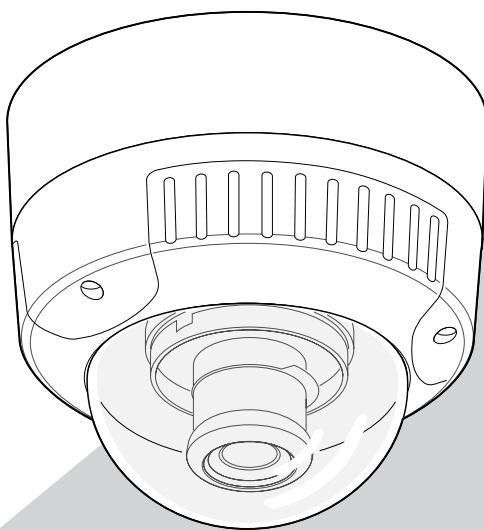


Panasonic

Colour CCTV Camera Operating Instructions

Model No.

WV-NW470S
WV-NW474SE



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

ENGLISH

DEUTSCH

FRANÇAIS

ESPAÑOL

ITALIANO

文

中

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 EEC/73/23 and EEC/89/336.

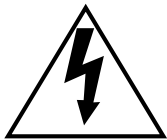
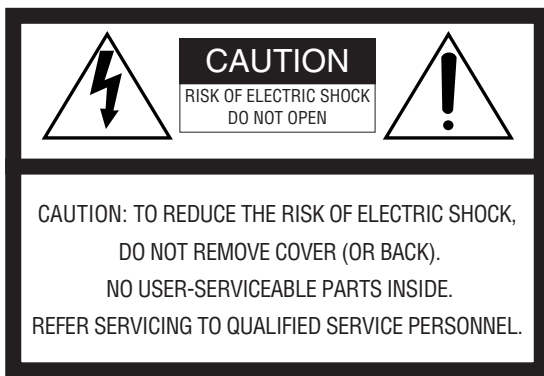
Wij verklaren als enige aansprakelijke, dat het product waarop deze verklaring betrekking heeft, voldoet aan de volgende normen of andere normatieve documenten, overeenkomstig de bepalingen van Richtlijnen 73/23/EEC en 89/336/EEC.

Vi erklærer os eneansvarlige for, at dette produkt, som denne deklaration omhandler, er i overensstemmelse med standarder eller andre normative dokumenter i følge bestemmelseme i direktivene 73/23/EEC og 89/336/EEC.

Vi deklarerar härmed vårt fulla ansvar för att den produkt till vilken denna deklaration hänvisar är i överensstämmelse med standarddokument, eller andra normativa dokument som framställs i EEC-direktiv nr. 73/23 och 89/336.

Ilmoitamme yksinomaisella vastuullamme, että tuote, jota tämä ilmoitus koskee, noudattaa seuraavia standardeja tai muita ohjeellisia asiakirjoja, jotka noudattavat direktiivien 73/23/EEC ja 89/336/EE. 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 73/23/EEC og 89/336/EEC.



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.



Turn the power off at the mains to disconnect the main power for all unit.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

WARNING

**THIS APPARATUS MUST BE EARTHED
IMPORTANT**

The wires in this mains lead are coloured in accordance with the following code.

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured **green-and-yellow** must be connected to the terminal in the plug which is marked with the letter **E** or by the earth symbol \perp or coloured **green** or **green-and-yellow**.

The wire which is coloured **blue** must be connected to the terminal in the plug which is marked with the letter **N** or coloured **black**.

The wire which is coloured **brown** must be connected to the terminal in the plug which is marked with the letter **L** or coloured **red**.

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

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

Model No. _____

Serial No. _____

WARNING: To prevent fire or electric shock hazard, do not expose this appliance to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION: An ALL-POLE MAINS SWITCH with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.

CONTENTS

PREFACE	4
Features	4
System Requirements	4
Trademarks	4
Document Convention	5
PRECAUTIONS	6
MAJOR OPERATING CONTROLS & THEIR FUNCTIONS	7
INSTALLATION	9
■ Installation Plans & Preparations	9
■ Mounting the Camera	10
■ Connections	11
■ Image Adjustment	12
■ Network Connection Types	14
PREPARATIONS FOR NETWORK CONNECTIONS	15
■ Network Setup of Your PC	15
■ Network Setup of the Camera	16
PRIOR TO CAMERA SETUP	19
■ Buttons Used for Setup	19
■ Camera Setup Menus	19
■ Setup Menu Tree	21
SETTING PROCEDURES	22
■ Setup Selection	22
■ Camera Setup Menu (CAM SETUP)	22
■ Network Setup (NETWORK SETUP)	29
INITIALIZING	30
■ Initializing the Camera Menu	30
■ Initializing the Setup Menu	30
■ Initializing HTML Files	30
TROUBLESHOOTING	31
PREVENTION OF BLOOMING AND SMEAR	32
SPECIFICATIONS	32
STANDARD ACCESSORIES	33
OPTIONAL ACCESSORIES	33
APPENDIX	34
■ Optional Heater Unit WV-CW3HE	34

PREFACE

Panasonic introduces the WV-NW470S and WV-NW474SE colour cameras for remote video surveillance through network connections. The camera incorporates a manual pan, tilt, and azimuth table in a compact dome, besides such essential functions as high sensitivity, wide dynamic range, video motion detection, and so forth.

Features

- 10/100BASE-T terminal enabling you to view camera images via the network
- User/Host authentication
- SD-II (Super Dynamic) expands the dynamic range up to 46 dB without interference between dark and bright portions in a scene.
- High adaptability to environmental changes
 - Auto light control (ALC)
 - B/W and colour switching (AUTO, EXT)
 - Electric sensitivity enhancement (SENS UP)
 - Electric shutter speed control
 - Electric zooming (EL-ZOOM)
 - Sync: VD2, Line-lock, Internal
 - White balance: AWC, ATW
- Picture quality
 - AGC
 - Digital noise reduction
 - Minute adjustments via SPECIAL menu
- Options
 - A heater unit for use in cold climates is available.

System Requirements

Your personal computer must meet the following minimum requirements to view camera pictures or to set up parameters.

Computer: PC/AT compatible

OS: One of the following should be installed.
Microsoft Windows98 Second Edition (English version)
Microsoft Windows2000 Professional Service Pack2 (English version)
Microsoft Windows Millennium Edition (English version)
Microsoft Windows XP (English version)
Microsoft Windows NT Workstation 4.0 Service Pack6a (English version)

CPU: Pentium II (300 MHz) or faster

Memories: 128 MB or higher

Network Interface: 10/100 Mbps Ethernet card

Applicable Network Protocols: TCP/IP, HTTP, FTP, SMTP, DNS, DDNS, DHCP, ARP, BOOTP, NTP

Browser: One of the following should be installed.
Internet Explorer 5.5, 5.5SP2, 6.0
Netscape Communicator 4.73, 4.78

It may happen some of the functions work wrongly when using the Netscape Communicator version 4.73 before, or upgraded version 4.73.

Then, take the following procedures on your PC:

1. Take notes all the setting status of Netscape Communicator in advance.
2. Uninstall the old Netscape Communicator and delete the holder named Netscape from your PC once.
3. Install the applicable version of Netscape Communicator to your PC.
4. Input the same setting status that item 1 to the Netscape Communicator.

Note: Only the English versions have been tested.

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- Ethernet is a registered trademark of Xerox Corporation.
- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.
- Distributing, copying, disassembling, reverse compiling, reverse engineering, and also exporting in violation of export laws of the software provided with this product, is expressly prohibited.

Document Convention

These operating instructions use the following conventions when describing the uses and operations.

- Windows98SE stands for Microsoft Windows98 Second Edition.
- Windows2000 stands for Microsoft Windows2000 Professional Service Pack2.
- Windows ME stands for Microsoft Windows Millennium Edition.
- Windows NT stands for Microsoft Windows NT Workstation 4.0 Service Pack6a.
- Windows XP stands for Microsoft Windows XP.

PRECAUTIONS

1. This product should be installed and connected in conformity with local codes by qualified service personnel or system installers.

2. Use a class 2 power source supplying 24 V AC.

3. To prevent fire or electric shock hazard, use a UL listed cable (VW-1, style 1007) to connect the power supply to the camera.

4. Be sure to use a ceiling board/wall having enough strength to support this camera.

5. Do not attempt to disassemble the camera.

To prevent electric shock, do not remove screws or covers.

There are no user-serviceable parts inside.

Ask a qualified service personnel for servicing.

6. Handle the camera with care.

Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

7. Do not use strong or abrasive detergents when cleaning the camera body.

Use a dry cloth to clean the camera when it is dirty.

When the dirt is hard to remove, use a mild detergent and wipe gently. Care should be taken not to scratch the dome cover when wiping it.

Wipe off any remaining detergent in it with a dry cloth.

8. Never face the camera towards the sun.

Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise, blooming or smear may be caused.

9. Never aim the camera at strong light sources for an extended period of time.

A light source such as a spot light causes burn-in on the display screen. Failure to observe this may cause the image to become discoloured due to deterioration of the colour filter in the CCD.

10. Do not operate the camera beyond the specified temperature, humidity or power source ratings.

Do not use the camera in an extreme environment where high temperature or high humidity exists. Do not place the camera near heat sources such as radiators, stoves or other units that produce heat.

Use the camera under conditions where temperatures are between -10°C and $+50^{\circ}\text{C}$ (14°F to 122°F) and humidity is below 90 %.

The input power source is 24 V AC 50 Hz for WV-NW474SE or 220 V - 240 V AC 50 Hz for WV-NW470S.

11. Do not install the camera near the air outlet of an air conditioner.

The lens may become cloudy due to condensation if the camera is used under the following conditions.

- Rapid temperature fluctuations by switching the air conditioner on and off.
- Rapid temperature fluctuations due to frequent opening and closing of a door.
- Use in an environment where eyeglasses become foggy.
- Use in a room filled with cigarette smoke or dust.

If the lens becomes cloudy due to condensation, remove the dome cover and wipe all moist surfaces with a soft cloth.

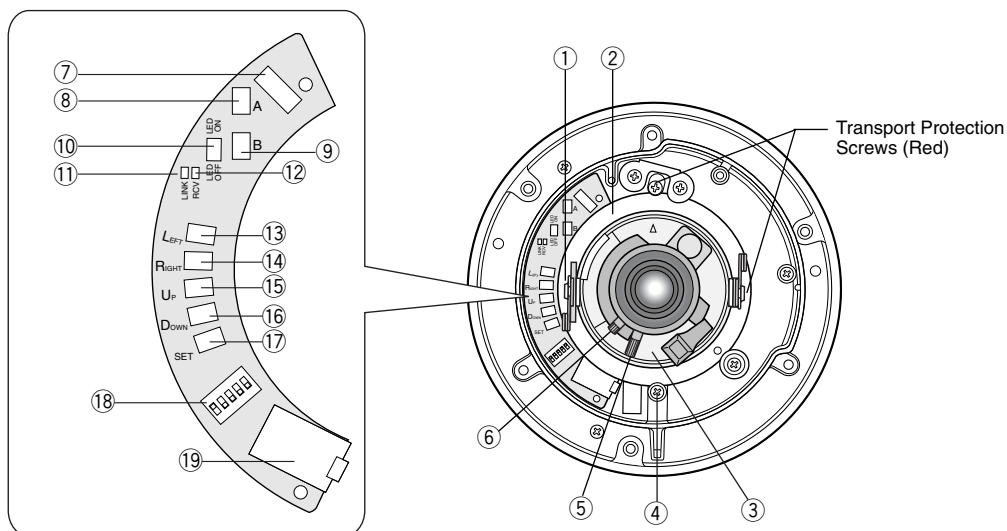
When installing, be sure to wipe off water drops and splashes inside the camera. Failure to do so may cause condensation.

