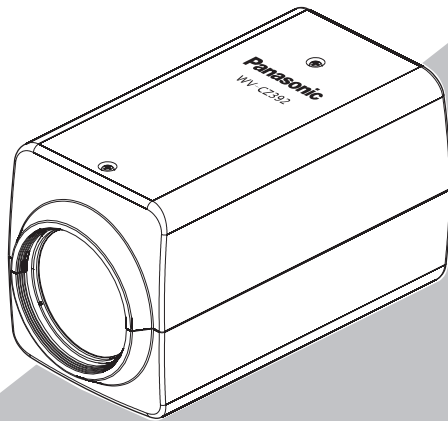


Panasonic

Operating Instructions

Color CCTV Camera

Model No. **WV-CZ392E**
WV-CZ492E



This illustration represents WV-CZ392E.

Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

We declare under our sole responsibility that the product to which this declaration relates is in conformity with the standards or other normative documents following the provisions of Directives 2006/95/EC and 2004/108/EC.

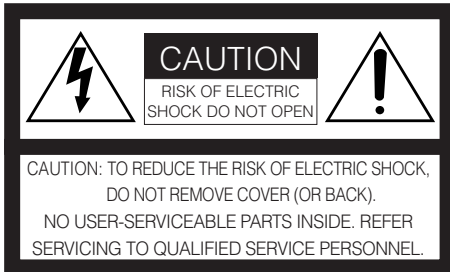
Wij verklaren als enige aansprakelijke, dat het product waarop deze verklaring betrekking heeft, voldoet aan de volgende normen of andere normatieve documenten, overeenkomstig de bepalingen van Richtlijnen 2006/95/EC en 2004/108/EC.

Vi erklærer os eneansvarlige for, at dette produkt, som denne deklaration omhandler, er i overensstemmelse med standarder eller andre normative dokumenter i følge bestemmelserne i direktivene 2006/95/EC og 2004/108/EC.

Vi deklarerar härmed vårt fulla ansvar för att den produkt till vilken denna deklaration hänvisar är i överensstämmelse med de standarder eller andra normativa dokument som framställs i direktiv nr 2006/95/EC och 2004/108/EC.

Ilmoitamme yksinomaisella vastuullamme, että tuote, jota tämä ilmoitus koskee, noudattaa seuraavia standardeja tai muita ohjeellisia asiakirjoja, jotka noudattavat direktiivien 2006/95/EC ja 2004/108/EC säädöksiä.

Vi erklærer oss alene ansvarlige for at produktet som denne erklæringen gjelder for, er i overensstemmelse med følgende normer eller andre normgivende dokumenter som følger bestemmelsene i direktivene 2006/95/EC og 2004/108/EC.



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 products 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.

Note:

- The serial number of this product may be found on the rear 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.

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Important safety instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Limitation of liability

THIS PUBLICATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THE THIRD PARTY'S RIGHT.

THIS PUBLICATION COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE ADDED TO THE INFORMATION HEREIN, AT ANY TIME, FOR THE IMPROVEMENTS OF THIS PUBLICATION AND/OR THE CORRESPONDING PRODUCT (S).

Disclaimer of warranty

IN NO EVENT SHALL Panasonic System Networks Co., Ltd. BE LIABLE TO ANY PARTY OR ANY PERSON, EXCEPT FOR REPLACEMENT OR REASONABLE MAINTENANCE OF THE PRODUCT, FOR THE CASES, INCLUDING BUT NOT LIMITED TO BELOW:

- (1) ANY DAMAGE AND LOSS, INCLUDING WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, CONSEQUENTIAL OR EXEMPLARY, ARISING OUT OF OR RELATING TO THE PRODUCT;
- (2) PERSONAL INJURY OR ANY DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER;
- (3) UNAUTHORIZED DISASSEMBLE, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER;
- (4) INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;
- (5) ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY;
- (6) ANY CLAIM OR ACTION FOR DAMAGES, BROUGHT BY ANY PERSON OR ORGANIZATION BEING A PHOTOGENIC SUBJECT, DUE TO VIOLATION OF PRIVACY WITH THE RESULT OF THAT SURVEILLANCE-CAMERA'S PICTURE, INCLUDING SAVED DATA, FOR SOME REASON, BECOMES PUBLIC OR IS USED FOR ANY PURPOSE.

Preface

This product is a 1/4 type CCD color CCTV camera. Connection of this product to a video monitor allows users to use this product as a monitoring camera.

- WV-CZ392: 36x zoom
- WV-CZ492: 36x zoom, Super Dynamic 6

About notations

The following notations are used when describing the functions limited for specified models. The functions without the notations are supported by all models.

CZ392 The functions with this notation are available when using the model WV-CZ392.

CZ492 The functions with this notation are available when using the model WV-CZ492.

Features

- High quality picture of 976 x 582 pixels
- Minimum illumination of 0.5 lx for color mode
- Minimum illumination of 0.04 lx for black-and-white mode
- Privacy zone feature enables users to veil unwanted zones
- Protocol adaptability to Panasonic's protocol
- Auto Day/Night mode enables the camera to switch between color and black-and-white in response to input lights
- Built-in digital motion detector and alarm outputs
- Super Dynamic 6 can capture clear images of subjects whose illumination is extremely different **CZ492**
- Up to 256 preset position
- Sync is available from internal
- Automatic gain control circuit
- Image hold
- Digital noise reduction effect
- Setting change executable only by authorized personnel thanks to the password lock function
- Enhanced horizontal resolution by resolution setting

About the user manuals

The illustrations and screens used in these operating instructions show the case of WV-CZ392.

Precautions

The following points as well as the contents of "Warning" and "Caution" shall be observed.

Refer installation work to the dealer.

Installation work requires technique and experiences. Otherwise injury, or damage to this product may result.

Be sure to consult the dealer.

Do not insert any foreign objects.

This could permanently damage this product. Turn the power off immediately and contact qualified service personnel for service.

Do not attempt to disassemble or modify this product.

Failure to observe this may cause fire or electric shock.

Consult the dealer for the repair or inspections.

Stop operation immediately when something is wrong with this product.

When smoke goes up from this product or the smell of smoke comes from this product, continued use will result in fire, injury, or damage to the product.

Turn the power off immediately and contact qualified service personnel for service.

Select an installation area that can support the total weight.

Selecting an inappropriate installation surface may cause the product to fall down or topple over, resulting in injury.

Installation work shall be started after sufficient reinforcement.

Periodic inspections shall be conducted.

Rust on the metal parts or screws may cause the product to fall down resulting in injury or accidents.

Consult the dealer for the inspections.

This product shall be installed in a vibration-free place.

Failure to observe this may cause screws and bolts to be loosened and consequently to fall resulting in injury.

Install this product high enough to ensure that people don't hit their heads.

Failure to observe this may cause a drop resulting in injury or accidents.

Do not strike or give a strong shock to this product.

Failure to observe this may cause injury or fire.

Turn the power off when do wiring of this product.

Failure to observe this may cause electric shock. A short circuit or wrong wiring may cause fire.

Do not use this product in an atmosphere of flammable gases.

Failure to observe this may cause injury by explosion.

Avoid installing this product in locations where it is subject to damage by salt or corrosive gas.

Otherwise the mounting fixtures will deteriorate, causing the product to fall down and leading to accidents.

Tighten screws and mounting fixtures to the specified torque.

Failure to observe this may cause a drop resulting in injury or accidents.

[Precautions for use]

This product is designed to be used indoors.

This product is not operable outdoors.

This product has no power switch.

When turning off the power, turn off a circuit breaker.

To keep on using with stable performance

Parts of this product may deteriorate and it may shorten the lifetime of this product when using in locations subject to high temperatures and high humidity. (Recommended operating temperature: +35 °C {95 °F} or lower)

Do not expose this product to direct heat sources such as a heater.

Handle this product with care.

Do not drop this product, nor apply shock or vibration to this product.

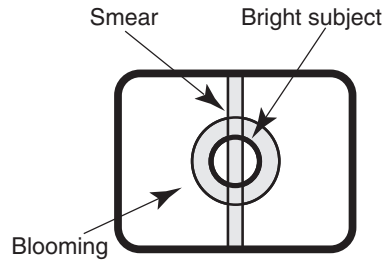
Failure to observe this may cause trouble.

Discoloration on the CCD color filter

When continuously shooting a bright light source such as a spotlight, the color filter of the CCD may have deteriorated and it may cause discoloration. Even when changing the fixed shooting direction after continuously shooting a spotlight for a certain period, the discoloration may remain.

Do not aim this product at strong light sources.

A light source such as a spot light causes a blooming (light bleeding) or a smear (vertical lines).



Cleaning this product body

Turn the power off when cleaning this product. Do not use strong abrasive detergent when cleaning this product. Otherwise, it may cause discoloration.

Synchronous mode setting

Image synchronous mode of this camera indicates internal synchronization (INT) only. Set the multiplex vertical driver (VD2) as OFF when the camera is connected to the system controller of the company.

Precautions for installation

The following points as well as the contents of "Warning" and "Caution" shall be observed.

Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this documentation.

Installation work shall be performed in accordance with the technology standard of the electric installation.

This product is designed to be used indoors.

This product is not operable outdoors. Do not expose the product to direct sunlight for hours and do not install the product near a heater or an air conditioner. Otherwise, it may cause deformation, discoloration and malfunction. Keep the product away from water and moisture.

Installing place

Contact your dealer for assistance if you are unsure of an appropriate place in your particular environment.

