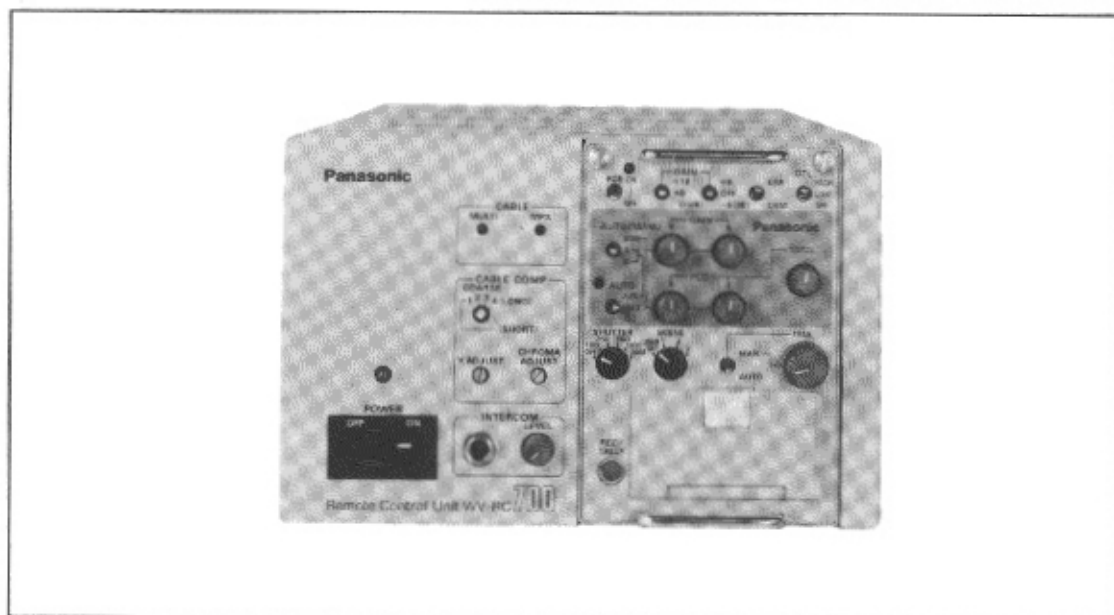


Operating Instructions

Remote Control Unit WV-RC700

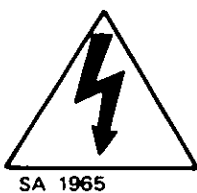
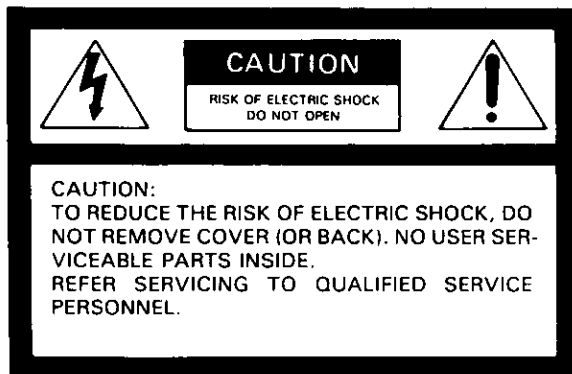


Panasonic®

Before attempting to connect or operate this product, please read these instructions completely.

CONTENTS

| | |
|--|----|
| PREFACE | 2 |
| FEATURES | 2 |
| PRECAUTIONS | 2 |
| MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS | 3 |
| CONNECTION | 8 |
| OPERATING PROCEDURE | 10 |
| SETTING THE BLACK BALANCE | 13 |
| SETTING THE WHITE BALANCE | 14 |
| ELECTRONIC SHUTTER OPERATION | 16 |
| PECULIAR PHENOMENA OF THE CCD | 16 |
| THE USER SETTING OPERATION | 17 |
| THE USER SETTING | 17 |
| CHARACTER DISPLAY | 19 |
| DATE/TIME DISPLAY | 23 |
| ID SETTING | 24 |
| CAMERA STATUS DISPLAY | 24 |
| RACK MOUNT INFORMATION | 25 |
| SPECIFICATIONS | 26 |
| ACCESSORY | 26 |
| OPTIONAL ACCESSORIES | 26 |



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.

For U.S.A.

Warning:

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

For CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

The serial number of this product may be found on the bottom of the unit.

You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

PREFACE

A Remote Control Unit (RCU) WV-RC700 is used to remotely control the Color Camera WV-F700 series for studio operation.

Features and functions include white balance setting, iris control, R/B gain control total pedestal control, color bar / camera selection switch, horizontal and subcarrier phase adjustment for gen-lock and intercom level control.

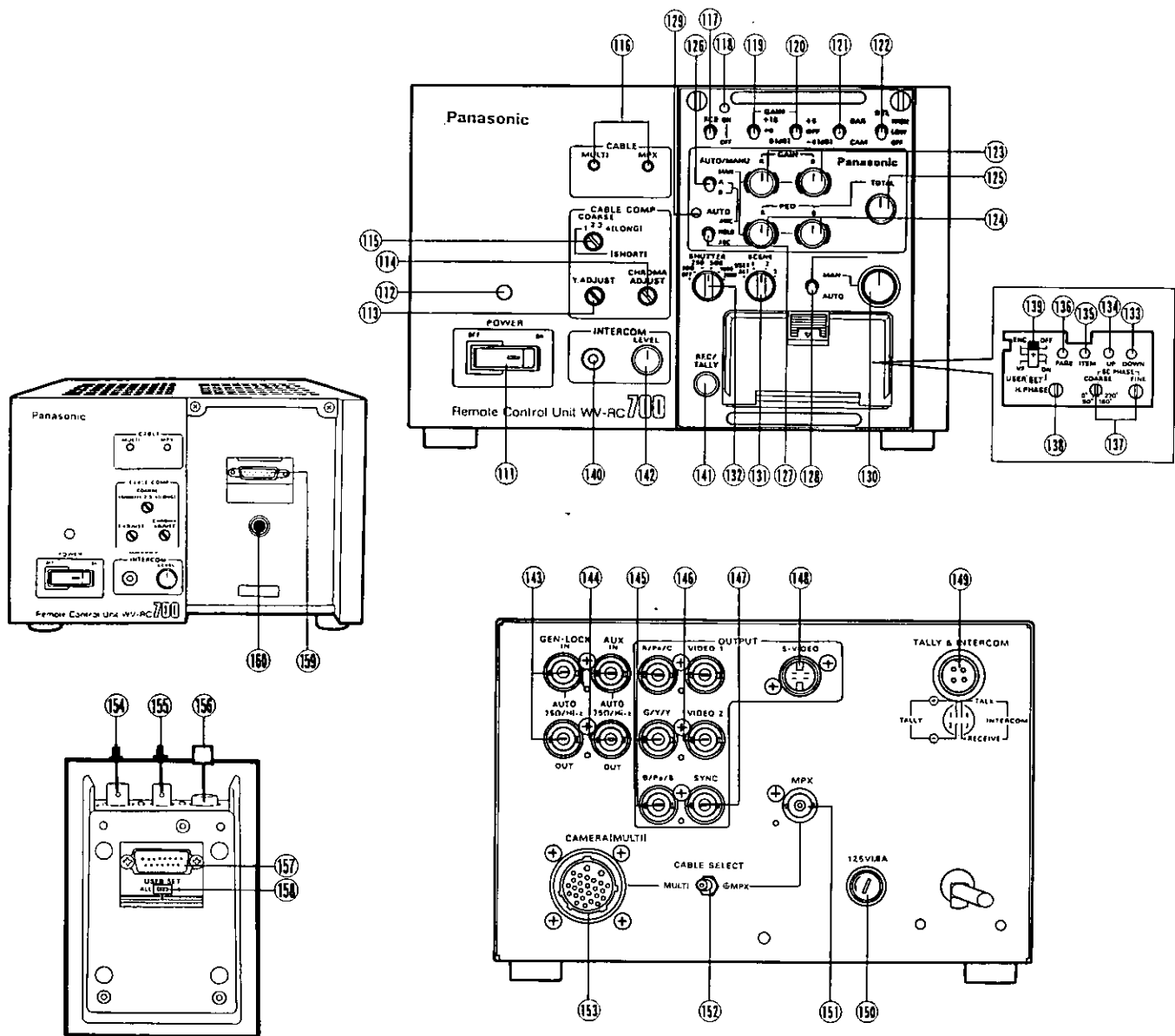
FEARURES

1. With cable length compensation switch and fine control, the video signal, gen-lock and the camera control from the RCU are available by using a coaxial cable.
When using a coaxial cable (Belden 8281), the maximum cable length is 1000 ft(300 m).
When using a coaxial cable (Belden 9259), the maximum cable length is 700 ft(200 m).
2. By separating the Remote Control Box parts from this unit, ENG/EFP operation can be controlled
3. With cable length compensation switch and fine control, 26-pin studio cable between the camera and RCU can be extended to maximum 1000 ft (300 m).
4. Color adjustment can be made by the R and B gain controls on the RCU.
5. With lens iris control, the auto iris level of zoom lens on the camera can be manually controlled from the RCU.
6. Horizontal and subcarrier phase controls on the RCU can adjust for matching the phase of the gen-lock signal for the system use.
7. 19" EIA rack mountable with the optional Rack Mount Frame WV-Q70.

PRECAUTIONS

- Do not attempt to disassemble the unit.
There are no user-serviceable parts inside.
Do refer any servicing to qualified service personnel.
- Do not abuse the unit. Avoid striking, shading etc.
- Do not use strong or abrasive detergents when cleaning the unit. Do use dry cloth to clean the unit when dirty. In case the dirt is hard to remove, use mild detergent and wipe gently.
- Do not expose the unit to rain or moisture. Do take immediate action if ever the unit do become wet.
Turn power off and refer servicing to qualified service personnel. Moisture can damage the unit and also create the danger of electronic shock.
- Use the unit under the conditions where temperature is within 23°F - 113°F (−5°C - +45°C) and humidity is less than 90%.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS



111. Power Switch (POWER, ON/OFF)

This switch turns on and off the power of the Remote Control Unit (RCU).

112. Power Indicator

This switch lights red whenever the unit is operating.

113. Luminance Gain Fine Control (Y ADJUST)

This control allows for fine adjustment of the luminance signal level for matching the levels of all cameras in a system. Adjust this control only after having set the Cable Length Compensation Switch (115) to the correct position.

114. Chroma Gain Fine Control (CHROMA ADJUST)

This control allows for fine adjustment of the chroma signal level for matching the chroma levels of all the cameras in a system. Adjust this control only after having set the Cable Length Compensation Switch (115) to the correct position.

115. Cable Length Compensation Switch (CABLE/COMP)

This switch is used to compensate for extensive cable lengths used with the 26-pin multi-cable between the camera and Remote Control Unit (RCU).

1. Use for cable length of less than 225 ft (75m)
2. Use for cable length of 225-450 ft (75-150m)
3. Use for cable length of 450-690 ft (150-230m)
4. Use for cable length of 690-900 ft (230-300)

This switch is also used to compensate for extensive cable lengths used with the coaxial cable (5C-2V) between the camera and Remote Control Unit (RCU).

1. Use for cable length of less than 450 ft (150m)
2. Use for cable length of 450-1000ft (150-300m)
3. Not available
4. Not available

116. Cable Indicator (CABLE, MULTI/MPX)

This indicator shows the setting position of the Cable Selection Switch (152) on the rear panel.

117. Remote Control Box (RCB) Operation Switch (RCB)

When connecting the Remote Control Box to the camera without using the Remote Control Unit, set this switch to ON position. When the RCB is installed in the RCU this switch is inoperative.

118. Remote Control Box (RCB) Indicator (ON/OFF)

This indicator lights while control data is communicated between the camera and Remote Control Unit (RCU) or Remote Control Box (RCB).

