

SONY[®]

High Definition Video System

Digital **HDVS**[®]

HDCAM[™]



HD Digital Camcorder
HDW-730S

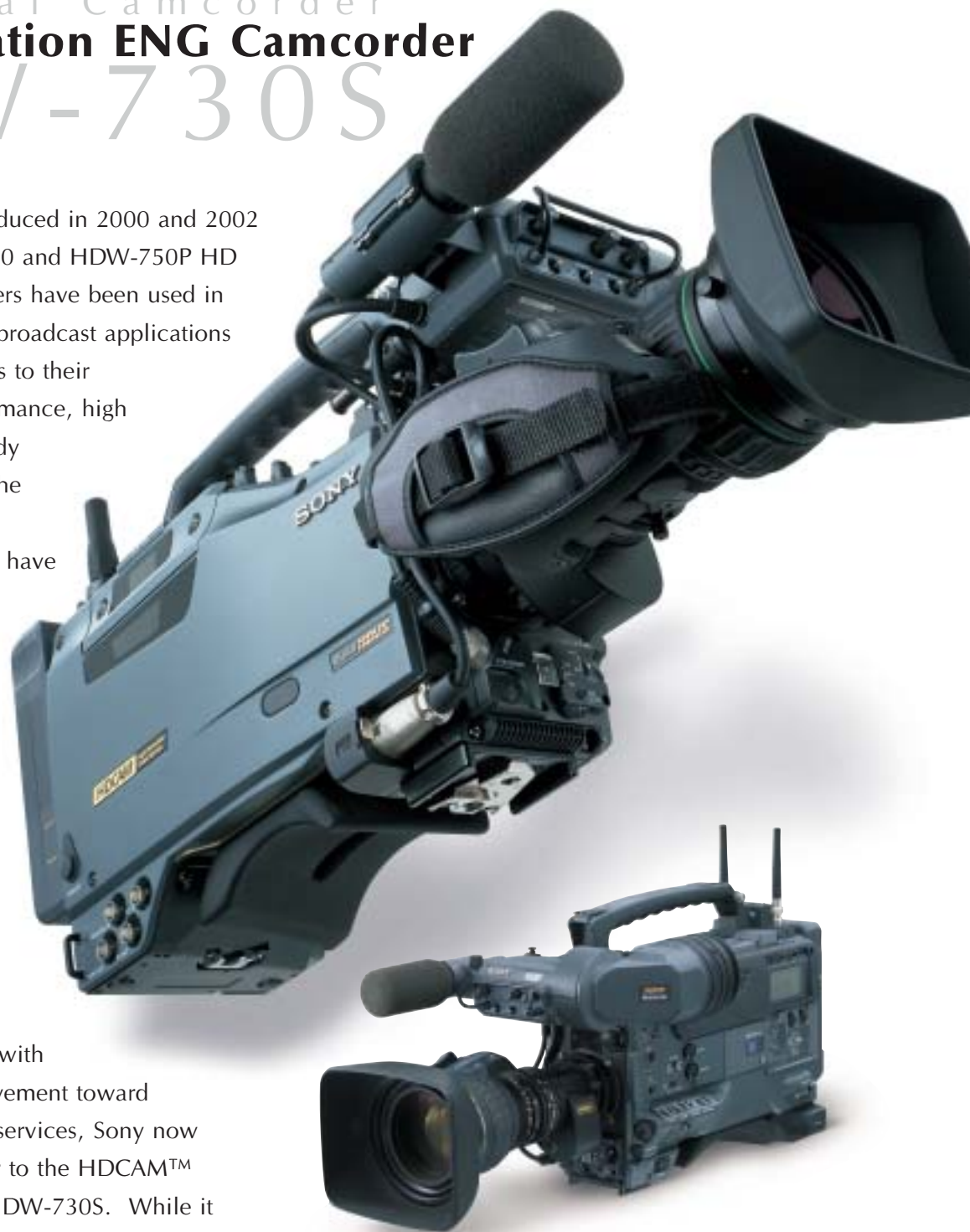
HD Digital Camcorder

Next-Generation ENG Camcorder

HDW-730S

Since they were first introduced in 2000 and 2002 respectively, the HDW-750 and HDW-750P HD multi-frame-rate camcorders have been used in scores of production and broadcast applications around the world. Thanks to their outstanding picture performance, high operability, and rock-steady reliability inherited from the Betacam™ family of acquisition products, they have been utilized as the core acquisition devices in applications such as digital cinematography, television program productions, commercial productions and sporting event coverage.

Understanding and being responsive to emerging customer needs, together with the recent worldwide movement toward high-definition broadcast services, Sony now introduces a new member to the HDCAM™ acquisition family – the HDW-730S. While it specifically focuses on 1080/60i or 1080/50i acquisition, the HDW-730S price is comparable to high-end SD camcorders. Equipped with a number of unique features to address even the harshest shooting environments, plus the outstanding picture performance that all HDCAM camcorders provide, the HDW-730S is poised to become the ideal camcorder to support migration to the next generation of ENG, EFP, and general HD acquisition applications.



