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**SONY**<sup>®</sup>

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THE NEW WAY OF BUSINESS<sup>SM</sup>

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V-2310-A

SONY®

HDV™



THE NEW WAY of HD.

HDV for professionals.



## **MORE DEFINITION FOR THE DOLLAR.**

Thinking high definition is too expensive is over. Getting more definition for the dollar is the new way of HD. Experience this new way with Sony's growing line of HDV 1080i equipment. The latest models are the HVR-M25U and HVR-M15U compact studio decks. An instant classic, the HVR-Z1U three-CCD camcorder is now joined by the smaller, even more affordable HVR-A1U, a CMOS-sensor camcorder that fits comfortably in one hand. All four models are configured to help working professionals, with such features as SMPTE time code, DVCAM™ and DV standard definition recording. The decks feature HDV/DV in TC, while the camcorders offer XLR audio inputs.

Whether you're in corporate, government, education or religious video. Whether you work events, indie films or production, the message is clear. HD quality at SD prices... that's the new way of HD.



## **HIGH DEFINITION, NOT HIGH OPERATING COSTS.**

The HDV format takes advantage of the tape mechanisms and media already developed for DV. This helps keep the system affordable. You can start with just a camcorder and your existing postproduction system. And with Sony HDV™ 1080i recording, you can shoot in SD or HD, so you can migrate into HD at your own pace and leverage your existing infrastructure. Or assemble a complete HDV production system at prices comparable to standard definition.

The HDV system records on highly affordable, widely available DV and DVCAM tapes. And you get the same extended recording time as DV, up to 63 minutes on a mini cassette.



**High definition is all around you.** High definition is sweeping the television landscape. TV sitcoms, dramas and theatrical releases that once would have been shot using 35mm are now shooting in HD. You can watch HD via cable, satellite, or over the air on more than 1,000 television stations in the United States. Broadcast networks, cable networks and others are rapidly embracing HD origination. And everywhere you look, consumers are buying 16:9 widescreen televisions. Customers and viewers are clamoring for high definition today, and even more will be tomorrow.

**HDV 1080i takes you there.** The surging demand for high definition is the challenge. HDV 1080i recording is the solution, satisfying the demand with 1080 effective scanning lines and 1440 horizontal pixels. That's more than four times as much picture information as 480i standard definition! To handle this avalanche of data, the system incorporates highly efficient, industry-standard MPEG-2 encoding. The system also records with the beautiful, fluid motion of 60i native capture. Or choose CineFrame™ mode for the theatrical look of 30F or 24F recording.

And HDV 1080i recording is a superb choice even if you're staying in SD. That's because Sony HDV products also record and play DVCAM™ and DV standard definition. Since the HDV camcorders have such high resolution, you get a phenomenal oversampled picture even when you record in SD! Sony's HDV system is the perfect bridge from your current SD infrastructure to your HD future.



IF YOU WORK IN VIDEO, YOU CAN AFFORD TO WORK IN HD.



SEIZE THE MOMENT WITH SONY HDV 1080i RECORDING.

## PROFESSIONAL CREATIVE CONTROL.

When the lighting is difficult. When the focusing is critical. When the zoom, aperture and focus moves within a shot get really complex. That's when you'll treasure the creative control of Sony's HDV 1080i camcorders, the HVR-Z1U and HVR-A1U.

**60, 50, 30, 25 and 24 picture rates.** Because some frame rates imply "fiction" while others communicate "reality," Sony has equipped these camcorders with a full range of picture rates. Native 60i interlace shooting gives action a lifelike fluidity, free of the visible judder of lower frame rates. At your option, CineFrame™ recording creates a theatrical look at picture rates of 30F and the all-important 24F with 3-2 pulldown. This gives you freedom of choice in the visual style of your production. The camcorders also play true 480p progressive scan through the analog component output, for gorgeous standard definition imagery. To these capabilities, the HVR-Z1U adds 60i/50i switching, 576p playback and CineFrame 25F recording.

