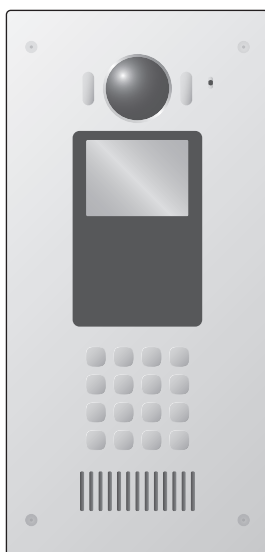


Installation and Operating Instructions

Video Intercom System — Lobby Station

Model No. **VL-VN1900**



Thank you for purchasing a Panasonic product.

Please follow all instructions in this document and save it for future reference.

Carefully read the information found in the section titled "2.1 Important safety information" in particular.

This system is not designed to provide complete protection from property loss. To the maximum extent permitted by applicable law, Panasonic will not be held responsible for any damage incurred as a result of property loss.

Note to the installer

- **This document includes instructions for both installation and operation. See the section titled "4 Installation" for installation instructions.**
- Please read this document carefully, and install the product safely and correctly by following the instructions.
- Only use attachments/accessories specified by the manufacturer.
- The installation shall be carried out in accordance with all applicable installation rules.

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1.1 System overview

This document explains basic information required to install and configure a VL-VN1900 Lobby Station for use with a Video Intercom System that is comprised of the following devices.

- VL-MN1000 Room Monitor
- VL-VN1900 Lobby Station
- VL-VN1500 Door Station
- VL-VN1700 Control Box
- VL-VN1800 Control Box^{*1}

General information about connecting other devices to the system is also provided.

^{*1} The available products differ depending on your region. For more information, please consult your dealer.

1.1.1 Main features

IP technology for smoother installation and integration

- Voice and data is carried over one cable, simplifying installation and connections.
- Network cameras and SIP phones can be integrated into the system.

Large-capacity, expandable

- The system can support up to 2000 SIP devices when using a control box, and up to 200 SIP devices when not.
- When 5 VL-VN1800 control boxes^{*1, *3} are used, up to 10000 SIP devices can be supported.
- Optional devices such as access controllers (key switches, card readers, etc.), open door sensors, and electric locks can be connected to each lobby station.
- Supports multi-building installations and buildings with up to 99 floors.

Easy to configure and maintain

- System settings can be configured in advance using a computer, and uploaded on-site over the network.
- Detailed settings and logs can be accessed using a web browser.

Convenient features for residents, visitors, and facility staff

- The system can be used in "room mode" (visitors can call rooms directly) or "reception mode" (visitor calls are directed to a receptionist).
- Visitors can use a lobby station to call residents and leave video messages for residents who do not answer.
- Residents can use their room monitors to monitor lobby stations and optional network cameras, and can allow visitors to enter the lobby and lift.^{*1, *2}
- External devices connected to residents' room monitors can notify facility staff and/or residents when triggered.

- Facility staff can make and receive calls to and from residents and visitors.
- Facility staff can send messages (text or voice, depending on system configuration) to residents' room monitors for quick information dispersal.
- For systems composed of VL-VN1800 control boxes^{*1, *3}, the following main operations can be performed by installing the Video Intercom System app on a smartphone.
 - Answering calls from visitors (from the lobby station or door station)
 - When using arm mode (at home/out), alarm notifications can be received when external devices (sensors, urgency buttons, or emergency buttons) connected to the room monitor are triggered

^{*1} The available products differ depending on your region. For more information, please consult your dealer.

^{*2} For enhanced system version 2 (page 38)

^{*3} For enhanced system version 3 (page 38)

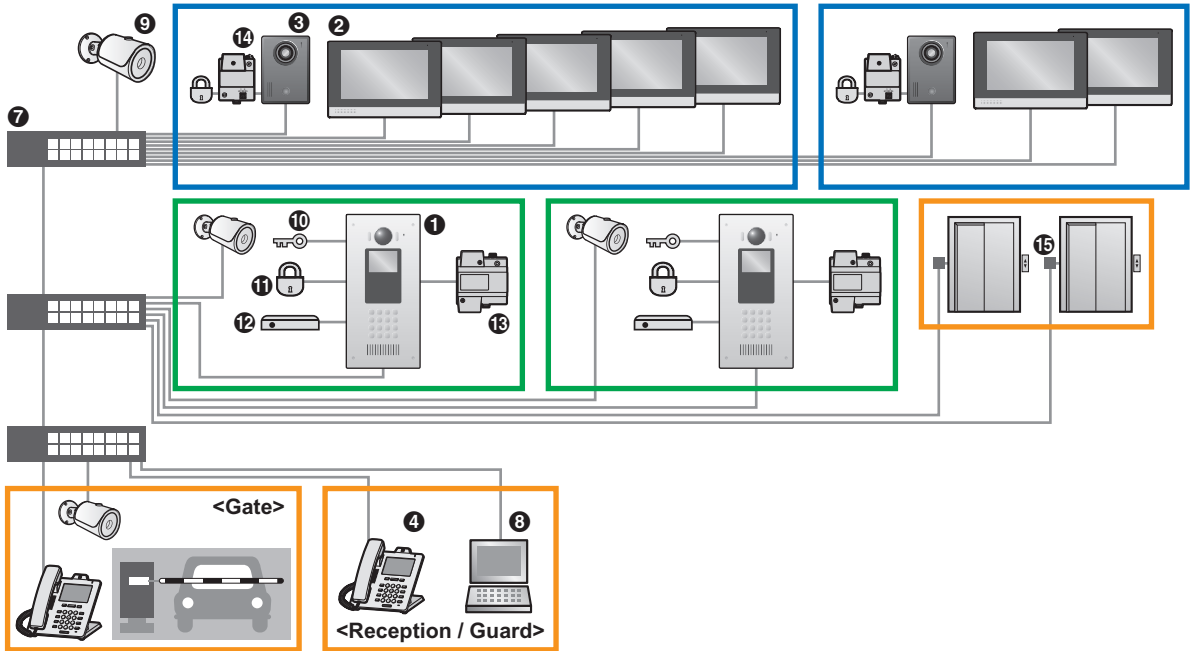
1. Introduction

1.1.2 System configuration

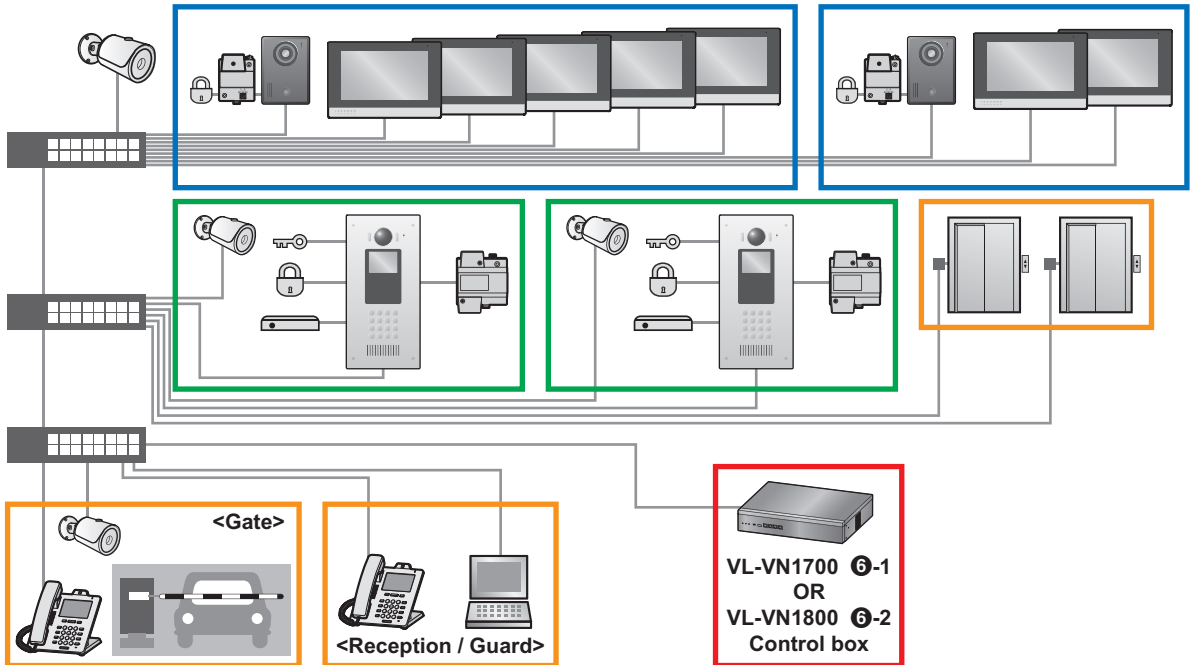
Note:

- See page 7 for information on the supported devices shown in the illustration (❶ to ❷).

Support up to 200 SIP devices*1 on a system without a control box (example 1)

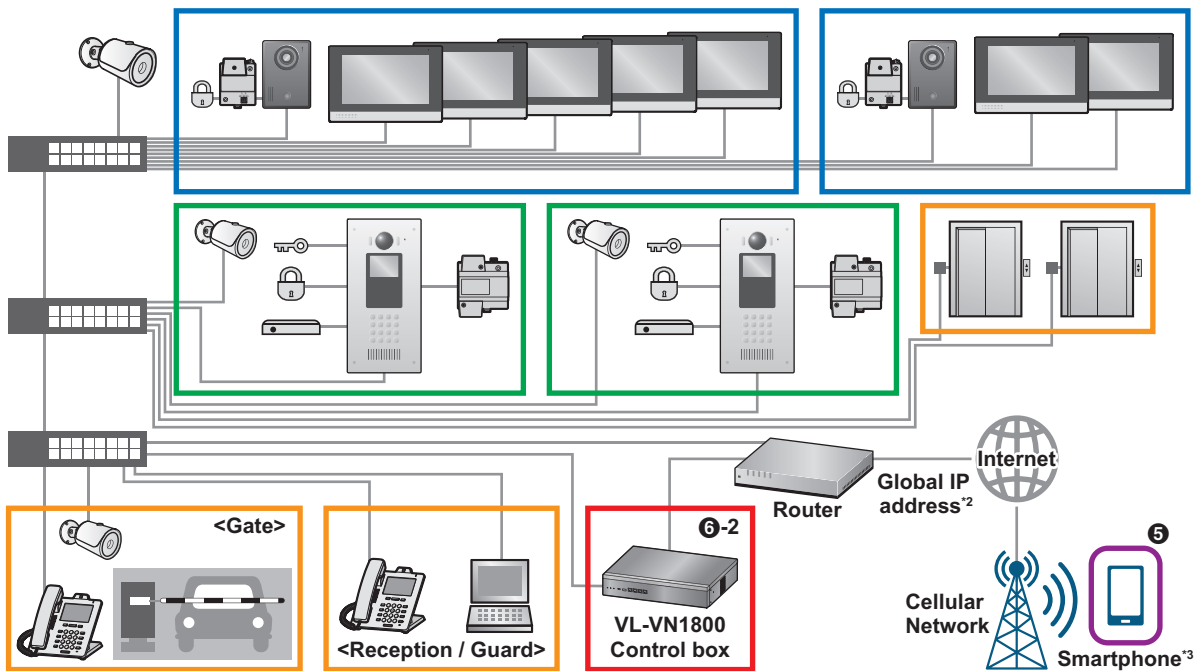


Support up to 2000 SIP devices*1 on a system with a control box (example 2)



*1 "SIP devices" include lobby stations, room monitors, door stations, and SIP phones.

