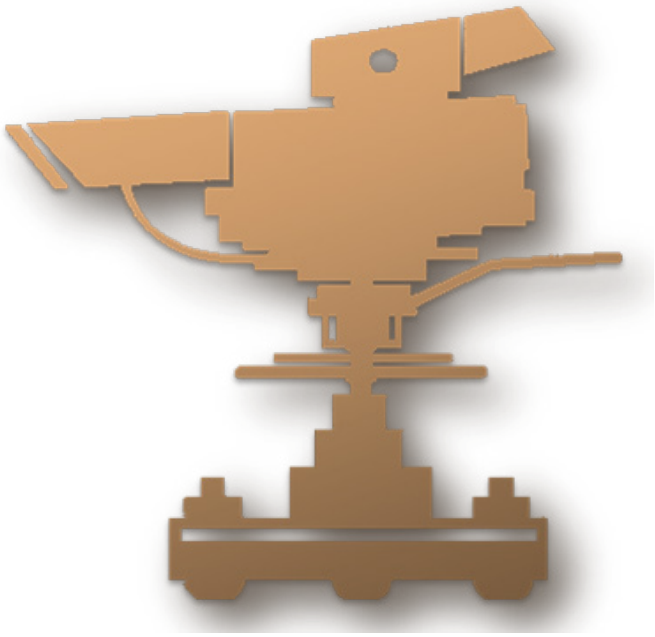
Studio Camera Workshop



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Basic Studio Workshop - Cameras:

An Introduction:

Camera operators work closely with directors (receiving directions over the camera headset) to get the best shots possible for the audience at the right time.

Major elements of their job are:

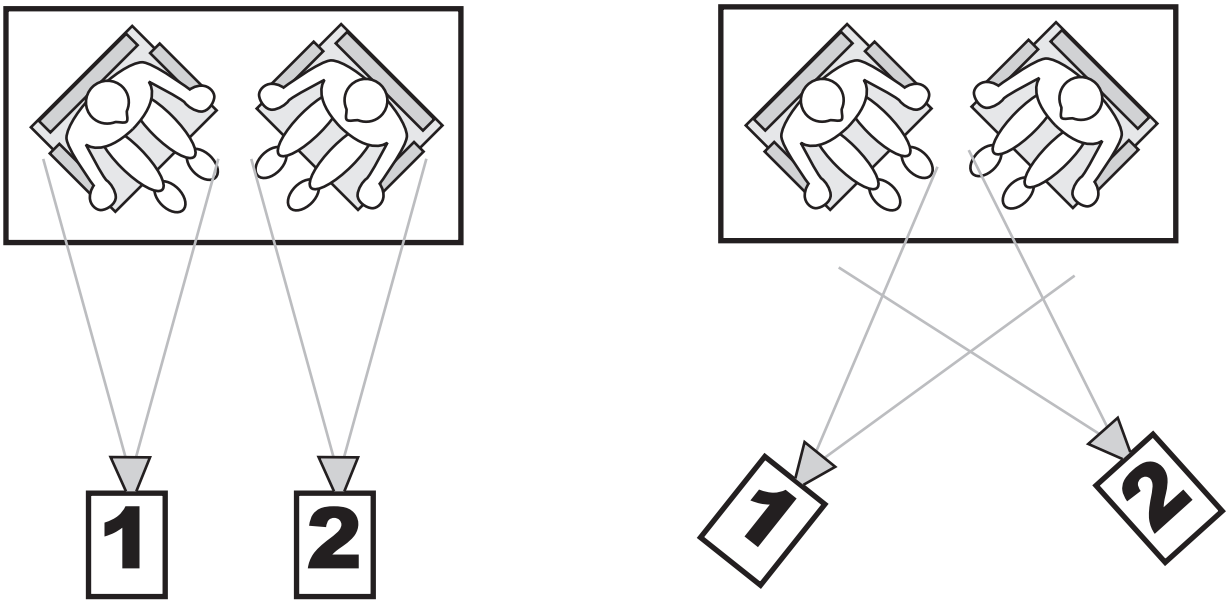
Focus
Framing
Movement
Set-up and Stowing Cameras

The record, iris and shutter are controlled in the control room, so the camera operators can focus on their work: getting a good shot.