**Shot Transition.** Shot Transition automatically executes a move in any combination of focus, zoom, or white balance. You have a choice of transition times and even a choice of transition delay times. The HVR-Z1U also executes Shot Transition control over iris, gain, and shutter, adding a choice of Linear, Soft Stop or Soft Transition modes.



**CinemaTone Gamma and Black Stretch controls.** Two switchable CinemaTone Gamma™ modes give you powerful ways to manage exposure latitude. One enhances the midtone reproduction of skin and neutral colors, while the other enhances the entire exposure range from deep shadows to bright highlights. Black Stretch brings out shadow detail, useful when you need to close the iris down to protect highlights.

**Color Correction.** The HVR-Z1U includes two powerful Color Correction modes. Choose Color Extraction to isolate two colors in the scene, rendering the rest of the frame in black and white. Or use Color Revision to alter a selected color, similar to secondary color correction.



Normal

Color Extraction

Color Revision



**Skin Tone Detail.** Skin Tone Detail reduces the appearance of facial imperfections by reducing detail on the skin tones without affecting the rest of the scene. Sony offers three skin tone modes, High, Medium and Low level settings. Your talent will thank you for it.

**Exceptional low-light performance.** When the sun goes down, both camcorders shine. The HVR-Z1U has an incredible rated sensitivity of 3 lux at F1.6 with 18 dB gain. And the camcorder supports shooting all the way down to 1 lux, thanks to Hyper Gain, an operating mode that boosts gain by up to 36 dB. In a similar vein, the HVR-A1U camcorder has a minimum illumination of 7 lux at F1.8. And this camcorder's Super NightShot™ system lets you capture monochrome pictures at 0 lux, illuminating the scene with the built-in infrared light.

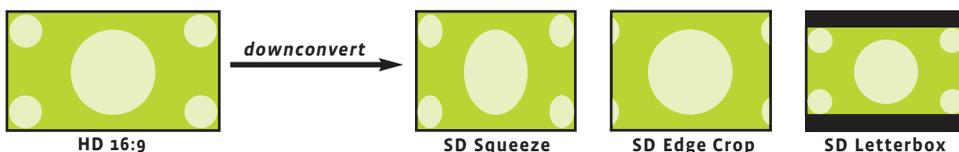
**Detail Enhancement.** Sony lets you crank the detail up for an edgier, hyper-realistic look. Or you can turn the detail down for softer, more film-like imagery.

## THE MARKS OF A TRUE PROFESSIONAL.

Built to make money for professionals, the HVR-Z1U and HVR-A1U camcorders include the recorder features and functions your work can't do without. With on-board downconversion, SMPTE time code and more, each camcorder is like a production studio in the palm of your hand!

**Switchable HDV, DVCAM and DV recording.** Not only are these camcorders milestones in affordable high definition; they're benchmarks in pro standard definition at anywhere near these prices. The camcorders record and play HDV 1080i, standard definition DVCAM tapes and standard definition DV (SP mode only). In this way, the camcorders are seamlessly compatible with your existing SD infrastructure and your existing SD workflow.

**Downconversion on the fly from HD to SD.** To smooth your migration to HD, the camcorders can downconvert the recorded HD signal to standard definition via the i.LINK® IEEE 1394 DV interface.\* This enables you to continue using conventional workflows and existing compatible nonlinear editors, even as you upgrade to HD acquisition. There's a choice of aspect ratio conversion — Squeeze, Edge Crop or Letterbox — to accommodate the HD 16:9 images in the conventional 4:3 world. The HVR-Z1U can even downconvert from 1080i to your choice of 480i and 576i.



**Professional SMPTE time code.** Professionals need reliable, frame-accurate access to recorded scenes. That's why Sony HDV camcorders incorporate SMPTE time code to identify each picture with a unique number for hours/minutes/seconds/frames. Time code features include preset, Drop Frame/Non Drop Frame select, RecRun/Free Run select, Reset and Regeneration. Time code information even travels over the i.LINK interface, identifying each frame for compatible nonlinear editors!

