AIPHONE®

GH SERIES

Apartment Intercom System

QuikStart **Installation Guide**

ATTENTION:

This is an abbreviated Installation Manual, addressing Wiring and Programming of the GH System only. The complete GH System Installation and Operation Manual is located on the CD that comes with the GH-BC Bus Control Unit. Access the PDF file from the CD and print the entire manual if a hard copy is needed. If installing a digital entry system, the program for loading names and numbers for each tenant is also located on the CD.

AIPHONE® 0210

GH Series Installation Manual Supplement

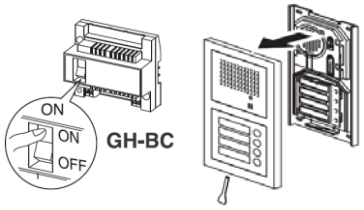
Programming Guide for Assigning Tenant Station ID Numbers

IMPORTANT:

Follow these instructions carefully when programming the GH entrance panel to call tenant stations.

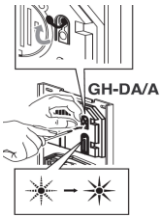
Ensure that all units are installed and wired properly. **If your system includes the GH-NS name scroll module, program the resident information (tenant names and room numbers) before assigning the ID's.**

1. Turn the power switch on the GH-BC to the ON position.

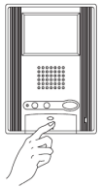


2. At the Entrance Panel, loosen the screw on the bottom of the front frame using the supplied #10 spanner tool (part # 262230) and remove the front panel. (Note: a #10 spanner bit is available at most hardware stores.)

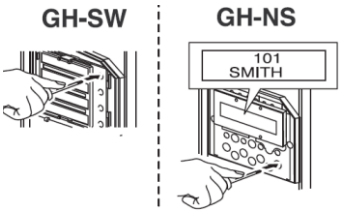
3. To put the system into program mode, lift the rubber cap on the GH-DA/A and **press and release the program button** using a long thin tool, such as a small screw driver. The In-Use LED will blink for approximately 6-15 seconds, then remain lit solid.



4. After the In-Use LED is lit solid, press and release the talk button on the first tenant station. You should have hands-free communication between the tenant and the entry at this point. If programming a video system, should also have the video image from the entrance station.



5. For the GH-SW, **press and release** the button you wish to assign to the tenant you are in communication with. *(If you press and hold until you hear the beep tone, you have just cleared the station. Press and release quickly; you will hear a short blip tone upon releasing. This indicates that the unit has been programmed correctly.)*
For the GH-NS, scroll to the resident name and number you wish to assign then **press and release** the bell (call) button. A short blip tone will be emitted at the entry panel indicating a successful program for that tenant. See bullet point below if more than one blip is heard.



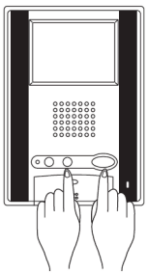
6. Press the talk button again on the tenant station to turn that unit off. If this is your first time programming the system, it is recommended to exit programming and test the station that you just programmed. Press the program button on the GH-DA/A once to exit programming and the LED will go off. You should now be able to call the tenant you just programmed. If it works, re-enter program mode and repeat the previous steps to program the remaining tenant stations in the system.

7. If there is more than one tenant station in a unit, each station will have to be assigned to the entry panel using the procedure above. The entry panel will emit 2 blip tones for the second unit, 3 blip tones for the third unit, and 4 blip tones for the fourth unit that is programmed for entry from the panel. 5 blip tones indicates a programming error. If 5 blip tones are heard, you'll need to clear the program for the tenant and entry panel address. See page 3

Correcting or changing an ID setting:

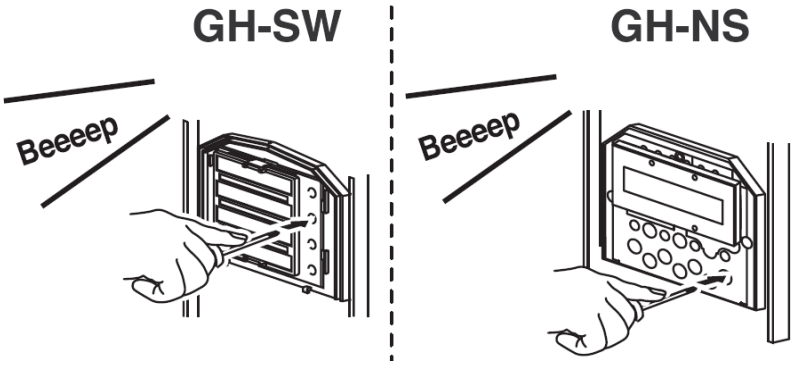
In order tocorrect a programming error, the entrance station(s) and the tenant station(s) must be cleared of their incorrect program data, then programmed again correctly. Follow these steps to clear:

1. Put the system into programming mode using the procedure described on page 1, step 3.



2. At the tenant station, **press and hold** the door release button and bell button simultaneously until a beep is emitted from the unit (should take about 3 seconds). The internal memory is now cleared.

3. If using the GH-SW, **press and hold** the call button that you wish to clear until you hear a continuous beep. If using the GH-NS, display the resident info on the screen that you wish to clear, then **press and hold** the bell button (call button) until you hear a continuous beep. That address in the entry panel is now cleared.

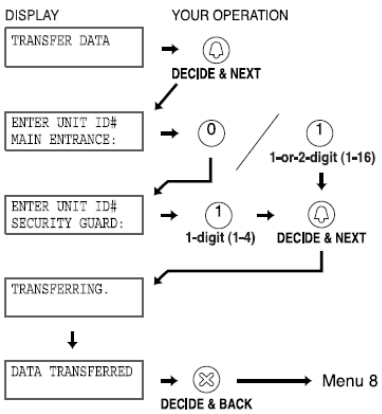


4. You can now re-program the tenant station(s) using the procedure on page 1.

Programming multiple entrance stations / Concierge stations via Link Data:

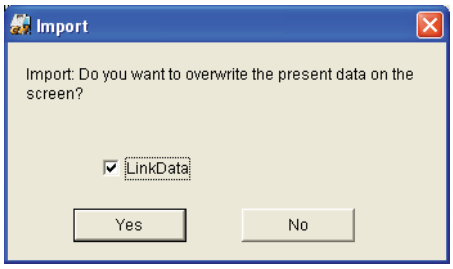
If your system has more than one entrance panel and/or you're using the GH-NS module or GH-MK Concierge station, you can send all of the tenant ID's you just programmed to the other units using the Link Data feature. This can be done manually via the keypad on the entry panel or via the supplied software.

Using the keypad and scroll module:

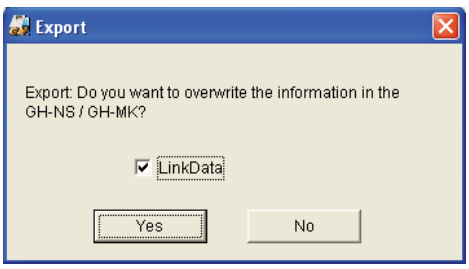


Using the supplied software:

1. Import the data from the GH-NS that you've set the ID's on into the software with the LinkData box checked.



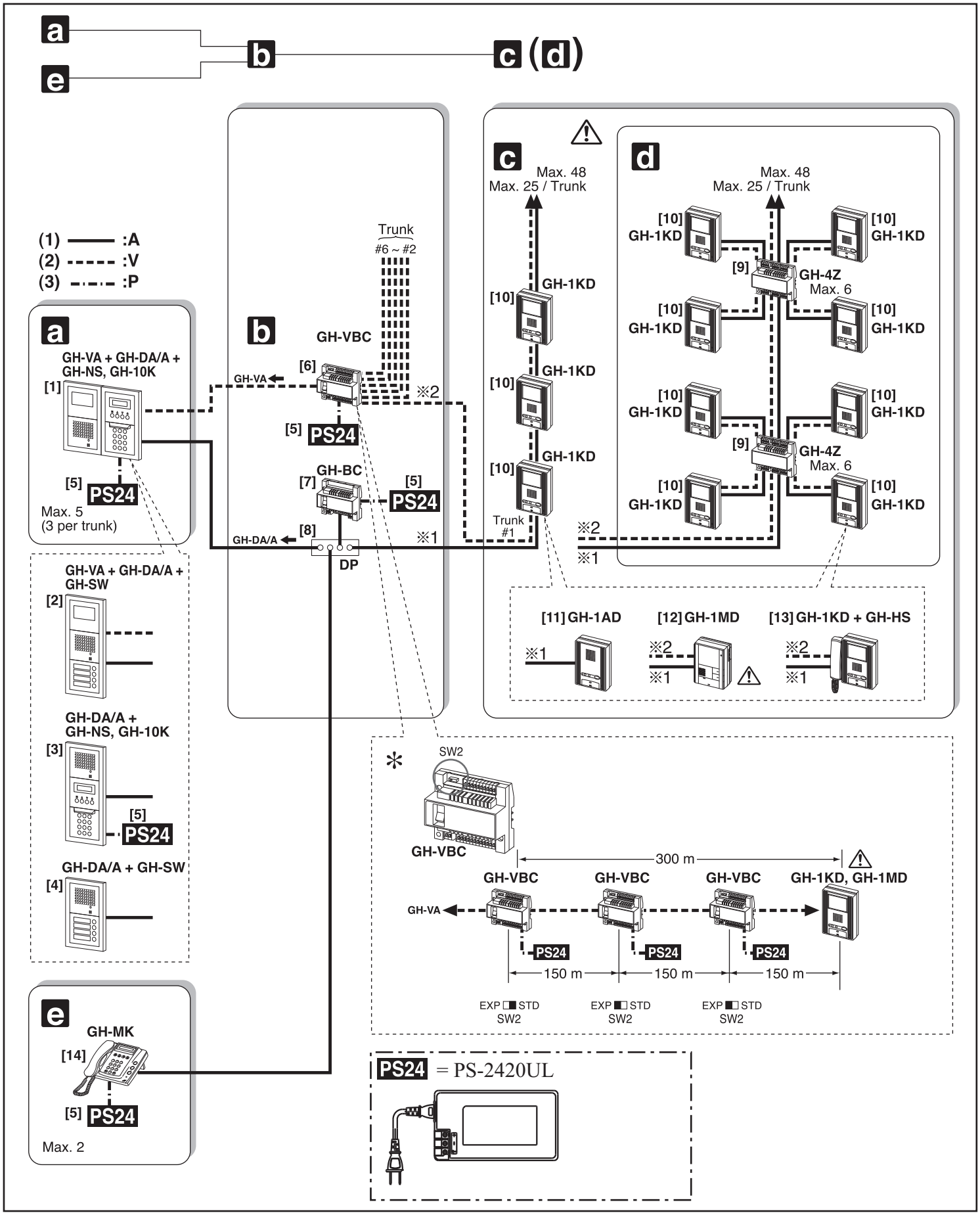
2. Export the data you just imported to each of your other GH-NS modules with the LinkData box checked.



Note: The GH-MK can be used to manually transfer data to other GH-MK's or GH-NS's in the system.

