Installation Manual

IX-DVM (Video Door Station)

AIPHONE ®

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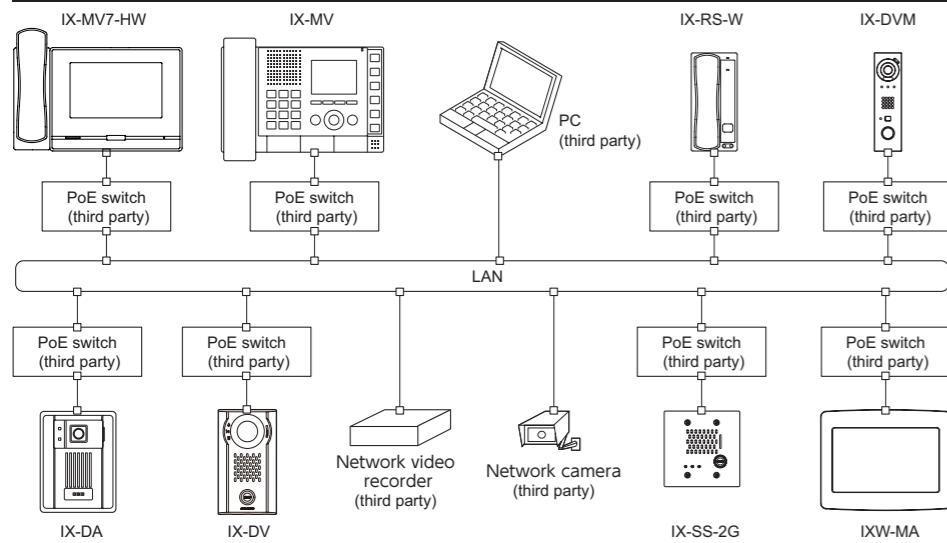
Introduction

- Read this manual before installation and connection. Read the "Setting Manual" and "Operation Manual". Manuals can be downloaded from our homepage at "https://www.aiphone.net/support/software-documents/" free of charge.
- After completing installation and connection, program the system according to the "Setting Manual". The system cannot operate unless it is programmed.
- This product incorporates a Class 1 laser.
  Laser emissions conform with IEC 60825-1:2014.

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CLASS 1
LASER PRODUCT
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> Perform installation and connection only after gaining sufficient understanding of the system and this manual.
> The illustrations used in this manual may differ from the actual stations.

- This product complies with FDA performance standards for laser products except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.
- Manufacturer

  AIPHONE CO.,LTD.

  10th floor Meiji Yasuda Seimei Nagoya Building, 1-1 Shinsakae-machi, Naka-ku, Nagoya, Aichi, 460-0004, JAPAN
- Manufacturing Location
  37-10 Shikita Sasahara-Cho, Toyota. Aichi 470-0352 Japan
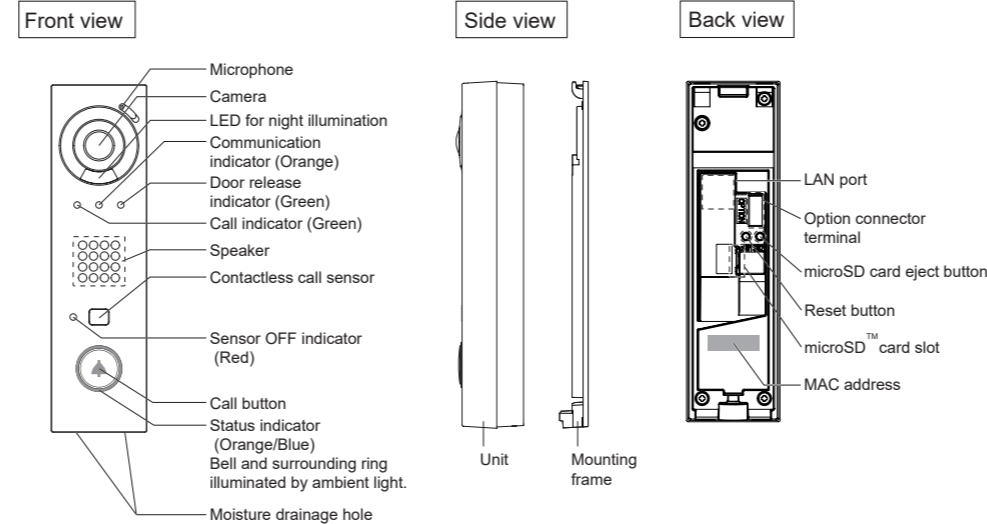
Example of System Configuration

