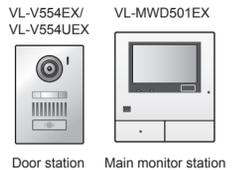


Installation Guide Wireless Video Intercom System

Model No. **VL-SWD501EX**
VL-SWD501UEX



Door station Main monitor station

Door station is described as "doorphone" and Main monitor station is described as "main monitor" in this guide.

* VL-V554EX is a surface mount type, VL-V554UEX is a flush mount type.

Note to the installer

- Before attempting to connect or operate this product, please read the label on the rear of the main monitor.
- Please read this guide carefully, and install the product safely and correctly by following the instructions. Carefully read the information found in the section titled "For your safety" in particular.
- Only use attachments/accessories specified by the manufacturer.
- The installation shall be carried out in accordance with all applicable installation rules.
- Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this guide. Additionally, any resulting malfunction will not be covered under the warranty.
- After installation, make sure to leave this guide with the customer.

For your safety

To prevent severe injury and loss of life/property, read this section carefully before using the product to ensure proper and safe operation of your product.

WARNING

Preventing fire, electric shock and short circuits

- Leave installation work to the dealer. Installation work requires technique and experiences. Failure to observe this may cause fire, electric shock, injury, or damage to the product. Consult the dealer.
- Electrical connection work should be performed by certified personnel only. Certification is required for performing electrical connection work. Consult your dealer.
- Use only the specified power supply unit.
- Do not attempt to disassemble or modify this product. Contact an authorised service centre for repairs.
- Never install wiring during a lightning storm.
- Do not connect non-specified devices.
- Do not connect a power cable to a terminal that is not specified in this guide.
- When opening holes in walls for installation or wiring, or when securing the power cable, make sure you do not damage existing wiring and ductwork.
- Do not make any wiring connections when the power supply is turned on.
- Do not use the supplied power supply unit for outdoor installations (it is for indoor use only).
- Do not install the main monitor and power supply unit in the following places:
 - Places where the main monitor and power supply unit may be splashed with water or chemicals.
 - Places where there is a high concentration of dust, or high humidity.
- Do not perform any actions (such as fabricating, twisting, stretching, bundling, forcibly bending, damaging, altering, exposing to heat sources, or placing heavy objects on the power cable) that may damage the power cable. Using the product with a damaged power cable may cause electric shock, short circuits, or fire. Contact an authorised service centre for repairs.
- When existing chime wires are used, it is possible that they contain AC voltage. Contact an authorised service centre.

Preventing accidents and injuries

- Do not install or use the product in health care facilities if any regulations posted in the area instruct you not to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF (radio frequency) energy.
- Do not install or use this product near automatically controlled devices such as automatic doors and fire alarms. Radio waves emitted from this product may cause such devices to malfunction, resulting in an accident.

CAUTION

Preventing electric shock

- If the wiring is underground, do not make any connections underground.
- If the wiring is underground, use a protection tube.
- If the wiring is outdoors, use a protection tube or a surge protector.

Preventing injury

- Install the product securely adhering to the instructions in this guide to prevent it from falling off the wall. Avoid installing onto low-strength walls, such as gypsum board, ALC (autoclaved lightweight concrete), concrete block, or veneer (less than 18 mm thick) walls.

Supplied accessories for installation

For the doorphone

Mounting base × 1 (EX only)	Flush mounting box × 1 (UEX only)	Screw × 4 (Used when installing the doorphone) (EX : 4 mm × 12 mm) (UEX : 4 mm × 25 mm)
Name plate × 2 (incl. 1 spare)	Hex wrench × 1	

For the main monitor

Mounting bracket × 1	Cable binder × 1
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Power supply unit and related items

Power supply unit × 1 (Part No. VL-PS240)	Cable binder × 2
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Important:

- You will need the following additional items to install and configure the doorphone and the main monitor.

