

# SONY

## Digital Betacam Family 2005/2006



*Digital* **BETACAM**

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**Digital BETACAM**

## Product line-up

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# Discover the quality and simplicity of Digital Betacam.

- Digital Betacam was the first recording format to bring the benefits of digital production to the wider programme making community. Since its introduction, Digital Betacam has become the established favourite for standard definition programme production where only the ultimate picture quality and sound will suffice.

The high quality performance of Digital Betacam, combined with its simplicity of operation is just one reason why many broadcasters around the world have chosen Digital Betacam as their “in-house” production format. Recognising the continued popularity of Digital Betacam around the world, Sony has added a new third generation camcorder to the Digital Betacam line-up.

With a comprehensive range of models and built-in capability to replay Betacam, Betacam SP, Betacam SX and MPEG IMX cassettes, Digital Betacam is the ideal format to fully integrate your existing operations into a digital environment.



## ■ Camcorder

### DVW-970P



The DVW-970P is the latest addition to the Digital Betacam line-up. This third generation camcorder combines Power HAD™ EX CCD performance with high precision 14 bit A/D conversion to deliver reduced noise and smear and excellent sensitivity. Progressive recording at 25 frames per second has been added, and features such as slow shutter mode, interval recording and picture cache operation are also provided. Use of the latest technology has reduced size, power consumption and acoustic noise compared with previous generation Digital Betacam camcorders.



## FEATURES

- 3-chip 2/3-inch Power HAD EX™ CCDs
- Digital Betacam picture quality
- Switchable between 50i and 25P, and 4:3 and 16:9 modes
- Long recording time of up to 40 minutes on a single cassette
- 14 bit A/D conversion
- High sensitivity of F11 at 2000 lux
- Low smear level of -145dB (typical)
- Excellent signal-to-noise ratio of 63dB
- Turbo gain up to +48dB
- TruEye™ processing for improved reproduction of natural colours
- Slow shutter mode for shooting in extremely low-light conditions
- Selectable gamma table including film-like gamma
- Auto Trace White (ATW) system
- Triple skin tone detail control
- Multi-matrix feature
- Dial in colour temperature
- Dual optical filters
- Picture cache for capturing the (up to) 8 seconds of material before the record button is pressed (CBK-MB01 option required)
- SDI output (CBK-SD01 option required)
- 4 channels of 20 bit digital audio
- Stereo audio output
- Slot for WRR-855 series wireless microphone receiver
- Memory Stick slot for storage and recall of set-up parameters
- Remote control using optional RM-B150 or RM-B750 controllers
- Battery remaining display in viewfinder
- Rugged and ergonomic design
- Essence Mark recording for rapid cue up during editing
- UMID (Unique Material Identifier) recording for picture cataloguing and searching

