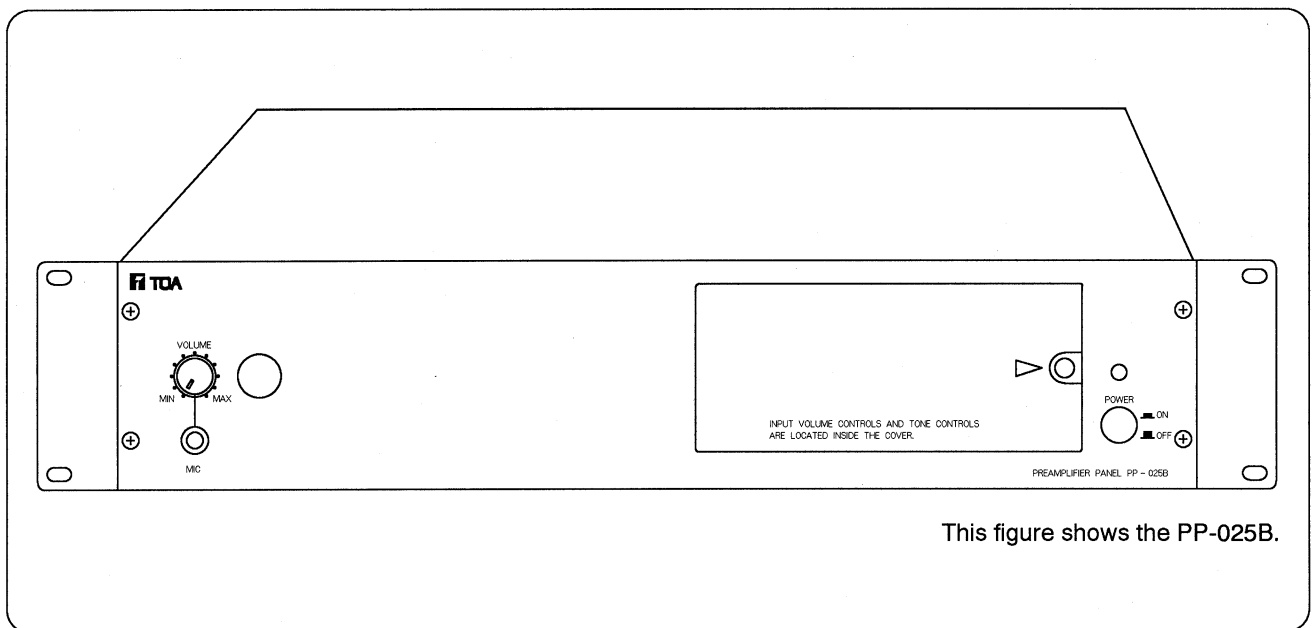


PREAMPLIFIER PANEL CHIME UNIT

PP-025B CK-025 (OPTIONAL)



CONTENS

1. GENERAL DESCRIPTION	2	6. CONNECTIONS	12
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Please follow the instructions in this manual to obtain the optimum results from these units.
We also recommend that you keep this manual handy for future reference.

1. GENERAL DESCRIPTION

The PP-025B is an 8-input preamplifier operating from 24V DC. Priority function is provided for input group 1, 2, and 3 in high order. The optional CK-025 chime unit can be built in the unit.

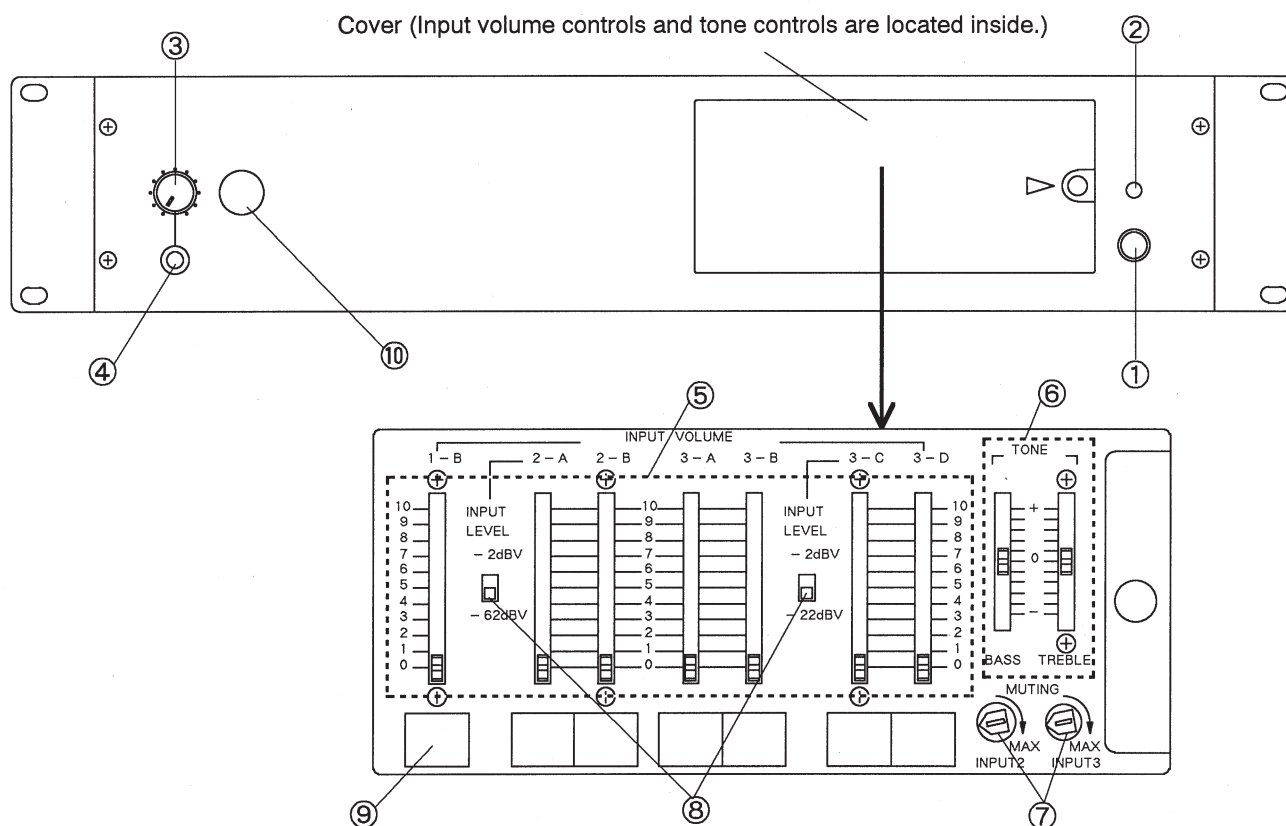
2. HANDLING PRECAUTIONS

- Avoid installing the unit near or over a heater or exposing the unit to the direct sunlight as this may result in damage to the unit's exterior or internal components.
- Recommendable operating temperature range is from 0 °C to +40 °C (32 °F to 104 °F), and moisture is under 90%.
- Never attempt to service the unit yourself as opening or removing the covers may expose you to dangerous voltage or other hazards. Refer all servicing to TOA dealers.
- If smoke or strange smell is detected, make no further attempt to use the unit. Immediately unplug the unit from the wall outlet, and contact your nearest TOA dealer.
- To clean, wipe with a soft cloth damped in a neutral cleanser diluted with water, then wipe with a dry cloth. Make sure that the power is switched off before cleaning.

