Panasonic®

Installation Guide

Included Installation Instructions

Network Camera

Model No. **WV-S2531LTN / WV-S2531LN**
WV-S2511LN

WV-S2531LN

SDXC™

- 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 provided CD-ROM.
- The model number is abbreviated in some descriptions in this manual.

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 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 notations

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

S2531L : The functions with this notation are available when using the model WV-S2531LTN / WV-S2531LN.
S2511L : The functions with this notation are available when using the model WV-S2511LN.

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-S2511LN 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	CD-ROM*² .... 1 pc.
IMPORTANT SAFETY INSTRUCTIONS.............. 1 pc.	Code label*³ .... 1 pc.
Warranty card*¹ ....1 set	

*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.

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	Bit (Hex wrench, screw
(M4 × 8 mm {5/16 inches}) ....5 pcs.	size 6.35 mm {1/4 inches} T20) .... 1 pc.
(of them, 1 for spare)	2P power cable .... 1 pc.
Template A (for the attachment plate)................1 sheet	4P alarm cable .... 1 pc.
Template B (for the base bracket) ....1 sheet	MONITOR OUT conversion plug .... 1 pc.
Waterproof tape... 1 pc.	Auxiliary handle **S2511L** .... 1 pc.

Waterproof tape   Bit   Auxiliary handle   MONITOR OUT conversion plug

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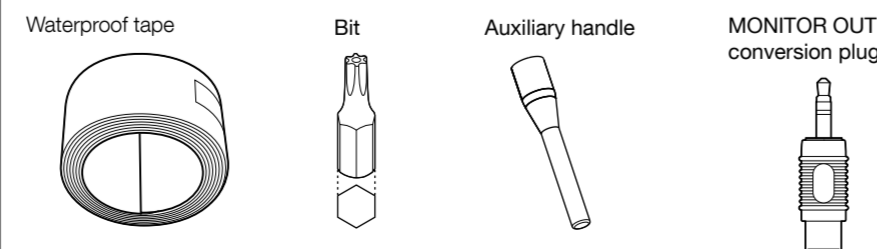
Preparations

Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.
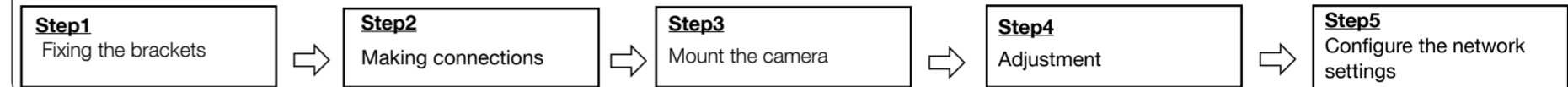
IMPORTANT:
- Procure 4 screws (M4) to secure the attachment plate (accessory) to a ceiling or a wall.
- The minimum required pull-out capacity of a single screw or anchor bolt is 196 N {44 lbf} or more when mounting with the installation method 【Type 1】, 【Type 2】, or 【Type 3】 described in the right table.
- 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).*¹	【Type 3】
Mount the camera using WV-Q105A (Ceiling mount bracket), WV-Q169A (Ceiling mount bracket), WV-Q121B (Ceiling mount bracket), WV-Q122A (Wall mount bracket), or WV-Q124 (Mount bracket) .	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.

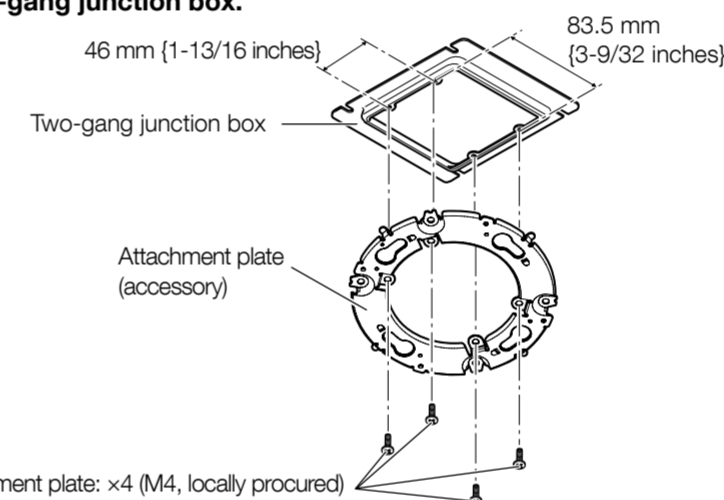| Step1	Step2	Step3	Step4	Step5
Fixing the brackets	Making connections	Mount the camera	Adjustment	Configure the network settings