# Optional Accessories

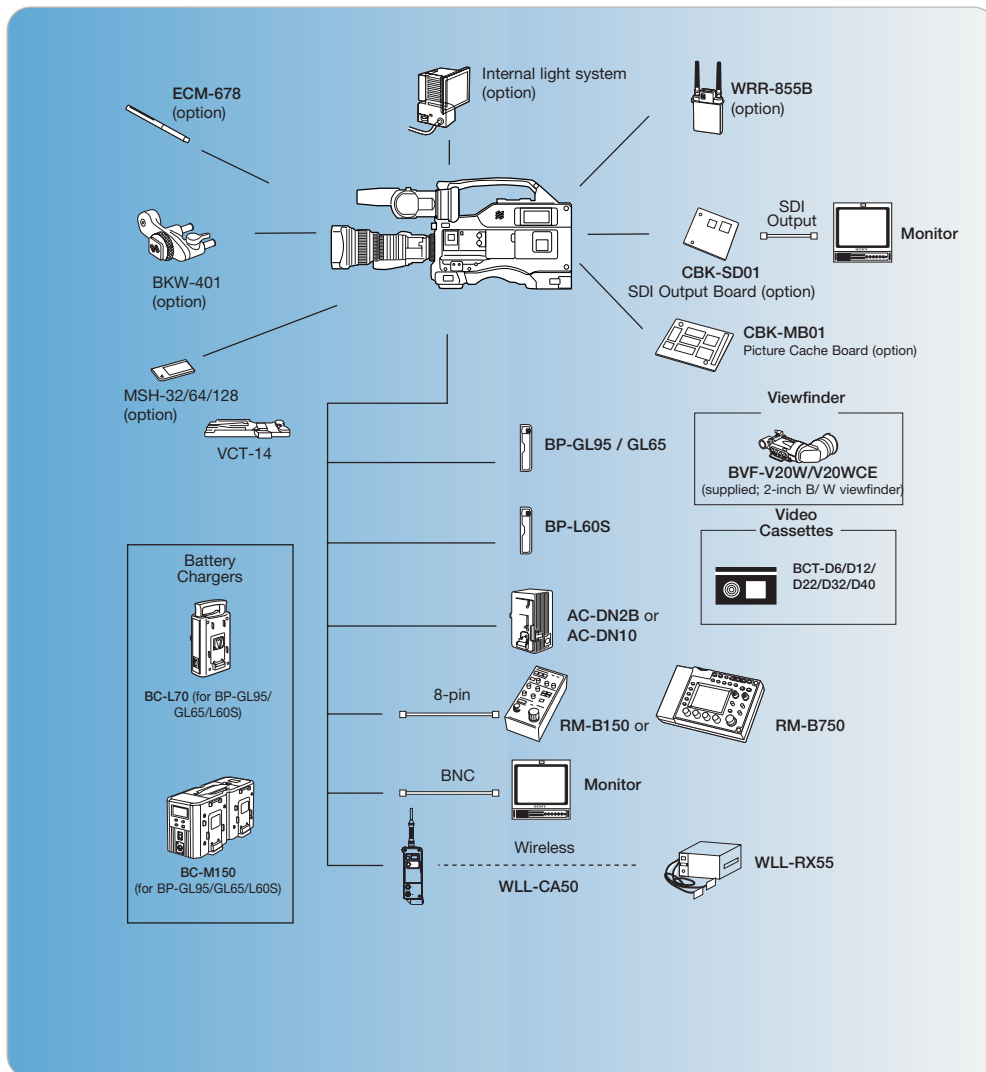


**CBK-SD01** SDI Output Board  
**CBK-MB01** Picture Cache Board  
**BKW-401** Viewfinder Rotation bracket  
**RM-B150** Remote Control Unit  
**RM-B750** Remote Control Unit  
**AC-DN10** AC Adapter  
**AC-DN2B** AC Adapter



**BP-GL65/GL95** Lithium Ion Battery Pack  
**BC-L70** Battery Charger  
**BC-M150** Battery Charger  
**VCT-14** Tripod Adapter  
**BCT-D6/D12/D22/D32/D40** Digital Betacam Cassettes  
**MSH-32/64/128** Memory Stick media  
**WRR-855B** Wireless Microphone Receiver (Shown here with a BTA-801 Camera adapter for rear Mounting to camcorder)

## System configuration



**WRR-862B** Dual Diversity Microphone Receiver (Adaptor required)  
**WLL-CA50** Wireless Camera Transmitter (Adaptor required)

**WLL-RX55** Wireless Camera Receiver  
**ECM-670/672/678** Shotgun-type Electret Condenser Microphones

- Not pictured here:**
- 1-547-341-12 Fog-proof Filter
  - A-8262-537-A Viewfinder Eye-piece (high magnification)
  - A-8262-538-A Viewfinder Eye-piece (low magnification)
  - A-8267-737-A Viewfinder Eye-piece (standard magnification with special compensation for aberrations)
  - A-8314-798-A Viewfinder Eye-Piece (high performance, x3)
  - X-3608-271-1 Standard Viewfinder Lens
  - A-8278-057-A Mounting Bracket for WRR-862B
  - LC-DN7 Hard Carrying Case

## ■ Studio Recorders

### DVW-M2000P



Records: **Digital BETACAM**

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Replays: **BETACAM SX** **MPEG IMX** **Digital BETACAM**  
**BETACAM** **BETACAM SP**

### DVW-2000P



Records: **Digital BETACAM**

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Replays: **Digital BETACAM**

The DVW-M2000P is a Digital Betacam editing VTR with Betacam, Betacam SP, Betacam SX and MPEG IMX playback. It combines superb picture quality with excellent multi-generation editing capability. The DVW-M2000P records 4 channels of digital audio at 20-bit resolution and has powerful editing features such as Pre-read, Dynamic Tracking (DT) and insert/assemble editing to zero frame accuracy. Recording and playback of UMID (Unique Material Identifier) is also a standard feature, for productions where the rapid

identification and access to material is required. Many broadcasters use Digital Betacam VTRs today for play-out of content from Flexicart and Library Management (LMS) systems. The DVW M2000P is ideal for this application, where the requirement for rugged, reliable 24 hour-per-day operation is mandatory.

The DVW-2000P offers the same features as the DVW-M2000P but without Betacam, Betacam SP, Betacam SX and MPEG IMX playback.

