



## Chapter 5: Video Cameras & Style

A video camera is much more than just a tool to tape special events with. It has an amazing power which nothing else has. A video camera has the ability to capture all of the sights and sounds of a situation exactly as they happen, preserving them so they can be relived at any other point in time. In a sense, they are better than any one person's memory because of their accuracy. That is why video cameras and videotape are used so often. They are used to tape home movies, make commercials, and even as evidence in courtrooms. For example, illegal incidents have been caught on videotape by amateur videographers. Those videotapes have helped to prove cases because of their astounding accuracy. It can be a perfect eyewitness.

Many homes now have camcorders to preserve special moments in family lives. The problem is that most people do not know how to use their camcorder or how to videotape properly. This chapter will outline some of the features found on home video cameras as well as a special section on video style. The chapter concludes with the most common features found on a camcorder and what they do.

### Parts of the Camcorder

Many of the features found on camcorders today are the same. Some manufacturers may have a different name for a specific feature, but the basic functions are consistent. Most differences occur in features that are used by professionals. The key parts are outlined in the next section.

The lens is the part of the camcorder that picks up the image that is being videotaped. Most lenses will have a 50 degree viewing area and have the ability to zoom. Larger lenses can more accurately reproduce colour because they let more light in. This is a key feature to look at when purchasing a camcorder.

### Lens



The two zoom buttons on the camcorder allow the videographer to get closer or further away from a subject. The buttons are labeled "T" for Telephoto and "W" for Wide Angle. By pressing the "T" the camcorder will zoom in. The "W" will zoom out. Many models have variable speed zoom which means the harder you press down on the zoom button, the faster the zoom is. If you press lightly on the button, the zoom will be slower.

### Zoom Buttons



### Production Notes

- Introduction to Video Cameras
- Parts of the Camcorder
- Lens
- Zoom Buttons

### DID YOU KNOW?

*Jerome Lemelson invented the camcorder and tried to patent the idea in the United States in 1977. The patent office thought the idea was too far-fetched and rejected his submission. In 1983, Sony released the Betamovie camcorder, the first one piece consumer video camera.*



# Chapter 5 Video Cameras & Style

The record button, when pressed once, will activate the video heads and start recording. When the button is pressed again the recording is put into pause. You do not have to hold the record button down to keep the camera recording.



**Record Button**

4

The built-in microphone picks up all of the audio for your video. The foam on the outside is there to cut down on the amount of wind noise. Camcorders will also have different types of built-in mikes. The majority of camcorders now have stereo microphones that may even have the ability to zoom in on a particular area. Some camcorders will also have an external microphone jack to plug in a different microphone. When this jack is used, the built-in microphone is deactivated.

**Built-in Microphone**



The viewfinder is where the picture you are videotaping is seen. Most viewfinders are colour now, but some black and white viewfinders still exist. Smaller cameras tend to have smaller viewfinders, making it more difficult to see what is being taped. This may lead to difficulties especially if you frequently use manual focus. That is why the flip-out LCD screen has become standard on camcorders. The user can see a large colour version of what they are videotaping without having to look through the small viewfinder.

**Viewfinder**



### Production Notes

- Record Button
- Built-in Microphone
- Viewfinder
- Tally Light

### DID YOU KNOW?

*One of the first portable camcorders that sat on your shoulder was introduced in 1984 by RCA. It had very few functions on it with no special effects. The picture quality was unacceptable by today's standards. The price tag on this machine was \$2000. A comparably equipped model today would cost around \$400, if you could find so few features!*

The tally light is a red light on the camcorder that turns on when the camcorder is recording. The light goes off when recording is paused. This is helpful to the person standing in front of the camera so they are aware of when the camera is or is not recording.

**Tally Light**





# Chapter 5 Video Cameras & Style

Full size camcorders will have a handle so that they can be carried more easily. The handle will usually contain the accessory shoe. Compact camcorders will have a strap that connects to the camera for transporting.

Handle



one that attaches to the camcorder at a particular spot. Manufacturers have made putting a battery on a camera easier by only allowing it to fit only one way. If you try to put it on the camera any other way, it will not fit.



Battery Compartment

### Production Notes

- Handle
- Power Button
- Battery Compartment
- Accessory Shoe

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The power button activates the power for the camcorder. It is usually located on the top of the camcorder, however compact camcorders could have this button anywhere.



Power Button

The accessory shoe is located on top of the camcorder and it is where video accessories are added. Camcorders only have one shoe, but there is an accessory that will attach to the shoe that will give you additional shoes. This makes it easier to attach a light, an external microphone, and any other equipment you may need.

Accessory Shoe



### DID YOU KNOW?

*The Sony CCD-TR1 8mm camcorder was the first video camera to use a rechargeable Lithium Ion battery (Li-ion). Sony had developed the technology and sent it to mass market in September of 1990, drastically changing how long a video camera could be used for.*

Source:  
[www.sony.net/Fun/SH/1-24/h3.html](http://www.sony.net/Fun/SH/1-24/h3.html)

9

The battery compartment is where the battery attaches to the camera and can be one of two types. The first type is the kind that drops into a slot. The second type is

The special effects that a camcorder may have are clumped in one area for easy



# Chapter 5 Video Cameras & Style

access. These effects may include a titler, strobe, still, gain-up, and digital zoom. Other buttons that are of some use are the date/time, on screen display activation (OSD), manual iris control, and high speed shutter. Special effects on smaller camcorders are usually accessed through a menu system instead of placing the buttons directly on the camcorder body. This is because space on the camera is limited and the buttons would have to be too small for a person to use easily.



**Manual Zoom Lever**

**Production Notes**

- Effects and Other Buttons
- Manual Zoom Lever
- Infra-red Window
- Flip-Out LCD Screen



**Effects & Other Buttons**

The infra-red window is where the camcorder senses how far away a subject is from the lens. The information gathered from this spot is used to control the automatic functions of the camera.

**Infra-red Window**



### DID YOU KNOW?

Sharp introduced the Viewcam in November of 1992, the first camcorder that used an LCD screen. This allowed the user to see everything that was being recorded without looking through the viewfinder. LCD's are now standard equipment on all camcorders.

