

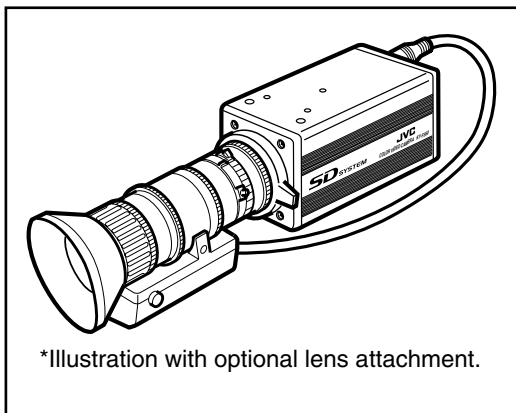


COLOR VIDEO CAMERA

KY-F560

INSTRUCTIONS

3-CCD



*Illustration with optional lens attachment.

This instruction manual is made from 100% recycled paper.

Thank you for purchasing this JVC product. Before operating this unit, please read the instructions carefully to ensure the best possible performance.

For Customer Use:

Enter below the Serial No. which is located on the bottom of cabinet. Retain this information for future reference.

Model No. KY-F560U

Serial No. _____

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water – for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the appliance.

Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING
(symbol provided by RETAC)



8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
12. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
13. Follow all warnings and instructions marked on the appliance.
14. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
15. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
16. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the appliance.
 - c. If the appliance has been exposed to rain or water.
 - d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
 - e. If the appliance has been dropped or the cabinet has been damaged.
 - f. When the appliance exhibits a distinct change in performance – this indicates a need for service.
18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

SAFETY PRECAUTIONS



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

This unit should be used with 12 V DC only.

CAUTION:

To prevent electric shocks and fire hazards, DO NOT use any other power source.

NOTE:

The rating plate (serial number plate) is on the bottom of the unit.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.



ATTENTION

RISQUE D'ELECTROCUTION
NE PAS OUVRIR



ATTENTION: POUR EVITER TOUT RISQUE D'ELECTROCUTION
NE PAS OUVRIR LE BOITER.
AUCUNE PIECE INTERIEURE N'EST
A REGLER PAR L'UTILISATEUR.
SE REFERER A UN AGENT QUALIFIE EN CAS DE PROBLEME.



Le symbole de l'éclair à l'intérieur d'un triangle équilateral est destiné à alerter l'utilisateur sur la présence d'une "tension dangereuse" non isolée dans le boîtier du produit. Cette tension est suffisante pour provoquer l'électrocution de personnes.



Le point d'exclamation à l'intérieur d'un triangle équilateral est destiné à alerter l'utilisateur sur la présence d'opérations d'entretien importantes au sujet desquelles des renseignements se trouvent dans le manuel d'instructions.

*Ces symboles ne sont utilisés qu'aux Etats-Unis.

AVERTISSEMENT:

POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

Cet appareil ne doit être utilisé sur 12 V en courant continu.

ATTENTION:

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas utiliser d'autres sources d'alimentation électrique.

REMARQUE:

La plaque d'identification (numéro de série) se trouve sur la partie inférieure de l'appareil.

INFORMATION (FOR CANADA) RENSEIGNEMENT (POUR CANADA)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Class B est conforme à la norme NMB-003 du Canada.

Thank you for purchasing this product.

These instructions are for KY-F560U.

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Notations and Symbols Used in This Manual

Caution	Precautions during operation are stated.
Note	Restrictions of functions and specifications are stated for reference purposes.
	Indicates the page and item to refer to.

※All product names in this manual are trademarks or registered trademarks of their respective companies.
Marks such as ™, ® and © are not used in this manual.

1. Getting Started

Features

- Supersensitive and high-performance camera that realizes a horizontal resolution of 850 lines and F13/2000 lx via three and a half inch CCD and 12-bit DSP processing.
Enables camera control and hence offers a wide range of uses via use of cameras for high resolution monitoring, relay, data transmission, weddings and conventions with a swivel base.
- Miniature Camera that Employs Bayonet Mount
Employment of bayonet mount and 1/2-inch color separation optics, and compact design through high-density mounting of the newly developed IC.
- Automatic Switching between Internal Sync/External Sync
Employs automatic switching between internal/external sync, which is useful for switching between multiple cameras or system upgrade via connection with other devices.
- SMPTE-compliant Built-in Color Bars Generator
Color monitor can be adjusted with ease with the use of SMPTE color bars.
- Variable Scan Shutter
Eliminates flicker when shooting screen pictures other than NTSC, such as computer screens.
- Equipped with White Shading Function
Corrects color shading triggered by optical characteristics.
- Black Stretch/Black Compress Feature
Stretches or compresses the gain of the dark section in an image to adjust the tone of that section.
- Negative
Used for special purposes such as shooting using films.
- AE (Automatic Exposure)
5 selectable modes in the AE area that are useful when there is a difference in brightness between the object and its surroundings.
In addition, exposure settings can also be performed according to shooting conditions via selection of AE level adjustment or photometry detection.
- Built-in White Spot Correction Feature
- Equipped with Remote Terminal
Supports remote control via the remote control unit (sold separately).
- Equipped with Expansion Slot
System upgrade via connection of optional devices (sold separately) is possible.

Points to Note During Use

- For important shootings, perform trials in advance to ensure that they are properly recorded.
- We will not compensate for contents lost due to the malfunction of this unit.

■ Characteristic CCD Phenomena

- **Smear and Blooming**

When shooting a bright light source, the CCD may induce white streaks (smear) in the vertical direction of the light source. When the light source is extremely bright, light of the surroundings may expand (blooming).

- **Aliasing**

Note that a jagged effect may occur when shooting striped patterns or lines.

- **White spot**

Operating this unit under a high temperature may give rise to white spots in the image. Ensure to use this unit within the specified range (−5°C to 40°C).

This unit comes with the white spot correction feature that helps to reduce this phenomenon.

 Page 26

■ Precautions During Handling

- **Strong Electromagnetic Waves or Magnetism**

When placed near radios or TV transmitters, or transformers and monitors that emit strong magnetism, noise or color change may occur in the image. Ensure that this unit is kept away from the above during use.

- **Compatible Lens  Page 14 'Mounting the Lens'**

Lens mount of this unit makes use of bayonet mount and there are restrictions on the type of lens to be used.

Pay attention to their performance and dimensions when lenses other than those specified are used.

- **Cleaning the Body of this Unit (Turn off the power before cleaning.)**

Wipe using a soft cloth.

Do not wipe with thinner or benzene. These may corrode or tarnish the surface.

When it is extremely dirty, wipe using a neutral detergent diluted with water, follow by wiping with a dry cloth.

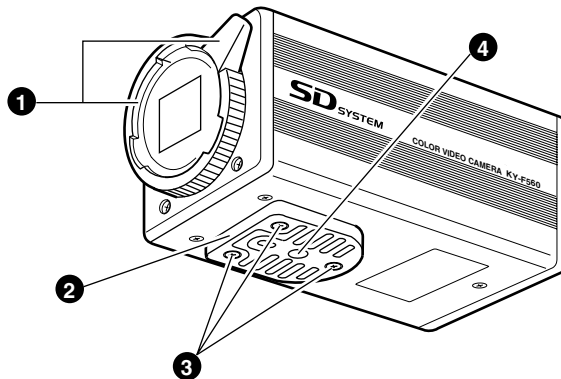
- **When not in use, turn off the power of the system to reduce power consumption.**

- **Do not mount unit at locations that emit radiation, X-rays or corrosive gases.**

1. Getting Started (continued)

Part Names and Functions

Front / Bottom



① Lens Mounting Ring/Lens Lock Lever

When dismounting the lens, do so by holding the lens and turning the lens lock lever in the anti-clockwise direction.

When mounting the lens, check that the guide pins of the lens are aligned, followed by turning the lens lock lever in the clockwise direction to fasten.

☞ Page 14 'Mounting the Lens'

② Camera Mounting Bracket

This is attached to the bottom face of the camera when supplied. Mount it to the top surface according to the conditions of use. Mount the fastening screws for the camera mounting bracket ③ to the screw holes on the top surface.

☞ Page 16 'Mounting the Camera'

③ Fastening Screws for Camera Mounting Bracket

(M2.6 x 6 mm, 3 pcs)

Caution

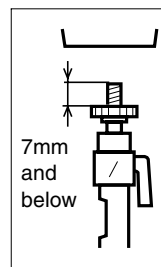
Make sure to use screws that are supplied with this unit.

Use of screws that are 6 mm or longer in length may give rise to malfunction of the unit.

④ Camera Mounting Screw Holes (1/4-20UNC)

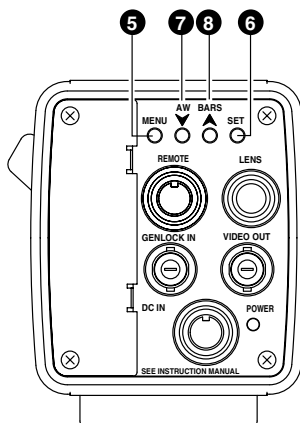
Use when mounting this unit to fixer or swivel bases.

(Use screws that are 7 mm or shorter in length.)



Part Names and Functions (continued)

Back



5 [MENU] Menu Button

Press this button for 1-2 seconds. Menu screen will be output from the [VIDEO OUT] terminal. Press the button for 1-2 seconds again to clear the menu screen.

☞ Page 30 'Setting Procedures'

6 [SET] Set Button

When the menu screen is displayed, use it to select a submenu or to confirm a selected item or set value.

☞ Page 30 'Setting Procedures'

7 [AW/▼] Auto White/Down Button

8 [BARS/▲] Color Bars/Up Button

■ When menu screen is displayed

Press these buttons to move between selection items on the menu screen.

Use the [▲] button to move upwards.

Use the [▼] button to move downwards.

Used for altering the set values when an item is being selected.

■ When the menu screen is off

- Press the [AW] button to adjust the white balance.

☞ Page 20 'White Balance Adjustment'

- Press the [BARS] button to switch between the color bars output and camera image output.

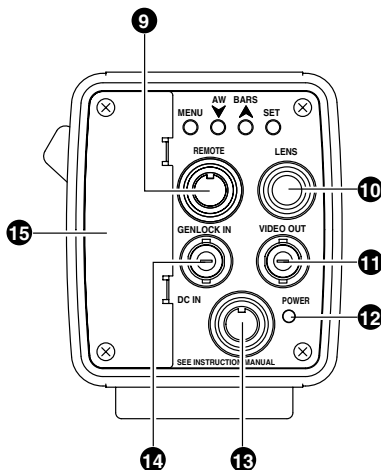
- Use this button when adjusting the monitor or when recording color bars signal.

☞ Page 18 'External Monitor Adjustment'

1. Getting Started (continued)

Part Names and Functions (continued)

Back



9 [REMOTE] Remote Terminal

(Mini DIN 6 Pin, Female)

Terminal for connection to remote control unit (RM-LP55 or RM-LP57, both sold separately).

