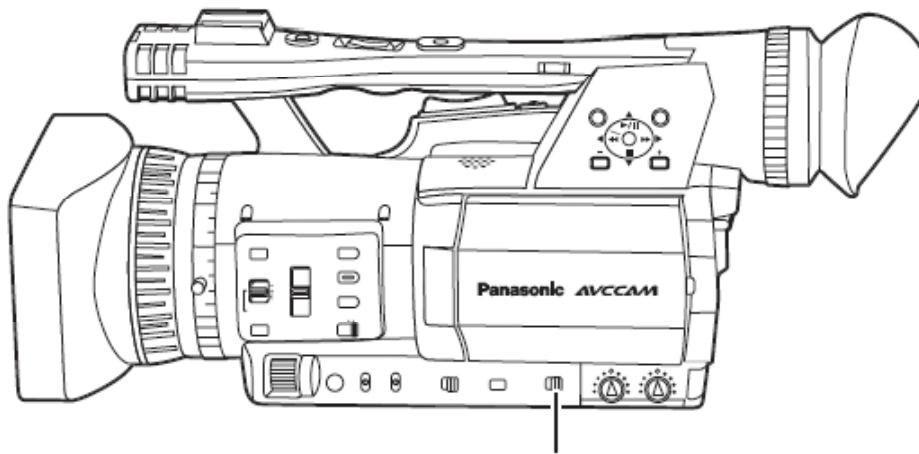


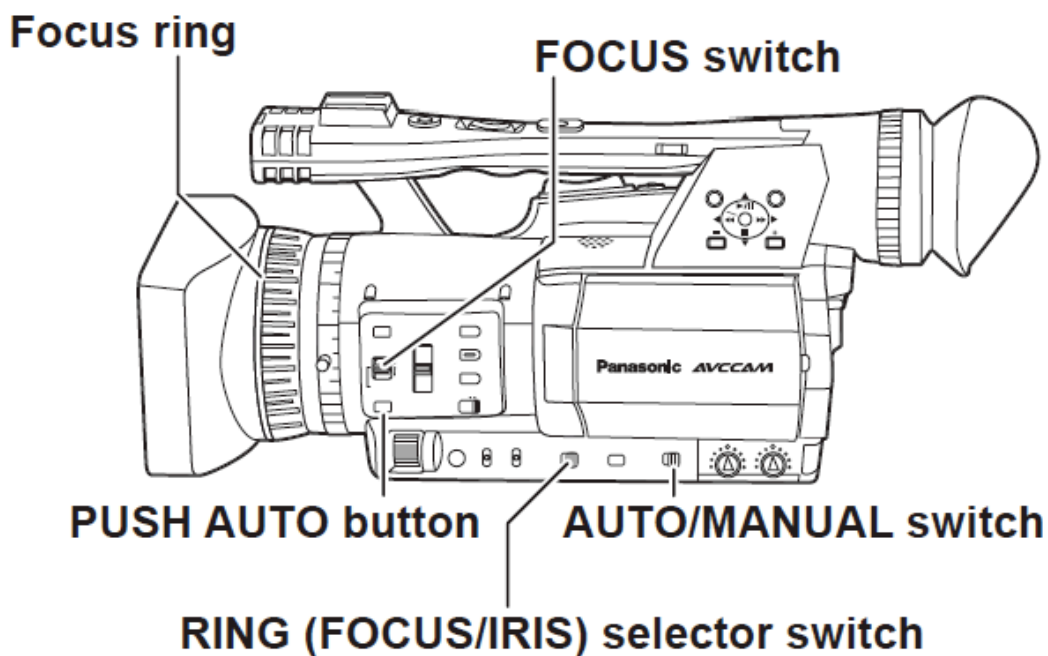
Switching to manual mode

Move the AUTO/MANUAL switch to the MANUAL position to select the manual mode. (**A** will disappear from the viewfinder or the LCD monitor.)



AUTO/MANUAL switch

Manual focusing



Focus ring

FOCUS switch

PUSH AUTO button

AUTO/MANUAL switch

RING (FOCUS/IRIS) selector switch

1 Use the AUTO/MANUAL switch to set to manual mode.

2 Use the FOCUS switch to choose how to control focusing.

A (AUTO):

Auto focus mode

M (MANUAL):

Manual focus mode

Turn the focus ring by hand.

∞ :

The camera first focuses on infinity, then it switches to manual focus.

The FOCUS switch automatically moves back to M (MANUAL) after you move it to ∞.

