

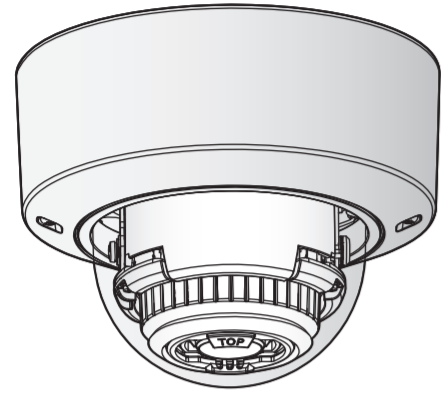


Installation Guide

Included Installation Instructions

Network Camera

Model No. WV-S2270L



- 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 our support website. https://i-pro.com/global/en/surveillance/documentation_database
- Before reading this manual, be sure to read the Important Information.

For U.S. and Canada:

i-PRO Americas Inc.
<https://www.i-pro.com/>

For Europe and other countries:

i-PRO Co., Ltd. Fukuoka, Japan
<https://www.i-pro.com/>

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Printed in China

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 "Troubleshooting" of Important Information in the CD-ROM and Operating Instructions on our support website. 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 we shall not respond to any inquiries regarding the contents of the source code.

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:

- 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)

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. _____

☰ : Direct current symbol

☠☪ : Hot surface 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 authority. 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 our support website):** Explains how to perform the settings and how to operate this camera.

"<Control No.: C****>" used in this document should be used to search for information on our support website and will guide you to the right information.

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.

Standard accessories

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

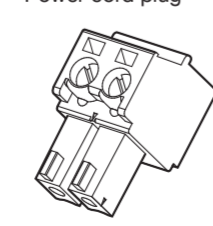
The following parts are used during installation procedures.

Attachment plate 1 pc. MONITOR OUT conversion plug 1 pc.
 Template A (for the attachment plate) 1 sheet Bit (Hex wrench, screw
 Power cord plug*3 1 pc. size 6.35 mm {1/4 inches} T20 1 pc.
 EXT I/O terminal plug*3 1 pc.

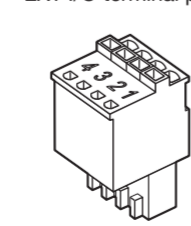
Bit



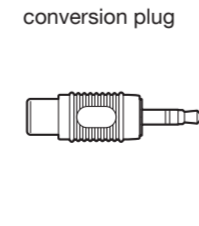
Power cord plug



EXT I/O terminal plug



MONITOR OUT conversion plug



*3 The EXT I/O terminal plug and power cord plug are attached to the camera.

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: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Supplier's Declaration of conformity
 Trade name : i-PRO
 Model No. : WV-S2270L
 Responsible Party :
 i-PRO Americas Inc.
 8550 Fallbrook Drive, Suite 200 Houston,
 Texas 77064
 Support Contact : 1-800-513-5417



For U.S.A. and Canada

This device complies with part 15 of FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Preparations

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

IMPORTANT:

- For information about the minimum pull-out strength, refer to our website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information <Control number:C0120>).
- 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] or [Type 2] 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.

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]
When mounting the camera on an insufficiently strong ceiling using the ceiling mount bracket WV-Q105A (when mounting in areas where the screws are too weak to support the total weight, such as the plaster board of double-ceilings). (approx. 150 g {0.33 lbs})	Refer to the Instruction Manual provided with the WV-Q105A.
Mount the camera in the ceiling using the ceiling mount bracket WV-Q174B (approx. 280 g {0.62 lbs}).	Refer to the Instruction Manual provided with the WV-Q174B.

Installation

The installation tasks are explained using 6 steps.



