

JVC
PROFESSIONAL

2/3" 3-CCD SWITCHABLE 16:9/4:3
DV CAMCORDER

GY-DV700WE



PROFESSIONAL DV

Mini DV PAL

Low Cost, High Quality, Wide

JVC introduces the GY-D700WE



From documentary director to blockbuster producer, the versatility of digital video has long intrigued programme makers. Now, JVC introduces their native 16:9 camcorder that reveals, once-and-for-all, a solution to the long-standing problem of how to originate low-cost, broadcast quality digital programme material in wide screen.

Unprecedented performance from a DV camcorder.

This powerful DV camcorder is ready to handle the sophisticated requirements of the most demanding feature production, yet it's priced within reach of virtually everyone. Developed in cooperation with the BBC, the GY-DV700WE combines three state-of-the-art 2/3-inch, true 16:9 CCDs with JVC's original high-performance dual-pipeline 14-bit DSP (Digital Signal Processing) for truly exceptional image quality. This combination gives you the power to unleash the creative potential of the DV format like never before.

The Screen Comes Of Age— 2/3" 16:9 3-CCD Camcorder



Truly professional in every way

Right down to the fundamental design, the DV700 was built with the professional's needs in mind. Controls are exactly where you expect to find them. A wide range of accessories are available to satisfy the operational requirements of any experienced TV or film crew. And EBU time-code and automatic scene logging, via JVC's proprietary Super Scene Finder (SSF), come as standard.

Impressive image meets incredible value

Hardware innovations are only part of the DV700 story because this camcorder affords programme producers some very practical financial benefits as well. Superior cost efficiency in both camcorder and tape costs allows for more of the precious programme budget to be spent on other essentials.

Proven ability in the real world

In the ever-changing world of programme production, the demands on quality, cost-effectiveness and versatility are many and varied. As a result, even in its infancy, the outstanding qualities of the DV700 have led to its starring role in the making of many "prime-time" programmes. Its operational flexibility makes the GY-DV700WE the perfect partner to a producer's creativity.

2/3" 3-CCD image pickup

High-quality/resolution



The GY-DV700WE incorporates three 2/3" true 16:9 IT CCDs that combine with an F1.4 prism to provide sensitivity of F11 at 2,000 lux and exceptionally sharp pictures. Each CCD is equipped with highly advanced circuitry that virtually eliminates vertical smear, ensuring quality pictures even when shooting into bright

lights or dark environments. Colour reproduction is faithfully reproduced throughout the whole digital range.

Native 16:9/4:3 switchable

4:3



16:9



With more and more high-end television production and independent movie producers turning to digital video for their production needs, the advantages of selectively shooting the original footage in the 4:3 or 16:9 aspect ratio of the finished programme are obvious. The higher pixel density of the 2/3" 16:9 CCDs provide beautiful results in either aspect ratio, without aliasing or re-scaling artefacts. Native 16:9 makes a big difference for large screen projection, high definition up-conversion or 35-mm blowup.

2/3" bayonet lens mount

The GY-DV700WE's standard "B4 type" professional 2/3" bayonet lens mount is compatible with the widest selection of lenses, including standard TV lenses, switchable aspect ratio, cine style prime lenses and high-definition lenses.

High-quality performance

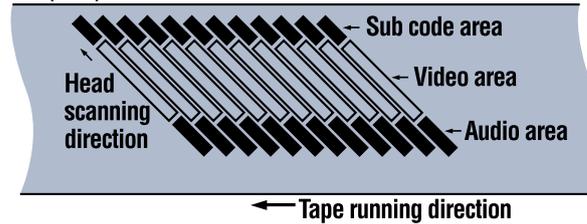
Professional DV recording on a MiniDV tape



The GY-DV700WE combines the convenience and affordability of readily available MiniDV cassettes with the high-quality camera performance you need for professional use. A single MiniDV cassette can record up to 80 minutes* of high-quality 8-bit, 13.5 kHz, 4:2:0 DV component digital images and can be played back in DVCPRO and DVCAM units.