Source: [www.sharp-world.com/corporate/rd/tj1/pdf/3.pdf](http://www.sharp-world.com/corporate/rd/tj1/pdf/3.pdf)

The manual zoom lever is located on the lens and allows you to manually control the speed of a zoom. Also located on this lever is a coloured button labeled "Macro" which activates the macro focus function. This is used to focus on a subject that is only a few centimetres or inches away from the lens. To use this function, press in the small button and adjust the lever until everything is in focus. Small camcorders typically do not have this lever. The user must rely on the power zoom to perform any zooming functions. The macro focus function is automatically activated when an object is placed close to the camera lens. It may take a few seconds to kick in, but it will eventually happen.

### 4 F D

The LCD screen started to appear on camcorders in the late 90's and is now standard. The screen acts as a large viewfinder, showing you exactly what you are videotaping in full colour. Screen sizes usually range from 2.5 to 3.5 inches in size. These screens quickly consume battery power and can cut your videotaping time in half. In other words, when the screen is used, a 2 hour battery will last only 1 hour.



**Flip-Out LCD Screen**



# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting

## Diagram of a Common S-VHS Video Camera





# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

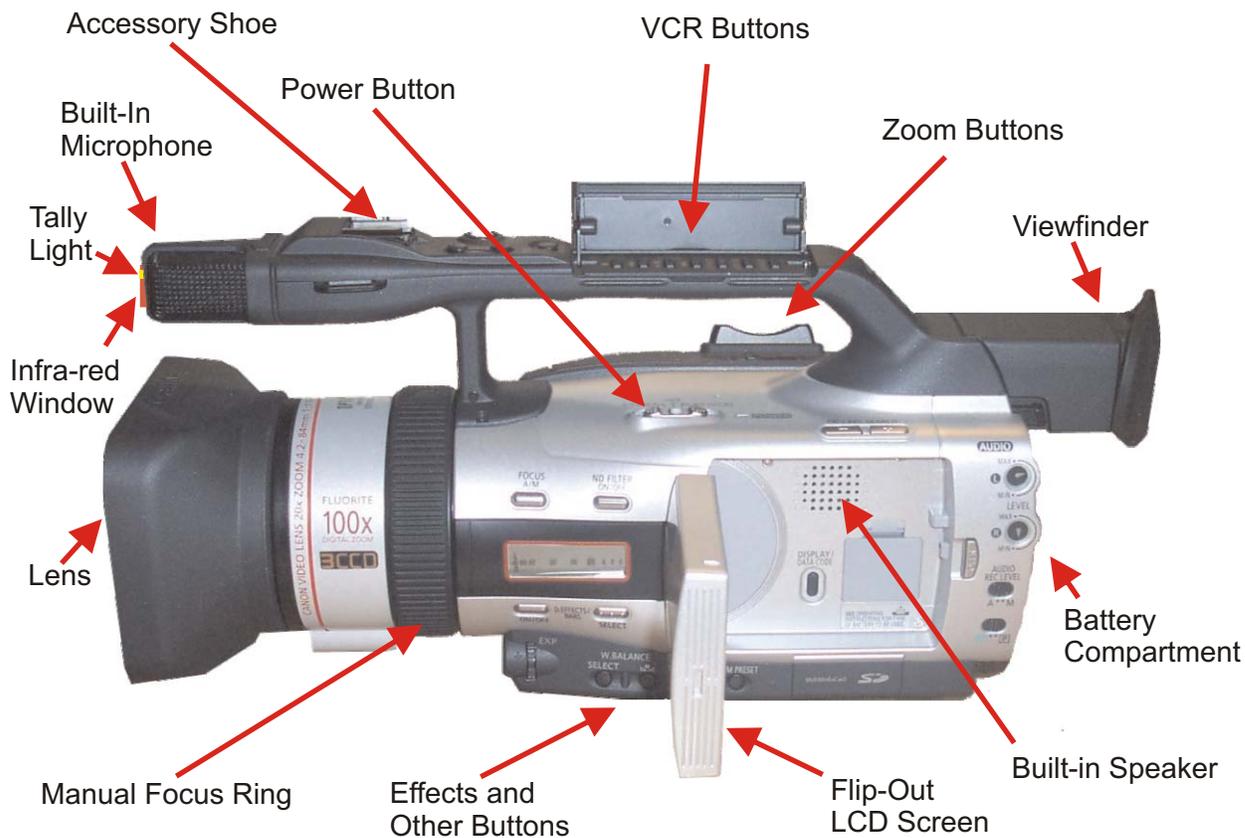
Features

Angles & Shots

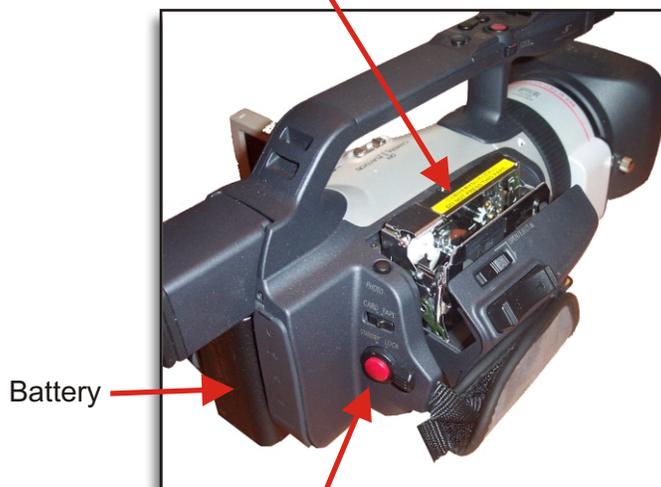
Camera Movements

Lighting

Diagram of a Mini-DV Video Camera



Tape Compartment





# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting



## Video Camera Accessories

There are many different types of lenses that can be used with video cameras. The two most common are the wide angle lens and the telephoto lens. These lenses can be very useful to videographers as they extend the normal range of video cameras.

The lens on a camcorder will cover a 50 degree angle view. Therefore, any lens over the 50 degree number is considered to be a wide angle lens because it extends our viewing area further than usual. Any lens under 50 degrees is a telephoto lens since it restricts our view to a small area.

Manufacturers of video camera lenses have made it difficult to distinguish between these two types of lenses. The numbering system they use is the opposite of what you might think. The lower numbers signify wide angle lenses while the higher numbers are telephoto lenses. For example, the normal focal length for an 8mm camcorder is 10mm. This is the 50 degree angle. A typical telephoto lens has a focal length of 45mm or 15 degrees. Wide angle lenses average around 4mm or 90 degrees. Lower numbers are wide angle lenses while higher numbers are telephoto lenses.