☞ Page 11 'Description of Terminals'

☞ Page 44 'Connecting the Remote Control Unit'

10 [LENS] Lens Connection Terminal

Connect the lens cable.

☞ Page 11 'Description of Terminals'

☞ Page 14 'Mounting the Lens'

11 [VIDEO OUT] Video Signal Output Terminal

Output terminal for composite video signals. Connect to video input terminals such as monitors or switchers.

12 [POWER] Power Indicator Light

Lights up when power is supplied to this unit.

13 [DC IN] Power Input Terminal

(Mini DIN 8 Pin, Female)

Power of this unit (DC 12 V) is supplied through this terminal.

Use an AC adaptor (AA-P700) for the power supply.

☞ Page 11 'Description of Terminals'

☞ Page 15 'Connecting the Power Supply'

14 [GENLOCK IN] External Sync Signal Input Terminal

Reference signal input terminal for synchronization with this unit.

Inputs composite video signals or black burst signals.

15 Slot Cover for Option Cards

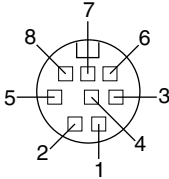
Remove the cover to install the option card.

☞ Page 46 'Connecting Optional Devices'

Please consult your JVC-authorized dealer on optional devices.

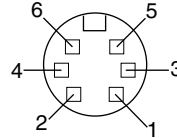
Description of Terminals

Power Input Terminal (Mini DIN 8 Pin, Female)



Pin No.	Signal
1	NC
2	GND
3	NC
4	NC
5	GND
6	+ 12 V Input
7	NC
8	+ 12 V Input

Remote Terminal (Mini DIN 6 Pin, Female)

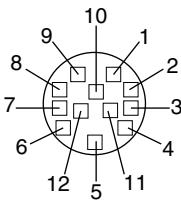


Pin No.	Signal
1	GND
2	OPERATE (L:ON)
3	GND
4	SID2(TX)
5	SID1(RX)
6	+ 9 V Output

Notes

- Please consult your JVC-authorized dealer on connection of remote terminals.
- Ensure to use cables that are shielded.

Lens Connection Terminal (Metal 12 Pin, Female)



Pin No.	Signal
1	LENS RET
2	NC
3	GND
4	LENS AUTO
5	IRIS CONTROL
6	+ 12 V Output
7	IRIS POSITION
8	IRIS A/R
9~12	NC

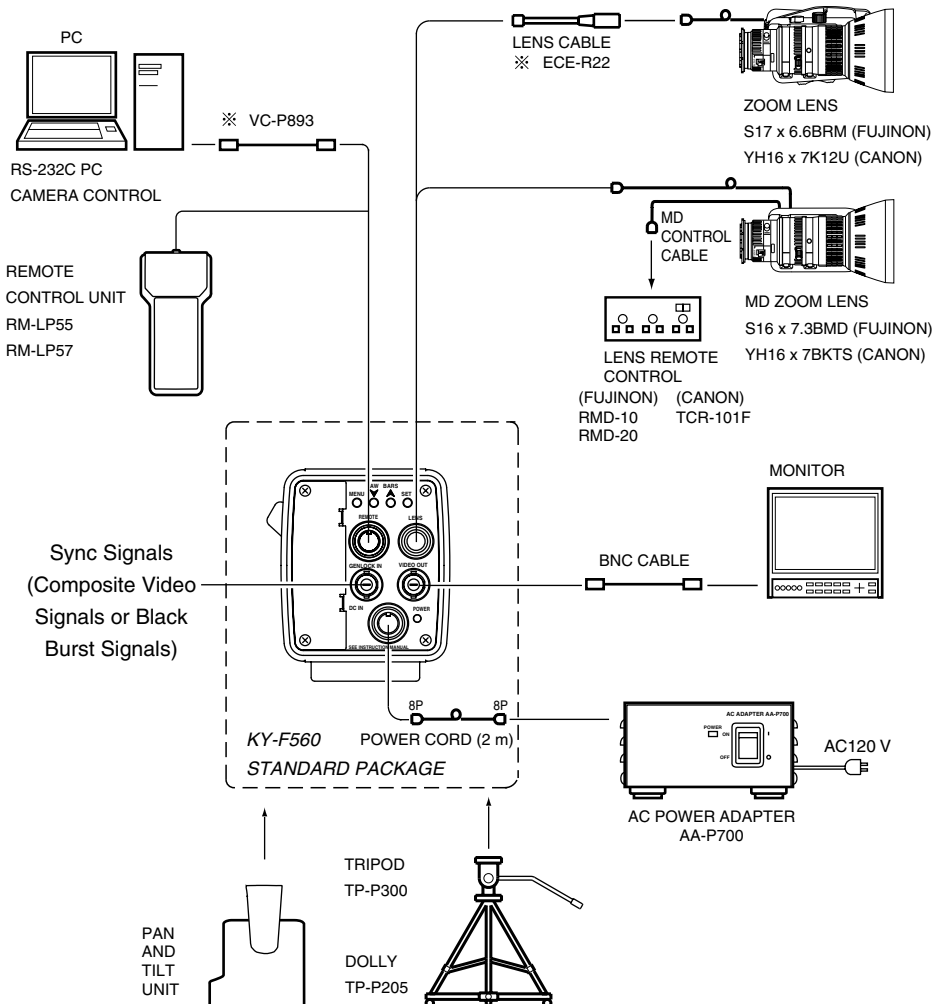
2. Preparation Before Shooting

Basic System

The diagram below illustrates connection of a basic system.

When connecting

- Perform this when the unit is off.
- Read the instruction manual of the unit before performing it.
- Consult your JVC-authorized dealer on details of the equipment in use of cables with the ※ mark.

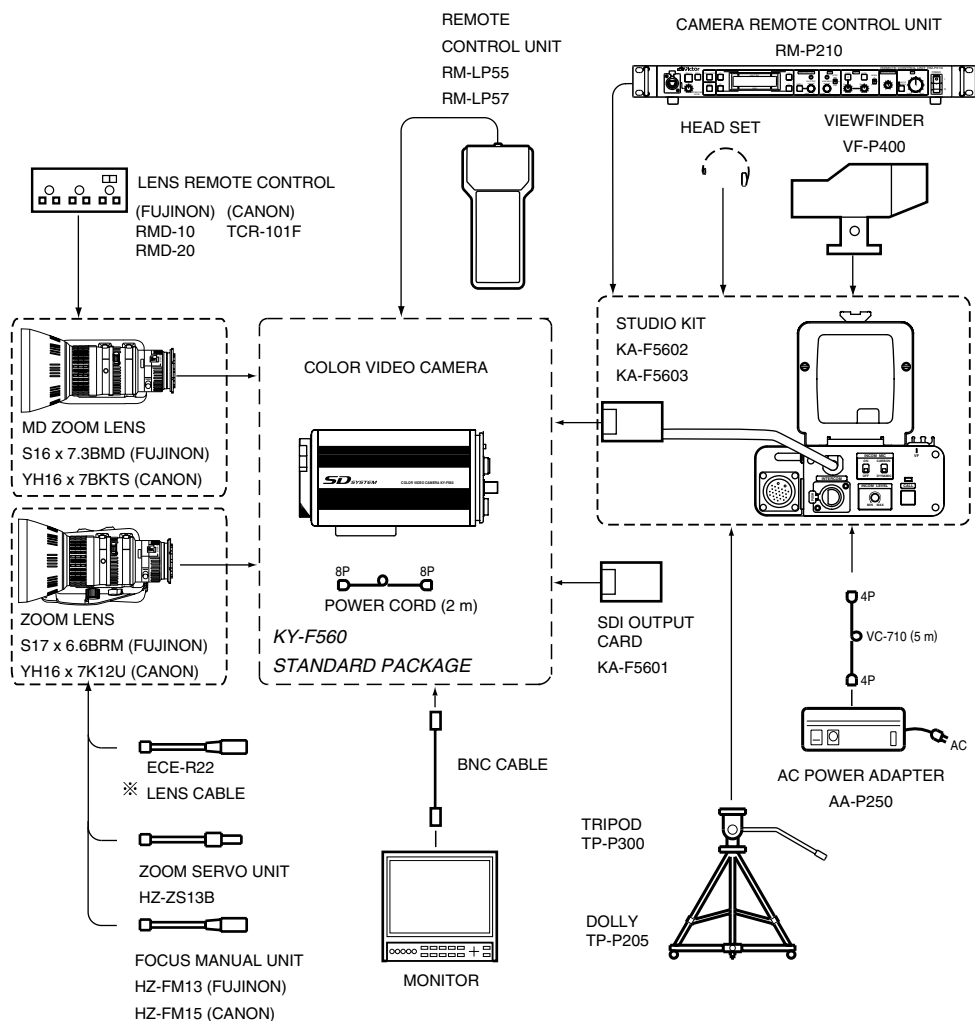


Applied System

The diagram below illustrates connection of an applied system.

When connecting

- Perform this when the unit is off.
- Read the instruction manual of the unit before performing it.
- Consult your JVC-authorized dealer on details of the equipment in use of cables with the ※ mark.

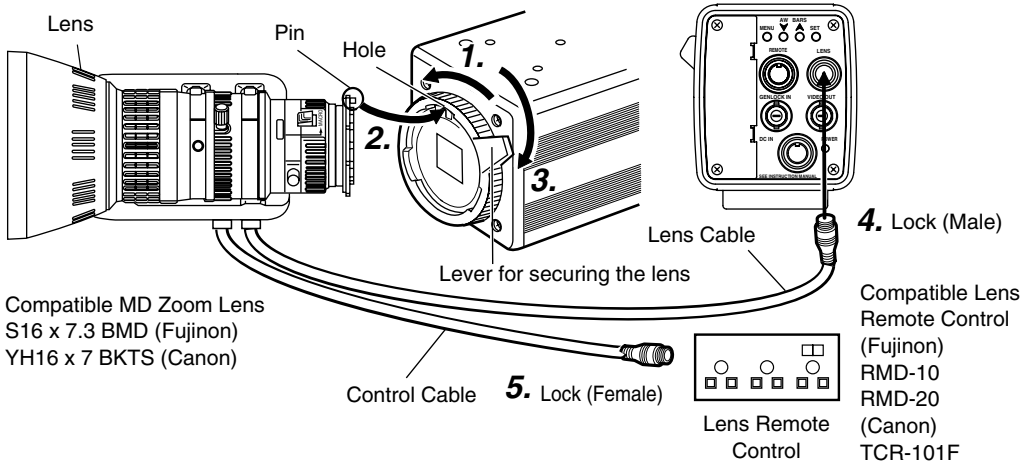


2. Preparation Before Shooting (continued)

Mounting the Lens

Follow the procedures below when mounting the auto iris lens.

Refer to the 'instruction manual' for the lens and lens remote control as well.



Note

When connecting the manual iris lens or lens remote control to operate the lens iris manually, set the "IRIS MODE" item to "MANUAL".

