



- 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 description of this product, refer to the Important Information 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 following Panasonic support web site. <https://security.panasonic.com/download/>
- Before reading this manual, be sure to read the Important Information.

For U.S. and Canada:

Panasonic Corporation of North America
Two Riverfront Plaza, Newark, NJ 07102-5490
<http://business.panasonic.com/>

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada
1-877-495-0580
<https://www.panasonic.com/ca/>

For Europe and other countries:

Panasonic Corporation
<http://www.panasonic.com>

Panasonic Corporation
Osaka, Japan
Authorised Representative in EU:
Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany



Important safety instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 6) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 7) Only use attachments/accessories specified by the manufacturer.
- 8) 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.
- 9) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 10) 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 "Troubleshooting" of Important Information in the CD-ROM and Operating Instructions on the Panasonic support web site. Then, 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.

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).

WARNING:

- To prevent injury, this apparatus must be securely attached to the wall/ceiling in accordance with the installation instructions.
- 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.

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

: 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.

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.
- **Important Information (included in the CD-ROM):** Provides basic information about the product such as Precautions for installation, Parts and functions, etc..
- **Operating Instructions (on the Panasonic support web site):** Explains how to perform the settings and how to operate this camera.

Note:

- 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.
- *<Control number: C***>* used in this document should be used to search for information on the Panasonic support website and will guide you to the right information.

Standard accessories

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

*1 The CD-ROM contains the several kind of operating instructions and different kinds of tool software programs.
*2 This label may be required for network management. Use caution not to lose this label.

The following parts are used during installation procedures.

Base bracket	1 pc.	RJ45 waterproof connector cover	1 pc.
Attachment plate	1 pc.	RJ45 waterproof connector cap	1 pc.
Fixing screws for attachment plate (M4 x 8 mm (5/16 inches))	5 pcs.	Bit (Hex wrench, screw size 6.35 mm (1/4 inches) T20)	1 pc.
(of them, 1 for spare)		4P alarm cable	1 pc.
Template A (for the attachment plate)	1 sheet	2P power cable	1 pc.
Template B (for the base bracket)	1 sheet	MONITOR OUT conversion plug	1 pc.
Waterproof tape	1 pc.		

Waterproof tape



Bit



MONITOR OUT conversion plug



For U.S.A.

The model number and serial number of this product may be found on the surface of the unit. You should note the model number and 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. _____

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.

Preparations

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

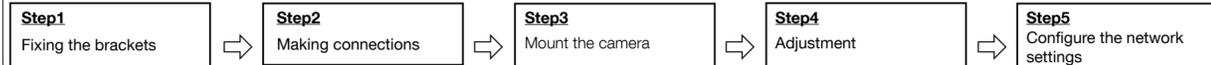
IMPORTANT:

- Procure 4 screws (M4) to secure the attachment plate (accessory) or the base bracket (accessory) to a ceiling or a wall.
- The minimum required pull-out capacity of a single screw or anchor bolt is 196 N (44 lbf) or more when mounting with the installation method [Type 1], [Type 2], or [Type 3] described in the right table.
- 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.
- This product can only be installed indoors when WV-Q105A or WV-Q169A is used to install it on the ceiling.

Installation method	Description of installation method
Mount the camera on the two-gang junction box using the attachment plate (accessory).	[Type 1]
Directly mount the camera onto the ceiling or wall using the attachment plate (when wiring can be installed in the ceiling or wall).	[Type 2]
Mount the camera onto the ceiling or wall using the base bracket (accessory) (when conduits are used for wiring, or when there is no space available for wiring in the ceiling or the wall).	[Type 3]
Mount the camera on the ceiling or wall by combining of the optional bracket. ⇒ Refer to our website (https://security.panasonic.com/support/info/ <Control number: C0112>) for information on a combination of brackets necessary for installation.	Refer to each instruction guide of the bracket.

Installation

The installation tasks are explained using 5 steps.



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

Step 1 Fixing the brackets

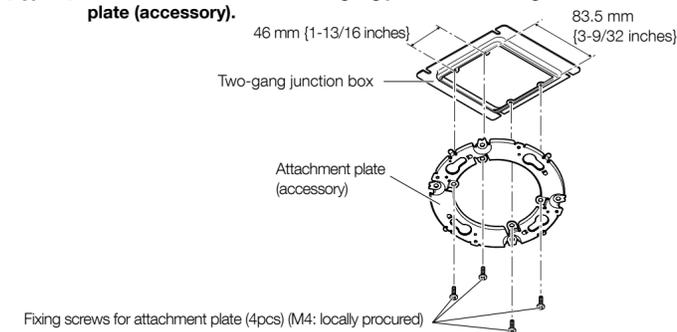
*There are 3 methods to install the camera to a ceiling or wall.