There are benefits and drawbacks to each type of lens. The wide angle lens offers a larger view to add a more dramatic effect to your video. It can also be useful in tight areas to capture everything that your regular lens may not be able to. The major drawbacks of wide angles lenses are that they can distort images at the corners of your picture and your camcorder will not be able to use the auto focus function properly.

The telephoto lens has the advantage of

bringing a distant subject closer to see more detail. The disadvantages are more dramatic. When you use a telephoto lens, the audio from the subject you are videotaping will be inaudible. That is fine if the audio has no bearing on the picture. Also, when a camera is zoomed in using a telephoto lens without a tripod, the picture will be very difficult to keep steady. The further you zoom in, the more jitter there will be in your picture. This also holds true for the built in telephoto lens on every video camera.

Remember to always choose your lenses wisely.

The sound on your video is just as important as the video picture itself. Most camcorder microphones are not very clear and cannot filter out background sounds. When you videotape someone in a very loud room, you cannot isolate what they are saying. The microphone will pickup every sound in that room. That is why external microphones are becoming a popular accessory.

There are a few types of microphones that can be attached to your camcorder. A wireless microphone is the most ideal type if you plan on isolating the speech of one particular person. The transmitter is worn by the subject and a lapel mike is usually clipped onto a collar or somewhere on their shirt. Some wireless mikes will also come with a regular handheld mike that can also be plugged into the transmitter. The receiver is attached to the accessory shoe of the camcorder. The receiver will also have a

### Production Notes

- Video Camera Accessories
- Lenses
- Microphones



A wireless microphone with the receiver (above) and transmitter (below)





# Chapter 5 Video Cameras & Style

Camcorder Parts

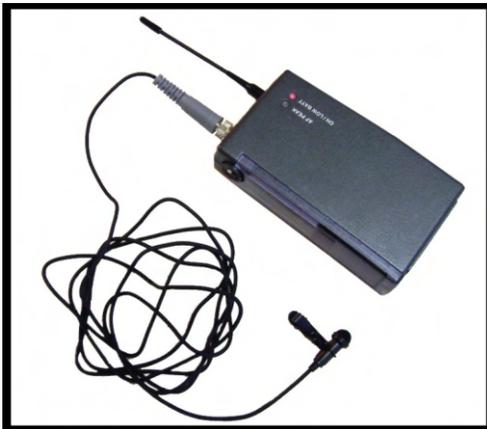
Accessories

Features

Angles & Shots

Camera Movements

Lighting



*A wireless microphone for camcorders*

plug on it that will fit into the external microphone port on your camcorder. The sound will be transmitted wirelessly from the subject, to the camcorder with perfect clarity. Be sure that the subject doesn't wander too far from the camera because wireless mikes can have their transmission path blocked by concrete walls.

Zoom microphones also have the ability to isolate one person talking but are not as accurate as a wireless microphone. The zoom mike will enhance the sound coming from whatever it is pointed at. If the camera pans away from the subject, they will not be heard.

Wired handheld microphones are like the ones reporters use when they are covering a story. These are very good as well because they isolate just the person that is talking into the microphone. The mike can also be passed from one person to another or pointed at another subject close by. It is more versatile than the wireless mike but has the limitation of only traveling as far as the cord can reach.

Be aware that most microphones that are attached to a video camera through the external microphone port are usually mono

and not stereo. This means that the sound you record will only come out one channel (usually the left). If you are editing on a computer system, you will have to double that track in order for it to be heard on both TV speakers.

To capture great colour with your video camera, you either need to shoot outdoors or flood an area with light. The lux rating on your camcorder will lead you to believe that it can see in the dark. As you may have discovered, this is not the case unless you have some sort of night vision effect. When light levels get low the picture starts to get grainy. That is why one of the most popular accessories for camcorders are lights.

Some camcorders come with a light built-in or as an accessory. Whatever the case may be, these lights are not very powerful. They are great for videotaping subjects that are close by but anything past 5 feet will still be grainy. The average light on a camcorder may be 5 watts at the most providing little illumination. They are so low because they use the camcorder's battery as a power source. Each time you turn the light on, the camcorder's videotaping time decreases dramatically. A 2 hour battery will only last for about 20 minutes if the light is constantly used. That is why external lights are recommended.

External lights are powered by one of two sources: a battery or a wall outlet. Wireless video lights are more practical to use for the average person. There are no cords for people to trip on or to restrict your movement. These lights come with either preset settings or adjustable settings.

## Production Notes

- Microphones
- Wireless Microphones
- Video Lights



*A video light that uses power from the camcorder*



*A video light that plugs into a standard wall socket*



*A video light that uses a separate camcorder battery for power*



# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting

The best lights to use are those that are adjustable. A typical light may have three settings on it: 10 watts, 20 watts, and 30 watts. This allows you to select the right amount of light for each situation. Beware of lights that automatically adjust to lighting conditions. These lights tend to cause a strobe effect as they try to adjust for people walking in front of the light or someone wearing lighter or darker clothing.

Wireless video lights typically use camcorder batteries as their power source. This can be very handy. If you do not need your light for a particular video shoot, you now have an extra battery to power your camcorder!

When more light is needed, wireless video lights will not suffice. You will have to use a corded light. An ideal wired light is around 150 watts. This power seems to provide a good amount of light giving you great colour. Lights higher than this power level can be very blinding and obtrusive.



## Common Video Camera Terms and Features

v

You may be wondering what the term lux means. Lux is a term used in video which means candlelight. To obtain a clear picture, a camera must have light. The lux level relates to the number of candles necessary for the camcorder to obtain a clear picture. The Panasonic AG455 video camera needs only the light from three candles for a clear picture. Some camcorders claim that their lux levels are one lux and even 0 lux. This is usually achieved through a digital process which will likely have adverse effects on the picture.

The Quasar VM37 had a 5 lux rating but could go down to 1 lux with gain-up on. The problem was that gain-up was digital. The picture had a delay effect to it that made people look like they were walking in slow motion. It is a good effect but not appropriate for shooting in low light situations.

Horizontal resolution is the number of lines a format will put on your television set. Each picture is made up of these lines. A television in North America has 525 lines. The more lines, the better the picture. A regular VHS tape will put 230 lines on your screen. An S-VHS videotape connected to your television using the S-Video cable will give you just over 400 lines. Mini-DV and Digital 8 give you 500 lines of resolution.

