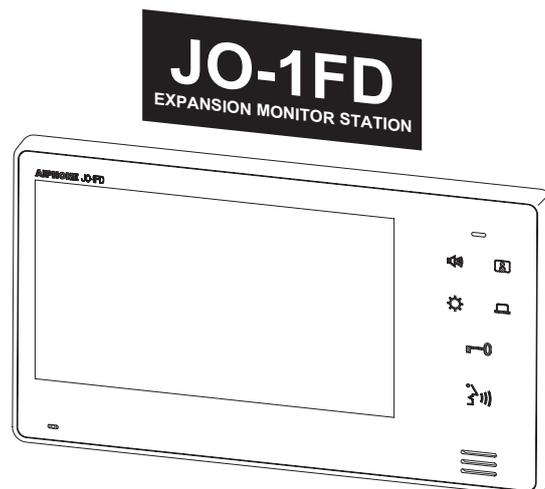# AIPHONE

JO-1FD

HANDS-FREE COLOR VIDEO INTERCOM EXPANSION MONITOR STATION

POSTE DE SURVEILLANCE D'EXTENSION D'INTERPHONE VIDÉO COULEUR MAINS LIBRES

MONITOR SECUNDARIO DE INTERCOMUNICACIÓN CON VÍDEO A COLOR MANOS LIBRES

HANDENVRIJE UITBREIDINGSBEWAKINGSPOST VOOR KLEURENVIDEOFOON

POSTAZIONE MONITOR SUPPLEMENTARE VIDEOCITOFONO A COLORI CON VIVAVOCE

FREISPRECH-FARBVIDEO-ERWEITERUNGSMONITORSTELLE

INSTALLATION & OPERATION MANUAL
MANUEL D'INSTALLATION ET D'UTILISATION
MANUAL DE INSTALACIÓN Y OPERACIÓN
INSTALLATIE- EN BEDIENINGSHANDLEIDING
MANUALE D'INSTALLAZIONE E USO
INSTALLATIONS- UND BEDIENUNGSANLEITUNGHANDBUCH

JO-1FD
EXPANSION MONITOR STATION

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   🚱 Keep unit away from water   ❗ General precautions

⚠WARNING

Negligence could result in death or serious injury.

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.

