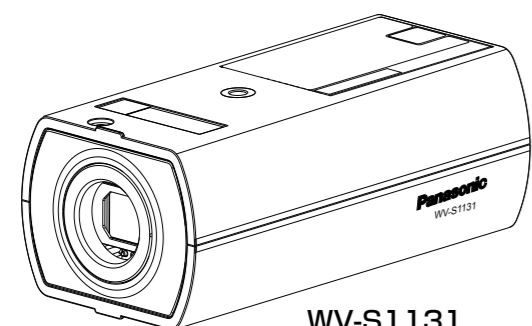# Panasonic®

Installation Guide

Included Installation Instructions

Network Camera

Model No. **WV-S1132 / WV-S1131**
WV-S1112 / WV-S1111

WV-S1131
(Please purchase the recommended lens separately.)

SD XC™

- Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.
- For information about the basic information about this product, refer to the installation instructions on the provided CD-ROM. For information about how to perform the settings and how to operate the camera, refer to the Operating Instructions on the provided CD-ROM.
- The model number is abbreviated in some descriptions in this manual.

WARNING:
- To prevent injury, this apparatus must be securely attached to the wall/ceiling in accordance with the installation instructions.
- To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- The apparatus should not be exposed to dripping or splashing.
- All work related to the installation of this product should be made by qualified service personnel or system installers.
- The installation shall be carried out in accordance with all applicable installation rules.
- The connections should comply with local electrical code.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunlight, fire or the like.

CAUTION:
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- The network camera is only intended for a connection to an ethernet or PoE network without routing to the outside plant.

─── : Direct current symbol

Disposal of Old Equipment and Batteries
Only for European Union and countries with recycling systems

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.
By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.
For more information about collection and recycling, please contact your local municipality.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

Note for the battery symbol (bottom symbol)
This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

─── For U.S.A. ───
NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

─── For Canada ───
CAN ICES-3(A)/NMB-3(A)

Preparations

Other items that are needed (not included)

Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.

Note:
- The lens section is not included with the camera. Refer to our website (http://security.panasonic.com/support/info/) for further information about the compatible lens.

  * When using a lens made by other companies, use a lens that has a protruded portion from the mount face of ø20 mm {25/32 inches} or less and a protruded portion from the flange face of 4.5 mm {5/32 inches} or less. Lenses without a focus adjustment mechanism and zoom lenses cannot be used.

Protruded portion from flange face: 4.5 mm {5/32 inches} or less
Protruded portion from mount face: ø20 mm {25/32 inches} or less
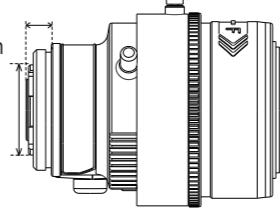
Installation method	Recommended screw	Minimum pull-out strength (per 1 pc.)
For mounting on ceiling Mount bracket: approx. 260 g {0.57 lbs} camera: 350 g {0.77 lbs}	M6 or M8 screws × 4[*1]	562 N {126 lbf}[*2]
	M4 × 1 (for the safety wire)	24.5 N {5.5 lbf}
For mounting on wall Mount bracket: approx. 420 g {0.93 lbs} camera: 350 g {0.77 lbs}	M6 or M8 screws × 4[*1]	724 N {163 lbf}[*2]
	M4 × 1 (for the safety wire)	24.5 N {5.5 lbf}

[*1] The number of required screws or anchor bolts varies depending on the specifications of the mount bracket (locally procured). Refer to the operating instructions of the mount bracket (locally procured) for information about how to mount the mount bracket.
[*2] Make sure that the screws or anchor bolts separately procured when locally procuring a mount bracket for the ceiling or wall are capable of supporting the total weight (including the moment force when mounting to a wall).
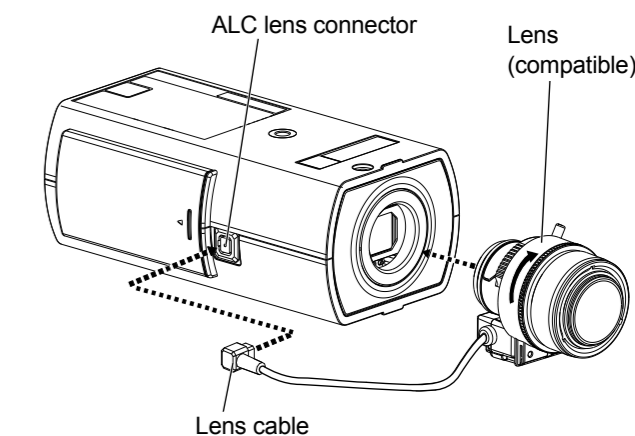
IMPORTANT:
- The installation area shall be strong enough to hold the camera and camera mount bracket.
- The camera mount bracket (locally procured) shall be mounted on the foundation part of the construction or a part with adequate strength.
- Select screws according to the material of the location that the camera will be mounted to. In this case, wood screws and nails should not be used.
- If the mounting location such as plaster board is too weak to support the total weight, the area shall be sufficiently reinforced.

