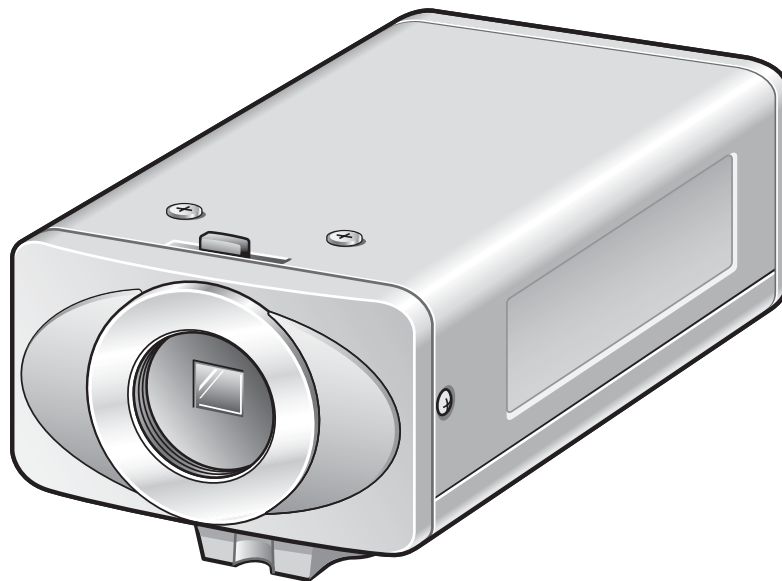# SANYO

INSTRUCTION MANUAL

VCC-N6584
VCC-N6695P
VCC-N4598PC

Color CCD Camera

THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO ALL LOCAL CODES.

English

Français

Español

Deutsch

中文简体

Please read this instruction manual carefully in order to ensure correct installation. In addition, be sure to read carefully the electronic manual contained in the supplied CD-ROM to ensure correct operation of the camera.

**This manual covers 3 models. Any difference between the 3 models is indicated when necessary.**

Contents

- -

■ Check the operating environment

- **PC** : IBM PC/AT and compatibles
- **OS** : Windows Vista/Windows XP Professional Edition SP2
- **CPU** : Pentium IV (2.0 GHz or higher)
3.0 GHz or higher for using the VA-SW3050LITE
- **Memory** : 1 GB or more (2 GB or more for using Vista)
- **Network interface** : 100Base-TX (RJ-45 connector)
- **Graphics processor** : GeForce 6000 series or higher
- **Display card** : 1024 x 768 pixels or higher, 16 million colors or higher
- **Web browser** : Internet Explorer Ver. 6.0 or higher

1

Information to User

Safety Guard

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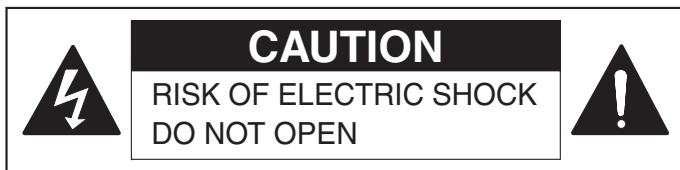
CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK, DO NOT REMOVE
COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

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

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

WARNING: To reduce a risk of fire or electric
shock, do not expose this appliance to rain or
moisture.

CAUTION: Changes or modifications not
expressly approved by the manufacturer may void
the user's authority to operate this equipment.

This equipment has been tested and found to
comply with the limits for a Class B digital device,
pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable
protection against harmful interference in a
residential installation. This equipment generates,
uses and can radiate radio frequency energy and,
if not installed and used in accordance with the
instructions, may cause harmful interference to
radio communications.
However, there is no guarantee that interference
will not occur in a particular installation.
If this equipment does cause harmful interference
to radio or television reception, which can be
determined by turning the equipment off and
on, the user is encouraged to try to correct the
interference by one or more of the following
measures.
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment
  and receiver.
• Connect the equipment into an outlet on a
  circuit different from that to which the receiver is
  connected.
• Consult the dealer or an experienced radio/TV
  technician for help.

For the customers in Canada

This class B digital apparatus complies with
Canadian ICES/NMB-003.

■ For Russian Users

АЯ46

This product certified by official
certification company which is
authorized by Russian Federation.

ДЛЯ ПОЛЬЗОВАТЕЛЕЙ РОССИЯ
Данная продукция сертифицирована
официальным органом по
сертификации Российской
Федерации.

2

Information To User

Precautions

■ In case of a problem
Do not use the unit if smoke or a strange odor comes from the unit, or if it seems not to function correctly. Turn off the power immediately and disconnect the power cord, and then consult your dealer or an Authorized Sanyo Service Center.

■ Do not open or modify
Do not open the cabinet, as it may be dangerous and cause damage to the unit. For repairs, consult your dealer or an Authorized Sanyo Service Center.

■ Be careful when handling the unit
To prevent damage, do not drop the unit or subject it to strong shock or vibration.

■ Do not put objects inside the unit
Make sure that no metal objects or flammable substance get inside the unit. If used with a foreign object inside, it could cause a fire, a short-circuit or damage. Be careful to protect the unit from rain, sea water, etc. If water or liquid gets inside the unit, turn off the power immediately and disconnect the power cord, and then consult your dealer or an Authorized Sanyo Service Center.

■ Do not install this unit close to magnetic fields
The magnetic fields may result in unstable operation.

■ Protect from humidity and dust
To prevent damage, do not install the unit where there is greasy smoke or steam, where the humidity may get too high, or where there is a lot of dust.

■ Protect from high temperatures
Do not install close to stoves, or other heat sources, such as spotlights, etc., or where it could be subject to direct sunlight, as this could cause deformation, discoloration or other damage.
Be careful when installing close to the ceiling, in a kitchen or boiler room, as the temperature may rise to high levels.

■ Cleaning
• Dirt can be removed from the cabinet by wiping it with a soft cloth. To remove stains, wipe with a soft cloth moistened with a soft detergent solution and wrung dry, then dry by wiping with a soft cloth.
• Do not use benzine, thinner or other chemical products on the cabinet, as this may cause deformation and paint peeling. Before using a chemical cloth, make sure to read all accompanying instructions. Make sure that no plastic or rubber material comes into contact with the cabinet for a long period of time, as this may cause damage or paint peeling.

