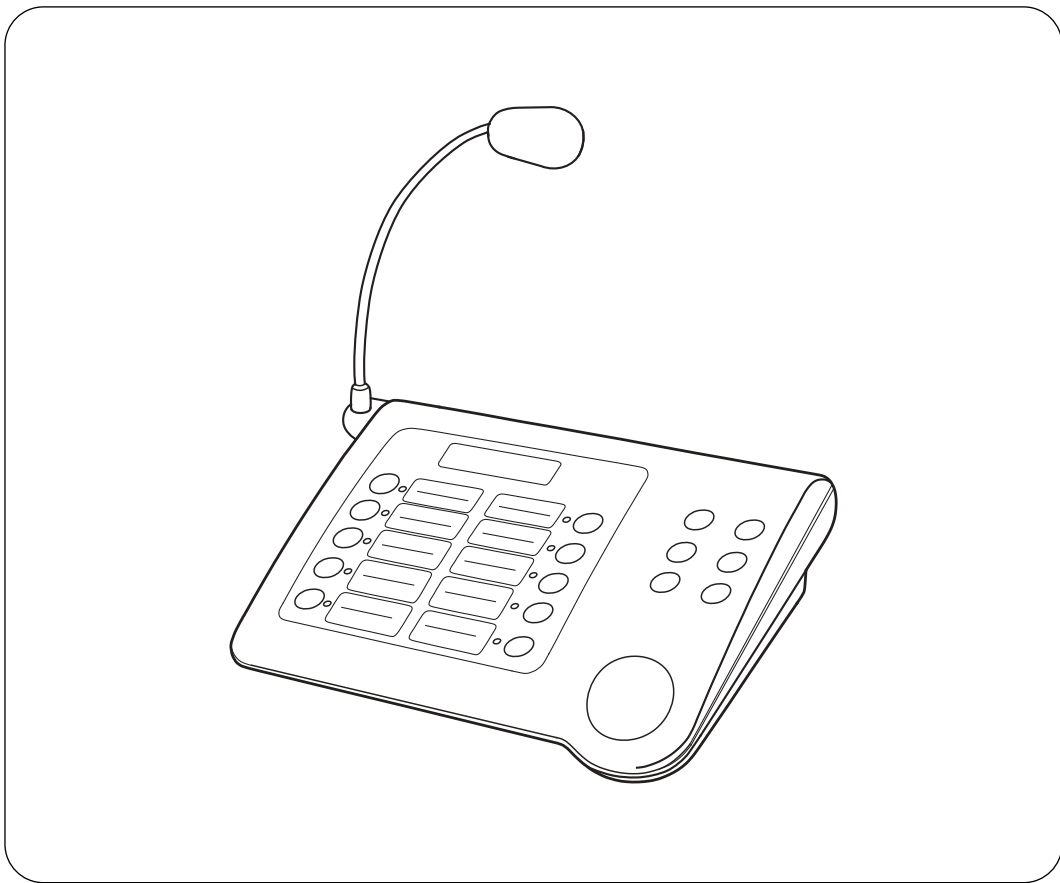




INSTRUCTION MANUAL

REMOTE MICROPHONE

RM-1200



Please follow the instructions in this manual to obtain the optimum results from this unit.
We also recommend that you keep this manual handy for future reference.

TOA Corporation

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1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first so you are thoroughly aware of the potential safety hazards as well as understand the safety symbols and messages.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the connection cables. In addition, avoid using the cables in close proximity to heaters, and never place heavy objects on the cables, as doing so may result in fire.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- To prevent the electromagnetic wave from badly influencing medical equipment, avoid installing the unit in close proximity to the medical equipment.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the circuit breaker of the junction panel to which the unit is connected. Then, contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
 - If you detect smoke or a strange smell coming from the unit.
 - If water or any liquid gets into the unit
 - If the unit falls, or the unit case breaks
 - If the connection cables are damaged (exposure of the core, disconnection, etc.)
- Do not place cups, bowls, or other containers of liquid on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not touch connection cables during thunder and lightning, as this may result in electric shock.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire.

When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Do not stand on nor hang down from the unit as this may cause it to fall down or drop, resulting in personal injury and/or property damage.
- Cut off the power supply (24 VDC) to the unit for safety purposes when cleaning or leaving the unit unused for 10 days or more. A fire may result.

2. GENERAL DESCRIPTION

TOA's RM-1200 is a general-purpose remote control unit designed to be used in conjunction with TOA's FS-971 Series Rack Mounted Emergency PA Systems. Featuring a built-in chime unit, the RM-1200 permits group broadcast of up to 20 groups, simultaneous all-zone broadcast, and individual zone broadcast of up to 330 zones. First-in-first-out or Last-in-first-out priority can be assigned to individual units when connecting multiple remote control units.