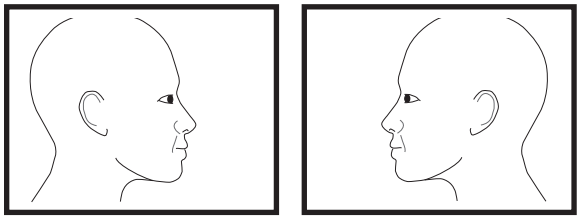
Basic Studio: Camera Placement

"Blocking" the Cameras:

Position cameras so that you can get a good variety of shots, and shots which view the talent "face-on", instead of in profile.

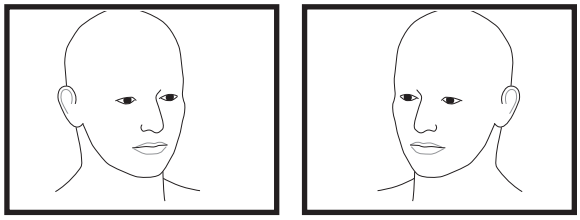


WRONG



Camera 1 Camera 2

CORRECT



Camera 1 Camera 2

Tips on Camera Positions:

1) Position the talent as close together as possible in natural, comfortable speaking positions. This will reduce the empty space between them, and permit closer, more detailed views for the audience.
2) "Cross Shoot" the talent as shown above to get more "face-on" views.
3) Judge the best camera angles from the cameras point-of-view.
4) Place cameras so that artwork, plants, and other set decorations will not distract the viewers attention.
5) Don't move cameras to positions that reverse the direction of action because it may confuse the viewer.

Basic Studio: Camera Operation

The MetroEast Studio is equipped with 3 cameras on the studio floor, and a fourth remote-controlled camera mounted above the control room. Each camera is mounted on a wheeled tripod for easy movement, and equipped with an intercom headphone/microphone so that the crew members may communicate.

Operating a camera in a Studio is very different than shooting with a single camcorder:

1) **Teamwork.** Each of the 3 camera operators must work as part of a team. Instead of trying to cover all of the action, each camera will be assigned to cover a specific part of the scene.

2) **Remote Controls.** The camera operator need only worry about pleasing composition of shots, sharp focus on subjects, and the cameras "Zoom" settings. Most of the other settings on the camera are remotely adjusted from the Control Room.

3) **"Hot" or not.** Only 1 of the 3 cameras is being seen at any given moment. This allows cameras which are not currently "hot" to move to different subjects, or to change the composition of a shot to provide the viewer with more variety.

Some Basic Terminology:

1) **Tilt.** Up or down movement of the lens. Tilting the lens up moves the image on-screen lower in the frame. Directors may ask a camera operator to "tilt up" or "tilt down" to adjust their framing of the subject.

2) **Pan.** Left or right lens movement. As with tilt, Directors may ask a camera operator to "pan left" or "pan right" to adjust composition of a shot, or to follow movement by a subject.

3) **Zoom.** Simulates movement toward or away from a subject by magnifying the image. A Director may ask you to "zoom -in" if she wants a closer view of the subject, or "zoom out" to see a wider view of the scene.

4) **Focus.** A control of the lens which sharpens the image. Focus changes as the distance from the camera to the subject changes. If you move your camera, or move to a different subject, you may need to re-focus the camera.

5) **Pre-Focus.** A technique for achieving sharp focus. The camera operator first zooms -in as close as possible to the subject, then turns the focus control until the image is clear. Once focused, the operator may zoom-out to the desired framing of the subject.

6) **Dolly.** Movement of the entire camera toward the subject or away from the subject. The Director may ask the camera operator to "dolly in" or "dolly back".