*With an MDV-80 tape.

Tape pattern



High-quality PCM digital audio



Connector Connector

To complement its superior pictures, the GY-DV700WE offers outstanding digital PCM sound. Audio signals are locked with video signals for smooth editing. You can choose from two 16-bit 48-kHz channels or two 12-bit, 32-kHz channels with a dynamic range of more than 85 dB. CH1 and CH2 audio channels with manual audio controls are provided on both the back and front of the unit, assuring that your primary audio is always within easy reach during shooting. In addition, auto mode with limiter compressor and low cut filter for outdoors shooting are provided. Three XLR connectors provide line or microphone input level with selectable phantom power while a built-in wireless microphone receiver receptacle can be used to carry Sony 820 wireless receiver.

LOLUX 0.75 lux

When activated, the LOLUX mode (an original JVC invention) increases

sensitivity with minimal increase in noise.

LOLUX lets you shoot in near darkness (as low as 0.75 lux). As a result, you can capture footage under the most challenging conditions. This feature is a real plus for ENG, reality TV or documentaries.



14-bit digital signal processor (DSP)



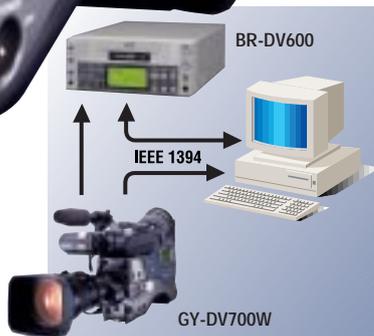
The GY-DV700WE applies JVC's DSP with advanced high-speed dual pipeline 14-bit video processing. Colour matrix, skin detail,

highlight chroma and no black compression bring out natural details, eliminate spot noise, and accurately reproduce dark areas, allowing you to get great footage using only ambient light.

Versatile functions

IEEE 1394 (Firewire) output compatible with most NLE systems

This allows high-quality compressed digital video signal transfer directly to a computer, a non-linear editing system, or to another DV recorder. Producers can now digitally spool directly to a non-linear editing platform without loss.



EBU time code input/output



EBU TC I/O connectors for multi-camera shooting allow synchronisation to other devices such as Nagra, DAT's and TC Slate. The GY-DV700WE's internal EBU TC reader generator provides user bit at any tape speed.

Super Scene Finder (SSF™)

A JVC exclusive, Super Scene Finder lets you log scenes automatically or manually in the field while shooting, and optionally mark the best ones. The SSF data for the last six tapes is retained in the camcorder's non-volatile memory. Data for up to 134 scenes may be permanently stored on the head of the corresponding tape. The camcorder possesses an RS-232 port for controlling the tape mechanism and downloading the scene data to a PC running logging software. Super Scene Finder dramatically speeds up and simplifies not only the production, but also the NLE transfer process and saves disk space, because you digitize only those scenes you need for editing.

Convenient facilities

The GY-DV700WE is provided with a tripod and lens mount compatible with a wide range of peripherals such as Steadicams, cranes, dollies and matte boxes/rail systems.

Compact, lightweight design

Only 3 kg for the main unit

Because it uses MiniDV tapes, high-tech materials, advanced microprocessors and highly-integrated electronics, the GY-DV700WE is able to pack a lot of performance into a very compact body. Built entirely of a strong yet lightweight die-cast magnesium alloy, the camcorder body itself weighs only 3 kg. Even when you add lens, viewfinder, battery pack and tape, it is still surprisingly light — weighing in at 5.5 kg or less.

User-friendly design

Viewfinder status display

The viewfinder status display uses characters and menus to display selected information in the viewfinder. For example, 4:3 or 16:9 safe area, time code/tape remain, F stop, battery condition, shutter speed, zebra pattern for skin detail and brightness indication are all displayed, as well as various events, camera setting status, recorder operation, and selected setup parameters.