3. FEATURES

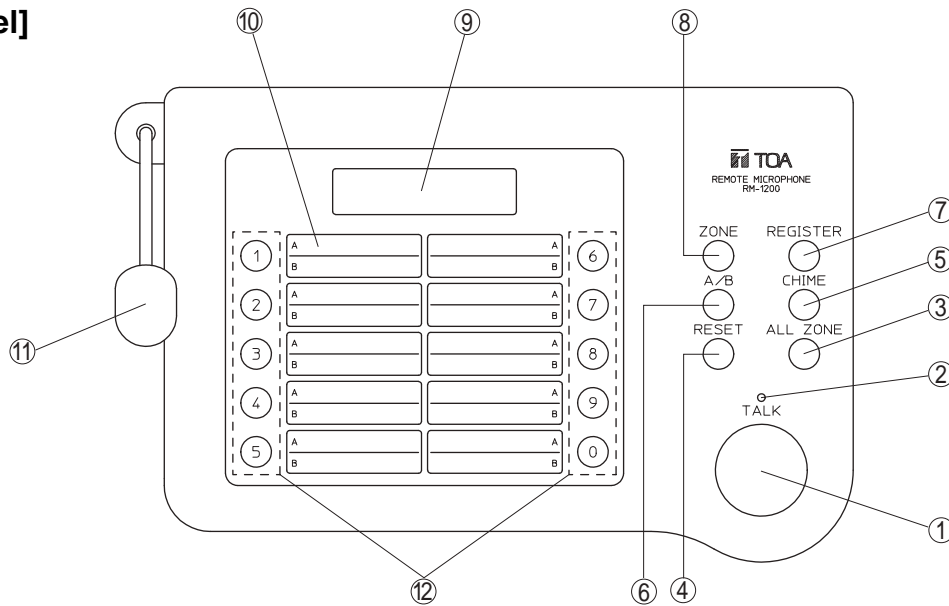
- Liquid crystal display facilitates check of broadcasting status, and initial setting.
- Individual zone broadcast of up to 330 zones (FS-971 Series).
- Uni-directional microphone suited for announcements.
- AUX input jack permits connection of a cassette deck or CD player.
- Internal compressor circuit prevents sound distortion due to large input.
(Functional only when the microphone is used.)
- Can be mounted on a wall.

4. HANDLING PRECAUTIONS

- Use the unit only with the voltage specified on the junction panel to which the unit is connected. Using a voltage higher than that which is specified may result in equipment failure.
- To clean, wipe with a dry, soft cloth. Do not use benzene, thinner or chemically-processed towel because the unit may be deformed or its finish discolored.
- When the case or operation panel is dirty, lightly wipe it down with a soft cloth. When it gets very dirty, wipe it down with a wrung towel after dipping it in a neutral detergent diluted with water, then wipe with a dry cloth.
- Do not spray an insecticide or other volatile liquids over the unit. Avoid leaving the unit in contact with the rubber or vinyl products for long hours because its quality may deteriorate or paint peel off.

5. NOMENCLATURE AND FUNCTIONS

[Front Panel]



1. Talk key

Make announcements while holding down this key when the message "In use" is displayed on the screen (9).

Note

The key turns on when pressed, and turns off when released.

2. In-use indicator

The attached microphone can be used when this indicator lights.

3. All-zone broadcast key

Enables simultaneous broadcast to the entire area.

4. Reset key

Pressing this key terminates broadcast from the main rack, and displays the indication "A" at the upper right of the screen.

5. Chime key

Used to sound a chime. While the internal chime is sounding, the in-use indicator flashes to indicate that the microphone and AUX input have turned off.

Note

The type of chime tone needs to be designated in the initial setting. Refer to p. 14.

6. Group A/B selector key

Selects either Group A (A1-A0) or Group B (B1-B0) when making group broadcast.

Note

If the number of groups is set for "10" in the initial setting, only Group A can be selected.

7. Registration key

Registers the line number (broadcast zone) selected with the numerical key to make broadcast to individual zones.

8. Individual-zone mode selector key

Press this key first when selecting individual broadcast zones.

Note

If the individual zone selection is set for "OFF" in the initial setting, this key cannot be used.

9. LCD screen

Displays the state of broadcast or settings. Backlight facilitates viewing even in dark locations.

10. Name label/Label cover

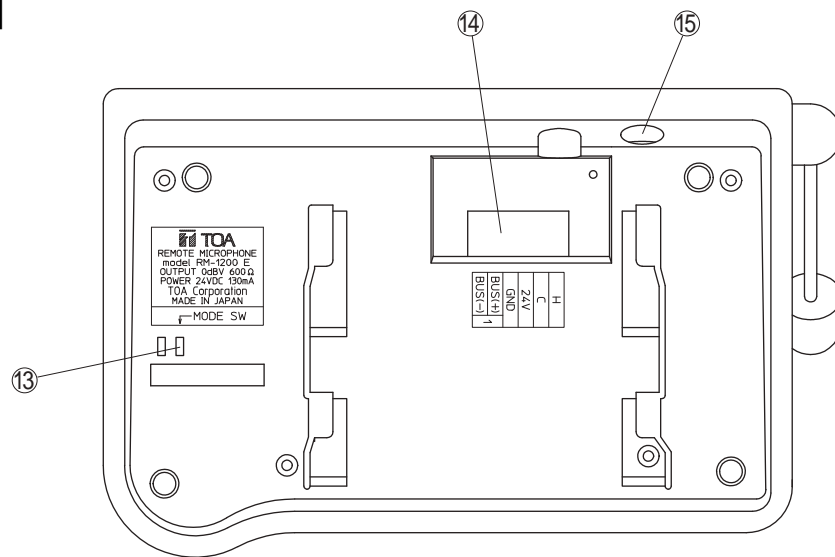
Write the name of each broadcast zone. For the removal and reattachment of the label and cover, refer to the section "10. NAME LABEL REMOVAL AND REATTACHMENT" on p. 16.