12. Do not aim the camera at the same object for a long time.

Burn-in of an image may be caused on the fluorescent screen of the CRT.

- Matsushita Electric Industrial Co., Ltd. herewith declares that it will not be liable for any damage, whether direct or indirect, caused by using the product for business transactions or security, or malfunctioning of this product.

MAJOR OPERATING CONTROLS & THEIR FUNCTIONS



① Tilting lock screw

Fixes the tilting position.

② Panning table

Adjusts the panning angle of the camera.

③ Azimuth adjuster

Adjusts the azimuth angle to level the image.

④ Pan lock screw

Fixes the panning position.

⑤ Zoom lock lever

Fixes the zoom position after adjustment.

⑥ Focus lock lever

Fixes the focus position after adjustment.

⑦ Optional heater connector

When an optional heater unit is installed in the camera, the harness exiting from the unit will be connected to this.

⑧ Reset button (A)

Holding down the Up and Down buttons simultaneously for 15 seconds in the power-on state will reset the network setup parameters.

Note: Never press both reset buttons A and B at the same time.

⑨ Reset button (B)

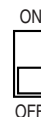
Holding down the Up and Down buttons simultaneously for 15 seconds in the power-on state will reset the HTML files and alarm mail setup.

⑩ LED switch

ON: Enables the LINK and RCV LEDs to indicate the communication status.

OFF: Disables the status indication.

Note: Normally set the switch to OFF. Set it to ON only when you check the communication status. Failure to do so may cause disturbance to the camera image, or light leakage to the outside of the camera in dark places.



⑪ Link indicator (LINK)

Lights up when establishing communications via the network if the LED switch is set to ON.

⑫ Receive indicator (RCV)

Lights up when receiving data via the network if the LED switch is set to ON.

⑬ Left button (Left)

Moves the cursor to the left, selects the mode, and adjusts some levels.

⑭ Right button (Right)

Moves the cursor to the right, selects the mode, and adjusts some levels.

⑮ Up button (Up)

Moves the cursor upward and selects items in the menu setup.

⑯ Down button (Down)

Moves the cursor downward and selects items in the menu setup.

⑰ **Set button (SET)**

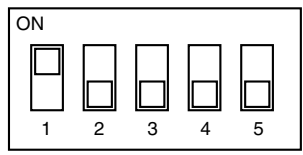
Validates the selection or opens a detailed menu.

⑱ **DIP switch**

Specifies certain settings shown in the figure. The default setting is marked with an asterisk *.

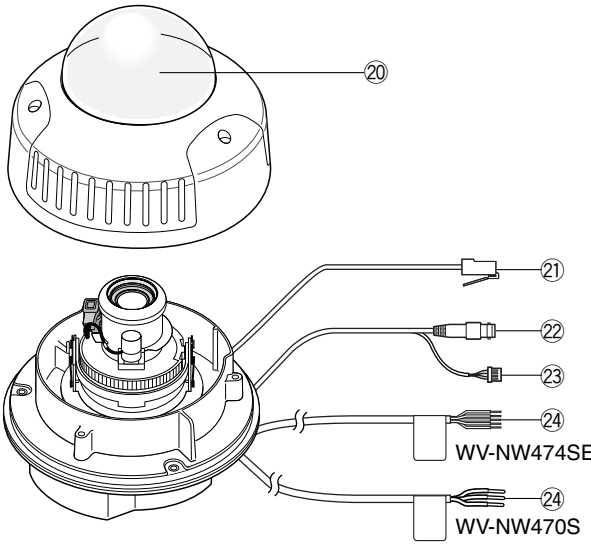
Note: The settings will be applied to the camera only when DIP SW, not MENU, is selected in the menu setup.

	1	2	3	4	5
	B/W level	B/W	Aperture	Upside Down	Sync
ON	High*	AUTO1	Soft	ON	LL
OFF	Low	OFF*	Sharp*	OFF*	INT*



⑲ **Monitor output jack**

Connects to the LCD monitor and other devices with a 3.5 diam. 2-pole L-type plug for checking images.



⑳ **Dome cover**

㉑ **Network port**

Connects to a PC or a network via a hub with a 10BASE-T/100BASETX cable.

㉒ **Video output connector**

Connects to the video input terminal of the monitor or recorder.

㉓ **Control connector**

Connects respective devices. See Connections and Specifications for details.

Day/night in: Optical sensor

Alarm in: Door switch

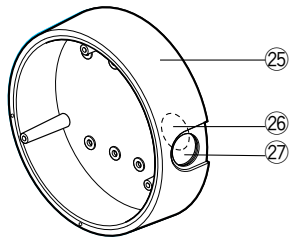
Alarm out: Buzzer

AUX out: Illumination

GND: Signal ground

㉔ **Power cable**

Supplies power to the camera.



㉕ **Camera mounting bracket**

㉖ **Cable access hole**

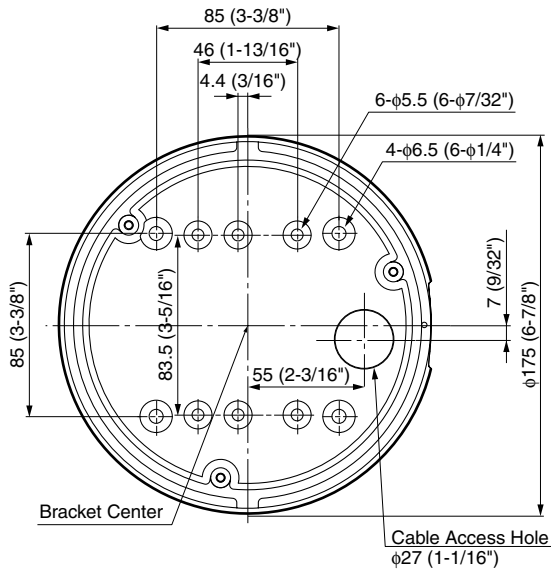
㉗ **Sideway cable exit**

INSTALLATION

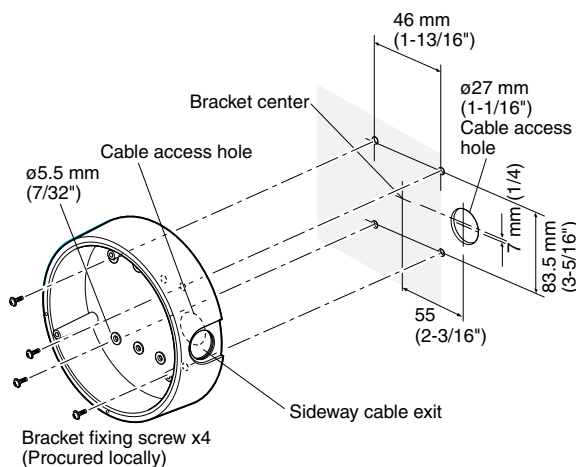
■ Installation Plans & Preparations

The supplied camera-mounting bracket can be installed directly on the wall/ceiling or on a procured junction box.

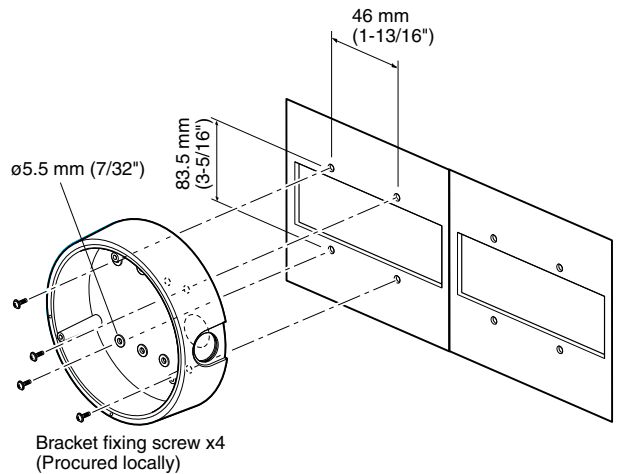
On the bottom of the bracket, there are four 6.5 mm screw holes and six 5.5 mm holes. Use the appropriate holes matching to the installation surface.



An example of surface mounting is shown.



An example of flush mounting is shown. This example shows two boxes: one is for camera mounting and the other is for cable junction.



1. Procurement

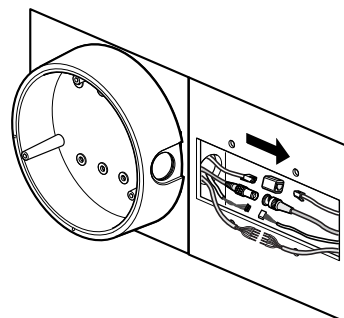
- Four screws
Locally procure four bracket fixing screws suitable for the installation surface and structure of the wall/ceiling or junction box.
- Junction box
When planning to use a junction box(s), procure one locally that meets the dimensions in the figure.

2. Installation space

Prepare a space on the surface measuring ϕ 175 mm or more.

3. Cable route

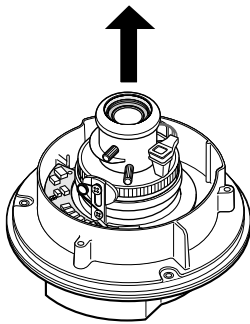
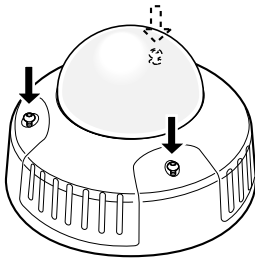
- When routing cables through the wall/ceiling, drill a hole as shown in the figure.
- When routing cables sideways, open the sideways cable exit unscrewing the lid with a hexagon wrench.



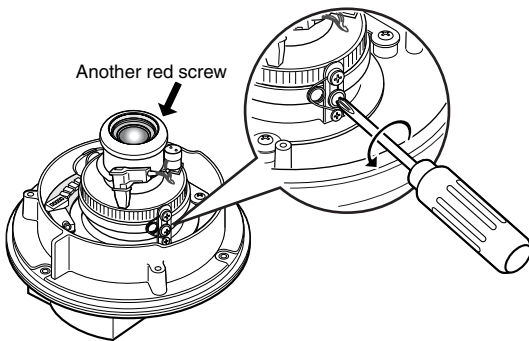
■ Mounting the Camera

Disassembling the Camera

1. Remove the dome cover by loosening the three tamper-proof screws with the supplied bit.



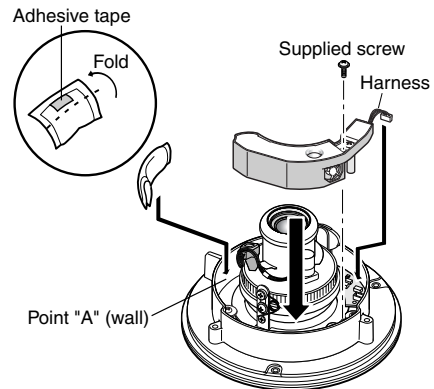
2. Remove the two red-coloured screws provided for transport protection with a Philips screwdriver.



Note: Prior to installation, discharge static electricity by placing your hands on a metallic surface. Failure to do so may damage the components inside the camera.

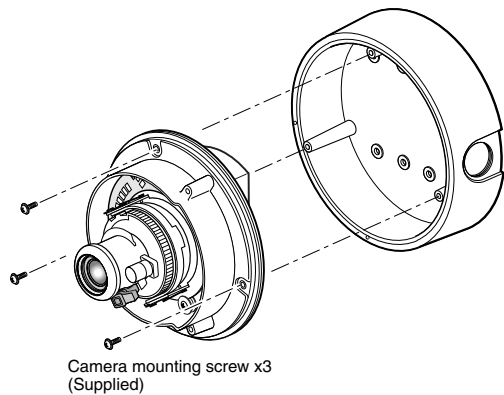
Optional Heater Unit

Assemble the optional heater unit into the camera if necessary. Refer to APPENDIX on page 34 for details.



