

Digital Betacam Family

Digital BETACAM



SONY

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Product line-up

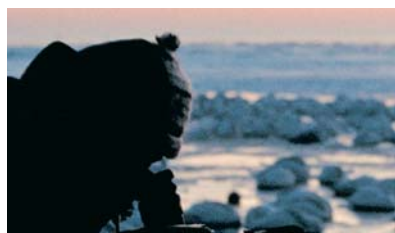
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Discover the quality and simplicity of Digital Betacam.

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 so many broadcasters around the world have chosen Digital Betacam as their "in-house" production format. Over 100,000 Digital Betacam camcorders, VTRs and players are in use around the world.

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.



Digital BETACAM

DVW-970P

DIGITAL BETACAM
CAMCORDER

The DVW-970P 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 and features such as slow shutter mode, interval recording and picture cache operation are also provided.

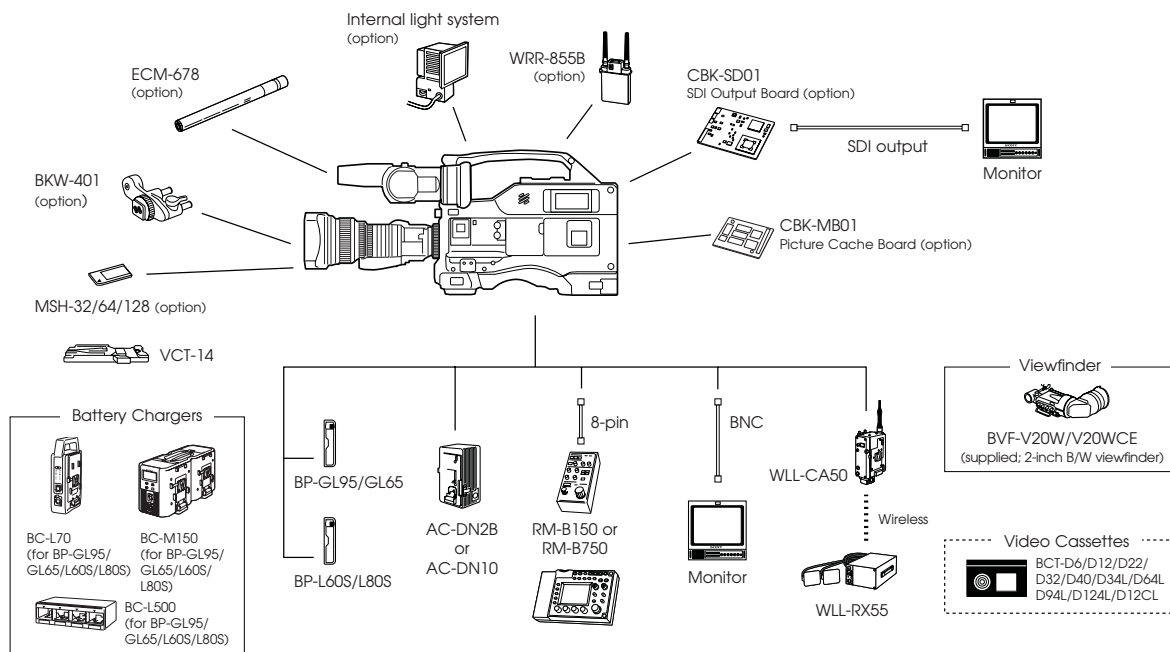
Use of the latest technology has reduced size, power consumption and acoustic noise compared with previous generation Digital Betacam camcorders.

DVW-970P 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

					
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/ L60S/L80S Lithium Ion Battery Pack	BC-L70 Battery Charger	BC-L500 Battery Charger	BC-M150 Battery Charger	VCT-14 Tripod Adapter
					
BCT-D6/D12/D22/ D32/D40/D34L/D64L D94L/D124L/D12CL Digital Betacam Tapes	MSH-32/64/128 Memory Stick media	WRR-855B Wireless Receiver (Shown here with a BTA-801 Camera adapter for rear Mounting to camcorder)	WRR-862B Wireless Receiver	WLL-CA50 Wireless Camera Transmitter	WLL-RX55 Wireless Camera Receiver
		<p>Not pictured here:</p> <ul style="list-style-type: none"> 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 			
ECM-670/672/678 Shotgun-type Electret Condenser Microphones	ECM-680S Shotgun-type Electret Condenser Microphone				

System Configuration



Studio Recorders

DVW-M2000P

DIGITAL BETACAM
VIDEOCASSETTE RECORDERRecords: **Digital BETACAM**Replays: **BETACAM SX** **MPEG IMX** **Digital BETACAM**
BETACAM **BETACAM SP**

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 playout of content from Flexicart and Library Management (LMS) systems.

DVW-M2000P FEATURES

- > 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

DIGITAL BETACAM
VIDEOCASSETTE RECORDERRecords: **Digital BETACAM**Replays: **Digital BETACAM**

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-2000P FEATURES

- > 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

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-102**CONTROL PANEL CASE****BKMW-103****CONTROL PANEL
EXTENSION KIT**
(Cable length: 10 m)**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.