Preparations

■ Installing the lens (for CS mount)

Lens terminals for auto iris lens

Brake coil (+) ╳ Brake coil (−)

Drive coil (−) ╳ Drive coil (+)

5 mm/0.2 in. or less
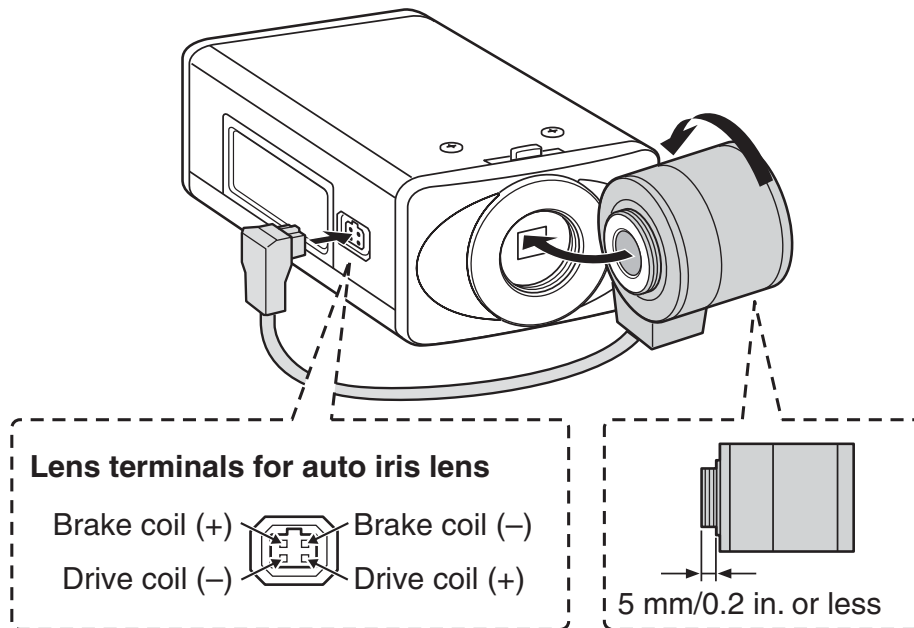
- **If using a C mount lens, install a commercially-available adapter ring.**
- **The shape of the lens plug may not mach depending on the type of lens being used. If the shape does not match, contact the place of purchase or an authorized service agent.**

■ Installing the camera

The bracket can be installed either above or below as shown in the illustration.
When installing the camera, check whether the screws can be securely tightened or not. Plaster boards and similar will not provide enough strength, so use extra measures such as a reinforcement plate to securely tighten the screws.
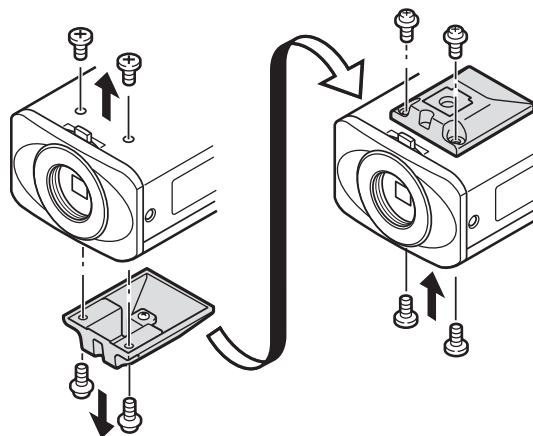
- **If monitoring objects which have a brightness that exceeds the maximum brightness amount for objects because of the degree of illumination, smearing (a phenomenon where vertical or horizontal striped lines appear in high-luminance areas of the object) may occur. Adjust the angle of the illumination while monitoring the object.**
- **Select a suitable camera mounting bracket (commercially-available) which is able to bear the full combined weight of the camera unit and the mounting bracket, and install it securely in a durable location.**

Parts Names and Functions

■ Rear
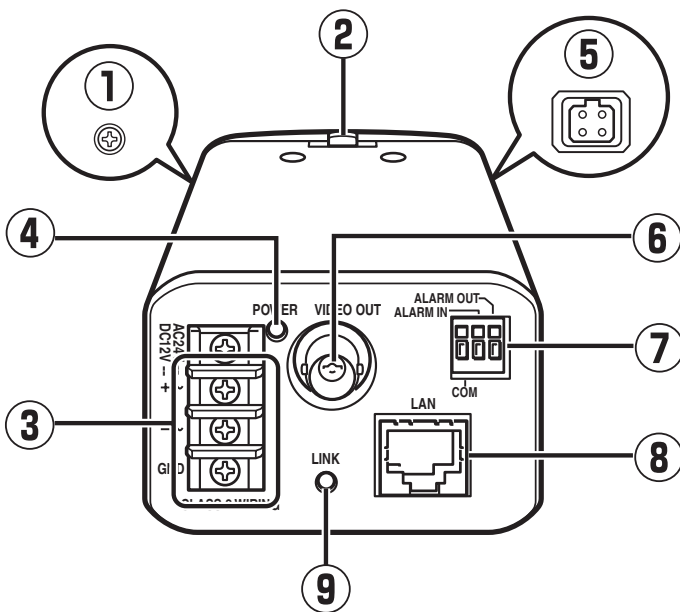
① **Flange back fixing screw**

② **Flange back adjustment lever**

③ **AC24V / DC12V terminals**
Connect this terminal to the power supply.
• When the camera is turned on, the POWER lamp lights.

④ **Power lamp**

⑤ **Lens terminals**

⑥ **VIDEO OUT connector (BNC type)**
Used to output image signals.
Connect to video equipment such as a monitor.

⑦ **Control terminals**
When connecting the cable, press and hold down the protrusion of the terminal, insert the cable into the terminal, and then release the protrusion.
• **COM terminal (Earth terminal)**
• **ALARM IN terminal**
Connect to a device such as an external alarm switch or an infrared sensor.
• **ALARM OUT terminal**
Used to connect to an external buzzer or lamp.
When an alarm is detected, the device connected to the terminal notifies that an alarm is detected.

⑧ **LAN connector (RJ-45)**
Used to connect the camera to your network.

⑨ **LINK lamp**
When connected correctly to the network, the lamp will illuminate 3 seconds after the power is turned on.
Flashes while data is being transferred.

■ Side
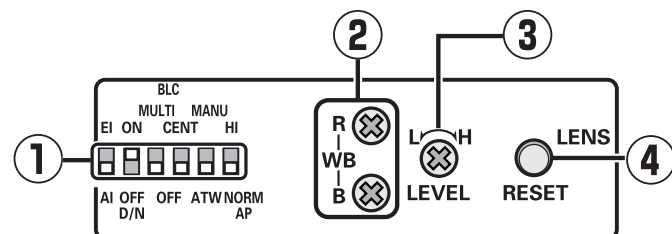
① **Camera setting switches (P7)**

② **White balance manual adjustment controls**
R: Red adjustment
B: Blue adjustment

③ **Iris adjustment control (LEVEL)**
This can only be adjusted when using a DC-type automatic iris lens.