Mounting the Camera

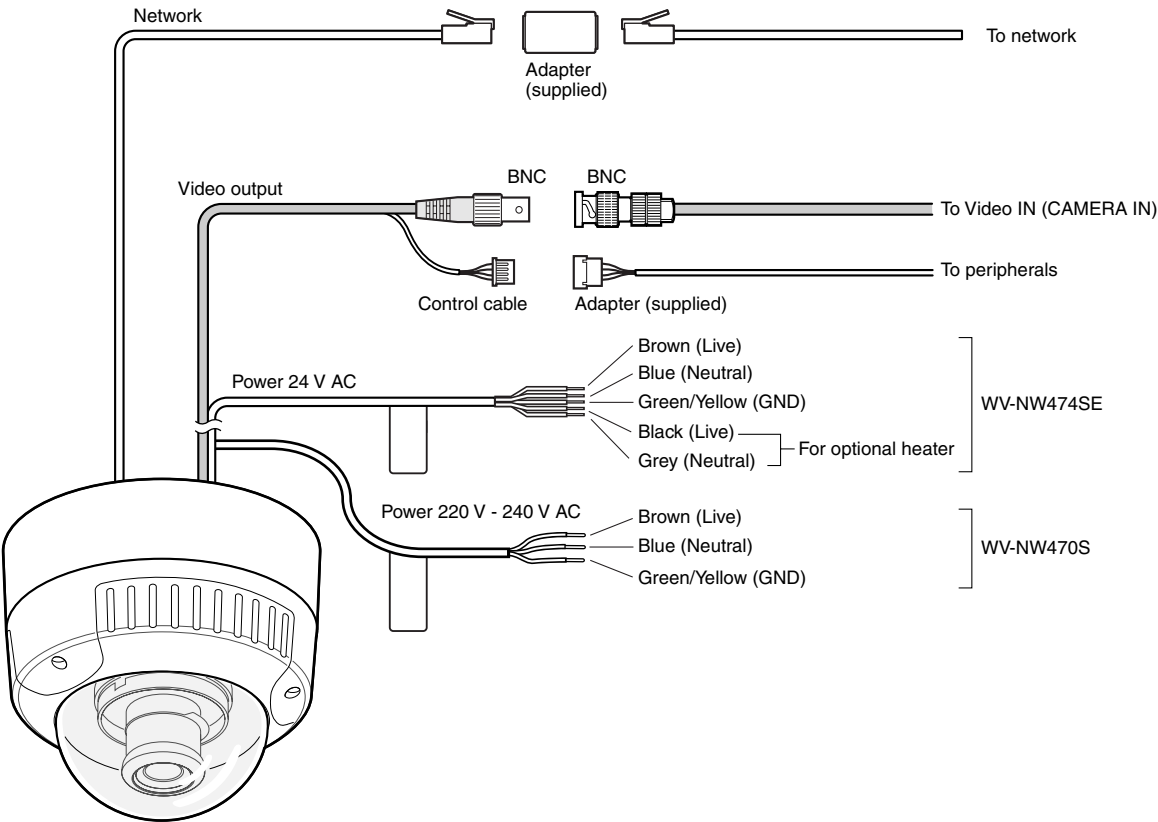
1. Fix the supplied camera-mounting bracket to the wall/ceiling or a junction box using four screws (locally procured).
2. Perform connections referring to ■ Connections.
3. Fix the camera to the bracket with the three supplied screws.
4. Adjust the image referring to ■ Image Adjustment.
5. A waterproof material such as silicone clay (rubber) or the like should be applied to the screws, screw holes, and other relevant portions if necessary.



■ Connections

Cautions:

- This product should be installed and connected in conformity with local codes by qualified service personnel or system installers.
- See page 2 for mains lead connection.
- Do not use a transformer with a capacity of more than 20 V A.
- Use a class 2 power supply.
- To prevent fire or electric shock hazard, use a UL listed cable (VW-1, style 1007) for 24 V AC connections.
- Be sure to connect the GND (grounding) lead of the camera and grounding terminal of the power supply.



● Power Connection

Use individual power sources for the camera and optional heater unit.

• Wire colours & functions

24 V AC Type

Wire colour	Function	Note
Brown	24 V AC Live	For camera
Blue	24 V AC Neutral	8.6 W
Green/Yellow	GND	
Black	24 V AC Live	For optional heater
Grey	24 V AC Neutral	12.1 W

220 V - 240 V AC Type

Wire colour	Function	Note
Brown	220 V - 240 V AC Live	9.9 W (camera)
Blue	220 V - 240 V AC Neutral	18.9 W (with heater)
Green/Yellow	GND	

• Cable length and wire gauge 24 V AC Type

The recommended cable length and thickness are shown in the table for reference. The voltage supplied to the power terminals of the camera should be between **19.5 V AC** and **28 V AC**.

Copper wire size (AWG)		#24 (0.22mm²)	#22 (0.33mm²)	#20 (0.52mm²)	#18 (0.83mm²)
Length of cable (approx.)	(m)	20	30	45	75
	(ft)	65	100	160	260

● Video Output Connection

Connect the video output cable to the monitor or other system device with the procured coaxial cable. 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
	(ft)	825	1650	1 980	2 640

● Control Connector

Connect the respective peripherals to supply and receive control signals. Use the supplied 5-pin cable adapter. For electrical ratings, refer to SPECIFICATIONS.

Pin#	Wire colour	Function	Example of peripherals
1	Black	Alarm in	Door switch
2	Grey	Alarm out	Buzzer
3	Pink	AUX out	Lighting lamp
4	Red	Day/night in	Optical sensor
5	Green	GND	Signal ground

● Network Port Connection

Connect the network port to a PC or a network via a hub with a 10BASE-T/100BASETX cable. Use the supplied adapter (RJ-45, female-female) if necessary.

Note: For network system connections, refer to ■ Network Connection Types.

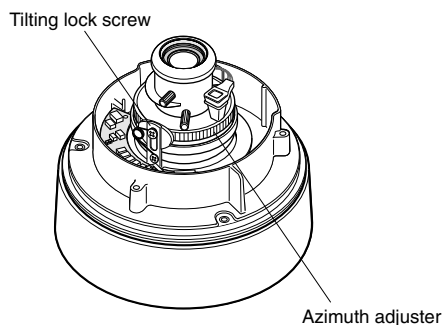
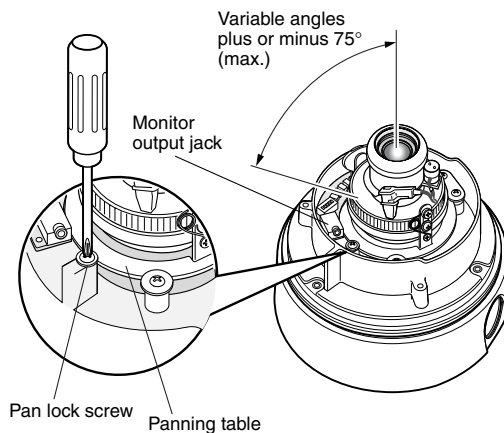
■ Image Adjustment

You can manually adjust the pan/tilt/azimuth angles, focus, and zoom while observing the connected monitor.

Notes:

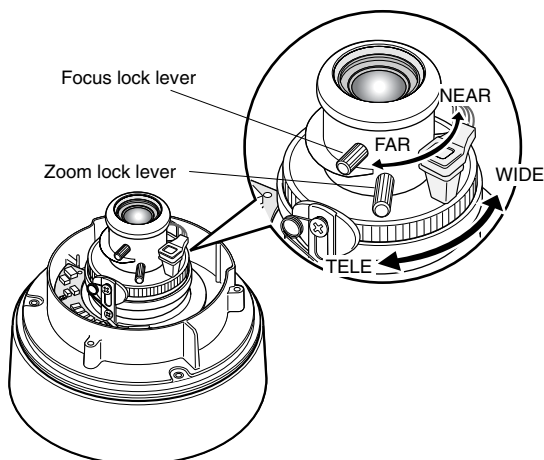
- Do not hold the camera by the lens unit when adjusting panning, tilting, or azimuth.
- The video output to the BNC will be interrupted while an LCD monitor is connected to the monitor output jack.

1. Connect an LCD monitor to the video jack.
2. Pan/tilt/azimuth adjustment
 - Loosen the two screws locking the pan and tilt tables.
 - Pan and tilt the table to aim the camera at what you need to watch.
 - Turn the azimuth adjuster to obtain a level image.
 - Tighten the two screws after adjustment.



3. Zoom

- Unlock the zoom lever.
- Move the lever to adjust the zoom.
- Lock the lever.



4. Focus

- Unlock the focus lever.
- Move the lever to adjust the focus.
- Lock the lever.

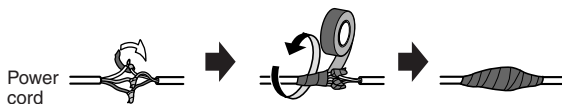
5. Reinstalling the dome cover

- Attach the dome cover to the camera so that the two position marks match.
- Tighten the three tamper-proof screws.

● Waterproof Process

If necessary, apply waterproof process to protect the camera from water soak.

- Power cord
Tape individual wires first, and finally all of them as a whole.



- Connector junctions
Tape the junction points of BNC-BNC, control connector-adaptor, and network connector-adaptor.



- Gaps and holes
Apply such a waterproof material as silicone clay (rubber) to the screws, screw holes, and other relevant portions.

■ Network Connection Types

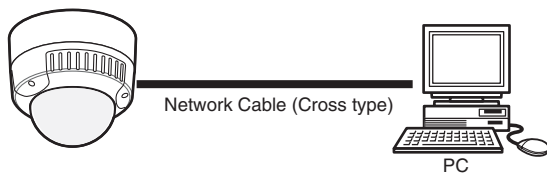
Prior to connections, specify the connection type and prepare relevant devices and cables.

Notes:

- We recommend that you use connection type 1 or type 2 when setting up the network address of the camera.
- Be sure to unplug or switch all the devices off, then start connections.

● Direct Connection to PC (Type 1)

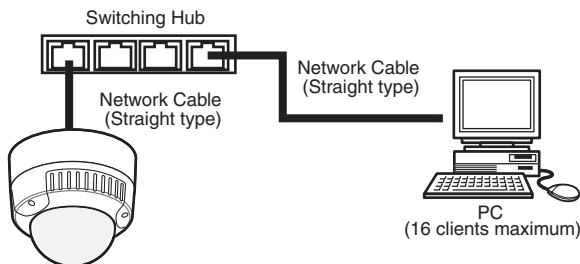
Use a cross-type network cable in the category 5 to connect the camera directly with the PC.



Necessaries: Cross-type network cable (Category 5)

● Connection to Intranet (Type 2)

A switching hub connected to the intranet is placed between the camera and the PC.

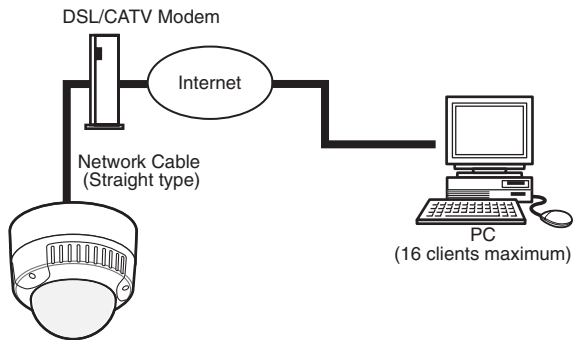


Necessaries:

- Straight-type network cable (Category 5)
- Switching hub or router (10BASE-T/100BASE-TX applicable)

● Connection to Internet (Type 3)

The PC accesses the camera through the Internet and the DSL/CATV modem.