Mount the lens to the camera

[1] Remove the cover film attached to the lens mounting hole of the camera.

Lens mounting hole
Cover film
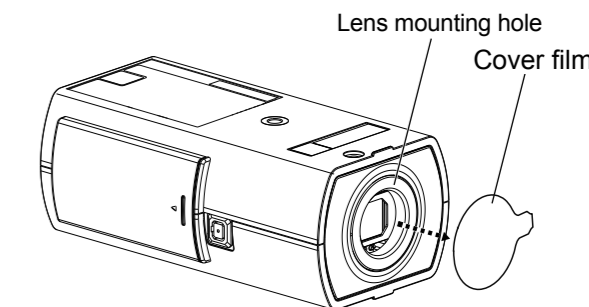
[2] Slowly rotate the lens clockwise to mount the lens and connect the lens cable to the ALC lens connector of the camera.

ALC lens connector
Lens (compatible)
Lens cable

Important safety instructions

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Only use attachments/accessories specified by the manufacturer.
10) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

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

Troubleshooting

Before requesting service, refer to the Important Information (included in the CD-ROM) and "Troubleshooting" in the Operating Instructions (included in the CD-ROM) and confirm the trouble.

Open Source Software

- This product contains open source software licensed under GPL (GNU General Public License), LGPL (GNU Lesser General Public License), etc.
- Customers can duplicate, distribute and modify the source code of the software under license of GPL and/or LGPL.
- Refer to the "readme.txt" file on the provided CD-ROM for further information about open source software licenses and the source code.
- Please note that Panasonic shall not respond to any inquiries regarding the contents of the source code.

About the user manuals

Product documentation is composed of the following documents.

- **Installation Guide (this document):** Explains installation, mounting, cable connections, and adjusting the field of view. This manual uses the WV-S1131 as an example in the explanations.
- **Important Information (included in the CD-ROM):** Provides basic information about the product.
- **Operating Instructions (included in the CD-ROM):** Explains how to perform the settings and how to operate this camera.

Adobe® Reader® is required to read these operating instructions on the provided CD-ROM.
When the Adobe Reader is not installed on the PC, download the latest Adobe Reader from the Adobe web site and install it.
The external appearance and other parts shown in this manual may differ from the actual product within the scope that will not interfere with normal use due to improvement of the product.

Standard accessories

Installation Guide (this document) .... 1 set
IMPORTANT SAFETY INSTRUCTIONS .... 1 pc.
Warranty card[*1] .... 1 set
CD-ROM[*2] .... 1 pc.
Code label[*3] .... 1 pc.

[*1] This product comes with several types of warranties. Each warranty is only applicable to the products purchased in the regions indicated on the relevant warranty.
[*2] The CD-ROM contains the operating instructions and different kinds of tool software programs.
[*3] This label may be required for network management. Use caution not to lose this label.

The following parts are used during installation procedures.

Tripod mount base[*4] .... 1 pc.
Power cable plug .... 1 pc.
Safety wire lug .... 1 pc.
Wire lug fixing screws
  (M2.5 × 8 mm {5/16 inches}) .... 2 pcs.
  (of them, 1 for spare)
Safety wire .... 1 pc.
Washer .... 1 pc.
Spring washer .... 1 pc.