11. Microphone

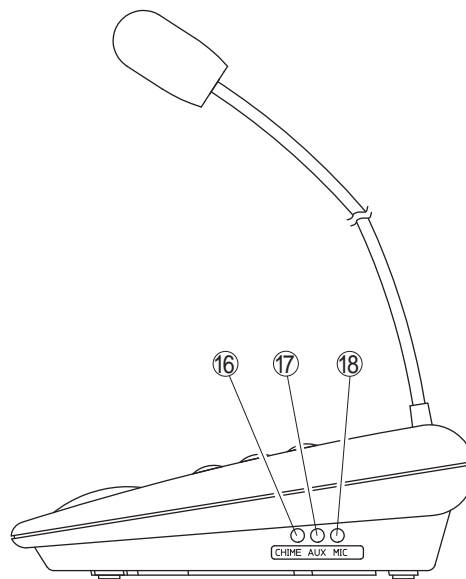
12. Numerical key

Press this key to select individual broadcast zones.

[Bottom Panel]



[Side Panel]



13. Mode switch

Setting this switch to the ON position places unit in the setting mode. Set this switch to the OFF position after setting completion.

14. Connection terminal

Connect cables from the main rack to this terminal. Refer to the section "7. CONNECTIONS" on p. 11 for details.

15. AUX input jack (-20 dBV/100 kΩ)

Connect a cassette deck or CD player. Note microphones cannot be connected.

16. Chime volume control

Adjusts the chime volume. Refer to the section "9. VOLUME LEVEL ADJUSTMENT" on p. 16.

17. AUX input volume control

Adjusts the AUX input volume. Refer to the section "9. VOLUME LEVEL ADJUSTMENT" on p. 16.

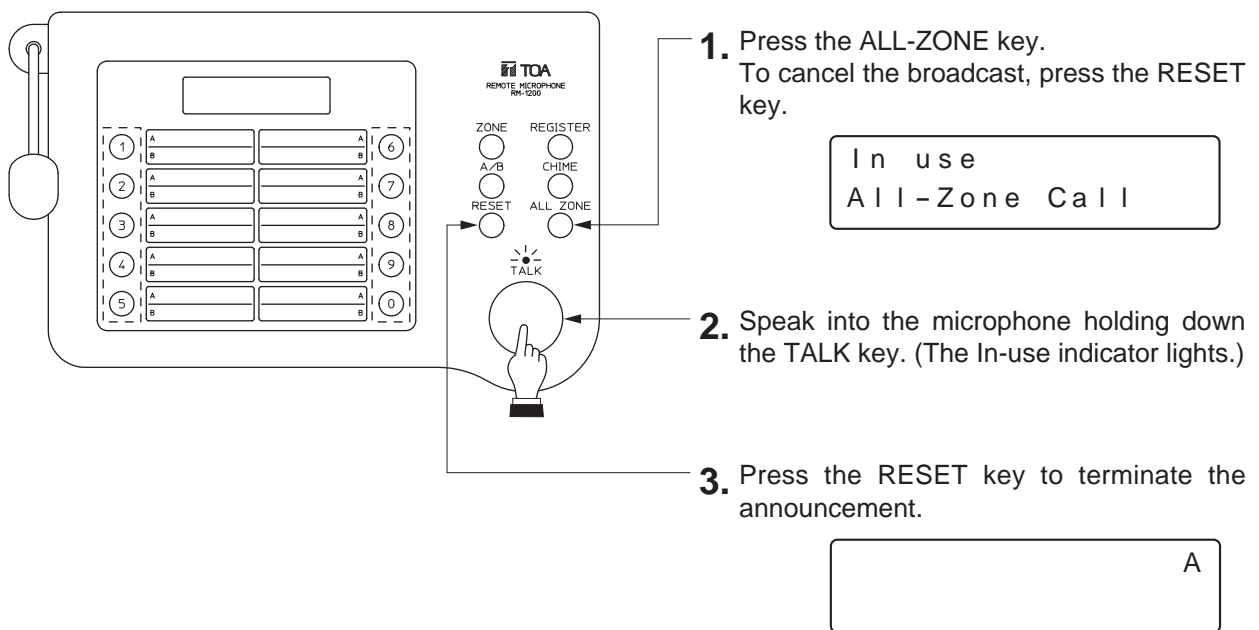
18. Microphone volume control

Adjusts the microphone volume. Refer to the section "9. VOLUME LEVEL ADJUSTMENT" on p. 16.