3 The function allocated to the focus ring can be changed with the RING (FOCUS/IRIS) switch.

FOCUS:

Adjust the focus.

IRIS:

Adjust the iris (aperture) setting.

Temporarily switching to auto focus

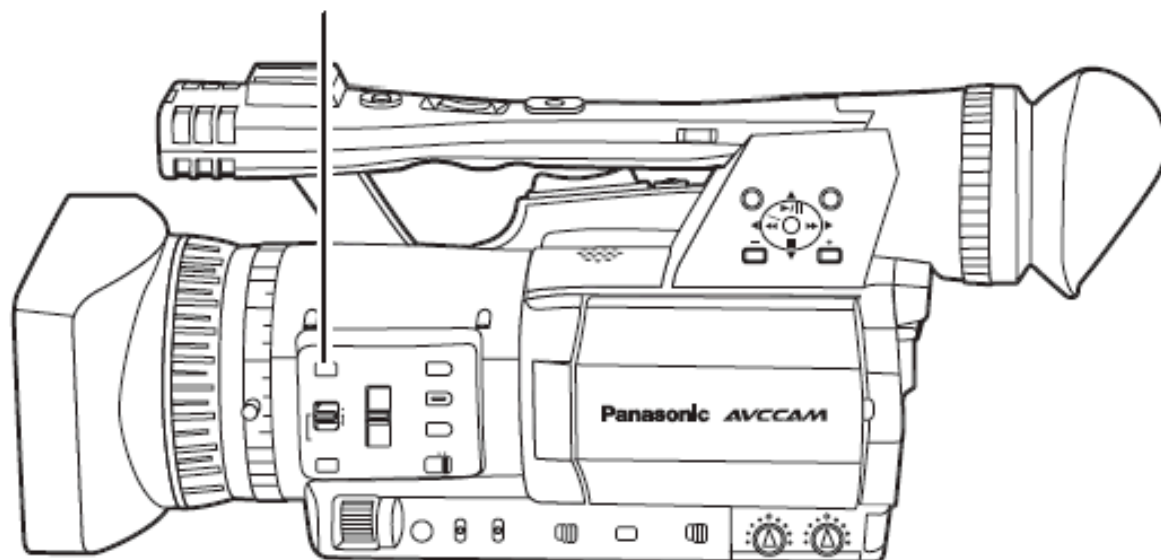
Even if you have switched FOCUS to M (MANUAL) the camera will focus automatically while you press down PUSH AUTO.

- Auto focus may not work properly if there is flickering. Select a shutter speed suited to the