119. High Gain Selection Switch (0 dB/+9 dB/+18 dB)

Normally set this switch to the 0 dB position. Positions +9 dB and +18 dB increase the video output amplitude for dark scenes and are equivalent to opening the lens iris 1.5 or 3 F-steps, respectively.

120. 6dB Gain Selection Switch (+6 dB/OFF/-6 dB)

Normally set this switch to OFF position. By the combination of this switch with the High Gain Selection Switch (119), fine adjustment of the gain level is available.

121. Color Bar/Camera Selection Switch (BAR/CAM)

In a system configuration, this switch is used for signal selection between camera mode and color bar mode.

BAR:

A color bar signal is provided from the Video Output Connector (146) on the Remote Control Unit (RCU).

CAM:

The actual picture, as picked up through the lens, is displayed.

122. Detail Level Selection Switch (DTL, LEVEL-HIGH/LOW/OFF)

The detail/aperture level can be selected by this switch in three steps. Set this switch to the desired position while observing the sharpness of the picture.

123. Red and Blue Gain Controls (R GAIN/B GAIN)

These controls are used to manually adjust the white balance.

These controls only work when the White/Black Balance Selection Switch (126) is set to the MANU position.

Turn the controls clockwise to increase the red and blue signal levels, and counterclockwise to decrease these levels.

Note:

As these controls employ Digital Processing, the Red and Blue signal levels will be changed in discrete steps.

124. Red and Blue Pedestal Level Controls (PED, R/B)

The black balance can be set manually by these controls when the White/Black Balance Selection Switch (126) is set to the MANU position. Turn these controls clockwise to increase the red and blue pedestal levels, and counterclockwise to decrease the levels.

Note:

As these controls employ the Digital Processing, these levels will be changed in the steps.

125. Total Pedestal Level Control (TOTAL PEDESTAL)

This control can adjust the pedestal level of the video signal (luminance) for matching the black level between two or more cameras in a system. Turn this control clockwise to increase the pedestal level, and counterclockwise to decrease the level.

Note:

As this control employs the Digital Processing, this level may be changed in the step.

126. White/Black Balance Selection Switch (AUTO/MANU,MAN/A/B)

This switch is used to select the white balance and black balance modes as follows:

MAN:

The white balance and black balance can be adjusted by the Red and Blue Gain Controls (123) and the Red and Blue Pedestal Level Controls (124).

A: The White Balance can be set automatically by pressing the Auto White/Auto Black Set Switch (127) upwards. The setting is stored in memory A.

B: Similar to A, but the setting is stored in memory B.

Note:

Two white balance setting, one each for different lighting conditions such as indoor and outdoor, may be stored in the two memories, A and B.

127. Auto White/Auto Black Set Switch (AWC/HOLD/ABC)

This switch sets the white balance and black balance automatically as follows:

AWC:

This position is used for setting the white balance when the White/Black Balance Selection Switch (126) is set to the A or B position of the White/Black Balance Selection Switch. White balance adjustment is required when "AWC A NG" or "AWC B NG" is displayed in the viewfinder or when the Auto Warning Indicator (129) on lights.

HOLD:

In this position, the white and black balances set at the AWC or ABC position can be held fixed, if so desired, for at least one year.

ABC:

This position is used for setting the black balance when the White/Black Balance Selection Switch (126) is set to the A or B position. Black balance adjustment is required when "ABC NG" is displayed in the viewfinder or when the Auto Warning Indicator (129) on the Remote Control Unit (RCU) lights.

Note:

Since the black balance adjustment is always automatically performed the picture will flash in the view finder and on the monitor screen while the black balance is being set. This flashing indicates that the adjustment is currently being performed and will cease once the adjustment is completed.

128. Lens Iris Selection Switch (IRIS, MAN/AUTO)

This switch is used to set the lens iris of the auto iris servo control zoom lens as follows.

Auto:

The iris level of the lens is controlled automatically.

Note:

Be sure to set the Iris Control Selection Switch on the zoom lens to the AUTO position.

MAN:

The iris level of the lens is controlled to the desired level by using the Lens Iris Control (130).

129. Auto Warning Indicator (AUTO)

This indicator blinks while the white balance or black balance is being automatically set. It goes out once the white and black balances have been correctly set. This indicator lights when the white or black balance is set improperly. In this case, carry out the automatic setting procedure for white and/or black balance.

130. Lens Iris Control (IRIS)

The iris level of the zoom lens can be manually controlled by turning this control when the Lens Iris Selection Switch (128) is set to the MAN position.

131. Scene Selection Switch (SCENE)

This switch is used to select the most suitable camera conditions, depending on scene conditions, to obtain the best picture possible.

Refer to page 17 for details.

132. Electronic Shutter Speed Selection Switch (OFF/100/250/500/1000/2000)

This switch is operative only when a camera featuring the electronic shutter is connected with the Remote Control Unit (RCU).

When fast-moving objects are shot at the slow shutter speeds typically found in conventional cameras they will appear blurred. The WV-F700 camera, however, features an electronic shutter function from which the following speeds can be selected: 1/100, 1/250, 1/500, 1/1000 or 1/2000 of a second. As a result, blur-free recording of high-speed action, such as car racing, golf swings, gymnastics, birds in flight is possible.

The selection of shutter speed is made by pressing this switch.

OFF:

Set this switch to this position when recording normally with standard shutter speeds.

1/100, 1/250, 1/500, 1/1000, 1/2000:

Choose the suitable shutter speed from these.

133. Down Switch (DOWN)

This switch is used to decrease the set value in the item pointed out by the cursor.

134. Up Switch (UP)

This switch is used to increase the set value in the desired item pointed out by the cursor.

135. Item Switch (ITEM)

This switch is used to choose the item in the set-up menus.

136. Page Switch (PAGE)

This switch is used to choose the desired set-up menu from the four menus.

137. Subcarrier Phase Coarse and Fine Controls (SC PHASE COARSE/FINE)

These controls allow for adjustment of the camera signal subcarrier phase from 0° to 360°, to match the phase with that of the burst signal at the Gen-lock Input Connector (143) in a system configuration.

The COARSE control adjusts the subcarrier phase from 0° to 360° in 90° steps, while the FINE control allows for continuous fine adjustment over a range of 90°.

138. Horizontal Phase Control for Gen-lock (H PHASE)

The horizontal phase of the camera signal can be adjusted to match the horizontal phase of the signal at the Gen-lock Input Connector (143).

139. ENC/VF Selection Switch (ENC/VF, OFF/ON)

This switch selects Encoder output or EVF (black and white) output from the Video Output Connector and whether the User Set Function is available as follows:

1. Switch set to position #1:
Encoder is output from the Video Output Connector on the RCB and the User Set function is not available.
2. Switch set to position #2:
Encoder is output from the Video Output Connector on the RCB and the User Set function is available.
3. Switch set to position #3:
EVF (black and white) signal is output from the Video Output Connector on the RCB, User Set function is available and the User Set menu is displayed on the monitor.

140. Intercom Jack (INTERCOM)

This jack is used for communications between the camera operator and Remote Control Unit (RCU) operator in a system configuration with a Special Effects Generator.

141. Tally Indicator (REC/TALLY)

When the Remote Control Unit (RCU) is used in conjunction with a Special Effects Generator, the Tally Indicator inside the viewfinder as well as this indicator on the Remote Control Unit (RCU) will light to indicate that recording is in progress.

Note:

When using the Remote Control Box (RCB) in the Remote Control Unit (RCU), the recording start/stop function is not available.

142. Intercom Level Control (INTERCOM, LEVEL)

Use this control to adjust the volume level in the headset connected to the Intercom Jack (140).

143. Gen-lock Input Connectors (BNC)

(GEN-LOCK IN AUTO 75Ω/HI-Z OUT)

These connectors receive the gen-lock signal (black burst or composite) from the Special Effects Generator for system reference.

When connecting a coaxial cable with BNC connector to the Gen-lock Input Connector (143), the high impedance video loop is automatically selected. At all other times, these connectors are automatically terminated with 75 ohms.

Caution:

As this connector is in parallel connection with the Remote Control Box Gen-lock Input Connector (155), do not input gen-lock signals to both of these connectors simultaneously.

144. Auxiliary Input Connectors

(AUX IN-AUTO/75Ω HI-Z OUT)

These connectors receive the lineview signal from a Special Effects Generator. Two connectors are provided for bridging or looping application.

When connecting a coaxial cable with BNC connector to this connector, this connector is automatically terminated with 75 ohms.

145. Red, Green and Blue Output Connectors

(OUTPUT-R/PR/C, G/Y/Y, B/PB/B)

Signals supplied from these connectors are selected by the RCU/VTR Signal Selection Switch on the Camera Adaptor. Refer to page 12 for setting the RCU/VTR Selection Switch.

Note:

The RCU/VTR Signal Selection Switch on the Camera Adaptor has been set to the ENC position at the factory.

146. Video Output Connectors

(OUTPUT-VIDEO 1, VIDEO 2)

These connectors supply a composite video signal to a Special Effects Generator, a Video Monitor or a VTR.

Note:

This connector is in parallel connection with the Monitor Output Connector (154) on the Remote Control Box (RCB).

147. Sync Output Connector (SYNC OUTPUT)

This Connector supplies a negative 4Vp-p/75 sync signal to the Sync Input of an RGB Color Video Monitor for synchronization.

148. S-Video Output Connector (S-VIDEO)

This connector outputs the Y/C signal when the RCU/VTR Signal Selection Switch on the camera adaptor is set to the Y/C/B Position.

149. Tally and Intercom Input Connector (TALLY & INTERCOM)

Connect a 4-pin cable between this connector and the Tally and Intercom output of the Special Effects Generator.

150. Fuse (125V 1.6A)

151. Multiplex Connector (MPX)

This connector is connected to the Multiplex Connector of the camera with coaxial cable (5C-2V or equal).

Note:

When using this connector, set the Cable Selection Switch (152) to MPX position.

152. Cable Selection Switch

(CABLE SELECT, MULTI/MPX)

Set this switch to the MULTI or MPX position according to the control cable used.

MULTI:

Select this position when the 26-pin cable (Multi cable) is used to control the camera.

MPX:

Select this position when the coaxial cable (5C-2V) is used to control the camera.

Caution:

Do not use the multi cable and the coaxial cable together.

153. Multi-cable Connector (CAMERA)

This connector is connected with the VTR/RCU Connector by using the multi-cable (26-pin).

Note:

Be sure to set the Cable Selection Switch (152) to the MULTI position.

154. Monitor Output Connector of the Remote Control Box (RCB)

As this connector is in parallel connection with the VIDEO 2 OUTPUT Connector (146), do not output the signal simultaneously from both connectors.

155. Gen-lock Input Connector of Remote Control Box

This connector is used to input the gen-lock signal to the Remote Control Box when using the Remote Control Box extended from the Remote Control Unit.

156. Remote Control Unit Extension Connector

This connector is used to extend the Remote Control Box from the Remote Control Unit or from the camera by using the optional RCB cable (WV-CA10B25/WV-CA10B50).

The maximum cable length for the extension is 300 ft (100m).

Refer to the following table.

| Cable length | (ft) | 6 | 75 | 150 | 300 |
|--------------|------|-----|-----|-----|-----|
| | (m) | 2 | 25 | 50 | 100 |
| Decrement | | 10% | 15% | 20% | 30% |

Note:

As the video level is changed by using various cable lengths, under certain conditions it may be out of the specification for the WV-F700 series.

157. Remote Control Unit Connector

This connector is used for directly connecting with the Remote Control Box Connector (159) on the Remote Control Unit.

158. User Set Switch (USER SET)

By setting this switch when the Scene Selection Switch (131) is set to the USER SET position, the page selection of the set up menus is available as follows.

All:

All the pages (page1-page4) in the set up menu are displayed by setting this switch to this position.

