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CAMCORDER

JVC GY-DV300 DV Camcorder

by Carl Mrozek

ow many of us have the luxury of toting backup cameras while on the road? Once in a while, when a camera goes down, a backup is worth its weight in platinum, especially on location with little or no time to ship in a replacement or to reshoot at a later date.

That is precisely what happened to me recently while shooting a documentary on wolves in Wisconsin and JVC offered to loan me its GY-DV300 DV camcorder to cover the shoot. I was skeptical about using a camcorder with three 1/3-inch CCDs and then matching those shots with 1/2-inch and 2/3-inch camcorders, but daylight was burning and the wolves were calling. I accepted JVC's offer.

FEATURES

The GY-DV300 is a lightweight camcorder comparable in size, weight (under 5 pounds) and design to other small pro camcorders like the Sony VX2000. Hence, it is extremely portable and travels well.

However, it also packs a lot of features and processing power into its spare frame, like 12-bit processing and a 400 percent dynamic range. The three 1/3-inch 380,000-pixel CCDs deliver a sensitivity of f11 at 2,000 lux.

While it is a 4:3 camera, it does offer a 16:9 letterbox option. The non-interchangeable 14x JVC lens is quite wide at 5.6mm, and an optical stabilizer is built into the lens.

Focus and iris are either manual or automatic. The auto iris func-

tion can be adjusted a full three stops over or under normal to achieve hot, saturated, shadowy or other looks, while relying on the auto iris to maintain that level of exposure. Gain level can be adjusted in 1 dB increments from -3 dB to +18 dB.

The JVC GY-DV300 has a variable shutter that can be continuously adjusted from 1/60 to 1/2000 of a second to eliminate rolling horizontal lines when shooting computer and TV screens.

Another handy feature is the flip-out screen/viewfinder. Besides flipping out perpendicular to the camera body facing the operator, it can be mounted flush on the camera

body, screen facing outwards. This highcontrast screen can also be flipped around in the perpendicular posi-

tion to face on-camera talent.

The GY-DV300 has a few other features often relegated to pricier pro cameras, including a SMPTE color bar generator and a four-stage zebra bar display. The camcorder also features a SMPTE time-code reader/generator that produces frame data readable on any professional DV-format deck.

Another important DV feature is the IEEE-1394 (FireWire) connection. The DV300's simple edit/search functions complement this feature by making it fast and easy to review footage in the field.

PCM audio can be sampled at 12-bits/32 kHz or at 16-bits/48 kHz. Audio levels for each track are displayed in the viewfinder and can be adjusted automatically or manually via knobs at

the front of the camera. The supplied microphones can be fastened to

Two LCD monitors and a carrying handle give the GY-DV300 a lot of

shooting flexibility.



the rubberized shock mount for vibration-free audio recording.

The GY-DV300 can be outfitted with a proprietary Webstreaming module but this is not yet available and I did not test it.

IN USE

I tested the GY-DV300 as a field camcorder, using it as a replacement for my larger, more traditional camera-and-docking-recorder setup. My goal was simply to continue shooting my documentary, while maintaining image quality and continuity. That seemed like a tall order for a short camera, albeit a new and improved one.

After some initial difficulties making minor adjustments to the camera's setup using its on-screen menu, the DV300 operated much like the broadcast cameras with which I am familiar. While the unit can save only three white-balance settings, re-balancing proved easy enough with the convenient auto white-balance button.

I loved being able to visually check the quality of auto white balance using the color viewfinder. I quickly relaxed, as the white balance seemed consistently to be on the money. Both color monitors (in the eyepiece viewfinder and flip-out external) provided fast, reliable white balance and focus feedback.

I especially liked the flip-out viewfinder for handheld shooting because of the expanded range of shot angles it facilitates. Its brightness and high contrast made it feasible to use outdoors, at least in indirect sunlight.

It also proved handy for interviewees unaccustomed to talking on camera. The talent or soundman could view the flip-out monitor, while I could simultaneously monitor everything from timecode and battery level to audio levels.

Although I'm always skeptical about non-changeable lenses, I was pleased with the sharpness and lack of ghosting and other aberrations with the JVC lens. I found the auto focus mostly reliable when I resorted to it, even in fairly fast-changing situations.

I especially appreciated being able to quickly set the auto exposure level up or down as much as three full stops. I found it reliable and helpful in backlit and other lighting conditions with a wide exposure range.

I relied heavily on the cine-mode gamma setup, which reduces the blacks without affecting chroma, plus a slightly reduced detail level. It rendered a very natural-looking image with rich color, without any hard edges or aliasing.

Achieving continuity with more than six hours of footage already shot with a larger-format camera was a key concern. I was afraid that footage shot with the DV300 would have a conspicuous "DV look" or at least would look very different than video shot with the bigger camera. To my relief, the contrast did not jump out at me and was subtler than I anticipated.

Another key concern was audio quality. I used the 16-bit, 48 kHz audio recording mode at all times, albeit with a different mic. The rubberized shock mount gave me vibration-free recording, even when holding the camcorder firmly. It delivered clean, distortion-free audio at various audio levels (including auto level) to record an

FAST FACTS

Application

EFP, ENG and event production

Key Features

Two viewfinders, DV format; FireWire port; 14x lens

Price

\$3,495

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assortment of bird, frog and mammal calls. The camera's compactness, lightness and ease of operation made it more convenient to use and maneuver closer to animal vocalists than my much larger camcorder.

I used my Sennheiser ME66 for interviews and it plugged neatly into the XLR audio inputs.

The DV300's compactness and fast turn-on let me grab more shots on the run than I might have otherwise, especially wildlife like deer, badgers, raccoons and other mammals visible only momentarily before vanishing into the forest. I was able to get fairly steady shots with the camcorder propped on the roof and body of vehicles, gates, branches and even my knee, sometimes at full telephoto, thanks in part to the shake-compensation built into the lens.

The 7.2 V Li-ion batteries powered the camcorder for at least 90 minutes. Two fully charged batteries got me through a typical day.

My only negative experience is that the eyepiece viewfinder does not lock into place. It flopped around quite a bit, making me nervous for its safety.

SUMMARY

Although I started out as a skeptic, the GY-DV300's performance convinced me that it is a sophisticated, well-designed and handy camcorder ideal for professional video applications such as special events, industrials, ENG and documentaries. Camera setup is fully adjustable via the menu at the push of a button and makes it possible to match its video output to that of cameras that use larger CCDs.

The GY-DV300's edit/search functions and IEEE-1394 port make it ready for basic field editing, as well as for use in the studio. For a small camera, it delivers a lot of punch for the buck. ■

Carl Mrozek operates Eagle Eye Media based in Buffalo, N.Y., specializing in wildlife and other outdoor subjects. His work appears regularly on the Discovery Channel, CBS, PBS and other networks. Contact him at eagleye@pce.net.