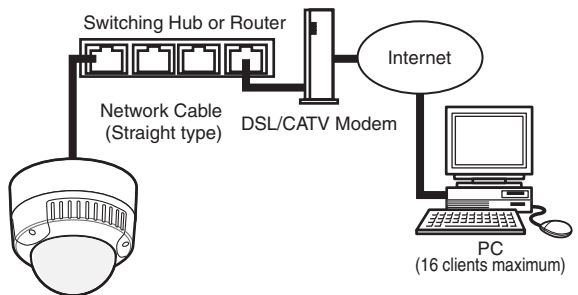


Necessaries:

- Straight-type network cable (Category 5)
- CATV modem (cable modem) or DSL modem

● Connection to Internet (Type 4)

A switching hub or a router may be added to type 3 connection.



Necessaries:

- Straight-type network cable (Category 5)
- CATV modem (cable modem) or DSL modem
- Switching hub or router (10BASE-T/100BASE-TX applicable)

Notes:

- Setting the router is required when connecting more than one camera. Refer to the manual included with the router.
- The camera does not support the PPPoE. Use a router that handles PPPoE when connecting the camera using that protocol.
- A global-type IP address is required when connecting via the Internet.

PREPARATIONS FOR NETWORK CONNECTIONS

■ Network Setup of Your PC

To set up the network of the PC, first change the TCP/IP settings of the PC to match them to the default settings of the camera.

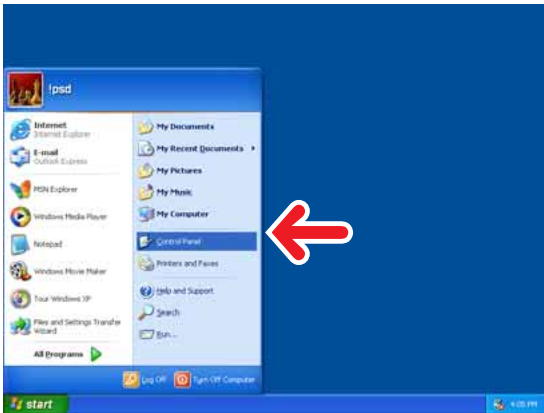
The following are the default network settings of the camera.

IP address : 192.168.0.10
Subnet mask : 255.255.255.0
Default gateway : 192.168.0.1

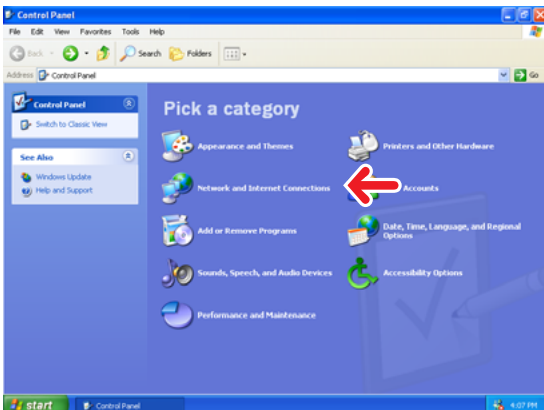
To access the camera, the IP address of the PC should be "192.168.0.XXX" (where XXX should be a number from 2 to 254 except 10).

Note: The procedure described below is based on the assumption that Windows XP is running on the PC. When running an OS other than Windows XP, see the manual included with the OS.

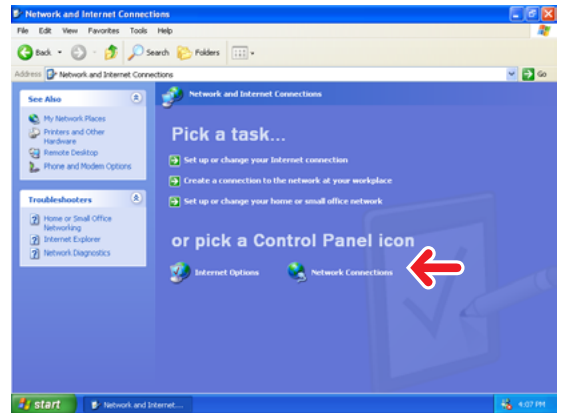
1. Start up your PC.
2. Click the [Start] button and select "Control Panel".



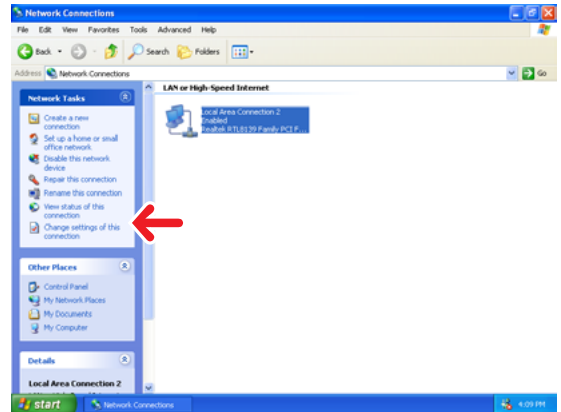
3. Double-click the "Network and Internet Connections" icon.



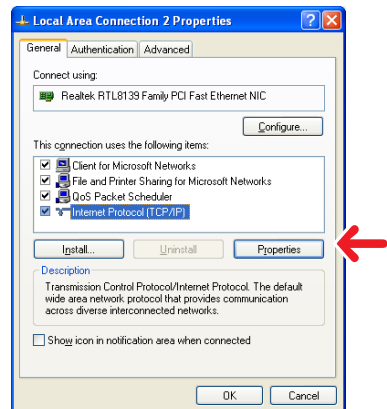
4. Double-click the "Network Connections" icon.



5. Click "Local Area Connection 2", and then click "Change settings of this connection" in the "Network Tasks" menu.

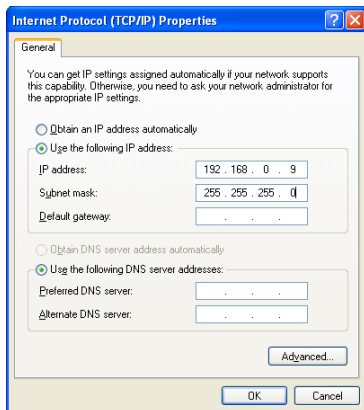


6. Click "Internet Protocol (TCP/IP)", and then click the [Properties] button.



- Click the "Use the following IP address" radio button and enter the IP address and the subnet mask as follows.

IP address : 192.168.0.9
Subnet mask : 255.255.255.0



- Click the [OK] button, and the window dialog box closes.

Note: Use a small sized picture when a blue picture appears instead of the live picture due to Internet traffic congestion.

■ Network Setup of the Camera

● Using Panasonic IP Setup Software

Set up the network of the camera using the "Panasonic IP Setup" software included on the CD-ROM provided with the camera.

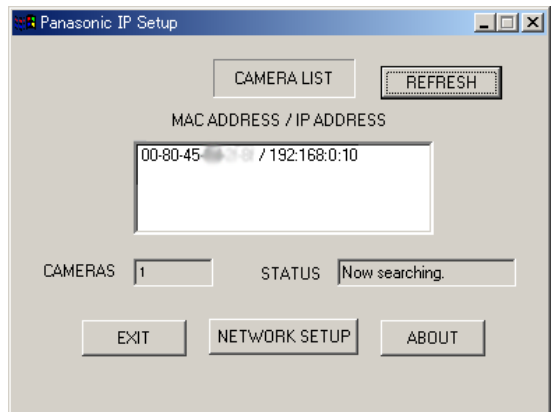
Notes:

- Do not access this menu through HTML or controllers during the Panasonic IP Setup procedure.
- Only one administrator is required.
- If a firewall (including software) exists, allow access to all UDP ports. Otherwise, it is impossible to use the "Panasonic IP Setup" software.

Double-click IP setup.exe.

The "Panasonic IP Setup" starts up.

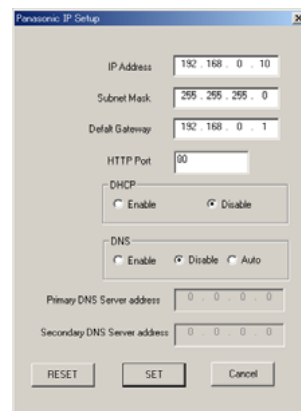
The MAC address and the IP address of the connected camera will be displayed. (Click the [REFRESH] button if they are not displayed.)



- Click the MAC ADDRESS/IP ADDRESS of the camera to be set up.
- Click the [NETWORK SETUP] button.
The setup window appears.

Notes:

- When two or more cameras are connected, the MAC addresses and the IP addresses of all the connected cameras will be displayed.
- The "Panasonic IP Setup" software can recognize only those cameras in the same subnet.
- Pressing the [REFRESH] button will display the updated MAC addresses and IP addresses of all the connected cameras that are in the same subnet.



- Set parameters for each item.

"IP Address"
"Subnet Mask"
"Default Gateway"
"HTTP Port"

- Input the parameters for your environment.

"DHCP"
"DNS"

- Click the [Enable] button when using DHCP and DNS.

When using the DNS functions, enter the "Primary DNS Server address" and the "Secondary DNS Server address".

- Click [AUTO] when the DNS server gets primary and secondary IP addresses from the DHCP server.

Notes:

- If DHCP is enabled although there is no DHCP server in the network, check "Disable" for DHCP in the "Panasonic IP Setup" window.
- If DHCP is enabled, and the DHCP server has not assigned an IP address yet, "0.0.0.0" is displayed for the IP address. The IP address of the camera will be displayed after the DHCP server assigns one to the camera.

- Click the [SET] button after completing the setting.

Important: It takes around 10 seconds for settings to take effect after the [SET] button has been pressed. The settings may be performed incorrectly if the power is off or the Ethernet cable is detached before the settings are completed.

Note: Do not make any other settings while executing Panasonic IP Setup.

● Using Network Setup Menu

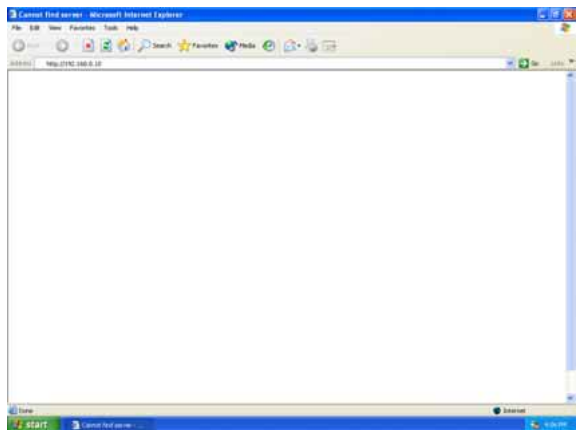
On completion of the network setup of the PC, begin the network setup of the camera. If two or more cameras are connected, each camera needs to be set up individually. The following information is necessary for the network setup of the camera. If you do not have these information, contact your network administrator or Internet service provider.

- IP Address
- Netmask
- Default Gateway
- Host Name
- Network Speed
- HTTP Port
- DHCP
- DNS
 - Primary DNS
 - Secondary DNS
- DDNS
 - Host Name
 - User Name
 - Password
 - Access Interval

- Start up Internet Explorer on your PC.



- Enter "http://192.168.0.10" (the default IP address of the camera) in the address bar.



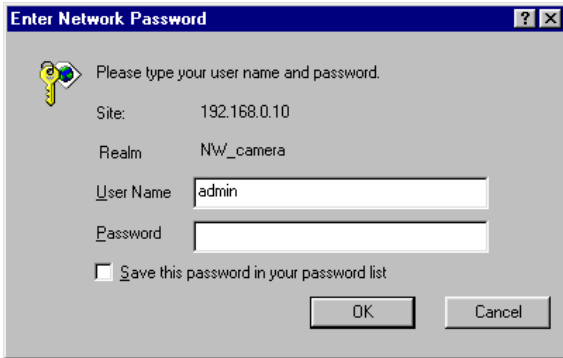
- The Main Menu of the camera appears.



