Thank you for selecting Aiphone for your communication and security needs. Please read this manual carefully for proper system operation. For future reference, keep manual in a safe place.
PRECAUTIONS

⚠️ Prohibited

Do not dismantle unit

 нельзя

Keep unit away from water

не рекомендуется

General precautions

1. Do not dismantle or alter the unit. Fire or electric shock could result.
2. Keep the unit away from water or any other liquid. Fire or electric shock could result.
3. High voltage is present internally. Do not open the case. Electric shock could result.
4. Do not connect any non-specified power source to the +, - terminals. Also, do not install two power supplies in parallel to a single input. Fire or damage to the unit could result.
5. Do not use power supply with a voltage other than specified. 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.
7. The unit must be installed and wired by a qualified technician.

🔥 WARNING

Negligence could result in death or serious injury.

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. Fire or electric shock could result.
2. 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.
3. Before turning on power, make sure wires are not crossed or shorted. Fire or electric shock could result.
4. Do not install the unit in locations subject to frequent vibration or impact. It may fall or tip over, resulting in damage to the unit or personal injury.
5. For power supply, use Aiphone power supply model specified for use with system. If non-specified product is used, fire or malfunction could result.
6. Do not put anything on the unit or cover the unit with cloth, etc. Fire or unit trouble could result.
7. Do not install the unit in any of the following locations. Fire, electric shock, or unit trouble could result.
   * Places under direct sunlight or near heating equipment that varies in temperature.
   * Places subject to steam or smoke (near heating or cooking surfaces).
   * Places where the temperature is quite low, such as inside a refrigerated area or in front of an air conditioner.
   * Locations subject to frequent vibration or impact.
8. Do not apply high pressure on the screen. If fractured, injury could result.
9. If the LCD is punctured, do not allow skin contact with the liquid crystal inside. Inflammation could result.
   * If liquid crystal is ingested, immediately gargle with water and seek medical attention.
   * If contact with the eyes or skin occurs, clean with pure water and seek medical attention.

🔥 CAUTION

Negligence could result in injury 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. Fire or electric shock could result.
2. 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.
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   * If liquid crystal is ingested, immediately gargle with water and seek medical attention.
   * If contact with the eyes or skin occurs, clean with pure water and seek medical attention.

GENERAL PRECAUTIONS

1. Keep the unit more than 1m (3.3’) away from radio or TV set.
2. Keep the intercom wires more than 30cm (12”) away from AC 100-240V wiring. AC induced noise and/or unit malfunction could result.
3. Comply with all third party manufacturing specifications that will be used with this system (sensors, door releases, etc.).
4. If the unit is down or does not operate properly, unplug the power supply.
5. When wall-mounted, the top of the unit may darken. This does not indicate a malfunction.
6. The unit case may become warm with use, but this is not a unit malfunction.
7. If the unit is used near a cellular phone, the unit may malfunction.
8. The unit can be damaged if dropped. Handle with care.
9. The unit will not work during power failure.
10. In areas where broadcasting station antennas are close by, the intercom system may be affected by radio frequency interference.
11. All the units, except for door stations, are designed for indoor use only. Do not use at outdoor locations.
12. This product, providing door release, should not be used as a crime prevention device.
13. Please note the LCD panel, though manufactured with very high precision techniques, inevitably will have a very small portion of its image elements always lit or not lit at all. This is not considered a unit malfunction.
14. Environmental sound around the unit may hinder smooth communication, but this is not a malfunction.
15. At night, due to reduced lighting on the object, the screen sees more noise and faces become more difficult to see, but this is not a malfunction.
16. For hands-free communication:
   * If you stand too far away, it may be difficult for the other person to hear the communication.
   * If there are loud noises around the unit (such as music playing or children crying), the sound may break up and be difficult to hear.
17. During communication, if you speak before the other person has finished talking, your voice may not come through clearly. Communication will proceed smoothly if you wait until the other person has finished speaking.
18. At a gate or porch illuminated by a fluorescent lamp, the image may vary, but this is not a malfunction.
19. The outline of video images displayed by the video door station may differ from that of the actual person(s) or background, but this is not a malfunction.
20. The system is not intended for life support or crime prevention. It is 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.
21. If the surface of a video door station freezes during wintertime, the image may become difficult to see or the call button may not move, but this is not a malfunction.
22. Color lighting shining on the video door station may change the tint of the image on the screen.
23. When outside temperature lowers sharply after rainfall, etc., the inside of the camera may fog up slightly, causing a blurry images, but this is not a malfunction. Normal operation will be restored when moisture evaporates.
24. When the unit’s screen is illuminated with strong light, the image looks white or silhouetted, but this is not a malfunction.