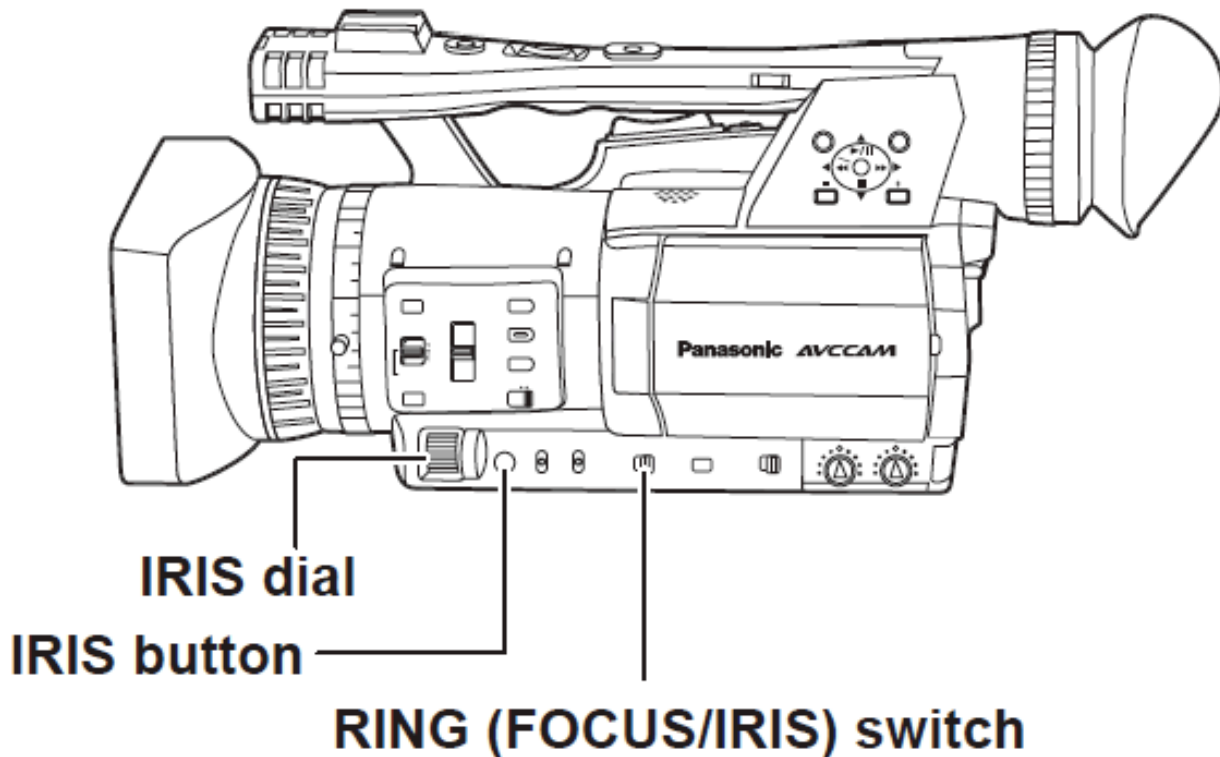
Using focus assist

Pressing the FOCUS ASSIST button enlarges the center of the screen or displays a frequency distribution graph in the top right of the screen, enabling the focus to be aligned more easily, and therefore particularly useful when using manual focus. The screen display that appears after pressing the FOCUS ASSIST button can be changed with the FOCUS ASSIST setting in the settings menu SW MODE screen. (Page 89)

FOCUS ASSIST button



Iris adjustments



1 Use the **AUTO/MANUAL** switch to set to manual mode. (Page 36)

2 Press the **IRIS** button to switch how to adjust the aperture of lens.

AUTO IRIS: Adjust the iris automatically.

MANUAL IRIS: Adjust the iris manually.

3 Turn the **IRIS** dial to adjust the aperture of lens when in the manual iris mode.

- In the auto iris mode, the lens iris can be corrected using this dial.

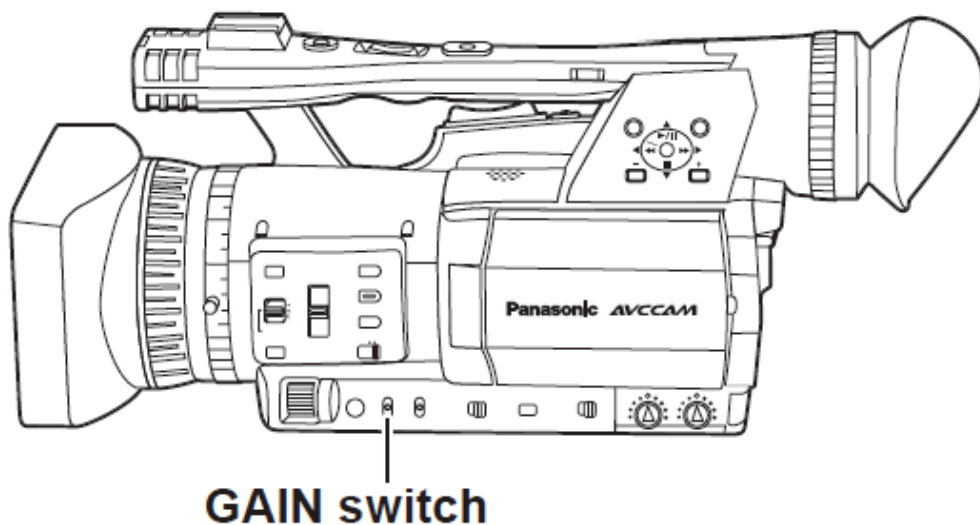
- Set the direction of the IRIS DIAL and aperture control in the setup menus, SW MODE screen, IRIS DIAL. (Page 88)
- If you have set ON under A.IRIS item on the setting menu AUTO SW screen, auto iris will be forcibly selected when auto mode has been established. (Page 90)
- The lens aperture can be adjusted in the focus ring by setting the RING (FOCUS/IRIS) switch to IRIS. However, as this will make it impossible to adjust the focus in the focus ring, please set the focus control method to A (AUTO) with the FOCUS switch. (Page 36)

When this camera's lens aperture is open, the F-value will be F1.6 when the lens zoom is set to maximum wide-angle (W), and F3.0 when set to maximum telescopic (T).

While the lens aperture is open, the iris displays on the viewfinder or LCD monitor will show OPEN when the lens zoom is set to maximum wide-angle (W), and F3.0 or OPEN when set to maximum telescopic (T).

