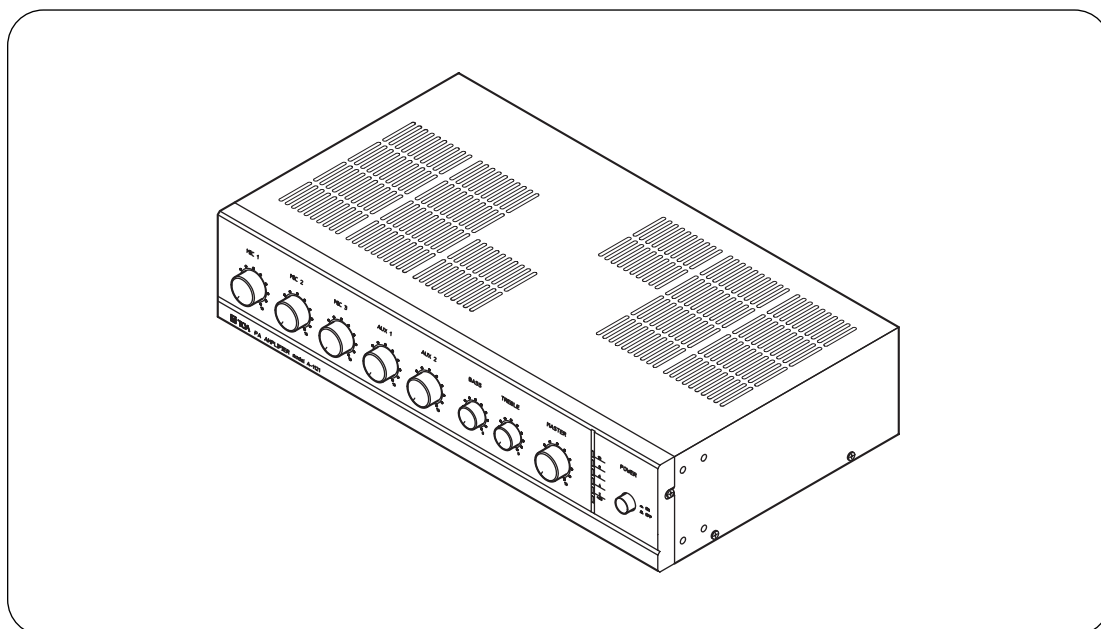


# **BASIC PA AMPLIFIER**

**A-1031**  
**A-1061**  
**A-1121**

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.



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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.



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



**WARNING**

### 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.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because the voltage of up to 100 V is applied to the high impedance speaker terminals, never touch these terminals to avoid electric shock.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.

### When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power

supply plug from the AC outlet and 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 metallic object gets into the unit
- If the unit falls, or the unit case breaks
- If the power supply cord is damaged (exposure of the core, disconnection, etc.)
- If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest TOA dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.



**CAUTION**

### When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the upper panel ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire.
- 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 or electric shock.

### 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.

## 2. GENERAL DESCRIPTION

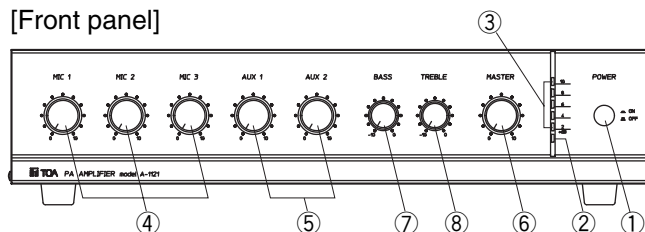
TOA's Basic PA Amplifiers A-1031, A-1061, and A-1121 are high cost-performance mixer power amplifiers suited for broadcasting paging or background music in schools, offices, and shops.