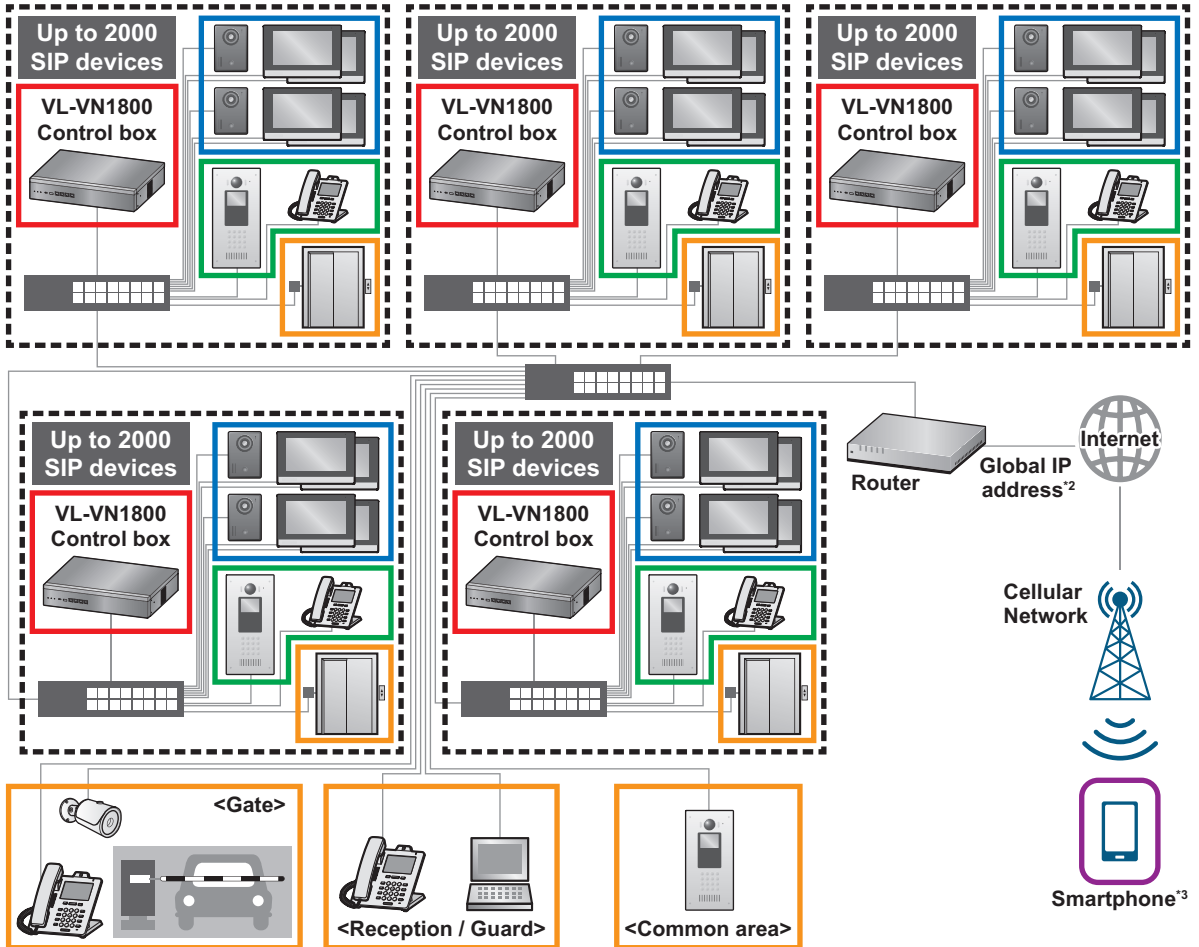
Support up to 2000 SIP devices*1 on a system with a control box (example 3)



- *1 "SIP devices" include lobby stations, room monitors, door stations, SIP phones, and smartphones.
- *2 A router connected to the internet with a global IP address is required. (A DDNS server may be required depending on the contract of the Internet Service Provider.) Router configuration is required in order for the **[Video Intercom System]** app to function. For more information, consult your dealer.
- *3 Smartphones must be connected to the internet in order for the **[Video Intercom System]** app to function. The **[Video Intercom System]** app will not function when the smartphone is connected to the same local network (local network of the residence) as the control box.

1. Introduction

Support up to 10000 SIP devices*¹ on a system with 5 control boxes (example 4)








*1 "SIP devices" include lobby stations, room monitors, door stations, SIP phones, and smartphones.

*2 A router connected to the internet with a global IP address is required. (A DDNS server may be required depending on the contract of the Internet Service Provider.) Router configuration is required in order for the **[Video Intercom System]** app to function. For more information, consult your dealer.











*3 Smartphones must be connected to the internet in order for the **[Video Intercom System]** app to function. The **[Video Intercom System]** app will not function when the smartphone is connected to the same local network (local network of the residence) as the control box.

Maximum number of devices

SIP devices

Item		Without control box	With control box
①	 Lobby station	100 ^{*1}	100 ^{*1}
②	 Room monitor ^{*2}	5 per room ^{*3}	5 per room ^{*3}
③	 Door station ^{*2}	1 per room	1 per room
④	 SIP phone	100 ^{*4}	100 ^{*4}
⑤	 Smartphone	—	4 per residence (room number) ^{*5, *6, *7}

Other devices

Item		Without control box	With control box
⑥-1	 Control box VL-VN1700	—	1
⑥-2	 Control box (can be linked with smartphones) VL-VN1800	—	1 ^{*11}
⑦	 Switching hub ^{*8}	—	—
⑧	 Computer (for programming)	—	—
⑨	 Network camera	500 ^{*9}	—
⑩	 Access controller	1 per lobby station	—
⑪	 Electric lock	1 per lobby station 1 per door station	—
⑫	 Open door sensor	1 per lobby station	—
⑬	 Power supply unit	1 per lobby station 1 per room monitor ^{*2} 1 per door station ^{*2}	—
⑭	 Relay box	1 per door station ^{*10}	—
⑮	Lift controller ^{*12}	—	—

*1 Up to a combined total of 8 lobby station and door station cameras can be registered to a room monitor for easy camera monitoring.

– **For enhanced system version 2 (page 38):** Up to a combined total of 20 lobby station and door station cameras can be registered to a room monitor for easy camera monitoring.

1. Introduction

- **For enhanced system version 3 (page 38):** Up to a combined total of 45 lobby station and door station cameras can be registered to a room monitor for easy camera monitoring.

For information about software updates for each device, consult your dealer.

- *2 If room monitors and door stations are not powered by Power over Ethernet (PoE), a power supply unit is required.
- *3 Up to 256 rooms can have multiple room monitors. All other rooms can have only one room monitor. For more information, refer to the documentation of the control box (PC Programming Manual).
- *4 Up to 18 SIP phones can be registered to a room monitor and/or lobby station for easy calling.
 - **For enhanced system version 3 (page 38):** Up to 90 SIP phones can be registered to a lobby station for easy calling.

For information about software updates for each device, consult your dealer.

- *5 **For enhanced system version 3 (page 38):** By installing the **[Video Intercom System]** app on a smartphone, you can expand the features available when using the VL-VN1800 control box system with a smartphone. In order to use the **[Video Intercom System]** app, you must download it to your smartphone and register your smartphones with your "main" room monitor. For information about downloading and installing the **[Video Intercom System]** app, visit the following website for more information.

<https://panasonic.net/cns/pcc/support/intercom/vn1900>

Compatible mobile devices: iPhone 5s and later, iPad Air and later (iOS 10 and later), Android™ devices (Android 4.4 and later), as of June/2019.

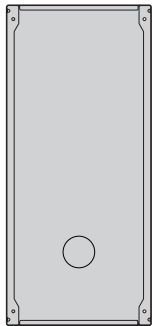

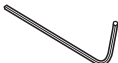
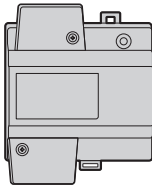


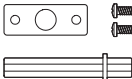
- *6 A maximum of 6 devices (including "main" room monitor, "sub" room monitors, and smartphones) can be registered to each residence. Up to 4 smartphones are counted as 1 SIP device.
- *7 Depending on the number of room monitors installed in a residence, the number of smartphones that can be registered is limited as shown in the following.




"Main" room monitor	"Sub" room monitor	Smartphone
1	–	4
1	1	4
1	2	3
1	3	2
1	4	1

- *8 If PoE-compatible switching hubs are used, they can supply power to room monitors and door stations.
- *9 Up to 32 network cameras can be registered to a room monitor for easy camera monitoring.
- *10 A relay box is used to connect an electric lock to a door station.
- *11 **For enhanced system version 3 (page 38):** By installing 5 control boxes, the system can be expanded to support up to 10000 SIP devices.
- *12 **For enhanced system version 2 (page 38):** A third-party lift controller is required for lift integration. Lift controllers are not available in some areas. For more information about lift controllers and their installation, consult your dealer.

1.2 Included items

The following items are included in addition to the lobby station.

Item	Quantity
Flush mount box 	1
Hex screw (4 mm × 25 mm) Used to secure the lobby station to the flush mount box. 	4
Hex wrench 	1
Power supply unit VL-PS240 	1
Screw (4 mm × 40 mm) Used to mount the power supply unit. 	2
Cable binder Used to secure the AC and DC wires. 	2
Vandal proof post kit Includes a post, bracket, and 2 screws. 	1

Item	Quantity
DC plug with ferrite core Used to connect the power supply unit to the lobby station. 	1
Note: <ul style="list-style-type: none"> Do not remove the ferrite core. 	
4-pin terminal block Used to connect wires to the K-IN connection terminals. 	1
3-pin terminal block Used to connect wires to the K-OUT connection terminal. 	1

1.3 Optional items

The following items are sold separately. Please contact your nearest Panasonic dealer for sales information.

Compatible system devices (as of June, 2019)

Item	Model no.
Door Station IP-compatible door station with built-in push button, camera, and card reader. Typically installed immediately outside the residence.	VL-VN1500
Room Monitor IP-compatible room monitor with touch screen. Typically installed inside a residence.	VL-MN1000
Control Box Allows the system to accommodate up to 2000 SIP devices.	VL-VN1700
Control Box Allows the system to accommodate up to 2000 SIP devices per unit. (Supports answering calls from smartphones linked to the system, etc.)	VL-VN1800

1.4 About this document

Symbols, expressions, and styles

The following symbols, expressions, and styles are used in this document.