⇒ ⇒ ⇒ ⇒

Step 1 Fixing the brackets *There are 3 methods to install the camera to a ceiling or wall.
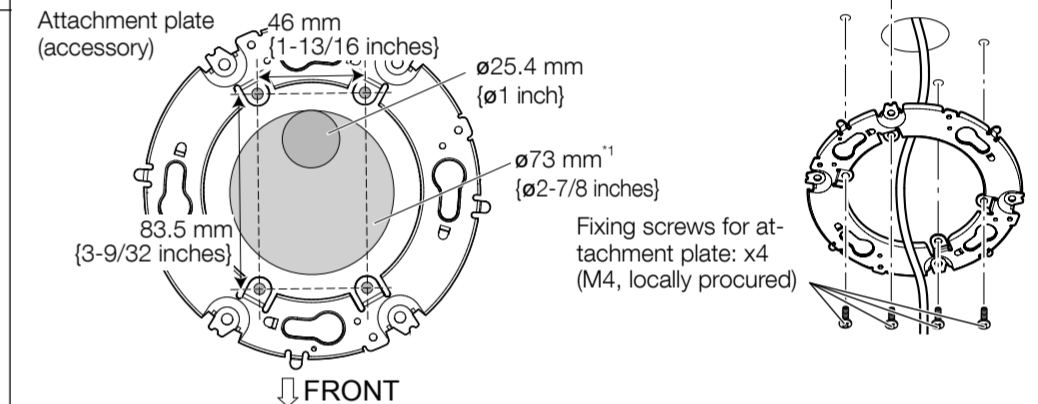
【Common】

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

【Type 1】 Using a two-gang junction box.

46 mm {1-13/16 inches}
83.5 mm {3-9/32 inches}
Two-gang junction box
83.5 mm {3-9/32 inches}
Attachment plate (accessory)
Fixing screws for attachment plate: ×4 (M4, locally procured)

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

①Using 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.

Position A
85 mm {3-11/32 inches} (85.7 mm {3-3/8 inches})
85 mm {3-11/32 inches} (85.7 mm {3-3/8 inches})
Ø25.4 mm {Ø1 inch}

Position B
138 mm {5-7/16 inches}
138 mm {5-7/16 inches}
Ø25.4 mm {Ø1 inch}

Position C
46 mm {1-13/16 inches}
83.5 mm {3-9/32 inches}
Ø25.4 mm {Ø1 inch}

Position D
63 mm {2-15/32 inches}
63 mm {2-15/32 inches}
Ø25.4 mm {Ø1 inch}

Position E *³
83.5 mm {3-9/32 inches}
Ø25.4 mm {Ø1 inch}

Position F
108.5 mm {4-9/32 inches}
70 mm {2-3/4 inches}
Ø25.4 mm {Ø1 inch}

*2 Select any of the two wiring holes of template B (accessory) when installing the base bracket. After mounting the attachment plate, the mounting direction of the camera can be adjusted in 90° increments.

*3 When attaching the base bracket to a one-gang junction box in Position E, secure the base bracket with 2 screws (M4, locally procured).

【Type 2】 Directly mount the camera to the ceiling or wall using the attachment plate.
Align the FRONT direction of the template A (accessory) with the desired direction, and drill through a 25.4 mm {1 inch} diameter hole to attach the attachment plate. Then, 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.