[Locally procured]

- Screws (for mounting base: × 2, for mounting bracket: × 2): Prepare the screws (refer the drawing on the right) according to the material, structure, strength and other factors of the mounting area and the total weight of objects to be mounted.
- Power cables (AC/DC cables), wires (for doorphone and other connections): Prepare cables and wires of the appropriate specification. (refer "Wire type and length")

Note:

- The illustrations in the supplied manual(s) may vary slightly from the actual product.

Precautions for installation

To avoid malfunction or communication disturbances, do not install the doorphone or the main monitor in the following locations:

- Places where vibration or any other kind of impact occurs.
- Places where echoing is frequent.
- Places near a high concentration of dust, hydrogen sulphide, ammonia, sulphur, or noxious fumes.

For the doorphone

- If a strong light is shining on the doorphone, the visitor's face may not be distinguishable. Do not place the doorphone in the following locations:
 - Where most of the background is the sky.
 - Where the background is a white wall, and direct sunlight will reflect off it.
 - Where direct sunlight will shine on the doorphone.
- Do not place the doorphone in locations where echoing occurs, as this will cause the doorphone to beep frequently.
- Dust protection/water protection is IP54. Only when installation work specified in this guide is properly performed and appropriate water protection treatment is performed.
- Make sure the rear of the doorphone is not subject to water.
- Depending on the installation location, condensation may form on the doorphone's lens cover. This may cause images to become obscured. Condensation will dissipate as the temperature rises.