Item	How it is expressed
Text displayed on the product's display	Text is displayed in a special font, usually enclosed in quotation marks. Example: "IP Config"
Buttons with printing on them	Button printing is displayed, usually wrapped in thick brackets. Example: [△]
Procedures	Usually written in an abbreviated style. The verb may be omitted. Example: Enter the room number → [△]. (Meaning: Enter the room number and then press the [△] button.)

Terms and illustrations

- Model number suffixes (e.g., the "BX" in "VL-VN1900BX") are omitted unless necessary.
- Design and specifications are subject to change without notice.
- Illustrations may vary slightly from the actual product.

Trademarks

- The software of this product is based in part on the work of the Independent JPEG Group.
- Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- MIFARE is a registered trademark of NXP B.V. and is used under license.
- iPhone and iPad Air are trademarks of Apple Inc., registered in the U.S. and other countries.
- Android is a trademark of Google LLC.
- All other trademarks identified herein are the property of their respective owners.

2.1 Important safety information

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



WARNING

Preventing fire, electric shock, and short circuits

- **Leave installation work to the dealer. Installation work requires technical knowledge and experience. Electrical connection work should be performed by certified personnel only. Failure to observe this may cause fire, electric shock, injury, or damage to the product. Consult the dealer.**
- Use only the power supply unit VL-PS240.
- Do not place objects on the power cables. Install the product where no one can step or trip on the power cables.
- Do not allow the power cables to be excessively pulled, bent or placed under heavy objects.
- Make sure all connections from the power outlet to the power supply unit are secure.
- Never touch the power supply unit and power cables with wet hands.
- Do not use the power supply unit for outdoor installations (it is for indoor use only).
- Do not disassemble or modify the product. Refer servicing to an authorised service centre when service is required. Disassembling the product or manipulating the product in a way not described in the documentation may expose you to dangerous voltages and other risks.
- Do not touch the product or the power supply unit during an electrical storm. There may be a remote risk of electric shock from lightning.
- 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 document.
- 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 outlet is turned on.
- Do not install the product and power supply unit in the following places:
 - Places where the product 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 push any objects through the openings of the product.
- If any of the following conditions occur, disconnect the Ethernet (LAN) cable from the product, disconnect the power supply unit from the power

outlet, and then refer servicing to an authorised service centre.

- The product emits smoke, an abnormal smell or makes unusual noise
- The power cables are damaged or frayed
- Metal objects have been dropped inside the product
- When existing wires are used, it is possible that they contain AC voltage. Contact an authorised service centre.



CAUTION

Preventing accidents, injuries, and property damage

- Do not use the product in unstable areas or areas prone to strong vibrations. This may cause the product to fall, resulting in damage to the product or injury.
- Always connect power cables to the appropriate connection terminals. Incorrectly connecting the power 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 included cable binders and attach the cable covers.
- Insert the power cables firmly all the way into the terminals. If the cables are not inserted all the way, heat may be generated.
- If the wiring passes outdoors, use a conduit and a surge protector.
- If the wiring passes underground, use a conduit, and do not make any connections underground.
- Install the product securely adhering to the instructions in this document 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.
- The power supply unit is used as the main disconnect device. Ensure that the power outlet is installed near the product and is easily accessible.
- Do not put your ear(s) near the speaker, as loud sounds emitted from the speaker may cause hearing impairment.

2. Important Information

2.2 Important safety instructions

When using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury.

Use only the power supply unit indicated in this document.

SAVE THESE INSTRUCTIONS

2.3 Privacy and rights of portrait

When installing or using the product, please take into consideration the rights of others with regard to privacy and rights of portrait.

- It is generally said that "privacy" means the ability of an individual or group to stop information about themselves from becoming known to people other than those whom they choose to give the information. "Rights of portrait" means the right to be safe from having your own image taken and used indiscriminately without consent.
- Please observe the legal regulations (data protection, video surveillance) in your country during use.

2.4 Data security

In order to use the system safely and correctly, the data security guidelines (listed below) must be observed. Failure to do so may result in the following.

- Loss, leakage, falsification or theft of user information.
- Unauthorised or illegal use of the system by a third party.
- Interference or suspension of service caused by a third party.

What is user information?

User information is defined as the following types of information.

- Information stored in the product
 - System event information
 - Resident names and room numbers
 - System and device settings
- Information stored on the computer that is used by the setup tool
 - Resident names and room numbers
 - System and device settings

Data security guidelines

- **Observe proper management of passwords.**
 - Passwords can be used to program the system, open doors, etc. Select passwords that are difficult to guess, change them regularly, and keep them secret. Assign a unique password to each device.
- **Use caution when entering or saving contact information for use by the system.**

- When configuring email addresses, room numbers, or other contact information, make sure all information is entered correctly. Incorrect information could cause user information to be disclosed to unintended recipients.
- **Protect user information when sending the product to be repaired, or when handing it over to a third party.**
 - Use the product's reset function to initialise the product before when sending the product to be repaired or handing it over to a third party.
 - Note that user information may be deleted or initialized when the product is repaired.
 - Refer all repairs to a trusted Panasonic service centre.
- **Protect user information stored on the computer used to configure the system.**
 - When user information is stored on a computer, the confidentiality of that information becomes the responsibility of the installer. Take precautions to prevent the unauthorised use of the computer and the setup tool used for performing system configuration or maintenance.
 - Connect the computer to the network only when performing system configuration or maintenance, and disconnect the computer from the network as soon as the work is complete.
 - Before disposing of the computer, ensure that data cannot be retrieved from it by formatting the hard disk and/or rendering it physically unusable.
- **Protect user information when disposing of the product.**
 - Use the product's reset function to initialise the product before disposing of the product.

2.5 Disclaimer

- Recorded data may be altered or deleted as a result of incorrect operations, exposure to static electricity, accidents, malfunction, repairs or other operations. To the maximum extent permitted by applicable law, Panasonic assumes no liability for any direct or indirect damages resulting from the loss or alteration of recorded data.
- To the maximum extent permitted by applicable law, Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this document.
- To the maximum extent permitted by applicable law, Panasonic will not be held responsible for any damage or loss due to non-performance or delay in performance, error or failure of network and/or any products.

2.6 Other important information

- When you leave the product unused for a long period of time, unplug it from the power outlet.
- If you stop using this product, remove it from the walls to prevent it from falling off.
- When power fails, this product cannot be used.
- Panasonic may not be liable for damages due to external factors such as power failures.

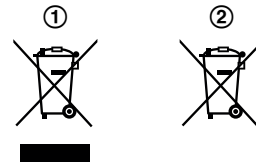
2.7 General information

- In the event of problems, you should contact your equipment supplier in the first instance.
- After removing the product and any included items from the packaging, store, dispose, or recycle the packaging as necessary. Note that certain types of packaging may be a suffocation or choking hazard.

Graphical symbols for use on equipment and their descriptions

Symbol	Explanation
	Alternating current (A.C.)
	Direct current (D.C.)
	Protective earth
	Protective bonding earth
	Functional earth
	For indoor use only
	Class II equipment (equipment in which protection against electric shock relies on Double Insulation or Reinforced Insulation)
	"ON" (power)
	"OFF" (power)
	Stand-by (power)
	"ON"/"OFF" (power; push-push)
	Caution, risk of electric shock

Disposal of Old Equipment and Batteries (Only for European Union and countries with recycling systems)



These symbols (①, ②) on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation. By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local authority. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

These symbols (①, ②) are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol

This symbol (②) might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

2. Important Information

2.8 For India only

Declaration of Conformity with the requirements of the E-Waste (Management) Rules

The Product is in conformity with the requirements of the reduction of hazardous substances of the E-Waste Rules.

The content of hazardous substance with the exemption of the applications listed in SCHEDULE II of the E-Waste Rules:

1. Lead (Pb) – not over 0.1% by weight;
2. Cadmium (Cd) – not over 0.01% by weight;
3. Mercury (Hg) – not over 0.1% by weight;
4. Hexavalent chromium (Cr6+) – not over 0.1% by weight;
5. Polybrominated biphenyls (PBBs) – not over 0.1% by weight;
6. Polybrominated diphenyl ethers (PBDEs) – not over 0.1% by weight.

Disposal information



For the purpose of recycling to facilitate effective utilization of resources, please return this product to a nearby authorized collection centre, registered dismantler or recycler, or Panasonic service centre when disposing of this product.

Please see the Panasonic website for further information on collection centres, etc., or call the toll-free number below.

Website:

<http://www.panasonic.com/in/corporate/sustainability/panasonic-india-i-recycle-program.html>

Service helpline: 1800 103 1333 or 1800 108 1333

2.9 For Europe

Declaration of Conformity

Panasonic Corporation declares that the radio equipment type (VL-VN1900BX/VL-VN1900EX) is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

<http://www.ptc.panasonic.eu/doc>

Contact to Authorised Representative:

Panasonic Testing Centre

Panasonic Marketing Europe GmbH

Winsbergring 15, 22525 Hamburg, Germany

Ecodesign information

Ecodesign information under EU Regulation (EC) No. 1275/2008 amended by (EU) Regulation No. 801/2013. From 1 January 2015.

Please visit here: <http://www.ptc.panasonic.eu/erp>

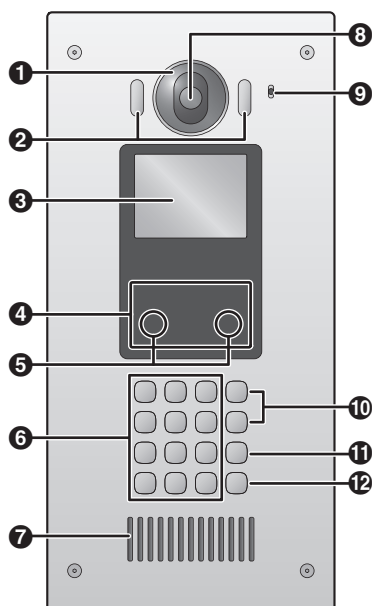
Click [Downloads] → [Energy related products information (Public)]

Power consumption in networked standby and guidance are mentioned in the web site above.

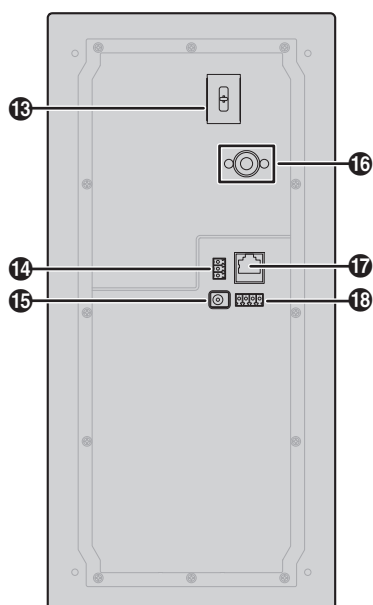
This device is classified as a HiNA device (networked equipment with high network availability), according to Ecodesign requirements.

3.1 Device diagrams

Front view



Rear view



5 Motion sensor

Turns on the display when a visitor is detected.