## 3. FEATURES

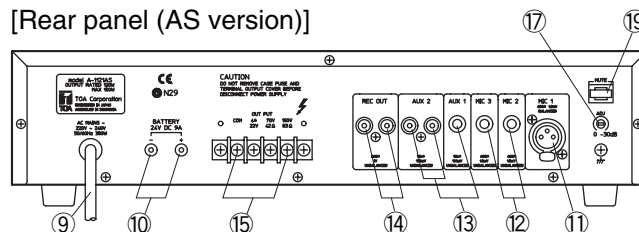
- High durability, high reliability, and high cost performance.
- Three microphone inputs, two AUX inputs, and one recording output.
- Speaker outputs of constant voltage distribution system (100 V and 70 V) and low impedance (4  $\Omega$ ).
- Operates on both AC and DC power.
- Muting function.
- Independent input volume controls and master volume control.
- Independent tone controls cut both high and low frequencies.
- Power voltage selector of 110 – 120 V or 220 – 240 VAC (LH version).
- MIC 1 input is a 5-pin DIN connector to provide muting control and phantom power for condenser microphones. (ER and UK versions).
- Five-segment output level meter provides at-a-glance monitoring of output status.
- Current limiter circuitry protects transistors, and the thermal protection circuitry prevents a failure due to overheat.

## 4. PANEL FACILITIES

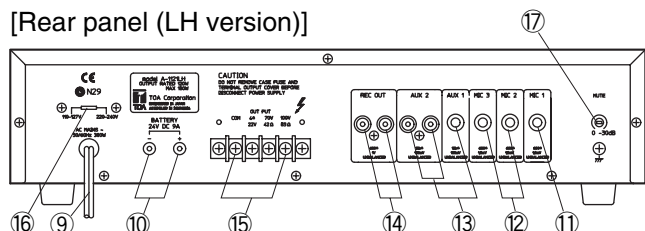
[Front panel]



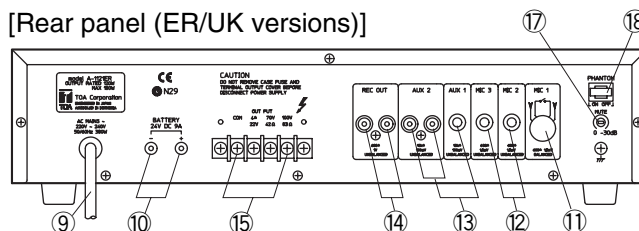
[Rear panel (AS version)]



[Rear panel (LH version)]



[Rear panel (ER/UK versions)]



### ① Power on-off button

Power is switched on and off with each depression of this button.

### ② Power indicator

Lights when power is switched on.

### ③ LED level meter

Lights when power is switched on, and indicates an output level.

### ④ Microphone volume control

Adjusts the microphone volume gain.

### ⑤ AUX volume control

Adjusts the AUX volume gain.

### ⑥ Master volume control

Adjusts the overall signal gain.

### ⑦ Bass control

Adjusts bass response. The "0" position provides flat audio response. Turning this control counter-clockwise attenuates the bass response.

### ⑧ Treble control

Adjusts treble response. The "0" position provides flat audio response. Turning this control counter-clockwise attenuates the treble response.

- ⑨ **AC power cord**  
Connects to an AC power source.
- ⑩ **DC terminals**  
Connect to a DC power supply. (A-1031 and A-1061: 12 VDC, A-1121: 24 VDC)
- ⑪ **MIC 1 input (LH version)**  
Connects to the unbalanced type microphone of 30-600 ohms and with 1/4" phone plug. When this input receives a signal, the muting function is operated. (Refer to the next section for the muting function.)
- ⑪ **MIC 1 input (ER/UK versions)**  
Connects to the balanced type microphone of 30-600 ohms and with 5-pin DIN connector. When pin 4 is shorted with pin 5, the muting function is operated. (Refer to the next section for the muting function.)
- ⑪ **MIC 1 input (AS version)**  
Connects to the balanced type microphone of 30-600 ohms and with XLR connector.  
Pin 1: Ground (shield)  
Pin 2: Hot (high)  
Pin 3: Cold (low)
- ⑫ **MIC 2 and 3 inputs**  
Connect to the unbalanced type microphone of 30-600 ohms and with 1/4" phone plug.
- ⑬ **AUX 1 and 2 inputs**  
Connect to auxiliary equipment.
- ⑭ **Recording output**  
Connect to a cassette tape recorder.
- ⑮ **Output terminals**  
Connect to speakers.
- ⑯ **Voltage selector (LH version only)**  
Sets the desired voltage.
- ⑰ **Muting level control**  
Adjusts the background music volume to be automatically reduced when the priority function is operated.
- ⑱ **Phantom power connector (ER/UK versions only)**  
Inserting this connector into the ON position supplies power for condenser microphones from MIC 1 connector. Be sure to set this connector to the OFF position when using the microphone that cannot be operated on phantom power.
- ⑲ **Muting control connector (AS version only)**  
Insert the supplied connector to short lead wires attached to the connector, and the muting function is operated, allowing MIC 1 input to take precedence.

