



Guide to the SONY HXR-NX5U Videocamera

*Adapted from the SONY camera/hard disk manuals, and OHM Media Lab Guide
January 6, 2011*

This camera can record on SDHC memory cards. This guide is for HD shooting; DO NOT SHOOT ANYTHING FOR A BDJ CLASS IN SD !!!!! All shooting for BDJ should now be "HD."

Checklist for camera bag:

- ✓ camera
- ✓ microphone
- ✓ mic cable
- ✓ headphones
- ✓ eyelight
- ✓ SDHC card (provided by you, at least 4G suggested, for 1 hour of video)

Other items:

- ✓ batteries
 - ✓ tripod
 - ✓ light stand
-

Types of memory cards you can use in your camcorder

You can use SDHC memory cards and SD memory cards in your camcorder. You cannot use a MultiMedia Card. There are two (2) card slots, so if you want to shoot on two cards, moving automatically to the next card once you finish the first one, you can.



Recommended: a 4G or 8G SDHC card, class 6 or higher. Lower class ratings or use of a regular SD card will take a little longer to edit from when you edit video. Stay with brand names like Panasonic, San Disk, PNY, Patriot IRIS, Toshiba, Kingston, and Transcend. They are available at the SU Bookstore, or online. Retail stores like Target, BJ's, etc., may carry some, but they will probably not be class 6 or higher.

Up to 32 GB of memory cards are able to be used with this camcorder.

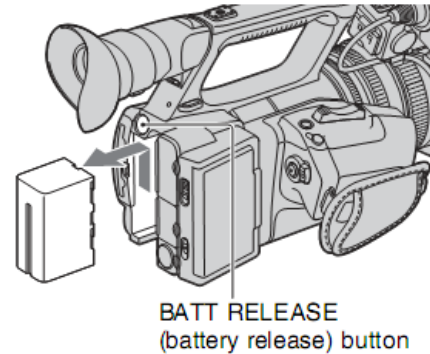
Do not attach a label or anything like it on an SD card!!!

Getting Started:

1) Battery

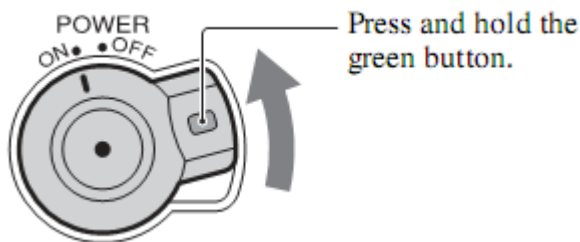
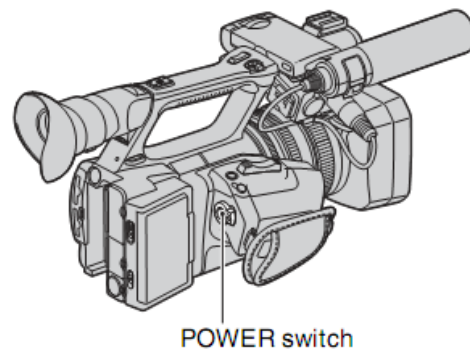
Insert battery below viewfinder; arrow on battery points down.

Approx. shooting time on fully charged battery: 4 hours. The remaining battery time appears in the upper left corner of the viewfinder/LCD screen.



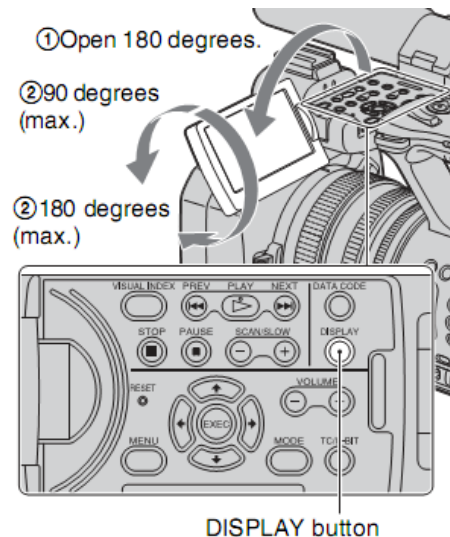
2) Power ON

To record or playback, press and hold the green button, and slide the POWER switch to ON. (To power OFF, slide the POWER switch to OFF.)