6 Keypad

7 Speaker

8 Camera lens

9 Microphone

10 Search buttons ([A] and [B])

Used to select items shown on the display.

11 Cancel button ([X])

12 Call button ([L])

13 Camera lens adjustment lever

14 K-OUT connection terminals (output)

Used to send signals to an electric lock.

15 DC IN connector

Used to connect the lobby station to the power supply unit.

16 Vandal proof button

See 4.3.5 Information about the vandal proof feature (Page 23).

17 LAN connector

Used to connect the lobby station to the network.

18 K-IN connection terminals (input)

Used to receive signals from an access controller and open door sensor.

1 Lens cover

2 Light

Illuminates subjects in dark environments.

3 Display

4 Card reader

Allows the door to be unlocked by using a card. The lobby station beeps if the card cannot unlock the door.

4. Installation

4.1 Installation cautions

Refer to the information found in 2 Important Information (Page 11) before installing the product.



CAUTION

- Always connect power cables to the appropriate connection terminals. Incorrectly connecting the power 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 included cable binders and attach the cable covers.
- If the wiring passes outdoors, use a conduit and a surge protector.
- If the wiring passes underground, use a conduit, and do not make any connections underground.
- Install the product securely adhering to the instructions in this document 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.

4.2 Installing the power supply unit

Required items

- VL-PS240 power supply unit (included)
- DC plug (included)
- Cable binders (included)
- Screws (included)
- Wires for AC and DC connection (user supplied)
See 4.5 Wire and cable specifications (Page 25) for specifications.
- Soldering gun and solder, insulation sleeve (user supplied)

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.
The external disconnect device must be certified, and have a creepage and clearance distance of 3 mm or more.

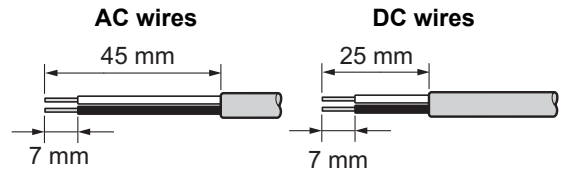
Installation methods

The following 2 methods can be used for installing the power supply unit.

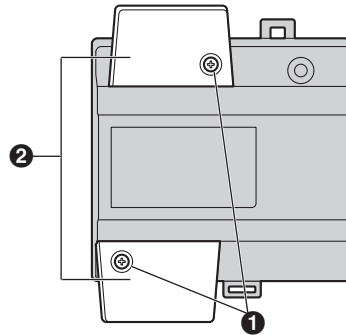
- mounting on a DIN rail (user supplied)
- attaching directly to a wall

4.2.1 Connecting the AC wires, DC wires, and DC plug

- 1 Strip the ends of the wires that connect to the power supply unit as shown below.



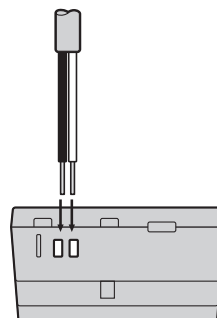
- 2 Remove the cable cover screws and then remove the cable covers.



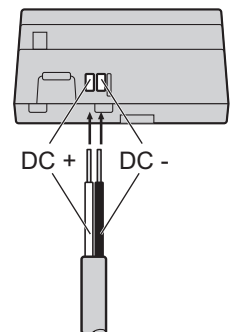
- 1 Screws
- 2 Cable covers

- 3 Connect the AC wires to the AC IN terminals on the top of the power supply unit, and then connect the DC wires to the DC OUT terminals on the bottom of the power supply unit.

Top view (AC wires)



Bottom view (DC wires)



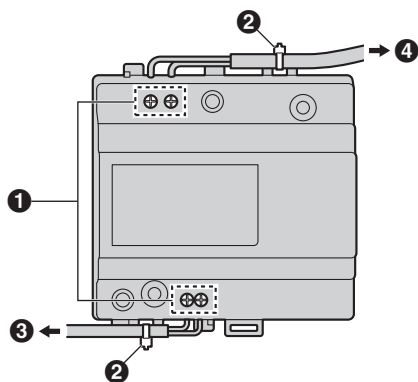
- For DC wires, the black wire is negative (-) and the other colour wire is positive (+). Note the colour of each DC wire and which terminal each

wire should be connected to, and insert the DC wires as shown.

- Solder the ends of the DC wires to the DC plug. Use insulation sleeves to insulate the wires.



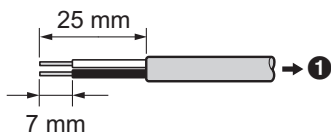
- Insert the power cables firmly all the way into the terminals. If the cables are not inserted all the way, heat may be generated.
- Tighten the terminal screws to secure the AC and DC wires (bare wire area) to the terminals, and then use the cable binders to secure the AC and DC wires (jacketed area) to the cable binder holes on the top and bottom on the power supply unit.



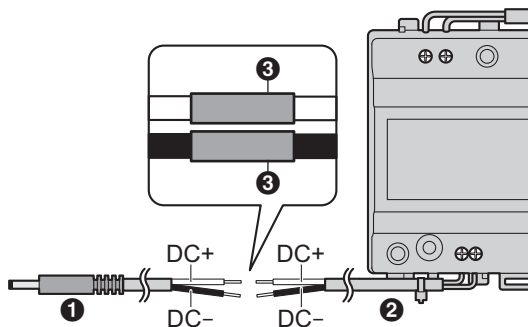
- Terminal screws
- Cable binders connected to cable binder holes
- To lobby station
- To AC power outlet

- Recommended torque:
 - AC IN terminals: 0.5 N·m {5.1 kgf·cm}
 - DC IN terminals: 0.45 N·m {4.6 kgf·cm}

- Strip the remaining ends of the DC wires as shown.



- To DC terminals of power supply unit



- DC plug
- DC wires
- Insulation sleeve

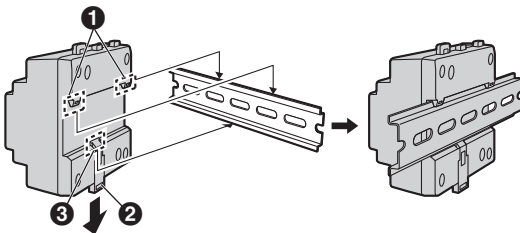
- Replace the cable covers and then securely fasten the cable cover screws.

4. Installation

4.2.2 Mounting on a DIN rail

Attach the power supply unit to the DIN rail so that the bottom hook is positioned at the bottom of the power supply unit.

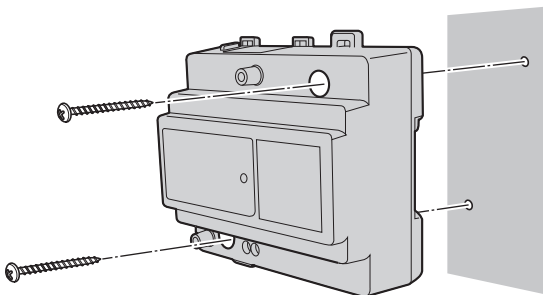
- 1 Hang the top hooks of the power supply unit on the top of the DIN rail.
 - At this point the power supply unit will be hanging from the DIN rail but will not be secure.
- 2 Pull the lever down, make sure the bottom of the power supply unit is flat against the DIN rail, and then release the lever.
 - The bottom hook will slide up, securing the bottom of the power supply unit to the DIN rail.



- 1 Top hooks
- 2 Lever
- 3 Bottom hook

4.2.3 Attaching directly to a wall

Attach the power supply unit to the wall securely using the 2 mounting screws.



4.3 Installing the lobby station

Required items

- Flush mount box (included)
- Hex screws and hex wrench (included)
- Vandal proof post kit (post, bracket, 2 screws; included)
- 4-pin terminal block and 3-pin terminal block (included)
- LAN cable (user supplied)
See 4.5 Wire and cable specifications (Page 25) for specifications.
- Wires that connect the lobby station to the electric lock, access controller, and open door sensor (user supplied)
See 4.5 Wire and cable specifications (Page 25) for specifications.

Installation location

- Do not install the product in the following locations. There may be a risk of malfunction or communication disturbances.
 - Places where vibration, impact, or echoing occurs.
 - Places near a high concentration of dust, hydrogen sulphide, ammonia, sulphur, or noxious fumes.
 - Places where there is excessive smoke, dust, and high temperature.
 - Places exposed to direct sunlight.
 - Places where most of the background is the sky.
 - Places where the background is a white wall, and direct sunlight will reflect off it.
- Install the product 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.
- Dust protection/water protection is IP55. Only when installation work specified in this document is properly performed and appropriate water protection treatment is performed.
- Make sure the rear of the product is not subject to water.
- Depending on the installation location, condensation may form on the product's lens cover. This may cause images to become obscured. Condensation will dissipate as the temperature rises.

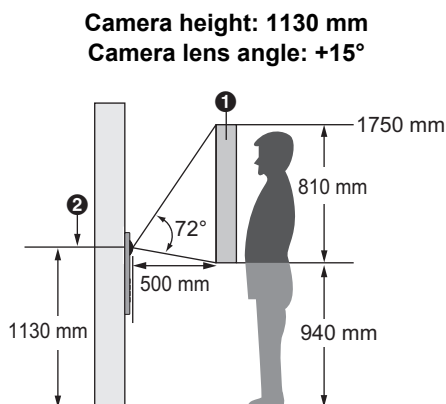
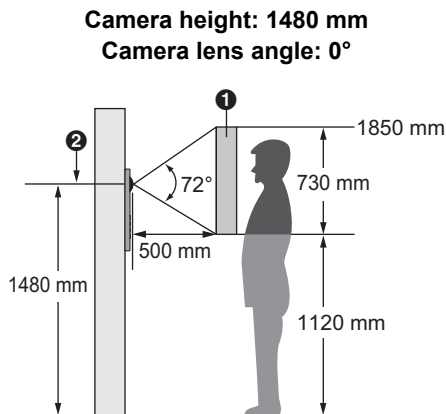
Important:

- **DO NOT USE ANY SOLVENTS CONTAINING CHLORINE. This causes the product to rust.**
- **Do not use any cleaning products that contain alcohol, polish powder, powder soap, benzene, thinner, wax, petroleum, or boiling water. Also do not spray the product with insecticide, glass cleaner, hair spray or wall paint. This may cause a change in colour or quality of the product.**

4.3.1 Installation position of the lobby station and camera range

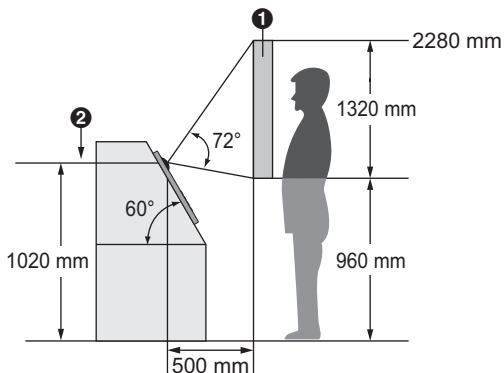
Refer to the following examples and confirm the area viewable by the camera. In each illustration, the viewable area is indicated by "1" and the centre of the camera lens is indicated by "2".

