

# SONY



**UP-991AD/UP-971AD**  
Hybrid Graphic Printers

The UP-991AD and UP-971AD are compact black and white printers designed for use with both analog and digital radiology imaging systems such as mobile C-arm, ultrasound, cardiac catheterization laboratory and other compatible medical imaging systems.

These printers are successors to the popular Sony UP-990AD and UP-970AD of medical printers. Redesigned and upgraded, it offers several operational and ergonomic enhancements in addition to the smaller design from its predecessors. Usability is further enhanced by an enlarged LCD display panel and joystick for intuitive menu navigation.

They provide high-quality hard copies of still images captured by the imaging system that can then be used as reference prints for patient record purposes or referrals.\*

Both the UP-991AD and UP-971AD provide a Multi-picture print mode and panoramic print capability. Additionally, the UP-991AD can store images on a connected USB flash drive and print on transparent blue film media, in addition to paper media. Other conveniences offered by the UP-991AD include automatic detection of media type and an integrated media cutter.

\* The images printed from the UP-991AD and UP-971AD are not to be used for diagnosis.



## Products Overview

	UP-991AD	UP-971AD
Roll Paper Width	210 mm (8 1/4 inches)	
Blue Transparent Film Print	●	
USB Flash Drive Storage	●	
Automatic Media Cutter	●	
Analog Video Input	●	●
USB Connector (For medical device)	●	●

## Key Features

### High quality printing

Using Sony's direct thermal printing technology, these printers deliver photo-quality black & white prints with a high resolution of approximately 325 dpi.

### High speed printing

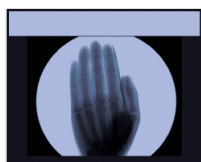
In standard mode, these printers can deliver a print in approximately 8 seconds.

### USB flash drive storage\*<sup>1</sup>

The UP-991AD can store either the printed image or captured video frame on a USB flash drive inserted into the USB port on the front of the printer. Stored images can be in color, provided that the input signal is in color and Color mode (for better B&W printing of color images) is chosen.

### Blue transparent film and black border mode\*<sup>1</sup>

Images can be printed on blue transparent film with an optional black border if desired.



Black Border



White Border

### Automatic media cutter\*<sup>1</sup>

The printer automatically cuts paper or film media to size when printing is completed.

### Accepts both digital and analog video input signals

These printers can receive digital as well as analog signals, allowing the printer to support both types of C-arm system. It also can receive signals from two different integrated systems – i.e. analog from a C-arm and digital from an ultrasound system.

### More compact, more visible

These printers have a compact design with dimensions of approximately 316 (W) x 132.5 (H) x 265 (D) mm (12 1/2 x 5 1/4 x 10 1/2 inches) – 40mm smaller in depth than its predecessor. At the same time, the size of the LCD display panel is increased, and the control panel features a white LED backlight.

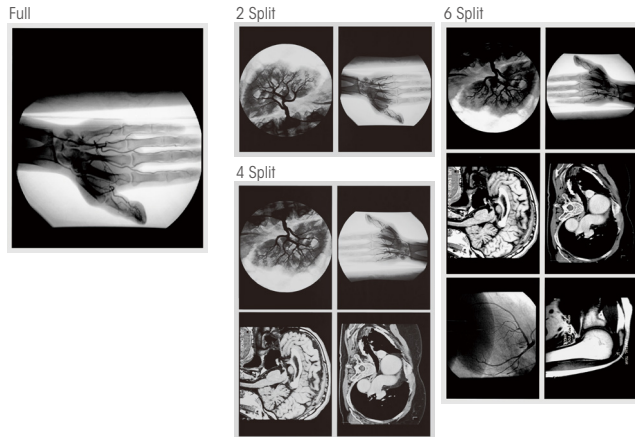
### Enhanced operability

All function keys of printers are located on the front panel, allowing easy setup and operation when the printer is installed in a medical cart. In addition, separate knobs on the front panel allow easy adjustment of both contrast and brightness and an auto lock function that prevents inadvertent alteration of settings.

## Multi-picture modes

As well as printing a single picture, these printers also offer a choice of two-, four- and six-way split printing of images on a single sheet when connected to an analog video signal. The 'Multi' button on the front panel allows quick switching between 'Single-picture' and 'Multi-picture' modes. With digital input signals, the printer can provide two or four split pictures on one sheet (NB: Multi button does not function with digital input).

