

AIPHONE®

Installation Manual

JVS-1V (A set including JV-1MD, JV-DV and power supply)**JVS-1F (A set including JV-1MD, JV-DVF and power supply)****JV-1MD (Hands free color video intercom master monitor station)****To installers:**

- After installation is completed, be sure to hand the accessories to the customer.

NOTE:

- The illustrations and images used in this manual may differ from the actual ones.

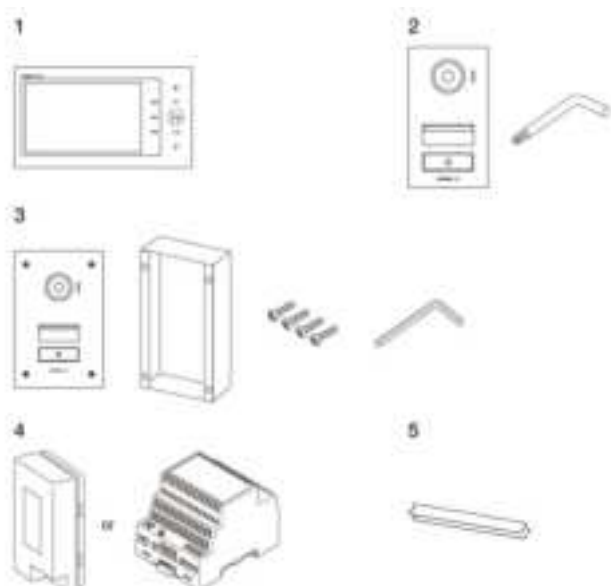
HTML manual

https://www.aip-info.net/file/manual/j/JV-1MD/JV-1MD_INS/JV-1MD_INS_EN/content/

Table of contents

Package contents	2
Precautions	2
Part names and functions	3
Wiring	5
Precautions for wiring	5
Wiring diagram and specifications	6
Before installation	7
Precautions for installation	7
Door station mounting positions and image view area	8
Mounting	8
JV-1MD	8
JV-DV	10
JV-DVF	11
After installation	11
Check after installation	11
Installer settings	12
Privacy notice	12

Package contents



No.	Content	JVS-1V	JVS-1F	JV-1MD
1	JV-1MD (master monitor station)	✓	✓	✓
2	JV-DV (door station) • Special screwdriver	✓		
3	JV-DVF (door station) • Flush mount back box • Special screw (×4) • Hexagonal wrench		✓	
4	Power supply (PS-2420UL, PS-2420-O, PS-2420DM, PS-2420S or PS-2420BF) (*)	✓	✓	
5	Nameplate (×2)	✓	✓	
-	Installation manual	✓	✓	✓
-	Information sheet	✓	✓	✓
-	Contact us sheet	✓	✓	✓
-	Chinese RoHS declaration (*)	✓	✓	✓

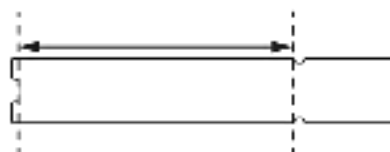
(*): This may not be included depending on the country in which the product is sold.

NOTE

- Mounting screws and wood screws are not included.

Filling in the nameplate

- 1 Peel off the protective seal (both sides).
- 2 Fill in the resident's name.
 - Use a permanent pen.
 - Keep the text within the dashed line.



Precautions



Indicates that users may require caution (including warning / caution).



Alerts users to prohibited actions.



Restricts user actions / provides instructions.

WARNING

Negligence could result in death or serious injury.



This product is not designed to explosion-proof specifications. Do not install or use in locations that can contain flammable gases.
This may result in fire or explosion.



Do not disassemble or modify the station.
This may result in fire or electrical shock.



Do not use with a power supply rated above the specified voltage.
This may result in fire or electrical shock.



Do not use the power supply other than Aiphone specified.
This may result in fire or malfunction.



Do not install two power supplies in parallel to a single input.
This may result in fire or electrical shock.



Do not connect any terminals on the product directly to an AC power line.
This may result in fire or electrical shock.



The AC outlet must be near the equipment and easily accessible.



Insert AC plug completely and securely into the outlet.
This may result in fire or electrical shock.

⚠CAUTION

Negligence could result in injury to people or damage to property.

- ❌ **Do not install or connect the product with the power on.**
This may result in electrical shock or malfunction.
- ❗ **Make sure the wiring is correct and there are no wiring shorts before switching on the product.**
This may result in fire or electrical shock.
- ❗ **Install in a place where the product will not get easily bumped.**
This may result in injury.
- ❌ **Do not put your ear close to the speaker when using the product.**
May cause harm to the ear if a sudden loud noise is emitted.

