Panasonic

AG-DVX100

Mini-DV Camera/Recorder (NTSC)

LEICA
DICOMAR

Mini DV Digital Video Cassette

Introducing the Ultimate Handheld Camera for Video Professionals

Panasonic created the AG-DVX100 with a single goal in mind: To provide the ultimate handheld recording tool for video professionals. A well balanced, lightweight DV camera, the AG-DVX100 represents the crystallization of decades of advanced Panasonic video technology. It responds to today's professional broadcasting needs with a wide-angle lens and high sensitivity. It delivers the finest image quality in its class. Its manual-oriented controls are designed to satisfy professionals. And with features like the 24p/30p Cinema mode and IEEE 1394 interface, the AG-DVX100 is ready for the next generation of visual production. The AG-DVX100 packs all this performance and versatility into a conveniently small, perfectly balanced body that weighs only 4 lb (1.8 kg) in full operating condition.* With the AG-DVX100, Panasonic proudly presents a video camera that excels in every aspect of news gathering, wedding, live event coverage, video production, and filmmaking. It's the ultimate handheld camera for professionals.

*Camera/recorder with DV cassette tape and supplied batteries.Shown with optional microphone.

Exceptional picture quality, thanks to a 410,000-pixel, 3CCD imaging system with high F11 sensitivity and low smear and flare levels.

Wide 32.5mm-325mm (35mm lens equivalent) Leica Dicomar lens.

Quick, easy, accurate operation with features such as cam-driven manual zoom and scene file dial.

Cinema mode for 24p/30p progressive image shooting and Cine-Like gamma.

Totally designed for professionals, with large electronic viewfinder, audio XLR input, and oversized audio controls.

IEEE 1394 terminal for non-linear production and digital dubbing.


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3CCD
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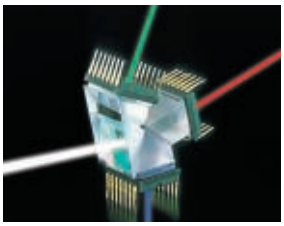
Crafted to Meet the Highest Professional Standards
High Sensitivity, Wide-Angle Lens, Superior Picture Quality, 24p/30p Mode

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

Panasonic designed the AG-DVX100 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-DVX100 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.



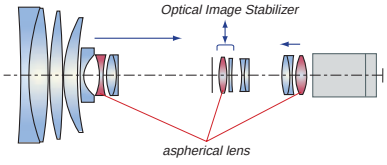
Wide-Angle/Zoom Lens Answers Professional Needs

Previous handheld video cameras lacked sufficient wide-angle capabilities for professional applications. To make up for this shortcoming, videographers often had to carry a big, heavy wide-angle conversion lens. The AG-DVX100 eliminates this problem with a newly developed zoom lens that also covers the wide-angle range that professionals need most. Extending all the way to 4.5mm (equivalent to 32.5mm on a 35mm lens), the lens captures wide-angle shots for news close-ups, recording in small rooms, and self-recorded interviews. And because there's no need to haul around a wide-angle conversion lens, you get the full benefit of the handheld camera's outstanding mobility.

Superb Image Rendering with the Leica Dicomar™ Lens

The AG-DVX100's Leica Dicomar™ lens incorporates the optical technology of Leica Camera AG, creator of many world-renowned cameras and lenses. This fine lens system employs 15 lens elements in 11 groups, including two aspherical lenses, to render sharp, crisp images with subtle nuances and remarkable shading. A Leica multi-coating process is also applied to the lenses to reduce flare and ghosts. The Leica Dicomar™ lens is manufactured under a quality control process authorized by Leica Camera AG. It meets the strict Leica quality standards for resolution, contrast and other characteristics.

*Leica is a registered trademark of Leica Microsystems IR GmbH.
Dicomar is a registered trademark of Leica Microsystems IR GmbH.



Optical Image Stabilizer Compensates for Hand Shaking

The AG-DVX100's OIS compensates for the slight hand shaking that occurs when shooting with a handheld camera. A gyrosensor detects hand shake and sends signals to a linear motor, which adjusts the lens to compensate. Because this process takes place prior to the CCD image capture rather than in the downstream electronic processing, the OIS virtually eliminates any effect of hand shake on resolution and screen angle. The OIS is also extremely effective in dim lighting and when zooming. Because the processing is done in real-time at 480 operations/sec, there are virtually no unnatural afterimages or visible interpolation effects.

Highly Reliable DV Mechanism

Panasonic chose a DV mechanism for the AG-DVX100 because of its superior mobility, low running costs, extended recording capability, and easy tape availability. However, for the AG-DVX100 we developed a greatly enhanced, vastly more reliable mechanism than the ones used in home DV cameras and recorders. To minimize dropout and head clogging, we incorporated the same forward cleaning head and automatic head cleaning function found in DVCPRO models. The sturdy loading system allows quick tape changes.

World's First 24p Mode and Cine-Like Gamma — Handheld Camera for Filmmakers

The AG-DVX100 is the world's first handheld camera designed with cinema specifications. With its superb, film-like picture quality, the AG-DVX100 stands as a revolutionary development for independent filmmakers and anyone who produces short movies or streaming video for online distribution.

