

DVCAM™

**DVCAM FAMILY CATALOGUE
2003/2004**



CHANGING



THE WAY



BUSINESS



COMMUNICATES

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SONY®

Introduction

Video production styles continue to diversify in response to the rapid and tremendous growth in visual communication. In this fast-changing environment, the need is for equipment that meets the crucial demands for both higher productivity and greater creativity in professional video production.

Since its launch in 1996, Sony DVCAM™ has satisfied these demands and brought many notable benefits. Excellent picture and sound quality that only a digital format can provide, high-performance editing capabilities, and system versatility that makes it possible to migrate smoothly from analogue to digital – these are just some of the factors behind the success of DVCAM. A full model line-up for digital acquisition, editing and program playout has led to the rapid acceptance of DVCAM by business users, production facilities and broadcasters around the world.

Many new models have been added to the DSR Series of DVCAM equipment, broadening the range of applications in ENG, field acquisition/editing, simple editing and so on.

Select from the Sony DVCAM lineup and you will be choosing innovative equipment to bring both new solutions to your production demands and added performance benefits to your system.

For more information, please visit our website:
www.sonybiz.net/dvcam



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• CREATV USES THE NEW DSR-DR1000P DVCAM HARD DISK RECORDER ON ITS COVERAGE OF BLACKBURN ROVERS AND OTHER SPORTING EVENTS



Professional video production is now seeking lower-cost equipment that will bring an increase in production efficiency and a reduction in running costs. OB outfit CREATV Broadcast is no exception. Chief executive Alan Yardley is hoping that a new, low-cost DVCAM-based server will enable his facility to broadcast up to 50 hours of weekly coverage during this year's Royal Ascot event.

Using two DSR-DR1000P DVCAM hard disk recorders, Yardley's company has the contract to take live feeds from the race, mix them and show them to thousands of spectators via Ascot Race Course's internal TV system.

Yardley explains that the VTR-like server – which has a capacity of 80 GB (or over six hours) of DVCAM stream video and four channels of audio – enables quick and easy handling of footage through random access and offers simultaneous recording and playback facilities. CREATV is also taking advantage of the recorder's channels of embedded audio by operating a restrictive radio system from the course with up-to-the minute news on betting and travel.

Yardley points out that the compact size (7.5 kg) of the new recorders means that CREATV can easily fit two recorders into one rack of an OB unit and can be used to perform tasks normally associated with high-end hard disk recorders such as the MAV-555. Yardley also operates Blackburn Rovers' internal TV system, Rovervision, and it was the useful functionality of the MAV-555 to provide instant and perfect slow-motion replays of goals when playing at their Ewood Park ground in Blackburn that persuaded him to look towards a more mobile option for Rovers' away games.

He says: "The compact size of the recorder was ideal to fit into a mobile unit and the two units provide similar functionality to one MAV-555."

Both the MAV-555 and the DSR-DR1000P are controlled by Ashvale's AVM4-2 Controller which lends it the ability to create clips and playback simultaneously. Yardley predicts that with these capabilities, his production unit will be able to cut down on tape stock and record more output.

"The DSR-DR1000P will eventually replace traditional analogue systems and allow instant access to replays while still maintaining the recordings," he says.

The recorder can be used for other applications including playout of commercial spots, as a simple back-up disk server and for transferring material on a network via Ethernet or at up to four times real time via i.Link.

CREATV is also expanding the function of its Betacam SX cameras by attaching one of its three cameras to the Studio Triax Camera system so that it can be used as a fully professional studio camera.

Rovervision provides a sophisticated pre-match magazine show, with player interviews, features and previous match action, which is broadcast throughout the Ewood Park complex and on to a Sony Jumbotron screen within the stadium. The outfit also provides live coverage of the game, with half-time highlights to boot.

• **DSR-DR1000P IS A STAR PERFORMER AT ICC CRICKET WORLD CUP 2003**



SABC USES 28 DVCAM HARD DISK RECORDERS FOR OUTSIDE BROADCAST VEHICLES AND PORTABLE KITS

Broadcasting to an estimated 1.5 billion viewers worldwide, the ICC World Cup 2003 was a major event for South Africa's national public service broadcaster, SABC, and its outside broadcast division, AirTime. At the heart of AirTime's World Cup coverage was an 18-camera vehicle with sophisticated digital switching and mixing facilities.

"Two years in the planning, the new vehicle is the flagship of AirTime TV Outside Broadcasts' fleet and is adaptable to all types of productions from live sport to major musical concerts," says SABC Engineering Services broadcast consultant, Ivan Marsh.

Eight DSR-DR1000P DVCAM hard-disk recorders were included in the vehicle, primarily for the Cricket World Cup where they quickly proved to be invaluable.

The DSR-DR1000P units allow full-function playback (including slow motion) whilst recording continues uninterrupted. During World Cup matches, six cameras were each slaved to a DSR-DR1000P – four line cameras and two mat cameras directly opposite the stump positions. The high quality digital jog sound and smooth slow-motion playback (over a speed range of +/- 200%) enabled the third umpire to make conclusive lbw and run-out decisions. Other DSR-DR1000P units were used for recording, editing and playing back highlights packages during half-time breaks. Once 'in' and 'out' points are marked, the clip segment playback (CSP) feature enables continuous playback of the selected clips with seamless transitions.

The Cricket World Cup set-up has become standard for all AirTime's cricket coverage, with the DSR-DR1000P also proving popular for other sports events such as soccer, rugby, athletics etc.

"We first saw the DSR-DR1000P at IBC 2002", commented Manny Coelho, High Technology Manager at AirTime. "During the ICC Cricket World Cup they proved themselves an ideal recording and playback solution. They give us the benefits of disk-based recording while retaining the operational feel of a VTR – complete with jog/shuttle dial."

The DSR-DR1000P World Cup performance led AirTime to place an order for another twenty DSR-DR1000P units, not only for other outside broadcast vehicles but also in fly-away kits for covering remote events. In this application, the major advantage of the DSR-DR1000P is its modest weight (6kg). Five DSR-DR1000 units weigh approximately the same as a single BVW-75 VTR (30kg). Initial concerns about possible damage to the disk array during travel were proved unfounded after extensive trouble-free travelling with multiple DSR-DR1000P units for almost a year.



NEWSGATHERING TEAM FRONTLINE TV USES THE DSR-DU1 HARD DISK RECORDER AS A SECURE BACK-UP FOR SENSITIVE FOOTAGE



In February 1991 freelance camera operator Vaughan Smith disguised himself as an army officer and infiltrated the ranks at the frontline of the Gulf war. His ingenuity allowed him to film the only unrestricted footage of Desert Storm.

Much of this material on the ground war is still available through the ex-BBC cameraman's crewing agency, Frontline TV, whose team of experienced freelancers have covered events in Afghanistan, Israel, Macedonia, Zimbabwe and Iraq. When BBC Newsgathering approached Frontline recently to shoot and make several copies of an important and secret interview, Smith opted for the latest in hard disk technology.

"All I was told was that a member of Al-Qaeda wanted to speak to the press. Obviously in these sorts of circumstances all sorts of people would try and sabotage the interview or seize a copy to prevent the footage from being broadcast", he reveals.

To ensure its chances of broadcast, three copies of the 45-minute interview were made simultaneously by attaching a DSR-DU1 hard disk recorder – supplied by broadcast distributors Mitcorp – to Smith's DVCAM camcorder. The DSR-DU1 works by docking onto the rear of a camcorder by use of an optional CA-DU1 camera adaptor and then connecting an i-Link cable from the camcorder to the adaptor. Camera output is then recorded to the hard drive of the DSR-DU1 in parallel with the recording on the camera's tape.

"Through the i-Link interface, the device can also interface with a variety of hand-held cameras and has the advantage of increasing recording time from the 40 minutes of a standard cassette to three hours. It's a cheap and portable method of making duplicates in the field – the only other way we would have got multiple copies would have been through daisy chaining other large recording decks together."

Frontline, whose clients include Channel 4, TV2 Danmark, TV2 Norway, RTE and ABC, also requires duplicate copies of interviews and events when it is working in association with more than one broadcaster. According to Smith, who has been shot twice during his career, there's another quite simple advantage to making duplicates in this way. "Quite often soldiers or the authorities will stop you at gunpoint and try to take your tape off you, but they never bother with hard disk recorders because they're trained to look for tape."

Smith also praises the DSR-DU1 for its useful function as a back-up when shooting material from dusty and sandy locations since it tends to be more robust than tape.

Once the shoot is complete, with the right code the device can be detached from the camcorder and used for field off-line logging of EDL creation. And because it is a fraction of the size of other hard disk recorders, freelance operators like Smith are able to take it into the field.

"For the freelance it is a versatile and useful bit of equipment which is bridging the gap between tape and the computer", Smith concludes.

• DATMEDIA STREAMS LECTURES WITH DSR-DU1



Internet streaming company Datmedia in London broadcasts lectures for the Institute of Electrical Engineers using the new DSR-DU1 DVCAM compact hard disk recorder.

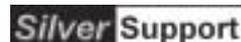
Bill Clee, Datmedia's technical director, says the company records the lectures with a DSR-570WSP DVCAM camcorder connected to the DSR-DU1, which were specified and supplied through broadcast distributors Mitcorp.

"The DSR-DU1 allows us to start encoding on the fly, faster than real-time, so it's a lot easier than tapes," Clee says. "While we're still filming, we can pull off material faster than real time and upload it and we've got people working on it while the lecture is still going on. It allows us to create an archiving system viewers around the world can access."

Datmedia is also using the DSR-DU1's cue system. If a lecturer is using slides, when he or she clicks on a slide, the DSR-DU1 operator can automatically bring up the slide stored on the hard disk recorder for the web viewer.

Datmedia is also streaming video to the SonyEricsson P800 mobile phone.

DVCAM SILVER SUPPORT PACK



Sony understand that in today's fast-changing environment, the need is for both equipment and a level of service that meet the crucial demands for higher productivity in professional video production.

Setting new standards in innovation, quality and reliability

Keywords associated with the Sony DVCAM line-up are versatility and flexibility. From state-of-the art technology to sophisticated functionality, the DVCAM line-up addresses a broad range of professional video applications from electronic news gathering to corporate video productions.

As soon as equipment is switched on, it becomes absolutely mission critical. Any fault or inability to use it to its full potential will have an immediate impact on bottom-line effectiveness. Now, with the launch of a customer-focused operational and technical support pack, which has significant advantages and benefits, Sony has underscored another keyword—reliability.

Quite simply more

Because professional customers need professional service and support, Sony offers enhanced support services for DVCAM products. DVCAM products are supplied with a 2-year Silver Support Pack, in addition to warranty, as standard. That means unique extra services, for twice as long.

Supported DVCAM products

Digital Camcorders:

DSR-570WSP | DSR-390P | DSR-250P | DSR-1P
DSR-PD170P | DSR-PDX10P

Digital VTRs

DSR-2000P | DSR-1800P | DSR-1600P | DSR-1500AP
DSR-45P | DSR-30P | DSR-25 | DSR-11 | DSR-70AP
DSR-50P

Hard Disk Units

DSR-DU1 | DSR-DR1000P

5 ADDITIONAL REASONS TO CHOOSE SONY DVCAM



2 Years Support

The Silver Support Pack extends the support period from the standard 1-year warranty to two years. Not only that, but extra features and services are also included.



Operational Phone Call Centre

Operational phone support is provided to give advice and help so that the user can get the most out of their DVCAM equipment and maximise its performance. Our telephone support is available from Monday to Friday and in 5 languages – English, French, German, Italian and Spanish.



Collection Anywhere

In the event of equipment failure, Sony will arrange collection of the faulty unit directly from, and delivery of the repaired unit directly to the customer's location – anywhere in mainland EU, Norway or Switzerland. That makes it simpler, quicker and even more convenient for the customer.



Repair within 7 days

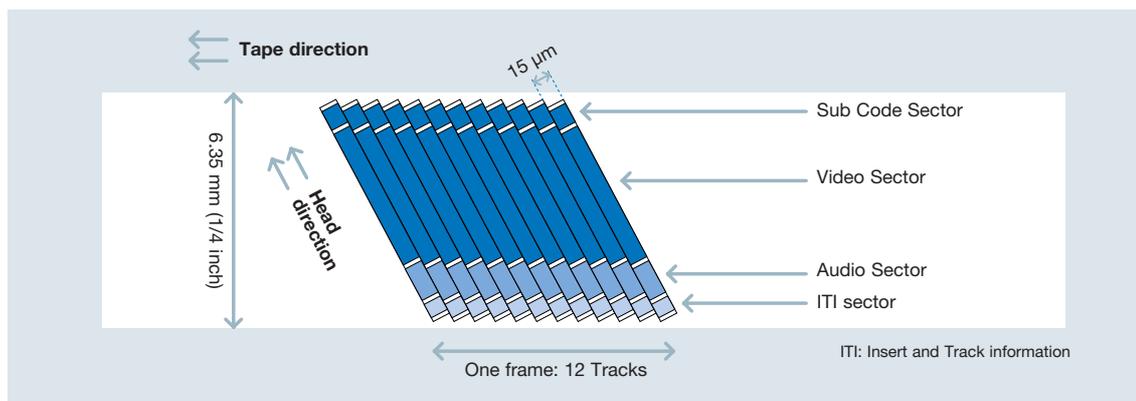
Sony will collect, repair and return the unit to the customer's preferred location within 7 working days. So, minimum downtime, increased confidence and the ability to plan your business are guaranteed.



Loan

If the faulty equipment cannot be repaired in time, the DVCAM hotline will contact the customer and arrange to have a loan unit delivered. Arrangements will be made to collect the loan unit as soon as confirmation is received that the repair has been carried out satisfactorily.

DVCAM FORMAT



DIGITAL COMPONENT RECORDING FOR EXCELLENT PICTURE QUALITY

The DVCAM format is the professional extension of the worldwide standard DV format. The DVCAM format uses 8-bit digital component recording with a 5:1 compression ratio and a sampling rate of 4:2:0. The unique compression algorithm provides excellent picture quality and superb multi-generation performance. The DVCAM format has a wider track pitch of 15 μm (compared with 10 μm for the DV format) which gives higher reliability for professional editing.

It also offers superior digital audio performance, providing a wide dynamic range and excellent signal-to-noise ratio, comparable to CD quality. Alternative audio channel modes can be selected: a two-channel mode with 48 kHz/16-bit recording or a four-channel mode with 32 kHz/12-bit recording.

RECORDING CAPABILITY OF UP TO THREE HOURS

DVCAM cassette tapes are available in two sizes: standard and mini. The standard-size cassette provides a recording time of up to 184 minutes, while the mini-size cassette provides up to 40 minutes. These long recording times are achieved in very compact cassettes with a 1/4-inch (6.35 mm) tape width.

Mini-size cassette



Standard-size cassette



EXCELLENT PERFORMANCE FROM PROFESSIONAL DVCAM TAPES

To gain maximum performance from high-density digital recording, advanced Metal Evaporated tape technology has been developed for the DVCAM format. The use of Sony pure cobalt advanced evaporated coating gives both high output and a high C/N (Carrier-to-Noise) ratio, resulting in superb quality pictures and a low error rate.

A DLC (Diamond Like Carbon) protective layer provides the enhanced protection of the tape surface that is essential to avoiding tape damage during long editing sessions. Finally, DVCAM tapes provide a low frequency of dropout and superior thermal stability.

A variety of cassettes, including tapes with IC Cassette Memory and Master Tapes, is available to suit different applications. The built-in 16-kbit Cassette Memory stores ClipLink™ Log Data, Index Pictures, Photo mode and other shooting data, enhancing editing efficiency. Tapes without IC Cassette Memory fit a wide range of applications, at an affordable price. The Master Tapes, which use Sony Hyper Evaticle II Magnetic Particle technology to provide higher output and lower noise, are suitable for high-speed data transfer applications as well as for making master recordings.

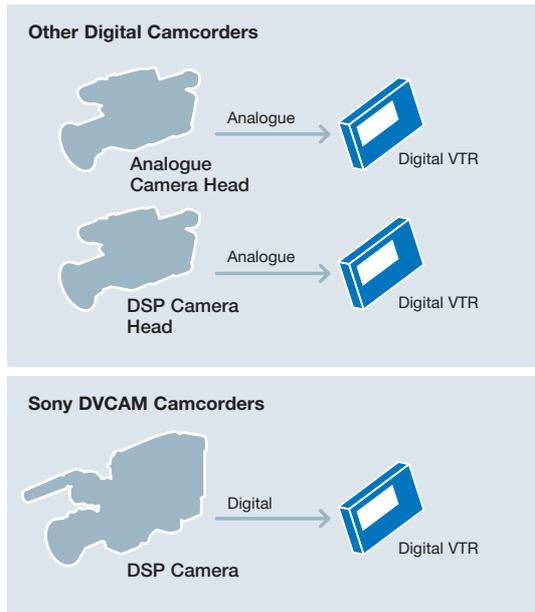
WHY DVCAM FORMAT FOR BROADCAST AND PROFESSIONAL?

Sony developed the DVCAM format with its wider 15 μm track pitch to meet broadcast and professional customer requirements. The consumer DV format with a 10 μm track pitch could not offer sufficient reliability for the broadcast and professional environment. Sony developed DVCAM format with a wider 15 μm track pitch specifically to meet broadcast and professional customer requirements. Reliability is particularly important in editing and playback compatibility, where the wider track pitch of the DVCAM format eliminates the risk of block noise in playback picture.

UNIQUE TECHNOLOGY AND ADVANTAGES

TRUE DIGITAL CAMCORDERS

Cameras: DSR-570WSP | DSR-390P | DSR-1P | DSR-250P | DSR-PD170P
DSR-PDX10P



Sony DVCAM camcorders are "True Digital Camcorders". They incorporate DSP (Digital Signal Processing) for full digital processing in the camera section and digital recording in the VTR section. The camera video signal remains in its digital component format through the recording process, resulting in outstanding image quality, free of artifacts and with none of the resolution loss typical of A/D and D/A conversion.