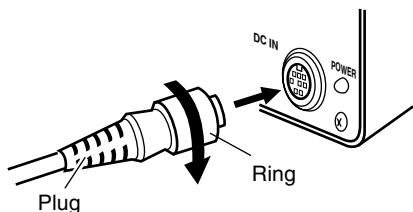
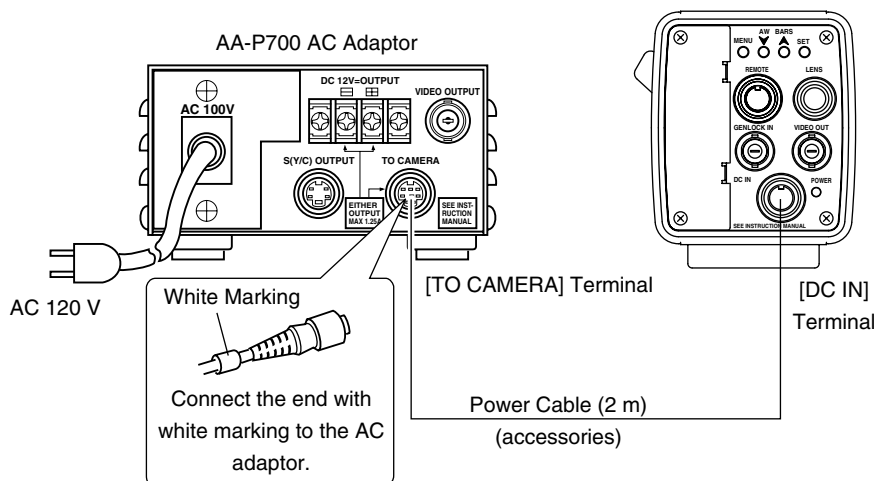
☞ Page 31 'IRIS MODE' Item on "EXPOSURE" Screen'

Caution

- Perform this when the unit is off.
Connecting with the power on may give rise to malfunction of the unit.
- When removing the lens mount cap, ensure that no foreign substances are inside the mount.
- Lenses are not supplied with this unit. Make sure to use lenses that are compatible with this unit.

Connecting the Power Supply

Connect the [DC IN] terminal at the back of this unit to the [TO CAMERA] terminal of the AC adaptor (AA-P700) using the power cable supplied (2 m).



- Insert plug fully, turn ring and ensure that it is fastened.
Connect the plug in the same way at the AC adaptor's end.

Caution

Ensure to make use of AA-P700 for the power supply.

When connecting, ensure that power switch of AA-P700 is turned OFF. Connecting with the power on may give rise to malfunction of the equipment.

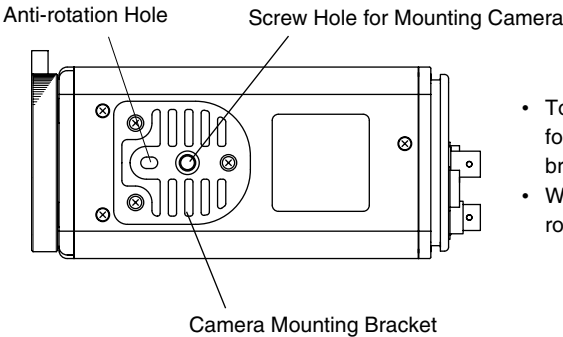
Note

Allow a 10 second interval after switching off the power before turning on again. If the power switch is turned ON and OFF too soon, malfunctioning such as startup failure may occur.

2. Preparation Before Shooting (continued)

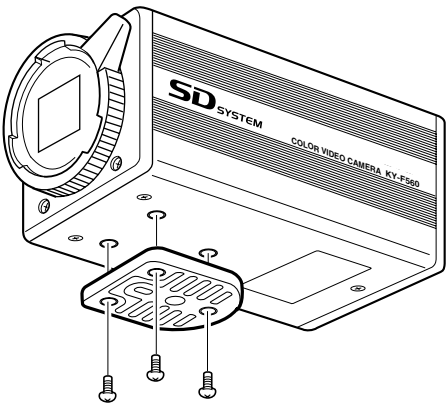
Mounting the Camera

<Mounting Procedures>



- To mount this unit, make use of the screw holes for mounting the camera on the camera mounting bracket.
- When mounting this unit, make use of the anti-rotation hole to prevent it from falling.

<Changing the Camera Mounting Bracket>

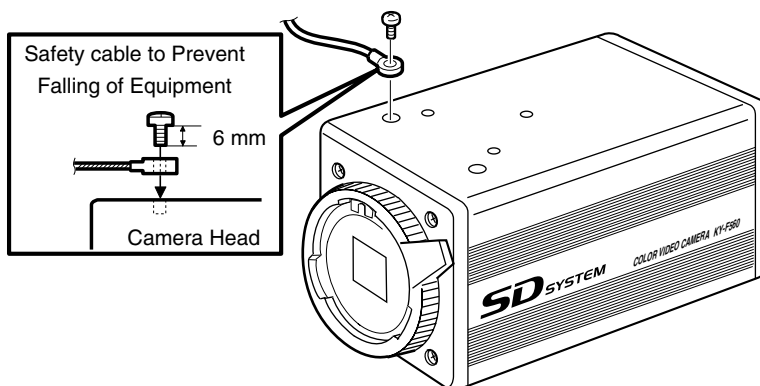


Camera Mounting Bracket is mounted to the bottom surface of the camera when supplied. To mount it to the top surface, do so by removing the 3 fastening screws of the camera mounting bracket.




Caution

Make sure to use screws supplied with this unit. Use of screws that are 6 mm or longer in length may give rise to malfunction of the unit.

Precautions to Prevent Camera From Falling



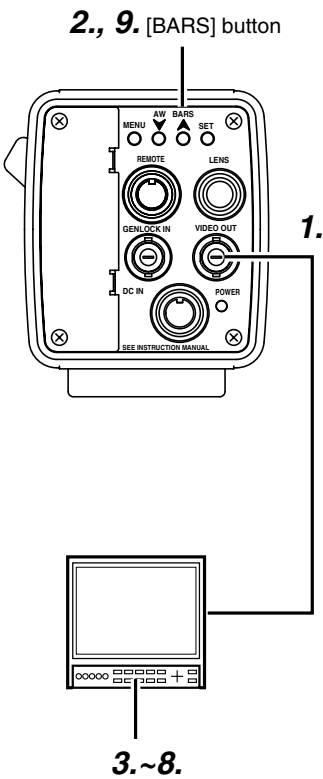
Caution

- Special attention is required when mounting to the wall or ceiling. Get a contractor to perform the work and avoid doing it on your own. Unit may fall off and cause injuries or accidents. 
- Mount the unit to a secure place using safety cable to prevent it from falling. To mount, make use of the bracket fastening screw holes on the face without the camera mounting bracket. (M2.6 x 6 mm)
Pay attention also to the length of the cable. 
- Strength of cable to prevent falling of unit shall be at least 10 times greater than the total mass of the camera and lens. 

3. Setting and Adjustment During Shooting

External Monitor Adjustment

Display the built-in color bars signal at the camera on the monitor to perform color/contrast/brightness adjustment.



1. Connect the color video monitor to the [VIDEO OUT] of this unit.
2. Press the [BARS] button to output the color bars signal (SMPTE-compliant color bars).
3. With the color bars displayed, turn [BLUE CHECK] at the monitor to ON.
Screen turns into a monochrome of blue and color bars appear as blue stripes.
4. Turn the [CHROMA] adjustment knob on the monitor and adjust color bars ① and ⑧, ⑦ and ⑭ to the same brightness level.
5. With [BLUE CHECK] in the ON mode, turn the [PHASE] adjustment knob on the monitor to adjust color bars ③ and ⑩, ⑤ and ⑫ to the same brightness level.
6. If brightness of color bars ① and ⑧, ⑦ and ⑭ vary upon [PHASE] adjustment, repeat chroma adjustment as in step 4..
7. Turn [BLUE CHECK] at the monitor to OFF and return to the normal screen (R, G and B are all displayed).
8. Adjust using the [BRIGHT] adjustment knob on the monitor such that color bars ⑮ and ⑯ disappear and ⑰ becomes visible.
9. Upon completing the adjustment, press the [BARS] button again to return to the normal screen.

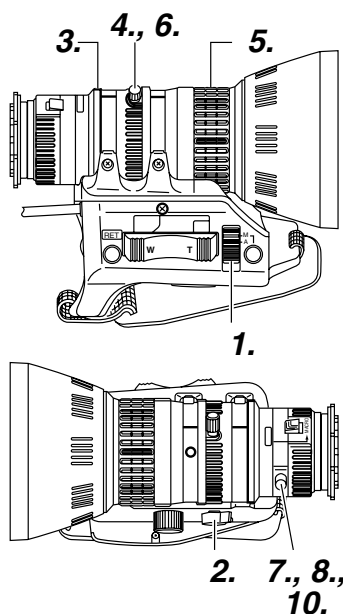
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
⑮	⑯	⑰	⑱	⑲	⑳	㉑

- | | |
|------------|------------|
| ①: White | ⑩: Magenta |
| ②: Yellow | ⑪: Black |
| ③: Cyan | ⑫: Cyan |
| ④: Green | ⑬: Black |
| ⑤: Magenta | ⑭: White |
| ⑥: Red | ⑮: Black |
| ⑦: Blue | ⑯: White |
| ⑧: Blue | ⑰: Black |
| ⑨: Black | |

Back Focus Adjustment

When the lens is mounted for the first time, adjust back focus of the lens if the focus for telephoto/wide angle during zoom is not aligned.

- Check whether the macro ring has been moved before adjustment. If so, restore the macro fixing knob to the original position.
- Place the camera at a distance of 3 m or further away from the object.
The best will be to use the Siemens Star Chart as the object.



Siemens Star Chart (Object)

■ Zoom Lens

1. Set iris mode switch of lens to M (manual).
2. Set zoom mode switch to M (manual).
3. Turn to open the iris ring.
Adjust illumination to obtain the proper image level.
4. Turn the zoom lever to adjust lens to the greatest telephoto position.
5. Turn the focus ring and align focus on the object.
6. Adjust lens to the widest angle position.
7. Loosen the fastening screw for the back focus ring.
8. Focus on the same object and select a position for which focus is best aligned, followed by fastening the back focus ring.
9. Repeat steps 4. ~ 8. for about three times until focus is aligned for both telephoto and wide angle.
10. Tighten fastening screw for back focus ring securely.

■ Power Zoom Lens

There is no manual mode for power zoom lens. Connect the lens remote control.

Adjustment Procedures

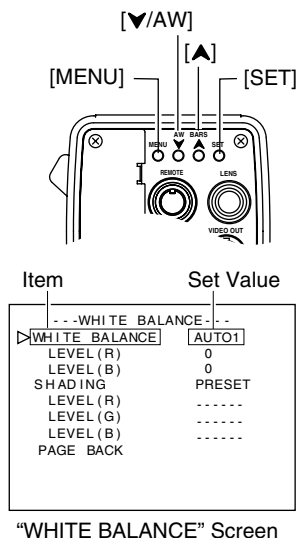
To adjust, follow steps 3. ~ 10. above.

