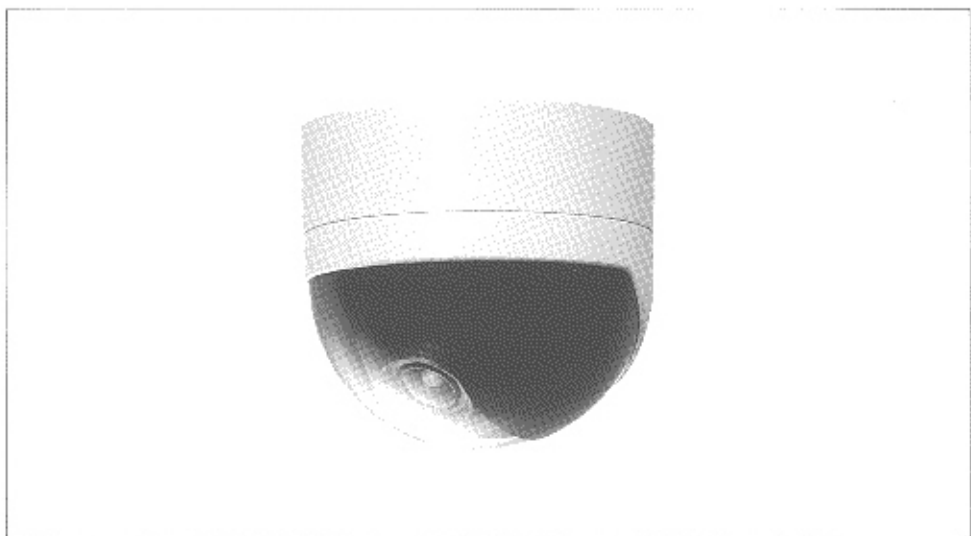


# Operating Instructions

Color CCTV Camera  
**WV-CF20**




**Panasonic**

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

# ENGLISH VERSION


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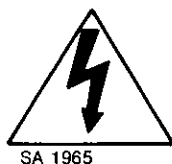


**CAUTION**

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.

..... 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 cover 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. \_\_\_\_\_ WV-CF20 \_\_\_\_\_

Serial No. \_\_\_\_\_

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

## PREFACE

The Panasonic's Color CCTV Camera, WV-CF20, is designed as a decorative surveillance camera.

With the built-in microphone, audio is available by connection with the optional Camera Drive Unit, WV-PS11A.

As the audio and the power are multiplexed on the video signal, the connection with the optional Camera

Drive Unit can be made by using a single coaxial cable.

The maximum cable length for the monitor connection is 200m with 3C-2V coaxial cable or 500m with 5C-2V coaxial cable.

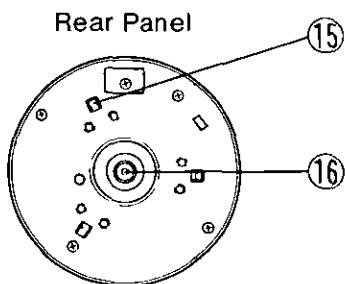
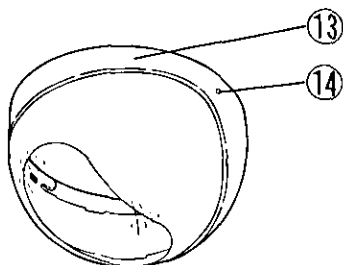
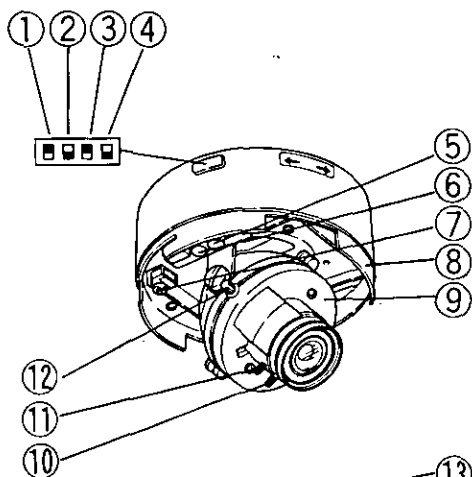
## FEATURES

- 1/3-inch interline transfer CCD image sensor with 330000 pixels.
- Built-in the Auto Gain Control (AGC) and Auto Tracing White Balance Control (ATW).
- A single coaxial cable for connection between the camera and optional Camera Drive Unit.
- An optional white Dome Cover, WV-CF1WA, is available.
- Built-in internal microphone.
- Easy mounting of the camera onto the Camera Fixing Angle.
- By using the Optional Ceiling Mount Bracket, WV-Q100A, or Wall Mount Bracket, WV-Q103A, surface mount is available.