[*4] For further information about Tripod mount base, refer to the Important Information on the provided CD-ROM.
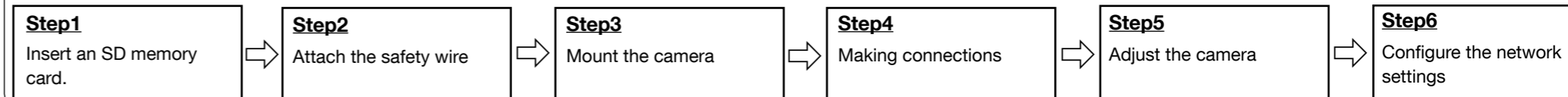
Power cable plug
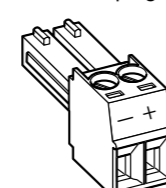
Tripod mount base
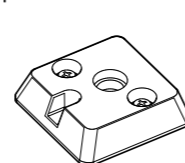
Installation

The installation tasks are explained using 6 steps.

- Remove the camera using the reverse order of the installation procedures.

| Step1	Step2	Step3	Step4	Step5	Step6
Insert an SD memory card.	Attach the safety wire	Mount the camera	Making connections	Adjust the camera	Configure the network settings

Step1 Insert an SD memory card

When using an SD memory card, go through the following procedure before installing the camera.
When removing an SD memory card, reverse the procedure.
Refer to the Operating Instructions on the provided CD-ROM for further information about the SD memory card settings.

[1] Open the slide cover on the side of the camera, insert an SD memory card fully into the SD memory card slot until a click is heard.
- Insert the SD memory card with its label facing up.
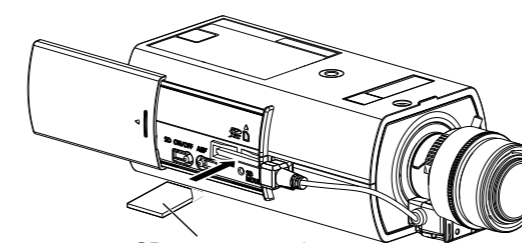
SD memory card
* Label face upward

[2] Close the slide cover on the side of the camera.

Step2 Attach the safety wire (accessory)

IMPORTANT:
- When securing the camera using a separately procured bracket, use the fixing screw (M4, locally procured), and the safety wire, washer, and spring washer (accessories).

[1] Engage the safety wire (accessory) with the wire engaging hole.

Safety wire (accessory)
Safety wire lug (accessory)
Wire engaging hole
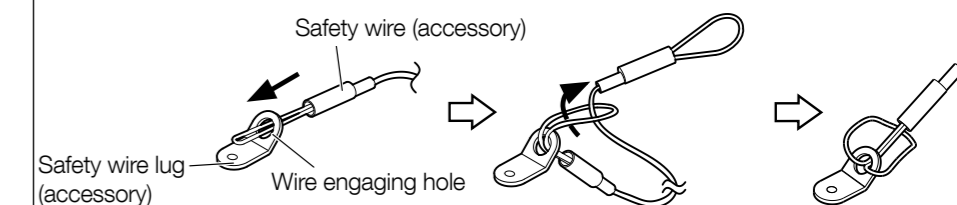
[2] Secure the safety wire lug (accessory) to the camera mount screw hole with the wire lug fixing screw (accessory).
(Recommended tightening torque: 0.39 N·m {0.29 lbf·ft})

Wire lug fixing screw (accessory)
Safety wire lug (accessory)
Fixing screw hole
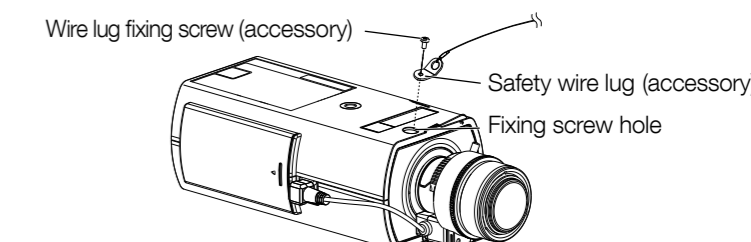
Step3 Mount the camera

■ For mounting on ceiling

【1】 **Mark the position of holes to be made for the ceiling mount bracket (locally procured) on the attachment position of the ceiling, and make those holes for attachment.**

Determine the hole diameter and hole depth according to the specifications of the screws or anchor bolts to be used.