- Make sure that the installation area is strong enough to hold the product, such as a concrete ceiling.
- Install the camera in the foundation area of the architecture or where sufficient strength is assured.
- If a ceiling board such as plaster board is too weak to support the total weight, the area shall be sufficiently reinforced.

Avoid installing this product in the following locations.

- Location where it may get wet from rain or water splash.
- Locations where a chemical agent is used such as a swimming pool.
- Locations subject to steam and oil smoke such as a kitchen, Locations near flammable gas or vapor.
- Locations where radiation or x-ray emissions are produced.
- Locations where corrosive gas is produced, Locations where it may be damaged by briny air such as seashores.
- Locations where the temperature is not within $-10\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$.
- Locations subject to vibrations (This product is not designed for on-vehicle use.)

Avoid moist or dusty places to install this system.

Otherwise, lifetime of the internal parts may be shortened.

Avoid installing this product in a place with a high level of noise.

Installation near an air conditioner, an air cleaner, a vending machine, or the like causes noise.

Be sure to remove this product if it is not in use.

Keep the camera cable away from the lighting cable.

Failure to observe this may cause noise.

Radio interference

When the camera is used near TV/radio antenna, strong electric field or magnetic field (near a motor or a transformer), images may be distorted and noise sound may be produced. In such a case, run the camera cable through specialized steel conduit tubes.

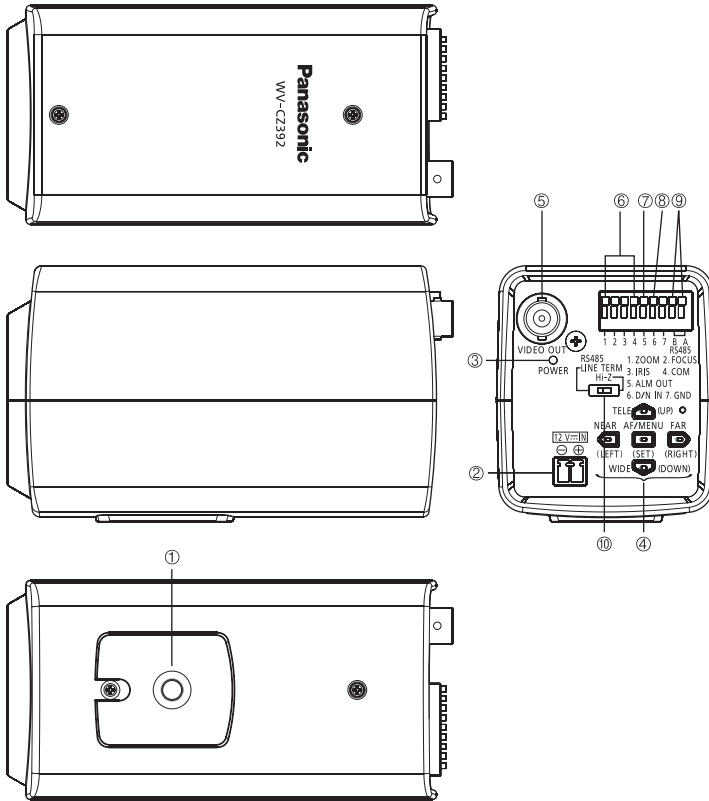
Locally procure the screws

Screws are not supplied with this product. Prepare the screws according to the material, structure, strength and other factors of the mounting area and the total weight of objects to be mounted.

Screw tightening

- The screws and bolts must be tightened with an appropriate tightening torque according to the material and strength of the installation area.
- Do not use an impact driver. Failure to observe this may cause overtightening and consequently damage to the screws.
- When a screw is tightened, make the screw at a right angle to the surface. After tightening the screws or bolts, perform visual check to ensure tightening is enough and there is no backlash.

Major operating controls



- ① Tripod mount base
- ② DC power terminal [12V \rightarrow IN]
- ③ Power indicator [POWER]
- ④ Operation buttons^{※1}
- ⑤ Video output connector

- ⑥ Lens control terminal^{※2}
- ⑦ Alarm output terminal^{※2}
- ⑧ Day/Night input terminal [D/N IN]^{※2}
- ⑨ RS485 data In/Output terminal^{※2}
- ⑩ RS485 terminal select switch

※1: Zoom, Focus and Auto Focus can be controlled by setting button if the setup menu is not opened.

※2: For more information about ⑥ ~ ⑨, refer to page 14.

Installation and connection

Important:

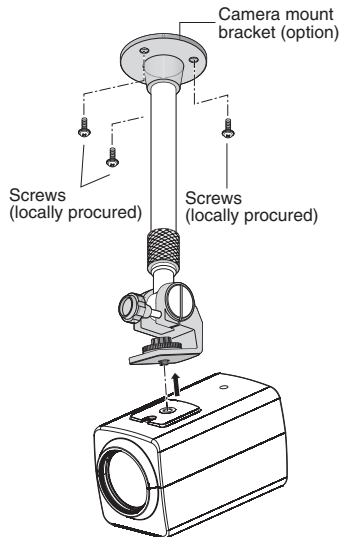
- The following installing and connections should be made by qualified service personnel or system installers in accordance with all local codes.

1 Secure the camera mount bracket (option) to an installation position, and mount the camera on the camera mount bracket.

Important:

- The camera mount bracket shall be mounted on the foundation part of the construction or a part with adequate strength.
- When installing on the ceiling, select "ON" for "UPSIDE-DOWN" setting on the setup menu (refer to page 29).

<Installation sample on a ceiling>



- The mounting conditions of the camera mount bracket are described as follows:

Installation place	Applicable mount bracket	Recommended screw	Number of screw	Minimum pull-out strength (per 1 pc.)
On ceiling	WV-7011	M6	4 pcs.	196 N
	WV-7010	M8	3 pcs.	196 N
	WV-7012	M6	3 pcs.	196 N
On wall	WV-831	M8	4 pcs.	921 N
	WV-7013	M6	3 pcs.	2.25 kN

For some applicable mount brackets, "A" is attached to the model number. The mounting conditions are the same even for the A-attached models.

2 The video output cable (locally procured) is connected to the video output connector.

Important:

- Be sure to turn off the power of each device before connection.
- Be sure to secure the coaxial cable connectors.

The maximum extensible length is shown in the table.

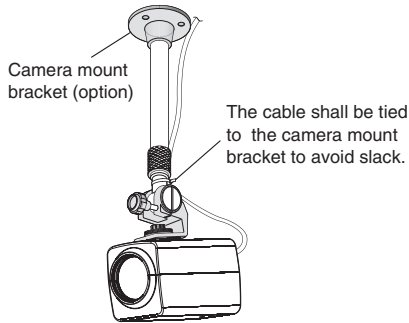
Type of coaxial cable		RG-59/U (3C-2V)	RG-6/U (5C-2V)	RG-11/U (7C-2V)	RG-15/U (10C-2V)
Recommended maximum cable length	m	250	500	600	800

3 Use a cable tie (locally procured) to attach the coaxial cable to the camera mount bracket.

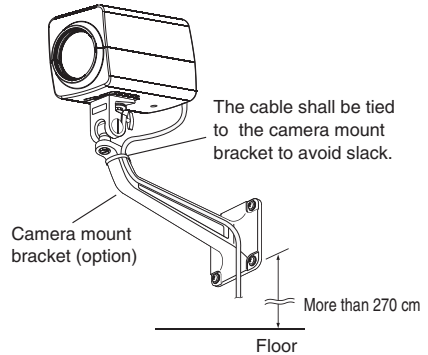
Important:

- The cable tie shall be made of metallic or durable material to be strong enough because the tie plays the role of camera drop prevention measures in case.
- When the camera mount bracket is mounted on a wall, be sure to observe the mounting height described on the illustration below.

<Installation sample on a ceiling>



<Installation sample on a wall>



4 Connet the cable of control terminal to all control terminals.

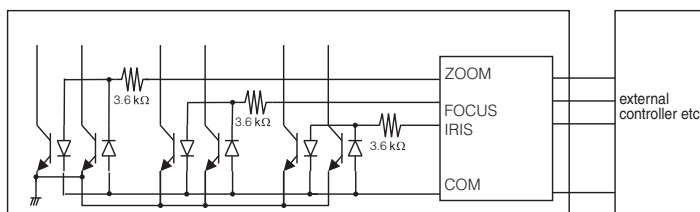
Control Terminals

	NAME	I/O	NOTICE
1	ZOOM (TELE: +, WIDE: -)	IN	TELE (+3 V - +15 V) WIDE (-3 V - -15 V)
2	FOCUS (NEAR: +, FAR: -)	IN	NEAR (+3 V - +15 V) FAR (-3 V - -15 V)
3	IRIS (OPEN: +, CLOSE: -)	IN	OPEN (+3 V - +15 V) CLOSE (-3 V - -15 V)
4	COM (For ZOOM, FOCUS, IRIS)		
5	ALARM	OUT	Open collector-output max.16 V DC 100 mA OFF (OPEN)/ON (0 V)
6	DAY/NIGHT	IN	Pulled up to 5.0 V DC OFF (open or 4 V DC-5 V DC)/ON (0 V 0.2 mA)
7	GND (For ALARM, DAY/NIGHT)		
8	RS485 (B)	I/O	
9	RS485 (A)	I/O	

Lens Control Terminal

Control is possible from external equipment by changing ZOOM, FOCUS, and IRIS to "+" or "-".

<Internal Connection Diagram>



* If you use a lens control terminal, you should not use GND but the COM terminal.

* The COM terminal is used in common with ZOOM, FOCUS, and IRIS.

* To change the polarity of "+" or "-", make a changeover with the "ZOOM INVERSE" or "FOCUS INVERSE" on the setup menu.