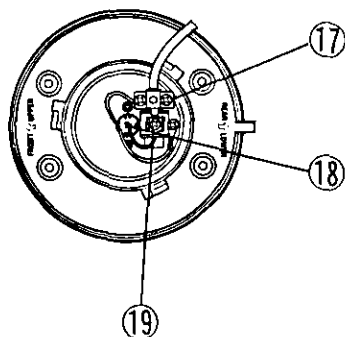
## PRECAUTIONS

1. Do not attempt to disassemble the camera.
  - To prevent electric shock, do not remove screws or cover.
  - There are no user-serviceable parts inside. Refer servicing to qualified service personnel.
2. Handle this camera with care.
  - Do not abuse the camera. Avoid striking or shaking it. The camera could be damaged by improper handling or storage.
3. Do not expose the camera to rain or moisture and avoid operation in wet areas.
  - Take immediate action if the camera should become wet.
  - Turn power off and request servicing to qualified service personnel. Moisture can damage the camera and also create the danger of electric shock.
4. Never aim the camera at the sun.
  - Whether the camera is in use or not, never aim it at the sun or an extremely bright object as this could cause smear.
5. Do not use the camera beyond its temperature, humidity or power source ratings.
  - 5-1. Designed for indoor use.
    - Ambient temperature must not range beyond  $-10^{\circ}\text{C}$  -  $+50^{\circ}\text{C}$ .
  - 5-2. Avoid using the camera when humidity is above 90%.

# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS



Camera Fixing Angle



## 1. AGC ON/OFF Switch (AGC ON / OFF)

This switch is used to select the gain of the video amplifier as follows.

ON : The lens iris is fully operated at low light shooting, a clear picture is obtained by automatic increase of the gain.

OFF : A natural and low-noise picture is obtained under a low light condition.

Note : This switch is preset to the ON position at the factory.

## 2. Back Light On/Off Switch (BLC ON / OFF)

When back light affects the picture, set this switch to ON position for a clear picture. See page 4 for more details.

## 3. Picture Detail Selection Switch (PICTURE SHARP / SOFT)

This switch is used to select the sharpness of the picture.

SHARP : The sharp picture is obtained.

SOFT : The soft picture is obtained.

Notes : 1. When connecting the WJ-450 Color Quad Unit to this camera, set this switch to the SOFT position.

2. This switch is preset to the SHARP position at the factory.

## 4. Microphone On / Off Switch (MIC ON / OFF)

By setting this switch to the ON position, the audio function can be obtained.

## 5. Audio Control (AUDIO, MAX / MIN)

The audio level can be adjusted by turning this control.

This is preset to the MAX position at the factory.

## 6. Auto Light Control (ALC, H / L)

This control should be used only for shooting the object in unusual lighting condition.

Do not adjust this control except the above condition.

Note : To use this control, be sure to set the Back Light On / Off Switch (2) to the OFF position.

## 7. Video Output Jack (VIDEO OUT)

This jack is used to adjust the angular field of view or focus while observing the picture on the monitor.

### 8. Panning Table

This is used to adjust the Right / Left Angle of the camera.

### 9. Camera Head

This is used to adjust the Up / Down Angle of the camera.

### 10. Focus Ring

This is used to adjust the focus.

### 11. Zoom Ring

This is used to adjust the angle of view.

### 12. Lens Holders

These are used to adjust the picture tilt.

### 13. Dome Cover

This cover is used to protect the camera head.

### 14. Microphone Holes

### 15. Hooks

These are used to mount this unit to the Camera Fixing Angle.

### 16. F-socket

This socket is connected with the F-plug (18) on the Camera Fixing Angle.

### 17. Coaxial Cable Clamp

### 18. F-plug (Refer to the ADSUTMENT on Page 7 for details)

This plug is used to connect with the F-socket (16) on the camera head.

### 19. Video Output Terminal

This terminal is used to connect the coaxial cable between the camera and the Camera Drive Unit WV-PS11A , Colour Video Monitor WV-CM110A or the equivalent.

