

MOBILE FILM SCHOOL

Get the most out of your camcorder — even if you don't have Spielberg's talent or Lucas's budget

From your imagination to the big screen ... and on to Hollywood, fame, and fortune! Is it possible to make a big-screen movie on a shoestring budget? Sure, just ask Hayden Carruth, who made time-travel thriller *Primer* for \$7,000 in 2003, or Robert Rodriguez, who made the action-packed *El Mariachi*, also for \$7,000, in 1992. Or ask Rick Popko, who got Blockbuster to carry his \$3,000 B-movie horror flick, *Monsturd* (see page 65).

In fact, moviemaking has never been easier. All you need is a digital video camcorder, a computer with movie-editing software, and a little time and creativity. We've got all the details on what to buy — and how to use it — for you to make your movie masterpiece. Even if you're just taping your pet iguana, we'll show you how to become a better moviemaker.



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WRITTEN BY DYLAN TWENEY STARRING LANA AS "LANA" CHRISTOPHER NULL AS "THE GOR-GAN" MORGAN MCDERMOTT AS "THE DIRECTOR" & ROGER HIBBERT AS "THE

SOUNDMAN" PHOTOGRAPHY BY MARK MADEO ASSISTED BY SAMANTHA BERG AND MICAH FITZGERALD STYLIST PEGGY JEUNG HAIR & MAKEUP BY SHERRIE LONG FOR ARTISTS UNTIED

Ten tips that will make you a better moviemaker

You've got a camcorder. You may even have lights, a boom-mounted microphone, and an awesome outer-space set. But if you don't know the basics of how to shoot, your movies will be unwatchable. Here's how to maximize your odds of getting usable shots, whether you're documenting your family's holiday gathering or filming a scripted low-budget thriller.

1 HOLD STILL

The biggest mistake amateurs make is moving the camera too much. Sure, it may seem natural to chase after your nephew as he skateboards down the sidewalk or to hold the camera at shoulder level as you walk through the house, but this kind of camera motion will make your movies more nausea-inducing than the latest Hilary Duff vehicle.

If you do nothing else, keep the camera still. A tripod can help eliminate hand jiggle, but even with a tripod, you need to keep from panning and zooming too much.



No tripod? Brace your camcorder arm with your free hand.

If you're shooting a moving car, don't follow the car — pick a spot and let the cars move across the frame.

We repeat: Do not move the camera.

2 PAN AND ZOOM SLOWLY

Once you've learned how to keep your camcorder still for 10 to 20 seconds at a stretch, it's time to learn how to



move it correctly. Use pans and zooms sparingly — as transitions between longer, more-or-less static shots — and make them as smooth and even as possible. A tripod or monopod (a one-legged tripod; see "The Filmmaker's Toolkit," page 64) really helps here.

If you don't have a tripod, press your right arm (the one holding the camcorder) against your body with your left hand, then rotate your entire body. This will produce a smoother movement than rotating with your wrist or elbow. Also, practice using your camcorder's zoom control so that you can zoom in and out slowly and evenly when you want to.

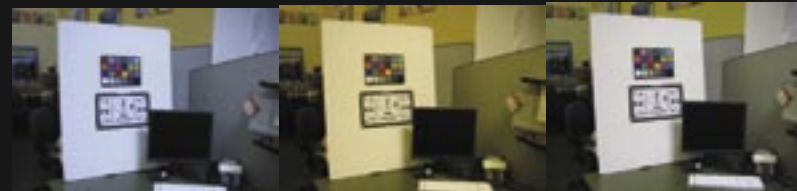
There's one exception: If you need to catch some new bit of action, don't bother stopping and then restarting recording — just move the camcorder quickly, frame your new shot, then stop moving and hold the camcorder still. When you're editing, you'll probably cut out this superquick jump, so get it over with as quickly as possible.

3 LOOK AT THE LIGHTING

Modern camcorders are incredibly forgiving when it comes to filming poorly lit scenes. Still, they're not perfect. One of the quickest ways you can improve the quality of your video is by making sure there's enough light on the subject. Grandma sitting in a dark corner? Put a floor lamp next to her before you start recording her babblings. Or use reflector lamps (see "The Filmmaker's Toolkit," page 64).

Adjusting the exposure and white balance settings on your camcorder can help improve the quality and color of your shots. A poor white balance setting can make indoor scenes look yellowish while outdoor scenes look blue and alien. Some camcorders let you set white balance by aiming the camera at a white sheet of paper. The camera adjusts itself to make the paper look white, and that makes everything you record look better.