NOTICES

* We will not under no conditions be liable for damage occurring due to the inability to communicate due to malfunctions, problems, or operational errors in this product’s contents or specifications.
* We will not under no conditions be liable for any damges or losses resulting from this product’s contents or specifications.
* This manual was created by Aiphone Co., Ltd., all rights reserved. Copying, in part or in whole, this manual without prior permission from Aiphone Co., Ltd. is strictly forbidden.
* Please note that images and illustrations depicted in this manual may differ from the actual ones.
* Please note that this manual may be revised or changed without prior notice.
* Please note that product specifications may be changed for the sake of improvement without prior notice.
* Lighting adjustments are made automatically by the door station. Adjustment results may vary depending on installation environment.
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<thead>
<tr>
<th></th>
<th>JOS-1A</th>
<th>JOS-1V</th>
<th>JOS-1F</th>
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</thead>
<tbody>
<tr>
<td>Front panel</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main unit</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JO-DA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JO-DV</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Flush mount back box</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Special screw x4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>JO-DVF</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Manual</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Special screwdriver</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Special screwdriver (Hexagonal wrench)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Transparent name plate x2</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### NOTES:
- Mounting and Wood mounting screws not included
- For details on the power supply, see the installation manual separately.
PART NAMES

**JO-1MD**

**Color LCD screen**
Displays camera images during door station call-ins, communication with door station, and door station monitoring.

**Microphone**
Sends sounds from this station to other stations.

**RESET button**
Press this button to reboot this station when it is not responding.

**Volume control button**
- **[During standby]**
  - Adjust the calling volume.
  - Volume adjustment range: \( \text{mute} \) - \( 1 \) - \( 3 \)
- **[During communication or monitoring]**
  - Adjust the communication volume.
  - Volume adjustment range: \( 1 \) - \( 3 \)

**Status LED (orange)**
Indicates the current status of this station by lighting up or blinking.
- On: During communication sending, while the door release button is being pressed, or while the option button is being pressed.
- Flashing: During communication reception in the PTT mode, during short detection or during mute.

**Monitor button**
Monitor a door station.

**Option button**
To activate/trigger external device.

**Screen brightness control button**
Adjusts LCD screen brightness.
- Brightness adjustment range: \( 1 \) - \( 5 \)

**Door release button**
Unlocks door.

**Talk/off button**
Starts or ends communication.

**Speaker**
Call tones, sounds from a door station.

**Camera-angle adjustment switch**
The camera-angle adjustment switch is behind the panel. Pushing the button changes the angle of the camera.
- +17° (Upward)
- +7° (Upward)
- 0° (Center)
- -7° (Downward)

**Camera**
Captures images to display on the screens of the master and expansion monitor station.

**Microphone**
Sends sounds from the door station to the master and expansion monitor station.

**Illumination sensor**
Detects outside illuminance to recognize whether it is daytime or nighttime.

**Speaker**
Outputs sounds from the master or expansion monitor station.

**Call button with white light LED**
calls the preset master and expansion monitor station. Lights up automatically when it gets dark around this station.

**Drainage holes**
These are for discharging rain water inside the unit. Do not obstruct these holes.

---

**Remove protective film before use.**

---

**Camera**
Captures images to display on the screens of the master and expansion monitor station.

**Microphone**
Sends sounds from the door station to the master and expansion monitor station.

**Illumination sensor**
Detects outside illuminance to recognize whether it is daytime or nighttime.

**Speaker**
Outputs sounds from the master or expansion monitor station.

**Call button with white light LED**
calls the preset master and expansion monitor station. Lights up automatically when it gets dark around this station.

**Drainage holes**
These are for discharging rain water inside the unit. Do not obstruct these holes.
INSTALLATION

Cable
Use PE (polyethylene)-insulated PVC jacket cable. Parallel or jacketed 2-conductor, mid-capacitance, non-shielded cable is recommended. Never use individual conductors, twisted pair cable, or coaxial cable.

Wiring method, wiring distance

<table>
<thead>
<tr>
<th>Ø 0.65 mm 22 AWG</th>
<th>Ø 0.8-1.2 mm 20-16 AWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 50 m 165’</td>
<td>100 m 330’</td>
</tr>
<tr>
<td>B 5 m 16’</td>
<td>10 m 33’</td>
</tr>
<tr>
<td>C 50 m 165’</td>
<td>150 m 495’</td>
</tr>
</tbody>
</table>

Mounting locations
Do not install door station and master monitor station in any of the following locations where lighting or the ambient environment could impact the display on the video monitor.

