Installation Manual
IX-RS-B, IX-RS-W (Handset Sub Station)

AIPHONE

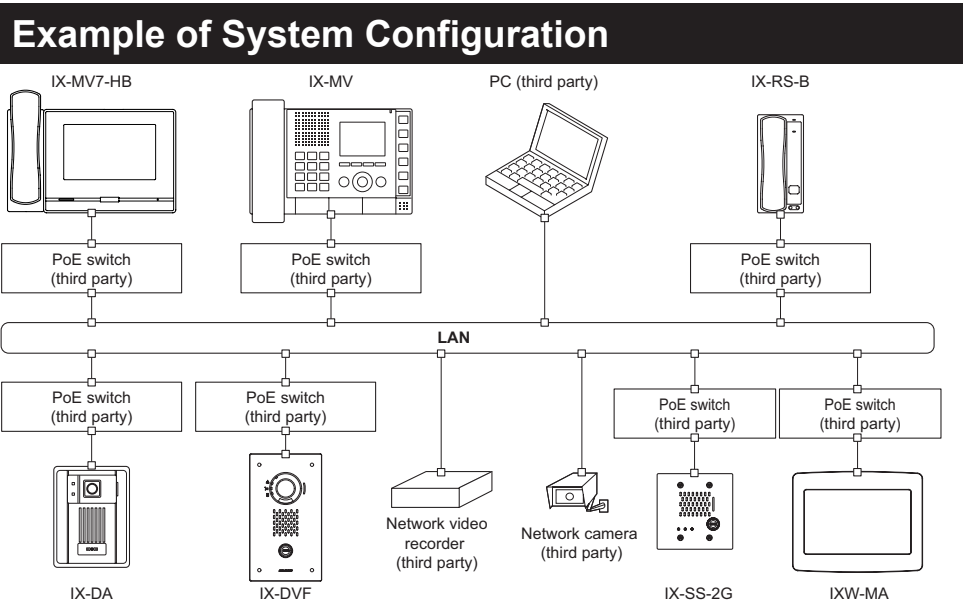Issue Date: Feb. 2019 FK2468 © P0219 MQ 61263

Introduction

- Read this manual before installation and connection.
  Read the "Setting Manual" and "Operation Manual". The manuals can be downloaded from our homepage at "https://www.aiphone.net/support/software-document/" free of charge.
- After completing installation and connection, program the system according to the "Setting Manual". The system cannot operate unless it is programmed.
- After performing installation, review with the customer how to operate system. Leave documentation accompanying the Master Station with the customer.

> ⚠ 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.

Example of System Configuration

IX-MV7-HB   IX-MV   PC (third party)   IX-RS-B

PoE switch (third party)   PoE switch (third party)   PoE switch (third party)

LAN

PoE switch (third party)   PoE switch (third party)   PoE switch (third party)   PoE switch (third party)

IX-DA   IX-DVF   Network video recorder (third party)   Network camera (third party)   IX-SS-2G   IXW-MA

Status Indicator

Refer to "IX-RS-W, IX-RS-B Operation Manual" for additional indicators not listed below.

☀: Lit   ▢ : Off

Status (pattern)		Meaning
Orange flashing	Normal flashing ☀ 0.75 sec → ▢ 0.75 sec	Booting
	Rapid flashing ☀ 0.25 sec → ▢ 0.25 sec	Device error, Startup error
	Long interval flashing ☀ 0.5 sec → ▢ 4 sec	Communication failure
	Long irregular flashing ☀ 1 sec → ▢ 0.25 sec → ☀ 0.25 sec → ▢ 0.25 sec → ☀ 0.25 sec → ▢ 0.25 sec	Firmware version updating
	Short irregular flashing ☀ 1 sec → ▢ 0.25 sec → ☀ 0.25 sec → ▢ 0.25 sec	Initializing
Blue light	☀	Standby

Part Names and Accessories

IX-RS-B, IX-RS-W

Front view

- Microphone
- Handset
- Status indicator (Orange/Blue)
- Call indicator (Green)
- Communication indicator (Orange)
- Door release indicator (Green)
- Door release button (Green) (Button appears when it is a usable option.)
- Speaker
- Call/Talk button
- Call tone/Incoming voice volume

Back view

- MAC address
- LAN port
- Option connector terminal
- Reset button

Included accessories

- Installation Manual ×3 (English, French, Japanese)
- Product warranty (Japanese) ×1
- Notice (IX Manuals and Software) ×1
- Chinese RoHS declaration ×1
- Wall-mounting wood screws ×2
- Wall-mounting screws ×2
- Option connector ×1
- Mounting bracket ×1 (attached to the unit)

Precautions

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

🚫 **Do not disassemble or modify the device.**
May cause fire or electrical shock.

🚫 **Do not, under any circumstances, open up the device.**
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.**
May cause 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.

❗ **Do not turn on power without first checking to make sure the wiring is correct and there are no improperly terminated wires.**
May cause fire or electrical shock.