#### DVW-M2000P

- 4:2:2 component digital VTR
- 625/50 operation
- Digital Betacam recording and playback
- Playback of Betacam, Betacam SP, Betacam SX and MPEG IMX cassettes
- 4 channels of 20-bit 48 kHz digital audio
- Superb multi-generation editing capability
- ±0 frame accurate assemble and insert editing
- Pre-read editing capability
- Broadcast quality variable speed playback from -1 to +3 times (-1 to +2 times with Betacam SX)
- Long record and playback time: 124 minutes using an L cassette and 40 minutes using an S cassette
- Composite and component analogue and SDI inputs and outputs as standard
- 4 analogue and AES/EBU audio inputs and outputs
- UMID reader/writer as standard
- Memory Stick slot for storing operational set up menus

#### DVW-M2000 + DVW-2000

525/60 Digital Betacam recorders are also available with CE marking for the Europe, Africa and Middle East market.

Please contact your Sony Sales Centre for details.

#### DVW-2000P

- 4:2:2 component digital VTR
- 625/50 operation
- Digital Betacam recording and playback
- 4 channels of 20-bit 48 kHz digital audio
- Superb multi-generation editing capability
- ±0 frame accurate assemble and insert editing
- Pre-read editing capability
- Broadcast quality variable speed playback from -1 to +3 times
- Long record and playback time: 124 minutes using an L cassette and 40 minutes using an S cassette
- Composite and component analogue and SDI inputs and outputs as standard
- 4 analogue and AES/EBU audio inputs and outputs
- UMID reader/writer as standard
- Memory Stick slot for storing operational set up menus

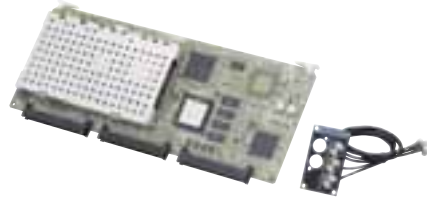
# Optional Accessories



## BKDW-101

### Control Panel

The BKDW-101 provides additional control of the DVW-M2000P and DVW-2000P from a remote location. It is used with the BKMW-102 Control Panel Case and the BKMW-103 Control Panel Extension Kit. A switch on the front of the recorder allows control to be selected between the remote control panel and the control panel supplied with the recorder. The BKMW-102 and BKMW-103 can also be used to extend the supplied front panel of the recorder. BKMW-103 includes a blanking panel which can be fixed to the front of the recorder in place of the original control panel.



## BKMW-104

### HD Up-Converter Board

For installation into DVW-M2000P and DVW-2000P Digital Betacam VTRs. Converts 625/50 Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam material to High Definition 1080/50i, and outputs from the DVW-M2000P via HD-SDI. Converts 625/50 Digital Betacam material to High Definition 1080/50i, and outputs from the DVW-2000P via HD-SDI.



## BKMW-103

Control Panel Extension Kit  
(Cable length: 10 m)



## RMM-131

Rack Mount Kit



## BKMW-102

Control Panel Case

## Tapes

BCT-D34L/D64L/D94L/D124L  
Digital Video Cassettes (Large Cassette)



BCT-D6/D12/D22/D32/D40  
Digital Video Cassettes (Small Cassette)

BCT-HD12CL  
Cleaning Cassette

(not pictured here)

## ■ Compact Players



**Digital BETACAM**  
**MPEG IMX**  
**BETACAM SX**  
**BETACAM SP**  
**BETACAM**

The J-30 and J-30/SDI are the smallest players of Betacam family cassettes. The design concept of the J-Series was for affordable, compact office viewers to be used by producers, journalists and production staff. The J-30 and J-30/SDI can replay Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam S-cassettes and L-cassettes. They also have all the features required for viewing and logging, and – although not designed for linear editing applications or on-air use – are ideal for source feeding to

servers or non-linear editing systems. The J-30 provides composite and component analogue video outputs, while the J-30/SDI has composite analogue and SDI outputs. Both models have an i.LINK interface for feeding material to DV-based editing applications, and are supplied with an infra-red remote controller. The J-30 and J-30/SDI also have a jog/shuttle dial, 525/625 versatility, simple remote control via RS-422A and audio meters – all packed into their compact size.

