

## Module 3

### Digital Video: Camcorder Features and Shooting Tips

#### OBJECTIVES <sup>ST.</sup>

Digital video camcorders and nonlinear editors have changed everything. Now a \$1,000 DV camcorder and a laptop PC can serve as a high-end video production studio. This module explains DV technology, covers legacy analog video issues, and lists some characteristics to look for when purchasing camcorders.

The future is high-definition video. Since high-def is still a bit out of reach for most student and school budgets, I'll only touch on it and will introduce the first prosumer HD-style camcorders and the software that allows you to edit that video in Premiere Pro.

To make an excellent video production, your students need to start with high-quality raw material—the original footage. No amount of clever, whiz-bang editing can turn mediocre raw video into a dazzling final product. The old computer-programming adage applies: garbage in, garbage out. In the TV world, that adage has a slightly different twist: You *can't* fix it in post. That is, postproduction techniques will not resurrect reels of video junk.

To ensure your students start their projects with high-quality raw material, have them follow the 18 video shooting tips in this module plus the expert advice given at its conclusion.

At the end of this lesson, students will be able to:

- Understand the fundamentals of digital video
- Know what to look for when buying a DV camcorder
- Explain the limitations of analog video
- Have a basic understanding of high-definition video
- Begin to use standard camcorder shooting techniques
- Apply professional video shooting tips presented in this module

#### ***Digital Video Changes Everything***

The message for your students is that DV changes everything.

In the old days (a couple years ago), analog was it. DV was ridiculously expensive and definitely not a budget video production option. Now, for virtually any student project, DV is the way to go. Yes, there are some analog camcorders, notably high-end Beta SP, that look better, but DV solves so many problems and is so easy to work with, it's the pragmatic choice for all student projects.

#### ***Analog Issues***

An analog video signal is a continuous waveform. Small disruptions to that otherwise smooth, continuous signal lead to degradation in image and color quality. Simply dubbing (recording) an analog tape to another tape results in some quality loss. With each additional dub—each added "generation"—images look less defined,

colors become increasingly washed out, and the pictures get grainy. Audio quality also suffers some degradation with each generation.

In tape-only editing systems, to make simple scene transitions—such as dissolves—or to add special effects—such as showing videos in moving boxes—means doing multiple edits or recording passes. Each pass adds more video "noise" to the tape. Editors using analog tape machines have to plan carefully to avoid creating projects with obvious shifts in video quality from one section to another.

### **Digital Makes All the Difference**

DV makes generation quality loss a thing of the past. DV is a binary signal. A stream of ones and zeros. Unlike an analog signal, which has a wide range of data possibilities and many ways for electronic equipment to misinterpret it, a digital signal rarely loses quality during transmission and doesn't suffer from generation loss.



#### **Note: Long-distance Digital Video**

Home satellite systems that use those pizza-sized dishes are digital. To reach your home, those digital TV signals travel from an Earth-based transmitter to a satellite in geosynchronous orbit (22,000 miles into space) and then back to your parabolic pizza pie receiver—44,000 miles and the picture is crystal clear.

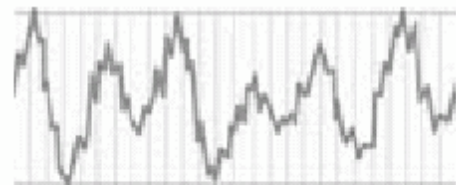
Although some noise may creep into the signal, electronic equipment easily can filter this out because all it's looking for are zeros and ones (see Figure 3.1). Little ragged edges on the signal rarely are large enough to lead to obvious signal quality loss.

**Figure 3.1:** Signal noise can dramatically affect analog signals but has virtually no impact on binary signals.

More importantly for our purposes, multiple DV edits or dubs do not lead to generational loss. The signal simply remains zeros and ones. You are no longer constrained to limiting your creative considerations to ensure low-noise video. No matter how many edits you perform, no matter how many layers of elements you pile up in a clip, there should be no discernible noise or degradation to fidelity.

Therefore, your first order of business is to buy, borrow, or rent a DV camcorder. A purchase will run you from \$500 to \$4,000 (see the upcoming sidebar for a rundown of several prosumer camcorders). Three things drive camcorder prices: lens quality, features, and whether they have one or three image-gathering and -processing integrated circuits or chips.

