

ACM CERTIFICATION STUDY GUIDE

Panasonic AG-HVX-200 HD CAMCORDER

PURPOSE

This Study Guide was created to help ACM students prepare for the Panasonic AG-HVX-200 HD CAMCORDER Certification exam. This Study Guide and the P2 Tutorial provides all essential information on the proper handling and use of the PANASONIC AG-HVX-200 HD equipment, including an explanation of contents, procedures to demonstrate, and required features and techniques to know.

Because the HVX-200 is merely the DVX-100 with full HD and P2 card capabilities, this Study Guide will not provide detailed explanations of functions covered in the DVX-100 tutorial. However, students taking the HVX-200 certification exam are expected to know them.

FREQUENTLY ASKED QUESTIONS

Q. Who can use the HVX-200?

A. Only Certified ACM students in advanced production classes can check out the HVX-200 (399, 410, 499). Priority is given to ACM 410.

Q. Do I need to study the P2 Tutorial and DVX-100 Tutorial for the HVX-200 Exam?

A. Yes. As an advanced student it is expected that you have had ample production time using the Panasonic DVX-100, which is very similar to the HVX-200. However several functions of the HVX 200 are new and make this camera unique. And the P2 hard drive normally goes out with the HVX-200 so you will be expected to know its basic functions and operating instructions. If the exam administrators deem it necessary, they may test you on DVX-100 concepts.

SAFETY PRINCIPLES OF THE ACM MEDIA CENTER

1. **Never force anything!** If something you are attempting to do requires any amount of excessive force, STOP and review your methods.
2. **Never over tighten!** This may cause the stripping of threads and/or the use of excessive force which can damage the equipment.
3. **Never leave the camera equipment unattended!** Camera and other video equipment are prime targets for theft.
4. **Never leave the camera equipment exposed to any heat source!** (e.g. - in the trunk of a vehicle. Make sure to remove the videotape from the camera before transporting.)
5. **Never take the UHM ACM Media Center equipment to the beach or near shorelines!** (e.g. - where sand and salt air/spray may contact the equipment) Sand and salt air/spray can clog and damage the sensitive equipment.
6. **Never use equipment in “risky” environments**!** (e.g. - any type of airborne devices or locations including airplanes, helicopters, skateboards, motorcycles, rollerblades,

etc., night time shoots in low lit and/or unsafe areas, and “remote” areas which require transport of equipment over rough terrain).

7. **Never touch or attempt to clean the lens or LCD Screen with anything other than the supplied cloth and solution!** There is a high probability of scratching and permanently damaging the lens without the proper cleaning materials. The Media Lab Staff will clean the lens for you.
8. **Never aim the viewfinder directly at a strong light source!** This will cause permanent damage to the viewfinder. (e.g.- the sun, lamp, or its reflection from an object.)
9. **Never point a laser into the lens or point the lens into direct sunlight!** This will damage the CCD's!
10. **Never use equipment near magnetic fields!** Using near magnetic fields can cause distortion to images.
11. **Never leave P2 cards out!** They should either be in the camera, the recorder, a laptop, or in their case.
12. **Never store camera in case with battery attached or tape in the camera.** Battery will lose life and tape can become slack and ruin the heads.

** “Risky” environments are defined as, but not limited to, situations and/or locations which present potential hazards to personal and/or equipment safety. Determination of “risky” locations shall be at the sole discretion of the ACM Media Center Director.

REQUIRED INFORMATION FOR CERTIFICATION

The Sachtler Tripod:

Because the HVX-200 is heavier and often combined with a lens adapter and/or matte box, the Sachtler Tripod, not the Libec Tripod, is used. The names of the parts and procedures are the same, but there are a few additional options.

Pan and Tilt resistance settings:

Two separate number dials control the level of resistance that can be applied to the tripod head when performing a pan or tilt, which can either make fast pans/tilts easier when set to a low number, or make smooth slow movements easier when set higher.

Important Notes: 1) Panning or tilting when the dial is not set to a specific number (stuck between two numbers) can damage the tripod head.

2) Setting the spring dial (tilt resistance) above 3 is excessive and will make smooth tilt movements difficult.

The slide plate:

The plate can be moved forward or back to balance a back heavy or front heavy camera. If a lens adapter and a matte box are attached, the slide plate should be set further back to balance out the weight.

