## Panasonic ideas for life





# An Evolution in DV for Professionals

#### New AG-DVX100B – World's First DV Camera-Recorder to Support Multi-Camera Recording

Already used for film and TV program production as well as news gathering, Panasonic's DVX100 series has now evolved further with the AG-DVX100B. The AG-DVX100B debuts as the industry's first DV camera-recorder to allow camerato-camera time-code synchro and user-settable file transfer.

This allows the AG-DVX100B to be used for simultaneous multi-camera recording techniques often used in video production. Additionally the new model offers remote focus and iris control for easier operation when mounted on a jib arm or tripod. The Black Sapphire AG-DVX100B offers the acclaimed performance and multiple functions of previous high-end DV camera-recorders models. In addition to superior image quality, high sensitivity, 24P/30P Cinema mode and manual operation, it has the specifications needed for full-fledged professional video production.

#### - New AG-DVX100B Functions (compared with the AG-DVX100A)

- \* Allows synchronous setting of time-code values in multiple cameras
- \* User-settable files can be copied from camera to camera
- \* Remote control of focus and iris (wired)
- \* EVF and LCD can display images in 16:9 letter-box format

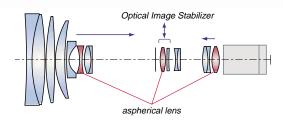




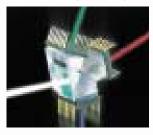
## Superior Image Rendering

Higher image quality and sensitivity than others in its class. 24P/30P native progressive mode lets you produce content with exceptional quality. Superior Image Rendering with the Leica Dicomar<sup>™</sup> Lens, Plus OIS The Leica Dicomar lens featured in the AG-DVX100B incorporates Leica optical technology and know-how. Use of low-dispersion glass reduces color aberration and increases resolution, while a multi-coating process minimizes flare and ghosting. The results are sharp, crisp, beautifully rendered images with delicate nuances and exceptional shading. The lens system features 15 lens elements in 11 groups, including three aspherical lenses. Panasonic's advanced OIS (Optical Image Stabilizer) drastically cuts the blurring caused by hand shake. Optical processing with an automatic correction function helps assure consistently clear, sharp images.

\*Leica and Dicomar are registered trademarks of Leica Microsystems IR GmbH.



## 410,000-Pixel, 3CCD Image System Provides F11 Sensitivity for Superior Image Quality



Panasonic designed the AG-DVX100B to deliver the highest sensitivity and picture quality in its class. At its heart is a 3CCD RGB system comprising three 1/3-inch, 410,000-pixel progressive CCDs developed especially for broadcast and professional applications. The new on-chip lens design achieves high F11 sensitivity, allowing the AG-DVX100B to record in

light as dim as below three lux, for example, in nighttime news gathering. Picture quality is outstanding, with a high S/N ratio that means less noise in darker parts of the image and low smear that allows shooting in sunlight or under bright spotlights.

#### High-Sensitivity Slow Shutter (in cumulative) Function

The slow shutter function uses image accumulation to enable shutter speeds with frame rates reduced by half or more. You get the ultra-high sensitivity needed for nighttime shooting without illumination, as well as dramatic frame-by-frame or soft focus effects.

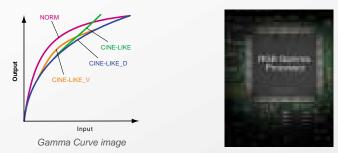
#### High Image Quality with 12-Bit A/D Conversion

The AG-DVX100B features an A/D converter that uses the same 12-bit processing as broadcast camera-recorders. Precisely digitizing the gradation and colors captured by the progressive CCD, this A/D converter supports gamma switching and other fine downstream image adjustments — one of the keys to achieving rich image expression.

#### RGB Gamma Processor Provides Rich, Cine-Like Tones

Panasonic has greatly expanded the expressive capability of the DV camera by creating unique gamma functions such as Cine-Like gamma curves, which produce images strikingly similar in tone to film images. For each of the RGB signals, the gamma curve settings are processed immediately upstream from the digital signal processing circuit. This helps achieve outstanding image quality.

The AG-DVX100B continues with the tradition of the seven gamma curves pioneered with the DVX100A.