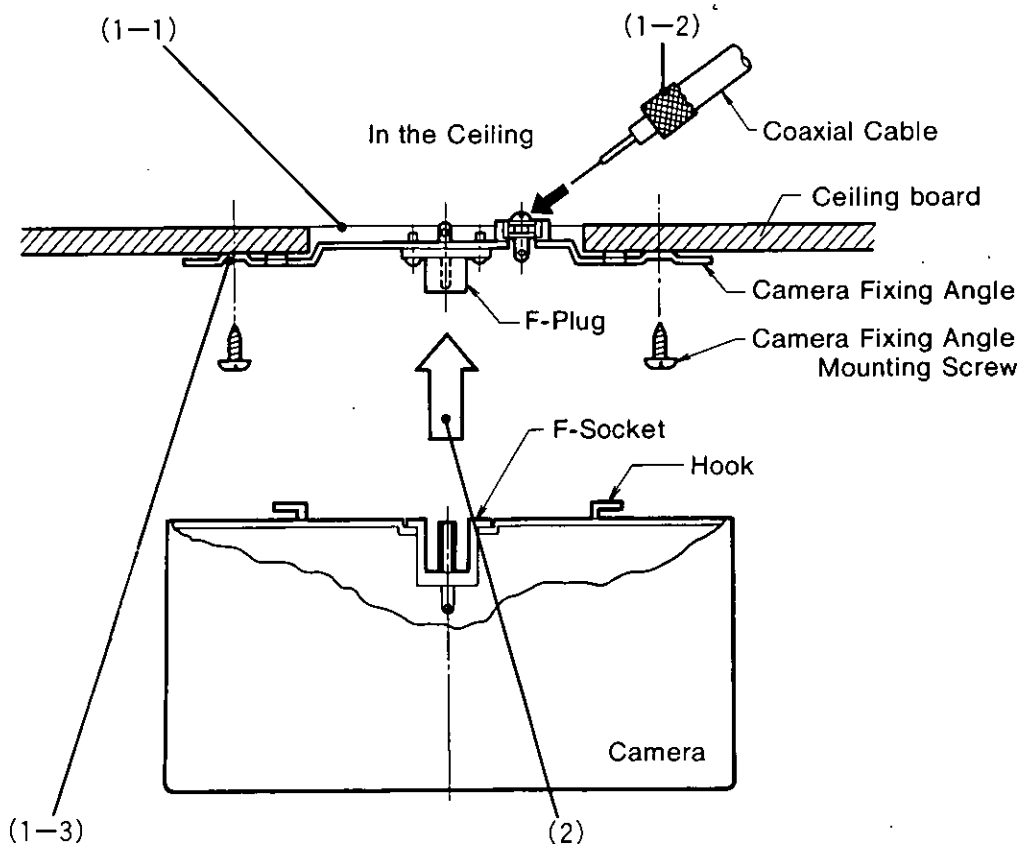
### BLC (Back Light Compensation) Description

When strong, unwanted background lighting interferes with the clarity of important scene objects, turn the BLC On/Off Switch (2) to the ON position.

Cautions : 1. Setting the BLC On / Off Switch to the "OFF" position is recommended when using a pan / tilt head or if the scene object has rapid changes in illumination, since the speed of lens iris becomes slow in the "ON" position.

2. If the desired scene objects are not in the center of the picture, back light compensation may not work effectively.

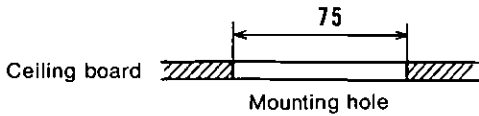
## INSTALLATION



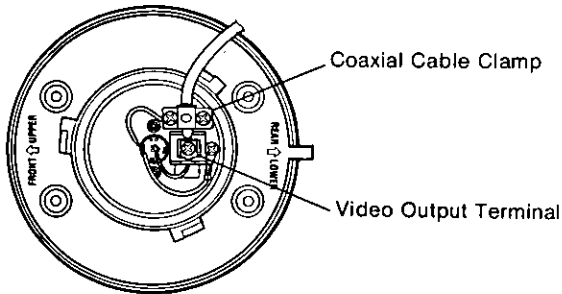
# INSTALLATION

## 1. Mounting the Camera Fixing Angle

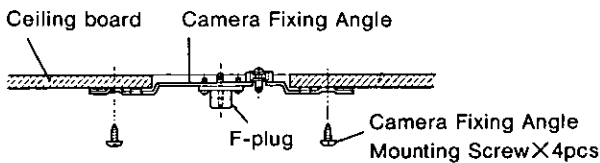
1-1. Make a hole (Diameter 75mm) in the ceiling board in the desired location.