⚠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.
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 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 closeby.
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.
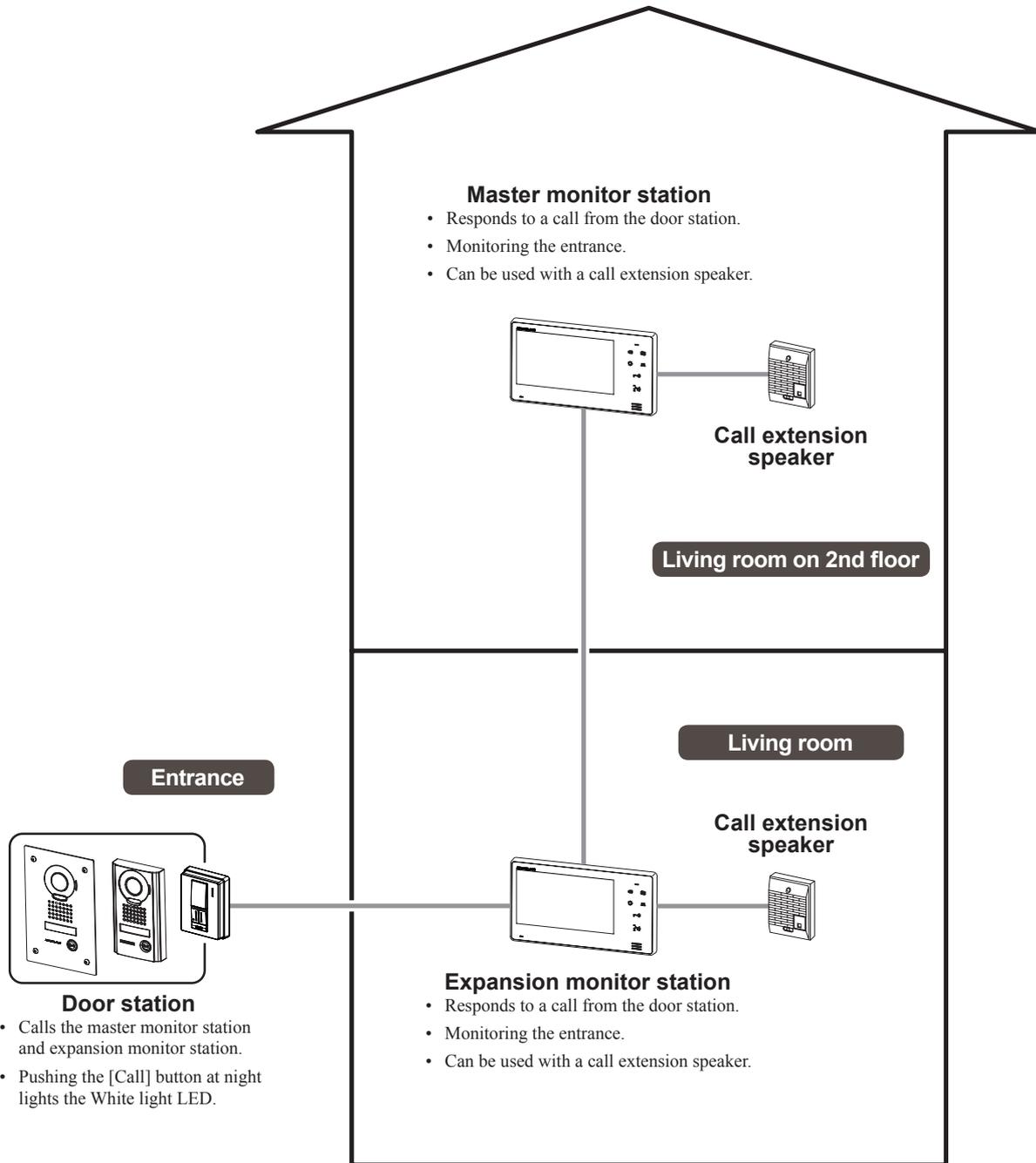
GENERAL PRECAUTIONS

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 it is used close to 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. The unit is 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.
17. 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.
18. 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 before speaking.
19. At a gate or porch illuminated by a fluorescent lamp, the image may vary, but this is not a malfunction.
20. 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.
21. When the unit's screen is illuminated with strong light, the image looks white or silhouetted, but this is not a malfunction.
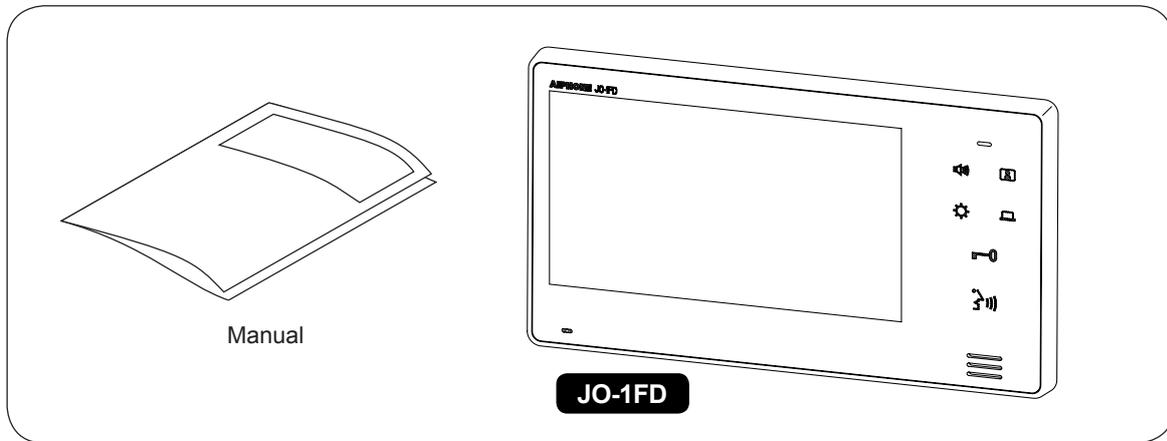
NOTICES

* We will under no conditions be liable for damage occurring due to the inability to communicate due to malfunctions, problems, or operational errors in this product.
* We will under no conditions be liable for any damages 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.
* This 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.
* Lighting adjustments are made automatically by the door station. Adjustment results may vary depending on installation environment.

