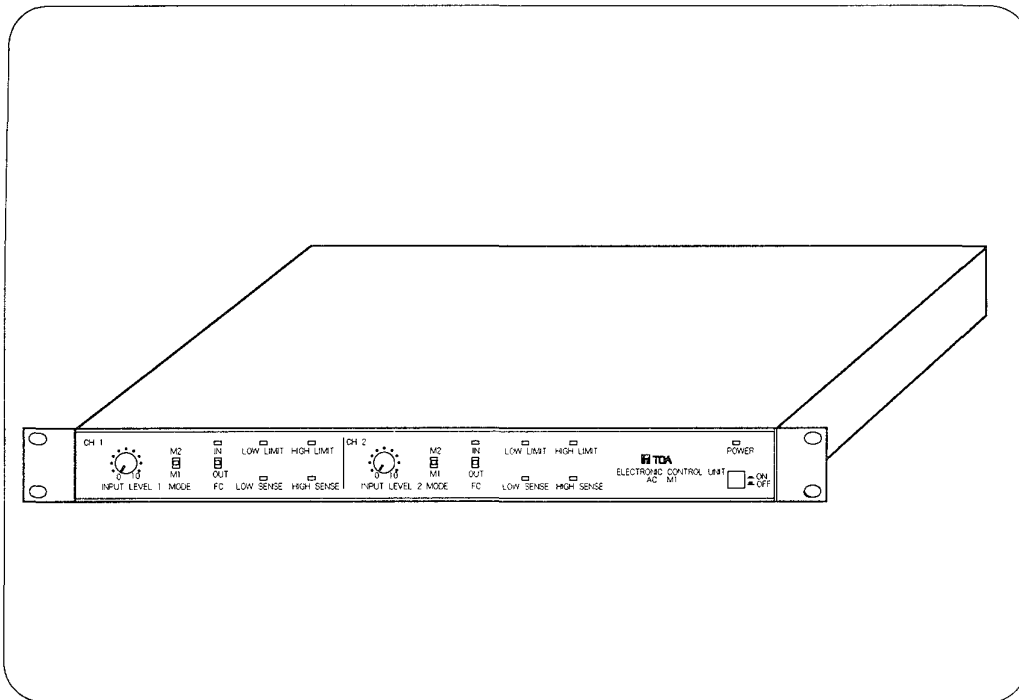


ELECTRONIC CONTROL UNIT

AC-M1



CONNECTING PRECAUTIONS

Be sure to provide a power amplifier, 300W(8Ω) or more output to use in connection with this unit.

Use of less than 300W power amplifier will not maintain primary capabilities and will lead to failures of the connecting speakers.

The AC-M1 control unit is designed for use exclusively with the SR-M1 and SR-M2 floor monitor speaker systems. Do not use other speakers than the SR-M1 and SR-M2.

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

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■ User care

- Never disassemble unit and touch the inside or insert metallic stuff into the inside as this may lead to a breakage or shock hazard.
- When water enters, a breakage or shock hazard can be caused. To prevent an accident, immediately unplug the power cord from the wall AC outlet and contact your nearest TOA dealer.
- Wipe unit down with a soft cloth when cleaning the exterior of unit. Never use such volatile liquids as thinner and benzine because their use may discolor unit.

■ General description

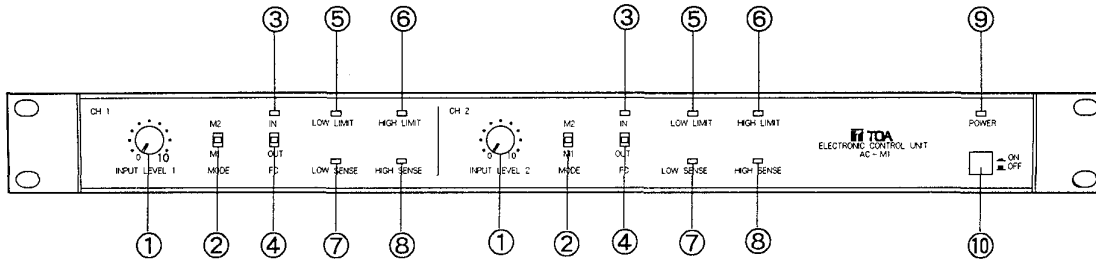
- The AC-M1 control unit is designed for use with the SR-M1 and SR-M2 floor monitor speaker systems.
- This electronic control unit provides the channel divider to divide respective frequency range between the speaker units, and can realize smooth phase characteristics in the speaker system, by according with the phase in crossover frequency while correcting time lag for the divided frequency range each other between the speaker units.
- In high frequency range in combination with the compression driver and the constant directivity (CD) horn, the horn equalizer employs to provide smooth phase and amplitude characteristics.
- Limiter is provided to prevent the speaker units from over-driven and damage in respective frequency range and not to arise power amplifier clipping.
- Quality sound is realized by use of selected electronic parts as OP amplifier, condensers etc.