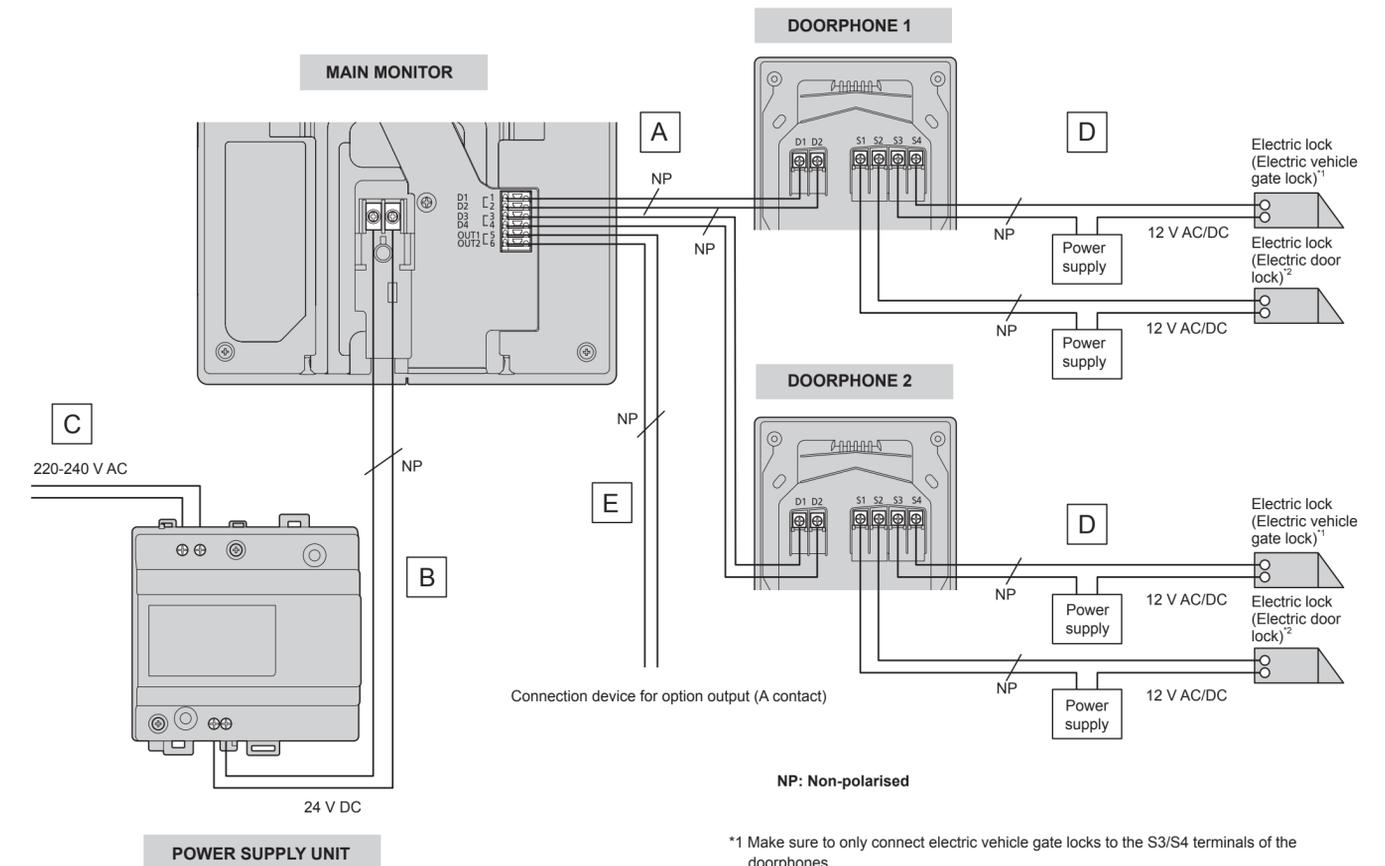
For the main monitor

- Install the main monitor away from electronic appliances such as TVs, radios, personal computers, air conditioners, boiler control panels with intercom, home security equipment, wireless devices, or digital cordless phones.
- Do not install the main monitor in places where it will be affected by extremely high-frequency radio waves (near broadcasting antennas etc.). This may cause the display to flicker or an interrupting noise to occur.
- Leave at least 20 cm of space above, below, and to the left and right sides of the main monitor. Do not install on a wall that is deeply recessed.
- Do not install the main monitor inside a wall.
- Be sure to install the main monitor more than 5 m away from the doorphone.
- The product operates in the frequency range of 1.88 GHz to 1.90 GHz, and the RF transmission power is 250 mW (max.). Refer to the "For best performance" section in the Operating Instructions.
- In areas surrounded by a high electrical field, disturbances may occur in the main monitor's image or sound.

Wiring schematic diagram

Set up correctly according to the following wiring schematic diagram and "Wire type and length".

- For information, such as order numbers, about optional devices that can be connected to, refer to the "Additional/replacement accessories" section in the Operating Instructions.



NP: Non-polarised

*1 Make sure to only connect electric vehicle gate locks to the S3/S4 terminals of the doorphones.

*2 Make sure to only connect electric door locks to the S1/S2 terminals of the doorphones.

Wire type and length

Wiring run		Wire type ¹		
		Diameter		Length (Max.)
Main monitor – Doorphone	A	φ 0.65 mm	22 AWG	100 m
		φ 1.0 mm	18 AWG	130 m
		φ 0.5 mm	CAT 5	50 m
Main monitor – Power supply unit	B	φ 0.65 mm	22 AWG	10 m
		φ 1.0 mm	18 AWG	20 m
Power supply unit – AC power source	C	φ 1.2 mm - φ 2.0 mm (17 AWG - 12 AWG)		No requirement
Doorphone – Electric lock ²	D	φ 0.5 mm - φ 1.2 mm (24 AWG - 17 AWG)		According to specification of connected device.
Main monitor – Connection device for option output (A contact) ²	E	φ 0.5 mm - φ 1.2 mm (24 AWG - 17 AWG)		According to specification of connected device.