Alternately, if your camcorder lets you



White balance can make your shots look too blue, too yellow, or just right.

set the exact "temperature" of the light (expressed in degrees Kelvin), use the following table to set it correctly based on the light you've got. The values below are approximate, so adjust the setting until it looks right to you.

Light	Color temperature
Candle flame	1900K
Household incandescent bulbs	2500K
Fluorescent lighting	3200-7500K
Moonlight	4000K
Direct sun	5500K
Daylight, overcast	7000K
Daylight, foggy weather	8000K

4 GET CLOSE

Nobody wants to watch a bunch of tiny figures in the distance wiggling around. Get as close to the action as you can. To give your movies a more personal, immediate feeling, put your camcorder at the eye level of whomever you're filming — especially if they're kids or other creatures close to the ground.

When you do wider shots, avoid cutting people off at major joints, such as their hips or knees — it looks creepy. Instead,



What's wrong with this picture? Almost everything!

put the bottom edge of the screen at mid-chest level, mid-thigh, or aim low enough that you can see their entire body, head to toe.

5 BE AN OBSERVER, NOT A PARTICIPANT

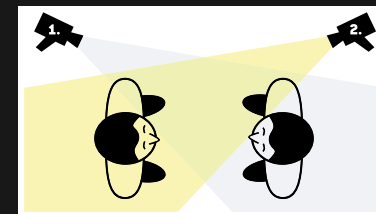
Don't let people talk directly at the camera, or to you. Your movies will look more professional and more cinematic if you stay out of their line of sight. Especially if you're Michael Moore.

6 TURN OFF THE RED "RECORDING" LIGHT AND CAMERA BEEPS

You know how people get when you point a video camera at them: self-conscious, nervous, and strange. Or else they start making fart noises with their armpits. Either way, you'll get better candid footage if you're responsibly stealthy. At the beginning of a party, inform them you'll be filming. Then turn off your camera's beep noises and turn off (or put tape over) the red "tally lamp" on the front that alerts people when you're recording.

7 GET BOTH SIDES OF A CONVERSATION

When you're filming two or more people interacting, look for "reverse angle"



Over-the-shoulder shots make for the most effective conversation scenes — even if you've got only one camera.



opportunities — shots from opposite angles, such as over the shoulders of each person in a conversation. When you edit your footage, alternate these reverse angles to give your movie a more dynamic, conversational feel. This can be hard to do with just one camera, so don't try to capture each back-and-forth — instead, record from one person's point of view for a minute or two, then switch to another POV.

8 SHOOT ESTABLISHING SHOTS TO USE FOR TITLES

You'll need some footage that you can use underneath the titles and credits at the beginning and end of your movie. Look for good establishing shots. For instance, if you're filming a birthday party, take a 20-second shot of the birthday cake or decorations before the party begins. If you're filming a corporate video, use some footage of your company's sign in front of the building, instead of creating titles in your movie-editing software.



9 TURN OFF DIGITAL ZOOM AND ALL SPECIAL EFFECTS

Optical zoom (which uses your camera's lenses to magnify the image without loss of quality) is all that matters. Digital zoom will only make your footage look grainy. Turn it off. While you're at it, turn off any special in-camera effects, such as black-and-white or sepia filters, decorative frames, and the like. That stuff is strictly amateur hour.

10 STOP FILMING AFTER 20 MINUTES

Unless you're making a feature film, you don't need more than 20 minutes of raw video. You can easily edit this much footage down to a tight three-to-five-minute home movie. More than that, and you'll have difficulty throwing things away — or finding the gems among all the garbage — not to mention getting anyone else to watch it.

The tools for making raw footage into great movies

ALBUM

This is where you can see thumbnails of the video clips you've imported from your camcorder. To add one to your movie, just drag it onto the timeline on the bottom.

EFFECTS, AUDIO, AND TITLES

Click on these tabs to see galleries of special effects, titles, and audio that you can add to your movie. Then drag the item you want onto the timeline to add it to your flick.

AUDIO TRACKS

You'll have at least two audio tracks: one for the audio your camcorder recorded along with the video (called "synchronous" audio) and one for a music sound track. You may also have additional audio tracks for sound effects or overdubbed audio.