【2】 **Secure the ceiling mount bracket (locally procured) using separately procured attachment fixing screws or anchors.**

【3】 **Loosen the camera mount bracket fixing mechanism to freely move the camera mount bracket.**
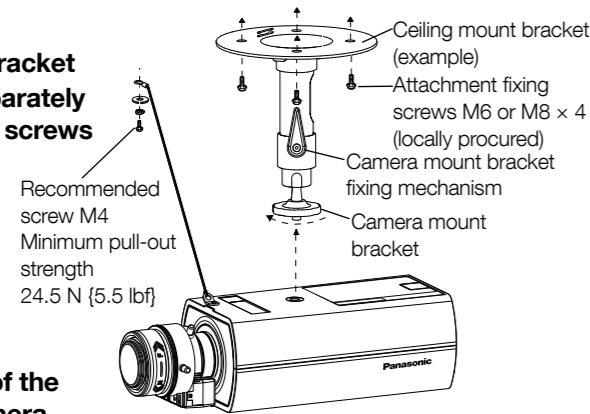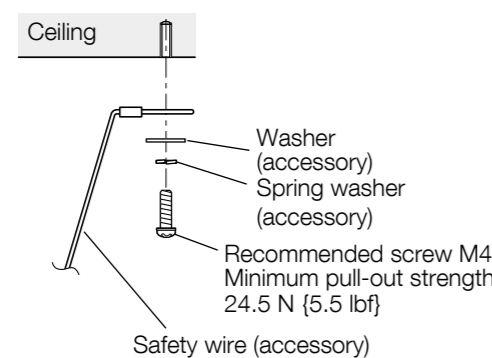**Align the screw thread with the fixing screw hole of the camera, and rotate the camera mount bracket to secure the camera.**

Tighten the camera mount bracket fixing mechanism and secure the camera mount bracket.

【4】 **Attach the safety wire (accessory) to the foundation area of the architecture or where sufficient strength is assured. Prepare the fixing screw according to the material of the area where the safety wire (accessory) is to be installed.**

Ceiling mount bracket (example)
Attachment fixing screws M6 or M8 × 4 (locally procured)
Camera mount bracket fixing mechanism
Camera mount bracket
Recommended screw M4 Minimum pull-out strength 24.5 N {5.5 lbf}

Ceiling
Washer (accessory)
Spring washer (accessory)
Recommended screw M4 Minimum pull-out strength 24.5 N {5.5 lbf}
Safety wire (accessory)

IMPORTANT:
- Be sure to rotate and secure the camera mount bracket. Rotating the camera places a large burden on the camera mount bracket, and may cause damage.
- The safety wire (accessory) shall be adjusted to remove slack.
- The distance from the camera to the ceiling changes depending on the tilt angle of the camera. Attach the safety wire (accessory) in a position according to the tilt angle of the camera.

■ For mounting on wall

【1】 **Mark the position of holes to be made for the wall mount bracket (locally procured) on the attachment position of the wall, and make those holes for attachment.**
Determine the hole diameter and hole depth according to the specifications of the screws or anchor bolts to be used.

IMPORTANT:
- Mount the bracket in a position higher than 2.7 m {8.86 feet} from the floor.

【2】 **Secure the wall mount bracket (locally procured) using separately procured screws or anchors.**

【3】 **Loosen the camera mount bracket fixing mechanism to freely move the camera mount bracket.**
Align the screw thread with the fixing screw hole of the camera, and rotate the camera mount bracket to secure the camera. Tighten the camera mount bracket fixing mechanism and secure the camera mount bracket.

【4】 **Attach the safety wire (accessory) to the foundation area of the architecture or where sufficient strength is assured. Prepare the fixing screws according to the material of the area where the safety wire (accessory) is to be installed.**

Attachment fixing screws M4 × 1 (locally procured)
Higher than the camera and wall mount bracket.
Camera mount bracket
Camera mount bracket fixing mechanism
Attachment fixing screws M6 or M8 × 4 (locally procured)
Wall mount bracket (example)
Recommended screw M4 Minimum pull-out strength 24.5 N {5.5 lbf}
Spring washer (accessory)
Washer (accessory)
Safety wire (accessory)
Wall
Foundation part of construction or part with adequate strength

