the following locations. Storing it anywhere else can result in paper discoloration or faded prints.
  – A cool, dark location under 30 °C (86 °F) (Store between paper that does not contain plastics, or in a polypropylene bag, etc.)
  – A dark, dry location away from direct sunlight and indoor lighting
  – A location out of contact with alcohol or other volatile organic solvents, cellophane tape, vinyl chloride, etc.
- Do not stack paper with diazo wet copies (blueprint). Also, make sure that the printed sides do not face one another. Doing so can result in paper discoloration or faded prints.
- When gluing paper, use double sided tape or water-based glue.

Disposing of paper
Do not burn the paper.
Disposal of paper must be carried out in accordance with the relevant local or national legislation and the related hospital regulations.

Loading Paper

When loading paper, make sure to follow the notes of the symbols on the unit.



Caution
Paper cutters are mounted in the unit. When loading paper, be careful not to touch the paper cutters. Touching the paper cutters may cause injury.

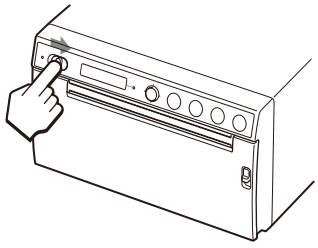
Caution
Do not touch the inside of the door and the patient at the same time.
If the unit malfunctions, it may generate voltage that could be harmful to the patient.

Notes

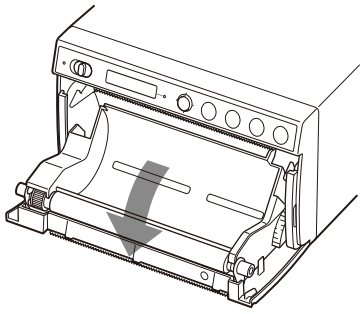
- Before loading paper, see “Paper” (page 18).
- Take care not to touch the printing surface with your fingers when loading paper. Inspection gel, fingerprints, perspiration, and folds could reduce print quality, such as blurred pictures.
- Do not use any paper other than UPP-110S/110HD/110HG paper (page 18).
- Be sure to set [-PP.TYPE] of the [CONFIG.] menu to the paper to be used. (page 27) You can confirm the media currently selected on the LCD. For details, see “Paper currently selected” (page 21).

Caution
Paper cutters are mounted in the unit. When loading paper, be careful not to touch the paper cutters. Touching the paper cutters may cause injury.

1 Set the standby/ON switch to ON to turn on the power.
If you have not yet loaded the paper, the alarm LED lights in orange and the message “EMPTY” is displayed on the LCD.

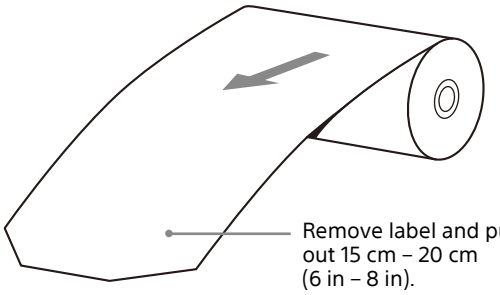


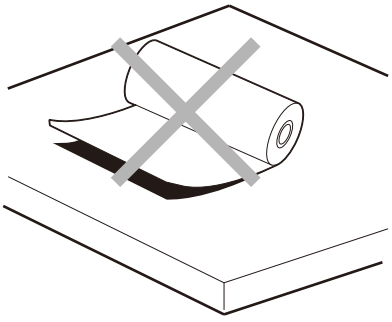
2 Press the OPEN lever down to open the door.



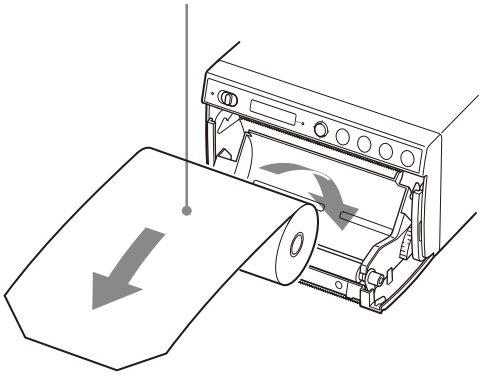
3 Remove the label from the leading edge of the paper, pull out about 15 cm – 20 cm (6 in – 8 in) of the paper, and then set the paper roll in the paper tray.

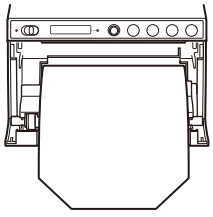
Note
When installing/removing the paper to/from the paper tray, be careful not to drop the paper or put the paper on desk, etc., with the surface of the paper facing downward. Otherwise, dirt may form on the paper, making it unusable.





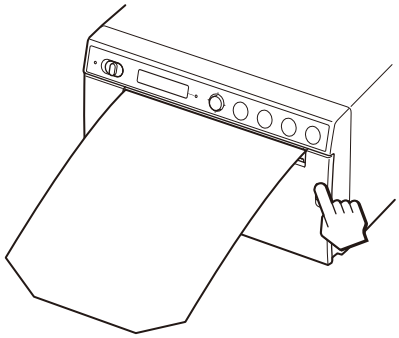
Load the paper in the orientation shown in the diagram.
Printing is not possible if the paper is reversed.

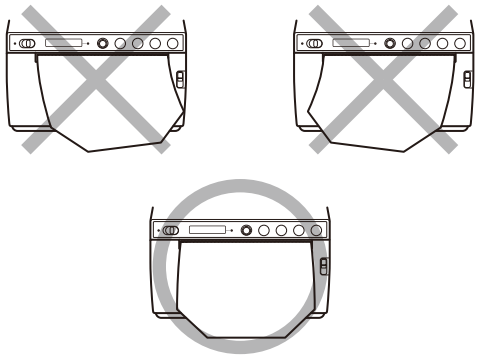




Make sure that the paper is
set straight.

4 Close the door panel by pushing it.





Notes

- Loading the paper at an angle may cause paper jams.
- If you did not pull out enough paper in step 3, press the FEED button to feed some more paper out of the unit without pulling out the paper.

Starting a Print Job

Printing from the Video Equipment

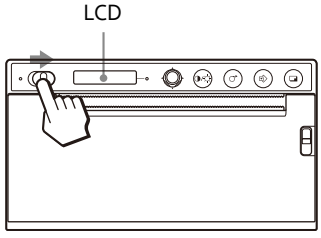
Before starting a print job, always check the following points:

- Unit connected correctly? (page 16)
- Paper loaded correctly? (page 19)
- Menu settings and adjustments done correctly? (page 25)
- Video source being input?

Starting a print job

You can set up the printing direction, image size, and all sorts of settings for printing, using the menu.
This section describes operations after completing all sorts of settings using the menu.

1 Set the standby/ON switch to ON to turn on the power.
The back light on the LCD lights in white, and "READY" is displayed on the LCD.
The standby LED that was lit in orange is turned off.