FEATURE AND SYSTEM EXAMPLE

Master monitor station
- Responds to a call from the door station.
- Monitoring the entrance.
- Can be used with a call extension speaker.

Call extension speaker

Living room on 2nd floor

Living room

Call extension speaker

Entrance

Door station
- Calls the master monitor station and expansion monitor station.
- Pushing the [Call] button at night lights the White light LED.

Expansion monitor station
- Responds to a call from the door station.
- Monitoring the entrance.
- Can be used with a call extension speaker.

PACKAGE CONTENTS

Manual

JO-1FD

NOTES:
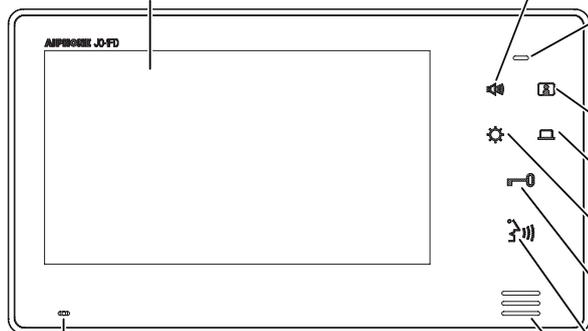- Mounting and Wood mounting screws not included

PART NAMES   Remove protective film before use.

JO-1FD

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.

[Bottom View]

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: ✕ (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.

INSTALLING EXPANSION MONITOR STATION

When installing the expansion monitor station with the master monitor station A

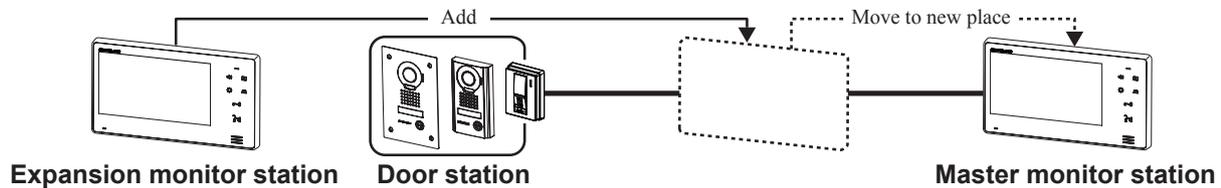Install and connect the expansion monitor station between the master monitor station and the door station.