IMPORTANT:
- Be sure to rotate and secure the camera mount bracket. Rotating the camera places a large burden on the camera mount bracket, and may cause damage.
- Attach the safety wire (accessory) in a position higher than the camera and the mount bracket.
- Attach the safety wire (accessory) so that if the camera were to become detached, it would not fall on nearby people.
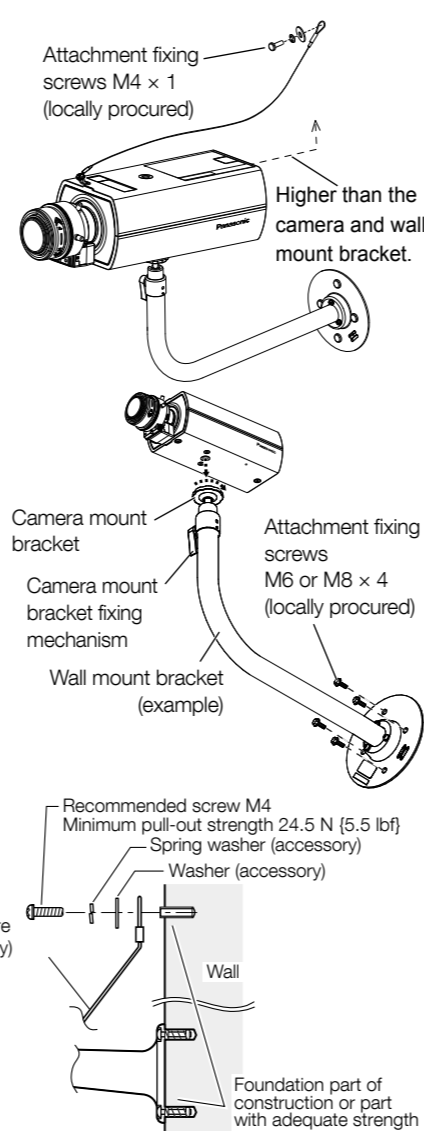
Step5 Adjust the camera

【1】 **Adjusting the camera angle**
Loosen the camera mount bracket fixing mechanism on the camera mount bracket, and then check the adjustment monitor to adjust the camera angle.
When adjusting the camera angle, make sure to loosen the camera mount bracket fixing mechanism on the camera mount bracket before making adjustments.
If the camera angle is changed when the camera mount bracket fixing mechanism is tightened, excessive force is applied to the camera mount bracket and camera, which may damage them.
After adjusting the camera angle, make sure to tighten the camera mount bracket fixing mechanism securely again.
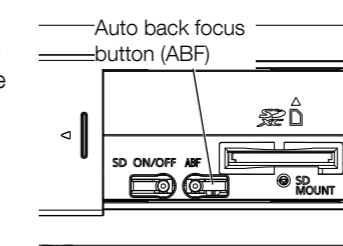
**For mounting on ceiling**   **For mounting on wall**

360° 90°   360° 90°
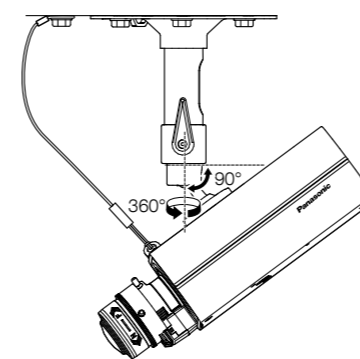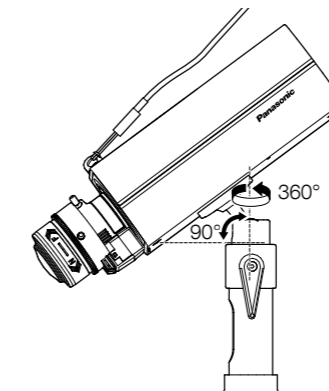
【2】 **Adjusting the focus**
①First, reset the back focus position by holding down the auto back focus button for 5 seconds or more when the power is on.