Locking and unlocking the camera plate:

When locking in the camera release (wedge) plate to the tripod, put the front of the plate into the wedge, then push the back down. This should trigger the lock to snap in and snugly hold the plate. To remove the plate, pull down the knob located on the red release lever, then slide the lever to the left.

Audio

All audio switches perform the same function as with the DVX-100, though some have changed location.

XLR Inputs and Input Selector Switch remain at the front of the camera.

Channel Select Switch and Phantom Power Switch remain under the LCD screen.

Headset Volume Control remains at the top of the camera.



Changed Locations:

Audio Level Control Dials (12)

The dials still control the audio input levels, but are now located on the back of the camera.

Headphone Jack

The headphone jack is located under the guard cap on the back right side of the camera. Use a 3.5 mm stereo mini jack only.

The steps to calibrating the camera to a Mixer:

- 1) Hook up mixer using the dual XLR cables.
- 2) Check setting on Mixer and Camera. (Line input/output, ch1-input1, ch2-input2, etc.)
- 3) Turn on oscillator on Mixer.
- 4) Use camera dials to set oscillator tone levels slightly below 0 db tick mark.

Do Not Touch Camera Input Dials once camera is calibrated.

Camera Settings

The HVX-200 button functions are the same as on the DVX and are, for the most part, in the same location.

White Balance Selector Switch (22)

Focus (auto/manual) (17)

Iris Button (19) Iris Dial (20)

ND Filter (18)

Each setting on the ND filter cuts light by 3 f/stops. The HVX-200's image quality is greatly reduced when the iris is closed beyond f/8. This is where ND filters are needed.

Gain (21)



Shutter-Speed sel (4)

Counter-Reset/TC Set (7)

Toggle between TC, user bits, frame rate, or counter display. The reset button can reset TC to zero when setting TC in the menu.

Optical Image Stabilizer (OIS, i.e. Steady Cam) (9)

Zoom Switch (Manuel/Servo) (14)

AWB Button (15)



The following buttons have moved:

Disp/Mode Chk (23)

When pressed once, removes the LCD/Viewfinder display. When held down, shows user button settings and current date/time.

User Buttons (24), usually, set to:

User 1: Rec Check

User 2: 18 db

User 3: ATW

This can be changed in the menu.

Auto/Manual (25)

Switches camera functions (i.e. white, focus, iris, gain) from auto to manual control.



New and Improved Buttons:

Zebra (8)

Unlike the DVX-100, whose Zebra only goes to 80%, the HVX 200 Zebra can go as low as 50%. Default is set to 1: 70% (because human skin tone is 70-76) and 2: 105% (broadcast limit). Settings can be changed in the menu under **Display Setup**. There is also the “marker” option.

Shutter (4)

Open LCD screen. Press the **Shutter** button to activate shutter. Then press Speed Sel button (next to Shutter button) to set shutter speed. Pressing the Speed Sel button cycles through the various settings. Note: Syncro scan, used for shooting computer screens, is found under this setting. If using shutter re-white balance.

*The shutter speed regulates how much light the camera will record for a given time. Long shutter speeds are often used in low light conditions and fast shutter speeds for lots of light and stop action. Computer and TV monitors use various refresh rates. To access the Syncro scan, press **Shutter**, cycle through the **speed select** until you see a decimal fractional speed, such as “1/36.3” or “180.0d”. Once you have **SYNCRO SCAN** speeds selected, go into the **SCENE FILE** menu and choose **SYNCRO SCAN** and change the shutter speed. Increase or decrease rate until the refresh bar becomes invisible.*

Because the HVX-200 is full HD, focus is extremely critical. Even being slightly off will be noticeable. The following tools must be used because neither the viewfinder nor LCD screen has a resolution as high as the camera.

Focus Assist(16)

Located above the Focus Switch. It enlarges the center of the picture, enabling the operator to achieve critical focus. Used with EVF DTL.

EVF DTL (11), (electronic viewfinder detail) found on the back of the camera, for crisp focus. Adds detail to the viewfinder and LCD screen. Does not affect the picture.

Scene File (10)

Located next to the battery of the camera is the **Scene File Wheel** which has six options (F1 – F6) allowing the user to select factory presets for different shooting conditions. F1 is for Standard Video (60i), F2-F4 are specialized video settings, F5-F6 are for shooting 24P to get a more cinematic look. Through the **Menu**, one may also change **Scene File** settings. Note: If you change any of the settings write them down. The Media Center resets the cameras to factory settings when the camera is checked in.