¹ Type: Single-pair cable with outer sheath (jacket)
Conductor: Copper solid

² When using an electric lock or a connection device for option output (A contact), select a device that meets the following guidelines:

- Electric lock connection terminal (S1/S2, S3/S4):
 - N/O dry closure contact
 - 12 V AC/DC, less than 1 A
- Connection device for option output (A contact) terminal (OUT1/OUT2):
 - 24 V AC/DC, less than 0.3 A (minimum contact: 5 V DC 1 mA)

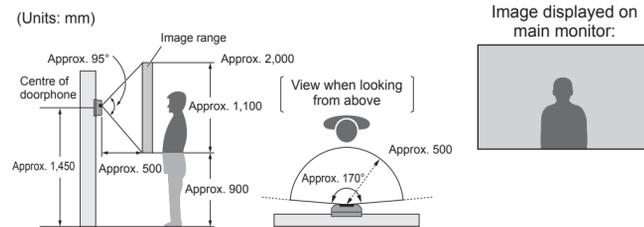
Doorphone installation position

Installation height and area visible by the camera lens

You can use the [Wide/Zoom settings] setting on the main monitor to select the area that is visible when a visitor calls; available settings are [Wide], [Zoom], and [All] (entire image display). (Default setting: [Wide])

- The following values are for when the doorphone is installed in the standard position (the centre of the doorphone's height is approximately 1,450 mm) and at a distance of approximately 500 mm from the camera lens.

When set to wide (default)



When set to zoom

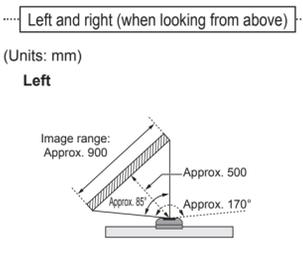
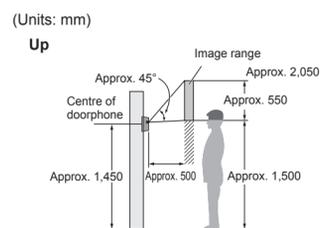
Displays a portion of the wide image at 2 times the size.

- Because a digital zoom is used, the image quality of zoom display is lower than that of wide display or entire image display.

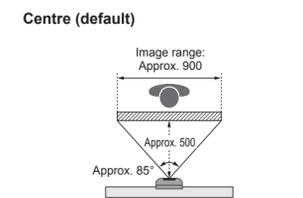
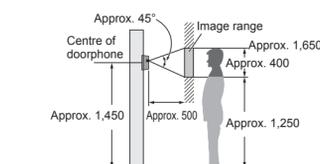


- You can use the main monitor's [Zoom position settings] setting to select the desired area visible when zooming. Refer to the following and configure the main monitor.

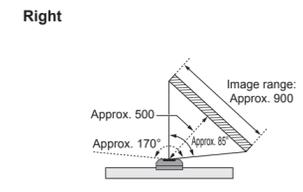
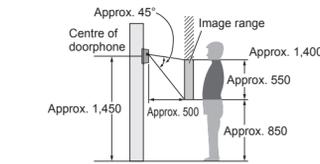
Up and down



Centre (default)

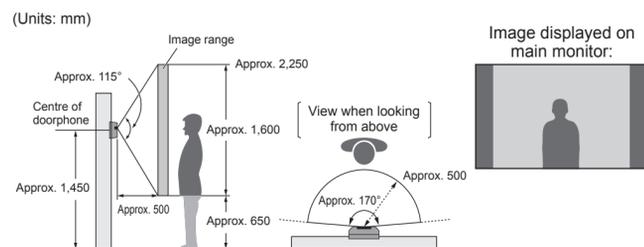


Down



Entire image display

The area above and below the wide image is visible.



Installing the doorphone

Important:

- On the bottom surface of the doorphone and the mounting base, there are holes to allow water to drain. Do not cover them up when installing.
- When existing wiring (such as chime wires) is used:
 - It may contain AC voltage that may cause electric shock and/or damage the product.
 - Never use the following types of wiring. Consult a qualified technician/dealer.