3) Using the LCD panel

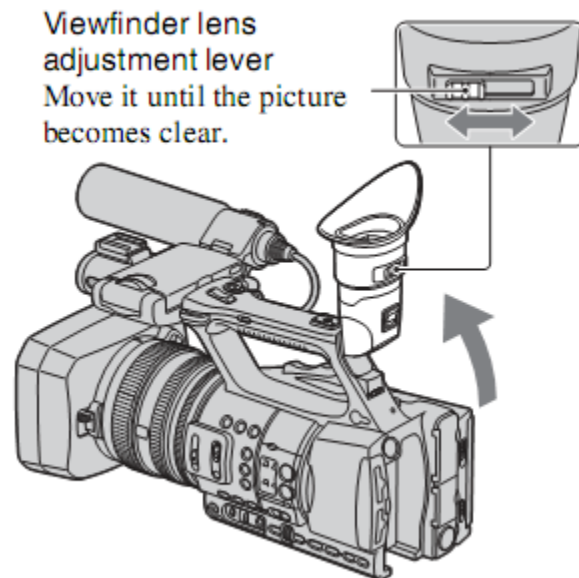
The LCD panel has the label NXCAM and is on the top of the camera, just to the left of the shotgun mic. Lift up the side nearest the mic to extend it, then swivel toward you. NOTE: it is a touchscreen, so you can press on-screen buttons when reviewing recorded video.



Or, if you're shooting your own standup, you can leave it facing you, and monitor it from in front of the camera.

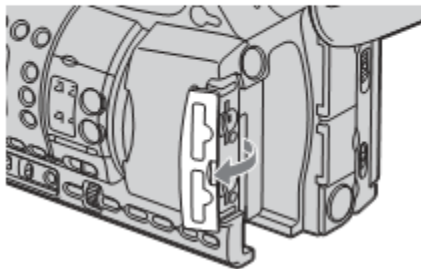
4) Using the Viewfinder

You can view pictures using the viewfinder to save battery, or when the picture on the LCD screen isn't clear.



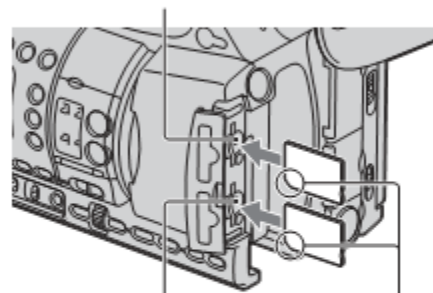
5) Inserting an SDHC card

- 1 Open the cover in the direction of the arrow.



- 2 Orient the memory card's notched corner as shown in the illustration, and insert into the memory card slot until it clicks.

Memory card slot A and its access lamp



Memory card slot B and its access lamp

Insert with the notched corner first, and facing down.

⚙ Notes

- If you insert a memory card into the slot in the wrong direction, the memory card, the memory card slot, or image data may be damaged.

NOTE: When you insert a new memory card in standby mode, the **[Create a new Image Database File.]** screen appears. Follow the screen indication, and touch **[YES]**. To eject the memory card, lightly push the memory card once.

When the access lamp is lit or flashing in red, your camcorder is reading/writing data. Do not shake or knock your camcorder, turn the power off, eject the memory card, or remove the battery pack. Otherwise, image data may be damaged!!!!!!!

If **[Failed to create a new Image Database File. It may be possible that there is not enough free space.]** appears, format the memory card (see below.)

- When inserting or ejecting the memory card, be careful to prevent the memory card from popping out and dropping; it can be easily damaged.

Selecting the memory card slot to be used for recording

Press the A or B button of the memory card slot where the memory card you want to record on is inserted. The lamp of the selected slot lights up in green. You can only record on one card at a time.

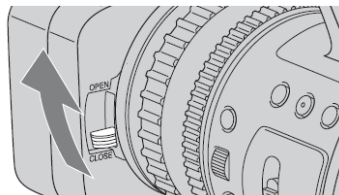
Formatting an SDHC card

WARNING: formatting a card permanently deletes all data on the card – be careful!!!