7) **Truck.** Movement of the entire camera to the left or right. For example, if your shot is blocked by an object, or your shot is at an odd angle, the Director may ask you to "truck right" or "truck left" to improve the shot. The direction is left or right from the position of the camera operator, not the talent.

Basic Studio: Camera Operation

An Introduction:

The camera is mounted on a pedestal so that the camera can easily be moved from place to place.

Viewfinder - shows the cameras view of the scene, and includes an adjustment to tilt the monitor up or down, or from side-to-side.

"**Tally Lights**" are red lights on the viewfinder which light when that camera is "on program". One tally light can be seen by the "talent", and the other is visible to the camera operator.

The Pan and Tilt controls include:

Tilt Lock - to prevent the camera from being moved up or down.

Pan Lock - to prevent the camera from being moved left or right.

Tilt Friction - Adds or reduces the amount of resistance on up and down "tilts" to improve the smoothness of moves.

Pan Friction - Adds or reduces the amount of resistance on left and right "pans" to improve the smoothness of moves.

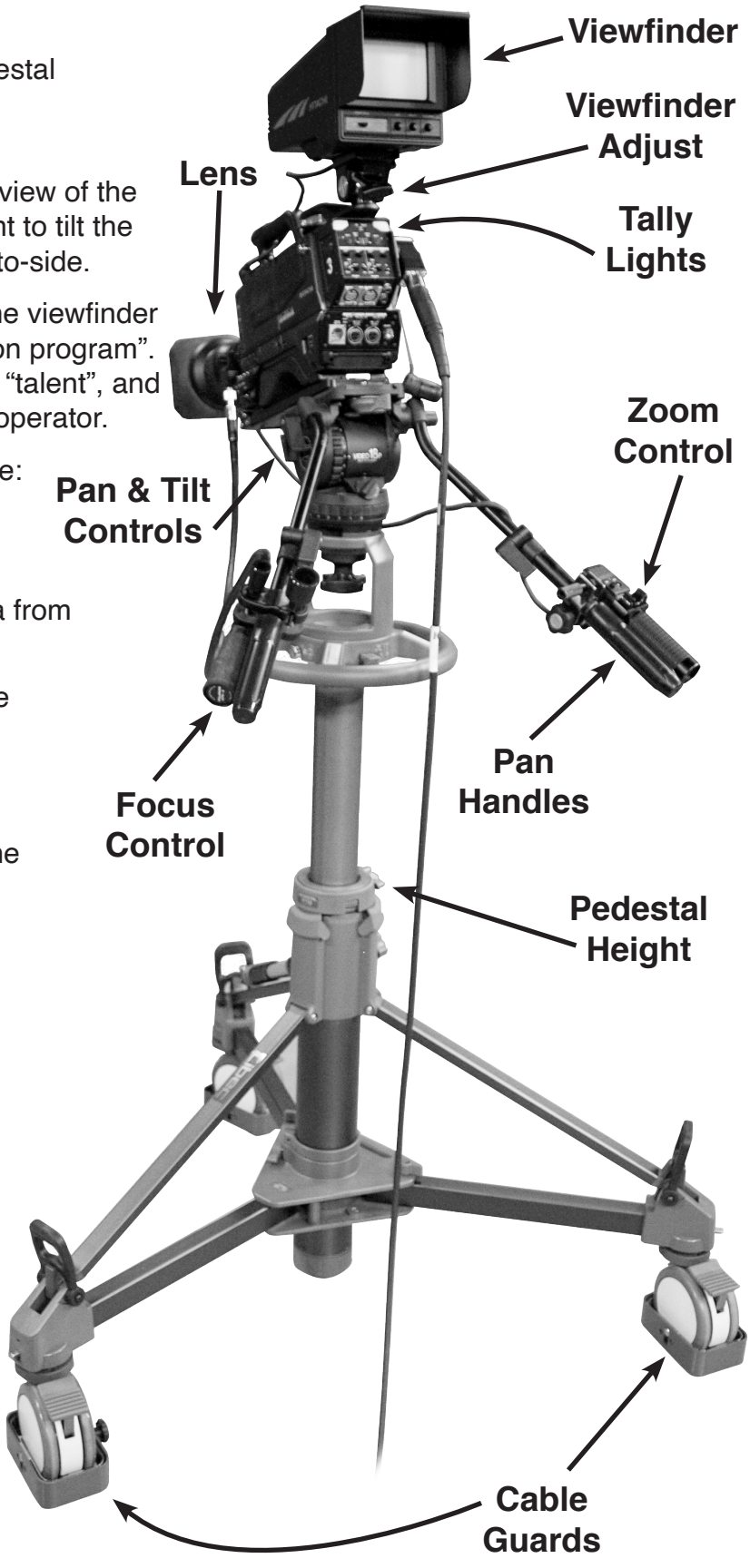
The "Panhandles" sticking out from the back hold 2 controls:

Zoom Control - Simulates moving toward or away from the subject by magnifying the image. Can move at varying speed, according to the pressure applied to the control switch.

Focus Control - Sharpens the image. Focus varies by distance from camera to subject.

Other Controls:

Steering Ring - Used to turn the wheels for movement, and to raise the camera.



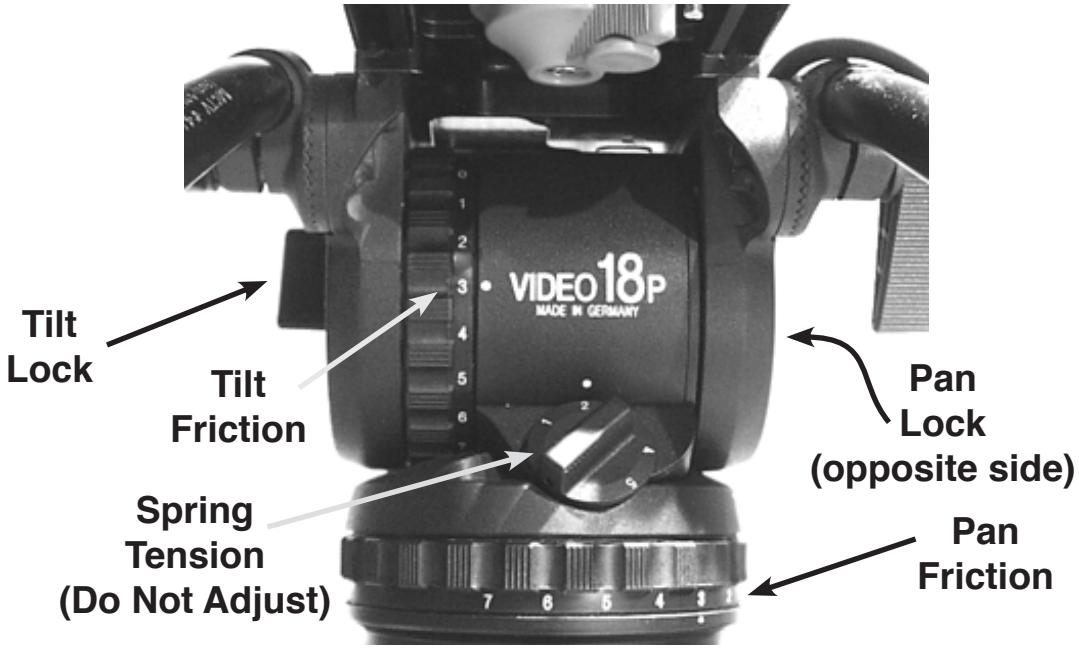
Basic Studio: Camera Operation

The Tripod "Head"

Located at the top of the pedestal, just below the camera, is the tripod head. This device permits the operator to tilt the camera forward or back, and swivel it left or right to adjust the framing of shots, or to follow a moving subject.

The Up and Down motion is called **Tilt**, and the left and right motion is called **Pan.**

This view is from the camera operators position at the back of the camera.