④ **Reset button (RESET)**
If pressed for approximately 5 seconds, it initializes the various NETWORK SETTINGS settings (such as IP address) for network operations.

Viewing Live Images on a Monitor (Basic Connections)

All the power supplied to the system should be turned off when you connect devices.

Monitor Connection

Using different cables from those specified here may attenuate the video and/or sync signals and interfere with correct transmission.

Thicker than RG-6U (5C-2V): 500 m / 547 yds. max.
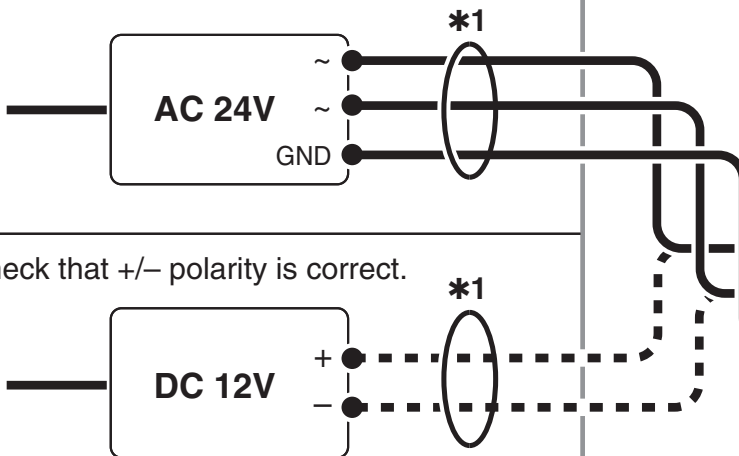
(Non-PoE power supply)

Power Supply Connection

To prevent a fire hazard use any UL listed wire rated VW-1.

∗1

~
AC 24V ~
GND

Check that +/− polarity is correct.

∗1

DC 12V +
−

POWER VIDEO OUT ALARM OUT ALARM IN

AC24V~
DC12V─

LINK

LAN

CLASS 2 WIRING

COM

∗1 **Thicker than 18 AWG**

Thicker than 24 AWG, 600 m / 656 yds. max.

Alarm Signal Output

If a lamp is connected to this cable, it will light up when an alarm signal is received or when the built-in motion sensor detects movement.

External peripheral equipment

(ALARM OUT)

(COM)

Alarm Signal Input

Alarm input signal

(ALARM IN)

(COM)

• To use the ALARM OUT setting, you must make the appropriate ALARM OUT settings for CAMERA SETTINGS in the network settings.
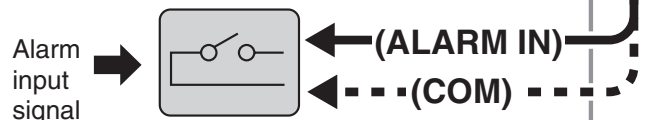
• To use the ALARM IN setting, you must make the appropriate ALARM IN settings for CAMERA SETTINGS in the network settings.

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Camera Settings

This camera has been adjusted so that it can be used with a commercially-available DC-type auto iris lens. This may not be suitable for some operating conditions, and so use the switches and controls on the side to make adjustments if necessary.

• If correct adjustment cannot be obtained, contact the place of purchase.

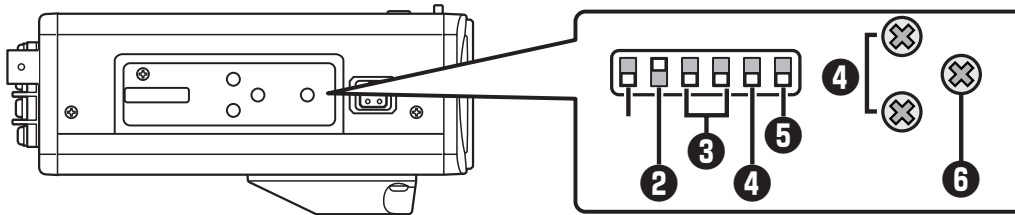The settings for this camera can be changed at the camera and using network operations (some settings may not apply). When changing settings, check the settings for "MAIN BODY SETTINGS" under "CAMERA SETTINGS" network operations.
- **USE (initial setting): The switches and controls on the side of the camera can be used for adjustments.**
- **NO USE: Camera settings can be carried out via network settings.**

■ Flange back adjustment

Normally adjustment is not necessary. If using a zoom lens and the images are out of focus, adjust the flange back by following the procedure given below.
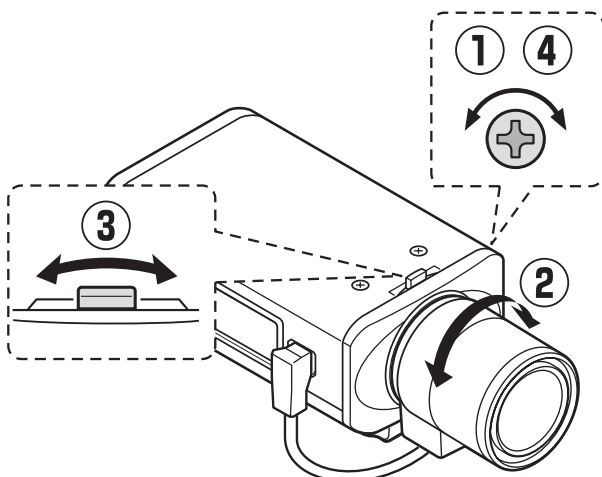
① **Loosen the screw.**

② **Set to the telephoto position, and then use the lens focus ring to adjust the focus.**

③ **Set to the wide-angle position, and then use the flange back adjustment lever to adjust the focus.**

④ **Tighten the flange back fixing screw.**
Repeat steps ② and ③ until there is no change in the focus when moving the lens from wide-angle to telephoto.

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❶ Iris setting (IRIS)

This sets the lens aperture.

Automatic iris (AI)	Electronic iris (EI)
	(For indoor use)

- **When setting the electronic iris, set the lens aperture to maximum (minimum F value).**
- **If using an electronic iris (fixed or manual iris lens) under fluorescent light illumination, flickering may occur in the images.**
- **If the overall images become too dark or too light when using an automatic iris lens, use the lens iris volume (LEVEL) to adjust.**

❷ Day/night setting (D/N)

Automatic setting (ON)	Color image fixed (OFF)

Automatic setting:
When it become dark, images are automatically switched from color images to black-and-white (non-IR sensitive) images.

