SONY

# Top Ten Questions to Ask Before Choosing an HD Camcorder


| | Question | Explanation | Sony XDCAM® HD Camcorders |
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| 1 | Are the image sensors really high definition? | High def or half def? Some professional "HD" camcorders actually have standard def image sensors with resolution as low as 960 x 540 – a recipe for trouble when popular "1080p" televisions display four times as many pixels. Check the published pixel count before you buy. | The PDW-700 is equipped with three true HD 2/3-inch CCDs with 1920x1080 resolution; 2.2 million pixels each. |
| 2 | Are the pixels real? Is there a one-to-one ratio of CCD pixels to camera pixels? | As usual in video, the rule is "garbage in/garbage out." You need to ask if the pixels that the camera processes correspond to actual photosites on the image sensors. Or are they generated by undisclosed image processing techniques? | In the PDW-700, every pixel is real. Every pixel corresponds to distinct physical photosites on the three CCDs – giving you an exact, one-to-one ratio. |
| 3 | Are the pixels and image sensors the right size? | They say that bigger is better. But it's only true "when all things are equal," a condition that rarely applies in real life. Seemingly subtle differences in pixel light gathering efficiency can make for important differences in camera sensitivity and noise. | The proof is the performance. Sony's 2/3-inch Power HAD FX CCDs achieve sensitivity of F12 (2000 lx, ) and S/N of 59 dB. |
| 4 | How long are the loads? | If you're used to shooting up to an hour on a tape, you may be in for a shock. Some HD camcorders shoot onto storage media that only hold a few minutes at best quality. This means you can't shoot long-form programming without shuffling media in and out of the camcorder. | **Bitrate** / **Single layer PFD-23A** / **Dual layer PFD-50DLA**<br>50 Mbps / 43 min. / 95 min.<br>35 Mbps / >65 min. / >145 min.<br>25 Mbps / 85 min. / 190 min.<br>18 Mbps / >112 min. / >248 min.<br>Actual recording times vary. |
| 5 | What is the cost per Gigabyte of storage? | Some HD camcorder media can cost over $50 per Gigabyte. This makes the media far too expensive to use anywhere but acquisition. If you want to send content to a post house, hand it to a client or store it in your archive, you'll be copying and re-copying your material onto other media. | Estimated street prices are less than $30 for Sony's PFD-23A single-layer disc and around $60 for the PFD-50DLA dual-layer version. That's about $1.30 per Gigabyte. |
| 6 | Will I need to hire an assistant just to wrangle data? | With some HD camcorders, you simply can't afford to store an entire production on the acquisition media. You may even need to offload the content onto some other medium while the shoot is still in progress. Just remember to cross your fingers before you erase your master. | The XDCAM system's Professional Disc media needs no special data wrangling. It can go straight into production just like tape. |
| 7 | Will it work with my nonlinear editor? | Especially with new codecs, it can take years for the NLE companies to offer actual, real-world, full-featured support. Don't put your faith in a press release. Double-check with your NLE company to make sure it works today and the workflow is what you expect. | The XDCAM HD system is thoroughly supported by a broad range of nonlinear editors, plus servers and other systems from 33 third-party suppliers. |
| 8 | Is the codec established? Does it really deliver the promised benefits? | HD compression codecs that might have advantages on paper can actually be hobbled by half-hearted implementations, a lack of compatible infrastructure and the inability of PCs to encode or decode in real time. | The MPEG-2 Long GOP codec is supported throughout the broadcast & production chain from acquisition to archive and even Blu-ray disc™ movies. Super fast smart-rendering provides real life 7~8 times faster editing than AVC I. |
| 9 | Can my laptop handle the data rate? | If you're currently using DV, DVCAM® or DVCPRO® decks at 25 Mbps, you may be in for a surprise. Many HD codecs require two, three or even four times the data storage capacity. This can overwhelm your laptop's hard drive, forcing you to buy all-new storage. | The XDCAM HD422 system can record full 1080 and 720 HD resolution at moderate bitrates up to 50 Mbps. If your laptop, server and data network can handle DV, it can also handle the XDCAM HD422 system. |
| 10 | Can I use my camcorder media for archiving? | Some HD camcorder media is so expensive that you may need to lay off to a second medium for editing and even a third medium for your archives. A workflow promoted as "easier" can actually introduce additional steps and additional headaches. | You can afford to use Professional Disc media just like tape, putting your camera masters right into your archive. Accelerated testing predicts an estimated 50 years archival life. |