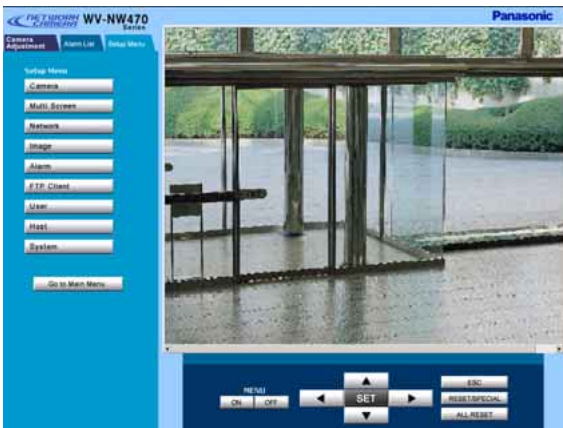
- Click the [Setup Menu] button. The authentication dialog appears.

5. Enter "admin" in the user name line.

Note: The default setting is "admin". The administrator should change the user name and password in the User Setup menu.

A dialog box titled "Enter Network Password" with a question mark icon. It contains a key icon and the text "Please type your user name and password." Below this, there are fields for "Site:" (192.168.0.10), "Realm:" (NW_camera), "User Name:" (admin), and "Password:". There is a checkbox for "Save this password in your password list" which is unchecked. At the bottom are "OK" and "Cancel" buttons.

6. Click the [OK] button. The "Setup Menu" window opens.

A screenshot of the Panasonic WV-NW470 Setup Menu. The left sidebar has buttons for "Camera", "Multi Screen", "Network", "Image", "Alarm", "FTP Client", "User", "Host", and "System". The main area shows a live video feed of a glass-enclosed structure. At the bottom, there are navigation buttons: "MENU", "ON", "OFF", "SET", "END", "REBOOT/RECALL", and "ALL RESET".

7. Click the [Network] button. The "Network Setup" window appears.

A screenshot of the "Network Setup" configuration screen. It has a table-like layout with various network settings. The settings are as follows:

Setting	Value
IP Address	192.168.0.10
Netmask	255.255.255.0
Default Gateway	192.168.0.1
Host Name	NW_camera
Network Speed	Auto
HTTP Port	80
DHCP	ON
DNS	ON
Primary DNS	0.0.0.0
Secondary DNS	0.0.0.0
DDNS Setup	ON
Host Name	NW_camera
User Name	
Password	
Access Interval	1 Hour

At the bottom right, there is a "SET & REBOOT" button.

8. Enter parameters for each item in the columns. Refer to Network Setup Parameters vs. Connection Type.

Notes:

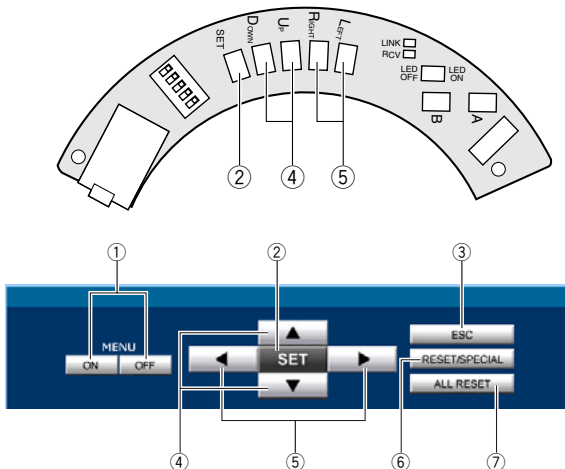
- After clicking the SET & REBOOT button, the browser software stops refreshing images and displays a dialog box prompting you to restart.
- Wait for around 10 seconds until rebooting is complete.

PRIOR TO CAMERA SETUP

This section describes the camera setup procedures common to accesses from the PC and from the camera.

Buttons Used for Setup

Press the buttons inside the camera, or click the buttons on the computer display. Each button is assigned functions in the setup as follows.



- ① **Menu ON/OFF button:** Opens or closes the setup menu,
- ② **SET button:** Validates the selection, opens a detailed menu.

SET button: (Inside the camera)

To open the setup menu, hold this down for 2 seconds.

To close the setup menu, move the cursor to END and press [SET].

To return to the previous menu, move the cursor to RET and press [SET].

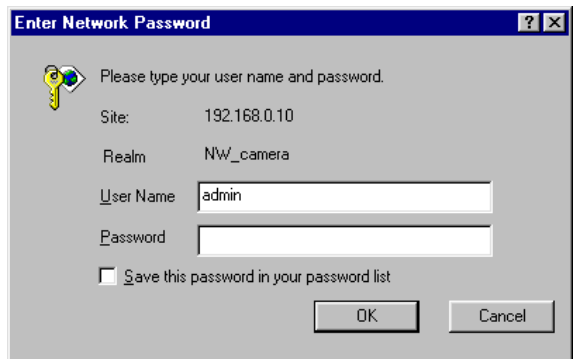
- ③ **ESC button:** Returns to the previous menu (one layer higher).
- ④ **Up/Down button:** Moves the cursor up and down.
- ⑤ **Left/Right button:** Moves the cursor right and left, selects parameters, adjusts some levels.
- ⑥ **RESET/SPECIAL button:**
Pressing [Right] and [Left], or clicking RESET/SPECIAL: Resets the selected parameter to the factory default when the cursor is on it, or opens the SPECIAL menu when the cursor is on END at the bottom of the menu.
- ⑦ **ALL RESET button:**
Pressing [Right], [Left], and [SET] buttons simultaneously or clicking ALL RESET: Resets all settings to the factory default.

Camera Setup Menus

From the PC

For details, refer to the PDF manual contained in the supplied CD-ROM.

1. Open the Main Menu of the camera, referring to page 17.
Log in as a level-1 administrator in the dialog box if requested.
2. Click the Setup Menu button on the left side of the screen.
The login dialog box will appear.



Note: Confirm the entered IP address when neither the dialog box nor the Main Menu appears. You may need to re-enter the IP address.

3. Enter the registered user name and password.

Note: Enter "admin" when you operate the system very first time, or you have not registered user names yet. For this time, you need not to enter the password.

Menu control buttons will appear under the camera image.



- Click the Menu ON button to overlay the ** SET UP ** menu on the camera image. The cursor is highlighted on the window.



- Move the cursor to SETUP DISABLE if it is displayed, or skip to step 7 if ENABLE is displayed.
- Click the SET button. DISABLE will change to ENABLE, and the camera is now ready to be set up.
Note: While DISABLE is displayed, setup operations are disabled.
- Move the cursor to CAMERA \rightarrow , and click the SET button. CAM SETUP opens.



Notes:

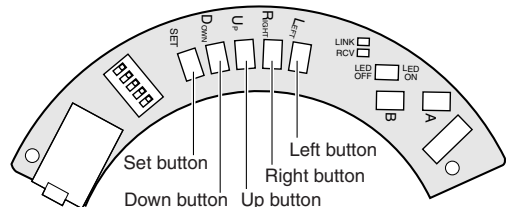
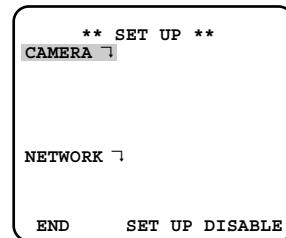
- Refer to the next page for setup operations.
 - Return the menu to ** SET UP ** (step 3 above), then go to step 8.
- Click the Menu OFF button after finishing the setup operations. The changed settings will be stored in the camera, and the overlaid camera menu will disappear.

Notes:

- Access the camera again on the WWW-browser to validate the settings for PC oriented items if the browser screen pauses.
- You can exit from the camera setup by clicking the Return button, though the menu is displayed if the Menu OFF button has not been clicked yet.

• From the Camera

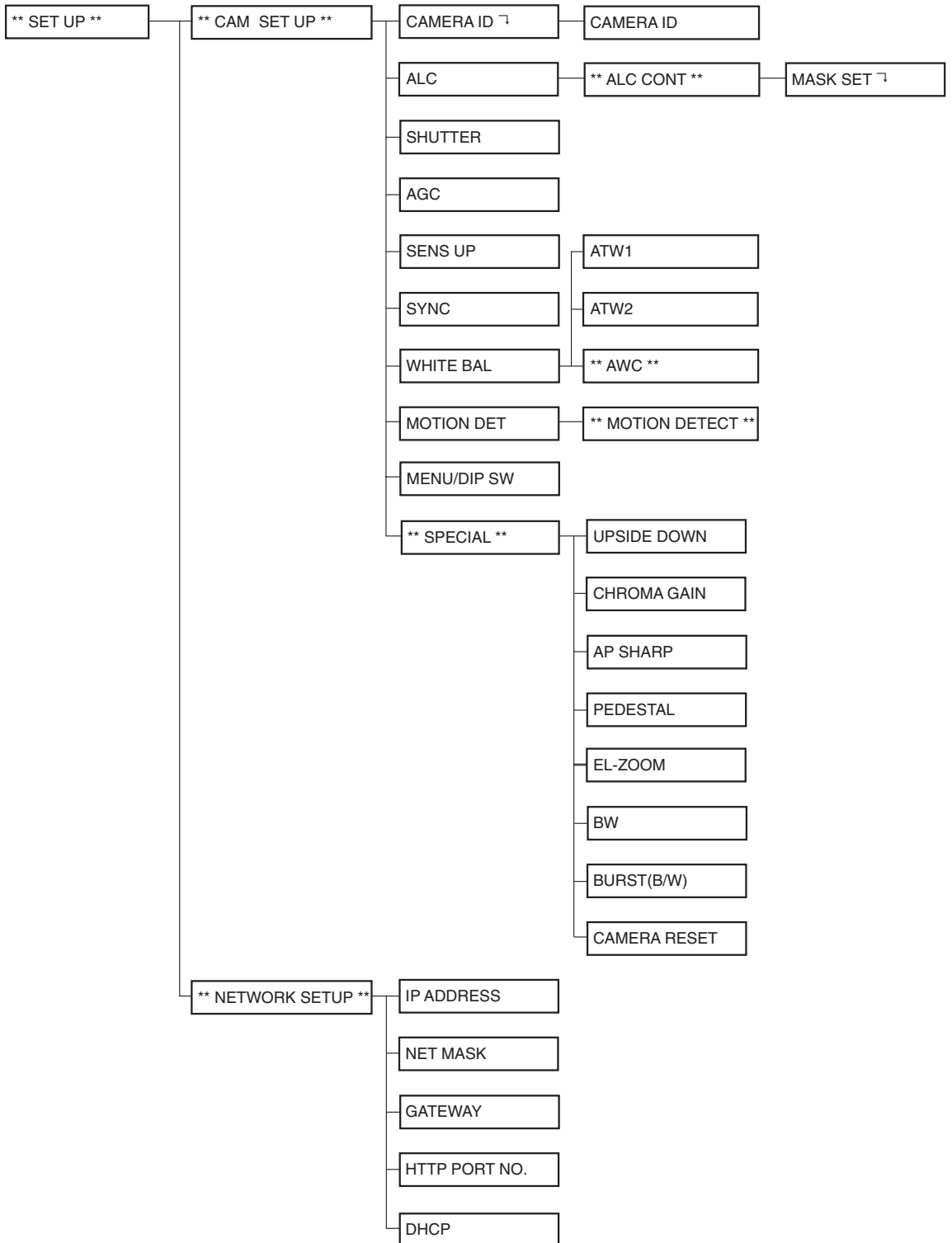
- Hold down the [SET] button for 2 seconds. ** SET UP ** will appear, overlaid on the camera image.