J-30  
J-30/SDI



- Extremely compact: 307 x 100 x 397 mm (12 1/8 x 4 x 15 1/2 inches) in size and just 8 kg in weight
- i.LINK interface (25 Mb/s DV output, and remote control input via 6-pin IEEE-1394)
- Playback of Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam cassettes
- Playback of S-cassettes and L-cassettes
- Jog/Shuttle dial with x20 maximum search speed for Digital Betacam cassettes
- Infra-red remote controller
- 525/625 switchable for international operation
- Monitor output of 2 audio channels (selectable on front panel)
- Audio meters for display of the selected 2 channels of audio
- Industry-standard RS-422A control interface for remote feeding into servers and non-linear editors

### J-30 only

- Composite analogue and component analogue video outputs

### J-30/SDI only

- Composite analogue and 2 SDI outputs (one with superimposed characters)
- Timecode output via BNC connector
- Built-in UMID (Unique Material Identifier) reader
- 4 channels of digital output via SDI (8 channels when replaying MPEG IMX cassettes)



# Camcorders Specifications

## GENERAL DWW-970P

|                           |   |
|---------------------------|---|
| Power requirements        | DC 12 V +5.0 V/-1.0 V   |
| Power consumption         | 29 W (with DC 12 V power supply, REC mode, with viewfinder)   |
| Operating temperature     | 0 to +40 °C (+32 to +104 °F)  |
| Storage temperature       | -20 to +60 °C (-4 to +140 °F)   |
| Operating humidity        | 25 to 85% (relative humidity)   |
| Mass                      | Approx. 3.7 kg (8 lb 3 oz)<br>Approx. 5.4 kg (11 lb 14 oz) (with viewfinder, microphone, BP-GL95 battery, BCT-D40 tape) |
| Continuous operating time | Approx. 170 min. with BP-GL95 battery at 25 °C (77 °F), REC mode  |

### SIGNAL INPUTS/OUTPUTS

|                         |   |
|-------------------------|---|
| Genlock video input     | BNC type (1), 1.0 Vp-p, 75 Ω  |
| Audio input (CH-1/2)    | XLR-3-31 type (2), -60/-50/-40/+4 dBu* selectable, high impedance, balanced |
| Microphone input        | XLR-3-31 type (1), -60/-50/-40 dBu*   |
| Time code input         | BNC type (1), 0.5 to 18 Vp-p, 10 kΩ   |
| Analog composite output | BNC type (1), 1.0 Vp-p, 75 Ω  |
| SDI output              | BNC type (1), 0.8 Vp-p, 75 Ω<br>(an optional CBK-SD01 is required)          |
| Video test output       | BNC type (1), 1.0 Vp-p, 75 Ω  |
| Audio output (CH-1/2)   | XLR-5-pin, male (stereo)  |
| Time code output        | BNC type (1), 1.0 Vp-p, 75 Ω  |
| Earphone output         | Mini-jack (2)<br>* 0 dBu=0.775 Vrms.  |

### OTHER INPUTS/OUTPUTS

|                     |  |
|---------------------|--|
| Lens                | 12-pin   |
| VF                  | 20-pin   |
| Remote              | 8-pin  |
| Wireless microphone | D-Sub 15-pin   |
| Light               | 2-pin, DC 12 V, max. 50 W                                      |
| DC input            | XLR-4-pin, male, DC 11 to 17 V                                 |
| DC output           | 4-pin (for wireless microphone receiver), DC 12 V (max. 0.1 A) |
| Battery terminal    | 5-pin  |
| Camcorder adaptor   | 40-pin   |

## VTR SECTION

### GENERAL

|                             |                |  |
|-----------------------------|----------------|--|
| Recording format            | Video<br>Audio | Digital Betacam<br>4 ch/20 bits/48 kHz                         |
| Tape speed                  |                | 96.7 mm/s  |
| Record/Playback time        |                | Max. 40 min. with BCT-D40 cassette                             |
| Fast forward time           |                | Approx. 6 min. with BCT-D40 cassette                           |
| Rewind time                 |                | Approx. 5 min. with BCT-D40 cassette                           |
| Recommended Recording Media |                | Sony Digital Betacam S cassette, BCT-D6/D12/D22/D32/D40 Series |
| Sampling frequency          |                | Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz                                 |
| Quantization                |                | 10-bit / sample  |

### DIGITAL VIDEO PERFORMANCE

|                     |                 |
|---------------------|-----------------|
| K-factor (2T pulse) | Less than 1 %   |
| Y/C delay           | Less than 15 ns |

### DIGITAL AUDIO PERFORMANCE

|   |                                  |
|---|----------------------------------|
| Frequency response                                  | 20 Hz to 20 kHz, +0.5 dB/-0.8 dB |
| Dynamic range                                       | More than 85 dB (emphasis ON)    |
| Distortion (at 1 kHz, emphasis ON, reference level) | Less than 0.08 %                 |
| Cross talk (at 1 kHz, reference level)              | Less than -70 dB                 |
| Wow & flutter                                       | Below measurable limit           |
| Head room   | 20 dB (ex-factory setting)       |

\* The specifications given above were measured via CBK-SD01 SDI Output Bord.