**Professional XLR microphone inputs.** With walkie talkies, cellphones and worse, video shoots can be fraught with radio frequency (RF) radiation. Unfortunately, consumer-grade unbalanced microphone connections can act as antennas, picking up RF interference that can devastate your audio tracks. That's why Sony built the HVR-Z1U and HVR-A1U with professional balanced XLR audio inputs. In addition, 48-volt phantom power can provide DC to compatible condenser microphones. Other audio features include independent L/R level controls and independent L/R audio level meters. A professional-grade stereo microphone is also built in. The HVR-Z1U adds to these audio functions with independent left and right Auto Gain Control, Audio Lock mode and a noise canceling feature on the built-in microphone.



\* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connector. All products with an IEEE 1394 connector may not communicate with each other. Please refer to the documentation that comes with any device having an i.LINK connector for information on compatibility, operating conditions and proper connection.



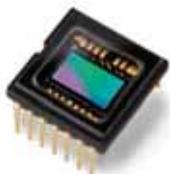
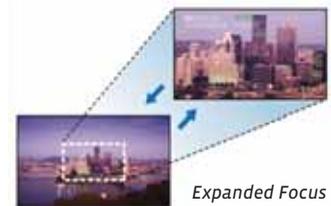
## HVR-Z1U. THE CAMCORDER THAT STARTED A REVOLUTION.

If you've used Sony 1/3-inch three-chip professional camcorders like the DSR-PD150 or DSR-PD170, you may already have great expectations about how Sony's HDV products will perform. Forget these expectations. The HVR-Z1U camcorder will knock you out with brilliant high definition 1080i pictures that feature jaw-dropping detail, color and clarity.

**Carl Zeiss high definition lens.** High definition pictures demand high-performance optics. That's why Sony equipped the HVR-Z1U with a lens of the highest order. The Carl Zeiss Vario-Sonnar® lens uses the same glass and coatings as in Zeiss prime lenses. In particular, the T\* coating minimizes lens flare and maximizes contrast. The lens offers a 12x zoom ratio from 32.5 mm at the wide end to 390 mm at full telephoto (35mm equivalent, 16:9 mode). Filter diameter is a generous 72 mm.

The lens also has smooth, positive action with rotary rings for manual zoom and focus, plus a separate manual knob for iris adjustment. For superb control, manual shutter adjusts in 20 steps (1/4 to 1/10000) in 50i & 60i modes while manual iris offers 24 steps (F1.6 to F11 and close).

Because focus is even more important in high definition, Sony provides an Expanded Focus mode for the viewfinder and LCD monitor. This magnifies the center of the frame 2 times for easy evaluation of fine detail. For additional help, Peaking Display outlines the subject that you're focusing on in the scene using a contrasting color. Finally, AF Assist lets you grab the manual ring and touch-up the focus without leaving the Auto Focus mode.



High definition CCD

**Three 1/3-inch high definition CCDs.** The HVR-Z1U camcorder is made possible by a breakthrough in Sony semiconductor technology: our phenomenal 1/3-inch high definition CCDs. Sony's Super HAD™ CCD design features low noise and high sensitivity, thanks to on-chip microlenses that maximize the amount of incoming light for each pixel. Native 16:9 design means you'll never sacrifice resolution to achieve a widescreen picture.

Each CCD has 1.04 million active pixels. Pixel offset technology achieves even higher resolution. And camera processing occurs at 1920 x 1080 resolution. The picture is not only gorgeous in HD, but the downconverted image is still spectacular in SD, thanks to 2:1 oversampling on the horizontal dimension and even greater oversampling on the vertical. Starting with more than four times the picture information makes the HVR-Z1U a standout in standard definition.