• World's First Handheld DV Camera with 24p Shooting Mode*

The AG-DVX100 gives you a choice of three shooting modes. Select 24p (24 fps, progressive) for images with a movie film-like look and motion, 30p (30 fps, progressive), or standard 60i (60 fps, interlace). Images captured in 24p mode 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. They can also be played back using an ordinary DV VTR and TV monitor and edited with a DV system.

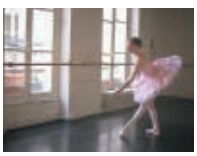
*As of September 2002.
*True 24p editing will require a non-linear editing system that is compatible with the 24p Advance Mode and provides reverse conversion from 60i to 24p. Development of such a system is now being planned by a Panasonic manufacturing partner. Use of a non-linear editing system compatible with the 24p Advance Mode pulldown results in less image degradation than 24p Mode, due to digital compression during reverse conversion from 60i to 24p.

• Cine-Like Gamma Curve

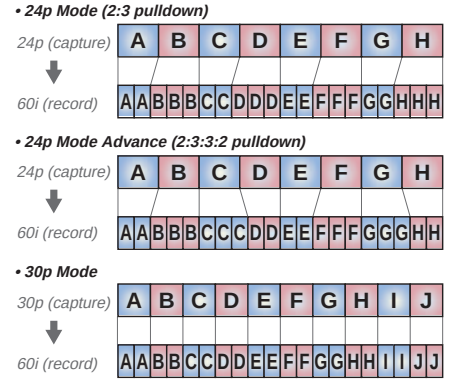
The AG-DVX100 lets you select from four gamma curves according to the image tone desired.

CINE-LIKE:	Film-like images
LOW:	Images with strong black contrast
NORM:	Standard video gamma
HIGH:	Bright images with enhanced gradation in dark portions and soft contrast

"NORM" image



"CINE-LIKE" image

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Controls that Replicate Professional Cameras
Versatile Manual and High-Speed Auto Functions

Fast, Smooth, Cam-Driven Manual Zoom

The AG-DVX100 is the first DV handheld camera to be equipped with the cam-driven manual zoom ring found on most professional cameras with interchangeable lenses. The AG-DVX100's pin configuration and tactile sensitivity replicate the familiar look and feel of a professional lens. Its lens provides quick, nimble zooming with a multi-speed servo-driven zoom plus three speed handle zoom. Select the zoom method that best suits the task at hand.

Manual/Auto Focus

Enjoy fast, sharp focusing either manually or automatically. In manual mode, the focus ring provides the same responsive control as conventional professional cameras with interchangeable lenses. In auto mode you get the kind of sharp, instant focusing needed in news gathering or when shooting at a high or low angle.
When set to the infinity position, the focal distance is immediately prepared for the next manual focus. Pressing the Push Auto button while in manual mode temporarily activates auto focus.

Scene File Dial for Quick, Easy Camera Setup

Set this dial for any of a variety of shooting conditions, and later you can instantly retrieve the settings. Six preset files are provided (F1 to F6, described below). You can freely change any of the six file names and their settings.

File Descriptions

F1:	--	Standard settings
F2:	FLUO.	Indoor shooting under fluorescent lights
F3:	SPARK	Highlighting subjects at receptions, dinners, and other gatherings
F4:	B-STR	Enhanced gradation in dark portions of sunset shots
F5:	24P	24p mode + Cine-Like gamma
F6:	ADVANC	Advanced 24p mode + Cine-Like gamma

User1/User2 Buttons for Customized Operation

The AG-DVX100 provides two user buttons, each of which can be assigned any one of the nine functions described below. The assigned functions can then be accessed at the touch of a button. This lets you customize the AG-DVX100 for quicker, easier, more versatile operation.

Assignable Functions

COLOR BAR	Display/hide the SMPTE color bar
SPOTLIGHT	Turn auto iris spotlight correction ON/OFF
BACKLIGHT	Turn 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	Turn auto tracking white balance function ON/OFF
ATWLOCK	Lock/unlock white balance in ATW operation
GAIN 18dB	Switch the gain to +18 dB

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're 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-DVX100 gives you the best of both worlds -- the speed and ease of automatic operation, and the precision of manual control.

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.
- 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 monitor is being recorded, a synchro scan function matches the shutter speed to the monitor to help eliminate the moving bar.
- ND filter: Two ND filters (1/8 ND, 1/64 ND) are built-in and easily accessible.


POWER
ON
OFF
END SEARCH
CAMERA
VCR
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Body Design, Switches, Connectors, and Recording Functions — All Built for the Professional

New Lightweight Design with Balanced Grip

The AG-DVX100 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-DVX100's short body and light weight — it weighs just 4 lb (1.8 kg) 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.

XLR Audio Input with +48-V Phantom Power Supply

In addition to built-in stereo microphones, the AG-DVX100 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.

Large Audio Dials and Flexible Input Selection

The AG-DVX100 has the same kind of large level-adjustment dials as DVCPRO camera/recorders. This practical new design incorporates professional operating features, such as blind touch and easy visibility, 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 gain level control can be turned on and off, and the input mic level (–50 dB/–60 dB) can be selected from the menu.