## CAMERA SECTION DWW-970P

|                                    |  |
|------------------------------------|--|
| Pickup device                      | 3-chip 2/3-inch type Power HAD EX CCD  |
| Aspect ratio                       | 16:9/4:3 switchable  |
| Total picture elements (H x V)     | 1038 x 1188  |
| Effective picture elements (H x V) | 980 x 1164   |
| Optical system                     |  |
| Spectral system                    | F1.4 prism (with quartz filter)  |
| Built-in filters                   | 1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND, A: CROSS, B: 3200K, C: 4300K, D: 6300K                           |
| Lens mount                         | 2/3-inch type Sony bayonet mount   |
| Electrical characteristics         |  |
| Scan format                        | 625/50i, 625/25p   |
| A/D conversion                     | 14 bits  |
| Sensitivity                        | F11 (typical) (2000 lx, 89.9% reflectance)   |
| Minimum illumination               | 0.008 lx (F1.4 lens, +48 dB gain, with slow shutter mode at 16-frame accumulation)                         |
| Smear level                        | -145 dB (typical)  |
| Video S/N ratio                    | 63 dB (typical)  |
| Vertical resolution                |  |
|                                    | 480 TV lines (with EVS) and 530 TV lines (without EVS) at 625/50i mode                                     |
|                                    | 575 TV lines at 625/25p mode   |
| Shutter speed                      | 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/50i mode  |
|                                    | 1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/25p mode                                   |
| ECS                                | 50 to 6000 Hz at 625/50i mode<br>25 to 6000 Hz at 625/25p mode   |
| Slow shutter                       | 1/25, 1/12.5, 1/8.3, 1/6.3, 1/5, 1/4.2, 1/3.6, 1/3.1, 1/1.6 s (1 to 8, 16 frames)                          |
| Gain selection                     | -3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions) |
| Registration                       | 0.05% (all zones, without lens)  |
| Warm-up time                       | 2 s  |
| Modulation depth at 5 MHz          | 70% (16:9 typical)/55% (4:3 typical)   |

### VIEWFINDER

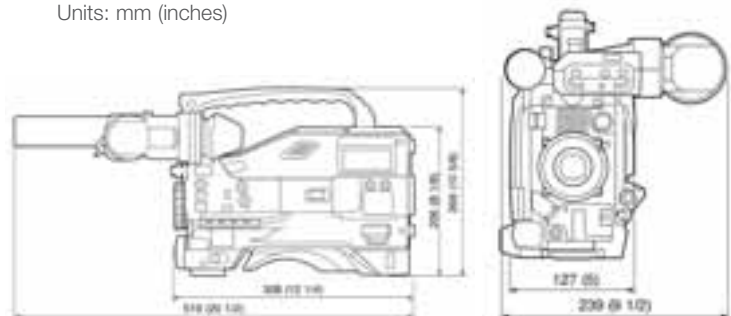
|                       |  |
|-----------------------|--|
| CRT                   | 2.0-inch monochrome  |
| Controls              | BRIGHT, CONTRAST, PEAKING, TALLY, ZEBRA, DISPLAY switches      |
| Horizontal resolution | 450 TV lines (16:9)/600 TV lines (4:3)                         |
| Microphone            | Electret condenser microphone (Ultra-directional) (Detachable) |

### SUPPLIED ACCESSORIES

|  |
|--|
| Operation Manual (x1), Viewfinder (x1), Lens cap (x1), Shoulder belt (x1), Monaural Microphone (x1). |
|--|

## Dimensions

Units: mm (inches)





# Studio Recorders Specifications

DWW-M2000P DWW-2000P

DWW-M2000P DWW-2000P

## GENERAL

|                          |   |       |
|--------------------------|---|-------|
| Power requirements       | AC 100 V to 240 V, 50/60 Hz                         |       |
| Power consumption        | 220 W   | 200 W |
| Operating temperature    | +5 °C to +40 °C (+41 °F to +104 °F)                 |       |
| Storage temperature      | -20 °C to +60 °C (-4 °F to +140 °F)                 |       |
| Humidity                 | 20 % to 90 % (relative humidity)                    |       |
| Mass                     | 23.5 kg (52 lb 11 oz)                               |       |
| Dimensions (W x H x D)   | 427 x 174 x 544 mm (16 7/8 x 6 7/8 x 21 1/2 inches) |       |
| Tape speed               | Digital BETACAM: 96.7 mm/s                          |       |
|                          | MPEG IMX: 53.776 mm/s                               | —     |
|                          | BETACAM SX: 59.575 mm/s                             | —     |
|                          | BETACAM/BETACAM SP: 101.51 mm/s                     | —     |
| Playback time            | Max. 124 min with BCT-D124L cassette                |       |
| Fast forward/rewind time | Approx. 3 min with BCT-D124L cassette               |       |
| Search speed range       | Digital BETACAM: ±50 times normal playback speed    |       |
|                          | MPEG IMX: ±78 times normal playback speed           | —     |
|                          | BETACAM SX: ±78 times normal playback speed         | —     |
|                          | BETACAM/BETACAM SP: ±42 times normal playback speed | —     |
| Servo lock time          | 0.7 s or less (from standby on)                     |       |
| Load/unload time         | 6 s or less   |       |