General Precautions

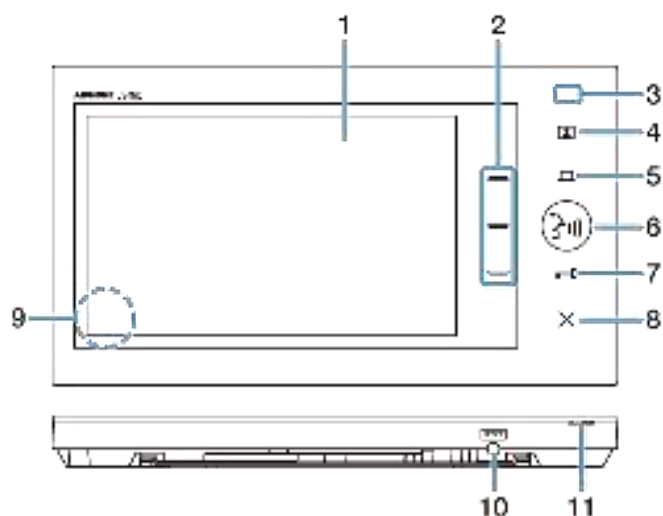
- Do not install the power supply in the ceiling or on the floor. Doing so would prevent maintenance inspections and repairs from being carried out. This may result in malfunction.
- Install low-voltage lines at least 30 cm (12") away from high-voltage lines (AC 100V-240 V), especially inverter air conditioner wiring. This may result in interference or malfunction.
- When installing or using the station, give consideration to the privacy rights of subjects, as it is the responsibility of the system owner to post signs or warnings in accordance with local ordinances.
- Keep the unit more than 1 m (3.3') away from radio or TV set.

Notice

- If the station is used in areas where there are business-use wireless devices such as a transceiver or mobile phones, it may cause malfunction.
- Keep the intercom wires more than 30 cm (12") away from AC 100-240 V wiring. AC induced noise and/or unit malfunction could result.
- If the station 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.
- When warm indoor air flows into the unit, dew condensation may be caused by a temperature difference between indoors and outdoors. It is recommended to cover openings on the unit such as cable incoming holes to avoid condensation.

Part names and functions

Master monitor station (JV-1MD)



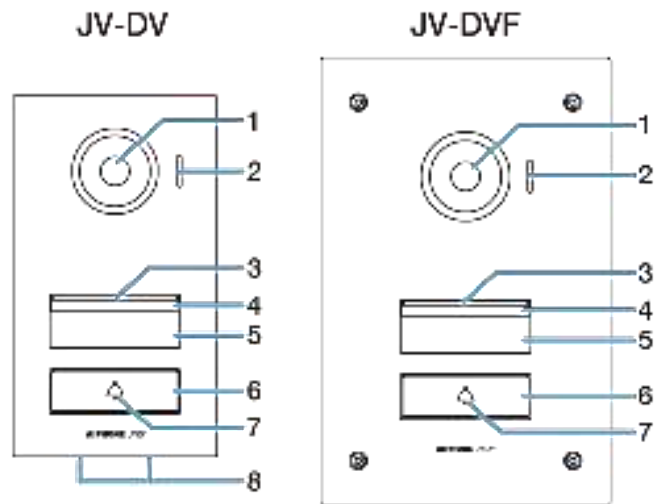
No.	Item	Description
1	Color LCD screen	Color LCD screen doesn't have touch interface.
2	Function buttons	• Tap the corresponding function button to execute the function displayed on the right side of the screen. • Tap any function button in standby mode to display the settings menu.
3	Notification LED (blue)	Indicates the current status of the station. → Notification LED (P.4)
4	Monitor button	Tap the monitor button to monitor the outside of the door.
5	Option button	Tap the option button to activate a connected external device.
6	Talk button	Tap the talk button to start communication.
7	Door release button	Tap the door release button to unlock the electric lock at the door station.
8	End button	Tap the end button to exit the current operation and enter standby mode.
9	Speaker	The speaker is on the back side of the station.
10	RESET switch	Push the RESET switch to reboot the station when it is not responding. Even if you reboot the station, the settings and recorded image are retained.
11	Microphone	Do not block the microphone with stickers or tape. Otherwise, communication may not be possible.

Notification LED

Refer to the "Operation Manual" for other indicators not listed.

LED		Description
Blue light	On	- Blue LED is lighting during startup. - Blue LED is lighting when the ringtone volume is set to "0". - Blue LED is lighting when talk direction is monitor station to door station.
Blue flashing	On (0.25 sec.) ↑↓ Off (0.25 sec.)	When a short circuit is detected in the door station wiring or the expansion monitor station wiring.
	On (0.5 sec.) ↑↓ Off (0.5 sec.) The LED turns off after flashing 3 times.	- Blue LED is flashing when you tap  to unlock the electric lock. - Blue LED is flashing when you tap  to activate the external unit.

Door station



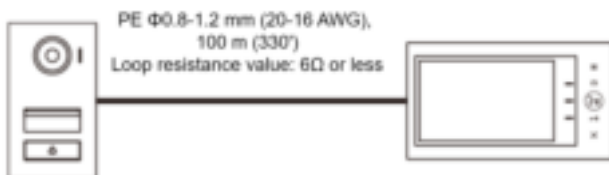
No.	Item	Description
1	Camera	-
2	Microphone	Do not block the microphone with stickers or tape. Otherwise, communication may not be possible.
3	Speaker	-
4	White light LED	The white light LED is always lit while the power is on. When the station detects dark conditions, the light automatically brightens. These conditions include: - The call button is pressed. - While an image at the door station is displayed on the monitor station. - The door is released. However, it may not become brighter depending on local conditions.
5	Nameplate cover	Do not put a sticker over the nameplate cover. This will decrease the LED's nighttime illumination.
6	Call button	-
7	Bell icon (white)	The backlight is always lit while the power is on.
8	Drainage holes	Holes for discharging rain water from inside the station.