2 Press the PRINT button when you want to print.
The screen displayed at the moment the button is pressed is printed.
The image displayed at the instant you press the PRINT button is captured into memory and is printed out immediately.

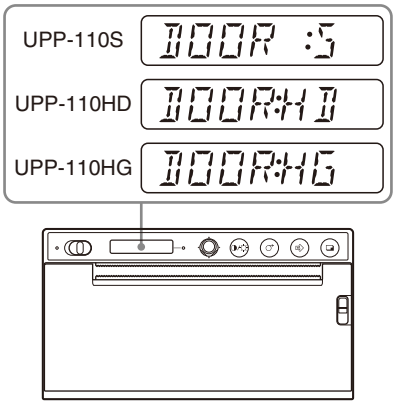
When the message is displayed on the LCD
If a problem occurs, the alarm LED lights in orange and the following messages appear.

Message	Cause and remedy
EMPTY:XX	Paper is not loaded. Load paper.
DOOR:XX	The door panel is open. Close the door.

XX indicates the selected paper.
"S" means UPP-110S, "HD" means UPP-110HD, and "HG" means UPP-110HG.

When the unit stops printing
When printing almost black images continuously, the thermal head protection circuit may shut down the unit to prevent the thermal head from overheating. In such a case, the message "COOLING" is displayed on the LCD. Leave the unit until the head cools down and this message disappears.

Paper currently selected
You can check the paper type currently selected on the LCD. The paper type currently selected is displayed on the right edge of the LCD when you press the OPEN lever down and open the door panel.



If the printout image is blurred
A rapidly moving image may be blurred when printed. Should this occur, select [FIED:ON] in [-FIELD] of the [VIDEO] menu and print out. When [FIED:ON] is selected, the resolution is slightly reduced.

Selecting the printing direction

You can select the printing direction and image size using the following items of the [VIDEO] menu.

- [-SIDE]: Selects the direction in which the image is to be printed.

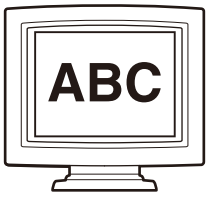
To select the printing direction

You can select the printing direction using [-SIDE] of the [VIDEO] menu.

To print in the same direction as the one displayed on the video monitor: Select [SIDE:OFF].

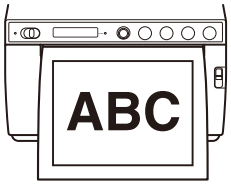
To print the image rotated by 90 degree counterclockwise: Select [SIDE:ON].

Image displayed on the monitor

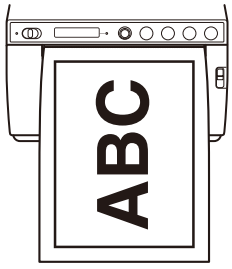


Printouts

When [SIDE:OFF] is selected



When [SIDE:ON] is selected



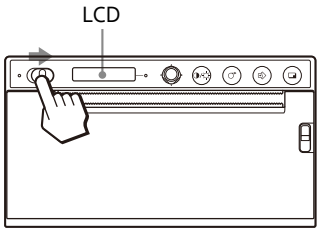
Printing from the Computer

Before starting a print job, always check the following points:

- Unit connected correctly? (page 16)
- Printer driver installed? (page 17)
- Paper loaded correctly? (page 19)
- Menu settings and adjustments done correctly? (page 25)

Starting a print job

1 Set the standby/ON switch to ON to turn on the power.
The back light on the LCD lights in white, and "READY" is displayed on the LCD.
The standby LED that was lit in orange is turned off.



2 Operate the computer by using the application software.

When the message is displayed on the LCD

If a problem occurs, the alarm LED lights in orange and the following messages appear.

Message	Cause and remedy
EMPTY:XX	Paper is not loaded. Load paper.
DOOR:XX	The door panel is open. Close the door.

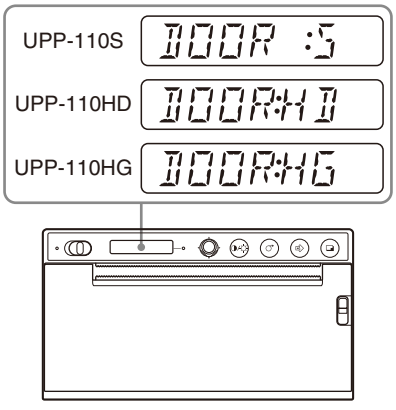
XX indicates the selected paper.
"S" means UPP-110S, "HD" means UPP-110HD, and "HG" means UPP-110HG.

When the unit stops printing

When printing almost black images continuously, the thermal head protection circuit may shut down the unit to prevent the thermal head from overheating. In such a case, the message "COOLING" is displayed on the LCD. Leave the unit until the head cools down and this message disappears.

Paper currently selected

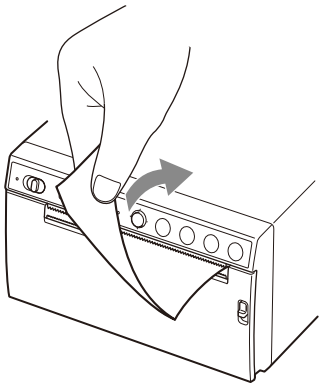
You can check the paper type currently selected on the LCD. The paper type currently selected is displayed on the right edge of the LCD when you press the OPEN lever down and open the door panel.



Cutting the Printed Paper

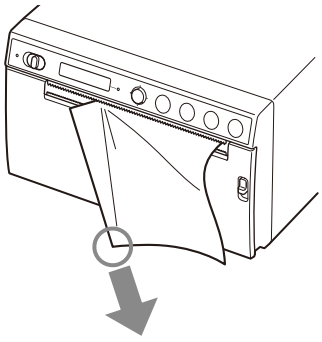
Cutting using the upper paper cutter

Hold the edge of the paper and cut the paper upward in an arc.



Cutting using the lower paper cutter

Hold the corner of the paper and pull downward at an angle to cut the paper.



Notes

- If you cut the paper by pulling it horizontally, the paper inside the unit will skew and may cause misprinting.
  If the paper is skewed, reload the paper correctly. (page 19)
- When cutting using the lower paper cutter, the paper may not be cut cleanly if holding the center of the front edge of the paper.

Canceling a Print Job

Press the FEED button while printing. Printing stops.

Making Copies of the Last Printout

Press the COPY button. The unit makes a copy of the last printout. You can make only one copy regardless of the print quantity set using the menu.

Notes

- If you press the COPY button immediately after turning the power on, the alarm buzzer will sound as nothing is stored in memory.
- Turning off the power will cause the image stored in memory to be lost.

To make multiple copies of the same printout

Press the COPY button and then press it again while the first image is printing. Each time you press the COPY button, a short buzzer sounds. Up to 20 copies ca be made including the first print.

Note

The number of printouts printed by pressing the PRINT button is also included in the maximum number. For example, if you press the COPY button after you pressed the PRINT button five times and made five printouts, the number of multiple copies of the same printout becomes 15.