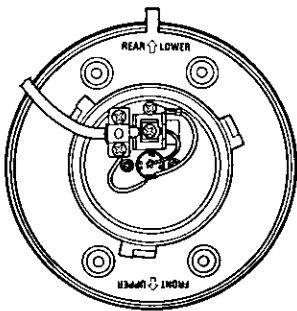
1-2. After completing the cable preparation, fix the coaxial cable to the Camera Fixing Angle.



1-3. Fix the Camera Fixing Angle onto the ceiling board by using four Camera Fixing Angle Mounting Screws.



Note : 1. Match "↑" of the REAR ↑ LOWER / FRONT ↑ UPPER to the desired position.



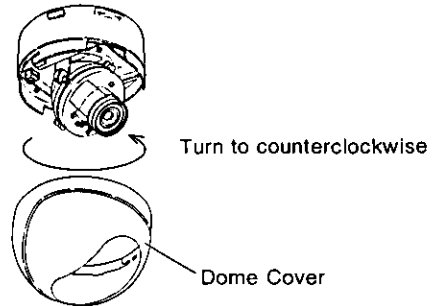
2. Use the optional Ceiling Mount Bracket WV-Q100A when the ceiling board cannot support camera.

### Important notice :

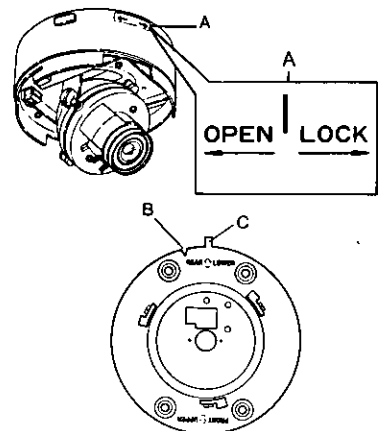
- The following installation should be made by qualified service personnel or system installers and should conform to all local codes.
- Install to support the load of four times the total weight.

## 2. Mounting the camera onto the Camera Fixing Angle (provided).

2-1. Remove the Dome Cover (13) from the camera by turning it counterclockwise.

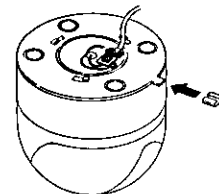


2-2. Match "A" on the camera to "B" of the Camera Fixing Angle and insert the camera into the Camera Fixing Angle.



2-3. Turn the camera toward the LOCK direction so that "A" is brought to the center of "C".

2-4. Set the Fall Prevention Cap (provided) to prevent the camera body from falling as shown below.



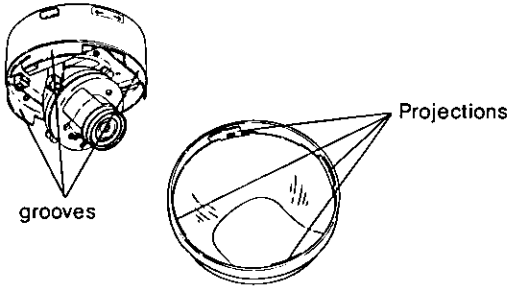
### Remarks :

- (1) If the camera body is not installed correctly with Camera Fixing Angle, the Fall Prevention Cap cannot be set.
- (2) The camera body cannot be moved after the Fall Prevention Cap has been set.
- (3) Remove the camera body after the Fall Prevention Cap has been removed.

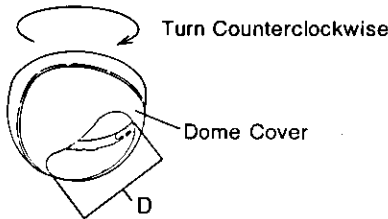
2-5. Adjust the camera angle to the desired position.

Refer to the Camera Angle Adjustment on page 7 for details.

2-6. Match four grooves on the camera to four projections of the Dome Cover.



2-7. Reattach the Dome Cover (13) to the camera by turning this cover clockwise so that the "D" position is in the front of the Camera Head.



## CONNECTION

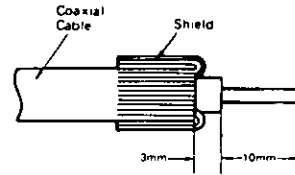
### Preparation :

These connections should be made only by qualified service personnel or system installers.