VIDEO HEAD

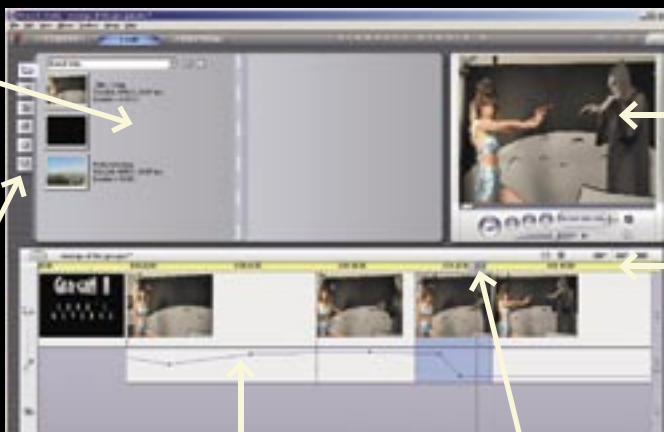
Represents your current position in the movie. You can "scrub" it left and right to move backward and forward in your movie.

PREVIEW WINDOW

Shows the currently selected clip in the album, or your movie, depending on what you've clicked on.

TIMELINE

This is where you trim clips, rearrange them, and tie in your audio track. Most video-editing programs have a timeline view, where each clip appears alongside a scale of the actual time, and a thumbnail view, where each clip gets a square tile with no time scale. The thumbnail view makes it easier to rearrange clips. Timeline view makes it easier to trim clips.



Pinnacle Studio 9

FEATURE-PACKED AND NOT TOO HARD TO USE

The latest incarnation of this popular video-editing package, Pinnacle Studio 9 strikes a good balance between usability and features. Its streamlined interface makes short work of importing and editing. But the software isn't as capable or foolproof as Apple iMovie (at right).



BEST FEATURE
Multiple timelines separate video and audio tracks

WORST FEATURE Can be complicated to learn

Studio 9 has separate timeline tracks for titles, transitions, your musical sound track, and sound effects. That gives you the benefit of a multitrack video editor while still keeping things easy enough for relative beginners.

Make sure you've got lots of RAM and hard-drive space, as the software will bog down on less-capable computers — especially once your project files get big. Also, it doesn't handle widescreen video or MPEG files well. Like almost every video-editing program, Studio 9 demands that you spend some time learning how to use it. But for a relatively easy-to-use Windows-based editor

Pinnacle Studio 9 **\$90**
System requirements: Windows XP; DirectX 9 or higher with compatible audio and video cards; 500MB of disk space
www.pinnaclesys.com

Apple iMovie HD

VIDEO EDITING AT ITS SIMPLEST

Let's face it — video editing is a painful, boring process. So Apple iMovie's stripped-down interface does you a great service by making movie editing faster and easier than on any other software we know of. Sure, you sacrifice some features, but the simplicity of the process in iMovie makes that worthwhile.



BEST FEATURE
Extremely simple to learn and use

WORST FEATURE
Requires you to buy a Mac

The latest version, iMovie HD, is bundled with iLife '05; it adds support for widescreen and high-definition video editing. It also adds a "Magic Movie" function that imports video from your camcorder, adds titles, music from your iTunes library, and transitions, and optionally burns the movie to DVD, all without requiring any input from you. This can be handy for transferring movies to disc quickly, or for starting a movie-editing project.

Sure, you need a Mac to use iMovie, which adds significantly to its cost if you don't already own one. But for easy, nearly painless video editing, you can't beat iMovie HD.

Apple iMovie '05 **\$71 for iLife '05**
System requirements: Mac OS X 10.3.6; 1GHz G4 CPU or faster; 250MB of disk space; 512MB of RAM to import HD video
www.apple.com

Great movies are made in the editing room. Here's how

You've got your footage, your video-editing software, and a couple of two-liter bottles of Diet Coke. It's time to start chopping away at your video to make it as good as it can be.

1 IMPORT THE MOVIE

Your first step is to transfer the movie from your camcorder to your computer. If you've recorded to MiniDV tapes, you'll need a FireWire cable and a FireWire port on your computer, as camcorders don't generally support digital video transfer over USB. Don't have a FireWire port? Use a USB adapter, such as Pinnacle Studio MovieBox (\$180, including Pinnacle Studio 9 software; www.pinnaclesys.com).

If you've recorded to DVD, the process is simpler. Use your camcorder to finalize the DVD, then pop it into your DVD drive on your computer. You should be able to



Importing via FireWire is simple, if slow.

bring the clips directly into your editing software from the disc.

