Installation Manual

This manual includes Product Liability Precautions. Provide this manual to end user after installation.

AIPHONE

IX-DF-HID-I (Video Door Station)

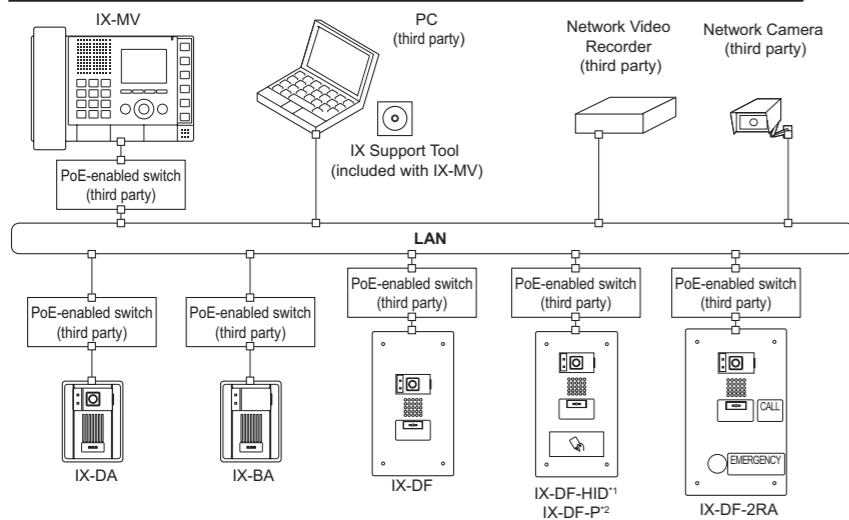Issue Date : November 2014 FK2122 Ⓐ P1114 SQ 56142 Printed in Thailand

Introduction

- Read this manual before installation and connection.
  Read the "Setting Manual" and "Operation Manual" included on the DVD-ROM that comes with the Master Station (IX-MV).
- Configure the system settings according to the "Setting Manual" after completing the installation and connection. The system will not function unless it has been properly configured.
- After installation, explain to the customer how to use the device, and be sure to provide the accompanying DVD-ROM that came with the Master Station (IX-MV).
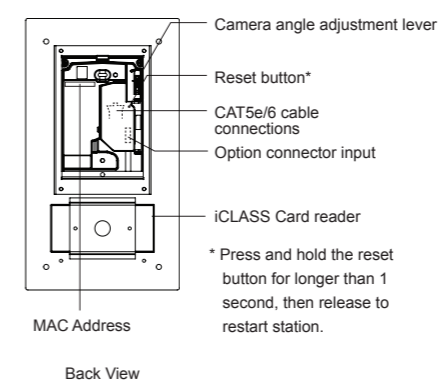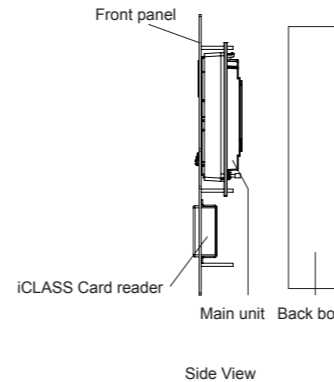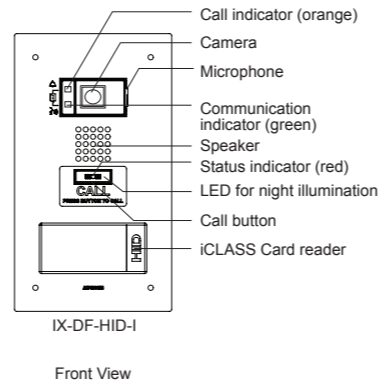
Important

- **Perform the installation and connection only after fully understanding this device and the manual.**

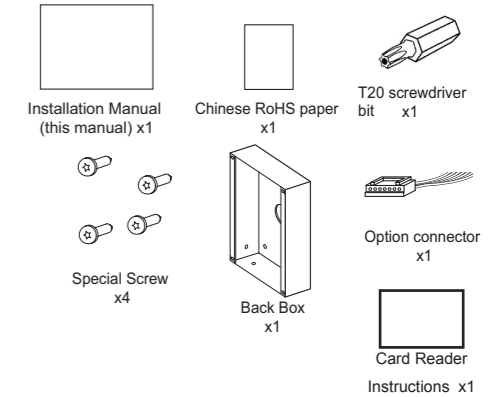Illustrations used in this manual may be different from the actual ones.