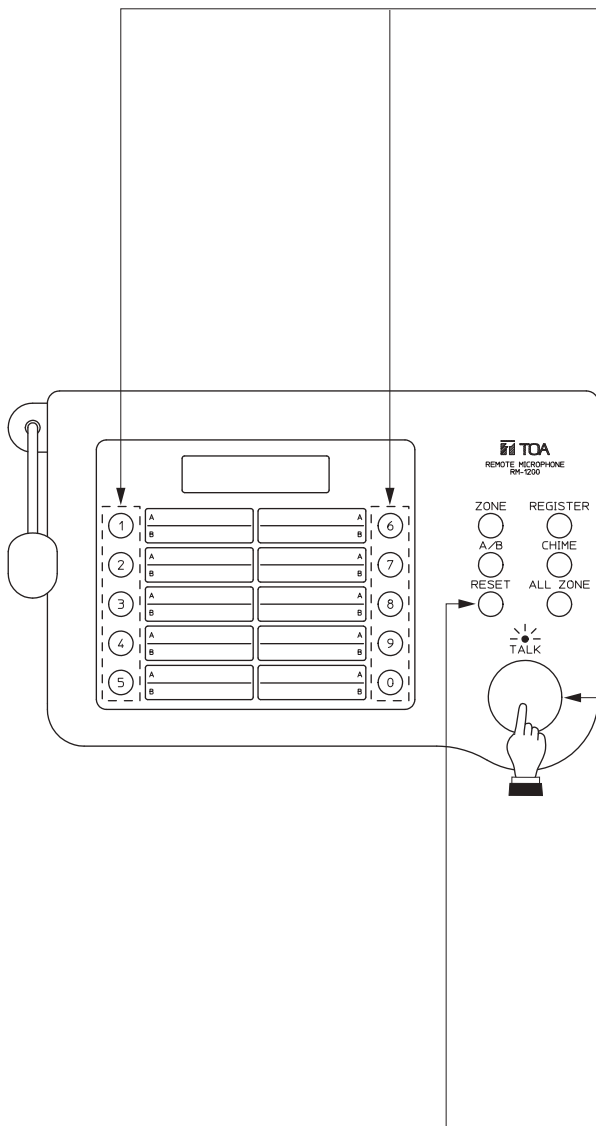
6. OPERATIONS

- The TALK key turns on when pressed, and turns off when released.
- When the message "Other in use" is displayed on your remote control unit, if other message "In use" does not appear even though you press the ALL ZONE, [1]-[0] or INDIVIDUAL ZONE key, this means the equipment with higher priority is in use. Your unit cannot be used. Priority order is set at the main rack.
- When the unit is set for [Auto chime 1-4] in the initial setting, a chime is automatically sounded whenever the TALK key is turned on and off.
- When the unit is set for [Auto chime 0] in the initial setting, press the CHIME key before and after announcement if it is desirable to sound a chime.
- The In-use indicator flashes during internal chime play.
- For initial settings, refer to p. 13.

6.1. All-zone Broadcast



6.2. Group Broadcast



1. Press the [1]-[0] (numerical) key to select the desired broadcast group (1-0).

If the [1] key is pressed, this message appears.

```
In use      A
A 1 ,
```

To select multiple groups, press the corresponding numerical keys continuously.

If the [3] and [7] keys are pressed continuously, this message appears.

```
In use      A
A 1 , A 3 , A 7 ,
```

To cancel the entry, press the RESET key.

When selecting the group of [B], press the A/B group selector key, and the indication [B] is displayed at the upper right of the screen.

```
In use      B
```

Then, press the [1]-[0] (numerical) key to select the desired broadcast group (1-0).

If the [2] and [3] keys are pressed continuously, this message appears.

```
In use      B
B 2 , B 3 ,
```

2. Speak into the microphone while holding down the TALK key. (The In-use indicator lights.)
3. Press the RESET key to terminate the announcement.

[Simultaneous broadcast to both groups A and B]

1. Press the [1]-[0] (numerical) key to select the desired broadcast group (1-0) of A.

```
In use      A
A 1 , A 3 , A 7 ,
```

2. Press the A/B group selector key and confirm that the indication B is displayed at the upper right of the screen.

```
In use      B
A 1 , A 3 , A 7 ,
```

Press the numerical key to select the group of B.

```
In use      B
A 1 , A 3 , A 7 , B 2 , B 3 ,
```

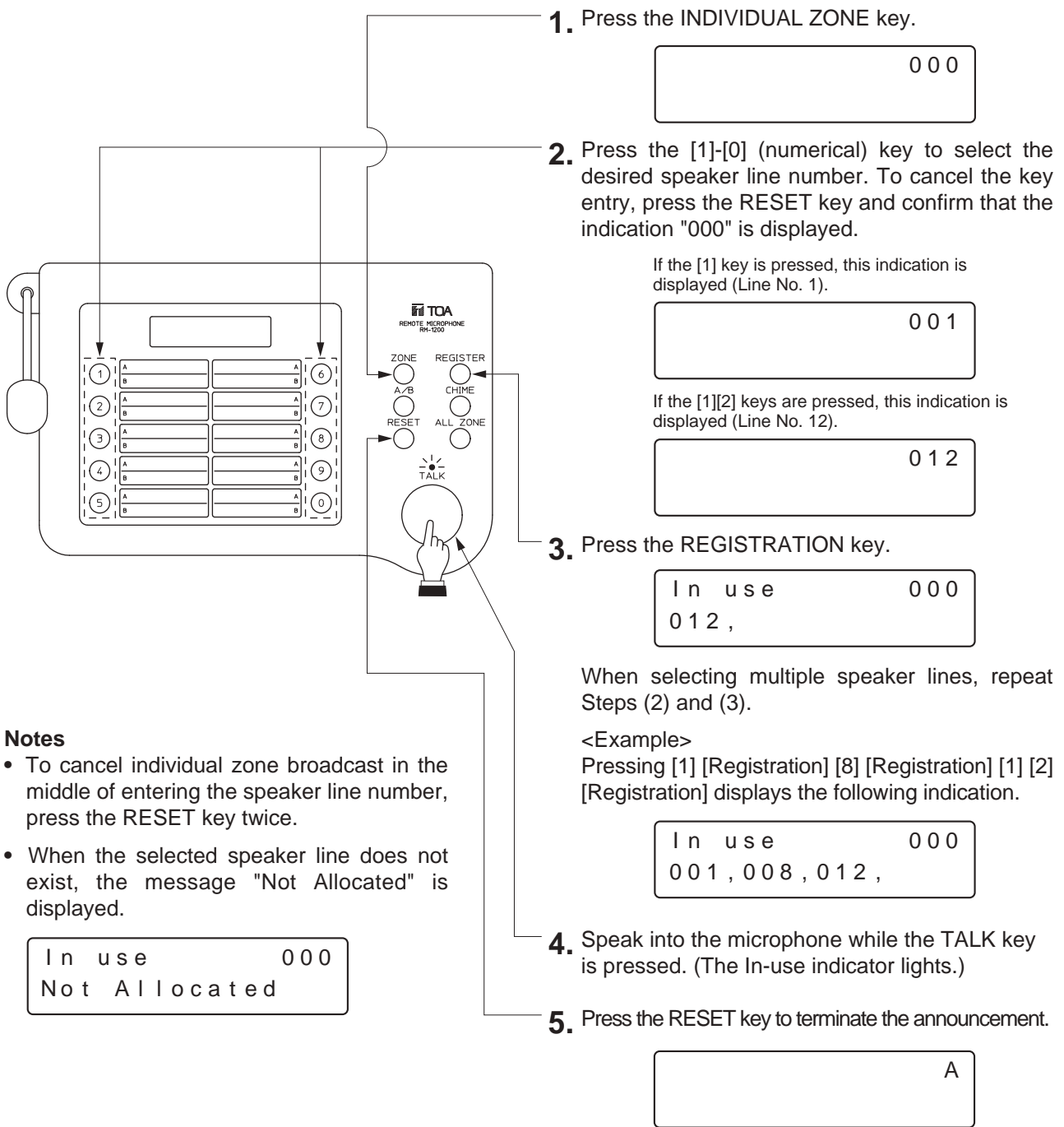
3. Speak into the microphone while holding down the TALK key. (The In-use indicator lights.)