### Cable Information

Coaxial Cable (Connection for the Video Output Terminal (19) )

The maximum cable thickness for this camera is 5C-2V (RG-6/U) type.

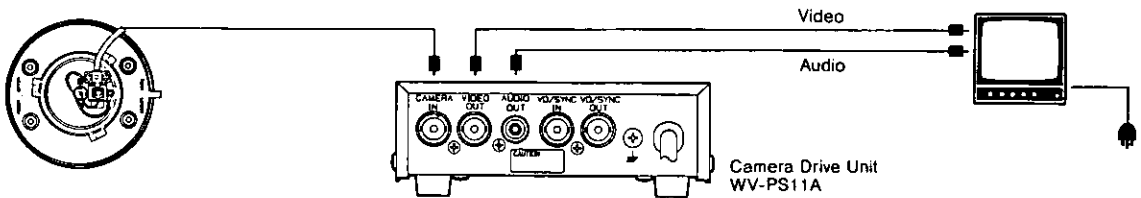


Note : When assembling the coaxial cable / BNC connector, follow connector manufacture's specific directions.

## SYSTEM CONNECTION

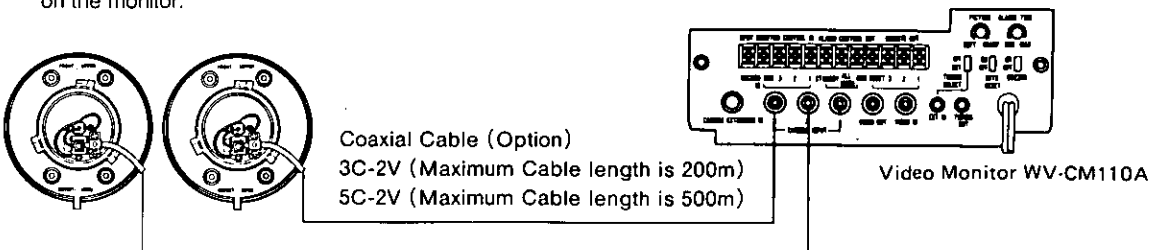
Connection with the optional Camera Drive Unit, WV-PS11A.

Connect a coaxial cable between the Video Output Terminal (19) on this camera and the Camera Input Connector on the Camera Drive Unit, WV-PS11A.



Connection with the optional monitor WV-CM110A

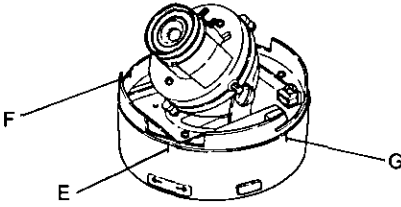
Connect a coaxial cable between the Video Output Terminal (19) on this camera and the Camera Input Connector on the monitor.



# ADJUSTMENT

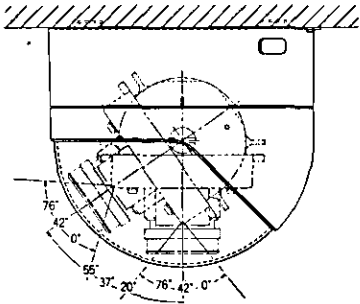
## 1. Panning

The "E" line on the Panning Table can move between the "F" and "G" lines.



## 2. Tilting of the camera

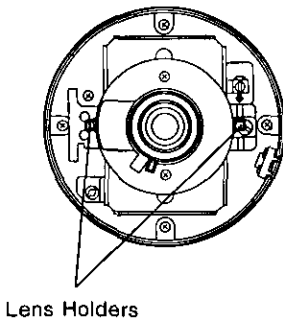
Tilting angle is shown below.



Note : The adjustment for picture tilt is normally required. (refer to the item 3 of ADJUSTMENT on page 7)

## 3. Picture Tilt

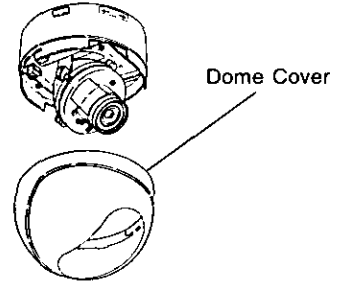
Loosen the two Lens Holders (12) and adjust the picture tilt by turning the Camera Head (9).