2 DELETE THE BAD OR UNUSABLE CLIPS

Watch the video you've imported. Anything out of focus, too wobbly, overexposed, or underexposed? Send it to oblivion. Consider doing the same with clips that have poor audio, unless you plan on replacing that audio with a separate sound track.

3 CUT THE REMAINING CLIPS DOWN TO THE HIGHLIGHTS

In the remaining clips, you'll still have segments where nothing interesting happens. Trim out the fat on each one

so that all you have left are high-quality, interesting video clips. You may have to drag the clips onto the timeline before you can edit them.

4 REARRANGE THE CLIP SEQUENCE

Now it's time to put the edited clips in order. Switch to thumbnail view and drag the clips around on the timeline until you've got them in the order you want.

5 EDIT CLIPS TO IMPROVE TRANSITIONS AND TO KEEP THE OVERALL TIME SHORT

Take a look at the total time of your edited movie. If you're making a feature film or art-house movie, the length depends on exactly how much boredom you intend to inflict on your victims, er, audience. If you're making a home movie, keep it under five minutes. Any longer than that and the people you show it to will start to feel like prisoners in home movie hell. While you're at it, take a look at the transitions between each clip. Make sure they're clean; you may need to trim a few seconds (or fractions of seconds) from your clips to avoid jarring jumps.

6 ADD TRANSITIONS AND SPECIAL EFFECTS

Now drag transitions and any special effects you want into your movie



Titles that spin in from the middle: Overkill? Nah, not for a sci-fi thriller!



Rearrange the imported clips until your movie makes sense.

timeline. Use transitions sparingly — you don't need to put one between every pair of clips. All you really need are a fade-in at the beginning of your movie and a fade to black at the end. Use cross dissolves or screen wipes between major scenes, or for variety, but only occasionally. Stay away from whirlpools, venetian blinds, and other more-complicated transitions, unless you really want that cheesy 1970s sitcom look.

7 ADD TITLES

Add introductory titles and any subtitles or headings you want your movie to have.

8 ADD A SOUND TRACK

A musical sound track can transform a boring home movie into an entertaining video — if you pick the right music and sync it with your scenes. Add the music last, otherwise any editing changes you make to the movie will leave your music out of sync with scene transitions.

9 BURN THE MOVIE TO DVD

Once your movie is complete, burn it to DVD and show it off! When you're sure that you're done editing, you can delete the video clips from your hard drive to save space. Keep the video-editing software's project file, though, in case you want to reimport the raw video and make changes to your project later.

What to look for when you're shopping for the perfect cam



MEDIA

MiniDV camcorders are still the best choice: They're cheap, deliver great quality, and hold 60 minutes of video apiece. But DVD camcorders are improving, and while an 8cm DVD can hold only 20 minutes of quality video, you can just pop the discs in your computer when you're done recording.

TRIPOD MOUNT

Can you load and unload the tape or DVD while the camera is mounted on a tripod? Many MiniDV camcorders have bottom-loading tape bays, which makes reloading tapes a hassle. If you plan on using a tripod (and you should), get a top-loading camcorder.

LENS

The key to getting good images is good optics. Ignore the digital zoom rating inscribed on the camera — all that matters is optical zoom. 10x is a minimum; 20x is even better.

LCD

The bigger the LCD, the easier it will be to see what you're filming. Most are 2.5 inches (measured diagonally), but the image will be letterboxed when you're shooting in 16:9 widescreen mode, making for a very squished picture — unless your camcorder has a widescreen LCD, that is.

BATTERY

Many camcorders have a large extended battery as an option. Go for it: The added juice is well worth the price. Or, get a second battery and keep it, charged, in your camera bag.

PHOTO BUTTON

This is handy for taking pictures in a pinch — but most camcorders can't compete with digital still cameras. Don't buy a camcorder for its still-image quality.



Canon Elura 90

EXCELLENT IMAGE QUALITY IN AN AFFORDABLE CAMCORDER

Canon's Elura 90's video quality and expandability make it competitive with many more expensive video cameras. It excels at capturing vibrant color in a variety of indoor and outdoor situations. The 20x optical zoom means you'll have no trouble getting your subjects to fill the screen, even from across the street. And the fact that MiniDV's load from the top is especially convenient for tripod users.