❗ **Install the device in a position where it will not easily be brushed against by somebody's shoulder, etc.**
Failure to do so could result in injury.

🚫 **For testing and verification of chime volume and call tone volume, do not hold the handset close to your ear.**
May cause harm to the ear if a sudden loud noise is emitted.

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

General Precautions

- Install low-voltage lines at least 30cm (11") away from high-voltage lines (AC100V, 200V), especially inverter air conditioner wiring. Failure to do so may result in interference or malfunction.

Notice

- The illustrations and images used in this manual may differ from the actual items.
- If the device 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.

Precautions for mounting

- Installing the device in the following locations could cause malfunction:
  - **Locations exposed to direct sunlight**
  - **Locations that get hot**
    Close to a heater, boiler, etc.
  - **Locations where there is risk of exposure to liquid, dust, oil, or chemicals**
  - **Locations with high humidity**
    Bathroom, basement, greenhouse, etc.
  - **Locations with low temperature**
    Inside a cold storage warehouse, the front of a cooler, etc.
  - **Locations directly exposed to steam or oil smoke**
    Next to heating devices or a cooking space, etc.
  - **Sulphurous environments such as a hot spring area**
  - **Locations close to the sea or directly exposed to sea breeze**
- If existing wiring is used, the device may not operate properly. In that case, it will be necessary to replace the wiring.
- Do not, under any circumstances, use an impact driver to fasten screws. Doing so may cause damage to the device.
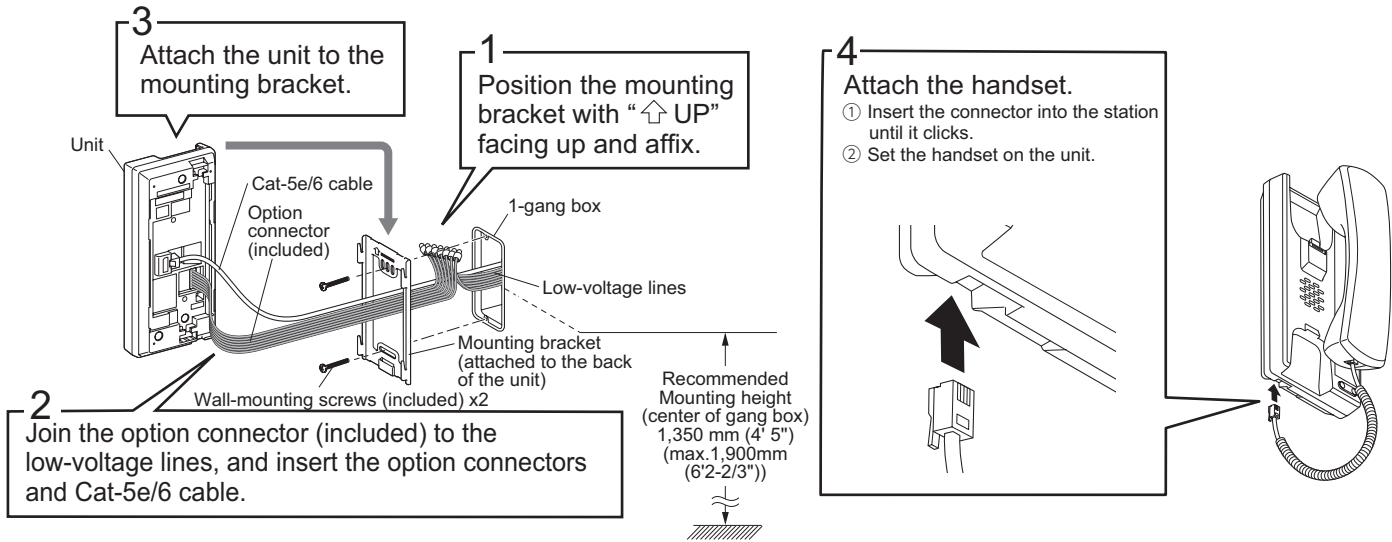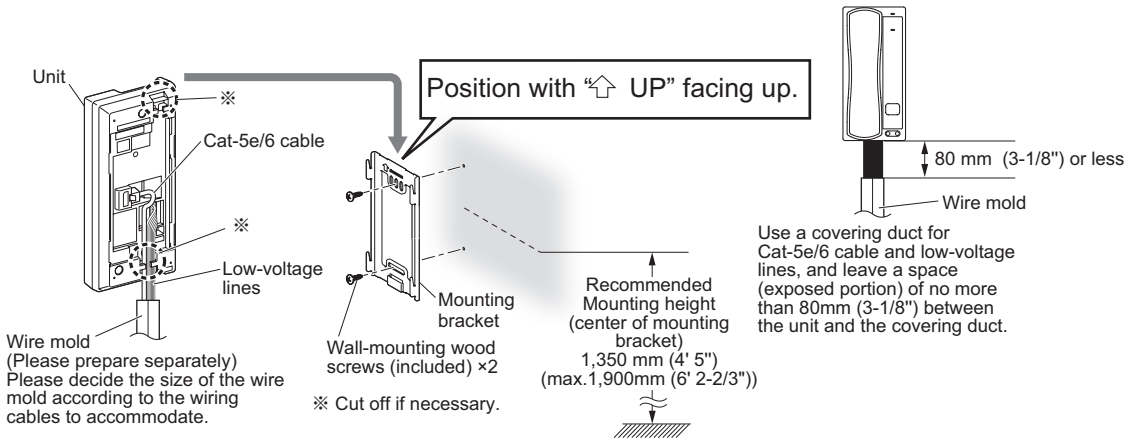
How to Install

! • The installation height of the equipment should not exceed more than 2m (Upper Edge) from the ground level.