3. NOMENCLATURE AND FUNCTIONS

[Front Panel Facilities]

In the figure below, the CK-025 chime unit is installed in the PP-025B preamplifier.



① Power switch

Switches power on and off with each depression.

② Power indicator lamp

Remains lit while power is supplied to the PP-025B.

③ Microphone (line) volume control

Increases the microphone volume when rotated clockwise.

④ Microphone (line) input jack (Input level : - 62 dBV, 600 Ω , balanced)

Insert the microphone phone plug into this jack.

Note

Volume control ③ and input jack ④ are intended for input 1-A, which takes precedence over the same input 1-A located on the rear panel. Inserting a plug into jack ④ will cut off the rear-mounted input 1-A. The input level can be switched from microphone to line signal level (-2dBV) by means of the input level selector switch exposed when the front panel is removed.

⑤ Input volume controls

Adjust the corresponding input volume (1-B, 2-A/B, and 3-A through 3-D). Input level selector switches are provided for inputs 2-A and 3-C.

Priority order : (1) Input 1 (2) Input 2 (3) Input 3

⑥ Bass/treble tone controls

Adjust the output sound quality.

⑦ Muting level controls

Adjust the level to suppress the current output when there is an input with higher priority.

⑧ Input level selector switches

Change signal levels of inputs 2-A and 3-C.

Input 2-A : - 2 dBV or - 62 dBV

Input 3-C : - 2 dBV or - 22 dBV

Notes

Do not change the level during broadcast because noise is generated. Leave controls ⑦ and ⑧ intact except when readjusting or setting the unit.

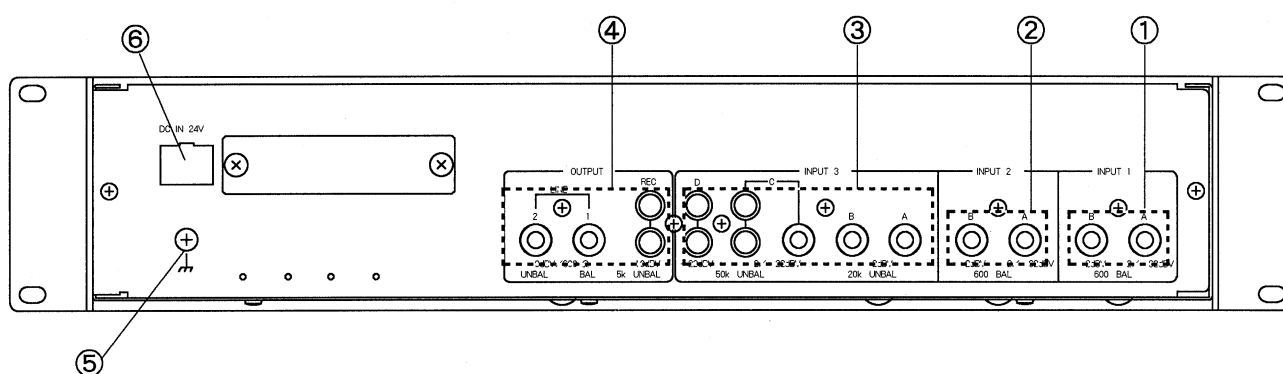
⑨ Input ID labels

Attach the supplied input identification labels.

⑩ Chime switch (Usable when the optional CK-025 chime unit is installed.)

Pressing this switch sounds a chime. One of four different chime tones can be selected.

[Rear Panel Facilities]



① Input group 1 phone jacks

This group consists of inputs 1-A and 1-B. The level of input 1-A can be set to either -2dBV (line) or -62dBV (mic) using the front-mounted input level selector switch. Rear input 1-A is lower than front input 1-A in priority level, and inserting a phone plug into the front input jack disables the rear input.

② Input group 2 phone jacks

There are inputs 2-A and 2-B. The level of input 2-A can be set to either -2dBV or -62dBV using the input level selector switch.

③ Input group 3 phone jacks/RCA jacks

There are inputs 3-A, 3-B, 3-C, and 3-D. The level of input 3-C can be set to either -2dBV or -22dBV using the input level selector switch. Inputs 3-A and 3-B are phone jacks, input 3-C is comprised of a phone jack and RCA jacks (common connection), and input 3-D has RCA jacks.

Even when inputs 3-C and 3-D are connected to stereo equipment, signals are mixed together for monaural output.

Priority order : (1) Input group 1 (2) Input group 2 (3) Input group 3.

④ Output phone jacks/RCA jacks

Two recording outputs, line output 1, and line output 2 are provided. The recording outputs (monaural) are an RCA jacks, and line outputs (1 and 2) are phone jacks. Signals from three input groups are mixed together and provided to line output 1, while those from input group 3 are sent to line output 2. However, when line output 2 is in use, line output 1 provides mixed signals of input groups 1 and 2.

⑤ Grounding terminal

Grounding point for signals. Be sure to ground this terminal to prevent oscillations.

Caution : Never connect this terminal to a gas pipe because the pipe may explode.

⑥ DC input (24V)

Connect the supplied cable to this input.