- 1: Page 1 and 2 are displayed by setting this switch to this position.
- 2: Only Page 3 is displayed by setting this switch to this position.

Refer to "THE USER SETTING OPERATION" on page 17 for the details.

159. Remote Control Box Connector

This connector is connected directly with the Remote Control Unit Connector (157) on the Remote Control Box.

160. Remote Control Box Extension Connector

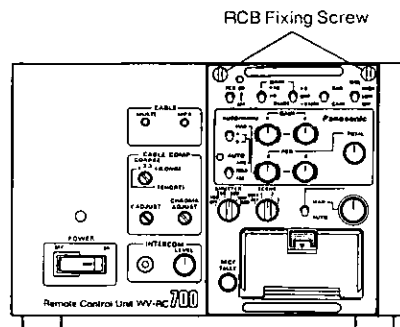
This is connected to the Remote Control Unit Extension Connector (156) on the Remote Control Box by using the optional cable.

Refer to item 156 for more details.

CONNECTION

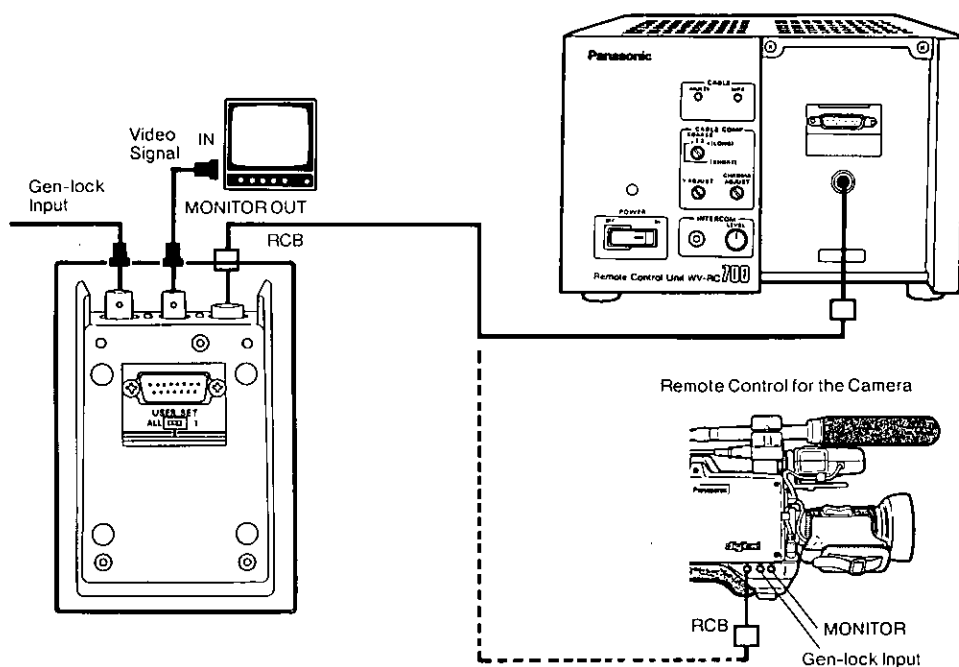
A. Direct Connection

Connect the Remote Control Unit Connector (157) to the Remote Control Box Connector.
Fix the Remote Control Box by using two RCB Fixing Screws.



B. Connection with the Optional RCB Cable

Connect the optional RCB cable between the Remote Control Box Extension Connector (160) and the Remote Control Unit Extension Connector (156).



C. Connection with the Camera

C-1 Connection with the camera by the 26-pin multi-cable

Connect the 26-pin studio cable between the camera and the Remote Control Unit (RCU).

Set the Cable Selection Switch (152) to the MULTI position and the Cable Selection Switch on the Camera Adaptor to VTR/MULTI position.

C-2 Connection with the camera by the coaxial cable

Connect the coaxial cable between the Multiplex Connector (151) and Multiplex Signal Input Connector (50).

Set the Cable Selection Switch (152) to the MPX position and the Cable Selection Switch on the Camera Adaptor to MPX position.

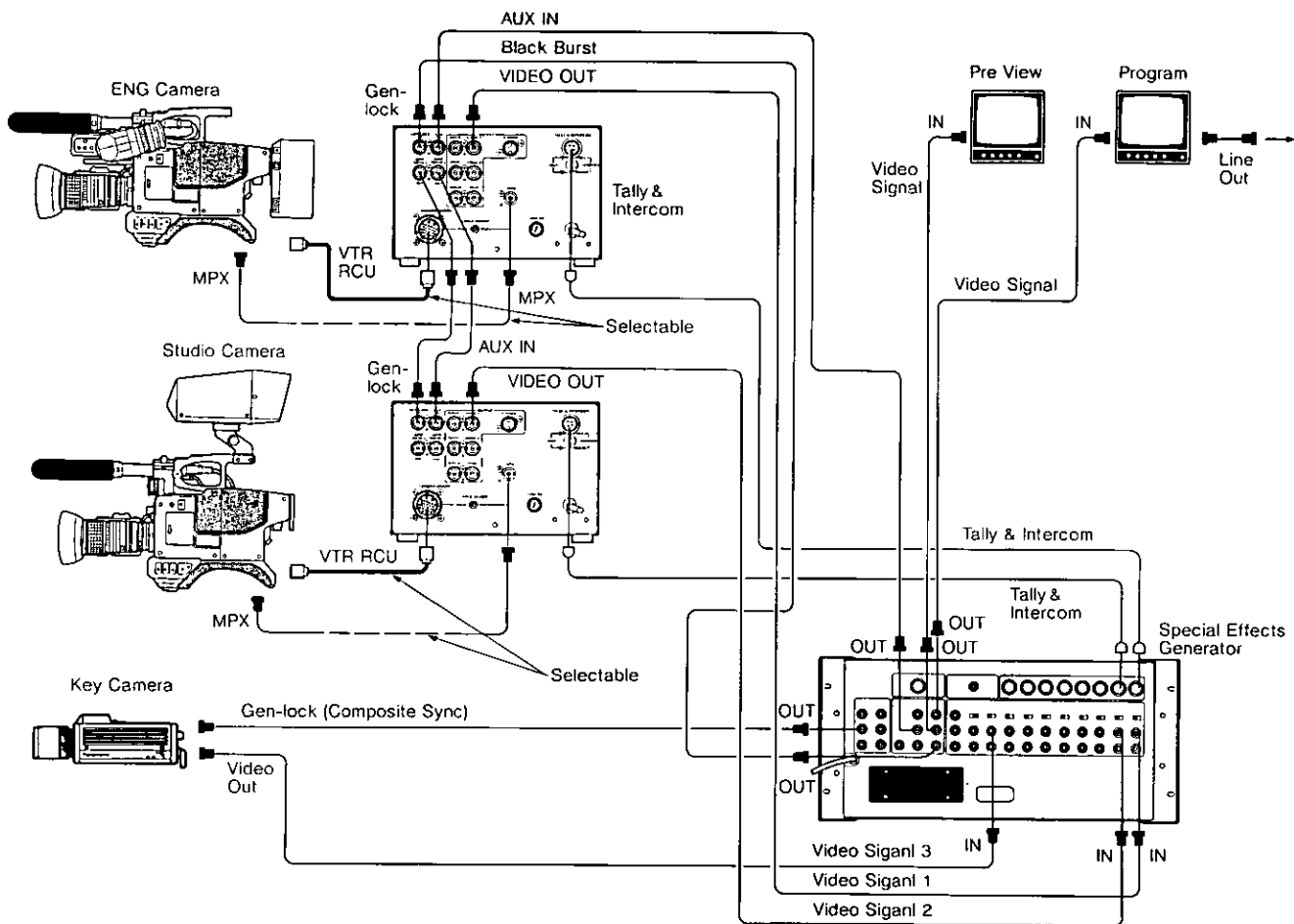
D. For Gen-lock

Connect the coaxial cable for the gen-lock signal between the black burst output on the production system and Gen-lock Input Connectors (143) on the RCU. (The signal may be bridged or looped through to another RCU.)

Connect the coaxial cable for the lineview signal between the effect output connector on the production system and the Auxiliary Input Connector (144) on the RCU. (The signal may be bridged or looped through to another RCU.)

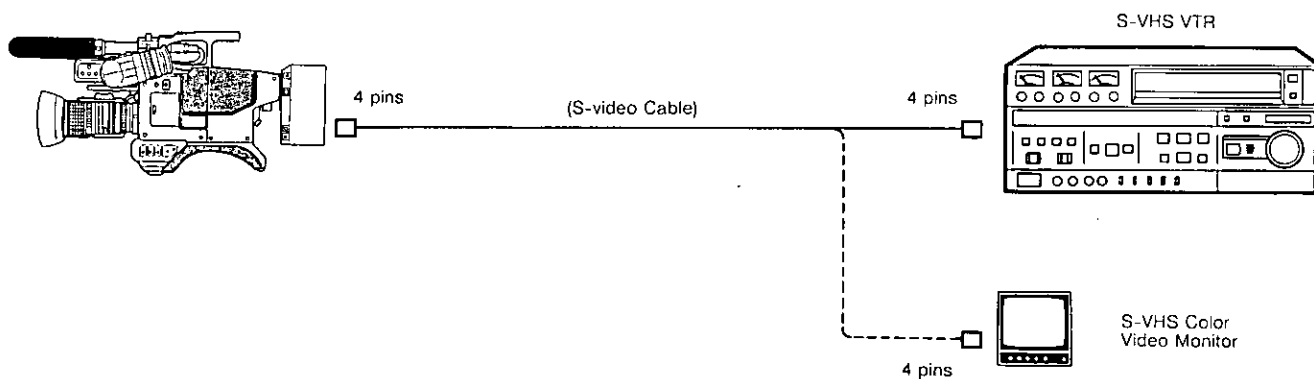
Notes:

1. The Tally Light and intercom between the camera, RCU and Special Effects Generator will function only when the 4-pin cable for the Tally Light and Special Effects Generator.
2. The 26-pin studio cable can be extended up to a maximum of approximately 1000 ft (300m). When extending the cable, be sure to set the Cable Length Compensation Switch (115) to the position matching the extension length.
3. The Subcarrier Phase Coarse and Fine Controls (137) and the Horizontal Phase Control (138) on the RCU should be set to match other cameras in the system. Refer to page the Operating Instructions of WV-F700 Series for details.
4. Be sure to set the Cable Selection Switches (152) to MULTI position.



Notes:

1. When using the MPX, INCOM, AUX and R/G/B and S-VIDEO outputs are not functioned.
2. When the WV-F700 Color Camera is connected to a desk-top type S-VHS VTR such as AG-7500 or directly to the video monitor for S-VHS format, the S-VHS cable (S-video cable) is required.