To interrupt copying

Press the FEED button while printing.

To make copies in different directions

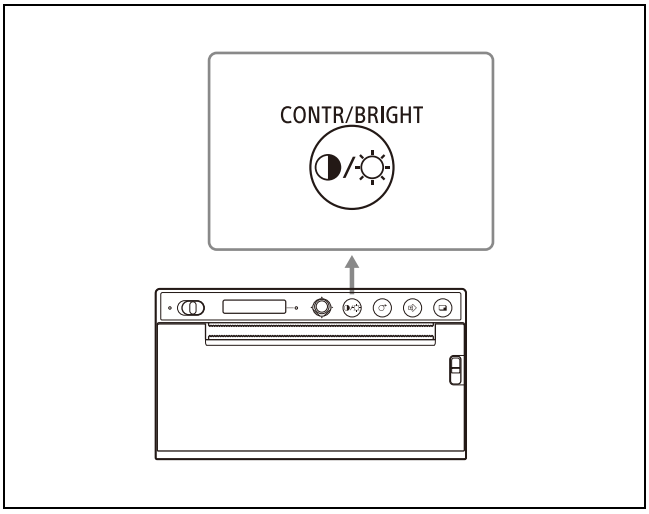
You can copy the video image stored last in a different direction. Select the direction in “Selecting the printing direction” (page 22), then press the COPY button.

Feeding Paper

To feed paper, press the FEED button. The unit will continue to feed paper as long as you hold down the FEED button. Do not attempt to pull paper out of the unit with your hand.

Adjusting the Contrast and Brightness

You can adjust the contrast and brightness of the printouts using the CONTR/BRIGHT button and menu lever.
Each press of the button switches between the [CONT] (contrast) and [BRIG] (brightness) menus.



To adjust the contrast

1 Press the CONTR/BRIGHT button to open the [CONT] menu.

2 Use the menu lever to adjust the contrast.
To increase the contrast: Tilt the menu lever up. Maximum is 16.
To decrease the contrast: Tilt the menu lever down. Minimum is –16.

Note

The contrast adjusting function is equivalent to [Light] of the density control provided with the printer driver. The value adjusted by using the Contrast control is added to the value already set as [Light].

To adjust the brightness

1 Press the CONTR/BRIGHT button to open the [BRIG] menu.

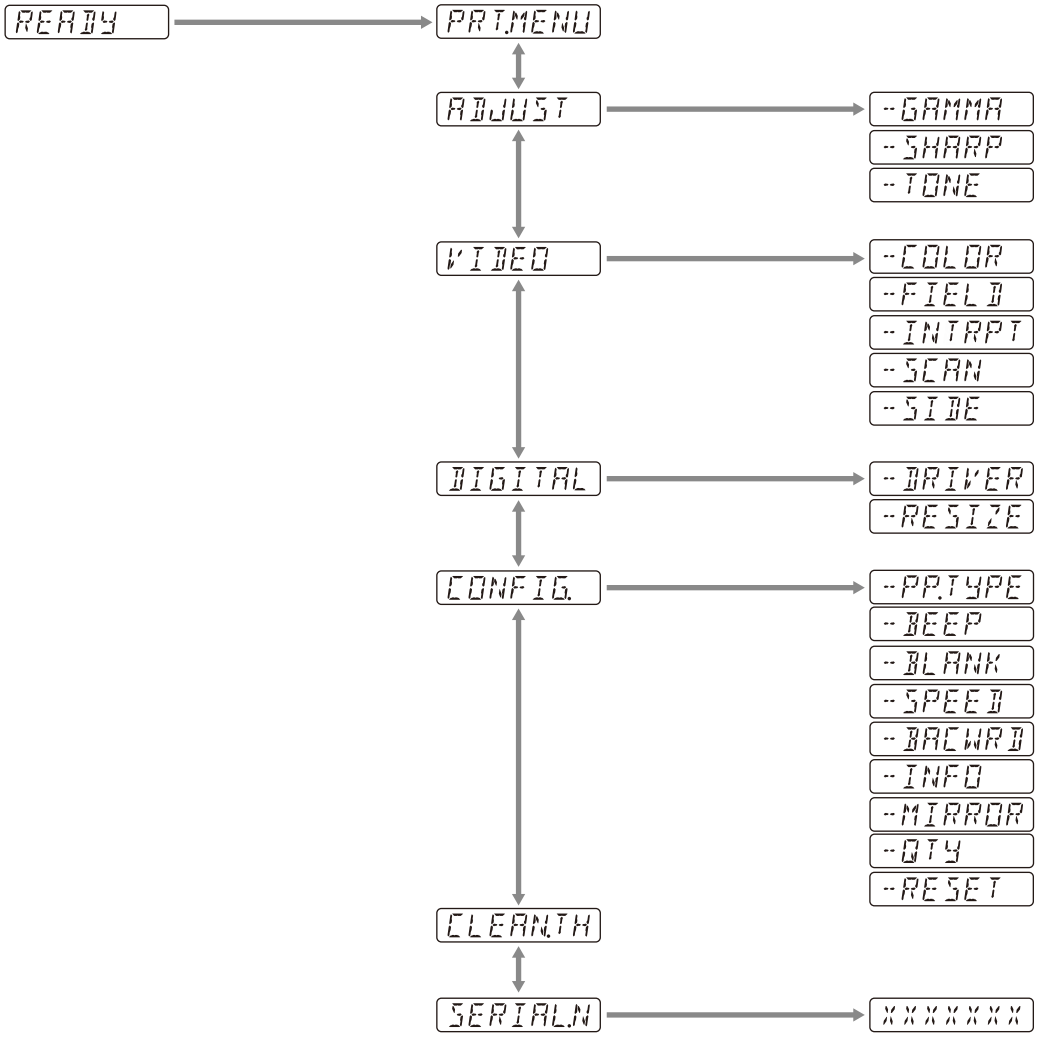
2 Use the menu lever to adjust the brightness.
To increase the brightness: Tilt the menu lever up. Maximum is 16.
To decrease the brightness: Tilt the menu lever down. Minimum is –16.

Adjustments and Settings Using the Menu

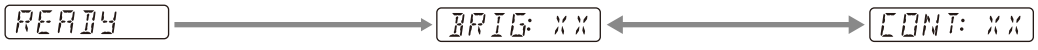
You can carry out adjustments and settings to meet your requirements. Those settings and adjustments are retained even if the unit is turned off.

Menu Structure

The contents displayed on the LCD change in sequence as you operate the menu lever, as shown in the following menu flow chart, and you can make the settings for each item.



The contents displayed on the LCD change in sequence as you operate the CONTR/BRIGHT button, as shown in the following menu flow chart, and you can make the settings for contrast and brightness.