Attachment plate (accessory)
46 mm {1-13/16 inches}
Ø25.4 mm {Ø1 inch}
83.5 mm {3-9/32 inches}
Ø73 mm*¹ {Ø2-7/8 inches}
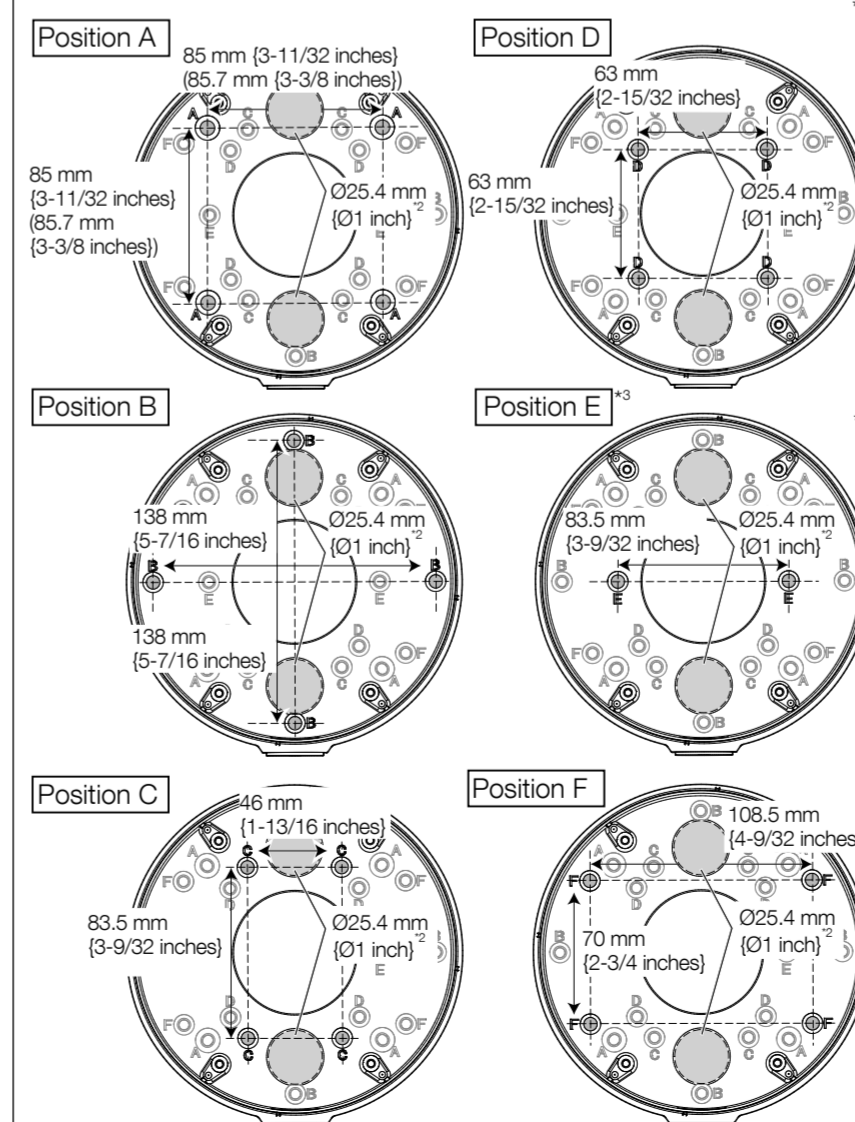Fixing screws for attachment plate: ×4 (M4, locally procured)
⬇ FRONT

*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.

②When 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.

Base bracket (accessory)
Cap for the female thread for the conduit
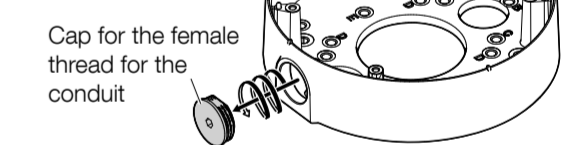
③Mount the attachment plate and the base bracket.
<When using the conduit on the ceiling or wall for wiring>
<When drilling a hole through the ceiling or wall for wiring>

