Step-by-Step Guide to:
The Panasonic AG-AC160a
HD Camcorder
Step-by-Step Shooting Guide

Set-up the Tripod:

1) Start with the legs together.
   Lift the leg extension levers, and extend one or both leg sections so that the top of
   the tripod is at about eye-level with your subject.
   Make sure the locks are securely fastened.

2) Spread the legs to their stops. Make sure that the latches at the top of the legs are
   locking, so the legs are all spreading the same amount.

3) Check the “bubble level” to see if the bubble is centered in the circle.

4) If it’s not level, loosen the “Level Adjust” knob. Tilt the tripod head until the bubble
   level is centered and re-tighten.

5) If you need additional height, loosen the “pedestal lock”. Raise the center shaft, and
   re-tighten the lock.

6) Loosen the “Panhandle Adjust” lever, and move the handle to a comfortable position.

7) Slide the camera plate (attached to the underside of the camera) into the channel on
   the top of the tripod.
   Turn the lever to lock the plate in place.

8) Loosen the Tilt and Pan Locks.

9) “Pan” the camera left and right, and turn the “Pan Drag” knob until smooth.

10) “Tilt” the camera up and down, and turn the “Tilt Drag” knob to add or release friction
    until the move is smooth.

If you need to shoot “Hand Held”:
- Spread your feet shoulder width apart
- Brace the camera against a post or tree
- Keep the horizon level in the viewfinder
- Don’t use the zoom. Stay wide, get close
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Power Up, Set to P2 Camera Mode:

1) Make sure the Power Switch is OFF
   If it was left on, push in the little white button and rotate it to OFF

2) Slide a battery into the slot on the rear surface of the camera. Push it in near the top of the opening, and slide it down until it locks into place.
   The arrow on the battery label should be point down when in position.

   **NOTE!** There are 2 larger batteries, and 1 smaller battery with each camera. The large batteries should last for at least 4 hours, the small for about 3.

   **OR**

3) Slide the AC power adaptor into the same slot. The other end of the cable connects to the jack on the front of the adaptor.

4) Turn on the POWER.
   Remember, push in the little white button to rotate the switch to the ON position.

**Charging Batteries**

5) If not using the AC power adaptor to power the camera, you can use it to recharge the batteries.

   The battery slides onto the slot on the top of the AC Power Supply box.

   The CHARGE light will come on while charging, and go out when finished. Each battery will require up to 4 hours to fully recharge if completely drained.

   **NOTE:** You can’t charge a battery at the same time you are using the adaptor as a power supply! You should completely unplug both ends of the cable that runs from the camera to the AC power supply box when charging.
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Choose Viewfinder, Set Auto/Manual, White Balance:

1) Fold out the LCD monitor from the side of the camera, and gently swivel the monitor up or down to a comfortable viewing angle.

OR

2) Tilt-up eyepiece viewfinder to a comfortable angle. The eyepiece shuts off when the LCD monitor is open.

3) If the eyepiece image appears blurry, turn the “diopter” ring to adjust to your vision.

Choose AUTO or MANUAL control:

4) If you just want to shoot, and not worry about any technical settings, set the main AUTO/MANUAL switch to AUTO.

You are now ready to Record. See pg. 7

OR

For more control, switch to MANUAL.

White Balance: Manual Color Adjustment

6) Set the WHITE BAL switch to “A” or “B”.

7) Zoom-in on something white: Paper, a white wall, etc. that is lit by the main source of light in the room. Try to fill the whole screen with white if you can.

8) Push and release the AWB button. The viewfinder should display “AWB Bch OK” or “AWB Ach OK”. The color is adjusted.

OR

9) Set the WHITE BAL switch to PRST (preset). This is less accurate, but quicker.

10) Push the AWB button.

11) If you are outdoors, push the button once or twice until the viewfinder flashes the message “AWB P5.6K”.

For indoor shoots, push the button until the viewfinder displays “AWB P3.2K”.

For more control, switch to MANUAL.
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Adjust Focus and Exposure:

1) ZOOM in as close as possible to the subject, by pushing the “T” side of the main zoom control, or the handle zoom control.

2) Set the FOCUS switch to “A” (Auto).

   The camera will adjust focus without any adjustments required.

   OR

3) Set the FOCUS switch to “M” (manual).

   Zoom in as close as possible to the main subject of your shot.

4) Turn the FOCUS RING one direction or the other until the image is sharp.

5) You can also let the camera set the focus with the PUSH AUTO button. This will activate the auto focus momentarily, and then return to Manual Focus Mode.

6) If the subject is further away than about 30’, you can also set the switch to the infinity (∞) setting.

Adjust Picture Brightness:

7) Set the GAIN switch to “L” (low), and set the ND FILTER switch to OFF.

8) Push the IRIS button. The viewfinder will flash AUTO IRIS or MANUAL IRIS. Push once or twice to select your preference.