Wiring

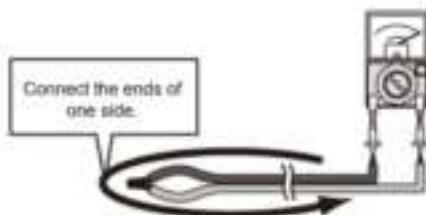
Precautions for wiring

Cable

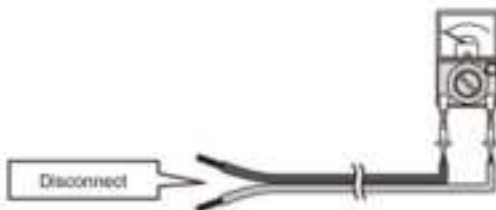
- Use a parallel 2-conductor wiring cable for connection of a video door station.
- Select a PE (polyethylene)-insulated PVC jacket cable for low voltage wiring.
 - A coaxial cable cannot be used.
 - A 2-pair quad-type vinyl sheathed cable cannot be used.
- For wiring, separate them for audio/video and door release and keep them more than 10 cm (3-15/16") away from each other.
- If existing wiring is used, the device may not operate properly. In that case, it will be necessary to replace the wiring.
- When using existing cables, check for short circuit and disconnection before installation.



- Disconnection check (6Ω or less)
Connect the ends of one side and make a measure at the other side with a tester.



- Short circuit check: $\infty\Omega$ (Infinity)



- To connect low voltage wires, either crimp them with a crimp sleeve or solder them, and then insulate by covering with insulating tape.

How to connect low voltage wires each other

Crimping with a crimp sleeve

- 1 Twist the stranded conductor around the solid conductor at least three times, then crimp them.



- 2 Overlap more than half of the width and twist them at least twice.



Soldering

- 1 Twist the stranded conductor around the solid conductor at least three times.



- 2 Bend the tip and solder it. Make sure no lead wire sticks out.



- 3 Overlap more than half of the width and twist them at least twice.