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

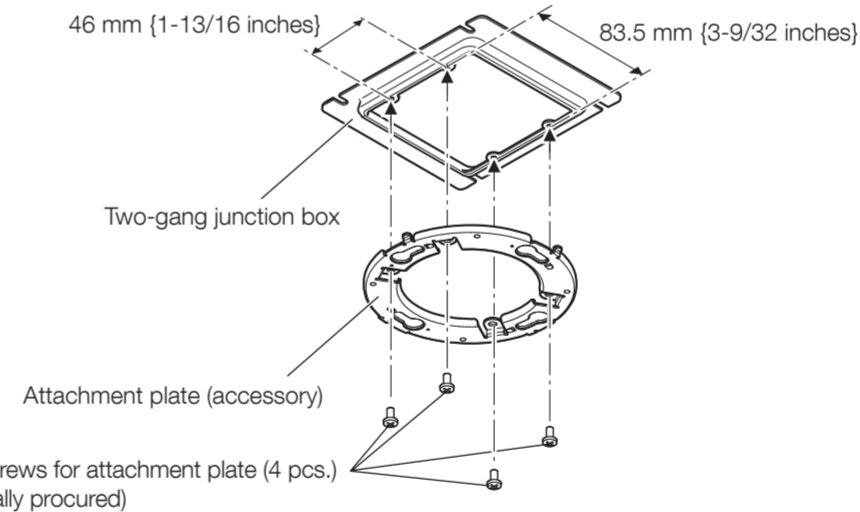
Step 1 Fixing the attachment plate (There are 2 methods to install the camera to a ceiling or wall.)

[Common]

Note:

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

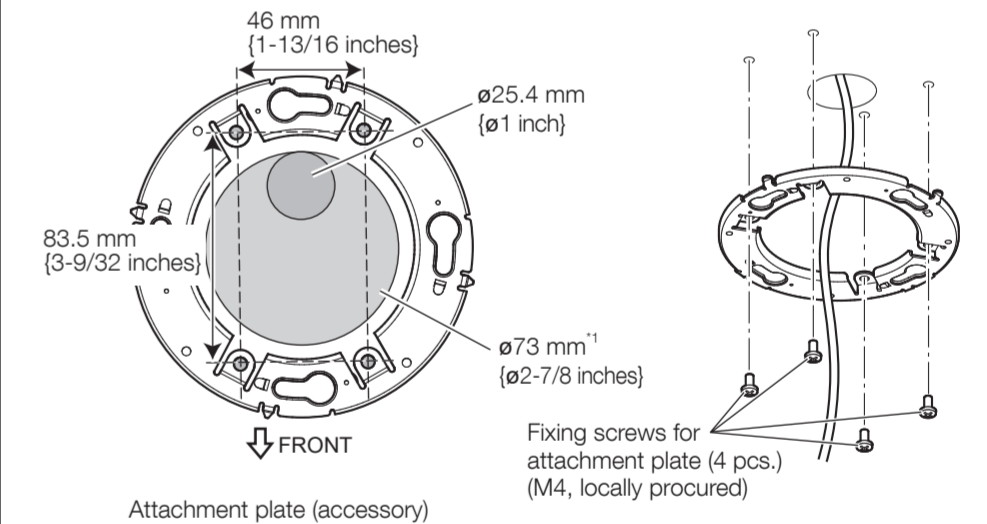
[Type 1] Mount the camera on the two-gang junction box using the attachment plate (accessory).



Fixing screws for attachment plate (4 pcs.) (M4, locally procured)

[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 [3] of "Step 4 Mount the camera") should face the desired direction of the camera.



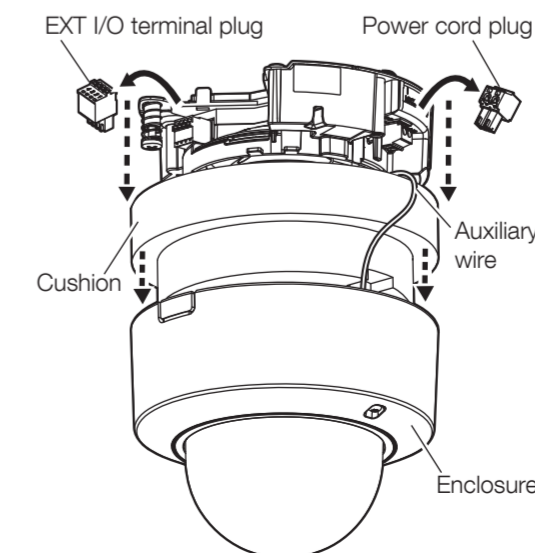
*1 If the mounting direction of the camera is not determined yet or if you want to change the direction of the camera after it has been installed
 If you want to be able to change the direction of the camera, drill through a 73 mm {2-7/8 inches} diameter hole in the center. By doing so you can adjust the mounting direction of the camera in 90° increments.

