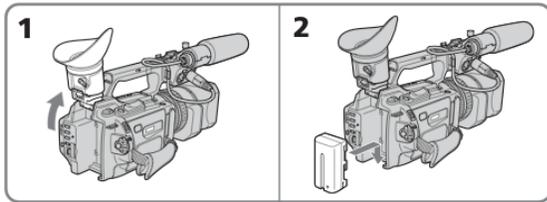
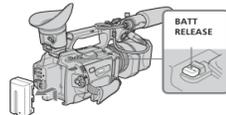


## ATTACHING A BATTERY

- (1) lift up viewfinder
- (2) insert battery with contacts at the bottom. (Click )



Removing the battery:  
press Batt Release and pull battery up and out.



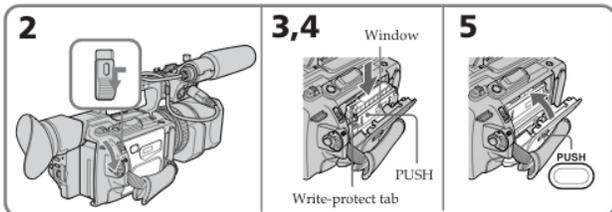
## THE ON BUTTON



set switch to CAMERA  
Press red button once to record,  
once to pause.

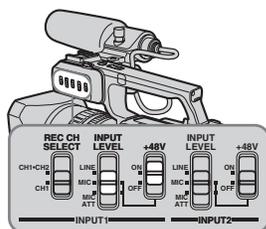
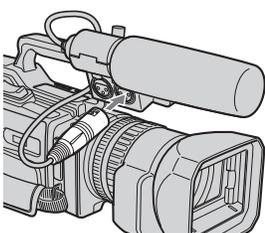
## INSERTING A CASSETTE

2. press the blue eject switch to open the cassette lid
3. cassette window faces out,
4. write protect tab faces up.
5. only press where it is indicated



## CHECKING MIC CONNECTION

- (1) plug mic into front plug INPUT 1
- (2) REC CH SELECT to CH1 • CH2
- (3) INPUT LEVEL to MIC
- (4) +48v to ON

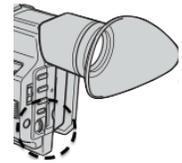


Note: turn off +48v if using wireless mics

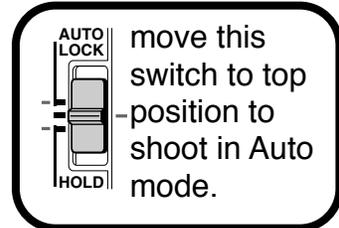
## MENU SETTINGS CHECKLIST

Press Menu to turn on.

(use the wheel at the back to move and press to select menu items



- D ZOOM - OFF
- 16:9 WIDE - ON \*don't mix 16:9 + 4:3
- STEADY SHOT - ON
- FRAME REC - OFF
- INT. REC - OFF
- WIND - OFF



- REC MODE - DVCAM
- AUDIO MODE - FS48K
- MIC NR - OFF
- AUDIO SET > AGC1/2 = ON

COLOR BAR - ON

• Record 20 seconds of colour bars

COLOR BAR - OFF

DATE REC - OFF ( never turn ON !!! )

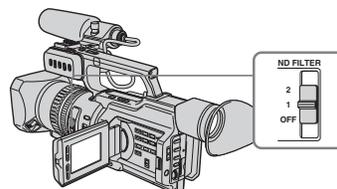
Press Menu to turn off

## MANUAL CRITICAL FOCUS

\* Is the lens clean?

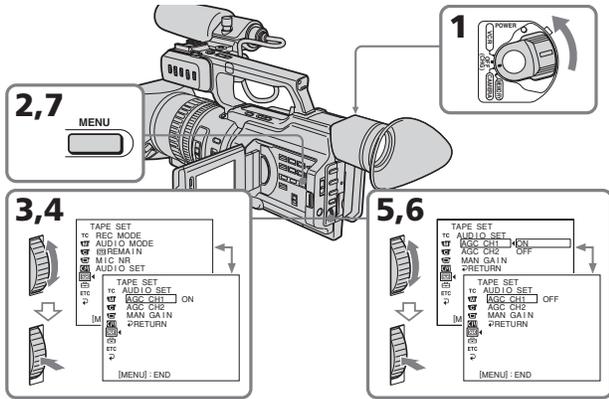
by setting up your focus before you start shooting, you can easily change your shot size by zooming and the image will always stay in focus.