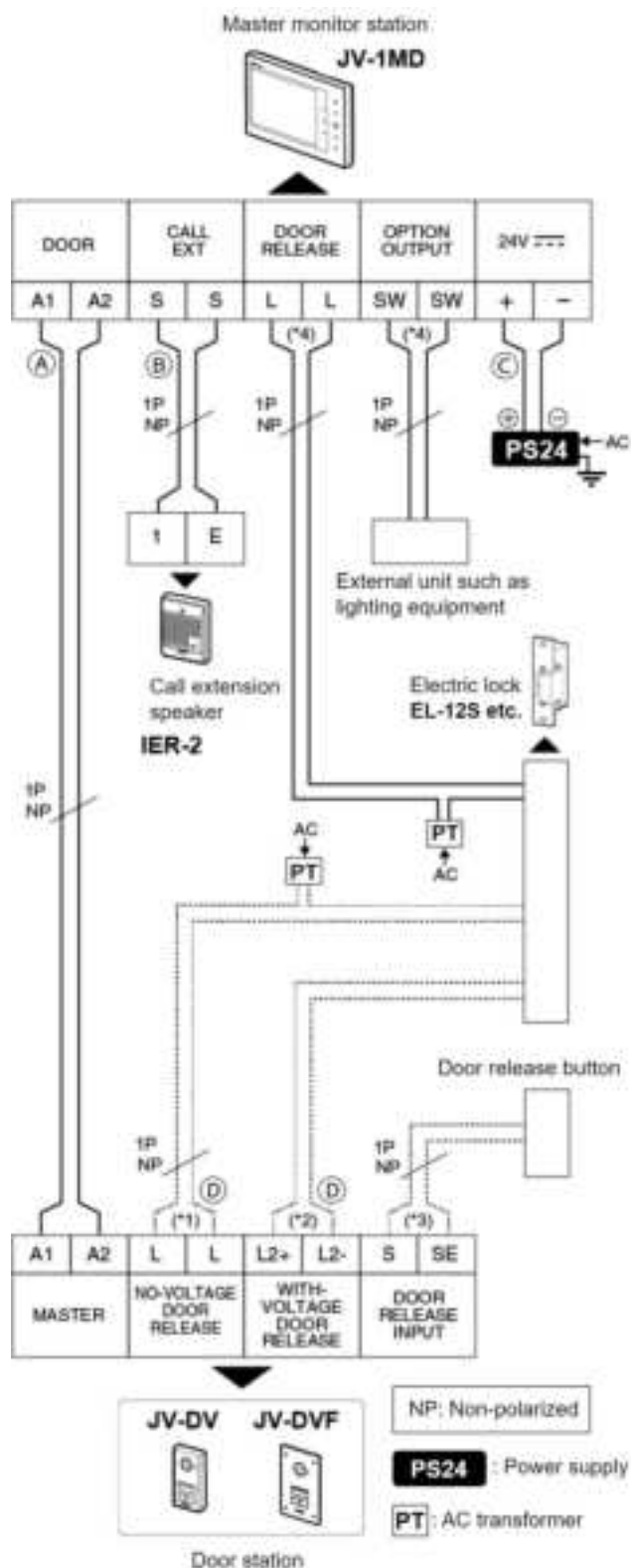


ATTENTION

- When crimping with a crimp sleeve, if the tip of the lead wire with connector is soldered, cut off the soldered part before crimping it.
- **After connecting wires, always check for breaking or insufficient connection. Especially when connecting a wire in the middle of wiring, either crimp it with a crimp sleeve or solder it, and then insulate it by covering with insulating tape. Keep the number of connections as low as possible when wiring.** Just twisting wires may cause poor connection, or the surface of the wires may get oxidized and cause a loose connection, leading to malfunctioning or failure.



Wiring diagram and specifications



ATTENTION

- Do not use the unused terminals for other purposes.
- The wiring between each device should not be in the same wiring jacket.
- Insulate and secure unused low-voltage lines.
- Only connect an electric lock to a single location.
- The external door release button activates only electric lock which is connected to door station.
- Be sure to ground the power supply.

NOTE

- The sequence of terminals in the diagram may differ from the actual product.
- Also refer to the instructions for each device to be connected.

Wiring distance

Ⓐ	PE $\Phi 0.65$ mm (22 AWG): 50 m (165') PE $\Phi 0.8-1.2$ mm (20-16 AWG): 100 m (330')
Ⓑ	PE $\Phi 0.65$ mm (22 AWG): 50 m (165') PE $\Phi 0.8-1.2$ mm (20-16 AWG): 150 m (490')
Ⓒ	PE $\Phi 0.65$ mm (22 AWG): 5 m (16'5") PE $\Phi 0.8$ mm (20 AWG): 10 m (33')
Ⓓ	PE $\Phi 0.65$ mm (22 AWG): 15 m (49') PE $\Phi 0.8-1.2$ mm (20-16 AWG): 30 m (98'5")
Others	PE $\Phi 0.65-1.2$ mm (22-16 AWG)

NOTE

- The wiring distance between the master monitor station and the power supply can be extended up to 25 m (82') by using a PE $\Phi 1.2$ mm (16 AWG) cable. However, the maximum distance between the door station and the master monitor station will be shortened to 70 m (230') by using a PE $\Phi 0.8-1.2$ mm (20-16 AWG) cable.
- When the wet contact output from the door station is 12 VDC, 580 mA (higher than 500 mA, 580 mA or lower), the wiring distance between the door station and the master monitor station should be 70 m (230') or shorter by using a PE $\Phi 0.8-1.2$ mm (20-16 AWG) cable.

(*1): Output specifications

Output method	Dry contact (N/O)
Contact rating	24 VDC, 1 A (resistive load)

(*2): Output specifications

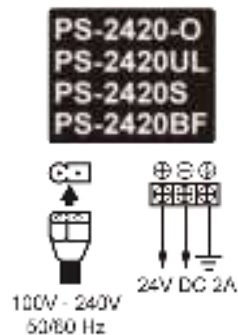
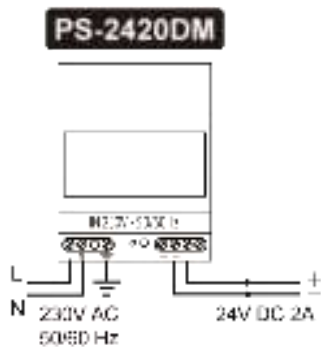
Output method	Wet contact (N/O)
Output current	500 mA or less
Output voltage	12 VDC

(*3): Input specifications

Input method	Dry contact (N/O)
Detection time	100 msec or more
Contact resistance	300 Ω or less
Terminal short-circuit current	10 mA or less
Voltage between terminals	5 VDC or less (between open terminals)

(*4): Output specifications

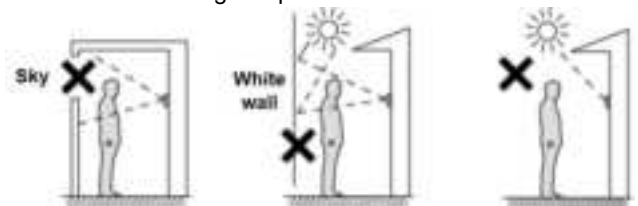
Output method	Dry contact (N/O)
Contact rating	24 VDC, 1 A (resistive load)



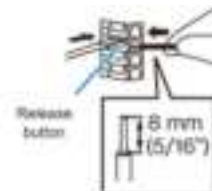
Before installation

Precautions for installation

- The monitor station is designed for indoor use only. Do not install at outdoor location.
- Installing the device in the following locations could cause malfunction:
 - * **Locations under direct sunlight (except for door stations)**
 - * **Locations near heating equipment**
 - * **Locations subject to liquid, iron filings, dust, oil, or chemicals**
 - * **Locations subject to moisture and humidity extremes**
 - * **Locations where the temperature is quite low**
 - * **Locations subject to steam or oil smoke**
 - * **Sulphurous environments**
 - * **Locations close to the sea or directly exposed to sea breeze**
- The installation height of the station should not exceed 2 m (6.6') (upper edge) from ground level.
- Installing the door station in the following locations as is may affect the clarity of the image:
 - * Where lights will shine directly into the camera at night time
 - * Where the sky fills much of the background
 - * Where the background of the subject is white
 - * Where direct sunlight is present