- Move the cursor to SETUP DISABLE.
- Press [SET]. DISABLE will change to ENABLE, and the camera is now ready to be set up.
Note: While DISABLE is displayed, setup operations are disabled.
- Move the cursor to CAMERA \rightarrow , and press [SET]. The CAM SETUP opens.
Notes:
 - Refer to the next page for setup operations.
 - Return to the menu where END is displayed on the bottom, then go to the next.

- Move the cursor to END, and press [SET] after finishing the setup. The changed settings will be stored in the camera, and the overlaid camera menu will disappear.
Note: If no button is pressed for 6 minutes, the setup menu disappears.

■ Setup Menu Tree

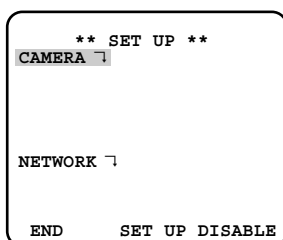


SETTING PROCEDURES

The following pages describe setting operations from the camera.
For accessing from the PC, interpret these instructions as follows.

Function	From the Camera	From the PC
Opening the camera setup menu	Hold down the [SET] button for 2 seconds.	Click the Camera Setup button in the main page to display the menu control buttons. Click the [MENU ON] button.
Closing the camera setup menu	Press the [SET] button while the cursor is at END.	Click the [MENU OFF] button.
Opening a more detailed setup menu	Press the [SET] button while the cursor is at an item tailed with "↓" mark.	Click the [SET] button while the cursor is at the item tailed with "↓" mark.
Returning to the previous menu	Press the [SET] button while the cursor is at RET.	Click the [SET] button while the cursor is at RET or simply click the [ESC] button.
Opening the special menu	Hold down the [Left] and [Right] buttons simultaneously while the cursor is at END in CAM SETUP.	Click the [RESET/SPECIAL] button while the cursor is at END in CAM SETUP.
Resetting the parameter of an item	Hold down the [Left] and [Right] buttons simultaneously while the cursor is at the item.	Click the [RESET/SPECIAL] button while the cursor is at the item.
Resetting all the settings	Hold down the [Left], [Right], and [SET] buttons simultaneously while the cursor is at CAMERA RESET.	Click the [ALL RESET] button while the cursor is at CAMERA RESET.
Selecting an item	Press the [Up] or [Down] button.	Click the [▲] or [▼] button.
Selecting a parameter	Press the [Left] and [Right] button.	Click the [◀] or [▶] button.
Validating the selection	Press the [SET] button.	Click the [SET] button.
Escaping from the VMD mask setup etc.	Hold down the [SET] button for 2 seconds.	Click the [ESC] button.

■ Setup Selection

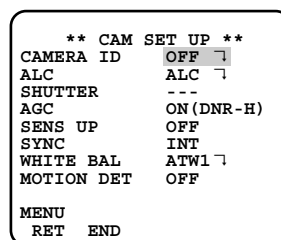


1. Move the cursor to CAMERA or NETWORK, and press [SET] to open the desired setup menu.
CAMERA↓: Opens the CAMERA SETUP menu.
NETWORK↓: Opens the NETWORK SETUP menu.

2. Move the cursor to END, and press [SET] to return to camera image screen.

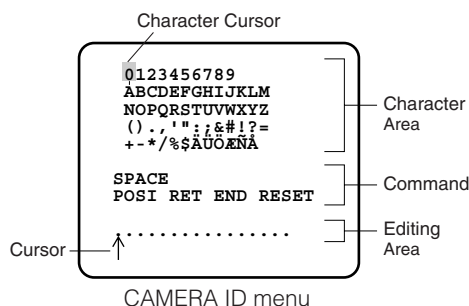
Note: When SETUP DISABLE appears in the bottom line you cannot change the currently active settings. This disablement is designed to prevent accidental setting change. Refer to the previous page to change it to ENABLE.

■ Camera Setup Menu (CAM SETUP)



1. Camera Identification (CAMERA ID) Setting

You can assign a name to the camera. The camera ID consists of up to 16 alphanumeric characters. The camera ID display can be switched on and off on the monitor screen.



To edit the CAMERA ID

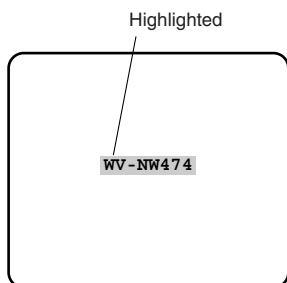
1. Move the cursor to CAMERA ID.
The factory default setting is OFF.
2. Press [SET]. The CAMERA ID menu appears. The cursor on the letter "0" is highlighted.
3. Move the cursor to the character you want to edit by pressing [Left]/[Right]/[Up]/[Down].
4. After selecting the character, press [SET]. The selected character appears in the editing area. (The cursor in the editing area moves to the right automatically at this moment.)
5. Repeat the steps above until all characters are edited.

Command Usage

Move the cursor to the respective commands, and press [SET].

SPACE: Adds a blank space to the cursor position in the editing area.

POSi: Opens the camera ID position window. Move the highlighted camera ID to the desired position with [Left]/[Right]/[Up]/[Down], and press [SET].



Note: The camera ID will be displayed under the clock display when both of them are set to ON.

RET: Returns to the CAM SETUP menu.

END: Closes the setup menu and returns to camera image screen.

RESET: Cancels all characters in the editing area.

To replace a specific character in the CAMERA ID

1. Move the cursor to the editing area by pressing [Down].
2. Move the cursor to the character to be replaced by pressing [Left] or [Right]. Then move the cursor to the character area and select a new character.
3. Press [SET] to determine the CAMERA ID.

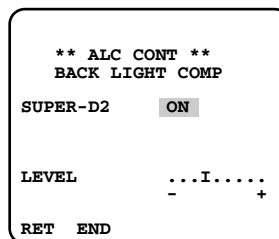
2. Light Control Setting (ALC)

2-1. ALC Mode with SUPER-D2 ON

Super Dynamic II Function (SUPER-D2)

The important object in a scene is usually placed in the centre of the monitor screen. In the SUPER-D2 mode, more photometric weight is given to the centre of the screen (where the important object is located) than to the edge of the screen (where bright backlight would most likely be located). You can use the SUPER-D2 function if you select ALC. It eliminates interference by strong background lighting which makes the camera picture dark, such as a spotlight.

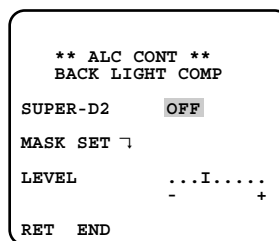
1. Move the cursor to ALC, and press [SET]. The ALC CONT menu appears.
2. Move the cursor to SUPER-D2 and select ON.



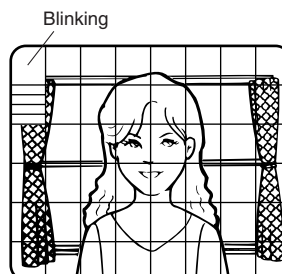
3. If you want to adjust the video output level, move the "I" cursor for LEVEL. Adjust to the desired level by pressing [Left] or [Right].

2-2. ALC Mode with SUPER-D2 OFF

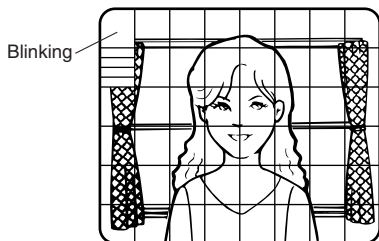
1. Move the cursor to SUPER-D2 and select OFF. The MASK SET appears on the menu.



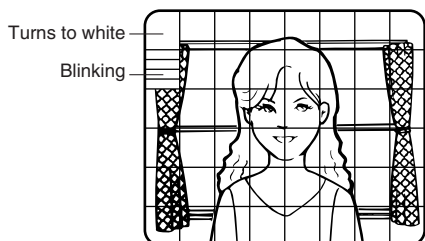
2. Move the cursor to MASK SET and press [SET]. The 48 mask areas appear on the monitor screen. The cursor is blinking in the upper left corner of the screen.



3. Move the cursor to the area where backlight is bright and press [SET] to mask that area. The mask turns to white. (When the cursor is moved on an area that has already been masked, the mask and cursor start blinking.)



4. Repeat step 3 to mask the desired areas. To cancel masking, move the cursor to that area and press [SET].
5. After masking is completed, press [SET] for 2 seconds or more. The ALC CONT menu appears.
6. If you want to change the video output level (picture contrast), move the "I" cursor for LEVEL and adjust the level.



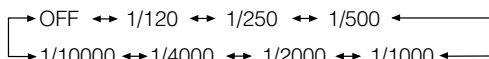
Note: If ON is selected for SUPER-D2, a shadow (black line) may appear at the boundary between the bright and the dim scene. This is a natural phenomenon and does not indicate trouble.

3. Shutter Speed Setting (SHUTTER)

Note: To select electronic shutter speed, select OFF for SUPER-D2 in the ALC CONT menu.

Move the cursor to SHUTTER and select the electronic shutter speed.

The preset values for SHUTTER (electronic shutter speed) change by pressing [Left] or [Right] as follows:
The factory default setting is ---.



4. Gain Control Setting (AGC ON (DNR-L, DNR-H)/OFF)

You can set the gain (brightness level portion of an image) to automatic level adjustment.

Move the cursor to AGC and select automatic level adjustment ON (DNR-H), ON (DNR-L) or fixed level (OFF).

ON (DNR-L): Selects lower noise reduction level.

ON (DNR-H): Selects higher noise reduction level.

OFF (Fixed Level): Disables the gain control function.

The factory default setting is ON (DNR-H).

Notes:

- If ON (DNR-H) is selected for the AGC, the noise reduction function is automatically activated under low light conditions to reduce noise. In pictures containing a moving object, this may result in an after-image.
- DNR-L is recommended for pictures containing a moving object that results in an afterimage. However, the noise slightly increases.
- DNR-H and DNR-L do not appear for AGC on the system controller setup menu.

5. Electronic Sensitivity Enhancement (SENS UP)

There are two modes for SENS UP.

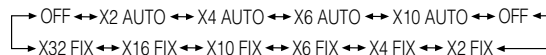
AUTO: If you select X10 AUTO, for example, the sensitivity is automatically raised to X10 max. When AUTO is selected, AGC is automatically set to ON.

FIX: If you select X32 FIX, for example, the sensitivity is raised to just X32.

The factory default setting is OFF.

Move the cursor to SENS UP and select the parameter for electronic sensitivity enhancement.

The preset values for SENS UP (electronic sensitivity enhancement) change by pressing [Left] or [Right] as shown at below:



Notes:

- When ON is selected for SUPER-D2 in the ALC CONT menu, FIX is not available for this item.
- When you select AUTO for SENS UP and ON for SUPER-D2, the SENS UP function has priority so that the SUPER-D2 function is not activated automatically.
- While the SENS UP function is selected, noise, spots or a whitish phenomenon may appear in the picture when the sensitivity of the camera is increased. This is a normal phenomenon.

6. Synchronization Setting (SYNC)

There are three synchronization modes: INT (internal), LL (line-lock), and VD2 (vertical drive). You can select the internal or line lock mode in the menu setup, but you cannot select VD2. The VD2 signal is supplied from an external device e.g., a Video Multiplexer, by being multiplexed on a coaxial cable, and it overrides the internal and line-lock mode even when these modes are selected in the menu.

Note: The priority for sync sources is: VD2 (highest) – LL – INT (lowest).

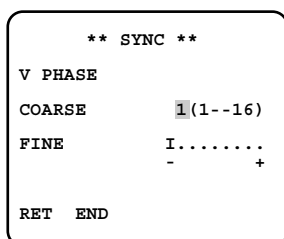
1. Move the cursor to SYNC and select a mode.

INT: Synchronizes the camera to the internal generator.

LL: Synchronizes to 24 V AC or 220 V - 240 V AC. The default setting is INT.