4. Press the RESET key to terminate the announcement.

Note

When [1..10] is selected in the setting of "8.3. Usable Group Numbers" (p. 14), the indication A appears even if the A/B key is pressed. Broadcast can be made only to the group (1-0) of A.

6.3. Individual Zone Broadcast



Notes

- To cancel individual zone broadcast in the middle of entering the speaker line number, press the RESET key twice.
- When the selected speaker line does not exist, the message "Not Allocated" is displayed.

In use 0 0 0
Not Allocated

6.4. External Equipment Broadcast

1. Connect a cassette deck, CD player or other source equipment to the AUX input jack.
2. Follow the procedures of All-zone broadcast, Group broadcast or Individual zone broadcast to enable broadcast.
3. Operate the connected source equipment to make broadcast.
4. Press the RESET key to terminate the broadcast, then stop the operation of the connected equipment.

Note

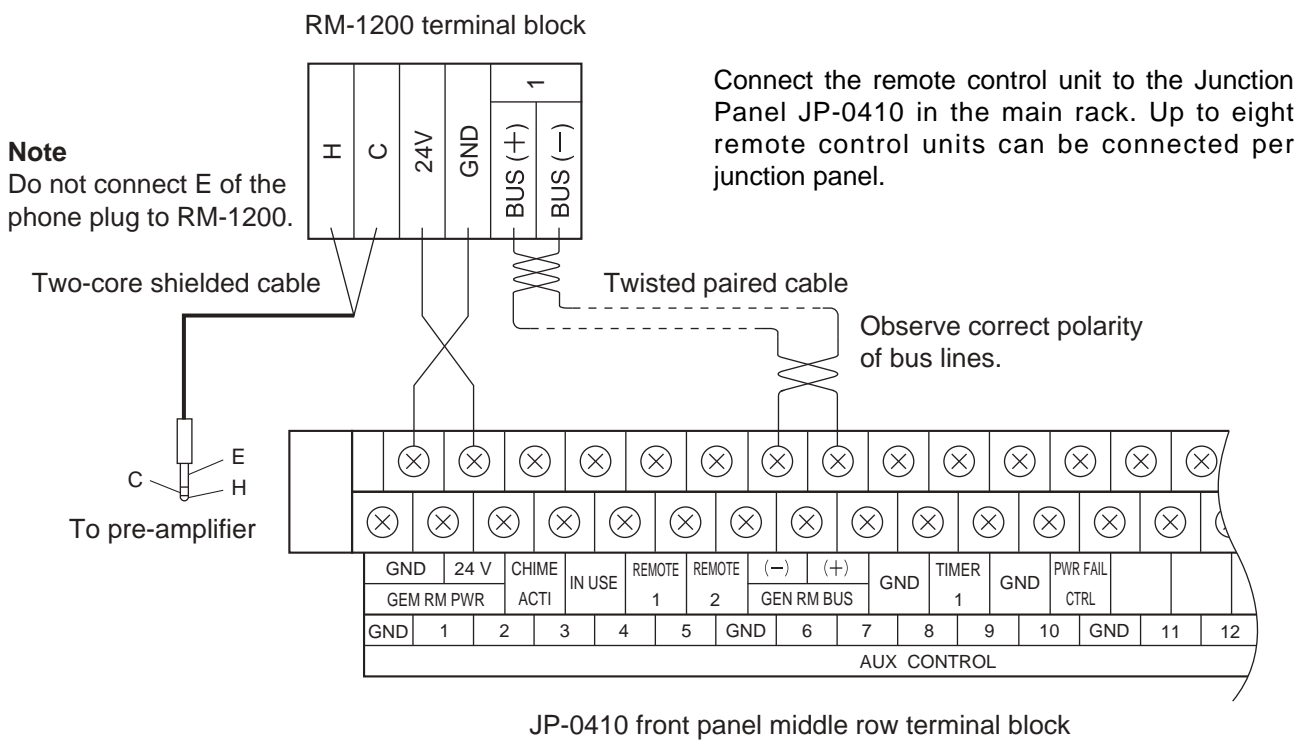
When the TALK key is pressed to make a microphone announcement during external equipment broadcast, both outputs are mixed together.