For more details, please refer to the instruction manual for the lens or lens remote control.

3. Setting and Adjustment During Shooting (continued)

White Balance Adjustment

Color of light (color temperature) may vary with light sources. When light source for illumination of object is changed, adjust white balance (AUTO WHITE) again. Do not place strong reflectors such as metals near the object. This may cause error in achieving white balance.



White balance adjustment includes Auto White, Full-time Auto White (FAW), manual and preset.

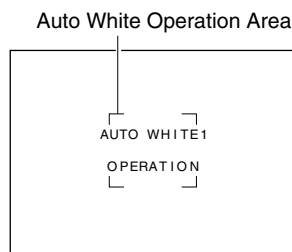
■ Setting procedures for Auto White (“AUTO1”, “AUTO2”)

1. Press the [MENU] button for 1-2 seconds.
The "MENU" screen will be displayed.
2. Use the [▲/▼] buttons to select "WHITE BALANCE..", then press the [SET] button.
The "WHITE BALANCE" screen will be displayed.
3. Use the [▲/▼] buttons to select "WHITE BALANCE", then press the [SET] button.
The set value displayed will start to blink.
4. Use the [▲/▼] buttons to select "AUTO1" or "AUTO2", then press the [SET] button.
5. Press the [MENU] button for 1-2 seconds.
The normal screen will be displayed.

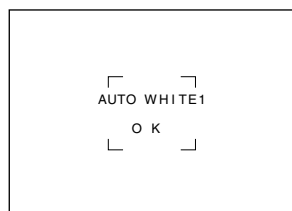
Note

Upon returning to the normal screen, place a white object with the same illumination conditions as the object, zoom in to the white portion at the center of the screen (above 80% within the area).

6. Press the [AW](Auto White) button.
 - When auto white is activated, the auto white operation area and "AUTO WHITE1 OPERATION" are displayed on the monitor.
 - When white balance is achieved "AUTO WHITE1 OK" will be displayed for about 3 seconds before returning to the normal screen.

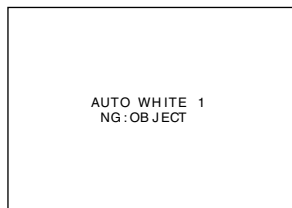


Auto White Operation
Activated

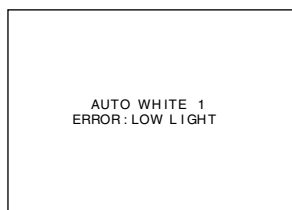


Auto White Operation Ends

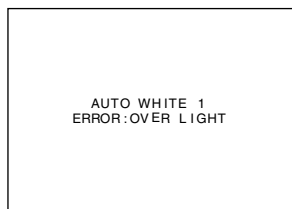
White Balance Adjustment (continued)



Object Error



Insufficient Illumination



Excessive Illumination

Error Display

When auto white adjustment is not correctly ended, the following message will be displayed for about 3 seconds.

- **“NG:OBJECT” (Object Error)**

Displayed when there is little white color in the object or when color temperature is not appropriate.

Change to a white object and perform procedures again to achieve white balance.

- **“ERROR:LOW LIGHT” (Insufficient Illumination)**

Displayed when illumination is too dark. Brighten the illumination and perform procedures again to achieve white balance.

- **“ERROR:OVER LIGHT” (Excessive Illumination)**

Displayed when illumination is too bright. Darken the illumination and perform procedures again to achieve white balance.

■ Full-time Auto White (FAW) Function

Automatic adjustment of white balance according to different illumination conditions.

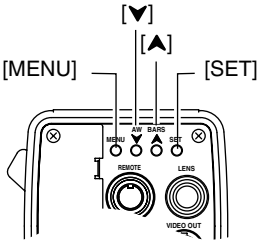
This mode is useful when there is no time to readjust white balance or when camera is frequently moved to locations with different illumination conditions.

- However, white balance cannot be properly achieved in cases that are beyond the adjustable range of the full-time auto white function, such as when there is only one color or little white color in the object.
- Precision of FAW deteriorates when compared with manual white balance.
- When power is turned on in the FAW mode, it takes about 10 seconds for the FAW automatic adjustment to end.

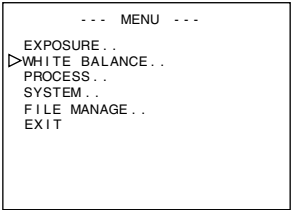
3. Setting and Adjustment During Shooting (continued)

White Shading Adjustment

There are cases when white balance is achieved for the center of the screen but not for the upper and lower ends, hence causing other colors to appear with green or magenta. This is brought about by the lens characteristics. The process of rectifying this is known as white shading.

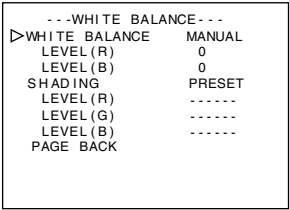


1.



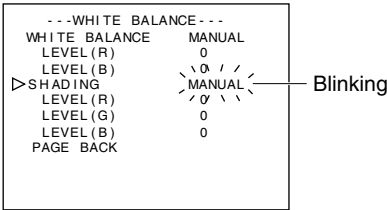
"MENU" Screen

2.



"WHITE BALANCE" Screen

3. 4.



Perform the following setting upon adjusting white balance.

Page 20

1. Press the [MENU] button for 1-2 seconds.
The "MENU" screen will be displayed.
2. Use the [▲/▼] buttons to select "WHITE BALANCE..", then press the [SET] button.
The "WHITE BALANCE" screen will be displayed.
3. Use the [▲/▼] buttons to select "SHADING", then press the [SET] button.
The set value starts blinking and adjustment is possible.
4. Use the [▲/▼] buttons to set value to "MANUAL", then press the [SET] button.

White Shading Adjustment (continued)

5. 6. Blinking

---WHITE BALANCE---		
WHITE BALANCE	MANUAL	
LEVEL (R)	0	
LEVEL (B)	0	
SHADING	MANUAL	
▷ LEVEL (R)	0	
LEVEL (G)	0	
LEVEL (B)	0	
PAGE BACK		

7.

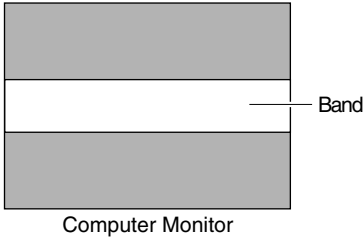
---WHITE BALANCE---		
WHITE BALANCE	MANUAL	
LEVEL (R)	0	
LEVEL (B)	0	
SHADING	MANUAL	
▷ LEVEL (R)	10	
LEVEL (G)	0	
LEVEL (B)	0	
PAGE BACK		

5. Use the [▲/▼] buttons to select items for “LEVEL(R)”, “LEVEL(G)” and “LEVEL(B)”, then press the [SET] button. The set value starts blinking and adjustment is possible.
6. Refer to the monitor to adjust values for “LEVEL(R)”, “LEVEL(G)” and “LEVEL(B)” using the [▲/▼] buttons. As each of the set values get bigger, the color at the lower end of the screen lightens while that at the upper end darkens. {Variable Values: -128 - +127}
7. Upon changing the set values, press the [SET] button to record them in the memory of this unit.
8. Press the [MENU] button for 1-2 seconds. The normal screen will be displayed.
9. Upon completing white shading adjustment, perform white balance adjustment again.
- ☞ Page 20 ‘White Balance Adjustment’

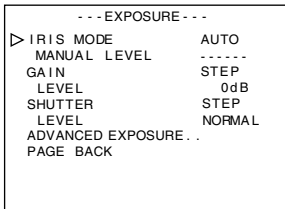
4. Various Modes of Shooting

Shooting the Computer Monitor

When shooting images of computer monitors or displays, horizontal bands will appear on the screen. To eliminate the bands, it will be necessary to align the shutter speed with the scanning frequency of the monitor.

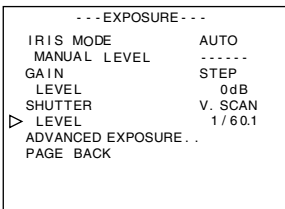


3. 4.



“EXPOSURE” Screen

5. 6.



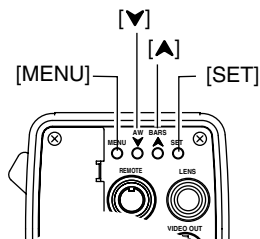
1. Press the [MENU] button for 1-2 seconds.
The “MENU” screen will be displayed.
2. Use the [▲/▼] buttons to select “EXPOSURE..”, then press the [SET] button.
3. Use the [▲/▼] buttons to select “SHUTTER”, then press the [SET] button.
The set value starts blinking and adjustment is possible.
4. Use the [▲/▼] buttons to set value to “V.SCAN”, then press the [SET] button.
5. Use the [▲/▼] buttons to select “LEVEL”, then press the [SET] button.
6. Use the [▲/▼] buttons to adjust the shutter speed. Pay attention to the screen
If black bands are visible : use the [▼] button to lower the shutter speed
If white bands are visible : use the [▲] button to increase the shutter speed
7. When bands are decreased to the minimum, press the [SET] button. This will be recorded in the memory of the unit.
8. Press the [MENU] button for 1-2 seconds.
The normal screen will be displayed.

Note

Vertical scanning frequency may vary with computer types and there are cases when bands may not be fully eliminated. In addition, frequency may also differ depending on the software used.

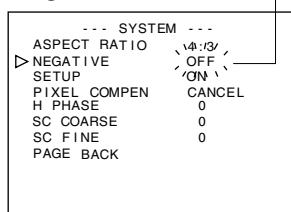
Output of Negative Image

It is possible to convert video signals output from the [VIDEO OUT] terminal of this unit into negative images.



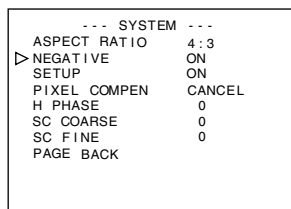
1. Press the [MENU] button for 1-2 seconds.
The "MENU" screen will be displayed.
2. Use the [▲/▼] buttons to select "SYSTEM..", then press the [SET] button.
The "SYSTEM" screen will be displayed.
3. Use the [▲/▼] buttons to select "NEGATIVE", then press the [SET] button.
The set value starts blinking and adjustment is possible.
4. Use the [▲/▼] buttons to set value to "ON", then press the [SET] button.
This will be recorded in the memory of the this unit.
Output image will be converted to negative images.
5. Press the [MENU] button for 1-2 seconds.
The normal screen will be displayed.

2. 3. Blinking



"SYSTEM" Screen

4. 5.