PLAYBACK CAPABILITY OF ALL DV (25 MB/S) FORMAT RECORDED TAPES

VTRs: DSR-2000P | DSR-1800P | DSR-1600P | DSR-1500AP | DSR-70AP

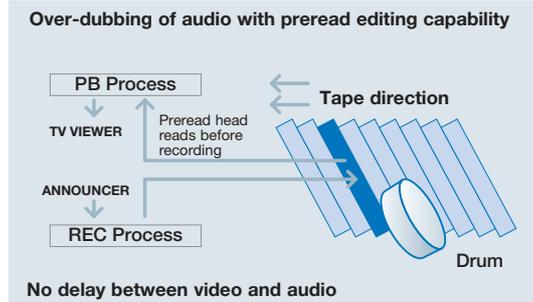
For maximum versatility in playback, the DVCAM VTRs are designed to playback DVCAM and DV (SP mode) tapes without a mechanical adaptor or menu adjustment. The DVCAM Master Series VTRs support DVCPRO tape playback*, and the DSR-2000P even supports DV (LP mode) playback. Furthermore, it is possible to use these tapes directly as editing source material, improving productivity. All DVCAM products including camcorders and VTRs can playback DV SP mode recorded tapes.

* Not compatible with SDTI (QSDI) and i.LINK (DV In/Out) interfaces. Only DSR-1500AP outputs via i.LINK.

EXCELLENT EDITING PERFORMANCE

• Preread Editing Capability*

VTR: DSR-2000P

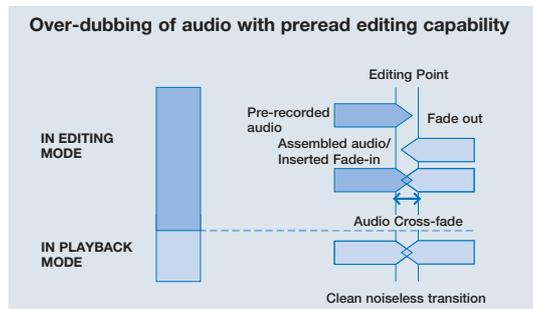


The DSR-2000P VTR offers preread editing, a function never before available on a 1/4-inch (6.35 mm) VTR. Preread heads are positioned ahead of the record heads on the drum to scan previously recorded video and audio signals. These signals can then be sent to a character generator, a video switcher and/or an audio mixer, combined with signals from another source, and then recorded back onto the same tracks. Preread editing provides many advantages since it enables single-VTR titling, audio mix/swap and voice over with no delay between video and audio. In addition, A/B roll editing with two VTRs is available (MIX and WIPE only).

* Not available for SDTI (QSDI) and i.LINK (DV In/Out) interfaces as these handle compressed signals.

• Audio Cross-fade Capability

VTRs: DSR-2000P | DSR-1800P



Preread heads also provide an audio cross-fade capability with clean audio transitions at editing points. During audio insert editing, the previously recorded audio signal is read out by preread heads, cross-faded with the VTR audio input signal and recorded back onto the same track. This provides excellent audio cross-fade editing performance without audio clicks at edit points and provides high quality audio to complement the video performance.

Main features

UNIQUE TECHNOLOGY AND ADVANTAGES

• Enhanced Digital Jog Audio

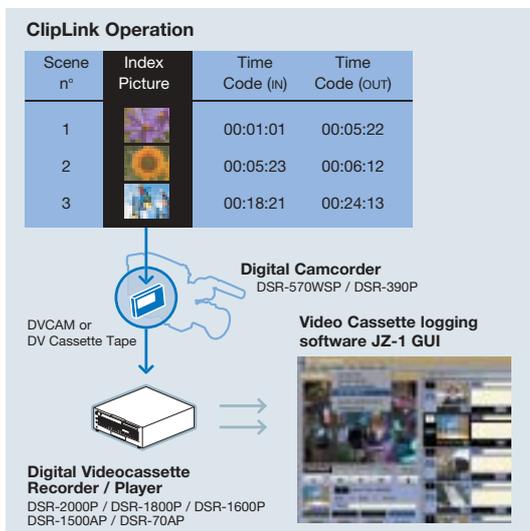
VTRs: DSR-2000P | DSR-1800P | DSR-1600P | DSR-1500AP | DSR-70AP

A digital jog audio function is included in the Master Series VTRs with a range of -1 to +1 (DSR-2000P) or -0.5 to +0.5 (DSR-1800P/1600P/1500AP/70AP) times normal speed. With its quick and smooth response, locating editing points is very easy. This is a particularly important feature for ENG applications that usually require audio-based editing. Moreover, this function is even available when using DV and DVCPRO tapes.

• ClipLink Operation

Cameras: DSR-570WSP | DSR-390P | DSR-1P

VTRs: DSR-2000P | DSR-1800P | DSR-1600P | DSR-1500AP | DSR-70AP



ClipLink is a unique Sony system that conveys shooting data into the digital production process. During acquisition with a camcorder equipped with this feature, the in-point/out-point time code data of each shot and its OK/NG status are recorded in the DVCAM Cassette Memory. At the same time, a still frame of each in-point, called an 'Index Picture*', is recorded on the DVCAM tape to provide visual information associated with the time code. ClipLink data can be imported automatically to JZ-1 videocassette logging software, modified and then be exported to almost any editing device. This greatly enhances subsequent editing operations.

* The DSR-570WSP/390P require an optional board to record Index Pictures.

VERSATILE DIGITAL INTERFACES

• SDI (Serial Digital Interface)*

VTRs: DSR-2000P | DSR-1800P** | DSR-1600P** | DSR-1500AP**
DSR-70AP**

With SDI, high-quality picture and sound can be transferred between DVCAM VTRs and SDI-equipped devices.

* The SDI used in DVCAM VTRs supports digital component video signals.
** The DSR-1800P/1600P/1500AP/70AP require an optional board for SDI.

• SDTI (QSDI™)*

VTRs: DSR-2000P | DSR-1800P** | DSR-1600P** | DSR-1500AP**
DSR-70AP**

SDTI (QSDI) is a digital interface that handles compressed video as well as the sub-code data and digital audio signals of the DV/DVCAM formats. It allows virtually degradation-free transfer of both video and audio signals between equipped VTRs and between these VTRs and the EditStation in a non-linear editing configuration.

* SDTI (Serial Data Transport Interface) is defined as SMPTE 305M. SDTI (QSDI) is the DV compressed signal interface defined as SMPTE 322M.
** The DSR-1800P/1600P/1500AP/70AP require an optional board for SDTI (QSDI).

• AES/EBU

VTRs: DSR-2000P | DSR-1800P | DSR-1600P | DSR-1500AP

DSR-2000P/1800P/1600P/1500AP VTRs are fitted with digital audio interfaces conforming to the AES/EBU standard. With a sampling frequency of 48 kHz and 20-bit quantization, these interfaces ensure high quality audio.

* The DSR-1800P/1600P/1500AP require an optional board for AES/EBU.

• SDTI-CP (MPEG Out)*

VTR: DSR-2000P**

SDTI-CP provides a direct connection to MPEG IMX™ products (MPEG2 4:2:2P@ML, 50 Mb/s).

* SDTI-CP is defined as SMPTE 326M.
** The DSR-2000P requires an optional board for SDTI-CP.

• **i.LINK™ (DV)***

Cameras: DSR-570WSP** DSR-390P** DSR-250P DSR-PD170P DSR-PDX10P
VTRs: DSR-2000P** DSR-1800P** DSR-1600P** DSR-1500AP DSR-45P DSR-30P DSR-25 DSR-11 DSR-70AP** DSR-50P

i.LINK enables a single cable to simultaneously carry digital video and audio signals, as well as data and control signals, with virtually no quality deterioration. This simple connection offers an ideal solution for connecting DVCAM equipment with consumer AV equipment and computer-related products.

* i.LINK stands for IEEE 1394-1995 standards and their revisions.
** Output only from the DSR-570WSP/390P.
The DSR-2000P/1800P/1600P/70AP require an optional board for i.LINK.

SOPHISTICATED MECHANISMS

• **Quick, Responsive Mechanism**

VTRs: DSR-2000P DSR-1800P DSR-1600P DSR-70AP DSR-1500AP
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Quick mechanical response is an essential requirement for professional video production. The Master Series VTRs provide this rapid response with a combination of highly reliable direct reel drive and drum motor mechanisms. The result is a tape drive with rapid response to Jog and Shuttle commands when searching for edit points, and a rapid start in Play mode.

• **Three-size Cassette Compartment**

VTRs: DSR-2000P DSR-1800P DSR-1600P DSR-1500AP DSR-70AP

The Master Series VTRs incorporate a newly designed three-size cassette compartment to ensure compatibility with DV (25 Mb/s) format recorded tapes of all sizes and types. Thanks to this feature, it is possible to use standard and mini DV and DVCAM cassettes, as well as medium DVCPRO cassettes, without a mechanical adaptor.

• **Dual-size Cassette Compartment**

Cameras: DSR-570WSP DSR-390P DSR-1P DSR-250P
VTRs: DSR-45P DSR-30P DSR-25 DSR-11 DSR-50P

The above camcorders and VTRs have a dual-size cassette compartment which accepts both standard and mini cassettes without a mechanical adaptor.

• **Dual Interface Mechanism**

Camera: DSR-1P

The DSR-1P Dockable Recorder has both Pro 76-pin Digital and Pro 50-pin connectors with a unique seesaw construction. These allow direct connection of the DSR-1P to several alternative Sony digital (DXC-D30P*/D30WSP*/D35P/D35WSP/D50P/D50WSP) and analogue cameras (DXC-327B/637*/537A*/327A*).

* These cameras are no longer sold, but current owners can still connect with the DSR-1P.

• **Further operational efficiency by DSR-DU1**

Cameras: DSR-570WSP DSR-390P DSR-250P DSR-PD170P DSR-PDX10P

The DSR-DU1 is a compact video disk unit that mounts on or can be interfaced with the above camcorders. It provides up to three hours of DVCAM/DV stream recording as a file. Via an i.LINK (DV) connection, the camera output of the camcorder is recorded to the hard drive of the DSR-DU1 in parallel to the recording made on the camcorder's tape. The DSR-DU1 is an extremely versatile device. When detached from the camcorder, it is very effective for field off-line logging or EDL creation, as a player for making dubs, or as a source feeder machine for i.LINK-equipped non-linear editors. Moreover, when connected to an SBP2-compatible i.LINK-equipped nonlinear editor*, the DSR-DU1 allows its DV files to be directly accessed from the non-linear editor. The Rec. start and stop time codes of each scene are also transferred to the editor, eliminating the logging process common to non-linear editing.

* Refer to page 25.



THIS IS NOT JUST ANOTHER DIGITAL CAMCORDER

Technical advantages of DSR-570WSP / DSR-390P

As most camcorders are now digital, it is important to understand that the real benefit of a professional DVCAM camcorder is in the way the Digital Signal Processing works.

The DSR camcorders were created with the sole purpose of producing perfect pictures. From the very first shot in a production, the operator now has the power to make a unique creative contribution during shooting. Using these models, so much more can now be done “in-camera” that is a defiance of conventional wisdom. The DSR camcorders deliver outstanding “in-camera” creativity!

Issued from the well-known DVW-700 Digital Betacam camcorder technology, the DSR-570WSP and DSR-390P offer unique functionality giving the operator a unique opportunity to customise their camera settings, so that they precisely suit production requirements.

Here are some examples of the unique functions provided by the high end DVCAM camcorders.

Colour Precision – TruEye™ Process



The TruEye digital signal processing is one of the most innovative features that DSP allows and makes it possible to reproduce a far more natural colour than a conventional camera, even in severe shooting conditions.

Sony TruEye digital signal processing technology virtually eliminates hue distortion, particularly obvious in extreme lighting conditions, that results from conventional RGB analogue or digital processing. By processing video signal data at three levels – brightness, hue, and saturation – similar to how the human eye works, the TruEye™ process assists in the reproduction of natural skin tones.

Contrast Control with the DynaLatitude™ function



DynaLatitude, a unique feature for contrast control, minimises video level distortion. Based on video signal histograms, the DynaLatitude function aligns the contrast of each pixel individually to eliminate imbalances, such as overexposure of background image.

Black Stretch and Compress



Contrast in the black area of an image can easily be adjusted using the Black Stretch/Compress control function. Black Stretch emphasises contrast in dark areas, while Black Compress enhances or deepens darkness.

Black Halo Free



On transition between 2 contrasted zones, the “Black Halo” phenomenon appears. It consists of excess of contrast on the border, the DSP process of the DVCAM camcorders eliminates this phenomenon.

Freeze Mix Function

The Freeze Mix function superimposes a previously recorded image on the view-finder, allowing the operator to easily frame or reposition a subject when a shot must be taken in the same framework as a previous take. Combined with the SetupLog™ function, a retake is a breeze.

**Skin colour reliability, management and
Skin Detail with Auto detection of Active Area**



Skin Detail



Skin Tone



Once again, based on the Digital Betacam camcorder technology, the DSR-570WSP and DSR-390P use a Multi Matrix function that allows a particular colour to be automatically grabbed and its hue, saturation and detail level modified independently from the rest of the picture.

For example in the case of a person's face, it gives the subject a pleasing facial complexion, while maintaining the sharpness of other areas.

The designated active area of Skin Detail can be set with the SKIN SET button on the camera's side panel. The colour range of the Skin Detail active area and Skin Detail level can also be controlled.

Other functions available:

- H detail frequency control
- R/G Vertical detail control
- Master Black
- Master Gamma
- Detail Frequency control
- Saturation and Hue control
- TLCS (Total Level Control System)
- Preset colour temperature with 32 steps
- SetupNavi™
- SetupLog™

DSR-570WSP DSR-390P

Common Features

- Highly mobile one-piece design
- DSP (Digital Signal Processing)
- Studio Multicore CCU operations up to 300m
- TruEye™ process for faithful colour reproduction
- DynaLatitude™ process minimises video level distortion
- Skin Detail and Skin Tone with auto detection of active area
- Black Stretch and Compress control functions
- Advanced Film Like Mode (Setup File)
- Superb picture quality of the DVCAM format
- Playback capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Total Level Control System (TLCS) for automatically extended range of Iris control
- Auto Tracing White Balance (ATW) function
- Black Halo free
- EZ Mode and EZ Focus for quick camera setup
- DynaFit™ shoulder pad for comfortable molding to any shoulder
- Variable colour temperature settings: 3200 K (19 steps in the range from 2200 K to 4300 K) or 5600 K (13 steps in the range from 4600 K to 12000 K)
- Video light connector for optional light equipment
- Menu control by Jog Dial operation
- Camera Setup File System
- SetupLog™ function for automatic recording of camera setting data
- Pool Feed operation *1
- i.LINK (DV output) interface providing a single cable connection to simultaneously transfer data and control signals as well as digital video and audio signals, with virtually no generation loss
- 26-pin VTR interface
- Full colour picture playback without an external adaptor
- Edit Search function
- Time code superimposed during playback and record
- Freeze Mix function
- ClipLink operation*2
- Compact and lightweight with BP-M50/100 Ni-MH Batteries or BP-L40A/BP-IL75 Lithium-ion Batteries
- CA-WR855 Camera Adaptor for the WRR-855B Wireless Receiver
- Compact crew package with the LC-DS300SFT Soft Carrying Case or LC-DS500 Hard Carrying Case
- DXF-51 5" Studio viewfinder
- Common Setup File for DSR-570WSP and DSR-390P
- Audio level monitoring through the side panel
- Individual cover for audio control switches
- External VTR control & monitoring via i.LINK connector
- CA-370 Intercom adaptor

*1 The optional DSBK-501P Analogue Composite Input Board is required.

*2 The optional DSBK-301A Index Picture Board is required.



Silver Support

DSR-570WSP

One-piece Camcorder

- 16:9 - 4:3 Switchable Camcorder
- Compact and lightweight: 6.3 kg (13 lb 14 oz) including viewfinder, microphone, lens, battery and tape
- Low power consumption: 24 W (without viewfinder)
- Three 2/3-inch Power HAD WS™ 16:9 CCDs providing high quality images with low smear level, high sensitivity, high S/N ratio (61 dB) and high horizontal resolution (980/850 TV lines in 16:9/4:3 mode)
- Hyper Gain (36 dB or 42 dB selectable)
- Aspect ratio switchable between 4:3 and 16:9
- SetupNavi™ function for camera setup file storage
- Sensitivity: F11 at 2000 lx
- Minimum illumination = 0.5 lx
- Optional remote software available
- Flexible safety zone marker
In 4:3 mode: OFF, 13:9, 14:9, 15:9, 16:9
In 16:9 mode: OFF, 4:3, 13:9, 14:9, 15:9
- Silver Support supplied as standard (see page 7)



Silver Support

DSR-390P

One-piece Camcorder

- Compact and lightweight: 6.2 kg (13 lb, 10 oz) including viewfinder, microphone, lens, battery and tape
- Low power consumption: 20 W (without viewfinder)
- Three 1/2-inch Power HAD™ CCDs for low smear level, high sensitivity, high S/N ratio (62 dB) and high horizontal resolution (800 TV lines)
- Hyper Gain (36 dB)
- 4:3 aspect ratio
- Sensitivity: F13 at 2000 lx
- Minimum illumination = 0.4 lx
- Flexible safety zone marker 4:3 mode: OFF, 13:9, 14:9, 15:9, 16:9
- SetupNavi™ function for camera setup file storage
- Silver Support supplied as standard (see page 7)

Lenses for DSR-390P

VCL-719BX (for DSR-390PK1 pack)

Zoom ratio	19:1
Focal length	6.7mm x 127mm
Zoom control	Servo/manual switchable
Iris control	Servo/manual switchable
Maximum relative aperture	F1.4 (6.7 to 89mm) to F2.0 (120mm)
Minimum object distance	Wide: 772x579mm, Tele: 42x32mm
Mount type	Sony 1/2-inch type bayonet mount
Weight	1.45kg (including lens hood)
Dimensions (WxHxD)	139.8 x 99.5 x 218.9mm (including objections)

VCL-716BX (for DSR-390PK2 pack)

Zoom ratio	16:1
Focal length	7.3mm x 117mm
Zoom control	Servo/manual switchable
Iris control	Servo/manual switchable
Maximum relative aperture	F1.9 (7.3 to 98mm) to F2.3 (117mm)
Minimum object distance	Wide: 823x617mm, Tele: 51x39mm
Mount type	Sony 1/2-inch type bayonet mount
Weight	1.2kg (including lens hood)
Dimensions (WxHxD)	123 x 102 x 205mm (including objections)

Silver Support



DSR-250P

One-piece Camcorder

- Compact and lightweight: 4.4 kg (9 lb 11 oz)
- Newly developed 1/3-inch CCDs for accurate colour reproduction
- Capable of both interlace scan, for moving images, and progressive scan, for still images or shooting moving subject*1 and exporting a frame of the image as a still picture
- DSP (Digital Signal Processing)
- New, high-resolution 1.5-inch black & white viewfinder
- 2.5-inch (200,000 dot) colour LCD monitor
- 12x lens*2 with Super SteadyShot™ system
- 16:9 recording mode available (electronically processed)
- Superb picture quality of the DVCAM format
- Recording and playback capability with standard and mini-size DVCAM and DV tapes (SP mode only)
- Three XLR audio input connectors for professional microphones (one at front, two at rear)
- Audio dubbing capability (48 kHz/16-bit or 32 kHz/12-bit selectable)
- Long recording time: 184 minutes with a standard-size cassette in DVCAM mode, or 270 minutes in DV SP mode
- Time/date data superimposition on output pictures
- Digital still camera functions with Memory Stick™
- Light output (DC 12 V, max. 30 W) and additional DC 12 V out for optional accessories
- Time code preset capability
- i.LINK (DV In/Out) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- LANC interface for simple editing with a LANC-equipped recorder or editing system
- Supplied RMT-811 Remote Commander
- Silver Support supplied as standard (see page 7)

*1 When recording moving images in progressive scan mode, the motion will display some jitter since the picture is read/output every 1/12.5 second.