As you move up the price range, you'll see an increasing number of competitive features—longer focal length lenses, larger LCD screen viewfinders, programmable settings, and fast shutter speeds. But the biggest differentiator is that top-end camcorders have three chips, versus a single chip for lower-priced products.



*Analog signal with noise*



*Digital (binary) signal with noise*

### Choosing a Camcorder

First up is your gear—and topping the list is your camcorder. This is an exciting time. For years video pros have lugged around shoulder-numbing Sony Beta SP and Ikegami broadcast-quality cameras. Their rich colors and low-light capabilities used to put "prosumer" (a step up from consumer but still not broadcast quality) camcorders to shame.

Not any longer. Some might quibble and say today's top prosumer camcorders are not true "broadcast quality," but only the most highly trained eye can discern an appreciable difference between the \$3,300 Canon XL1S or the \$2,300 Sony DCR-VX2100 and anything a \$15,000+ broadcast camera can crank out. See Figure 3.2 for some high-quality prosumer camcorder models. In the meantime, even lower-priced prosumer and consumer models are more than acceptable and work fine with Adobe® Premiere® Pro.



**Figure 3.2:** Top-of-the-line prosumer DV camcorders. Canon XL1S (estimated street price \$3,300), the Sony DCR-VX2100 (\$2,300), and the Panasonic PV-DV953 (\$1,300). You can't go wrong with any of these models.

#### Camcorder Selection Tips

Camcorders use a charged coupled device (CCD) chip to convert brightness and color to a digital signal. Single-chip camcorder CCDs have to crunch a lot of data. Three-chip camcorders use a prism to divide incoming light into separate red, green, and blue (RGB) hues, thus letting each respective CCD gather more information within its designated segment of the color spectrum. Even though single-chip camcorders use special RGB filters to help their one CCD interpret color data, three-chip cameras have distinctly better color and low-light capabilities.

Your choice in camcorders then comes down to your audience. If your videos are only for home or Web page viewing, a single-chip camcorder will work fine. If you will be projecting your videos on large screens for sales presentations or shareholder meetings, you should give strong consideration to a three-chip camcorder. And if you want to move into the professional video-production business, a three-CCD camcorder is a must. Showing up at a client's office with a palm-sized, single-chip camcorder is a sure way to jinx a deal.

#### Prosumer Camcorder Rundown

Camcorder buying is one of those things that may simply come down to "feel." You pick up a camcorder and it fits well in your hands, the controls are logical and accessible, the menus make sense, and the images look right. Or not. When you start digging into the details—all those features—it becomes brain numbing.

So, here are the basics: Top-of-the-line gets you three CCDs and plenty of manual override options: focus, iris, shutter speed, and white balance. If you're serious about shooting high-quality videos you'll want to have that level of control. For example, setting a higher shutter speed—the Panasonic PV DV953 I tested for this book has a super-fast 1/8,000th of a second shutter speed—means you can capture very crisp images of a very fast subject. Racecars and sprinters all look sharp at such shutter speeds. You do need plenty of light to make this work, though.

Other features of importance include the following:

- Substantial optical zoom—at least 10X, but 25X is better.
- Input and output capabilities. IEEE 1394 (the industry-standard means to transfer digital video) is a given, as is a means to record from and to a VCR or other camcorder (S-Video connectors are better than composite). Analog-in lets you record analog video to DV and/or pass it through directly to your PC via the IEEE 1394 cable.
- An external mic plug is a necessity as well as a headphone plug.
- Optical image stabilizing using prisms or some other means (versus the less desirable electronic stabilization).

Superfluous features—and there are many—include the following:

- Digital zoom. All you get are chunky pixels. Use Adobe Premiere Pro's Motion or Transforms effects to handle this.
- Titler; Fade-in, Fade-out; and Digital Effects (picture in picture, wipes, multipicture mode, sepia, and so on). Adobe Premiere Pro will handle all these without forcing you to fumble with awkward on-camera controls and menus.
- Wide-screen view (unless it's a true 16:9—few offer this). "Faux wide screen" simply adds black bars to the top and bottom of the screen covering parts of the image. Again, you can create this "look" in Adobe Premiere Pro.
- Built-in lighting compensation modes, including back-lit, low-light, portrait, sports, and extremely bright settings (surf and snow). You should use the manual features to more accurately handle these situations.

The prosumer industry de facto standard camcorder is the Canon XL1S, followed closely by the Sony DCR-VX2100, the Canon GL2 and the Panasonic PV-DV953.