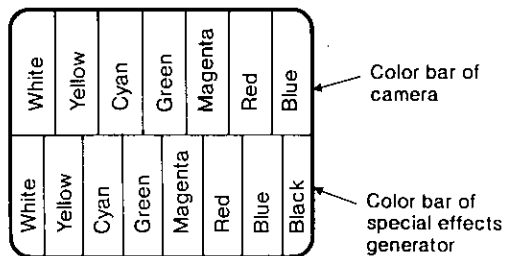


OPERATING PROCEDURE

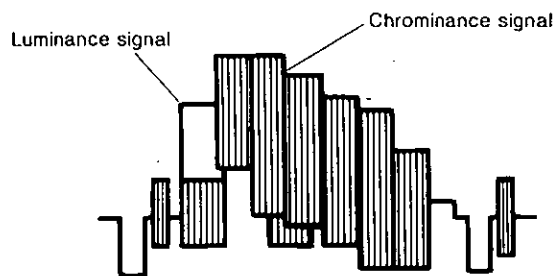
1. Make all required connections are properly set.
2. Set the switches as follows:

| Unit | Switches | Positions |
|--------|--|----------------|
| Camera | White Balance Selection Switch | AWC A or AWC B |
| | Lens Iris Selection Switch | NOR (Normal) |
| | Iris Control Selection Switch on lens | A (Auto) |
| | Detail Level Selection Switch | HIGH |
| | Power Selection Switch | VTR/RCU |
| | Power Switch | ON |
| RCU | High Gain Selection Switch (119) | 0 dB |
| | Color Bar/Camera Selection Switch (121) | BAR |
| | White/Black Balance Selection Switch (126) | BAR |
| | Lens Iris Control (130) | AUTO |
| | Power Switch (111) | ON |

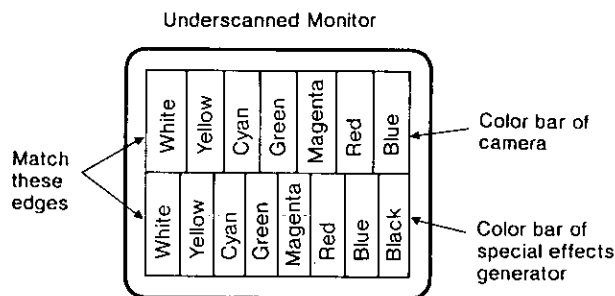
3. Set the Cable Length Compensation Switch (115) on the RCU according to the length of studio cable used.
4. Fine-adjust the luminance gain and chroma gains as follows:
 - Set the switches and controls on the Special Effects Generator so that the split color bar picture is observed on the program monitor. Refer to the operating instructions accompanying the Special Effects Generator.



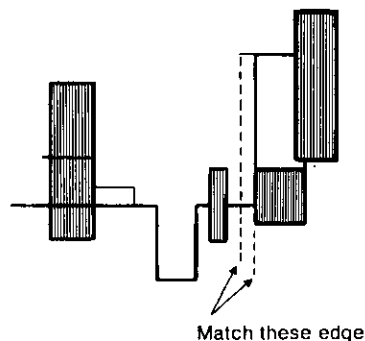
- Connect an oscilloscope to the Program Output Connector of the Special Effects Generator or feed the Program Output signal to a waveform monitor. Observe the horizontal period of the Program Output signal.
- Adjust the Luminance Gain Fine Control (113) so that the luminance signal levels of both color bar signals are equal. Adjust the Chroma Gain Fine Control (114) so that the chrominance signal levels of both color bar signals are equal.



5. Adjust the horizontal phase of the camera as follows:
 - Set the switches and controls on the Special Effects Generator so that the split color bar picture is observed on the program monitor. Refer to the operating instructions accompanying the Special Effects Generator.



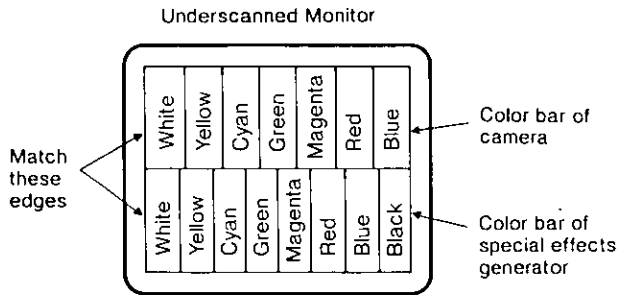
- Connect an oscilloscope to the Program Output Connector of the Special Effects Generator and check the horizontal blanking period of the Program Output signal.
- Adjust the Horizontal Phase Control for Gen-lock (138) on the RCU so that the phase of the horizontal blanking of the color bar signal for the camera matches that of the Special Effects Generator.



- The horizontal phase of the camera can be roughly adjusted by observing the split color bar picture on the program monitor after all switches and controls have been correctly set. Adjust the Horizontal Phase Control for Gen-lock (138) so that the edges of the color bar of the camera and Special Effects Generator roughly match each other.

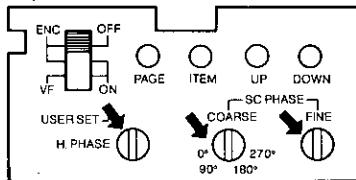
Note:

The horizontal phase as well as the subcarrier phase explained in the next paragraph should be readjusted if the connections of coaxial cable length is changed in the system.



6. Adjust the subcarrier phase of the camera as follows:

- Set the switches and controls on the Special Effects Generator so that the split color bar picture is observed on the program monitor. Refer to the operating instructions accompanying the Special Effects Generator for details.
- Adjust the Subcarrier Phase Coarse and Fine Controls (137) on the RCU so that the colors of the color bars from the camera are similar to the colors of the color bars generated by the Special Effects Generator.



- For precise adjustment, the use of a vectorscope is recommended. In this case, supply the Program Output signal from the Special Effects Generator to the vectorscope. While observing the vectorscope, adjust the Subcarrier Phase Coarse and Fine Controls (137) on the RCU so that the phase of the color bars from the camera matches that of the bars generated by the Special Effects Generator.

7. Reset the Color Bar/Camera Selection Switch (121) on the RCU from the BAR to the CAMERA position.

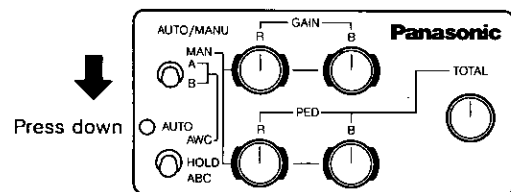
8. Select the proper filter according to the color temperature at the scene, using the Filter Selection Knob on the camera while referring to the Table on page 15.

9. Set the black balance as follows:

Set the Auto White/Auto Black Set Switch (127) on the RCU to the ABC position momentarily by pressing it down.

The lens iris is automatically closed and the black balance is set automatically in approximately 10 seconds. After the black balance has been set, the lens iris automatically returns to its previous position. The Auto Warning Indicator (129) on the RCU blinks while the black balance is being set and it shuts off when the black balance has been correctly set. While the black balance is being set, "ABC" also blinks in the viewfinder screen, and "ABC OK" appears when the setting is completed. After a few seconds "ABC OK" disappears from the screen.

If the Auto Warning indicator remains lit and "ABC NG" appears in the viewfinder screen, the black balance adjustment should be carried out once more. Refer to "Setting the Black Balance" on page 13 for details.

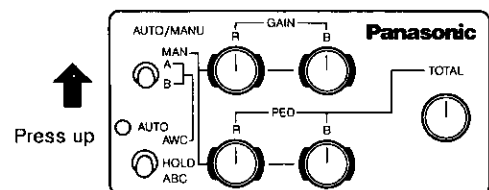


10. Set the white balance as follows:

Set the White Balance Selection Switch (126) on the RCU to the AWC A or AWC B position.

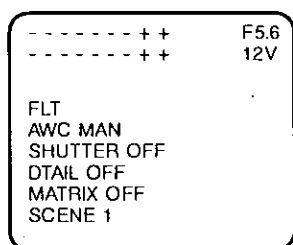
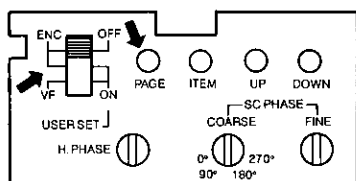
While aiming the camera at a white object, e.g. white paper or a white wall, set the Auto White/Auto Black Set Switch (127) on the RCU to the AWC position momentarily by pressing it up. The white balance is automatically set. After the white balance has been set. The blinking Auto Warning Indicator (129) on the RCU goes out and the blinking "AWC A" or "AWC B" in the viewfinder turns into "AWC A OK" or "AWC B OK", respectively. This indication disappears after a few seconds.

If the Auto Warning indicator remains lit and "AWC A NG" or "AWC B NG" appears in the viewfinder screen, the white balance adjustment should be carried out once more. However, before proceeding with the adjustment, make sure the Filter Selection Knob is set correctly. Refer to "Setting the White Balance" on page 14 for details.



11. Confirm the flange-back adjustment of the lens as follows:
 - Aim the camera at a dark object more than 2m (6 ft) from the camera.
 - Zoom in (from wide-angle to tele) with the Zoom Ring/Lever or the Zoom Controller (182) of the Lens Control Kit, and adjust the lens focus with the Focus Ring or the Focus Controller (186) of the Lens Control Kit.
 - Zoom out (from tele to wide-angle) and confirm that the picture is in focus. If not, the flange-back of the lens should be adjusted according to the instructions of WV-F700 Series.
12. The system condition can be confirmed while pressing the Page Switch (136) on the Remote Control Unit.

Open the operation panel on the Remote Control Unit. Set the ENC/VF Selection Switch (139) to VF position. Set the Scene Selection Switch (131) to the 1 position. Refer to "Character Display" on page 19 for details.



13. Zoom in/out until the desired composition is achieved. Focus the lens until the object is in sharp focus by watching the picture in the viewfinder.

SETTING THE BLACK BALANCE

1. Black Balance

Correct setting of the black balance is required for producing correct colors, especially in low-light situations. Once the black balance has been correctly set, the setting is maintained in a special memory, for approximately 10 years. The setting will not be lost, even though camera power is turned off.

However, for best results, it is recommended that the black balance adjustment be carried out if the camera has not been used for a long period of time.

2. Automatic Black Balance Setting

- Set the Iris Control Selection Switch on the zoom lens and the Lens Iris Control (130) on the Remote Control Unit (RCU) to the A (auto) position and AUTO position, respectively.

Note:

If you need to set the black balance while in the manual iris control mode, the incoming light should be blocked by capping the lens.

- When the Auto White/Auto Black Set Switch on the camera or (127) on the RCU is pressed down toward the ABC position within 2 seconds, black balance is set shown in the following.

| Bar/±6dB/Camera | +6dB/-6dB | ABC |
|-----------------|-----------|------------|
| CAMERA | — | 0/+9/+18 |
| ±6dB | -6dB | -6/+3/+12 |
| | +6dB | +6/+15/+24 |

The lens iris is closed, blocking incoming light, and the black balance is automatically set in approximately 5 seconds. When the black balance has been set, the lens iris returns to its previous position.

- In case of pressing the above switch for more than 2 seconds, the black balance is set shown in the following.

| Bar/±6dB/Camera | +6dB/-6dB | ABC |
|-----------------|-----------|-----|
| CAMERA | — | ALL |
| ±6dB | — | |

The Auto Warning indicator in the 1.5" viewfinder and the Auto Warning Indicator (129) on the RCU blink while the black balance is being set. The indicators go out after the black balance has been set.

While the black balance is being set, "ABC" blinks in the viewfinder, and "ABC OK" appears when the black balance has been correctly set.

This indication disappears after a few seconds.

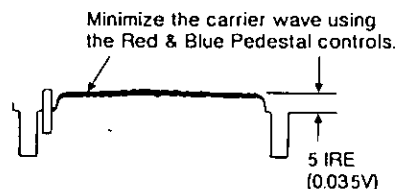
If the Auto Warning indicators remain lit and "ABC NG" appears in the viewfinder screen, the black balance adjustment should be carried out once more.

