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 if the settings are not configured correctly.
- 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

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>50 stations</td>
</tr>
<tr>
<td>IX-BA, IX-SS, IX-SS-2RA*</td>
<td>Audio Only Door Station</td>
<td>20 stations*</td>
</tr>
</tbody>
</table>

*North America only

*1 Except North America

*2 Only Master Stations can be registered (Max. 20)

Indicators

<table>
<thead>
<tr>
<th>Name</th>
<th>Status (Pattern)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red light</td>
<td>Blinking at 2 sec</td>
<td>Standby</td>
</tr>
<tr>
<td>Red light</td>
<td>Blinking at 0.2 sec</td>
<td>Device error</td>
</tr>
<tr>
<td>Long interval flashing</td>
<td>Red light</td>
<td>Concludes idle</td>
</tr>
<tr>
<td>Long irregular flashing</td>
<td>Red light</td>
<td>Firmware version upgrading</td>
</tr>
<tr>
<td>Short irregular flashing</td>
<td>Red light</td>
<td>Initializing</td>
</tr>
<tr>
<td>Long irregular flashing</td>
<td>Red light</td>
<td>Normal flashing</td>
</tr>
<tr>
<td>Red light</td>
<td>Blinking at 0.5 sec</td>
<td>Booting</td>
</tr>
</tbody>
</table>

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 where the temperature is extremely 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 inverters 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 bumped. Injury or damage could result.

5. Do not place the unit in the locations exposed 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 with cloth, etc. Fire or unit trouble could result.

8. Be sure to perform a call test or check call button/door control function in the monitor.

9. If a call button is not confirmed, check the circuit or its trouble.


to

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 not be responsible for damages that occur 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 be responsible 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 (3.2') 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 can be damaged if 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. At a gate or porch illuminated by a fluorescent lamp, the picture may vary, but this is not a malfunction.

21. Please be aware that some effects may be seen on the screen when the system is operating.

22. Please be aware that some effects may be seen on the screen when the system is operating.

23. If the unit is down or does not operate properly, unplug the power supply or turn off the POWER switches.

24. If it is used close to a cellular phone, the unit may malfunction.

25. The unit may not operate correctly if the unit is placed in an area exposed to direct sunlight.

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30. The unit may not operate correctly if the unit is placed in an area exposed to direct sunlight.
How to Connect

Connection Precautions

- Do not use separate conductors or twisted pair cables.

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.

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

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

Cable precautions
- Do not use a CAT5e/6 cable with a bending angle of less than a 25 mm (1") radius.
- Use a straight cable when connecting between equipment.
- Do not use separate conductors or twisted pair cables.

Audio Output Specifications
- Output impedance: 100 Ω
- Output audio level: 300 mVrms (600 Ω when terminated)

Wiring Connection

Contact Input Specifications
- Input method: Form C dry contact (N/O or N/C)
- Level detection method: 200 mVac or more
- 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)

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)
- AC 24V, 0.5A (resistive load)
- Minimum load (AC/DC): 100 mV, 0.1 mA

Class Reader Wiring Table

<table>
<thead>
<tr>
<th>Pigtail Description</th>
<th>Digital</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red/Grn GPIO1 (RS232-T/RS485-A)</td>
<td>Red/Grn</td>
<td>GPIO1 (RS232-T/RS485-A)</td>
</tr>
<tr>
<td>Red/Grn GPIO2 (RS232-R/RS485-B)</td>
<td>Yellow</td>
<td>GPIO2 (RS232-R/RS485-B)</td>
</tr>
<tr>
<td>Red/Grn GPIO3 (RS485-Z)</td>
<td>Blue</td>
<td>GPIO3 (RS485-Z)</td>
</tr>
<tr>
<td>Drain Unused</td>
<td>Black</td>
<td>Drain Unused</td>
</tr>
<tr>
<td>Red LED Input</td>
<td>Orange</td>
<td>Red LED Input</td>
</tr>
<tr>
<td>Green LED Input</td>
<td>Green</td>
<td>Green LED Input</td>
</tr>
<tr>
<td>Green (CSN)</td>
<td>Green</td>
<td>Green (CSN)</td>
</tr>
<tr>
<td>Blue Ground (RTN)</td>
<td>Gray</td>
<td>Blue Ground (RTN)</td>
</tr>
<tr>
<td>Wiegand Data 1 / Clock</td>
<td>White</td>
<td>Wiegand Data 1 / Clock</td>
</tr>
<tr>
<td>Wiegand Data 2 / Data</td>
<td>Yellow</td>
<td>Wiegand Data 2 / Data</td>
</tr>
<tr>
<td>Blue Open Collector Output</td>
<td>Blue</td>
<td>Blue Open Collector Output</td>
</tr>
<tr>
<td>PoE-enabled switch</td>
<td>PoE-enabled switch</td>
<td>PoE-enabled switch</td>
</tr>
</tbody>
</table>

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

How to Install

Installation of Door Station

Imaging Range and Mounting Location

Wall Mounting

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

<table>
<thead>
<tr>
<th>Vertical</th>
<th>Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera angle 0°</td>
<td>Camera angle =15°</td>
</tr>
<tr>
<td>Camera angle +15°</td>
<td>Camera angle =0°</td>
</tr>
<tr>
<td>Camera angle +15°</td>
<td>Camera angle =0°</td>
</tr>
<tr>
<td>Camera angle 0°</td>
<td>Camera angle =15°</td>
</tr>
</tbody>
</table>

When the 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 the 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.

Cable

The cable is not included with the product.

Output Impedance

100 Ω

Output Audio Level

300 mVrms (600 Ω when terminated)