Stepping down a notch, but still a prosumer-quality 3CCD camcorder, is the Sony DCR-TRV950.

### **Legacy Analog Camcorders**

You may own a legacy analog camcorder—VHS (dread the thought), S-VHS, or Hi-8—and aren't ready to shell out the cash for a DV camcorder. Your old clunker may get the job done, but the results will be several cuts below pure DV video. Image quality from most legacy camcorders falls below today's DV camcorders (Hi-8 still looks pretty good, and professional Beta SP is better than Prosumer DV). But no matter how good the original video looks, the final edited product will not look that great. That's largely because when loading the analog video into your PC (video capture), Adobe Premiere Pro converts it to a digital video file (losing some quality in the process), and when you record it back to analog tape for viewing, it will lose even more quality. Because Adobe Premiere Pro stores video digitally, there will be no generation loss for converted-analog video (or DV) during editing.

One other minor fly in the ointment: You'll need to buy a video capture card (see Module 6, "Scene Selection and Video Capture") with analog input connectors. A straightforward DV-only capture card will not work.

### ***Moving Up (Way Up) to High-Definition Video***

High-definition TV (HDTV) is imminent. Sort of. It's been imminent for nearly two decades. Back in 1987, I did a news story about how KSL-TV (my employer at the time) in Salt Lake City was going high-def. The consumer response since then has been decidedly underwhelming.

That's about to change. Top-down pressure from the Federal Communications Commission on TV networks, their affiliates and independent stations, to switch to digital TV (including high-def) by 2006 is one reason.

But I think bottom-up pressure will be the main reason we move to HDTV. Video producers, advertisers, independent film makers, and consumers will lead the charge to HDTV.

HD image quality nearly matches 35mm film, comparable quality cameras and editing equipment are less expensive (about \$200,000 for top-end HDTV versus \$400,000 for a high-quality film camera), and high-def videotapes cost much less. With processing included, film costs about \$5,000 an hour. A one-hour HD tape costs \$60.

Adobe Premiere Pro can handle HDTV, but it takes some specialized hardware and software to do it. As of this module's release, only one company had announced an HDTV-style software-only product for Adobe Premiere Pro: CineForm's \$1,200 Aspect HD software plug-in (a separate piece of software that works within Adobe Premiere Pro). It works only with HDV-compatible camcorders (as of mid-2004 there were only two: the \$3,000 JVC JY-HD10U or the \$2,400 JVC GR-HD1 prosumer camcorders -- see Figure 3.3). HDV is a less-than-full-resolution HD format that uses MPEG-2 video streams to enable it to transfer HD to a PC over a standard firewire connection.



**Figure 3.3:** *The JVC JY-HD10U is the first prosumer-priced HD camcorder.*

BOXX Technologies announced it plans to start shipping a \$23,000, full-HD editing hardware/software Premiere Pro solution in June, 2004. It'll use Cineform's new Prospect HD (a superset of Aspect HD) Premiere Pro plug-in. For more information visit [www.cineform.com](http://www.cineform.com) and [www.boxxtech.com](http://www.boxxtech.com).

HD is a small part of Adobe Premiere Pro's current feature set, but that feature set won't stay limited for long. Adobe is working with several camcorder manufacturers and high-definition video card companies and expects to announce several partnerships in the near future.

### ***Eighteen Tips on Shooting Great Video***

With camcorder of choice in hand, it's time for your students to venture off and shoot videos. Here are my video-shooting axioms:

- Stripe your DV tapes.
- Adhere to the "rule of thirds."
- Get a closing shot.

- Get an establishing shot.
- Keep your shots steady—use a tripod.
- Let your camera follow the action.
- Use trucking shots to move with the action.
- Try out unusual angles.
- Lean into or away from subjects.
- Get wide and tight shots to add interest.
- Try to match action in multiple shots.
- Shoot sequences to help tell the story.
- Avoid fast pans and snap zooms—they're for MTV only.
- Remember to shoot cutaways to avoid jump cuts.
- Make sure you don't break the "plane."
- Get plenty of natural sound.
- Use lights to make your project brilliant.
- Plan your shoot.

I've jammed a lot into these 18 items. All will help make your video shine with a professional glow. I discuss each in detail below.