Note:

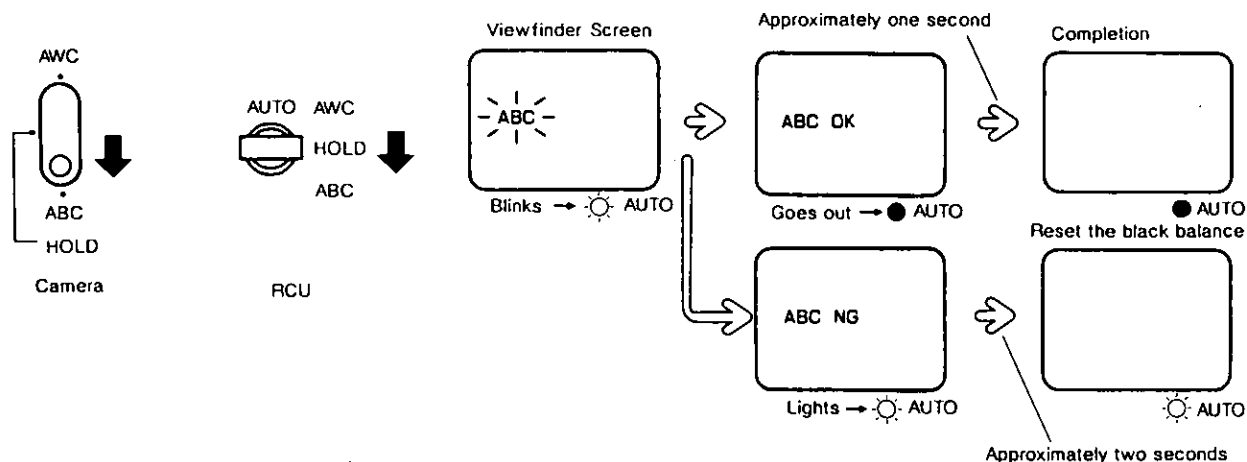
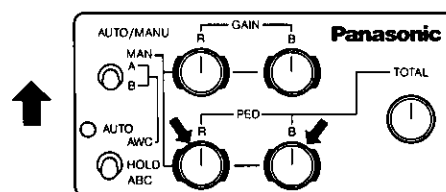
The black balance setting will be kept in the memory for approximately 10 years even if the power to the camera is turned off. It is recommended, however, that the black balance be reset if the camera has not been in use for a long time.

3. Manual Black Balance Setting (Studio Application)

- Manual adjustment of the black balance is possible by adjusting the Red Pedestal and Blue Pedestal Level Controls (124) on the RCU.
- Set the White/Black Balance Selection Switch (126) on the RCU to the MANUAL position and close the lens iris or cap the lens.
- Observe the video output signal on an oscilloscope or a waveform monitor.
- Adjust the Red Pedestal and Blue Pedestal Level Controls (124) on the RCU so that the carrier wave of the video output signal is at minimized.



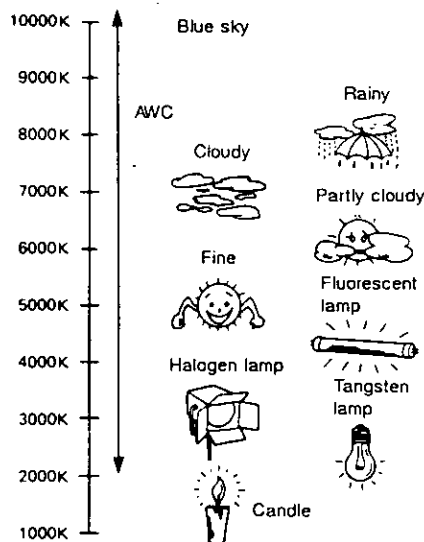
- The overall pedestal level can be adjusted by the Total Pedestal Level Control (125) on the RCU.



SETTING THE WHITE BALANCE

1. White Balance

- Light can be measured in terms of its color temperature, stated in degrees Kelvin (K). On a ranking scale, blue light has a higher color temperature than reddish light. Thus, when the camera is aimed at an object illuminated by a light source having high color temperature, the produced image will be somewhat bluish, while if the color temperature is low, the image will turn reddish.
- In order to correctly reproduce the colors of the scene, the white balance should be set before recording is begun.



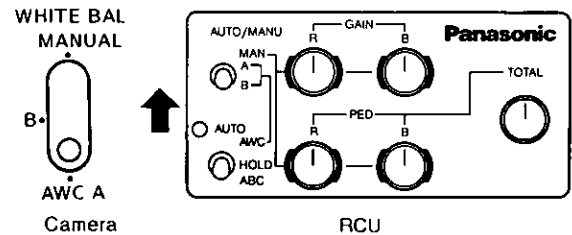
2. Automatic White Balance Setting

Note:

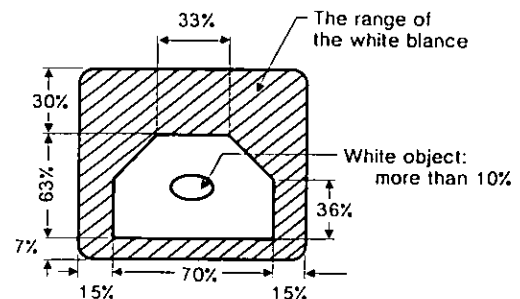
Color Temperature range in which automatic white balance control is possible: Approximately 2200K - 11,000K using the Filter Selection Knob.

Two white balance settings, for two different lights sources such as indoors and outdoors, can be kept in the two white balance memories, as follows:

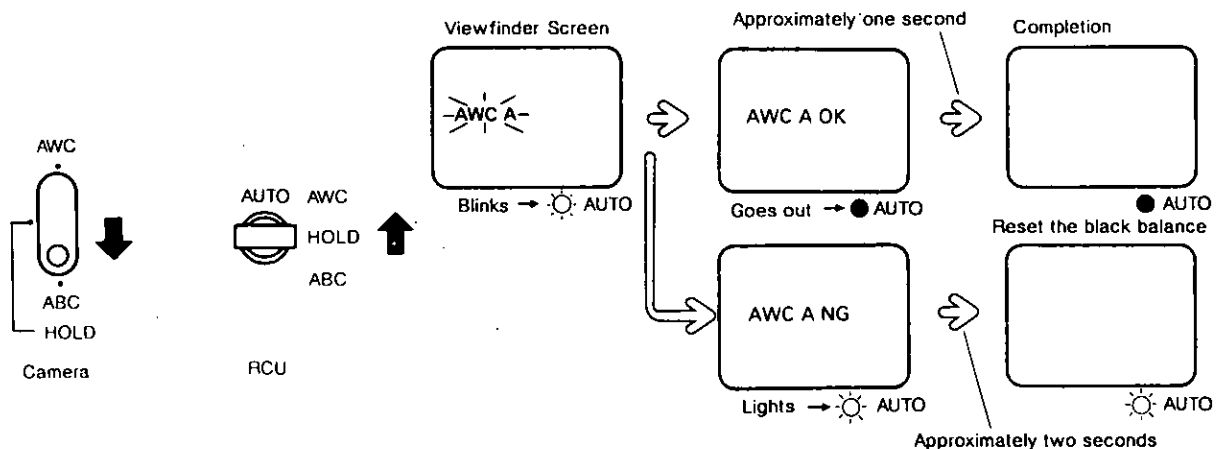
- Set the White Balance Selection Switch on the camera to the AWC A or AWC B position. If camera is in studio application, set the White/Black Balance Selection Switch (126) on the RCU to the A or B position.



- Aim the camera at a white object e.g., white paper or a white wall, within the range of the white balance as shown in the following and make sure that at least 10% or the viewfinder screen is occupied by the white image.



- Set the Auto White/Auto Black Set Switch on the camera or (127) on the RCU (in studio application) to the AWC position momentarily by pressing it up. The white balance is automatically set in approximately 2 seconds. While the white balance is being set, the Auto Warning indicator in the 1.5" viewfinder and the Auto Warning Indicator (129) on the RCU blink. These indicators go out after the adjustment is completed. When the white balance has been correctly set, the blinking "AWC A" or "AWC B" in the viewfinder turns into "AWC A OK" or "AWC B OK", respectively. This indication disappears after a few seconds. If the Auto Warning indicator remains lit and "AWC A NG" or "AWC B NG" appears in the viewfinder screen, the white balance adjustment should be carried out once more. However, before proceeding with the adjustment, make sure the Filter Selection Knob is set correctly.

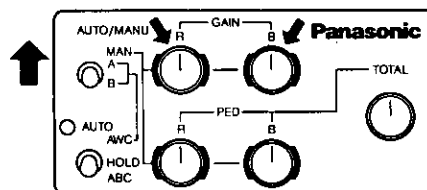


Notes:

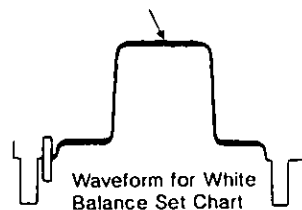
1. The white balance setting (as well as the black balance setting) will be kept in the memory for approximately 10 years even if the power to the camera is turned off. (The memory backup battery will supply power for up to ten years.) It is recommended, however, that the white balance be reset if the camera has not been in use for a long period of time.
The white balance should also be reset when moving to another light source that is not covered by any of the settings in the two white balance memories.
2. When the white balance is reset, the previous setting in the corresponding memory is erased.
3. When two different white balance settings have been stored in the memories, moving between two light sources is easily accomplished by simply changing the White Balance Selection Switch on the camera or (126) on the RCU to the position matching the light source. Recording is not interrupted when the white balance memory is switched.
4. If the camera has not been used for a long period of time, the white balance (as well as the black balance) should be reset before recording is begun.
5. Allow a few minutes of warm-up time before setting the white balance. This will allow a higher degree of precision when making the adjustment.
6. The white balance may not be correctly set under the following conditions:
 - In low light situations
 - In extremely bright light situations
7. If recording is to be carried out under sunlight, the white balance setting should be performed against a white surface exposed to the sun to avoid color distortion. Please note that if the white balance has been set in this manner, a slight color distortion might appear when turning the camera towards the shade.

3. Manual White Balance Setting (Studio Application)

- The white balance can be set manually, if so desired, from the RCU.
- Use the Filter Selection Knob to select the proper filter according to the color temperature of the light source at the scene. Refer to the table for filter settings on page 15.
- Set the White/Black Balance Selection Switch (126) on the RCU to the MANU position.
- Aim the camera at a white object, e.g. a white paper or white wall.
- Observe the video output signal on an oscilloscope or a waveform monitor.
- Adjust the Red Gain and Blue Gain Controls (123) on the RCU so that the carrier wave of the video output signal is at minimum.



Minimize the carrier wave using the Red & Blue Gain Controls.



4. Filter Selection Knob Settings

- Select the filter according to the light source at the scene.

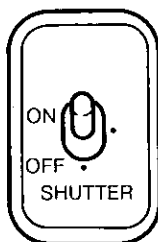
| Object/Scene & Light Source Condition | | Color Temperature | Wheel No. |
|---------------------------------------|---|-------------------|-----------|
| Indoor | Halogen Lamp or Tungsten Lamp (Studio) | 3200K | 1 |
| | Fluorescent Lamp (White) | 4500K | 3 |
| | Fluorescent Lamp (Daylight) | 6500K | 3 |
| Outdoor | Fluorescent Lamp (Daylight) | 6500K | 3 |
| | Daylight (Sunny) | 4500K | 2 |
| | Cloudy | 7000 - 7500K | 3 |
| | Cross position Halogen Lamp Tungsten Lamp | 3200K | 4 |

ELECTRONIC SHUTTER OPERATION

Fast moving objects shot at slow shutter speeds by a normally operated camera appear blurred. The electronic shutter function enables blur-free recording of high speed action, such as car racing, golfer's downswing, gymnastics, or birds in flight by taking in the image with the CCD device in a short period of time, 1/100 sec, 1/250 sec, 1/500 sec, 1/1000 or 1/2000 sec. Set the camera to the electronic shutter operation mode with the following procedure.

1. Set the Electronic Shutter Switch to the ON position.
2. By every pressing up the Electronic Shutter Switch, the selection of a desired speed is available as follows:

1/100 → 1/250 → 1/500 → 1/1000 → 1/2000



3. By pressing down this switch, the OFF position is selected.

Notes:

1. When setting this switch to the ON position from the OFF position, the preset shutter speed is indicated for a moment in the viewfinder.
2. The shutter off condition or shutter speed is indicated in the viewfinder by pressing the Check Button.
3. Select the most suitable shutter speed according to the speed of the moving object.
4. After setting the Electronic Shutter Switch, confirm how the picture is reproduced while shooting the actual object/scene.
5. In the electronic shutter operation, the light of the object/scene is taken in a short period of time. Therefore, higher shutter speeds require greater scene illumination.