## 4. Focusing

Precaution :The focus adjustment should be done at the same time of the Camera Angle Adjustment.

4-1. Remove the Dome Cover (13) from the camera. (Refer to item 2-1 of INSTALLATION on Page 5)

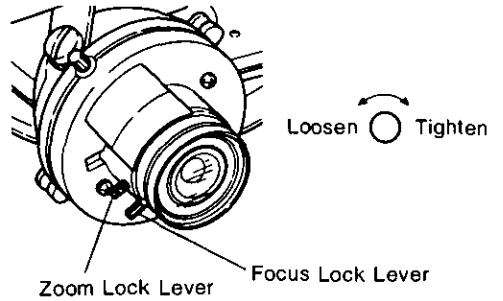


4-2. Loosen the Zoom Lock Lever.

4-3. Set the angular field of view according to the scene desired.

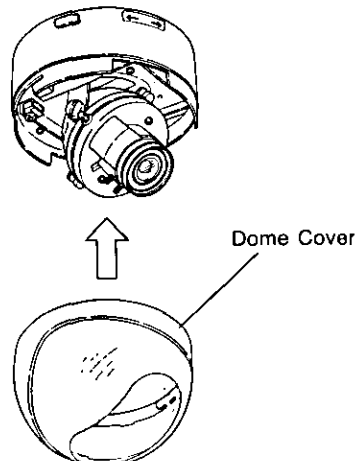
4-4. After setting the angular field of view, tighten the Zoom Lock Lever.

4-5. Loosen the Focus Lock Lever.



4-6. Set the correct focus by turning the Focus Ring (10).

4-7. After setting the correct focus, tighten the Focus Lock Lever.





## 5. Angular field of view and focus

By connecting the Video Output Jack (Diameter is 2.5mm) to the video input on a video monitor, local adjustment of angular field of view and / or focus is available while observing the picture.

Note : Be sure to use this jack only the purpose for adjustment of the angular field of view or focus.

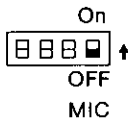
Do not use this jack for anyother purpose.

Other wise the noise on the screen will be obtained.

## OPERATION

By using the optional Camera Drive Unit, WV-PS11A, and Color Monitor, WV-CM1000, the sound from the camera can be monitored.

Set the Michrophone On / Off Switch (4) to the ON position.



Note : When the distance between the camera and speaker is too close, howling or feedback may occur.

In this case, turn the Audio Control (5) to counterclockwise (MIN direction) until the howling stops.



## SPECIFICATIONS

Power Supply :	To be supplied from the specified monitor WV-CM110A or Camera Drive Unit WV-PS11A (12V DC, 310mA)
Pick-up Device :	682(H) X 492(V) pixels, 1/3" Interline Transfer CCD 4.82(H) X 3.64(V)mm (Equivalent to scanning area of 1/3" image size)
Scanning System :	2 : 1 interlace
Horizontal Scanning Frequency :	15.734kHz
Vertical Scanning Frequency :	59.94Hz
Horizontal Resolution :	More than 430 lines at center (WIDE)
Vertical Resolution :	More than 350 lines at center (WIDE)
Video Output :	1.0 Vp-p / 75 ohms composite video signal
Signal to Noise Ratio :	More than 46 dB (AGC OFF)
Minimum Illumination :	8Lux (with the Dome Cover)
Maximum Cable Length (5C-2V) :	Approx. 500m
Angular Field of View :	41.5°-76.7° (WIDE) 31.9° (TELE)-59.8° (WIDE)
ALC :	H/L (Volume)
Video Output Jack :	Diameter 2.5mm jack
Ambient Operating Temperature :	-10°C - +50°C
Dimensions :	120(D) × 110(H) mm
Weights :	600 g

Weights and dimensions indicated are approximate.  
Specifications are subject to change without notice.

## STANDARD ACCESSORIES

Camera Fixing Angle .....	1 pc.
Camera Fixing Angle Mounting Screws .....	4 pcs.
Fall Prevention Cap .....	1 pc.

## MAJOR OPTIONAL ACCESSORIES

Camera Drive Unit .....	WV-PS104B / WV-PS11A
Monitor .....	WV-CM110A
Dome Cover .....	WV-CF1WA
Ceiling Mount Bracket .....	WV-Q100A
Wall Mount Bracket .....	WV-Q103A



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**Division of Matsushita Electric Corporation of America**

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