● Input/output table

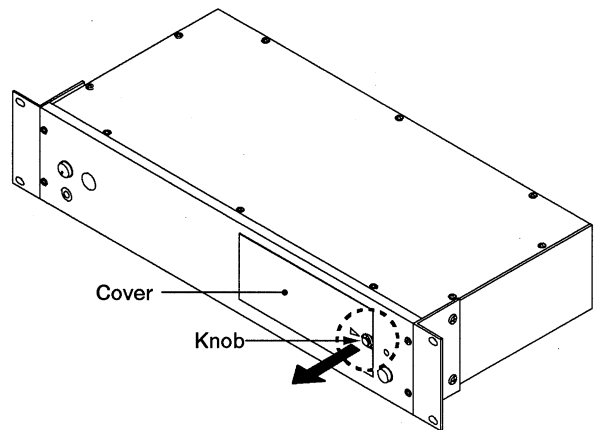
INPUT	Level		Jack		Impedance	
	1-A	$-2\text{dBV} / -62\text{dBV}$ (changeable)	Phone jack		$600\ \Omega$	balanced
	1-B	-2dBV	Phone jack		$600\ \Omega$	balanced
	2-A	$-2\text{dBV} / -62\text{dBV}$ (changeable)	Phone jack		$600\ \Omega$	balanced
	2-B	-2dBV	Phone jack		$600\ \Omega$	balanced
	3-A	-2dBV	Phone jack		$20\text{ k}\ \Omega$	unbalanced
	3-B	-2dBV	Phone jack		$20\text{ k}\ \Omega$	unbalanced
	3-C	$-2\text{dBV} / -22\text{dBV}$ (changeable)	Phone jack RCA jack (monaural)		$50\text{ k}\ \Omega$	unbalanced
	3-D	-22dBV	RCA jack (monaural)		$50\text{ k}\ \Omega$	unbalanced
OUTPUT	Recording	-10dBV	RCA jack (monaural)		$5\text{ k}\ \Omega$	unbalanced
	LINE 1	0dBV	Phone jack		$600\ \Omega$	balanced
	LINE 2	0dBV	Phone jack		$600\ \Omega$	unbalanced(*)

Note : Optional chime is preset to input 1.

(*) Can be converted into balanced type using an optional IT-450 transformer.

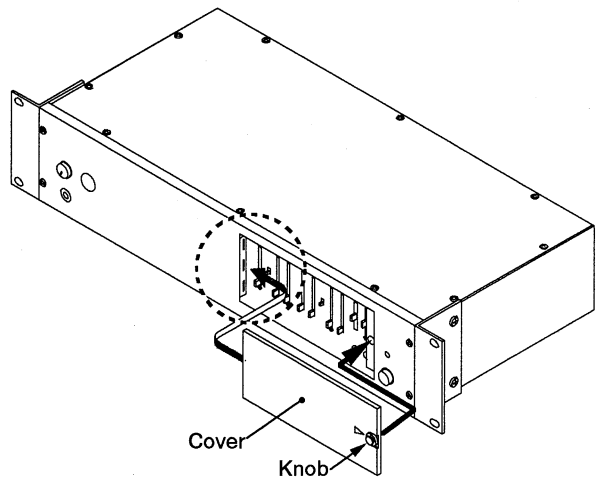
● Front cover removal

To remove the cover, pull the knob located on the right hand side of the cover (as viewed from the front).



● Front cover replacement

1. Insert the three tabs into the corresponding holes in the front panel.
2. Set the cover in place and push the knob.

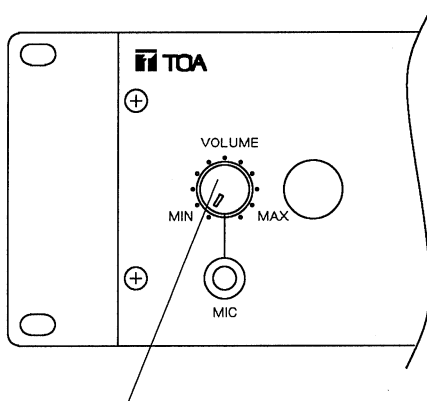


4. HOW TO BROADCAST

4.1 Presetting

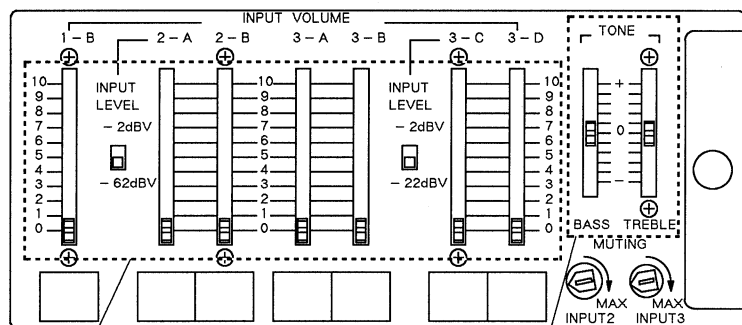
When using the PP-025B preamplifier for the first time, set as shown below.

Left side front



Microphone input volume control
Set the control to minimum position.

Inside of front cover



Input volume controls
Set all controls to "0" position.

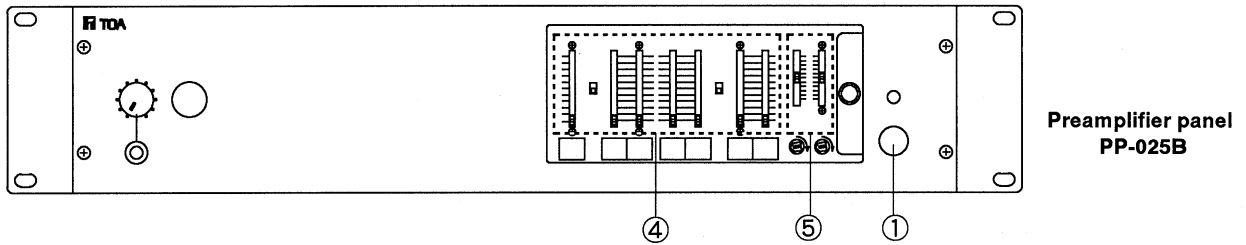
Tone controls
Set bass and treble tone controls to "0" (center) position.

Note

During the adjustment above, do not touch the input level selector switches and muting level controls because they have been preset and preadjusted when the unit has been installed. If their settings have to be changed, refer to the section "7. ADJUSTMENT" on p. 13.

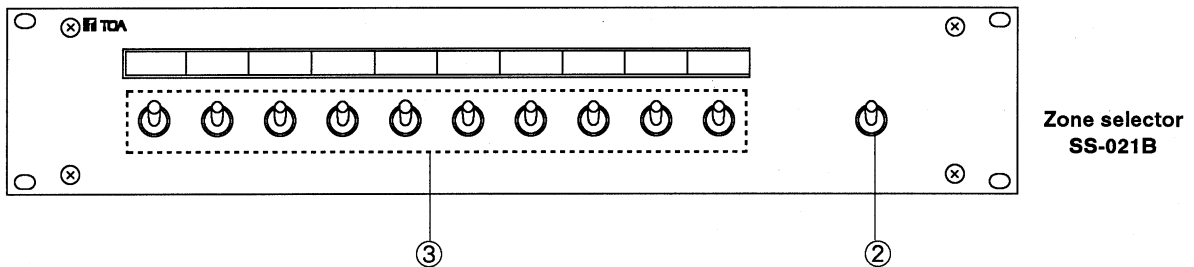
4.2 Operations

1. Set the power switch ① to ON.



2. Select the desired output zone.
[When using the SS-021B zone selector.]

Press the global call key ② to broadcast to the entire area simultaneously.
Press the corresponding zone selector key ③ to broadcast to individual zones.