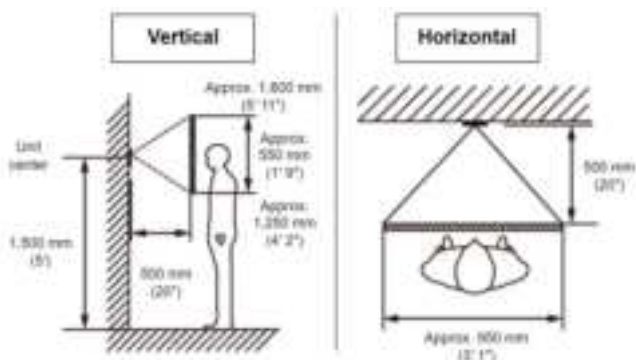


- Installation of lighting is recommended to further improve the nighttime image. When installing a video door station, determine the mounting position so that the light does not directly enter the camera. It is recommended to add at least 5 lux of illumination in addition to the LED illumination for the nighttime.
- In 50 Hz regions, if a strong fluorescent light enters directly into the camera, it may cause the image to flicker. Either shield the camera from the light or use an inverter fluorescent light.
- Do not use an impact driver to fasten screws. Doing so may cause damage to the device.
- Always properly secure wall mounted stations to prevent the station from falling.
- Strip 8 mm (5/16") of the wire jacket and insert it into the terminal. If it is difficult to insert, press and hold the release button while inserting.



Door station mounting positions and image view area

JV-DV, JV-DVF

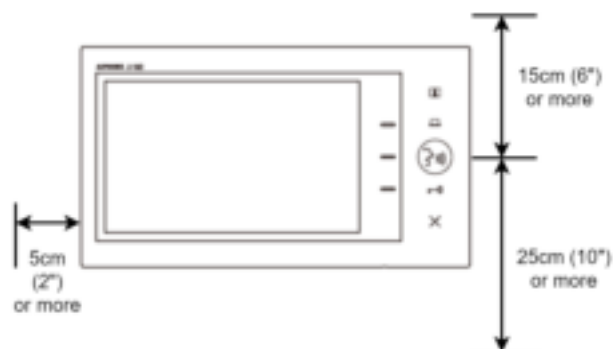


Mounting

JV-1MD

ATTENTION

- Do not embed the station inside a wall.
- To prevent malfunction, install the station at least 20 cm (8") away from other devices (e.g., floor heating remote control).
- Avoid installing the station in a concave space in a wall to prevent audio distortion.
- The location of the station requires the following open spaces to prevent malfunctions or call interruption.
 - 15 cm (6") or more above the center of the station.
 - 25 cm (10") or more below the center of the station (to allow operation of the reset button on the bottom of the station).
 - 5 cm (2") or more on the left side of the station (to avoid blocking the speaker).



Back wiring

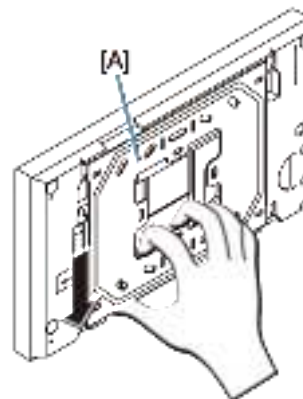


Installation video

https://www.aip-info.net/file/manual/j/JV-1MD/JV-1MD_INS/JV-1MD_INS_EN/content/attachments/101959052/101968970.mp4

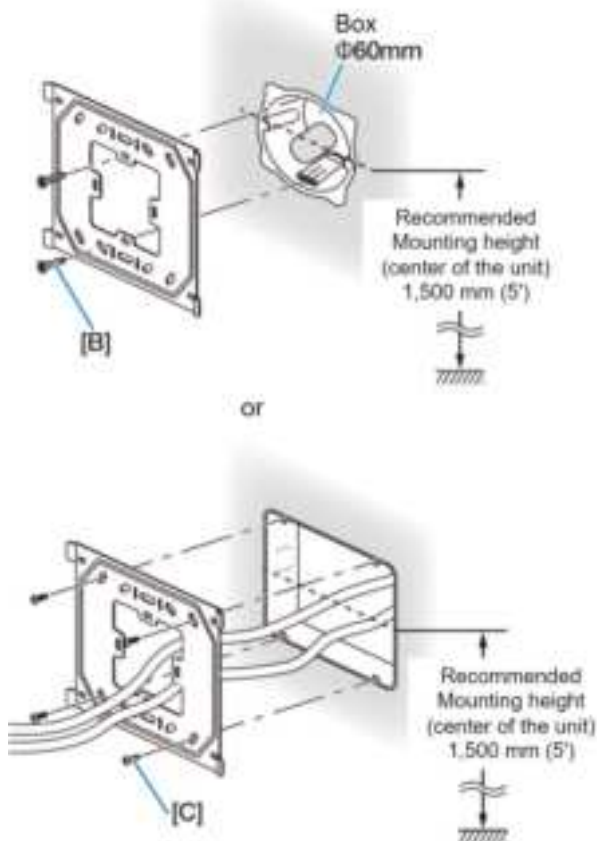


- 1 **Remove the mounting bracket [A] from the back of the station.**
Slide the mounting bracket down, and remove it.