#### Notes

- When all the five LEDs (+10 dB) remain lit, this indicates that sound is distorted. In such a case, adjust each volume control so that LED 4 (+8 dB) and 5 (+10 dB) flash.
- When connecting speakers, use only one of the speaker output terminals.

## 5. MUTING FUNCTION

### ● H version

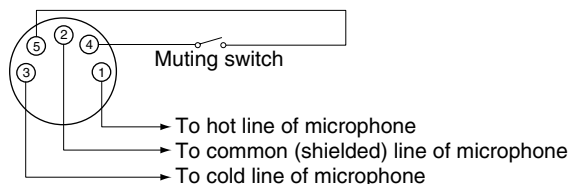
When MIC 1 input is used, it takes precedence and automatically reduces the volume of MIC 2 and MIC 3 inputs by 0 to -30 dB, which is adjustable with the MUTE control on the rear panel. The attenuation level is preset for -30 dB at the factory.

MUTE



### ● R and UK versions

Shorting DIN plug pins 4 and 5 of rear-mounted MIC 1 input allows MIC 1 input to reduce the volume of MIC 2 and MIC 3 inputs by 0 to -30 dB. The attenuation level is adjustable with the MUTE control on the rear panel and is preset for -30 dB at the factory. Use TOA's microphone PM-222D or PM-660D to bring the best results.

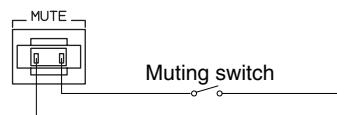


MUTE



### ● S version

Connect the supplied connector with lead wires to the muting connector on the rear panel, and the lead wires to the muting switch. Turning on (shorting) the muting switch allows MIC 1 input to take precedence, muting signals of inputs of MIC 1 and 2, and AUX 1 and 2 by 0 to -30 dB. The attenuation level is adjustable with the rear-mounted muting control, and is preset for -30 dB at the factory.