1. switch focus switch to manual
2. close LED screen and look into viewfinder
3. adjust viewfinder for your eye
4. set up your shot
5. zoom in on subject's eyes, focus
6. reframe your shot, and shoot.



Make sure the ND filter is off - only use in very bright settings. Camera will flash ND1 / ND2 on screen if filter is needed

**MANUAL AUDIO CONTROL SETUP**



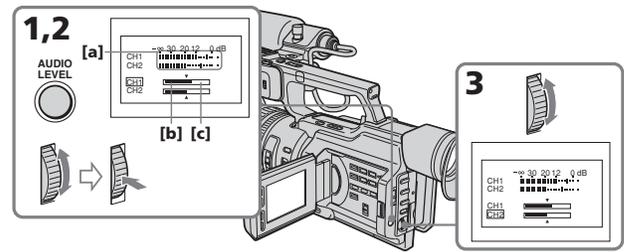
1. Set the POWER switch to CAMERA
2. Press MENU to display the menu.
3. Turn the SEL/PUSH EXEC dial to select

TAPE SET >  
 AUDIO SET >  
 AGC CH1 - OFF  
 AGC CH2 - OFF  
 MAN GAIN - SEPARATED  
 [MENU]: END

item	set.	what happens
AGC CH 1	ON	Switches the recording level adjustment of the channel1 from automatic (ON) and manual (OFF).
	OFF	
AGC CH 2	ON	Switches the recording level adjustment of the channel 2 from automatic (ON) and manual (OFF).
	OFF	
MAN GAIN	SEP	Sets the recording levels of channel 1 and channel 2 linked (LINKED) or separated (SEPARATED).
	LINK	

**AGC 2 + LINKED MAN GAIN ONLY WORKS WHEN USING THE SECOND MIC INPUT**

**ADJUSTING RECORDING LEVELS**



- [a] Recording level meter  
 [b] Decreases the recording level  
 [c] Increases the recording level

1. Press the silver AUDIO LEVEL button to display the recording level adjustment display in standby or recording mode.
2. Turn the SEL/PUSH EXEC dial to adjust the recording level of the channel 1, then press the dial. The cursor moves to "CH2," and you can adjust the recording level of the channel 2.
3. Turn the SEL/PUSH EXEC dial to adjust the recording level of the channel 2.

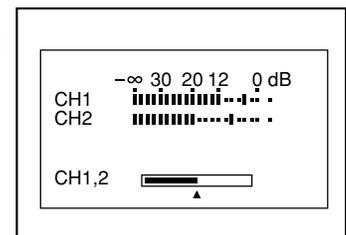
To clear the recording level adjustment display, press AUDIO LEVEL again.

**when AGC CH1 or AGC CH2 is set to ON**

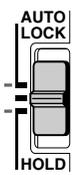
You can see the recording level adjustment display, however, you cannot adjust the recording level of the channel that the item above is set to ON.

**When MAN GAIN is set to LINKED**

The recording level adjustment display is changed like so:



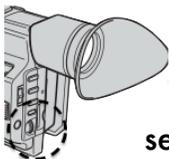
## MANUAL CONTROL SETUP

 Move Auto Lock switch to the middle position. To save Manual settings, move this switch down to HOLD

There are 3 buttons on the back of the camera that allow us to set manual controls. Pressing one of these buttons will cause a symbol to be selected on the LCD screen.

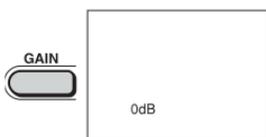


**GAIN**  
**SHUTTER SPEED**  
**WHITE BALANCE**



We use this little wheel to select and change the manual settings of the camera

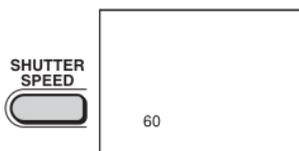
## MANUAL GAIN



Gain affects the sensitivity to light of the camera. Too much gain will make the image grainy and will mess up the white

balance. Keep Gain at zero.