VL-V554EX	VL-V554UEX
<p>1 Attach the mounting base to the wall securely.</p> <p>Screws (locally procured) × 2</p> <p>Mounting base (accessory)</p> <p>Wire (locally procured)</p> <p>Wall</p> <p>83.5 mm</p>	<p>1 Install the flush mounting box in the wall.</p> <p>Flush mounting box (accessory)</p> <p>Knockout hole</p> <p>100 mm</p> <p>151 mm</p> <p>37 mm</p>
<p>• Install the mounting base on a vertical flat wall.</p>	<p>*1 Only open the knockout holes as required for the wiring.</p>
<p>2 Use a hex wrench (accessory) to loosen screw A and remove the front panel of the doorphone.</p> <p>Front panel</p> <p>Screw A</p> <p>2 mm hex wrench (accessory)</p>	
<p>3 Connect the wires.</p> <p><Rear view></p> <p>Terminal for the main monitor</p> <p>Terminals for the electric locks</p> <ul style="list-style-type: none"> Recommended torque: 0.5 N·m {5.1 kgf·cm} Maximum torque: 0.7 N·m {7.1 kgf·cm} <p>3-1 Loosen the screws.</p> <p>3-2 Push in the wires to the terminal connectors (non-polar), then tighten the screws.</p>	
<p>4 Attach the doorphone to the mounting base.</p> <p>Screws (accessory) × 4</p>	<p>4 Attach the doorphone to the flush mounting box.</p> <p>Screws (accessory) × 4</p>
<p>5 Attach the name plate to the doorphone and use screw A to secure the front panel.</p> <ul style="list-style-type: none"> Write the name on the name plate as needed. <p>Name plate (accessory)</p> <p>Screw A</p> <ul style="list-style-type: none"> Recommended torque: 0.35 N·m {3.6 kgf·cm} 	

Installing the power supply unit

About the installation location

- The device must be installed inside an electrical panel or cabinet.
- A readily accessible disconnect device shall be incorporated external to the equipment.

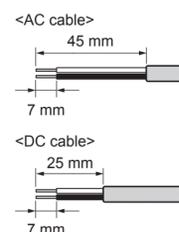
Precautions for wiring

- Make sure you turn off the power at the breaker before performing any wiring work.
- Always connect AC or DC cables to the appropriate connection terminals. Incorrectly connecting the AC or DC cables may damage the power supply unit.
- To prevent the power cables from disconnecting and to prevent electric shock, secure the power cables using the cable binders (accessory) and attach the cable covers.

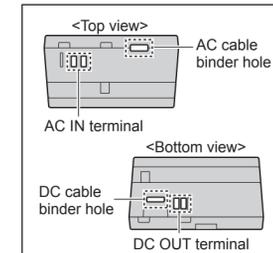
How to connect the power cable (AC/DC)

Connect the power supply unit (accessory) and AC/DC cables (locally procured).

- 1** Strip the AC/DC cables as follows:



Power supply unit (with cable covers removed)



- 2** Remove the screws (②) and then remove the cable covers (①).

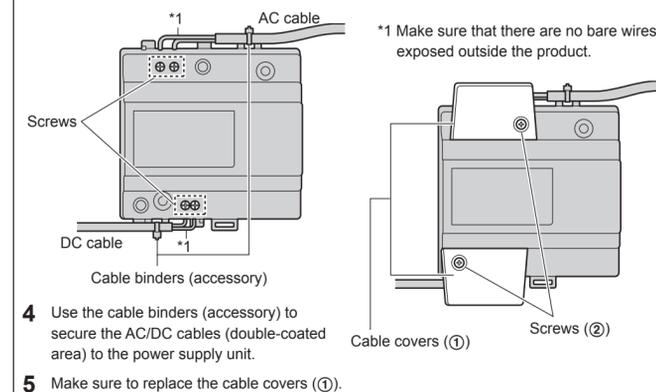
- 3** Connect the AC/DC cable to the AC IN terminal/DC OUT terminal on the top and bottom of the power supply unit, and then secure the wires by tightening the screws.