Convenient menu dial

Quickly and easily navigate through the camera's powerful setup menu or select the shutter-speed with the convenient menu point and click dial.

Tally lamps

Tally lamps on the viewfinder and rear panel indicate when the camera enters the record mode and flash when the battery level is too low, the remaining tape time is less than 3 minutes, etc. Either tally may be switched off at the user's discretion.

Back-lit LCD display

Clear and easy to see even in the dark, this display shows operation status and warning indicators including audio level indicators, remaining tape/battery power display, time code reader/generator indication, menu setting and time date display.

Professional camera features

Full auto shooting

When you are in a hurry and there is no time to set up for a shot, this function provides point-and-shoot ease of operation — all you have to do is zoom, focus and press the record button. Activating full auto shooting sets the camera to the Auto Iris mode, even if the lens is set to manual. If the auto-iris runs out of range, the Automatic Video Level Control (ALC), along with Extended Electronic Iris (EEI) takes over to provide both variable gain and variable shutter, extending the operating range 10,000 times! Also activated is Full Auto White, which provides white balance even under continuously varying colour temperatures. Full auto shooting makes possible seamless shooting from a dark area to a bright area without changing gain, iris, or ND filter.

Precision "accu-focus" mode

In the ACCU-FOCUS position, the electronic shutter is activated for approximately ten seconds, forcing the iris fully open. As a result, the depth of field is minimised so the lens can be focused quickly and precisely. This feature combined with VF-P116WE viewfinder peaking allows quick precise focusing.

Continuous auto black (CAB)

JVC's Continuous Auto Black circuit continuously corrects black balance by sampling the CCD's optical black. As a result, perfect black balance is assured in a changing environment without interrupting shooting.

Automatic level control (ALC)

ALC with Extended Electronic Iris allows continuous automatic shooting in all light levels, by varying the gain from 0 dB to +18 dB.

Shutter/variable scan view

The electronic shutter speed range varies from 1/100 to 1/2,000 sec. By selecting the alternate Variable Scan function, you can capture flicker-free footage of the computer screens whose vertical scan rates differ from that of the camera.

Black stretch/compress

This function enhances or suppresses the details of dark areas on the picture.

Adjustable detail frequency

This feature gives you control over the picture sharpness for a bolder or more detailed look.

Adjustable gamma point

By adjusting the contrast, you can alter the "mood" of the picture according to your taste.