☾ Black-and-white	Color ☀

Switching luminance
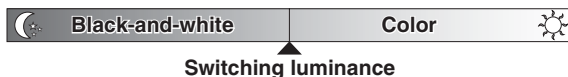
Color image fixed:
Images are always taken in color

❸ Backlight compensation (BLC)

This is only enabled when using an automatic iris lens.
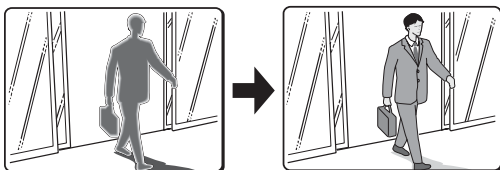
Multi-spot metering* Applies backlight compensation to the whole image **(MULTI)**.		Center-zone metering Applies backlight compensation to the center of the image **(CENT)**.	OFF
High	Normal		

* If the background for the objects is extremely dark, set to center-zone metering.

* If you would like compensation for the overall image to be carried out quickly, select high.

❹ White balance (WB)

Automatic (ATW)	Manual (MANU)
	R ⊗ (Red) WB B ⊗ (Blue)
	When turned clockwise, the hue becomes higher.

❺ Aperture compensation (AP)

Normal outline (NORM AP)	Sharper outline (HI)
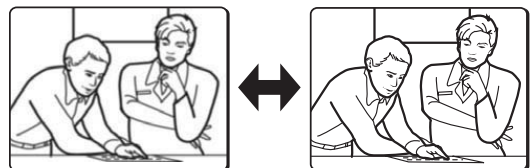
❻ Lens iris level adjustment (LEVEL)

Adjust if the overall images are too dark or too bright when using an automatic iris lens.

(Darker) L ⊗ H (Brighter)
LEVEL

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Viewing Live Images on a Computer (Network Connection)

■ Connection when Using PoE (Power over Ethernet) Power Supply

- **Do not use the power supply of the camera.**
- **Do not supply power to the PoE hub or PoE power adapter until the camera installation is finished.**

Connect the camera to the LAN through a switching hub using shielded LAN cables.

You may extend the transmission distance by using multiple switching hubs with PoE support.
For details on the extendable distance, please refer to the hub performance in the specifications, etc.

Monitor

Switching hub with PoE support

PC

*1

*1

B **Connect the camera to the LAN through a power adapter and a switching hub using shielded LAN cables.**

Power adapter

*1

*1

PC

*1

Switching hub
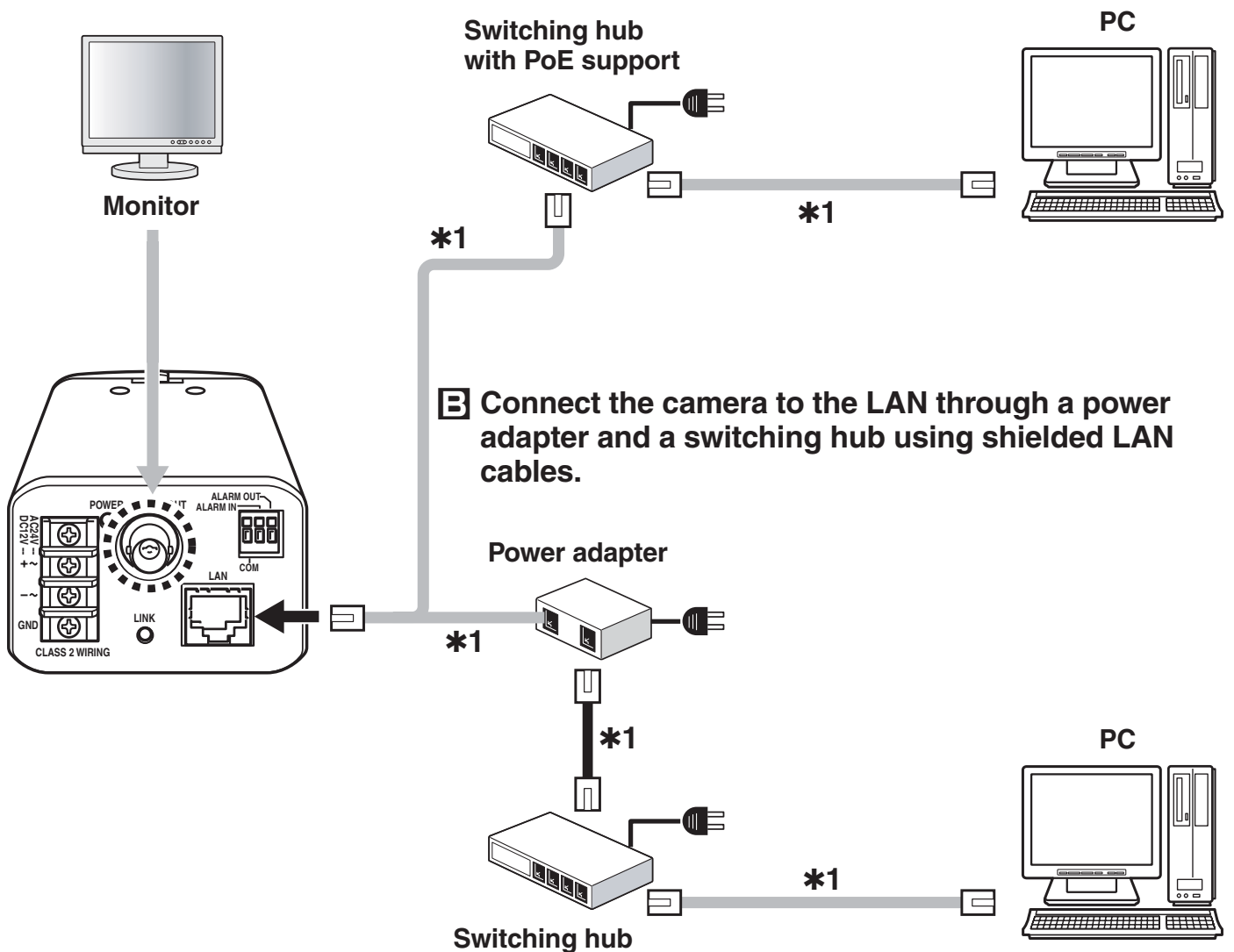
✱**1:** LAN cable: CAT5 or higher, straight type, Max. 100 m / 109 yds

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■ Connection when Not Using PoE (Power over Ethernet) Power Supply

Ⓐ Internet connection (P11)