7. CONNECTIONS

7.1. Notes on Connections

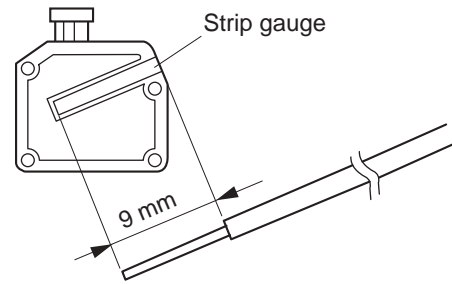
- The maximum cable length between the main rack and the RM-1200 is 800 m.
- Use cables with line resistance of less than 10Ω.
- Use twisted paired cable for bus lines.
- Use twin shielded cables for signal lines.
- Be sure to connect the RM-1200's bus line to BUS 1 terminal.
- Be sure to match the polarity of bus lines.

7.2. Connection of the RM-1200 to the Rack-Mounted Emergency PA System FS-971 Series



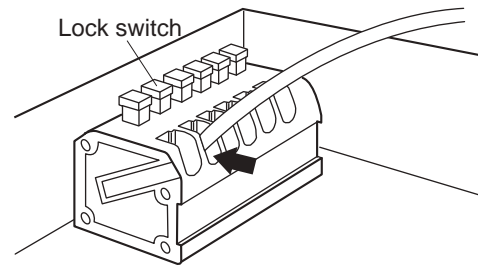
7.3. Connection of the RM-1200's Push-in Terminal Block

1. Strip the cable sheath 9 mm using the strip gauge provided on the side of the terminal block.

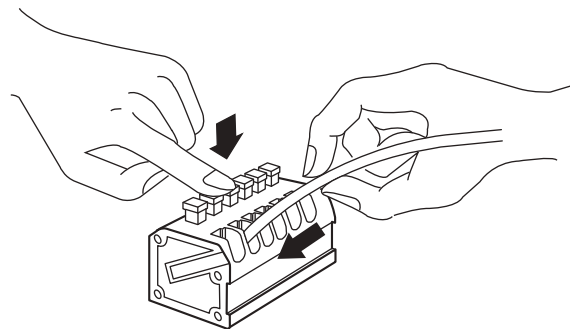


2. Insert the cable into the terminal block.

- Solid cable
Fully Insert the cable into the hole in the terminal block.



- Twisted cable
Press the lock switch on the terminal block, and fully insert the cable. Then, release the switch with the cable inserted.

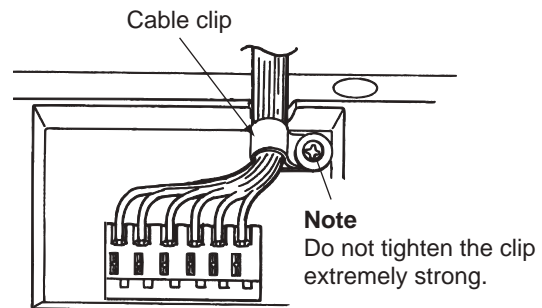


When removing the cable, pull it out of the terminal block while pressing the lock switch.

Note : Do not press the lock switch extremely strong.

3. After connection completion, bundle cables together using the cable clip, then fix the clip with a screw.

If cables are too thick to be bundled together, replace the cable clip with the supplied clip.



7.4. Error Message Indication

When error messages are displayed on the screen after connection and setting completion, the following causes can be considered. Check the connections and settings again.

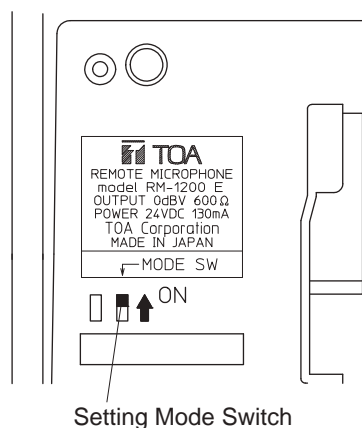
Error Message Indication	Possible Cause
RM-BUS Error	<ol style="list-style-type: none"> 1. Bus line disconnection between the main rack and RM-1200 2. Reversed bus line polarity between the main rack and RM-1200 3. Connected RM-1200 numbers are set for "0" at the main rack.
Polling Error	<ol style="list-style-type: none"> 1. Wrong address setting at the RM-1200 2. Wrong setting of connected RM-1200 numbers at the main rack.

8. INITIAL SETTING

Set the following items.

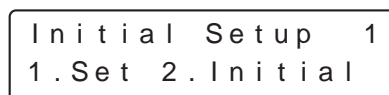
- | | Factory-preset setting |
|-----------------------------------|------------------------|
| • Address | 0 |
| • Usable group numbers | 2 (20 groups) |
| • Individual zone broadcast | 1 (ON) |
| • Chime tone type | 1 (4-note chime) |
| • Auto chime mode | 0 (Off/disabled) |

Placing the RM-1200's bottom-located Setting Mode Switch in the ON position displays the Initial Setup screen.



8.1. Initial Setup

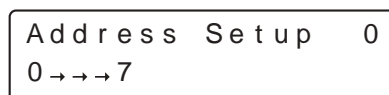
Pressing the [1] key and then the REGISTRATION key displays the Address Setup screen.