"SYSTEM" Screen

4. Various Modes of Shooting (continued)

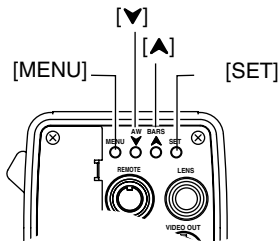
White Spot Correction

As a peculiar common characteristic of CCD, white spots may appear on the screen when operated under high temperature.
This unit comes with a white spot correction feature to reduce this phenomenon.

How To Use

■ Detection of White Spots

The quantity and size of white spots differ with the temperature and shutter speed during use. Before using the white spot correction feature, it will thus be necessary to detect the position of the white spots under the conditions of use.

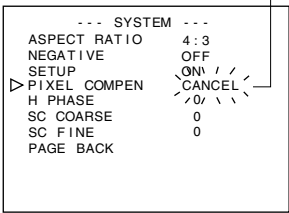


Preparation

- Set the conditions of use (ambient temperature, shutter speed, etc.) in this unit.
- Turn on the power of the camera and leave it on for at least 2 hours.
- Close the lens iris to ensure that no light enters the CCD.

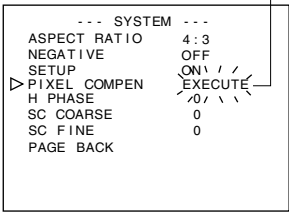
Operation

2. 3. Blinking



"SYSTEM" Screen

4. 5. Blinking



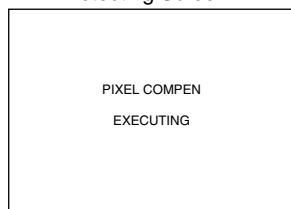
"SYSTEM" Screen

1. Press the [MENU] button for 1-2 seconds.
The "MENU" screen will be displayed.
2. Use the [▲/▼] buttons to select "SYSTEM..", then press the [SET] button.
The "SYSTEM" screen will be displayed.
3. Use the [▲/▼] buttons to select "PIXEL COMPEN", then press the [SET] button.
The "CANCEL" value starts blinking and adjustment is possible.
4. Use the [▲/▼] buttons to select "EXECUTE" and press the [SET] button to start the white spot detection.
Detection process may take a few minutes to complete.
5. Upon completing detection, "Detection Completed" screen will be displayed.
6. Turn on the power again.
Allow a 10 seconds interval after switching off the power before turning on again.
When power is turned on, white spots will be corrected.

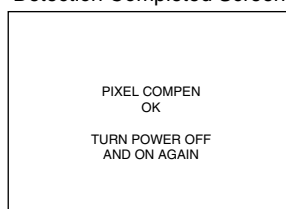
White Spot Correction (continued)

■ White Spot Correction Messages

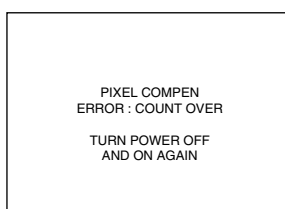
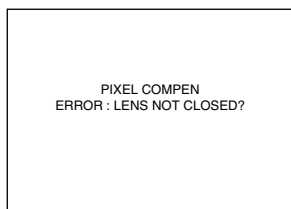
Detecting Screen



Detection Completed Screen

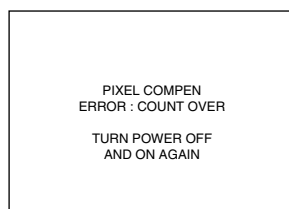
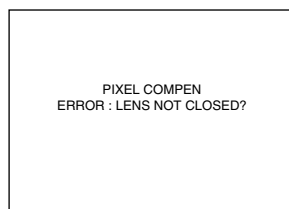


Detection Error Screen



Notes

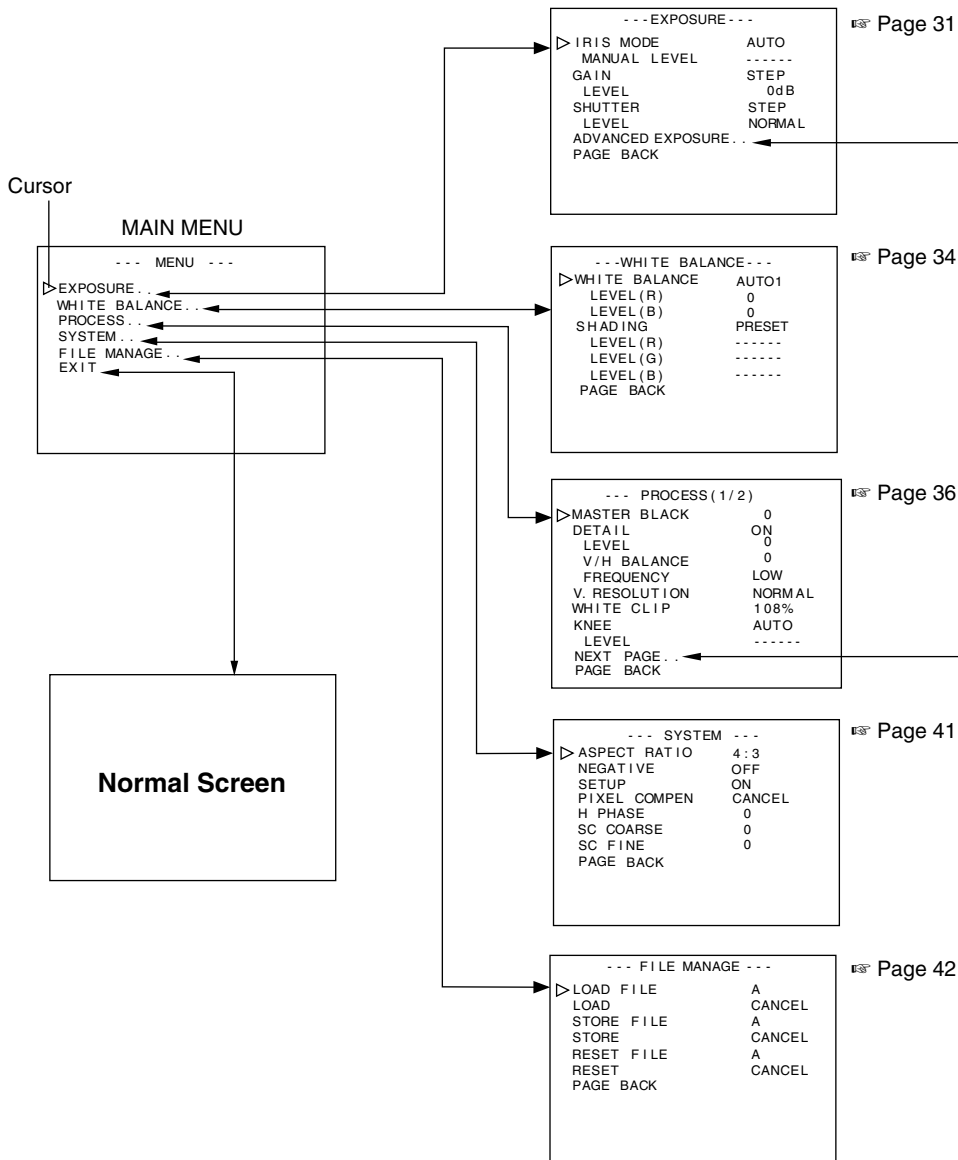
- The white spot correction feature of this unit does not correct all white spots. Detection and correction of white spots by this unit is performed under the following conditions. White spot correction will not be performed under conditions beyond those stated. In cases where conditions are fulfilled, correction may not be successfully performed depending on the nature of the white spots. In such case, perform the detection again until white spots are detected. Consult your JVC authorized dealer if white spots cannot be corrected. Quantity of Detection/Correction: 32 or less
- The screen on the right may be displayed during detection of white spots in cases when light enters the CCD during detection or depending on the condition of white spots. In this case, check if there is light entering the CCD. If the screen is displayed despite that no light enters the CCD, increase the shutter speed by 1 step and perform detection again.
- During white spot correction, pixel data is obtained via interpolation of pixel information from the surroundings. Thus data may not be accurate for fine images.
- Results of white spot detection will be stored until the next detection is performed.
- During white spot detection, operation via the remote control will be disabled.



5. Setting Via the Menu Screen

Flow of Menu Screens

The menu screen is made up of multiple layers of menu screens as illustrated in the diagram below. Select the menu screen for setting at the MAIN MENU screen according to function and usage, and perform setting accordingly.



Flow of Menu Screens (continued)

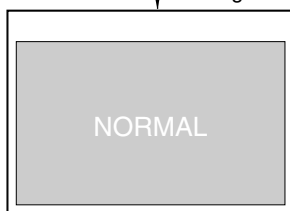
- Press the [MENU] button for 1-2 seconds.
The normal screen will be displayed.
- When the remote control is connected, items that can be operated via the remote control will be displayed as “REMOTE” on the menu screen. Operation of these items via the camera unit will be disabled.

--- ADVANCED EXPOSURE ---

▷ ALC LIMIT	+18dB
EEL LIMIT	1 / 240
AE LEVEL	0
AE DETECT	NORMAL
AE AREA..	
PAGE BACK	

Page 33

Page 33



--- PROCESS (2 / 2) ---

▷ CINEMA	OFF
COLOR MATRIX	STANDARD
ADJUST..	
GAMMA	MANUAL
LEVEL	0
BLACK	NORMAL
FLARE	ON
MASTER	0
FLARE (R)	0
FLARE (B)	0
PAGE BACK	

Page 38

Page 40

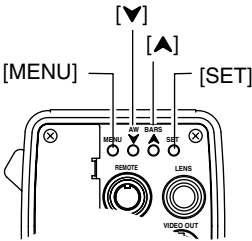
--- MATRIX ADJUST ---

▷ R GAIN	0
R ROTATION	0
G GAIN	0
G ROTATION	0
B GAIN	0
B ROTATION	0
PAGE BACK	

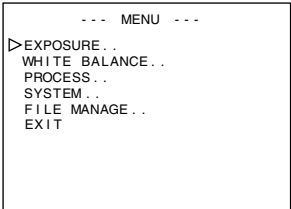
5. Setting Via the Menu Screen (continued)

Setting Procedures

The various functions of this unit can be set using the menu screen. Settings will be stored in the memory of this unit and will remain recorded when the power is turned off.

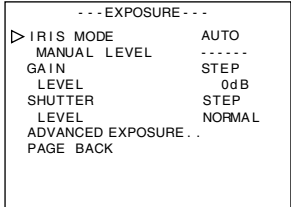


1.



"MENU" Screen

2.




"EXPOSURE" Screen (Example)
(Submenu Screen)

1. Press the [MENU] button for 1-2 seconds.
The "MENU" screen will be displayed.
 2. Use the [▲/▼] buttons to select an item, followed by pressing the [SET] button. The submenu screen will be displayed.
 3. For the submenu screens, similarly, use the [▲/▼] buttons to select an item, then press the [SET] button.
The set value starts blinking and adjustment is possible.
 4. Use the [▲/▼] buttons to alter the set value, followed by pressing the [SET] button. Set value will be confirmed and recorded in the memory of this unit.
- Note**
- If there is a huge difference in the magnitude of value to be set, press and hold the [▲/▼] buttons to speed up the change. Use this when making a significant change to the set value.
5. Press the [MENU] button for 1-2 seconds.
The normal screen will be displayed.