Example of System Configuration

IX-MV | PC (third party) | Network Video Recorder (third party) | Network Camera (third party)

IX Support Tool (included with IX-MV)

PoE-enabled switch (third party)

LAN

PoE-enabled switch (third party) | PoE-enabled switch (third party) | PoE-enabled switch (third party) | PoE-enabled switch (third party) | PoE-enabled switch (third party)

IX-DA | IX-BA | IX-DF | IX-DF-HID*1 IX-DF-P*2 | IX-DF-2RA

■ Number of station registrations in address book

Product number	Product name	Number of station registrations in address book
IX-MV	Master Station	500 stations
IX-DA, IX-DF, IX-DF-HID-I*1, IX-DF-HID*1, IX-DF-2RA*1, IX-DF-P*2, IX-DF-P*2	Video Door Station	20 stations*3
IX-BA, IX-SS, IX-SS-2RA*1	Audio Only Door Station	20 stations*3

*1 North America only
*2 Except North America
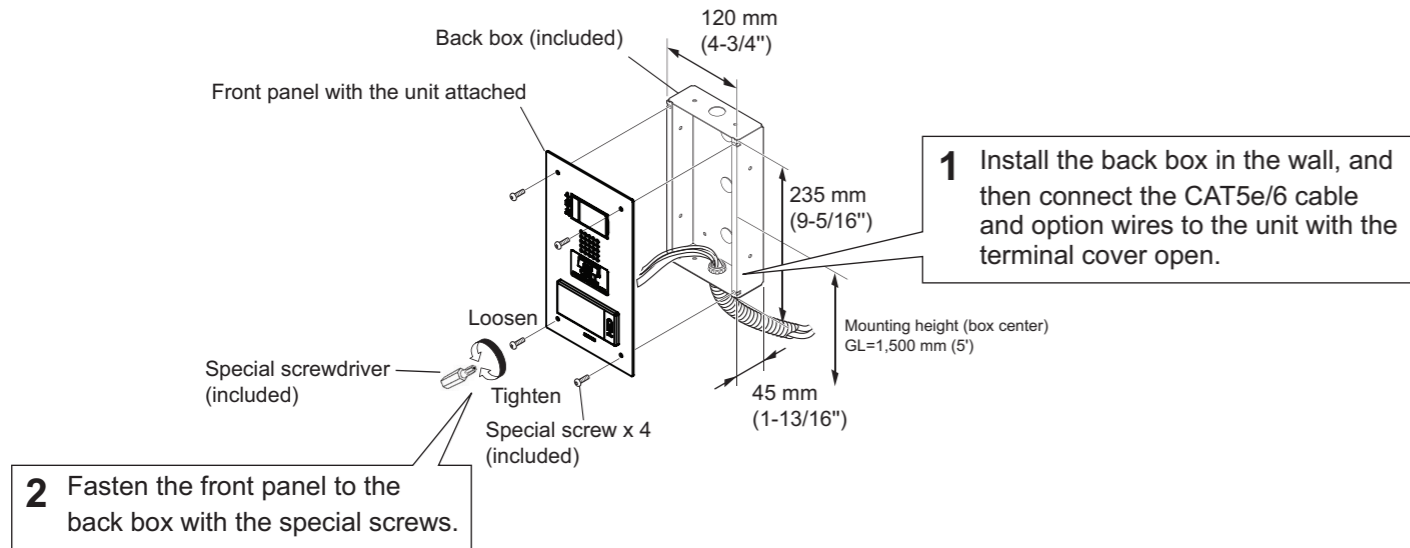*3 Only Master Stations can be registered (Max. 20)

Indicators

Refer to the separate "IX-DA & IX-BA Operation Manual" for indicators other than those listed.