Large Viewfinder and LCD Monitor

The large-diameter viewfinder tilts upward a full 100°. You can move the viewfinder away from your eye and still see it clearly, making it easy to adopt a comfortable shooting stance with unobstructed forward vision. The 3.5-inch color LCD shows your subject in sharp, vivid detail and greatly simplifies menu settings. It rotates a full 270° for shooting at a wide variety of angles and easy self-recording.

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.

Interval Recording and One-Shot Recording

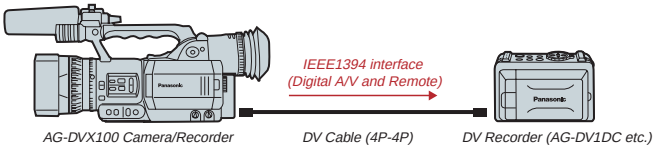
The AG-DVX100's interval recording works much like a time-lapse VTR and offers exceptionally high quality. Use it to observe the growth of a plant, monitor progress at a construction site, or for a frame-by-frame recording effect. Recording times can be set from 0.5 to 2 seconds, at intervals from 30 seconds to 10 minutes.
There's also a One-Shot mode — for animation film making — that records for the set number of seconds each time the Start/Stop button is pressed.

Built-In SMPTE Time Code Generator/Reader

The AG-DVX100 records an SMPTE-compliant VTC onto the sub-code area of the tape. Select from DF/NDF and Free Run/Rec Run modes, and use preset or regen. User bits (UB) are also provided, letting you record your choice of date, time, TC value, frame rate, or user data.

External Backup with the IEEE 1394 Synchro Lock Function

The AG-DVX100 comes equipped with an IEEE 1394-compliant 4-pin DV terminal that makes it easy to upload data to a PC and dub onto a DV recorder. This terminal also features a new synchro lock function that allows the AG-DVX100 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-DVX100 and the external recorder, begin external recording when the AG-DVX100 tape ends.



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 before recording.
- 2-Pattern zebra: Displays an overexposure warning on the viewfinder and monitor. Select any two levels from among 80%, 85%, 90%, 95%, and 100%.
- 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.
- 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.
- Unlike consumer DV camcorders, the audio is locked to the video with a PLL circuit.
- 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-DVX100'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)

Side view (with LCD monitor closed)

AG-DVX100 Bundled Standard Accessories

Optional Accessories

AG-MC100G XLR microphone

CGR-D16A/1B Battery Pack (1.6 Ah)

CGR-D28A/1B Battery Pack (2.8 Ah)

AG-B15 AC adapter kit

Front view (with lens hood removed)

Rear view (with terminal cover removed)

Side view (with terminal cover removed)

AG-HT100G Hard carry case

IEEE1394 Interface cable

AG-LW7208G
Wide conversion lens

AG-LA7200G
16:9 conversion lens

AG-SC100G Soft carry case

QR-DVX AntonBauer battery adapter

Mini DV Cassette Tape

AY-DVM63PQ
Professional Series Tape

AY-DVM63MQ
Master Series Tape

*Please do not use 80 minutes miniDV cassette tapes

AY-DVMCL
Cleaning tape

AG-DVX100 Specifications

[GENERAL]

Supply Voltage:	DC 7.2/7.9 V
Power Consumption:	6.8 W (when viewfinder is used) 7.8 W (when LCD monitor is used) 9.2 W (max.)
Operating Temperature:	32°F to +104°F (0°C to +40°C)
Operating Humidity:	10% to 85% (no condensation)
Weight:	3.652 lb (1.66 kg) 4.034 lb (1.83 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
Gain Selection:	0, +3, +6, +9, +12, +18 dB (60i mode only)
Shooting Mode:	60i (525i) interlaced fields Progressive mode (30P, 24P or 24P advance)
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.
Sensitivity:	F11.0 at 2000 lux
Minimum luminance:	3 lux (F 1.6, 18 dB gain, 50 IRE video output)

[VTR]

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)
Tape Used:	6.35 mm wide metal tape
FF/Rew Time:	Approx. 85 sec. (when AY-DVM60 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:	Pin jack, analog composite input/output, 1.0 Vp-p, 75Ω (input/output automatically switched)
S-VIDEO IN/OUT:	S-connector, Y/C separate signal input/output, Y: 1.0 Vp-p, C: 0.286 Vp-p, 75Ω (input/output automatically switched)
AUDIO IN/OUT:	Pin jacks a2 (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), 77 mV, 32Ω
CAM REMOTE:	Mini jack (2.5 mm diameter)

[EQUIPMENTS]

LCD Monitor:	3.5-inch LCD color monitor, 200,000 pixels
Viewfinder:	0.44-inch LCD color viewfinder, 180,000 pixels
Internal Microphone:	Stereo microphone
Internal Speaker:	20mm 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)
Dimensions (WxHxD):	2-13/16" x 1-13/16" x 4-5/8" (70 x 44.5 x 116 mm)

*The specifications given above were measured by playing back tapes recorded by the AG-DVX100 on standard VTRs.
Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

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