“EXPOSURE” Screen

Settings in bold are factory settings

Item	Function/Variable Values
“IRIS MODE”	Switch according to the lens in use. “AUTO” : When using auto iris lens “MANUAL” : When using manual iris lens
“MANUAL LEVEL”	For setting the iris level when “IRIS MODE” is set to “MANUAL”. Increase value : Opens the iris. Decrease value : Closes iris. {Variable Values : 0 - 128 - 255} Note _____ “When “IRIS MODE” is set to “AUTO”, “MANUAL LEVEL” item selection will be disabled. (Displayed as “- - - - -”)
“GAIN”	For switching the electric sensitivity mode. “STEP” : Gain boost level can be altered using the “LEVEL” item. “V.GAIN” : Gain boost level can be fine-tuned using the “LEVEL” item. “ALC” : Alters gain boost level automatically according to the brightness. Set the maximum value at the “ALC LIMIT” item.  Page 33
“LEVEL”	Gain boost level can be altered when gain boost mode is set as “STEP” or “V.GAIN”. {Variable “STEP” Values: -3, 0 , +3, +6, +9, +12, +15, +18dB, LOLUX} {Variable “V.GAIN” Values: -3 - 0 - 18dB 0.2dB Step} Note _____ “When “GAIN” is set to “ALC”, “LEVEL” item selection will be disabled. (Displayed as “- - - - -”)

5. Setting Via the Menu Screen (continued)

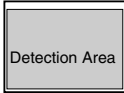
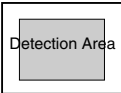
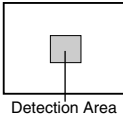
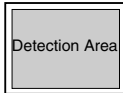

“EXPOSURE” Screen (continued)

Settings in bold are factory settings

Item	Function/Variable Values
“SHUTTER”	For switching the shutter mode. “STEP” : Shutter speed can be altered using the “LEVEL” item. “V.SCAN” : Align scan speed of monitor to eliminate horizontal lines that appear when shooting the computer monitor. Shutter can be fine-tuned using the “LEVEL” item. ☞ Page 24 ‘Shooting the Computer Monitor’ “EEI” : Adjusts shutter speed automatically according to brightness of object. (Maximum value: 1/960) Set the maximum value at the “EEI LIMIT” item. ☞ Page 33
“LEVEL”	{Variable “STEP” Values : NORMAL (1/60) , 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000} {“V.SCAN” variable : approx. 1/60 ~ approx. 1/10000} Notes • When “SHUTTER” is set to “EEI”, “LEVEL” item selection will be disabled. (Displayed as “- - - - -”) • There will be insufficient light intensity if the shutter speed is increased and adjustment of lens iris and gain will be necessary. Attention shall be paid to the picture quality when gain boost is increased as this increases the sensitivity and screen may become grainy as a result.
“ADVANCED EXPOSURE”	Invokes the “ADVANCED EXPOSURE” screen. ☞ Page 33 “ADVANCED EXPOSURE” Screen’
“PAGE BACK”	Press the [SET] button to return to the “MENU” screen when cursor is at this position.

“ADVANCED EXPOSURE” Screen

Settings in bold are factory settings

Item	Function/Variable Values
“ALC LIMIT”	For setting the maximum “ALC” value that triggers automatic switching of gain boost level according to the brightness. {Variable Values: +9,+12,+15, +18dB }
“EEI LIMIT”	For setting the maximum shutter speed when shutter mode is set to “EEI”. “1/240” : Set as 1/240 seconds. “1/480” : Set as 1/480 seconds. “1/960” : Set as 1/960 seconds.
“AE LEVEL”	For adjusting the image level when using auto iris, “ALC” or “EEI”. Increase value : Increases level. Decrease value : Decreases level. {Variable Values : -5 - 0 - +5}
“AE DETECT”	Selects the detection method of the detection area when auto iris, “ALC” or “EEI” is used. “ NORMAL ” : Normal Position “PEAK” : Detects the maximum brightness value (peak level) to enhance visibility of objects with high luminance. “AVG” : Detects the average brightness value (average) to enhance visibility of objects with high luminance.
“AE AREA..”	Invokes the “AE AREA” screen. For selecting the detection area of the image level when using auto iris, “ALC” or “EEI”. <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <p>“NORMAL”</p>  </div> <div style="text-align: center;"> <p>“SQUARE”</p>  </div> <div style="text-align: center;"> <p>“SPOT”</p>  </div> <div style="text-align: center;"> <p>“FULL”</p>  </div> <div style="text-align: center;"> <p>“CIRCLE”</p>  </div> </div> <p>Note _____</p> <p>Auto iris, “ALC” and “EEI” operations stop when the detection area is displayed.</p>
“PAGE BACK”	Press the [SET] button to return to the “EXPOSURE” screen when cursor is at this position.

Note

The “AE LEVEL”, “AE DETECT” and “AE AREA” items cannot be selected when operation of auto iris, “ALC” and “EEI” are set as disabled.

“The “AE LEVEL” and “AE DETECT” items are displayed as “- - - - -”.

5. Setting Via the Menu Screen (continued)

“WHITE BALANCE” Screen

Settings in bold are factory settings


Item	Function/Variable Values
“WHITE BALANCE”	For setting the white balance mode. “ AUTO 1 ” : Set to this to enable automatic adjustment of white balance. “AUTO 2” : AUTO 2 Equipped with 2 modes (“AUTO 1” and “AUTO 2”). ☞ Page 20 ‘White Balance Adjustment’ “LEVEL(R)” and “LEVEL(B)” items allow fine-tuning of white color upon achieving white balance. “FAW” : Automatic adjustment of white balance according to different illumination conditions. “MANUAL” : Manual adjustment of white balance. Can be altered using the “LEVEL(R)” and “LEVEL(B)” items. “PRESET” : Fixes white balance at 3200 K.
“LEVEL(R)”	For adjusting the reddishness of white balance when “WHITE BALANCE” is set to “AUTO” or “MANUAL”. Increase value : Increases reddishness on screen. Decrease value : Decreases reddishness on screen. {Variable Values During “AUTO”: -32 - 0 - +31} {Variable Values During “MANUAL”: 0 - 128 - 255}
“LEVEL(B)”	For adjusting the bluishness of white balance when “WHITE BALANCE” is set to “AUTO” or “MANUAL”. Increase value : Increases bluishness on screen. Decrease value : Decreases bluishness on screen. {Variable Values During “AUTO”: -32 - 0 - +31} {Variable Values During “MANUAL”: 0 - 128 - 255}

Note

Selection of “LEVEL(R)” and “LEVEL(B)” items is disabled when the “WHITE BALANCE” item is set to “PRESET”. (Displayed as “- - - - -”)

“WHITE BALANCE” Screen (continued)

Settings in bold are factory settings

Item	Function/Variable Values
“SHADING”	For setting whether to perform white shading adjustment. “PRESET” : White shading adjustment disabled. “MANUAL” : White shading adjustment enabled.  Page 22 ‘White Shading Adjustment’
“LEVEL(R)”	For adjusting reddishness of white shading only when the “SHADING” item is set to “MANUAL”. Increase value : Decreases reddishness at lower end and increases reddishness at upper end of screen. Decrease value : Decreases reddishness at upper end and increases reddishness at lower end of screen. {Variable Values : -128 - 0 - +127}
“LEVEL(G)”	For adjusting greenishness of white shading only when the “SHADING” item is set to “MANUAL”. Increase value : Decreases greenishness at lower end and increases greenishness at upper end of screen. Decrease value : Decreases greenishness at upper end and increases greenishness at lower end of screen. {Variable Values : -128 - 0 - +127}
“LEVEL(B)”	For adjusting bluishness of white shading only when the “SHADING” item is set to “MANUAL”. Increase value : Decreases bluishness at lower end and increases bluishness at upper end of screen. Decrease value : Decreases bluishness at upper end and increases bluishness at lower end of screen. {Variable Values : -128 - 0 - +127}
“PAGE BACK”	Press the [SET] button to return to the “MENU” screen when cursor is at this position.

Note

Selection of “LEVEL(R)”, “LEVEL(G)” and “LEVEL(B)” items is disabled when the “SHADING” item is set to “PRESET”. (Displayed as “- - - -”)

5. Setting Via the Menu Screen (continued)


“PROCESS (1/2)” Screen

Settings in bold are factory settings

Item	Function/Variable Values
“MASTER BLACK”	<p>For adjusting the pedestal level (master black), which is based on the black color when the lens cap is being put on. To view the black portion, increase the pedestal level to brighten the entire screen.</p> <p>Increase value : Increases pedestal Decrease value : Decreases pedestal {Variable Values : -10 - 0 - +10}</p>
“DETAIL”	<p>For setting whether to highlight the contour (detail).</p> <p>“ON” : Highlight of contour enabled. “OFF” : Highlight of contour disabled. “LEVEL”, “V/H BALANCE”, “FREQUENCY” items are displayed as “- - - - -”.</p> <p>Caution _____</p> <p>When “LOLUX” is activated, the adjustment feature will not work even if the menu operation under “DETAIL” item is performed.</p>
“LEVEL”	<p>For setting highlight level of contour (detail) when “DETAIL” is set to “ON”.</p> <p>Increase value : Sharpens contour. Decrease value : Softens contour. {Variable Values : -10 - 0 - +10}</p>
“V/H BALANCE”	<p>For setting whether to emphasize the horizontal (H) or vertical (V) direction during contour highlight (detail) when “DETAIL” is set to “ON”.</p> <p>Increase value : Emphasize on H direction. Decrease value : Emphasize on V direction. {Variable Values : -5 - 0 - +5}</p>
“FREQUENCY”	<p>For altering the frequency for contour highlight (detail) when “DETAIL” is set to “ON”. Set this according to the object.</p> <p>“LOW” : Lowers the frequency for contour highlight. Use this when shooting objects with large patterns. “MIDDLE” : Sets the frequency for contour highlight to standard. “HIGH” : Increases the frequency for contour highlight. Use this when shooting objects with fine patterns.</p>
“V.RESOLUTION”	<p>For increasing the vertical resolution.</p> <p>“NORMAL” : Vertical resolution of approx. 380 lines “V.MAX” : Vertical resolution of approx. 450 lines</p> <p>Caution _____</p> <p>In the case of “V.MAX”, colors may be found on the brighter portions of the object depending on its color temperature. In addition, there will be more residual images.</p>

“PROCESS (1/2)” Screen (continued)

Settings in bold are factory settings

Item	Function/Variable Values
“WHITE CLIP”	For setting a white clipping point for video signals of a high luminance level. “108%” : Enable white clipping at point where luminance level is 108%. “100%” : Enable white clipping at point where luminance level is 100%.
“KNEE”	For setting whether to automatically or manually perform the “KNEE” operation, which compresses video signals that are beyond a certain level in order to show the gradation of the highlighted portion. To double-check gradation of the bright portion, set to “MANUAL” and adjust knee point manually. “AUTO” : Adjusts luminance level automatically. “MANUAL” : Luminance level can be altered using the “LEVEL” item.
“LEVEL”	For setting the starting point of knee compression (knee point). Increase value : Increases the knee point level. Decrease value : Decreases the knee point level. The smaller the value, the more readily visible is the gradation of high luminance levels. {Variable Values: 80, 85, 90, 95, 100% } Note _____ When in the “AUTO” mode, the “KNEE” item is displayed as “- - - - -”.
“NEXT PAGE”	Press the [SET] button to invoke the “PROCESS (2/2)” screen when the cursor is at this position.  Page 38 ‘PROCESS (2/2) Screen’
“PAGE BACK”	Press the [SET] button to return to the “MENU” screen when cursor is at this position.