*2 Digital zoom of 24x or 48x available via menu selection.

DIGITAL CAMCORDERS



Silver Support

DXC-D50P/WSP+DSR-1P Two-piece Camcorder

- Combination of the DXC-D50P/WSP Digital Video Camera and the DSR-1P Dockable Recorder, equivalent to a one-piece camcorder
- Compact and lightweight: 6.3 kg (13 lb 14 oz) including viewfinder, battery, joint plate and carrying handle
- Three 2/3-inch Power HAD EX CCDs for very low smear level (-140 dB), high sensitivity and high S/N ratio (63 dB), and high horizontal resolution (920 TV lines on DXC-D50P, or 850 TV lines in 4:3 mode and 800 TV lines in 16:9 mode on DXC-D50WSP)
- 4:3 only on DXC-D50P, or 16:9 / 4:3 switchable on DXC-D50WSP
- 12-bit A/D Conversion
- Creative image control with Low Key Saturation, Skin Matrix, Adaptive Highlight Control and Black Gamma functions
- Advanced DSP (Digital Signal Processing)
- Skin Detail with auto detection of active area
- Sensitivity: F11 at 2000 lx
- Minimum illumination: 0.5 lx
- Black Stretch and Compress control functions
- Superb picture quality of the DVCAM format
- Playback capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Total Level Control System (TLCS) for automatically extended range of Iris control
- Auto Tracing White Balance (ATW) function
- EZ Mode and EZ Focus for quick camera setup
- Camera Setup File System
- ClipLink operation

DSR-1P Dockable Recorder

- Compact and lightweight: 3.1 kg (6 lb 13 oz) including battery
- Ideal operation as a digital camcorder by docking with the DXC-D50P Digital Video Camera
- Dual-size cassette mechanism: both standard- and mini-size cassettes accepted
- Dual interface mechanism: Pro 76-pin Digital and Pro 50-pin interfaces for direct connection with both Sony digital and analogue cameras
- Superb picture quality of the DVCAM format
- Playback capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- ClipLink operation
- Full colour picture playback capability without a playback adaptor
- Record review function
- Frame accurate back-space editing
- Built-in SMPTE/EBU time code generator/reader
- Time base stabiliser
- Full VTR function control (FastForward/Rewind/Play/Stop/Eject)
- Comprehensive 8-digit LCD
- Silver Support supplied as standard (see page 7)



DSR-PD170P Compact Camcorder

- Compact and lightweight: 1.5 kg (3 lb 5 oz) including battery and tape
- 1/3-inch CCD for accurate colour reproduction
- Capable of both interlace scan, for moving images, and progressive scan, for still images or shooting a moving subject*1 and exporting a frame of the image as a still picture
- DSP (Digital Signal Processing)
- Two XLR audio input connectors for professional microphones
- Supplied RMT-811 Wireless Remote Commander
- Hybrid 2.5-inch (211,200 dot) colour LCD monitor
- Black & white viewfinder (180,000 dot LCD)
- On-handle zoom lever and Rec Start/Stop button
- 12x lens*2 with Super SteadyShot system
- Manual control and a full range of auto modes
- 16:9 recording mode available (electronically processed)
- Superb picture quality of the DVCAM format
- Playback and record capability of DV recorded tapes*3 (SP mode)
- 40 minutes recording time with a mini-size cassette
- Time/date data superimposition on output pictures
- Digital still camera functions with Memory Stick
- InfoLITHIUM™ battery system displays the remaining capacity of the battery (accurate to the minute)
- Audio dubbing capability (48 kHz/16-bit or 32 kHz/12-bit selectable)
- i.LINK (DV In/Out) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- LANC interface for simple editing with a LANC-equipped recorder or editing system
- Wide Conversion Lens VCL-HG0758 supplied as standard
- Lens Hood LSF-S58 supplied as standard
- Silver Support supplied as standard (see page 7)

*1 When recording moving images in progressive scan mode, the motion will display some jitter since the picture is read/output every 1/12.5 second.

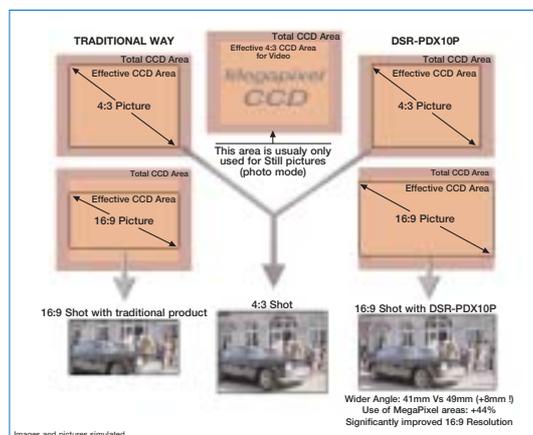
*2 Digital zoom of 24x or 48x available via menu selection.

*3 Only mini-size DVCAM and DV cassettes can be used.



DSR-PDX10P Handycam®-style Camcorder

- Very compact body (the smallest 3 CCD DVCAM camcorder)
- 3 1/4.7-inch Mega pixel Advanced HAD CCD type
- 14 Bits DXP Processing (Digital Extended Processor)
- Enhanced 16:9 capability (real 16:9 shooting quality)
- 2 XLR audio input connectors for professional microphones
- USB Streaming (capability to stream Video and Audio through USB port) available in camera and VCR mode
- 3.5 inch type 240,000 colour LCD monitor with touch panel function (Spot focus, Spot AE, Playback Zoom, Memory play)
- 180,000 dot precision Black and White LCD Viewfinder
- Optical Super SteadyShot™
- TC and User bit preset capability
- DVCAM and DV (SP mode) recording and playback formats
- High resolution picture recording (640x480 / 1152x864 dots)
- MPEG movie recording up to 85 mins on a 128 MB Memory Stick
- i.LINK and Analogue In/Out interfaces
- Silver Support supplied as standard (see page 7)



Master Series VTRs



Since its introduction, the DVCAM format has become widely accepted in the world of video production – from industrial to broadcast markets. Recognising the increasing demands for DV-based production in broadcast applications, Sony introduced the DSR-2000P in 1999, complete with compatibility with all DV family formats and professional features, such as excellent editing performance and high-quality jog audio, inherited from analogue formats. Building on the advanced technologies of the DVCAM format and professional features of the flagship DSR-2000P, Sony now presents the entire lineup of Master Series VTRs, our top-of-the-line DVCAM videocassette recorders and players. The Master Series VTRs (DSR-2000P, DSR-1800P, DSR-1600P, DSR-1500AP and DSR-70AP) now bring the features and benefits introduced with the DSR-2000P to a wider market, from industrial to broadcast for a wider range of applications and needs.

DSR-2000P DSR-1800P DSR-1600P DSR-1500AP DSR-70AP

Master
Series

Common Features

- Superb picture quality of the DVCAM format
- Playback capability of DV (25 Mb/s) recorded tapes including DV tapes recorded in SP mode and DVCPRO tapes*1 without a mechanical adaptor or menu settings changes
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Four-channel audio editing capability*6
- Audio cross-fade function for clean audio transitions at editing points*2
- Excellent jog audio capability
- DMC (Dynamic Motion Control) provides noiseless slow-motion playback
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse*6
- Versatile digital interfaces*3: SDI, SDTI (QSDI), i.LINK (DV In/Out) and AES/EBU digital audio
- Extensive analogue interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame accurate editing capability
- ClipLink operation
- Full tape dubbing with ClipLink Log Data via SDTI (QSDI) and RS-422A interfaces*4
- 16:9 aspect ID signal recording
- Video process control for greater control of both analogue and digital outputs
- Built-in SMPTE/EBU time code and VITC generator/reader
- Built-in signal generator (colour bars, black burst, 1 kHz tone, silent signal)*4
- Flexible input selection between video and audio*5
- Universal powering system (AC 100 V to 240 V)
- Three-size cassette compartment to ensure compatibility with DV(25Mb/s) recorded tapes

*1 SDTI (QSDI) and i.LINK (DV In/Out) interfaces do not support DVCPRO playback.

*2 DSR-2000P/DSR1800P only.

*3 Optional Input/Output Boards required. Please check Feature Comparison of Studio VTRs for details.

*4 DSR-2000P/DSR1800P/DSR-1500AP/DSR-70AP only.

*5 i.LINK cannot be combined with other signal interfaces.

When SDTI (QSDI) is selected as the audio input, the video signal is assumed to be SDTI (QSDI). However, when it is selected as the video input, other signal interfaces can be selected for the audio.

*6 DSR-2000P/1800P/1600P only.



Silver Support

Master

DSR-2000P

Editing Recorder

- Playback capability of DV tapes recorded in LP mode
- Non-tracking playback*¹
- Preread editing capability*² to perform sound-on-sound capability, audio mix/swap and over-dubbing of audio with no delay between video and audio as well as A/B roll editing*³ with two VTRs
- VTR-to-VTR editing without external controllers
- Wide range of digital slow speed from -1 to +1 times normal speed
- Optional SDTI-CP digital interface board (MPEG Out)
- Channel condition monitoring function
- Audio level control in both recording and playback modes
- Dial menu operation
- Key Inhibit and Rec Inhibit functions to prevent accidental operation
- Silver Support supplied as standard (see page 7)

*1 Can cover mis-alignment tapes without picture noise

*2 Not available through SDTI (QSDI) and i.LINK interfaces.

*3 MIX and WIPE only.



Silver Support

Master

DSR-1800P

Editing Recorder

- Preread playback capability to perform audio mix/swap and over dubbing without any delay between video and audio signals
- Wide range of digital slow speed from -0.5 to +0.5 times normal speed
- Channel condition monitoring function
- Jog dial on front panel
- Silver Support supplied as standard (see page 7)



Silver Support

Master

DSR-1600P

Editing Player

- Wide range of digital slow speed from -0.5 to +0.5 times normal speed
- Channel condition monitoring function
- Jog dial on front panel
- Silver Support supplied as standard (see page 7)



Silver Support

Master

DSR-1500AP

Editing Recorder

- Wide range of digital slow speed from -0.5 to +0.5 times normal speed
- Recording and playback capability of the DV format (SP mode only)
- Compact, half-rack size
- Menu keys on front panel for picture search
- Silver Support supplied as standard (see page 7)

STUDIO VTRs



Silver Support

DSR-45P

Recorder

- Superb picture quality of the DVCAM format
- Recording and playback capability of the DV format (SP mode only)*¹
- Long recording time: up to 184 minutes with a standard-size cassette, 40 minutes with a mini-size cassette
- Full range of analogue Video IN/OUT: Component, Composite, S-Video
- Four channel independent Audio IN/OUT with XLR connectors for Audio OUT
- i.LINK(DV) interface for simultaneous transfer of audio, video, and command signals
- RS-422A remote control interface*²
- RS-232C interface for basic control from a PC
- LANC and Control S interface
- Time code IN/OUT
- Time code/ User bit preset
- Time code IN through DV IN
- Duplication function (including the duplication of Cassette Memory data)
- Compact size (half-rack size width, 2U height)
- Low power consumption (22 W during playback)
- Built-in 2-inch type (123,200 dot) colour LCD monitor
- Tape counter
- Wireless remote controller RMT-DS5 supplied
- Silver Support supplied as standard (see page 7)

*¹ When recording in DV (SP) format, the transition between cut to cut may not be smooth. In addition, when the recording format is switched between DVCAM and DV, the transition may not be recorded smoothly.

*² The DSR-45P is not equipped with the synchronisation capability, therefore is recommended to be used only as a source feeder in A/B roll editing.



Silver Support

DSR-30P

Recorder

- Superb picture quality of the DVCAM format
- Playback capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- i.LINK (DV In/Out) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- LANC interface for simple editing with a LANC-equipped recorder or editing system
- Auto repeat function
- One-program playback function to automatically rewind to the beginning of a tape and enter Standby mode
- Power-on playback/recording capabilities
- External timer recording
- Duplication mode with original time code
- Function lock to avoid accidental operation
- Built-in control tray with a Jog/Shuttle dial with a range of 1/5 to 18 times normal speed, in both forward and reverse
- Index Points search function (when using a cassette with IC Cassette Memory)
- Clear frame picture
- RMT-DS30 Wireless Remote Controller (supplied accessory) for control of basic functions
- Headphone/microphone connections
- Silver Support supplied as standard (see page 7)



Silver Support

DSR-25

Recorder

- Superb picture quality of the DVCAM format
- Recording and playback capability of the DV format (SP mode only)*1
- Long recording time: up to 184 minutes with a standard-size cassette, 40 minutes with a mini-size cassette
- Recording and playback capability of both NTSC/PAL signals*2
- i.LINK(DV) interface for simultaneous transfer of audio, video, and command signals
- LANC and Control S interface
- Time code/ User bit preset
- Time code IN through DV IN
- Duplication function (Including the duplication of Cassette Memory data)
- Power-on recording and playback capabilities
- Compact size (half-rack size width, 2U height)
- Low power consumption (16 W during playback)
- Built-in 2-inch type (123,200 dot) colour LCD monitor
- Tape counter
- Wireless remote controller RMT-DS5 supplied
- Silver Support supplied as standard (see page 7)

*1 When recording in DV (SP) format, the transition between cut to cut may not be smooth. In addition, when the recording format is switched between DVCAM and DV, the transition may not be recorded smoothly.

*2 The DSR-25 is not equipped to convert signals from NTSC to PAL, or vice versa.



Silver Support

DSR-11

Recorder

- Superb picture quality of the DVCAM format
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Recording and playback of DV format tapes (SP mode only)
- NTSC/PAL compatible*1 in both Rec and Play mode
- Composite and S Video inputs
- i.LINK (DV In/Out) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- Unique design enables both horizontal and vertical installation
- LANC and Control S terminals
- Auto repeat function
- DC power operation
- Supplied RMT-DS11 Wireless Remote Commander
- Silver Support supplied as standard (see page 7)

*1 The DSR-11 does not convert signals from NTSC to PAL, or vice versa.

● PORTABLE VTRs



Silver Support

Master

DSR-70AP Portable Editing Recorder

- Compact, all-in-one package features a 6.4-inch VGA LCD monitor, a full cut-editing controller with a Jog/Shuttle dial and audio speaker
- Wide range of digital slow speeds from -0.5 to +0.5 times normal speed
- High-speed colour picture search over a range of 32 times normal speed, in both forward and reverse
- Audio mix/swap recording
- Cliplink operation: cue up to Mark In/Cue address, change of Mark In/Out points, change of OK/NG status and creation of new Mark In/Out points
- Edit List Memory Function
- Double Deck Editor by docking two DSR-70AP units or a DSR-70AP and a DNW-A25 Betacam SX® portable editing recorder
- SDI and i.LINK interfaces are provided by a single DSBK-160A optional board
- Two-camera switching recording*1
- Sequential recording for up to 6 hours in the double deck configuration
- Parallel-run recording to control two docked DSR-70AP units in parallel for simultaneous recording
- Two-way power supply system (AC/DC) for operation with either AC*2 or DC power
- Silver Support supplied as standard (see page 7)

*1 The optional DSBK-180P Dual Video Input Board is required.
*2 AC adaptor is required.

Note: Optional interface boards (DSBK-140/150/160A/170) cannot be used in combination with each other. However, these boards can be used together with the optional DSBK-180.

Silver Support

DSR-50P Portable Recorder

- Superb picture quality of the DVCAM format
- Playback capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Four-channel independent digital audio recording
- 2.5-inch (200,000 dot) colour LCD monitor
- Duplication options (tape copy, tape copy with original time code, or tape copy with cassette memory data)
- Compact & lightweight design: 3.9 kg (8 lb 9 oz) without battery and tape
- Playback capability of both NTSC and PAL recorded tapes*1
- i.LINK (DV In/Out) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- 26-pin Camera Connector
- Analogue Component Output
- Timecode IN/OUT
- Silver Support supplied as standard (see page 7)

*1 The output signal level is not standard and therefore recommended for simple monitoring only, with a monitor of the same colour system as the original source.