Installed on vertical wall, side view

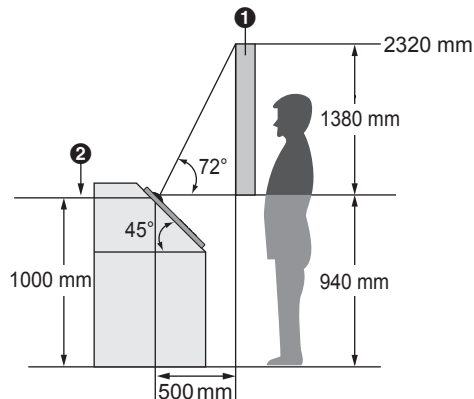


Installed on slanted surface, side view

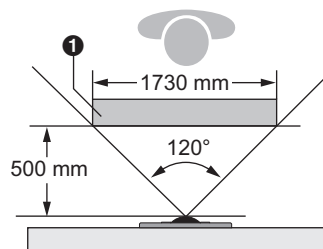
Camera height: 1020 mm
Surface angle: 60°
Camera lens angle: 0°



Camera height: 1000 mm
Surface angle: 45°
Camera lens angle: -15°



Top view



Note:

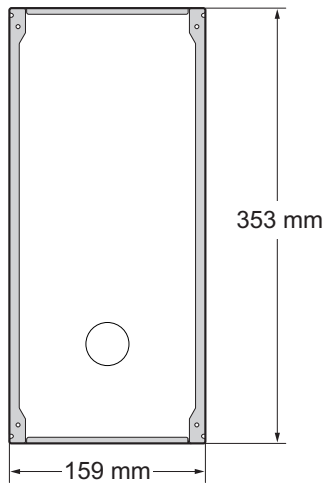
- The measurements and angles shown here are for reference purposes and may vary depending on the environment.
- The angle of the camera lens can be adjusted $\pm 15^\circ$. See 4.3.4 Adjusting the camera lens angle (Page 23).
- Install the lobby station so that the lobby station is not exposed to strong light. If strong light shines on the lobby station, the visitor's face may not be distinguishable.

4. Installation

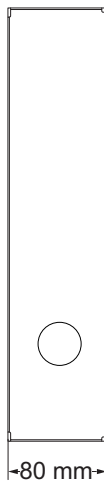
4.3.2 Installation

- 1 Open a hole in the wall for the flush mount box.
 - Note the dimensions of the flush mount box.

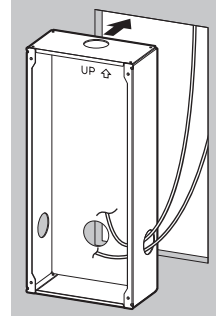
Front view



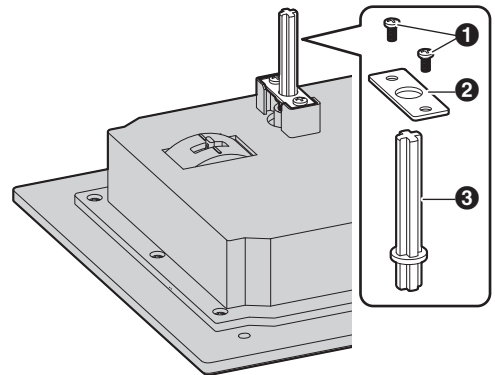
Side view



- 2 Open the knockout holes of the flush mount box, and then pass all necessary cables and wires (DC plug, LAN cable, wires for electric lock, access controller, open door sensor) through the knockout holes.

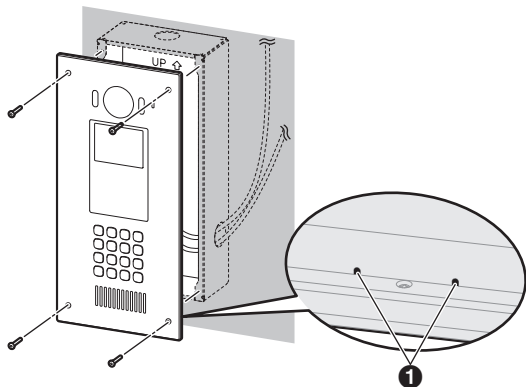


- 3 Install the flush mount box in the wall.
- 4 Attach the vandal proof post to the back of the lobby station.
 - See 4.3.5 Information about the vandal proof feature (Page 23) for information about the vandal proof feature.



- 1 Screws
- 2 Bracket
- 3 Vandal proof post

- 5 Connect the wires and cables to the lobby station.
 - See 4.3.3 Connecting the wires and cables (Page 22).
- 6 Attach the lobby station to the flush mount box, and then use the hex wrench to secure the lobby station to the flush mount box using the 4 screws.
 - We recommend you view the lobby station's camera image using a room monitor and adjust the camera lens angle before completing the lobby station installation. See 4.3.4 Adjusting the camera lens angle (Page 23).
 - Do not cover the water drain holes.

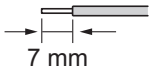


- 1 Water drain holes

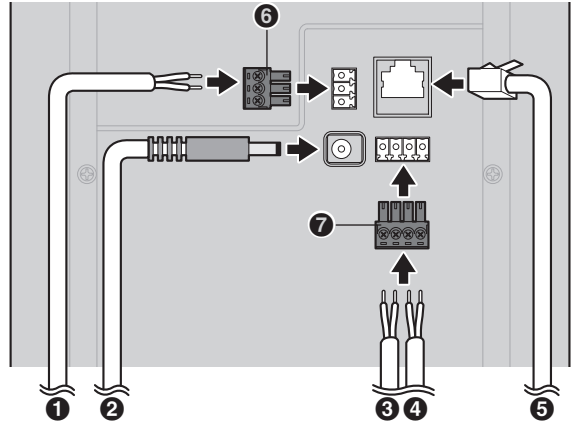
4. Installation

4.3.3 Connecting the wires and cables

- 1 Connect the LAN cable to the LAN connector.
- 2 Connect the DC plug to the DC IN connector.
 - See 4.2 Installing the power supply unit (Page 16) for information about installing the power supply unit.
- 3 Strip the wires from the electric lock, access controller, and open door sensor as shown below.



- 4 Insert the wires from the electric lock into the 3-pin terminal block, tighten the terminal block screws, and then attach the 3-pin terminal block to the K-OUT connection terminals.
 - Connect the wires according to the specifications of the electric lock. Only 2 wire connections are needed.
S1 and S2: For normally-open circuit type electric locks
S2 and S3: For normally-closed circuit type electric locks
 - Make sure the wires are inserted fully into the terminal block and that the terminal block screws are tight enough to prevent the wires from pulling out.
 - Make sure the 3-pin terminal block snaps into place and is securely connected to the K-OUT connection terminals.
- 5 Insert the wires from the access controller and open door sensor into the 4-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the K-IN connection terminals.
 - Connect the wires as follows.
C1 and C2: Access controller
C3 and C4: Open door sensor
 - Make sure the wires are inserted fully into the terminal block and that the terminal block screws are tight enough to prevent the wires from pulling out.
 - Make sure the 4-pin terminal block snaps into place and is securely connected to the K-IN connection terminals.



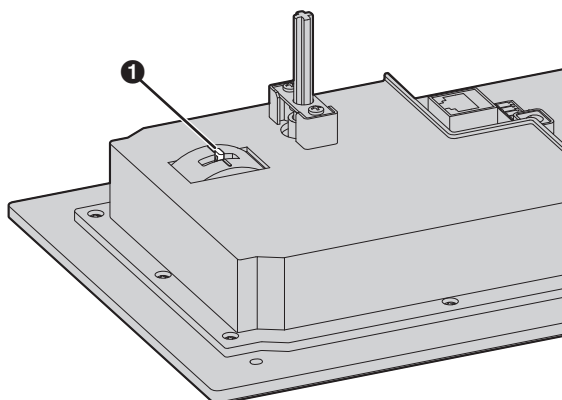
- 1 Wires from electric lock
- 2 DC plug from power supply unit
- 3 Wires from access controller
- 4 Wires from open door sensor
- 5 LAN cable
- 6 3-pin terminal block
- 7 4-pin terminal block

Note:

- Refer to 4.4 Wiring schematic (Page 24) for connection diagrams.
- Refer to 4.5 Wire and cable specifications (Page 25) for information on the type and length of wires that can be used.

4.3.4 Adjusting the camera lens angle

The angle of the camera lens can be adjusted $\pm 15^\circ$. Pushing the lever toward the top of the lobby station points the camera lens down; pushing it toward the bottom points the camera lens up.



❶ Camera lens adjustment lever

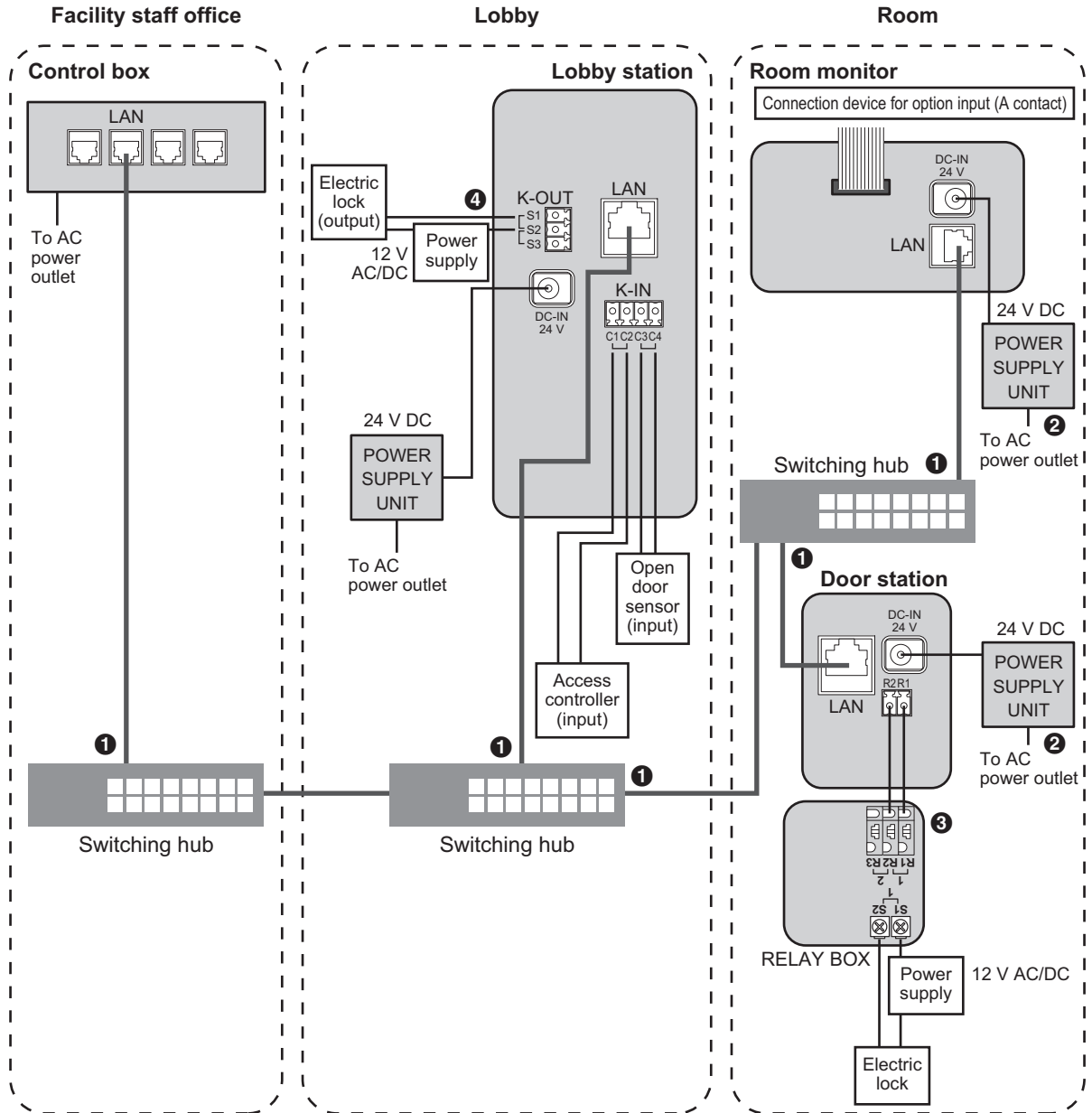
4.3.5 Information about the vandal proof feature