Conduit
Fixing screws × 4 (M4, locally procured) Minimum pull-out strength: 196 N {44.06 lbf} (per 1 pc.)
Attachment plate (accessory)
Fixing screws for attachment plate: ×4 (accessory) (Recommended tightening torque: 0.78 N·m {0.58 lbf·ft})
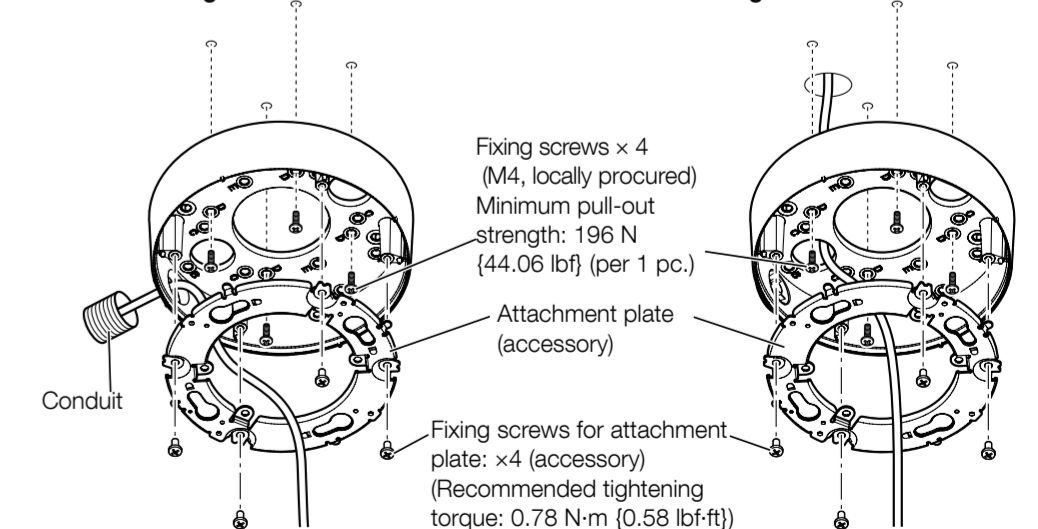
IMPORTANT:
- If open wiring is conducted, be sure to use conduits and run the cables inside the tubes to protect the cables from direct sunlight.
- Installation work shall be such that there is no exposure to water into the architecture through the conduits having been joined..

Step 2 Making connections

RJ45 (female) Network cable | Ethernet cable (category 5e or better, straight)

Alarm input/output cable

4P alarm cable (accessory)

12 V DC power supply terminal | 2P power cable (accessory) | 12 V DC (red)
GND (black)

Audio input cable* (white)

Audio output cable* (black)

*Make sure to use the stereo mini plug.

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

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 (female) network cable. * The maximum cable length is 100 m {328 feet}.

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 ø5 mm {ø3/16 inches} to ø6.5 mm {ø1/4 inches}.

① 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.
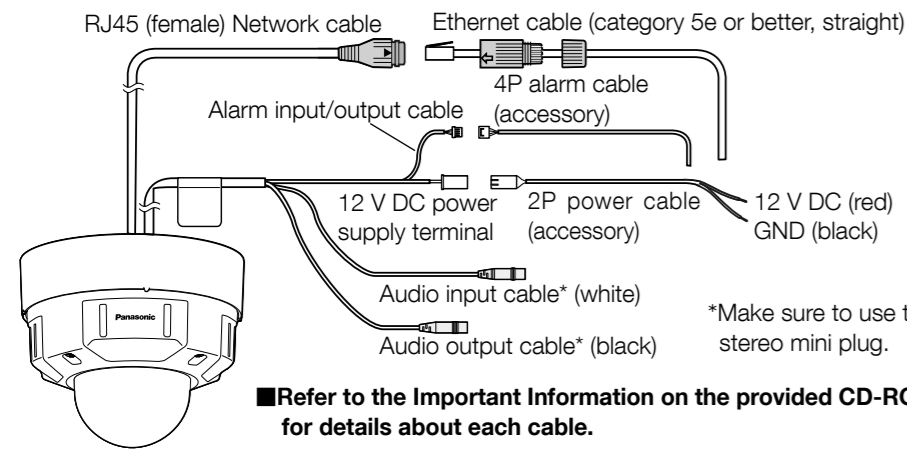● Take care not to remove the rubber parts from inside the RJ45 waterproof connector cover.

② Insert the RJ45 plug into the RJ45 waterproof jack connected to the camera.

③ Connect the RJ45 waterproof connector cover to the RJ45 waterproof connector jack and then rotate the RJ45 waterproof connector cover until the "⇦⇨" marks align.

④ 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.
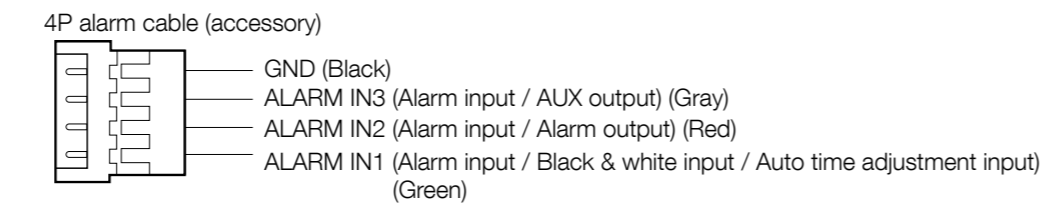
RJ45 plug (locally pocured)

