

Buying guide – CAMCORDERS

Introduction

Choosing a camcorder model to capture memorable events such as marriages, reunions, trips, your families' antics, or any occasion you'd like to view over and over again doesn't have to be a complicated decision. With today's camcorders, you can make digital or analog home videos directorial debuts using video editing software included on your computer. Gone are the days of straight playback being the only easy option. Analog camcorders are less expensive; although, the picture and sound quality reflects this, as does their size. Most analog models are bulkier, more obtrusive, and much less likely to be used regularly. Digital camcorders, now the dominant format, can use either discs or tapes to record in digital format. Being digital eases transfer to the computer, and allows for endless copies to be made without any quality loss. Standard Definition digital video cameras offer good picture and sound quality, and produce digital still photos at rudimentary resolutions. High Definition digital camcorders offer excellent picture, up to 5.1 surround sound recording, with mid-range resolution digital stills. In this buying guide, we will cover what's available and what you need to know to buy a camcorder that is perfectly suited to your needs.

What's Available

Sony dominates the camcorder market, with multiple models in a number of formats. Other top brands include Canon, JVC, Panasonic and Samsung. Most digital models use MiniDV tapes to record, but there are a more and more disc based formats DVD-RAM, DVD-R, DVD+RW. Some of the latest models record directly to flash memory or internal hard drives and weight less than a pound.

1. **MiniDV:** They may be small in size but MiniDV camcorders can record high resolution video. They use specialized digital analog tape cassettes. MiniDV recording media is inexpensive, only about \$4 a tape and each tape can record about 60 minutes of video. When a MiniDV camcorder is connected to your computer the signal remains digital and can be easily edited and output to a DVD, or back onto the tape, after being processed by the computer. When connected to your television or VCR, the signal is converted to analog and your options are limited to playing back the recording on the tape as it exists, to get the highest picture quality connect the camcorder using an S-video cable. Prices range from \$260-\$1000.
2. **Disc-Based:** The pervasiveness of DVD players makes these format camcorders very appealing, especially because they offer all the benefits of optical media: long-term durability, compactness, and random access to scenes. The videos are formatted in MPEG-2, the same format as Hollywood DVDs, so playback on your home theater equipment is a cinch. Choosing a disc that is compatible with your player will allow you to playback your movies directly on your DVD player. Discs range in price from \$4 to \$20, and can record between 20 minutes and 60 minutes per side depending on the video resolution. Most players don't read DVD-RAM, but most will read DVD-R (one time use), or DVD-RW/DVD+RW (rewritable); as always, the camera can be connected directly to the television if your player and Disc type are incompatible.
3. **High Definition:** By far the most advanced consumer grade camcorder format available, HD camcorders record in stunning 1920 x 1080 HD resolution video, and record sound in 5.1 immersive surround sound. Many HD models have extras such as touch panel displays, intelligent face detection (which automatically compensates the exposure for

faces), electronic flash for still images, etc. An HD camcorder's capabilities are only fully realized when used in conjunction with HDTV that has a matching or a higher resolution than the camera.