Silver Support

DSR-DU1

Hard Disk Unit

- Compact hard drive unit (2.5-inch, 40 GB hard drive) for use with DVCAM and Sony DV camcorders*¹
- Camera output can be recorded to the DSR-DU1's hard drive in parallel to the recordings made on the camcorder's tape via i.LINK(DV) connection.
- Recording in 25Mb/s DVCAM/DV stream for up to three hours
- Capable of docking directly to the rear of DVCAM camcorders*² by use of the CA-DU1 optional Camera Adaptor
- The camera adapter's slot-in mechanism allows easy and quick replacement of the DSR-DU1
- Can interface with a variety of i.LINK(DV) equipped Sony hand-held type DVCAM/DV camcorders via its i.LINK(DV) connector
- The DSR-DU1's DV video/audio files can be accessed from a compatible i.LINK equipped non-linear editor*³
- Compact and lightweight
- VTR-like functions and operation keys
- i.LINK interface with AV/C and SBP2 protocols
- Cache recording (8 seconds)
- Interval recording
- 525(NTSC)/625(PAL) Switchable*⁴
- REC Trigger controlled from the REC On/Off button of Sony i.LINK(DV) equipped camcorders*⁵
- Supplied remote controller for Rec, Cue and Rec Tally controls
- Flexible DC operation (DC 12 V*⁶, DC 8.4 V)
- Shooting Data (Time codes of the rec in and out points, Cue points from the DSR-DU1 and the supplied remote controller)
- Silver Support supplied as standard (see page 7)

*¹ Please contact your nearest Sony office or Authorised dealer for compatible DV camcorders.

*² DSR-570WSP/390P/370P/500WSP/300AP/250P.

*³ Please contact your nearest Sony office or Authorised dealer for non-linear products that support DV file transfer between the DSR-DU1.

*⁴ Signal conversion from 525(NTSC) to 625(PAL), or vice versa is not possible.

*⁵ To use this function with camcorders other than the DSR-570WSP/390P/370P, tape should be set in the cassette compartment.

*⁶ To use DC 12V, the optional CA-DU1 is required.



Silver Support

DSR-DR1000P

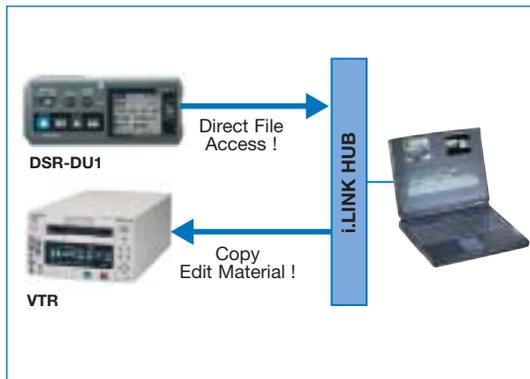
Hard Disk Recorder

- DVCAM recording for over 6 hours (80 GB hard drive)
- Compact & lightweight (Half-rack size, 6 kg)
- Simultaneous recording & playback
- Clip segment playback for playout of designated video segment
- DMC playback with the range of $\pm x2$ times normal speed
- Continuous loop recording
- Pre-alarm recording (automatic recording triggered by an external alarm signal)
- Interval recording
- i.LINK interface with AV/C and SBP2 protocols
- Versatile interfaces (i.LINK, SDI, Component, Y/C, Composite, AES/EBU, Analogue audio, TC I/O, RS-422A, Ethernet)
- VTR-like control panel with a Jog/Shuttle dial
- Network capability (file transfer using FTP via 100Base-T Ethernet)
- Silver Support supplied as standard (see page 7)



DSR-DU1

Workflow Acceleration



Three key benefits with compatible NLE

No digitisation delays

Direct import of time code & clip info in seconds.

No ingest hold-ups

Edit directly on the DSR-DU1 hard drive.

No rewiring hassle

Plug & play with an IEEE1394 hub (not included) to import clip info & export content to tape in real-time.

Non Linear Editing softwares supporting DSR-DU1/DR1000P file format (as of Nov. 2003) are:

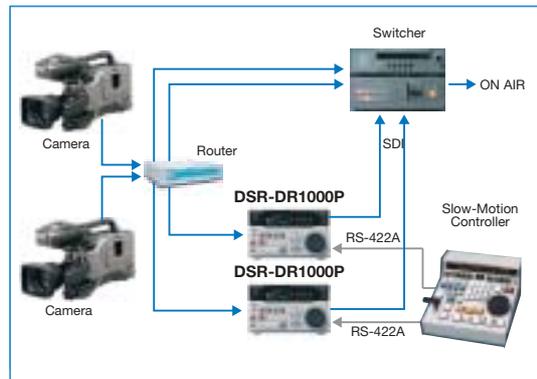
- Adobe Premiere Pro (www.adobe.com)
- Apple Final Cut Pro 4 (www.apple.com)
- Pinnacle Liquid Edition 5.5 (www.pinnaclesys.com)
- Canopus CWS-30/50/100 (www.canopus.com)
- Incite Remote Producer and Newsmaker (www.inciteonline.com)
- Sonic Foundry Vegas 4.0 (mediasoftware.sonypictures.com)

File converter supporting DSR-DU1/DR1000P file format (as of Nov. 2003) is:

- aDVanced DV File Converter Pro (www.dvunlimited.com)

DSR-DR1000P

For Sports Application



Sports / Live events (OB Van) – with Slow-Motion Controller

Cost effective solution

- Simultaneous rec & play with less than 1 sec delay
- +/-200% Dynamic Motion Control
- Instant cue-up & replay

Slow Motion controllers supporting DSR-DR1000P are:

- Ash Vale Marketing AVM-4a (www.avm4.com)
- Hi Tech Systems HT-800s series (www.hitechsys.co.uk)
- DNF ST300-DSR1K (www.dnfcontrols.com)
- Kurrer S4 (www.kurrer.de)

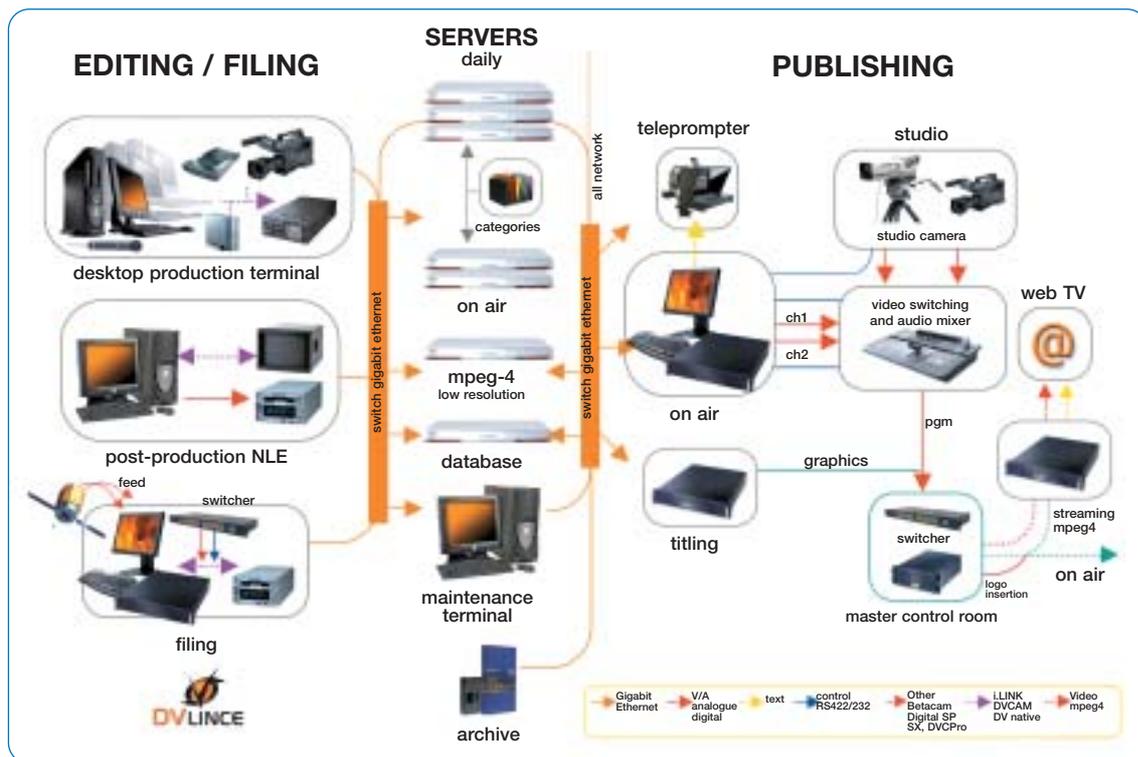


DVLince

DVLince is a complete, integrated, and managed solution for the planning, production and distribution of video and audio content. Built on the vast experience that Sony has gained with high-end solutions such as Newsbase, it is an affordable, flexible and scalable system that leverages both consumer DV and professional DVCAM acquisition while replacing individual video cassettes with shared assets.

In simple terms, DVLince is a 'content factory', covering the newsroom, editing, broadcasting, archiving and the internet. It has been especially designed to meet the needs of local broadcasters and TV stations, universities, media schools, agencies, webcasters and corporate clients.

For more information please visit www.dvlince.com



PRODUCTION SYSTEMS

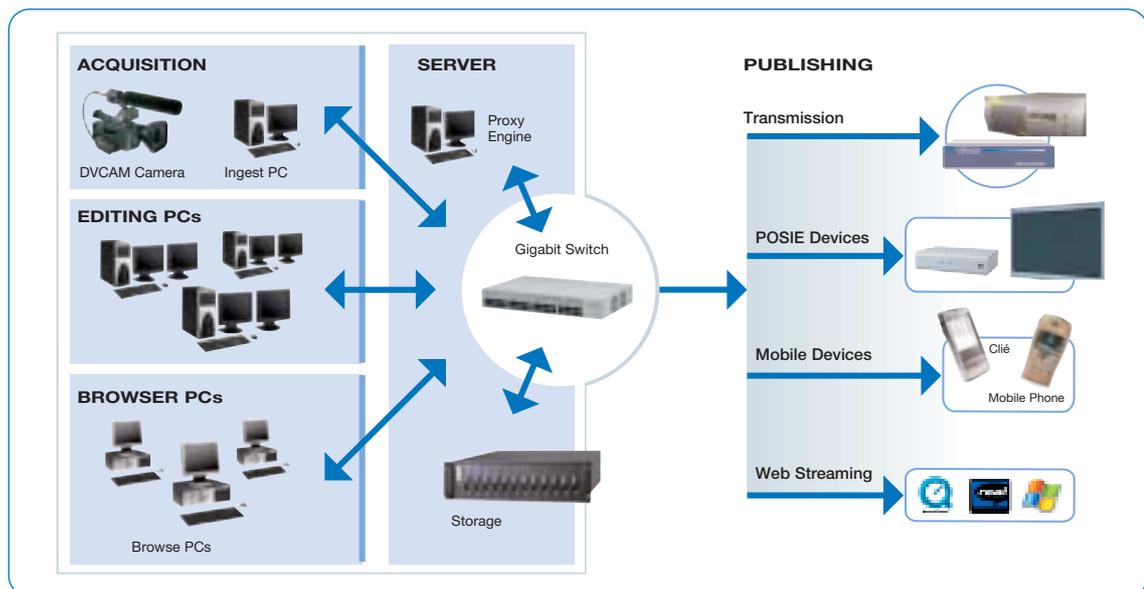
DV Station

As a world leader in digital media solutions for broadcasters, Sony has designed DV Station to be simple and intuitive to operate – even for non-specialists with little or no video editing experience.

With DV Station, all content is stored and managed using the industry standard DV compression format to assure great-looking pictures and sound without the need for expensive, high capacity storage solutions and bandwidth-hungry networking resources.

Stored and edited clips can be viewed using any PC running QuickTime™ - with no need for special viewing software or powerful graphics hardware.

Content is stored centrally for browsing, sharing and editing across your standard IT network. From there it's easy to publish edited content anywhere you want – whether it's terrestrial broadcasting, business TV or the Web.



Recommended Wireless Microphone Systems for DVCAM

The UWP Series of wireless microphones have two specific packages designed for portable/camera use. Each package has been carefully compiled to meet with a range of operational requirements that are able to adapt to all your operational needs. The UWP Series excels in transmission stability. Sophisticated wireless technologies, developed for top-of-the-line Sony wireless microphone systems, have been incorporated, including the UHF PLL-synthesised system, space-diversity reception and a tone squelch function. These capabilities are typically found only on high-end wireless systems.



Photo shows portable tuner mounted on a camera.

Features

Stable Transmission and Reception

The UWP Series Wireless Microphone System uses three core technologies to provide stable transmission and reception:

PLL Synthesised System

Key to achieving stable transmission and reception is the use of a stable carrier signal to avoid interference with other frequency channels and to allow the selection of a preferred channel from multiple frequencies. The UWP Series achieves this by using a UHF PLL (Phase Locked Loop) frequency synthesised system, which provides the use of accurate carrier signal frequencies. This system is used in both the transmitters and tuners, so that a stable carrier is generated at the transmitter and accurately tuned in at the tuner. This PLL-controlled system provides highly stable, user-selectable frequencies in increments of 125 kHz.

Space Diversity Reception System

In general, wireless microphone transmission systems can be subject to reception interruptions (signal dropout), but the UWP Series reduces this to a minimum. By utilising a space diversity reception system, it achieves stable reception by using dual-antenna inputs/reception circuits that receive signals over two different paths and automatically selecting the stronger RF signal for output. The space diversity reception system is adopted in all UWP tuners – the portable tuner, half rack-size tuner and tuner module alike. What's more, the antennas of the portable and half-rack-size tuners each allow for angle adjustments, which helps to further eliminate signal dropout.

Tone Squelch Circuitry

When operating a wireless microphone system, it is essential that the tuner does not pick up carrier signals transmitted from other systems. In order to avoid this, the UWP Series handheld microphone and portable transmitter transmit a 32-kHz pilot-tone signal along with the audio signal. The squelch circuit of the UWP Series tuners recognises this tone signal, and will output the audio signal only when this tone signal is received. This function virtually prevents the output of unwanted signals or noise from other signal transmissions in the air, as well as the RF noise and popping noise that occur when the transmitter is powered on or off.

Pre-Programmed Operating Frequencies

The transmitters and tuners included in the UWP Series incorporate preprogrammed frequencies that meet the wireless-communication regulations of each country. The UWP Series operates within the following frequency ranges: 798 MHz to 822 MHz or 838 MHz to 862 MHz (189 selectable frequencies).

Simultaneous Multi-Channel Operation

The UWP Series allows simultaneous operation of up to 16 wireless microphones. Optimum combinations of practically tested, interference-free frequencies are stored in the UWP tuners. By using the pre-programmed frequency groups, users can easily choose interference-free frequencies for the transmitters and tuners, simplifying the task of system setup.



Lavalier Microphone and Bodypack Transmitter

Bodypack Transmitter:

- Compact and lightweight design
- Attenuator function allows adjustment of the microphone-input level to suit each user's voice
- Selectable RF-output level: 5 mW output is suitable for simultaneous multi-channel operation, while 30 mW output is intended for long-distance transmission

Lavalier Microphones:

- Omni-directional type for the UWP-C1 package
- 1.2 m (3.9 feet) microphone cable
- Supplied with a microphone windscreen and microphone-holder clip
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- An LCD screen provides extensive information, including the operating channel number and its frequency in MHz, attenuator level, RF-output level setting (High/Low), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- A 3.5-mm dia., 3-pole mini-jack input connector with lock mechanism accepts the output of any lavalier microphones equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone
- Supplied with a belt clip



Handheld Microphone

- Uni-directional, dynamic microphone capsule
- Internal antenna design
- Attenuator function allows adjustment of the audio-input level to suit each user's voice
- Selectable RF-output level: 5 mW output is suitable for simultaneous multichannel operation, while 30 mW output is intended for long-distance transmission
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- An internal LCD screen provides extensive information, including the operating channel number and its frequency in MHz, attenuator level, RF-output level setting (High/Low), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- Supplied with a microphone holder and a screw adaptor



Portable Tuner

- Space diversity reception system for stable RF reception
- Angle-adjustable antennas to help eliminate signal dropout. This feature also allows mounting position flexibility when the portable tuner is mounted on a camcorder
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems
- An LCD screen provides extensive information, including the operating channel number and its frequency in MHz, audio-output status, RF-input level, tuner-battery status and accumulated operating time
- A green LED indicator illuminates when RF-input signals are appropriately received
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- Stereo mini jack with monitor-volume control
- Supplied shoe-mount adaptor enables easy mounting on Sony camcorders. A microphone stand adaptor, screw adaptor, microphone cable and belt clip are also provided



UWP-C1 Turnkey Package

- Consists of an omni-directional lavalier microphone, bodypack transmitter and portable tuner
- Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip
- The bodypack transmitter is supplied with a belt clip
- The portable tuner is supplied with a microphone stand adaptor, screw adaptor, shoe-mount adaptor for mounting on a camcorder and microphone cable (3-pole mini-plug/XLR-type)



UWP-C2 Turnkey Package

- Consists of a handheld microphone and portable tuner
- Ideal for a variety of situations, from news gathering to interview scenarios
- The handheld microphone is supplied with a microphone holder and screw adaptor
- The portable tuner is supplied with a microphone stand adaptor, screw adaptor, shoe-mount adaptor for mounting on a camcorder, belt clip and microphone cable (3-pole mini-plug/XLR type)