**JO-1MD**
- a In direct sunlight
- b Avoid installing the master monitor station in a concave space of a wall to prevent disconnection of communication
- c Allow at least 15 cm (6") above and 25 cm (9") below center of the mounting bracket for installation of the station

Mounting positions and image view area

**JO-DA**: Refer to below diagrams when the camera angle is changed with the adjustment switch.
<Back wiring>

1. Fasten the mounting bracket to the wall
2. Press release button to insert or remove wire.
3. Insert wire into the terminal.
4. Mount the unit on the mounting bracket.

<Surface wiring>

When the wiring is not coming through the wall, the wires can be routed to the top or bottom of the unit. Remove cable inlet plate on the upper part of the unit to allow passage of the wiring into the unit.

Remove cable inlet plate

Mounting screw × 4
(Screw shaft: Ø4.1)
(Slotted Head: Ø8.2 or less
Height 3.0mm or less)
(not included)

Wood mounting screw × 4
(Screw shaft: Ø4.1)
(Slotted Head: Ø8.2 or less
Height 3.0mm or less)
(not included)
1. Remove the main unit from the mounting frame by loosening the locking screws.

2. Fasten the mounting frame to the wall.

3. Connect wires.

4. Fasten the unit to the mounting surface. *Use board anchors or concrete plugs as needed.

5. Replace face plate and tighten screw with included special screwdriver.

1. Loosen the special screw with the special screwdriver, and remove the front panel.

2. Insert the transparent name plate.
   1. Peel off the protective seals on the plate (both sides).
   2. Fill in the name on the transparent name plate.
   3. Insert the filled-in transparent name plate as below (indicated with in diagram).

3. Fasten the front panel to the back box with the special screws.

*See above JO-DV for details.
WIRING

Insert wires securely into each terminal as shown.

Door release
An EL-12S (AC 12 V, 0.125 A, DC 12 V, 0.2 A) or equivalent part and a separate AC transformer (or power supply) are required.
Door release contact: AC/DC 24 V, 0.5 A
       (Minimum contact: 100 mV DC, 0.1 mA)
       (N/O dry closure contact L, L).
*Run separate cables for audio/video and door release.

Presence of sound from IER-2
Call tone from door station.

NOTES:
• To add an expansion monitor station, see the installation manual of the expansion monitor station.
OPERATIONS

Answering a door call

1. Push Call button.
2. The call tone sounds, an image appears on screen.
   - The screen turns off after approx. 45 seconds if not answered.
3. Push \[ \text{[1]} \], and after the beep, communicate hands-free (hands-free mode).
4. After finishing communication, push \[ \text{[1]} \] and communication will end after the beep.

NOTES:
- Communication ends automatically after approx. 1 minute.
- The communication volume can be adjusted during the monitoring or the communication by pressing \[ \text{[2]} \].
  
  There are three communication volume settings to cycle through: \[ \text{[1]} \] (Minimum), \[ \text{[2]} \] (Medium), and \[ \text{[3]} \] (Maximum). The current volume level is displayed on the screen and disappears in approx. 5 seconds. The default setting is \[ \text{[2]} \] (Medium).

For loud outdoor areas, use Press-to-Talk mode (PTT)

After 2 seconds or more

1. Press and hold \[ \text{[1]} \] for 2 seconds or more.
   - After approx. 2 seconds beep sounds, PTT mode is engaged.
   - If \[ \text{[1]} \] is pressed briefly, PTT mode is not engaged.
2. When communicating, keep \[ \text{[1]} \] pressed. To hear the caller’s voice, release \[ \text{[1]} \].
   
   Status LED lights when you talk, and flashes slowly as you listen to caller (or hear outside sounds).

NOTES:
- It is not possible to switch back to hands-free mode (from PTT mode during communication).

Activating door release

1. Press \[ \text{[0]} \].
2. Door release is activated and door can be opened.
   
   During release: Status LED lights.
Monitoring door station

1. Push in standby mode.

2. The video image from the door station and the incoming audio is heard. If you do not push , the caller will not hear sounds from the inside station.

3. Push to end monitoring.

NOTES:
• To talk to door station during monitoring, momentarily push . This allows communication with the door station.
• The monitoring turns off automatically after approx. 1 minute.

Adjust call tone volume

1. Push in standby mode to adjust call tone volume and display the volume level.

2. Push until the desired call tone volume level is heard.

NOTES:
• There are four call tone volume settings to cycle through: [Mute], [Minimum] - [Maximum]. The current volume level is displayed on the screen and disappears in approx. 5 seconds. The default setting is [Medium].

Night illumination

At night, the door station White light LED lights up during calling or monitoring door station.

<When a call is made from the door station>
If Call button is pushed, the White light LED lights up. When communication ends, the White light LED will turn off.

<When the white light LED is lit up during monitoring door station>
When is pushed during monitoring door station, the White light LED will light up. When monitoring door station ends, the White light LED will turn off.