RJ45 waterproof connector cover (accessory)

RJ45 waterproof connector cap (accessory)

RJ45 waterproof jack

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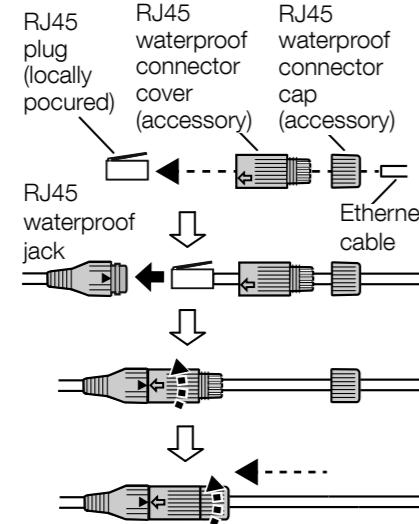
[2] When connecting an AC adaptor or an external power supply, use the 2P power cable (accessory) to connect it to the camera.

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).

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).

4P alarm cable (accessory)

GND (Black)
ALARM IN3 (Alarm input / AUX output) (Gray)
ALARM IN2 (Alarm input / Alarm output) (Red)
ALARM IN1 (Alarm input / Black & white input / Auto time adjustment input) (Green)

Note:
● 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.

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

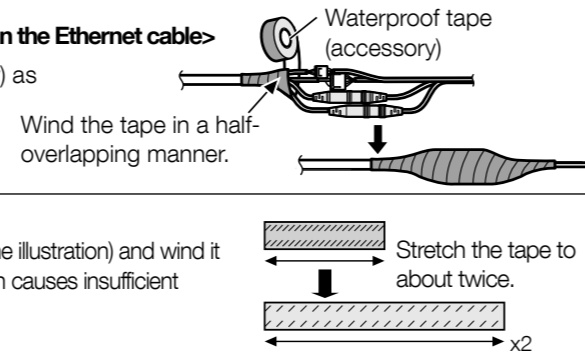**[5] If needed, connect a powered speaker to the audio output cable.**

Note:
● The audio output can be switched to the monitor output. Refer to the "Operating Instructions" on the provided CD-ROM 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 is waterproof, but the cable ends, inside the base bracket (accessory) are not waterproof. Apply waterproof treatment on the connecting part as shown below.

<Waterproof treatment for other cables than the Ethernet cable>

Apply some waterproof tape (accessory) as shown in the right.

Waterproof tape (accessory)

Wind the tape in a half-overlapping manner.

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

Stretch the tape to about twice.

×2

Step 3 Mount the camera

[1] Align the OPEN mark of the enclosure side panel 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 tab position of the attachment plate.)

IMPORTANT:
● For installations on the wall, to prevent water from accumulating on the surface of the dehumidifying device, install the camera so that the dehumidifying device does not face up. If water accumulates on the surface of the dehumidifying device, it cannot function properly.

Protruding part of base bracket (Nail of the attachment plate)