1 SYSTEM CONFIGURATION

1-1



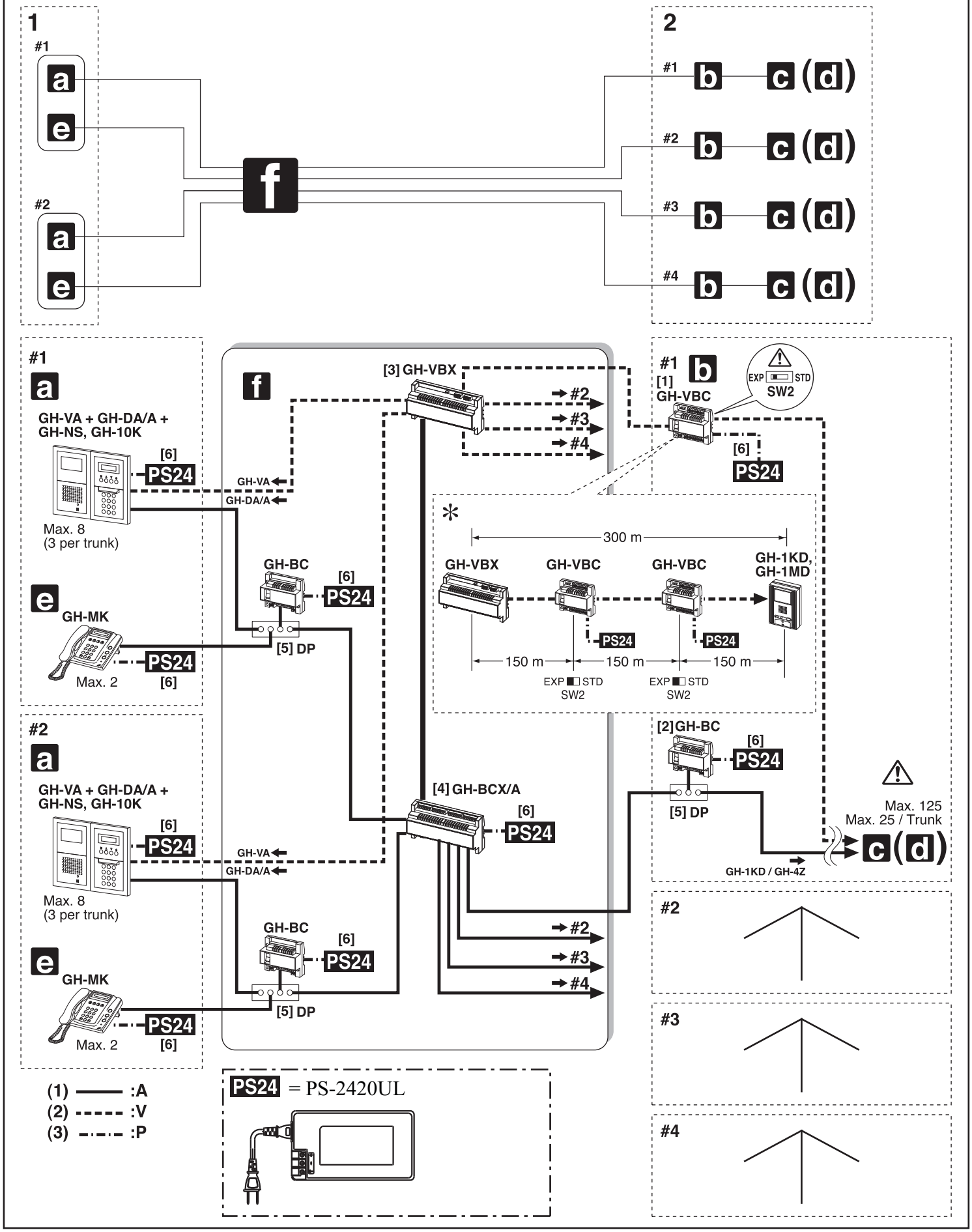
1-1

Standard System Configuration

(1) Audio signal line
(2) Video signal line
(3) Power supply line
a. Entrance station (For details, see 2-1 and 2-2)
[1] Audio/video + digital name scrolling type
GH-VA + GH-DA/A + GH-NS, GH-10K
[2] Audio/video + direct selection type
GH-VA + GH-DA/A + GH-SW
[3] Audio + digital name scrolling type
GH-DA/A + GH-NS, GH-10K
[4] Audio + direct selection type
GH-DA/A + GH-SW
b. Bus control units
[5] Power supply PS-2420UL
[6] Video Bus control unit GH-VBC
* GH-VBC can be used as an extension adaptor as well. To do so, set the setting switch (SW2) to "EXP." (2 units per trunk line)
⚠ Even if two GH-VBC units are used as extension adaptors (SW2: EXP), the wiring distance from the video Bus control unit (SW2: STD) to the farthest video residential station is limited to 300 m (980').
[7] Bus control unit GH-BC
[8] Distribution terminal (junction): sold separately
c. Residential station (For details, see 2-4): Station-to-station wiring
d. Residential station (For details, see 2-4): Homerun wiring
⚠ Do not mix station-to-station wiring and homerun wiring on a single trunk line.
[9] 4-way video junction unit GH-4Z
[10] Color video residential station GH-1KD, GH-1KD-SW
(Supplied with working service button)
[11] Audio residential station GH-1AD, GH-1AD-SW
(Supplied with working service button)
[12] Black &White video residential station GH-1MD
⚠ Station-to-station wiring is not possible for GH-1MD
[13] Color video residential station + handset (option) GH-1KD + GH-HS, GH-1KD-SW + GH-HS
e. Security Guard Station
[14] Security guard station GH-MK

	Capacity
Entrance Station	Maximum 5 stations (up to 3 stations per trunk)
Residential Station	Maximum 48 stations (up to 25 stations per trunk)
Security Guard Station	Maximum 2 stations
Residential stations in the same residence	Maximum 4 stations (up to 2 monitor stations)
4-way video junction unit	Maximum 6 units per trunk
Bus control unit	Maximum 1 unit per system

1-2


1
#1
a
e
#2
a
e
f
2
#1 b c (d)
#2 b c (d)
#3 b c (d)
#4 b c (d)
#1
a
GH-VA + GH-DA/A +
GH-NS, GH-10K
[6]
PS24
Max. 8
(3 per trunk)
e
GH-MK
PS24
Max. 2
[6]
f
[3] GH-VBX
#2
#3
#4
GH-VA
GH-DA/A
GH-BC
[6]
PS24
[5] DP
[4] GH-BCX/A
#2
a
GH-VA + GH-DA/A +
GH-NS, GH-10K
[6]
PS24
Max. 8
(3 per trunk)
e
GH-MK
PS24
Max. 2
[6]
GH-BC
[6]
PS24
[5] DP
#2
#3
#4
#1 b
[1]
GH-VBC
EXP STD
SW2
[6]
PS24
*
300 m
GH-VBX
GH-VBC
GH-VBC
GH-1KD,
GH-1MD
PS24
PS24
150 m
150 m
150 m
EXP STD
SW2
EXP STD
SW2
[2] GH-BC
[6]
PS24
[5] DP
Max. 125
Max. 25 / Trunk
c (d)
GH-1KD / GH-4Z
#2
#3
#4
(1) :A
(2) :V
(3) :P
PS24 = PS-2420UL

1-2

Expanded System Configuration Diagram

1. Common trunk line #1, 2
2. Sub trunk line #1 - 4
   Sub trunk line #2 - #4 are the same as #1. Maximum 125 units per sub trunk line.
   (1) Audio signal line
   (2) Video signal line
   (3) Power supply line

a. Entrance station (For details, see 2-1 and 2-2)
b. Bus control unit
[1] Video Bus control unit GH-VBC
⚠ In Expanded System, GH-VBC unit is used as extension adaptor (SW2: EXP).
* Another GH-VBC can be added as the second extension adaptor (SW2: EXP). The wiring distance from the Expanded video Bus control unit GH-VBX to the farthest video residential station is limited to 300 m (980').
[2] Bus control unit GH-BC
c. Residential station (For details, see 2-4):
Station-to-station wiring (For details, see 1-1)
d. Residential station (For details, see 2-4):
Homerun wiring (For details, see 1-1)
⚠ Do not mix station-to-station wiring and homerun wiring on a single trunk line.
e. Security Guard Station
f. Expanded Bus control unit
[3] Expanded video Bus control unit GH-VBX
[4] Expanded Bus control unit GH-BCX/A
[5] Distribution terminal (junction): Not included
[6] Power supply PS-2420UL

	Capacity
Entrance Station	Maximum 16 stations (up to 3 stations per trunk)
Residential stations per Sub trunk line	Maximum 125 stations (up to 25 stations per trunk)
Residential Station	Maximum 500 stations
Security Guard Station	Maximum 4 stations
Residential stations in the same residence	Maximum 4 stations (up to 2 monitor stations)
Bus control unit per Common trunk line	Maximum 1 unit
Bus control unit per Sub trunk line	Maximum 1 unit

Please refer to the GH installation manual for complete wiring information on GH Expanded system.