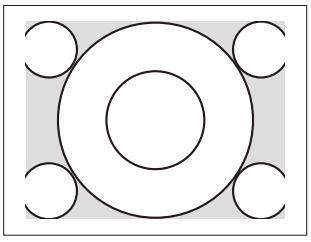
Menu List

The menu item settings are shown in the following table.
Settings enclosed in [ ] are the default settings.

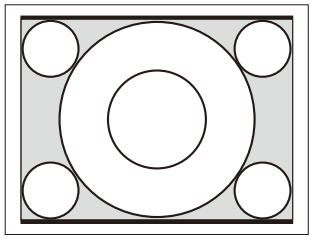
Item	Description	Setting	
PRT.MENU	Prints current settings by menu list.	-MENU:OK	Prints by pushing the menu lever or tilting it to the right.
ADJUST	Displays menu for adjusting image quality.	-GAMMA	Select the type of gamma. GAMA4: Hard gradation-2 GAMA3: Hard gradation [GAMA2]: Standard GAMA1: Soft gradation When you select [898/897] in [-DRIVER], the gamma curve is switched to the one corresponding to the previous model.
		-SHARP	Emphasizes the outline of the printout. Adjusts the sharpness of the printout to any of 15 levels, from 0 to [7] to 14. The higher the value, the more the outline is emphasized. Set to "0" to turn it off. The default value is "7."
		-TONE	Adjusts the density of halftone. You can set between –16 - [0] - +16.
VIDEO	Displays menu for video.	-COLOR	Select color, in accordance with the input signal. COLR:ON: Video signal to print in color. [COLR:OFF]: Video signal to print in black and white.
		-FIELD	Select memory mode. FIED:ON: Avoids blurring the image when shooting in fast motion (such as capturing a ball being hit by a bat). [FIED:OFF]: This is the standard setting.
		-INTRPT	Select operation for when printing is stopped. INTR:ON: If you press the PRINT button again to cancel a print operation and want to print a screenshot at the moment the PRINT button is pressed, select this. [INTR:OFF]: Even when you press the PRINT button again during a print operation, printing continues. If you want to print a screenshot at the moment the PRINT button is pressed after the print operation finishes, select this.
		-SCAN[1)]	Select an image to print. The print area gets smaller in the order of SC:WD2 [SC:WD1] SC:NOR
		-SIDE[2)]	Select the direction in which the image is to be printed. SIDE:ON: Prints the image rotated by 90 degrees counterclockwise. [SIDE:OFF]: Prints the image in the same direction as that displayed on the monitor.
DIGITAL	Displays menu of settings to print from computer.	-DRIVER	Select the printer driver to use for this unit. [DRV:899]: Use the driver for UP-X899MD, UP-D899MD. DRV:898: Use the driver for UP-X898MD, UP-D898MD. DRV:897: Use the driver for UP-D897. If a paper size for 3840×1280 or 4096×1280 is selected using the UP-X898MD/UP-D898MD driver or UP-897 driver, only the maximum paper size that can be printed on this unit (2560×1280) will be printed. Wireless Print System UPA-WU10 cannot be used with [DRV:897].
		-RESIZE	Select whether or not the image is enlarged. [RSIZ:OFF]: Prints the image at its original size. RSIZ:ON: Prints the image at a larger size, according to the paper size set by the printer driver.

Item	Description	Setting	
CONFIG.	Displays settings for operation.	-PP.TYPE	Select paper to use. [P.TYPE:HG]: Use UPP-110HG. P.TYPE:HD: Use UPP-110HD. P.TYPE:S: Use UPP-110S.
		-BEEP	Select whether the operation tone sounds. Error tones sound regardless of the setting. BEEP:OFF: The operation tone does not sound. [BEEP:ON]: The operation tone sounds.
		-BLANK	Adjust the length of the top blank space (BACW:OFF) or the bottom blank space (BACW:ON). BLANK:MIN: Minimizes the blank space. [BLANK:S]: Shortens the blank space. BLANK:L: Lengthens the blank space.
		-SPEED	Select the printing speed. When you use the UPP-110HD paper, you cannot select [HI] (high speed printing). LOW: Prints at power saving setting (low speed). [HI]: Prints at high speed. Prints in LOW mode at 15 °C (59 °F) or lower.
		-BACWRD[3)]	Select the printing direction. BACW:ON: Starts to print in the reverse direction (from the top of the screen). [BACW:OFF]: Starts to print in the normal direction (from the bottom of the screen).
		-INFO	Select whether the print conditions are to be printed under image. INFO:ADJ: Prints image quality adjustment value. INFO:STR: Prints the pathname/file name of the image stored on the USB flash drive. [INFO:OFF]: Does not print information.
		-MIRROR	Prints image inverting right and left. MIRR:ON: Inverts right and left of image. [MIRR:OFF]: Does not invert image.
		-QTY	Set the print quantity. QTY:[1] - 10: You can make 1 - 10 copies of the same printout.
		-RESET	Resets the menu items to the default setting (initialization). [RESET:OK]: Resets the settings to the default.
CLEAN.TH	Starts head cleaning.	-CLEAN:OK	Starts the head cleaning by pushing the menu lever or tilting it to the right.
SERIAL.N	Displays serial numbers of the product.		

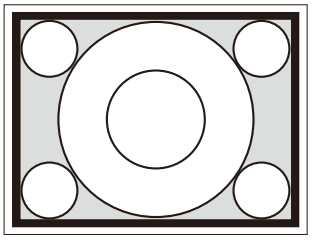
1) The range of the image to be printed is as follows.



When “SC:NOR” is selected



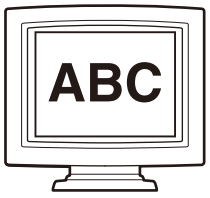
When “SC:WD1” is selected



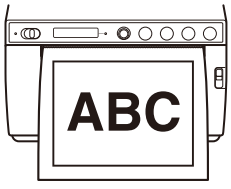
When “SC:WD2” is selected

2) The print direction of the images printed is as follows.

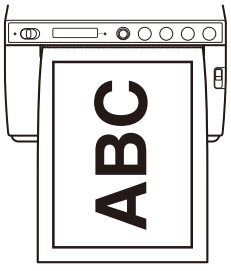
Image displayed on the monitor



Printouts

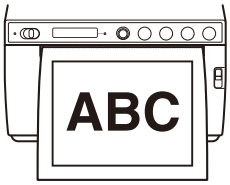


When [SIDE:OFF] is selected

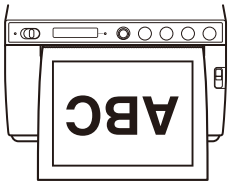


When [SIDE:ON] is selected

3) The printing direction is as follows.