Attachment mounting screws

Position of dehumidifying device

Protruding part of base bracket

LOCK OPEN

OPEN mark

[2] Loosen 4 enclosure fixing screws using the bit (accessory), and remove the enclosure from the camera.
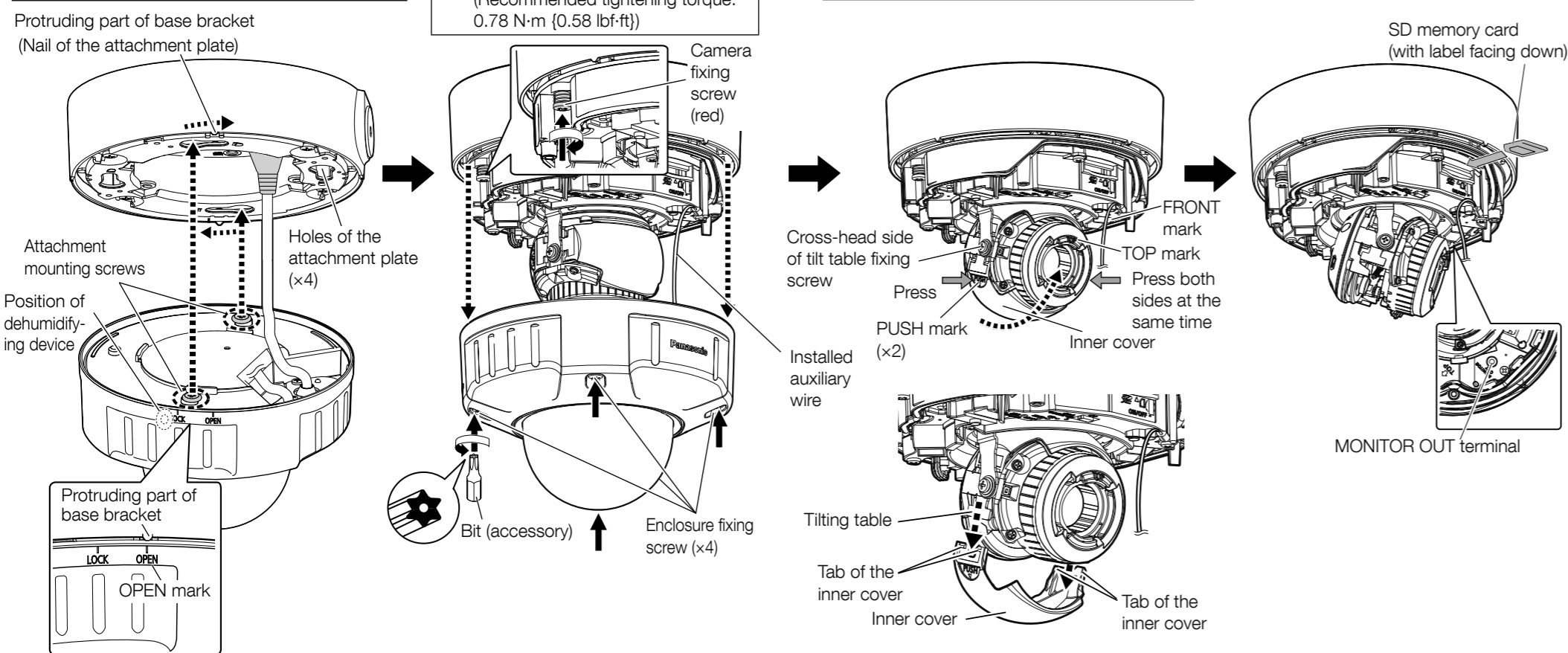
IMPORTANT:
● Enclosure is fixed to the camera body by the installed auxiliary wire, so please do not remove it.

[3] Secure the camera by tightening the camera fixing screws (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})

Camera fixing screw (red)

Holes of the attachment plate (×4)

Bit (accessory)

Enclosure fixing screw (×4)

[4] Loosen the cross-head side of tilt table fixing screw (on one side), and incline the tilt table while keeping the TOP mark on the camera lens head facing the front (i.e. the direction of FRONT mark on the camera).

(S2511L)

[5] Unhook each piece of four nails provided at both sides of the inner cover from the tilting table by pressing surroundings of the PUSH mark of the cover, and remove the inner cover.

Note:
● When using WV-S2531LTN / WV-S2531LN, do not remove the inner cover.

Cross-head side of tilt table fixing screw

Press

PUSH mark (×2)

FRONT mark
TOP mark

Press both sides at the same time

Inner cover

Tilting table

Tab of the inner cover

Inner cover

Tab of the inner cover

[6] Connect the MONITOR OUT conversion plug (accessory) to the MONITOR OUT terminal of the camera, and then connect the monitor for adjustment with a RCA pin cable (locally procured).

[7] Insert an SD memory card into the slot, if necessary.
● Refer to the "Important Information" on the provided CD-ROM for how to insert/remove the SD memory card.