## Production Notes

- External Lights
- Common Video Camera Terms and Features
- Lux Level
- Resolution



## DID YOU KNOW?

*Standard Definition (SDTV) has 480 lines of resolution. High Definition (HDTV) has 720 or 1080 lines of resolution. The newest camcorders on the market can record at the HDTV resolution giving the picture an extremely high quality look.*

Source:  
[www.hdtvinfoport.com/HDTV-Resolution.html](http://www.hdtvinfoport.com/HDTV-Resolution.html)



# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting

## *D (D)*

The viewfinder or LCD screen is the place where the user sees exactly what is being recorded by the camcorder. What you are looking at is a small television set. The viewfinder or screen can also give you helpful information. When the OSD button is pressed on the side of the camcorder, the On Screen Display is activated. This will give you such information as the counter position, amount of battery power, and other readouts. We will review each one so that no message will be foreign to you when it appears.

One of the most important readings is the battery power level. This may appear as a series of bars or a battery icon that slowly appears less full. To sustain battery life, do not use the power features or digital effects very often. They consume power very rapidly and may result in the battery losing its charge quickly. This also applies to the LCD screen which will drain power very fast.

Another readout found in the viewfinder is the counter. It is sometimes set to count in a four digit mode where you will see 0000 as the counter start point. Most cameras use a real-time counter that will give you the amount of tape you've used in hours, minutes and seconds.

When the Date/Time is active, you will notice that these two readings are displayed in one of the corners of the viewfinder or screen. Remember, these are the only two on-screen displays which are recorded onto the actual videotape. If you plan on editing, do not use this function as it will be annoying later on to see the date and time keep changing on the screen. It cannot be removed.

Other readings that may appear are the Shutter Speed, Manual Focus indicator, and Digital Zoom. The shutter speed is always a fraction of a second. For example,  $1/100 = 1/100\text{th}$  of a second. The shutter speed for most camcorders begins at  $1/60$  and goes up from there. Manual focus is indicated by an icon that may read "MF" which tells you that you are currently using manual focus as opposed to automatic. The digital zoom reading may say "D.ZOOM" and could have multiple levels to it.

For more explanations on viewfinder readouts, see the manual that came with the camcorder. There are many readings that can be viewed. Take advantage of this information. It can save your video.

## *W (W)*

White Balancing the camera means that you are telling the camcorder what the colour white looks like under a particular type of light. From this setting, the camcorder can adjust all of the other colours to give accurate reproduction. This is especially important when shooting outside on a sunny day or in a room where both

### Production Notes

- On Screen Display (OSD)
- White Balance



*Not White Balanced*



*White Balanced*

Photo courtesy of  
Panasonic Canada





# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting

sunlight and artificial light are present. On sunny days, the camera will have a problem shooting into shady areas. It tends to make white objects look blue in the shaded spot.

Therefore, if you white balance on a white object in the shaded area, your colours will look better. The same applies for a room with two types of light. If you are unsure about the situation, white balance the camera. That way you will always get exactly the right setting. Always remember to change your white balance though every time you move to a new spot.

Most camcorders will have preset white balance settings. For shooting indoors, there are usually 2 settings: one for fluorescent lights and the other for incandescent lights (bulbs). For shooting outdoors there may be a setting for bright sunlight and another for cloudy days. Make sure you choose the right one because it will alter the colouring of your picture.

*F*

The manual focus button puts the camcorder into manual focus mode. Since most videographers do not use auto focus due to its inconsistency, this is a very important and useful feature. When manual focus is activated, you turn the focus ring located on the lens of the camcorder or the dial near the lens to adjust the focus. To let the camera do the work for you, simply disengage the manual focus.

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The "Iris" allows the user to open and close the iris, therefore adjusting the amount of light that is entering through the camera lens. This may be necessary when shooting

in a theatre that is dark but uses a spotlight. Closing the shutter to the F 2.0 or F 2.4 level can usually cure any washed out pictures that may appear.

The regular shutter speed for the camcorder is 1/60. If you are videotaping high action sports, you may want to increase the shutter speed to capture the action more clearly. The highest shutter speed has the ability to tape an airplane propeller very clearly. When the image is paused, you will actually be able to see the propeller rather than a big blur.

*N*

This is becoming a very popular feature on camcorders. The effect enables you to videotape in the dark. The resulting picture will not be in colour. It will be monotone with a green colouring. The effect usually appears like a spotlight as well. This feature is great as an effect but should not be used extensively as it can be distracting at times.

## Production Notes

- White Balance cont.
- Manual Focus
- Iris/Shutter Speed
- Night Vision



*The Night Vision effect*





# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting



D

Most camcorders have some interesting special effects which can make editing much easier and faster. If you know what effect you want to use for a particular shot, it may be easier to use it "in-camera" and then insert it into your final video as is. This will avoid the need for any special effects generators or a complicated computer system. A good rule to follow is to make sure that you shoot the scene with and without the effect. You may decide later on that the effect is not appropriate, so having a backup is always a good idea.

If you want to take a snapshot of a particular person or scene, this feature can be very useful. It allows the user to freeze a scene and record it to tape. Keep in mind that these still shots will be in video resolution and not nearly as high a quality as digital still cameras. If you try to print this still shot, it will be very small. Video cameras are not meant to be still cameras so don't treat them as such. The still feature is great for adding titles over top in the editing process but has no practical use for graphic design purposes. The pictures will most likely be very grainy and pixilated.

The most overused effect in the history of amateur videomaking is the strobe feature. What the strobe effect does is freeze a picture for a fraction of a second before freezing another one. Most strobes will give you between 5 and 15 still shots per second. This staggering of pictures gives a feeling of disorientation and is popular with young viewers.

D

Digital Zoom allows the user to zoom in much closer to an object than the optical zoom will. Cameras are advertised and promoted as having 100x digital zoom or even up to 720x. This sounds like an amazing feature but in reality it is not that functional or practical.

The digital zoom is very pixilated at the highest powers of magnification. This makes the picture virtually unusable. Most camcorders get pixilated pictures around the 20x digital zoom level. Also, to keep the picture steady while zoomed in 100X is impossible without using a tripod. Look for camcorders that have a high optical zoom level as the pictures recorded at the highest levels of zoom will still be perfectly clear.

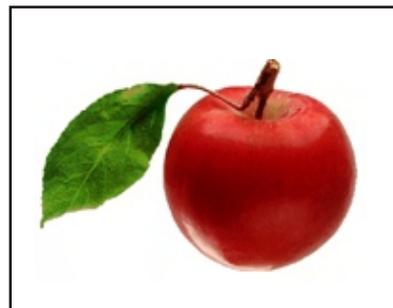
( )

The Tracer function is one of those special effects that is hard to describe. It is easiest to activate it and see what it does. In short, it gives an after-image or trail to the objects that are moving in the picture. The Tracer effect is good for showing speed or even in flashback or dream sequences. It lets the viewer know that something different is going on.