Door station   **Expansion monitor station**   **Master monitor station**
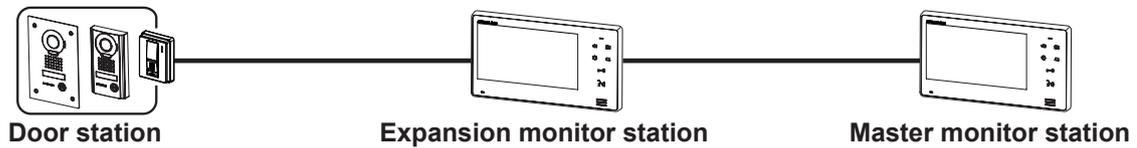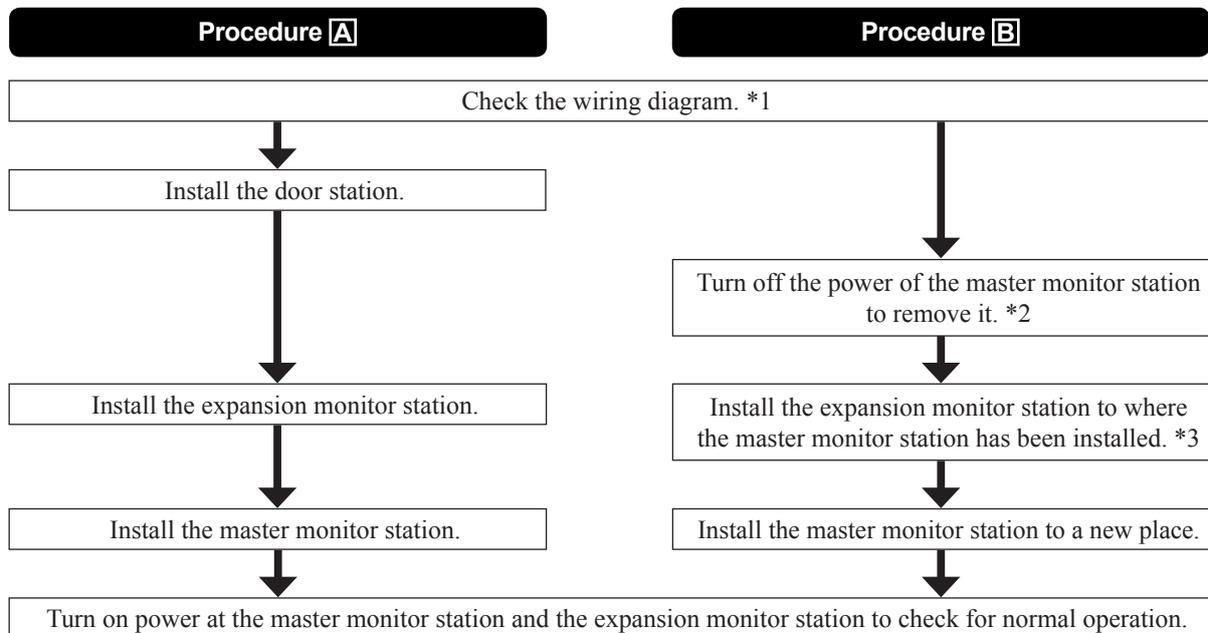
→ See Procedure A below.

When adding the expansion master monitor station to an existing system B

When adding the expansion monitor station, remove the master monitor station and install the expansion monitor station to where the master monitor station has been installed. Install the master monitor station so that the expansion monitor station is between the master monitor station and the door station.

Add   ········ Move to new place ········

Expansion monitor station   **Door station**   **Master monitor station**

→ See Procedure B below.

Installation procedures

Procedure A	Procedure B
Check the wiring diagram. *1	
Install the door station.	
	Turn off the power of the master monitor station to remove it. *2
Install the expansion monitor station.	Install the expansion monitor station to where the master monitor station has been installed. *3
Install the master monitor station.	Install the master monitor station to a new place.
Turn on power at the master monitor station and the expansion monitor station to check for normal operation.	

*1 Refer to WIRING on page 8 for wiring and connection with optional accessories.
*2 When disconnecting wires from the master monitor station, label or mark wires to identify where each wire is connected.
*3 Mounting brackets used for the master monitor station can be used for the expansion monitor station.
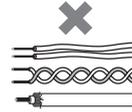
English

Français

Español

Nederlands

Italiano

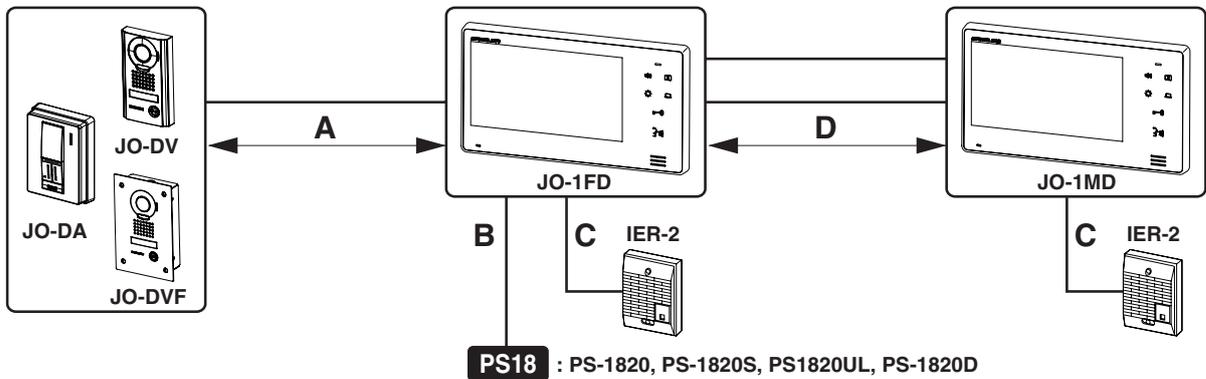Deutsch

INSTALLATION

Cable

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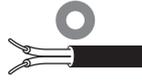
Never use individual conductors, twisted pair cable, or coaxial cable.