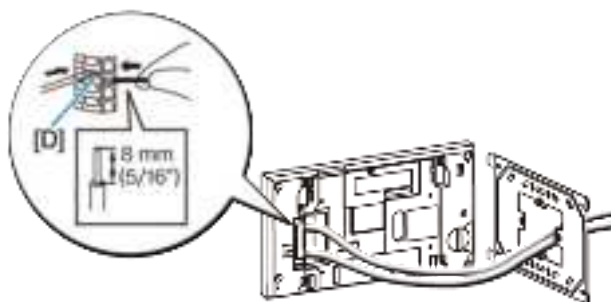
2 Fasten the mounting bracket to the wall with the screws [B] (×2).

When using a 3-gang box, use screws [C] (×4).

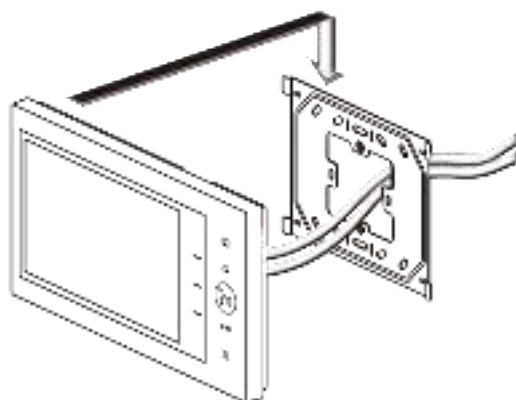


3 Connect wires.

Strip 8 mm (5/16") of the wire jacket and insert it into the terminal. If it is difficult to insert, press and hold the release button [D] while inserting.



4 Mount the station on the mounting bracket [A].



ATTENTION

- Be careful not to trap cables between the station and the mounting bracket.
- Be careful not to damage the cable sheath with the mounting bracket.

NOTE

- When using wood mounting screws (×4) for wall mounting, drill a 50 mm (1-15/16") diameter hole at the position of the station's center on the wall.

Available screws

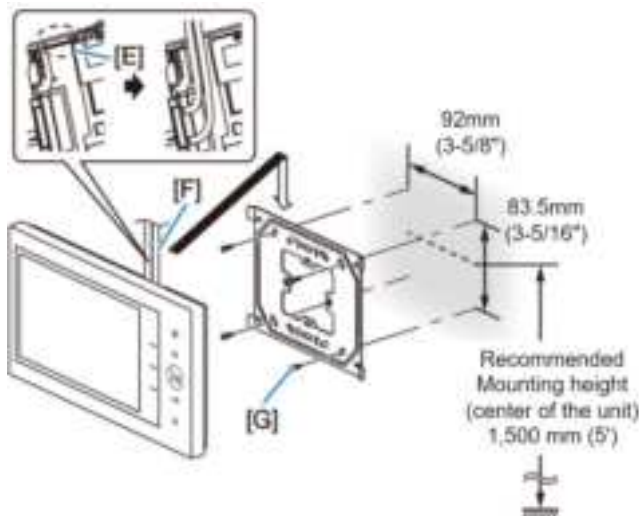
[B]	Should be compatible with a gang box.
[C]	Screw shaft: $\Phi 4.1$ mm or less Slotted head: $\Phi 8.2$ mm or less, 3.0 mm or less in height
Wood mounting screw	Screw shaft: $\Phi 4.1$ mm or less Slotted head: $\Phi 8.2$ mm or less, 3.0 mm or less in height

Surface wiring

The wires can be routed to the top or bottom of the station. If wiring is to be routed from the top of the station, cut the cable inlet [E].

If there is a large amount of wiring [F], strip away the jacket of the wire up to the cable inlet.

Fasten the mounting bracket to the wall with wood mounting screws [G] (×4).

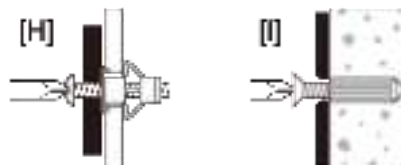


Available screws

[G]	Screw shaft: $\Phi 4.1$ mm or less Slotted head: $\Phi 8.2$ mm or less, 3.0 mm or less in height
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NOTE

- When wood mounting screws cannot be used for plasterboard walls, concrete walls, and the like, use commercially-available board anchors [H] or concrete plugs [I].