Step 2 Remove the enclosure from the camera.

- 1) Remove the enclosure and cushion from the camera.
- 2) Remove the power cord plug (accessory) and the EXT I/O terminal plug (accessory) attached to the camera.

IMPORTANT:

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

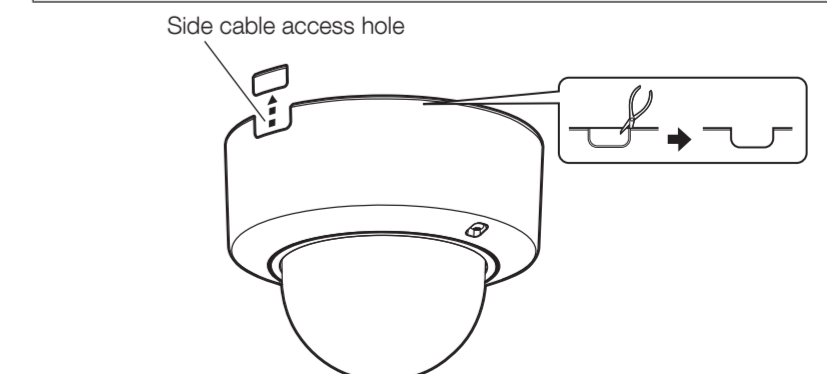


Using the side cable access hole

When installing the camera directly on the ceiling or wall with cables exposed, or when mounting the camera using the ceiling mount bracket WV-Q174B (option), cut out a portion of the enclosure to open a side cable access hole.

IMPORTANT:

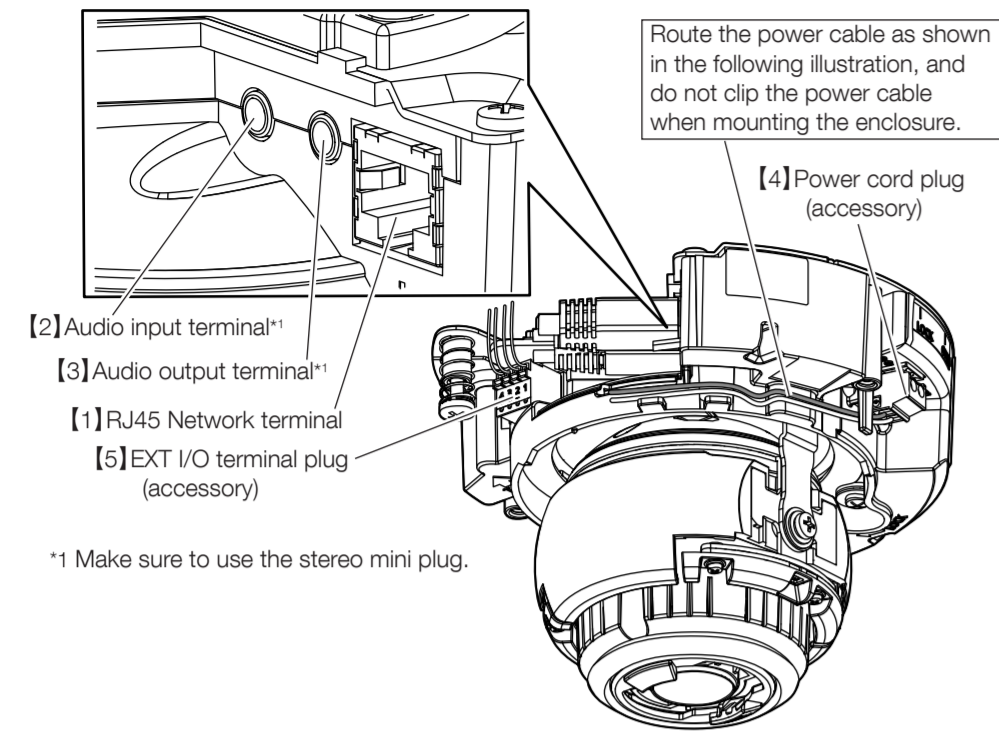
- To prevent injuries and protect the cables, finish the side cable access hole with a file to avoid sharp edges.