**14-bit processing.** Most camcorders use 10-bit analog-to-digital conversion, which requires “pre-knee” — a step that introduces unwanted color shifts as light levels increase from the darkest to the brightest areas in the scene. In dramatic contrast, the HVR-Z1U incorporates Sony’s 14-bit A/D conversion and 14-bit HD DXP (Digital eXtended Processing). These provide an amazing 16,384 shades for each of the primary colors: red, green and blue. Thanks to 14-bit A/D, no pre-knee is necessary. So our 14-bit processing yields a richer, more accurate, more natural image.

**Super SteadyShot system.** Sony’s optical Super SteadyShot® system stabilizes the image even when you’re shooting at full telephoto. All without sacrificing resolution. You can optimize the function with Hard, Standard and Soft modes, plus a dedicated mode for the optional wide-angle conversion lens.

**Six assignable buttons, Personal Menu.** When the shoot gets hectic, the last thing you need is to hunt for the menu functions you use every day. That’s why Sony provides six assignable buttons. They’re perfectly located to give you fast access to your choice of 15 controls. Another alternative to navigating multiple screens is the camcorder’s Personal Menu, which you can customize with exactly the operational features you need.

**Six Picture Profiles.** Thanks to Sony’s powerful 14-bit DXP, you can build looks for specific shooting situations like exterior day, interviews, candlelight and sunset. That’s why Sony provides six Picture Profile memory registers. Each one stores your choices for more than a dozen picture parameters!

**Simultaneous viewfinder and LCD monitor.** To get the focus and framing you want, Sony goes beyond the built-in LCD color viewfinder to provide a 3.5-inch widescreen LCD monitor (viewable area, measured diagonally). Sony’s hybrid monitor design uses both transmissive and reflective light, so you get optimum viewing everywhere from darkened rooms to direct sunlight. You can also use the viewfinder and monitor simultaneously—and use the monitor to review shots with your creative team.

**A versatile view.** Three viewfinder “markers” include Center Marker, which puts crosshairs in the middle of the frame. Safety Marker defines the area that will reliably appear on 16:9 televisions and monitors. And 4:3 Marker identifies which areas of the 16:9 picture you’ll lose via Edge Crop on the downconversion to 4:3. In addition, All Scan Monitoring shows the complete picture up to the edge while Zebra Display helps you monitor exposure levels.



First Sony astonished professionals with our HVR-Z1U camcorder. Now we've gone even further. Weighing less than two pounds (without battery or cassette), the palm-sized HVR-A1U breaks new barriers in size, weight and cost-effectiveness.

**1/3-inch type CMOS sensor.** The HVR-A1U is made possible by a remarkable new Sony image sensor with Complementary Metal Oxide Semiconductor (CMOS) technology. Sony meets the daunting challenge of HD imaging with high-speed processing and low power consumption. Optimized photo receptor size, advanced noise reduction and minimized smear make for exceptionally clear images.

**Enhanced Imaging Processor (EIP).** To make the most of the CMOS sensor, Sony created the Enhanced Imaging Processor. It divides the CMOS data into texture and brightness components, processing them independently. In this way, the HVR-A1U does an exceptional job of holding both shadow detail and highlight detail, for gorgeous grayscale rendition.

**Still photography.** A dedicated Photo button takes still pictures up to 2.7 megapixels (1920 x 1440) and saves them onto the supplied Memory Stick DUO™ media card. You can even save stills as you shoot video — or save an HDV video frame as a photograph during playback!

## HVR-A1U: HDV 1080i IN THE PALM OF YOUR HAND.

- 1/3-inch type CMOS sensor with 2.97\* million pixels total, 4:3 aspect ratio.
- Carl Zeiss Vario-Sonnar™ T\* (T-star) lens with 10x optical zoom.
- Electronic Super SteadyShot® image stabilization for handheld shooting.
- HDV 1080i record/playback for superb high definition imagery.
- DVCAM and DV record/playback integrates with SD infrastructure, SD tapes.
- CineFrame™ 24F and 30F and CinemaTone Gamma™ modes.
- Downconversion of HDV 1080i recordings to SD via the i.LINK IEEE 1394 interface.
- i.LINK IEEE 1394 input/output in HD and SD enables digital transfer of A/V.
- 2-channel XLR audio input with independent L/R metering, L/R level controls.
- 2.7-inch Hybrid LCD monitor (viewable area, measured diagonally).
- SMPTE time code with RecRun/FreeRun, Regeneration, Preset, User Bit.