- 4. Analog:** Records on VHS, VHS-C, S-VHS-C, 8mm, or Hi8. Lower picture resolution and sound quality than digital. This is an older technology that is slowly being phased out, however, if you are replacing your existing analog camera the tapes you have now could be played on a newer camera, if you purchase the same format again. Otherwise transferring your tapes to DVD is the best move. They'll last much longer that way, anyway.
- 5. Dimensions and weight:** As camcorders are designed to be portable, the camera's size will most likely be among your primary considerations. The camcorder size you choose should be suited to your use. In most cases, an easily gripped small camcorder is ideal. However, if it's too light camera shake can be a pronounced, bulkier camcorders offer better 'vibration-free' operation, but due to the extra girth you run the risk of straining your arm during prolonged uses. Using a tripod will give you the best results if you're concerned about camera shake. Competitive camcorder brands will have the most often used controls conveniently placed for easy access. The zoom lever, record on/off, and snapshot capture are prominently placed. The battery, tape, DVD, or memory card should be able to be installed and removed without hassle. When shopping online you obviously can't test out the product first hand, however there are a number of web site that offer objective, hands-on reviews to aid in your product research. CNET.com, for example, features most popular models in their video reviews.
- 6. Memory:** Flash memory cards have storage capacities starting at 8 MB. Over the years as card capacities have increase, newer models have added the capability of recording video directly to these memory cards. Older models use these cards to record still snapshots. As card capacities have increased the price of these cards has decreased making them a viable option for replacing tapes or discs. All models except Sony use either a MMC or SD card, if a card is accommodated at all. Sony has their own proprietary cards known as memory sticks. Other camcorder models offer built-in hard drives as an added option for media storage, with these everything you record is saved directly on the hard drive. Eliminating the burden of carrying bulky storage media with you makes these newer recording methods a great option for those times when you are traveling.
- 7. LCD screen/Viewfinder:** Camcorders worth buying are equipped with a flip-out Liquid Crystal Display (LCD) screen. The move away from eyepiece viewfinders to LCD displays is mainly attributed to Sharp, and to user's complaints that while looking through the eyepiece they're missing something else, going on around them, worth filming. Freeing the photographer from the eyepiece also allows the camera operator to be more versatile with angle. Filming over the crowds at a concert, and still seeing what you're recording, is made easy with a flip-out LCD. Most LCDs are 2.5 inches; this size allows you to clearly view what you are recording. Yet, larger LCDs are available, and will bring the price of the camera up about a \$100 per inch above 2.5. Another option to look for on LCD display is a touch panel display controller. Only the latest HD models add this function, giving you access to most of the controls right on your LCD screen so you never have to take your eyes off the action.
- 8. Zoom:** The zoom is typically a toggle switch, press it one way to magnify, the other to widen the view. Camera manufacturers produce both optical and digital zoom. Optical zooms enlarge the image through actual lens magnification, so there is no decrease in

picture resolution. This difference makes optical zooming preferable to digital zooming. In the case of digital zoom, the image is enlarged by cropping pixels from it and then increasing the size of the remaining pixels to fill the screen. The decrease in resolution is relative to the amount of digital zoom applied.

- 9. Image stabilizer:** An image stabilizer reduces the amount of shaking that occurs from hand-holding a camera. Some stabilizers are optical, most are digital; optical stabilizers work by using a floating lens element which attempts to compensate for any camera shake. The more common, less expensive, digital image stabilizers use a technique that shifts the electronic video image from frame to frame, enough to counteract the motion. It's also worth noting different manufactures refer to this feature differently. Canon calls it Image Stabilization (IS), Panasonic and Leica call it MegaOIS, and Sony calls it Super Steady Shot (SSS). As always, mounting your camcorder on a tripod is the surest way of getting a steady shot. If you're not using a tripod using both hands and bracing you elbows against your chest is the next best thing.
- 10. PC connectivity:** Digital or analog camcorders can be hooked up to your personal computer. Analog camcorders require a video capture card to process analog signals. Analog video capture cards vary in the quality of video they can produce, most are fair to poor in picture and sound quality. Digital camcorders do not require such an addition to your computer system; they interface through USB 2.0 or Firewire. With either format you will be able to transfer video recordings to the computer for editing, add some effects, uploading to youtube, or just storing the vids, however if PC connectivity is a major concern it is recommended that you shop only digital camcorders.
- 11. Battery:** Battery size, weight, and duration has steadily improved over the decades, implementation of lighter more effective metals has been a crucial step in taming the overall bulkiness of the video camera. Gone are the days of having to fully discharging your battery before you can recharge it. Although, it is still a good idea to never over charge your battery this has shown it will shorten the batteries lifespan.
- 12. Intelligent Face Detection:** Face detection technology is a form of Artificial Intelligence, in a camcorder. Sony has been a major proponent of the integration of robotic technologies in our cameras. This application is simple, the camera calculates where the faces are in the frame, and adjusts the exposure to optimize the picture quality for the faces it identifies. This will come in super handy on partly cloudy days when the light changes rapidly, or when moving from indoors to outdoors.

Making the right decision

Decide what part of the price spectrum to explore, then chose your preferred format. Analyzing your requirements and then understanding which camcorder is right for you is half the work. We invite you to browse our selection of video cameras at etronics.com.

When choosing your camcorder, it's good idea to check what is on offer from industry leaders such as Sony, Canon, Samsung, or JVC. We offer a wide range of price points for camcorders on the following links: [\\$300 - \\$500](#), [\\$500 - \\$1000](#), [\\$1000 - \\$2000](#), [\\$2000 - \\$3000](#)

When making a list of the models being considered, besides the features, the companies after-sales service should also be considered. We at Etronics.com hope this guide was informative enough to point you in the direction of the model that is right for you. After all, it's all about fun; camcorders are truly easy to use and enjoyable gadgets to own.