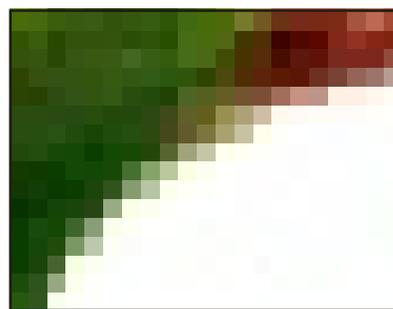
This effect is easier to use as you are taping than to add a similar effect in editing. But remember, after you use the effect, tape the scene once more without the effect activated. You may find that you do not like it later and the scene may not be repeatable. This general rule applies for any time that you use a special effect.

## Production Notes

- Digital Special Effects
- Still Shot
- Strobe
- Digital Zoom
- Tracer



An object at 12x zoom



An object at 100x zoom



An object at 720x zoom



# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting

W

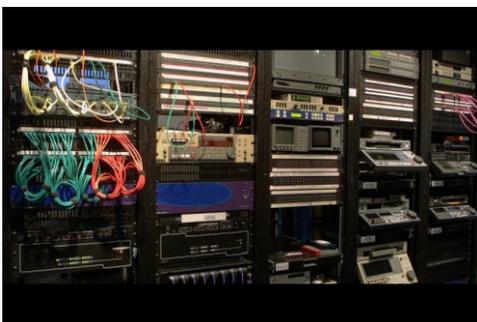
These special effects let you record your video with an old fashioned look to it (Sepia) or with absolutely no colour at all (Black & White). These are great to use if you are sure this is how you want the scene recorded. If you aren't sure, record in colour and use a computer later on to adjust the picture the way you want it.

*The Sepia Tone colouring*



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Many camcorders now allow the user to record in widescreen mode like feature films. On a standard TV set, the picture will appear with black bars at the top and bottom of the picture. If you are fortunate enough to own a widescreen TV, no bars will appear.



Gain-up is one of the more peculiar effects on video cameras. The original intent of this effect was to boost the signal of the video picture in low lighting situations. Instead, it has evolved into a special effect that has some interesting applications. This effect has been described in many different ways. Some people say that it makes video look like film, others say that it looks like people are moving in slow motion. Either way, the effect is very useful and when used creatively it can give some great effects that are not possible in the editing process.

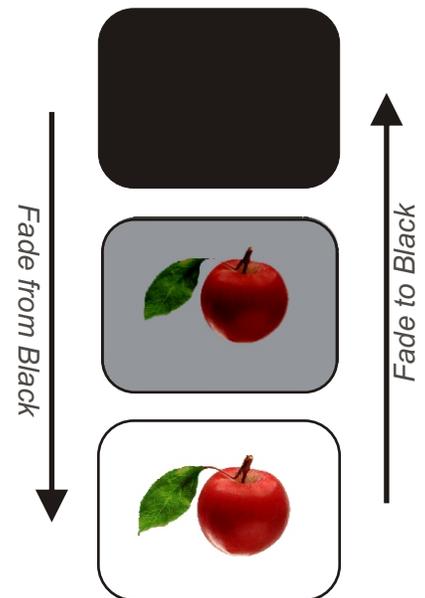
F

The Fade function is used to show the passing of time or as a transition from one scene to another. You can fade from black or fade to black. Fading from black is when you start with a black screen and the picture gradually becomes visible. Fading to black is exactly the opposite. The picture will gradually go dark until it gets completely black.

On most camcorders to fade from black, press and hold the fade button until the picture is black. Start recording and let go of the fade button (don't forget the camera pre-roll time). The picture will fade in over 3 seconds. Fading to black is even easier. While recording, press and hold the fade button. The picture will go dark until it reaches pure black. At this point, stop recording, and release the fade button. It's that easy! Only used the in-camera fade if you don't have the ability to edit your video.

## Production Notes

- Sepia Tone, Black & White
- 16:9
- Gain-Up
- Fade





# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting



## What Features Are Needed?

The answer to this question depends on how you are using your final video. If it is just being viewed at home with no editing, you may want a few special effects to insert into your video. They can add interest if they are not overused. If you are planning on editing, then special effects are not needed. This can reduce the overall cost of your camera by hundreds of dollars. A basic digital video camera will do the trick. That will cost about \$300 compared to the over \$500 you will spend to get special effects.

Larger LCD screens are worth investing in. Most standard screen sizes are 2.5, 3.0, and 3.5 inches. The bigger screen is nice to have but will cost more.

An external microphone port is also handy. Recently, Panasonic took this feature off of their introductory models and re-introduced it when negative feedback was received about this. Most Canon, JVC, and Sony cameras still have them on their base models.

Manual controls are always nice to have. Professionals use manual focus all the time since automatic focus is unreliable. Try to find a camera with a manual focus ring on the lens as opposed to a dial located elsewhere on the camera.

Look for a camcorder with a larger lens. Larger lenses give better overall picture quality than the smaller lenses.

*WF?*

The eternal question that plagues all consumers buying a video camera. The answer depends on personal preferences and past performance. The format currently

dominating the market is Mini-DV. There have been numerous formats introduced to compete against Mini-DV such as Digital 8, MicroMV, DVD, and hard drive based cameras. Digital 8 and MicroMV have virtually disappeared now and DVD is the latest “fad” format. Hard drive based cameras are worthwhile but are not very practical for school use since video footage will remain on the drive while other classes use the camera. Stick with Mini-DV as it has weathered the storm and has become a standard.

Mini-DV will record for 60 minutes on a standard tape at the highest quality setting. If you put it in LP mode, it will go to 90 minutes. There is an 80 minute tape available that extends to 120 minutes in LP mode but the higher cost of the tape for an extra 20 minutes isn't worth it unless you need the time. The tape is small and will cost about \$4 per tape for Maxell or TDK brands. The tape does not play in your VCR but that is standard with other formats on the market.

Digital 8 uses Hi-8 videotapes to record onto. That means that the camera can record in either Hi-8 mode or Digital 8 mode. In Hi-8 mode, 120 minutes can be recorded at a resolution of 400 lines. In Digital 8 mode, 60 minutes can be recorded at a resolution of 500 lines. The camera can also playback 8mm tapes. So, if you have a collection of old 8mm or Hi-8 tapes, this format would be a logical choice for you. You can continue to playback your old tapes without having to keep the old camera or transfer them to Mini-DV. Tapes will cost about \$5-8 each. Digital 8 cameras are hard to find now with very few models.