SD memory card (with label facing down)

MONITOR OUT terminal

Step 4 Adjustment

[1] Turn on power for the camera and then remove the protection film from the camera lens.
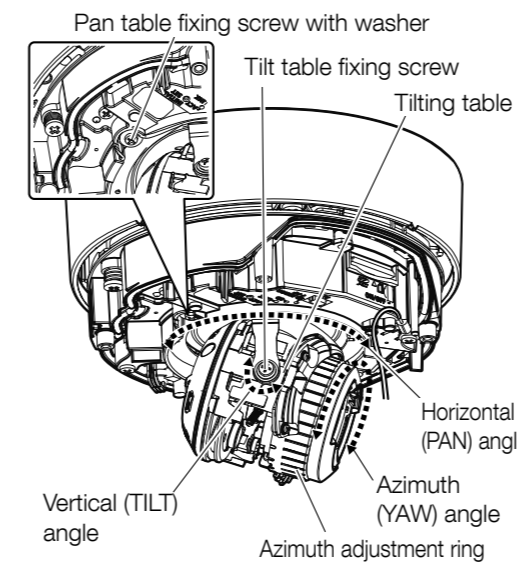
[2] Loosen the pan table fixing screw. Adjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring.
Horizontal (PAN) angle: ±180 °
Vertical (TILT) angle:+85 ° – -30 °
Azimuth (YAW) angle: ±100 °

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.

[3] Tighten the cross-head side of tilt table fixing screw (on one side) and the pan table fixing screw, and fix the camera.
(Recommended tightening torque: 0.59 N·m {0.44 lbf·ft})

Pan table fixing screw with washer

Tilt table fixing screw

Tilting table

WIDE

TELE

Auxiliary handle (accessory)

Zoom knob

Vertical (TILT) angle

Horizontal (PAN) angle

Azimuth (YAW) angle

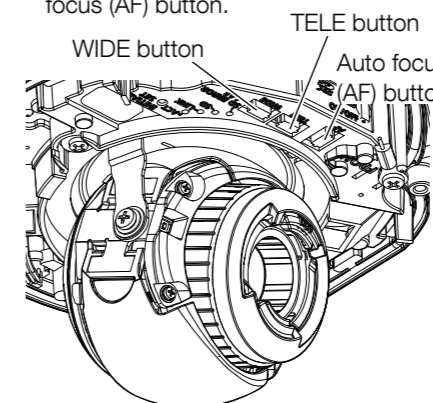Azimuth adjustment ring

(S2511L)

[4] Adjust the zoom and focus.
① Loosen the zoom knob equipped with auxiliary handle (accessory) by rotating the knob to the left, and move it between TELE and WIDE to obtain the appropriate angle of view. Then, lock the zoom knob by rotating it back to the right.
② Adjust the focus by pressing the auto focus (AF) button.

Auto focus (AF) button
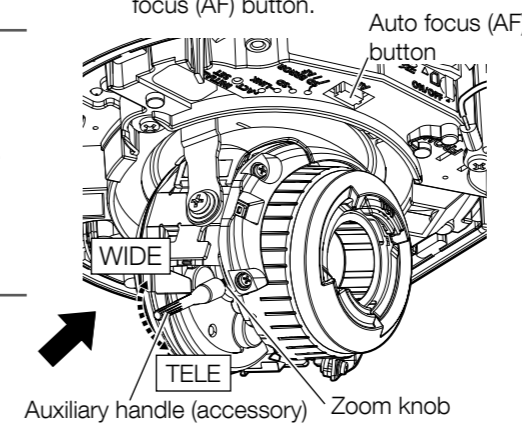
(S2531L)

[4] Adjust the zoom and focus.
① adjust the viewing angle by pressing the WIDE or TELE buttons.
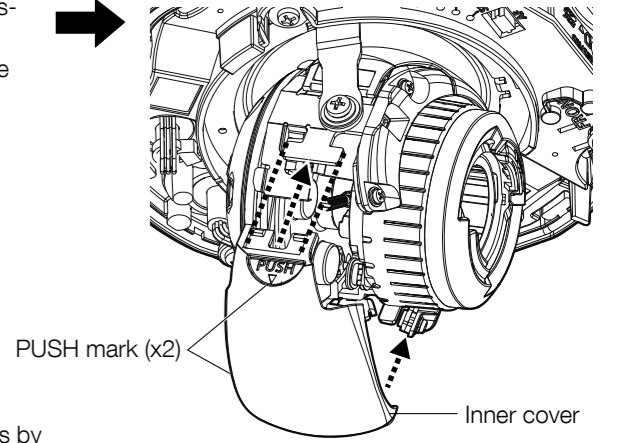② Adjust the focus by pressing the auto focus (AF) button.