Adjust the Tripod Head Settings

When properly adjusted, the tripod head will provide silky-smooth movement of the camera.

1) **Unlock the Tilt Lock.** Turn the lever counter-clockwise one full turn to loosen. The camera should now tilt forward and back with little resistance.

   Tilt Lock must **always** be unlocked when operating the camera, and locked after use.

2) **Unlock the Pan Lock.** Reach around to the front side of the tripod head, and move the smaller pan lock lever. The camera should now swivel left or right with little resistance.

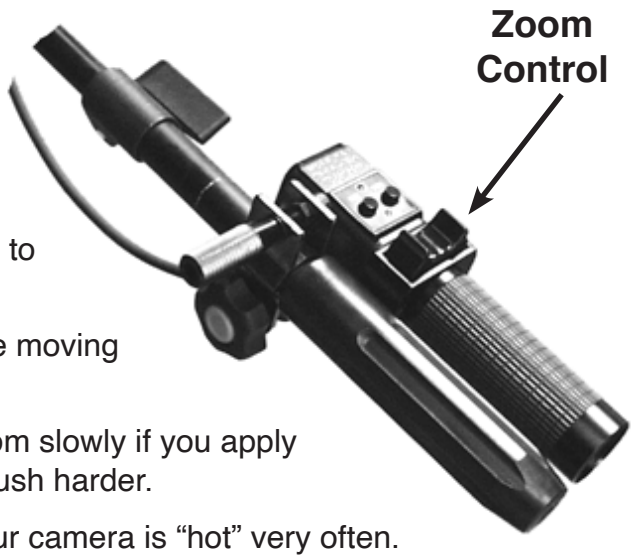
   Pan Lock must **always** be unlocked when operating the camera, and locked after use.

3) **Adjust the Tilt Friction.** Turn the vertical wheel to align a number with the white dot just to the right of the wheel. The higher the number, the greater the resistance added to the tilt. Tilt the camera up and down, and adjust until the motion seems smooth for your particular needs.

4) **Adjust the Pan Friction.** Turn the horizontal wheel to align a number with the white dot just below the wheel. The higher the number, the greater the resistance added to the Pan. Move the camera left and right, and adjust until the motion seems smooth for your particular needs.

Basic Studio: Camera Operation

Using the Zoom Control



When standing at the back of the camera, you'll find the zoom control attached to the right "pan handle.

Grab the handle and rest your thumb in the u-shaped switch. Move your thumb to the right to **"Zoom in"** to a closer shot of the subject.

Move the switch left to **"Zoom Out"** to simulate moving further away from the subject.

The zoom control is **variable speed**. It will zoom slowly if you apply light pressure to the control, and faster if you push harder.

Most Directors won't ask you to zoom while your camera is "hot" very often. Instead, you can use the zoom -- while one of the other cameras is "hot" -- to vary the composition of your shot from a wide to a tight angle, without having to move the camera.

The Focus Control

The control attached to the **left panhandle** allows you to adjust the Focus of the camera to make subjects sharp and clear.

This camera lens, like most professional cameras, **does not have an "Auto-Focus"** control, like some personal camcorders you may have used.

Clarity of focus varies according to the distance from the camera to the subject. If you move the camera, or your subject moves, or you move to a different subject, you may need to refocus.

Turn the focus control **clockwise** to focus on a subject **closer** to the camera than your current focus setting. Turn counter-clockwise for a subject that is further away.

Pre-Focusing

One basic function of camera operation is adjusting the cameras focus. The most reliable method to ensure sharp focus is called "Pre-focus." Follow these simple steps:

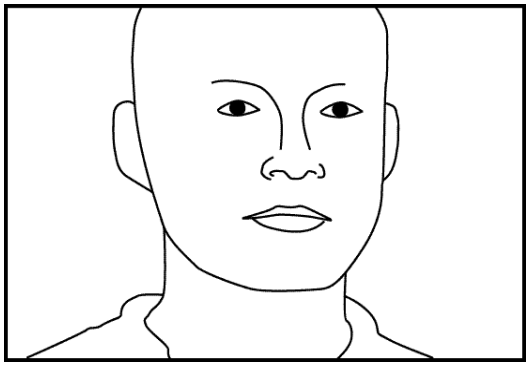
1) **Zoom In** as close as the zoom will allow on your subject. If focusing on a person, zoom in on their eyes.
2) **Turn the Focus Control.** If you turn one direction and the picture gets fuzzier, try turning the knob the opposite direction.
3) **Zoom Out** to whatever framing of the shot is requested by the Director.