\* 1.55 to 2.76 megapixels effective depending on the selected aspect ratio and recording format.



Shown with the optional ECM-678 shotgun microphone.

## HVR-M25U and HVR-M15U.

Thanks to Sony's HDV 1080i studio decks, there's no need to keep your camcorder in-house during edit sessions. These affordable, professional decks record and play HDV at all the same frame rates as the HVR-Z1U and HVR-A1U camcorders. And the decks record and play DVCAM and mini-DV tapes, to support your smooth migration from SD to HD.

**Up to 276 minutes of HD on a single tape.** While the HVR-Z1U and HVR-A1U camcorders support Mini cassettes only, these studio decks also support Standard cassettes, for extended record/playback time. Using a single Sony PHDV-276DM DigitalMaster™ cassette, you can record up to 276 minutes of record/playback time in HDV and DV mode, 184 minutes in DVCAM mode.

**SMPTTE time code and external time code copy.** As true professional decks, the HVR-M25U and HVR-M15U both offer SMPTTE time code to identify each hour, minute, second and frame. Both decks can also copy external time code thanks to the HDV/DV in TC. The HVR-M25U goes further with the Duplicate Plus dubbing function, which carries audio, video, time code and user bits over the i.LINK IEEE 1394 interface.\* Duplicate Plus enables you to copy an HDV, DV or DVCAM work tape with the original time code intact by activating the Duplicate Plus function on the recorder.

**Point of information display.** You can also use the HVR-M25U and HVR-M15U as high definition players at retail, tradeshow and other points of information. The HVR-M15U offers a playback repeat function, while the HVR-M25U adds programmable Custom Repeat and an HDMI™ output for consumer high definition televisions.



### HVR-M15U exclusive features.

- Vertical or horizontal operation saves precious desktop real estate.
- Audio recording level -6/0/+6 dB settings and Automatic Gain Control (AGC).

HVR-M15U

\* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connector. All products with an IEEE 1394 connector may not communicate with each other. Please refer to the documentation that comes with any device having an i.LINK connector for information on compatibility, operating conditions and proper connection.



HVR-M25U

#### Common features.

- HDV 1080i record/playback for superb high definition imagery.
- Playback of HDV 720p30 recorded material via analog component outputs for broad compatibility.
- DVCAM and DV record/playback integrates with SD infrastructure, SD tapes.
- Downconversion of HDV 1080i recordings to SD via the i.LINK IEEE 1394 interface.
- Choice of edge crop, letterbox (except i.LINK HDV/DV output jack), or squeeze in HD to SD downconversion.
- i.LINK IEEE 1394 input/output in HD and SD enables digital transfer of A/V.
- Analog component video output in HD and SD.
- S-Video and composite video input and output in SD.
- Audio Dubbing in SD and HD for flexible postproduction.
- SMPTE time code with reset.
- HDV/DV IN time code copies external time code.
- Auto repeat.

#### HVR-M25U exclusive features.

- 2.7-inch (viewable area measured diagonally) Clear Photo LCD plus monitor.
- SMPTE time code with user bit and reset.
- Conversion from 1080i to 720p via analog component outputs and HDMI™ output.
- Duplicate Plus with time code and user bit.
- HDMI™ output for connection to consumer HD televisions.
- Edge crop adjustment enables you to customize the downconversion from HD to SD.
- Assignable buttons.
- Custom Repeat enables you to pre-set repeat times, cycle and start time.
- Audio recording level controls.
- Headphone jack.