②Manually adjust the angle of view and focus coarsely by adjusting the zoom and focus of the lens to center a subject in the screen, and then press the auto back focus button on the side of the camera.
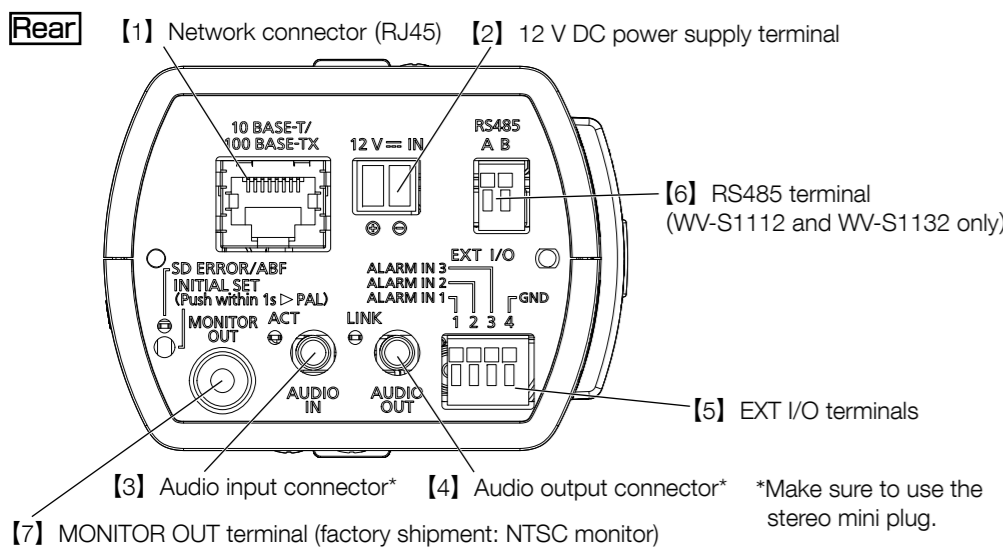
Auto back focus button (ABF)
Focus lock knob
Zoom lock knob
Zoom ring
Focus ring
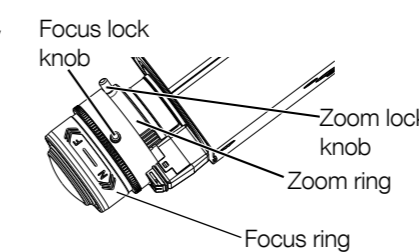
Note:
- How to take a wide depth of field:
  When focus is desired on entire near or distant subjects, select indoor scene mode, or adjust the focus to the midrange position using manual focus adjustment.
- The most common use of a varifocal lens and a zoom lens:
  Note that the adjustment method is different depending on the type. For further information, refer to the operating instructions for the lens to be used.
- Depending on the lens to be used, if the zoom ring is fully rotated in the "W" direction, the periphery may become dark. In such a case, rotate the zoom ring in the "T" direction for readjustment.
- When shooting the following subjects, it may have difficulty adjusting the back focus position automatically. In this case, adjust the back focus position manually from the setup menu.
  Refer to the Operating Instructions (included in the CD-ROM) for how to perform the auto back focus function from the setup menu.
  - Subj. moves frequently
  - Subj. with large illuminance change
  - Subj. with low illuminance
  - Subj. through a window
  - Subj. with less contrast such as white wall
  - Subj. with heavy flicker

Step4 Making connections

*Refer to the Important Information on the provided CD-ROM for details about each cable.

Rear
【1】 Network connector (RJ45)   【2】 12 V DC power supply terminal
10 BASE-T/100 BASE-TX
12 V ⎓ IN
RS485 A B
SD ERROR/ABF INITIAL SET (Push within 1▷ PAL)
MONITOR OUT
ACT
LINK
AUDIO IN
AUDIO OUT
EXT I/O
ALARM IN3
ALARM IN2
ALARM IN1
GND
1 2 3 4
【6】 RS485 terminal (WV-S1112 and WV-S1132 only)
【5】 EXT I/O terminals
【3】 Audio input connector*   【4】 Audio output connector*   *Make sure to use the stereo mini plug.
【7】 MONITOR OUT terminal (factory shipment: NTSC monitor)

IMPORTANT:
- Turn off each system's power supply (PoE hub or device to supply power to the camera) before making a connection.
- The 12 V DC power supply shall be insulated from the commercial AC power..

【1】 **Connect an Ethernet cable (category 5e or better, straight) to the network connector.**

【2】 **When connecting an AC adaptor or an external power supply, use the power cable plug (accessory) to connect it to the camera.**

Caution:
- A READILY ACCESSIBLE DISCONNECT DEVICE SHALL BE INCORPORATED TO THE EQUIPMENT POWERED BY 12 V DC POWER SUPPLY.
- ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY (UL 1310/CSA 223) or LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1).