Alarm Output Terminal

Connect an external device such as a buzzer or lamp to the ALM OUT terminal.

DAY/NIGHT Input Terminal

Connect an external sensor to the DAY/NIGHT IN terminal.

Note:

- Use a relay unit if the voltage or current of the connected device exceeds the rating.
- To validate the Day/Night function, set "BW MODE" to "EXT" on the setup menu.
- The GND terminal comes in only one.

If multiple GND lines are required, branches should be made outside the equipment.

RS485 Data In/Output Terminal

Control data is transmitted and received to and from other peripherals.

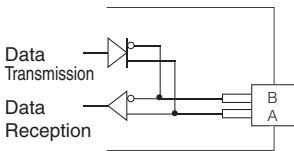
For the farthest camera from RS485 convertor, set the RS485 terminal select switch to RS485 LINE TERM, or Hi-Z for other cameras.

	Switch	Function
Switch position	Right	Hi-Z
	Left	Terminal resistor

Note:

- Wire gauge size is thicker than AWG#22 (0.325 mm²)
- Because the existence of potential difference with the devices in long distance, communications may be abnormal. Use the same GND line or an RS485 isolator (locally procured).

<Half duplex>



5 Turn on the power.

Important:

- The power supply of 12 V DC shall be insulated against 220 to 240 V AC.

Connect the power supply of 12 V DC:

- ① Loosen the screw of the power cord plug (accessory).
- ② Connect the power supply of 12 V DC to the power cord plug.

Strip the end of the wire by 3 mm to 7 mm, and twist the stripped part of the wire sufficiently to avoid short circuit.

Calculation of the relation among the cable length, resistance, and power supply. The voltage supplied to the camera shall be between 10.8 V DC and 16 V DC.

$$10.8 \text{ V DC} \leq V_A - 2(R \times I \times L) \leq 16 \text{ V DC}$$

L: Cable length (m)

R: Resistance of copper wire (Ω/m)

V_A : DC output voltage of power supply unit

I: DC current consumption (A) See specifications

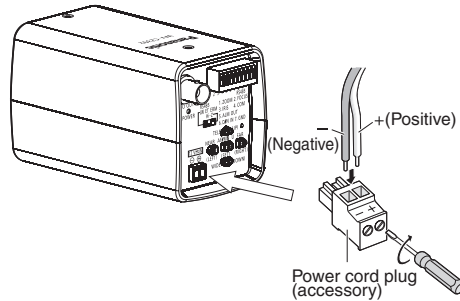
Resistance of copper wire [at 20 °C]

Copper wire size (AWG)	#24 (0.205 mm ²)	#22 (0.325 mm ²)	#20 (0.519 mm ²)	#18 (0.833 mm ²)	#16 (1.307 mm ²)
Resistance	Ω/m 0.083	0.052	0.033	0.020	0.013

Cautions:

- Check whether the stripped part of the wire is not exposed and is securely connected.
 - To prevent fire or electric shock hazard, use a UL listed cable (WV-1, style 1007) for the DC power terminal.
 - Do not mistake "+" and "-" when connecting the power cable to the DC power terminal of the camera. It may cause trouble.
 - This is not mobile equipment. Never feed the power from a battery source.
-

- ③ Tighten the screw of the power cord plug.
- ④ Connect the power cord plug to the DC power terminal.



Important:

- Use the provided power cord plug (accessory).
 - Make sure that the power cord plug is inserted fully into the DC power terminal, or it may cause malfunction.
 - Use the adapter comply with the power source and consumption (refer to page 38).
-

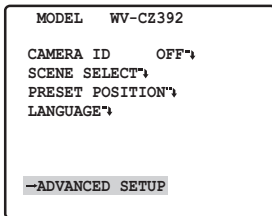
Basic operation

The description below explains how to operate the setup menu basically.

The operations in the setup menu are performed with the operation buttons after calling up the setup menu on the connected video monitor.

Screenshot 1

Hold down the [SET] button for around 2 seconds to call up the top screen of the setup menu.

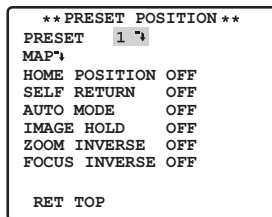


Step 1

Move the cursor to the item to be set, and press the [SET] button.

Screenshot 2

The selected setup screen in the setup menu appears on the screen.



Step 2

Perform the settings for each item.

- Selection of setting item:
Press the [UP] or [DOWN] button to move the cursor.
- Change of settings:
Press the [RIGHT] or [LEFT] button.
- Display of advanced setup screen:
Press the [SET] button when " " is attached to the target setting item.
- Return to previous setup screen:
Move the cursor to "RET" and press the [SET] button.
- Return to top screen:
Move the cursor to "TOP" and press the [SET] button.

Step 3

When configure the setting except for quick setup menu, hold down the [SET] button for around 2 seconds to quit the setup menu.

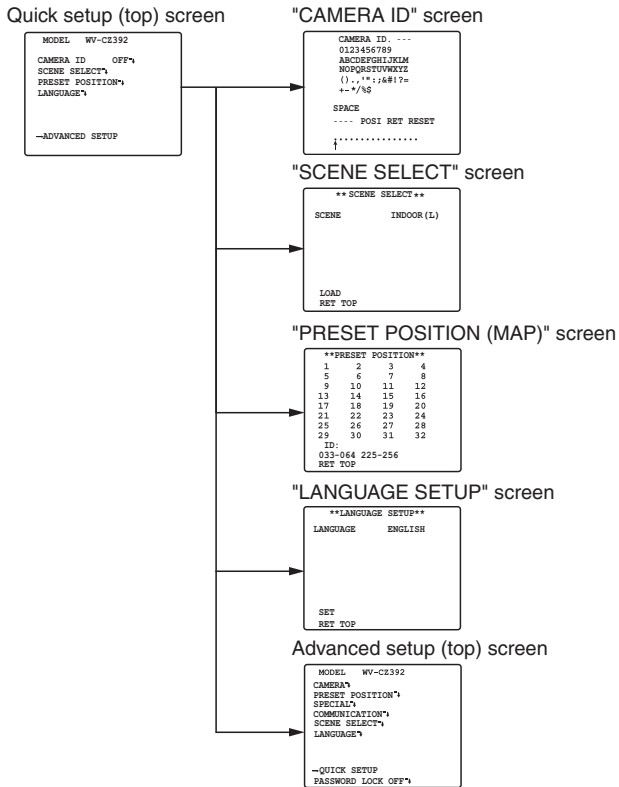
Setup menu

Performing each setting item in the setup menu should be completed in advance to use this unit. Perform the settings for each item in accordance with the conditions of the camera shooting area.