NOTES:
• The door station evaluates lighting conditions to automatically turn on the white light LED when necessary.
Adjust screen brightness

1. Push 🌞 when the screen is difficult to see. The screen brightness changes from [1] (the darkest) to [5] (the brightest) during communication or monitoring.

NOTES:
- The current brightness level is displayed on the screen and disappears in approx. 5 seconds.
- The default setting is [3].

Activating/Triggering external devices (if installed)

1. Press 📢 to operate to the unit’s option output.

NOTES:
- Optional devices must be installed and connected properly.
- The 📢 can control lights, secondary doors, garages, etc.
- While the 📢 button is pressed, the N/O dry closure contact signal is kept being output.

TECHNICAL PRECAUTIONS

Cleaning:
- Clean all units with a soft cloth and gentle cleaner. Do not spray cleaner directly on unit. Do not use an abrasive cleaner or cloth.
- Door stations are weather resistant.

Wiring:
- When a short is detected between A1 and A2 of the door station, the unit stops functioning and the Status LED flashes rapidly until the short is removed. Check the wires.
- If noise is heard from the master monitor station, the wiring is disconnected between the video door station and the master monitor station.

Trouble:
- If the station does not respond, reboot this station by pressing the RESET button.
- When the power supply is turned off, power failure, or the RESET button is pressed, the setting of brightness, communication volume, and call tone volume are returned to the default setting.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>JO-1MD (Master monitor station)</th>
<th>JO-DA/JO-DV/JO-DVF (Video door station)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>DC 18V (from power supply)</td>
</tr>
<tr>
<td><strong>Current consumption</strong> (standby) 24mA (max) 410mA</td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Hands-free: Auto-voice actuation</td>
</tr>
<tr>
<td></td>
<td>PTT: Press-to-talk, release to listen</td>
</tr>
<tr>
<td><strong>Ambient temperature</strong> 0 - 40°C (+32°F - +104°F)</td>
<td></td>
</tr>
<tr>
<td><strong>Monitor</strong></td>
<td>7 inch color LCD screen</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Wall-mount</td>
</tr>
<tr>
<td><strong>Electrical box</strong></td>
<td>3-gang box</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>Flame resistant ABS resin</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>White</td>
</tr>
<tr>
<td><strong>Dimension</strong></td>
<td>130 (H) x 230 (W) x 21 (D) (mm)</td>
</tr>
<tr>
<td></td>
<td>5-1/8 (H) x 9-1/16 (W) x 13/16 (D) (inches)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approx. 470g (1.04 lbs.)</td>
</tr>
<tr>
<td><strong>Camera unit</strong></td>
<td>1/4 - inch color CMOS</td>
</tr>
<tr>
<td><strong>Ambient temperature</strong> -20 - 60°C (-4°F - +140°F)</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum illumination</strong></td>
<td>Approx. 5 lux at 50 cm (16&quot;) distance</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
</tr>
<tr>
<td>(JO-DA)</td>
<td>129 (H) x 97 (W) x 36 (D) (mm)</td>
</tr>
<tr>
<td>(JO-DV)</td>
<td>5-3/32 (H) x 3-27/32 (W) x 1-13/32 (D) (inches)</td>
</tr>
<tr>
<td>(JO-DVF)</td>
<td>173 (H) x 98 (W) x 27 (D) (mm)</td>
</tr>
<tr>
<td>(JO-DVF)</td>
<td>6-13/16 (H) x 3-7/8 (W) x 1-3/8 (D) (inches)</td>
</tr>
<tr>
<td>(Flush mount back box for JO-DVF)</td>
<td>209 (H) x 135 (W) x exposed area 3.5 (D) (mm)</td>
</tr>
<tr>
<td>(Flush mount back box for JO-DVF)</td>
<td>8-1/4 (H) x 5-5/16 (W) x 5/16 (D) (inches)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td></td>
</tr>
<tr>
<td>(JO-DA)</td>
<td>Approx. 200 g (0.44 lbs.)</td>
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<tr>
<td>(JO-DV)</td>
<td>Approx. 650 g (1.43 lbs.)</td>
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<tr>
<td>(JO-DVF)</td>
<td>Approx. 580 g (1.27 lbs.)</td>
</tr>
<tr>
<td>(Flush mount back box for JO-DVF)</td>
<td>Approx. 550 g (1.2 lbs.)</td>
</tr>
<tr>
<td><strong>IP rating</strong></td>
<td>IP54 (JO-DA / JO-DV / JO-DVF)</td>
</tr>
<tr>
<td><strong>IK rating</strong></td>
<td>IK08 (JO-DV)</td>
</tr>
<tr>
<td></td>
<td>IK07 (JO-DVF)</td>
</tr>
</tbody>
</table>
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