Studio Orientation: Camera Operation

Composition and Framing

While the terminology may change a bit from Director to Director, here are some common names for shots, and tips to help you compose a pleasing picture.

Extreme Close-Up

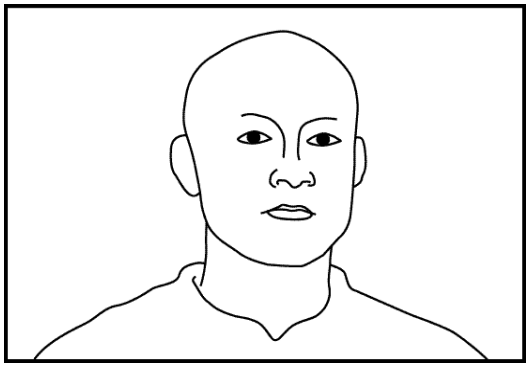


A shot which is so "tight" that you can't fit the entire head into the frame. Adjust zoom and tilt so that the top of the frame cuts across at mid-forehead, and the bottom is a few inches below the chin.

This shot is used when the Director wants the viewer to be able to experience the emotions of the subject along with him.

The shot is not very flattering, and not used often.

Close-Up

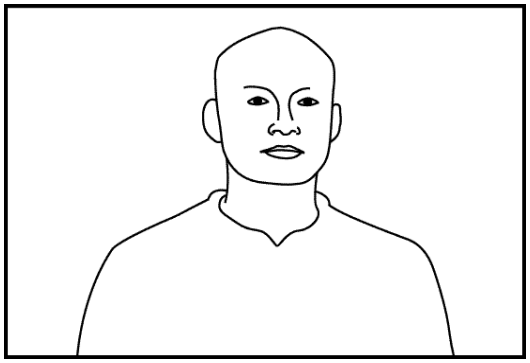


A well-framed Close-Up leaves a small amount of space between the top of the subjects head and the top of the screen. This space is called **Headroom.**

The bottom of the picture should be a few inches below the tops of the subjects shoulders. Avoid cutting-off the subject right at the base of the neck.

Also, **center** subjects from left-to-right on the screen.

Medium Close-Up

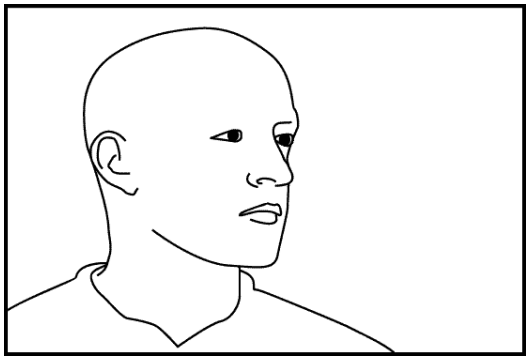


A little wider than the Close-Up, this shot is used frequently. Because it's wider, it is easier to keep the subject "in frame" when he leans or moves, and focus is less critical on a wider shot.

The shot should have **headroom** at the top of frame.

The bottom of the frame cuts the subject somewhere between the chest and belly button.

Lead Room / Nose Room



When shooting a subject from the side, whether he is completely or only partially in profile, don't center the head between the left and right edges of the frame.

Instead, leave a little more space between the subjects nose and the side of the frame than behind the subjects head.

This space, called "Lead Room" or "Nose Room" will usually place the subjects nose at about the center of the screen, from the left to right sides.