Installation of Handset Sub Station

■ Back wiring

3 Attach the unit to the mounting bracket.

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

4 Attach the handset.
① Insert the connector into the station until it clicks.
② Set the handset on the unit.

Unit
Cat-5e/6 cable
Option connector (included)
1-gang box
Low-voltage lines
Mounting bracket (attached to the back of the unit)
Wall-mounting screws (included) x2
Recommended Mounting height (center of gang box) 1,350 mm (4' 5") (max.1,900mm (6'2-2/3"))

2 Join the option connector (included) to the low-voltage lines, and insert the option connectors and Cat-5e/6 cable.

■ Surface wiring

Unit
※
Cat-5e/6 cable
※
Low-voltage lines
Wire mold (Please prepare separately) Please decide the size of the wire mold according to the wiring cables to accommodate.
Wall-mounting wood screws (included) ×2
※ Cut off if necessary.
Mounting bracket
Recommended Mounting height (center of mounting bracket) 1,350 mm (4' 5") (max.1,900mm (6' 2-2/3"))

Position with "⇧ UP" facing up.

80 mm (3-1/8") or less
Wire mold
Use a covering duct for Cat-5e/6 cable and low-voltage lines, and leave a space (exposed portion) of no more than 80mm (3-1/8") between the unit and the covering duct.

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

■ 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
Electrical tape
Solid wire   Stranded wire
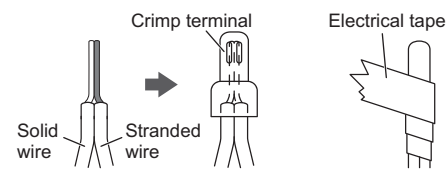
● Soldering method
1. Twist the stranded wire around the solid wire at least 3 times.
2. After bending down the point, perform soldering, with care that no wires protrude from the soldering.
3. Overlap the tape by at least a half width and wrap the connection at least twice.

Solid wire   Stranded wire
Soldering
Electrical tape
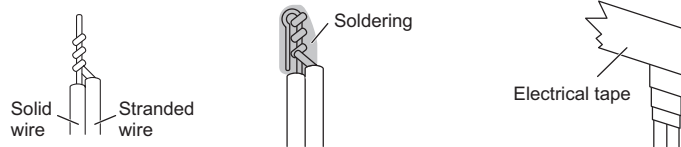
! • If the connector-attached lead wire is too short, extend the lead with an intermediate connection.
• As the connector has polarity, perform the connection correctly. If the polarity is incorrect, the device will not operate.
• When using the crimp sleeve method, if the end of the connector-attached 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.
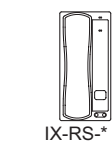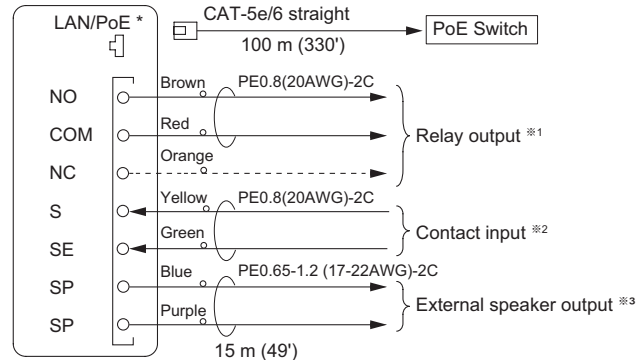
✕   ◯   ◯
Soldering method   Crimp sleeve method

Wiring Connection

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

Handset Sub Station

IX-RS-*
* IEEE802.3 af

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

NO	Brown	PE0.8(20AWG)-2C	
COM	Red		Relay output ※1
NC	Orange		
S	Yellow	PE0.8(20AWG)-2C	
SE	Green		Contact input ※2
SP	Blue	PE0.65-1.2 (17-22AWG)-2C	
SP	Purple		External speaker output ※3

15 m (49')

※1 Relay Output Specifications

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

※2 Option Input Specifications

Input method	Programmable dry contact (N/O or N/C)
	Level detection method
Detection time	100 msec or more
Contact resistance	Make: 700 Ω or less
	Break: 3 kΩ or more
Terminal short-circuit current	10 mA or less
Voltage between terminals	5.5 VDC or less (between open terminals)

※3 External Speaker Output Specifications

Output impedance	8 Ω
Maximum output power	2 w