Feature Comparison

DIGITAL CAMCORDERS

DSR-570WSP

DSR-390P

DSR-250P

DSR-PD170P

DSR-PDX10P

General

CCD size	3CCD 2/3 inch	3CCD 1/2 inch	3CCD 1/3 inch	3CCD 1/3 inch	3CCD 1/4.7 inch
CCD type	16:9	4:3	4:3	4:3	4:3
16:9 commutation capability	4/3 Commutation		•	•	• (with high resolution capability)
PowerHAD CCD	•	•			
Standard lens	Recommended Canon: YJ18x9KRS, Fujinon: A19x8.7BRM-28	APK version: YH18x6.7 KRS	12x (6.0 to 72 mm)	12x (6.0 to 72 mm)	12x (3.6 to 43.2 mm)
Interchangeable lens	•	•	Large range of high quality lenses are available at Century Optics	Large range of high quality lenses are available at Century Optics	VCK-HG0237X and VCL-HG0737X (consumer accessories)
Super SteadyShot			•	•	•
Resolution	980 in 16/9 & 850 in 4/3	800 lines	530 lines	530 lines	530 lines
Minimum illumination	0.25 lux	0.4 lux	2 lux	1 lux	7 lux
S/N Ratio	61 dB Typical	62 dB Typical			
Viewfinder type	BW CRT	BW CRT	BW CRT	High resolution BW LCD	High resolution BW LCD
Tape size	Std and Mini DV/DVCAM	Std and Mini DV/DVCAM	Std and Mini DV/DVCAM	Mini DV and DVCAM	Mini DV and DVCAM
Recording mode	DVCAM	DVCAM	DV or DVCAM	DV or DVCAM	DV and DVCAM
Playback	DV and DVCAM	DV and DVCAM	DV and DVCAM	DV and DVCAM	DV and DVCAM
PCM Audio 16bits/12 bits	•	•	•	•	•
Audio dubbing			•	•	•
Time code preset	•	•	•	•	•
Colour LCD screen			Yes 2.5-inch	Yes 2.5-inch, Hybrid	Yes 3.5-inch
Memory Stick (MSA-4A/8A/16A/32A/64A/128A)			•	•	•
Manual iris	Yes (Ring)	Yes (Ring)	Yes (Ring)	Yes (Dial)	Yes (Dial)
Manual zoom	Electric or manual	Electric or manual	Electric or manual	Electric or manual	Electric
Focus ring	•	•	•	•	•
On-handle zoom lever & Rec button				•	
DynaFit Shoulder pad	•	•	•		
Mass	6.3 kg	6 kg	4.4 kg	1.5 kg	0.95 kg
Studio operations CCU control capability	•	•			

Advanced DSP Features

TruEye Process	•	•			
Dynalatitude Process	•	•			
Skin Detail	•	•			
SkinTone	•	•			
TSCS (Total Level Control System)	•	•			
ATW (Auto Tracing White Balance)	•	•			
EZ Mode	•	•			
EZ Focus	•	•			
Camera Setup File	•				
Setup Navigation	•				
Setup Log	•	•			
Freeze Mix	•	•			
ClipLink	•	•			
Photo mode			•	•	•
Progressive still picture mode			•	•	•
High resolution still pictures				• (640x480)	• (1152x768)
Long MPEG movie recording on MS					•

Output connectors

Composite	Yes (2xBNC)	Yes (2xBNC)	Yes (RCA+BNC)	Yes (Jack)	Yes (Jack)
S-Video	•	•	•	•	•
Y, R-Y, B-Y component	Yes w 26-pin	Yes w 26-pin			
i-LINK IEEE-1394	Yes (6-pin)	Yes (6-pin)	Yes (6-pin)	Yes (4-pin)	Yes (4-pin)
USB Connector (streaming)					•
Audio RCA x 2	•	•	•	•	•
DC-12V - 4-pin	•	•	•		
Time Code	•	•			

Input connectors

Composite	Yes (option DSBK-501)	Yes (option DSBK-501)	Yes (RCA)	Yes (RCA)	Yes (RCA)
S-Video			•	•	•
Remote (RS-232)	•	•			
Gen Lock	•	•			
LANC			•	•	•
Lens connector	•	•			
Audio XLR	Yes (1 front + 2 rear)	Yes (1 front + 2 rear)	Yes (1 front + 2 rear)	Yes (2)	Yes (2)
Time Code	•	•			
Power through 4-pin XLR	•	•	•		
Specific power plug				•	•
i-LINK IEEE-1394			Yes (6-pin)	Yes (4-pin)	Yes (4-pin)

DIGITAL CAMCORDERS

DSR-570WSP

DSR-390P

DSR-250P

DSR-PD170P

DSR-PDX10P

Accessories

	DSR-570WSP	DSR-390P	DSR-250P	DSR-PD170P	DSR-PDX10P
AC Adaptor	AC-DN1/2	AC-DN1/2	AC-DN1/2	supplied (AC-L15)	supplied (AC-L10)
Batteries	BP-L40A/IL75/M50/M100	BP-L40A/IL75/M50/M100	BP-L40A/IL75/M50/M100	NPF-330/550/750/960	NP-FM50/NP-QM71/NP-QM91
i-LINK cable	CCF-3L (6P-6P) CCFD-3L (4P-6P)	CCF-3L (6P-6P) CCFD-3L (4P-6P)	CCF-3L (6P-6P) CCFD-3L (4P-6P)	VMC-IL4415/4435 (4P-4P) VMC-IL4615/4635 (4P-6P)	VMC-IL4415/4435 (4P-4P) VMC-IL4615/4635 (4P-6P)
Optional charger	BC-M50/BC-M150/AC-DN1	BC-M50/BC-M150/AC-DN1	BC-M50/BC-M150/AC-DN1	AC-V700A	AC-SQ950D
Audio HF transmitter	WRT-822B	WRT-822B	WRT-805B or WRT-822B	WRT-805B	WRT-805B
Wide angle	Canon YJ12x6.5 KRS Fujinon A12x6.8	Canon YH12x4.8KRS, Fujinon S12x5	option: Sony VCL-HG0758 (without lens hood) Canon WR-58/ Century Optics	Sony VCL-HG0758 supplied with lens hood LSF-S58 Canon WR-58 Century Optics	Century Optics
Rain cover	LCR-1	LCR-1	LCR-1	LCR-VX2000A	
Camcorder light	Anton Bauer Ultra Light2 20W (UL2-6)+ (DIFFUSION FILTER uld-f)	Anton Bauer Ultra Light2 20W (UL2-6)+ (DIFFUSION FILTER uld-f)	Anton Bauer Ultra Light2 20W(UL2-6)+ (DIFFUSION FILTER uld-f)	HVL-20DW2 (+NP-550/750 not supplied)	HVL-S3D (+NP-550/750 not supplied)
Audio HF receiver	WRR-855B (+CA-WR855)	WRR-855B (+CA-WR855)	WRR-805A/B or WRR-855B (+BTA 801)	WRR-805A/B	WRR-805A/0B
Remote panel	Yes RM-M7G/F	Yes RM-M7G/F		photo type	photo type
Tripod adaptor	VCT-U14 supplied	VCT-U14 supplied	option : VCT-U14		
Hard carrying case	LC-421 / LC-DS500	LC-421 / LC-DS500	LC-421	LCH-VX2000A	LCH-TRV950
Soft carrying case	LC-300SFT	LC-300SFT	LC-300SFT		
Large viewfinder	DXF-51 + accessories*	DXF-51 + accessories*	DXF-51 + accessories*		
Silver Support included	•	•	•	•	•

* Spare part ref. for assembling kit = A-8278-177-A.

Feature Comparison

DIGITAL VTRs

	DSR-2000P	DSR-1800P	DSR-1600P	DSR-1500AP	DSR-70AP
Cassette Size					
Standard-size	•	•	•	•	•
Mini-size	•	•	•	•	•
DVCPRO Medium-size	•	•	•	•	•
Recording/Playback Capability					
DV-SP Recording				•	
DV-SP Playback	•	•	•	•	•
DV-LP Playback	•				
DVCPRO Playback	•	•	•	•	•
NTSC Recording					
NTSC Playback					
Digital Interface					
SDI	•	○	○ *2	○	○
SDTI (QSDI)	•	○	○ *2	○	○
SDTI-CP	○ *2				
i.LINK (DV In/Out)	○	○	○	•	○
AES/EBU	•	○	○ *2	○	
Analogue Interface					
Composite	•	•	• *2	○ *1 / • *2	•
Component	•	•	• *2	○ *1 / • *2	○
S-Video	•	•	• *2	○ *1 / • *2	•
Analogue Audio	• (4ch)	• (4ch)	• *2 (4ch)	○ *1 / • *2 (2ch)	• (2ch)
Time Code In/Out	•	•	• *2	•	•
Control Interface					
RS-422A	•	•	•	•	•
RS-232C					
LANC					
Control S		•	•	•	•
26-pin Camera					
Key Function					
Non-Tracking	•				
Pre-read Editing (Video/Audio)	•				
VTR-to-VTR Editing	•				•
Audio Pre-read Editing	•	•			
Channel Condition Indicator	•	•	•		
Jog/Shuttle Dial	•	•	•		•
4ch Audio Insert independently	•	•			
Audio Cross Fade	•	•			
Assemble/Insert Editing	•	•		•	•
16:9 Aspect ID Recording	•	•		•	•
Analogue-like Jog Audio	•	•	•	•	•
Professional Slow Motion Picture *4	•	•	•	•	•
Quick Response Mechanism	•	•	•	•	•
Power On Playback/Recording		• *4	• *4	• *4	
Time Counter Display on Front Panel	•	•	•	•	•
Digital Slow Range	x+-1.0	x+-0.5	x+-0.5	x+-0.5	x+-0.5
Power					
AC	• (100-240V)	• (100-240V)	• (100-240V)	• (100-240V)	
DC					• (12V)
Battery Operation					• (BP-L series)

• Standard

○ Option

*1 Input only

*2 Output only

*3 As player only

*4 The same filter as Digital BETACAM

*5 Power On Playback only

*6 Not frame accurate

DIGITAL VTRs

	DSR-50P	DSR-45P	DSR-30P	DSR-25	DSR-11
Cassette Size					
Standard-size	•	•	•	•	•
Mini-size	•	•	•	•	•
DVCPRO Medium-size					
Recording/Playback Capability					
DV-SP Recording	•	•		•	•
DV-SP Playback	•	•	•	•	•
DV-LP Playback					
DVCPRO Playback					
NTSC Recording				•	•
NTSC Playback	•			•	•
Digital Interface					
SDI					
SDTI (QSDI)					
SDTI-CP					
i.LINK (DV In/Out)	•	•	•	•	•
AES/EBU					
Analogue Interface					
Composite	•	•	•	•	•
Component	•	•			
S-Video	•	•	•	•	•
Analogue Audio	• (4ch)	• (4ch)	• (2ch)	• (2ch)	• (2ch)
Time Code In/Out	•	•			
Control Interface					
RS-422A		• *3			
RS-232C		•			
LANC	•	•	•	•	•
Control S	•	• *1	•	• *1	•
26-pin Camera	•				
Key Function					
Non-Tracking					
Pre-read Editing (Video/Audio)					
VTR-to-VTR Editing				•	
Audio Pre-read Editing					
Channel Condition Indicator					
Jog/Shuttle Dial					
4ch Audio Insert independently					
Audio Cross Fade					
Assemble/Insert Editing			• *6		
16:9 Aspect ID Recording					
Analogue-like Jog Audio					
Professional Slow Motion Picture *4					
Quick Response Mechanism					
Power On Playback/ Recording		• *4	•	•	• *4
Time Counter Display on Front Panel	•	•	•	•	
Digital Slow Range	x ±1/10, 1/3	x ±1/10, 1/3	x ±1/10, 1/5	x ±1/10, 1/3	x ±1/10, 1/3
Power					
AC		• (100-240V)	• (220-240V)	• (100-240V)	
DC	• (12V)				• (12V)
Battery Operation	• (BP-L series)				

Optional Accessories & Peripheral Equipment

BATTERIES, CHARGERS & AC ADAPTORS



BP-L40A
Li-ion Rechargeable Battery Pack

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-70AP | DSR-50P**



BP-IL75
Li-ion Rechargeable Battery Pack

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-70AP | DSR-50P**



NP-F550
Rechargeable Battery Pack

Camera: **DSR-PD170P**



NP-F750
Rechargeable Battery Pack

Camera: **DSR-PD170P**
Hard Disk: **DSR-DU1**



NP-F960/B
Rechargeable Battery Pack

Camera: **DSR-PD170P**
Hard Disk: **DSR-DU1**



BKW-L601
Battery Adaptor for BP-L40A/IL75

Cameras: **DSR-1P**
Serial No for DSR-1P is 14151



AC-DN1
AC Adaptor

Cameras: **DSR-570WSP | DSR-390P | DSR-250P**



AC-DN2B
AC Adaptor

Cameras: **DSR-570WSP | DSR-390P | DSR-250P**
VTR: **DSR-70AP**



AC-V700A
AC Adaptor/Charger

Camera: **DSR-PD170P**
Hard Disk: **DSR-DU1**



BP-M50/M100
Ni-MH Rechargeable Battery Pack

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-70AP | DSR-50P**



BC-M50
Battery Charger for
BP-L40A/IL75/M50/M100

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-70AP | DSR-50P**



NP-QM71/QM91
Rechargeable Battery Pack
for DSR-PDX10P

Camera: **DSR-PDX10P**



AC-SQ950D
AC/DC Adaptor Charger
for DSR-PDX10P

Camera: **DSR-PDX10P**



BC-M150
Battery Charger for
BP-L40A/IL75/M50/M100

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-70AP | DSR-50P**

CABLES & REMOTE CONTROL UNITS



RCC-5G
Remote Control Cable (5 m)

VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-70AP



CCA-7
Camera Remote Control Cable

Cameras: **DSR-570WSP | DSR-390P**



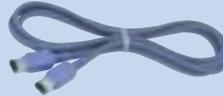
CCZ-A2/A5/A10
Connecting Cable (26-pin - 26-pin)

Cameras: **DSR-570WSP | DSR-390P**



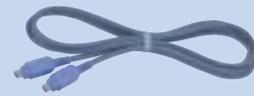
VMC-IL4615/IL4635
i.LINK Cable (4-pin to 6-pin, 1.5 m/3.5 m)

Cameras: **DSR-250P | DSR-PD170P | DSR-PDX10P**
VTRs: **DSR-45P | DSR-30P | DSR-25**
DSR-11 | DSR-70AP | DSR-50P



VMC-IL6615/6635
i.LINK Cable (6-pin to 6-pin, 1.5 m/3.5 m)

Camera: **DSR-250P**
VTR: **DSR-50P**



VMC-IL4408/IL4415/IL4435
i.LINK Cable (4-pin to 4-pin, 0.8 m/1.5 m/3.5 m)

Cameras: **DSR-PD170P | DSR-PDX10P**
VTRs: **DSR-45P | DSR-30P | DSR-25 | DSR-11**



CCFD-3L
DV Cable (6-pin with lock to 4-pin)

Cameras: **DSR-570WSP | DSR-390P | DSR-250P**
DSR-PDX10P
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-50P | DSR-45P | DSR-30P
DSR-25 | DSR-11



CCF-3L
DV Cable (6-pin with lock to 6-pin)

Cameras: **DSR-570WSP | DSR-390P | DSR-250P**
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-70AP | DSR-50P



RCP-D50/D51
Remote Control Panel

Cameras: **DSR-570WSP | DSR-390P**



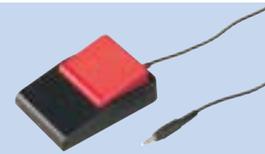
RM-M7G
Remote Control Unit

Cameras: **DSR-570WSP | DSR-390P**



CCU-D50P
Camera Control Unit

Cameras: **DSR-570WSP | DSR-390P**



FS-20
Foot Switch

VTR: **DSR-50P**



EC-0.5C2
Microphone Cable

Cameras: **DSR-PDX10P**



DSRM-10
Remote Control Unit

VTRs: **DSR-1500AP | DSR-45P | DSR-25**
DSR-11 | DSR-50P



DSRM-20
Remote Control Unit

VTRs: **DSR-45P | DSR-25 | DSR-11 | DSR-50P**

Optional Accessories & Peripheral Equipment

RECORDING MEDIA



PDV-12CL
Cleaning Cassette Tape (Standard size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



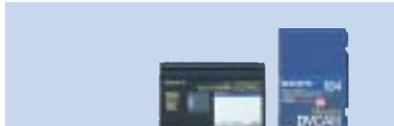
PDV-34ME/64ME/94ME/124ME/184ME
Digital Video Cassette (Standard size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



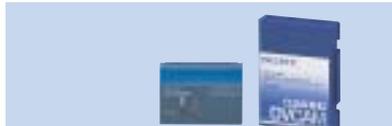
PDV-34N/64N/94N/124N/184N
Digital Video Cassette (Non IC type/Standard size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



PDV-64MEM/124MEM/184MEM
Digital Video Cassette (Master tape/Standard size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



PDVM-12CL
Cleaning Cassette Tape (Mini size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
DSR-PD170P | DSR-PDX10P
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



PDVM-12ME/22ME/32ME/40ME
Digital Video Cassette (Mini size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
DSR-PD170P | DSR-PDX10P
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



PDVM-32MEM/40MEM
Digital Video Cassette (Master tape/Mini size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
DSR-PD170P | DSR-PDX10P
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



PDVM-12N/22N/32N/40N
Digital Video Cassette
(Non IC type Mini Size)

Cameras: **DSR-570WSP | DSR-390P | DSR-1P | DSR-250P**
DSR-PD170P | DSR-PDX10P
VTRs: **DSR-2000P | DSR-1800P | DSR-1600P**
DSR-1500AP | DSR-45P | DSR-30P | DSR-25
DSR-11 | DSR-70AP | DSR-50P



MSA-8A/16A/32A/64A/128A
Memory Stick (8 MB/16 MB/32 MB/64 MB/128 MB)