Pressing the [2] key and then the REGISTRATION key produces factory-preset data, and displays the message "Store?" (refer to p. 15 "8.7. Set Data Registration") on the screen.

8.2. Address

Be sure to set the address for "0" when using only one RM-1200 unit.



Up to eight RM-1200 units can be connected. Assign the address of 0-7 consecutively to each unit starting from "0". Take care not to assign the same address to two or more units.

Using the numerical key, set the address of 0-7.

If the [3] key is pressed, this indication is displayed.



Press the REGISTRATION key, and the Group screen will be displayed.

8.3. Usable Group Numbers

Press either the [1] or [2] key to select group numbers used.

Note

If [1. 10] is selected, only up to ten groups of A1-A0 can be used. The A/B key cannot be used.

```
Group No. Setup1
1.10 2.20
```

If the [2] key is pressed, this indication is displayed.

```
Group No. Setup2
1.10 2.20
```

Pressing the REGISTRATION key stores the selected group numbers and displays the Individual Zone screen.

8.4. Individual Zone Broadcast

Press either the [1] or [2] key to set whether or not to disable (ON or OFF) the Individual Zone Broadcast Function.

Note

If [2. OFF] (disabled) is selected, the INDIVIDUAL ZONE key cannot be used.

```
Individual Zone1
1.ON 2.OFF
```

If the [2] key is pressed, this indication is displayed.

```
Individual Zone2
1.ON 2.OFF
```

Pressing the REGISTRATION key stores the setting and displays the Chime type screen.

8.5. Chime Tone Type

Using the [1]-[5] keys, select the chime tone type to be played.

- [1]: 4-tone chime
- [2]: Two-tone chime
- [3]: Single-tone chime
- [4]: None
- [5]: External chime

Note

The external chime refers to a chime component installed in equipment connected to the RM-1200. Selecting [5. External Chime] disables the Auto Chime Function.

```
Chime type 1
1→→→5
```

If the [5] key is pressed, this indication is displayed.

```
Chime type 5
1→→→5
```

Pressing the REGISTRATION key stores the selected chime tone type and displays the Auto Chime screen.

8.6. Auto Chime Function

The Auto Chime Function automatically sounds a chime when the TALK key turns on and off. However, if [5. External Chime] is selected in 5. Chime Tone Type Setting, the Auto Chime Function is disabled.

Using the [0]-[4] keys, set the operation mode.

[0]: Disables the Auto Chime Function.

[1]: TALK key ON → Ascending 4-note chime → Microphone turns on.
OFF → Microphone turns off. → Descending 4-note chime (*1)

[2]: TALK key ON → Ascending 4-tone chime → Microphone turns on.
OFF → Microphone turns off. → Announcement is terminated (*2).

[3]: TALK key ON → Designated chime tone → Microphone turns on.
OFF → Microphone turns off. (*1)

[4]: TALK key ON → Designated chime tone → Microphone turns on.
OFF → Microphone turns off. → Announcement is terminated (*2).

Corresponding mode number appears as the key is pressed.

Auto chime	0
0 . OFF	1 → → → 4

Notes on operation

(*1) Press the RESET key to terminate announcements.

(*2) Announcements are automatically terminated.

Further pressing the REGISTRATION key stores the designated Auto Chime mode and displays the message "Store?".

8.7. Set Data Registration

To operate the unit exactly as set in Items 8.1.-8.6. above, select [1. Yes], then press the REGISTRATION key. The termination message is displayed.

Set data registration

Store ?	1
1 . Yes	2 . No

To change set data, press the [2] key to select [2. No], then press the REGISTRATION key. The display returns to the Initial Setup screen. Make changes by following the procedures 8.1.-8.6.

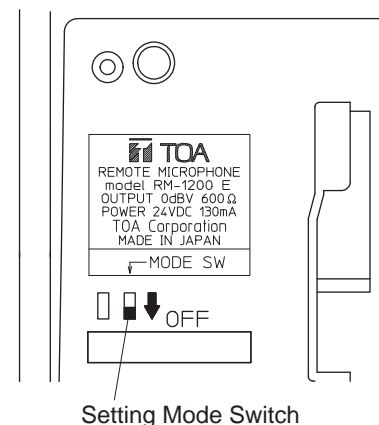
Termination message

Set Setup SW.	1
to "OFF"	

8.8. Termination of the Setting

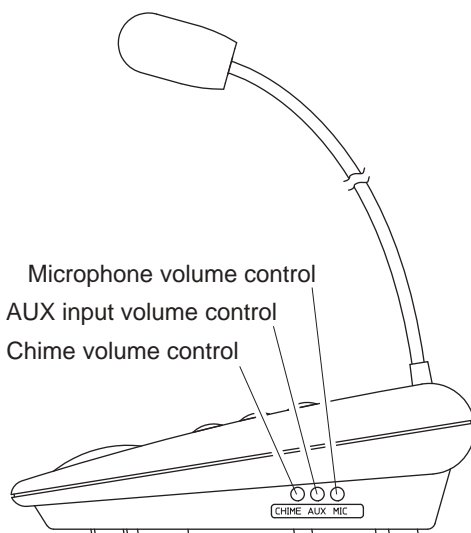
Set the Setting Mode Switch to the OFF position.

The setting is now complete. The display returns to the normal screen, indicating that the unit is in normal operation mode.