CINE-LIKE	Film-like images
CINE-LIKE-D	The Cine-Like mode shifted to prioritize dynamic range
CINE-LIKE-V	The Cine-Like mode shifted to prioritize contrast
LOW	Images with strong black contrast
B.PRESS	Images with even stronger black contrast
NORM	Standard video gamma
HIGH	Bright images with enhanced gradation in dark portions
	and soft contrast

#### High-Quality, Native Progressive 24p/30p Mode

Choose from three shooting modes: 24p (24 fps, progressive) for images with the look and motion of film movies, 30p (30 fps, progressive), or standard 60i (60 fps, interlace). Thanks to its progressive CCD, the AG-DVX100B creates native progressive images with outstanding vertical resolution — unlike images produced using conventional

electronic interpolation. With its high mobility and low costs, the AG-DVX100B is the ideal tool for producing indies, shorts, or streaming video.



30p image (30 progressive frames per second)

#### 60i image (60 interlace fields per second)

#### 24p Advance Mode — For 24p Non-Linear Editing

In 24p mode, images from the CCD can be 2:3 pulldown-converted (24p Mode) or 2:3:3:2 pulldown-converted (24p Advance Mode) and recorded onto tape in the standard 60i TV format. The tape can then be played back or edited using an ordinary DV system. True 24p editing can be achieved by uploading 2:3:3:2 pulldown-converted images via an IEEE 1394 DV interface to a compatible non-linear editing system.\* The 24p Advance Mode allows 60i/24p conversion with minimal picture degradation and on the fly 24 frame extraction.

\*Systems Compatible with 24PA as of June 2005:

Apple Power Mac G4/G5 with FCP 4, Avid Xpress Pro, Adobe Premiere Pro, Sonic Solutions Vegas

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AG-DVX100B	77										e Power Mac G4/G5 & Final Cut Xpress Pro
• 24p Mode (2	:3 рі	ılldo	wn)								
24p (capture)	Α	E	3	С	D	Ε	F		G	Н	
+		/		7			/		/		
60i (record)	AA	ΒB	ВС	CD	DD	ΕE	FF	FG	GH	HH	1
• 24p Advance Mode (2:3:3:2 pulldown)											
24p (capture)	Α	E	3	С	D	Ε	F		G	Н	
+		/		1	\		/				
60i (record)	AA	BB	ВС	CC	DD	ΕE	FF	FG	GG	3 H F	1
• 30p Mode											
30p (capture)	Α	В	С	D	Е	F	G	Η	1	J	
+	/							/			
60i (record)	AA	BB	CC	DD	ΕE	FF	GG	HH		IJJ	

## Improved Color Reproduction and Advanced Image Adjustments Built-In

- Optimized color separation optics help provide true-to-life colors
- "Enriched" Matrix setting offers more saturated colors
- Adjustable V detail level (edge correction in vertical direction), H/V detail balance, and detail coring (detail noise removal)
- Knee point (luminance compression) settings Auto, Low, Mid and High

#### 24p/30p Shooting Functions for Professionals

- Focus assist\*
- Gain up (+12 dB max.)

• SMPTE Color bar display and output

\*Auto focus in 24p/30p mode requires slightly more focusing time than in 60i mode.



## Outstanding Mobility

The AG-DVX100B's Manual/auto operation is a very useful tool for professionals. It offers high reliability to support your camera work.

#### Wide-Angle/Zoom Lens Answers Professional Needs

The AG-DVX100B's zoom lens extends all the way to 4.5 mm (equivalent to 32.5mm on a 35mm lens), covering the full wide-angle range needed in most broadcast and professional shooting. It gives you ample range for close-ups, recording in small rooms, and self-recorded interviews. There's no need to carry around a bulky wide-angle conversion lens. And with a minimum object distance (MOD) of approximately 0.6 meter (1.9 ft) in telephoto mode, the AG-DVX100B has the maneuverability of a handheld camera.

#### Fast, Smooth Cam-Driven Manual Zoom

The cam-driven (mechanical) manual zoom ring provides the same smooth, easy zooming as cameras with interchangeable lenses. Its direct operation gives you fast, precise zooming control. You'll also notice the AG-DVX100B's improved operating feel. When you turn the zoom ring, you experience the familiar steady resistance as with familiar 35mm lenses.

The AG-DVX100B is also equipped with a servo-driven zoom that allows slow zooming. Slowest zoom has been reduced to a dramatic 30 seconds from 20 seconds.