When the vandal proof post is installed, the post presses against the vandal proof button and holds the button down as long as the lobby station is installed in the flush mount box. If there is an attempt to remove the lobby station from the flush mount box, the post releases the button and the vandal proof feature sounds an alert for 3 minutes.

Note:

- If this alert is triggered accidentally during installation, or to avoid false detections when performing maintenance, disconnect the lobby station from the power supply by disconnecting the DC plug or by cutting the power to the power supply unit.
- To avoid false detections during installation, the vandal proof feature cannot be triggered unless the vandal proof button has been pressed down continuously for 3 minutes.

4.4 Wiring schematic



① LAN cable

② If the switching hub does not support PoE, a power supply unit (VL-PS240; sold separately) is required.

③ When connecting an electric lock (user supplied), a relay box (VL-RLY1; sold separately) is required.

④ Connect the electric lock to the appropriate terminals, depending on the circuit type.

S1 and S2: For normally-open circuit type electric locks

S2 and S3: For normally-closed circuit type electric locks

4.5 Wire and cable specifications

Wiring run			Specifications	Max. length
Lobby station	↔	Switching hub	Cat-5e or higher, stranded, twisted pair, straight	100 m
Power supply unit	↔	Lobby station	0.65 mm (22 AWG)	approx. 10 m
			2 mm (12 AWG)	approx. 20 m
Power supply unit	↔	AC power source	1.2 mm (17 AWG)	No requirement
			2 mm (12 AWG)	
Lobby station	↔	Electric lock	0.5 mm (24 AWG)	According to specification of connected device.
		Access controller Open door sensor	1.2 mm (17 AWG)	

Note the following when selecting wiring

- For all wiring (except network wiring), use 2-conductor (solid copper) wiring with a PE (polyethylene)-insulated PVC jacket.
Mid-capacitance, non-shielded wiring is recommended.
- A certified power supply wiring has to be used with this equipment. The relevant national installation and/or equipment regulations shall be considered. A certified power supply wiring not lighter than ordinary polyvinyl chloride flexible wiring according to IEC 60227 shall be used.

4. Installation

4.6 Connecting other devices

4.6.1 Electric locks

You can connect an electric lock to each lobby station via the K-OUT connection terminals. An electric lock is used to open the lobby door in conjunction with another action, such as pressing a button, swiping an access card, inserting a key, entering a door access password, etc.

- One electric lock can be connected to each lobby station.
- When selecting an electric lock, select a device that meets the following guidelines.
 - N/C or N/O dry closure contact
 - 12 V AC/DC, less than 1 A

4.6.2 Access controllers

You can connect an access controller to each lobby station via the K-IN connection terminals. An access controller is used to determine whether the user is allowed to open the door, such as a push button, key switch, card reader, etc.

- One access controller can be connected to each lobby station.
- The lobby station features a built-in card reader. You can connect an external card reader to the lobby station if necessary.

4.6.3 Open door sensors

You can connect an open door sensor to each lobby station via the K-IN connection terminals. An open door sensor works together with the electric lock. It allows the lobby station to send a signal to the electric lock continuously until the door is open.

- One open door sensor can be connected to each lobby station.

4.6.4 SIP phones

You can connect SIP phones to the network to be used in the facility staff office, common areas, etc.

- Up to 100 SIP phones can be registered to the system, and up to 18 SIP phones can be registered to each room monitor.
- Refer to the operating instructions of the SIP phone for information about SIP server settings, setting extension number, etc.
- **Compatible Panasonic SIP phones (as of March, 2017)**
 - KX-HDV130/230/430 seriesConsult your dealer for more information.

4.6.5 Network cameras

You can connect network cameras to the network and register them to the system. Network cameras allow

facility staff and residents to monitor visitors and other activity around the facility, such as a garage, common areas, etc.

- Up to 500 network cameras can be registered to the system, and up to 32 network cameras can be registered to each room monitor.

- **Compatible Panasonic network cameras**

Consult your dealer for more information.*1

*1 For more information about compatible Panasonic network cameras, refer to the following website.

<https://panasonic.net/cns/pcc/support/intercom/vn1900>

5.1 Programming overview

There are 2 methods used to configure the system.

- **PC programming:** Used to configure the overall system. PC programming involves using a computer and the setup tool (a dedicated program provided by Panasonic) to create configuration files while offline (and typically off-site) that will be uploaded to the system later, when the computer is connected to the same network as the system.
- **Lobby station management:** Used for light system management, such as registering door access cards, changing the reception mode, etc.

5.2 PC programming

PC programming involves using a computer and the Panasonic IP Video Intercom System Setup Tool to configure the overall system.

Note:

- The Panasonic IP Video Intercom System Setup Tool is also called "setup tool" in this document.

System requirements

- **Operating system:** Microsoft® Windows® 7, Windows 8, Windows 8.1, Windows 10
- **Additional framework:** .Net Framework 4.0 or later

5.2.1 PC programming overview

The following describes the typical workflow when using PC programming.

1 Install

Install the setup tool.

2 Plan

Use the setup tool to specify the following information.

- General system information
This includes the number of buildings, floors, and rooms, the number of room monitors per room, the number of lobby stations per building, general network settings, etc.
- Device information
This includes information about optional devices such as network cameras, devices that are connected to room monitors, the MAC address of individual devices, etc.

3 Generate

Use the setup tool to generate configuration files from the information you've specified in the previous steps.

This information is saved on the computer, and will be automatically distributed to each lobby station, door station, and room monitor later.

4 Deploy

If using a control box, make sure it is configured and running, and then send the configuration files to the

control box. For more information about configuring the control box, refer to the control box's PC Programming Manual.

Next, while the computer is connected to the same network as the system, start the setup tool and turn on each lobby station, door station, room monitor, etc. Each of these devices will download its configuration file from the computer and perform its own initial setup.

5.2.2 Installing the setup tool

- 1 Download the installer.
 - Download information is available at the following web site.
<https://panasonic.net/cns/pcc/support/intercom/vn1900>
- 2 Double-click the installer.
- 3 Follow the on-screen instructions and install the setup tool.

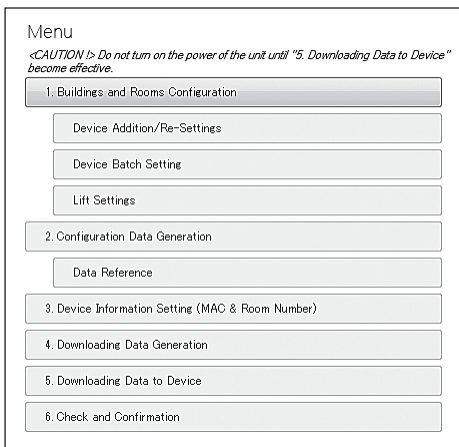
5.2.3 Using the setup tool for the first time

- 1 Start the setup tool.
- 2 In the left pane, click **[New project]**.
- 3 In the right pane, enter the desired project name in the **[Project Name]** field and then click **[Create]**.
 - The setup tool's main menu is displayed. For information about each menu item, see 5.2.4 Setup tool main menu (Page 28).
- 4 Click **[1. Buildings and Rooms Configuration]**.
- 5 Follow the on-screen instructions and configure the general system information.
- 6 After you have configured the items on all of the screens as needed, click **[Complete]** when prompted.

5. Programming

5.2.4 Setup tool main menu

The following items are displayed in the main menu of the setup tool. Items may not be available depending on the current project, which items you have finished configuring, etc.



1. Buildings and Rooms Configuration

Allows you to configure general system information, such as the number of buildings, floors, and rooms, the number of room monitors per room, the number of lobby stations per building, general network settings, etc.

– Device Addition/Re-Settings

Allows you to change settings or add devices in a previously created project.

– Device Batch Setting

Allows you to configure default settings for each type of device.

– Lift Settings

Allows you to configure connection settings for lift controllers.

2. Configuration Data Generation

Generates configuration files based on the data you have configured using the setup tool.

– Data Reference

Allows you to generate PDF files based on the data you have configured using the setup tool. We recommend referring to these files when configuring your network cameras, etc.

Note:

- Generated PDF files contain passwords and other sensitive information. Handle with appropriate caution.

3. Device Information Setting (MAC & Room Number)

When system devices are turned on for the first time, they will attempt to download their configuration files. This item determines whether system devices are identified by MAC address or by room number for the purpose of downloading their configuration files.

When **[MAC Address]** is selected, devices can download their configuration files automatically based on their MAC addresses. You can enter MAC addresses

manually, or use a barcode scanner to scan the MAC address of each device individually.

When **[Room Number]** is selected, you must specify each device's room number by entering it using the device itself before devices can download their configuration files.

4. Downloading Data Generation

Generates data to be downloaded to devices.

5. Downloading Data to Device

Allows the setup tool to host the configuration files, so that each device can then download its configuration file when it is first turned on.

6. Check and Confirmation

Allows you to confirm which devices have successfully downloaded their configuration files.

5.2.5 Device labels (found on the outer and inner product packaging)

Each lobby station, room monitor, and door station has a device label attached to its outer and inner packaging. Each label contains the device's MAC address and space for you to note other information about where the device will be installed and how it will be used. When using the setup tool to configure the system, you can enter each device's MAC address by scanning it with a barcode reader.

Outer label

Use the outer label when you will configure the system first and install the devices later.

1. Write the required information on each device's outer label while it is still attached to the outer packaging.
2. When using the setup tool to configure the system, scan each device's MAC address directly from the label on the outer packaging.
3. Move each device to its installation area by referring to the information written on the label, and install each device.