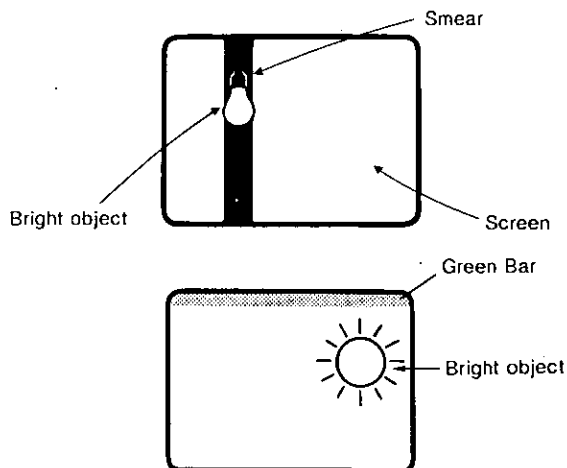
| Shutter Speed | Minimum Illumination (at F4) |
|---------------|------------------------------|
| 1/100 sec | 1000 lux |
| 1/250 sec | 2000 lux |
| 1/500 sec | 4000 lux |
| 1/1000 sec | 8000 lux |
| 1/2000 sec | 16,000 lux |

6. In the electronic shutter operation, the vertical smear of CCD is emphasized since greater light intensity is required as mentioned above. Avoid shooting scenes which contain extremely bright objects. Refer to PECULIAR PHENOMENA OF CCD on page 16.
7. The white balance may be disturbed if the 1/1000 sec or 1/2000 sec electronic shutter is operated while the camera is in the +18 dB high gain condition.

PECULIAR PHENOMENA OF THE CCD

1. Vertical Smear

When the camera is aimed at a scene which contains excessively bright objects such as the sun, lamp or reflected light under the electronic shutter mode, vertical bars called smear may appear below the bright object in the picture.



2. Fixed Pattern Noise

Fixed pattern noise may be seen in the entire picture area when the operating temperature of the camera is high.

3. Horizontal Lines Under Electronic Shutter Mode

When an extremely bright object is in the picture under the electronic shutter operation, green horizontal bar or lines may be obtained as shown in figure.

4. White blemish

When a white blemish appears in the picture when the camera is operating in high temperatures, do not use this camera in the +18 dB high gain mode.

THE USER SETTING OPERATION

This camera is provided with four scene file memories. When setting the Scene File Selection Switch to ON-1, ON-2 or ON-3 position, the camera is operated in one of the preset scene file condition.

When setting the Scene File Selection Switch to the USER SET position, the cameras operating conditions can be set by the user to any desired level.

Set up Menu 1

| NO. 1 | * | ODB |
|------------------|-------|---------|
| (. 3 5 - . 5 5) | CURR | NEW |
| → * GAMMA (NOR) | . 4 5 | . 4 5 |
| * GAMMA (SHT) | . 4 5 | . 4 5 |
| KNEE POINT | 9 8 | 9 8 % |
| WHITE CLIP | 1 1 0 | 1 1 0 % |
| * H. DTL LEVEL H | 3 1 | 3 1 |
| * V. DTL LEVEL H | 3 1 | 3 1 |
| * H. DTL LEVEL L | 1 5 | 1 5 |
| * V. DTL LEVEL L | 1 5 | 1 5 |

Set up Menu 2

| NO. 2 | * | ODB |
|-----------------|------|-----|
| (2 - 5) | CURR | NEW |
| → * H. BAND DTL | 5 | 5 |
| * L. BAND DTL | 1 | 1 |
| NOISE SUP | 1 | 1 |
| LEVEL DEP | 0 | 0 % |
| CHROMA DTL | 0 | 0 |
| DARK DTL | 0 | 0 |

Set up Menu 3

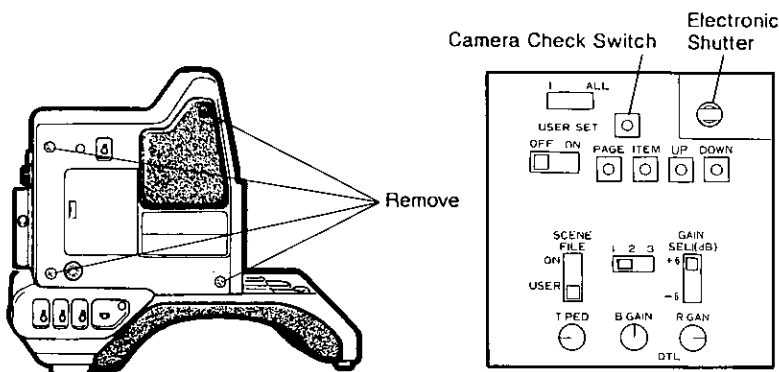
| NO. 3 | | |
|----------------|------|-------|
| (- 2 5 - 2 5) | CURR | NEW |
| → MATRIX (R-G) | 0 | 0 % |
| (R-B) | 0 | 0 % |
| (G-R) | 0 | 0 % |
| (G-B) | 0 | 0 % |
| (B-R) | 0 | 0 % |
| (B-G) | 0 | 0 % |
| ZEBRA | 9 5 | 9 5 % |

Set up Menu 4

| NO. 4 | | |
|-------------|------|-----|
| (-) | CURR | NEW |
| → BLACK SHD | ON | ON |
| WHITE SHD | OFF | OFF |
| FLARE RED | 0 | 0 |
| GREEN | 0 | 0 |
| BLUE | 0 | 0 |
| KNEE | ON | ON |

THE USER SETTING

1. Set the Scene File Selection Switch on the camera to the USER SET position. "SCENE USER" is indicated in the viewfinder.
2. Remove the Left Side Cover and set the User Set Switch inside the cover to the ON position. The camera is now in the User Set mode and the Set menu is displayed in the viewfinder.



Note:

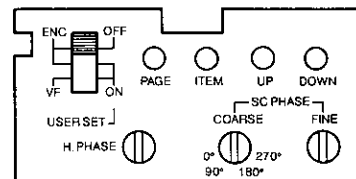
The setting of the menu can be set by the Camera Head, Remote Control Unit (RCU) or Remote Control Box (RCB).

3. By repeated pressing of the Page Switch (136), the set up menus can be displayed in the viewfinder from menu 1 to menu 4.

Note:

By using the Page Switch, which menus can be displayed is limited as shown in the following.

- 1: Set up menu 1 Set up menu 2
- 2: Set up menu 3
- ALL: Set up menu 1-4



(The side pocket of the RCU/RCB)

The range of setting level
Cursor
By moving the cursor on the desired item, the level change or set is available.

| NO. 1 | * ODB | Gain |
|------------------|---------------|------|
| (. 3 5 - . 5 5.) | CURR NEW | |
| * GAMMA (NOR) | . 4 5 . 4 6 | |
| * GAMMA (SHT) | . 4 5 . 4 5 | |
| KNEE POINT | 9 8 9 8 % | |
| WHITE CLIP | 1 1 0 1 1 0 % | |
| * H. DTL LEVEL H | 3 1 3 1 | |
| * V. DTL LEVEL H | 3 1 3 1 | |
| * H. DTL LEVEL L | 1 5 1 5 | |
| * V. DTL LEVEL L | 1 5 1 5 | |

* The items marked by * can be set the level according to the each gain of 0/9/18/24dB.

Setting level
Preset level

[The Level Setting]

| Gain | Data |
|-------------|----------------------------|
| -6, 0, 3 dB | Using of the data at 0 dB |
| 6, 9, 12 dB | Using of the data at 9 dB |
| 15, 18 dB | Using of the data at 18 dB |
| 24 dB | Using of the data at 24 dB |

Set levels in the Set Up menu according to the following procedure

1. By pressing the Item Switch (135), the cursor is moved to the various items in the menu. The item identified by the cursor can have its level set or changed at this point.
2. Change of the level is made by use of the Up Switch (UP) or Down Switch (DOWN).

UP Switch (UP):

By repeated pressing of this switch, the value of the level is increased.

If an item just has either an ON or OFF position pressing this switch places that item in the ON position. If the item just has either an ON/OFF position, pressing this switch places that item in the ON position.

Down Switch (DOWN): By repeated pressing of this switch, the value of the level is decreased.

If an item just has either an ON or OFF position pressing this switch places that item in the OFF position.

3. Set the User Set Switch to the OFF position.

Every time the Scene File Selection Switch is set to the USER SET position. The camera is operating monitor TV Levels preset by the user.

Note:

When the overmodulation is occurred by recording or playback with VTR, set the Detail Level Selection switch to LOW position.

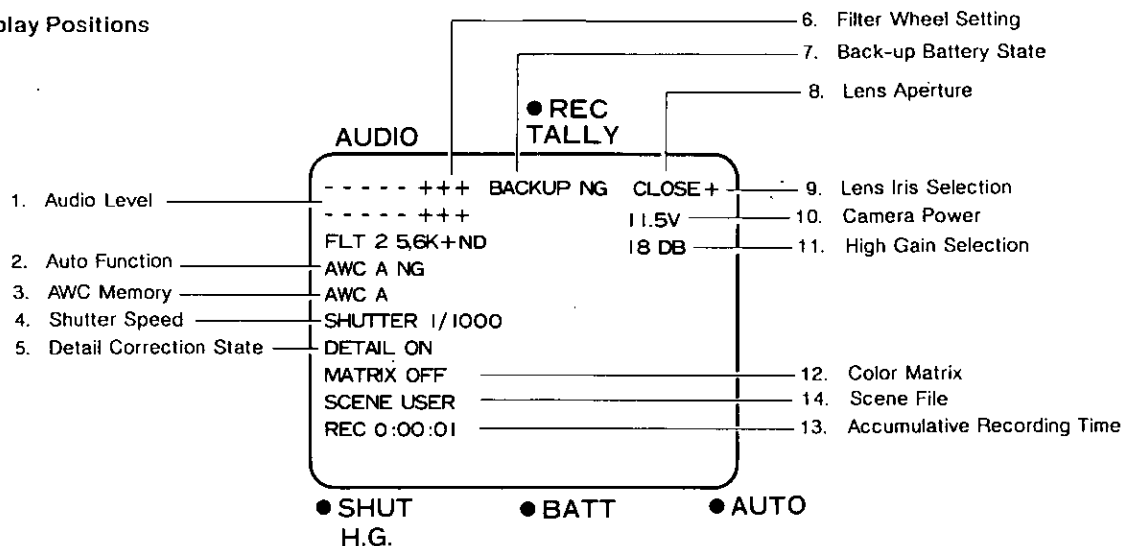
CHARACTER DISPLAY

The following operational & warning displays are shown in the viewfinder to show the operating condition of the camera.

Notes:

1. The displays in the viewfinder are not recorded.
2. The displays are not shown while a playback picture is on the viewfinder screen.

Display Positions



Timing of Displays

The viewfinder displays appear in the viewfinder as stated below:

| No. | Display | Displayed all the time | Displayed in short intervals only when the condition changes. | Displayed only when the Check Button (19) is pressed. |
|-----|-----------------------------|------------------------|---|---|
| 1 | Audio Level | ○ | — | ○ |
| 2 | Auto Function | — | ○ | — |
| 3 | AWC Memory | — | ○ | ○ |
| 4 | Shutter Speed | — | ○ | ○ |
| 5 | Detail Correction State | — | ○ | ○ |
| 6 | Filter Selection Knob | — | ○ | ○ |
| 7 | Back-up Battery State | ○ | — | ○ |
| 8 | Lens Aperture | ○ | — | ○ |
| 9 | Lens Iris Selection | ○ | — | ○ |
| 10 | Camera Power | ○ | — | ○ |
| 11 | High Gain Selection | — | ○ | ○ |
| 12 | Color Matrix | — | ○ | ○ |
| 13 | Accumulative Recording Time | — | — | ○ |
| 14 | Scene File | — | ○ | ○ |

1. Audio Level Display

The audio output level from the camera or the playback audio level of the 3/4" U-vision or 1/2" S-VHS VTR is displayed by minus (—) and plus (+) letters. The upper level is for channel 1 (L) and the lower level is for channel 2 (R).