①Loosen the screw of the power cable plug (accessory), strip 3 mm to 7 mm {1/8 inches to 9/32 inches} from the end of the wire, twist the stripped part of the wire sufficiently to avoid short circuit, and then connect the output cable to the power cable plug (accessory). When connecting an external power supply to the camera, use the 16 AWG to 24 AWG single-wired or stranded wired cables.
②Tighten the screw of the power cable plug (accessory). (Recommended tightening torque: 0.34 N·m {0.25 lbf-ft})
③Connect the power cable plug to the camera.

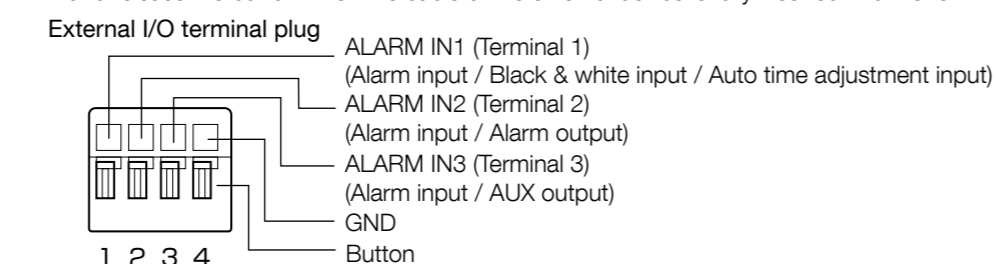【3】 **If needed, connect a microphone or the line out of an external device to the audio input connector.**

【4】 **If needed, connect a powered speaker to the audio output connector.**

【5】 **If needed, connect the alarm input/output cables to the EXT I/O terminals.**
Connect the cables of external devices to the EXT I/O terminal plug.
①When connecting an external device, remove 8 mm - 9 mm {5/16 inches - 11/32 inches} of the outer jacket of the cable and twist the cable core to prevent the short circuit first. Specification of cable (wire): 20 AWG - 26 AWG, Single core, twisted
②Push down the button of the desired terminal on the external I/O terminal plug with a ballpoint pen, and release the button when the cable of the external device is fully inserted into the terminal hole.

External I/O terminal plug
ALARM IN1 (Terminal 1) (Alarm input / Black & white input / Auto time adjustment input)
ALARM IN2 (Terminal 2) (Alarm input / Alarm output)
ALARM IN3 (Terminal 3) (Alarm input / AUX output)
GND
1 2 3 4
Button

Note:
- Do not connect 2 wires or more directly to a terminal. When it is necessary to connect 2 or more wires, use a splitter.
- Check whether the stripped part of the wire is not exposed and is securely connected.
- The default of EXT I/O terminals is "Off". Refer to the Operating Instructions on the provided CD-ROM for further information about the EXT I/O terminal settings.

【6】 **If needed, connect an RS485 communication cable.(WV-S1112 and WV-S1132 only)**
Connect a twisted-pair cable (locally procured) to the RS485 terminal.
①When connecting an external device, remove 9 mm - 10 mm {11/32 inches - 13/32 inches} of the outer jacket of the cable and twist the cable core to prevent the short circuit first. Specification of cable (wire): 22 AWG - 28 AWG, Single core, twisted
②Push down the button of the desired terminal on the RS485 terminal plug with a ballpoint pen, and release the button when the cable of the external device is fully inserted into the terminal hole.

Note:
- There is a correlation between communication speed and transmission distance. Confirm usage conditions. (Ex. 1200 m {3937 feet} when 90 kbps or lower)
- When using twisted-pair cable over long distances, use thicker cable (22 AWG to 24 AWG).
- This product does not contain a termination resistor. If needed, use an external termination resistor.
- The RS485 port of this unit is intended for use with 2-line communications. When connecting 4-line communication devices, make connections as shown in the right illustration.

A B
RA RB TA TB
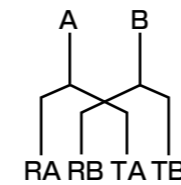
【7】 **Connect the adjustment monitor to the MONITOR OUT terminal using a pin-plug cable.**

【8】 **Turn on the camera.**

Step6 Configure the network settings

Configure the setting of the camera after temporarily invalidating the firewall software. Once the camera configuration is completed, return to the original state.
Contact the network administrator or your Internet service provider for information about configuring the settings of the network.