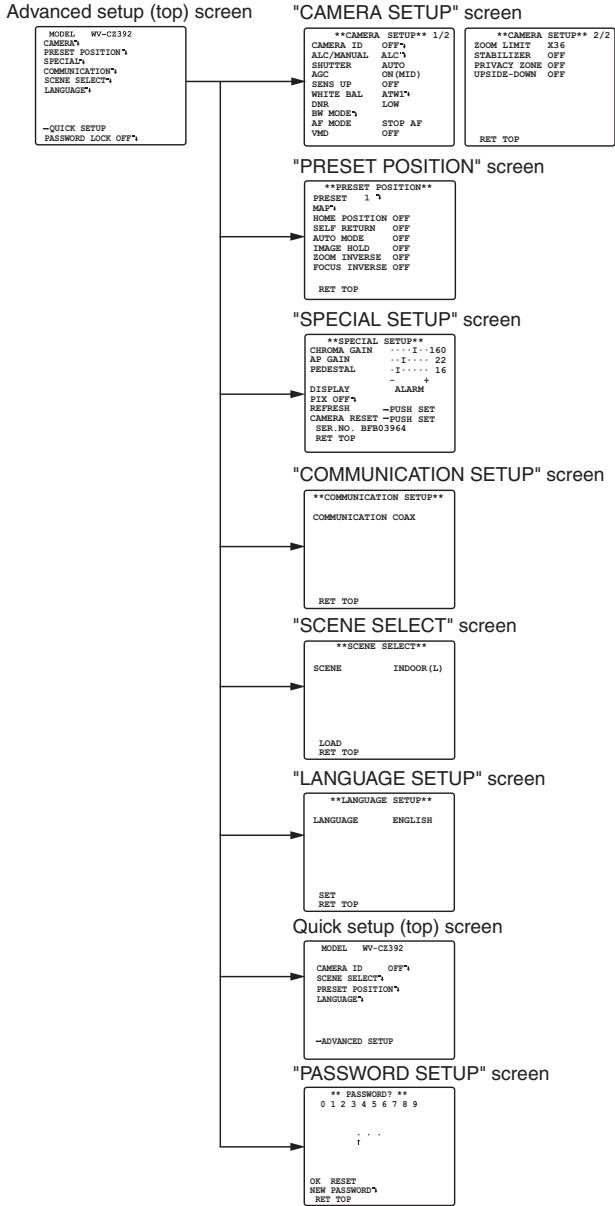
List of setup menu

Setup item	Description
CAMERA	Performs the camera operation settings.
CAMERA ID	This item specifies the camera title. The camera title that indicates the camera location and other information about the camera is created with alphanumeric characters and symbol, and displayed on the screen.
ALC/MANUAL	Performs settings Light control.
SHUTTER	Specifies the electronic shutter speed.
AGC	Specifies gain adjustment.
SENS UP	Specifies electronic sensitivity enhancement.
WHITE BAL	Specifies white balance adjustment.
VMD	Performs settings regarding VMD (Video Motion Detector).
DNR	Selects the level of the digital noise reduction function.
BW MODE	Performs each setting regarding the black-and-white mode such as switching between color and black-and-white images.
PRIVACY ZONE	Hides undesired portions in the camera shooting area.
AF MODE	Selects auto focus mode.
ZOOM LIMIT	A limitation is provided to prohibit the ZOOM operation in the direction of TELE, exceeding the preset value.
STABILIZER	Decides whether or not to enable the image stabilizer.
UPSIDE-DOWN	The video image is reversed upside down during ON setting.
PRESET POSITION	
PRESET	Selects the position number. The preset setting menu appears on the monitor screen.
MAP	The PRESET POSITION (MAP) menu appears on the monitor screen.
HOME POSITION	To set a position number for the home position.
SELF RETURN	Set up the time needed to return to the home position automatically.
AUTO MODE	Use the auto mode setting to specify the camera movement mode.
IMAGE HOLD	The camera picture remains as a still image on the monitor screen until the camera reaches the preset position.
ZOOM INVERSE	The TELE/WIDE operation from the [UP] and [DOWN] buttons is reversed during ON setting.
FOCUS INVERSE	The FAR/NEAR operation from the [LEFT] and [RIGHT] buttons is reversed during ON setting.
SPECIAL	Performs the special settings.
CHROMA GAIN	Adjusts the chroma level.
AP GAIN	Adjusts the aperture level.
PEDESTAL	Adjusts the pedestal (brightness) level.
DISPLAY	Configure the display setting.
PIX OFF	Corrects image defects such as flaws.
REFRESH	The refresh operation is started.
CAMERA RESET	Restores the settings in the setup menu to the default settings.
SER.NO.	Displays the serial number of this unit.
COMMUNICATION	Selects RS485 or COAX or COAX (RCV).
SCENE SELECT	Configure the scene select setting.
LANGUAGE	Selects a language to be used in the setup menu.
PASSWORD LOCK	Performs settings password lock.

Screen transition diagram



Screen transition diagram

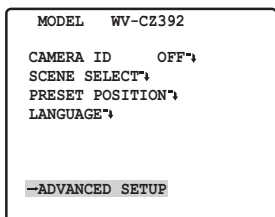


Advanced operation

■ Quick setup menu

Hold down the [SET] button for around 2 seconds to call up the camera setup menu. Following items can be set on the quick setup menu.

- Camera Identification Setting (refer to this page)
- Scene select setting (refer to page 34)
- Preset position setting (refer to page 29)
- Language setting (refer to page 35)
- Advanced setting (refer to this page)

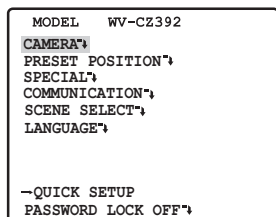


The setting steps of Quick setup menu is the same as Advanced setup menu. Change from Quick setup menu to Advanced setup menu, move the cursor to "→ ADVANCED SETUP" and press the [SET] button.

■ Advanced setup menu

Display the Advanced setup menu through the Quick setup menu.

1. Display the Quick setup menu (refer to this page), move the cursor to "→ ADVANCED SETUP" and press the [SET] button.



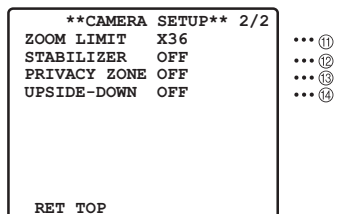
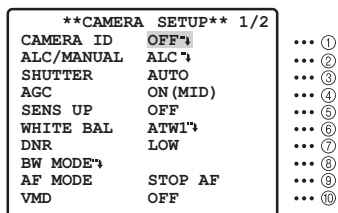
All the settings can be configured by pressing the [SET] button. When "ON" is selected for Password lock, all the settings cannot be configured. Reset the password lock then configure the setting. The information about how to reset the password lock, please refer to page 35.

■ Camera setting

● To Display the Camera Setup Menu

Move the cursor to "CAMERA ↵", and press the [SET] button. The "CAMERA SETUP" menu appears. (refer to this page)

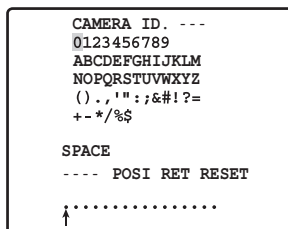
① Camera Identification Setting



The camera ID consists of up to 16 alphanumeric characters. The camera ID display can be switched on or off on the monitor screen.

To edit the CAMERA ID

1. Move the cursor to "CAMERA ID".
2. The cursor on the letter "0" is highlighted.
3. Move the cursor to the character you want to edit.
4. After selecting the character, press the [SET] button. The selected character appears in the editing area.
5. Repeat the steps above until all characters are edited.



To enter a blank space in the camera ID

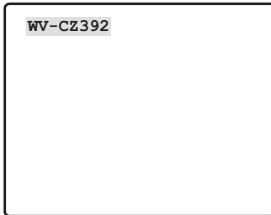
Move the cursor to "SPACE" and press the [SET] button.

To erase all characters in the editing area

Move the cursor to "RESET" and press the [SET] button. All characters in the editing area disappear.

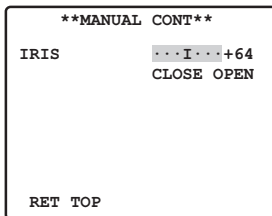
To determine the display position of the camera ID

1. Move the cursor to "POS1", and press the [SET] button. The display in the figure appears and the camera ID is highlighted.
2. Move the camera ID to the desired position.
3. Press the [SET] button to fix the position of the camera ID.



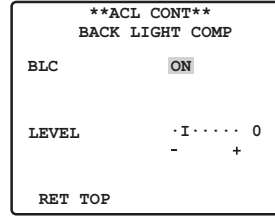
② Light Control Setting

1. Move the cursor to "ALC/MANUAL" and select "ALC" or "MANUAL". When you select "ALC", backlight compensation "ON" or "OFF" can be set. Default setting: ALC
2. When "MANUAL" is selected, press the [SET] button and the "MANUAL CONT" menu appears. Press the [LEFT] or [RIGHT] button for iris adjustment.



(1) ALC Mode with BLC "ON" CZ392

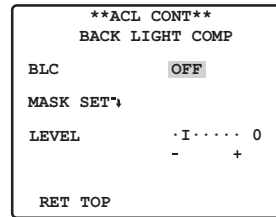
1. Press the [SET] button after selecting "ALC". The "ALC CONT" menu appears.



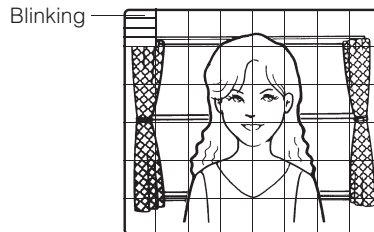
2. Move the cursor to the BLC parameter and select "ON".
3. If you want to adjust the video output level, adjust the "I" cursor for "LEVEL".

(2) ALC Mode with BLC "OFF" CZ392

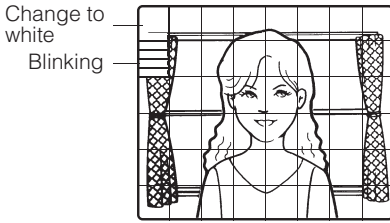
1. Move the cursor to "BLC" and select "OFF". (When you select "MANUAL", BLC is not available.)



2. Move the cursor to "MASK SET" and press the [SET] button, the mask setting menu appears.



3. To mask an area where backlight is bright, move the cursor to the area and press the [SET] button. The mask turns white. Once the flicker display moves to the mask area, white and stripe will display alternatively in this area. Repeat this procedure to mask the desired areas.



- To cancel a masked area, move the cursor to the area, and press the [SET] button. To delete all the masking area, press the [RIGHT] and [LEFT] buttons at the same time for more than 2 seconds.
- After masking is completed, press the [SET] button more than 2 seconds. 48 mask areas on the monitor screen disappear and the "ALC CONT" menu appears.

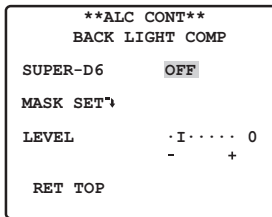
(3) SUPER-D6 (Super Dynamic 6) CZ492

- When "ALC" is selected, press the [SET] button, SUPER-D6 can be set.
- Move the cursor to "SUPER-D6", select "ON" or "OFF" and press the [SET] button.

ON: Turns on SUPER-D6.

OFF: Turns off SUPER-D6.

Default setting: OFF



SUPER-D6 (Super Dynamic 6)

When there is wide variation between the illumination of light and dark areas of the location being monitored, the camera adjusts the lens iris in accordance with the bright areas. This causes loss of detail in dark areas. Conversely, adjusting lens brightness for the dark areas cause brighter area to become washed out. SUPER-D6 digitally combines an image that is set up for a clear view of bright areas with an image that is set up for a clear view of dark areas, creating a final image that preserves overall detail.

Loss of detail in dark areas



Wash out of bright areas



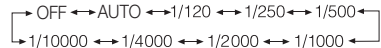
Two images digitally combined to create a clear final image.

Note:

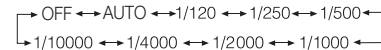
- When "OFF" is selected for "SUPER-D6", please refer to the setting of Mask area in page 22.
- When "ON" is selected for "SUPER-D6", increase the level can obtain better effect. But if the level is too high, afterimage and noise maybe increased.