☀ : Light ON ☐ : Light OFF

Name	Status (Pattern)		Explanation
Status indicator	Red flashing	Normal flashing ☀ 0.75 sec → ☐ 0.75 sec	Booting
		Fast flashing ☀ 0.25 sec → ☐ 0.25 sec	Device 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 upgrading
		Short irregular flashing ☀ 1 sec → ☐ 0.25 sec → ☀ 0.25 sec → ☐ 0.25 sec	Initializing
	Red light	☀	Standby

Part Names and Accessories

Call indicator (orange)
Camera
Microphone
Communication indicator (green)
Speaker
Status indicator (red)
LED for night illumination
Call button
iCLASS Card reader

IX-DF-HID-I
iCLASS Card reader

Front View

Front panel

Main unit   Back box

Side View

Camera angle adjustment lever
Reset button*
CAT5e/6 cable connections
Option connector input
iCLASS Card reader

* Press and hold the reset button for longer than 1 second, then release to restart station.

MAC Address

Back View

Accessories included

Installation Manual (this manual) x1 | Chinese RoHS paper x1 | T20 screwdriver bit x1

Special Screw x4 | Back Box x1 | Option connector x1

Card Reader Instructions x1

Precautions

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

1. Voltage is applied to parts within the equipment. Do not touch any parts that are not associated with the installation, wiring, or connection. Electric shock could result.
2. Do not dismantle or alter the unit. Fire or electric shock could result.
3. Keep the unit away from water or any other liquid. Fire or electric shock could result.
4. The unit is not explosion-proof. Do not install or use near gases or flammable materials. Fire or explosion could result.
5. Do not connect any terminal on the unit to an AC power line. Fire or electric shock could result.
6. Do not put any metal or flammable material into the unit through the openings. Fire, electric shock, or unit trouble could result.

Dismantling or alteration

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

1. Do not install or make any wire terminations while power supply is plugged in. It can cause electrical shock or damage to the unit.
2. Before turning on power, make sure wires are not crossed or shorted. If not, fire or electric shock could result.
3. Do not install the unit in any of the following locations. Fire, electric shock, or unit trouble could result.
   - Places under direct sunlight or places near heating equipment that varies in temperature.
   - Places subject to dust, oil, chemicals, hydrogen sulfide (hot spring).
   - Places subject to moisture and humidity extremes, such as bathrooms, cellars, greenhouses, etc.
   - Places where the temperature is quite low, such as inside a refrigerated area or in front of an air conditioner.
   - Places subject to steam or smoke (near heating or cooking surfaces).
   - Where noise generating devices such as dimmer switches or inverter electrical appliances are close by.
   - Locations subject to extremely powerful electric fields.
4. When mounting the unit on a wall, install the unit in a convenient location, but not where it could be jarred or bumped. Injury could result.
5. Do not place or install the unit in the locations subject to frequent vibration or impact. If the unit falls, injury to people or damage to the unit could result.
6. Do not run wires between movable objects (doors, windows, etc.). It may cause malfunction.
7. Do not put anything on the unit or cover the unit with cloth, etc. Fire or unit trouble could result.
8. Be sure to perform a call test or check the chime volume with the handset on the hook. If you operate the hook switch with the handset on your ear, a sudden call etc. may arrive causing damage to your ear.