BEST FEATURE
Excellent video image quality

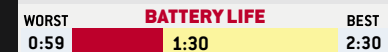
WORST FEATURE Many control buttons can be confusing

Adding to the allure of the Elura is a wide range of compatible accessories. (A wide-angle adapter is included in the box.) It's also got separate microphone and headphone ports, making it easy to use an external mic and monitor the sound at the same time. The only real downside is that the Elura's profusion of buttons can be confusing, so you'll have to spend some time learning how to use all its many features.

Of course, all those features would be moot if this camcorder didn't take decent video. Fortunately, the Elura 90 excels in the quality department, with crisp images and richly saturated colors. The built-in stereo microphone works well too, without picking up any noticeable motor noise from the camcorder itself.

Whether you're an art-film amateur or a new parent with baby movies to make, the Elura 90 fits the bill without breaking the bank.

Canon Elura 90	\$592
Weight: 1.2 pounds	
Size: 5.2 x 3 x 2.6 inches	
Specs: MiniDV recording; 20x optical zoom; 2.4-inch LCD; 1,280 x 960-pixel still images; SD slot	
www.canon.com	



Sony Handycam DCR-DVD403

WIDESCREEN VIDEO FOR YOUR NEXT RAVE

The poor video quality of DVD camcorders usually outweighs the convenience of recording straight to disc. But the Sony DVD403 made us sit up and take notice. It couples remarkably good video quality with an incredibly easy-to-use interface, and the result is an excellent camcorder for home movie recording.

Its touch-screen LCD makes navigating menus easy, although your grubby fingers will smudge the screen. The extended battery kept the DVD403 filming for a near-record two and a half hours — enough to fill five mini DVDs. And the widescreen-proportioned LCD is perfect for your cinematic masterpieces.

One gripe: If you use non-Sony discs, the camera complains whenever you turn it on, delaying the otherwise quick startup by a few seconds.

More seriously, the DVD403's discs are not readable on Macs, and the camcorder lacks a FireWire port, so Apple users should steer clear.

For even better-quality movies, check out the DVD403's widescreen cousin, the Sony DCR-HC90 (\$807), which records to MiniDV tapes. But for convenient DVD recording, it's hard to beat the DVD403.



BEST FEATURE
Intuitive touch-screen LCD

WORST FEATURE
Lacks a FireWire port



Sony Handycam DCR-DVD403	\$790
Weight: 1.4 pounds	
Size: 5.7 x 3.6 x 2.5 inches	
Specs: DVD-RW recording; 10x optical zoom; 2.6-inch widescreen, touch-screen LCD; 2,016 x 1,512-pixel still images	
www.sony.com	

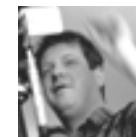


CHOOSE YOUR OWN PALMVENTURE!
Motorola eventually acquires you. You get lost in the bigger company's dysfunctional bureaucracy and eventually fade away. After 20 years, you retire with a decent pension. THE END.

[Starts on page 23]



FYI: Mini DVs are 3.1 inches across and hold 20, 30, or 60 minutes of video, depending on the quality setting you choose. They also make great pocket Frisbees!



by filmmaker
Rick Popko

Everything you need to make great movies

BACKPACK

The LowePro Orion Trekker II (\$61; www.lovepro.com) has a padded compartment for your camcorder and room for other stuff in the top.

MICROPHONE BOOM

A boom will help get your microphone closer to the sound. Either tape your mic to a section of PVC pipe, or buy this \$55 collapsible Gitzo boom on Amazon.com.

EXTERNAL MICROPHONE

Camcorders often spoil their audio tracks with excessive motor noise. The easy cure? An external microphone. The Audio-Technica ATR-55 Shotgun Microphone (\$56 from Amazon.com) is cheap, effective, and can pick up conversations from a hundred feet away.

8.5-INCH CLAMP LAMP WITH FULL-SPECTRUM COMPACT FLUORESCENT BULB

For cheap lighting, buy "natural sunlight" fluorescent bulbs (\$6 apiece) that have a color temperature rating of 5500K, which is close to that of sunlight, and screw them into clamp-on reflector lamps (\$10 each). Buy several, as they're not terribly bright, and set your camcorder's white balance accordingly.

INDEX CARD STORYBOARDS

3 x 5-inch index cards have almost the same shape as a 16:9 video screen. That makes them perfect for pocket storyboarding. A box of 500 costs only \$3!