### ● Single-picture mode ● Multi-picture modes



## Panoramic printing

When connected to a digital signal, the printers can produce panoramic prints up to a maximum of 600mm long.

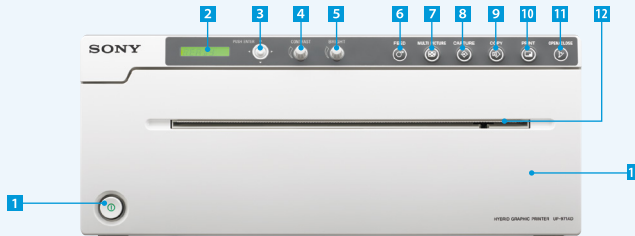
## Front and Rear Panels

### UP-991AD Front Panel



- |  |                                |
|--|--------------------------------|
| 1 Power on/off switch                                  | 9 CAPTURE button               |
| 2 Printer window display (LCD: liquid crystal display) | 10 COPY button                 |
| 3 Menu lever   | 11 PRINT button                |
| 4 CONTRAST (contrast) dial                             | 12 OPEN/CLOSE button           |
| 5 BRIGHT (brightness) dial                             | 13 Paper door                  |
| 6 CUT button   | 14 USB Flash Drive terminal    |
| 7 FEED button  | 15 USB Flash Drive access lamp |
| 8 MULTI PICTURE (multi-picture) button                 |                                |

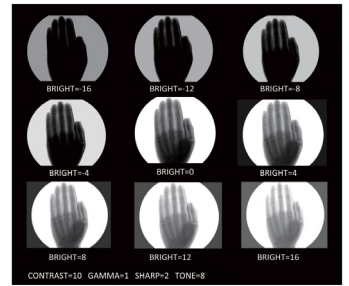
### UP-971AD Front Panel



- |  |                      |
|--|----------------------|
| 1 Power on/off switch                                  | 8 CAPTURE button     |
| 2 Printer window display (LCD: liquid crystal display) | 9 COPY button        |
| 3 Menu lever   | 10 PRINT button      |
| 4 CONTRAST (contrast) dial                             | 11 OPEN/CLOSE button |
| 5 BRIGHT (brightness) dial                             | 12 Paper Cutter      |
| 6 FEED button  | 13 Paper door        |
| 7 MULTI PICTURE (multi-picture) button                 |                      |

## Visual print quality control

Optimum print settings can be compared and chosen from a 'collage' print of nine pictures with different values for brightness, contrast, tone or sharpness.



Example ("BRIGHT"=0)

## Quick guide print

Quick instruction guides for different print operations can be selected via the front control panel. They can be printed out for easy reference without needing to refer to the user manual.\*2

## Automatic detection of media type\*1

The printer automatically detects whether film or paper media has been loaded, eliminating the need to manually adjust settings when changing print media.

## Compliance with Medical Safety Standards\*3

This device is compliant and certified for IEC 60601-1 and product safety standards in the U.S.A., Canada and Europe.

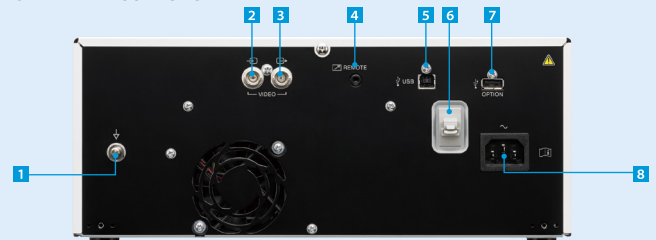
\*1 This feature is only available on the UP-991AD.

\*2 English only.

\*3 Registration status as a medical device may vary, depending on country.

For more details, please contact your nearest Sony office or an authorized dealer.

### UP-991AD Rear Panel



- |   |                                   |
|---|-----------------------------------|
| 1 Equipotential terminal                  | 5 USB connector (4-pin connector) |
| 2 VIDEO IN (input) connector (BNC type)   | 6 USB Cable Clamper               |
| 3 VIDEO OUT (output) connector (BNC type) | 7 OPTION terminal                 |
| 4 REMOTE connector                        | 8 AC IN connector                 |

### UP-971AD Rear Panel



- |   |                                   |
|---|-----------------------------------|
| 1 Equipotential terminal                  | 5 USB connector (4-pin connector) |
| 2 VIDEO IN (input) connector (BNC type)   | 6 USB Cable Clamper               |
| 3 VIDEO OUT (output) connector (BNC type) | 7 OPTION terminal                 |
| 4 REMOTE connector                        | 8 AC IN connector                 |