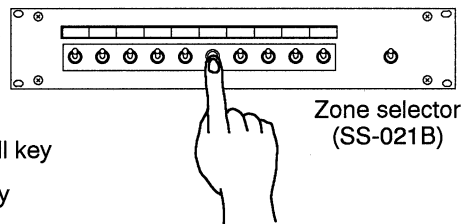


3. Remove the preamplifier's front cover, then adjust the internal volume controls ④ and tone controls ⑤.
(For convenience sake, mark the set positions of the controls with the supplied arrow marker.)
4. Replace the front cover to prevent accidental changes of settings.
5. After broadcast completion, press the selected key again to release the output zone.
6. Set the power switch ① to OFF.

4.3 Microphone Announcements

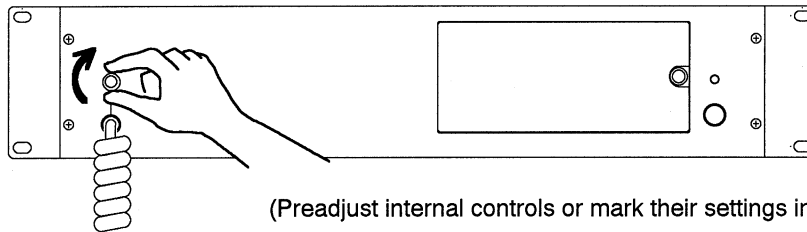
1. Select the desired output zone.

Simultaneous all-zone announcement : Global call key
Individual zone announcement : Zone selector key

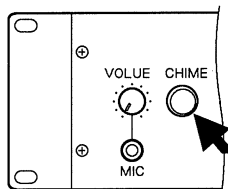


2. Increase the volume.

Preamplifier panel (PP-025B)



3. Press the chime switch.



Preamplifier panel with a chime unit (CK-025) built inside.

4. Speak into the microphone.



**5. After announcement completion, rotate the microphone volume control fully counter-clockwise, then release the selected output zone.
(Press the key of the selected zone again.)**

Notes

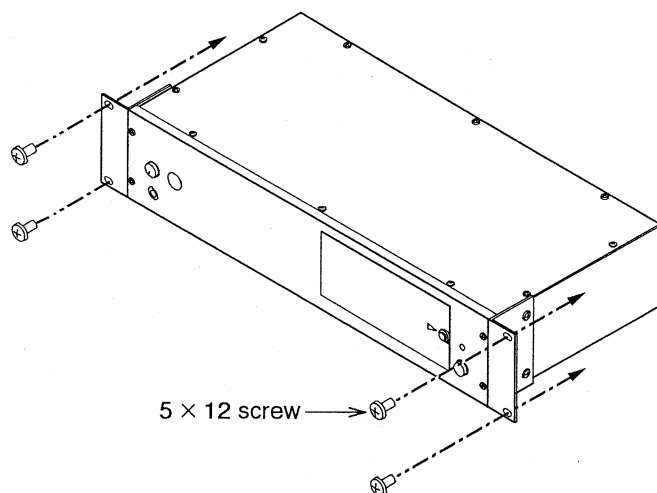
- Sounding a 4-tone chime before and after announcement makes the announcement more effective.
To accomplish this, the chime unit must be installed in the preamplifier panel.
- Speak slowly, calmly, and with intermissions. For information which needs to be stressed, repeat twice.
- Inserting a plug into the microphone (line) input jack on the front panel cuts off input 1-A on the rear panel.

5. INSTALLATION

Contact your nearest TOA dealer as to the installation of the preamplifier, and mounting, connection and adjustment of optional equipment.

5.1 Rack Mounting

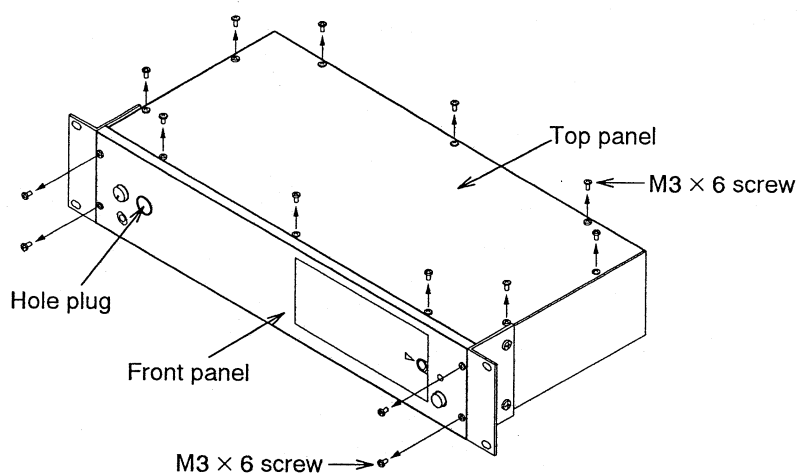
Using the supplied screws (four black 5 × 12 screws), mount the preamplifier in an equipment rack.



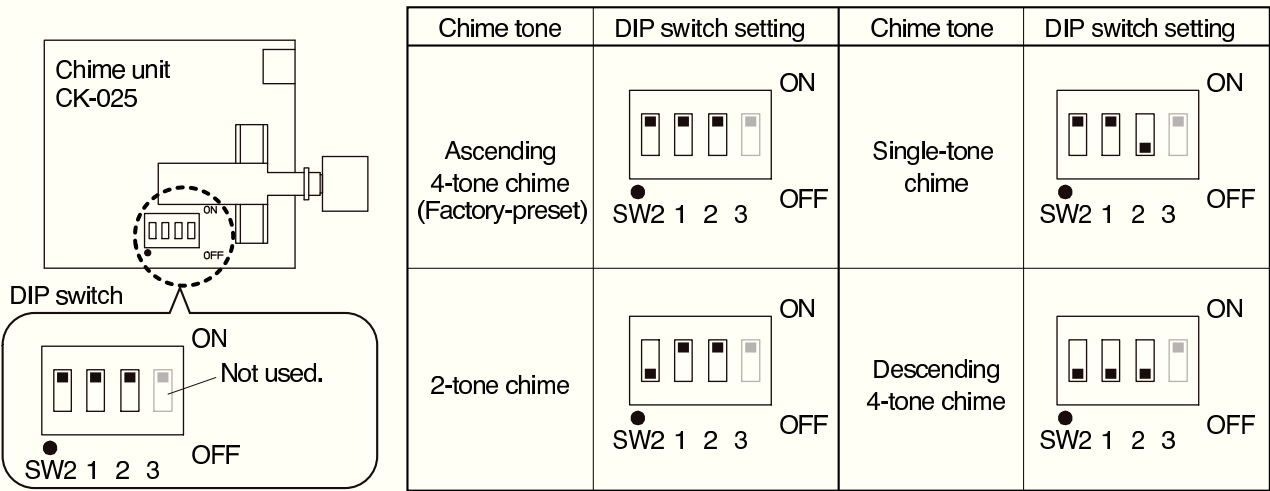
5.2 Mounting the CK-025 Chime Unit in the Preamplifier

Note : Be sure to mount the chime unit in the preamplifier before rack mounting.