③ Shutter Speed Setting

Shutter speed changes as follows: CZ392



When "OFF" is selected for "SUPER-D6", Shutter speed is changing as follows: CZ492



When "ON" is selected for "SUPER-D6", Shutter speed changes as follows: CZ492



AUTO: When shooting the bright object in outdoor, Shutter will be started to obtain more clear picture.

OFF: fix to 1/50s

Default setting: AUTO

Note:

- When the selected shutter speed caused flicker on condition that fluorescent lamps stay on, change this setting to "OFF".
- When "MANUAL" is selected for "ALC/MANUAL" and "FIX" is selected for "SENS UP", "AUTO" can be selected for "SHUTTER", but the AUTO function is not available.

④ Gain Control Setting

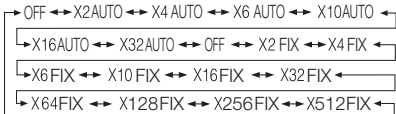
Select "ON (LOW)", "ON (MID)", "ON (HIGH)" or "OFF".
Default setting: ON (MID)

Note:

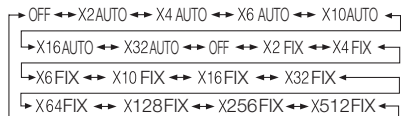
- Even if "AGC" is set to "ON" and if the noise reduction function is enabled, after images may be produced by shooting a moving object.
- For more information, refer to Digital Noise Reduction on page 25.

⑤ SENS UP Setting

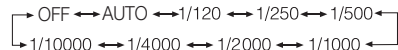
The electronic sensitivity enhancement mode changes as follows: **CZ392**



When "OFF" is selected for "SUPER-D6", the electronic sensitivity enhancement mode changes as follows: **CZ492**



When "ON" is selected for "SUPER-D6", the electronic sensitivity enhancement mode changes as follows: **CZ492**



Default setting: OFF

Note:

- The difference between "AUTO" and "FIX" are as follows:

AUTO: If selected "X32 AUTO", SENS UP will increase up to X32 automatically.

FIX: If selected "X32 FIX", SENS UP will increase up to X32 fixedly.

- Noise or spots may appear in the picture when the sensitivity of the camera is increased.

⑥ White Balance Setting

1. **ATW1/ATW2:** in this mode, the camera continually monitors the color temperature of the light source and automatically adjusts white balance.

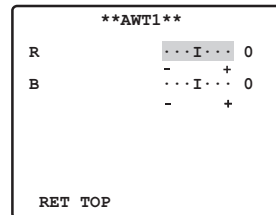
ATW1: 2700 K to 6000 K.

ATW2: 2000 K to 6000 K (Mode recommended for sodium lighting)

Default setting: ATW1

Proper white balance may not be possible under the following conditions. In such cases, use the "AWC" while balance mode.

- When the subject contains mostly dark colors
 - When the light source is a deep blue sky or twilight
 - When illumination of the subject is low
- (1) The white balance of the camera is automatically adjusted at ATW1 and ATW2.

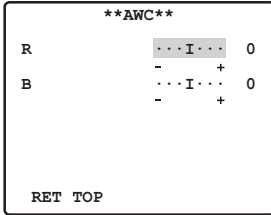


- (2) For fine adjustment of ATW1/ATW2, press the [SET] button. The ATW1/ATW2 fine adjustment menu appears on the monitor screen.

2. **AWC:** Automatic White Balance Control
In this mode, the supported color temperature range is approximately 2000 K to 10000 K. This mode is best in locations where the light source is constant.

- (1) Select "AWC" and press the [SET] button.
- (2) "PUSH SET" is highlighted on the display while white balance adjustment is being performed.
- "PUSH SET" becomes unhighlighted again when white balance adjustment is complete.

- If white balance adjustment cannot be completed for some reason, "PUSH SET" will remain highlighted on the display. If this happens, it could mean that the color temperature is outside the supported range, or that illumination is too low.
- (3) For fine adjustment of the "AWC" press the [RIGHT] button, select "AWC →". The AWC fine adjustment menu appears on the monitor screen.



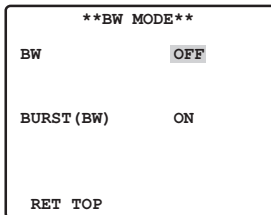
⑦ Digital Noise Reduction

DNR may be used to improve quality under low light conditions. There are 2 levels of DNR, which may be selected depending on local site conditions.
LOW: Low DNR, Low afterimage.
HIGH: High DNR, High afterimage.
 Default setting: LOW

⑧ Black-and-white Mode Setting

You can set up the BW mode on this menu.
BW Setting

1. Move the cursor to "BW" and select "EXT", "AUTO", "ON" or "OFF".



EXT: Changes between the color and black-and-white mode according to the D/N IN terminal.

AUTO: The camera selects the black-and-white mode if the picture is dark, or the color mode if the picture is bright enough.

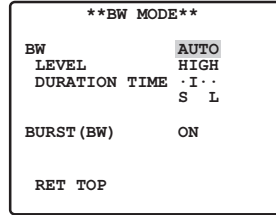
ON: The black-and-white mode is selected.

OFF: The color mode is selected.

Default setting: OFF

Note:

- When "AUTO" is selected, it is recommended to set "AGC" to "ON" before use.
 - At the time of "EXT" setup, the controller cannot be used for ON/OFF control.
-
2. When "AUTO" is selected, it becomes possible to set up the LEVEL and DURATION TIME.



3. When "AUTO" is selected, move the cursor to "LEVEL" and press the [LEFT] and [RIGHT] buttons to set the illuminance when switching to black-and-white or color mode. The illuminance shown below is based on the assumption that the camera is used in an area lit by halogen lamps.

LOW: Switches to the black-and-white mode when illuminance around the camera is approximately 1.5 lx or lower (when AGC ON (MID), SENS UP OFF is set).

HIGH: Switches to the black-and-white mode when illuminance around the camera is approximately 3 lx or lower (when AGC ON (MID), SENS UP OFF is set).

Default setting: HIGH

Note:

- When near-infrared lamps are used, the image may be displayed out of focus and mode switching may not perform automatically.
-

4. Move the cursor to "DURATION TIME". The camera determines whether to switch the mode when the time set for holding a picture motionless on the screen has elapsed.

Available duration times:

(S) 2 s ↔ 10 s ↔ 30 s ↔ 60 s (L)

Default setting: 10 s

BURST (BW) Setting

Move the cursor to select "ON" or "OFF".

ON: The burst signal is supplied along with the black-and-white composite video.

OFF: The burst signal is not output.

Default setting: ON

Note:

- With some monitors and VTR models, output of a camera images in the black-and-white mode will not display a proper image unless a burst signal is provided. Select "ON" for this setting when using equipment that requires a burst signal.

⑨ Auto Focus Setting

STOP AF: The AF mode activates during or after lens operation.

AUTO: The AF mode activates when the illuminance is changed.

Default setting: STOP AF

Note:

- Long use in "AUTO" mode may shorten the service life of the lens drive.
- Auto-focus may not be possible with the types of objects listed below. For such objects, focus manually.
 1. Dirt or water on window glass.
 2. Low lighting or illumination.
 3. Bright objects or high intensity objects.
 4. Single color object such as a white wall or fine felt.
 5. sloping objects.Auto-focus focuses on the object in the center of the picture, so objects around the outside periphery of the picture will not be in focus.

⑩ Motion Detector Setting

1. Select "OFF", "MOTION DET" or "SCENE CHANGE".

OFF: Turns off the motion detector.

MOTION DET: Alarm signal is output when motion is detected in the image. Selecting "MOTION DET" and pressing the [SET] button displays the "MOTION DET" menu, which can be used for configuring detailed settings.

SCENE CHANGE: Alarm signal is output when the camera is covered by cloth, a lid, spray paint or something.

Default setting: OFF

VMD

The motion detector divides the screen into 48 blocks and monitors changes in the luminance in each block. When it detects any change (movement) in the image, it outputs an alarm signal. When a change (movement) in the image is detected while in the auto mode, the alarm signal is output and the camera stops at the preset position for a specified amount of time.

Important:

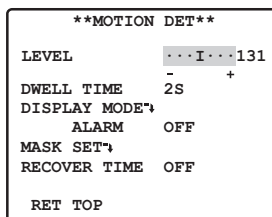
Conditions for SCENE CHANGE

Monitoring might not be possible in the following situations.

- If only one part of the screen is not covered, or if the covering is translucent. Also, false detection might occur in the following situations.
- When extreme changes in lighting occur, such as turning lights on an off.
- If pedestrian or vehicle traffic is heavy.

Note:

- If you want to set a motion detector for each preset position, do the scene file setting. (refer to page 31)
2. Select "MOTION DET" and press the [SET] button, "MOTION DET" menu appears. Mask setting can be set in this menu.



3. Move the cursor to "MASK SET 1" and press the [SET] button, 48 mask areas appears on the monitor screen. For more information, refer to Light Control Setting on page 22.

4. After masking areas, press the [SET] button more than 2 seconds. "MOTION DET" menu appears on the monitor screen.
5. Move the cursor to "ALARM", select "ON" or "OFF".

ON: Turns on alarm output in the demo mode.
OFF: Turns off alarm output in the demo mode.
 Default setting: OFF

6. Move the cursor to "DISPLAY MODE ↗", press the [SET] button to see the present setting.

Demo Mode

The demo mode divides the screen into 48 blocks and monitors changes in the luminance in each block. It also masks any part of the picture where there is a change in average luminance that exceeds the currently specified detection sensitivity level. The demo mode results can be used to determine the optimum detection sensitivity level (step 7) and the areas of the screen that need to be masked (step 3).