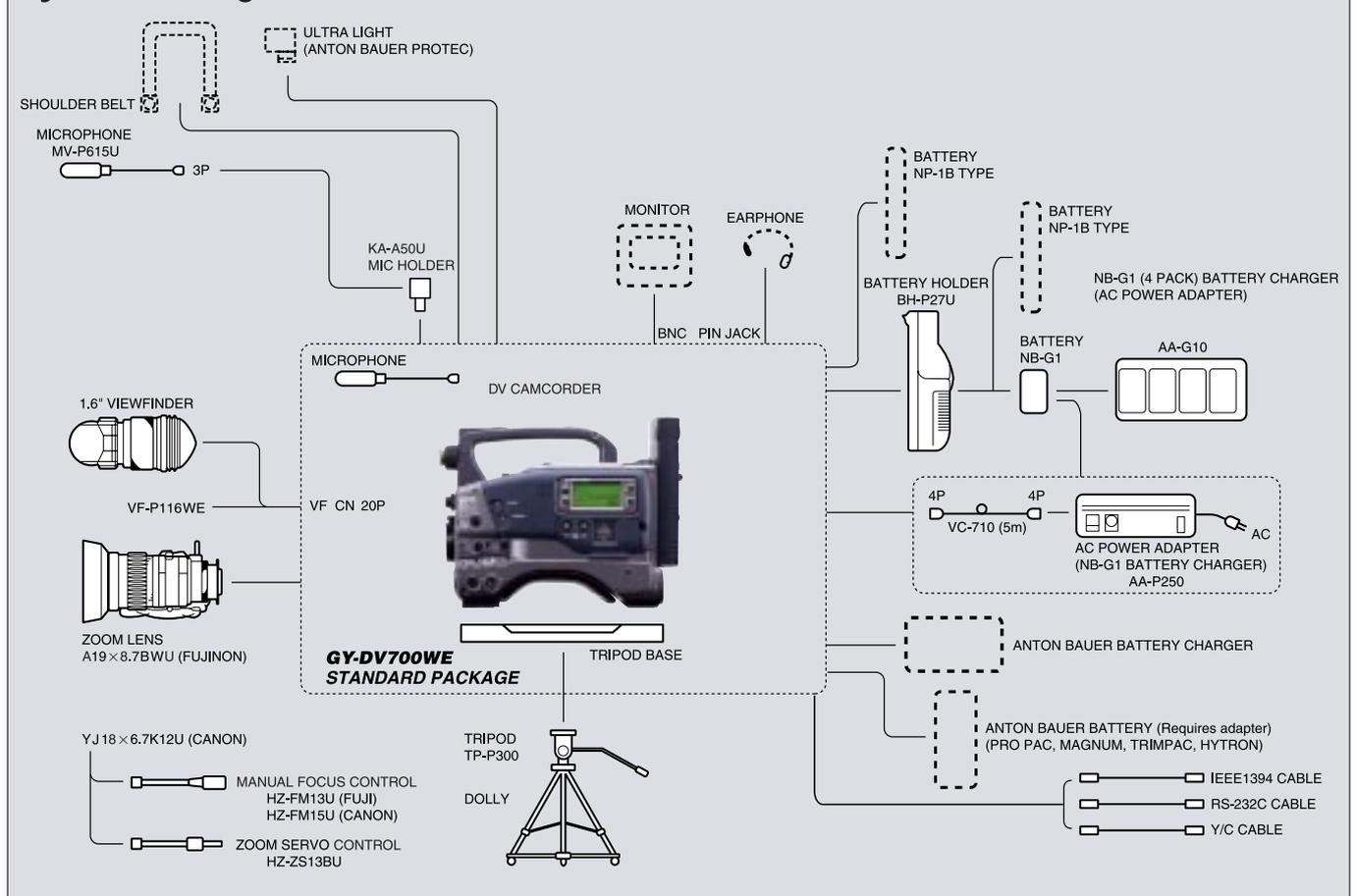
Time code reader/generator

EBU-standard time code can be recorded and read for accurate editing.

Sync lock mode

This enables a number of cameras to be synchronised for multi-camera shooting.

System configuration



GY-DV700WE controls, indicators and connectors

[Front section]

- 1 Viewfinder mount base, sliding securing ring
- 2 [VF] viewfinder connector (20-pin)
- 3 [MIC IN] microphone input connector (XLR 3-pin)
- 4 [LENS] lens control connector
- 5 [ZEBRA] switch
- 6 [VTR] trigger button
- 7 [AUDIO LEVEL CH-1] CH-1 recording level control
- 8 [AUTO WHITE/ACCU FOCUS] switch
- 9 [TAKE] button
- 10 Lens mounting ring/lens lock lever
- 11 [FILTER] colour temperature conversion filter control knob

[Right side section — camera setting]

- 12 [ALARM] volume control
- 13 [MONITOR] audio monitor volume control
- 14 [STATUS] status/menu button
- 15 [SHUTTER/MENU] dial
- 16 [LOLUX] LOLUX on/off button
- 17 [BLACK] black stretch/black compression switch
- 18 [FULL AUTO] full auto shooting ON/OFF button and indicator
- 19 [AUTO IRIS] auto iris level switch
- 20 [GAIN] switch
- 21 [VTR SAVE/STBY] switch
- 22 [OUTPUT] colour bar/camera/auto knee switch
- 23 [WHT.BAL] white balance switch
- 24 [NG] button
- 25 [POWER] switch