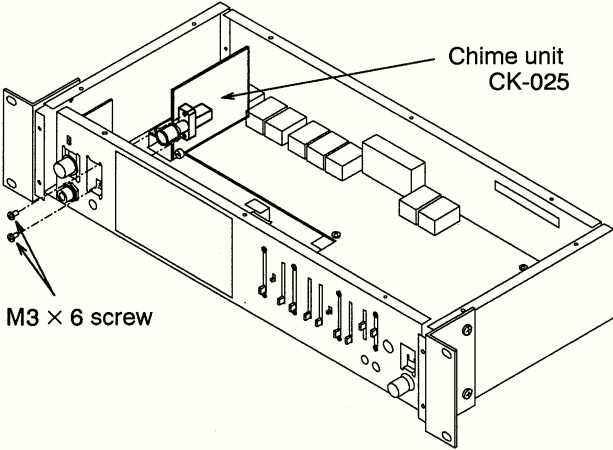
1. Remove the front panel, top panel, and front panel hole plug.



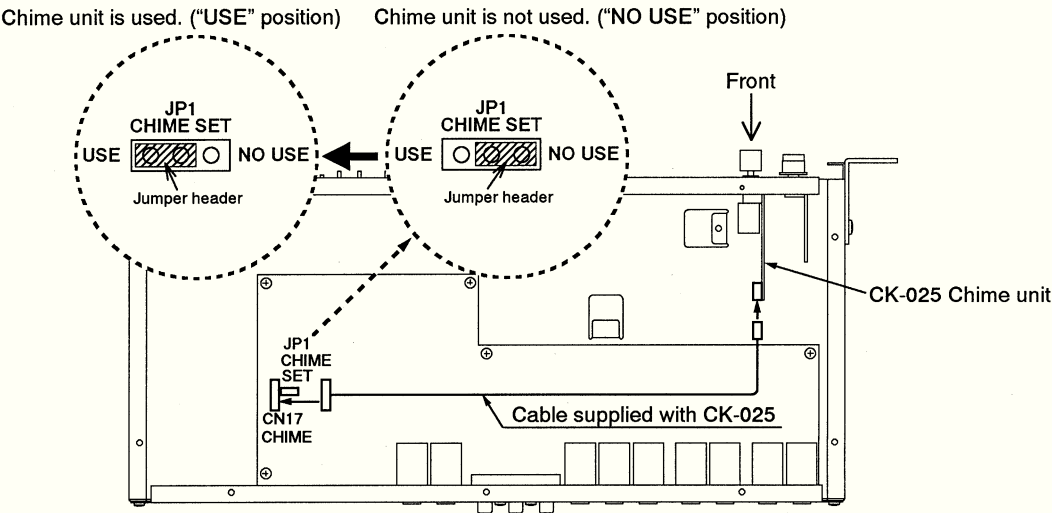
2. Select the chime tone by changing settings of SW2 (DIP switch) on the chime unit's circuit board.



3. Mount and fix the chime unit to the preamplifier using the supplied screws (two M3 × 6 screws).

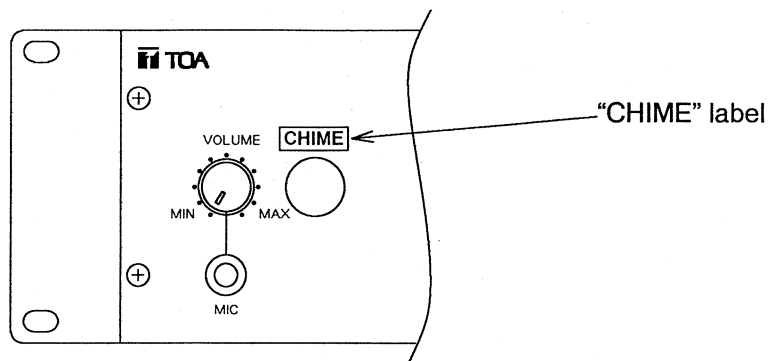


4. Using the cable supplied with the chime unit, connect the chime unit's connector to CN17 connector on the PP-025B's internal circuit board.



5. Set jumper header JP1 to "USE" position.

6. Replace the front panel and top panel, then attach the supplied "CHIME" label to the position (above the chime switch) indicated in the figure.



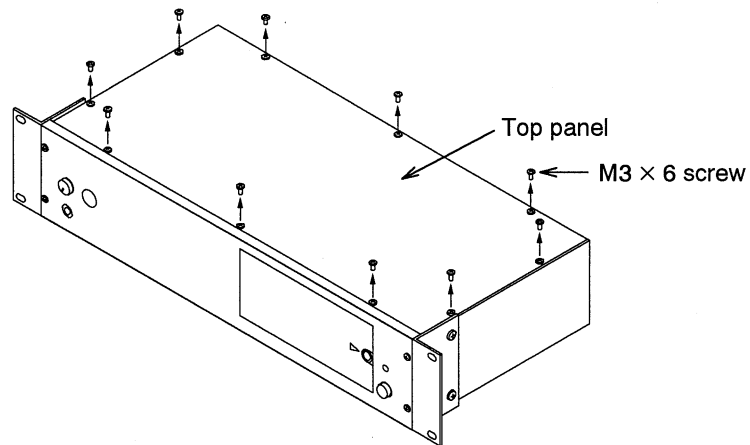
7. Adjust the chime volume control after mounting the preamplifier in the rack and completing connections.
For details, refer to p. 13 "7. ADJUSTMENT".