## Production Notes

- What Features Are Needed?
- Which Format
- Mini-DV vs. Digital 8

*Mini-DV, VHS-C and 8mm videotapes*





# Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting



## Video Style

A camcorder can be very easy to use but one of the biggest problems in video is knowing how to use the camera properly and effectively. The goal of most videos is to preserve a moment in time. The problem occurs when that moment in time is played back on your television set for your friends and the camera work is so bad that everyone gets seasick from watching it. This sounds very funny but the fact is that it happens all of the time. People can run a camera but not in an effective manner. So how is that problem resolved? Learning video style.

Good video style is something that is learned through practice. If you find something that looks good, remember it, and apply it in the future. Eventually you will have a collection of good shots that, when put together, will display good video style.

There are a few hints though that will help cut down on your experimentation and discovery time. Varying the types of shots and angles that are used in a video can turn an ordinary video into an extraordinary production. So take the time to learn the next few sections.

There are three types of angles used in video: High, Normal, and Low.

The High Angle is shot from above the subject with the camera looking down. The effect of this angle is that people or objects appear small. There is a feeling of dominance and a sense of power from the point of view of the camera.

The Normal Angle is the angle of everyday viewing. The camera is positioned

at eye level and shoots exactly what a person would see. This angle is very comfortable since it is the one that all of us are accustomed to. Most shots in a video are from this angle.

The Low Angle is a very dramatic effect when used properly. It makes objects look larger than life. The object or person in the view of the camera is being dominated.

Experiment with the different types of angles to see what types of emotions they convey. Do not be afraid to change the angle of everyday viewing. Sometimes it is just too boring. A good hint to remember is this: look through the viewfinder like a photographer would. Set up your shots keeping in mind not only your subject but what is contained in the background.

### Production Notes

- Video Style
- High Angle
- Normal Angle
- Low Angle

*High Angle Shot*



*Normal Angle Shot*



*Low Angle Shot*





# Chapter 5 Video Cameras & Style

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There are seven different types of shots that are used as reference points for video. Each shot is given a name and a short form for quick reference during storyboarding and in the production stage.

### 1. Extreme Long Shot (XLS)

The Extreme Long Shot is used to show a large area or landscape. Sometimes shots of people in a large crowd can also be considered as an XLS. It is the most impersonal shot possible in video. This is because it would be hard to see any reactions or emotion from people in the shot since they are too far away. An example of an XLS would be a shot of a school.



### 2. Long Shot (LS)

The Long Shot is a closer shot than an XLS and would contain a person's entire body from the top of their head to the bottom of their feet.



### 3. Medium Long Shot (MLS)

A Medium Long Shot would contain a person from their knees to the top of the head.



### 4. Medium Shot (MS)

A Medium Shot is considered to be what a person would see if they were standing and talking to another person. It is the most comfortable view and is used the most in productions. The shot contains a person from the waist to the top of the head.



### 5. Medium Close-Up (MCU)

The Medium Close-Up is often referred to as a head and shoulders shot. The reason for this is because it contains a person's head and shoulders completely.



### Production Notes

- Types of Shots
- Extreme Long Shot (XLS)
- Long Shot (LS)
- Medium Long Shot (MLS)
- Medium Shot (MS)
- Medium Close-Up (MCU)

### DID YOU KNOW?

*One of the most interesting movies to watch the angles in is Citizen Kane. It is considered to be one of the greatest movies ever made. The movie had so many different types of angles that, at times, it was confusing, but the overall effect was tremendous. If you get a chance, watch the movie because there is definitely a distinct style in it.*



# Chapter 5 Video Cameras & Style

## 6. Close-Up (CU)

A Close-Up is used to show emotion on the subject's face. It is slightly closer than the MCU with just the top of the shoulders visible.



## 7. Extreme Close-Up (XCU)

The Extreme Close-Up is the most personal of all video shots. It can show emotion very clearly. It contains the entire face of the subject. This shot does have the tendency to make the viewer feel uncomfortable because it is very close.



Very rarely in a video do you see the camera stay still for every single shot. There is usually some type of movement in every scene. If there was no movement at all, the scene would be boring to watch. Good camera movements add interest, can evoke emotion, and also give the viewer a better sense of what is in the scene.

There are eight types of camera movements that can be done with a standard video camera, tripod, and dolly.

### 1. Pan

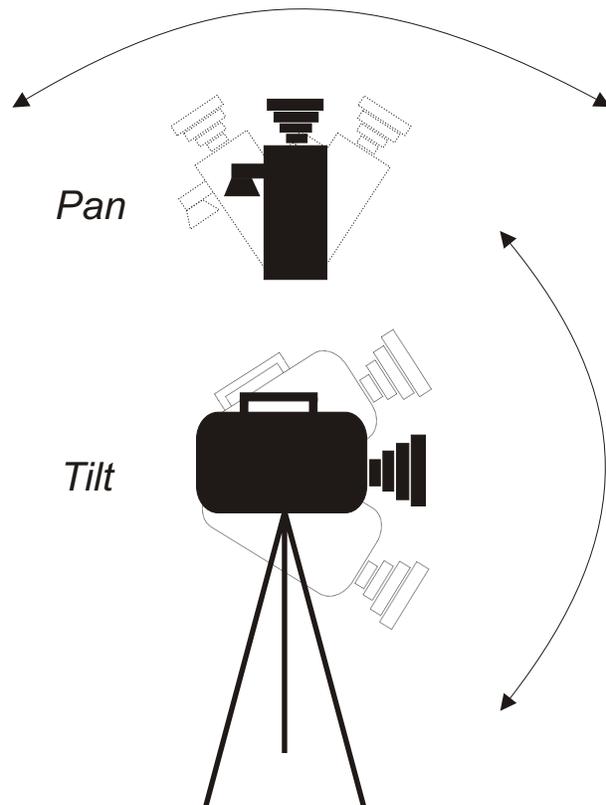
A pan is a camera movement where the tripod or operator stays stationary in one place and the camcorder is turned from left to right or right to left. Pans are used to give the viewer a sense of what is contained within a scene. Since a camcorder does not have as wide a view as the human eye does, pans are sometimes necessary to get everything into the picture.