[Right side section — audio setting]

- 26 Monitoring loudspeaker
- 27 [CH1 AUDIO LEVEL] CH1 recording level control
- 28 [CH2 AUDIO LEVEL] CH2 recording level control
- 29 [MONITOR SELECT] audio monitor selector switch
- 30 [CH-1 AUDIO SELECT] selector switch
- 31 [CH-2 AUDIO SELECT] selector switch
- 32 [CH-1 AUDIO INPUT] selector switch
- 33 [CH-2 AUDIO INPUT] selector switch

[Right side section — VCR setting]

- 34 [MENU] button
- 35 [HOLD/GROUP] button
- 36 [SHIFT/TEM] button
- 37 [ADVANCE/SELECT] button
- 38 [PRESET/DATA SET] button
- 39 [CONTINUE] button
- 40 [PRESET/REGEN] switch
- 41 [REC/FREE] run switch
- 42 Lithium battery installation compartment

[Right side section — VCR display]

- 43 [OPERATE/WARNING] indicator
- 44 [RESET] button
- 45 [LIGHT] switch
- 46 [COUNTER] switch
- 47 Audio level meters
- 48 SP indicator
- 49 32K/48K sampling frequency indication
- 50 [AUD LOCK] indicator
- 51 [MENU] indicator
- 52 [WIDE] indicator
- 53 Cassette indicator
- 54 [REMAIN] indicator
- 55 Tape transport direction indicators
- 56 Remaining battery power display
- 57 Counter display
- 58 Time code-related indications (SLAVE/PB/HOLD)
- 59 Warning indicators (AUTO OFF/DEW/SERVO/R/LI)

[Left side section]

- 60 Cassette cover
- 61 [MONITOR OUT] connector (BNC)
- 62 [YC OUT] connector (4P)
- 63 [TC IN] connector (BNC)
- 64 [TC OUT] connector (BNC)
- 65 [LINE OUT CH-1/CH-2] connector (RCA)
- 66 [TEST OUT] connector (BNC)
- 67 [SYNC IN] connector (BNC)
- 68 [VTR REMOTE] connector
- 69 Microphone attachment holes

[Top section]

- 70 [EJECT] switch
- 71 Operation cover
- 72 [PLAY] button
- 73 [STOP] button
- 74 [STILL] button
- 75 [REW] button
- 76 [FF] button
- 77 [LOG] button

[Rear section]

- 78 [DV] connector
- 79 [EAR.] earphone jack
- 80 [DC OUTPUT] connector
- 81 [DC INPUT] connector (XLR 4-pin)
- 82 [CH-1 AUDIO IN] CH-1 audio input connector (XLR 3-pin)
- 83 [CH-2 AUDIO IN] CH-2 audio input connector (XLR 3-pin)
- 84 Back tally lamp
- 85 [CH-1 AUDIO IN LINE/MIC] CH-1 AUDIO select switch
- 86 [CH-2 AUDIO IN LINE/MIC] CH-2 AUDIO select switch
- 87 Battery holder
- 88 Battery holder lock release knob
- 89 [BREAKER]



Specifications

General

Power requirements: DC 10.5 V to 17 V
 Power consumption: Approx. 20 W
 Dimensions: 290 (W) x 245 (H) x 130 (D) mm
 Weight: 3 kg (main unit only)
 Temperature
 Operating: 0°C to 40°C
 Storage: -20°C to 60°C
 Humidity
 Operating: 30% to 80% RH
 Storage: 85% RH or less