5.3 Transformer Installation for Converting LINE OUT 2 into Balanced Type

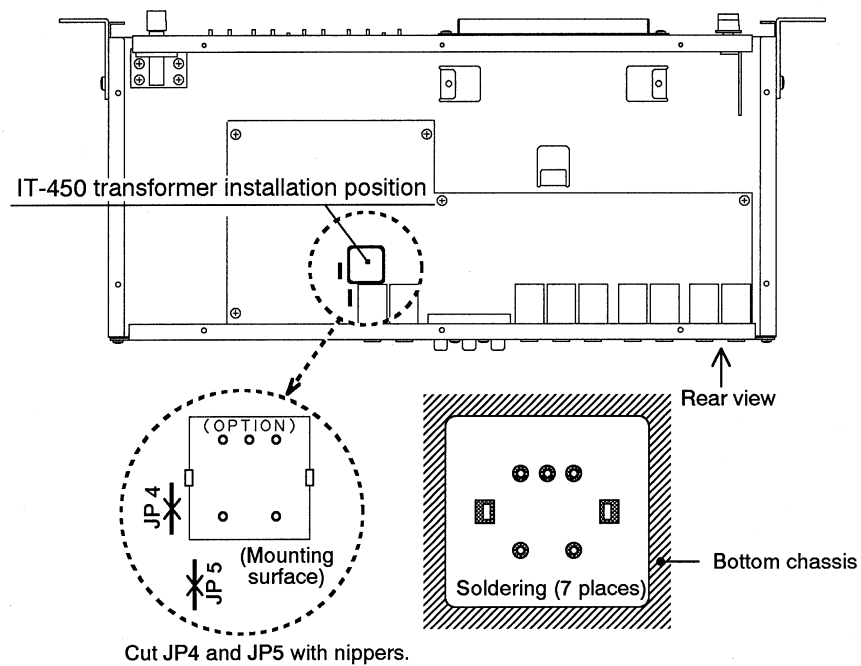
Notes

- Install the transformer before mounting the preamplifier in the rack.
- Optional transformer IT-450 is required.

1. Remove the top panel.



2. Cut JP4 and JP5 on the circuit board using nippers.

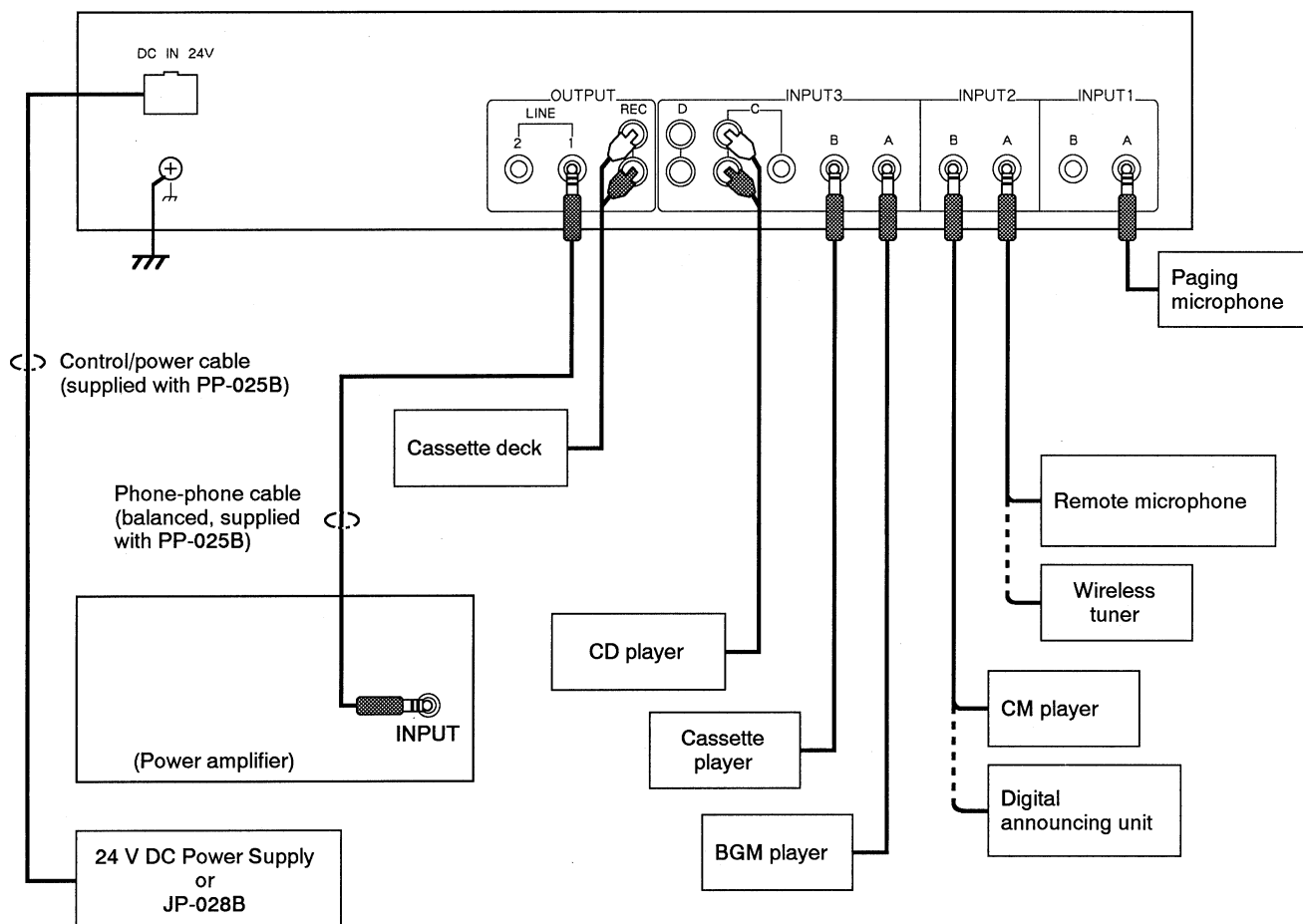


3. Noting the proper installation direction, mount the transformer onto the mounting surface of the circuit board, and solder (7 places) from the reverse side.

4. Replace the top panel.





6. CONNECTIONS

Priority levels are given to Input 1, Input 2, and Input 3 in high order.



Note : The plugs and cables other than those supplied with equipment should be prepared locally.