## INPUT/OUTPUT SIGNALS

|                           |   |
|---------------------------|---|
| Analogue composite input  | BNC (x2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative                |
| Analogue composite output | BNC (x3, including one character out), 1.0 Vp-p, 75 Ω, sync negative                      |
| Analogue component input  | BNC (x3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω |
| Analogue component output | BNC (x3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω |
| SDI input                 | BNC (x2, including one active throughout), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s          |
| SDI output                | BNC (x3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s              |

## Recommended Wireless Systems for Camcorder



WRR-862B Receiver    WRR-855B Receiver    WRT-8B Transmitter\*    ECM-88BC Lavalier Mic

|                                    |                               |                                 |                               |                          |
|------------------------------------|-------------------------------|---------------------------------|-------------------------------|--------------------------|
| UHF operating frequency            | Dependent on version / region | Dependent on version / region   | Dependent on version / region | no                       |
| Frequency response                 | 40 Hz – 18 kHz                | 100 Hz – 15 kHz                 | 40 Hz – 20 kHz                | 40 Hz – 20 kHz           |
| Signal to noise                    | >60 dB A-weighted             | >60 dB A-weighted               | 60 dB or more                 |                          |
| RF Power output                    | N/A                           |                                 | 10/50 mW Switchable           |                          |
| Current consumption                | 230 mA                        | 200 mA                          | 6 hours @ 50 mW               |                          |
| Battery life                       | 5 hours                       |                                 | 13 hours @ 10 mW              |                          |
| Max SPL                            | N/A                           |                                 |                               | 120 dB                   |
| Weight                             | 400 g                         | 280 g                           | 140 g incl batteries          | 1.5 g Capsule            |
| Dimensions W x H x D (mm)          | 89 x 120 x 29.5               | 88 x 118 x 31                   | 63 x 83 x 17                  | 3.5 x 3.5 x 12.5 Capsule |
| Mounting/adaptor brackets required | A8278-057A                    | CA-WR855, BTA-801 or A8278-057A |                               |                          |
| Cable Length                       | N/A                           |                                 |                               | 2.5 m                    |

\* Or use WRT-847B Handheld Transmitter with either CU-F780, CU-G780, CU-E700, CU-E672 or CU-F117 Capsule

|                            |   |   |
|----------------------------|---|---|
| HD-SDI output (option)     | BNC (x3)  |   |
| Analogue audio input       | XLR (x4) (4CH)  |   |
| Analogue audio output      | XLR (x4) (4CH)  |   |
| Cue audio input            | XLR (x1)  |   |
| Cue audio output           | XLR (x1, only Digital Betacam playback)   |   |
| Digital audio input        | BNC (x2), 4 channels, AES/EBU, default 48 kHz (32 to 48 kHz with Sample Rate converter), Complies with AES-3id-1995 |   |
| Digital audio output       | BNC (x4), 8 channels, AES/EBU, 48 kHz fixed, Complies with AES-3id-1995   | BNC (x2), 4 channels, AES/EBU, 48 kHz fixed, Complies with AES-3id-1995 |
|                            |   |   |
| Remote control             | Remote (RS-422A)  | D-sub 9-pin (x2), Sony 9-pin remote interface                           |
|                            | RS-232C (ISR*)  | D-sub 9-pin (x1), RS-232C interface                                     |
|                            | Parallel Remote   | D-sub 50-pin (x1)   |
|                            | Video control   | D-sub 15-pin (x1)   |
| Control Panel              | Circular connector 10-pin   |   |
| Time code input            | XLR (x1)  |   |
| Time code output           | XLR (x1)  |   |
| Memory card insertion slot | "Memory Stick" slot (x1)  |   |
| Monitor output L/R         | XLR (x2) (channel selectable)   |   |
| Phones                     | JM-60 Stereo phone jack   |   |