### 2. Tilt

A tilt also has a stationary base but the camera is gradually moved from top to bottom or bottom to top.

**Production Notes**

- Close-Up (CU)
- Extreme Close-Up (XCU)
- Camera Movements
- Pan
- Tilt
- Diagram of a Pan
- Diagram of a Tilt





# Chapter 5 Video Cameras & Style

Again, a tilt has the same effect as a pan does. It allows the viewer to see more objects that are in a scene. However, a tilt can also convey a sense of mystery. By starting a tilt at a person's feet, the viewer will wonder who the person is the entire time the camera is moving upwards. The curiosity is fulfilled when the camera reaches the face. The same applies for a tilt in the opposite direction.

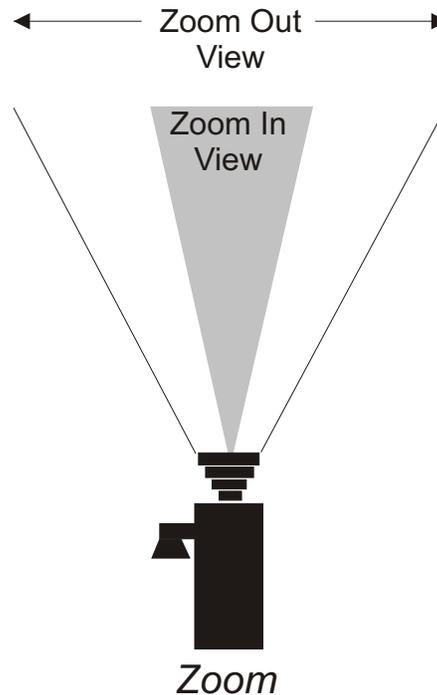
### 3. Zoom

A zoom is the gradual narrowing of the camera's view from a stationary location. The zoom function on a video camera is one of the most popular functions. People tend to use it so much because it is an easy way to get close to a subject without moving. The problem arises when the camcorder is zoomed to the maximum level and the operator has a hard time keeping it steady.

There should always be a purpose to your zoom. Operators tend to use it just because it is there. When you perform a zoom, do not stop it part way only to start it again in a few seconds. If at all possible, stop the camera first, change your angle, zoom in, and then start recording again. This effect will look much better. If you have to zoom, use a tripod to keep it steady.

If your camcorder has a manual zoom lever, try it out with different special effects. Manual zooms at high speeds will give some great special effects when combined with strobe and digital gain-up functions. This type of experimenting may give you a valid reason for using a zoom.

Whenever you are tempted to zoom in on your subject instead of walking up to it and getting the shot, think twice.



**Production Notes**

- Zoom
- Dolly
- Truck
- Diagram of a Zoom
- Diagram of a Dolly

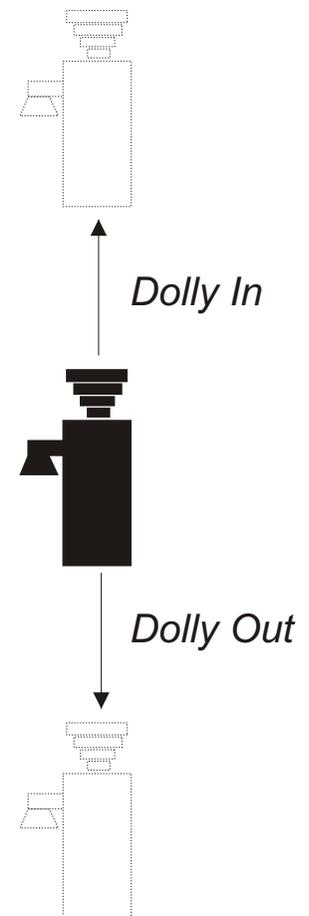
### 4. Dolly

A dolly is the physical movement of the camera towards or away from a subject. A dolly does not use the zoom function. The camera is actually moved by either walking with it or pushing it along the ground or floor (the name "dolly" also refers to the wheel attachment for tripods).

To "dolly in" means that the camera is getting closer to the subject. A dolly out is moving the camera further away. This effect combined with arcing is frequently used in shows aimed at a younger audience. MTV, VH1 and Much Music use dollying and arcing in their programs quite frequently.

### 5. Truck

A truck is the physical movement of the camera from left to right or right to left. Like the dolly, a truck actually involves the



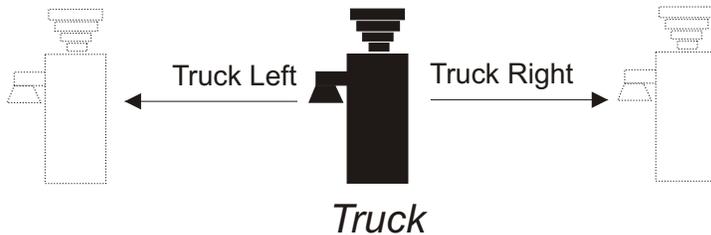


# Chapter 5 Video Cameras & Style

camera moving. This type of movement is used most often when following a person or object. For example, two people are talking while walking along a sidewalk. When the camera moves with the people, this is a truck.

In high budget professional projects, trucks are done along tracks or from moving vehicles to make sure that the picture has no jumps or jitters in it. For the average videographer, a truck will utilize a tripod and the hardware known as a dolly to obtain a steady picture. Be sure to perform this only on smooth surfaces with no unexpected bumps.

A truck left moves the camera from its current position to a new position to its left side. A truck right moves the camera to the right.



6. Arc

An arc is the physical movement of the camera left or right while always keeping the subject in the middle of the picture. A continuous arc would eventually end up back at the starting point. The camera will have made a complete 360 degree circle around the subject.

As mentioned before, this type of camera movement is used in programs aimed at the younger generation, namely teenagers. It is a modern technique that appeals to the younger viewer. Be careful when using the arc with a dolly. If your target audience is comprised of adults, they may find this movement bothersome.