Notice

1. Aiphone assumes no responsibility for damages as a result of delayed or unusable services, which were due to failures in network equipment, communication services by Internet and cellular phone companies, line interruptions, communication failures, or inaccuracies or omissions in the transmission unit.
2. We will under no conditions be liable for damage that occurs due to the inability to communicate due to malfunctions, problems, or operational errors in this product.
3. If personal information leaked by eavesdropping or unauthorized access in the communication paths over the Internet, please be aware that Aiphone assumes no responsibility for the damages.
4. We will under no conditions be liable for any damages or losses resulting from this product's contents or specifications.
5. This manual was created by Aiphone Co., Ltd., all rights reserved. Copying a part of or this entire manual without prior permission from Aiphone Co., Ltd. is strictly forbidden.
6. Please note that this manual may be revised or changed without prior notice.
7. Please note that product specifications may be changed for the sake of improvement without prior notice.
8. Please be aware that it is the customer's responsibility to ensure that their computer is secure. We will under no conditions be liable for security failures.
9. This system is not intended for life support or crime prevention. It is just a supplementary means of conveying information. Aiphone will under no conditions be liable for loss of life or property which occurs while the system is being operated.
10. Keep the unit more than 1m (3.3') away from radio or TV set.
11. Install the unit in an area that will be accessible for future inspections, repairs, and maintenance.
12. If the unit is down or does not operate properly, unplug the power supply or turn off the POWER switches.
13. If it is used close to a cellular phone, the unit may malfunction.
14. The unit can be damaged if dropped. Handle with care.
15. The unit turns inoperative during power failure.
16. In areas where broadcasting station antennas are close by, the intercom system may be affected by radio frequency interference.
17. At a gate or porch illuminated by a fluorescent lamp, the picture may vary, but this is not a malfunction.
18. If stripes or fine patterns are reflected, outlines and colors shown may differ from actual people or backgrounds, but this is not a malfunction.
19. Warm-color lighting shining on the video door station may change the tint of the picture on the monitor.
20. When using fluorescent lights to illuminate the screen its colors may periodically change (color rolling), but this is not a malfunction.
21. The unit case may become a warm with use, but this is not a unit malfunction.
22. Warm air flowing from inside may interact with the temperature difference in the outside air to cause condensation to occur on the camera unit. It is recommended that you block the points from which warm air is flowing out, such as incoming line ports, in order to prevent condensation.
23. Keep the intercom wires more than 30cm (12'') away from AC 100-240V wiring. AC induced noise and/or unit malfunction could result.
24. Door station is weather-resistant, but do not spray high-pressure water. Unit trouble could result.
25. Due to the nature of the camera built into the Video Door Station, external light and the surrounding environment may affect the projection quality of the TV monitor, so please avoid installing in the following locations.

Where the sky can be seen in the background | Where the background is white | Where direct sunlight is present

Sky | White wall

Installation of Door Station

Back box (included)

Front panel with the unit attached

120 mm (4-3/4")

235 mm (9-5/16")

1 Install the back box in the wall, and then connect the CAT5e/6 cable and option wires to the unit with the terminal cover open.

Loosen

Special screwdriver (included)

Tighten

Special screw x 4 (included)

45 mm (1-13/16")

Mounting height (box center) GL=1,500 mm (5')

2 Fasten the front panel to the back box with the special screws.
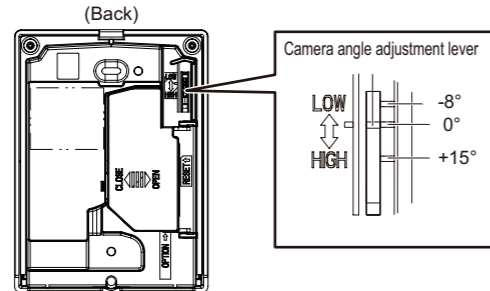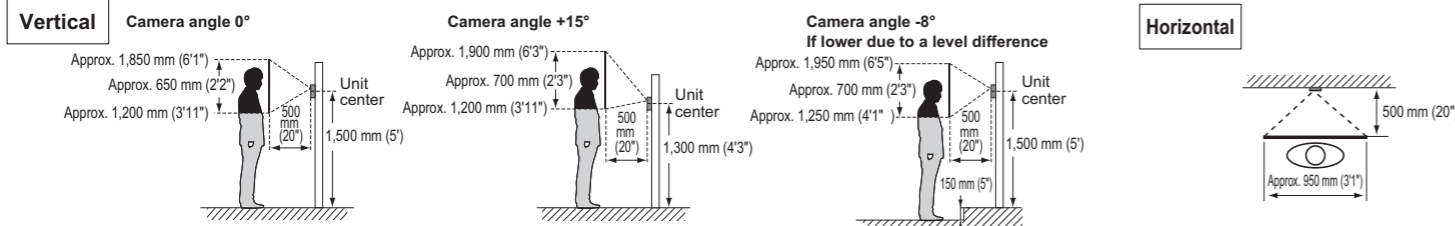
Imaging Range and Mounting Location

Imaging Position Settings

The camera angle can be adjusted up or down (-8°, 0°, +15°) using the camera angle adjustment lever. Set it to the optimal level.