Cameras: **DSR-250P | DSR-PD170P | DSR-PDX10P**



MSAC-FD2
Floppy Disc Adaptor
for Memory Stick

Cameras: **DSR-250P | DSR-PD170P | DSR-PDX10P**



MSAC-PC2
PC Card for Memory Stick

Cameras: **DSR-250P | DSR-PD170AP | DSR-PDX10P**



MSAC-US70
Memory Stick USB Adaptor with built-in mouse

Cameras: **DSR-250P | DSR-PD170P | DSR-PDX10P**



BOARDS



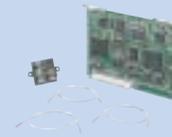
DSBK-1501
Digital Input/Output Board

VTR: **DSR-1500AP**



DSBK-1504P
Analogue Input Board

VTR: **DSR-1500AP**



DSBK-160A
SDI/i.LINK Input/Output Board

VTR: **DSR-70AP**



DSBK-180P
Dual Video Input Board

VTR: **DSR-70AP**



DSBK-1601
SDI/AES/EBU Output Board

VTR: **DSR-1600P**



DSBK-1602
SDTI (QSDI) Output Board

VTR: **DSR-1600P**



DSBK-1801
SDI/AES/EBU Input/Output Board

VTR: **DSR-1800P**



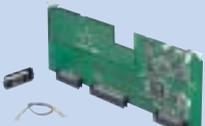
DSBK-1802
SDTI (QSDI) Input/Output Board

VTR: **DSR-1800P**



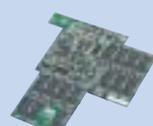
DSBK-1803
i.LINK/DV Input/Output Board

VTRs: **DSR-1800P | DSR-1600P**



DSBK-190
i.LINK/DV Input/Output Board

VTR: **DSR-2000P**



DSBK-301A
Index Picture Board

Cameras: **DSR-570WSP | DSR-390P**

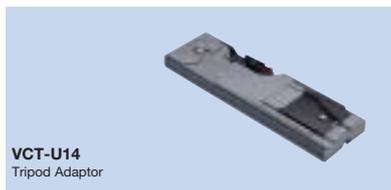
Optional Accessories & Peripheral Equipment

MOUNTING & CARRYING ACCESSORIES



VCT-1170RM
Video Tripod with Remote Control

Cameras: **DSR-PD170P** | **DSR-PDX10P**



VCT-U14
Tripod Adaptor

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-1P**



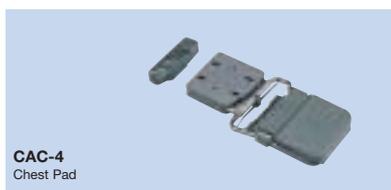
LCR-VX2000A
Rain Jacket

Camera: **DSR-PD170P**



A8278-057-A
Adaptor bracket for WRR-805A/B

Cameras: **DSR-570WSP** | **DSR-390P**



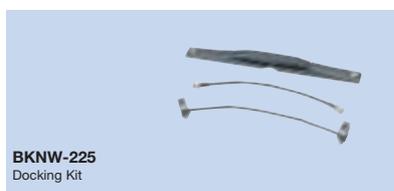
CAC-4
Chest Pad

Camera: **DSR-1P**



LC-421
Carrying Case (Hard type)

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-250P**



BKNW-225
Docking Kit

VTR: **DSR-70AP**



CAC-12
Microphone Holder

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-250P**
DSR-PD170P | **DSR-PDX10P**



LCH-VX2000A
Hard Carrying Case

Camera: **DSR-PD170P**



LC-DS300SFT
Carrying Case (Soft type)

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-250P**



LC-DS500
Carrying Case (Hard type)

Cameras: **DSR-570WSP** | **DSR-390P**



LCH-TRV950
Hard Carrying Case

Camera: **DSR-PDX10P**



LCR-1
Rain Cover

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-250P**

OTHERS



DXF-51
5-inch Monochrome Viewfinder

Cameras: **DSR-570WSP** | **DSR-390P**



WRR-855B
UHF Synthesized Tuner

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-1P**



UWP-C1 and UWP-C2
Turnkey packages for wireless microphones
(please see p. 29 for details)



WRT-822B
UHF Synthesized Wireless Transmitter



CVX-V3P
Colour Video Camera



CVX-V18NSP
Colour Video Camera for night shot application



CVX-V1P
Colour Video Camera



VCL-HG1758
Tele Conversion Lens 1.7x

Cameras: **DSR-250P** | **DSR-PD170P**



VF-58PK
Filter Kit PL Filter and Multi-coat Filter

Cameras: **DSR-250P** | **DSR-PD170P**



VCL-HG0758
Tele Conversion Lens 0.7x

Cameras: **DSR-250P** | **DSR-PD170P**



ECM-672/670
Electret Condenser Microphone

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-250P**
DSR-PDX10P



BTA-801
Adaptor for WRR-855B

Cameras: **DSR-1P**



CA-WR855
Adaptor for WRR-855B

Cameras: **DSR-570WSP** | **DSR-390P**



CA-DU1
Camera adaptor

Cameras: **DSR-570WSP** | **DSR-390P** | **DSR-250P**
Hard Disk: **DSR-DU1**



CA-370
Camera adaptor

Cameras: **DSR-570WSP** | **DSR-390P**



LSF-S58
Lens Hood

Camera: **DSR-PD170P**



VCL-HG0737X
Wide Conversion Lens

Camera: **DSR-PDX10P**



VCL-MHG07A
Wide End Conversion Lens

Camera: **DSR-PDX10P**



VCL-HG2037X
Tele Conversion Lens

Camera: **DSR-PDX10P**



VF-R37K
ND Filter and Protector

Camera: **DSR-PDX10P**



VF-37CPKS
PL Filter and MC Protector

Camera: **DSR-PDX10P**

Specifications

DIGITAL CAMCORDERS

DSR-570WSP / DSR-390P / DXC-D50P/WSP Camcorders

DSR-1P Dockable Recorder

DSR-570WSP

DSR-390P

DXC-D50P/WSP

DSR-1P

General

Power requirements	DC 12 V (11 to 17 V)			DC 12 V \pm 5/-1 V
Power consumption	26.1 W (with VF), 24 W (without VF)	22.1 W (with VF), 20 W (without VF)	26 W (with VF)	12 W
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)			0 °C to 40 °C (32 °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)
Tape speed	28.221 mm/s			28.221 mm/s
Recording/Playback time	184 min.			184 min.
Standard size	40 min.			40 min.
Mini size	Approx. 12 min.			Approx. 12 min.
Fast forward/Rewind time	Approx. 12 min.			Approx. 3 min.
Standard size	Approx. 3 min.			Approx. 3 min.
Mini size	Approx. 3 min.			Approx. 3 min.
Continuous recording time	Approx. 70 min. with BP-L40A Approx. 90 min. with BP-M50 Approx. 140 min. with BP-IL75 Approx. 200 min. with BP-M100	Approx. 80 min. with BP-L40A Approx. 100 min. with BP-M50 Approx. 180 min. with BP-IL75 Approx. 230 min. with BP-M100	Approx. 75 min with BP-L40A	Approx. 75 min. with BP-L40A (DSR-1P + DXC-D35P)
Mass	6.4 kg (14.1 lb 225.7 oz) (with VF, microphone, lens, battery and tape)	6.2 kg (13 lb 10 oz) (with VF, microphone, lens, battery and tape)	7.3 kg (16 lb 1 oz) (with VF, microphone, lens, battery, tape and carrying handle)	3.1 kg (6 lb 13 oz) (with battery)
Dimensions (W x H x D)	121 x 192 x 280 mm (4 7/8 x 7 5/8 x 11 1/8 inches) (without projections) 242 x 247 x 547 mm (9 5/8 x 9 3/4 x 21 5/8 inches) (with projections)	121 x 192 x 270 mm (4 7/8 x 7 5/8 x 10 3/4 inches) (without projections) 242 x 247 x 536 mm (9 5/8 x 9 3/4 x 21 1/8 inches) (with projections)	121 x 206 x 344 mm (4 7/8 x 8 1/8 x 13 5/8 inches)	118 x 185 x 185 mm (4 3/4 x 7 3/8 x 7 3/8 inches)

Camera Section

Image device	3-chip 2/3-inch, Interline-Transfer CCD	3-chip 1/2-inch, Interline-Transfer CCD	3-chip 2/3-inch, Interline-Transfer CCD	—
Optics	—	F1.4 medium index prism system	—	—
Effective picture elements	980 (H) x 582 (V)	752 (H) x 582 (V)	980 (H) x 586 (V)	—
Total picture elements	1038 (H) x 594 (V)	795 (H) x 596 (V)	1038 (H) x 1188 (V)	—
Sensing area	9.6 mm x 5.4 mm	6.4 mm x 4.8 mm	8.8 mm x 6.6 mm (D50P), 9.6 mm x 5.4 mm (D50WSP)	—
Built-in filters	1: 3200 K 3: 5600 K	2: 5600 K+1/8 ND 4: 5600 K+1/64 ND	1: Clear 3: 1/16 ND	2: 1/4 ND 4: 1/64 ND
Lens mount	Sony 2/3-type bayonet mount			—
Signal system	PAL colour system			—
Scanning system	2:1 interlaced, 625 lines, 50 fields/s			—
Horizontal frequency	15.625 kHz			—
Vertical frequency	50 Hz			—
Sync system	Internal and external with VBS or BS signal			—
Horizontal resolution	16:9 mode: 980 TV lines 4:3 mode: 850 TV lines	800 TV lines	920 TV lines (D50P), 850 TV lines in 4:3 mode and 800 TV lines in 16:9 mode (D50WSP)	—
Vertical resolution	480 TV lines (without EVS), 530 TV lines (with EVS)			—
Minimum illumination	0.25 lx with F1.4, Hyper gain (36 dB+DPR) 0.4 lx with F1.8, Hyper gain (36 dB+DPR)	0.4 lx with F1.4, Hyper gain (30 dB+DPR)* 0.6 lx with F1.8, Hyper gain (30 dB+DPR)**	0.5 lx with F1.4, Hyper gain (36 dB) 0.8 lx with F1.8, Hyper gain (36 dB)	—
Sensitivity	F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)	F13 at 2000 lx (3200 K, 89.9% reflectance) (typical)	F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)	—
Gain selection	-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 18 dB+DPR, 24 dB, 24 dB+DPR, Hyper gain (36 dB or 42 dB selectable)	-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 18 dB+DPR, 24 dB, 24 dB+DPR, Hyper gain (30 dB+DPR)**	-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB	—
Shutter speed selection	OFF, 1/60, 1/250, 1/500, 1/1000, 1/2000 s			—
S/N ratio	61 dB (typical)	60 dB (typical)	63 dB (typical)	—
Registration	0.05% (all zones, without lens)			—
Geometric distortion	Below measurable level			—

VTR Section

Video performance*	Luminance: 25 Hz to 5.5 MHz \pm 1.0/-2.0 dB Chrominance: 25 Hz to 2.0 MHz \pm 1.0/-2.0 dB			Luminance: 25 Hz to 5.5 MHz \pm 1.0/-2.0 dB 5.75 MHz \pm 0/-3.0 dB (Typical measurement) Chrominance: 25 Hz to 2.0 MHz \pm 1.0/-2.0 dB
Bandwidth	More than 55 dB			More than 55 dB
S/N ratio	Less than 2.0%			Less than 2.0%
K-factor (K2T, KPB)	Less than 30 ns			Less than 30 ns
Y/C delay	2 CH mode (48 kHz/16-bit): 20 Hz to 20 kHz \pm 0.5/-1.0 dB 4 CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz \pm 0.5/-1.0 dB			2 CH mode (48 kHz/16-bit): 20 Hz to 20 kHz \pm 0.5/-1.0 dB 4 CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz \pm 0.5/-1.0 dB
Audio performance**	More than 80 dB			More than 80 dB
Frequency response	Less than 0.08% (1 kHz reference level, 48 kHz)			Less than 0.08%
Dynamic range	—			—
Distortion (THD)	—			—

Input/Output Connectors

Signal inputs	Genlock Video In: BNC, 1.0 Vp-p, 75 Ω Analogue Video In: BNC, 1.0 Vp-p, 75 Ω (with DSBK-501P optional board installed) Ext Audio CH-1/2: XLR 3-pin female x2 -60 dBu, 3 k Ω \pm 4 dBu, 10 k Ω MIC In: XLR 3-pin female TC In: BNC, 0.5 Vp-p to 18 Vp-p, 10 k Ω	Genlock Video In: BNC, 1.0 Vp-p, 75 Ω Ext Audio CH-1/2: XLR 3-pin female x2 -60 dBu, 3 k Ω \pm 4 dBu, 10 k Ω MIC In: XLR 3-pin female TC In: BNC, 0.5 Vp-p to 18 Vp-p, 10 k Ω	Genlock Video In: BNC, 1.0 Vp-p, 75 Ω Ext Audio CH-1/2: XLR 3-pin female x2 -60 dBu, 3 k Ω \pm 4 dBu, 10 k Ω TC In: BNC, 0.5 Vp-p to 18 Vp-p, 10 k Ω	Genlock Video In: BNC, 1.0 Vp-p, 75 Ω Ext Audio CH-1/2: XLR 3-pin female x2 -60 dBu, 3 k Ω \pm 4 dBu, 10 k Ω TC In: BNC, 0.5 Vp-p to 18 Vp-p, 10 k Ω
Signal outputs	Video Out: BNC, 1.0 Vp-p, sync negative, 75 Ω 26-pin male VBS: 1.0 Vp-p, sync negative Y/R-Y/B-Y: Y, 1.0 Vp-p, sync negative R-Y/B-Y: 0.525 Vp-p Y/C: Y, 1.0 Vp-p, sync negative C: 0.3 Vp-p (burst level) S-Video: DIN 4-pin, 1.0 Vp-p, 75 Ω DV Out: 6-pin, IEEE1394-based Audio CH-1/2: Phono, -10 dBu, 47 k Ω Monitor Out: BNC, 1.0 Vp-p, sync negative, 75 Ω TC Out: BNC, 1.0 Vp-p, 75 Ω	Video Out: BNC, 1.0 Vp-p, sync negative, 75 Ω 26-pin male VBS: 1.0 Vp-p, sync negative Y/R-Y/B-Y: Y, 1.0 Vp-p, sync negative R-Y/B-Y: 0.525 Vp-p Y/C: Y, 1.0 Vp-p, sync negative C: 0.3 Vp-p (burst level) S-Video: DIN 4-pin, 1.0 Vp-p, 75 Ω DV Out: 6-pin, IEEE1394-based Audio CH-1/2: Phono, -10 dBu, 47 k Ω Monitor Out: BNC, 1.0 Vp-p, sync negative, 75 Ω TC Out: BNC, 1.0 Vp-p, 75 Ω	Camera head BNC connector: VBS: 1.0 Vp-p, sync negative 26-pin connector of CA-537P docked to DXC-D35P: VBS: 1.0 Vp-p, sync negative Y/R-Y/B-Y: Y, 1.0 Vp-p, sync negative, R-Y/B-Y: 0.525 Vp-p Y/C: Y, 1.0 Vp-p, sync negative, C: 0.3 Vp-p (burst level) RGB: 1.4 Vp-p Video Out: BNC, 1.0 Vp-p, sync negative, 75 Ω S-Video: DIN 4-pin Y: 1.0 Vp-p, sync negative C: 0.3 Vp-p (burst level) Audio CH-1/2: Phono, -10 dBu, 47 k Ω TC Out: BNC, 1.0 Vp-p, 75 Ω	Video Out: BNC, 1.0 Vp-p, sync negative, 75 Ω S-Video: DIN 4-pin Y: 1.0 Vp-p, sync negative, 75 Ω C: 0.3 Vp-p, 75 Ω Audio CH-1/2: RCA PIN, -10 dBu, 47 k Ω TC Out: BNC, 1.0 Vp-p, 75 Ω
Others	DC In: XLR 4-pin male DC Out: XLR 4-pin female Battery Terminal: 5-pin Earphone: Mini jack Light Out: 2-pin female WRR Out: 7-pin Lens: 12-pin VF: 20-pin Remote1: Stereo mini jack, Remote2: 10-pin	DC In: XLR 4-pin male DC Out: XLR 4-pin female Battery Terminal: 5-pin Earphone: Mini jack Light Out: 2-pin female WRR Out: 7-pin Lens: 12-pin VF: 20-pin Remote1: Stereo mini jack, Remote2: 10-pin	DC In: XLR 4-pin male DC Out: XLR 4-pin female Earphone: Mini jack Lens: 12-pin VF: 8-pin, 20-pin Remote1: Stereo mini jack Remote2: 10-pin	Analogue Interface: Pro 50-pin Digital Interface: Pro 75-pin Digital DC In: XLR 4-pin male DC Out: XLR 4-pin female Earphone: Stereo Mini jack

Supplied Accessories

1.5-inch B/W Viewfinder (DXF-801) Microphone with Wind Screen Tripod Adaptor VCT-U14 Shoulder Strap, Lens Mount Cap Flange Focal Length Adjustment Test Chart Switch Guard, Binding Tie Operating Instructions	1.5-inch B/W Viewfinder (DXF-801) (except PH version) Microphone with Wind Screen (except PH version) Tripod Adaptor VCT-U14 (except PH version) Shoulder Strap, Lens Mount Cap Flange Focal Length Adjustment Test Chart Operating Instructions	Shoulder Strap Connector Cap Lithium Battery (type CR2032) M4 x6 Screws (2) M4 x12 Screws (2) Operating Instructions ClipLink Guide
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*1 DPR is equivalent to +6 dB gain up. 18 dB+DPR: Equivalent to +24 dB gain up. 24 dB+DPR: Equivalent to +30 dB gain up. Hyper gain (30 dB+DPR): Equivalent to +36 dB gain up.

*2 The specifications for "Video/Audio performance" were measured by playing back material on the DSR-85P (via analogue component out) that had been recorded on the DSR-570WSP.