1-3

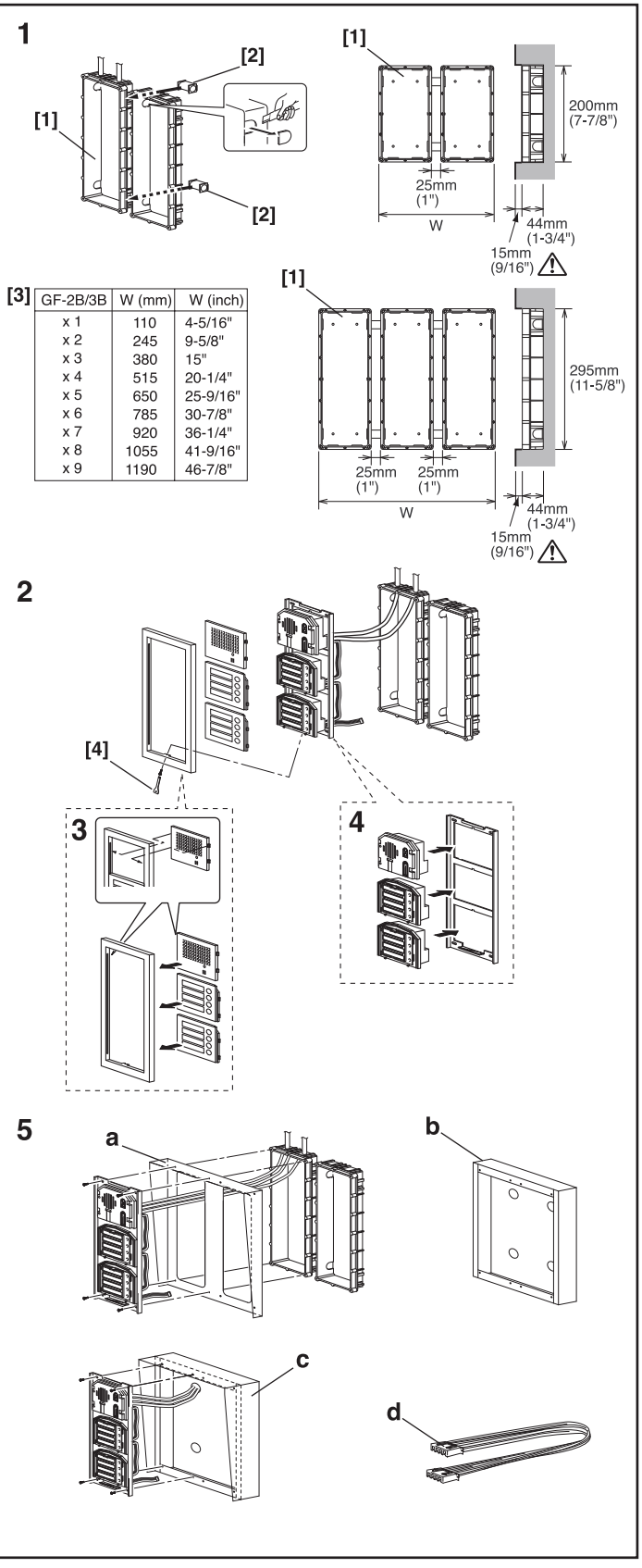
Wiring Distance

* DP = Distribution Point

Diameter of wires	0.65 mm (22 AWG)	0.8 mm (20 AWG)	1.0 mm (18 AWG)
GH-BC - DP	-	5 m (16')	-
DP - GH-DA/A	-	300 m (980')	-
GH-VBC - GH-VA	150 m (490')	300 m (980')	-
GH-MK - DP	-	300 m (980')	-
DP - farthest residential station (R1-R2) (Includes system with GH-4Z)	-	300 m (980')	-
GH-VBC - farthest residential station (1 monitor unit/residence) (Includes system with GH-4Z)	100 m (330')	150 m (500')	-
GH-VBC - farthest residential station (2 monitor units/residence) (Includes system with GH-4Z)	50 m (165')	100 m (330')	150 m (500')
GH-VBC (SW2: STD) - GH-VBC (SW2: EXP)	100 m (330')	150 m (500')	-
GH-BC - power supply	-	5 m (16')	5 m (16')
GH-VBC - power supply	-	5 m (16')	5 m (16')
GH-NS - power supply	-	300 m (980')	300 m (980')
GH-MK - power supply	-	300 m (980')	300 m (980')
Standard system total wiring distance	-	2500 m (8200')	-
GH-BCX/A - power supply	-	5 m (16')	5 m (16')
GH-BC - GH-BCX/A	-	300 m (980')	-
GH-VBC (SW2: EXP) - GH-VBX	-	150 m (500')	-
GH-DA/A - GH-BCX/A	-	300 m (980')	-
GH-VA - GH-VBX	150 m (500')	300 m (980')	-
GH-BCX/A - farthest residential station (R1-R2) (Includes system with GH-4Z)	-	300 m (980')	-
GH-VBX - farthest residential station (1 monitor unit/residence) (Includes system with GH-4Z)	100 m (330')	150 m (500')	-
GH-VBX - farthest residential station (2 monitor units/residence) (Includes system with GH-4Z)	50 m (165')	100 m (330')	150 m (500')
Expanded system total per Common trunk line (maximum 2 trunk lines)	-	each 2500 m (8200')	-
Expanded system total per Sub trunk line (maximum 4 trunk lines)	-	each 2500 m (8200')	-

3 MOUNTING

3-1



[3]

GF-2B/3B	W (mm)	W (inch)
x 1	110	4-5/16"
x 2	245	9-5/8"
x 3	380	15"
x 4	515	20-1/4"
x 5	650	25-9/16"
x 6	785	30-7/8"
x 7	920	36-1/4"
x 8	1055	41-9/16"
x 9	1190	46-7/8"

Mounting the Entrance Station (1)

[1] Back box
[2] Joint pipe
[3] Back box assembly dimensions
[4] Special screwdriver (enclosed with GH-BC)

1. Mounting the back box
- Make a hole for the cable.
- Use the joint pipe to assemble the back box.
- Make sure the back box is mounted level.
- Mount the camera and GH-NS module at eye-level for the average height of an adult.

⚠Do not mount the back box on a surface that is recessed by 15 mm (1/2") or more from the external surface of the wall.

2. Set up the modules.
- For information on what modules can be used, see 2-1 and 2-2.

⚠Up to 6 GH-SW modules can be used. If you would like to connect 7 modules or more, please contact Aiphone.

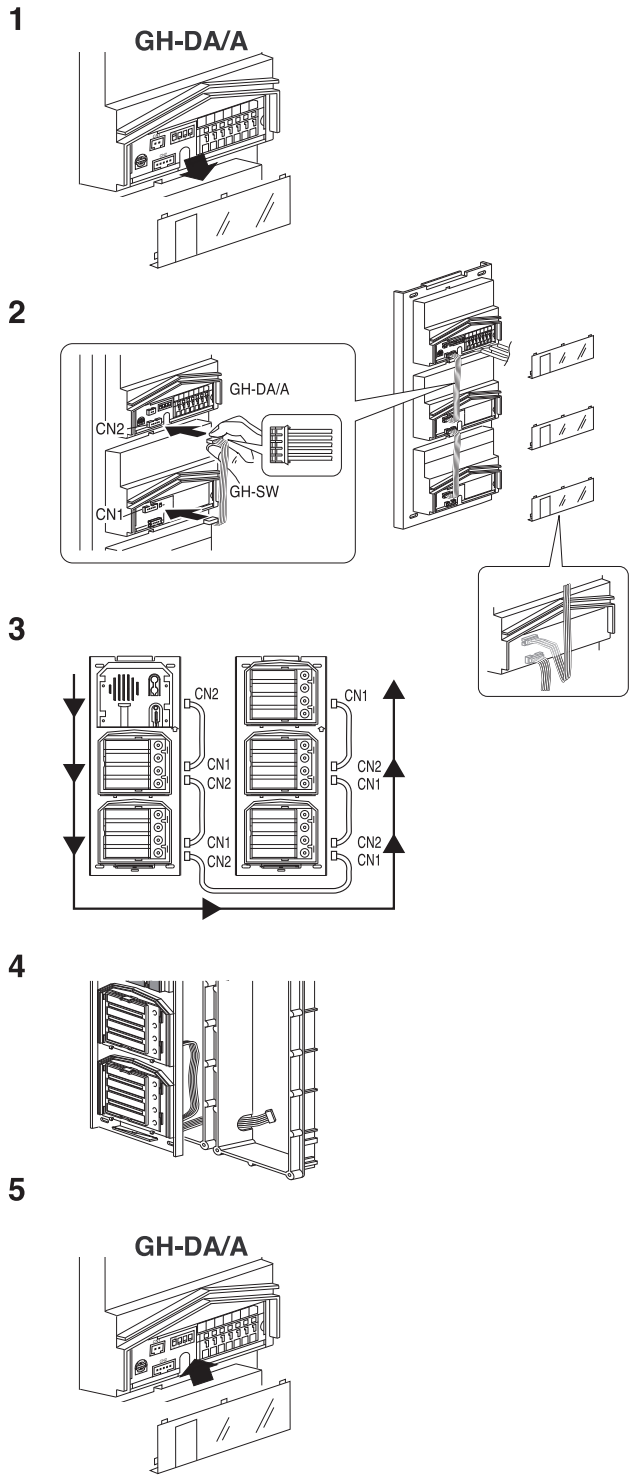
3. Mount each module panel to the front frame.
- Mount the panels from behind the front frame.
- Insert the notch into the slots on both sides and slide it downward.

4. Mount each module, except GF-AC, to the mounting bracket.
- Set the modules in the mounting bracket until they click in place.

5. Options
a. Rain hood GF-203HA
b. Surface-mount box GF-203BA
c. Hooded surface-mount box GF-203HBA
d. 80 cm (32") connection cable GF-C

⚠Peel off protection film on GH-NS display.

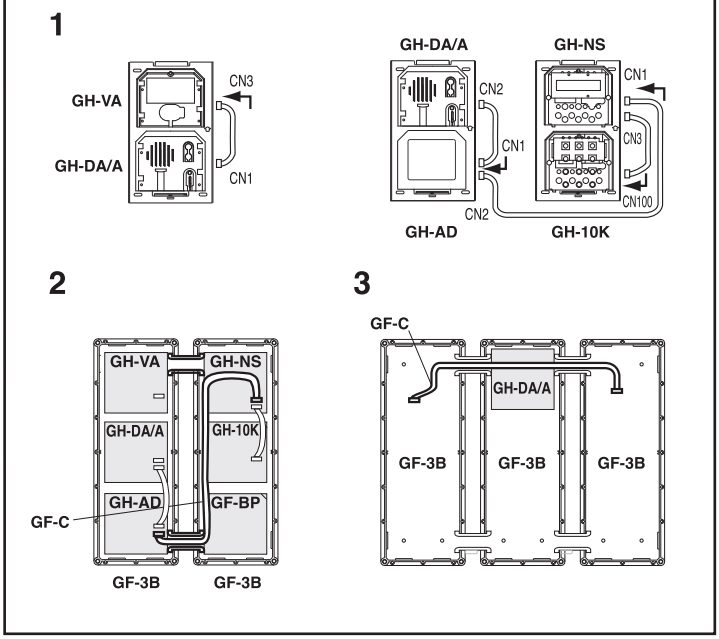
3-2



Mounting the Entrance Station (2)

1. Remove the terminal cover.
2. From the speech module to the next module, insert the attached connector into the socket. Make sure to run the cable under the terminal cover for protection.
3. Connect the connectors between the modules with cables.
4. Run the connection cable through the joint pipe (which you should have made open in advance) and connect CN1 of GH-SW to the next row.
5. Put back the terminal cover.

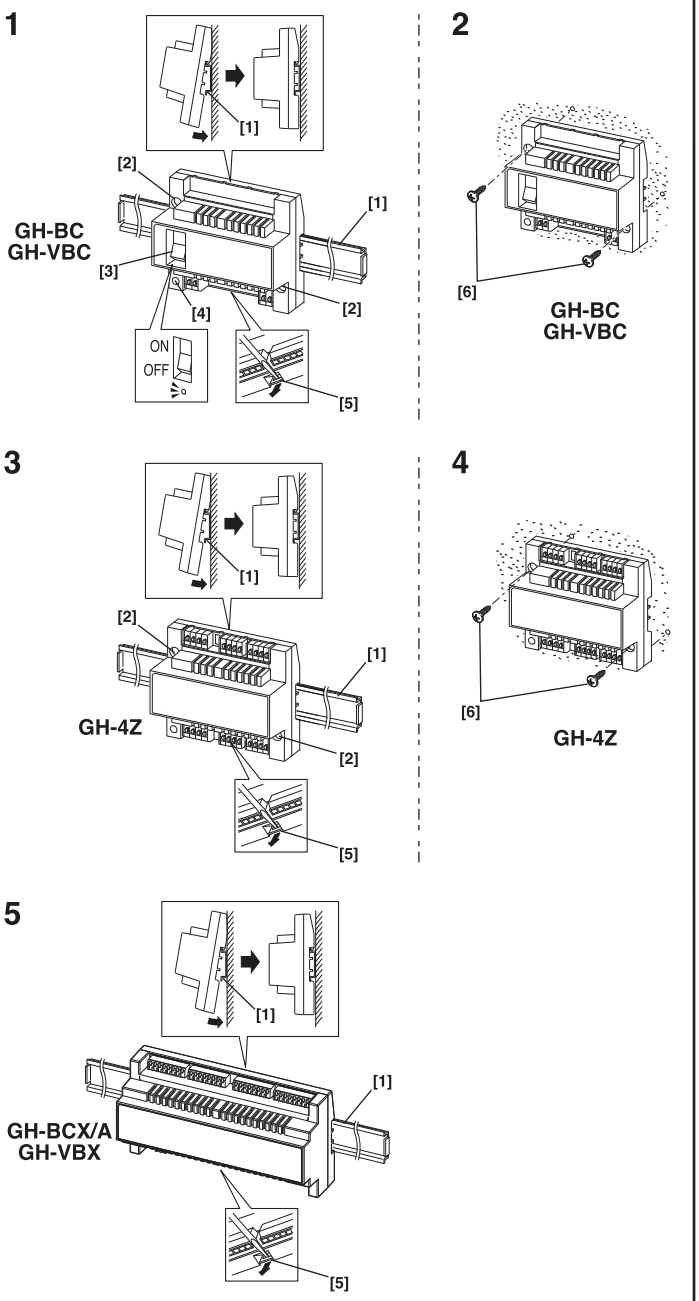
3-3



Mounting the Entrance Station (3)

1. Example of interconnection of modules.
2. Use GF-C to connect to the name scrolling module.
3. To position the speech module in the center row, run GF-C through the joint pipe in advance.