Note:

The Right channel (Lower) will not be displayed if an AG-7450A is not docked with the camera.

2. Auto Function Display

- Automatic White Balance Control (AWC)

| Display | Audio Level |
|-----------------|----------------|
| — | Low Level |
| — — | |
| — — — | |
| — — — — | |
| — — — — — | Standard Level |
| — — — — — + | |
| — — — — — + + | |
| — — — — — + + + | High Level |

If the Auto White/Auto Black Set Switch on the camera or (127) on the RCU is pressed up, the white balance is automatically set. Refer to "Setting the White Balance" on page 14 for details.

| Display | Display Time | Auto Warning Indicator | Cause | Remedy |
|----------------|--------------|------------------------|--|--|
| HIGH LIGHT | 2 seconds | ON | Excessive bright light | <ul style="list-style-type: none"> • Reduce lighting on object or reduce lens iris. • Reset the white balance. |
| LOW LIGHT | 2 seconds | ON | Insufficient light | <ul style="list-style-type: none"> • Prepare an additional light source. • Reset the white balance. |
| AWC MAN | 2 seconds | ON | White Balance Selection Switch is set to MANUAL. | <ul style="list-style-type: none"> • Set the switch to AWC A or AWC B. • Reset the white balance. |
| — | — | ON | Color Bar/−6 dB/Camera Selection Switch on the camera or (121) on the RCU is set to BAR. | <ul style="list-style-type: none"> • Set the switch to CAMERA. • Reset the white balance. |
| AWC A/AWC B | 2 seconds | Blinking | White balance is being set. | — |
| AWC A/AWC B OK | 1 second | OFF | White balance setting completed. | — |
| AWC A/AWC B NG | 2 seconds | ON | Switches are incorrectly set while the white balance is being set. | <ul style="list-style-type: none"> • Set all switches properly. • Reset the white balance. |

Note:

When the white balance adjustment has been completed, the setting of the Filter Selection Knob is kept in memory and may be confirmed in the viewfinder by pressing the Check Button.

• **Automatic Black Balance Control (ABC)**

If the Auto White/Auto Black Set Switch on the camera or (127) on the RCU is pressed down, the black balance is automatically set. Refer to "Setting the Black Balance" on page 13 for details.

| Display | Display Time | Auto Warning Indicator | Cause | Remedy |
|---|--------------|------------------------|--|---|
| LENS OPEN | 2 seconds | ON | Lens iris is not closed. | <ul style="list-style-type: none"> • Check the lens connector. • Set the Iris Control Selection Switch on the lens to A (AUTO). • Reset the black balance. |
| ABC | 5 seconds | Blinking | Black balance is being set. | — |
| ABC OK | 1 second | OFF | Black balance setting completed. | — |
| ABC NG (RB) or ABC NG (R) or ABC NG (B) | 2 seconds | ON | Black balance setting is disturbed by some reason. (RB): Red and Blue signals (R): Red signal only | <ul style="list-style-type: none"> • Repeat black balance adjustment until ABC OK appears. If not contact qualified service personnel. |

3. AWC Memory

When the White Balance Selection Switch setting is changed, one of the following displays appears for one second:

| Display | Description |
|---------------|---|
| AWC A (FLT 1) | The White Balance Selection Switch has been set to AWC A. The Filter Wheel setting previously used together with AWC A is also displayed. |
| AWC B (FLT 2) | The White Balance Selection Switch has been set to AWC B. The Filter Wheel setting previously used together with AWC B is also displayed. |
| AWC MAN | The White Balance Selection Switch is set to MANUAL. |

Note:

The setting of the Filter Selection Knob is displayed as 1, 2 or 3.

4. Shutter Speed Display

One of the following displays appears for one second when the position of the Electronic Shutter Switch is changed.

| Display | Shutter/High Gain Indicator (LED) | Description |
|----------------|-----------------------------------|---|
| SHUTTER OFF | OFF | The Electronic Shutter ON/OFF Switch is set to OFF. Normal camera operation. |
| SHUTTER 1/100 | ON | Camera is set to electronic shutter mode with shutter speed of 1/100 second. |
| SHUTTER 1/250 | ON | Camera is set to electronic shutter mode with shutter speed of 1/250 second. |
| SHUTTER 1/500 | ON | Camera is set to electronic shutter mode with shutter speed of 1/500 second. |
| SHUTTER 1/1000 | ON | Camera is set to electronic shutter mode with shutter speed of 1/1000 second. |
| SHUTTER 1/2000 | ON | Camera is set to electronic shutter mode with shutter speed of 1/2000 second. |

5. Detail Correction State

The detail/aperture correction state is displayed for one second when the setting of the Detail Level Selection Switch is changed.

Note:

The detail/aperture correction state is also displayed when the Check Button is pressed.

| Display | Position of Detail Level Selection Switch |
|-------------|---|
| DETAIL HIGH | HIGH |
| DETAIL LOW | LOW |
| DETAIL OFF | OFF |

6. Filter Selection Knob Setting Display

The color temperature conversion filter presently in use is displayed when the Check Button is pressed.

| Display | Position of Filter Selection Knob |
|----------------|--|
| FLT1 3.2K | 1 3200K |
| FLT2 5.6K + ND | 2 5600K + 12.5% ND |
| FLT3 5.6K | 3 5600K |
| FLT4 CROSS | 4 3200K CROSS |
| FLT NG | The Filter Selection Knob is not set to a click stop. Reset the wheel. |

7. Back-up Battery State Display

When the back-up battery for white balance and black balance memories, as well as the character display, has a low charge "BACK UP NG" is displayed.

Replace the back-up battery immediately.

Notes:

1. Refer replacement of the back-up battery to qualified service personnel.
2. The back-up battery will supply power for approximately 10 years.

8. Lens Aperture Display

The lens aperture/iris is adjusted automatically according to the incoming light intensity. The F-number, i. e. aperture/iris opening, is displayed in the viewfinder when a specified zoom lens, with a 12-pin lens connector, is used.

Note:

If the F-number displayed differs from the actual F-number in use, refer adjustment to qualified service personnel.

| Display |
|---------|
| OPEN |
| F2 |
| F2.8 |
| F4 |
| F5.6 |
| F8 |
| F11 |
| F16 |
| CLOSE |

9. Lens Iris Selection Display

The setting of the Lens Iris Selection Switch is displayed.

| Display | Description |
|--------------|---|
| + | The Lens Iris Selection Switch is set to 1/2 OPEN. The lens iris is opened an extra 1/2 F-stop from the standard lens iris/aperture. |
| (no display) | The Lens Iris Selection Switch is set to NOR (normal). Lens iris/aperture is normal. |
| — | The Lens Iris Selection Switch is set to 1/2 CLOSE. The lens iris is closed an extra 1/2 F-stop from the standard lens iris/aperture. |

10. Camera Power Display

The voltage level supplied to the camera, from the Battery Pack, AC Adaptor/Charger or VTR is displayed.

Note:

If "10.6" is displayed, replace the battery pack. The battery pack will supply sufficient power for only a few minutes after this display lights.

| Display | Present Voltage Level |
|--------------|-----------------------------------|
| HIGH (Blink) | More than 17V |
| 17V | About 17V |
| 16V | About 16V |
| 15V | About 15V |
| 14V | About 14V |
| 13V | About 13V |
| 12V | About 12V |
| 11.5V | About 11.5V |
| 11V | About 11V |
| 10.8V | About 10.8V. Replace battery. |
| 10.6 | Less than 10.6V. Replace battery. |

11. High Gain Selection Display

When the setting of the High Gain Selection Switch on the camera or (119) on the Remote Control Unit is changed, this is indicated in the viewfinder for one second.

Note:

This is also indicated when the Check Button is pressed.

| Display | Shutter/High Gain Indicator | Position of High Gain Selection Switch | BAR/±6dB/CAMERA | Gain Selection Switch |
|---------|-----------------------------|--|-----------------|-----------------------|
| 0 dB | OFF | 0 dB | CAMERA | — |
| —6 dB | | | ±6 dB | —6 dB |
| 6 dB | | | ±6 dB | +6 dB |
| 9 dB | ON | +9 dB | CAMERA | — |
| 3 dB | | | ±6 dB | —6 dB |
| 15 dB | | | ±6 dB | +6 dB |
| 18 dB | | +18 dB | CAMERA | — |
| 12 dB | | | ±6 dB | —6 dB |
| 24 dB | | | ±6 dB | +6 dB |
| | | | | |

12. Color Matrix Display

The setting of the Color Matrix ON/OFF switch is displayed while the Check Button is being pressed.

Notes:

1. The Internal Matrix ON/OFF switch has been preset to ON at the factory.
2. Refer color adjustment using internal controls to qualified service personnel.

| Display | Description |
|------------|--|
| MATRIX ON | The switch is set to ON. Color reproduction can be adjusted slightly through use of internal controls. |
| MATRIX OFF | The switch is set to OFF. Standard color reproduction is obtained. |

13. Scene File Display

When the Scene File Selection Switch or the Check Button is pressed, one of the following display appears for one second.

Scene 1:

The camera's internal controls are preset at the factory for optimal performance under normal lighting conditions.

Scene 2:

The same as above except the controls are optimized for shooting under fluorescent lighting.

Scene 3:

The same as above except the controls are optimized for low illuminance level shooting.

Scene User:

The camera's internal controls are preset by the user.

Refer to the User Set Operation on page 17 for details.

14. Accumulative Recording Time Display

While the Check Button is pressed, the accumulative recording time is displayed during ENG/EFV operation. When a camera/recorder system utilizes an AG-7450A S-VHS VTR, the tape counter is displayed instead of accumulative recording time.

Notes:

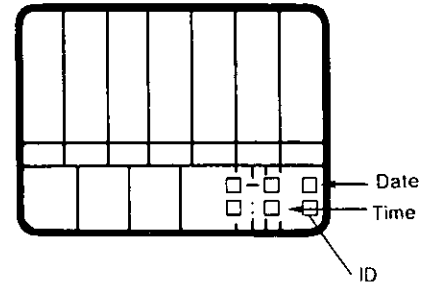
1. The display value is reset to 0 HOUR 00 MIN 00 SEC (0:00:00) when the Recording Time Reset Button is pressed.
When a camera/recorder system is used, the tape counter can be reset to 0:00:00 by either the Recording Time Reset Button on the camera or the Reset button on the AG-7450A S-VHS VTR.
2. The maximum recording time that can be displayed is 7 HOURS 59 MIN 59 SEC (7:59:59). If the recording time should exceed this value, the display will start counting again from 0:00:00.

DATE/TIME DISPLAY

DISPLAY

- The date/time is displayed and can be recorded together with the color bar signal by setting the Color Bar/±6 dB/Camera Selection Switch to the BAR position.

DISPLAY POSITION

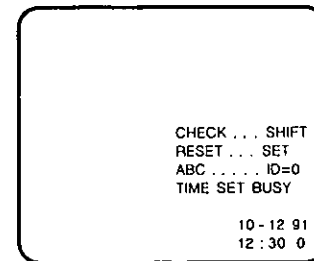


(For Example)

| | | | | |
|-------|---|--------|--|------|
| Month | | Day | | Year |
| 10 | - | 12 | | 91 |
| 12 | : | 30 | | 1 |
| Hour | | Minute | | ID |

DATE/TIME SETTING PROCEDURE

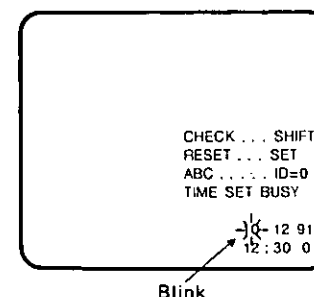
1. Set the Color Bar/±6 dB/Camera Selection Switch to the BAR position to show the date and time.
2. While pressing the Check Button, press the Auto White/Auto Black Set Switch to the AWC position and then release the Check Button in order to shift to the time setting mode as shown in the figure.