RMM-131**RACK MOUNT KIT****BCT-D34L/D64L/
D94L/D124L****DIGITAL VIDEO
TAPES (Large)****BCT-D6/D12/D22/
D32/D40****DIGITAL VIDEO
TAPES (Small)****FEATURES**

- > Ultra-fine magnetic particles for high output
- > High-performance binder increases output
- > Specially developed lubricant increases head contact and reduces headwear
- > Designed for long-term playback reliability
- > Low-shrinkage for archival stability

BCT-D12CL**CLEANING TAPE**
(not pictured here)

J-30 & J-30/SDI

COMPACT PLAYERS



Plays:



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 FEATURES

- > 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)



DVW-970P

Specifications

09

GENERAL

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) 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
Analogue composite output	BNC type (1), 1.0 Vp-p, 75 Ω
SDI output	BNC type (1), 0.8 Vp-p, 75 Ω (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)

* 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

Recording format	Digital Betacam
Video	4 ch/20 bits/48 kHz
Audio	
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 Board.

CAMERA SECTION

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
	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

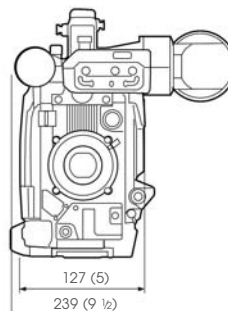
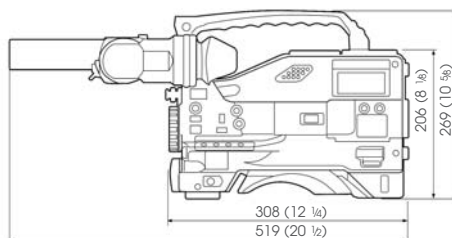
CRT	2.0-inch monochrome
Controls	BRIGHT, CONTRAST, PEAKING, TALLY, ZEBRA, DISPLAY switches
Horizontal resolution	450 TV lines (16:9)/600 TV lines (4:3)
Microphone	Electret condenser microphone (Ultra-directional) (Detachable)

SUPPLIED ACCESSORIES

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

Unit: mm (inches)



10 Specifications



DVW-M2000P



DVW-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): 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): 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	
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		
Remote (RS-422A) control	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	JIM-60 Stereo phone jack	

* ISR: Interactive Status Reporting

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 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 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 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 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 Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less 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 Dynamic range (at 1 kHz, emphasis ON): More than 95 dB Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05% 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	T1=60 μs, T2=15 μs (ON/OFF selectable in REC mode)

SUPPLIED ACCESSORIES	
PSW 4x16 Rack Mount Screw (x4), Operation manual (x1), Installation manual (x1)	

RECOMMENDED WIRELESS SYSTEMS FOR CAMCORDER



WRR-862B RECEIVER	WRR-855B RECEIVER	WRT-8B TRANSMITTER*	ECM-88BC LAVALIER MIC
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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
Mounting/adaptor brackets required	A8278-057A	CA-WR855, BTA-801 or A8278-057A		Capsule
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



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 (12 1/8 x 4 x 15 3/4 inches)	307 x 100 x 397 mm (12 1/8 x 4 x 15 3/4 inches)
Tape speed		
Digital Betacam	96.7 mm/s	96.7 mm/s
MPEG IMX	64.467 mm/s (525 mode), 53.776 mm/s (625 mode)	64.467 mm/s (525 mode), 53.776 mm/s (625 mode)
Betacam SX	59.515 mm (525 mode), 59.575 mm (626 mode)	59.515 mm (525 mode), 59.575 mm (626 mode)
Betacam/ Betacam SP	118.6 mm/s (525 mode), 101.5 mm/s (625 mode)	118.6 mm/s (525 mode), 101.5 mm/s (625 mode)
Playback time		
Digital Betacam	Max. 124 min. with BCT-D124L	Max. 124 min. with BCT-D124L
MPEG IMX	Max. 184 min. (525 mode)/220 min. (625 mode) with BCT-184MXL	Max. 184 min. (525 mode)/220 min. (625 mode) with BCT-184MXL
Betacam SX	Max. 194 min. with BCT-194SXLA	Max. 194 min. with BCT-194SXLA
Betacam/ Betacam SP	Max. 90 min. (525 mode)/108 min. (625 mode) with BCT-90MLA	Max. 90 min. (525 mode)/108 min. (625 mode) with BCT-90MLA
Fast forward/rewind time		
Digital Betacam	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/ Betacam SP	Approx. 5 min. with BCT-90MLA	Approx. 5 min. with BCT-90MLA
Search speed range		
Digital Betacam	±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/ Betacam SP	±18 times (525 mode), ±20 times (625 mode) normal playback speed	±18 times (525 mode), ±20 times (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), 1.0 Vp-p, 75 Ω	BNC (x 1), RCA Phono (x1), 1.0 Vp-p, 75 Ω
S-video output	Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286 Vp-p burst, 75 Ω	Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286 Vp-p burst, 75 Ω
Analogue component output	BNC (x 3), Y: 1.0 Vp-p, R-Y/B-Y: 0.7 Vp-p, 75 Ω	—
SDI output	—	BNC (x 2), SMPTE 259M, 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 47kΩ load, unbalanced, XLR (male x 2): +4 dBm, 600 Ωload, low impedance, balanced	RCA Phono (x 2): -10 dBu at 47kΩ load, unbalanced, XLR (male x 2): +4 dBm, 600 Ωload, low impedance, balanced
Headphone output	JM-60 Stereo Phone Jack, ∞ to -12 dBu at 8Ω load, unbalanced	JM-60 Stereo Phone Jack, ∞ to -12 dBu at 8Ω load, unbalanced

REMOTE CONTROL		
RS-422A	D-sub 9-pin (female) (x 1), Sony 9-pin remote interface	D-sub 9-pin (female) (x 1), 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), Operation manual, vertical stand (x 2), Infra-red remote controller	Operation manual (CD-ROM), Operation manual, vertical stand (x 2), Infra-red remote controller

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