Wiring method, wiring distance

A — JO-DV, JO-DA, JO-DVF → JO-1FD
D — JO-1FD → JO-1MD
B — PS18 : PS-1820, PS-1820S, PS1820UL, PS-1820D
C — IER-2

|	Ø 0.65 mm	22 AWG	Ø 0.8-1.2 mm	20-16 AWG
A	50 m	165'	100 m	330'
B	5 m	16'	10 m	33'
C	50 m	165'	150 m	495'
D	50 m	165'	100 m	330'

Mounting locations

Do not install expansion monitor station in any of the following locations where lighting or the ambient environment could impact the display on the video monitor.
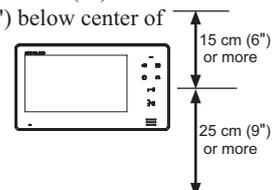
a In direct sunlight

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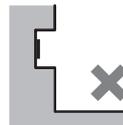
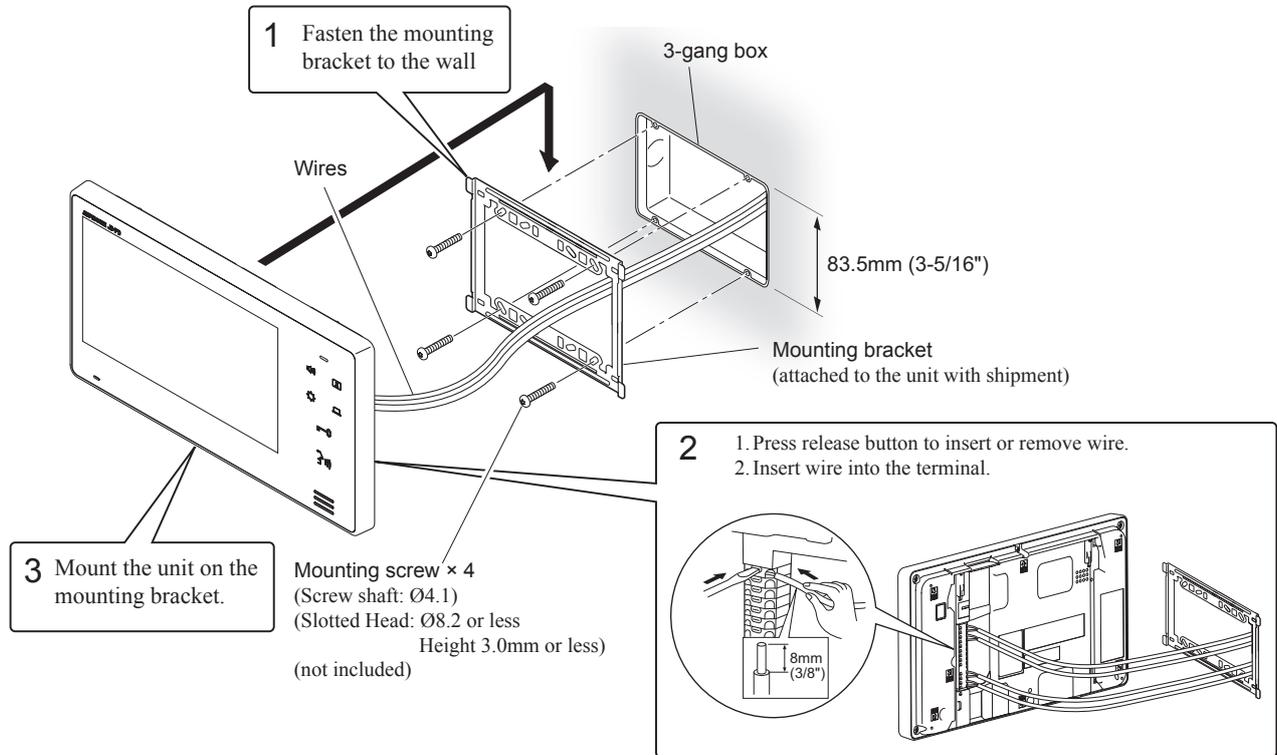**c** Allow at least 15 cm (6") above and 25 cm (9") below center of the mounting bracket for installation of the station