[Common]

Note:

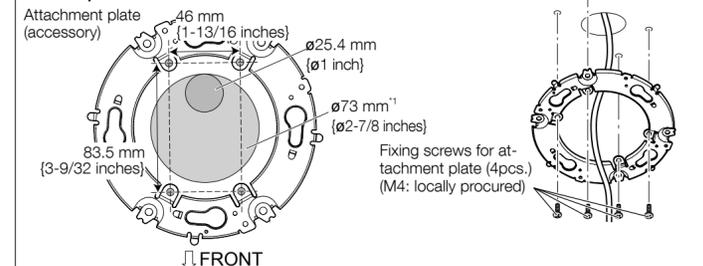
- Attach the attachment plate (accessory) so that the marking (PGYE1054) faces toward the ceiling or wall to be installed.

[Type 1] Mount the camera on the two-gang junction box using the attachment plate (accessory).



[Type 2] Directly mount the camera onto the ceiling or wall using the attachment plate (accessory).

Align the FRONT direction of the template A (accessory) with the desired direction, and drill through four holes to attach the attachment plate and a 25.4 mm (1 inch) diameter hole to pass through the cables. Then, attach the attachment plate to the ceiling or wall. The direction of the marker "FRONT" on the camera (see the figure in [4] of "Step 3 Mount the camera") should face the desired direction of the camera.



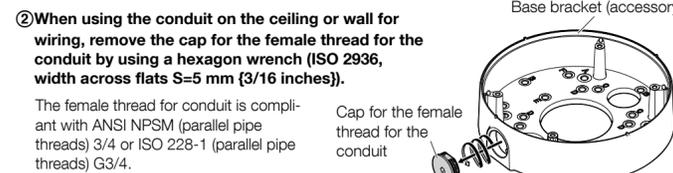
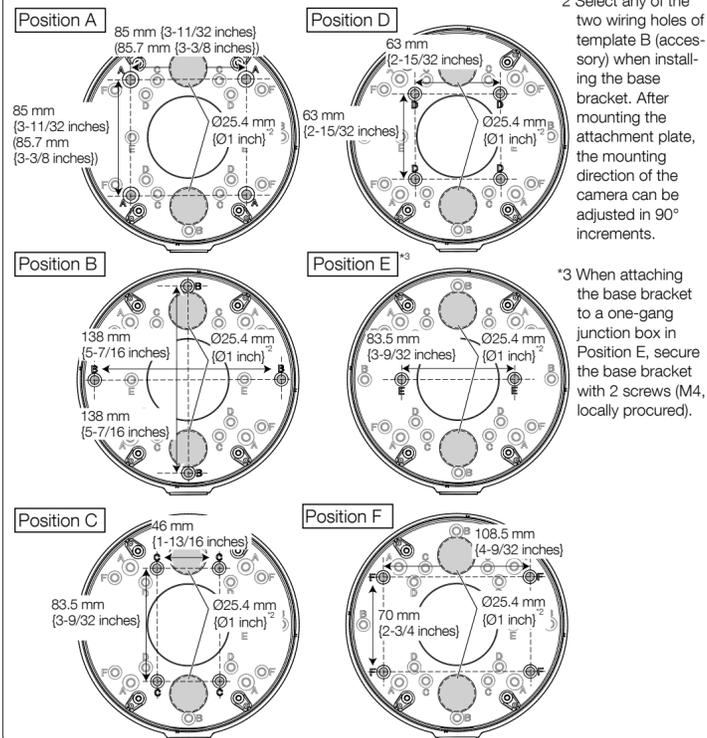
*1 If the mounting direction of the camera is not determined yet or if you want to change the direction of the camera after it has been installed

If you want to be able to change the direction of the camera, drill through a 73 mm (2-7/8 inches) diameter hole in the center. By doing so you can adjust the mounting direction of the camera in 90° increments.

[Type 3] Mount the camera to a ceiling or a wall using base bracket (accessory).