■ Features

- Time lag between speaker units in the speaker system is corrected.
- Provided the frequency dividing network function.
- Accorded with phase at the crossover frequency.
- Limiter is provided to prevent the speaker units from over-driven and damage in each frequency range and not to arise power amplifier clipping.
- An internal equalizer circuit makes the speaker frequency response flat by minimizing the influence of reflected waves produced when the speaker is directly installed on the floor.
- Strictly selected parts and component parts are used for materializing quality sound.
- Can be mounted on 19" EIA standard rack. (one size)
- Space-saving design, yet dual channel construction. Either the SR-M1 or SR-M2 can be selected in each channel.
- Input and output are used the electronically balanced XLR type connector.
(Pin No.3 : HOT, No.2 : COLD and No.1 : GND)

Panel facilities

[Front view]



① Input level control (INPUT LEVEL 1, 2)

Adjusts the AC-M1's input level. When adjusting the input level, set this control to maximum position (10), and the gain control of each power amplifier for woofer and driver unit to 26dB.

② Speaker selection switch (MODE)

Set this switch to M1 position when using the SR-M1 speaker, and M2 position when using the SR-M2 speaker.

③ FC switch indicator

Lights when the FC switch is set to IN.

④ FC switch (FC)

Makes the speaker frequency response flat by minimizing the influence of reflected waves produced when the speaker is directly installed on the floor.

⑤ Low limit indicator (LOW LIMIT)

Low limit indicator comes on when the low limiter circuit starts to employ with signal of low sense input terminal. In case the indicator very often flashes, adjust the input level until it occasionally flashes.

⑥ High limit indicator (HIGH LIMIT)

High limit indicator comes on when the high limiter circuit starts to employ with signal of high sense input terminal. In case the indicator very often flashes, adjust the input level until it occasionally flashes.

⑦ Low sense input indicator (LOW SENSE)

Low sense input indicator comes on when signal is input to the low sense input terminal.

⑧ High sense input indicator (HIGH SENSE)

High sense input indicator comes on when signal is input to the high sense input terminal.

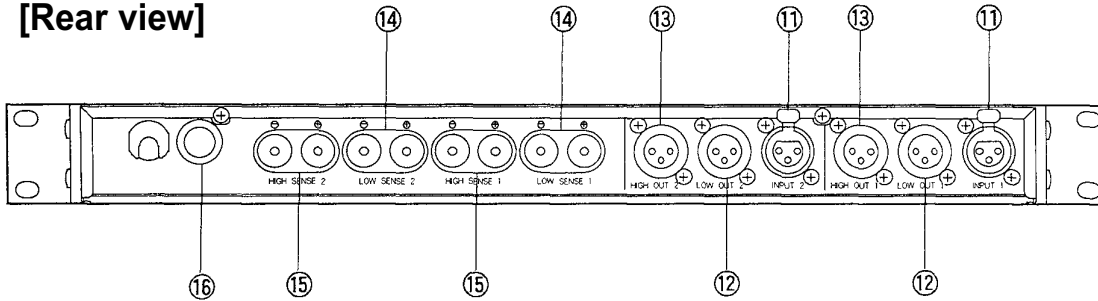
⑨ Power indicator

Power indicator comes on when the power switch is ON.

⑩ Power switch (POWER)

Press this switch to turn power ON or press it again to turn power OFF.

[Rear view]



⑪ Input connector (INPUT 1, 2)

Input connector for signal is used the electronically balanced XLR type connector.

⑫ Low output connector (LOW OUT 1, 2)

Output connector to the power amplifier for low frequency range is used the electronically balanced XLR type connector.

⑬ High output connector (HIGH OUT 1, 2)

Output connector to the power amplifier for high frequency range is used the electronically balanced XLR type connector.

⑭ Low sense input terminal (LOW SENSE 1, 2)

Input terminal for inputting signal from the power amplifier output for low frequency range is used the electronically balanced screw terminal.