CAUTION:

Release the Check Button after pressing the Auto White/Auto Black Set Switch to the AWC position. If the Check Button is kept pressed, the camera will not be shifted to the time setting mode.

3. After releasing the Check Button, press the Check Button once again within 10 second to cause the "Month" section to blink.



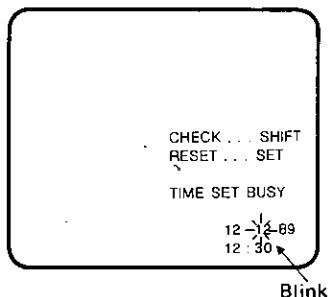
CAUTION:

If the Check Button has not been pressed within 10 second and no character is blinking, the time setting mode will be reset to normal display mode.

4. To increase the "Month", press the Recording Time Reset Button.

10 → 11 → 12

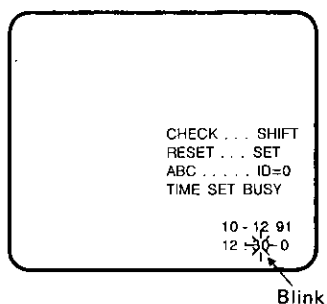
5. For fast increment mode, keep pressing the Recording Time Reset Button (32).



6. After setting the correct "Month", press the Check Button to set the "Day". The "Day" characters start to blink.

12 → 13 → 14

7. Press the Recording Time Reset Button to change the "Day".
8. After setting the correct "Day" press the Check Button.
9. For setting the "Year" and "Hour", follow the same procedure used for the "Month" or "Day".
10. For setting the "Minute", press the Check Button after setting the "Hour".



11. Press the Recording Time Reset Button to change the "Minute".

30 → 31 → 32

12. If it is desired to set the "Second", wait for the Time tone from a radio etc., (the "Minute" section is blinking). As soon as the tone at the Time is heard press the Check Button. The clock starts running and the character "TIME SET END" will be displayed for 1 second and then the display mode will be changed to the normal display mode.

Notes:

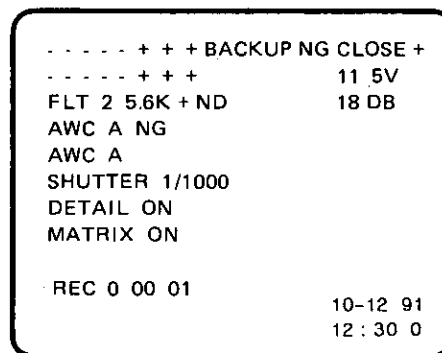
- The date and time (clock) will be powered by the back-up battery even if the camera is turned off.
- The back-up battery lasts approximately 10 years.
- The accuracy of displayed date and Time (clock) is approximately ± 60 seconds per month.

ID SETTING

The setting of 0 - 9 and blank at the ID position is available. By every pressing down the Auto Black/Auto White Set Switch toward the ABC position in the data/time setting mode, the ID setting is made.

CAMERA STATUS DISPLAY

- The camera status can be recorded together with the color bar signal and the Date/Time character by keeping the Check Button pressed while the Color Bar/-6 dB/Camera Selection Switch is set to the BAR position.



RACK MOUNT INFORMATION

MAJOR COMPONENT

161. Rack-mounting Spacer

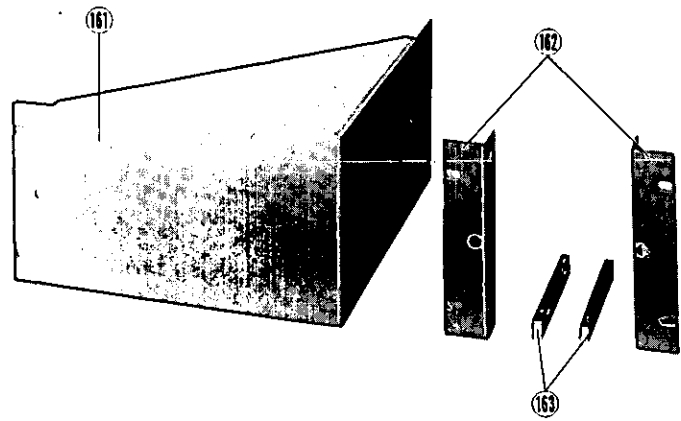
This is used to mount the single Remote Control Unit on the rack.

162. Rack Mounting Angles

Two Rack-mounting Angles should be used to mount the double Remote Control Units on the rack.

163. RCU Jointing Bars

These bars are used to joint double Remote Control Units.



INSTALLATION

1. Mounting of the single Remote Control Unit

- 1-1. Fix one Rack-mounting Angle (161) to the either side by using two screws (M4×10, provided).
- 1-2. Attach the Rack-mounting Spacer (162) to the Remote Control Unit by using four screws (Two M5×10 and two M4×10, provided).
- 1-3. Mount the Remote Control Unit onto the EIA 19" rack by using four rack mounting screws (not provided) as shown in Fig. 1.

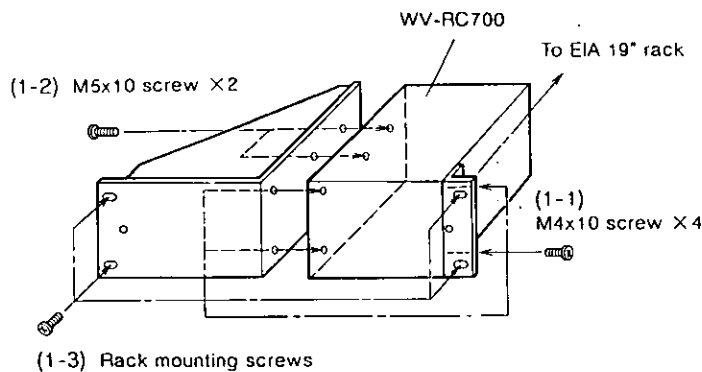


Fig. 1

2. Mounting of double Remote Control Units.

- 2-1. Fix two RCU Jointing Bars (163) on the side of Remote Control Units by using four screws (M5×16, provided) as shown in Fig.2.

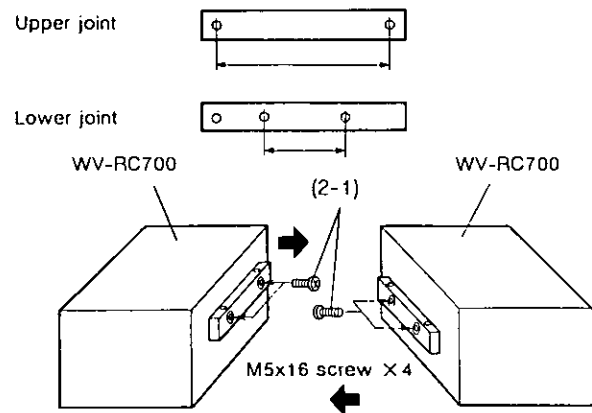


Fig. 2

- 2-2. Attach two Remote Control Units by using four screws (M4×25, provided) as shown Fig.3.
- 2-3. Fix two Rack Mounting Angles(161) on both side of the jointed Remote Control Units.
- 2-4. Mount two Remote Control Units onto the EIA 19" rack by using four rack mounting screws (not provided).

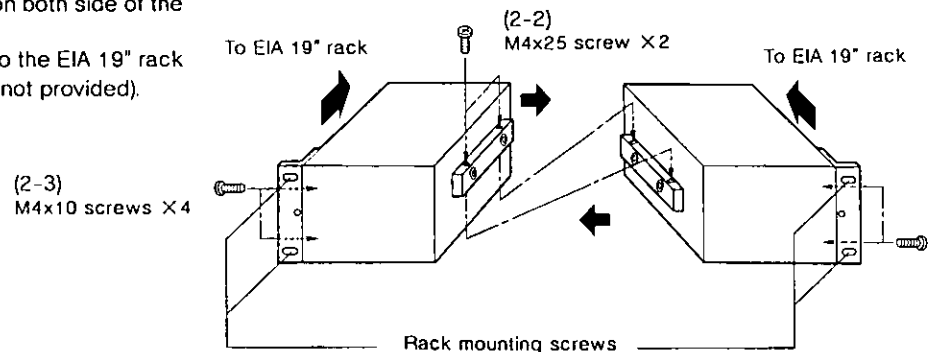


Fig. 3

SPECIFICATIONS

| | |
|---------------------------------|---|
| Power Source : | 120 V AC, 60 Hz, 70 watts |
| Video Output : | 1.0 Vp-p NTSC composite / 75 ohms X 2 (BNC connectors) |
| Gen-lock Input : | 1.0 Vp-p NTSC composite or black burst signal / 75 ohms or Hi-z looping through X 1 (BNC connectors), auto termination |
| AUX (Line View) Input : | 1.0 Vp-p NTSC composite / 75 ohms or Hi-z looping through X 1 (BNC connectors), auto termination |
| R/G/B, Y/PR/PB, Y/C/B | |
| Switching Output : | 75 ohms X each 1 (BNC connectors) |
| R/G/B : | 0.7 V |
| Y/C/B : | Y: 0.714 Vp-p |
| | C: 0.286 Vp-p |
| Y/RB/PB : | Y: 1.0 Vp-p |
| | PR, PB: 0.7 Vp-p |
| Sync Output : | 4.0 Vp-p / 75 ohms X 1 (BNC) |
| S-Video Output : | Y: 0.714 Vp-p / 75 ohms X 1 (S connector) |
| | C: 0.286 Vp-p 75 ohms X 1 (S connector) |
| Intercom Jack : | M-6 |
| Maximum Cable Length : | 1000 ft (300 m) with studio cable |
| | 1000 ft (300 m) with cable compesator (Belden 8281) |
| Switches : | Cable Selection, Cable Length Compensation, High Gain Selection, 6 dB Gain Selection, Color/Bar Camera Selection, Detail Level Selection, White/Black Balance Selection, Auto White / Auto Black Set, Lens Iris Selection, Scene Selection, Electronic Shutter Speed Selection, ENC/VF Selection, Subcarrier Phase Coase, RCB Operation, Up, Down, Item, Page, User Set |
| Controls : | Luminance Gain Fine, Chroma Gain Fine, Red and Blue Gain, Red and Blue Pedestal Level, Total Pedestal Level, Lens Iris, Fine, Horizontal Phase, Intercom Level |
| Ambient Operating Temperature : | 23°F - 113°F (–5°C - +45°C) |
| Ambient Operating Humidity : | Less than 90 % |
| Dimensions : | 8-1/4"(W) X 5-3/16"(H) X 14-9/16"(D) |
| | 209 (W) X 132 (H) X 370 (D) mm |
| Weights : | 15.6 lbs (7.1 kg) |

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

ACCESSORY

4-pin connector (For Tally / Intercom) 1pc.

OPTIONAL ACCESSORIES

| | |
|------------------------------|---|
| Color Camera | WV-F700 series |
| Studio Cable | WV-CA26U15 / WV-CA26U30/ WV-CA26U100 |
| RCU Rack Mount Frame | WV-Q70 |
| RCB Cable | WV-CA10B25 / WV-CA10B50 |
| Cable Joint Adaptor | WV-CA26T26 |
| 26/32 Conversion Cable | WV-CA26AT32 |
| 32/26 Conversion Cable | WV-CA32T26 |

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