HAD Sensor Technology

The HDW-730S camcorder inherits Sony HAD sensor technology and the on-chip lens structure of the Power HAD™ sensors, an imaging device is based on the 1920 x 1080 CIF (Common Image Format). The 2/3-inch type 2.2 million-pixel IT CCD provides excellent performance that achieves industry-leading sensitivity of f10 at 2,000 Lux and a vertical smear level of -125 dB.





Ultimate Sensitivity

The optional Slow Shutter Board HKDW-705 powerfully enhances the operational and creative versatility of the HDW-730S camcorder in both ENG and EFP applications. With the HKDW-705 installed, the HDW-730S can slow its shutter speed down to a 64-frame period*. During such a long frame period, electrical charges accumulate on the CCDs, dramatically increasing sensitivity (minimum illumination: 0.003 Lux). This allows camera operators to make images in extremely dark environments. In addition, because more picture blur occurs when shutter speed is reduced, the HKDW-705 allows operators to produce creative pictures when shooting a moving object with the intentional use of blurred images.

*The shutter speed can be adjusted to a 1-, 2-, 3-, 4-, 5-, 6-, 7-, 8-, 16-, 32-, or 64-frame period.



Slow Shutter OFF



32 Frames

Always Ready to Capture an Image

Picture Cache Recording is a scene saving function of the HDW-730S camcorder that can be employed by using the optional HKDW-703 Picture Cache Board. Up to 7 seconds* (1060/60i format) of audio and video signals are buffered into memory before the Rec button is even pressed. This means that everything that happened 7 seconds before the Rec button was pressed, while in Standby mode, can still be recorded to tape. Having this capability can prevent the loss of important events that occur before the operator even has the chance to press the Rec button.

*Up to 8 seconds can be buffered in 1080/50i format.

Extended Recording Time

The HDW-730S provides a long recording time of up to 100 minutes even when using the mid-size BP-IL75 Info Li-Ion Battery. This will meet a critical need for long operating time required especially from ENG camera crews.



Rugged and Ergonomic Design

The design of the HDW-730S is based on years of Sony experience in camera ergonomics, and provides a high level of mobility and balance to minimize fatigue even in the challenging conditions of ENG shooting. Combined with the viewfinder, battery, cassette, and microphone, the total weight is only 5.4 kilograms (less than 12 pounds). This astonishingly compact and lightweight HD camcorder opens new possibilities for handheld creative camera work.

Versatile Monitoring Capability

The HDW-730S offers an extensive range of interfaces. In addition to the HD-SDI output, it offers SD-SDI or analog composite output with the optional HKDW-702 Down Converter Board. With this capability, HDCAM-originated content cannot only be viewed with an HDTV monitor, but also using an existing SDTV monitor.

Shot Mark Handling

The HDW-730S is capable of recording shot marks (time code for 'good' shots) and shot data (data, shot ID, cassette number, etc.) to tape. When a tape containing shot marks is played back on an HDW-2000 series VTR, the shot mark positions are automatically detected and a list of all marks is generated for display on the video monitor. This allows operators to easily select and cue-up to the scene of previously selected as "good" shots.

Quick Setup

The HDW-730S incorporates the Sony Memory Stick™ system for the storage and instant recall of setup parameters. This is an easy, effective system for storing and recalling camera setup parameters for individual scenes or the individual preferences of a camera operator, including the settings of assignable switches. The Memory Stick data can also be easily off loaded onto a computer for storage or e-mail of set up/scene file data.