When [BACW:OFF] is selected

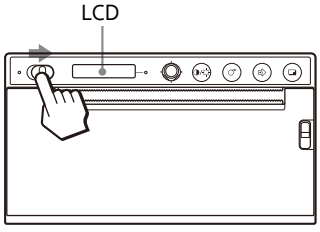


When [BACW:ON] is selected

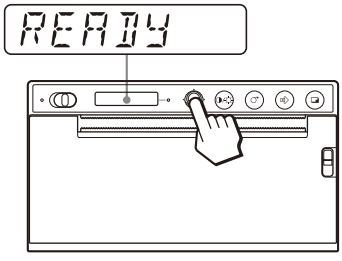
Basic Menu Operations

This section describes the basic menu operations which are common to each menu, taking settings for printing direction as an example.
When operating the menu lever, “pushing” and “tilting to the right” are the same action.

1 Set the standby/ON switch to ON to turn on the power.
The back light on the LCD lights in white, and the standby LED that was lit orange is turned off.

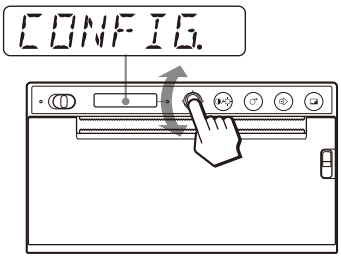


2 Confirm that “READY” is displayed on the LCD, and push the menu lever or tilt it to the right.



The unit enters the menu mode.
Menu item is displayed on the LCD.

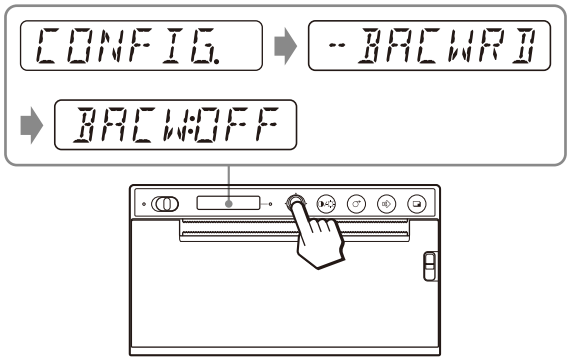
3 Display [CONFIG.] by tilting the menu lever up or down.



4 Push the menu lever or tilt it to the right.
The unit enters the menu mode in which you can set printing condition. The menus have "-" in front of their name.

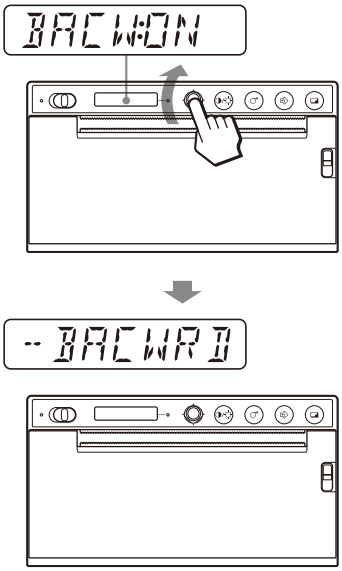
5 Display [-BACWRD] by tilting the menu lever up or down.

6 Push the menu lever or tilt it to the right.



The unit enters the mode in which you can select the printing direction.
The factory setting [BACW:OFF] is displayed on the LCD. [BACW:OFF] is the current setting. Change this setting to [BACW:ON].

7 Display [BACW:ON] by tilting the menu lever up, and then push the menu lever or tilt it to the right.



[BACW:ON] is registered as the printing direction.
[-BACWRD] is displayed on the LCD.

Note

If about 20 seconds elapse without making any menu operation after you have displayed the menu item or setting, the display returns to "READY" on the LCD and the unit exits the menu mode.
In such a case, the setting of [-BACWRD] is not changed.

To cancel the setting
Go back to step 5 or 3 by tilting the menu lever to the left in step 7.

To continue menu operations
Make settings by repeating steps 3 to 7.

To end the menu operations
Display "READY" by tilting the menu lever to the left after step 7.
The unit exits the menu mode.

Menu lock function
If the message "LOCK" is displayed and you hear the alarm sound when you push the menu lever, the menu lever is disabled because the menu operation function is locked. If you want to perform a menu operations, see the "LOCK" item in "Error Messages" (page 38).

Printing the Settings List

You can make a printout of the current menu settings.

1 Push the menu lever or tilt it to the right.
The menu list is displayed and the unit enters menu mode.

2 Display [PRT.MENU] by tilting the menu lever up or down, and then push the menu lever or tilt it to the right.

3 Confirm [MENU:OK] is displayed, and then push the menu lever or tilt it to the right.
The unit starts printing the current menu settings.
[PRT.MENU] is displayed on the LCD.

4 Tilt the menu lever to the left.
“READY” is displayed and the unit enters the normal printing mode.

Storing Images on a USB Flash Drive

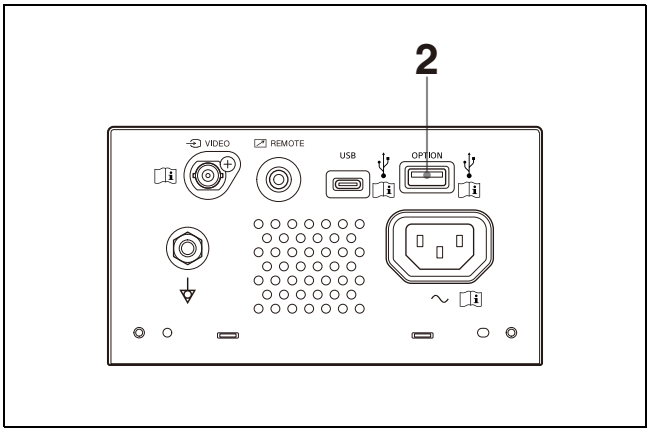
Warning

Using this unit for medical purposes
This connector is not isolated.
Do not connect any device other than a USB Flash Drive or a UPA-WU10 Wireless Print System powered exclusively by the electric supply from the unit.
When a device that uses an alternating current is connected, current leakage may result in an electric shock to the patient or operator.

When a USB flash drive is inserted into the OPTION connector (USB type A) on the rear panel of this unit, the image captured by the unit is saved as a bitmap image file on the USB flash drive when printing. The image files saved in the USB flash drive can be viewed using a computer equipped with a USB connector (type A).

Folder where the image files are stored
The image files will be stored to the \\SONY\UP-X899MD\SN.[Serial Number of this device] folder on the USB flash drive. If the folder does not exist, it will be created.

File name of the image
Each time you press the PRINT button to print, the image files are numbered from UP_000000.bmp to UP_999999.bmp in sequence and saved as bitmap image files to the USB flash drive. For split screens, each screen is also saved as a file. A new image is only saved when it is printed. Once printed, it will not be saved.



1 Turn on the power of this unit.

2 Connect the USB flash drive to the OPTION connector (USB type A) of this unit.

3 Press the PRINT button to print the VIDEO signal.
Print from a computer if printing images stored on the computer.
The unit starts printing.
When printing is finished, the image is also stored in the USB flash drive. While writing, “STORING” is displayed on the LCD. When writing is completed, “STORING” disappears.