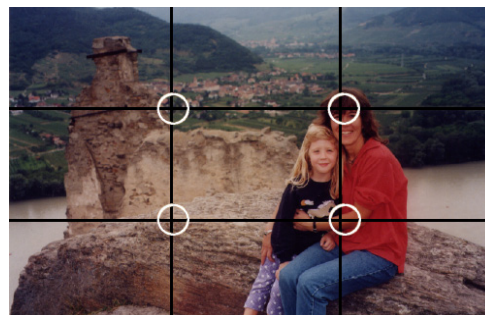
### ***Stripe Your DV Tapes***

This is a tedious but ultimately timesaving step. Your DV camcorder lays down timecode as it records. Later, as you transfer DV to your computer, you'll likely use that timecode to create a video clip log. Once you've completed logging your tape or tapes, you'll tell Adobe Premiere Pro to automatically retrieve the logged clips by automatically shuttling the tape to the timecodes noted in the log and then record them to your hard drive.

Most camcorders, when powered up, reset their timecode to zero seconds. If you do that more than once using the same videotape, you'll end up with several instances of the same timecode on one tape. As a result, Adobe Premiere Pro probably will retrieve the wrong clip. Striping your tapes before doing any shooting resolves that. You stripe tapes by simply placing a fresh tape in your camcorder, capping your lens, pressing Record, and waiting for your camcorder to stripe the entire tape. Rewind the tape and you're ready to go. Now, as you use your camcorder, it'll record new video over the black video you taped but won't change the timecode. It will change the *time stamp*, the day, and date information recorded to a separate area of the tape.

### Adhere to the "Rule of Thirds"

Composition is the most fundamental element of camerawork, and the "rule of thirds" is the textbook. As with still photography, when composing your shot, think of your viewfinder as being crisscrossed by two horizontal and two vertical lines (refer to Figure 3.4). The center of interest should fall on one of the four intersections. One rule of thumb is to look around the viewfinder as you shoot, not just stare at its center. Check the edges to see whether you're filling the frame with interesting images. Avoid large areas of blank space.



**Figure 3.4:** Adhere to the same rule of thirds covered in Module #1. Place the center of interest at one of the intersecting lines.

### Get a Closing Shot

This may seem like I'm taking things way out of order, but the one shot that should be uppermost in your mind is the closing shot (the opening shot or shots are important but have a much less lasting impact). Your closing images are what will stick in people's minds. They are what your audience will take away from your video production. If you start a shoot without knowing what your closing shot will be, you should be constantly on the lookout for that one shot or sequence that will best wrap up your story.



#### Note: Dotson's Rule

The importance of the closing shot came through loud and clear at a seminar I attended given by NBC-TV feature reporter Bob Dotson (see Module 1, "DV Workflow, Project Planning and Writing Tips"). He and his photographer never fail to find a closing shot. It could be as simple as someone closing a door, capping a pen, petting a dog, turning out the lights, or releasing a butterfly from their cupped hands. If you happen to see a Dotson feature story, consider its close. It's sure to be memorable.

### Get an Establishing Shot

An establishing shot sets a scene. It doesn't have to be the opening shot. One of the greatest establishing shots of all time is in Robert Redford's *The Natural*. Those who have seen this marvelous film know what I'm talking about: the shot from the top row of the baseball stadium during a night game that takes in the entire field with blazing lights ringing the park. Anyone who has been to a major league ballpark gets goose bumps when that image appears onscreen. It tells a dramatic story in one image.

That should be your goal for your project's establishing shot or shots (you may need several if you're covering several topics in one video).



#### Tip: Think Different

Although super-wide works sometimes—aerials make great establishing shots—it pays to think "outside the box." Don't fall back on the old standbys, such as the scoreboard, the corporate sign, or the medium shot of a hospital operating room. Try something different. A tight shot of a soccer ball with natural sound of children's voices, a low-angle image through a glass table of someone using your client's product, or a close-up of a scalpel with light glinting off its surface.

Each grabs the viewer's attention and helps tell your story.

**Keep Your Shots Steady—Use A Tripod**

We all know that photographers take the images we view on TV, and that someone uses a camera to create them. But as video producers, we don't want to remind viewers of that. We want to give them the sense that they're looking through a window or, better yet, are there on location.

A shaky camera shatters that illusion.

Despite a recent trend away from the use of tripods—MTV started it, and shows such as *48 Hours* have run with it—there's plenty to be said for smooth-looking video. If you're doing a sit-down interview or grabbing close-ups, put your camcorder on "sticks." When possible, use a tripod with a fluid head. That'll let you make smooth pans or tilts. Good tripods are not cheap. Reasonably high-quality sticks start at about \$150. See Figure 3.5 for a



top-of-the-line example.