Media Type -Mode Button (13)

Select your media type with the switch (tape or P2) **before you turn on the camera**. The **Mode button** allows you to switch between VCR, Formatting the P2 card and to dub from P2 card to tape.

Menu

Menu access

Press the **Menu** button on the top of the camera.



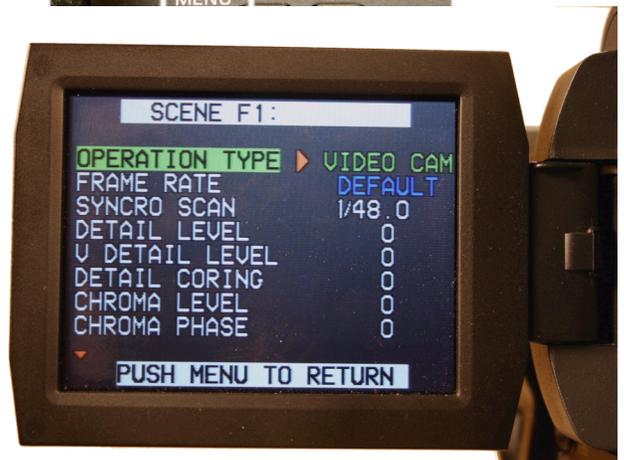
Scene File Menu

Allows one to change image-control settings and program them into the Scene File Wheel.

Operation Type allows two choices: Video Cam and Film Cam. Cannot be changed while recording. Switching to a new scene file will load new setting for all other parameters but not for Operation Type or Frame Rate.

Frame Rate

When using Film Cam mode and 720P recording lets you change frame rate the camera captures at. One can choose these frame rates: 12, 18, 20, 23, 25, 27, 30, 32, 37, 48, and 50. This allows one to under-crank and over-crank for Fast motion and Slow motion.



*Note—Any item that is blue is disabled due to the format you have chosen.

Camera Setup

Allows one to choose the **Aspect Ratios** one is shooting in. For HD it is 16:9 for SD, you can choose Squeeze, Normal or Letterbox.

SW Mode

Controls the settings for the switches found on the camera. Gain, ATW, Handle Zoom, Iris Dial, and the User buttons.

Auto SW

This menu is used to control the automatic functions of this camera if you switch the “Auto/Manual” switch to Auto.



Recording Setup

This menu allows you to select the recording format, Time code, Interval shooting, One-Shot recording, Pre-recording, and other functions. Recording formats are 480, 720, or 1080 lines at 24, 30 or 60 frames per second in either interlaced or progressive mode. (Note: 720 captures only in progressive mode.)



AV In/Out

This is only active when in VCR mode and deals with setting related to component, composite, and s-video input/output jacks, the 1394 connection, and the headphone jack.

Display Setup

This menu controls the text and graphics that show up on the camera’s LCD monitor and viewfinder.

Card Function

Deals with the standard SD Memory card. (Not in use at this time)

P2 Recording

1. Switch the **Media** switch to “P2”.
2. Set the Power switch to On.
3. Lift up the viewfinder and open the card slot cover.
4. Insert the P2 card securely in the card slot.

P2 card access lamps

Camera mode (MCR)

Lights green: Second card/slot to be recorded.

Blinks green slow: Card is write protected.
Blinks green fast: Card is full.
Lights Orange: First slot/card to be recorded.
Blinks Orange slow: Card is being recorded to.
Blinks Orange fast: A card is now being recognized.

Formatting P2 cards

1. Press the mode button and set it to **MCR**.
2. Press the Menu button.
3. On the menu, select **Operation** and then **Format**.
4. Choose the slot then select **Yes**.

Basic Playback Operations

1. Before turning the Power switch on set **Media Switch** to the **P2** position.
2. Turn the **Power** switch on.
3. Press the **mode button** so the **MCR** lamp turns on.
4. **Play ▶** When this button is pressed in stop mode, playback will start from the first clip selected.
5. **Fast-Forward ▶▶** When this button is pressed during playback, the clips are advanced from a point in the clip already selected(at four times normal speed).
6. **Rewind ◀◀** When this button is pressed during playback, the clips are rewound from a point in the clip already selected(at four times normal speed).

Refer to the acm_p2_tutorial for instruction on the P2 storage device.