PC

**LAN cable
(straight type)**

**Router or
ADSL modem**

∗1   ∗1

Monitor
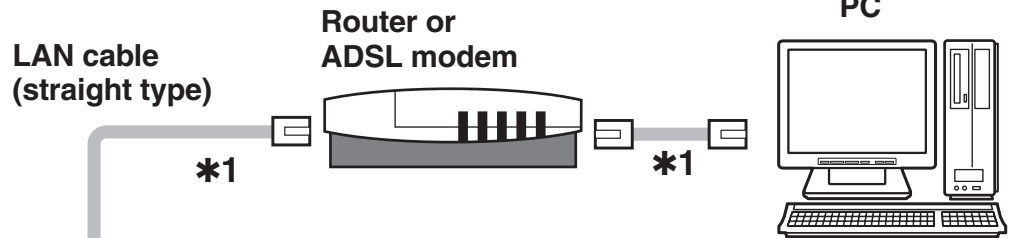
Ⓑ Direct connection

PC

LAN cable (crossover type)
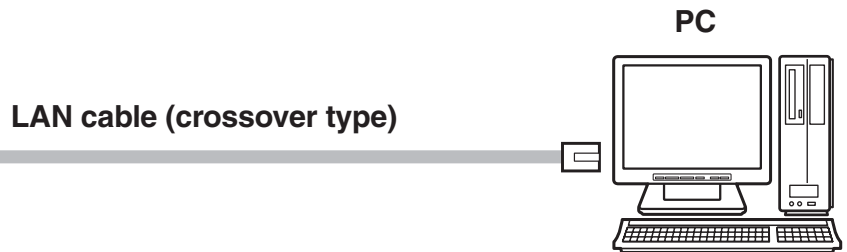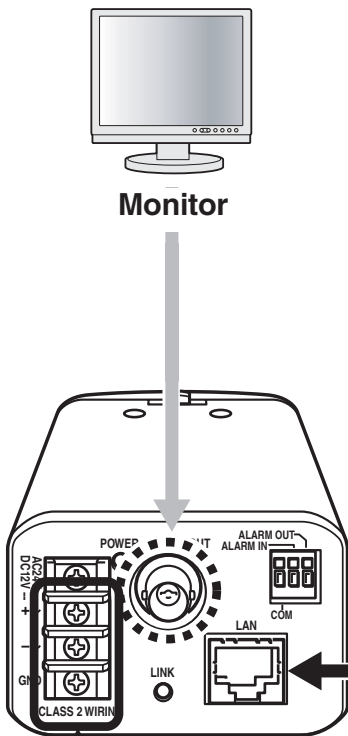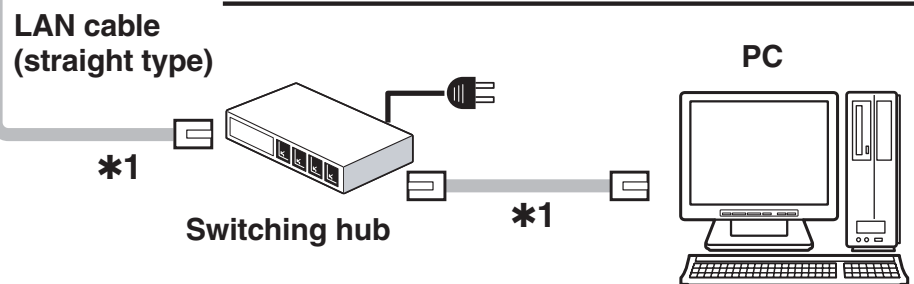
**Power Supply
(AC24V/DC12V)**

LAN connection

PC

**LAN cable
(straight type)**

∗1

Switching hub   ∗1

∗1: LAN cable: CAT5 or higher, straight type, 100 m / 109 yds max.

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Viewing Live Images on a Computer (Network Connection)

■ About the "Ⓐ Internet connection"

Port forwarding settings will need to be carried out for the image port (HTTP/UDP) of the broadband router.

●Port 1: JPEG∕H.264 HTTP

Port number: Initial value 80 (TCP)
IP address: Initial value 192.168.0.2

To LAN port

Port number: Initial value 80 (TCP)
• Set to match the LAN

To WAN port

Router

●Port 2: H.264 UDP Unicast

Port number: Initial value 3939 (UDP)
IP address: Initial value 192.168.0.2

To LAN port

Port number: Initial value 3939 (UDP)
• Set to match the LAN

To WAN port

Router
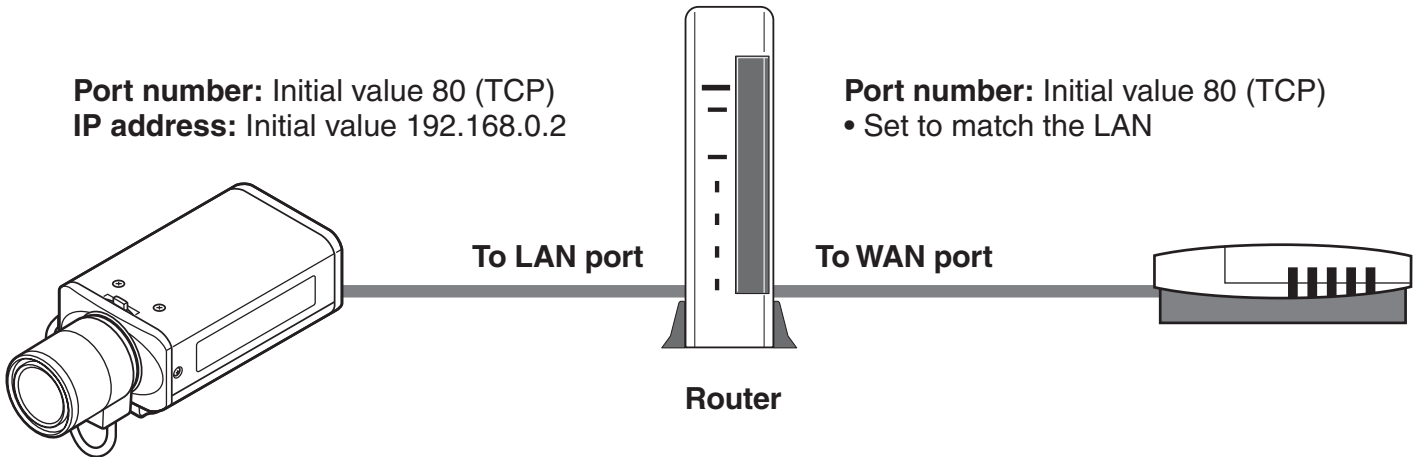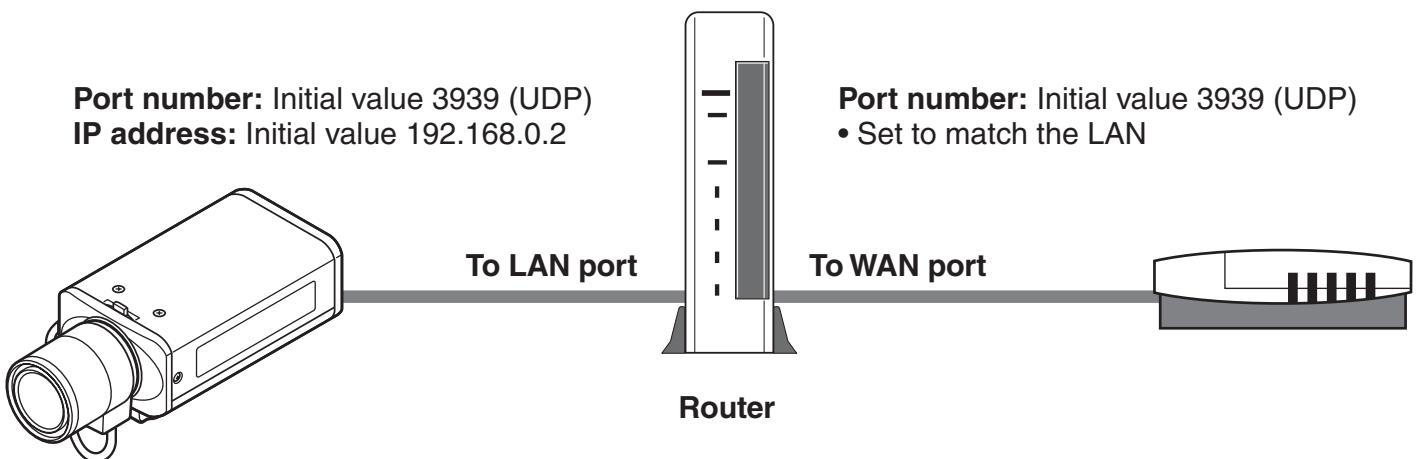
• If UDP port forwarding has been set when viewing H.264 movie images over the Internet, the transfer can take place using the UDP protocol. However, it depends on the network environment, so ask your network administrator.
• For details on how to set port forwarding, please refer to your router's Instruction manual.