**Figure 3.5:** The Sachtler DA 75 L aluminum tripod (left) weighs only 2 kg. Its DV 2 fluid head (right) works well with lightweight camcorders.

**Tip: Makeshift Tripods**

If a tripod is too expensive, cumbersome, or inconvenient; if the action is too fast-paced; or if you need to move the camera during the shot, then try to find some way to stabilize the shot. For still shots, lean against a wall, put your elbows on a table, or place the camcorder on a solid object. For moving shots, get the camcorder off your shoulder, hold it about waist high, and let your arms work as shock absorbers.

Another alternative is to buy or make a "Steadicam." A Steadicam Jr—complete with a built-in monitor—that works with prosumer camcorders costs \$900. See [http://www.steadicam.com/prohh\\_jr.htm](http://www.steadicam.com/prohh_jr.htm).

And here is a web site for a home-built steady cam: <http://www-2.cs.cmu.edu/~johnny/steadycam/>. It's a heck of a lot cheaper.

***Let Your Camera Follow the Action***

This may seem obvious, but keep your viewfinder on the ball (or puck, face, conveyor belt, and so on). Your viewers' eyes will want to follow the action, so give them what they want.

One nifty trick is to use directed movement as a pan motivator. That is, follow a leaf's progress as it moves down a stream and then continue your camera motion past the leaf—panning—and widen out to show something unexpected: a waterfall, a huge industrial complex, or a fisherman.

***Use Trucking Shots to Move with the Action***

This is an excellent way to follow action (so named because using a camera on a moving vehicle is one way to get this shot). Truck right along with some action. If you're shooting a golf ball rolling toward the cup, tag along right behind, in front of, or beside it. When walking through tall grass, dangle your camcorder at knee level and walk right through it, letting the grass blades smack into the lens. Ever wonder how they get those cool downhill snow-skiing shots? The cameraperson skis backward with a heavy electronic news-gathering (ENG) camera on his shoulder or dangling from his hand at snow level (see the next section). I've watched my good friend Karl Peterson (see the upcoming sidebar) do that amazing maneuver several times.

***Try Out Unusual Angles***

Move your camcorder away from eye level. Shoulder shots have their place—they represent probably as much as 80 percent of all video—but getting the camcorder off your shoulder leads to more interesting and enjoyable shots. Ground-level "ferret-cam" shots are great for cavorting puppies or crawling babies. Climb a ladder or use a tall building to get a "crane" shot. Shoot through other objects or people while keeping the focus on your subject.

**Tip: Stop-Action**

You'll need "sticks" to create stop-action or time-lapse photography. Both methods require that the camera remain steady. The other requirement is that the focal length and aperture cannot change. So when you set your camcorder up to shoot the same scene for a long time, planning to compress time during editing, make sure your autofocus, auto-white balance, and auto-iris are turned off.

***Lean Into or Away from Subjects***

Too many shooters rely too heavily on the zoom lens. A better way to move in close or away from a subject is simply to lean in or out. Lean way in and start your shot tight on someone's hands as he works on a wood carving; then lean way back (perhaps widening your zoom lens as well) to reveal that he is working in a sweatshop full of folks hunched over their handiwork. It's much more effective than a standard lens zoom and a lot easier to pull off.

***Get Wide and Tight Shots to Add Interest***

Most novice videographers create one boring medium shot after another. The reason: It fits our experience. Our eyes tend to take in things the same way. Instead, think wide and tight. Grab a wide shot and a tight shot of your subject. It's much more interesting.

**Tip: Get Close to the Subject**

When you grab your tight shots, try to avoid relying on your zoom lens. Instead, get as close as practical to your subject and then grab that tight shot. Unless you want your shot to look like you took it from a distance, it's much more interesting to change positions rather than simply toggle that zoom button. Also, audio is much better when you're closer to the subject.

**Try to Match Action in Multiple Shots**

Repetitive action—running assembly-line machinery, demonstrating a golf swing, or working in a barbershop—lends itself to matched action shots. A barber clips someone's hair and it falls to the floor. Get a shot of the scissors, the hair hitting the floor, a wide shot of the entire shop, and a close-up reflection of the scissors in the mirror or the barber's glasses. You'll later edit those separate shots into one smooth collection of matched action.

