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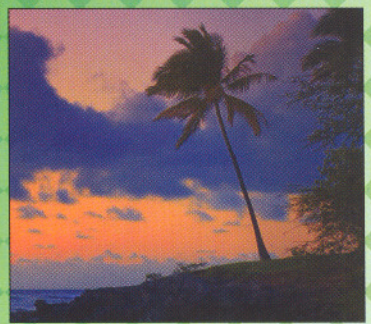
TOOLS AND TECHNIQUE FOR THE INDEPENDENT PROFESSIONAL

IN REVIEW
PANASONIC AG-HPX300 CAMCORDER
INNOVISION OPTICS DV PROBE LENS



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JANUARY 2010



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READY TO RUN

PANASONIC DELIVERS WITH THIS WELL-PRICED ENG AND EVENT CAMERA.

BY NED SOLTZ

The AG-HPX300 is a shoulder-mounted P2 HD camera with three 1/3" CMOS imagers (Panasonic calls it 3MOS), full-raster 1920x1080, interchangeable lens, flip-out LCD screen, two P2 slots and, most significant, the addition of the AVC-Intra codec. AVC-I was previously available only on the \$48,000 (plus lens) AJ-HPX3000 or as a \$3,100 option for the AJ-HPX2000. Panasonic delivers AVC-I and more for a list price of \$10,700 including lens but excluding battery. Street price runs around \$8,495.

I see this camera as the next step up from the HPX170 or HVX200 cameras. Like its two more compact siblings, the HPX300 shoots the range of DVCPRO HD frame sizes and rates, DVCPRO 50 as well as DVCPRO 25. Switching between 1080, 720 or 480 requires a reboot of the camera, by the way. It's a petty nuisance to me but one I'm prepared to live with. It's the availability of AVC-I 100, though, that sets this camera apart in its price range.

The AVC-I 100 codec is an I-frame 10-bit 4:2:2 codec that should not be confused with what Panasonic calls AVCHD, a more compressed Long GOP codec. Both are based on H.264. The AVCHD codec captures tremendously more detail than DVCPRO HD while utilizing the same storage requirements (about 1GB per minute on your P2 cards). It is computationally more intense, particularly when editing in Final Cut Pro, which needs to transcode it to ProRes 422 or ProRes 422 HQ. Final Cut Pro running on my MacBook Pro 2.33 GHz machine, for example, cannot reliably play AVC-I 100 ProRes clips from a single drive; clips play fine from an external two-drive RAID.

Unlike the HPX170 and HVX200, which employ pixel shifting to achieve 1920x1080, the HPX300 shoots a full-raster 1920x1080. This is made possible with the use of the CMOS imagers. It simply would be impossible to deliver a full-raster camera at this price point using CCD imagers.

The use of CMOS over CCD presents a set of challenges. While it allows for full-raster imaging, improves low-light sensitivity and reduces blurring, CMOS cameras in this price range utilize a rolling shutter. The rolling shutter exposes each pixel sequentially, which renders the camera susceptible to flash banding. To put it quite simply,



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the duration of the flash or strobe is less than the duration of the exposure of the full frame, which results in a band running across the image. I have had shots ruined by flash banding and other shots less affected.

Panasonic is the first manufacturer to attempt to tackle this flash-banding issue through the release, at the end of June 2009, of a Flash Band Compensation (FBC) firmware patch for the camera. (And, unlike another vendor that requires cameras to be returned to the depot for firmware updates, Panasonic freely distributes them on the Web and provides idiot-proof instructions.) The FBC firmware creates frames to compensate for the flash banding and effectively "averages out" the frame.

The creation of FBC technology is indicative of Panasonic listening to its customers' needs and actively trying to solve problems. In fact, the HPX300 is about as close to meeting the requests of professional users as any camera could be.

Who is the target HPX300 user? This is an ideal ENG and event camera. It's lightweight, moves between tripod and handheld with ease, and is easy to shoot — the learning curve is not in how to use the camera but in how to control the picture profile settings to achieve the best possible look for your scenario. It can also intercut perfectly with other P2 HD cameras, making it an ideal B camera for VariCam or HPX2000/3000 shoots.

You might want larger imagers, a wider lens, more P2 slots, a 2x lens, and a host of other features, but remember: You can buy this camera for around \$8,495.

My assessment is there is no other camera like the HPX300 on the market. Thanks, Panasonic, for listening to us and delivering what so many of us need. **DV**

SCORE

PANASONIC AG-HPX300 CAMCORDER



PROS: Form factor. Ergonomics. AVC-I codec. Controls. Lens. Audio. Four levels of ND. Wireless microphone slot. **CONS:** 1/3" chips. CMOS imagers can skew. No controls easily located on viewfinder for brightness/contrast.

BOTTOM LINE: An excellent camera for the money. **MSRP:** \$10,700

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