Adjusting the gain

When the display is dark, increase the gain to brighten the display.



1 Use the **AUTO/MANUAL** switch to set to manual mode. (Page 36)

2 Switch the gain with the **GAIN** switch.

L:

Set here under normal conditions. (0 dB)

M:

Increase the gain of the image amplifier.
(The default value is 6 dB.)

H:

Increase the gain of the image amplifier.
(The default value is 12 dB.)

Light intensity adjustments

Use the ND FILTER switch to change the ND Filter used (filter to change light intensity).

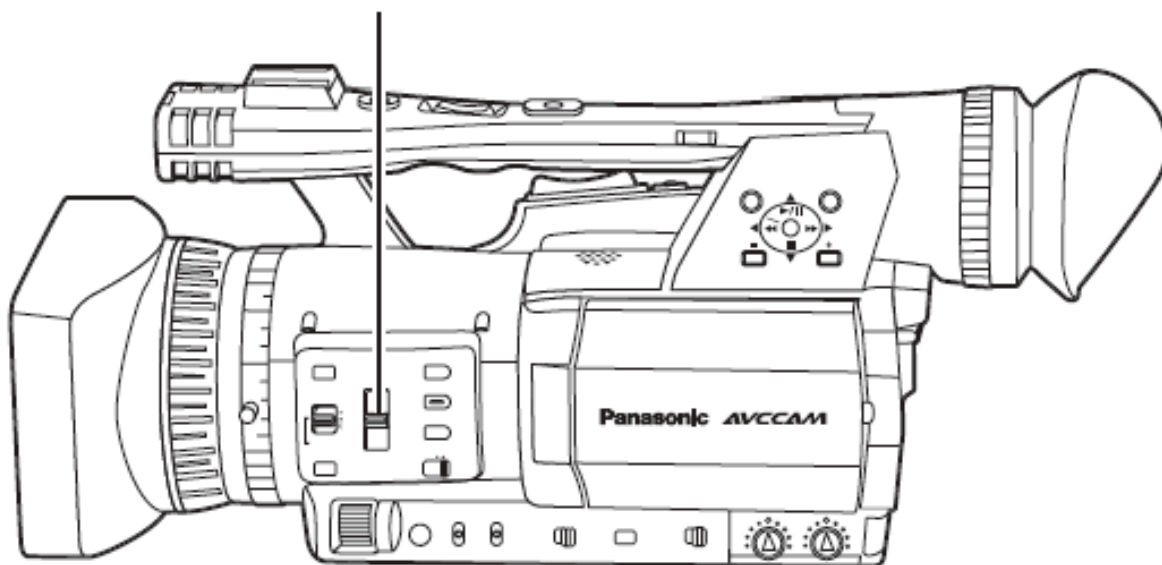
OFF: ND filter is not used.

1/4: Cuts light intensity by up to about 1/4.

1/16: Cuts light intensity by up to about 1/16.

1/64: Cuts light intensity by up to about 1/64.