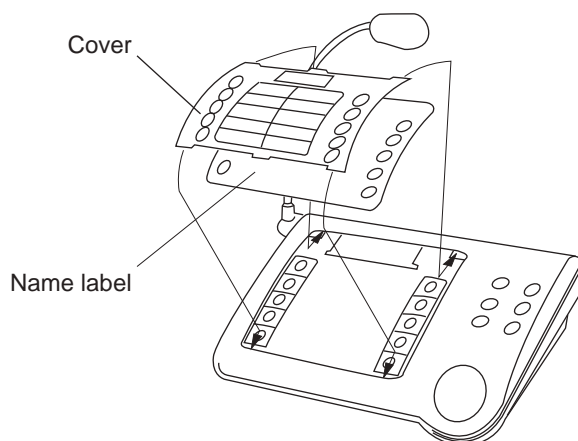
9. VOLUME LEVEL ADJUSTMENT

1. Using the slotted screwdriver, turn the microphone, chime and AUX input volume controls fully counter-clockwise.
2. Speaking into the microphone, turn the microphone volume control clockwise to adjust the volume.
3. Making broadcast from equipment connected to the AUX input, turn the volume control clockwise to adjust the volume.
4. Sounding a chime, turn the chime volume control clockwise to adjust the volume.
(When using external chime unit, adjust the volume at the external unit.)



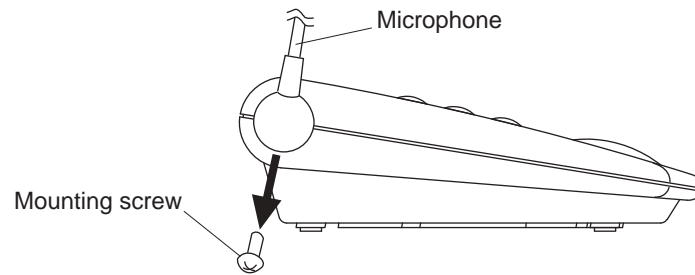
10. NAME LABEL REMOVAL AND REATTACHMENT

1. Insert a pointed object into the label cover opening and raise the cover to remove it.
2. Write broadcast zones in the label. When there are ten group broadcast groups, use the reverse side.
3. Replace the label and then the cover.

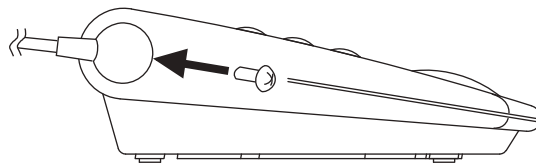


11. WALL MOUNTING

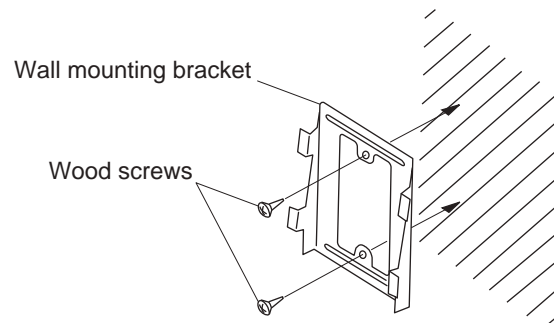
1. Remove the microphone mounting screw, then take the microphone out of the unit by lightly pulling.



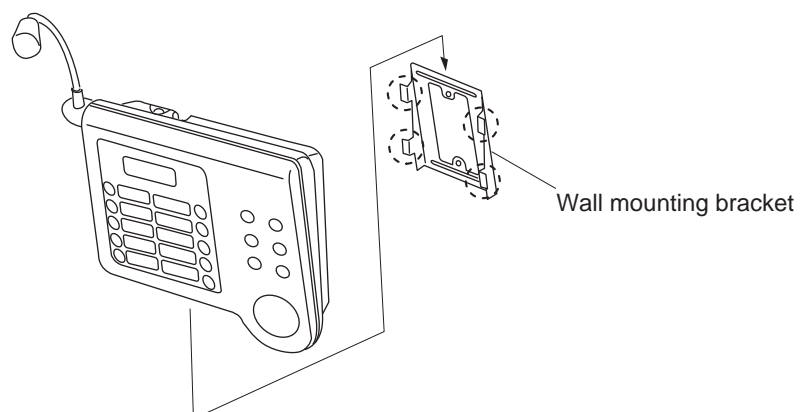
2. After turning the microphone 90 degrees, reinsert it into the unit, then secure it with the screw.



3. Install the wall mounting bracket directly on the wall using the supplied wood screws.



4. Align holes in the RM-1200's bottom surface with bracket tabs, then slide the unit down into place.



12. SPECIFICATIONS

Power Source	24 VDC
Current Consumption	130 mA
Output	0 dBV, 600Ω, balanced
Microphone	Uni-directional electret-condenser microphone
Speaker Control	20 groups, individual speaker line selection (up to 330 lines), all-zone broadcast
AUX Input	-20 dBV, 100 kΩ, unbalanced
Chime	Internal chime, 3 different tone types
Volume Control	Microphone/AUX input/Chime volume controls
Connection Cable	Twin shielded cable + twisted paired cable + power cable
Maximum Cable Length	800 m
Line Resistance	Under 10Ω
Finish	ABS resin, light gray
Dimensions	241 (w) x 51 (h) x 151 (d) mm
Weight	0.5 kg

Note : The design and specifications are subject to change without notice for improvement.

• Accessories

Cable clip	1
Name label	1
Wall mounting bracket	1
Wood screw (3.5 x 2.5)	2