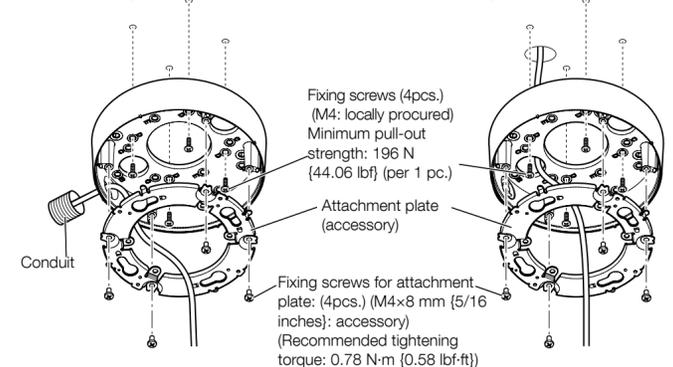
① Using the template B (accessory), make screw holes for fixing the base bracket and wiring holes.

The base bracket can be fixed in any of the following 6 screwing positions according to ceiling and wall conditions. Match the hole used when installing the camera to any of positions A to F.



② When using the conduit on the ceiling or wall for wiring, remove the cap for the female thread for the conduit by using a hexagon wrench (ISO 2936, width across flats S=5 mm (3/16 inches)).

The female thread for conduit is compliant with ANSI NPSM (parallel pipe threads) 3/4 or ISO 228-1 (parallel pipe threads) G3/4.

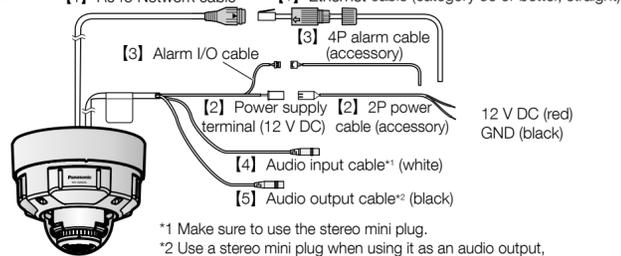


IMPORTANT:

- If open wiring is conducted, be sure to use conduits and run the cables inside the tubes to protect the cables from direct sunlight.
- Installation work shall be such that there is no exposure to water into the architecture through the conduits having been joined..

Step 2 Making connections

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



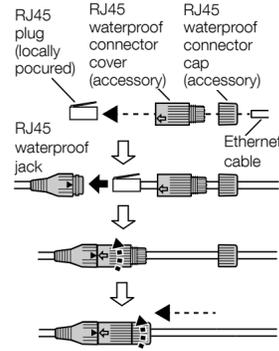
- *1 Make sure to use the stereo mini plug.
- *2 Use a stereo mini plug when using it as an audio output, and use a monaural mini plug when using it as a monitor output.

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 RJ45 network cable. * The maximum cable length is 100 m [328 feet].

- First pass the Ethernet cable through the RJ45 waterproof connector cap (accessory) and then through the RJ45 waterproof connector cover (accessory). Next, use a specialized tool (locally procured) to crimp the RJ45 plug (locally procured) to the end of the Ethernet cable.
 - Take care not to remove the rubber parts from inside the RJ45 waterproof connector cover.
- Insert the RJ45 plug into the RJ45 waterproof jack connected to the camera.
- Connect the RJ45 waterproof connector cover to the RJ45 waterproof jack and then rotate the RJ45 waterproof connector cover until the "◀▶" marks align.
- Connect the RJ45 waterproof connector cap to the RJ45 waterproof connector cover and rotate the RJ45 waterproof connector cap until there is no gap between it and the RJ45 waterproof connector cover.



IMPORTANT:

- If the procedure for the RJ45 waterproof connector (accessory) part is not correctly followed, the waterproofing may be compromised. Do not install the camera where the RJ45 waterproof connector is exposed to constant rain or moisture.
- The external dimensions of the Ethernet cable are from $\phi 5$ mm [$\phi 3/16$ inches] to $\phi 6.5$ mm [$\phi 1/4$ inches].

Step 3 Mount the camera

[1] Align the OPEN mark of the side of the camera with the protruding part of base bracket, insert 2 attachment mounting screws into the attachment plate, and rotate the camera approximately 15°. The LOCK mark is moved to the protruding part of base bracket and the camera is temporarily secured. (When directly attaching the attachment plate to a ceiling or wall, align the OPEN mark to the nail of the attachment plate.)