**Shoot Sequences to Help Tell the Story**

Shooting repetitive action in sequence is another way to build interest and even suspense. A bowler wipes his hands on a resin bag, dries them over a blower, wipes the ball with a towel, picks the ball up, fixes his gaze on the pins, steps forward, swings the ball back, releases it, slides to the foul line, watches the ball's trajectory, then reacts to the shot. Instead of simply capturing all this in one long shot, piecing these actions together in a sequence of edits is much more compelling. You easily can combine wide and tight shots, trucking moves, and matched action to turn repetitive action into attention-grabbing sequences.

**Avoid Fast Pans and "Snap" Zooms**

These moves fall into MTV and amateur video territory. Few circumstances call for such stomach-churning camerawork. In general, it's best to minimize all pans and zooms. As with a shaky camera, they remind viewers that they're watching TV.

If you do zoom or pan, do it for a purpose: to reveal something, to follow someone's gaze from his or her eyes to the subject of interest, or to continue the flow of action (as in the floating leaf example earlier). A slow zoom in, with only a minimal change to the focal length, can add drama to a sound bite. Again, do it sparingly.

**Tip: Keep on Rolling Along**

Don't let this no-fast-moves admonition force you to stop rolling while you zoom or pan. If you see something that warrants a quick close-up shot or you need to suddenly pan to grab some possibly fleeting footage, keep rolling. You can always edit around that sudden movement later.

If you stop recording to make the pan or zoom and adjust the focus, you may lose some or all of whatever it was you were trying so desperately to shoot. Plus you won't miss any accompanying natural sound.

**Remember to Shoot Cutaways to Avoid Jump Cuts**

Cutaways literally let you cut away from the action or interview subject. One important use is to avoid jump cuts—two clips that when edited one after the other create a disconnect in the viewer's mind.

Consider the standard news or corporate interview. You might want to edit together two 10-second sound bites from the same person. Doing so would mean the interviewee would look like he suddenly moved. To avoid that jump cut—that sudden disconcerting shift—you make a cutaway of the interview. That could be a wide shot, a hand shot, or a reverse-angle shot of the interviewer over the interviewee's shoulder. You then edit in the cutaway over the juncture of the two sound bites to cover the jump cut.

The same holds true for a soccer game. It can be disconcerting simply to cut from one wide shot of players on the field to another. If you shoot some crowd reactions or the scoreboard, you can use those shots to cover up what would have been a jump cut.

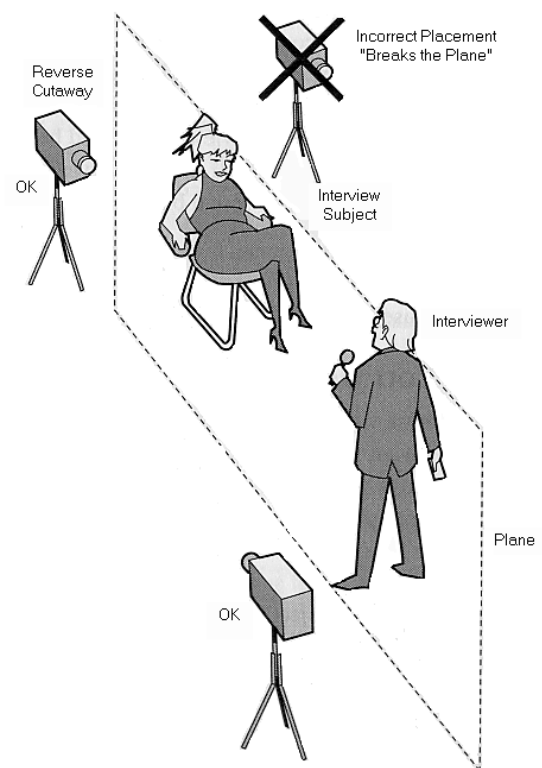
### **Make Sure You Don't Break the "Plane"**

This is another of those viewer disconnects you want to avoid. If you're shooting in one direction, you don't want your next shot to be looking back at your previous camera location. For instance, if you're shooting an interview with the camera peering over the left shoulder of the interviewer, you want to shoot your reverse cutaways behind the interviewee and over his right shoulder.