● A part of the enclosure and the auxiliary wire is omitted in the illustrations after Step 3.

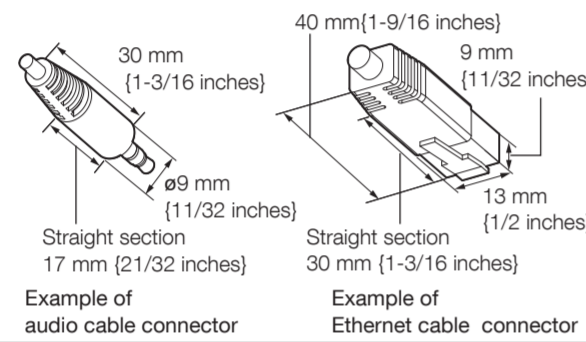
Step 3 Making connections

Refer to the Important Information on the provided CD-ROM for details about each cable.
 As necessary, use a cable tie (locally procured) to tie the cables together.



Note:

Since the connector storage section does not have a sufficient space, use audio cables and an Ethernet cable that do not exceed the sizes described in the illustrations.



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.

- Connect an Ethernet cable (category 5e or better, straight) to the RJ45 network terminal.
- If needed, connect a microphone or the line out of an external device to the audio input terminal.
- If needed, connect a powered speaker to the audio output terminal.
- When connecting an AC adaptor or an external power supply, use the power cord 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).

- Loosen the screws of the power cord plug, 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 cord plug.
 When connecting an external power supply to the camera, use the 16 AWG to 24 AWG single-wired or stranded wired cables.
- Tighten the screw of the power cord plug.
 (Recommended tightening torque: 0.34 N·m {0.25 lbf·ft})
- Connect the power cord plug to the camera.

- If needed, connect the alarm I/O cables to the EXT I/O terminal plug (accessory).

Connect the cables of external devices to the EXT I/O terminal plug.
 When 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

- Push down the button of the desired terminal on the EXT 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.

EXT I/O terminal plug
 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 our support website for further information about the EXT I/O terminal settings.

Step 4 Mount the camera

- Align the OPEN mark of the side of the camera with the nail of the attachment plate, insert 2 attachment mounting screws into the attachment plate, and rotate the camera by approximately 15°. The LOCK mark is moved to the nail of the attachment plate and the camera is temporarily secured.

- Secure the camera by tightening the camera fixing screw (red).

IMPORTANT:

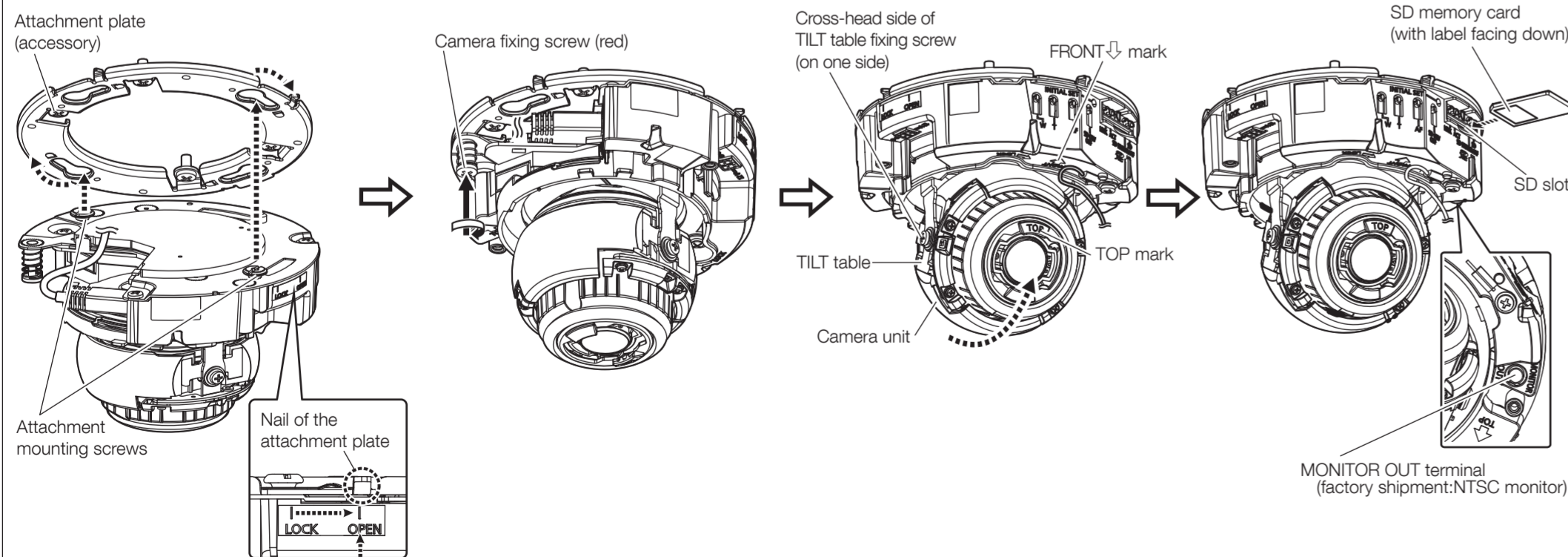
- Be sure to tighten the camera fixing screw. Failure to observe this may cause a drop resulting in injury or accidents.
 (Recommended tightening torque: 0.78 N·m {0.58 lbf·ft})

- 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).

- Connect the MONITOR OUT conversion plug (accessory) to the MONITOR OUT terminal of the camera, and then connect the monitor for adjustment with cable (locally procured).

- Insert an SD memory card into the SD slot, if necessary.

- Refer to the "Important Information" on the provided CD-ROM for how to insert/remove the SD memory card.



Step 5 Adjustment

- Turn on power for the camera.

- Loosen the PAN table fixing screw. Adjust the angle of the camera with the PAN table, TILT table, and Azimuth adjustment ring.

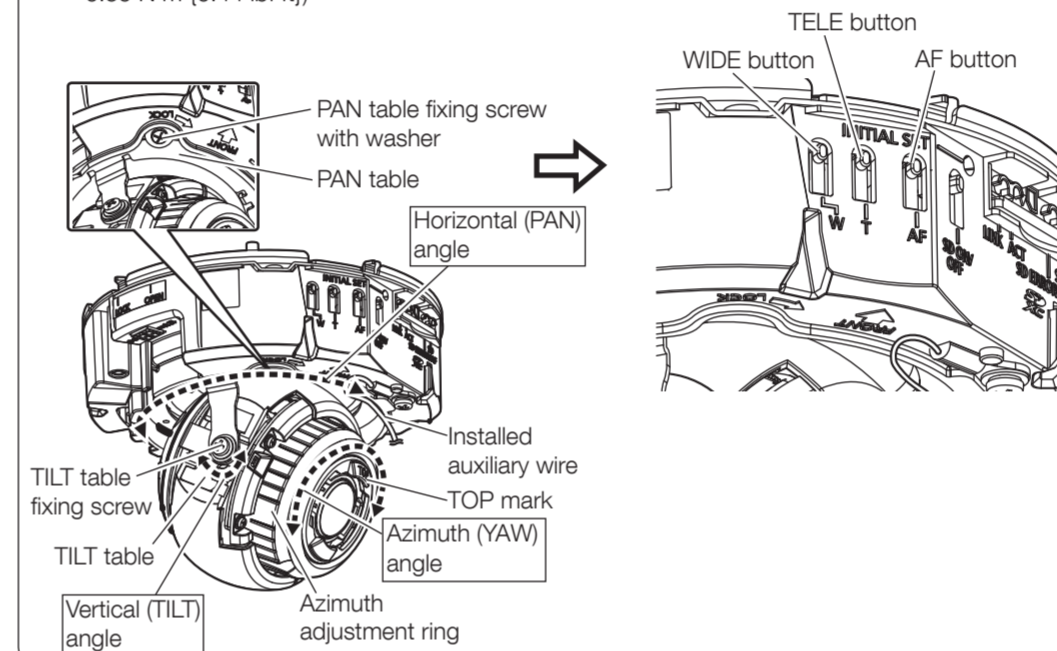
Horizontal (PAN) angle: -240° - +120°
 Vertical (TILT) angle : -30° - +85°
 Azimuth (YAW) angle : ±100°

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.