Inner label

Use the inner label when you will install the devices first, and configure the system later.

1. Move each device to its installation area and remove it from its outer package.
2. Write the required information on each device's inner label, and then install each device.
3. Collect the inner labels for all devices.
4. When using the setup tool to configure the system, scan each device's MAC address from the label you collected. When finished, you can discard the inner labels you have collected.

5.2.6 Editing a previously saved project

- 1 Start the setup tool.
- 2 In the left pane, click the desired project.
- 3 In the right pane, click the desired project data.
- 4 Click **[1. Buildings and Rooms Configuration]**.
- 5 Follow the on-screen instructions and configure the general system information.
- 6 After you have configured the items on all of the screens as needed, click **[Complete]** when prompted.

- How to enable or disable backlight compensation for lobby station and door station cameras
 - How to configure system settings for each room monitor so that Video Intercom System apps on residents' smartphones can be used for systems composed of VL-VN1800 control boxes (In order to use the Video Intercom System app, you must download it to your smartphone and register your smartphones with your "main" room monitor.)^{*1}
- *1 For enhanced system version 3 (page 38)

5.2.7 Generating configuration files

- 1 Start the setup tool.
- 2 In the left pane, click the desired project.
- 3 In the right pane, click the desired project data.
- 4 Click **[2. Configuration Data Generation]**.

5.2.8 Deployment

- 1 Connect the computer to the same network as the system and then start the setup tool.
- 2 Turn on each lobby station, room monitor, and door station.

3 If you registered each device's MAC address using the setup tool

Each device will download its configuration file from the computer and perform its own initial setup.

If you did not register each device's MAC address using the setup tool

Follow the prompts displayed on the lobby station or room monitor, and enter the device's room number. Each device will download its configuration file from the computer and perform its own initial setup.

(Note that for door stations, you must register each door station's MAC address using the setup tool in order for the door station to be able to complete its initial setup.)

5.2.9 Other information

Consult your dealer or the system administrator for information about the following.

- How to perform batch settings for configuring lobby station and card station card readers
- How to configure advanced settings using a web programming
- How to configure resident information using the phonebook tool and then sync it with the system using web programming (includes resident names, unlock passwords, card reader registration, etc.)
- How to allow facility staff to send text messages to residents' room monitors (available only when a lobby station is used as the system's SIP server)

5.3 Lobby station management

Facility staff can use a lobby station for light system management.

- 1 Press **[#]** → enter the administrator password → **[#]**.
 - The default administrator password is "135246". If necessary, you can change the administrator password (Changing the administrator password (Page 30)).
- 2 Set each parameter.
 - You can browse parameters by pressing **[A▲]** and **[B▼]**, and select a parameter by pressing **[#]**.
 - See 5.3.3 List of lobby station management parameters (Page 32) for information about each parameter.
- 3 When finished, press **[X]**.
 - The lobby station exits programming mode and the standby screen is displayed.

Entering numbers and characters

You can use the keypad to enter numbers and characters.

- Press a key repeatedly to scroll through the characters assigned to that key.
- Follow the hints displayed on the bottom of the display.
 - To erase the rightmost character, press **[X]**.
 - To confirm or save the entered numbers or characters, press **[#]**.

Changing the administrator password

The administrator password is required to perform lobby station management.

1. Press **[#]** → enter the administrator password → **[#]**.
 - The default administrator password is "135246".
2. Select **"Change Password"** → **[#]**.
3. Enter the desired 6-digit code → **[#]**.
4. For confirmation, re-enter the desired 6-digit code → **[#]**.

5.3.1 Issuing access cards

Authentication is required in order to issue access cards. To authenticate, you can use either the administrator's access card, or the password used to issue access cards.

- 1 Press **[#]** → enter the administrator password → **[#]**.
 - The default administrator password is "135246".
- 2 Select **"Issue Card"** → **[#]**.
- 3 **Authenticate using the administrator's access card**

Select **"Main Card"** → **[#]** → touch the administrator's card to the card reader area of the lobby station (under the display).

 - If **"Card error."** is displayed, the card you used is not the administrator's access card.
- Authenticate using the password for issuing access cards**

Select **"Password"** → **[#]** → enter the password for issuing access cards → **[#]**.

 - The default password for issuing access cards is "001122".
- 4 Enter the room number to associate with the new card → **[#]**.
- 5 Touch the new access card to the card reader area of the lobby station (under the display).
 - When **"Issue card success!"** is displayed, the new access card has successfully been issued.
- 6 Press **[X]**.

5.3.2 Switching between room mode and reception mode

- 1 Press **[#]** → enter the administrator password → **[#]**.
 - The default administrator password is "135246".
- 2 Select "Reception Mode" → **[#]**.
- 3 Select "On/Off Setting" → **[#]**.
- 4 Press **[1]** or **[2]** to display the desired setting → **[#]**.
 - "Reception Mode On": Reception mode is enabled. Visitor calls are directed to a receptionist.
 - "Reception Mode Off": Room mode is enabled. Visitor calls can call rooms directly.

Note:

- If "Not registered" is displayed, no SIP phones are registered, therefore reception mode is unavailable.

Changing the receptionist

1. Press **[#]** → enter the administrator password → **[#]**.
 - The default administrator password is "135246".
2. Select "Reception Mode" → **[#]**.
3. Select "Call Centre Setting" → **[#]**.
4. Select the desired setting → **[#]**.

5. Programming

5.3.3 List of lobby station management parameters

The following parameters are available when using lobby station management.

Parameter	Description and available settings	Default
IP Config	Allows facility staff to change the IP settings of the lobby station.	—
Issue Card	Allows facility staff to issue access cards for residents. <ul style="list-style-type: none">• See 5.3.1 Issuing access cards (Page 30).	—
Volume Config ^{*1}	Allows facility staff to change the speaker volume of the lobby station.	—
Web Port	Allows facility staff to change the port number used to access the lobby station via web programming.	80
Change Password	Allows facility staff to change the administrator password, which is used to access lobby station management. <ul style="list-style-type: none">• See Changing the administrator password (Page 30).	—
Language	Allows facility staff to change the display language used by the lobby station.	English
Reception Mode	Allows facility staff to switch the lobby station between "room mode" (visitors can call rooms directly) or "reception mode" (visitor calls are directed to a receptionist). Facility staff can also specify the SIP phone that is the destination of visitors' calls when using reception mode.	—
Phonebook	Allows facility staff to edit phonebook information stored in the lobby station.	—

*1 Press **[#]** to confirm the contents of the settings.

6.1 Lobby station operations

6.1.1 Calling a resident

- 1 Enter the resident's room number.
- 2 Press **[⏏]** to call.

Note:

- If there are multiple buildings, a building number may need to be specified when entering the resident's room number. See 6.3 Information for visitors (Page 34) for details.

6.1.2 Calling a receptionist

- 1 Press **[⏏]**.
- 2 Press **[A▲]** or **[B▼]** to select the desired item.
- 3 Press **[⏏]** to call.

6.1.3 Searching the directory

- 1 Press **[*]**.
- 2 Use the keypad to enter the first few letters of the resident's name.
 - Press a key repeatedly to scroll through the letters assigned to that key.
 - Note the hints displayed at the bottom of the screen.
- 3 Press **[A▲]** or **[B▼]** to select the desired item.
- 4 Press **[⏏]** to call.

6.1.4 Opening the door by using an access card

Touch your access card to the card reader area of the lobby station (under the display) or to the external card reader (if present).

6.1.5 Opening the door by entering an unlock password

- 1 Press **[#]**.
- 2 Enter your room number.
- 3 Press **[*]**.
- 4 Enter your unlock password.
- 5 Press **[#]**.

6.1.6 Recording a video message

- 1 When the resident does not answer, press **[1]** when prompted to record a video message.
- 2 When finished, press **[X]**.

6.2 Facility staff operations using a SIP phone

6.2.1 Opening a lobby door

While talking to a visitor at a lobby station, dial **[#]** → enter the open door code → **[#]**.

- The code is specified by the system administrator. The default code is **[0] [0] [0]**.

6.2.2 Switching between room mode and reception mode

While talking to a lobby station, dial **[#]** → **[#]** → enter the mode switching code → **[#]**.

- The code is specified by the system administrator. The default switching codes are as follows.
 - Reception mode: **[0] [0] [1]**
 - Room mode: **[0] [0] [0]**
- When reception mode is enabled, a long beep is heard. When room mode is enabled, 3 short beeps and then a long beep is heard.

6.2.3 Transferring a visitor call to a resident's room

- 1 While talking to a visitor at a lobby station, press the SIP phone's "transfer" button.
- 2 Enter the extension number.
- 3 After the resident answers the call, hang up to complete the transfer.
 - To cancel without transferring the call, press the SIP phone's "cancel" button.

Note:

- Refer to the operating instructions of the SIP phone for information about transferring calls, button location, etc.

6.2.4 Handling emergency and other calls

If an emergency button or sensor that is connected to a resident's room monitor is triggered, the system will call a pre-programmed SIP phone. Information about the event will be displayed on the SIP phone's display, and the SIP phone user can talk to the resident by answering the call.

6.3 Information for visitors

We recommend preparing a guide to help visitors. Please refer the following samples.

When calling within the same building

CALLING INSTRUCTIONS
[Room number] + [⏏]
<ul style="list-style-type: none">• Example: To call room 101: [1] [0] [1] [⏏]

When calling to another building

If there are multiple buildings, a building number must be specified when calling from one building to another, or when calling from a "common" lobby station, such as a lobby station that is installed at a guard house or at an entrance gate.

CALLING INSTRUCTIONS
[Building name] + [*] + [Room number] + [⏏]
<ul style="list-style-type: none">• Example: To call building A, room 101: [A▲] [*] [1] [0] [1] [⏏] To call building 3, room 101: [3] [*] [1] [0] [1] [⏏]• For building numbers B–F, use the [B▼] button. Press the button repeatedly without stopping to advance through the available letters. Example: To call building B, room 101: [B▼] [*] [1] [0] [1] [⏏] To call building D, room 101: [B▼] [B▼] [B▼] [*] [1] [0] [1] [⏏]

7.1 Basic troubleshooting

For advanced troubleshooting, refer the information on the following web site.

<https://panasonic.net/cns/pcc/support/intercom/vn1900>

If the system does not operate correctly, particularly after installing or modifying the system, perform the following basic troubleshooting.

- Make sure power is being supplied to each device.
 - For devices that use Power over Ethernet (PoE)
Make sure the PoE power supply is turned on and supplying power, then check the LAN cable connection.
 - For devices that use a power supply unit
Make sure the power supply unit is connected to the AC power supply and is receiving power, then check the AC and DC wiring and the DC plug.
- Make sure that all cables are firmly connected and are connected to the correct terminals.