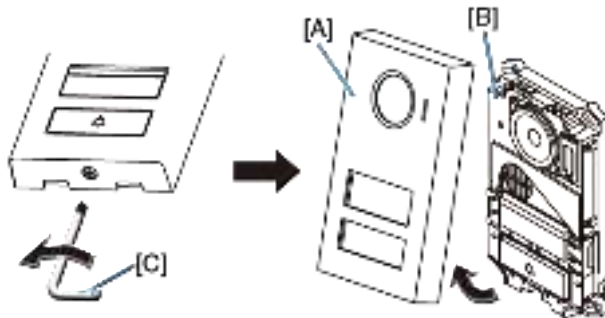
Installation video

https://www.aip-info.net/file/manual/j/JV-1MD/JV-1MD_INS/JV-1MD_INS_EN/content/attachments/101959275/101968975.mp4



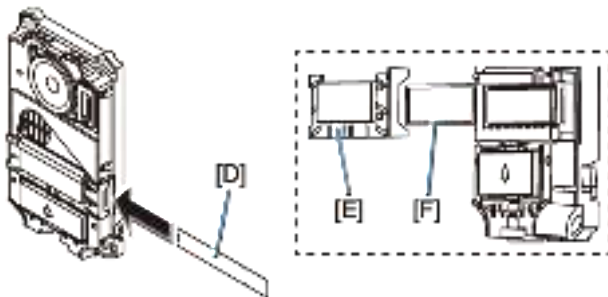
1 Remove the front panel [A].

Loosen the special screw with the included special screwdriver [C], and remove the front panel from the station [B].



2 Insert the filled-in nameplate [D].

Refer to "Filling in the nameplate (P.2)" for nameplate instructions.



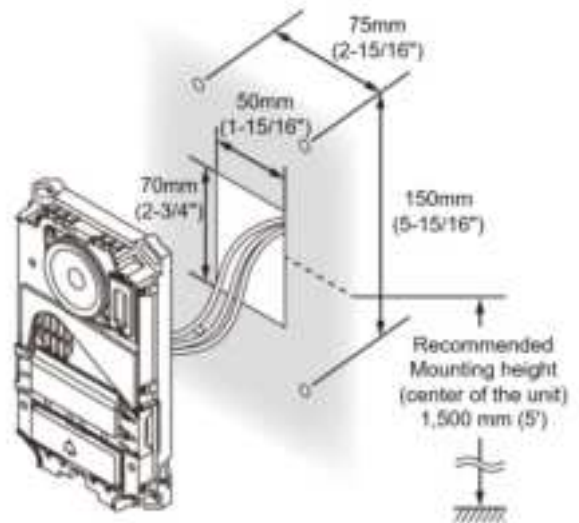
ATTENTION

- Do not put a sticker over the nameplate cover [E]. This will decrease the LED's nighttime illumination.
- Do not remove the nameplate cover except for maintenance. If the packing [F] is not installed properly, water may enter the nameplate.

3 Connect wires to the station [B].

Slide down and then open the terminal cover on the back of the station, and strip 8 mm (5/16") of the wire jacket and insert it into the terminal. If it is difficult to insert, press and hold the release button while inserting.

Be sure to close the terminal cover, then slide it up.

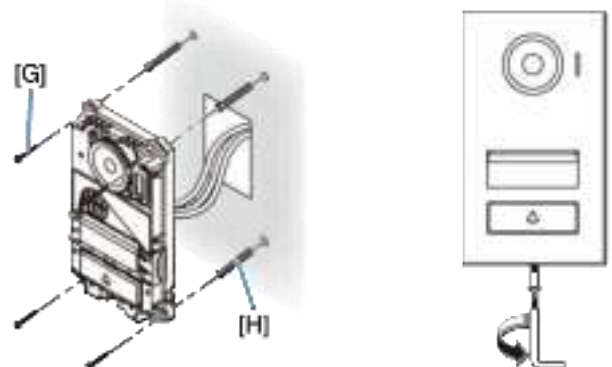


ATTENTION

- Failure to slide up the cover may cause water to enter the terminals, etc., resulting in damage to the station.

4 Fasten the station [B] to the mounting surface with screws [G] (×4), then replace the front panel [A] and tighten the special screwdriver [C].

Use a commercially-available anchor [H] if necessary.



ATTENTION

- Do not install the station with the cables trapped or pressed hard by the main unit.
- Do not overtighten the screws.
- Do not block the drainage holes.

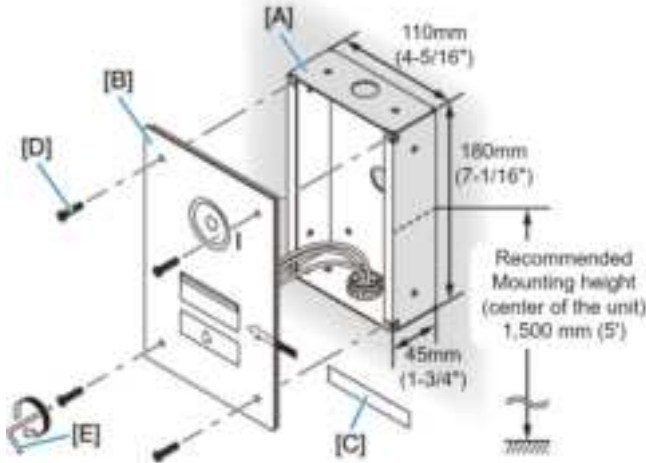
Available screws

[G]	Screw shaft: $\Phi 4.1$ mm or less Slotted head: $\Phi 8.2$ mm or less, 3.0 mm or less in height
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Installation video

https://www.aip-info.net/file/manual/j/JV-1MD/JV-1MD_INS/JV-1MD_INS_EN/content/attachments/101959398/101968992.mp4



1 Install the flush mount back box [A] in the wall.

2 Insert the filled-in nameplate [C].

Refer to "[Filling in the nameplate \(P.2\)](#)" for nameplate instructions.