15 cm (6") or more

25 cm (9") or more

MOUNTING

JO-1FD

<Back wiring>

1   Fasten the mounting bracket to the wall

3-gang box

Wires

83.5mm (3-5/16")

Mounting bracket
(attached to the unit with shipment)

2
1. Press release button to insert or remove wire.
2. Insert wire into the terminal.

3   Mount the unit on the mounting bracket.

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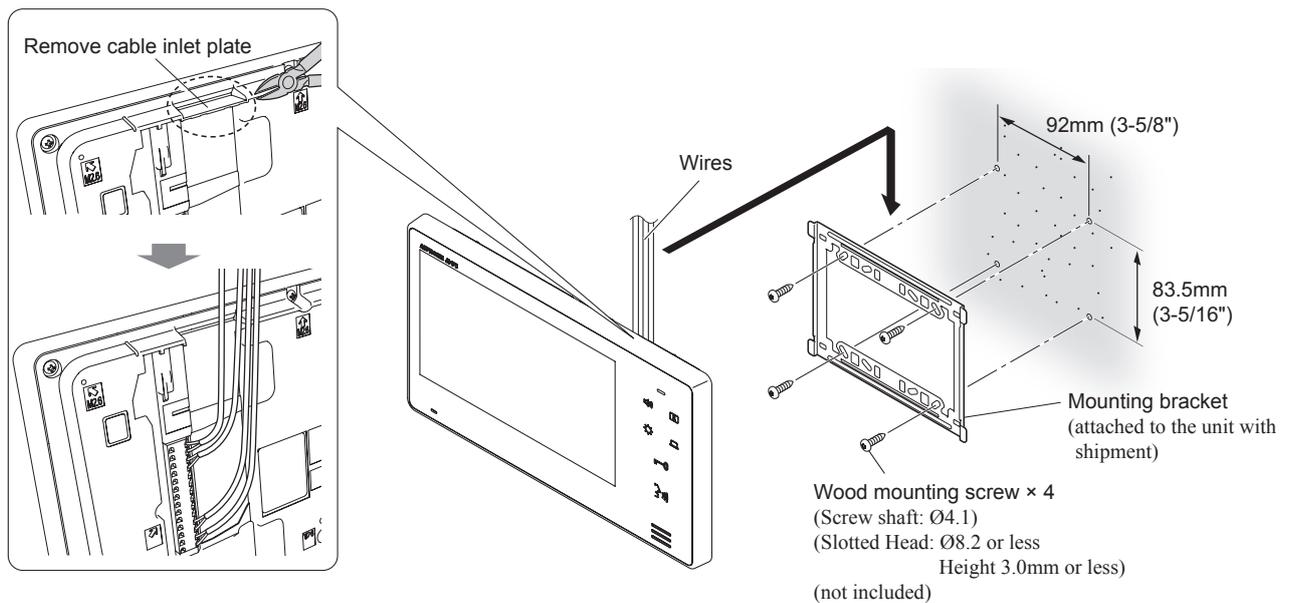   Height 3.0mm or less)
(not included)

8mm
(3/8")

<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 a cable inlet plate on the upper part of the unit to allow passage of the wiring into the unit.

Remove cable inlet plate

Wires

92mm (3-5/8")

83.5mm
(3-5/16")

Mounting bracket
(attached to the unit with shipment)

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

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WIRING

Insert wires securely into each terminal as shown.