“KNEE” Function

When aligning brightness level to the person in front of a high luminance background during shooting, the background will blurred with white. In this case, use the knee function to obtain a clear background.

It will be effective to make use of this function under the following circumstances.

- When shooting a person indoors and view outside the window at the same time
- When shooting a person under a shade on a fine day
- When shooting a high-contrast scene


Caution

If the high-luminance section of a fast-moving body such as a car under sunlight is shot, the knee function may cause brightness of the entire screen to change according to the motion of the object. In this case, set the “KNEE” item to “MANUAL” during shooting.

5. Setting Via the Menu Screen (continued)

“PROCESS (2/2)” Screen

Settings in bold are factory settings

Item	Function/Variable Values
“CINEMA”	“ OFF ” : Disabled. “ON” : Switches to a gamma curve that is similar to the screen characteristics of movies. Color matrix switches to the “CINEMA” mode.
“COLOR MATRIX”	For setting color matrix. “OFF” : Disabled. “ STANDARD ” : Sets to standard color matrix. “WARM” : Sets to a reddish tone. “EXT1-3” : Sets to a color matrix other than those above. Select according to your preference. “MANUAL” : Sets color matrix to the manual adjustment mode. Note _____ When the “CINEMA” item is set to “ON”, “(CINEMA)” is displayed and setting is disabled. (“EXT2” is equivalent to the “CINEMA” mode.)
“ADJUST..”	This can be selected only when the “COLOR MATRIX” item is set to “MANUAL”. Press the [SET] button to invoke the “MATRIX ADJUST” screen.  Page 40 ‘MATRIX ADJUST Screen’
“GAMMA”	For adjusting the gamma curve that determines the reproducibility of black color. “OFF” : Disables gamma curve adjustment. “ MANUAL ” : Amount of gamma curve adjustment can be altered using the “LEVEL” item. “CINEMA” : Switches to a gamma curve that is similar to the screen characteristics of movies. Note _____ When the “CINEMA” item is set to “ON”, “(CINEMA)” is displayed and setting is disabled.
“LEVEL”	Gamma curve adjustment is enabled only when the “GAMMA” item is set to “MANUAL”. Increase value : Enhances gradation of black. However, gradation of bright portions will deteriorate. Decrease value : Enhances gradation of bright portions. However, gradation of black will deteriorate. {Variable Values : -5 - 0 - +5} Note _____ Displayed as “- - - - -” when the “GAMMA” item is set to “OFF” or “CINEMA”.

“PROCESS (2/2)” Screen (continued)

Settings in bold are factory settings

Item	Function/Variable Values
“BLACK”	For switching gain of the dark portions. Switch via the video signals to be shot. “NORMAL” : Standard mode “STRETCH” : Stretches only the darker portions of the signal, thus emphasizing the light and shade of the darker portions. “COMPRESS” : Compresses gain of the black portion to add contrast in the case when image shot is bright and with little contrast.
“FLARE”	For correcting the black level when light that enters the lens reflects irregularly and hence causing flare, where color appears on the black portion. “OFF” : Correction disabled. “ON” : Correction enabled.
“MASTER”	Performs correction on the entire black level. Increase value : Increases black level. Decrease value : Reduces black level. {Variable Values : -10 - 0 - +10}
“FLARE(R)”	For correcting Rch of black level in accordance with the luminance level when light that enters the lens reflects irregularly, hence causing flare that turns the entire screen whitish. Perform this together with FLARE(B). Increase value : Increases the black level of Rch to enhance the reddishness. Decrease value : Decreases the black level of Rch to reduce the reddishness. {Variable Values : -10 - 0 - +10}
“FLARE(B)”	For correcting Bch of black level in accordance with the luminance level when light that enters the lens reflects irregularly, hence causing flare that turns the entire screen whitish. Perform this together with FLARE(R). Increase value : Increases the black level of Bch to enhance the bluishness. Decrease value : Decreases the black level of Bch to reduce the bluishness. {Variable Values : -10 - 0 - +10}
“PAGE BACK”	Press the [SET] button to return to the “PROCESS(1/2)” screen when cursor is at this position.

Note

Selection of “MASTER”, “FLARE(R)” and “FLARE(B)” items is disabled when the “FLARE” item is set to “OFF”. (Displayed as “- - - - -”)

5. Setting Via the Menu Screen (continued)


“MATRIX ADJUST” Screen

Settings in bold are factory settings

Item	Function/Variable Values
“R GAIN”	For manually adjusting the shading of the R axis of the color matrix (red and cyan). Increase value : Enhances red and cyan. Decrease value : Reduces red and cyan. {Variable Values : -3 - 0 - +3}
“R ROTATION”	For manually adjusting the color phase of the R axis of the color matrix (red and cyan). Increase value : Increases yellowishness of red color and bluishness of cyan color. Decrease value : Increases bluishness of red color and greenishness of cyan color. {Variable Values : -3 - 0 - +3}
“G GAIN”	For manually adjusting the shading of the G axis of the color matrix (green and magenta). Increase value : Enhances green and magenta. Decrease value : Reduces green and magenta. {Variable Values : -3 - 0 - +3}
“G ROTATION”	For manually adjusting the color phase of the G axis of the color matrix (green and magenta). Increase value : Increases bluishness of green color and reddishness of magenta color. Decrease value : Increases yellowishness of green color and bluishness of magenta color. {Variable Values : -3 - 0 - +3}
“B GAIN”	For manually adjusting the shading of the B axis of the color matrix (blue and yellow). Increase value : Enhances blue and yellow. Decrease value : Reduces blue and yellow. {Variable Values : -3 - 0 - +3}
“B ROTATION”	For manually adjusting the color phase of the B axis of the color matrix (blue and yellow). Increase value : Increases reddishness of blue color and greenishness of yellow color. Decrease value : Increases greenishness of blue color and reddishness of yellow color. {Variable Values : -3 - 0 - +3}
“PAGE BACK”	Press the [SET] button to return to the “PROCESS(2/2)” screen when cursor is at this position.

“SYSTEM” Screen

Settings in bold are factory settings

Item	Function/Variable Values
“ASPECT RATIO”	For setting the screen size for recorded video signals. “4:3” : Image output at aspect ratio of 4:3. “16:9” : Image output at aspect ratio of 16:9. The vertical resolution deteriorates as compared to the images of 4:3.
“NEGATIVE”	Signals output from the [VIDEO OUT] terminal can be output as negative signals. “ON” : Outputs negative signals. “OFF” : Outputs normal video signals.
“SET UP”	For setting whether to add setup signals to the camera images. “ON” : Add setup signals. “OFF” : Do not add setup signals.
“PIXEL COMPEN”	For setting whether to perform white spot correction. “CANCEL” : Do not perform white spot correction. “EXECUTE” : Perform white spot correction.  Page 26 ‘White Spot Correction’
“H PHASE”	Adjust the horizontal (H) phase of this unit with respect to signals input to the [GENLOCK IN] terminal (external sync signals). Increase value : Adjusts horizontal phase back. Decrease value : Adjusts horizontal phase ahead. {Variable Values : -128 - 0 - +127}
“SC COARSE”	Coarse tune the subcarrier (SC) phase of this unit with respect to signals input to the [GENLOCK IN] terminal (external sync signals). Increase value : Adjusts phase back. Decrease value : Adjusts phase ahead. {Variable Values : 0° , 90°, 180°, 270°}
“SC FINE”	Fine tune the subcarrier (SC) phase of this unit with respect to signals input to the [GENLOCK IN] terminal (external sync signals). Increase value : Adjusts phase back. Decrease value : Adjusts phase ahead. {Variable Values : -128 - 0 - +127}
“PAGE BACK”	Press the [SET] button to return to the “MENU” screen when cursor is at this position.

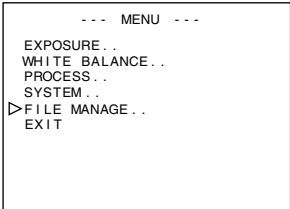
5. Setting Via the Menu Screen (continued)

“FILE MANAGE” Screen

The following can be performed on the “FILE MANAGE” screen.

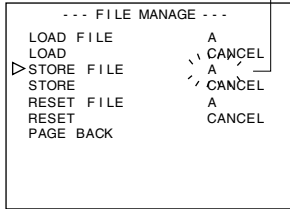
- Saving menu settings in 3 types of files (A, B and C).
- Retrieving stored files (A, B and C).
- Resetting menu settings to factory settings.

1. 2.



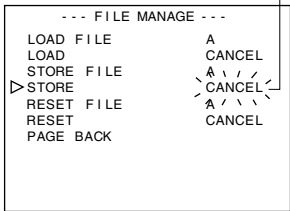
“MENU” Screen

1. 2. Blinking

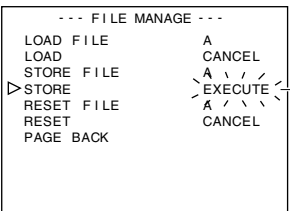


“FILE MANAGE” Screen

3. Blinking



4. Blinking



■ Display the “FILE MANAGE” screen.

1. Press the [MENU] button for 1-2 seconds.
The “MENU” screen will be displayed.
2. Use the [▲/▼] buttons to select “FILE MANAGE..”, then press the [SET] button.
The “FILE MANAGE” screen will be displayed.

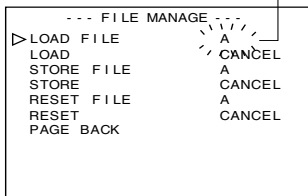
■ Save the set value.

1. Use the [▲/▼] buttons to select “STORE FILE”, then press the [SET] button.
The set value displayed will start to blink.
2. Use the [▲/▼] buttons to select “A”, “B” and “C”, then press the [SET] button.
3. Use the [▲/▼] buttons to select “STORE”, then press the [SET] button.
“CANCEL” will start to blink.
4. Use the [▲/▼] buttons to select “EXECUTE”, followed by pressing the [SET] button to save the menu settings in the selected file destination.
5. Press the [MENU] button for 1-2 seconds.
The normal screen will be displayed.