【1】 **Insert the provided CD-ROM into the CD-ROM drive of your PC.**

The License Agreement will be displayed. Read the Agreement and choose "I accept the term in the license agreement", and click [OK].
⇒ The launcher window will be displayed.

Note:
- If the launcher window is not displayed, double click the "CDLauncher.exe" file on the CD-ROM.
- Refer to "Using the CD-ROM" in the Operating Instructions on the provided CD-ROM for further information about CDLauncher

Panasonic
IP Setting Software — Install / Run
Manual — Install / Open
Viewer Software — Install
Please read first   About this software   Close

【2】 **Click the [Run] button next to [IP Setting Software].**
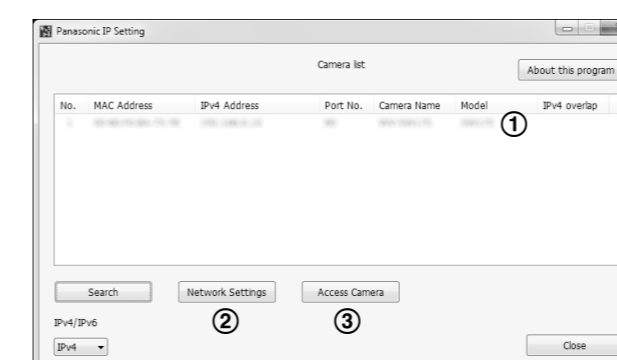⇒ [Panasonic IP Setting] screen will be displayed.
The MAC Address / IP address of the detected camera will be displayed.

【3】 **Select the camera you want to configure (①), and click [Network Settings] (②) to chance the network settings. Then, click [Access Camera] (③).**

Note:
Select the camera with same MAC address as the MAC address printed on the camera that you want to configure.

Panasonic IP Setting
Camera list — About this program
No. MAC Address | IPv4 Address | Port No. | Camera Name | Model | IPv4 overlap ①
IPv4/IPv6
IPv4
Search ② Network Settings ③ Access Camera   Close

【4】 **When the administrator registration window is displayed, enter "User name","Password" and "Retype password" by following the instructions displayed on the screen, and then click the [Set] button.**

Please keep your user name and password in a safe place free from public view to ensure security. After completing the registration, the camera will automatically be re-connected and the authentication window will be displayed. Enter the registered user name and password. The default setting of user authentication is "On". For further information, refer to the "Preface" section in the Operating Instructions.

Administrator registration
Enter the user name and password of the administrator.
User name (1 to 32 characters)
Password (8 to 32 characters)
Retype password
Set
Note:
(1) Distinguish between upper- and lower cases.
(2) Entry of the following is not allowed as a user name: 2-byte characters, and 1-byte symbols " & : ; \
(3) Entry of the following is not allowed as a password: 2-byte characters, and 1-byte symbols " &
(4) For the password, use two or more types of characters from alphabetic characters, numbers, and symbols.
(5) Keep the user name and password at hand so as not to lose them.
(6) It is recommended to change the password periodically.

IMPORTANT:
- When the camera is used over the Internet, setting user authentication to "Off" may lead to unintended access by a third party. Please leave user authentication set to "On".

【5】 **When live images from the camera are displayed, the network connection is complete.**

Note:
For more information on the following content, refer to the Operating Instructions.
- Please set [Time & date] on the [Basic] screen of "Setup" before using the camera.
- It is impossible to display H.265 (or H.264) or MJPEG images, receive/transmit audio, display logs, and use full-screen display when the viewer software "Network Camera View 4S" is not installed on the PC.
- Depending on the environment of your PC, it may take time for images to be displayed.
- At the time of purchase, the audio input and output connectors are set to "Off".If needed, change the setting on the "Audio" screen in "Setup".
- Due to security enhancements in "IP Setting Software", "Network settings" cannot be changed when around 20 minutes have passed after turning on the power of the camera to be configured. (When the effective period is set to "20 min" in the "Easy IP Setup accommodate period".) However, settings can be changed after 20 minutes for cameras in the initial set mode.
If images are not displayed, set the Web browser to compatibility view. For details on how to configure, refer to our website (http://security.panasonic.com/support/info/)