7. Move the cursor to "LEVEL", press the [LEFT] and [RIGHT] buttons to set the level. Move to "+", the level increases, move to "-", the level decreases. Repeat steps 6 and 7 to obtain the optimum detection level.

Detection Conditions

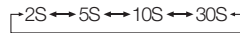
Object Size: The picture size on the screen should be larger than 1/48 of the actual picture size.

Subject Contrast: The contrast ratio between the background and the moving object must be at least 5 % (at the maximum LEVEL setting).

Object Speed: The allowable time range for the object to pass from one edge of the screen to the other is 0.1 second to 0.8 second. Movement that is faster or slower than this cannot be detected.

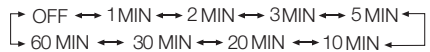
But when the contrast ratio between the background and the moving object is sufficient, the restriction to object size and speed can be relaxed.

8. Move the cursor to "DWELL TIME", press the [LEFT] and [RIGHT] buttons to select an alarm detect dwell time. After alarm detection, the next alarm is not detected until the specified dwell time elapses. Display in the sequence shows as below.



Default setting: 2S

9. Move the cursor to "RECOVER TIME", and press the [LEFT] or [RIGHT] button to select an alarm reset time setting. Display in the sequence shows as follows. When "OFF" is selected, it cannot be reset before other operation.



Default setting: OFF

Note:

- Use the mask setting to mask areas where there is wind movement of curtains, etc.
 - Use a lower sensitivity level (LEVEL) setting for areas where illumination is low and prone to digital noise. Also note that operation error can occur when the illuminance of a subject is changed suddenly by the headlights of passing cars, turning lights on or off, etc.
 - There is a delay of about 0.2 second from the point that the camera detects change (movement) in the image and the point that a signal is sent to the alarm terminal of a VTR, etc.
 - Alarms are not output when ZOOM, FOCUS or other functions are operating.
 - When the motion detector is set to "MOTION DET" or "SCENE CHANGE", it outputs alarm data during the blanking period. This can cause operational problems for a VTR or other device that uses a time code signal, etc. Turn off the motion detector when not using coaxial communication.
 - The motion detector is not intended for use as specialty device for the prevention of theft, fire, etc. The manufacturer assumes no responsibility for any accidents that occur or any losses incurred while this product is being used.
-

11 Zoom Limit Setting

A limitation is provided to prohibit the ZOOM operation in the direction of TELE, exceeding the preset value.

Digital zoom: X36 - X720

Optical zoom: below X36

12 Stabilizer

This function electronically compensates for an unstable camera image due to movement of a mounting pole or bracket.

1. Move the cursor to "STABILIZER" and select "ON" or "OFF".

ON: Automatically compensates for an unstable image.

OFF: Image stabilizer will not operate.
Default setting: OFF

13 Privacy Zone Setting

Up to 8 unwanted zones can be masked on the monitor screen.

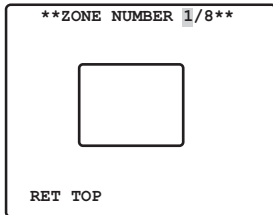
1. Move the cursor to "PRIVACY ZONE", press the [LEFT] and [RIGHT] buttons and select among "ON (1)", "ON (2)" or "OFF". Then press the [SET] button.

ON (1): Turns on the privacy zone function.
(Grey)

ON (2): Turns on the privacy zone function.
(Mosaic)

OFF: Turns off the privacy zone function.
Default setting: OFF

2. When "ON (1)" or "ON (2)" is selected for "PRIVACY ZONE" then press the [SET] button. This will display the "ZONE NUMBER" selection menu. The picture will be X1 wide angle (WIDE) if there is no privacy zone defined for the current zone number.

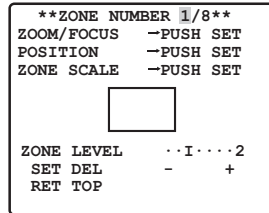


3. Move the cursor to "ZONE NUMBER", and then press the [LEFT] or [RIGHT] button to select the zone number (1 to 8) you want to configure. An asterisk (*) to the right of the number indicates that it already has a privacy

zone configured for it. Selecting such a zone number zooms the picture to the zoom setting that was in effect when its privacy zone settings were configured.

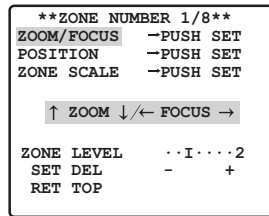
4. Press the [SET] button.

The appearance of the menu depends on zone settings.



5. Move the cursor to "→ PUSH SET" to the right of "ZOOM/FOCUS", and then press the [SET] button.

This will display the ZOOM/FOCUS setting menu.



6. Press the [UP], [DOWN], [RIGHT] or [LEFT] button to adjust the zoom and focus positions, and then press the [SET] button.

This completes the adjustment procedure and returns to the zone setting menu.

Privacy zone should be set under low magnification. If the privacy zone is set under high magnification, it may shift.

7. Move the cursor to "→ PUSH SET" to the right of "POSITION", and press the [SET] button.

This will display the POSITION setting menu.

8. Press the [UP], [DOWN], [RIGHT] or [LEFT] button to set up the mask position of the privacy zone, and then press the [SET] button.

This completes the setting procedure and returns to the zone setting menu.

9. Move the cursor to "→ PUSH SET" to the right of "ZONE SCALE", and press the [SET] button.

This will display the ZONE SCALE setting menu.

10. Press the [UP], [DOWN], [RIGHT] or [LEFT] button to set up the mask size of the privacy zone, and then press the [SET] button.
This completes the setting procedure and returns to the zone setting menu.
11. When "ON (2)" is selected for "PRIVACY ZONE", move the cursor to "ZONE LEVEL", and press the [LEFT] and [RIGHT] buttons to set the level of privacy zone.
12. Move the cursor to "SET", and then press the [SET] button.
This completes the privacy zone setting procedure and returns to the zone number selection menu.
Selecting "DEL" deletes the zone settings.

Note:

- After setting the privacy zone, dislocation will occur in the mask zone when upside-down inverse is used.

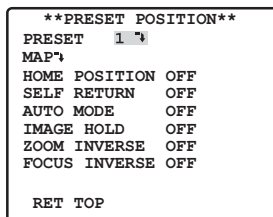
⑭ **Upside-Down Setting**

OFF: The video image cannot be reversed upside down.

ON: The video image can be reversed upside down.

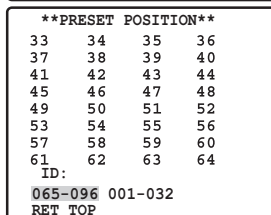
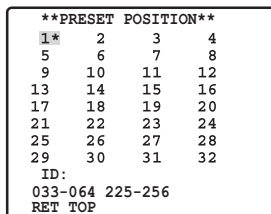
Default setting: OFF

■ Preset position setting



① **Preset Menu Display**

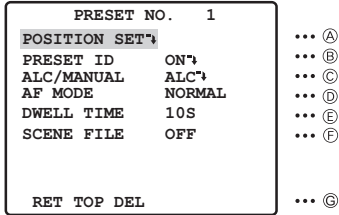
1. Displaying the preset menu directly
 - (1) Move the cursor to "PRESET" and select the position number.
 - (2) Press the [SET] button. The preset setting menu appears on the monitor screen.
2. Displaying the preset menu from the "PRESET POSITION" (MAP) menu.
 - (1) Move the cursor to "MAP ↵" and press the [SET] button. The "PRESET POSITION" (MAP) menu appears on the monitor screen.



- (2) Move the cursor to the position number to be set and press the [SET] button. The preset setting menu appears on the monitor screen.
To display any position number between 33 and 64, move the cursor to "033-064" in the lower left of the screen and press the [SET] button.

Note:

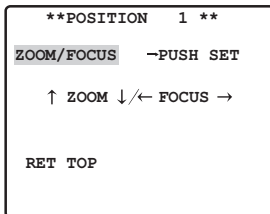
- The "*" mark indicates that the position number has been preset.
- The character "H" refers to the home position.
- The second line from the bottom shows the preset ID corresponding to the selected number. Preset Position can be displayed in the right of "ID".

**A Position Setting**

1. Move the cursor to "POSITION SET *" on the preset setting menu and press the [SET] button.

The POSITION setting menu appears.

- (1) Move the cursor to "→ PUSH SET" for "ZOOM/FOCUS" and press the [SET] button.



- (2) Select a zoom position and a focus position, and then press the [SET] button. The positions are set and the screen returns to the position setting menu.

Note:

- If you move the cursor to the position number and press the [LEFT] or [RIGHT] button, the position number can be selected. The selected preset position number can also be set after pressing the [SET] button.

B Preset Identification Setting

1. Move the cursor to "PRESET ID" on the preset setting menu and select "ON" or "OFF".

ON: Preset ID appears on the monitor screen.

OFF: Preset ID does not appear.

Default setting: ON

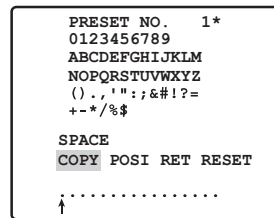
2. Press the [SET] button to display the PRESET ID menu.

To Enter a New Preset ID

For registration, refer to the items of CAMERA ID on page 21.

To Copy a Preset ID from Another Position

Move the cursor to "COPY" and press the [SET] button. The preset ID in the preceding position is immediately shown. Each consecutive pressing of the [SET] button displays the ID preceding the one currently displayed.