IMPORTANT:

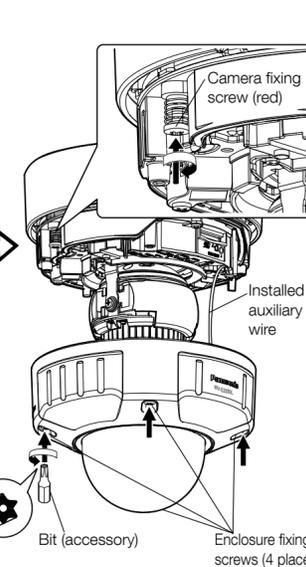
- For installation on the wall, install the camera with the ventilation opening in a sideways or downward position. In a face-up position, the ventilation opening doesn't work well as water accumulates on the surface.

[2] Loosen 4 enclosure fixing screws using the bit (accessory), and remove the enclosure from the camera.

IMPORTANT:

- Enclosure is fixed to the camera body by the installed auxiliary wire, so please do not remove it.

[3] Secure the camera by tightening the camera fixing screw (red).



IMPORTANT:

- Be sure to tighten the camera fixing screw. Failure to observe this may cause camera trouble due to camera falling. (Recommended tightening torque: 0.78 N·m [0.58 lbf·ft])

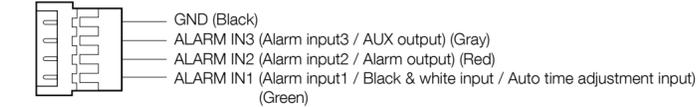
IMPORTANT: (continued)

- If when removing the RJ45 waterproof connector, be sure to loosen the RJ45 waterproof connector cap first, rotate the RJ45 waterproof connector cover in the direction opposite to the attaching direction, and remove it. (If the RJ45 waterproof connector cover is removed when the "◀▶" mark of the RJ45 waterproof connector cover is aligned with the "▶" mark of the RJ45 waterproof jack, the RJ45 waterproof jack may be damaged).

[2] When connecting an AC adaptor or an external power supply, use the 2P power cable (accessory) to connect it to the camera.

Connect the output cable of the AC adaptor to the 2P power cable (accessory). (Red: 12 V DC side, Black: GND side)

[3] If needed, connect the 4P alarm cable (accessory).



Note:

- The default of EXT I/O terminals are "Off". Refer to the Operating Instructions on the Panasonic support web site for further information about the EXT I/O terminal settings.

[4] If needed, connect a microphone or the line out of an external device to the audio input cable.

[5] If needed, connect a powered speaker to the audio output cable.

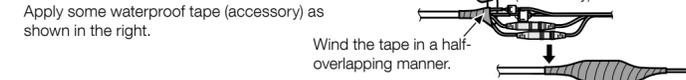
Note:

- The audio output can be switched to the monitor output. Refer to the Operating Instructions on the Panasonic support web site for descriptions of how to switch the output.

[6] Adequate waterproof treatment is required for the cables when installing the camera with cables exposed.

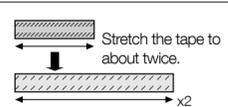
The camera body and RJ45 waterproof connector are waterproof, but the cable ends and the internal part of the base bracket (accessory) are not waterproof. When using cables other than Ethernet cables, apply waterproof treatment on each connecting part including disused cables as shown below.

<Waterproof treatment for other cables than the Ethernet cable>



IMPORTANT:

- Stretch the tape by approx. twice (see the illustration) and wind it around the cable. Insufficient tape stretch causes insufficient waterproofing.



Step 4 Adjustment

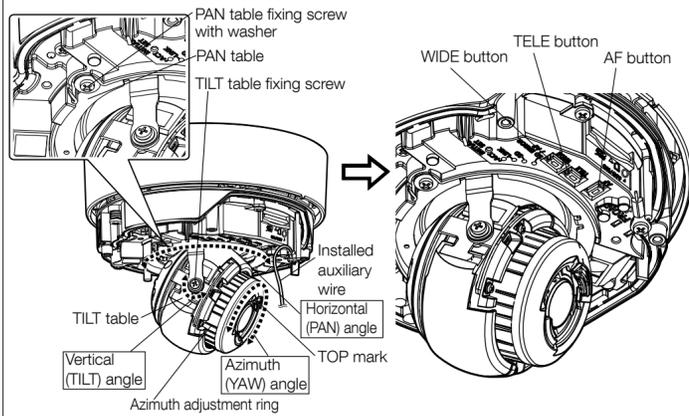
[1] Turn on power for the camera and then remove the protection film from the camera lens.