3-4



Bus Control Unit and Power Supply

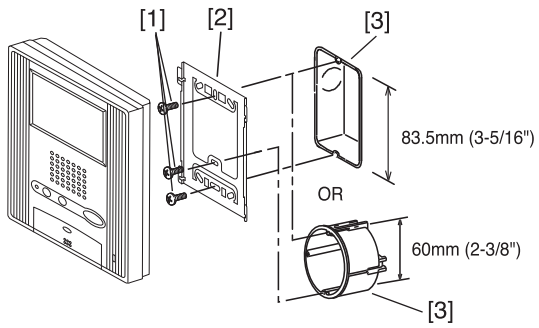
[1] Din rail (W-DIN11)
[2] Screw hole
[3] POWER switch
[4] Power On LED (green)
[5] Lock release lever
[6] Wall mounting screws (x2)

1. Mount GH-BC and GH-VBC to the Din rail. Click unit into place.
   * To remove GH-BC and GH-VBC, pull the lock release lever down.
   * If there is a problem with the system, check the power supply wiring. Turn off the GH-BC and GH-VBC power switch and then turn the switch back on after four seconds. This will reset the entire system.
2. Mount GH-BC and GH-VBC directly to the wall surface.
3. Mount GH-4Z to the Din rail.
   * To remove GH-4Z, pull the lock release lever down.
4. Mount GH-4Z directly to the wall surface.
5. Mount GH-BCX/A and GH-VBX to the Din rail. To remove GH-BCX/A and GH-VBX, pull the lock release lever down.
   ⚠1. GH-BCX/A and GH-VBX cannot be mounted directly to the wall surface.
   ⚠2. The length of the connecting cable between the GH-BCX/A and GH-VBX is 40 cm (15-3/4"). Therefore, mount the GH-BCX/A and GH-VBX adjacent to each other.
6. Power supply PS-2420UL

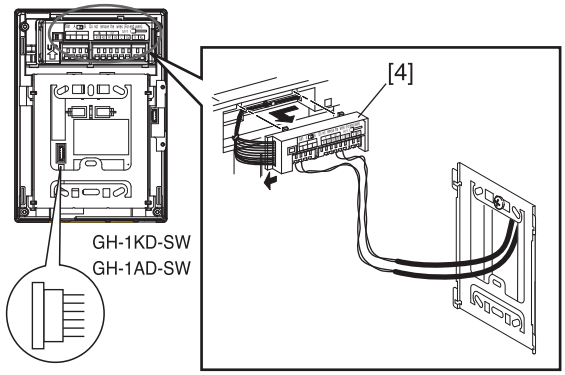
3-5

GH-1AD
GH-1KD

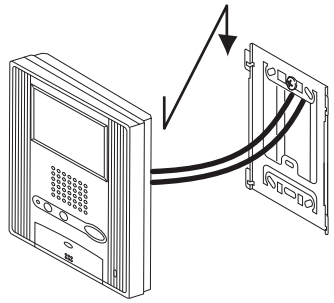
1



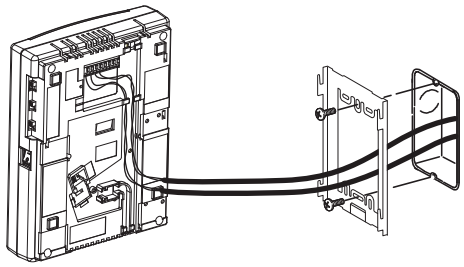
2



3



GH-1MD



Residential Station

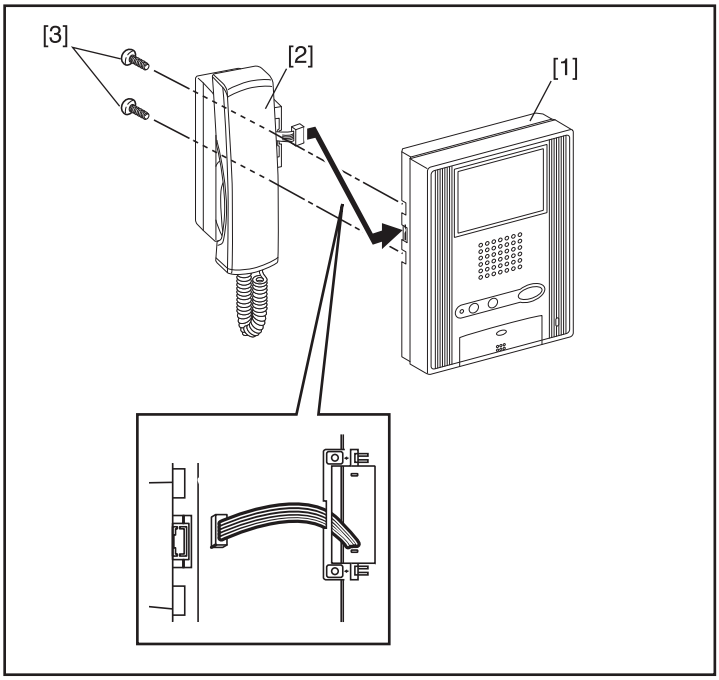
[1] Mounting screws (x2)
[2] Mounting bracket
[3] 1-gang box or round back box
[4] Terminal block (GH-1AD, GH-1KD)

1. Mount the mounting bracket on the 1-gang box.
2. Connect the wiring to the terminal block.
3. Mount the station unit to the mounting bracket.

⚠ Strip away the jacket of the cable and insert all wires into the slots in an orderly fashion. Failure to do so could result in pinching that may damage the wiring.

NOTE: To remove the terminal block, slide the terminal block and pull it out. (GH-1AD, GH-1KD)

3-6



Optional Handset

[1] Chassis
[2] Handset (GH-HS)
[3] Screws (x2)

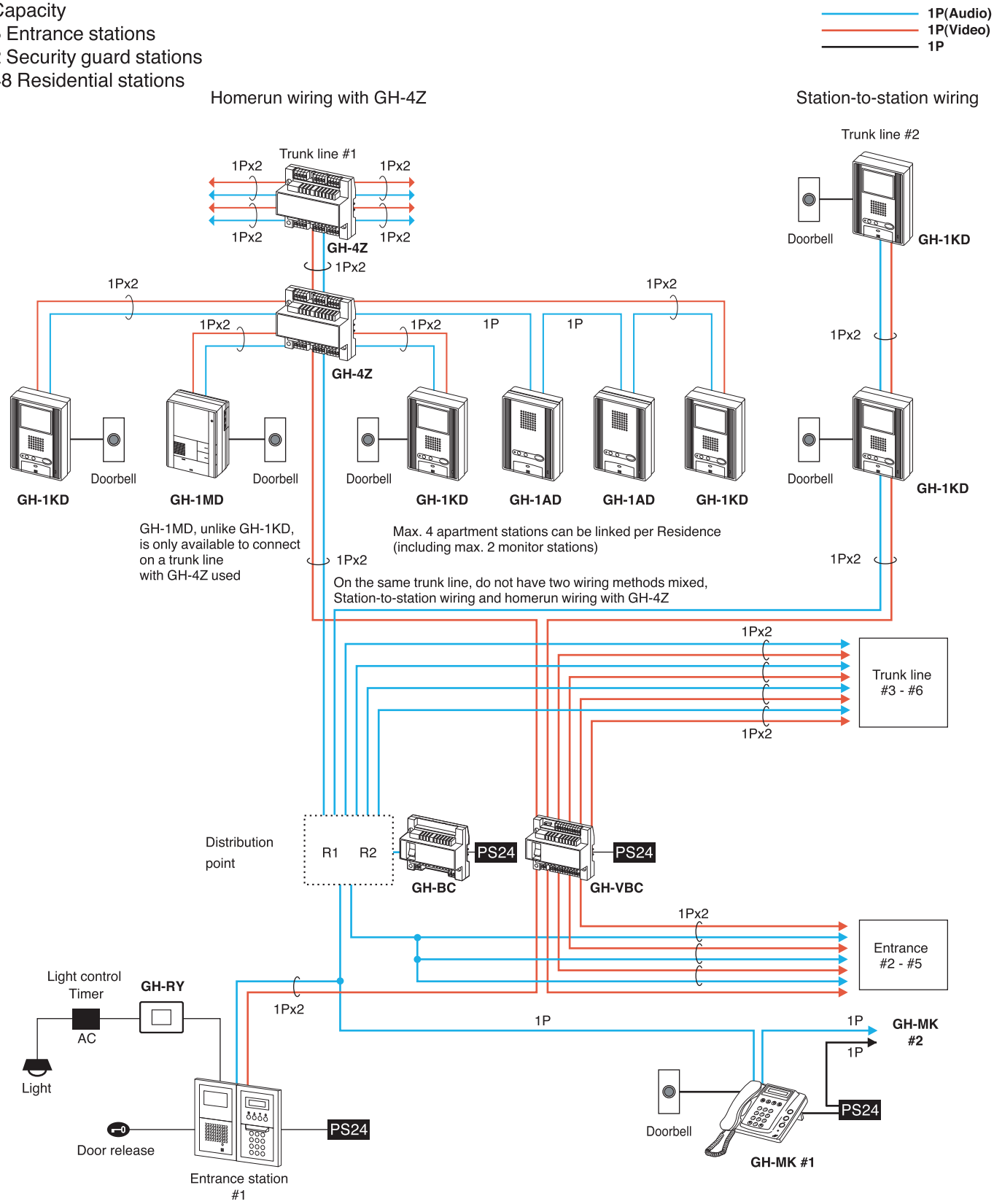
- Connect the station unit joint connector.

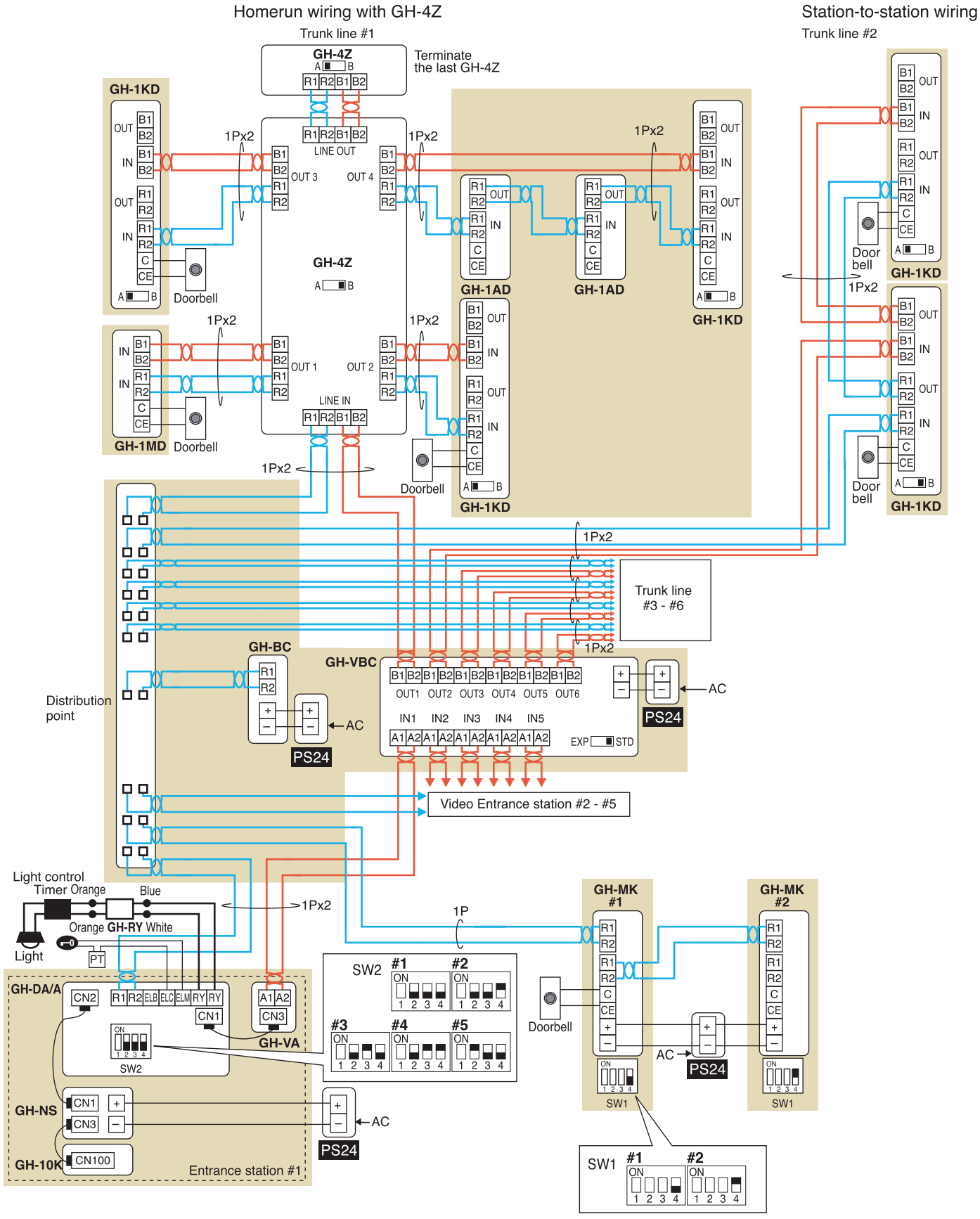
⚠ GH-HS can be installed only for the color monitor residential station (GH-1KD, GH-1KD-SW).