MEMO:
When setting multiple cameras, use the network operations to set the port numbers for ports 1 and 2 to numbers which are different from the first camera.
• **Port 1:** [NETWORK] → "PORT NUMBER"
• **Port 2:** [CODEC/STREAMING] → "UDP (Unicast) PORT"

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Network Settings

Set the TCP/IP settings in accordance with the operating system of the computer being used.

☞ The screens below explain the procedure when using Windows Vista.
If using Windows XP, click [Start] → [Control Panel] → [Network & Internet Connections], and then click [Network Connections], and then proceed to step 3.

1 **Click [Start] → [Control Panel] → [Network and Sharing Center], and then click [Network Connections].**
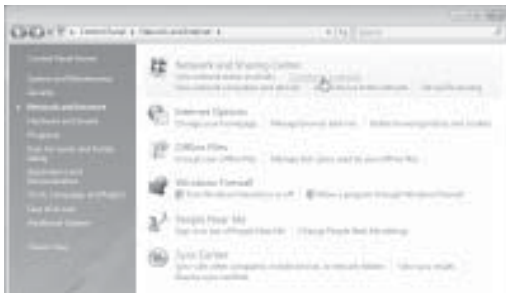
2 **Click [Manage Network Connections].**

3 **Right-click the icon for the LAN card (Ethernet adapter) you are using, and then select "Properties" from the menu.**

4 **In "This connection uses the following items", select "Internet Protocol Version 4 (TCP/IPv4)", and then click Properties.**

• For Windows XP, select "Internet protocol (TCP/IP)".
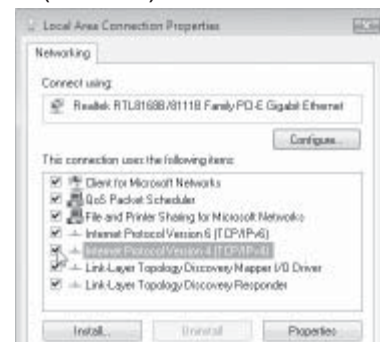
5 **Select "Use the following IP address", and then enter the IP address, subnet mask and gateway.**
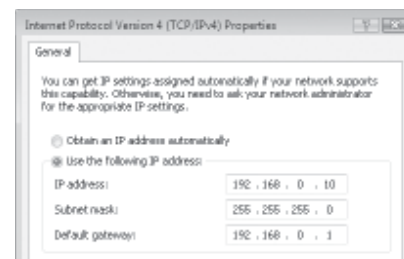
If the camera's IP address is the default address (192.168.0.2), enter "192.168.0.xxx". For "xxx", enter a value which does not overlap with the value for any other computer or network device on the network, or which is not within the range of IP addresses assigned by DHCP server.

6 **Check the setting details, and then click the OK button.**

☞ If accessing the camera via UPnP (Universal Plug and Play), check the electronic manual on the included CD-ROM.

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Network Settings

2 | Viewing Camera Images on a Computer

1 | **Start Internet Explorer.**

2 | **Enter the camera's IP address in the address bar, and then press the [Enter] key.**

(Example of entry)

http://192.168.0.2/

3 | **In the login screen, enter your username and password, and then click the OK button.**

☞ If logging in for the first time, enter the following.
User name: admin
Password: admin

Connect to 192.168.0.10

The server 192.168.0.10 at You need ID requires a username and password.

Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

User name: admin
Password: •••••
☑ Remember my password

OK   Cancel
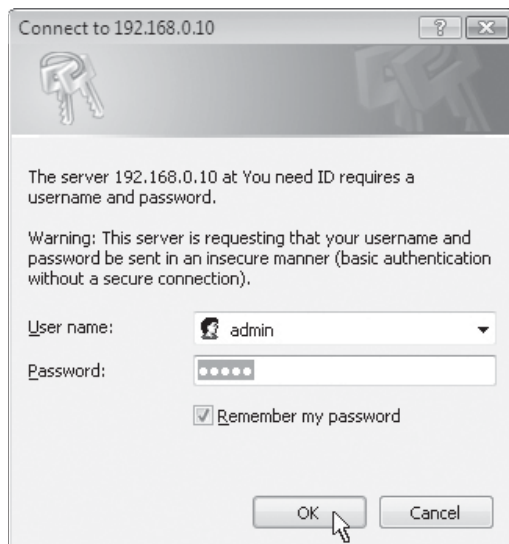
4 | **Click the desired language button.**

SANYO

PLEASE SELECT LANGUAGE
SÉLECTIONNER LA LANGUE
BITTE SPRACHE WÄHLEN
SELECCIONE EL IDIOMA
言語を選択してください

ENGLISH FRANÇAIS DEUTSCH ESPAÑOL 日本語

• **Switch to the live image window.**
(If logging in for the second and subsequent time, the window will switch automatically.)