HVR-M15U

Sony designed the HDV 1080i system to make money for working professionals. That's why this is a full system, fully prepared for the recording, editing and production challenges you face every day.

## NOT JUST A PRODUCT, A PRODUCTION SYSTEM.

**Compatible nonlinear editors.** The HDV 1080i system offers powerful choices in postproduction processing and editing. Sony is pleased and proud to report that the following companies have announced support for HDV 1080i: Adobe, Apple, Avid, Canopus, CineForm, Focus, KDDI, Lumiere, Main Concept, Microsoft, Miranda, Pinnacle, Ulead, and Sony's Vegas® software. You'll find the latest list of companies that support HDV recording at [www.hdv-info.org](http://www.hdv-info.org).

**Media that makes the most of HDV recording.** To realize the full potential of HDV, DVCAM and DV formats, professionals choose Sony DigitalMaster™ tape. While the HDV format can accept conventional DV tape, only DigitalMaster tape has a dual layer of magnetic material. The result? Higher RF output, lower noise, 95% fewer errors and 60% fewer dropouts compared to DV tape! Exactly the performance that professionals require.

**Sony's HD-SDI-to-i.LINK® HDV interface unit.** Now you can capture the output from an HD studio camera or switcher to HDV. So it's easy to record HD-SDI productions simultaneously on an HDV deck or camcorder. Sony's HFU-X310 interface unit (with HFBK-TS1 board) converts HD-SDI video and analog audio into a single HDV Transport Stream on the i.LINK HDV interface.

**Miranda's i.LINK® HDV-to-HD-SDI interface unit.** Bring your HDV footage into the HD-SDI world with the Miranda HD-Bridge DEC. This sleek, affordable interface supports embedded audio and time code, along with digital and analog video/audio inputs. You can find more information at [www.miranda.com/hdbridge](http://www.miranda.com/hdbridge).



DigitalMaster Tape



Vegas NLE Software



LUMA™ Monitors

## PROFESSIONAL ACCESSORIES COMPLETE THE PICTURE.

Mic up your talent with the [UWP-C1/6264](#) wireless mic system.



Zero in on the action with the [ECM-678](#) shotgun microphone.



2NP-F970/B

2NP-QM91D/B

NP-QM71D



Extend your recording time with InfoLithium® battery packs [2NP-F970/B\\*](#) InfoLithium rechargeable battery pack for HVR-Z1U, [NP-QM71D](#) and [2NP-QM91D/B\\*](#) InfoLithium rechargeable battery pack for HVR-A1U.

\*Consists of 2 batteries.

VCL-HG0872



Widen your field of view with a wide-angle lens adaptor ([VCL-HG0872](#) for HVR-Z1U, [VCL-HG0737Y](#) for HVR-A1U). Get closer with the [VCL-HG2037Y](#) teleconversion lens adaptor for the HVR-A1U.



Go all out with digital cinematography options for the HVR-Z1U: matte box, follow focus, eyepiece adaptor ring, and zoom remote control, available through 3rd-party companies.

Enjoy the support of the **VCT-FXA** shoulder mount for the HVR-Z1U.



Protect your investment with a Sony hard case, designed to withstand the rigors of commercial shipping and airline travel. The **LC-Z1TH** holds the HVR-Z1U camcorder, VTR, power supply, a matte box and accessories. The **LC-ZA1TH** is designed for the HVR-A1U. Travel easy with a Sony soft case. The **LC-Z1BP** holds the HVR-Z1U camcorder and most accessories. The **LC-ZA1BP** carries the HVR-A1U.