- 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})



- 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.

Note:

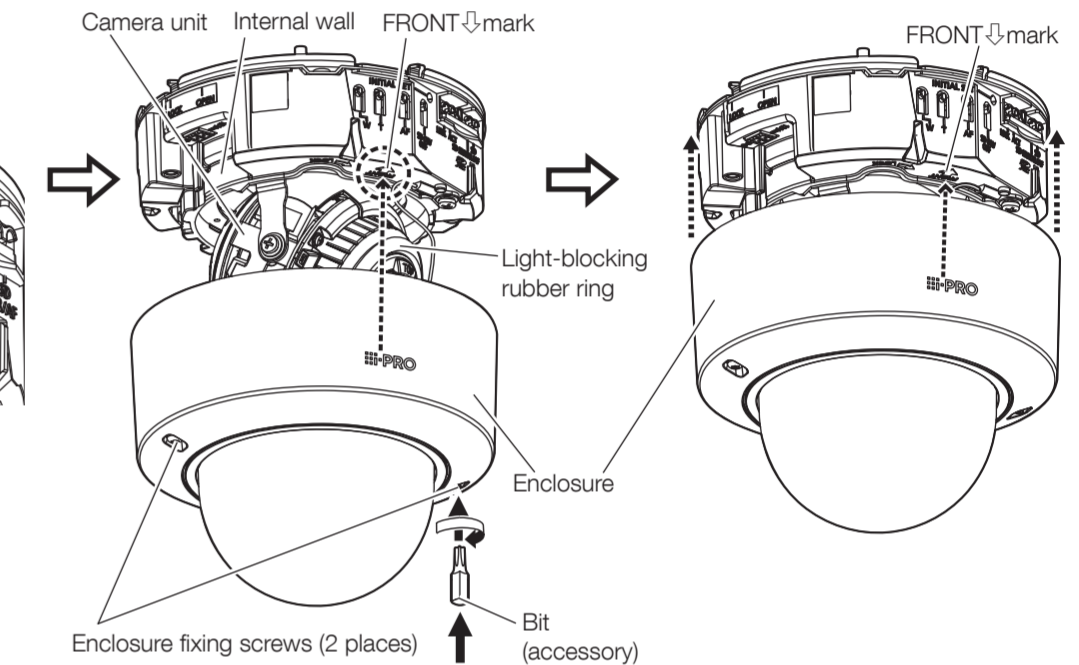
- When using the camera at a vertical position angle of 75° or more (a position where the camera lens is nearly horizontal), part of the image may appear to be overlapped due to influence from the dome cover. To prevent overlapping, decrease the vertical position angle or adjust the zoom ratio.

- Disconnect the MONITOR OUT conversion plug (accessory). Attach the enclosure and secure it by using a bit (accessory) to tighten the enclosure fixing screws (2 places).

Attach the enclosure by aligning the i-PRO logo to the direction marker (FRONT mark) on the camera.
 (Recommended tightening torque: 0.59 N·m {0.44 lbf·ft})

Note:

- Mount the enclosure to the camera body at a straight angle.
- 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.



- After complete installation, remove the protection film from the dome cover.

When the camera has been installed, remove the protection film from the dome cover. After removal, be sure not to touch the dome cover.

Step 6 Configure the network settings

Download and start [IP Setting Software] <Control No.: C0123> or [i-PRO Configuration Tool (iCT)] <Control No.: C0133> on our technical information support site (https://i-pro.com/global/en/surveillance/training_support/support/technical_information), and connect to the network.