Operation panel   **Live image window**
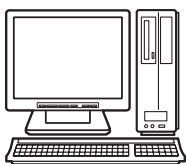
You can display the menu screen on the computer, and use it to make a variety of settings.
For details on the settings, refer to the electronic manual contained in the supplied CD-ROM.

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Setting the Camera from the Computer

This camera is shipped with the standard setting values and you can start using the camera without performing any settings. If necessary, make appropriate settings or adjustment according to your usage. For details, refer to the electronic manual contained in the supplied CD-ROM.

• If you have trouble adjusting the camera, consult your dealer or an Authorized Sanyo Service Center.

1   Displays the menu setting window (MENU button).

2   Displays the respective menu setting window (menu buttons).

3   Returns to the live image window (BACK button).

(Operation panel)   **(Menu setting window)**
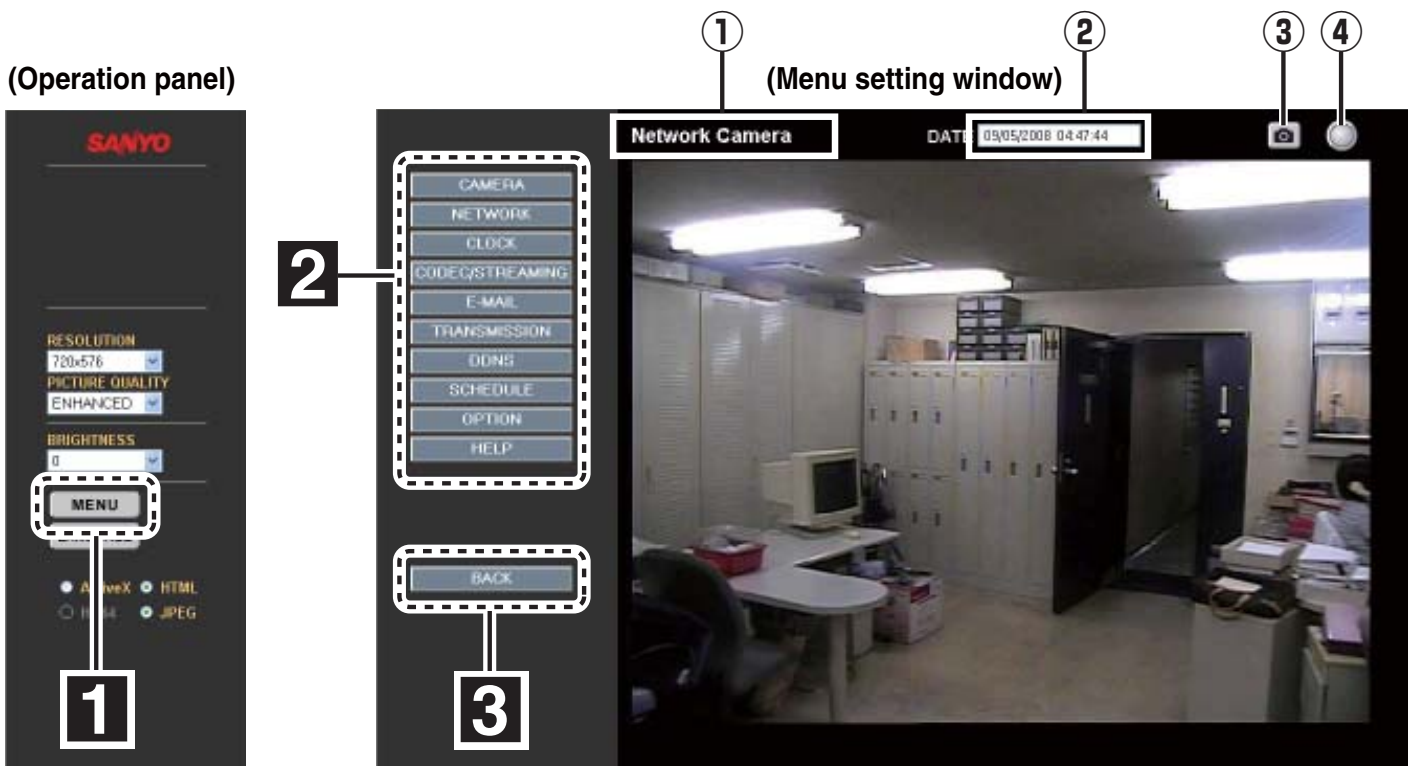
① **Camera title**
The setting for "TITLE" in NETWORK SETTINGS will be displayed here.
The initial setting is "Network Camera".

② **Date and time**
The date and time set in CLOCK SETTINGS will be displayed here.

③ **Capture button**
When you click this button, a still image is displayed in a separate window.
The images in the live image window will continue to be displayed even while the still image is being displayed.

④ **Remote alarm button**
You can click the button at the top-right of the screen to output an alarm signal.

Setting the Camera from the Computer

List of menu buttons

CAMERA SETTINGS window:
This window is used to set the filming settings and operating conditions (such as day/night and motion detection) in accordance with the camera setting environment.

NETWORK SETTINGS window:
This window is used to set network information (such as IP address and subnet mask).

CLOCK SETTINGS window:
This window is used to set the current date and time for network connections and live image display, and also to make summer time and automatic time adjustment settings.

CODEC/STREAMING SETTINGS window:
This window is used to set the image resolution and communication method when transmitting live images.

E-MAIL SETTINGS window:
This window is used to make settings for automatic sending of e-mail messages. You can also attach live images (still images).
• Sending e-mail messages to notify of an alarm
• Sending e-mail messages at regular intervals

IMAGE TRANSFER SETTINGS window:
This window is used for settings for enabling captured live images to be sent to a computer.
• **HTTP:** Setting details can be checked using the VA-SW3050 Server/Client recording and playback software (sold separately)
• **FTP:** For sending images to an FTP server

DDNS SETTINGS setting:
Make these settings if using the Sanyo DDNS service. When accessing the camera from Internet Explorer, you can enter the domain name to connect automatically without entering the camera's IP address.

SCHEDULE SETTINGS window:
This window is used in order to set schedules for sending images via e-mail transmissions and for automatic mode settings.
Days can also be designated as holidays.

OPTION SETTINGS window:
• UPnP function
• Upgrading the firmware version
• Initializing the setting values
• Checking the system restart history
• Backing up and restoring menu settings made using network operations

Provides explanations of each function.