# Specifications

	UP-991AD	UP-971AD
Printing Method	Direct thermal printing	
Resolution	325 dpi	
Gradations	8 bits (256 levels) processing	
Picture Elements	Digital: 7680 x 2560 dots Video NTSC: 720 x 504 dots Video PAL: 720 x 604 dots	
Picture Area	DIGITAL: 600 x 200 mm (23 5/8 x 7 7/8 inch) (Max) VIDEO: STD NTSC: 182 x 144 mm PAL: 188 x 140 mm SIDE NTSC: 244 x 184 mm PAL: 244 x 183 mm	
Paper Size	Paper width of 210 mm (8 1/4 inches)	
Printing Time	Approx. 8 seconds/image (in standard mode)	
Picture Memory	Digital: 2816 x 7680 x 8 bits Video: 6 frames (720 x 608 x 8 bits for one frame)	
Interface	USB terminal (type A) for USB flash drive (X1)	-
	Hi-Speed USB (USB 2.0) (x1) VIDEO INPUT: BNC type (X1) NTSC or PAL composite video signals 1.0Vp-p, 75ohm (NTSC/PAL automatically discriminated) VIDEO OUTPUT: BNC type (x1) Loop-through REMOTE: Stereo mini jack (x1)	
Printer Driver Software	Microsoft Windows XP 32/64, Vista 32/64, 7 32/64, 8 32/64	
Power Requirements	AC 100 V to 240 V, 50/60 Hz	
Input Current	2.9 A to 1.2 A	
Operating Temperature	5°C to 35°C (41°F to 95°F)	
Operating Humidity	20% to 80% (no condensation allowed)	
Storage and Transport Temperature	-20°C to +60°C (-4°F to +140°F)	
Storage and Transport Humidity	20% to 80%	
Dimensions (W x H x D)	316 x 132.5 x 265 mm (12 1/2 x 5 1/4 x 10 1/2 inch)	
Mass	7 kg (15lb 7oz)	
Safety Standards	(US/CA) ANSI/AAMI ES60601-1, UL 60601-1, UL 60950-1, CAN/CSA-C22.2 No.60601-1, CAN/CSA C22.2 No.601.1, CAN/CSA C22.2 No.60950-1 (EU) EN 60601-1, EN 60950-1 (CB) IEC 60601-1 (2nd/3rd Ed.), IEC 60950-1	
EMC Standards	(US/CA) FCC Part 15 Subpart-B Digital Device Class A, ICES-003 Class A Digital Apparatus (EU) EN 60601-1-2 (Class B), EN 55022 (Class B)+EN 55024, EN 61000-3-2+EN 61000-3-3 (AU) AS/NZS CISPR22 (EN55022) Class B (JP) VCCI Class A, JIS C 61000-3-2 (KR) KN22, KN24 Class B	
EC Directive	(EU) MDD, EMC, LVD	
Supplied Accessories	Print Media (1), Thermal head cleaning sheet (1), CD-ROM (1), Before Using this Printer (1), Service Contact List (1)	

## Optional Accessories



FS-24  
Foot Switch

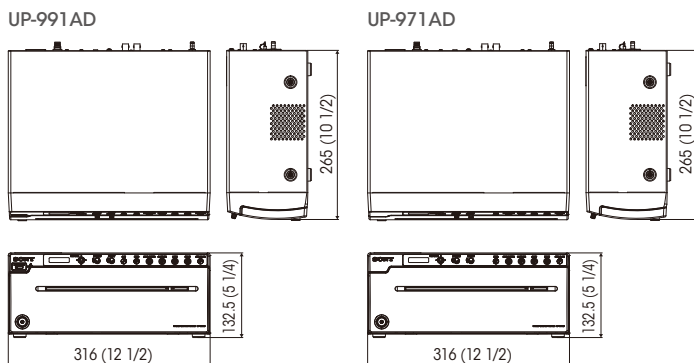
RM-91  
Remote Commander

## Printing Paper



UPP-210HD Thermal Print Media (High Density) Paper size: 210 mm (W) x 25 m  
UPP-210SE Thermal Print Media (Normal) Paper size: 210 mm (W) x 25 m  
UPP-210BL Blue Thermal Transparent Film Film size: 210 mm (W) x 12.5 m

## Dimensions



Unit: mm (inches)

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Registration status as a medical device may vary, depending on country.  
For more details, please contact your nearest Sony office or an authorized dealer.