4 WIRING

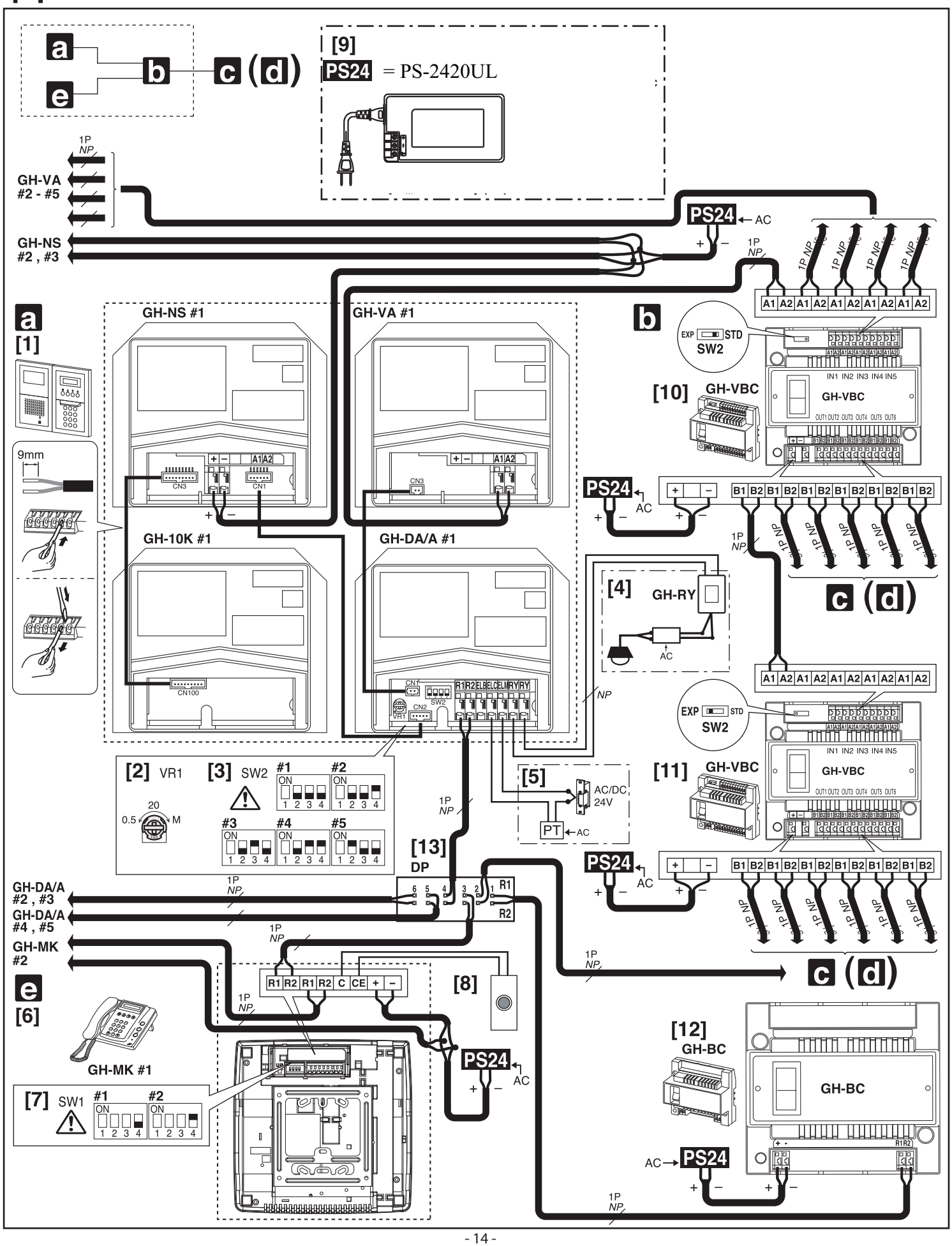
Standard system

Capacity
5 Entrance stations
2 Security guard stations
48 Residential stations

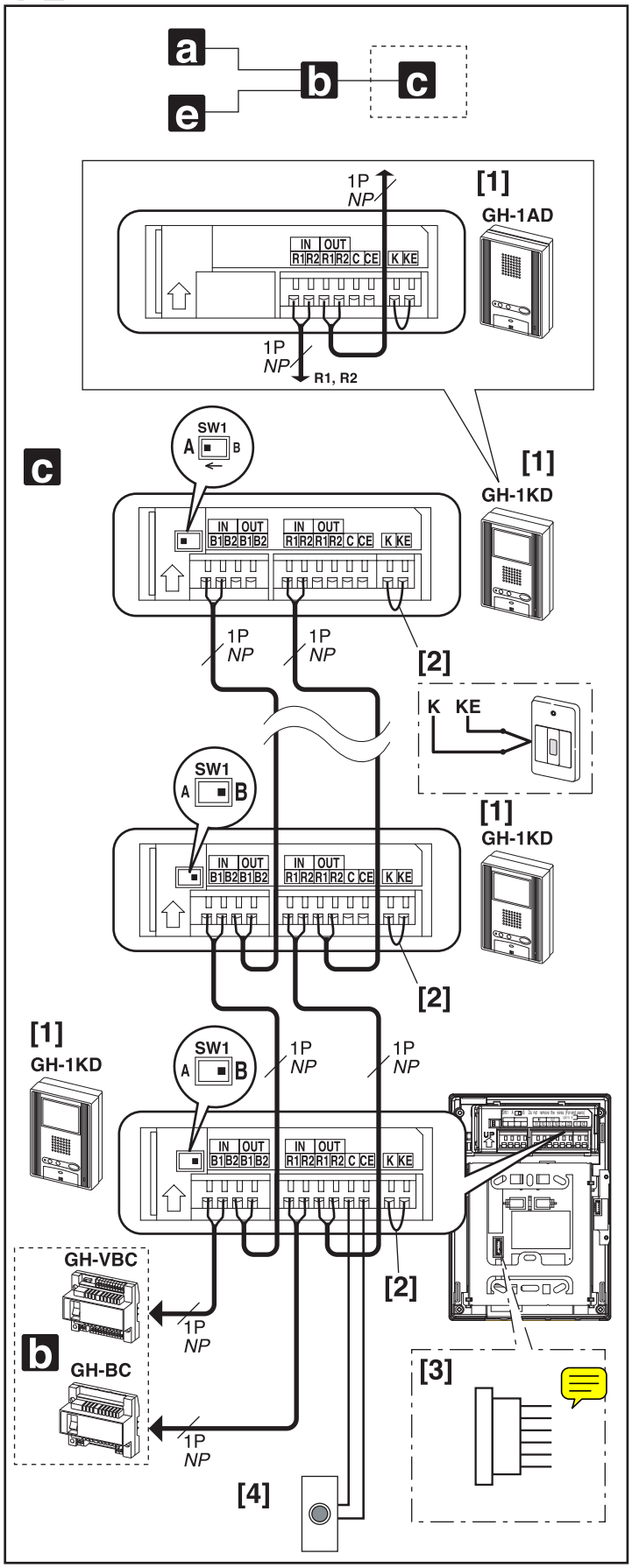



Homerun wiring with GH-4Z
Station-to-station wiring
Trunk line #1
Trunk line #2
GH-4Z
Terminate the last GH-4Z
GH-1KD
GH-1AD
GH-1MD
Doorbell
Door bell
1Px2
LINE OUT
LINE IN
OUT 1
OUT 2
OUT 3
OUT 4
Trunk line #3 - #6
Distribution point
GH-BC
GH-VBC
PS24
AC
Video Entrance station #2 - #5
Light control
Timer Orange
Blue
Orange GH-RY White
Light
PT
1P
GH-MK #1
GH-MK #2
SW1
SW2
GH-DA/A
GH-VA
GH-NS
GH-10K
CN100
Entrance station #1

4-1


a
b
e
c (d)
[9]
PS24 = PS-2420UL
1P NP
GH-VA #2 - #5
GH-NS #2 , #3
PS24
AC
GH-NS #1
GH-VA #1
GH-10K #1
GH-DA/A #1
[1]
9mm
[2] VR1
[3] SW2
[4] GH-RY
[5] AC/DC 24V
PT
[6] GH-MK #1
[7] SW1
[8]
[10] GH-VBC
[11] GH-VBC
[12] GH-BC
[13] DP
GH-DA/A #2 , #3
GH-DA/A #4 , #5
GH-MK #2
EXP STD
SW2
IN1 IN2 IN3 IN4 IN5
OUT1 OUT2 OUT3 OUT4 OUT5 OUT6
A1 A2
B1 B2
R1 R2 EL BEL CEL MRY RY
CN1 CN2 CN3 CN100 VR1 SW2
R1 R2 R1 R2 C CE + –
ON 1 2 3 4

4-2



4-1

Standard System (1)

[1] Entrance Station

[2] Door release timer (set to "M" at time of shipment)

- Set the duration for the door release function when the door release button is pressed.
  [0.5] - [20]: 0.5 secs - 20 secs
  [20] - [M]: Activates while the button is pressed.

[3] Setting switch (GH-DA/A)

- SW2: 1: Setting switch for camera entrance station monitoring function (set to OFF at time of shipment)
  ON (Up): Monitored.
  OFF (Down): Skipped at time of entrance station monitoring.
- SW2: 2 - 4: Entrance station number setting switch (set to #1 at time of shipment)

⚠When installing multiple entrance stations, make sure to set the GH-DA/A ID numbers (SW2).

[4] External signaling relay GH-RY
For details, see 4-5.

[5] Door release relay contact
Less than AC/DC 24 V, 4 A (resistance load)
PT: AC Transformer
For connecting the access control keypad module GF-AC, refer to the GF-AC Installation & Operation Manual.

[6] Security guard station GH-MK

[7] Setting switch (GH-MK)

- SW1: 1: Password reset switch
  Set the password reset switch to ON for 2 seconds or more during standby will reset the password (set to "*1111" at time of shipment).
- SW1: 2, 3: Unused switch
- SW1: 4: Security guard station number setting switch (set to #1 at time of shipment)

⚠When installing two security guard stations, make sure to set the ID numbers (SW1).