ND FILTER switch



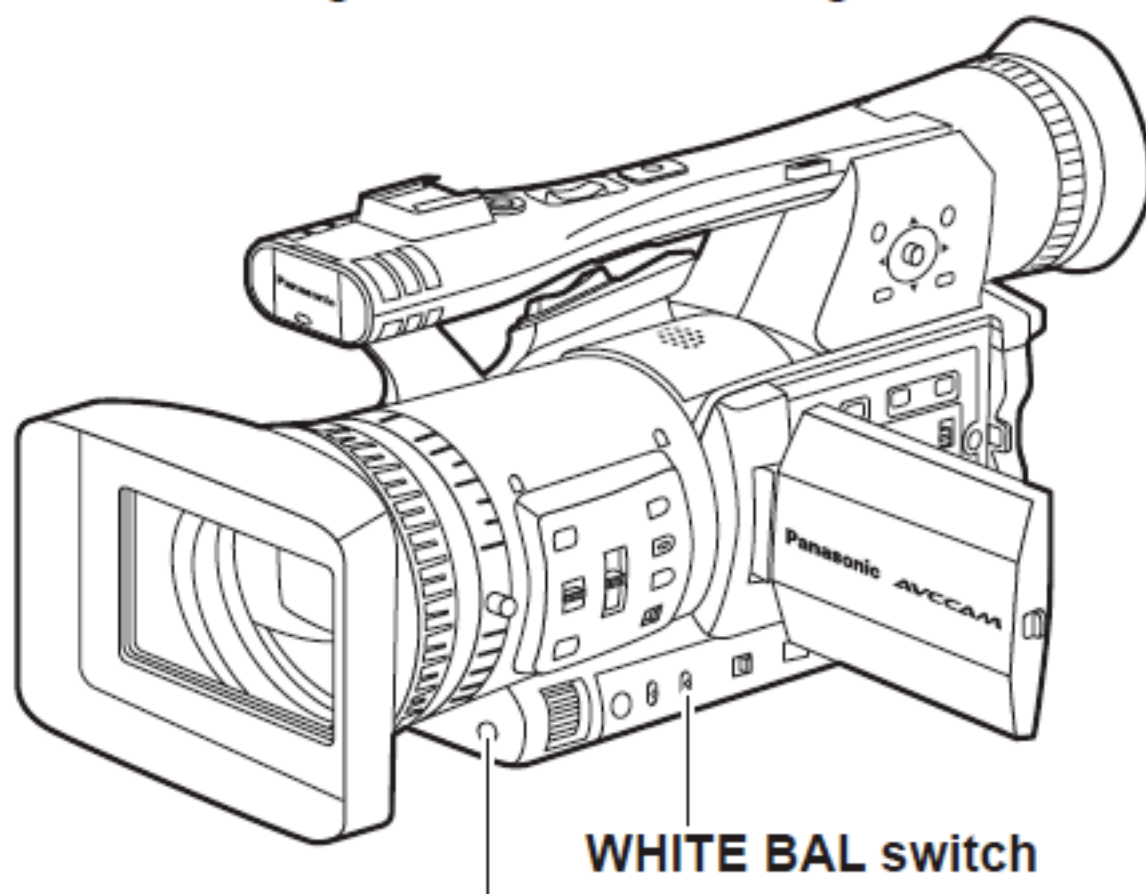
Adjusting the white balance

In order to reproduce the white accurately, adjust the ratio between the three RGB primary colors. If the white balance is not adjusted properly, not only will the white be reproduced poorly but the color tones of the entire screen will also be downgraded. When you are shooting in manual mode, readjust the white balance whenever lighting conditions change.

You can save adjustments and reselect them by setting the WHITE BAL switch to A or B.

You can also use the preset values.

Use the settings to suit the shooting conditions.



White balance adjustments

- 1 Use the AUTO/MANUAL switch to set to manual mode. (Page 36)
- 2 Set the shutter speed. (Page 46)
- 3 Place a white pattern in a location with the same lighting conditions and light source as the subject, then zoom in and fill the whole screen with white.
Something white (a white cloth or wall) near the subject can be used instead.
 - Do not include bright spotlights in your shot.

- 4 Set the WHITE BAL switch to A or B (whichever one you want to save the adjustment in).

- 5 Press the AWB button.
 - Adjustment takes a few seconds. (The following messages appear on the screen.)

Message during adjustment

AWB Ach ACTIVE

Message after adjustment

AWB Ach OK

- An error message appears on the screen when white balance adjustment is not possible.

Message when adjustment cannot be done

AWB Ach NG

- White balance cannot be adjusted if the ATW (Auto Tracking White) function is working.
- If you have set ON under ATW on the setting menu AUTO SW screen, ATW will be selected when auto mode has been established regardless of the WHITE BAL switch position. (Page 90)
- Make the necessary adjustments if one of the following error messages appears, then try adjusting the white balance again.

Error messages	Adjustments
LOW LIGHT	Increase light or increase the gain.
LEVEL OVER	Reduce light or decrease the gain.

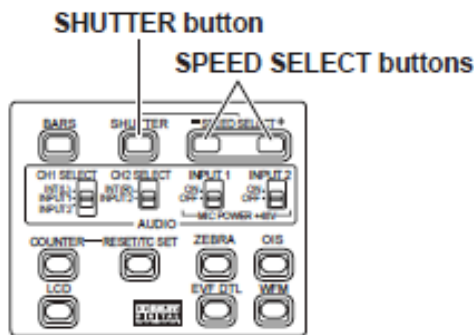
- If the messages repeatedly appear even after trying a number of times, consult your dealer.

Using presets

Use this feature when you have no time to make white balance adjustments.

- 1 Use the AUTO/MANUAL switch to set to manual mode. (Page 36)
- 2 Set the WHITE BAL switch to PRST. The current white balance value appears.
 - White balance values 3200 K and 5600 K are preset in the PRST position.
Guide to the preset values
P3.2K (3200 K): halogen light
P5.6K (5600 K): outdoors
- 3 Press the AWB button. White balance switches between 3200 K and 5600 K.