ATTENTION

- Do not put a sticker over the nameplate. This will decrease the LED's nighttime illumination.

3 Connect wires to the station.

Slide down and then open the terminal cover on the back of the station, and strip 8 mm (5/16") of the wire jacket and insert it into the terminal. If it is difficult to insert, press and hold the release button while inserting.

Be sure to close the terminal cover, then slide it up.



ATTENTION

- Failure to slide up the cover may cause water to enter the terminals, etc., resulting in damage to the station.

4 Fasten the front panel [B] to the back box [A] with the special screws [D] (×4).

Use the hexagonal wrench [E] to install.



ATTENTION

- Do not install the station with the cables trapped or pressed hard by the main unit.
- Do not overtighten the screws.

After installation

Check after installation

After installation, check that the system is functioning in accordance with the operation manual.

If not operating properly

Remove the door station, and then connect it directly to the master monitor station with short, low-voltage wires to check its operation.

If it operates properly, there may be a problem with the wiring. Check the wiring connections.



CAUTION

- Be sure to unplug the power supply before removing the low voltage wires.

When the notification LED flashes

The wiring to the door station may be shorted. Check the wiring.

The master monitor station will restart when the short circuit is restored.

For more information on the notification LED, refer to

"[Notification LED \(P.4\)](#)."

Installer settings

ATTENTION

- Be sure to configure the settings according to the connected devices. Otherwise, the station may not operate properly.

NOTE

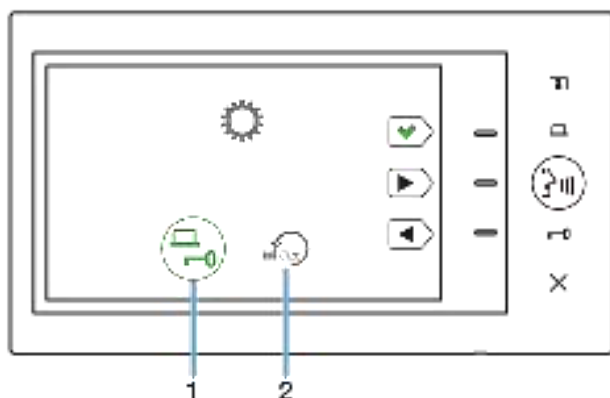
- While in the settings menu, no operations such as calls or notifications can be performed.
- The station will enter standby mode (the display will turn off) after about one minute of no operation. If this occurs, any unfinished setting changes will be lost.

Installer setting items

No.	Item	Details	Setting value ([]: Default)
1	Contact output time (*)		
	Option output duration	Sets the option output duration time.	1/[5]/10/20/30 (sec)
	Door release duration	Sets the unlocking duration for the electric door lock.	1/[5]/10/20/30 (sec)
2	Initialize	Resets all settings to default. All images saved in built-in memory will also be deleted.	-

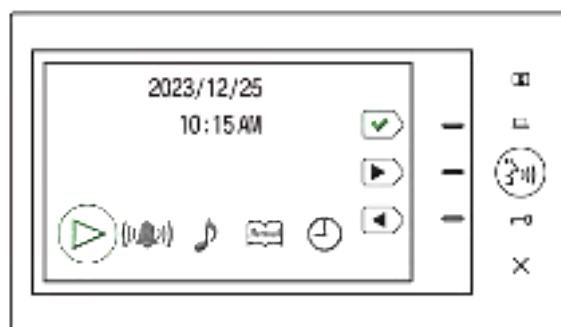
(*): The setting values should be the same as those of other monitor station.

Installer setup menu screen



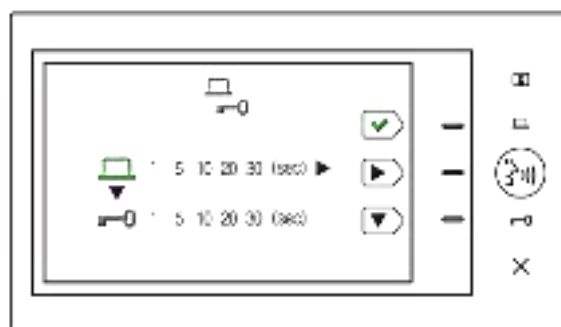
Setting procedure (e.g., setting the door release duration)

- Tap one of the function buttons in standby mode. The menu screen will be shown.



- Tap and hold the icon for 5 seconds or more. The installer setup menu screen will be shown.

- Tap the function button (▶) or (◀) to select the icon, then tap the function button (✓). The contact output time screen will be shown.



- Tap the function button (▼) to select the icon.
- Tap the function button (▶) to adjust the door release duration.
- Tap the function button (✓) to apply changes.

ATTENTION

- Be sure to tap the function button (✓) to apply changes.
- Changes will not be applied if X is pressed.

Privacy notice

<https://www.aip-info.net/legal/privacy/>