Specifications

General	
Mass	Approx. 3.7 kg (8 lb 3 oz): Main Body Approx. 5.4 kg (11 lb 14 oz) (with MIC, VF, BCT-40HD, BP-L60A)
Dimensions (WxHxD)	127 x 206 x 308 mm (5 x 8 1/8 x 12 1/4 inch)
Power requirement	DC 12V + 5.0 V/-1.0 V
Power consumption	33 W (with 12 V power supply, REC mode, without VF)
Operating temperature	0 °C to +40 °C (+32 °F to +104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	25% to 80% (Relative humidity)
Continuous operating time	Approx. 110 min with BP-L60A, Approx. 130 min with BP-L90A
Inputs/outputs connectors	
Genlock video input	BNC type x 1, 1.0 Vp-p, 75 Ω
Time code input	BNC type x 1, 0.5 V to 18 Vp-p, 10 kΩ
Audio CH1/CH2 input	XLR-3-pin type x 2 (Female), -60 dBu/+4 dBu selectable, high impedance, balanced (0 dBu = 0.775 Vrms)
Mic input (Stereo)	XLR-5-pin type x 1 (Female), -60 dBu
Test output	BNC type x 1, 1.0 Vp-p, 75 Ω, unbalanced
VBS/SDI output (option:HKDW-702)	BNC type x 1, 75 Ω/VBS out: 1.0 Vp-p/SDI out: 0.8 Vp-p
HD-SDI output	BNC type x 1, 0.8 Vp-p, 75 Ω, unbalanced
Audio output	XLR-5-pin type x 1 (Male), 0 dBm
Time code output	BNC type x 1, 1.0 Vp-p, 75 Ω
Earphone	Mini-jack (x 2), 8 Ω, ∞ to -18 dBs variable
Lens	12-pin
Remote	8-pin
Light	2-pin, DC 12 V, max. 50 W
DC input	XLR-4-pin type (Male), DC 11 V to 17 V
DC output	4-pin (for wireless microphone receiver), DC 11 V to 17 V, maximum current 0.1 A
VTR section	
Recording format	HDCAM
Tape speed	Approx. 96.7 mm/s (at 59.94i format) Approx. 80.6 mm/s (at 50i format)
Playback/Recording time	Max. 40 min. with BCT-40HD (at 59.94i format) Max. 48 min. with BCT-40HD (at 50i format)
Fast forward/rewind time	Approx. 5 min. with BCT-40HD
Recommended tape	Sony HDCAM cassette BCT-22HD, BCT-40HD
Digital video performance	
Sampling frequency	Y: 74.25 MHz, PB/PR: 37.125 MHz
Quantization	10 bits/sample (8 bits/sample for compression processing)
Channel coding	S-NRZI PR-IV
Compression	Coefficient recording system
Error correction	Reed-Solomon code
Error concealment	Adaptive three dimensional
Audio performance (Playback with standard HDW-500/F500/M2000/M2100)	
Frequency response	20 Hz to 20 kHz, + 0.5 dB/-1.0 dB
Dynamic range	More than 85 dB (emphasis ON)
Distortion (at 1kHz, emphasis ON, reference level)	Less than 0.08%
Cross talk (at 1kHz, reference level)	Less than -70 dB
Wow & flutter	Below measurable limit

Camera section (Performance)	
Pickup device	3-chip 2/3-inch type IT CCD
Effective Picture elements	1920 (H) x 1080 (V)
Optical system	F1.4 prism (Equipped with Quarz Filter)
Lens mount	Special bayonet mount
Built-in filters	ND 1: Clear, 2: 5600K + 1/8ND, 3: 5600K, 4: 5600K + 1/64ND
Sensitivity (2000 lux, 89.9% reflectance)	F10.0 (typical) Equivalent to ISO 600 or more
Minimum illumination	Approx. 0.3 lx (F1.4 lens, +42 dB turbo gain)
Smear level	-125 dB
S/N ratio	54 dB (typical)
Modulation depth at 5MHz	45% +/-5%
Horizontal resolution	1000 TV lines
Shutter speed	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) (at 59.94i format) 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) (at 50i format)
Clear Scan	60 Hz to 4300 Hz (at 59.94i format) 50Hz to 4700 Hz (at 50i format)
Programable Gain	-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB (select in camera setup menu for L/M/H/TURBO)
Viewfinder	
CRT	2.0-inch monochrome
Controls	BRIGHT, CONTRAST, PEAKING controls / TALLY, ZEBRA, DISPLAY/ASPECT switches
Horizontal resolution	500 TV lines (16:9, at center)
Microphone	Ultra-directional monaural microphone (Detachable)
Supplied accessories	HDVF-20A, HD Electric viewfinder (1)/Stereo microphone, Super cardioid directional, external power supply type (1)/Operation manual (1)/Lens cap (1)/Shoulder strap (1)/XLR cap (4)
Optional accessories	HKDW-702, HD-SD Down Converter Board HKDW-703, Picture Cache Board HKDW-704, GPS Unit HKDW-705, Slow Shutter Board VCT-14, Tripod Adapter HDCA-901, Camcorder Adapter BKW-401, Viewfinder Rotation Unit BKDW-701, Servo Filter Unit RM-B150, Remote Control Unit RM-B750, Remote Control Panel HDVF-C30W, HDVF-C750W, HD LCD Color Viewfinder BP-GL95/GL65/IL75, Info Li-Ion Battery BP-M50/M100, Ni-MH Battery BC-M150, Battery Charger BC-M50, Battery Charger AC-550/550CE, AC Adapter AC-DN2B, AC Adapter AC-DN10, AC Adapter MSA-8A/16A/32A/64A, Memory Stick WRR-855A/855B, UHF Synthesized Tuner Unit WRR-810A/860A/862A/862B, UHF Synthesized Tuner Unit (A-8278-057-A, WRR mounting bracket required) ECM-MS5, Stereo Microphone C-74, Microphone CAC-12, Microphone Holder CRS-3P, Cradle Suspension CCXA-53, Audio Cable MLB-1M-100, Memory Label BCT-22HD/40HD, HDCAM tape cassette BCT-HD12CL, Cleaning Cassette LC-DS3005FT, Soft Carrying Case

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