Setup issues

Problem	Cause & Solution	Page
Cannot upload data to the system.	<ul style="list-style-type: none"> ● The cables are not connected properly. → Make sure that all cables are firmly connected and are connected to the correct terminals. ● The switching hub is not connected or not turned on. → Make sure switching hubs or any other necessary network equipment is connected properly and turned on. ● The system devices (lobby stations, room monitors, door stations, etc.) are not connected or not turned on. → Make sure all devices are connected properly and turned on. 	22 – –

General issues

Problem	Cause & Solution	Page
The display does not turn on.	<ul style="list-style-type: none"> ● The lobby station is not receiving power. → Make sure the power supply unit is connected to the AC power supply and is receiving power, then check the AC and DC wiring and the DC plug. 	16
Calls are disconnected.	<ul style="list-style-type: none"> ● The current call timed out and was disconnected. → To conserve system resources, all calls time out and are disconnected after a programmed amount of time. 	–

7.2 Error messages

Display	Cause & Solution	Page
Network error.	<ul style="list-style-type: none"> ● Consult the network administrator. 	–
Card error.	<ul style="list-style-type: none"> ● The card you used to unlock the door is not valid. → Use a valid card. 	–
Password do not match.	<ul style="list-style-type: none"> ● The password you entered to unlock the door is not valid. → Use a valid password. 	–

7. Other information

7.3 Specifications

Lobby Station (VL-VN1900)

Power source	Power supply unit (VL-PS240): 24 V DC, 0.6 A
Power consumption	Standby: 3.5 W Operating: 8.5 W
Dimensions (mm) (height × width × depth)	Approx. 373×179×6 (excluding sections embedded into the wall)
Mass (weight)	Approx. 1.5 kg
Operating environment	Ambient temperature: approx. -10 °C to +55 °C Relative humidity (non-condensing): up to 90 %
Display	Approx. 8.8 cm (3.5-inch) colour TFT LCD
Installation method	Flush mount (using included flush mount box)
Image sensor	1/2.7-inch CMOS sensor (approx. 2M pixels)
Viewing angle	Horizontally: approx. 120° Vertically: approx. 72°
Minimum illuminance required	1 lx (within approx. 50 cm from the camera lens)
Lighting method	LED lights
IP rating	IP55*1
IK rating	Compliant with IK07
Card reader (RFID)	ISO/IEC 14443 Type A (MIFARE®) (Frequency: 13.56 MHz; RF transmission power: 42 dBμA/ m (max.) @ 10 m)
Video format	H.264 codec
Audio format	G.711 codec
Network interface	Ethernet II (DIX)
Network protocol	TCP/IP, UDP
Communication mode	Speed, Duplex AUTO (10BASE-T/100BASE-TX, FULL/HALF) (Auto negotiation)

Power Supply Unit (VL-PS240)

The power supply unit is for indoor use only.

Power source	Input: 220–240 V AC, 0.2 A, 50/60 Hz Output: 24 V DC, 0.6 A
Dimensions (mm) (height × width × depth)	Approx. 116×100×54 (excluding protruding sections)
Mass (weight)	Approx. 230 g
Operating environment	Ambient temperature: approx. 0 °C to +50 °C Relative humidity (non-condensing): up to 90 %
Installation method	Attach to DIN rail Wall mount (using included screws)

*1 Water resistance is only assured if the product is installed correctly according to the instructions, and appropriate water protection measures are taken.

7.4 Cleaning

Wipe the product with a soft, dry cloth.

- For excessive dirt, wipe the product with a cloth slightly dampened with fresh water.
- When the product is installed near ocean coasts, wipe the product with a cloth slightly dampened with fresh water once every 2 to 3 months.

Important:

- **DO NOT USE ANY SOLVENTS CONTAINING CHLORINE. This causes the product to rust.**
- **Do not use any cleaning products that contain alcohol, polish powder, powder soap, benzine, thinner, wax, petroleum, or boiling water. Also do not spray the product with insecticide, glass cleaner, hair spray or wall paint. This may cause a change in colour or quality of the product.**

7.5 Open source software notice

Parts of this product use open source software supplied based on the relevant conditions of the Free Software Foundation's GPL and/or LGPL and other conditions. Please read all licence information and copyright notices related to the open source software used by this product. This information is available at the following web page:

<https://panasonic.net/cns/pcc/support/intercom/vn1900>

At least three (3) years from delivery of this product, Panasonic Corporation will give to any third party who contacts us at the contact information provided below, for a charge of no more than the cost of physically distributing source code, a complete machine-readable copy of the corresponding source code and the copyright notices covered under the GPL and the LGPL. Please note that software licensed under the GPL and the LGPL is not under warranty.

<https://panasonic.net/cns/pcc/support/intercom/vn1900>

7. Other information

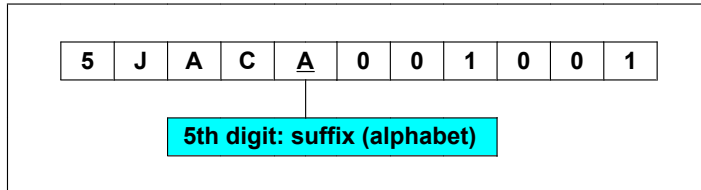
7.6 Identifying enhanced features

Enhanced features are used to add to the capabilities of devices in the Video Intercom System. You can identify the enhanced features by checking the suffix of the serial number.

7.6.1 Serial numbers

Serial numbers are attached as labels to devices. The suffix of the serial number can be used to determine which enhanced features are supported by the device.

Serial number example:



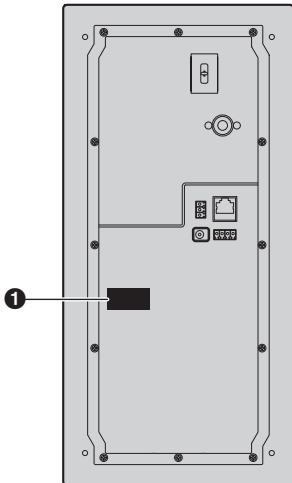
Note:

- The letter used for the suffix is updated for product changes or products with updated features.

Serial number label locations

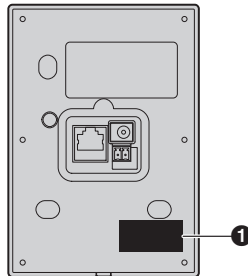
Lobby station (rear view)

- ❶ Serial number label



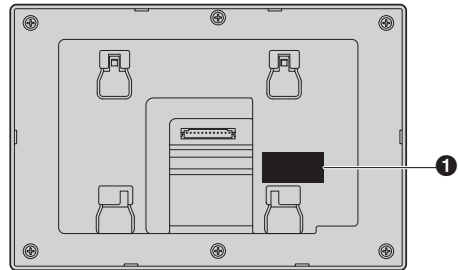
Door station (rear view)

- ❶ Serial number label



Room monitor (rear view)

- ❶ Serial number label



7.6.2 Serial number suffixes

The suffix of the serial number can be used to determine which enhanced system are supported by the device.

- Software uploaded to the web site: Use the latest setup tool.
Download information is available at the following web site.
<https://panasonic.net/cns/pcc/support/intercom/vn1900>
- For information about software updates for each device, consult your dealer.

Lobby station (VL-VN1900)

Original system version 1

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-VN1900BX	A, B, C, D	—
VL-VN1900EX	A, B, C	
VL-VN1900ML	A, B, C	
VL-VN1900SX	A, B, C	
VL-VN1900VN	A, B, C	

Enhanced system version 2

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-VN1900BX	E or later	<ul style="list-style-type: none"> • A third-party lift controller is available for lift integration. Lift controllers are not available in some areas. For more information about lift controllers and their installation, consult your dealer.
VL-VN1900EX	D or later	
VL-VN1900ML	D or later	
VL-VN1900SX	D or later	
VL-VN1900VN	D or later	

Enhanced system version 3

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-VN1900BX	G or later	<ul style="list-style-type: none"> • Available only when VL-VN1800 control box is used as the system's SIP server (2000 SIP devices). • Enables the system to call up to 10000 SIP devices by connecting up to 5 VL-VN1800 control boxes. • For systems composed of VL-VN1800 control boxes^{*1}, the following main operations can be performed by installing the Video Intercom System app on a smartphone. <ul style="list-style-type: none"> – Answering calls from visitors (from the lobby station or door station) <p>^{*1} The available products differ depending on your region. For more information, please consult your dealer.</p> <ul style="list-style-type: none"> • Up to 90 SIP phones can be registered to a lobby station for easy calling. • Addition of Vietnamese and Indonesian to the LCD display
VL-VN1900EX	F or later	
VL-VN1900ML	F or later	
VL-VN1900SX	F or later	
VL-VN1900VN	F or later	

7. Other information

Door station (VL-VN1500)

Original system version 1

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-VN1500BX	A, B, C	—
VL-VN1500EX	A, B	
VL-VN1500ML	A, B	
VL-VN1500SX	A, B	
VL-VN1500VN	A, B	

Enhanced system version 2

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-VN1500BX	D or later	<ul style="list-style-type: none"> Available only when a door station is used as the system's SIP server.
VL-VN1500EX	C or later	
VL-VN1500ML	C or later	
VL-VN1500SX	C or later	
VL-VN1500VN	C or later	

Enhanced system version 3

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-VN1500BX	F or later	<ul style="list-style-type: none"> For systems composed of VL-VN1800 control boxes^{*1}, the following main operations can be performed by installing the Video Intercom System app on a smartphone. <ul style="list-style-type: none"> Answering calls from visitors (from the lobby station or door station) <p>^{*1} The available products differ depending on your region. For more information, please consult your dealer.</p>
VL-VN1500EX	E or later	
VL-VN1500ML	E or later	
VL-VN1500SX	E or later	
VL-VN1500VN	E or later	

Room monitor (VL-MN1000)**Original system version 1**

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-MN1000BX	A	—
VL-MN1000EX	A, B	
VL-MN1000ML	A	
VL-MN1000SX	A	
VL-MN1000VN	A	

Enhanced system version 2

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-MN1000BX	B or later	<ul style="list-style-type: none"> Up to a combined total of 20 lobby station and door station cameras can be registered to a room monitor for easy camera monitoring.
VL-MN1000EX	C or later	
VL-MN1000ML	B or later	
VL-MN1000SX	B or later	
VL-MN1000VN	B or later	

Enhanced system version 3

Model no.	Suffix (5th digit of serial number)	Changes summary
VL-MN1000BX	D or later	<ul style="list-style-type: none"> For systems composed of VL-VN1800 control boxes^{*1}, the following main operations can be performed by installing the Video Intercom System app on a smartphone. <ul style="list-style-type: none"> When using arm mode (at home/out), alarm notifications can be received when external devices (sensors, urgency buttons, or emergency buttons) connected to the room monitor are triggered *1 The available products differ depending on your region. For more information, please consult your dealer. Up to a combined total of 45 lobby station and door station cameras can be registered to a room monitor for easy camera monitoring. Addition of Vietnamese and Indonesian to the LCD display
VL-MN1000EX	E or later	
VL-MN1000ML	D or later	
VL-MN1000SX	D or later	
VL-MN1000VN	D or later	

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