(Back)

Camera angle adjustment lever

LOW -8° / 0°

HIGH +15°

Wall Mounting

The indicated range is a guideline that may change depending on the installation environment.

Vertical

Camera angle 0°
Approx. 1,850 mm (6'1")
Approx. 650 mm (2'2")
Approx. 1,200 mm (3'11")
Unit center
500 mm (20")
1,500 mm (5')

Camera angle +15°
Approx. 1,900 mm (6'3")
Approx. 700 mm (2'3")
Approx. 1,200 mm (3'11")
Unit center
500 mm (20")
1,300 mm (4'3")

Camera angle -8°
If lower due to a level difference
Approx. 1,950 mm (6'5")
Approx. 700 mm (2'3")
Approx. 1,250 mm (4'1")
Unit center
500 mm (20")
1,500 mm (5')
150 mm (5")

Horizontal
500 mm (20")
Approx. 950 mm (3'1")

When light enters the camera, the monitor screen may flicker brightly or the subject may become dark. Try to prevent strong lighting from entering the camera directly.

FCC

This device complies with Part 15 of the FCC Rules. 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.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, then user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
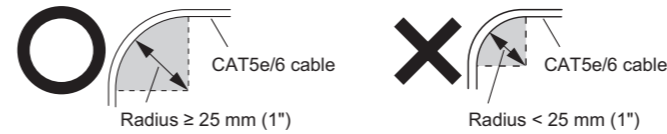- Consult the dealer or an experienced radio/TV technician for help.

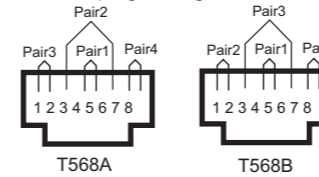## Connection Precautions

■ Cable

The cable is not included with the product.
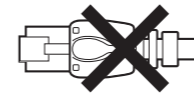
About the CAT5e/6 cable
- **Use a straight cable when connecting between equipment.**
- Do not use a CAT5e/6 cable with a bending angle of less than a 25 mm (1") radius. A radius of less than 25 mm (1") could cause a communication failure.

Radius ≥ 25 mm (1") CAT5e/6 cable

Radius < 25 mm (1") CAT5e/6 cable

- Do not peel the jacket off the CAT5e/6 cable any more than is necessary.
- Attach the RJ45 modular plugs using either EIA/TIA-568A or 568B.