#### Focus Assist

Enjoy quick, sharp focusing manually or automatically. In manual mode, the focus ring provides the similar operating feel and responsive control as conventional cameras with interchangeable lenses. In auto mode, you get the quick, sharp focusing needed in news gathering or when shooting at a high or low angle.

When set to infinity, the focal distance is immediately prepared for the next manual focus. When in manual mode, pressing the Push Auto button temporarily activates auto focus.

Macro Focus can be achieved either Manually or Automatically when the zoom lens is in the wide angle position.

#### Three User Buttons for Customized Operation

The AG-DVX100B provides three user buttons, each of which can be assigned any one of the 11 functions described below.

The assigned functions can then be accessed at the touch of a button. This lets you customize the AG-DVX100B for quicker, easier, more versatile operation.

#### Assignable Functions

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COLOR BAR	Display/hide the SMPTE color bar
SPOTLIGHT	Auto iris spotlight correction ON/OFF
BACKLIGHT	Auto iris backlight correction ON/OFF
BLACKFADE	Fade out to a black screen (linked with audio)
WHITEFADE	Fade out to a white screen (linked with audio)
MODECHECK	Display camera settings in viewfinder/monitor
ATW	Auto tracking white balance function ON/OFF
ATWLOCK	Lock/unlock white balance in ATW operation
GAIN 18dB	Switch the gain to +18 dB
INDEX	Write the index signal
SLOW SHUT	Slow shutter mode ON/OFF

#### Scene File Dial Provides Quick, Easy Setup

Set this dial for any particular shooting conditions, and later you can retrieve the settings instantly. Six preset files are provided (F1 to F6, described below); you can change any of the six file names and their settings as desired. The AG-DVX100B also introduces a new design in which a rib protects the scene file dial to prevent unintentional file changes.



File De	File Description				
F1:	_	Standard settings			
F2:	FLUO.	Indoor shooting under fluorescent lights			
F3:	SPARK	Highlighting subjects at receptions, dinners, and other gatherings			
F4:	B-STR	Enhanced gradations of luminance in low light scenes			
F5:	24P	24p mode + Cine-Like-V gamma			
F6:	ADVANC	Advanced 24p mode + Cine-Like-D gamma			

#### 3-Position White Balance with Auto Tracking White Function

One press of the AWB button is all it takes to adjust the white balance and black balance. There are three white balance values to select from: one that's preset, and two (A, B) that you can set and save in memory. The auto tracking white balance (ATW) function can also be assigned to any of the three positions. The ATW mode supports fast, active shooting by adjusting the white balance in real-time as lighting conditions change.

#### Auto Button for Instant, Easy Shooting

Just press the Auto button to turn on Auto Iris, Auto Gain, Auto Tracking White Balance, and Auto Focus — and you are quickly ready to shoot. You can also customize the Auto button by removing functions and setting the gain to any value desired.

With this new Auto function, the AG-DVX100B gives you the best of both worlds — the speed and ease of automatic operation, and the precision of manual control.

#### Lightweight Design with Balanced Grip

The AG-DVX100B introduces a new design that ends the contradiction between a compact, lightweight body and a stable, secure hold. The center of balance is located precisely at the handgrip. Because there's no need for a wide-angle conversion lens, the weight balance is ideal for comfortable shooting. The AG-DVX100B's short body and light weight — it weighs only 4.189 lb (1.9Kg) in operating condition\* — means free, easy maneuverability. Plus, the low-center-of-gravity design and new skeleton lens hood greatly improve forward vision.

\*Camera-recorder with DV cassette tape and supplied battery.



#### Magnesium Alloy Chassis

#### - The Rugged Durability Professionals Need

The AG-DVX100B features the same magnesium alloy diecast chassis as our DVCPRO broadcast models. This tough, rigid unit protects the highprecision mechanism, giving the AG-DVX100B outstanding reliability and durability. Built for professionals, the AG-DVX100B stands up to the bumps and jolts that occur in the field.

#### Automatic Head Cleaning

The AG-DVX100B provides the same head cleaning function as our DVCPRO models. The white roller pad positioned to the right of the head cylinder cleans the head each time you load a tape, helping to minimize dropouts and head clogging.