That keeps the camera on the same side of the plane—an imaginary vertical flat surface running through the interviewer and interviewee. To shoot over your subject's left shoulder would break that plane, meaning the viewer would think the camera that took the previous shot should somehow be in view. Figure 3.6 shows an interview with correct and incorrect (broken plane) camera placements. This also applies to larger settings like shooting from both sides of a basketball court or football field.

In general, you want to keep all your camera positions on one side of that plane. This isn't true for all situations. Consider a TV show of a rock group performance. Camera crew members typically scramble all over the stage, grabbing shots from multiple angles, and frequently appear on camera themselves. That's much different from breaking the plane in a formal sit-down interview.

**Figure 3.6:** The "plane" is an imaginary vertical wall running, in this case, through the reporter and interviewee. Breaking the plane—particularly when shooting a reverse cutaway—leads to camera shots that cause viewer disconnects.



### **Tip: Switch Sides**

If you conduct formal, sit-down interviews with more than one person for the same piece, consider shooting each subject from a different side of the interviewer. That is, if you shoot one subject with the camera positioned over the left shoulder of the reporter, position the camera over the right shoulder of the reporter for the next interview. That avoids a subtle jump cut that happens when you edit two bites from two individuals who are both facing the same way.

### **Get Plenty of Natural Sound**

This is absolutely critical. We tend to take sound for granted. However, relying on your camcorder's built-in mic and taking extra steps to improve the audio quality will dramatically improve the production value of your projects. I'll cover audio issues in depth in Module 13, "Acquiring Audio." For now, think in terms of using additional mics: *shotgun* mics to narrow the focus of your sound and avoid extraneous noise, *lavalieres* tucked out of sight for interviews, and *wireless* mics to get sound when your camera can't be close enough to get just what you need.

### **Use Lights to Make Your Project Brilliant**

Lights add dazzle and depth to otherwise bland and flat scenes. An onboard camcorder fill light is a convenient way to brighten dull shots. And a full (but admittedly cumbersome) lighting kit with a few colored gels can liven up an otherwise dull research laboratory. If you don't have the time, money, patience, or personnel to deal with adding lights, do whatever you can to increase the available light. Open curtains, turn on all the lights, or bring a couple desk lamps into the room. One caveat: Low-light situations can be dramatic, and flipping on a few desk lamps can destroy that mood in a moment.



#### **Tip: Watch Your White Balance**

No matter what kind of lighting situation you're in, you always need to watch your *white balance*. Different lights operate with different color temperatures. Your eyes automatically compensate for those color differences, but your camcorder is not that proficient. These days most camcorders have auto-white balance, and many have manual white balance as well. Auto-white balance works in most situations. As you move from room to room or from inside to outside, the camera "assumes" everything in its field of view is gray and adjusts its color balance accordingly.



#### **Caution: Tricky Lighting Situations**

Problems arise when you shoot indoors and have a window in the scene. In that circumstance, whatever you see through the window probably will have a blue tint. The other tricky white balance situation is when you shoot a scene with a predominant color, such as doing product shots using a solid-color background. The auto-white balance will "think" that solid color is gray, and the image will look horrible. That's when you need to place a gray or white card in the scene, fill the viewfinder with that card under whatever lighting you plan to use for the product shots, and click the manual white balance button. For a fun practical lesson in the value of a manual white balance, roll tape throughout this procedure or when you walk from indoors to outdoors to watch the colors change.

### **Plan Your Shoot**

When you consider a video project, plan what you need to shoot to tell the story. Videotaping your kid's soccer championship match, a corporate backgrounder, or a medical procedure each require planning to ensure success. Know what you want your final video project to say and think of what you need to videotape to tell that story.

Even the best-laid plans and most carefully scripted projects may need some adjusting once you start rolling and recording in the field. No matter how you envision the finished project, be willing to make changes as the situation warrants.

### **Expert Advice from a Professional TV News Photographer**

Karl Petersen is my favorite TV news photographer. We met in Boise, Idaho, where we worked at competing stations. We later worked together at KSL-TV in Salt Lake City. We formed a video production company in Oregon called Glint Video (we always tried to get a "glint" shot in all our news pieces). Then Karl moved on to KGW-TV in Portland, Oregon, where he is now chief photographer.