Status Indicator

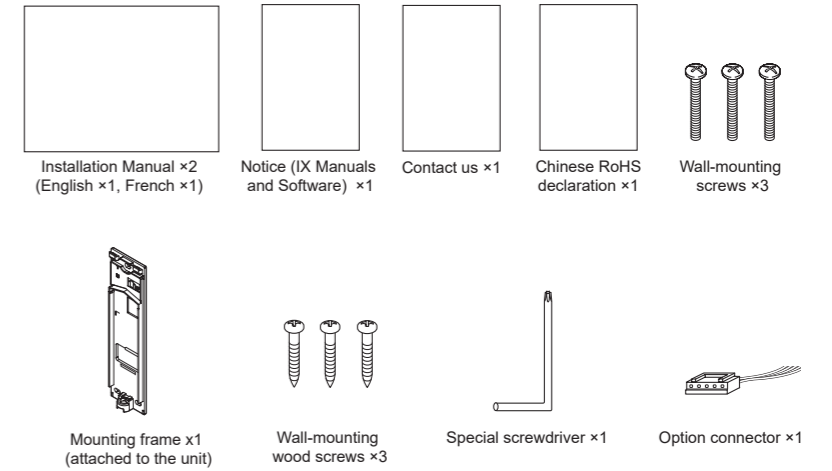Refer to "Operation Manual" for indicators not listed below.

☀: Lit ☐ : Off

Status (pattern)		Meaning
Orange flashing	☀ 0.75 sec → ☐ 0.75 sec	Booting
	☀ 0.25 sec → ☐ 0.25 sec	Device error, Startup error
	☀ 0.5 sec → ☐ 4 sec	Communication failure
	☀ 1 sec → ☐ 0.25 sec → ☀ 0.25 sec → ☐ 0.25 sec → ☀ 0.25 sec → ☐ 0.25 sec	Firmware version updating
	☀ 2 sec → ☐ 0.25 sec → ☀ 0.25 sec → ☐ 0.25 sec	Mounting/ unmounting microSD card
	☀ 1 sec → ☐ 0.25 sec → ☀ 0.25 sec → ☐ 0.25 sec	Initializing
Blue light	☀	Standby

Part Names and Accessories

IX-DVM

Front view — Microphone, Camera, LED for night illumination, Communication indicator (Orange), Door release indicator (Green), Call indicator (Green), Speaker, Contactless call sensor, Sensor OFF indicator (Red), Call button, Status indicator (Orange/Blue), Bell and surrounding ring illuminated by ambient light., Moisture drainage hole

Side view — Unit, Mounting frame

Back view — LAN port, Option connector terminal, microSD card eject button, Reset button, microSD™ card slot, MAC address

Included accessories

- Installation Manual ×2 (English ×1, French ×1)
- Notice (IX Manuals and Software) ×1
- Contact us ×1
- Chinese RoHS declaration ×1
- Wall-mounting screws ×3
- Mounting frame x1 (attached to the unit)
- Wall-mounting wood screws ×3
- Special screwdriver ×1
- Option connector ×1

Precautions

⚠ Warning — Negligence could result in death or serious injury.

Do not disassemble or modify the station.
This may result in fire or electrical shock.

Do not, under any circumstances, open the station.
Voltage within some internal components may cause electrical shock.

The device is not designed to explosion-proof specifications. Do not install or use in an oxygen room or other such locations filled with volatile gases.
This may result in fire or explosion.

⚠ Caution — Negligence could result in injury to people or damage to property.

Do not install or connect the device with the power on.
May cause electrical shock or malfunction.

Make sure the wiring is correct and there are no wiring shorts before switching on the station.
This may result in fire or electrical shock.

Do not put your ear close to the speaker when using the station.
May cause harm to the ear if a sudden loud noise is emitted.

General Precautions

- When installing or using the station, give consideration to the privacy rights of subjects, as it is the responsibility of the system owner to post signs or warnings in accordance with local ordinances.

Notice

- If warm air from inside the room enters the unit, the internal and external temperature difference may cause condensation on the camera. Plugging of cable holes and other gaps where warm air might enter is recommended for preventing condensation.
- If the station is used in areas where there are business-use wireless devices such as a transceiver or mobile phones, it may cause malfunction.
- If the device is installed close to a light dimmer, an inverter electrical appliance or the remote control unit of a hot-water system or floor-heating system, it may create interference and cause a malfunction.
- If the device is installed in an area with an extremely strong electrical field, such as in the vicinity of a broadcasting station, it may create interference and cause a malfunction.
- Environmental conditions such as the accumulation of rainwater, frost, snow, or dust on the unit may prevent calls from being made or place accidental calls.