## PROCESSOR ADJUSTMENT RANGE

|                       |  |   |
|-----------------------|--|---|
| Video level           | ±3 dB/ -∞ to 3 dB selectable               |   |
| Chroma level          | ±3 dB/ -∞ to 3 dB selectable               |   |
| Black level           | ±210 mV                                    |   |
| Chroma phase          | ±30°                                       |   |
| System sync phase     | ±15 μs                                     |   |
| System SC phase       | ±200 ns                                    |   |
| Y/C delay             | ±100 ns (BETACAM/BETACAM SP playback only) | — |
| Composite input level | ±3 dB                                      |   |

## DIGITAL VIDEO PERFORMANCE

|   |  |                                  |
|---|--|----------------------------------|
| Sampling frequency                                    | Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz   |                                  |
| Quantization  | Digital BETACAM: 10-bit / sample   | Digital BETACAM: 10-bit / sample |
| Error correction                                      | Reed-Solomon code  |                                  |
| Digital input to analogue component output            | D/A quantization: 10-bit / sample<br>Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB<br>S/N ratio: 62 dB or more, K-factor (2T pulse): 1% or less  |                                  |
| Analogue component input to analogue component output | A/D and D/A quantization: 10-bit / sample<br>Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB<br>S/N ratio: 56 dB or more, K-factor (2T pulse): 1% or less, LF non-linearity: 3% or less                      |                                  |
| Analogue composite input to analogue composite output | A/D and D/A quantization: 10-bit / sample<br>Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB<br>S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less<br>Y/C delay: 20 ns or less, K-factor (2T pulse): 1% or less |                                  |

## DIGITAL AUDIO PERFORMANCE

|  |  |  |
|--|--|--|
| Sampling frequency                       | 48 kHz (synchronised with video)   |  |
| Quantization                             | Digital BETACAM 20-bit / sample  |  |
| Analogue input to analogue output        | Frequency response (0 dB at 1kHz): 20 Hz to 20 kHz +0.5/-1.0 dB<br>Dynamic range (at 1 kHz, emphasis ON): More than 95 dB<br>Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%<br>Cross talk (at 1 kHz, between any two channels): Less than -80 dB Wow & flutter: Below measurable level |  |
| Head room                                | 20 dB (18 dB selectable)   |  |
| Emphasis (ON/OFF selectable in REC mode) | T1=50 μs, T2=15 μs   |  |

## SUPPLIED ACCESSORIES

|  |   |
|--|---|
|  | PSW 4x16 Rack Mount Screw (x4), Operation manual (x1), Installation manual (x1) |
|--|---|

\* ISR: Interactive Status Reporting

# Compact Players Specifications



## J-30

## J-30/SDI

### GENERAL

|                              |  |   |   |
|------------------------------|--|---|---|
| Power requirements           | AC 100 V to 240 V, 50/60 Hz                        | AC 100 V to 240 V, 50/60 Hz   |   |
| Power consumption            | 55 W   | 55 W  |   |
| Operating temperature        | +5 °C to +40 °C (+41 °F to +104 °F)                | +5 °C to +40 °C (+41 °F to +104 °F)                                 |   |
| Storage temperature          | -20 °C to +60 °C (-4 °F to +140 °F)                | -20 °C to +60 °C (-4 °F to +140 °F)                                 |   |
| Humidity                     | 25% to 80% (relative humidity)                     | 25% to 80% (relative humidity)                                      |   |
| Mass                         | 8.2 kg (18 lb 1 oz)                                | 8.2 kg (18 lb 1 oz)   |   |
| Dimensions (W x H x D)       | 307 x 100 x 397 mm<br>(12 1/4 x 4 x 15 3/8 inches) | 307 x 100 x 397 mm<br>(12 1/4 x 4 x 15 3/8 inches)                  |   |
| Tape speed                   | Digital Betacam<br>96.7 mm/s                       | 96.7 mm/s   |   |
|                              | MPEG IMX   | 64.467 mm/s (525 mode),<br>53.776 mm/s (625 mode)                   | 64.467 mm/s (525 mode),<br>53.776 mm/s (625 mode)                   |
|                              | Betacam SX   | 59.515 mm (525 mode),<br>59.575 mm (626 mode)                       | 59.515 mm (525 mode),<br>59.575 mm (626 mode)                       |
|                              | Betacam/<br>Betacam SP                             | 118.6 mm/s (525 mode),<br>101.5 mm/s (625 mode)                     | 118.6 mm/s (525 mode),<br>101.5 mm/s (625 mode)                     |
| Playback time                | Digital Betacam<br>Max. 124 min. with BCT-D124L    | Max. 124 min. with BCT-D124L  |   |
|                              | MPEG IMX   | Max. 184 min. (525 mode)/220 min.<br>(625 mode) with BCT-184MXL     | Max. 184 min. (525 mode)/220 min.<br>(625 mode) with BCT-184MXL     |
|                              | Betacam SX   | Max. 194 min. with BCT-194SXLA                                      | Max. 194 min. with BCT-194SXLA                                      |
|                              | Betacam/<br>Betacam SP                             | Max. 90 min. (525 mode)/108 min.<br>(625 mode) with BCT-90MLA       | Max. 90 min. (525 mode)/108 min.<br>(625 mode) with BCT-90MLA       |
| Fast forward/<br>rewind time | Digital Betacam<br>Approx. 5 min. with BCT-D124L   | Approx. 5 min. with BCT-D124L                                       |   |
|                              | MPEG IMX   | Approx. 5 min. with BCT-184MXL                                      | Approx. 5 min. with BCT-184MXL                                      |
|                              | Betacam SX   | Approx. 5 min. with BCT-194SXLA                                     | Approx. 5 min. with BCT-194SXLA                                     |
|                              | Betacam/<br>Betacam SP                             | Approx. 5 min. with BCT-90MLA                                       | Approx. 5 min. with BCT-90MLA                                       |
|                              |  |   |   |
| Search<br>speed range        | Digital Betacam<br>±20 times normal playback speed | ±20 times normal playback speed                                     |   |
|                              | MPEG IMX   | ±32 times normal playback speed                                     | ±32 times normal playback speed                                     |
|                              | Betacam SX   | ±35 times normal playback speed                                     | ±35 times normal playback speed                                     |
|                              | Betacam/<br>Betacam SP                             | ±18 times (525 mode), ±20 times<br>(625 mode) normal playback speed | ±18 times (525 mode), ±20 times<br>(625 mode) normal playback speed |
|                              |  |   |   |
| Servo lock time              | 1.5 s or less (from standby on)                    | 1.5 s or less (from standby on)                                     |   |
| Load/unload time             | 9 s or less  | 9 s or less   |   |