Video door station

JO-DA

JO-DV **JO-DVF**

Expansion monitor station

JO-1FD

Master monitor station

JO-1MD

(A1) (A2)

2 /NP

2 /NP

Electric door strike

EL-12S

AC transformer

2 /NP

A1
A2
B1 DOOR
B2 MASTER STATION
L
L DOOR RELEASE
SW
SW OPTION OUTPUT
S
S CALL EXT
+ IN DC18V
+ OUT

A1
A2 DOOR
L
L DOOR RELEASE
SW OPTION OUTPUT
S
S CALL EXT
+ DC18V

(To optional units)
(AC/DC 24V, 0.5A N/O dry closure contact)
(Minimum contact: 100mV DC, 0.1mA)

(To optional units)
(AC/DC 24V, 0.5A N/O dry closure contact)
(Minimum contact: 100mV DC, 0.1mA)

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).
*Run separate cables for audio/video and door release.

2 /P

NP: Non-polarized
P: Polarized

2 /P

+ −

PS18

PS18 : Power supply

PS-1820D

PS-1820
PS-1820S
PS-1820UL

IN 230V~ 50/60Hz

L
N 230V AC
50/60Hz

± 18V DC 2A

100V - 240V
50/60Hz

18V DC 2A

Without grounding, the units may not operate normally.

IER-2

1 E

2 /NP

Call extension speaker IER-2

IER-2

1 E

2 /NP

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

OPERATIONS

Answering a door call
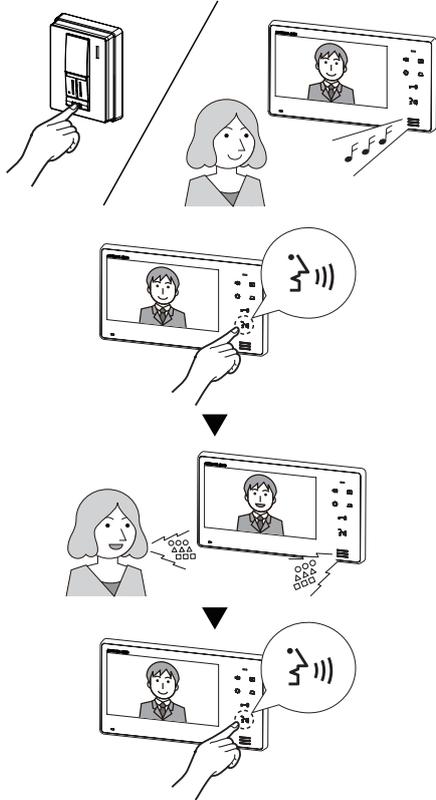
1 Push Call button.

2 The call tone sounds, an image appears on screen.
   • The screen turns off after approx. 45 seconds if not answered.

3 Push ⤵)) , and after the beep, communicate hands-free (hands-free mode).

**4** After finishing communication, push ⤵)) 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 ◁)) .
>   There are three communication volume setting to cycle through:
>   [◁1] (Minimum), [◁2] (Medium), and [◁3] (Maximum). The current volume level is displayed on the screen and disappears in approx. 5 seconds. The default setting is [◁2] (Medium).
> • Even when the expansion monitor station has responded to a call from the door station, the master monitor station displays the image for approx. 45 seconds.
> • While either of the expansion monitor station or the master monitor station is displaying an image, the White light LED of the door station remains on at night.
> • Pushing ⤵)) of the master monitor station while the expansion monitor station is communicating with the door station results in three-way communication.
> • The master monitor station and the expansion monitor station cannot call or communicate each other.
> • Pushing [👤] of the master monitor station while the expansion monitor station is communicating with the door station can display the entrance and enable monitoring of the communication.

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

After 2 seconds or more
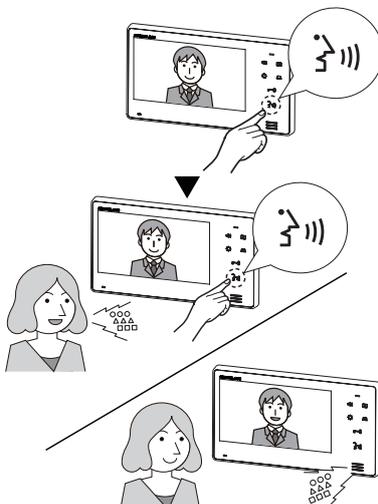
1 Press and hold ⤵)) for 2 seconds or more.
   After approx. 2 seconds beep sounds, PTT mode is engaged.
   • If ⤵)) is pressed briefly, PTT mode is not engaged.