To remove the USB flash drive

While “STORING” is displayed on the LCD, the unit is writing data to the USB flash drive. If you remove the USB flash drive, the data will not be written correctly, and the data on the USB flash drive may be corrupted.

When “NO SPACE” is displayed on the LCD

The USB flash drive is full or the maximum number of images has already been stored, and no further images can be stored. In this case, delete unnecessary files from the USB flash drive using a computer or use a new USB flash drive.

Notes

- Do not connect a USB device with its own power supply, such as a hard disk, to the OPTION connector (USB type A) of this unit. Otherwise it may cause malfunction.
- Do not connect to the USB device requiring over 500 mA even temporarily, even if its power supply is from the OPTION connector (USB type A).
- Only BMP is supported as the save file format.
- Images stored on the USB flash drive cannot be printed again.
- Images can be stored on the USB flash drive, but saved images cannot be read or deleted. Use the computer equipped with a USB connector (type A) to read or delete images.
- Backup files of the USB flash drive to your computer before using the USB flash drive with this device. We cannot guarantee that files stored on a USB flash drive will not be corrupted or deleted when used on this unit.

Notes on the OPTION connector (USB type A)

- It is compatible with the USB mass storage. (Operations for all types of USB flash drive are not guaranteed.)
- Connection of the OPTION connector (USB type A) to the USB flash drive through a hub is not guaranteed.
- It is compatible with USB Hi-Speed.
- Corresponding file system is FAT32.
- If the USB flash drive has a lock function, make sure to disable it before using it.
- USB flash drive with more than one drive cannot be used.
- USB flash drives with special features (such as encryption) are not supported.
- You can connect USB flash drives or optional accessories by inserting them directly into the connector. Do not use USB extension cables, etc.

Maintaining Unit Performance

On Safety

- Check the operating voltage before operation. Operate the unit only with a power source specified in “Specifications” (page 35).
- Stop operation immediately if any liquid or solid object falls into the cabinet. Unplug the unit and have it checked by qualified personnel.
- Unplug the unit from the wall outlet if you will not be using it for a long time. Disconnect the power cord by grasping the plug. Never pull the cord itself.
- Do not disassemble the cabinet. Refer servicing to qualified personnel only.

Caution

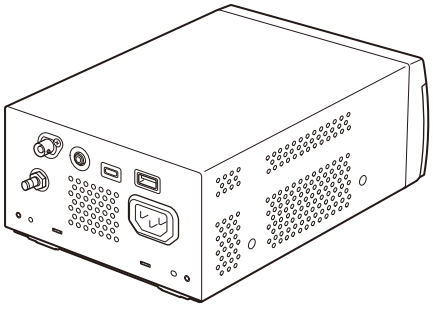
Paper cutters are mounted in the unit. When loading paper, be careful not to touch the paper cutters. Touching the paper cutters may cause injury.

On Installation

- Place the unit on a level and stable surface. If you use the unit with placed on an uneven surface, malfunction of the unit is likely to occur.
- Do not install the unit near heat sources. Avoid locations near radiators or air ducts, or places subject to direct sunlight or excessive dust, humidity, mechanical shock or vibration.
- Provide adequate air circulation to prevent heat buildup. Do not place the unit on surfaces such as rugs, blankets, etc., or near materials such as curtains and draperies.

Caution

To prevent internal heat built-up, maintain sufficient space around the printer (at least 10 cm (4 in.)). Do not obstruct the ventilation holes on the right and left sides of the printer and on the rear panel.



Notes on Carrying the Unit

- Take care not to bump or drop the unit.
- Do not carry or move the unit when the paper is loaded. Doing so may cause a malfunction.

On Condensation

If the unit is suddenly taken from a cold to a warm location, or if ambient temperature suddenly rises, moisture may form on the outer surface of the unit and/or inside of the unit. This is known as condensation. If condensation occurs, turn off the unit and wait until the condensation clears before operating the unit. Operating the unit while condensation is present may damage the unit.

On Consumable Parts

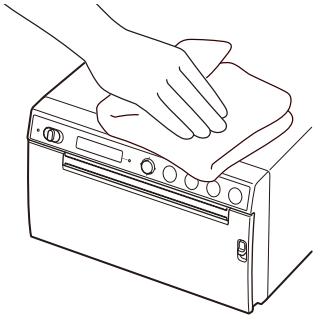
The life expectancy of the electrolytic capacitor is about 5 years under normal operating temperatures and normal usage (8 hours per day; 25 days per month).
If usage exceeds the above normal usage frequency, the life expectancy may be reduced correspondingly.

Use with Electrosurgical Knives and Similar Devices

If this unit is used together with an electrosurgical knife, etc., the picture may be disturbed, warped or otherwise abnormal as a result of strong radio waves or voltages from the device. This is not a malfunction.
When you use this unit simultaneously with a device from which strong radio waves or voltages

are emitted, confirm the effect of this before using such devices, and install this unit in a way that minimizes the effect of radio wave interference.

Cleaning the Cabinet



Note

Before cleaning the printer, be sure to set the standby/ON switch to standby and then **disconnect the power cord**.

When solvents such as benzene or thinner, or acid, alkaline or abrasive detergent, or chemical cleaning cloths are used on the printer surface, the surface finish may be damaged. Take care with respect to the following:

- Clean the printer surface with a 50 to 70 v/v% concentration of isopropyl alcohol or a 76.9 to 81.4 v/v% concentration of ethanol.
- Stubborn stains may be removed with a soft cloth such as a cleaning cloth lightly dampened with mild detergent solution and then cleaned using the above chemical.
- Do not use unnecessary force to rub the printer surface with a stained cloth. The printer surface may be scratched.
- Do not keep the printer surface in contact with a rubber or vinyl resin product for a long period of time. The surface finish may deteriorate or the coating may come off.

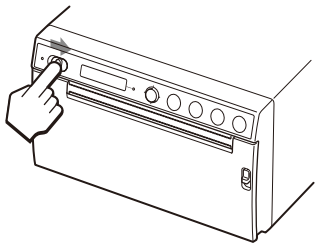
Cleaning the Thermal Head

If the printout is dirty or white stripes appear on the printouts, clean the thermal head using the cleaning sheet supplied.
Carry out the head cleaning operation using the menu.

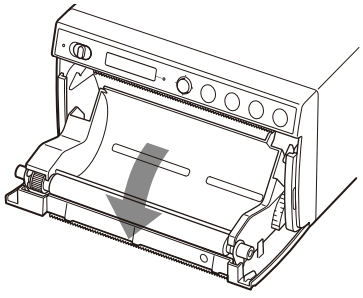
Caution

Paper cutters are mounted in the unit. When cleaning the thermal head, be careful not to touch the paper cutters. Touching the paper cutters may cause injury.