## System Flexibility

Industry's first DV camera-recorder to support multi-camera recording. Recording function and specifications designed to meet high-level professional needs.

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## First DV camera-recorder with time-code synchro function – Supports multi-angle recording with multiple cameras

Connecting two AG-DVX100B units together with a DV cable (IEEE1394) allows synchronous time-code setting, which then enables time-code-locked editing of clips recorded with multiple camerarecorders for "TC synchro editing." The AG-DVX100B is the industry's first DV camera-recorder with this function, which was previously available only on bigger, bulkier camera-recorders. The built-in SMPTE time-code generator/reader lets you select, preset and regenerate the Drop Frame/Non-Drop Frame and Free Run/Rec Run modes. User Bits are also provided, letting you record your choice of date, time, frame rate or user data.

#### File Transfer Function

New user file transfer function makes it easy to get uniform image quality from multiple camera-recorders. When two AG-DVX100B units are connected together with a DV cable (IEEE1394) you can transfer user files containing camera parameters to help match cameras on a multiple camera shoot. Additionally the Time Code value can be transferred as well making a common starting point for recording.



**3camera** 

## New remote operation function – Controls zoom, Rec, focus and iris

The AG-DVX100B is equipped with terminals that allow remote control of focus and iris settings. You can combine these control functions with the conventional remote control functions (zoom, Rec start/stop) to create an easy-to-use remote control system for mounting to the handle section of a tripod or on a remote arm of a jib.

#### XLR Audio Input with +48-V Phantom Power Supply

In addition to built-in stereo microphones, the AG-DVX100B is equipped with two XLR audio input terminals with a 48-V phantom power supply for broadcast use. The terminals are positioned low on the camera to minimize the possibility of the cables being snagged when a hand mic is in use. Both input 1 and input 2 can be switched between line and mic, and Audio is locked to the Video unlike consumer DV camcorders.

#### Audio Dials and Flexible Input Selection

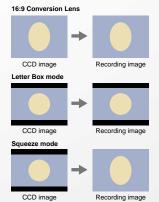
The AG-DVX100B has the same kind of level-adjustment dials as DVCPRO camera-recorders. This practical design incorporates professional operating features that have been refined over years of use

on location. A switch lets you select built-in mic, input 1, or input 2 for the audio input of both left and right channels. Auto level control can be turned on and off, and the input mic level (–50 dB/–60 dB) can be selected from the menu.



#### Three 16:9 Wide Modes, Including the New Squeeze Mode

The AG-DVX100B has three modes for shooting 16:9 wide images. Use the optional 16:9 conversion lens (AG-LA7200G, sold separately) to take full advantage of the higher image quality made possible by using all of the CCD pixels. With the standard lens\*, you can record in letterbox mode or the newly added squeeze mode. This gives you extra flexibility when using the AG-DVX100B together with equipment from other manufacturers.



Activating the Aspect Ratio function on the LCD allows for a letter-box display for easier framing when

shooting in Squeeze Mode or when using the Anamorphic lens. \*Vertical resolution with the standard lens is slightly lower than with the 16:9 conversion lens. However,

when recording in progressive mode rather than interlace mode, the difference is barely perceptible.

#### Large Electronic Viewfinder

The large viewfinder is easy to see through, even with your eye at a slight distance, and it tilts upward 100° for easy low-angle shots. The AG-DVX100B also adds a B/W display mode\*, detail (PEAKING) function, and image adjustment menu.

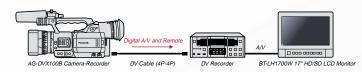
\*With the same high resolution as the color display

#### 3.5" Color LCD Monitor

The large 3.5" color LCD monitor rotates 270°. This improves shooting flexibility by making it easier to monitor high-angle shots or self recordings. The display is bright, too, for easy viewing when monitoring images or selecting the menu settings. The higher resolution of the LCD and EVF display make the Peaking detail even more of an effective tool for quick and accurate focusing.

#### External Backup with the IEEE 1394 Synchro Lock Function

An IEEE 1394-compliant 4-pin DV terminal features a synchro lock function that allows the AG-DVX100B to remotely start and stop an external DV device connected to it via a DV cable. Three recording modes help protect against mistakes: record only onto the external recorder, record onto both the AG-DVX100B and the external recorder, begin external recording when the AG-DVX100B tape ends.