[8] Doorbell button

[9] Power supply PS-2420UL

[10] Video Bus control unit GH-VBC (SW2: STD)

[11] Video Bus control unit GH-VBC (SW2: EXP)

- To use GH-VBC as an extension adaptor, set the setting switch to "EXP". Connect only "IN1" terminal at input side.

[12] Bus control unit GH-BC

[13] Distribution terminal (junction): Not included

NP: Non-polarized

4-2

Standard System (2) Station-to-Station Wiring

[1] Residential station GH-1KD, GH-1AD

- There can be a maximum of 25 stations per trunk.
- For the terminating residential station GH-1KD, set the setting switch (SW1) to "A".

[2] Short lead

- To use the emergency alarm switch (see 11-7 for details), disconnect the short lead and connect the switch.

[3] Option Connector
For details, see 4-6.

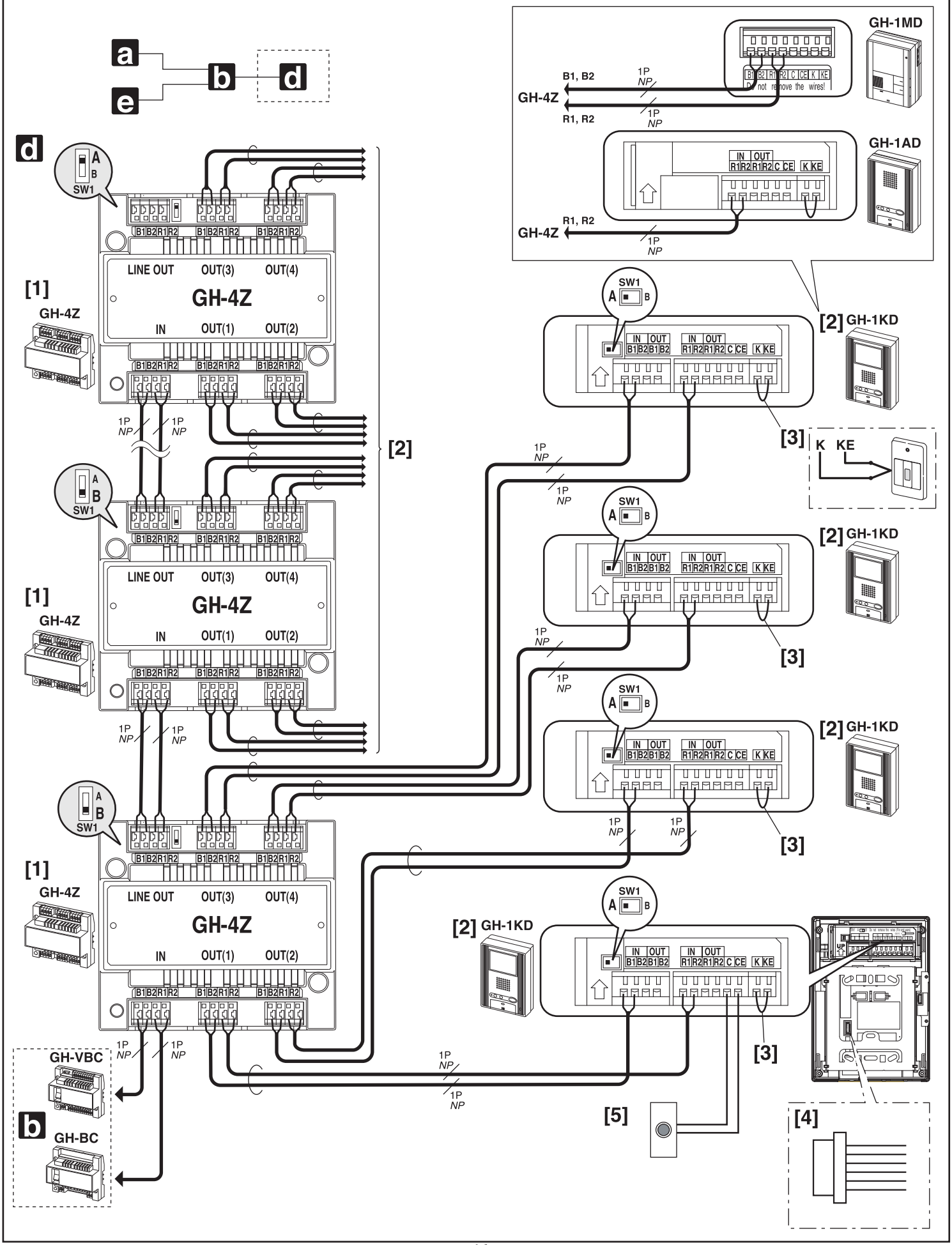
⚠The separate option connecter is required.

[4] Doorbell button

⚠1. Do not mix station-to-station wiring with homerun wiring.

⚠2. Station-to-station wiring is not possible for GH-1MD.

NP: Non-polarized


a
e
b
d
GH-1MD
B1, B2
1P NP
GH-4Z
R1, R2
1P NP
Do not remove the wires!
GH-1AD
IN OUT
R1 R2 R1 R2 C CE K KE
[2] GH-1KD
[3]
K KE
[1]
GH-4Z
LINE OUT OUT(3) OUT(4)
GH-4Z
IN OUT(1) OUT(2)
B1 B2 R1 R2
SW1
A B
[5]
[4]
GH-VBC
GH-BC

4-3

Standard System (3) Homerun Wiring

[1] 4-way video junction unit GH-4Z

- For the terminating GH-4Z (maximum of 6 units per trunk), set the setting switch (SW1) to "A".

[2] Residential station GH-1KD, GH-1AD, GH-1MD

- For GH-1KD, set the setting switch (SW1) to "A".

[3] Short lead

- To use the emergency alarm switch (see 11-7 for details), disconnect the short lead and connect the switch.

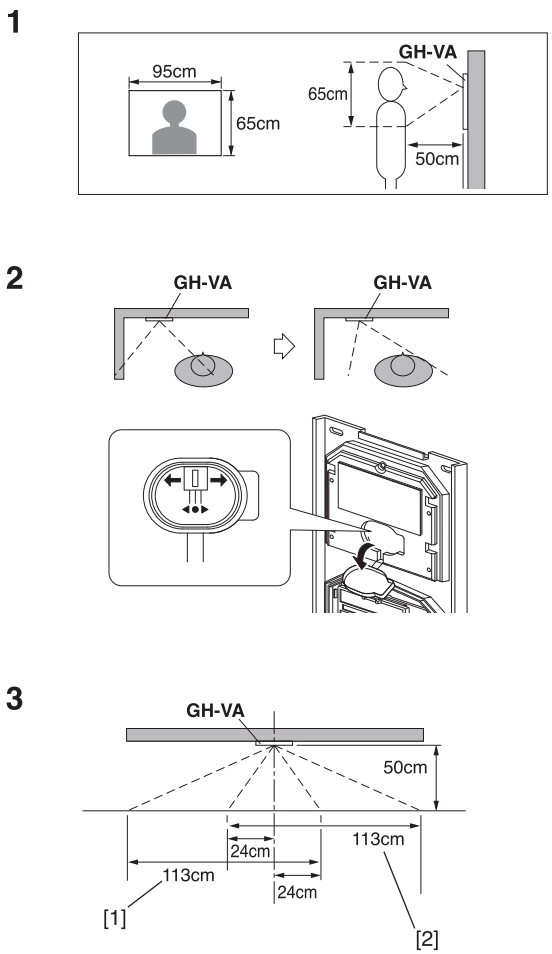
[4] Option Connector
For details, see 4-6.
⚠ The separate option connecter is required.

[5] Doorbell
⚠ Do not mix homerun wiring with station-to-station wiring on the same trunk line.

NP: Non-polarized

8 SETTING UP (ENTRANCE STATION)

8-1



Adjusting the Camera Angle

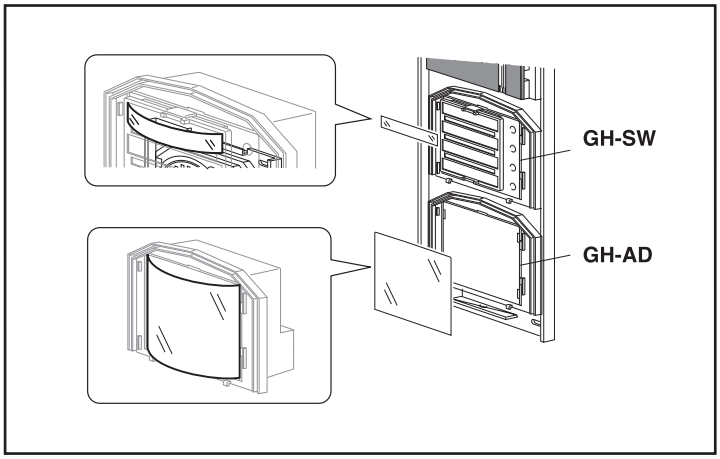
1. View from the initial camera position
2. Changing the camera angle
- Remove the rubber cap. Move the lever to the desired position.

* Do not forget to reset the rubber cap.

3. Image view area after adjustment

[1] When camera has been adjusted to the left
[2] When camera has been adjusted to the right

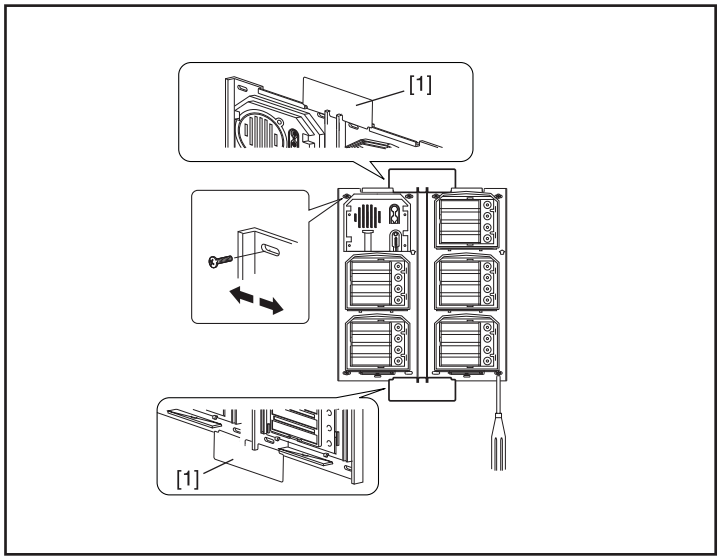
8-2



Entering Names and Addresses

- Remove the resident name/address plate or paper by pressing the left or right end. (Peel off the plastic film.)
- Use a permanent pen to write the resident name and address on the transparent plate and mount the plate on the module.