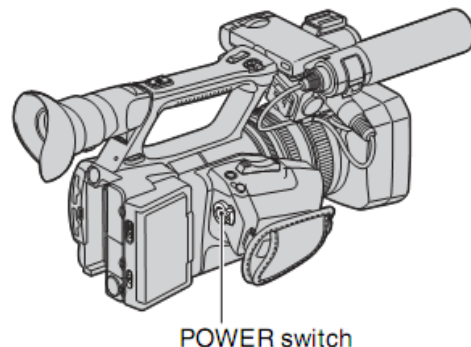
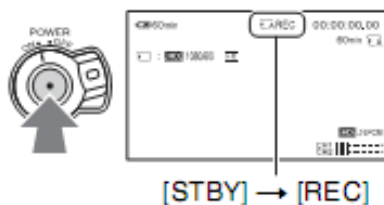
- Put the card, corner side down, in a card slot.
- Press the MODE button where the LCD panel rests.
- On the LCD screen, press **MANAGE MEDIA > MEDIA FORMAT**.
- Touch the recording media to be formatted.
- Press **YES > YES > OK**.

6) Recording

1. *Open the shutter of the lens hood*



2. *Turn POWER ON (See step 2 above)*

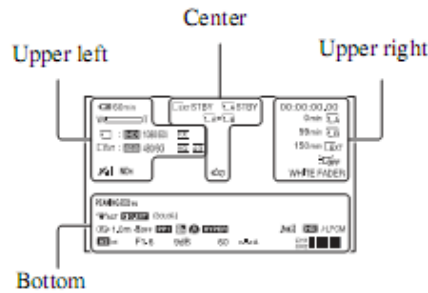


3. *Press the REC button or the HANDLE REC button*

The REC light on the front of the camera lights up when recording. To stop recording, again press REC/STOP.

7) View Screen Indicators

Screen indicators



Upper left

Indicator	Meaning
60min	Remaining battery
1080/60i	SET (24), REC FORMAT (25)
	WIDE REC (77)
	GPS triangulating status (42)
ND1 ND2 ND3	ND filter (31)

Center

Indicator	Meaning
	Recording media
	Relay recording (22)
	Recording status (21)
	Warning (99)
	Playback indicator (49)

Upper right

Indicator	Meaning
0min	Estimated remaining recording time
	Recording/playback media
00:00:00.00	Time code (hour:minute:second:frame)

Indicator	Meaning
TC IN	Time code input (45)
	LCD backlight off (15)
WHITE FADER BLACK FADER	Fader (75)

Bottom

Indicator	Meaning
PEAKING	PEAKING (81)
	ZEBRA (81)
	STEADYSHOT (73)
	D.EXTENDER (75)
	x.v.Color (75)
	Manual focus (28)
	FOCUS MACRO (74)
	Picture profile (33)
	BACK LIGHT (73)
	SPOTLIGHT (73)
	HYPER GAIN (71)
	Iris (29)
9dB	Gain (30)
60	Shutter speed (30)
	Manual volume control (41)
	AUDIO FORMAT (78)
	AE SHIFT (72)
	Auto setting (82)
	White balance (31)

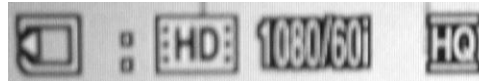
Tips

- Indicators may look different or appear at different positions.
- Some indicators may not appear, depending on your camcorder model.

IMPORTANT NOTE: MAKE SURE THE VIEW SCREEN INDICATORS LISTED BELOW ARE SET PROPERLY:

1) **Record format: the View Screen should show you the following settings near the top:**



- a. Should always say HD (High Definition)
- b. Should say 1080/60i
- c. Should say HQ
- d. So, then, to recap, the line near the top of the screen should read:

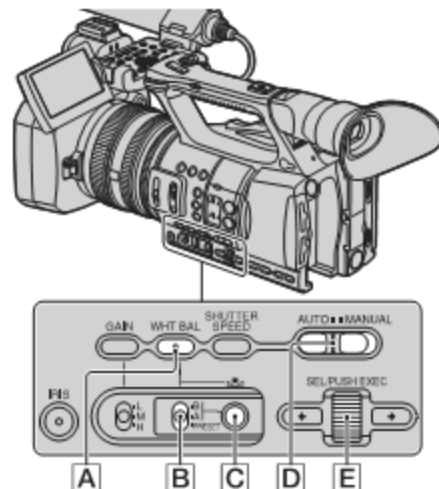


If you have to change any of these:

- Turn camera on
- Open view screen
- Press MENU on top of camera (be careful not to play with ANY OTHER settings except those listed below!!!)
- Use the ARROW buttons below the EXEC button to navigate through the menu to the REC/OUT SET submenu
- Press EXEC to select and enter the submenu
- Select REC SET
- Select HD/SD SET
- Make sure the 1st choice is selected: **(card icon):HD.....Ext: HD**
- In REC SET submenu, select REC FORMAT
- Make sure the 3rd choice is selected: **HD:1080/60i....HQ**
- Press MENU to exit the MENU

8) Camera Controls: White Balance

- a. make sure camera is powered ON and lens cap is OPEN
- b. Put the camera AUTO LOCK [D] into the right position: MANUAL
- c. Push the WHT BAL button [A]
- d. Put the selector switch [B] in position A (for manual WB) 
- e. Put a white card  in the scene you are about to shoot and zoom in on the card until it fills the frame



- f. Make sure the camera IRIS exposure setting is in automatic mode [you should NOT see an F-stop indicator (like **F2.4**) in the lower left of the viewfinder. If you do see this, press once on the IRIS button just above the letter [A] in the picture above, to turn it to automatic]
- g. Press and hold the white balance button [C], above, until the “book” A icon stops flashing
- h. The camera is now white balanced to the scene, and the information is stored in WB A (another white balance may be stored in WB B, using the same method with symbol “B” instead)

Understanding WHITE BALANCE: Light consists of 3 different primary colors. The balance of these different colors can shift depending on the light sources and environment, even within the same room. A video camera is usually more sensitive to these differences than the human eye. When the camera is white balanced on a white card, the card will be white in the video and all other colors will appear normal.

NEUTRAL DENSITY FILTER


Select an appropriate ND filter (left side of camera) for proper exposure of the scene. The viewfinder will flash with an ND indicator [ND1] or [ND2] or [ND OFF] if there is too much or too little light, suggesting the proper setting.

9) Camera Controls: FOCUS

News shooting is almost always done in manual focus; YOU should always adjust the focus yourself:

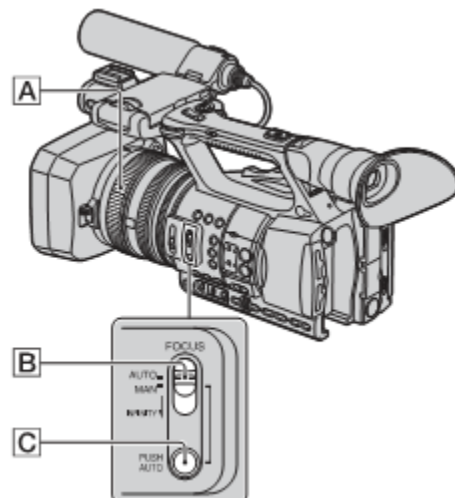
Zoom in as close to your subject as you can (just for proper focusing.)

Set the FOCUS switch [B] in the adjacent diagram, on the left side of the camera, to MAN (UAL.)

You'll see this appear in the viewfinder: 

Now either:

- Rotate the manual focus ring [A] above,
- or
- Press the PUSH AUTO button [C] above (located right next to the lens itself on

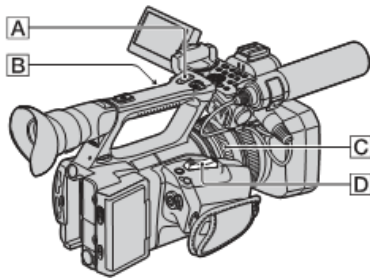


- camera left) to automatically set the focus
- Zoom out to your desired framing

10) Camera Controls: ZOOM

Changing the settings of your camcorder recordings

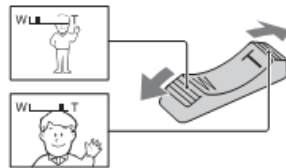
Adjusting the zoom



Using the power zoom lever

Move the power zoom lever **D** slightly for a slower zoom. Move it further for a faster zoom.