WIDE button

TELE button

Auto focus (AF) button

(S2511L)

③ Adjust the screen size and focus by repeating steps ① and ②. Readjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring if necessary.
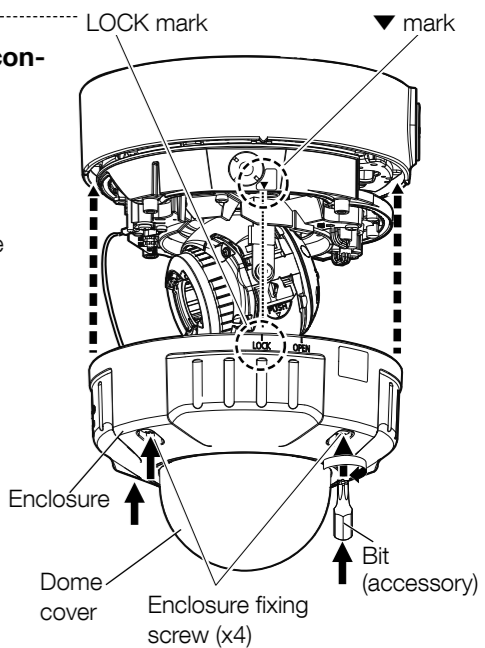After the adjustment, remove the auxiliary handle (accessory).

(S2531L)

③ Adjust the screen size and focus by repeating steps ① and ②. Readjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring if necessary.

[6] Disconnect the MONITOR OUT conversion plug (accessory). Attach the enclosure and secure it by tightening the enclosure fixing screws.
Align the LOCK mark on the enclosure with the ▼ mark on the camera. Then mount the enclosure directly to the camera. (Recommended tightening torque: 0.78 N·m {0.58 lbf·ft})

IMPORTANT:
● Check that the water-proof rubber installed in the slot around the camera does not slide out of the slot, and then mount the enclosure.

[5] Press the PUSH mark on both sides of the inner cover, and install the inner cover to the place where it was removed.

PUSH mark (x2)

Inner cover

LOCK mark

▼ mark

Enclosure

Dome cover

Bit (accessory)

Enclosure fixing screw (x4)

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

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 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

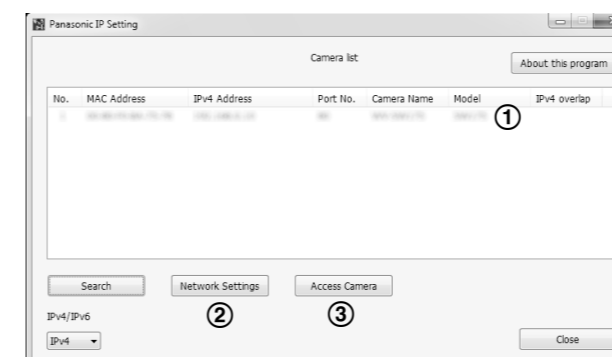**[2] Click the [Run] button next to [IP Setting Software].**
⇒ [Panasonic IP Setting] screen will be displayed.
The MAC Address / IP address of the detected camera will be displayed.

[3] Select the camera you want to configure (①), and click [Network Settings] (②) to change the network settings. Then, click [Access Camera] (③).
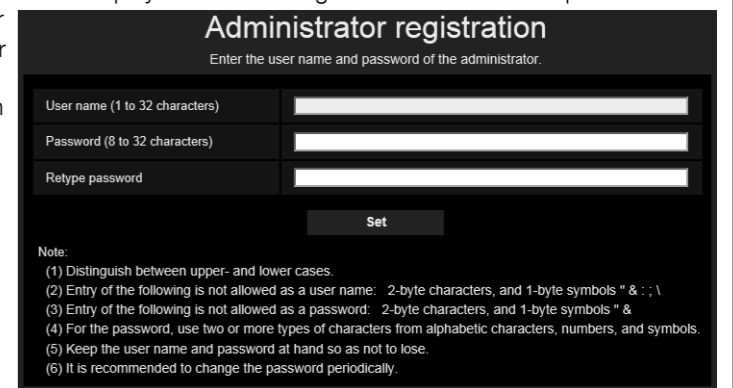
Note:
Select the camera with same MAC address as the MAC address printed on the camera that you want to configure.

Panasonic IP Setting

Camera list

About this program

No. | MAC Address | IPv4 Address | Port No. | Camera Name | Model | IPv4 overlap

①

Search | Network Settings | Access Camera

② ③

IPv4/IPv6

IPv4

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.
(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.
● 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 (http://security.panasonic.com/support/info/)