8-3

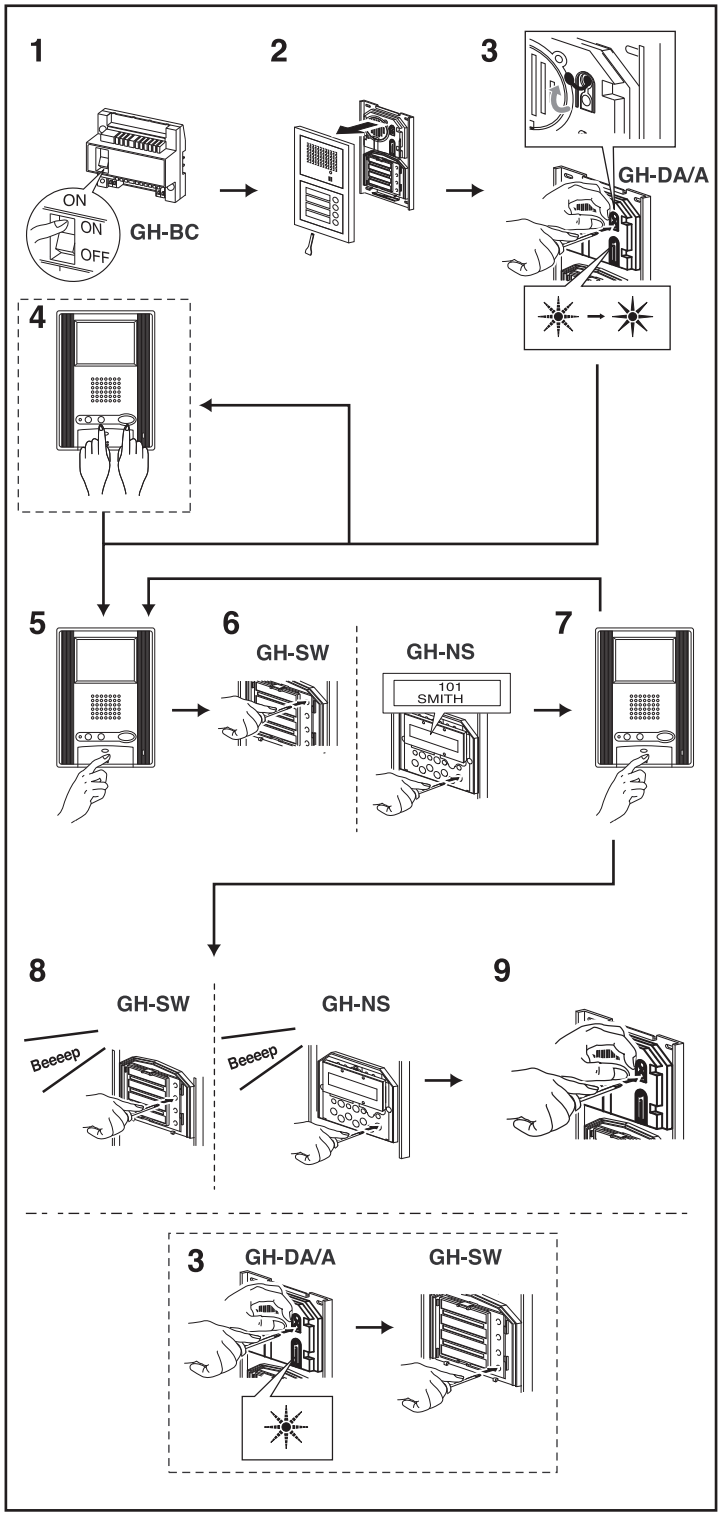


Making Adjustments with the Mounting Gauge

[1] Mounting gauge

- To mount multiple rows of panels, apply the mounting gauge to the mounting bracket. While using the mounting gauge to make adjustments, tighten the screws.

* There is a mounting gauge for the built-in back box of GF-2B and GF-3B.



Setting up the System

1. Make sure that all units are installed and wired properly. Turn on the power switch in GH-BC. When the system includes GH-NS, program the resident information (names and room numbers) in advance. (For details, see 8-5)
2. Loosen the base screw and open and remove the front panel.
3. Set the system to program mode.
- Lift up the rubber cap.
- Press the program switch once. Use any long thin tool, such as a fine screwdriver.
- The In-Use LED will blink for approximately 15 seconds for entrance stations with GH-SW and between approximately 6 to 15 seconds for entrance stations with GH-NS.

Continue to the appropriate step according to the setting up status of the residential station.

- If setting up the link for the first time after mounting the residential station => 4.
- In cases other than that stated above => 5.

4. Perform the operation below only if "setting up the link for the first time after mounting the residential station."
Once the In-Use LED is lit solid, press the door release button while holding down the light button of the residential station and continue to press the buttons until a beep is emitted approximately 3 seconds later.
Performing the operation in step 4 will delete all setting data in the residential station and return it to the initial settings.
5. Once the In-Use LED is lit solid, press the talk button of the first residential station. The corresponding communication channel will be established.
For GH-MK, lift the handset.
6. For GH-SW, press the (corresponding) call button and release quickly. (Do not press the button longer than 1 second.) For GH-NS, display the assigned room No. and press the call button (bell symbol). (Do not press the button longer than 1 second.)
An electronic beep will be emitted once.
7. Press the talk button to end. Repeat these steps and program all residential stations.
For GH-MK, hang up the handset.

* If there is a second residential station installed in a single apartment, program the residential station following the same method detailed in steps 4 through 6. An electronic beep will be emitted twice. An electronic sound will be emitted three times for a third residential station and four times for a fourth residential station.

8. Correcting or changing the settings
- Press and hold down the call button of GH-SW or GH-NS until you hear a continuous beep. For GH-NS,display the room you want to correct and reprogram all the residential stations in the single apartment (following steps 4 and following).

9. Ending programming
- Push the GH-DA/A program switch. The In-Use LED will go off.
- Replace the cap.

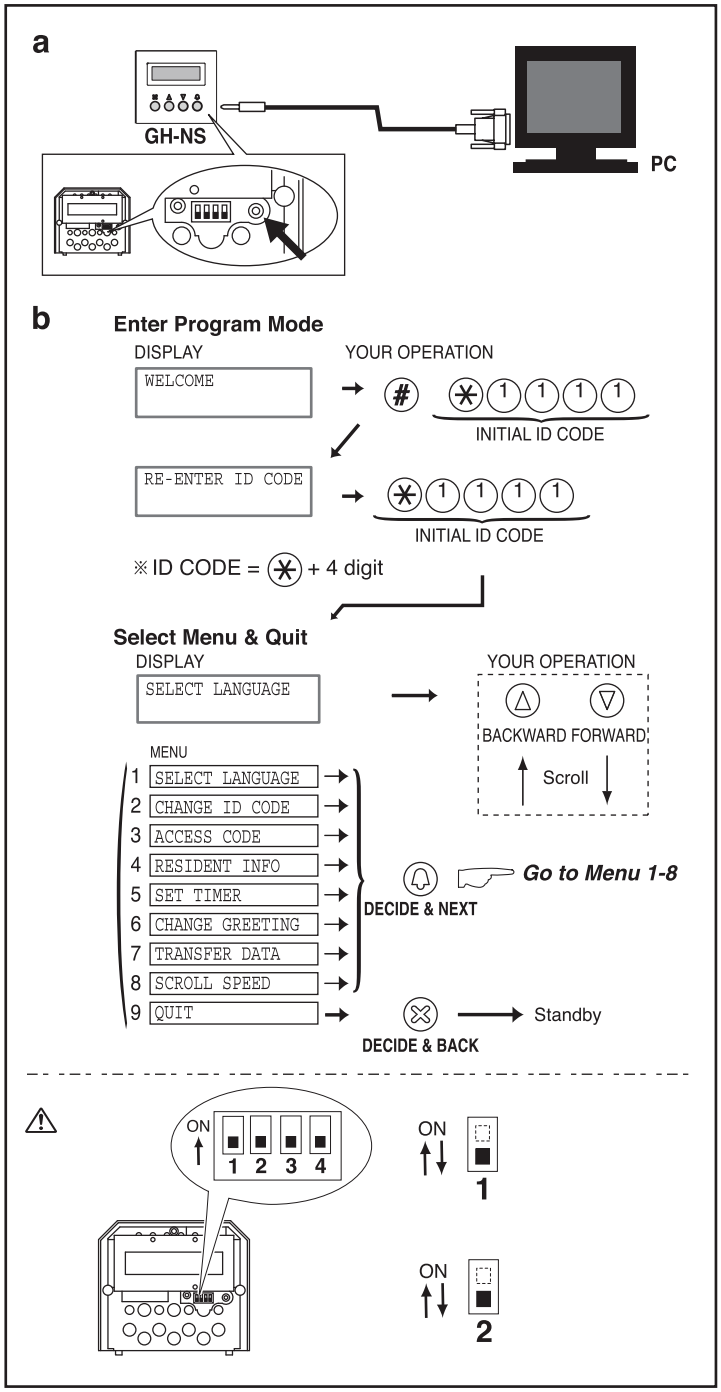
10. Checking the programming
- Pressing the program switch for 5 seconds or more will light up the In-Use LED.
- In the case of GH-SW, an electronic beep will be emitted once when the programming was successful. If the programming was unsuccessful, an alarm beep will be emitted.
- For GH-NS, use the arrow keys or 10-key to select the room and press the call button. An electronic sound will be emitted once when the programming was successful. If the programming was unsuccessful, an alarm sound will be emitted.
- Press the programming switch to end the check.

⚠If power supply is interrupted during programming, the programmed information might be lost. In such cases, retry the programming again from the beginning.

NOTES: 1. Setting up the light button (GH-SW) In Step 3, press the call button of the assigned GH-SW while the In-Use LED is blinking (within 15 seconds in program mode), the light button will be set up. (The assigned call button cannot be used as the residential call button simultaneously.) An electronic beep will be emitted once.

2. If you attempt to setup a fifth residential station when four residential stations have already been established, an alarm beep will be emitted. To cancel the communication link, display the assigned name and press the call button for at least 3 seconds. A continuous beep will be emitted to verify the communication link has been cleared.

8-5



Programming (GH-NS)

a. Programming with a PC

- You can use a PC to enter data and write in or change resident names.
- Use the connection cable that comes with GH-NS to connect your PC to GH-NS.
- In your PC, install the setup tool program from the CD that comes with the GH-BC.

* For information on how to use the setup tool, see the text (.txt) file that is installed in the same folder as the setup tool (.exe). Save programmed data and resident information data to your PC is recommended.

b. Programming with GH-NS and GH-10K

- Confirm that "Welcome" is shown on the Display, indicating that the system is in standby mode.

* You can change the "Welcome" text.

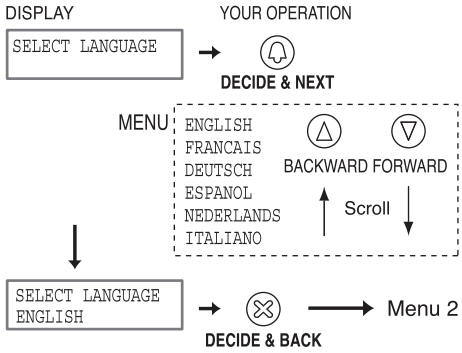
- First, set the system to program mode.
  Press " #✱ " and enter the 4-digit ID code.
  RE-ENTER ID CODE is displayed, re-enter " ✱ " and the 4-digit ID code.
  The initial ID code is ①①①① .

* Before you begin programming, we recommend that you register a new exclusive ID code for yourself so that the system is not accessed by others. (For details, see 8-6.)

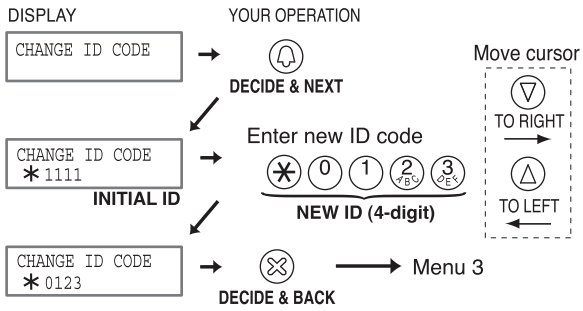
⚠ If you have forgotten your ID code, set the switch (#1) to ON for approximately 2 seconds. The ID code will be reset to the default setting of "∗1111".

NOTE: To display only resident name without room number; Set the switch (#2) to ON.