Symbols

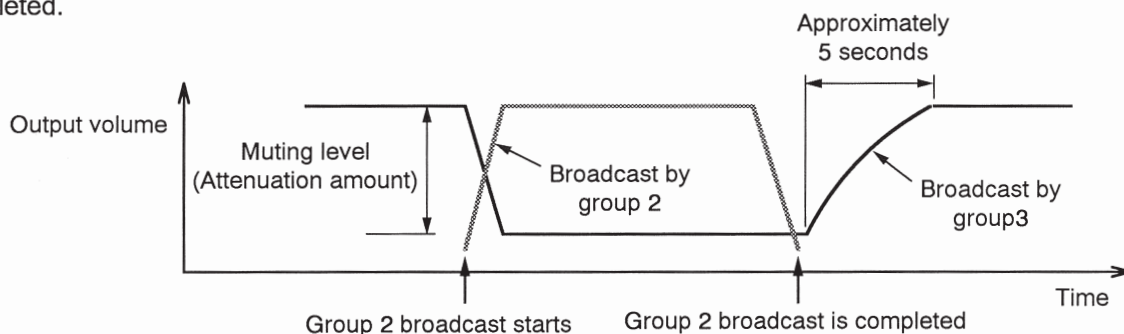
-  : Phone plug (unbalanced)
-  : Phone plug (balanced)
-  : RCA plug
-  : RCA plug

7. ADJUSTMENT

Adjustments explained below must be made after mounting the unit in a rack and completing equipment connections.

7.1 Muting Level Adjustment

In the PP-025B, input group 1 (1-A and 1-B) has priority over input group 2 (2-A and 2-B), which in turn has priority over input group 3 (3-A, 3-B, 3-C, and 3-D). If, for instance, there is an input from group 2 during a group 3 broadcast, the output of group 3 decreases in the predetermined amount, allowing the group 2 input to go through. The output of group 3 gradually increases to the previous level after the group 2 broadcast is completed.



This section describes the method of adjusting the muting level (attenuation amount) when two broadcasts with different priority levels take place simultaneously.

Notes

- Muting levels must be adjusted for both inputs 2 and 3 so that the priority function can operate properly (input 1>input 2>input 3).
- If the muting level is adjusted only for input 2, and not for input 3 (i.e. minimum attenuation amount), the priority function does not operate (i.e. signal level does not attenuate) for input 3.
- An optional chime unit is set for input group 1.

● Adjustment

The muting level controls are located inside the front cover. When adjusting the muting level, remove the cover and use a slotted screwdriver with relatively thin blade. After adjustment completion, replace the cover.

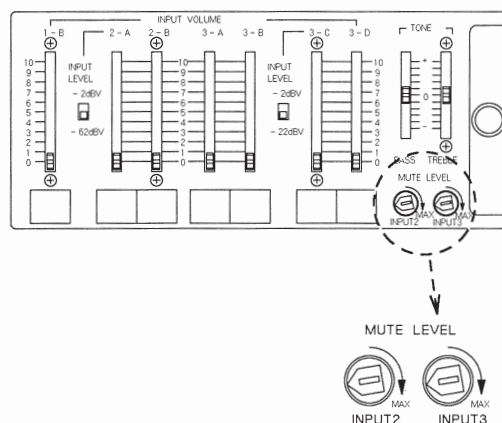
1. Muting level adjustment for input 3

- (1) Broadcast input group 3.
- (2) Broadcast input group 1 or 2.
- (3) Adjust the muting level (attenuation amount) using the input 3 muting level control. (Refer to the figure at right.)

The attenuation amount increases (the volume of input group 3 decreases) as the control is rotated clockwise.

2. Muting level adjustment for input 2

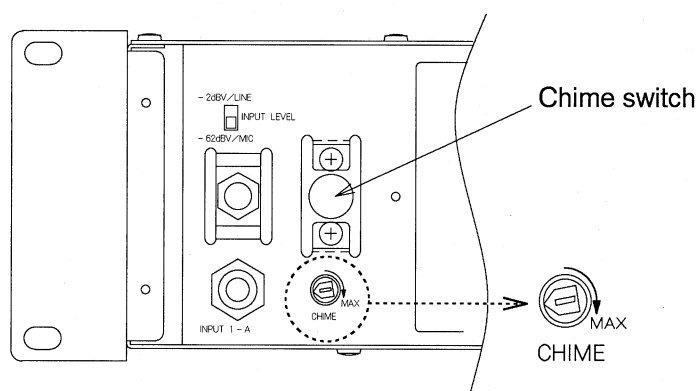
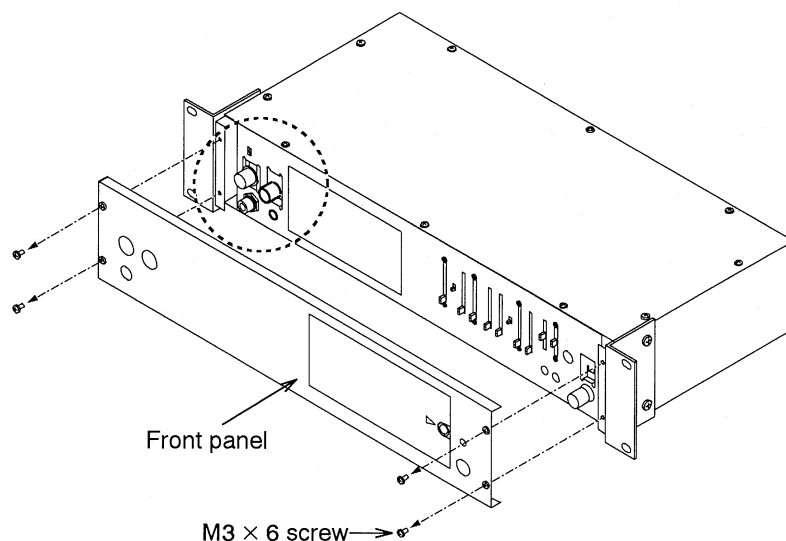
- (1) Broadcast input group 2.
- (2) Broadcast input group 1.
- (3) Adjust the muting level (attenuation amount) using the input 2 muting level control. (Refer to the figure at right.) The attenuation amount increases (the volume of input group 2 decreases) as the control is rotated clockwise.



7.2 Chime Volume Adjustment (When CK-025 Chime Unit is Employed)

For this adjustment, prepare a slotted screwdriver with thin blade.

1. Remove the front panel.



2. Press the chime switch to play chime.
3. Adjust the chime volume with the chime volume control. The volume increases as the control is rotated clockwise.
4. Replace the front panel after adjustment completion.

8. INPUT LEVEL SELECTION SWITCH

It is possible to change the input levels of inputs 1-A, 2-A, and 3-C as follows depending on the types of connected equipment.