1 Set the standby/ON switch to ON to turn on the power.



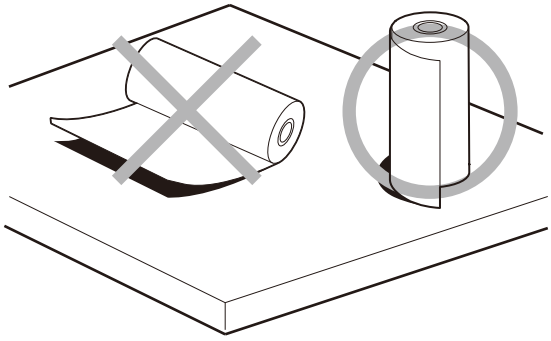
2 Press the OPEN lever down to open the door.



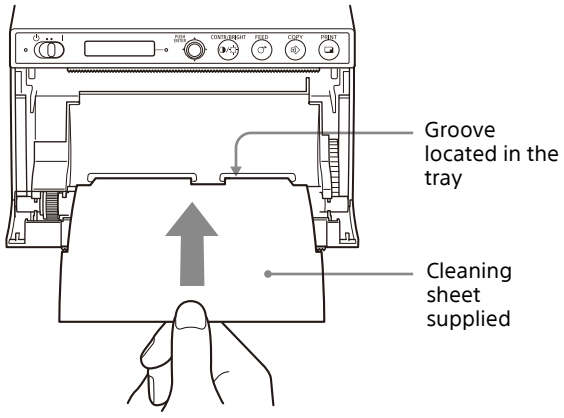
If the paper is loaded in the paper tray, remove it.

Note

Be careful not to let the surface of the paper touch the other objects. Failure to do so may cause defective printings because of the dirt on the paper.



3 Insert the supplied cleaning sheet into the groove of the paper tray.
Insert the cleaning sheet so that it fits into the groove.



4 Close the door panel by pushing it.

5 Push the menu lever.
Menu item is displayed.

6 Display [CLEAN.TH] by tilting the menu lever up or down, and then push the menu lever.

7 Confirm that [CLEAN:OK] is displayed, and then push the menu lever.
The unit starts cleaning the thermal head.
[CLEAN:TH] is displayed on the LCD.
Cleaning is finished when the cleaning sheet stops.

8 Press the OPEN lever down to open the door and remove the cleaning sheet.

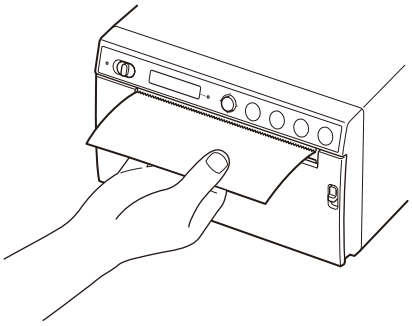
9 Close the door panel by pushing it.

Note

Clean the thermal head only when necessary. If you clean the thermal head too frequently, it may cause a malfunction.

Cleaning the Platen Roller

When the surface of the platen roller gets dirty, the paper will not be fed smoothly, resulting in paper jams and inconsistent print quality. Set the standby/ON switch to ON to turn on the power, and then press the FEED button for about one second to feed some more paper out of the unit. It is likely that the roller is getting dirty if the paper is easily pulled out by the hand.



Clean the platen roller using a soft cloth moistened with a 76.9 to 81.4 v/v% concentration of ethanol when it becomes dirty.

Caution

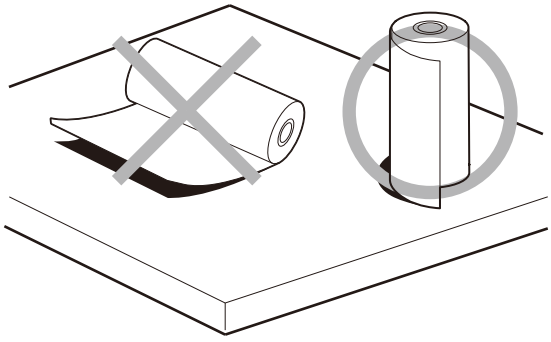
Paper cutters are mounted in the unit. Be careful not to touch the paper cutters. Touching the paper cutters may cause injury.

1 Set the standby/ON switch to ON to turn on the power.

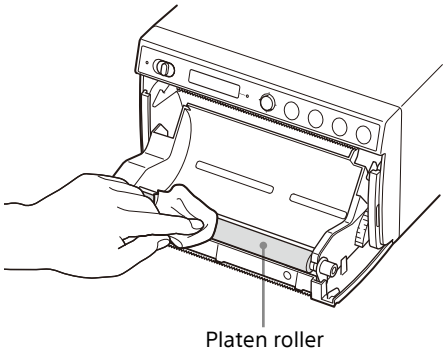
2 Press the OPEN lever down to open the door. If the paper is loaded in the paper tray, remove it.

Note

Be careful not to let the surface of the paper touch the other objects. Failure to do so may cause defective printings because of the dirt on the paper.



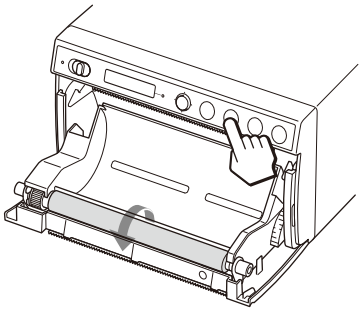
3 Clean the platen roller gently using a soft cloth moistened with ethanol.



Notes

- After the surface of the platen roller wiped has been dried completely, turn the platen roller to clean another portion.
- Do not turn the platen roller with hands. Use the FEED button to turn it. Press the FEED button to automatically turn the platen roller.

4 Press the FEED button.
The platen roller turns about 120 degrees.



Notes

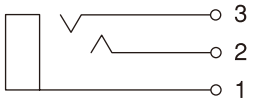
- Be careful not to get your fingers caught in the turning platen roller.
- Be sure to start cleaning only after the platen roller has stopped completely.

5 Repeat steps 3 and 4 until the platen roller becomes clean.

6 After the platen roller has been dried completely, close the door by pushing it.

Specifications

Power Requirements
100 V to 240 V ∿, 50/60 Hz
Input Current 0.75 A to 0.5 A
Operating Temperature
10 °C to 40 °C (50 °F to 104 °F)
Operating Humidity
20% to 80% (no condensation allowed)
Operating Pressure
700 hPa to 1,060 hPa
Storage and Transport Temperature
–20 °C to +60 °C (–4 °F to +140 °F)
Storage and Transport Humidity
20% to 90% (no condensation allowed)
Storage and Transport Pressure
700 hPa to 1,060 hPa
Dimensions 154 × 88 × 208 mm (6 $^{1}/_{8}$ × 3 $^{1}/_{2}$ × 8 $^{1}/_{4}$ inches) (W/H/D)
Mass 2.0 kg (4 lb 6.5 oz) (printer only)
Thermal head
Thin-film thermal head, 1280 dots
Picture size (Standard print size)
100 × 75 mm
Printing speed
About 2 sec./image (960 × 1280 dots)
(When [HI] is selected from [-SPEED] of the [CONFIG.] menu)
About 3.8 sec./image (960 × 1280 dots)
(When [LOW] is selected from [-SPEED] of the [CONFIG.] menu)
Input connectors
VIDEO IN (BNC type)
NTSC or PAL composite video signals: 1.0 Vp-p, 75 ohms
(NTSC/PAL automatically discriminated)
Interfaces OPTION connector (USB type A)
USB connector: type C (for data receiving)
REMOTE connector (stereo mini jack)



1 GND
2 PRINT SIGNAL (TTL)
Input of LOW pulse over 100 msec. initiates print.
3 PRINT BUSY (TTL)
Goes HIGH during printing.