**To Edit a Preset ID**

Move the "↑" to the characters to be changed by pressing the [LEFT] and [RIGHT] buttons, and enter new characters follow the steps in "To edit the CAMERA ID" (refer to page 21).

To Delete a Preset ID

Please refer to "To erase all characters in the editing area" in page 22.

To Enter the Next ID without Returning to the Preset Setting Menu

- (1) In the preset ID setting menu, move the cursor to the top line and select a desired position number and press the [SET] button.
- (2) Enter, copy, change or delete the ID as described above.

C Light Control Setting

Select "ALC" or "MANUAL".

Default setting: ALC

D Auto Focus Setting

Move the cursor to "AF MODE" and press the [LEFT] and [RIGHT] buttons to configure the auto focus setting.

NORMAL: Press the [AF] button on the camera, auto focus activates.

STOP AF: The AF mode activates during or after lens operation.

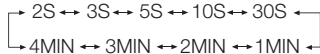
AUTO: The AF mode activates when the illuminance is changed.

Default setting: NORMAL

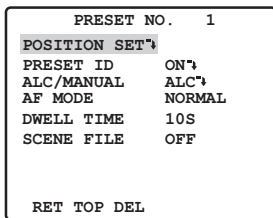
E Dwell Time setting

Move the cursor to "DWELL TIME" and select a dwell time setting.

The stop time display in the sequence shows as follows.



Default setting: 10S



F Scene File Setting

1. Selecting a Scene File

Move the cursor to "SCENE FILE", select the number of the scene file (1-10 or OFF). When select "OFF", scene file cannot be selected.

Default setting: OFF

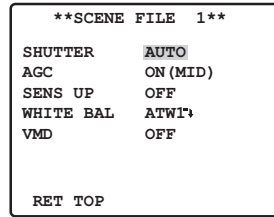
2. Configuring Scene File Settings

Move the cursor to "SCENE FILE" and press the [SET] button. "SCENE FILE" menu appears.

The following items can be set in Scene File menu.

More information please refer to the camera setting.

- Shutter (refer to page 23)
- AGC (refer to page 24)
- SENS UP (refer to page 24)
- White balance (refer to page 24)
- VMD (refer to page 26)



G Deleting Preset Positions

Move the cursor to "DEL" and press the [SET] button.

② Home Position Setting

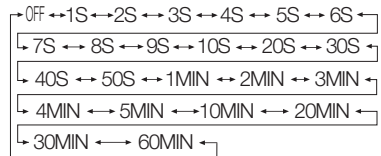
1. To set a position number for the home position
Move the cursor to "HOME POSITION" and select a desired position number.
2. Select "OFF" if you are not using the home position function.

③ Self Return Setting

This menu is used to set up the time needed to return to the home position automatically.

1. Move the cursor to "SELF RETURN", select a self return time. Then press the [SET] button.

Self return display in the sequence shown below.



Default setting: OFF

2. If you selected any setting other than "OFF" in step 1, press the [SET] button. Press the [LEFT] and [RIGHT] buttons to return to self return mode.

OFF: In the auto mode, exits the auto mode.

AUTO: Returns to the auto mode when the trigger time elapses. When "AUTO MODE" is setting "OFF", returns to the home position when the trigger time elapses.

HOME: Returns to the home position when the trigger time elapses.

SEQ: Activates the sequence function when the trigger time elapses.

SORT: Activates the sort function when the trigger time elapses.

Default setting: AUTO

④ Auto Mode Setting

Use the auto mode setting to specify the camera movement mode (OFF, SEQ, SORT). Move the cursor to "AUTO MODE", select a camera movement mode.

OFF: Manual movement only

SEQ: Sequentially switches between preset positions in position number sequence. (sequential movement)

SORT: Sequentially switches between preset positions counterclockwise, starting from the camera home position. (sort movement)

Default setting: OFF

⑤ Image Hold

The camera picture remains as a still image on the monitor screen until the camera reaches the preset position. This function is useful for surveillance via local area network.

Move the cursor to "IMAGE HOLD" and select "ON" or "OFF".

Default setting: OFF

⑥ ZOOM INVERSE

The TELE/WIDE operation from the [UP] and [DOWN] buttons is reversed during "ON" setting.

⑦ FOCUS INVERSE

The FAR/NEAR operation from the [LEFT] and [RIGHT] buttons is reversed during "ON" setting.

■ Special setting

SPECIAL SETUP		
CHROMA GAIN	...I...160	... ①
AP GAIN	..I...22	... ②
PEDESTAL	-I...16	... ③
	- +	
DISPLAY	ALARM	... ④
PIX OFF ↴		... ⑤
REFRESH	-PUSH SET	... ⑥
CAMERA RESET	-PUSH SET	... ⑦
SER.NO. BFB03964		... ⑧
RET TOP		

① Chroma Level

② Aperture Level

③ Pedestal Level

Move the cursor to "CHROMA GAIN", "AP GAIN" and "PEDESTAL" and move the "I" cursor to your desired position.

④ Setting the display

Move the cursor to "DISPLAY" and select a display setting.

ALARM: Only alarm is displayed. Zoom position is not displayed.

OFF: Zoom position displays and alarm are not displayed.

ALL: Zoom position displays and alarm are all displayed.

POSITION: Only zoom is displayed. Alarm is not displayed.

Default setting: ALARM

⑤ PIX OFF Setting

In this setting, you can assign a blemish position and compensate the blemish.

1. Move the cursor to "PIX OFF ↴" and press the [SET] button. The "PIX OFF" menu appears.

** PIX OFF **			
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
000 000			
RET TOP			

2. Select a number and press the [SET] button. The blemish compensation position setting screen appears.

+	
---	--

Move the "+" cursor to the place on the blemish position. After moving the "+" cursor to a position where the blemish looks inconspicuous, press the [SET] button. Consequently, the blemish compensation position is set up and the "PIX OFF" menu is restored. After a blemish compensation position is set up, "+" is attached at the right of the number.

3. If you would like to delete a blemish compensation position, move the cursor to the applicable number and press the [SET] button. The blemish compensation position setting screen appears. The blemish compensation position is deleted and "+" is also deleted from the right of the number by pressing the [RIGHT] and [LEFT] buttons for more than 2 seconds.

⑥ REFRESH

Move the cursor to "→ PUSH SET" to the right of "REFRESH" and press the [RIGHT] and [LEFT] buttons at the same time for more than 2 seconds. Then, the Refresh operation is started.

The refresh function corrects the camera position when it starts to deviate from the preset positions.

⑦ CAMERA RESETTING

Move the cursor to "→ PUSH SET" to the right of "CAMERA RESET" and press the [RIGHT], [LEFT], and [SET] buttons at the same time for more than 2 seconds.

The camera is reset to the factory default settings.

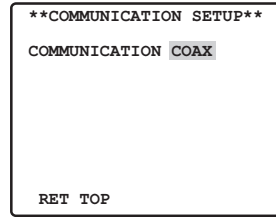
⑧ SER.NO.

Display the serial number of this unit.

Note:

- Any of the following cannot be reset to the factory defaults: Preset Position Setting (POSITION SET, ALC/MANUAL, AF MODE, SCENE FILE), Communication Setting, Password Lock Setting, PIX OFF setting.
- In case of performing this operation on the condition that the cursor is positioned on other than CAMERA RESET, you cannot perform the operations on the menu thereafter. In that event, set the camera menu to ON again.

■ Communication setting



Move to the cursor to "COMMUNICATION" and select "RS485 ↗" or "COAX" or "COAX (RCV)".

COAX: Communication is carried out in the coaxial multiplex system.

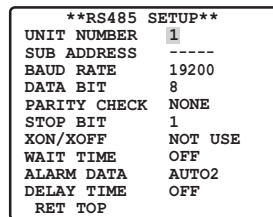
COAX (RCV): If our receiver (WV-RC100, WV-RC150, WV-RC170) is used, select "COAX (RCV)".

RS485: Communication is maintained through the RS485 terminal.

Selecting "RS485 ↗" and the [SET] button is pressed, the "RS485 SETUP" menu is displayed.

Default setting: COAX

● Changing the Camera Communication Parameters for RS485.



Move the cursor to the item and select the parameter.

Unit Number

In an RS485 chain each unit must have a unique number.

Sub Address

Do not set. When use Pelco communication, press the [RIGHT] button, the sub address will display "----P", unit number will display "P1 D96", at this time Pelco-P address will be "1", Pelco-D address will be "96". Unit address can be changed by changing unit number.

Baud Rate

Specifies the transmission speed ("2400", "4800", "9600", "19200" bit per second) for the RS485 communication.

Default setting: 19200

Data Bit

Specifies the number of data bits ("7" or "8" bits) for the RS485 communication.

Default setting: 8

Parity Check

Specifies the parity check mode ("NONE", "ODD", "EVEN").

Default setting: NONE

Stop Bit

Specifies the number of stop bits ("1" or "2" bits).

Default setting: 1

X ON/X OFF

Specifies whether to apply flow control or not ("USE" or "NOT USE").

Default setting: NOT USE

Wait Time

Specifies the time to wait until retrying after confirming that no data is received from the controller.

(OFF: no retry, 100, 200, 400, 1000 ms).

← OFF ↔ 100MS ↔ 200MS ↔
1000MS ↔ 400MS ↔ ←

Default setting: OFF

Alarm Data

Specifies the alarm transmission mode.

POLLING: Transmits the alarm data in response to requests from the controller.

AUTO1: Transmits the alarm data each time an alarm signal is received by the camera.

AUTO2: Transmits alarm data at intervals of 5 seconds.