Wide view: (Wide angle)



Close view: (Telephoto)

Tips

- The minimum distance required between your camcorder and the subject for focus is about 1 cm (about 13/32 in.) for wide angle and about 80 cm (about 2 5/8 feet) for telephoto.
- The focus may not be adjusted at certain zoom positions if the subject is within 80 cm (about 2 5/8 feet) from your camcorder.
- When you set [FOCUS MACRO] to [OFF], you cannot focus on a subject within 80 cm (about 2 5/8 feet) regardless of the zoom position (p. 74).
- Be sure to keep your finger on the power zoom lever **D**. If you move your finger off the power zoom lever **D**, the operation sound of the power zoom lever **D** may also be recorded.
- You can increase the zoom speed of the power zoom lever **D** or the handle zoom **A** ([SPEED ZOOM], p. 74).

Using the handle zoom

- ① Set the handle zoom switch **B** to VAR or FIX.

Tips

- When you set the handle zoom switch **B** to VAR, you can zoom in or out at variable speed.
- When you set the handle zoom switch **B** to FIX, you can zoom in or out at fixed speed set in [HANDLE ZOOM] (p. 74).

- ② Press the handle zoom lever **A** to zoom in or out.

Notes

- You cannot use the handle zoom lever **A** when the handle zoom switch **B** is set to OFF.
- You cannot change the zoom speed of the power zoom lever **D** with the handle zoom switch **B**.

Using the zoom ring

You can zoom at the desired speed by turning the zoom ring **C**. Fine adjustment is also possible.

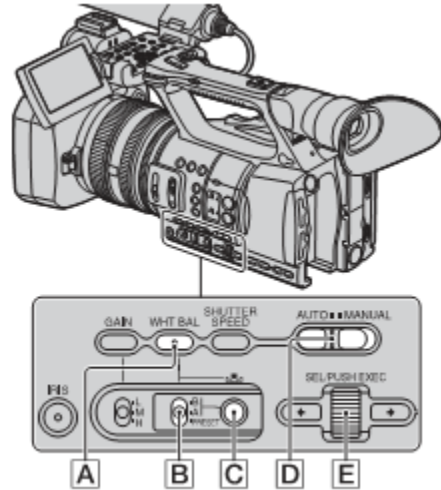
Notes

- Turn the zoom ring **C** at a moderate speed. If you turn it too fast, the zoom speed may lag behind the zoom ring rotation speed, or the operation sound of the zoom may also be recorded.

Continued → 27

Advanced camera control: GAIN

The camera IRIS in AUTO automatically opens as wide as possible to let enough light in. But if the pictures you see are very dark, perhaps a nighttime shoot without lights, you can try to increase the GAIN, by artificially making the picture seem brighter – but at a cost: too much gain=grainy pictures (like those hidden camera shoots.)



- *Make sure the AUTO/MANUAL switch [D] is on MANUAL*
- *Press the GAIN button in the upper-left of the diagram*
- *Increase the GAIN by switching the L/M/H toggle switch, right BELOW the GAIN button. It usually starts in Low, then up to Medium, and finally High, for maximum GAIN*

Don't forget to turn the GAIN OFF, by pressing the GAIN button one more time.

11) AUDIO

There are two audio inputs (MIC JACKS) located just below the shotgun mic [A], governed by the INPUT2/INPUT1 controls, which is located BEHIND the shotgun mic [B]. The AUDIO LEVEL controls [C-F] determine how the audio from audio INPUT1 and INPUT2 are recorded in the camera. Our default is recording wild sounds always from the shotgun mic onto INPUT1, and hand-held mic sound onto INPUT2.