Adjusting the shutter speed



1 Press the SHUTTER button.
Each time you press the SHUTTER button, the shutter speed switches between normal (OFF) and the speed you selected with the SPEED SELECT buttons.

2 After you have pressed the SHUTTER button, press SPEED SELECT buttons to select the shutter speed.
The shutter speed changes as follows each time you press SPEED SELECT + button (The order is reversed for the SHUTTER SELECT - button.)

- Remember that the faster the shutter speed, the lower the sensitivity.
- If iris is set to auto, then it will open wider with higher shutter speeds and thereby reduce focal depth.
- It will take longer to focus when the shutter speed has been reduced so it is recommended that the unit be secured to a tripod, etc. for use.

- The current shutter speed appears on the viewfinder and LCD monitor unless you have selected OFF in OTHER DISPLAY in the DISPLAY SETUP screen of the setup menus. It is not displayed if you have set the shutter speed to normal (OFF).
- With artificial lighting and especially fluorescent lights and mercury-vapor lamps, the luminance changes in synchronization with the power line frequency. When this frequency is 50 Hz, mutual interference will occur between the camera-recorder's vertical sync frequency (approx. 60 Hz) and the lighting frequency (50 Hz). This means that the white balance may change periodically. Before shooting in areas with artificial lighting or adjusting the white balance, set the shutter speed as follows.

Progressive mode	Shutter speed	
	50 Hz	60 Hz
OFF (60i)	1/100	OFF (1/60)
30P	OFF (1/50)	1/60
24P	OFF (1/50)	1/60

- The gain is fixed at 0 dB with a shutter speed of 1/15.

With the 1080/60i or 720/60P formats	
Standard (OFF) 1/60	SYNCRO SCAN ↔ 1/15 ↔ 1/30 ↔ 1/100 ↔ 1/120 ↓ 1/2000 ↔ 1/1000 ↔ 1/500 ↔ 1/250
With the 1080/30P or 720/30P formats	
Standard (OFF) 1/50	SYNCRO SCAN ↔ 1/15 ↔ 1/30 ↔ 1/60 ↓ 1/1000 ↔ 1/500 ↔ 1/250 ↔ 1/120
With the 1080/24P or 720/24P formats	
Standard (OFF) 1/50	SYNCRO SCAN ↔ 1/24 ↔ 1/60 ↓ 1/1000 ↔ 1/500 ↔ 1/250 ↔ 1/120

Zebra pattern

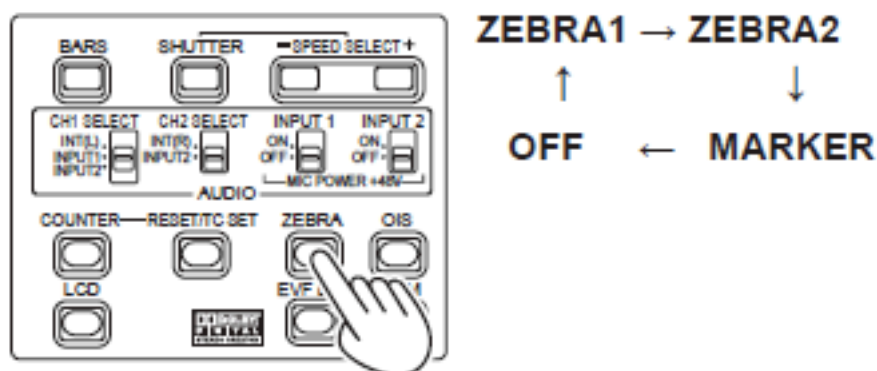
Press the ZEBRA button in the CAM mode to show the zebra pattern or marker on the viewfinder and the LCD monitor so you can check the brightness of the subject.

Parts that may be whited out through over exposure are shown as a zebra pattern.

- Very bright
- Reflecting parts

You can remove most overexposed parts by adjusting the iris and shutter speed in the manual mode to remove the areas with zebra patterns.

The display changes as follows each time you press the ZEBRA button.



In the setup menus, DISPLAY SETUP screen, ZEBRA DETECT1 and ZEBRA DETECT2, set the brightness for the zebra patterns. (Page 94)

If the ZEBRA DETECT2 item is set to OFF, ZEBRA2 will not be displayed even if the ZEBRA button is pressed.

The zebra pattern you have set appears as a percentage on the display for about 2 seconds. The zebra pattern cannot be displayed while the focus assist function is in use.