Supplied accessories

- Thermal head cleaning sheet (1)
- CD-ROM (including multi-lingual Instructions for Use, Readme and printer driver) (1)
- Before Using this Printer (1)
- Service Contact List (1)
- Thermal Print Media
  - UPP-110HG/SET (High Glossy) (1)
- Information for Customers in Europe (1)

Optional accessories

- Thermal Print Media
  - UPP-110HG (High Glossy)
  - UPP-110HD (High Density)
  - UPP-110S (High Quality)
- Wireless Print System
  - UPA-WU10[1)]

1) For about the availability of product, contact your Sony dealer.

The design and these specifications are subject to change without prior notification.

Medical Specifications

- Protection against electric shock: Class I
- Protection against harmful ingress of water: Ordinary
- Degree of safety in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide: Not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide
- Mode of operation: Continuous

Notes

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE TO PRINT CONTENT OF ANY TYPE OR LOSS OF DATA DUE TO FAILURE OF THIS UNIT OR ITS PRINTING MEDIA, ASSOCIATED SOFTWARE, EXTERNAL STORAGE, OR OTHER EXTERNAL DEVICE.
- SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
- SONY WILL NOT BE LIABLE FOR CLAIMS OF ANY KIND MADE BY USERS OF THIS UNIT OR MADE BY THIRD PARTIES.
- SONY WILL NOT BE LIABLE FOR THE TERMINATION OR DISCONTINUATION OF ANY SERVICES RELATED TO THIS UNIT THAT MAY RESULT DUE TO CIRCUMSTANCES OF ANY KIND.

The supplied Thermal Print Media (High Glossy) (UPP-110HG/SET) is used for test operation of the unit. Note that discoloration may occur depending on the transportation and storage environment. To achieve printing performance in accordance with the specifications, purchase the printer paper (sold separately) (page 18).

Troubleshooting

Before you call for service, please check the problems and solutions described below. If you cannot solve the problem, contact the nearest authorized dealer.

Symptom	Causes/remedies
First few prints spotted with small dots.	New paper roll just installed? →Press the FEED button and hold it down to feed about 15 cm – 20 cm (6 in – 8 in) and then release.
Print job does not start when the PRINT button is pressed. Or print job does not start even operated on the computer.	• Paper does not feed. →Power switched on? →Unit connected correctly? →Paper roll loose? →When printing the video image, is the video signal of the image input? • Alarm sounds. →Has the thermal head overheated? The thermal head may overheat when the unit prints dark image continuously. Wait until the head cools down. →Paper loaded correctly? • Paper feeds but printing does not start. →Paper loaded with the wrong side up? (page 19)
Black borders or missing portions around the printout.	Change the setting of the [-SCAN] menu item.
Paper jams.	• Press the OPEN lever down to open the door, remove the printout or the paper roll, and then gently pull the jammed paper out of the unit. • Condensation collected in unit? →If the unit has just been brought into a warm room from a cold location, condensation may have formed inside the unit. Switch the unit off and let it set for 1 - 2 hours (until it warms to room temperature), then try printing again.
Printouts dirty.	• Thermal head dirty? →Use the supplied cleaning sheet to clean the thermal head. (page 33) • Platen roller dirty? →Clean the platen roller using a soft cloth moistened with ethyl alcohol. (page 34)
The unit stops printing while printing almost black images and the message [COOLING] is displayed on the LCD.	When printing almost black images continuously, the thermal head protection circuit may shut down the unit to prevent the thermal head from overheating. The protection circuit that prevents the thermal head from overheating has been activated. →Leave the unit until the head cools down and this message disappears.
White lines or small letters on the screen are not printed clearly.	When printing the video image, is [COLR:ON] selected in the [-COLOR] of the [VIDEO] menu for black and white input signals? →Select [COLR:OFF].
Small squares appear over the whole screen.	When printing the video image, is [COLR:OFF] selected in the [-COLOR] of the [VIDEO] menu for color input signals? →Select [COLR:ON].
The printout is too bright or too dark.	• Is [-PP.TYPE] in the [CONFIG.] menu set correctly? • Is [-GAMMA] in the [ADJUST] menu set correctly?
Paper does not feed smoothly.	Platen roller dirty? →Clean the platen roller. (page 34)
Printing is interrupted. When printing, the unit discharges several centimeters of the white paper and stops. Cannot print. The FEED operation cannot be performed. When the paper is set correctly, “EMPTY” is displayed.	Does the sunlight or incandescent light that includes strong infrared light irradiate the paper exit? →The unit has an infrared light sensor that detects the printing paper. Therefore, when the light directly irradiates the paper exit, paper detection may not operate correctly. Do not expose the paper exit to light directly.

Error Messages

Messages appear on the LCD under the following conditions. Take the remedial actions shown next to the messages to correct the problem.

Messages	Description and remedy
DOOR	The door panel is open. →Close the door panel until it is locked securely.
EMPTY	• There is no paper loaded. • Paper has been used up. →Load some paper.
COOLING	The protection circuit that prevents the thermal head from overheating has been activated. →Wait for the message to disappear. Printing will then resume automatically.
LOCK	If the menu lever or CONTR/BRIGHT button is locked →If you want to perform menu operations, turn the power off, then press and hold the menu lever and turn the power back on. If “UNLOCK” appears, the lock is released.
ERROR	This unit has encountered a technical problem. →Restart the unit. If the display does not disappear, contact the nearest authorized dealer.
NO.INPUT	The PRINT button is pressed when the video signal is not input. →Connect the VIDEO input connector to the video equipment through the BNC cable, and then press the PRINT button after the video signal is input.
STOR.ERR	The USB flash drive connected to the USB connector failed to save the image. • The USB flash drive is not a model with less than 64 GB of space. →Use a USB flash drive with less than 64 GB of space. • The USB flash drive is not formatted with FAT32. →Use a USB flash drive formatted with FAT32. • The write-protect function of the USB flash drive is set. →Disable write protection. • The USB flash drive has more than one partition, and so the unit recognizes it as multiple drives. → Use a USB flash drive having only one partition. • The USB flash drive has security functions such as fingerprint authentication. →The unit does not recognize all features of every USB flash drive. • The USB flash drive is malfunctioning. →Use a new USB flash drive.
NO.SPACE	The USB flash drive does not have enough space. →Replace the USB flash drive with one that has free space.

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zlib

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