The default setup is:

IN THE MIC JACKS [A]

INPUT1 = shotgun mic should be plugged in

INPUT2 = handheld or tie-tac mic plugged in

IN THE INPUT2/INPUT 1 CONTROLS [B]

INPUT2 = MIC

INPUT1 = MIC + 48V (only for the shotgun mic)

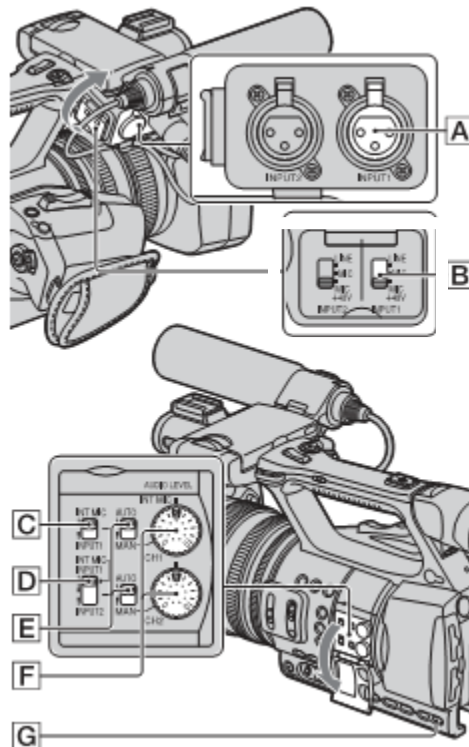
IN THE AUDIO LEVEL CONTROLS [C-F]

CH1 = INT MIC/AUTO [C, E] (shotgun mic, should never change, both switches all the way up)

CH2 = INPUT 2/MAN [D, E] (handheld mic, should never change, both switches all the way down)

AUDIO LEVEL dial [F] = set only on **CH2** for optimum handheld mic audio record level, must be adjusted/monitored by videographer. (Shotgun mic on **CH1** is set to AUTO, to adjust itself automatically.)

- **If recording from two non-shotgun mics** (e.g., handheld mic and tie-tac or wireless mic), unplug the shotgun mic cable, and plug the second one into the CH1 jack, change the INPUT1 audio control from MIC+48V to MIC, and change the Audio Level controls for CH1 to INPUT1/MAN. Remember to change them back when you plug the shotgun mic cable back in to INPUT1.
- **If you ONLY want to record audio from a handheld mic**, plug it into INPUT2, and unplug the shotgun cable from INPUT1 jack.
- **If you are able to plug an XLR cable into a mult box at a speech or concert**, etc., plug the receiving end of the cord into audio INPUT2 jack, but change the INPUT2 audio control from MIC+48V to LINE. Remember to change it back again when you plug the handheld mic back in.

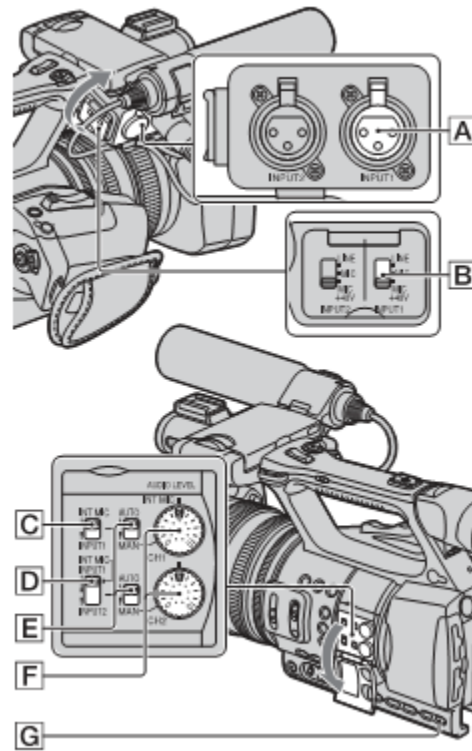


The shotgun mic (INPUT1) needs extra energy from what is called “Phantom Power” to work; that’s why the toggle switch is set to MIC+48V in INPUT1. Handheld and tie-tac mics do NOT need this extra power. In fact, some mics may be damaged if phantom power is on when not needed! Only use it with the SHOTGUN mic!