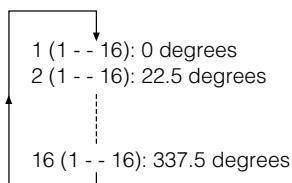
2. When LL is selected, press [SET] to open a submenu.

The vertical phase can be adjusted in the submenu.



3. Supply the video output signal of the camera to be adjusted and the reference camera video output signal to a dual-trace oscilloscope.
4. Set the oscilloscope to the vertical rate and expand the vertical sync portion on the oscilloscope.
5. Move the cursor to COARSE. The cursor is highlighted.
6. Press [Left] or [Right] to match the vertical phase for both video output signals as closely as possible. (COARSE adjustment can be incremented in 16 steps by 22.5 degrees by pressing [Left] or [Right].)

Note: After the sixteenth step, the adjustment returns to the first step.



7. Move the cursor to FINE.
8. Press [Left] or [Right] to match the vertical phase for both video output signals as closely as possible.

(FINE adjustment can be made by up to 22.5 degrees by pressing [Left] or [Right].)

Notes:

- When the "I" cursor reaches the "+" end, it jumps back to "-". At the same time, COARSE is incremented by one step to enable a continuous adjustment. The reverse takes place when the "I" cursor reaches the "-" end.
- When [Left] or [Right] is kept pressed for a second or more, the "I" cursor moves faster.
- To reset COARSE and FINE to the values preset at the factory, press [Left] and [Right] simultaneously. COARSE and FINE adjustments are preset at the factory to zero-crossing of the AC line phase.
- If the AC line contains noise (spike noise, etc.), the stability of the vertical phase of the camera video output signal may be disturbed.

7. White Balance Setting (WHITE BAL)

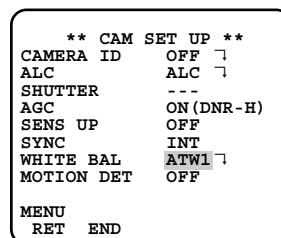
You can select one of four modes for white balance adjustment as follows.

The factory default setting is ATW1.

• ATW1 (Auto-Tracing White Balance 1)

Move the cursor to WHITE BAL and select ATW1.

In this mode, the colour temperature is monitored continuously and thereby white balance is automatically set. The colour temperature range for the proper white balance is approximately 2 600 - 6 000 K. Proper white balance may not be obtained under the following conditions:



1. The colour temperature is out of the 2 600 - 6 000 K range.
2. When the scene contains mostly high colour temperature objects, such as a blue sky or sunset.
3. When the scene is dim.

In these cases, select the AWC mode.

• ATW2 (Auto-Tracing White Balance 2)

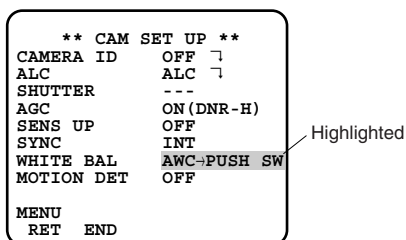
Auto-tracing white balance in the sodium lamp mode (ATW2)

When you select ATW2 for sodium lamp, white balance is automatically set (no operation needed).

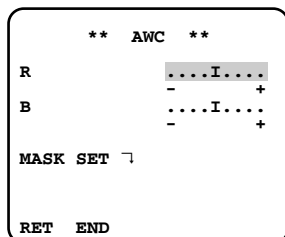
Note: ATW1 and ATW2 do not appear for WHITE BAL on the system controller setup menu.

• Automatic White Balance Control Mode (AWC)

In this mode, accurate white balance is obtained within a colour temperature range of approximately 2 300-10 000 K.



1. Move the cursor to WHITE BAL and select AWC → PUSH SW.
2. Press [SET] to start white balance setup. PUSH SW is highlighted to indicate that white balance is being set.
3. When the white balance setting is completed, PUSH SW returns to normal display.
Note: If white balance is not set, PUSH SW is being highlighted.
4. When you want to adjust white balance manually, press [Right] to select AWC and press [SET]. The AWC menu appears on the monitor screen. (When ATW is selected, pressing [SET] displays the ATW menu.)



Manual Fine Adjustment for AWC (ATW)

You can set the white balance items manually.

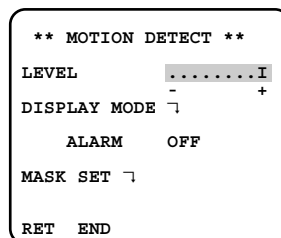
1. To set MASK SET, proceed as described in steps 2 to 4 of "ALC mode with SUPER-D2 OFF".
2. Move the cursor to R.
3. Press [Left] or [Right] to obtain the optimum amount of red gain.
4. Move the cursor to B.
5. Press [Left] or [Right] to obtain the optimum amount of blue gain.

Note: When you need to set MASK SET, re-adjust to obtain the optimum amount of red and blue gain.

8. Motion Detector Setting (MOTION DET)

The motion detector detects the moving objects in the scene by monitoring changes in brightness level. You can select the level of sensitivity for motion detection. When this camera is connected to a compatible intelligent CCTV system, the camera transmits an alarm signal by multiplexing it with the video signal.

1. Move the cursor to MOTION DET and select ON. The factory default setting is OFF.
2. Press [SET]. The MOTION DETECT menu appears on the monitor screen.



3. Move the cursor to MASK SET and press [SET]. MASK SET lets you set 48 mask areas. To set MASK SET, proceed as described in steps 2 to 4 of "ALC mode with SUPER-D2 OFF".
4. Move the cursor to ALARM and select ON or OFF to set the alarm for DISPLAY MODE.
Note: When using the WV-RM70, WV-CU550C, WV-CU161C or WV-CU360C controller with this model, select OFF for ALARM.
5. Move the cursor to DISPLAY MODE and press [SET] to see the current setting. The masks that detect the brightness changes start blinking.
6. To raise detection sensitivity, press [SET] to return to the MOTION DETECT menu.
7. To obtain the optimum detection level, move the "I" cursor to adjust the level.
8. Repeat the procedures above to obtain a satisfactory setting.

Notes:

- Masking or adjusting the detection level is needed to prevent malfunction under the following conditions:
 - When shooting an object under flickering fluorescent light.
 - When leaves or curtains etc. are swayed by the wind.
 - When the object is lighted by lighting equipment that constantly turns on and off.
 - It takes about 0.2 seconds for the alarm signal to reach the alarm terminal of the VTR after the camera detects the object.
- Because the alarm signal is multiplexed on the video signal, it may be mistakenly interpreted by other video equipment as a time code signal. Therefore, when the camera is not used in a Panasonic Intelligent CCTV System, select OFF to prevent the above from occurring.

- The camera will deactivate the detector for a few minutes after the power of the camera is turned on or the BW setting in the Special Menu is set to something other than OFF.
- The motion detection function is not designed specifically for prevention of theft, fire, etc.

9. Menu/DIP SW Selection

Some of the settings: picture upside down, aperture level, BW, and synchronization: are operable in the menu setup or from the DIP switch on the camera. You can select MENU or DIP SW in the second from the bottom of the **CAM SET UP** menu to apply either settings to the camera.

1. Move the cursor to the second bottom line.
2. Press [Left] or [Right] to select the parameter.

MENU: Applies the settings specified in the menu setup.

DIP SW: Applies the settings specified by the DIP switch, SW1-SW5.

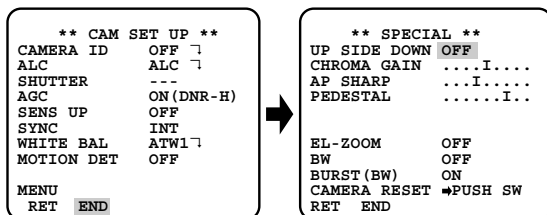
The default setting is DIP SW.

Note: The **SPECIAL** menu specifies the following: picture upside down, aperture level, and BW settings: while the **CAM SET UP** menu specifies the synchronization mode.

10. Special Menu (SPECIAL)

This menu lets you adjust and set up the video signal of the camera to meet your requirements.

Move the cursor to END in the bottom line of the CAM SET UP menu and press [Left] and [Right] simultaneously (holding down [Left] and press [Right]) for 2 seconds or more. The SPECIAL menu appears on the monitor screen.



10-1. Camera Picture Upside Down Positioning (UP SIDE DOWN)

1. Move the cursor to UP SIDE DOWN.
2. Select ON when you want to turn the picture upside down.

10-2. Chroma Level Setting (CHROMA GAIN)

1. Move the cursor to CHROMA GAIN.
2. While observing the vectorscope or colour video monitor, move the "I" cursor to adjust the chroma level.

10-3. Aperture Gain Setting (AP SHARP/AP SOFT)

1. Move the cursor to AP SHARP.
2. To select AP SOFT, press [SET].
3. While observing the waveform monitor or colour video monitor, move the "I" cursor to adjust the aperture gain level.

10-4. Pedestal Level Setting (PEDESTAL)

1. Move the cursor to PEDESTAL.
2. While observing the waveform monitor or colour video monitor, move the "I" cursor to adjust the pedestal level (black level).

10-5. Electronic Zoom (EL-ZOOM)

1. Move the cursor to EL-ZOOM.
2. Select ON or OFF using [Left] or [Right].
The factory default setting is OFF.
ON: x2 electronic zoom is available with the ZOOM switch on the controller.
OFF: The electronic zoom function is disabled.
3. While the cursor is on EL-ZOOM, press [SET]. The EL-ZOOM setting menu appears.

```

** EL-ZOOM **

PAN/TILT  →PUSH SET
ZOOM      →PUSH SET

      U TILT D/L PAN R

RET END

```

4. Move the cursor to PUSH SET for ZOOM and press [SET] to display the ZOOM setting menu.

```

** EL-ZOOM **

PAN/TILT  →PUSH SET
ZOOM      →PUSH SET

      U ZOOM D

RET END

```

5. Press [Up] or [Down] to zoom in or out the image.
6. Move the cursor to PUSH SET for PAN/TILT and press [SET]. The PAN/TILT setting menu appears.

7. Press [Up] or [Down], [Left] or [Right] to change the angular field of view.
8. To return to the EL-ZOOM setting menu, press [SET].

10-6. BW

This function lets you switch from colour to black-and-white picture automatically in low light conditions such as at night.

1. Move the cursor to BW.
2. Select AUTO1, AUTO2, EXT, ON or OFF using [Left] or [Right].

The factory default setting is OFF.

AUTO1: The camera selects black and white mode if the picture is dark, or colour mode if the picture is bright enough.

AUTO2: Applying AUTO1 may cause malfunction when using a source of near-infrared light at night because the illuminance changes significantly when switching between the colour picture and a black-and-white picture. This can be prevented by using the AUTO2 setting to detect the type of light source.

Notes:

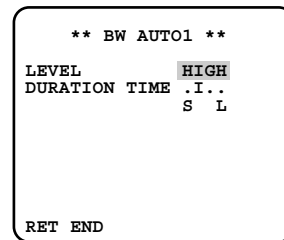
- Because the type of light source is detected based on information received from the CCD image pickup element, an object that is constantly moving or has the same colour as its background may not always be properly recognized. When choosing the AUTO2 mode, make sure to use a light source having a wavelength of 800 nm or more.
- The object may be out of focus when using a source of near-infrared light than using the visible light.

EXT: Colour picture reverts to black-and-white picture when an external day/night switching signal is received (refer to alarm connections).

ON: Black-and-white mode enabled.

OFF: Colour mode enabled.

3. Select AUTO1 or AUTO2 using [Left] or [Right].
4. Press [SET].
The AUTO1 or AUTO2 menu appears on the monitor screen.
5. Move the "I" cursor to LEVEL to select the illuminance level using [Left] or [Right].
The factory default setting is HIGH.
LOW: Colour picture switches to black-and-white picture at approx.2 lx.
HIGH: Colour picture switches to black-and-white picture at approx.5 lx.