1

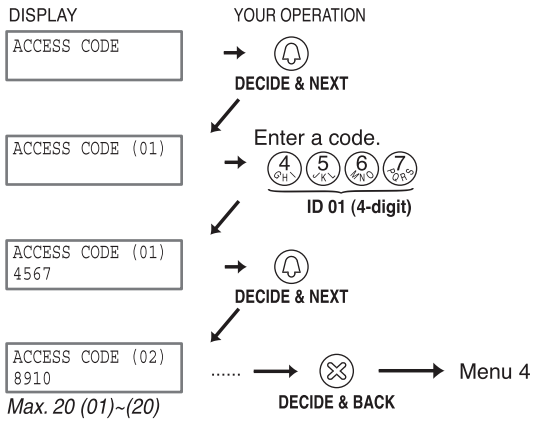


2



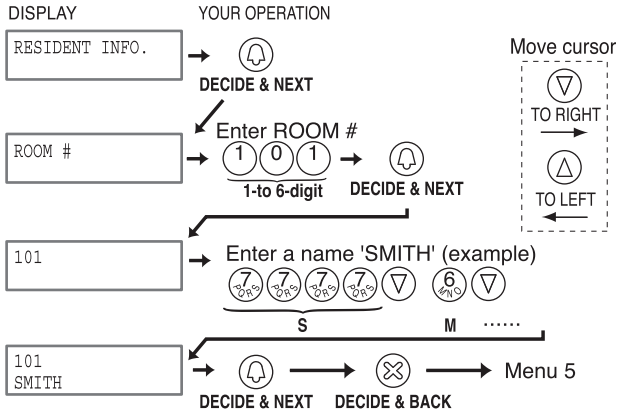
※ ID CODE = ✳ + 4 digit

3

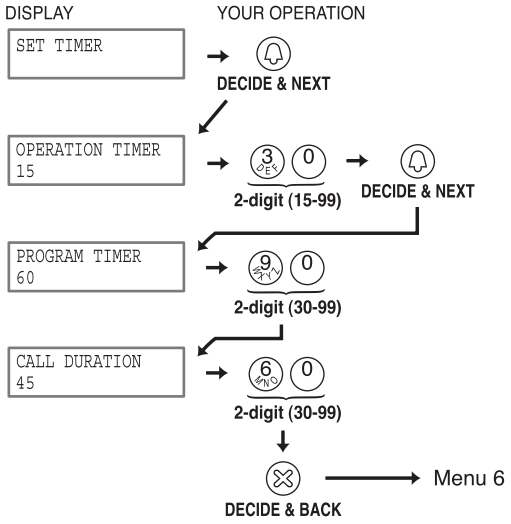


Max. 20 (01)~(20) programmable

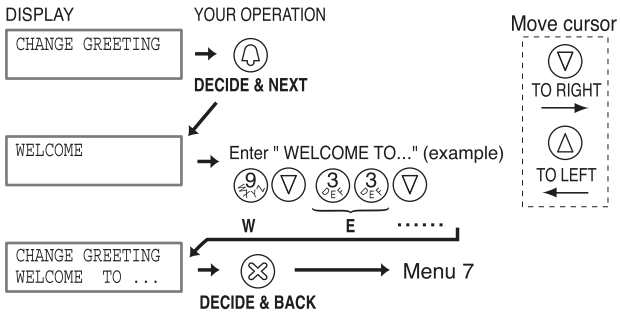
4



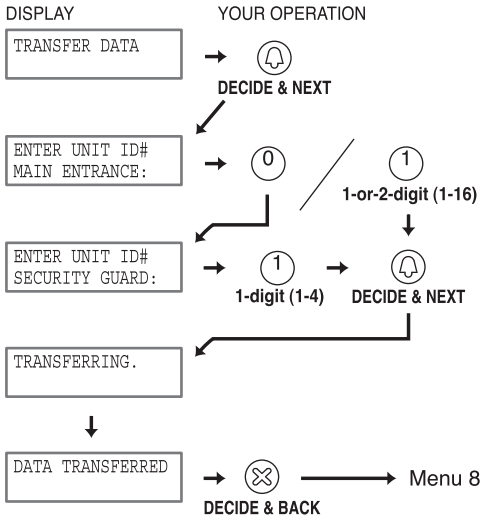
5



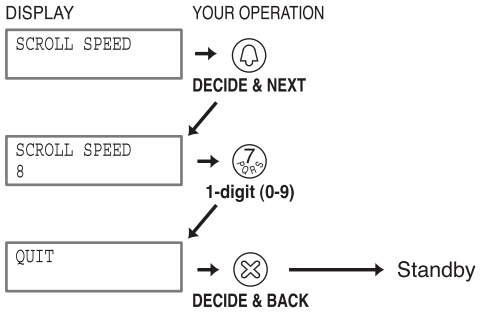
6



7



8



8-6

Program Mode (GH-NS)

1. Menu 1: Select language
   Choose language to be displayed on GH-NS.
   ⚠When selects "ITALIANO" as display language on GH-NS, use the setup tool program Ver.2.2 or new. If the setup tool program version is not corresponding, the display language becomes English. Download the latest version from our web site http://www.aiphone.com.
   When "ITALIANO" is not in the menu on GH-NS, Italian cannot be displayed. At this time, if "ITALIANO" is chosen and programmed with setting tool Ver.2.2 or new, it becomes a communication error. Try to reprogram in another language.
2. Menu 2: Change ID code
   Enter new ID code starting with "∗", then 4-digit number. (Example: ∗1234)
3. Menu 3: Set access code
   Enter new 4-digit Access Code. (Example: 1234)
   • (0000) cannot be registered as an access code.
   • Recommend not to use a simple access code such as (1111).
4. Menu 4: Write in resident information
   Register room #s and resident names.
   Enter room #s using 1 to 6-digit characters.
   Enter resident name (up to 16 characters).
5. Menu 5: Set input timeout timer
   Operation Timer: If the operation panel is not operated for a certain period of time, the system returns to standby mode. Programmable from 15 to 99 seconds.
   Program Timer: If, in Residential Programming mode, the operation panel is not operated for a certain period of time, it automatically cancels the programming mode. Programmable from 30 to 99 seconds.
   Call Timer: Call from Entrance panel expires in a certain period of time. Programmable from 30 to 99 seconds.
6. Menu 6: Change greeting
   Enter greeting message (up to 160 characters).
7. Menu 7: Transfer link information
   ⚠With Expanded System, enter unit ID# for transferring Entrance stations and Security guard stations as below;
   • Entrance station: Connected to same common line - "programmed ID#" as is. (e.g. transferring to #2: Enter "2"), or Connected to another common line - "programmed ID# plus 8" (e.g. transferring to #1: 1+8=9, Enter "9")
   • Security guard station: Connected to same common line - "programmed ID#" as is. (e.g. transferring to #2: Enter "2"), or Connected to another common line - "programmed ID# plus 2" (e.g. #1: 1+2=3, Enter "3")

5 TECHNICAL PRECAUTIONS

Technical precautions

- Operating temperature : Entrance Station: -10 - 60 °C
  Residential Station: 0 - 40 °C
  Security Guard Station: 0 - 40 °C
  Control Unit: 0 - 40 °C
- Mounting location : Do not install the entrance station in a place where there would be a bright light behind a visitor (or where there would be a bright background) or in a place where the camera lens would be directly exposed to sunlight or a bright light.
- Rain hood (option): Although the entrance station is weather resistant, it is recommended that it not be directly exposed to weather conditions. The rain hood (GF-H) can be installed to protect the entrance station from rain fall.
- Post-replacement setup : After all wiring is completed and the residential station has been replaced, turn off the power to GH-BC temporarily and then turn it back on. Next, reprogram the relevant residential station.
- Operation : When an entrance station is calling a residential station, the call tone from the doorbell button will not sound.
- Cleaning: Clean the units with a soft cloth dampened with a neutral household cleanser. Never use an abrasive cleanser or cloth.
- Repair requests : When units do not operate normally, request repairs from a qualified technician.

6 SPECIFICATIONS

Specifications

- Power supply:
  DC 24V supplied by PS-2420UL
  (for GH-BC, GH-VBC, GH-NS/10K, GH-MK, GH-BCX)
- Current consumption:
  GH-BC: 0.9 A, GH-VBC: 0.9 A, GH-NS: 0.13 A,
  GH-MK: 0.18 A, GH-BCX: 0.35 A
- Call tone:
  There are three different types of call tones:a call tone for the entrance station, a call tone for the security guard station and a call tone for the doorbell button.
- Communication route: Secure single channel
- Communication:
  Voice-actuated communication (or press-to-talk communication)
- Door release:
  Connecting terminals: Between ELM-ELC (N/O) and ELB-ELC (N/C)
  Specifications: less than 4A (resistance load), AC/DC 24V, dry closure contact for door release
- Wiring: 2 pair cables
- Type of cables:
  Pair cable (solid wire not stranded), polyethylene insulated, diameter 0.65 1.0 mm
- Dimensions:
  GH-1MD: 160 (W) x 210 (H) x 55.5 (D) mm (6-5/16 x 8-1/4 x 2-3/16 inch)
  GH-1AD: 125 (W) x 175 (H) x 32 (D) mm (4-15/16 x 6-14/16 x 1-1/4 inch)
  GH-1KD: 125 (W) x 175 (H) x 32 (D) mm (4-15/16 x 6-14/16 x 1-1/4 inch)
  GH-BC: 122.5 (W) x 108.5 (H) x 61 (D) mm (4-13/16 x 4-1/4 x 2-3/8 inch)
  GH-VBC: 122.5 (W) x 108.5 (H) x 61 (D) mm (4-13/16 x 4-1/4 x 2-3/8 inch)
  GH-4Z: 122.5 (W) x 108.5 (H) x 61 (D) mm (4-13/16 x 4-1/4 x 2-3/8 inch)
  GH-MK: 215 (W) x 210 (H) x 69 (D) mm (8-7/16 x 8-1/4 x 2-3/4 inch)
  GH-BCX: 210 (W) x 108.5 (H) x 61 (D) mm (8-1/4 x 4-1/4 x 2-3/8 inch)
  GH-VBX: 210 (W) x 108.5 (H) x 61 (D) mm (8-1/4 x 4-1/4 x 2-3/8 inch)
  Entrance Station
  2 module, 2 row panel : 270 (W) x 225 (H) x 16 (D) mm (10-5/8 x 8-7/8 x 5/8 inch) (Box depth: 44mm (1-3/4"))
  3 module, 1 row panel : 135 (W) x 320 (H) x 16 (D) mm (15-5/16 x 12-5/8 x 5/8 inch) (Box depth: 44mm (1-3/4"))
- Weight:
  GH-1MD: Approx. 980 g (2.2 lbs.)
  GH-1AD: Approx. 330 g (0.7 lbs.)
  GH-1KD: Approx. 400 g (0.9 lbs.)
  GH-BC: Approx. 450 g (1.0 lbs.)
  GH-VBC: Approx. 2500 g (0.6 lbs.)
  GH-4Z: Approx. 190 g (0.4 lbs.)
  GH-MK: Approx. 900 g (2.0 lbs.)
  GH-BCX: Approx. 400 g (0.9 lbs.)
  GH-VBX: Approx. 350 g (0.8 lbs.)

WARRANTY

Aiphone warrants its products to be free from defects in material and workmanship under normal use and service for a period of one year after delivery to the ultimate user. We will repair free of charge or replace at no charge Aiphone product, that upon examination by an Aiphone Repair Technician is proven defective and under warranty. Aiphone reserves the right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty covers bench repairs by the Aiphone Service Department only, and does not extend to units that have been repaired or altered outside of the factory. Aiphone is not responsible for any costs incurred involving on-site service calls. This warranty shall not apply to any Aiphone product that has been subjected to misuse, neglect, accident, power surge, or used in violation of instructions furnished.

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