Camera section

Image pickup device: 2/3" interline-transfer CCDs
 Colour separation optical system: F1.4, 3-colour separation prism
 Number of effective pixels: 570,000 (980 (H) x 582 (V))
 Colour system: PAL (R-Y, B-Y encoder)
 Colour bars: EBU type
 Sync system: Internal sync, external sync (VBS)
 Lens mount: 2/3" bayonet system
 Optical filter: 3200K, 5600K, 5600K + 1/8ND/5600K + 1/64ND
 Sensitivity: F11, 2000 lux
 Gain: -3, 0, 6, 9, 12, 18 dB, variable gain in ALC and LOLUX
 Minimum illumination: 0.75 lux with F1.4, LOLUX
 Registration: 0.05% or less (excluding lens distortion)
 Detail correction: Horizontal and vertical dual-edged
 Electronic shutter variable range:
 Standard value: 50 Hz
 Fixed values: 120, 250, 500, 1000, 2000 Hz
 Variable scan: 50.1 to 2067.8 Hz

VTR section

Format: DV format
 Signal format: PAL
 Usable tape: MiniDV tape
 Tape speed: 18.831 mm/sec. (SP mode)
 Record/play time: 60 minutes or more (with an MDV-60 tape)
 FF/rewind time: 120 sec. or less (with an MDV-60 tape)

[Video]

Video signal recording format: 8-bit, 13.5 MHz, 4:2:0 component recording

[Audio]

Audio signal recording format: 16-bit, 48 kHz or 12-bit, 32 kHz PCM for 2 channels
 Frequency response: 20 Hz to 20 kHz (16-bit), 20 Hz to 14.5 kHz (12-bit)
 S/N: 59 dB or more
 Dynamic range: 79 dB or more

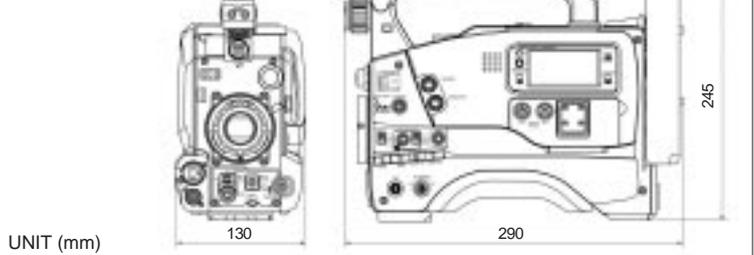
[Connectors]

Video output: 1.0 V_{p-p}, 75 ohms (BNC) (composite video signal)
 Y/C output: Y/C signal, 4-pin, 75 ohms, unbalanced
 Audio inputs (AUDIO 1, AUDIO 2)
 MIC: -60 dBs, low impedance (XLR), balanced
 LINE: +4 dBs, 10 kohms, balanced
 Line outputs (LINE 1, LINE 2): -6 ± 1 dBs, low impedance (RCA), unbalanced
 Time code input/output
 Bi-directional IEEE 1394 interface: 4-pin (digital data + VTR section control)
 RS-232C interface: Mini DIN 6-pin
 VF connector: 20-pin
 Genlock/video input: BNC
 Earphone jack: Stereo mini-jack (monaural)

Included accessories

Instruction manual
 Tripod mounting plate
 Microphone

Dimensions



Options—A wide range of options are available to expand the flexibility of this camcorder.



Professional DV VTR
BR-DV600E Professional DV recorder/player

- DV recording on a MiniDV tape
- PCM digital audio
- Various video inputs/outputs (IEEE 1394 input/output, composite/YC/component inputs/outputs)
- RS-422 interface/JVC bus interface and optional RS-232C interface
- Super Scene Finder
- Insert/assemble editing and audio dubbing (usable functions vary depending on the editing controller used)
- EBU-standard LTC time code generator

VF-P116WE
1.5" viewfinder



A19 x 8.7B12U
19:1 power zoom lens



A19 x 8.7BE12U
19:1 power zoom lens with x2 extender



A19 x 8.7B12WU
19:1 power zoom lens



YJ18 x 9BK12U
18:1 power zoom lens



MV-P615U
Monaural microphone with XLR connector



(For attachment, the KA-A50U adapter is required.)

AA-P250E
AC power adapter/charger



NP-1 type batteries



Anton Bauer batteries

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