2 When communicating, keep ⤵)) pressed. To hear the caller's voice, release ⤵)) .
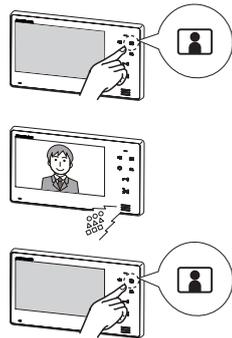   Status LED lights when you talk, and flashes slowly as you listen to caller (or hear outside sounds).

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

Activating door release
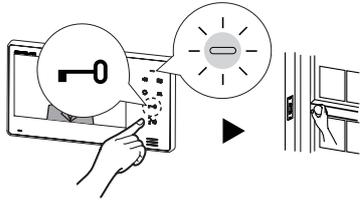
1 Press ▬0 .

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 door station.
- The monitoring turns off automatically after approx. 1 minute.
- Pushing 👤 of the master monitor station while the expansion monitor station is used to monitor the entrance enables monitoring the entrance with both the master monitor station and the expansion monitor station.
- Pushing ⤳)) of the master monitor station while the expansion monitor station is used to monitor the entrance enables communication between the master monitor station and the door station. The expansion monitor station continues monitoring and the communication come from stations.
- Pushing ⤳)) of the expansion monitor station while the master monitor station is used to monitor the entrance enables communication between the expansion monitor station and the door station. The master monitor station continues monitoring.

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), [◁1] (Minimum) - [◁3] (Maximum).
  The current volume level is displayed on the screen and disappears in approx. 5 seconds. The default setting is [◁2] (Medium).

Night illumination

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

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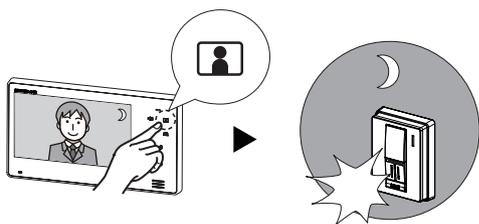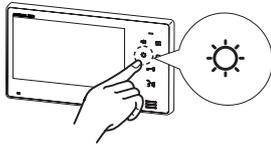
When 👤 is pushed during monitoring door station, the White light LED will light up.

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.
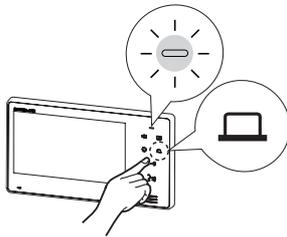
10

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.

Wiring:
• When a short is detected between the door station and the expansion monitor station, the expansion monitor station stops functioning and the Status LED flashes rapidly until the short is removed. The master monitor station does not indicate the short and stops its operation with the door station. Check the wires.
• When a short is detected between the expansion monitor station and the master monitor station, the master monitor station stops functioning and the Status LED flashes rapidly until the short is removed. The expansion monitor station operates with the door station normally.
• If noise is heard from the expansion monitor station, the wiring is disconnected between the video door station and the expansion monitor station.
• If noise is heard from the master monitor station, the wiring is disconnected between the video door station and expansion monitor station or between the master monitor station and the expansion 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

JO-1FD (Expansion monitor station)

Power supply	DC 18V (from power supply)	Electrical box	3-gang box
Current consumption	(standby) 38mA (max) 420mA	Material	Flame resistant ABS resin
Communication	Hands-free: Auto-voice actuation	Color	White
	PTT: Press-to-talk, release to listen	Dimension	130 (H) x 230 (W) x 21 (D) (mm)
Ambient temperature	0 - 40°C (+32°F - +104°F)		5-1/8 (H) x 9-1/16 (W) x 13/16 (D) (inches)
Monitor	7 inch color LCD screen	Weight	Approx. 480g (1.06 lbs.)
Mounting	Wall-mount		

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Deutsch