### INPUT SIGNAL

|           |                       |                       |
|-----------|-----------------------|-----------------------|
| Ext. sync | BNC (x 1), Frame lock | BNC (x 1), Frame lock |
|-----------|-----------------------|-----------------------|

### OUTPUT SIGNALS

|                           |   |   |
|---------------------------|---|---|
| Analogue composite output | BNC (x 1), RCA Phono (x1),<br>1.0 Vp-p, 75 Ω  | BNC (x 1), RCA Phono (x1),<br>1.0 Vp-p, 75 Ω  |
| S-video output            | Mini DIN 4-pin (x 1), Y: 1.0 Vp-p,<br>C: 0.286 Vp-p burst, 75 Ω   | Mini DIN 4-pin (x 1), Y: 1.0 Vp-p,<br>C: 0.286 Vp-p burst, 75 Ω   |
| Analogue component output | BNC (x 3), Y: 1.0 Vp-p,<br>R-Y/B-Y: 0.7 Vp-p, 75 Ω  | —   |
| SDI output                | —   | BNC (x 2), SMPTE 259M,<br>270 Mb/s, 0.8 Vp-p, 75 Ω  |
| i.LINK (DV output)        | 6-pin (x1), IEEE 1394   | 6-pin (x1), IEEE 1394   |
| Time Code output          | —   | BNC(x1), 1.0Vp-p, 75 Ω, unbalanced  |
| Monitor output L/R        | RCA Phono (x 2): -10 dBu at 47K Ω load,<br>unbalanced, XLR (male x 2): +4 dBm,<br>600 Ω load, low impedance, balanced | RCA Phono (x 2): -10 dBu at 47K Ω load,<br>unbalanced, XLR (male x 2): +4 dBm,<br>600 Ω load, low impedance, balanced |
| Headphone output          | JM-60 Stereo Phone Jack,<br>-∞ to -12 dBu at 8 Ω load, unbalanced   | JM-60 Stereo Phone Jack,<br>-∞ to -12 dBu at 8 Ω load, unbalanced   |

### REMOTE CONTROL

|          |  |  |
|----------|--|--|
| RS-422A  | D-sub 9-pin (female) (x 1),<br>Sony 9-pin remote interface | D-sub 9-pin (female) (x 1),<br>Sony 9-pin remote interface |
| RS-232C  | D-sub 9-pin (male) (x 1)                                   | D-sub 9-pin (male) (x 1)                                   |
| Wireless | SIRCS  | SIRCS  |

### SUPPLIED ACCESSORIES

|  |  |  |
|--|--|--|
|  | Operation manual (CD-ROM),<br>Operation manual, vertical stand (x 2),<br>Infra-red remote controller | Operation manual (CD-ROM),<br>Operation manual, vertical stand (x 2),<br>Infra-red remote controller |
|--|--|--|

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