TRIPOD OR MONOPOD

A cheap, lightweight tripod is plenty for a 2-pound camcorder. If a tripod is too bulky, get this one-legged Vanguard monopod (\$19 from Amazon.com).

LENS FILTERS

A UV filter protects your lens and improves contrast. Keep it on your camcorder at all times, and throw away the lens cap. Opteka makes a three-filter kit for \$25 (www.opteka.com).

LENS CLEANING CLOTH

Dust is your enemy. The \$5 Dust-Off Screen Shammy is your friend.

BLANK MEDIA

Always carry a few spare MiniDV tapes or DVDs.

CAMCORDER

Don't forget to include its charger, an AV cable, and a FireWire cable.

WIDE-ANGLE LENS

Many camcorders' wide-angle settings are still too narrow. An adapter is a must for wide interior shots. This lens is included with the Canon Elura 90.

HOMEMADE STEADY-CAM

A homemade steady-cam looks rough, but it costs just \$14 and will give you moving shots that are smooth as silk. See Steadycam.org for construction details.

If you have a good digital video camera, a computer with a FireWire port, and a decent video editor, then you can make a feature-length movie and get it into your local video store. I know it's possible, because I did it.

My first feature, *Monsturd*, about a murderous poop monster that pops out of people's toilets and kills them, cost a meager \$3,000. My friends and I shot it with a Canon GL-1 MiniDV camcorder and edited it on a 500MHz PC with Adobe Premiere. Our distributor sold 4,000 copies to Blockbuster, and our movie is available on Amazon.com and Netflix, among others. If we could do it, you can too. Just follow these simple tips.



COME UP WITH A CLEVER MOVIE TITLE AND CONCEPT

You can have the worst movie in world, but if it has a marketable title and a crazy concept, a distributor will find a way sell it. Examples of compelling titles: *Curse of the Queerwolf* and *Nudist Colony of the Dead*. Bad titles that not even your mom would watch: *Nebraskan Corn*, *December Snow*, and *The Smell of Lavender*.

WRITE A GOOD SCRIPT

If you have a decent script, you can get away with bad camera work, terrible acting, and poor production values. Just ask John Waters. If you can't write one yourself, buy or option one from someone else — you can find wannabe screenwriters and cheap scripts on indie filmmaking sites like B-Independent.com, Indieclub.com, Roguecinema.com, and Filmthreat.com.

MAKE A GOOD MOVIE

If you can afford it, buy a camera with a 3CCD sensor, which will give you a cleaner, sharper picture. Also, buy a shotgun microphone. Bad audio will get your movie tossed out faster than Jerry Lewis' unfinished Nazi comedy, *The Day the Clown Cried*.

GET THE ACTING RIGHT

With MiniDV tapes costing five bucks



An old Canon GL-1 made this cinematic masterpiece.



apiece, there's no excuse for bad performances. Get the lines right — even if it requires a hundred takes. To find good actors for free, post fliers in the drama department at your local community college.

HAVE A NAME IN YOUR MOVIE

One of the first questions distributors will ask is, "Who's in it?" You don't need Tom Cruise; you can get away with an actor who's last big gig was a small part in *Alf* 15 years ago.

FIND A DISTRIBUTOR

If want to distribute your masterpiece yourself, check out Custom Flix (www.customflix.com). They'll give you space on their website and help with the shipping and transactions. It's up to you to get out there and promote the hell out of it. If you're interested in securing a bigger distributor, then you'll need a copy

of the Hollywood Distributors Directory (www.hcdonline.com) to find distributors who might be interested in your flick.

CREATE ADDITIONAL SELLING POINTS

You need something to help your movie rise to the top of the stack. We did it by renting a movie theater for three days for a "premiere" screening. We sent review copies and press releases to all the local media outlets. When one distributor told us to call back in three months, we said, "What if we've already been written up in the *San Francisco Examiner*?" Suddenly our movie went to the top of his pile.

SIGNING ON THE DOTTED LINE

Get a lawyer's advice before you sign a distribution contract. If you're not careful, you could be signing away all your rights. Be wary.



Tripods? Lights? Gear? Who needs 'em?! We're guerrilla filmmakers!

WHEN DO I GET RICH?

You probably won't. Most people don't make any money at all on their first film, and we're no exception. *Monsturd* has been on the market for three years, and we've been paid a whopping \$895 so far (after the distributor's expenses and percentage). But hey, that just about covers our beer tab while we work on our sequel, *RetarDEAD*.