Default setting: AUTO2

Delay Time

Specifies the time to transmit the acknowledge request when communicating on a 2-line connection.

OFF ↔ 100MS

This menu appears only when a 2-line communication is used. Make sure to be 100 ms when connecting the camera with the Video Multiplexer WJ-SF616 or the Matrix Switcher WJ-SX350 in a 2-line communication system.

RS485 settings become effective with the closing of setup menu.

Note:

- Set the same parameters for the cameras, controllers and personal computers in an RS485 chain.

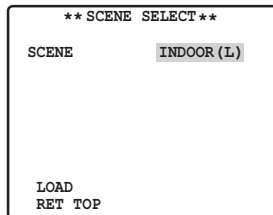
■ Using the scene select setting menu

Display the scene select setting menu from the setup menu to configure scene select settings.

First, display the scene select setting menu.

1. Display the setup menu (page 21), move the cursor to "SCENE SELECT", and then press the [SET] button.

This will display the scene select setting menu.



● Scene Select Settings

Use the following procedure to configure scene select settings.

1. Move the cursor to "SCENE", and press the [LEFT] or [RIGHT] button to change the scene setup.

INDOOR (L): Indoor setting (picture quality priority)

INDOOR (H): Indoor setting (sensitivity priority)

OUTDOOR (L): Outdoor setting (picture quality priority)

OUTDOOR (H): Outdoor setting (sensitivity priority)

Default setting: INDOOR (L)

Settings related to the picture switch depending on the scene settings.

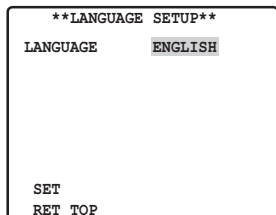
Scene select settings and relationship to other settings are shown in the table below.

	AGC	SENS UP	SHUTTER
INDOOR (L)	MID	OFF	OFF
INDOOR (H)	HIGH	X2 AUTO	OFF
OUTDOOR (L)	MID	OFF	AUTO
OUTDOOR (H)	HIGH	X2 AUTO	AUTO
	BW	DNR	WHITE BAL
INDOOR (L)	OFF	LOW	ATW1
INDOOR (H)	OFF	HIGH	ATW1
OUTDOOR (L)	AUTO	LOW	ATW2
OUTDOOR (H)	AUTO	HIGH	ATW2

2. Move the cursor to "LOAD", and then press the [SET] button.
This will cause the setup you selected for SCENE in step 1 to be applied to the image.

■ Language setting

1. Move the cursor to "LANGUAGE", and then press the [SET] button.



2. On the 8-language selection menu that appears, select the language you want to use. The factory default setting is English.
 3. Move the cursor to "SET", and then press the [SET] button.
- ※ The item that was set flashes when the language is being changed and stops flashing when the language has been changed. Do not operate the system controller when changing settings.
 - ※ After switching the language, the title set in the former language will be disappeared.
 - ※ If you have selected Japanese as the language, only the IDs and titles can be set in katakana.
 - ※ The LANGUAGE display remains in English even when the language setting is changed.

■ Quick setup

Move the cursor to "→ QUICK SETUP", and press the [SET] button. Quick setup menu appears.

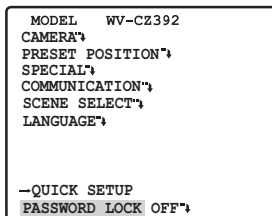
More information, please refer to settings on page 21.

■ Password lock setting

Note:

- For security, do not operate your VTR for recording while the password menus are displayed on the monitor.
- A 3-digit number is used for a password to limit access to all settings.

1. Move the cursor to "PASSWORD LOCK". ("ON" or "OFF")



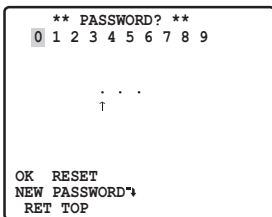
Note:

- "ON" or "OFF" can be selected only after going through the password verification.
OFF: You can change all settings.
ON: You cannot change all settings.
Default setting: OFF

2. Press the [SET] button.

Password Verification

3. The password verification menu appears.



- 3-1 Select a numeral for the first digit with the cursor, and press the [SET] button. Though the entered password is not displayed, the up-arrow moves one character to the right.
- 3-2 Repeat the above step for the 2nd and 3rd digits.
Default setting: 123.
- 3-3 The cursor moves to "OK" after all the three digits have been entered. Unless you want to change the password, press the [SET] button.

- 4-1 Enter a new three-digit password in the same way as in steps 3-1 to 3-2.
- 4-2 The cursor moves to "OK" after all the three digits have been entered. Press the [SET] button to move the cursor to the first digit on the second line.
- 4-3 Enter the same password as the one you have entered on the first line. The cursor moves to "OK".
- 4-4 Press the [SET] button. If the new password is successfully entered, the screen returns to setup menu. Retry steps 4-1 to 4-4. If the first entry for the password is different from the second one.

Note:

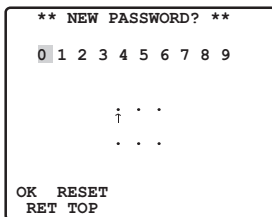
- Be sure to enter the initial password "123" at first time, otherwise the switch between "ON" and "OFF" of password lock cannot be performed.
-

If the correct password is entered, the screen returns to setup menu. "ON" and "OFF" settings are the same as made on the setup menu. If a wrong password is entered, the screen returns to the verification menu. Repeat steps 3-1 to 3-3 to verify the password.

- 3-4 To cancel an incomplete password, move the cursor to "RESET", and press the [SET] button. The screen returns to the verification menu.

New Password

- 4. To change the password in step 3-3 above, move the cursor from "OK" to "NEW PASSWORD ↗" then press the [SET] button. "NEW PASSWORD" menu appears.



Note:

- The "NEW PASSWORD" menu is accessible only after the verification has been completed. The up-arrow mark appears indicating the first digit on the first line.
-



Troubleshooting

Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution	Reference pages
No image displayed	<ul style="list-style-type: none"> Are the power cord and coaxial cable connected appropriately? → Check whether the connection is appropriately established.	12-16
	<ul style="list-style-type: none"> Is the monitor brightness appropriately adjusted, or is the contrast appropriately adjusted? → Check whether the monitor settings are appropriate.	-
Blurred image	<ul style="list-style-type: none"> Is the lens of the camera soiled with dirt or dust? → Check whether the lens of the camera is clean.	-
	<ul style="list-style-type: none"> Is the focus adjusted correctly? → Check if the focus is adjusted correctly.	28
Black line appears in the image	<ul style="list-style-type: none"> Whether or not the connected system controller is set as multiplex vertical driver (VD2)? → Check if the connected system controller is set correctly.	8
Damaged power cord sheathing	<ul style="list-style-type: none"> The power cord, power connector, or power plug is damaged. Use of the damaged cord, connector, or plug may cause electric shock or fire. Disconnect the power plug immediately and request repair to your dealer. 	-
Heated portion of power line consisting of power cord, connector, and power plug during use		
The power cord gets hot when bent or stretched.		

Specifications

Effective pixels	976 (H) x 582 (V)
Scanning area	3.6 mm (H) x 2.7 mm (V)
Synchronization	INT (Internal sync)
Horizontal scanning frequency	15.625 kHz
Vertical scanning frequency	50.00 Hz
Video output	1.0 V [p-p] PAL composite/75 Ω
Horizontal resolution	650 TV lines typ. (at center)
Vertical resolution	400 TV lines or more (at center)
Signal-to-noise ratio	52 dB (AGC: OFF)
Minimum illumination	0.5 lx (color mode) 0.04 lx (black-and-white mode) SENS UP: OFF; AGC: HIGH
Zoom speed	around 6 s (TELE/WIDE) in manual mode
Iris	automatic (open/close is possible)/manual
Maximum aperture ratio	1:1.4 (WIDE) - 4.2 (TELE)
Focal length	3.3 - 119.0 mm
Angular field of view	H 1.47°- 60.15° V 1.20°- 46.03°
Electronic shutter	1/50 (OFF), AUTO 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 s
AGC	ON (LOW)/ON (MID)/ON (HIGH)/OFF
Sensitivity up	OFF / AUTO (max.x32) / FIX (max.x512)
BLC	ON/OFF 
Super Dynamic 6	ON/OFF 
Zoom ratio	x36
Digital (electronic) zoom	x20
Iris range	F1.4 - 22, CLOSE
Power source	12 V DC
Power consumption	220 mA
Ambient operating temperature	-10 °C - +50 °C
Dimensions**	118 mm(H) x 58 mm(W) x 68 mm(L)
Mass**	310 g
Auto focus	MANUAL/STOP AF/AUTO
Camera ID	camera ID, preset ID, up to 16 characters
VMD	OFF/MOTION DET/SCENE CHANGE
Day/Night IN	Input pulled up to 5.0 V DC OFF (open or 4 V DC - 5 V DC) /ON (0 V 0.2 mA)
Alarm OUT	Output open collector - output max. 16 V DC, 100 mA OFF (OPEN)/ON (0 V)
B/W mode	AUTO/ON/OFF/EXT
Privacy zone	ON (1) / ON (2) / OFF, up to 8 zones
Image hold	ON/OFF

※ Weights and dimensions indicated are approximate.

Standard accessories

Operating Instructions (this book)	1 pc.
CD-ROM*	1 pc.

*The CD-ROM contains the operating instructions (PDF).

The following part is used during installation procedures.

Power cord plug	1 pc.
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Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Panasonic Corporation

<http://panasonic.net>

Importer's name and address to follow EU rules:

Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg F.R.Germany