9) If you chose MANUAL, turn the ring on the lens to increase or decrease the brightness of the video image.

IRIS wide open and Picture still too Dark?:

10) Boost the Gain. Start with the switch set to “L” (low). Jump up to “M” (medium) or “H” (high) as needed.

IRIS almost closed and Picture too Bright?:

11) Turn on a “ND” (neutral density) filter. This is like putting sunglasses on the camera. Leave it OFF when indoors!
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Record and Monitor Audio:

1) Plug-in a Microphone or two.
   Remember, the camera can record 2 separate “channels” of audio, which can be adjusted independently in editing.
   It makes sense to record on both channels, even if you think you might not need both.

2) Set the LINE/MIC switch for each channel you’re using. Set to MIC for any directly connected microphone, and LINE for anything that’s not a microphone.

3) Turn ON the “+48V” to provide power to some types of mics that would otherwise need a battery (eg - lapel or shotgun)

Select Camera or External Mic:
Open the LCD viewfinder to reveal the switches beneath:

4) Set the “CH1 SELECT” switch to INT(L) to record the built-in mic on Channel 1, or to INPUT 1 or INPUT 2 for an external connection.
   Repeat for the “CH2 SELECT” switch.

5) To let the Camera adjust the volume of sound being recorded automatically, set the CH1 AUTO/MANUAL switch to the AUTO position. Repeat for CH2 if desired.

   OR

   For Manual control of the sound level, set the switches to MANU, and see Page 7.

Monitor the Sound:

6) Open the rubber flap, and plug-in headphones to listen to the sound.
   MetroEast will provide headphones with your camera for you to use, or you can bring your own pair.

7) Adjust the volume of the headphones to a comfortable setting with the buttons on the face of the camera. The “-” button lowers the volume, and the “+” raises it.
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Adjust Audio Recording Levels:

1) Locate the V.U. (Volume Units) Meter in the lower left corner of the viewfinder display (LCD or Eyepiece)

2) Before you begin recording, ask your subject to speak so that you can set a volume level. Identify which channel his mic is plugged in to.

3) On the lower left side of the camera, turn the volume knob for that channel, while watching the VU Meter.

4) Adjust the levels so that the display on the VU Meter bounces up to (peaks) at the longer mark from the left side.

   It’s okay if the audio bounces up a little past the mark occasionally, but NEVER let it get all the way up to the red mark!

5) Repeat these steps for the other channel.

6) If you change mics, or change talent, you should re-set the volume levels.

You’re Ready to Record!

With the white balance and iris adjusted, and audio levels set, you’re can begin recording.

7) Push the red button on the Power Switch. Make sure that the viewfinder displays a RED DOT, and that the time counter begins to run.

OR

8) Push the red record button on the top of the cameras handle.

   Push either button a second time to pause the recording process.

Remember! Start recording at least several seconds before you cue the talent, and keep recording for several seconds after they stop.
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Troubleshooting -

When most people have trouble with equipment, they assume that the problem must be an electronic or mechanical failure. In fact, most of the time, the problem is simply a switch in the wrong setting, or a procedure done incorrectly. Here are some of the more common problems:

**No Picture in Viewfinder:**

*Do you see any display (battery, time code) showing? If not, the battery might be dead, or the power might be switched off. If you do see information displayed:*

1) Did you remove the lens cap?
2) Is the IRIS in Manual mode, and closed?
3) Is the ND FILTER turned on? This makes the picture much darker.
4) Remember, the eyepiece only functions when the LCD monitor is off, and vice versa. Make sure the LCD monitor is completely closed if you are using the eyepiece viewfinder.
5) Are you simply zoomed in on something dark? Wave your hand in front of the lens and look for any movement. Zoom out to a wide shot.

**No Sound:**

*First, check to see if there is movement on the VU meters in the viewfinder. If there is, you are getting sound into the camera, and just not hearing it:*

7) Are the headphones plugged-in, and the volume turned-up?

*If you are not seeing any movement on the VU Meters:*

8) Check that the MIC/LINE switch is in the correct position for what you’ve plugged-in.
9) Confirm that the cables from the mic to the camera are securely connected at both ends.
10) Are the audio level dials turned up?

**Color Looks Incorrect:**

*Bad color is usually a White Balance issue.*

11) If using the White Balance “Pre-sets” (switch set to PRST), the viewfinder should display “AWB P5.6K” for shooting in sunlight, or “AWB P3.2K” for any man-made light source.

12) Try resetting the White Balance.

**Picture Looks Too Dark:**

12) Set the IRIS to Auto, or turn the Iris adjust ring to open it.
13) If the IRIS is wide open, switch the GAIN switch from low to medium or high.
14) Make sure the ND FILTER is set to OFF.
15) Be certain that the SHUTTER is off (open LCD monitor to see switch)