## MANUAL SHUTTER SPEED

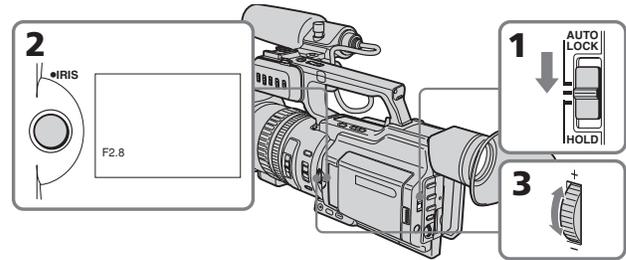


Lower shutter speeds need less light, but creates a ghosting effect with movement, which can be used as an

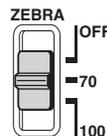
effect. Higher shutter speeds need more light are useful for rapidly moving objects. If you plan to create freeze frames, using a higher shutter speed will result in more image detail.

## MANUAL IRIS

Iris control is in front of the LCD screen. When iris is manual you will see F stop info on screen.



Using the zebra for exposure.

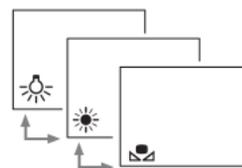


1. Use Zebra 100
2. Have subject hold a white piece of paper. Adjust iris until only the paper has the zebra stripe.

## MANUAL WHITE BALANCE



White balance adjustment is used to tell the camera what is true white, resulting in all other colours also being correct.



1. set the AUTO LOCK switch to the center
2. Press WHT BAL.

You should see the white balance indicator on the screen

3. Turn the SEL/PUSH EXEC dial to choose the white balance you want.



indoor tungsten bulb



outdoor sunny day



manual setting

- (1) Fill the frame with a piece of white paper that is being lit by the same lighting setup.
- (2) Press the SEL/PUSH EXEC dial until the white balance symbol stops flashing.
- (3) Re do the manual white balance for every new lighting setup.

## CAMERA CHECKLIST - AUTOMATIC

### Adjustments to check

- ✓ Auto Lock switch to top position
- ✓ Menu settings adjusted
  - ✓ D Zoom off
  - ✓ 16:9: on / off
  - ✓ Rec mode: DVcam or SP
  - ✓ Audio Set : auto, manual, partial
- ✓ ND filter turned off ?

### Basics

- ✓ battery charged
- ✓ lens clean
- ✓ tripod level and sturdy
- ✓ tape rewound or at proper position
- ✓ 20 seconds of colour bars or black at beginning of tape

### Focusing

- ✓ Focus switch to manual
- ✓ eyepiece adjusted for operators eye
- ✓ critical focus done before shooting

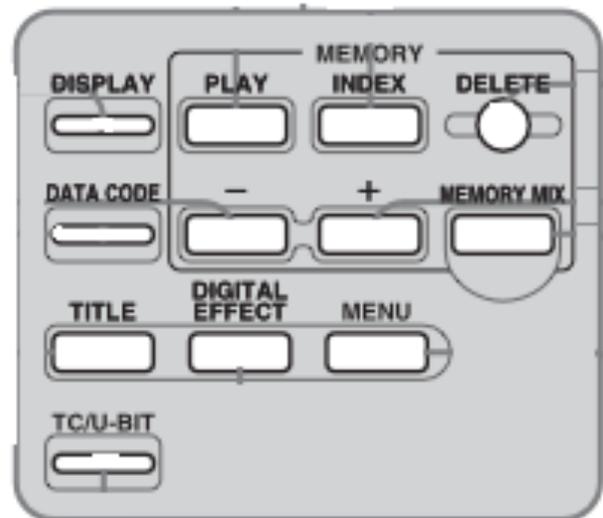
### Logging

- ✓ tape labelled with date and camera #
- ✓ tape box labelled with camera #, date and producers last names
- ✓ Timecode display selected with TC/ U-bit button ( 00:00:00:00 on LCD display )
- ✓ camera log neatly written and accurate

## CAMERA CHECKLIST - MANUAL

- ✓ Auto Lock to middle position
- ✓ Gain set to 0dB
- ✓ Shutter set to 30 - 125
- ✓ Iris adjusted with zebra at 100
- ✓ White balance set with lighting change
- ✓ Auto Lock to Hold position once all manual settings are done
- ✓ Audio levels adjusted for each mic

## BUTTONS



- memory-play-index-delete : used for memory card
- 
- DIGITAL EFFECT ( page 40 )
  - STILL -
  - FLASH -
  - LUMI-
  - TRAIL -
  - OLD MOVIE
- TITLE used with memory card
- DATA CODE: to see data on screen
- DISPLAY: to see date/time on screen
- END SEARCH : to go to end of last recorded scene - won't work if tape is ejected
- ZEBRA : shows brightest spots of image:
  - 70= skin tone, 100 = pure white