6. Move the "I" cursor for DURATION TIME to set the switching time using [Left] or [Right].

The following switching times are available:

10s--30s--60s--300s

(S)

(L)

10-7. BURST (BW)

1. Move the cursor to BURST (BW).
2. Select ON or OFF using [Left] or [Right].

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

OFF: The burst signal is not output.

The factory default setting is ON.

Notes:

- We recommend that you usually select ON.
- When the camera is used to synchronize the system for external sync, select ON to prevent a malfunction.

To reset to the factory settings (CAMERA RESET)

1. Move the cursor to CAMERA RESET. The PUSH SW is highlighted.
2. While holding down [Left] or [Right], press [SET] for 2 seconds or more. The camera is reset to the factory settings.

Note: For resetting network setup and HTML setup, refer to page 30.

■ Network Setup (NETWORK SETUP)

Set up network parameters when connecting the 10/100BASE jack with a network.

Notes:

- Access the setup menu from the PC to use the DHCP or DNS server, because these settings are not included in this window.
- Ask your system administrator or ISP (Internet Service Provider) about available IP address, subnet mask, and gateway, prior to setup.
- The assigned address should be a global type when connecting via the Internet. Ask your ISP whether it is.

**** NETWORK SET UP ****

IP ADDRESS	
192.168. 0. 10	
NETMASK 255.255.255. 0	
GATEWAY 192.168. 0. 1	
HTTP PORT NO. 80	
DHCP OFF	
RET END	

1. Move the cursor to NETWORK SETUP in the SETUP menu window and press [SET]. The NETWORK SETUP menu opens.

The factory default settings are as follows.

IP ADDRESS: 192.168.0.10

NETMASK: 255.255.255.0

GATEWAY: 192.168.0.1

HTTP Port Number: 80

DHCP: OFF

2. Move the cursor to the line you wish to edit, and press [SET].
Parameters become editable.
3. Select a digit using [Left] or [Right].
4. Select a number in the digit using [Up] or [Down].
5. Repeat steps 2, 3 and 4 above appropriately until all parameters are set.
6. Move the cursor to END and press [SET] to close the setup menu and store new settings, or select RET to go back to the SETUP menu.

Note: The port number assigned to the camera is exclusive, and any other usage is not allowed.

INITIALIZING

You can reset the following data back to the factory default settings.

- Camera Setup
- Setup Menu (PC oriented)
- HTML files

■ Initializing the Camera Menu

- Move the cursor to CAMERA RESET.
- Hold down [Left], [Right], and [SET] buttons simultaneously for 2 seconds on the camera, or click the All Reset button on your computer display.

■ Initializing the Setup Menu

- In the power-on state, press the [Up] and [Down] buttons simultaneously while holding down the button A.

Hold down the button A for 15 seconds. It will take about 10 seconds to complete the initializing. Be sure to continue supplying power to the camera while initializing.

Notes:

- Clock calibration is required even after initializing the setup menu.
- Try again if the previous initializing failed.

■ Initializing HTML Files

- In the power-on state, press the side panel buttons, [Up] and [Down] simultaneously while holding down the button B.

Hold down the button B for 15 seconds. It will take about 10 seconds to complete the initializing. Be sure to continue supplying power to the camera while initializing.

Notes:

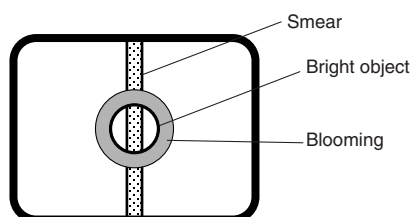
- Never press both the buttons A and B at a time.
- Try again if the previous initializing failed.

TROUBLESHOOTING

Symptom	What to do	Reference page
No picture is displayed.	<ul style="list-style-type: none"> • Is the 24 V AC or 220 V - 240 V AC cable firmly connected? • Is the video cable or network cable connected properly? 	11
Cannot access the camera from the browser.	<ul style="list-style-type: none"> • Are the network cables connected properly? • Is the status indicator lamp of the network connection terminal on? If not, a network connection has not been established or the other devices are not in operation. • Is a valid IP address set for the camera? • Are you connecting to a wrong IP address? Open the command prompt on your PC and enter: >ping (enter here the IP address set for the camera). If the camera replies, the connection is correct. If not, set the correct IP address for your PC and/or to the camera. 	11, 15-18
HTML documents are not displayed.	<ul style="list-style-type: none"> • HTML files in the camera might be broken. Initializing is required. 	30

PREVENTION OF BLOOMING AND SMEAR

When the camera is aimed at a bright light, such as a spotlight, or a surface that reflects bright light, smear or blooming may appear. Therefore, the camera should be operated carefully in the vicinity of extremely bright objects to avoid smear or blooming.



SPECIFICATIONS

Network Section

Image resolution	752x568, 752x280, 368x280, 176x136 pixel
Image process	JPEG (Super Fine/Fine/Normal/Low image quality selectable)
Image refreshing rate	Fast/Middle/Slow/Very Slow
Traffic control	32 kbps, 64 kbps, 128 kbps, 256 kbps, 512 kbps, 1 024 kbps, Unlimited
Protocols supported	TCP/IP, HTTP, FTP, SMTP, DNS, DDNS, DHCP, ARP, BOOTP, NTP
OS applicable	Windows 98 SE, Windows NT WORKSTATION 4.0 Service Pack6a, Windows 2000 Professional Service Pack2, Windows ME, or Windows XP
Applicable browsers	Internet Explorer 5.5, 5.5 SP2, 6.0, or Netscape Communicator 4.73, 4.78
Available number connections	16 browsers maximum

Camera Section

Pick-up Device:	753 (H) x582 (V) pixels, Interline Transfer CCD
Scanning Area:	4.8 (H) x 3.6 (V) mm (Equivalent to scanning area of 1/3" pick-up tube)
Scanning:	625 lines/50 fields/25 frames
Horizontal:	15.625 kHz
Vertical:	50.00 Hz
Synchronization:	Internal, Line-lock or multiplexed vertical drive (VD2) Sync selectable
Video Output:	1.0 V[P-P] PAL composite 75 Ω/BNC connector
Horizontal Resolution:	480 lines (C/L), 570 lines (B/W)
Signal-to-Noise Ratio:	50 dB (Equivalent to AGC Off, weight On, AP On)
Dynamic Range:	48 dB (Typ)
Minimum Illumination:	0.8 lx (0.08 footcandle) (WIDE) (C/L) 0.1 lx (0.01 footcandle) (WIDE) (B/W)
Gain Control:	ON (DNR-H), ON (DNR-L) or OFF (SET UP MENU) selectable
White Balance:	ATW1, ATW2 or AWC (SET UP MENU) selectable
Aperture:	Set Variable (SET UP MENU)
Super Dynamic2:	ON or OFF (SET UP MENU) selectable
Electronic Shutter Speed:	OFF, 1/120, 1/250, 1/500, 1/1 000, 1/2 000, 1/4 000, 1/10 000 s selectable
Lens	
Focal length:	3.8 mm - 8 mm
Maximum aperture ratio:	1:1.4 (Wide), 1:1.8 (Tele)
Angular field of view:	Horizontal: 35.6° - 73.6° Vertical: 26.6° - 53.4°
Focusing range:	1.2 m - ∞ (3.9 ft - ∞)
Control Function:	Alarm In: Pulled-up to 5 V DC, OFF (Open or 2 V DC - 12 V DC)/ ON (0 V 0.4 mA, ≥100 ms) Alarm Out: Collector-output, OFF (Open or 4 V DC - 5 V DC)/ ON (≤ 1 V 50 mA) Pulse/Latch selectable

Control Function:	Auxiliary Out: Collector-output, OFF (Open or 4 V DC – 5 V DC)/ ON (≤ 1 V 50 mA) Day/Night In: Pulled-up to 5 V DC, OFF (Open) / ON (0 V 0.2 mA)
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General

Power Source	24 V AC 50 Hz (WV-NW474SE), 220 V - 240 V AC 50 Hz (WV-NW470S)
Power Consumption:	24 V type: 8.6 W (Camera) 12.1 W (Optional heater unit) 220 V - 240 V type: 9.9 W (Camera) 18.9 W (Camera & heater)
Ambient Operating Temperature:	-10 °C - +50 °C (14 °F - 122 °F) -30 °C - +50 °C (-22 °F - 122 °F) (when optional heater unit built in)
Ambient Operating Humidity:	Less than 90 %
Dimensions:	$\phi 152.5$ mm x 175 mm (H) [$\phi 6$ " x 6-7/8" (H)]
Weights:	WV-NW470S 2 kg (4.4 lbs.) (Camera) WV-NW474SE 1.85 kg (4.1 lbs.) (Camera) Camera mounting bracket 0.5 kg (1.1 lbs.)

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

STANDARD ACCESSORIES

CD-ROM (PDF Manual Contained)	1 pc.
Operating Instructions (This document)	1 pc.

The following are for installation.

Camera mounting bracket	1 pc.
Camera mounting screw	3 pcs.
Tamperproof screw bit	1 pc.
RJ-45 female-female conversion connector*	1 pc.
Label for MAC address	1 pc.
Control cable adapter(5-pin)*	1 pc.

*Attached to the cable when shipped.

OPTIONAL ACCESSORIES

WV-CW3HE Heater unit

■ Optional Heater Unit WV-CW3HE

● Introduction

Installing this heater unit enables the camera to operate under in a low-temperature environment of -30°C (-22°F). The heater turns on automatically when the temperature inside the camera drops below $+10^{\circ}\text{C}$ (50°F) and turns off when it rises.

A small fan inside the unit will minimize condensation on the surface of the dome cover caused by changes in ambient temperature unless temperatures change too rapidly. The fan will stop when there is no possibility of condensation.

● Precautions

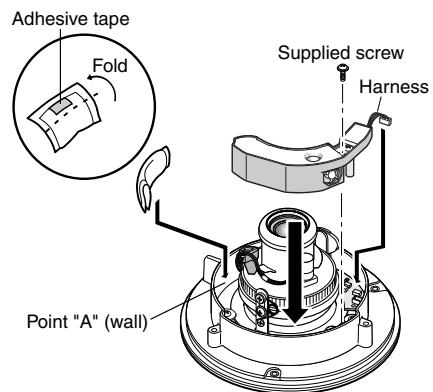
- This product should be installed and connected by qualified service personnel or system installers.
- Do not use the same 24 V AC power source supplying the power to the camera for the heater unit. Connect another 24 V AC power source to the heater unit. If the same power source is used, turning the heater on and off may disturb the camera images.
- When servicing, pay attention to high temperature on the surface of the unit. Disconnect the harness and wait until it cools.
- When you install the camera in a low-temperature location and start operating it, it may take time (around 30 minutes) for the inside of the camera to warm up. Cut power once then supply power again.

● Installation

1. Open the dome cover. (See Disassembling the camera.)
2. Place the heater unit in the camera and fix it with the supplied screw.
3. Insert the harness into the heater unit connector of the camera.
4. Fold the desiccant pack in half, and attach it with adhesive tape to point "A" shown in the figure.

Note: Attach the desiccant pack so that it does not block ventilation holes or hang over the top of the wall.

5. Attach the dome cover while paying attention not to pinch the harness cable.
6. Connect the heater power cable of the camera. (See Connection.)



● Specifications

Required power:	24 V AC, 50 Hz
Power consumption:	12.1 W maximum
Dimensions:	29 mm (H) x 83 mm (W) x 89.5 mm (D) [1-1/8" (H) x 3-1/4" (W) x 3-1/2" (D)]
Weights:	45 g (0.1 lbs)

● Accessories

Fixing screw (M3 x 12)	1 pc.
Desiccant pack	1 pc.

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