SETTING AUDIO LEVELS

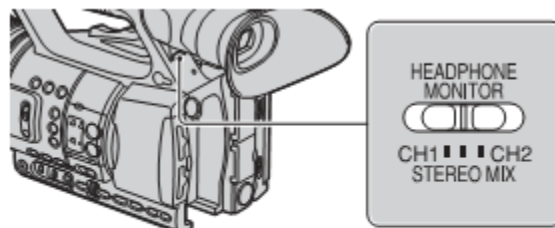
Rotate the audio level dial [F] to adjust the recording level of the audio signal from the audio inputs. The **ONLY** works if the INPUT channel is set to MAN (INPUT2) !!! Because the shotgun mic in INPUT1 is set to AUTO, the CH1 dial doesn’t need to be adjusted, only the dial for the handheld mic in CH2.

- Look in the viewfinder or LCD screen
- The audio levels appear in the lower right corner
- Set the record level (rotating knob) so the meter peaks **BELOW** the RED in the meter readout
- The audio recording level is set **TOO HIGH** if it touches the red bar; audio will be distorted!



ATTACHING HEADPHONES

The headphone jack is located under a rubber guard cap just below the eyepiece. The volume control (+/-) is under the LCD panel.

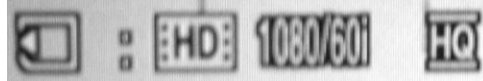


You can select the channel, CH1 or CH2, to output from the headphone.

STANDARD PROCEDURE TO BEGIN SHOOTING VIDEO


Setup camera:

1. Insert battery
2. Turn on camera
3. Plug headphone in (volume in behind LCD panel)
4. Put SDHC card in camera card slot (cut corner of the card is always DOWN!)
5. Make sure viewfinder says “HD” in upper left corner NOT “SD”, and looks like this:



6. If it does NOT look like this, follow the steps at the end of section 7 above to set these properly.

Setup for shooting video on location

1. Three-step audio setup:
 - a. Hook up microphone to be used (shotgun mic: INPUT1, handheld mic: INPUT2)
 - b. Make sure INPUT2/INPUT1 audio controls say INPUT2=MIC, INPUT1=MIC+48V (for the shotgun mic)
 - c. Make sure AUDIO LEVEL controls read:
 - i. **CH1** = INT MIC/AUTO (shotgun mic, should never change, both switches all the way up)
 - ii. **CH2** = INPUT 2/MAN (handheld mic, should never change, both switches all the way down)
 - iii. **AUDIO LEVEL dial** = set only on **CH2** for optimum handheld mic audio record level, must be adjusted/monitored by videographer. (Shotgun mic on **CH1** is set to AUTO, to adjust itself automatically.)
2. Set proper audio recording levels and monitor with headphones
3. Set IRIS to AUTO (should NOT see at anything like F4.4 in the lower left corner of the screen)
4. Set proper ND filter selection (usually OFF)
5. Make sure WHITE BALANCE is ON, and toggle switch is in position A 
6. Zoom in and focus on a white card in front of the subject matter, and set WHITE BALANCE (by pressing the little button under SHUTTER SPEED); when the “book” icon stops flashing, white balance is set
7. Focus lens on subject matter in manual mode for maximum sharpness; press the PUSH AUTO button to set the focus, once zoomed in
8. Zoom back to compose scene to shoot
9. Record video while monitoring audio with headphones
10. Stop recording and check recorded video as outlined below

PLAYBACK VIDEO THROUGH THE CAMERA VIEWFINDER/LCD SCREEN

1. Make sure camera is powered ON, and the LCD panel is open
2. Press the VISUAL INDEX button on the left side of the camera
3. On the LCD screen itself, press on a thumbnail image to view to select a clip, and it will automatically start to play
4. To playback at faster speeds, press and hold the FAST REWIND or FAST FORWARD buttons onscreen during playback



REMOVE THE SDHC CARD TO EDIT IN AVID (import instructions can be found in the AVID guide.)

CAMERA TROUBLESHOOTING

- RESETTING MENU SELECTIONS IN THE FIELD

If it is apparent that camera menu settings have become set incorrectly, refer to the end of Section 7 above to change the camera settings to the default BDJ settings

- CONTACTING S.U. FOR HELP FROM THE FIELD

If you are unable to get the camera working correctly, you can call the engineering office in Newhouse for help during regular business hours: 443-5660, or 443-4001.

If you experience any problems in the field, please call the Technical Support Staff @ 443-5660, or 443-4001.