Connect to accord with polarities (\oplus , \ominus) between the power amplifier output terminal and the sense input terminal.

⑮ High sense input terminal (HIGH SENSE 1, 2)

Input terminal for inputting signal from the power amplifier output for the high frequency range is used the electronically balanced screw terminal.

Connect to accord with polarities (\oplus , \ominus) between the power amplifier output terminal and the sense input terminal.

⑯ Fuse

When the fuse blew, ensure to replace it with the same type fuse after confirming its cause and countermeasures. (Be sure to unplug the power cord before replacing with a new fuse.)

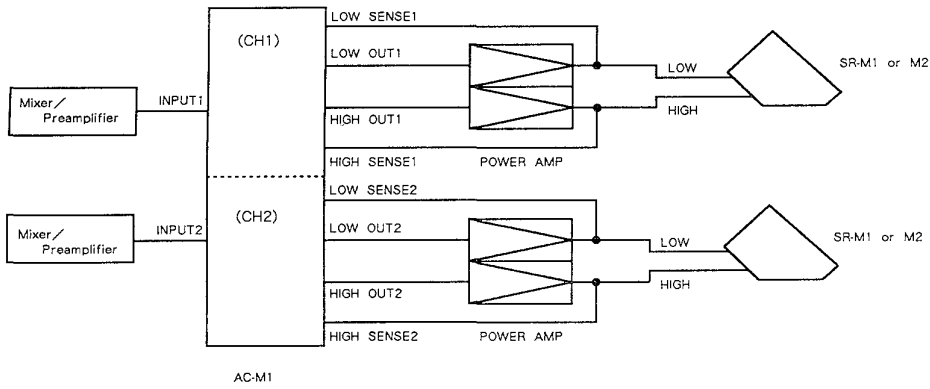
Use of other fuses than the same type fuse will lead to failures of unit.

Fuse rating

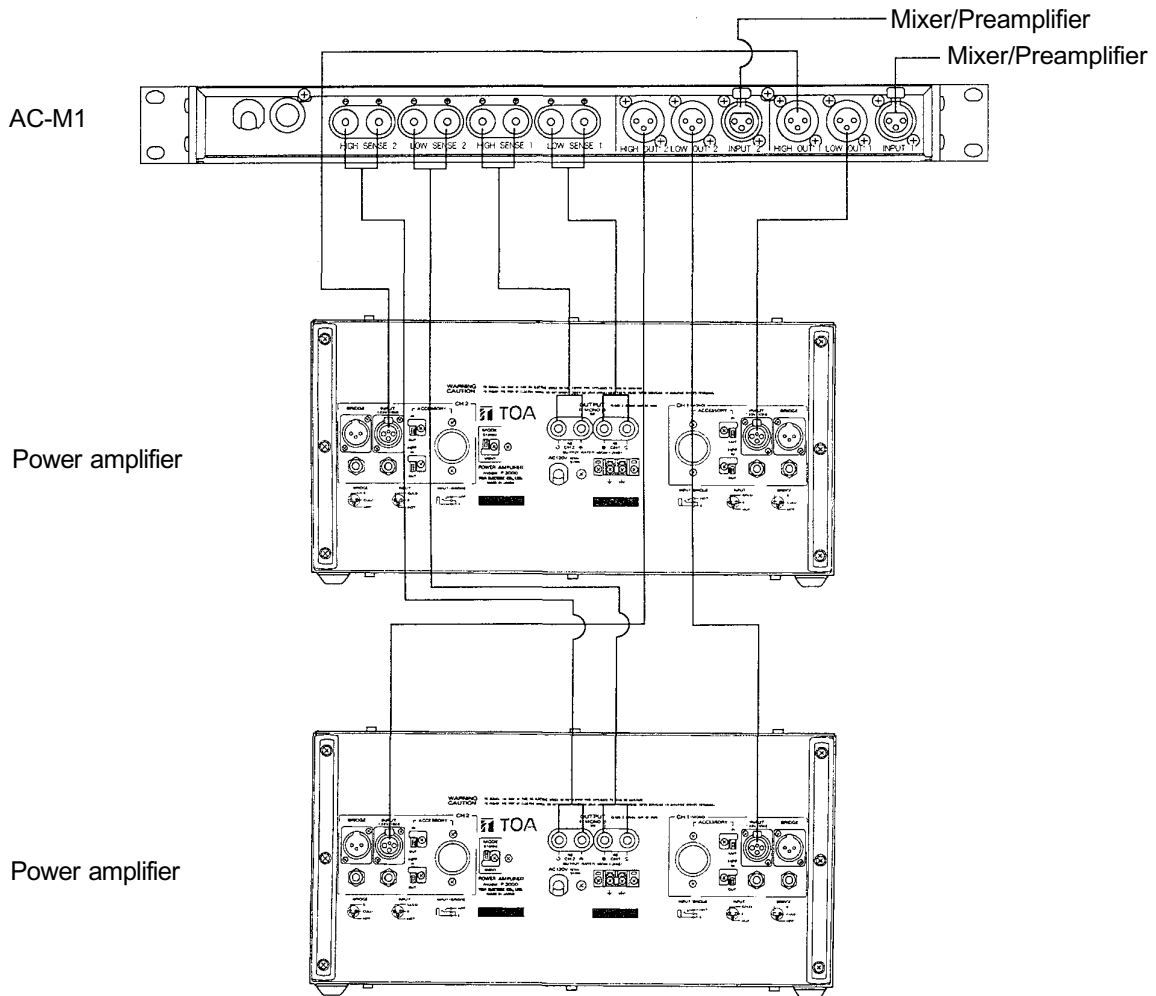
220~240V AC version	250V 0.2A
120V AC version	250V 0.63A