Precautions for mounting

- Installing the station in the following locations as is may affect the clarity of the image:
  - Where lights will shine directly into the camera at night time
  - Where the sky fills much of the background
  - Where the background of the subject is white
  - Where direct sunlight is present
- Installing the device in the following locations could cause malfunction:
  - **Locations near heating equipment**
  - **Locations subject to liquid, iron filings, dust, oil, or chemicals**
  - **Locations subject to moisture and humidity extremes**
  - **Locations where the temperature is quite low**
  - **Locations subject to steam or oil smoke**
  - **Sulphurous environments**
  - **Locations close to the sea or directly exposed to sea breeze**
- In 50Hz regions, if a strong fluorescent light shines directly into the camera, it may cause the image to flicker. Either shield the camera from the light or use an inverter fluorescent light.
- If existing wiring is used, the device may not operate properly. In that case, it will be necessary to replace the wiring.
- Do not use and impact driver to fasten screws. Doing so may cause damage to the device.
- Avoid installing the door station in concave space of a wall to prevent disconnection of communication.
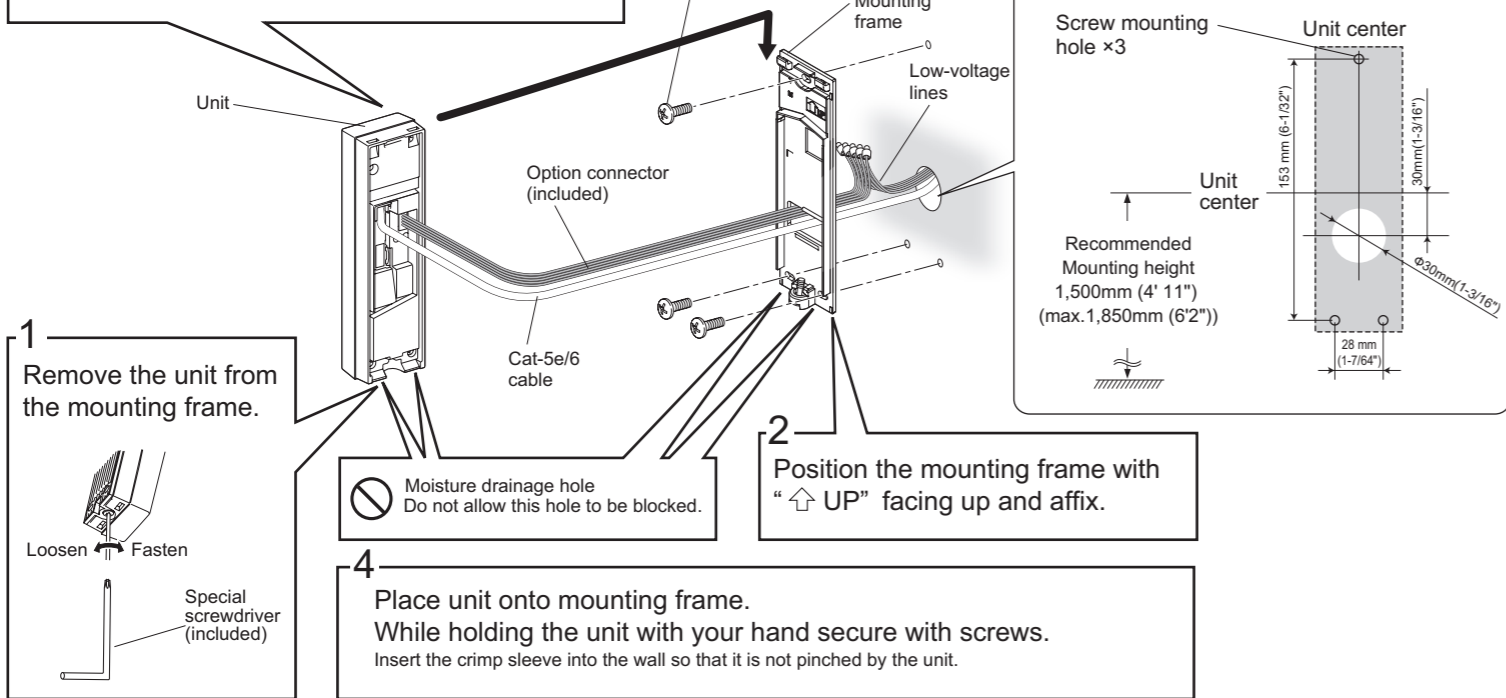
How to Install

Installation of Video Door Station

> • There is no space behind the device to store wires. Please create an opening for the wires.
> • The installation height of the unit should not exceed more than 2m (Upper Edge) from the ground level.