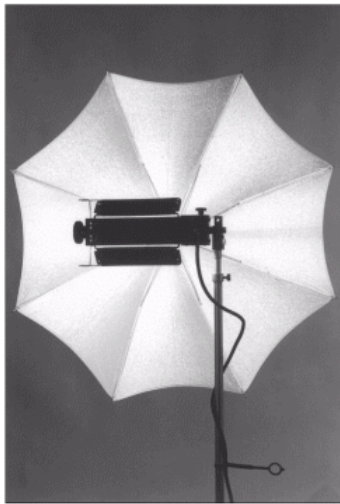


**Karl Petersen**—Chief Photographer, KGW-TV, Portland, Oregon

Karl has seen and done it all. Absolutely nothing fazes him. He'll venture into the tensest situation and shoot with aplomb. When we went out on stories we had an unspoken understanding—I never had to tell Karl what kind of images and sound I needed. I knew he would always get exactly what would make the story "work." Karl's regular beat these days is chopper photog. "Sky 8," KGW's Bell 407, has two Flir cameras. One is infrared and can operate in *total* darkness.

Karl's advice is worth much more than the price of this book. Take it to heart:

- My first shooting advice is, don't do it. Pursue a career of doctor, lawyer, teamster, stevedore, bordello piano player, whatever.
- Having failed that, my first tip is always to shoot as an editor. Always think about how to get from one shot to the next. Try to get some kind of transition shot with either an entry or exit. Close-ups are especially helpful in editing to get from point A to point B.
- Get a good shot mix—wide, medium, close-up (extreme close-ups work well), and unusual angles. Get lots of shots. Variety is an editor's friend.
- Get an establishing shot that tells viewers where you are.
- Fundamentals: Make sure you have freshly charged batteries, always monitor audio by wearing an earpiece (if you don't, you're guaranteed to get burned), and watch your color balance.
- For all indoor interviews, I recommend using at least two lights, three if you have time (I usually don't—TV news is hectic). If I'm to the reporter's right, I place a light with an umbrella reflector slightly to his left. That means the interviewee is looking toward the light. I place a Lowel Omni with "barn doors" (to keep it from shining into the lens) behind and over the left shoulder of the interview subject (that is, to my right). This adds nice highlights. If I have time, I place a third umbrella well behind the camera to add fill. See Figure 3.7.



**Lowel Tota with  
an umbrella**



**Lowel Omni with  
barn doors**

**Figure 3.7:** A Lowel Tota with an umbrella (left), and a Lowel Omni with barn doors. Images courtesy of Lowel-Light.

- If I'm shooting in a room with sunlight coming in a window, I use blue gels—especially balanced for daylight—and then color balance for sunlight.
- For underwater photography, I recommend using an Ewa-Marine plastic bag video camcorder housing (see <http://www.ewa-marine.de/english/index.htm>). They're good to a depth of about 30 feet, easy to use, and relatively inexpensive (about \$350).

When shooting from "Sky 8", I sit in the warmth and comfort of the back seat and operate the cameras with a laptop and a joystick. Not many video producers have this luxury. For those who must shoot from a side window, here are some tips:

- Think safety first. Make sure nothing can fall off the camera—such as a lens shade—or out of the back seat and possibly hit the rotor. That makes the chopper spin like crazy, so you get real dizzy before you die.
- Shooting with the door off is ideal (remove it *before* you take off).
- Try to keep the camera slightly inside the doorframe to keep it out of the wind.
- Have the pilot "crab" (fly sort of sideways) so you can shoot straight ahead. That's much more dramatic. It's a great way to fly along a river, for instance.
- Have the pilot fly low. This allows cool "reveal" shots, such as flying over a ridge to reveal an expansive vista.

Finally, don't forget to grab that "glint" shot.

### **Exercises**

1. Have your students grab their camcorders and shoot some video. Keep my 18 tips in mind. Remember the “rule of thirds.” Get wide, tight, and trucking shots. Follow the action, use unusual angles, and record plenty of natural sound.
2. Ask your students to critically view their videos, looking for poorly framed shots, shaky camera work, and lousy lighting. Encourage them to learn from their mistakes.
3. As in Module #1, contact a video production company or TV news station and ask whether a student or students can tag along on a shoot. The best arrangement would be to go along on a magazine-style, longer-format story (breaking news stories tend to be “run and gun”). Watch how the photographer works. When and how does he use “sticks” or lights, does he move in extra close on some shots, or use trucking shots or unusual angles? How much does he shoot relative to the length of the story? How do the reporter and photographer decide what to shoot?

For complete information about Adobe digital video tools, please visit the Adobe Education Web site: [www.adobe.com/education](http://www.adobe.com/education)

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