<b>CAMCORDER FEATURES</b>	<b>HVR-Z1U</b>	<b>HVR-A1U</b>
Image Sensors, 1/3-inch type	Three CCDs	One CMOS
Sensor native aspect ratio	16:9	4:3
Sensor pixels	1.04 MP x 3, effective	2.97 MP, gross
Carl Zeiss Vario-Sonnar Lens, optical zoom	12X	10X
Zeiss T* (T-star) coatings	Yes	Yes
Filter thread	72mm	37mm
Super SteadyShot™ image stabilization	Optical	Electronic
Manual and auto zoom	Yes	Yes
Manual and auto focus	Yes	Yes
Programmable Shot Transition	6 variables	3 variables
HDV 1080i record/play	Yes	Yes
DVCAM and DV SP record/play	Yes	Yes
Still photo recording	-	Yes
Switchable 50i/60i	Yes	-
True progressive mode	480p, 576p	480p
CineFrame modes	24F, 25F, 30F	24F, 30F
SMPTE time code	Yes	Yes
Downconversion to SD	Yes	Yes
Aspect ratio squeeze, crop or letterbox	Yes	Yes
i.LINK IEEE 1394 DV/HDV interface	Yes	Yes
Hybrid widescreen LCD monitor (viewable area measured diagonally)	3.5"	2.7"
Expanded Focus	Yes	Yes
Center, Safety and 4:3 markers	Yes	Yes
All Scan Monitoring	Yes	Yes
Histogram	-	Yes
Assignable buttons	6	1
Low light mode	Hyper Gain	Super Night-Shot
Cinematone Gamma modes	2	2
Black Stretch	Yes	Yes
Color Correction	Yes	-
Skin Tone Detail	Yes	Yes
Personal Menu	Yes	Yes
Balanced XLR audio input	Yes	Yes
Separate left/right level	Yes	Yes
Separate left/right metering	Yes	Yes
Separate left/right AGC	Yes	-
Built-in pro microphone	Yes	Yes
Dimensions (WHD)	6-3/8 x 7-5/8 x 14-3/8"	5 x 9-1/8 x 12-3/8"
Weight, not including battery and cassette	4 lbs., 10 oz.	1 lb., 7 oz.

<b>DECK FEATURES</b>	<b>HVR-M25U</b>	<b>HVR-M15U</b>
HDV 1080i record/play	Yes	Yes
DVCAM and DV SP record/play	Yes	Yes
Switchable 50i/60i	Yes	Yes
True progressive mode	480p, 576p	480p, 576p
Compatible cassette sizes	Standard and Mini	Standard and Mini
Maximum recording time: DV, HDV modes	276 minutes (approximate)	276 minutes (approximate)
Maximum recording time: DVCAM mode	184 minutes (approximate)	184 minutes (approximate)
Widescreen LCD monitor (viewable area, measured diagonally)	2.7" Clear Photo LCD plus	-
SMPTE time code	Yes	Yes
Time code/user bits settings	Yes	Reset only
HDV/DV in time code	Yes	Yes
Duplicate Plus with time code, user bit	Yes	-
Tape counter	LCD	On-screen display
Vertical or horizontal operation	-	Yes
1080i to 720P conversion	Yes	No
720p30 playback	Playback as 1080i60 or 720p60 via analog component or HDMI or downconverted SD	Playback as 1080i60 or downconverted to SD
Downconversion to SD	Yes	Yes
Aspect ratio squeeze, edge crop or letterbox (except i.LINK HDV/DV output jack)	Yes	Yes
Edge crop adjustment	Yes	-
Assign button	Yes	-
Audio record volume control	Yes	-6/0/+6 dB, AGC
i.LINK IEEE 1394 DV/HDV interface	Yes	Yes
HDMI™ output	Yes	-
Component video output	BNC	RCA
Composite video input/output	BNC	RCA
S-Video input/output	Yes	Yes
Headphone jack	Yes	-
Control-S interface	Yes	Yes
LANC interface	Yes	Yes
Repeat functions	Custom repeat	Auto repeat
Dimensions (WHD)	8-3/8 x 3-1/2 x 15"	7-1/8 x 2-7/8 x 10-1/2"
Weight	9 lbs. 8 oz.	5 lbs. 1 oz.