■ Back wiring

3

Crimp together option connector cable (included) and the low-voltage lines, then connect the option connector and Cat-5e/6 cable.
Insert a microSD card into the microSD card slot if needed.Select a microSD card that suits the usage environment such as temperature.

Wall-mounting screws (included) ×3
or Wall-mounting wood screws (included) ×3
*When mounting equipment on a thin mounting surface (aluminum plate, etc.), holes should be 3.5 mm diameter. If the mounting surface is thick, drill holes at least 25 mm deep; then mount with self-threading screws.

Mounting frame

Low-voltage lines

Unit

Option connector (included)

Cat-5e/6 cable

NOTE
Make room for threading a screw.

Screw mounting hole ×3

Unit center

153 mm (6-1/32")

30mm(1-3/16")

Unit center

Recommended Mounting height 1,500mm (4' 11")
(max.1,850mm (6'2"))

φ30mm(1-3/16")

28 mm (1-7/64")

1

Remove the unit from the mounting frame.

Loosen ← → Fasten

Special screwdriver (included)

Moisture drainage hole
Do not allow this hole to be blocked.

2

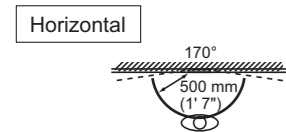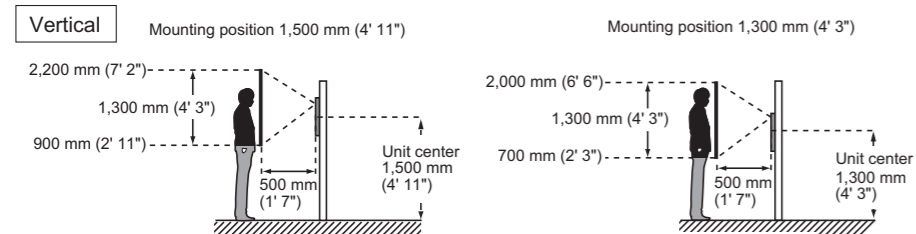Position the mounting frame with " ⇧ UP" facing up and affix.

4

Place unit onto mounting frame.
While holding the unit with your hand secure with screws.
Insert the crimp sleeve into the wall so that it is not pinched by the unit.

Camera view range and mounting position

■ Camera view range
The camera range as illustrated is only an approximate indication and may vary according to the environment.

Wide view (When Wide View and Fisheye Lens Correction is set "Enable".)

Vertical

Mounting position 1,500 mm (4' 11")

2,200 mm (7' 2")
1,300 mm (4' 3")
900 mm (2' 11")

500 mm (1' 7")

Unit center 1,500 mm (4' 11")

Mounting position 1,300 mm (4' 3")

2,000 mm (6' 6")
1,300 mm (4' 3")
700 mm (2' 3")

500 mm (1' 7")

Unit center 1,300 mm (4' 3")

Horizontal

170°
500 mm (1' 7")

An area over a range of approx. 170° in a 500 mm (1' 7") radius from the camera displays. (The display range is a rough estimation and may change due to the installation environment and the specification of the monitor.)

How to Connect

Connection Precautions

■ Cat-5e/6 cable
• For connection between devices, use a straight-through cable.
• If necessary, when bending the cable, please observe the manufacturer's recommendations. Failure to do so could cause a communication failure.
• Do not strip away the cable insulation any more than is necessary.
• Perform termination in accordance with TIA/EIA-568A or 568B.
• Before connecting the cable, be sure to verify conduction using a LAN checker or similar tool.
• A RJ45 covered connector cannot be connected to the LAN ports of the master stations or the door stations. Use cables without covers on the connectors.
• Be careful not to pull on the cable or subject it to excessive stress.

■ Precautions regarding low-voltage line
• Use PE (polyethylene)-insulated PVC jacketed cable. Parallel or jacketed conductors, mid-capacitance, non-shielded cable is recommended.
• Never use twisted-pair cable or coaxial cable.
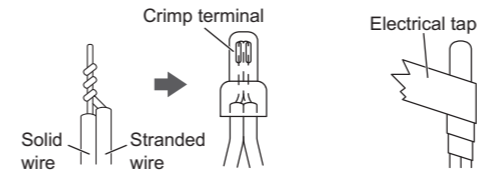• 2Pr quad V twisted pair cables cannot be used.