Connection

● Basic block diagram



● Back wiring connection of with external equipment



■ Installation

● FC (Floor Correction) switch

The AC-M1 features the Floor Correction function which minimizes the influence of reflected waves produced when the speaker is directly installed on the floor.

When a floor monitor speaker is used, direct sound (A) and reflected sound (B) are both heard simultaneously at the listening point, as shown in Fig. 1, while both sounds are combined into one frequency response. The reflected sound produces dips (a drop in SPL at the specified frequency) in the frequency response. The AC-M1 has an internal equalizer to correct the dips for the best possible sound reproduction. Usually set the FC switch to IN.

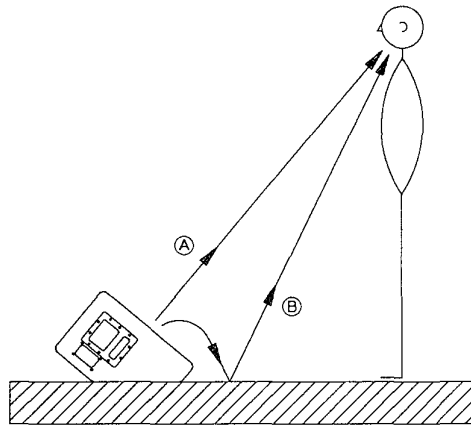


Fig. 1

When using the speaker installed on the table (far from the floor) as shown in Fig. 2, set the FC switch to OUT.