Input 1-A	– 2 dBV	↔	– 62 dBV
2-A	– 2 dBV	↔	– 62 dBV
3-C	– 2 dBV	↔	– 22 dBV

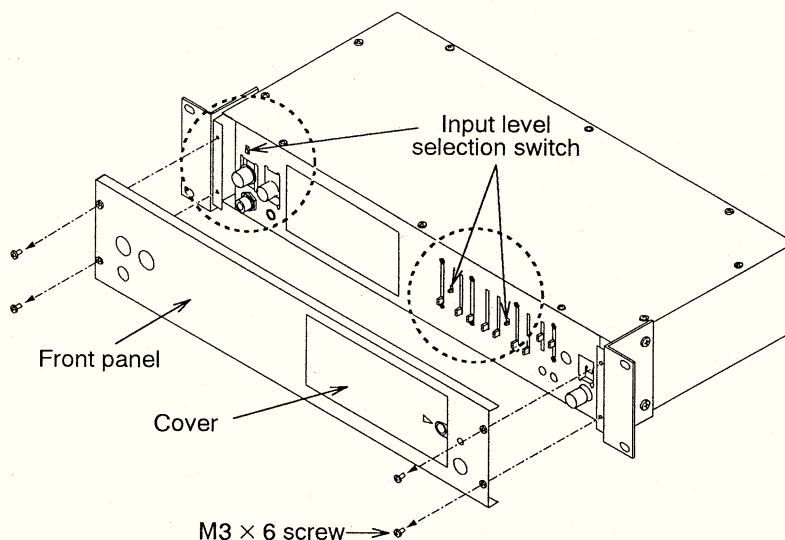
Follow the procedures below to make changes

Note : Avoid changing the level during broadcast because noise may be generated.

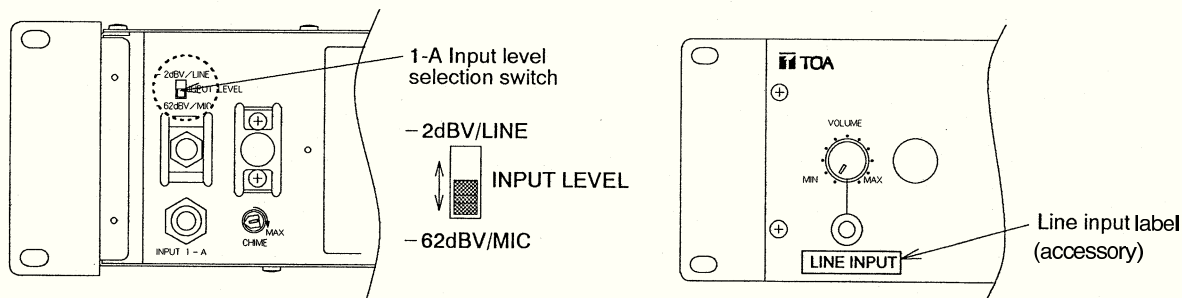
● Input 1-A

1. Unscrew and remove the front panel.

2. Change the input level with the input level selection switch (refer to the figure at right).



The level is factory-preset to “–62dBV (MIC)” position. When changing to “–2dBV (LINE)”, place the supplied “LINE INPUT” label over the “MIC INPUT” indication on the front panel.



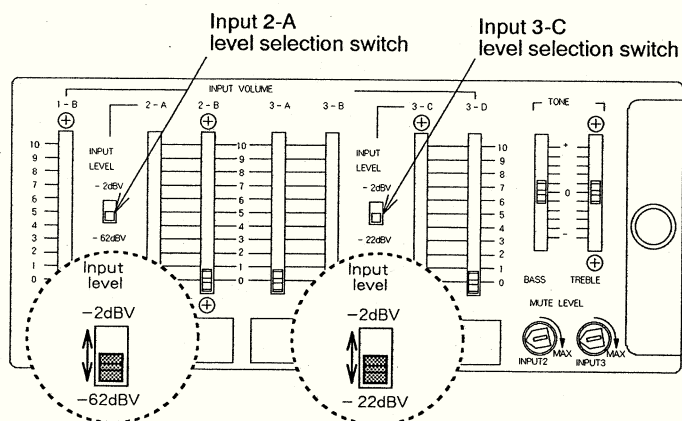
3. Replace the front panel after making necessary changes.

● Inputs 2-A and 3-C

1. Remove the front cover.

2. Change the level using the level selection switch.
(Refer to the figure at right.)

3. Replace the front cover after making necessary changes.



9. SPECIFICATIONS

Power source	24 V DC
Power Consumption	200 mA or less
Inputs	Input 1-A: -2/-62 dB*, 600 Ω, balanced, φ6.3 mm phone jack (2 P) Input 1-B: -2 dB*, 600 Ω, balanced, φ6.3 mm phone jack (2 P) Input 2-A: -2/-62 dB*, 600 Ω, balanced, φ6.3 mm phone jack (2 P) Input 2-B: -2 dB*, 600 Ω, balanced, φ6.3 mm phone jack (2 P) Input 3-A: -2 dB*, 20 kΩ, unbalanced, φ6.3 mm phone jack (2 P) Input 3-B: -2 dB*, 20 kΩ, unbalanced, φ6.3 mm phone jack (2 P) Input 3-C: -2/-22 dB*, 50 kΩ, unbalanced, φ6.3 mm phone jack (2 P)/RCA jack Input 3-D: -22 dB*, 50 kΩ, unbalanced, RCA jack
Outputs	Line out 1: 0 dB*, 600 Ω, balanced, all inputs (Inputs 1/2 are output when using the line out 2.), φ6.3 mm phone jack (2 P) Line out 2: 0 dB*, 600 Ω, unbalanced (Input 3 is output.), φ6.3 mm phone jack (2 P) Rec out: -10 dB*, 5 kΩ, unbalanced, all inputs (Inputs 1/2 are output when using the line out 2.), RCA jack
Frequency Response	50 Hz to 15 kHz ± 3 dB (at 1 kHz)
Tone Control	100 Hz, 10 kHz ± 10 dB
Signal to Noise Ratio	60 dB or more
Distortion	1% or less
Priority	Priority order: Input 1 > Input 2 > Input 3, Priority signal: Input level
Finish	Panel : Pre-coated steel plate, black (30% gloss)
Dimensions	482 (w) x 88.4 (h) x 218 (d) mm
Weight	3 kg

* 0 dB = 1 V

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

• Accessories

Phone plug/phone plug connection cord (balanced)	1
Power supply cord.....	1
Rack mounting screw (with washer).....	4
Rack mounting bracket (preinstalled on the unit).....	2
Input indication label	1
5P DIN plug	1

• Optional product

Chime unit: CK-025

[CK-025] (optional)

Power Supply	24 V DC (supplied from PP-025B)
Chime	1. Ascending 4-tone chime 2. 2-tone chime 3. 1-tone chime 4. Descending 4 tone chime

• Accessories

Chime connection cord	1
Screw M3 x 6.....	1