[2] Loosen the PAN table fixing screw. Adjust the angle of the camera with the PAN table, TILT table, and azimuth adjustment ring.

Horizontal (PAN) angle: $\pm 180^\circ$
Vertical (TILT) angle: $+85^\circ - -30^\circ$
Azimuth (YAW) angle: $\pm 100^\circ$

Note:

- When mounting the camera on a ceiling, adjust the TILT angle so that the TOP mark above the lens always comes to the top side.
- When mounting the camera on a wall, rotate the PAN table by 180° to the left and rotate the TILT table till the TOP mark above the lens always comes to the top side.



Note:

- When using the camera at a vertical position angle of 75° or more (a position where the camera lens is nearly horizontal), part of the image may appear to be overlapped due to influence from the dome cover. To prevent overlapping, decrease the vertical position angle or adjust the zoom ratio.

[3] Tighten the cross-head side of TILT table fixing screw (on one side) and the PAN table fixing screw, and fix the camera unit.

(Recommended tightening torque: 0.59 N·m [0.44 lbf·ft])

[4] Adjust the zoom and focus.

- Adjust the viewing angle by pressing the WIDE or TELE buttons.
- Adjust the focus by pressing the AF (auto focus) button.
- Adjust the screen size and focus by repeating steps ① and ②. Readjust the angle of the camera with the PAN table, TILT table, and azimuth adjustment ring if necessary.

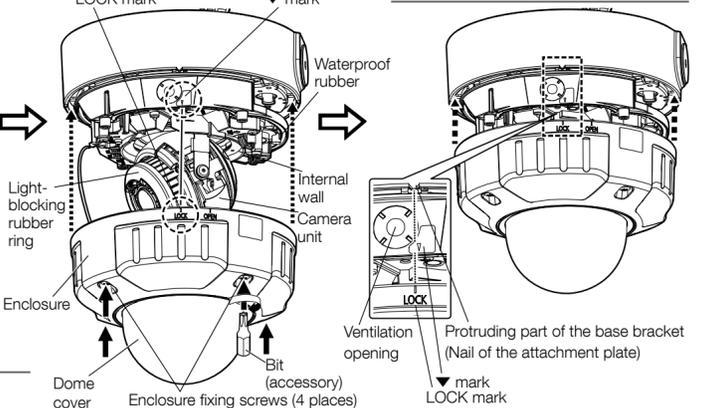
IMPORTANT:

- Mount the enclosure after checking that the waterproof rubber installed in the groove around the camera body has not come off the groove.

[6] After complete installation, remove the protection film from the dome cover.

Note:

- Align the ▼ mark on the camera body with the LOCK line on the enclosure and then mount the enclosure to the camera body at a straight angle.
- If the enclosure is not mounted to the camera body at a straight angle, the inside of the dome cover may make contact with the camera unit, which may result in the configured viewing angle moving out of alignment. The light-blocking rubber ring may be stretched depending on the TILT angle. This does not have effects on light-blocking performance.
- Push the wires from the camera unit into the camera body so that they do not come out from the internal wall of the camera body.



- There is a ventilation opening inside the enclosure. Do not caulk (fill the clearance between the enclosure and the ceiling or wall with sealants or other materials) as internal humidity is discharged through this ventilation opening. Water does not come inside.

Step 5 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 Panasonic support web site for further information about CDLauncher



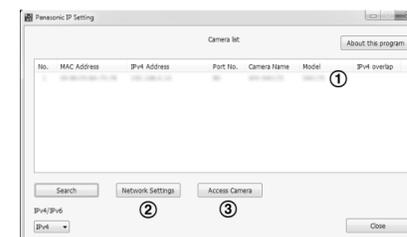
[2] Click the [Run] button next to [IP Setting Software].

⇒ [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 change 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.



[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.



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.
 - Defocus may be caused by the reinstalled enclosure. In this case, perform the auto focus function from the setup menu.
- If images are not displayed, set the Web browser to compatibility view. For details on how to configure, refer to our website (<https://security.panasonic.com/support/info/>) <Control number: C0104>