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Using the Supplied CD-ROM

■ Software

The following application software is contained in the supplied CD-ROM.
You can install and use these applications to use the image data in a wider variety of ways.

● VA-SW3050LITE

The monitoring software is compatible with cameras manufactured by Sanyo.
Live images from multiple cameras can be monitored using a computer (up to a maximum of 128 cameras).

☞ "VA-SW3050LITE" folder: Instruction manual (PDF)

MEMO:

If you purchase the VA-SW3050 Server/Client software (sold separately), you can record live images on the computer and play them back.

■ Operation guide

By using the operation guide which is contained in the supplied CD-ROM, you can access extensive information from basic operation to advanced settings and functions, as well as troubleshooting.

● Requirements for viewing the electronic manual

Browser: Internet Explorer 6.0 or higher
• Make sure that JavaScript and Cookie are enabled.
• To use the Search function, also enable the ActiveX control.

1 **Insert the CD-ROM into the CD drive of your computer and then double-click the " " icon.**

C **Select the model and then select the language.**

The electronic manual opens.

● To open and view the instruction manual for the application software

You need Adobe Reader installed on your PC.
If it has not been installed on your PC, visit the Adobe website at http://www.adobe.com to download and install the free software program.

Specifications

## ■ Camera

Television format	Color NTSC (VCC-N6584)/PAL (VCC-N6695P) compliant
Image sensor	1/3 inch interline transmission-type CCD
Effective pixels	NTSC: 768(H) × 494(V) PAL: 752(H) × 582(V)
Scanning system	2:1 interlaced, NTSC: 525 scanning lines, 60 fields/sec. PAL: 625 scanning lines, 50 fields/sec.
Automatic iris control	DC type (variable DC level), 4-pin terminal
Lens mount	CS mount
Flange back	12.5 mm ± 0.5 mm/0.5 in. ± 0.02 in. adjustment
Light control	Automatic iris (AI)/Electronic iris (EI)
Sync system	Internal sync
Video output (VIDEO OUT)	1.0 V (p-p), 75 Ω, composite BNC connector
Horizontal resolution	540 TV lines typical
Minimum illumination	0.35 lx (F1.2, color mode) 0.25 lx (F1.2, black-and-white mode)
Video S/N ratio	More than 50 dB (during AGC OFF)
Day/night function	ON (AUTO)/OFF (color fixed)
Backlight compensation	OFF/CENT (center-zone metering)/MULTI (multi-spot metering: Normal) / MULTI-H (multi-spot metering: High)
White balance	Automatic adjustment (ATW) / Manual adjustment (MANUAL: R/B adjustable)
Gain control	Fixed at ON (3 dB gain up for black-and-white)
Gamma compensation	Fixed at 0.45
Aperture compensation	HI/NORM
Camera title	Maximum 16 characters can be entered (network operations only)
Motion detection	Detect/Mask/OFF (network operations only)
Alarm input	Control terminals: 1 input, NO/NC selectable, time setting for next alarm possible (network operations only)
Alarm output	Control terminals: 1 output, NO/NC selectable, 16V, 150mA open collector, alarm output time setting possible (network operations only)
LAN terminal	10 Base-T/100 Base-TX (RJ-45 terminal)/PoE compatible
Operating temperature/ humidity	−10°C − +50°C (14°F − 122°F), 90% RH or less (no condensation)
Power supply	NTSC: AC24V±10% 60Hz, DC12-15V PAL: AC24V±10% 50Hz, DC12-15V
Power consumption	7.1 W/12.4 oz.
Weight	350 g
Accessories	CD-ROM

■ Network

Image data compression	H.264/JPEG (simultaneous transmission possible)

Frame rate	H.264
	    PAL: 25ips (720×576)
	    NTSC: 30ips (720×480)
	JPEG
	    PAL: 25ips (720×576)
	    NTSC: 30ips (720×480)

Resolution	H.264
	    PAL: 720×576, 352×288, 176×144
	    NTSC: 720×480, 352×240, 176×144
	JPEG
	    PAL: 720×576, 720×288, 640×480, 360×288, 176×144
	    NTSC: 720×480, 720×240, 640×480, 360×240, 176×120

Image quality	BASIC, NORMAL, ENHANCED, FINE, SUPER FINE
Band limit	NO LIMIT/Selectable
Interface	10 Base-T/100 Base-TX/PoE compatible
Protocol	TCP/IP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP, DDNS
Simultaneous access	16 (ADMIN: 1)
Security	Basic verification (ID/password), SSL compatible
LAN terminal (RJ-45 terminal)	10 Base-T/100 Base-TX/PoE compatible

■ Dimensions

Units: mm (inch)

129.3 (5.1)

119.5 (4.7)

71 (2.8)

45 (1.8)

11.2 (0.4)

1/4"-20UNC

18
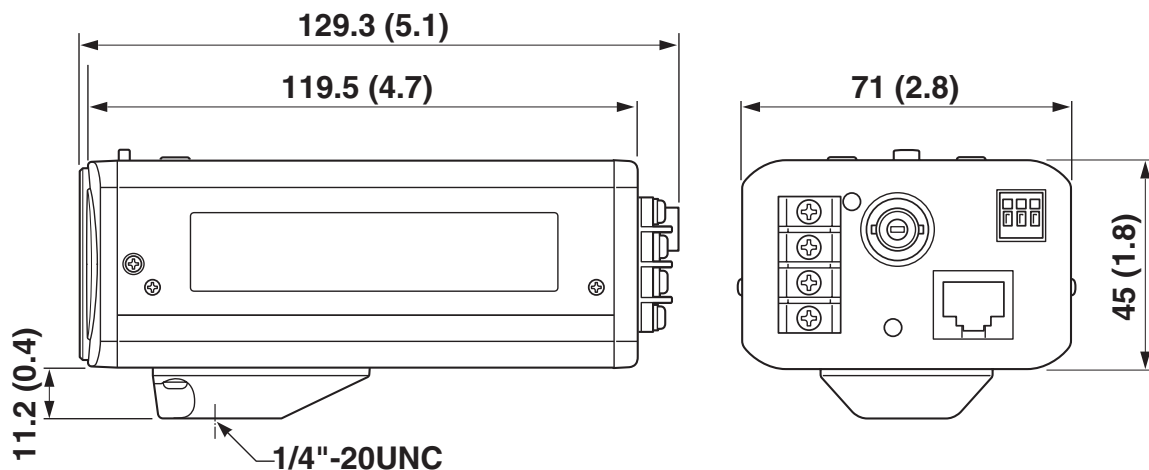
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