DSR-250P / DSR-PD170P / DSR-PDX10P Camcorders

DSR-250P

DSR-PD170P

DSR-PDX10P

General			
Power requirements	DC 12 V(11 V to 17 V)	DC 7.2 V (Battery), DC 8.4 V (AC adaptor)	DC 7.2 V (Battery operation), DC 8.4 V (AC Adaptor)
Power consumption	10.5 W (with VF), 12.1 W (with VF and LCD)	4.7 W (with VF), 5.4 W (with LCD)	5 W (with VF), 5.3 W (with LCD)
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)		
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)		
Tape speed	Approx. 28.2 mm/s (DVCAM mode) Approx. 18.8 mm/s (DV SP mode)		
Recording/Playback time	184 minutes (DVCAM mode), 270 minutes (DV SP mode with PDV-184ME) cassette, 40 minutes (DVCAM mode) 60 minutes (DV SP mode with PDVM-40ME)	40 minutes (DVCAM mode) 60 minutes (DV SP mode, with PDVM-40ME)	
Mass	Approx. 4.4 kg (9 lb 11 oz)	(camcorder only) Approx. 1.5 kg (3 lb 5 oz)	camcorder only (approx 950 g)
Dimensions (W x H x D)	214.7 x 251.25 x 508.8 mm (9 5/8 x 10 x 20 1/8 inches)	133 x 180 x 456 mm (5 1/4 x 7 x 18 inches) including microphone	93 x 99 x 202 mm (3 3/4 x 4 x 8 inches)

Lens

Zoom	12:1 Variable Speed (1.2-22 s) zoom lens F = 6.0 to 72.0 mm; F1.6 to 2.4	12:1 Variable speed (1.83 to 26.5 s) zoom lens F = 3.6 to 43.2 mm
Filter diameter	58 mm (2 3/8 inches)	37 mm
Focus	Auto/Manual (ring)/Infinity/One push auto	

Camera

Image device	Three 1/3-inch CCDs, 450,000 pixels	Three 1/4.7-inch CCDs, 1,070,000 pixels
Signal system	CCIR Standard, PAL colour system	
Scanning system	Progressive/Interlace Scan	
Horizontal resolution	530 TV lines	
Minimum illumination	2 lx	1 lx
Gain selection	—	
Shutter speed selection	1/3, 1/6, 1/12, 1/25, 1/50, 1/60, 1/100, 1/120, 1/150, 1/215, 1/300, 1/425, 1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000 s	1/3 to 1/10000 s
Exposure	Auto/Manual (Exposure ring)	Auto/Manual (Exposure dial)
White balance	Auto/One-push/Out door (5800 K)/Indoor (3200 K)	
Viewfinder	1.5-inch black and white CRT, Zebra Pattern	180,000 dot Black & White LCD, Zebra Pattern
Built-in microphone	Electret condenser microphone	
Built-in speaker	Dynamic speaker	
LCD	TFT Active Matrix 2.5-inch 200,640 dots (880 x 228)	Hybrid 2.5-inch 211,200 dots (960H x 200V)
Memory card slot	Memory Stick Recording signals: Camera signals, VTR signals Image size: VGA (640 x 480) Image compression: JPEG	Memory Stick Recording signals: Camera signals, VTR signals Image size: VGA (1152 x 864) Image compression: JPEG

Input/Output Connectors

Signal inputs/outputs	Video IN/OUT: RCA pin x 1, Luminance signal:1 Vp-p, 75 Ω , unbalanced, sync negative Video OUT: BNC pin x 1, Luminance signal:1 Vp-p, 75Ω , unbalanced, sync negative Audio IN/OUT: RCA pin x 2, 245 m Output impedance with less than 2.2 kΩ Input impedance with more than 47 kΩ S-Video IN/OUT: Mini-DIN 4 pin x 1 Luminance signal:1 Vp-p, 75 Ω , unbalanced, Chrominance signal: 0.3 Vp-p (PAL) Audio IN: XLR 3-pin(female) x 3, -60 dBu, 6.8 kΩ , +4 dBu, 6.8 kΩ (0 dBu = 0.775 V rms) i.LINK (DV IN/OUT): 6 pin (with lock) x 1	Video IN/OUT: RCA pin x 1 Luminance signal: 1 Vp-p, 75 Ω , unbalanced, sync negative Audio IN/OUT: RCA pin x 2, 327 mV Output impedance with less than 2.2 kΩ Input impedance with more than 47 kΩ S-Video IN/OUT: Mini-DIN 4 pin x 1 Luminance signal: 1 Vp-p, 75 Ω , unbalanced Chrominance signal: 0.3 Vp-p Audio IN: XLR 3-pin female x 2, -60 dBu, 3 kΩ , +4 dBu, 10 kΩ (0 dBu = 0.775 V rms) i.LINK (DV IN/OUT): 4-pin x 1 LANC: Stereo mini jack (0.25 mm) x 1 Headphone: Stereo mini jack (0.35 mm) x 1 External DC IN: 8.4 V for AC-L10 AC adaptor	Audio/Video In/Out: Special AV mini jack (converts to Phono) x1, 1.0 Vp-p, 75 Ω , sync negative S-Video In/Out: Mini DIN 4-pin x1 Y: 1.0 Vp-p, 75 Ω , unbalanced C: 0.3 Vp-p (subcarrier burst), 75 Ω , unbalanced MIC In: Stereo mini jack x1 (XLR 3-pin x1, via adaptor) i.LINK (DV In/Out): 4-pin x1, IEEE1394-based USB mini-B x1
Others	LANC: Stereo mini-mini jack (0.25 mm) x 1 Headphone: Stereo mini jack (0.35 mm) x 1 External DC IN: 12 V, XLR 4-pin (male) DC OUT for Light: 12 V, max. 30 W DC OUT: 12 V, 4 pin	LANC: Stereo mini-mini jack (0.25 mm) x 1 Headphone: Stereo mini jack (0.35 mm) x 1 External DC IN: 8.4 V for AC-L10 AC adaptor	LANC: Stereo mini-mini jack x1 External DC In: 8.4 V (AC-L10 AC Adaptor) Headphone: Stereo mini jack x1

Supplied Accessories

ECM-NV1 Monaural Microphone RMT-811 Remote Commander and R6 Batteries (2) MSA-4A IC Recording Media Memory Stick MSAC-US1 Memory Stick Reader/Writer Picture Gear 4.1 Lens Hood Lite Hood Cap	ECM-NV1 Monaural Microphone AC-L15 AC Adaptor NP-F330 InfoLITHIUM Rechargeable Battery Pack RMT-811 Remote Commander and R6 Batteries (2) VCL-HG0758 Wide Conversion Lens LSF-S58 Lens Hood (for Wide Conversion Lens) Lens Cap built in Hood Lens Cap i.LINK Cable Strap Special Stereo AV Cable Carrying Belt	ECM-NV1 monaural microphone AC-L10 AC Adaptor NP-FM50 InfoLITHIUM Rechargeable Battery Pack RMT-811 Remote Commander and R6 Batteries (2) MSA-8A Recording Media Memory Stick Memory Stick/PC Card Adaptor XLR Adaptor Special Stereo AV Cable, Lens Hood, Lens Cap, Carrying Belt i.LINK Cable USB cable USB driver
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Specifications

DIGITAL VTRs

DSR-2000P / DSR-1800P / DSR-1600P / DSR-1500AP Editing Recorders / Players

	DSR-2000P	DSR-1800P	DSR-1600P	DSR-1500AP
General				
Power requirements	AC 100 V to 240 V, 50/60 Hz			
Power consumption (Max.)	110 W	100 W	70 W	60 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)			
Operating humidity	Less than 80%			
Storage humidity	Less than 90%			
Tape speed	28.221 mm/s			
Recording/Playback time	Standard size: 184 min. with PDV-184ME/184N/184MEM Mini size: 40 min. with PDVM-40ME/40N/40MEM			
Fast forward/Rewind time	Standard size: Less than 3 min. with PDV-184ME/184N/184MEM Mini size: Less than 1 min. with PDVM-40ME/40N/40MEM			
Search speed	Shuttle mode: still to ±60 times normal speed Digital slow mode: ±1 times normal speed			
Mass	18 kg (39 lb 10 oz)	13 kg (28 lb 10 oz)	13 kg (28 lb 10 oz)	6 kg (13 lb 3 oz)
Dimensions (W x H x D, excluding projections)	427 x 175 x 496.5 mm (16 7/8 x 7 x 19 5/8 inches)	427 x 174 x 400 mm (16 7/8 x 6 7/8 x 15 3/4 inches)	427 x 174 x 400 mm (16 7/8 x 6 7/8 x 15 3/4 inches)	210 x 130 x 420 mm (8 3/8 x 5 1/8 x 16 5/8 inches)
Video Performance				
Bandwidth (via analogue component I/O)	25 Hz to 5.0 MHz +1.0/-2.0 dB 5.75 MHz +0/-3.0 dB (Typical measurement)	25 Hz to 5.0 MHz ±1.0 dB	25 Hz to 5.0 MHz ±1.0 dB	25 Hz to 5.0 MHz ±1.0 dB
Chrominance	25 Hz to 2.0 MHz + 1.0/-2.0 dB			
S/N ratio (via analogue component I/O)	More than 55 dB			
K-factor (K2T, KPb)	Less than 2.0%			
Y/C delay 0	Less than 30 ns			
Audio Performance				
Frequency response	2 CH mode (48 kHz/16-bit) 4 CH mode (32 kHz/12-bit)	20 Hz to 20 kHz +0.5/-1.0 dB 20 Hz to 14.5 kHz +0.5/-1.0 dB	20 Hz to 20 kHz ±1.0 dB 20 Hz to 14.5 kHz ±1.0 dB	20 Hz to 20 kHz ±1.0 dB 20 Hz to 14.5 kHz ±1.0 dB
Dynamic range	More than 90 dB			
Distortion (THD+N)	Less than 0.05%			
Video Signal Inputs				
Analogue	Composite, 1.0 Vp-p, 75 Ω, sync negative			
Ref. Video (BNC x2, loop-through connection)	Composite, 1.0 Vp-p, 75 Ω, sync negative	0.3 Vp-p, 75 Ω, sync negative	—	Composite, 1.0 Vp-p, 75 Ω, sync negative
Video (BNC x2, loop-through connection)*1	Composite, 1.0 Vp-p, 75 Ω, sync negative	—	—	Composite, 1.0 Vp-p, 75 Ω, sync negative
Component (BNC x3)*1	Y: 1.0 Vp-p, 75 Ω, sync negative R-Y: 0.7 Vp-p, 75 Ω (100 %) B-Y: 0.7 Vp-p, 75 Ω (100 %)	—	—	Y: 1.0 Vp-p, 75 Ω, sync negative R-Y: 0.7 Vp-p, 75 Ω (100 %) B-Y: 0.7 Vp-p, 75 Ω (100 %)
S-Video**	DIN 4-pin x 1 Y: 1.0 Vp-p, 75 Ω, sync negative C: 0.3 Vp-p, 75 Ω (at burst level)	—	—	BNC x 2
Digital	BNC x 2, active-through connection			
SDI** *3	Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656			
SDTI (QSDI) (BNC x1) ** *4	Conforms to SDTI (270 Mb/s), SMPTE 305M/322M			
iLINK (DV In/Out) (6-pin x1) ** *5 *7	IEEE1394-based			
Audio Signal Inputs				
Analogue	XLR 3-pin female x4			
Audio**	-6/0/+4 dBu, 600 Ω on/off/ -60 dBu, high impedance	-6/-3/0/+4 dBu, 600 Ω on/off/ -60 dBu, high impedance	—	XLR 3-pin female x2 -6/-3/0/+4 dBu, high impedance
Digital	BNC x 2			
AES/EBU** *3 *5	75 Ω, unbalanced			
Video Signal Outputs				
Analogue	Video 1/2/3 (super) BNC x 3			
Ref. Video (BNC x1)	Video 1/2/3 (super) BNC x 3	0.3 Vp-p, 75 Ω, sync negative	—	Video 1/2/3 (super) BNC x 3
Video	Video 1/2/3 (super) BNC x 3	Video 1/2 (super) BNC x 2	—	Video 1/2/3 (super) BNC x 3
Component (BNC x3)	Y: 1.0 Vp-p, 75 Ω, sync negative R-Y: 0.7 Vp-p, 75 Ω (100%) B-Y: 0.7 Vp-p, 75 Ω (100%)	Composite, 1.0 Vp-p, 75 Ω, sync negative	—	Y: 1.0 Vp-p, 75 Ω, sync negative R-Y: 0.7 Vp-p, 75 Ω (100%) B-Y: 0.7 Vp-p, 75 Ω (100%)
S-Video	DIN 4-pin x 1	—	—	BNC x 2
Digital	Y: 1.0 Vp-p, 75 Ω, sync negative C: 0.3 Vp-p, 75 Ω (at burst level)			
SDI** *3 *5	BNC x 3			
SDTI (QSDI) ** *4 *5	Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656			
iLINK (DV In/Out) (6-pin x1) ** *5 *7	BNC x 1 Conforms to SDTI (270 Mb/s), SMPTE 305M/322M IEEE1394-based			
Audio Signal Outputs				
Analogue	XLR 3-pin male x4			
Audio**	-6/0/+4 dBu (selectable by menu)	-6/-3/0/+4 dBu (selectable by menu)	—	XLR 3-pin male x2
Monitor	Phono x 1 -11 dBu, 47 kΩ, unbalanced (-18 dBFS)	RCA x1 -9 dBu, 47 kΩ, unbalanced (-18 dBFS)	—	∞ to +1 dBu, 47 kΩ, unbalanced (-20 dBFS)
Headphone (JM-60 headphone jack x1)	∞ to -13 dBu, 8 Ω, unbalanced (-18 dBFS)	∞ to -11 dBu, 8 Ω, unbalanced (-18 dBFS)	—	∞ to -13 dBu, 8 Ω, unbalanced (-20 dBFS)
Digital	BNC x 2 75 Ω, unbalanced			
AES/EBU** *3 *5	BNC x 2 75 Ω, unbalanced			
Time Code Input/Output				
In (BNC x1)	0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced			
Out (BNC x1)	2.2 Vp-p, 75 Ω, unbalanced			
Remote				
	RS-422A: D-sub 9-pin female x2 Video Control: D-sub 15-pin male x1 Control Panel: D-sub 15-pin female x1	RS-422A: D-sub 9-pin female x1 Video Control: D-sub 15-pin male x1 Control S (SIRCS): Stereo mini jack x1	—	RS-422A: D-sub 9-pin female x1 Control S (SIRCS): Stereo mini jack x1
Supplied Accessories				
	AC Power Cord RCC-5G 9-pin Remote Control Cable Operating Instructions	—	AC Power Cord Operating Instructions	—

*1 The optional DSBK-1504 is required for the DSR-1500AP
*2 The optional DSBK1801 is required for the DSR-1800P
*3 The optional DSBK1501 is required for the DSR-1500AP

*4 The optional DSBK1802 is required for the DSR-1800P
*5 The optional DSBK-190 is required for the DSR-2000P
*6 The optional DSBK1803 is required for the DSR-1800P/1600P

*7 The optional DSBK1503 is required for the DSR-1500AP
*8 The optional DSBK-1601 is required for the DSR-1600P
*9 The optional DSBK-1602 is required for the DSR-1600P

DSR-45P / DSR-30P / DSR-25 / DSR-11 Recorders

DSR-45P

DSR-30P

DSR-25

DSR-11

	PAL	PAL	NTSC/PAL Switchable	NTSC/PAL Switchable
System	PAL	PAL	NTSC/PAL Switchable	NTSC/PAL Switchable
Power requirements	AC 100 V to 240 V, 50/60 Hz	AC: 220 V to 240 V, 50 Hz	AC: 100 V to 240 V, 50/60 Hz	
Power consumption	22 W	37 W	16 W	15 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)			
Tape speed	28.221 mm/s		18.831 mm/s	
Recording/Playback time	DVCAM mode	184 min. with PDV-184ME/184N/184MEM		
	DV SP mode	40 min. with PDVM-40ME/40N/40MEM		
Tape rewind time	Less than 2 min. with PDV-184ME/184N/184MEM			
Search speed	When controlling via optional DSRM-20: Shuttle mode: ±1/10, 1/5, 1, 2, approx. 10, approx. 17 times Jog mode: ±1/10, 1/5, 1, 2 times	Still, ±1/5, 1, 2 times, Cue/Review (±10 or 18 times)	When controlling via optional DSRM-20 or supplied RMT-DS20: Still, ±1/5, 1, 2 times, Cue/Review (±10 or 18 times)	When controlling via optional DSRM-20 or supplied RMT-DS11: Still, ±1/5, 1, 2 times, Cue/Review (±10 or 18 times)
Mass	Approx. 4.5 kg (10 lb 2 oz)	Approx. 9.2 kg (20 lb 4 oz)	Approx. 4.3 kg (9 lb 8 oz)	Approx. 2.8 kg (6 lb 2 oz)
Dimensions (W x H x D, including projections)	212 x 98 x 392 mm (8 3/8 x 3 7/8 x 15 1/2 inches)	430 x 129 x 374 mm (17 x 5 1/8 x 14 3/4 inches)	212 x 98 x 392 mm (8 3/8 x 3 7/8 x 15 1/2 inches)	180 x 73 x 265 mm (7 1/8 x 2 7/8 x 10 1/2 inches)

Video Signal Inputs

Rec mode	DVCAM/DV (SP mode only)	DVCAM	DVCAM/DV (SP mode only)	DVCAM/DV (SP mode only)
PB mode	DVCAM/DV (SP mode only)			
Ref. Video (BNC x1)	Black burst: 75 Ω, sync negative	—		
Video (DSR-45P/25: BNC x1)* (DSR-30P: BNC x1, Phono jack x1) (DSR-11: Phono jack x1)	Composite, 1.0 Vp-p, 75 Ω, sync negative			
S-Video (DSR-45P/25/11: Mini DIN 4-pin x1) (DSR-30P: Mini DIN 4-pin x2, front x1/rear x1) Component (BNC x3)	Y: 1.0 Vp-p, 75 Ω, sync negative R-Y/B-Y: 0.7 Vp-p (with 100 % colour burst)	Y: 1.0 Vp-p, 75 Ω, sync negative C: 0.3 Vp-p (subcarrier burst), 75 Ω		—

Audio Signal Inputs

Audio (DSR-45P/25/11: Phono jack x2/stereo L/R) (DSR-30P: Phono jack x2/ stereo L/R, front x1/rear x1)	2 Vrms (full bit)
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Video Signal Outputs

Video (DSR-45P/25: BNC x1) (DSR-30P: BNC x2, Phono jack x1) (DSR-11: Phono jack x1)	Composite, 1.0 Vp-p, 75 Ω, sync negative
S-Video (DSR-45P/25/11: Mini DIN 4-pin x1) (DSR-30P: Mini DIN 4-pin x2)	Y: 1.0 Vp-p, 75 Ω, sync negative C: 0.3 Vp-p (subcarrier burst), 75 Ω
Component (BNC x3)	Y: 1.0 Vp-p, 75 Ω, sync negative R-Y/B-Y: 0.7 Vp-p (with 100 % colour burst)
Monitor (BNC x1)	Composite, 1.0 Vp-p, 75 Ω, sync negative

Audio Signal Outputs

Audio (DSR-40P: XLR 3-pin male x2, stereo L/R) (DSR-20P/11: RCA pin x2/stereo L/R)	4 dBu, balanced	2 Vrms (full bit)
Monitor (RCA pin x2, stereo L/R)	2 Vrms (full bit)	2 Vrms (full bit)

Digital Input/Output

iLINK (DV In/Out) (4-pin x1)	IEEE1394-based
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Others

	RS-422A: D-sub 9-pin female x1 Control S (SIRCS) In: Stereo mini jack x1 Headphone: Stereo mini jack x1 LANC: Stereo mini-mini jack x1 RS-232C: D-sub 9-pin male x1	LANC: Stereo mini-mini jack x2 (front x1/rear x1) ^{*2} Control S (SIRCS) In: Mini jack x1 Control S (SIRCS) Out: Mini jack x1 Trigger In: RCA pin x1 (active short) Headphone: Stereo mini jack x1 MIC In: Mini jack x1	LANC: Stereo mini-mini jack x1 Headphone: Stereo mini jack x1 Control S (SIRCS) In: Stereo mini jack x1	LANC: Stereo mini-mini jack Control S: Stereo mini jack
LCD Monitor	2-inch type 123,200 dots	—	2-inch type 123,200 dots	—

Supplied Accessories

	AC Power Cord Cleaning Cassette Operating Instructions RMT-DS11 Wireless Remote Commander Size AA (R6) Batteries for Remote (2) Interface manual for programmers (RS-232C)	RMT-DS30 Wireless Remote Controller Size AA (R6) Batteries for Remote (2) AC Power Cord LANC Cable Cleaning Cassette Operating Instructions	RMT-DS20 Wireless Remote Controller Size AA (R6) Batteries for Remote (2) AC Power Cord Cleaning Cassette Operating Instructions	AC Adaptor, Power Cord RMT-DS11 Wireless Remote Commander Size AA (R6) Batteries for Remote (2) Rack Cleaning Cassette Operation Manual
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*1 Shared between composite IN and REF-IN.