Pair2
Pair3 | Pair1 | Pair4
1 2 3 4 5 6 7 8
T568A

Pair3
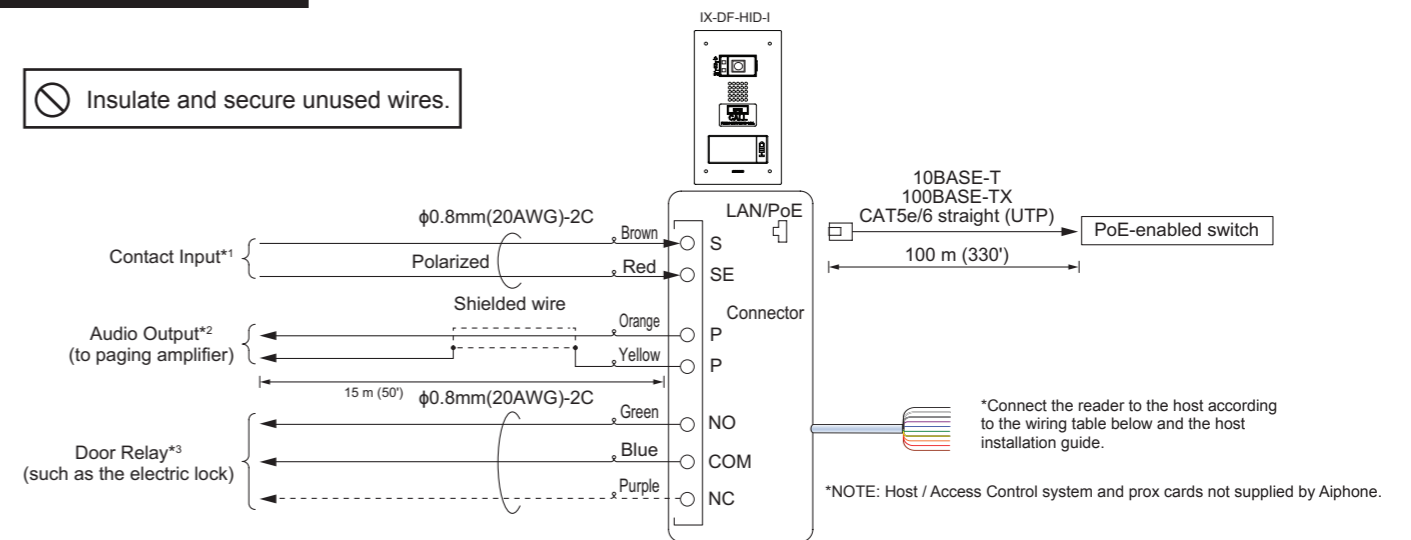Pair2 | Pair1 | Pair4
1 2 3 4 5 6 7 8
T568B

- **Use the LAN tester to confirm conduction before connecting the CAT5e/6 cable.**
- The RJ45 connector with cover cannot be connected to CAT5e/6 cable terminals for Master Station or Door Stations. Use cables without covers on the connectors.

- Do not pull the CAT5e/6 cable or apply excessive load.

Cable precautions
- Do not use separate conductors or twisted pair cables.

- Do not use an odd number cable.

Wiring Connection

○ Insulate and secure unused wires.

IX-DF-HID-I

LAN/PoE

10BASE-T
100BASE-TX
CAT5e/6 straight (UTP)

PoE-enabled switch

100 m (330')

Contact Input*1
φ0.8mm(20AWG)-2C
Polarized
Brown — S
Red — SE

Connector

Audio Output*2
(to paging amplifier)
Shielded wire
Orange — P
Yellow — P

15 m (50') φ0.8mm(20AWG)-2C

Door Relay*3
(such as the electric lock)
Green — NO
Blue — COM
Purple — NC

*Connect the reader to the host according to the wiring table below and the host installation guide.

*NOTE: Host / Access Control system and prox cards not supplied by Aiphone.

*1 Contact Input Specifications

Input method	Form C dry contact (N/O or N/C)
	Level detection method
Fixed detection time	200 msec or more
Contact resistance	Maximum closure resistance: 700 Ω or less / Minimum open resistance: 3 kΩ or more
Terminal short-circuit current	10 mA or less
Voltage between the terminals	DC 5V or less (between open terminals)

*2 Audio Output Specifications

Output impedance	600 Ω
Output audio level	300 mVrms (600 Ω when terminated)

*3 Relay Output Specifications

Output method	Form C dry contact (N/O or N/C)
Voltage between the terminals	AC 24V, 0.5A (resistive load) / DC 24V, 0.5A (resistive load) / Minimum load (AC/DC): 100 mV, 0.1 mA

iClass Reader Wiring Table

Pigtail	Description	Pigtail	Description
Yellow	Beeper Input	Red/Grn	GPIO1 (RS232-T/RS485-A)
Orange	Green (GRN) LED Input	Tan	GPIO2 (RS232-R/RS485-B)
Black	Ground (RTN)	Violet	Open Collector Output
Red	+VDC	White	Wiegand Data 1 / Clock
Drain	Unused	Green	Wiegand Data 0 / Data
Brown	Red LED Input	Pink	GPIO3 (RS485-Z)
Blue	Hold Input	Gray	GPIO4 (RS485-Y)