#### **One-Shot Recording and Other Recording Functions**

- One-Shot mode: for animation film making that records for the set number of seconds each time the Start/Stop button is pressed.
- Audio dubbing: Allows voice-over recording on a recorded tape via an external mic.
- Line recording: Lets you record a video signal input from an external source.

#### Recessed Trigger and Zoom Control on Upper Handle Grip

In addition to the lens grip, the upper part of the handle grip contains both the Rec Start/Stop button and a lens zoom control. This design assures easy shooting even at low angles or when using a tripod. The zoom speed can be set to any of three speed levels or off.



#### Gain, Iris, Shutter Speed, ND Filter

- Gain: Increases gain up to 18 dB. The selector has three positions: L is fixed at 0 dB; M and H can be set to 0, +3, +6, +9, or +12 dB. +18dB can also be quickly accessed by the use of USER 1, 2 or 3 switch.
- Iris: Allows smooth, gradual manual or auto iris adjustment. The iris dial allows adjustment even when in Auto mode. Either backlight compensation or spotlight compensation can be added to the auto iris adjustment.
- Shutter: Maximum shutter speed is 1/2,000 sec. When a computer display is being recorded, a synchro scan function allows the shutter speed to be matched to the sync of the monitor to help eliminate the moving scan line.
- ND filter: Two ND filters (1/8 ND, 1/64 ND) are built-in and easily accessible.

#### Support Functions for Greater Convenience

- End search: Automatically searches for the last recorded portion of the tape. Convenient when preparing to start the next recording.
- Mode check: Displays a list of the camera settings on the viewfinder and monitor. Makes it easy to check settings before recording.
- 2-Pattern zebra: Displays an overexposure warning on the viewfinder and monitor. Select any two levels from among 80%, 85%, 90%, 95%, 100% and 105%.
- Rec check: Plays back the last portion of a recorded passage for easy checking.
- Index: Enables marking while recording. Convenient for searching after recording.
- Tally lamps: Provided on the unit's front and rear menu switchable.
- Reversible eye cup for left and right eyed shooters.
- Built-in SMPTE color bars useful for setup.

Switches and connectors are arranged to allow easy use of the AG-DVX100B's many functions, and a host of bundled accessories and available options prepare it for action just about anywhere.

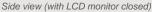


Top view (handle and grip)



Sub-panel (with LCD monitor opened)









16:9 Anamorphic Lens





CGR-D16A/1BBattery Pack (1.6 Ah)CGP-D28A/1BBattery Pack (2.8 Ah)CGA-D54SE/1BBattery Pack (5.4 Ah)



Front view (with lens hood removed)



Rear view (with terminal cover removed)



Side view (with terminal cover removed)