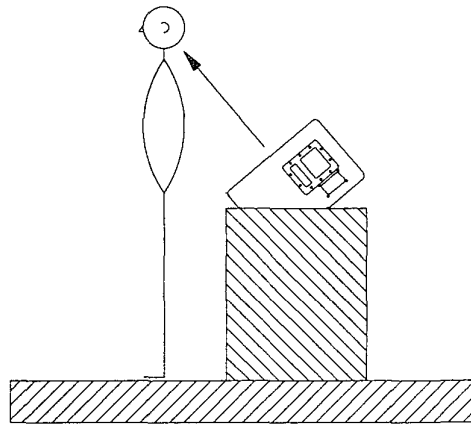
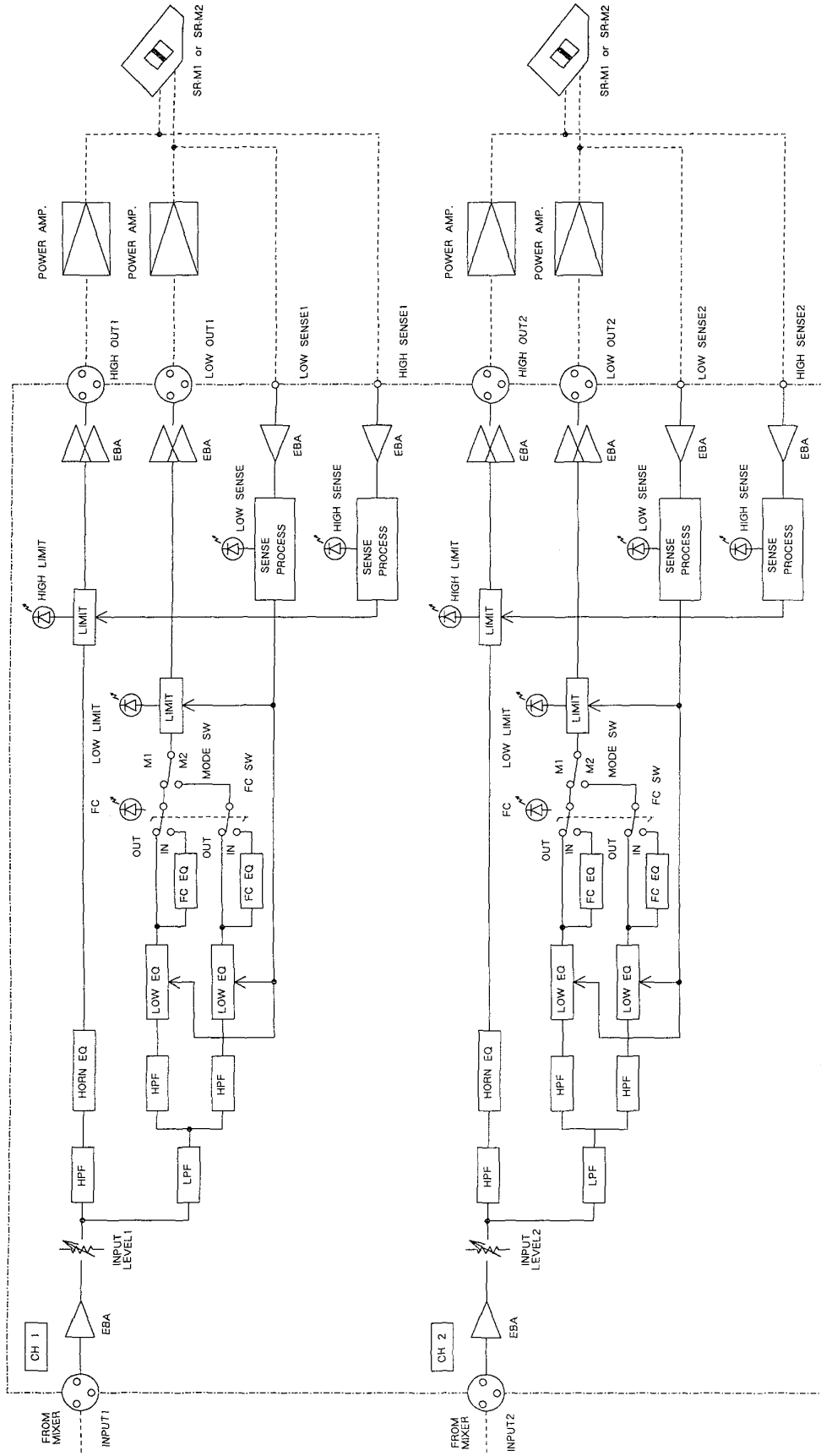


Fig. 2

- Note** : (1) Refer to "Operating instructions of the SR-M1/SR-M2" on connection diagrams with the speakers and power amplifiers.
- (2) When driving two parallel-connected speakers, the amplifier output power must be at least 450W (at 4 ohm load).

Block diagram



ACM1 BLOCK DIAGRAM

■ Specifications

Model	AC-M1
Input	Electronically balanced (Cannon XLR-3-31I or equivalent)
Input impedance	20 k Ω (Balanced)
Rated input level	+4dB* (Pin No.3 : HOT, No.2 : COLD and No.1 : GND)
Max. input level	+26 dB*
Sense input	Electronically balanced (Binding post)
Sense input impedance	10 k Ω
Output	Electronically balanced (Cannon XLR-3-32 or equivalent)
Output impedance	600 Ω (Balanced)
Rated output level	+4dB*
Max. output level	+26 dB* (Balanced)
Crossover frequency	1 kHz
Distortion	Less than 0.05%(+4 dB* 1 kHz)
Hum & Noise	Less than -85 dB* (20 Hz~20 kHz)
Indicators	Power : green LED FC : green LED Sense input : green LED (LOW SENSE, HIGH SENSE) Limit : red LED (LOW LIMIT, HIGH LIMIT)
Front panel operation	Input level control Power switch Mode switch FC switch
Power requirement	AC Mains, 50 Hz/60 Hz
Power consumption	18 W (120V AC version) 16 W (220V~240V AC version)
Weight	5 kg (11.02 lb.)