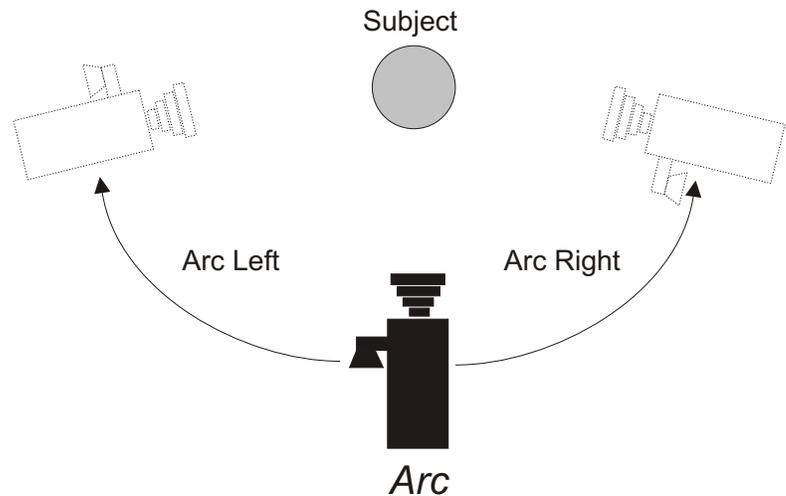
## 7. Pedestal

A pedestal is the movement of the camera up or down from a fixed position usually while using a tripod. This type of movement is very easy to do with a tripod since they have a crank on them to perform this exact function.

A modified form of a pedestal is often used in movies when the scene starts out over top of a house or neighbourhood and lowers itself to street level. Feature films use a device called a jib to ensure a smooth movement.

**Production Notes**

- Diagram of a Truck
- Arc
- Pedestal
- Diagram of a Pedestal
- Diagram of an Arc





## Chapter 5 Video Cameras & Style

Camcorder Parts

Accessories

Features

Angles & Shots

Camera Movements

Lighting



### Lighting

We've seen on television amazing cameras that have the ability to see in the dark. The picture may be a strange colour but at least there is a picture to view. We then rush to our camcorder manuals to find out if our camera can do the same thing. The manual says that your camera can give you a clear picture at the 1 lux light level. You think to yourself

"Wow, I only need the light from 1 candle to get a clear picture!" You rush around the room shutting off all of the lights, get out a candle, and get your camera set up.

Now that you are armed with your new found knowledge your videos are going to look great! You start taping everything around the room. You can't see anything in the viewfinder but your manual says you will get a clear picture so the camera must be picking up something, right?

Wrong! When the tape is played on a TV, there is either a faint grainy picture or complete darkness. But your manual said it would work! What happened?

The answer to this question is simple. Camcorders need light. If there is not enough light, forget it. A grainy original picture looks bad, and will look even worse if you do any fixing in editing. So how do you avoid this problem? You have to know how your camcorder performs under certain lighting conditions. The manual may give a lux rating that looks great on paper but has no validity in practice. Since every company

has a different method of measuring the lux level of their camcorders you will have to do some experimenting on your own.

To test how well your camcorder will perform, go into a dark room and gradually lower the light levels. At each level record a small section of video and describe the light level so you will know what you did when you watch the tape back. While watching the tape, look at the picture and see at what level your camcorder starts to get a grainy picture. You'll know it when you see it. Once you know how much light you need to get a clear picture, you will be a better judge of how much light you will need to add to a particular scene.

Adding light is not difficult.

We've already talked about camera accessories and lights you can mount on your camera. Now let's talk about lighting a scene.

Every movie and television show always looks great. The picture is perfect, the colours are vibrant, there are no shadows, and the edges are well defined and crisp. How do they do it? Many lights positioned in just the right spot.

The basics of lighting a scene is very simple. With just three lights, you can get your pictures to turn out as good as the pros...well almost. Video still isn't as high quality as film but you can certainly improve the picture tremendously.



### Production Notes

- Lighting
- Testing Your Video Camera in Different Lighting Situations
- Lighting a Scene



# Chapter 5 Video Cameras & Style



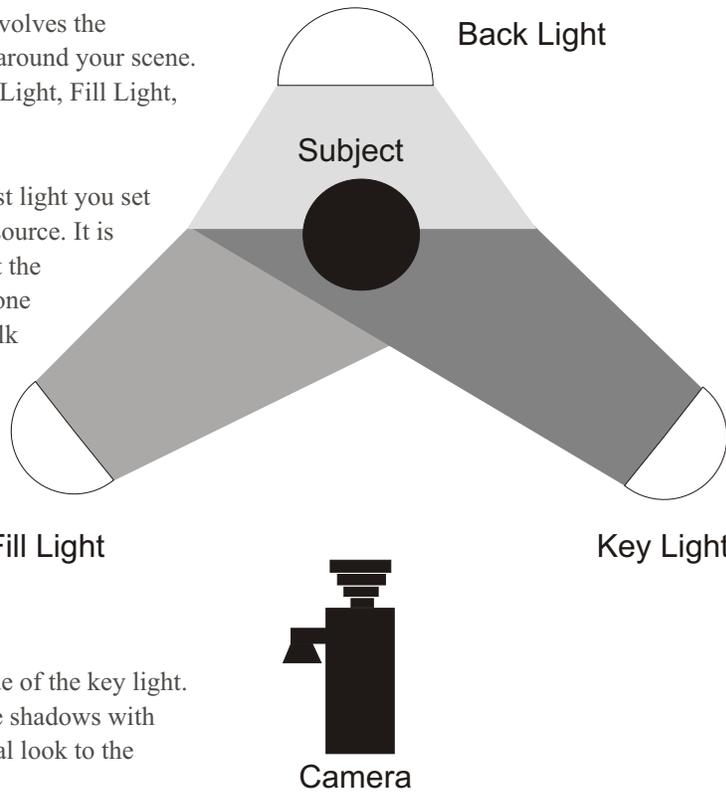
Three point lighting involves the placement of three lights around your scene. The lights are called Key Light, Fill Light, and Back Light.

The key light is the first light you set up and is the major light source. It is usually pointed directly at the scene and it is located to one side of the subject. In a talk show or news setting, the light should be positioned just above the top of the subject's head.

The fill light is not as powerful as the key light and is placed on the opposite side of the key light. Its purpose is to fill in the shadows with light to give a more natural look to the overall scene.

The back light is placed behind the subject at about the same height as the key light. Be careful that the back light does not light up the subject's entire head. Ideally it should not cast any light onto the front of the subject. This light adds depth to the picture and separates the foreground from the background. In a sense, you are turning the picture into a three dimensional view from a two dimensional one.

Knowing and applying these basic lighting skills will dramatically improve your video productions. It is the easiest and most dramatic change you can make to the way you shoot your videos. A clear picture looks more professional, shows the viewer that you know what you are doing, and takes away the amateur look that usually accompanies videos shot on video cameras. Camcorders and studio cameras love light, so give it to them.



**Production Notes**

- Key Light
- Back Light
- Fill Light
- Three Point Lighting