AG-B15 AC adapter kit



**QR-DVX** AntonBauer battery adapter



IEEE 1394 Interface cable



AG-HT100G Hard carry case



AG-SC100G Soft carry case



BT-LH1700W 17" HD/SD LCD Monitor



AY-DVM63PQ Professional Series Tape

AY-DVM63MQ Master Series Tape

AY-DVM63AMQ Advanced Master Quality Series Tape

\*Please do not use 80 minutes miniDV cassette tapes

AY-DVMCL Cleaning tape

#### AG-DVX100B Specifications

[GENERAL]	
Supply Voltage:	DC 7.2/7.9 V
Power Consumption:	6.8 W (when viewfinder is used) 7.2 W (when LCD monitor is used) 9.8 W (max.)
Operating Temperature:	32°F to +104°F (0°C to +40°C)
Operating Humidity:	10% to 85% (no condensation)
Weight:	3.75 lb (1.7 kg) 4.19 lb (1.9 kg) with battery and cassette
Dimensions (WxHxD):	5-1/2" x 6-5/16" x 14-3/8" (139 x 160 x 364 mm)
[CAMERA]	
Pick-up Device:	1/3-inch interline transfer type CCD x 3 (progressive modes supported)
Picture Elements:	Total: 410,000 pixels Effective: 380,000 pixels (horizontal pixel shift system)
Lens:	Leica DICOMAR lens with optical image stabilizer, motorized/manual mode switching, 10x zoom F 1.6 (f = 4.5 to 45 mm) (35 mm equivalent: 32.5 to 325 mm)
Filter Diameter:	72 mm
Optical Color Separation:	Prism system
Optical Filter:	ND Filters, 1/8ND, 1/64ND
Shooting Mode:	60i (525i) interlaced fields Progressive mode (30P, 24P or 24P advance)
Gain Selection:	60i mode: 0, +3, +6, +9, +12, +18 dB 30P, 24P, 24P (ADV) mode: 0,+3,+6,+9,+12 dB (0dB fixed, when slow shutter mode )
Preset Shutter Speeds:	60i mode: 1/60 (OFF), 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000 sec. 30P mode: 1/30, 1/50 (OFF), 1/60, 1/120, 1/250, 1/500, 1/1000 sec. 24P, 24P (ADV) mode: 1/24, 1/50 (OFF), 1/60, 1/120, 1/250, 1/500, 1/1000 Sec.
Synchro Scan Shutter Speeds:	60i mode: 1/60.3 to 1/250.0 sec. 30P mode: 1/30.1 to 1/250.0 sec. 24P, 24P (ADV) mode: 1/24.1 to 1/250.0 sec.
Slow Shutter Speeds:	60i mode: 1/4, 1/8, 1/15, 1/30 sec. 30P mode: 1/4, 1/8, 1/15 sec. 24P, 24P (ADV) mode: 1/6, 1/12 sec.
Sensitivity:	F11.0 at 2000 lux
Minimum luminance:	3 lux (F 1.6, 18 dB gain, 50 IRE video output)
[VTR]	
Tape Used:	6.35 mm wide metal tape (mini DV cassette)
Recorded Audio Signals:	PCM digital recording 16 bits: 48 kHz/2 channels, 12 bits: 32 kHz/4 channels
Recording Tracks:	Digital video, audio signals: helical track Time code: helical track (sub-code area)
Tape Speed:	SP mode: 18.812 mm/sec., LP mode: 12.555 mm/sec.
Recording Time:	SP mode: 60 minutes, LP mode: 90 minutes (when AY-DVM63 is used)
FF/Rew Time:	Approx. 140 sec. (when AY-DVM63 is used)

[VIDEO]	
Sampling Frequencies:	Y: 13.5 MHz, PB/PR: 3.375 MHz
Quantizing:	8 bits
Video Compression System	: DCT + variable length code
Error Correction:	Reed-Solomon product code
[AUDIO]	
Sampling Frequency:	48 kHz/32 kHz
Quantizing:	16 bits/12 bits
Frequency Characteristics:	20 Hz to 20 kHz
Wow & Flutter:	Below measurable limits
[CONNECTORS]	
VIDEO IN/OUT:	RCA x 1, analog composite input/output, 1.0 Vp-p, $75\Omega$ (input/output automatically switched)
S-VIDEO IN/OUT:	DIN 4pin x 1, Y/C separate signal input/output, Y: 1.0 Vp-p, C: 0.286 Vp-p, $75\Omega$ (input/output automatically switched)
audio in/out:	RCA x 2 (CH1, CH2) Input: 316 mV, high impedance Output: 316 mV, 600Ω (input/output automatically switched)
DV:	4-pin, digital input/output, IEEE 1394 standard
MIC/LINE INPUT:	XLR (3 pins) x 2 (CH1, CH2) LINE/MIC switching, high impedance LINE: 0 dBu, MIC: –50 dBu/–60 dBu (menu selection)
DC INPUT:	7.9 V
PHONES:	Stereo (3.5 mm diameter), $100\Omega$
CAM REMOTE:	Zoom S/S: Mini jack (2.5 mm diameter) Focus IRIS: Mini jack (3.5 mm diameter)
[ON-BOARD EQUIPME	NT]
LCD Monitor:	3.5-inch LCD color monitor, 210,000 pixels
Viewfinder:	0.44-inch LCD color viewfinder, 235,000 pixels
Internal Microphone:	Stereo microphone
Internal Speaker:	28mm round shape, volume – or +
[AC ADAPTER]	
Power Source:	110/120/220/240 V AC, 50/60 Hz
Power Consumption:	18 W
Weight:	0.35 lb (0.16 kg)

\*The specifications given above were measured by playing back tapes recorded by the AG-DVX100B on standard VTRs. Weight and dimensions shown are approximate. Specifications are subject to change without notice.

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