Parallel cable   Coaxial cable

■ Connection of low-voltage lines
• When connecting low-voltage lines, perform the connection using either the crimp sleeve method or soldering, then insulate the connection with electrical tape.
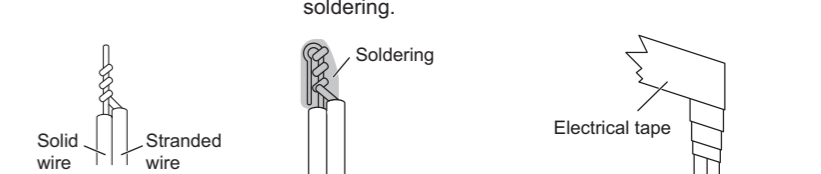
● Crimp sleeve method

1. Line up the solid wire and stranded wire and crimp them together.

2. Overlap the tape by at least a half width and wrap the connection at least twice.

Crimp terminal

Solid wire   Stranded wire

Electrical tape

● Soldering method

1. Twist the stranded wire around the solid wire at least 3 times.

2. After bending down the point, perform soldering, with care that no wires protrude from the soldering.

3. Overlap the tape by at least a half width and wrap the connection at least twice.

Solid wire   Stranded wire

Soldering

Electrical tape

> • If the connector-attached lead wire is too short, extend the lead with an intermediate connection.
> • As the connector has polarity, perform the connection correctly. If the polarity is incorrect, the device will not operate.
> • When using the crimp sleeve method, if the end of the connector-attached lead wire has been soldered, first cut off the soldered part and then perform crimp.
> • **After completing connection of wires, check that there are no breaks or inadequate connections. When connecting low-voltage lines in particular, perform the connection using either soldering or the crimp sleeve method and then insulate the connection with electrical tape. For optimal performance, keep the number of wiring connections to a minimum.**
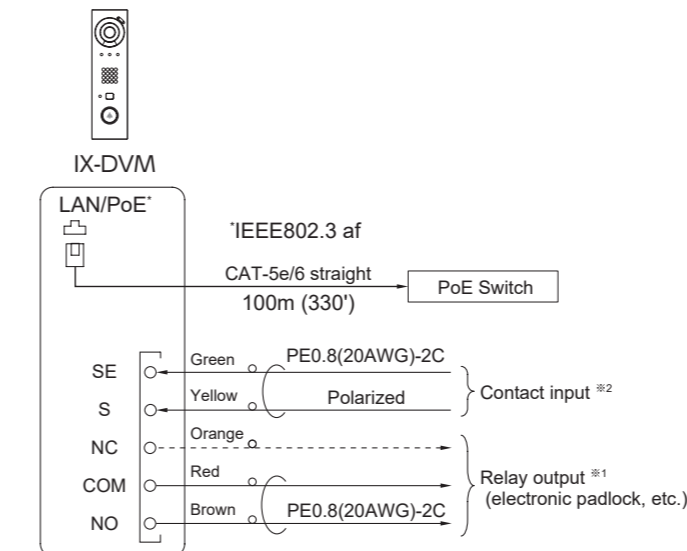> Simply twisting low-voltage lines together will create poor contact or will lead to oxidization of the surface of the low-voltage lines over long-term use, causing poor contact and resulting in the device malfunctioning or failure.

Soldering method   Crimp sleeve method

Wiring Connection

> • Insulate and secure unused low-voltage lines and the connector-attached lead wire.

Video Door Station

IX-DVM

LAN/PoE*

*IEEE802.3 af

CAT-5e/6 straight
100m (330')   PoE Switch

SE   Green   PE0.8(20AWG)-2C
S   Yellow   Polarized   Contact input ※2
NC   Orange
COM   Red   Relay output ※1
NO   Brown   PE0.8(20AWG)-2C   (electronic padlock, etc.)

※1 Relay Output Specifications

Output method	Form C dry contact (N/O or N/C)
Contact rating	24 VAC, 1 A (resistive load)
	24 VDC, 1 A (resistive load)
	Minimum overload (AC/DC): 100 mV, 0.1 mA

※2 Option Input Specifications

Input method	Programmable dry contact (N/O or N/C)
	Level detection method
Detection time	100msec - 600sec by setting
Contact resistance	Make: 700 Ω or less
	Break: 3 kΩ or more
Terminal short-circuit current	20 mA or less
Voltage between terminals	5.5 VDC or less (between open terminals)