- Recommended torque:
 - AC terminal: 0.4 N·m {4.1 kgf·cm}
 - DC terminal: 0.45 N·m {4.6 kgf·cm}

CAUTION

Insert the cables firmly all the way into the terminals. If the cables are not inserted all the way, heat may be generated.

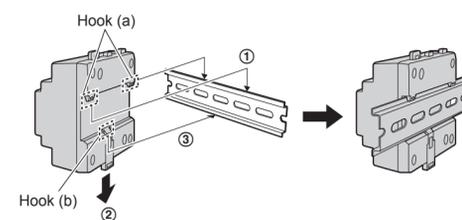
<Front view>



Attach to the DIN rail

Attach in the order described below so that hook (b) is positioned at the bottom.

- Hang hook (a) on the DIN rail (①).
- Pull and hold the lever down (②).
- Secure hook (b) to the DIN rail (③).

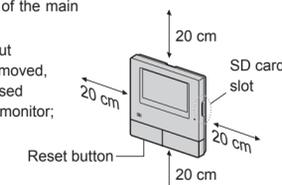


Main monitor installation position

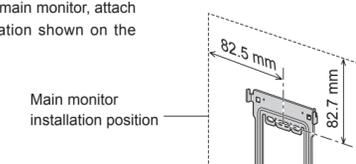
About the installation position of the main monitor and mounting bracket

- Place the main monitor in a location that your eyes are the same height as the centre of the display.

- For the following reasons, leave at least 20 cm of space above, below, and to the left and right sides of the main monitor:
 - To prevent malfunction and sound cutting out
 - To ensure SD cards can be inserted and removed, and to make sure the reset button can be used (the SD card slot is on the side of the main monitor; the reset button is on the bottom)

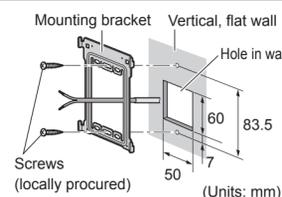


- After deciding where to install the main monitor, attach the mounting bracket in the location shown on the right.



Installing the main monitor

- Attach the mounting bracket to the wall securely.
- Install the mounting bracket on a vertical flat wall.



- Connect the DC cable and wires.

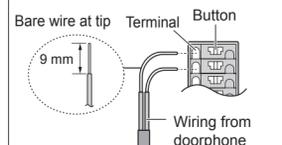
- Connect the wires correctly according to "Wiring schematic diagram".

How to connect the DC cable:

- Remove screw A and then remove the terminal cover.
- Loosen screw B and push in the wires of the DC cable to the terminal connectors (non-polar), then tighten the screws.
 - Recommended torque: 0.8 N·m {8.2 kgf·cm}
- Use the cable binder (accessory) to secure the DC cable (double-coated area) to the main monitor.
- Make sure to replace the terminal cover.

How to make wiring connections:

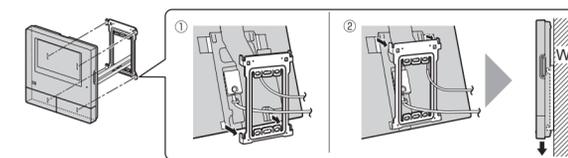
While pressing on the button with a pointed object such as a screwdriver, insert the wire into the terminal connector. (To disconnect a wire, while pressing on the button, pull out the wire.)



Important:
Do not connect the power cable. (Damage may occur.)

- Mount the main monitor to the mounting bracket.

- Line up the tab on the bottom of the bracket with the groove on the main monitor (①).
- Line up the tab on the top of the bracket with the groove on the main monitor, and push the main monitor down until it is secure (②).



Notes about electrical wiring

- Make sure not to pinch the wires (as shown to the right) on the mounting bracket when installing.
- Do not forcibly attach to the mounting bracket.