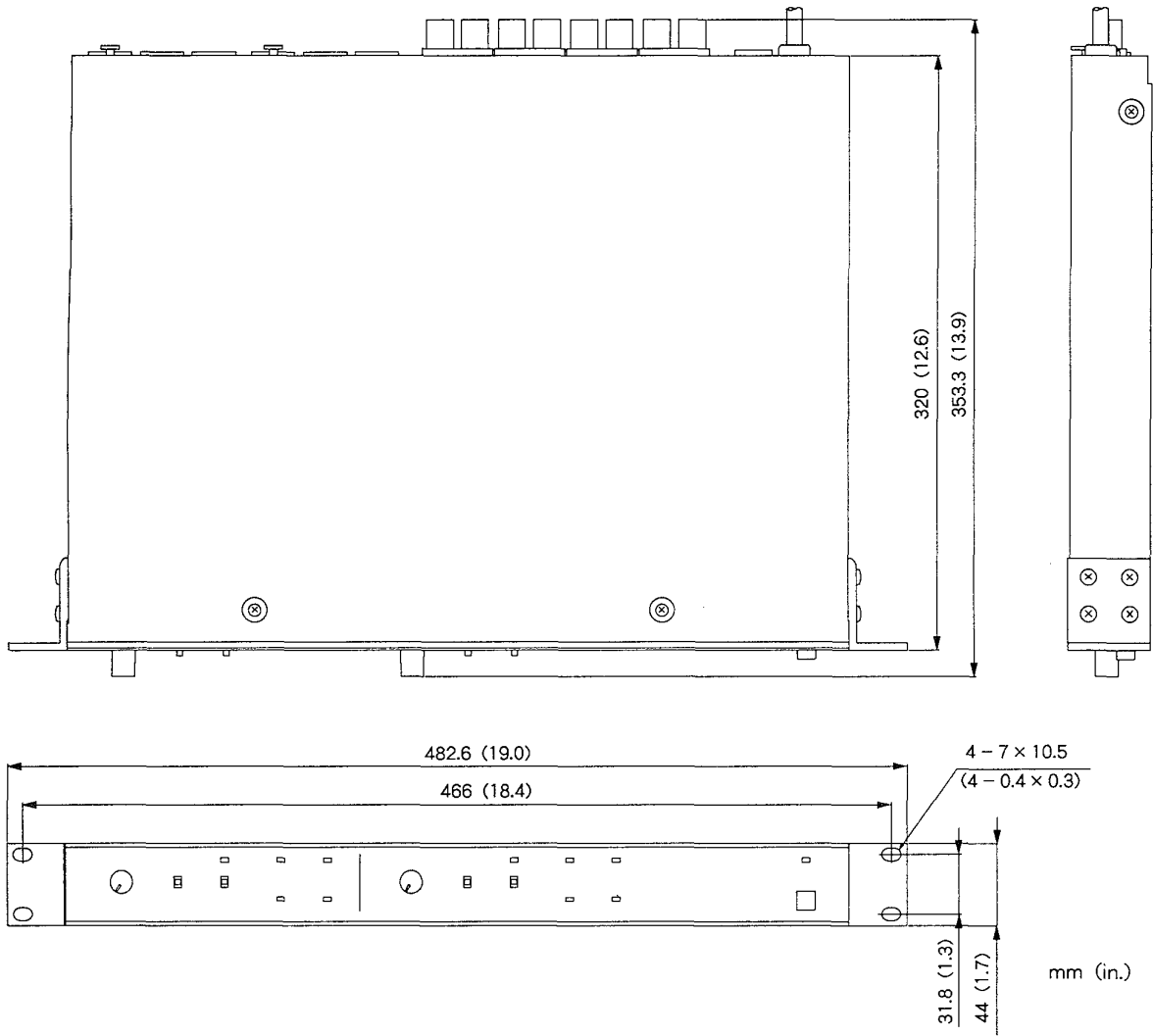
* Specifications are subject to change without notice.

※ 0dB=0.775Vrms

● Accessories

Fuse (0.63A 120V AC version / 0.2A 220V~240V AC version)	1
Warranty card (for USA and Canada only)	1
Operating instructions	1

■ Appearance





TOA Corporation

TOA

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