**Installation Manual**

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

### 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 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).
- 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

![System Configuration Diagram](image)

### Number of station registrations in address book

<table>
<thead>
<tr>
<th>Product number</th>
<th>Product name</th>
<th>Number of station registrations in address book</th>
</tr>
</thead>
<tbody>
<tr>
<td>IX-MV</td>
<td>Master Station</td>
<td>500 stations</td>
</tr>
<tr>
<td>IX-DFA, IX-DFR, IX-DFR-P, IX-DFR-HID, IX-DFR-2RA(FR)*1</td>
<td>Video Door Station</td>
<td>20 stations**</td>
</tr>
<tr>
<td>IX-BA, IX-SS, IX-SS-2RA, IX-SS-RAFRA*1</td>
<td>Audio Only Door Station</td>
<td>20 stations**</td>
</tr>
</tbody>
</table>

* North America only
** 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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Status (Pattern)</th>
<th>Explanation</th>
<th>Light OFF</th>
<th>Light ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal flashing</td>
<td>-</td>
<td>Blinks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fast flashing</td>
<td>-</td>
<td>Blinks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Long interval flashing</td>
<td>-</td>
<td>Blinks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Short irregular flashing</td>
<td>-</td>
<td>Blinks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Red light</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### 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, setting, or connection. Electric shock could result.
2. Do not disassemble 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.

#### 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 dampness 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 exposed to steam or smoke (near heating or cooking surfaces).
   - Where noise generating devices such as drier machines 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 jammed or dropped in the hook. If the unit falls, injury to people or damage to the unit 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 wire 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 the volume is too loud, it may cause damage to your eardrum.

### Notice

1. Aiphone assumes no responsibility for damages as a result of delayed or unusable services, which are 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 not 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 not 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 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 (3.2’) 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 may emit noise 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 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 the 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.
**How to Install**

**Installation of Door Station**

There is no space to accommodate the wiring in the back of the unit. If you do not use a 1-gang box, please provide openings or handle exposed wiring in other ways.

**Wall Mounting**

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

- **Vertical**
  - Camera angle +0°
    - Approx. 1,500 mm (5')
    - Approx. 1,150 mm (4')
    - Approx. 700 mm (2'3'')
  - Camera angle +15°
    - Approx. 1,200 mm (3'11'')
    - Approx. 1,850 mm (6'1'')
  - Camera angle -8°
    - Approx. 1,200 mm (3'11'')
    - Approx. 1,900 mm (6'3'')

**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.

- **How to Connect**
  - 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.
  - The indicated range is a guideline that may change depending on the installation environment.

**How to Install**

**Installation of Door Station**

- **Wall Mounting**
  - The indicated range is a guideline that may change depending on the installation environment.

- **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.

**How to Connect**

**Connection Precautions**

- **Cable**
  - Do not use separate conductors or twisted pair cables.
  - Do not use an odd number 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.

- **Wiring Connection**
  - Insulate and secure unused wires.

- **Contact Input Specifications**
  - Form C dry contact (N/O or N/C)
  - 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)

- **Audio Output Specifications**
  - Output impedance: 600 Ω
  - Output audio level: 300 mWms (600 Ω when terminated)

- **Latch Reset Specifications**
  - Input method: Form C dry contact (N/O or N/C)
  - Contact resistance: Maximum closure resistance: 700 Ω or less
  - Terminal short-circuit current: 10 mA or less
  - Voltage between the terminals: DC 5V or less (between open terminals)

- **Board Relay Output Specifications**
  - Input 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 (DC): 10 mV, 0.01 mA

- **Audio Output Specifications**
  - Output impedance: 600 Ω
  - Output audio level: 300 mWms (600 Ω when terminated)
### Dip Switch "SW2" and Contact Locations

**Option Connector**

- Reset Connector "CN7"
- Call Button
- Emergency Button

**Aux Relay Outputs**

- **Aux Relay 1**
  - NO: brown
  - C: red
  - NC: orange
- **Aux Relay 2**
  - NO: yellow
  - C: green
  - NC: blue

### Default Settings:

- **Contact Input**
  - Set to "Call"
- **2XWSXW6SHFLÀFDWLRQ**
  - Set to "Contact Input Call / Communication State"
- **DIP SWITCH "SW2" Settings (Relay PCB Dip Switch)**
  - Talking: OFF
  - Monitoring: ON

### Manual Reset Settings:

- **Contact Input**
  - Set to "Call"
- **2XWSXW6SHFLÀFDWLRQ**
  - Set to "Contact Input Call / Communication State"
- **DIP SWITCH "SW2" Settings (Relay PCB Dip Switch)**
  - **AUX RY2** remains "ON" (latched) until Reset Connector "CN7" on PCB is shorted.

### Door Release Settings:

- **Contact Input**
  - Set to "Door Release"
- **2XWSXW6SHFLÀFDWLRQ**
  - Set to "Door Release"
- **DIP SWITCH "SW2" Settings (Relay PCB Dip Switch)**
  - **Door Release Operation Tone** must be set to "Operation sound".
  - **AUX RY2** remains "ON" (latched) until Reset Connector "CN7" on PCB is shorted.

### Optional Settings:

- **Contact Input**
  - Set to "Call"
- **2XWSXW6SHFLÀFDWLRQ**
  - Set to "Contact Input Call / Communication State"
- **DIP SWITCH "SW2" Settings (Relay PCB Dip Switch)**
  - **Door Release Operation Tone** must be set to "Operation sound".

### Door Release & Manual Reset Settings:

- **Contact Input**
  - Set to "Door Release"
- **2XWSXW6SHFLÀFDWLRQ**
  - Set to "Door Release"
- **DIP SWITCH "SW2" Settings (Relay PCB Dip Switch)**
  - **Door Release Operation Tone** must be set to "Operation sound".
  - **AUX RY2** remains "ON" (latched) until Reset Connector "CN7" on PCB is shorted.
Once all steps have been completed, the door station will need to be updated with the new settings. From the IX Main menu, select the function setting to save changes.

Press the Update button to save changes.

Update Settings to Station. Check the box beside the station that has been updated and click Update. The status menu will display the result of the update.

**Function Settings**

Select Contact Input Call / Communication State

In order for the contact input button to be able to be called, expand Function Settings from the menu on the left side of the window. A door station group will need to be created. Select the group that was created in the previous step. Using the drop-down under Group Name, select the appropriate door station and use the drop-down to select the appropriate group number. Use the IX Support Tool button in the Table View.

Setting Manualfor complete programming instructions.

The IX Support Station is programmed to call designated master(s) via the red microphone button at a higher priority. The microphone station can call different masters than the standard call button(s). This procedure shows how to set the microphone button call designated master(s) via the red microphone button at a higher priority.

**Output Settings**

Select Contact Input Call / Audio

The IX Support Tool button is programmed to call designated master(s) via the red microphone button at a higher priority.

**Contact / Audio**

Select Contact Input Call / Audio

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5