*2 The audio output level of the DSR-45P will be reduced by half when connected to an Unbalanced XLR input device.

*3 Recommended remote control unit: DSRM-20

*4 Priority on front LANC.

Specifications

VTR REAR CONNECTOR PANELS

DSR-2000P



DSR-1500AP



DSR-1800P



DSR-DR1000P



DSR-1600P



DSR-45P



DSR-25



DSR-30P



DSR-11



DSR-50P



DSR-70AP



DSR-70AP

Portable Editing Recorder

General

Power requirements	DC 12 V (DC 12 V In: XLR 4-pin male x1)
Power consumption	46 W (without options)
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	Less than 80%
Storage humidity	Less than 90%
Tape speed	28.221 mm/s
Recording/Playback time	Standard size: 184 min. with PDV-184ME/184N/184MEM Mini size: 40 min. with PDVM-40ME/40N/40MEM
Fast forward/Rewind time	Standard size: Less than 3 min. with PDV-184ME/184N/184MEM Mini size: Less than 1 min. with PDVM-40ME/40N/40MEM
Search speed	x \pm 32
Mass	5.8 kg (12 lb 12 oz)
Dimensions (W x H x D)	211 x 149 x 443 mm (8 3/8 x 5 7/8 x 17 1/2 inches)
LCD display (x1)	6.4-inch VGA, 640 (H) x 480 (V)
Built-in speaker (x1)	Monaural
Remote	RS-422A: D-sub 9-pin female x1

Video Signal Inputs

Analogue	
Ref. Video (BNC x2, loop-through connection)	0.3 Vp-p, 75 Ω , sync negative
Video (BNC x2, loop-through connection)	Composite, 1.0 Vp-p, 75 Ω , sync negative
Component (BNC x3) ^{1*}	Y: 1.0 Vp-p, 75 Ω , sync negative R-Y: 0.7 Vp-p, 75 Ω (100%) B-Y: 0.7 Vp-p, 75 Ω (100%)
S-Video (DIN 4-pin x1)	Y: 1.0 Vp-p, 75 Ω , sync negative C: 0.3 Vp-p, 75 Ω (at burst level)
Digital	
SDI (BNC x1) ^{2*}	Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656
SDTI (QSDI) (BNC x1) ^{3*}	Conforms to SDTI (270 Mb/s), SMPTE 305M/322M
i.LINK (DV) (6-pin x1) ^{2*}	IEEE 1394

Audio Signal Inputs

Analogue	
Audio (CH-1,2) (XLR 3-pin female x2)	+4/0/-60dBu, high impedance, balanced

Video Signal Outputs

Analogue	
Ref. Video (BNC x1)	0.3 Vp-p, 75 Ω , sync negative
Video 1/2(SUPER) (BNC x2)	Composite, 1.0 Vp-p, 75 Ω , sync negative
Component (BNC x3) ^{1*}	Y: 1.0 Vp-p, 75 Ω , sync negative R-Y: 0.7 Vp-p, 75 Ω (100%) B-Y: 0.7 Vp-p, 75 Ω (100%)
S-Video (DIN 4-pin x1)	Y: 1.0 Vp-p, 75 Ω , sync negative C: 0.3 Vp-p, 75 Ω (at burst level)
Digital	
SDI (BNC x2) ^{2*}	Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656
SDTI (QSDI) (BNC x1) ^{3*}	Conforms to SDTI (270 Mb/s), SMPTE 305M/322M
i.LINK (DV) (6-pin x1) ^{2*}	IEEE 1394

Audio Signal Outputs

Analogue	
Audio (CH-1,2 or CH-3,4) (XLR 3-pin male x2)	+4/0/-6 dBu (selectable by menu)
Monitor (R/L) (Phono x1)	-6 dBu, 47 k Ω , unbalanced
Headphone (JM-60 headphone jack x1)	∞ to -20 dBu, 8 Ω , unbalanced

Time Code Input/Output

Time Code In (BNC x1)	0.5 to 18 Vp-p, 3.3 k Ω , unbalanced
Time Code Out (BNC x1)	2.2 Vp-p, \pm 3.0 dBu, 600 Ω , unbalanced

Supplied Accessories

	Carrying Belt Connector Cap (per interface) Operating Instructions Warranty Card
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¹ The optional DSBK-170 Analogue Component Input/Output Board is required.

² The optional DSBK-160A SDI & i.LINK/DV Input/Output Board is required.

³ The optional DSBK-150 SDTI (QSDI) Input/Output Board is required.

DSR-50P

Portable Recorder

General

System	PAL
DC input	XLR 4-pin (male), +12 V
Power consumption	15 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)
Tape speed	Approx. 28.2 mm/s (DVCAM mode), Approx. 18.8 mm/s (DV SP mode)
Recording/Playback time	184 minutes (DVCAM mode), 270 minutes (DV SP mode), with PDV-184ME cassette 40 minutes (DVCAM mode), 60 minutes (DV SP mode), with PDVM-40ME cassette
Mass	3.9 kg (8 lb 9 oz), excluding battery and tape
Dimensions (W x H x D)	247 x 92.5 x 311 mm (9 3/4 x 3 3/4 x 12 1/4 inches), excluding projections 279 x 99 x 315 mm (11 x 4 x 12 1/2 inches), including projections

Video

Rec mode	DVCAM/DV (SP mode only)
PB mode	DVCAM/DV (SP mode only)

Audio

Rec mode	48.0 kHz/16-bit (2CH)/ 32.0 kHz/12-bit (4CH)/automatic (DV IN)
PB mode	48.0 kHz/16-bit (2CH)/32.0 kHz/12-bit (4CH)/ 32.0 kHz/16-bit (2CH)/44.1 kHz/16-bit (2CH) (automatically selected)

Input/Output Terminals

Video IN Composite	1.0 Vp-p, 75 Ω , Sync negative
S(4-pin mini DIN)	Y: 1.0 Vp-p, 75 Ω , Sync negative C: 0.3 Vp-p (subcarrier burst) 75 Ω
Audio IN	XLR 3-pin (female) (+4 dBu/-20 dBu/-60 dBu) x 4, impedance more than 3 k Ω with +48 V power supply (independently switched for each channel)
Camera IN	26-pin camera connector
Composite	1.0 Vp-p, 75 Ω , Sync negative
Component	Y: 1.0 Vp-p, 75 Ω , Sync negative B-Y: 0.7 Vp-p, 75 Ω , R-Y: 0.7 Vp-p, 75 Ω
Reference IN	BNC, Black Burst 75 Ω , Sync negative (use Video IN)
Video OUT 1 (Monitor)	BNC, 1.0 Vp-p, 75 Ω , Sync negative Superimpose On/Off
Video OUT 2 Composite	BNC, 1.0 Vp-p, 75 Ω , Sync negative
S (4-pin mini DIN)	Y: 1.0 Vp-p, 75 Ω , Sync negative C: 0.3 Vp-p (subcarrier burst) 75 Ω
Component OUT	BNC x 3 Y: 1.0 Vp-p, 75 Ω , Sync negative B-Y/R-Y: 0.7 Vp-p, 75 Ω
Audio OUT	RCA pin x 4, -10 dBu Standard output level -18 dB from full bit
Audio OUT (Monitor)	RCA pin
DV IN/OUT	6-pin (with lock)
Timecode IN	BNC, 0.5 to 18 Vp-p, 10 k Ω
Timecode OUT	BNC, 2.2 Vp-p, 600 Ω /1.2 Vp-p, 75 Ω
Control S	Stereo mini jack
Remote	Stereo mini jack (Edge High/Edge Low/Level High/Level Low) (Tally)
Control	Stereo mini-mini jack (compatible with LANC as a player)
Headphone jack (left side)	Stereo standard jack, -19 dBu, with Level Control

Other

Colour LCD monitor	2.5-inch, 200,000 dots
Supplied accessories	LCD Protection Cover, Cleaning Cassette

Specifications

HARD DISK RECORDERS / FLEXICART

DSR-DR1000P Hard Disk Recorder

General

Power requirements	AC 100 V to 240 V, 50/60 Hz
Power consumption	60 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)
Operating humidity	Less than 80%
Storage humidity	Less than 90%
Mass	7.5 kg (16 lb 10 oz)
Dimensions (W x H x D)	210 x 130 x 422 mm (8 3/8 x 5 1/8 x 16 5/8 inches, without projection)

Video Performance

Bandwidth (via analogue component I/O)	Luminance: 25 Hz to 5.0 MHz +1.0 Chrominance: 25 Hz to 2.0 MHz +1.0/-2.0 dB
S/N ratio (via analogue component I/O)	More than 54 dB
K-factor (K2T, KPB)	Less than 2%
Y/C delay	Less than 30 ns

Audio Performance

Frequency response	2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz ±1.0 dB 4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz ±1.0 dB
Dynamic range	More than 87 dB
Distortion (THD + N)	Less than 0.07% (48 kHz)

Input Signals

VIDEO (ANALOGUE)	REF. Video: BNC (2) 0.3 Vp-p, 75 Ω sync negative Composite Video: BNC (2), loop-through connection (*) 1.0 Vp-p, 75 Ω, sync negative Component: BNC (3) (*) Y: 1.0 Vp-p, 75 Ω, sync negative R-Y, B-Y: 0.7 Vp-p, 75 Ω (100% colour bar) S-Video: BNC (2) (*) Y: 1.0 Vp-p, 75 Ω, sync negative C: 0.3 Vp-p, 75 Ω (at burst level)
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VIDEO (DIGITAL)	SDI: BNC (1) Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656 i.LINK (DV): 6-pin (1) IEEE 1394-based
AUDIO (ANALOGUE)	Audio: XLR 3-pin female (2) -6/-3/0/+4 dBu (selectable by menu), high impedance
AUDIO (DIGITAL)	AES/EBU: BNC (2) 75 Ω, unbalanced
Time Code	BNC (1), 0.5 Vp-p to 18.0 Vp-p, 3 kΩ unbalanced

Output Signals

VIDEO (ANALOGUE)	Video 1/2 (SUPER): BNC (2) (*) Composite, 1.0 Vp-p, 75 Ω, sync negative Component: BNC (3) (*) Y: 1.0 Vp-p, 75 Ω, sync negative R-Y, B-Y: 0.7 Vp-p, 75 Ω (100% colour bar) S-Video: BNC (2) (*) Y: 1.0 Vp-p, 75 Ω, sync negative C: 0.3 Vp-p, 75 Ω (at burst level)
VIDEO (DIGITAL)	SDI: BNC (2) Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656 i.LINK (DV): 6-pin (1) IEEE 1394-based
AUDIO (ANALOGUE)	Audio: XLR 3-pin male (2) -6/-3/0/+4 dBu (selectable by menu) Monitor: RCA (1) -9 dBu, 47 kΩ, unbalanced (-18 dBFS), volume center Headphone: JM-60 headphone jack (1) -∞ to -11 dBu, 8 Ω, unbalanced (-18 dBFS)
AUDIO (DIGITAL)	AES/EBU: BNC (2), 75 Ω, unbalanced
TIME CODE	BNC (1), 2.2 Vp-p, 600 Ω, unbalanced
REMOTE	RS-422A: D-sub 9-pin, female (2) Control: Mini jack (1)
Network	Ethernet (1): 10Base-T/100Base-TX Ethernet, RJ-45 modular jack

DSR-DU1 Hard Disk Recorder

General

Power requirements	DC 7.2 V (battery), DC 8.4 V (AC adaptor)
Power consumption	5.6 W
Mass	500 g (1 lb 1 oz)
Dimensions (W x H x D)	44 x 101 x 142 mm
Operating temperature	0 °C to 40 °C
Storage temperature	-20 °C to 60 °C
Operating Humidity	Less than 85 % (without dew condensation)

Input/Output Terminals

DV IN/OUT	i.LINK x1 (IEEE1394 4-pin)
Remote	4-pin Stereo mini Jack x1
DC IN	x1

Supplied Accessories

	Warranty card Operation manual i.LINK cable (4-pin to 4-pin) Remote controller (RM-LG2) Battery (CR2032) Case
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UWP Series Bodypack Transmitter / Handheld Microphone / Portable Tuner

Bodypack Transmitter

Oscillator	Crystal-controlled PLL synthesizer
Type of emission	F3E
Carrier frequencies CE model	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model.
RF power output	30 mW or 5 mW (selectable)
Antenna	1/4 λ wave length wire
Pilot tone signal	32 kHz
Frequency response	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (-60 dBV, 1 kHz input)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Audio attenuator adjustment range	0 to 21 dB (in 3 dB steps)
Audio input level	-60 dBV (at 0 dB attenuator level)
Audio input connector	3.5 mm (5/32 inch) dia., 3-pole mini jack
Indicators	
LCD	Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio-input status, RF-output status, transmitter battery status, and accumulated operating time
LED	Power status
Power requirements	DC 3.0 V (with two AA-size alkaline (LR6) batteries)
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output
Dimensions (W x H x D)	63 x 100 x 27 mm (2 1/2 x 4 x 1 1/8 inches)
Mass	Approx. 140 g (4.9 oz) including batteries
Supplied accessories	Omni-directional (UWP-C1)/Uni-directional (UWP-S1/X1) lavalier microphone (x 1), windscreen (x 1), microphone-holder clip (x 1), belt clip (x 1)

Portable Tuner

Oscillator	Crystal-controlled PLL synthesizer
Type of reception	Space diversity
Receiving frequencies CE model	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model
Antenna	1/4 λ wave length wire
Pilot-tone signal	32 kHz
RF squelch level	15 dBμ
Frequency response	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (at 1 kHz modulation)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Audio output connector	3.5 mm (5/32 inch) dia., 3-pole mini jack (x 1), unbalanced
Audio output level	-58 dBm
Monitor output connector	3.5 mm (5/32 inch) dia., stereo mini jack (x 1)
Monitor output level	5 mW (at 16 Ω)
Indicators	
LCD	Operating channel number/frequency, audio-output status, RF-input level, tuner battery status, and accumulated operating time
LED	RF-input status
Power requirements	DC 3.0 V (two AA-size alkaline (LR6) batteries)
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F)
Dimensions (W x H x D)	63.0 x 100.0 x 30.0 mm (2 1/2 x 4 x 1 3/16 inches)
Mass	Approx. 180 g (6 oz) including batteries
Supplied accessories	Microphone stand adaptor (x 1), screw adaptor (x 1), shoe-mount adaptor (x 1), belt clip (x 1), output cable (x 1, 3-pole mini-plug/XLR-type)

Handheld Microphone

Oscillator	Crystal-controlled PLL synthesizer
Type of emission	F3E
Carrier frequencies CE model	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model.
RF power output	30 mW or 5 mW (selectable)
Antenna	1/4 λ wave length wire (internal)
Pilot tone signal	32 kHz
Frequency response	100 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (94 dB SPL, 1 kHz input)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Microphone capsule	Dynamic capsule (uni-directional)
Audio attenuator adjustment range	0 to 21 dB (in 3 dB steps)
Max. input sound pressure level	151 dB SPL (at 21 dB attenuator level)
Indicators	
LCD	Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio-input status, RF-output status, transmitter battery status, and accumulated operating time
LED	Power status
Power requirements	DC 3.0 V (two AA-size alkaline (LR6) batteries)
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output
Dimensions	ø52 x 240 mm (ø2 1/8 x 9 1/2 inches)
Mass	Approx. 300 g (10.6 oz) including batteries
Supplied accessories	Microphone holder (x 1), screw adaptor (x 1)

0 dBV = 1 Vrms
0 dB SPL = 20μ Pa.

DVCAM™

Master
Series

Sony address/contact details/dealer stamp

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