"FILE MANAGE" Screen (continued)

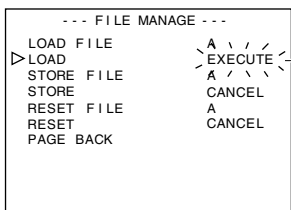
1. 2.

Blinking



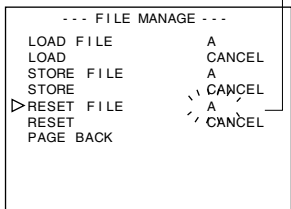
3. 4.

Blinking



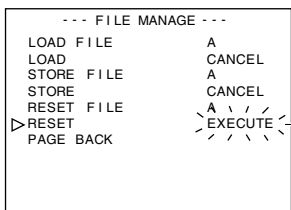
1. 2.

Blinking



3. 4.

Blinking



Retrieve file.

1. Use the [▲/▼] buttons to select "LOAD FILE", then press the [SET] button.
The set value displayed will start to blink.
2. Use the [▲/▼] buttons to select "A", "B" and "C", then press the [SET] button.
3. Use the [▲/▼] buttons to select "LOAD", then press the [SET] button.
"CANCEL" will start to blink.
4. Use the [▲/▼] buttons to select "EXECUTE", followed by pressing the [SET] button to retrieve the menu settings from the selected file destination.

Reset the set value.

1. Use the [▲/▼] buttons to select "RESET FILE", then press the [SET] button.
The set value displayed will start to blink.
2. Use the [▲/▼] buttons to select select a file to reset, then press the [SET] button.
"A", "B", "C", "CURRENT" (Current Set Value)
3. Use the [▲/▼] buttons to select "RESET", then press the [SET] button.
"CANCEL" will start to blink.
4. Use the [▲/▼] buttons to select "EXECUTE" and press the [SET] button to reset the set value.

Note

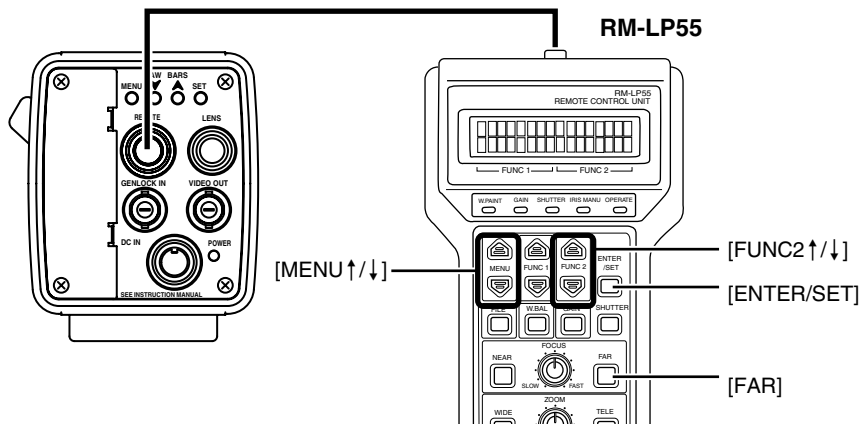
Resetting the stored files ("A", "B" and "C") will not reset the current set value.

To reset the current set value, select "CURRENT".

6. Others

Connecting the Remote Control Unit

Menu function of the camera can be set using the remote control unit (RM-LP55 AND RM-LP57). (For further details, please refer to the instruction manual of the remote control.)



■ When operating the menu function of this unit from RM-LP55

Set the "CAMERA TYPE" setting no. of RM-LP55 to "3".

Connection

Connect cable of the remote control unit to the [REMOTE] terminal of this unit.

Operation

1. Press the [ENTER/SET] and [FAR] buttons at the same time when turning the [OPERATE] switch to [ON].
Display on LCD screen will be as shown in the following diagram.

AUTO IRIS LEVEL
ON

2. Use the [MENU ↑/↓] buttons to display the "CAMERA TYPE" setting screen.
Display on LCD screen will be as shown in the following diagram.

CAMERA TYPE
1

Camera Type
Setting No.

3. Use the [FUNC2 ↑/↓] buttons to set the camera type setting no. to "3".
4. Pressing the [ENTER/SET] button returns to the normal mode of use after "INITIALIZE" is displayed.

Notes

- In the case when the menu function of this unit is identical to the remote control unit, the switch function of the remote control will override that of this unit.
- FOCUS and ZOOM cannot be adjusted using the remote control unit.
- When connected to RM-LP55, even if the "V.SCAN" under "SHUTTER" item is set to 1/60.0, the camera will operate based on 1/60.1.
As such, the image level will change if the "STEP" mode under "SHUTTER" item is changed from NORMAL (1/60) to "V.SCAN".

■ List of Remote Control Unit Functions

Function	This unit	Operation From RM-LP55	Operation From RM-LP57
MODE	○	} ○ BARS, CAM, NEGA	○ CAM, BARS
NEGA	○		×
CONTOUR	○	○ ON (LEVEL) , OFF	○ ON (LEVEL) , OFF
GAMMA	○	×	×
MASTER BLACK	○	○ LEVEL	○
IRIS	○	○ AUTO (LEVEL), MANU	○ AUTO (LEVEL), MANU
IRIS DETECT	○	○ NORMAL, PEAK, AVG	×
WHITE BALANCE	○	○ AUTO1, AUTO2, FAW, MANUAL, PRESET	○ AUTO1, AUTO2, FAW
WHITE PAINT	○	○ AUTO1, AUTO2	○ AUTO1, AUTO2
GAIN	○	○ -3,0,6,9,12,18dB, ALC, ALC+EEI, LOLUX	○ 0,6,9,12,18dB, ALC/ALC+EEI
SHUTTER	○	○ NORMAL, 1/100, 1/250, 1/500, 1/1000, 1/2000, V.SCAN, EEI	○ NORMAL, 1/100, 1/250, 1/500, 1/1000, 1/2000, EEI
TITLE DISPLAY	×	×	×
POSITION	×	×	×
TITLE SETTING	×	×	×
DATA	×	×	×
FILE	○	○	×
D-SUB OUT	×	×	×
H.PHASE	○	○ LEVEL	○
SC COARSE	○	○ 0°, 90°, 180°, 270°	○ 0°, 90°, 180°, 270°
SC FINE	○	○	○
ZOOM	×	×	×
FOCUS	×	×	×
HI-RESO	○*	○	×
WHITE SHADING	○	×	×

○ ... Function available

×

* ... Equivalent to V.RESOLUTION

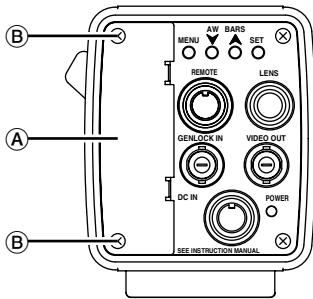
NORMAL : HI-RESO OFF

V.MAX: HI-RESO ON

6. Others (continued)

Connecting Optional Devices

This unit comes with an option card slot. System expansion via connection of optional devices (sold separately) is possible.
For further details on connection and setting, please refer to the instruction manual for the corresponding optional devices.



■ Installation of Option Card

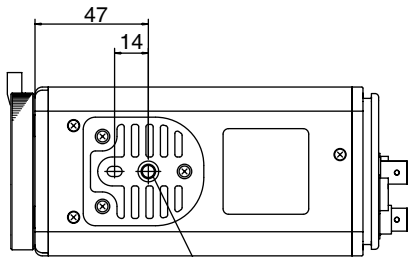
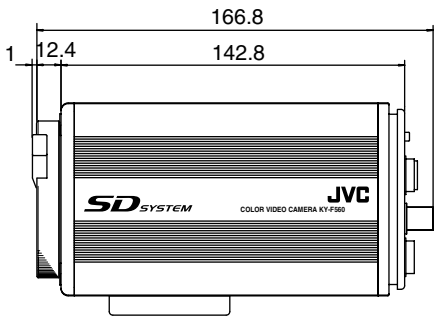
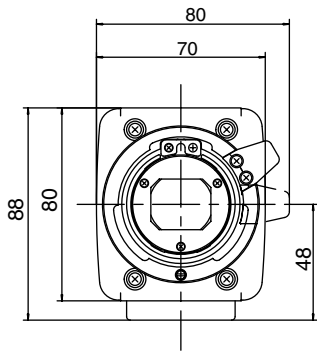
1. Remove the 2 (B) screws for mounting the slot cover (A) to remove the slot cover.
2. Insert the option card into the unit.
3. Use the 2 (B) screws removed in Step 1. to mount the option card to this unit.

Caution

For mounting of optional devices, please consult your JVC-authorized dealer.

Specifications

Dimensional Drawing (Unit: mm)



1/4-inch Screw

Specifications (continued)

Image Pickup Device	: 1/2" IT CCD x 3
Scan Mode	: Interlace
Effective Pixel Nos.	: 380,000 Pixels (768 (H) x 494 (V))
Lens Mount	: 1/2" Bayonet Mount
Color Separation System	: F1.4 3-color Separation Prism
Aspect Ratio	: 4:3
Horizontal Resolution	: Y: 850 lines and above
Registration	: 0.05 % (or less) of entire zone (excluding lens distortion)
Sensitivity	: F13 2000 lx
Practical Minimum Illuminance	: 0.7 lx (F1.4, during LOLUX) When Gain is 30 dB (calculated value)
Output Signal	: Composite: 1 V (p-p), 75 Ω Unbalance (BNC)
Dynamic Range	: 400 % and above
S / N	: 64 dB
Gain Boost	: -3/0/+3/+6/+9/+12/+15/+18 dB/ALC/LOLUX
Electronic Shutter	: STEP : NORMAL(1/60), 1/100, 1/250, 1/500, 1/1000, 1/4000, 1/10000 s
Variable Scan	: V.SCAN: approx. 1/60 s - approx. 1/10000 s
Quantization	: RGB 12 bits each
Contour Correction System	: H/V: Effective for both
Sync System	: Internal Sync / External Sync (VBS or BB) H PHASE and SC PHASE adjustable
CCD White Flaw Correction	: Switchable between ON/OFF
White Balance	: MANUAL, AUTO1, AUTO2, PRESET, FAW Compliance Range: 2300 K- 10000 K
Temperature Range During Use	: -5 °C to 40 °C (Humidity of 80 % or lower)
Input Supply Voltage	: DC 12 V (when using AA-P700)
Power Consumption	: 9.6 W (camera unit only)
Dimension	: (W)70 mm x (H)80 mm x (D)155.2 mm (Does not include connector)
Mass	: 840 g
Accessories and Attachments	: Power Cord (8P, 2 m) x 1 Instruction Manual x 1

Specifications and appearance of this unit are subject to change for further improvement without prior notice.



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