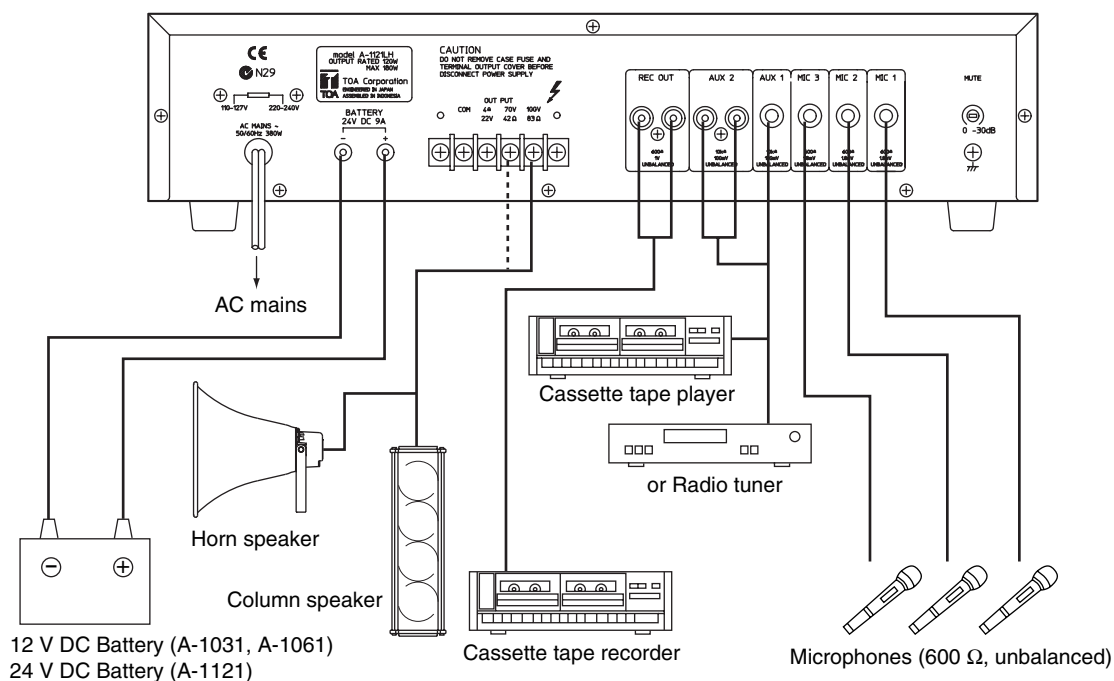


ADJ

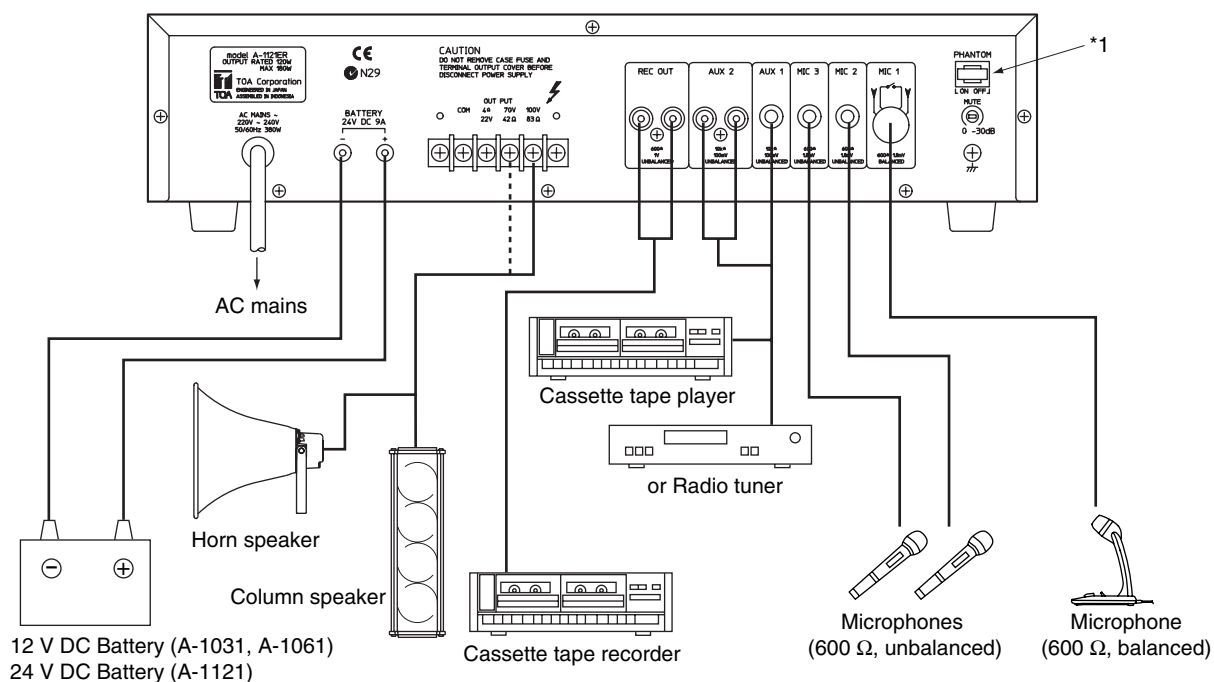


## 6. CONNECTION EXAMPLE

### ● LH version

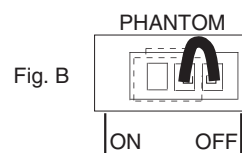
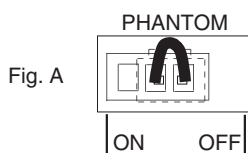
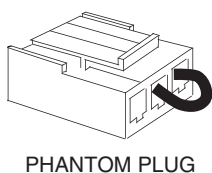


### ● R and UK versions



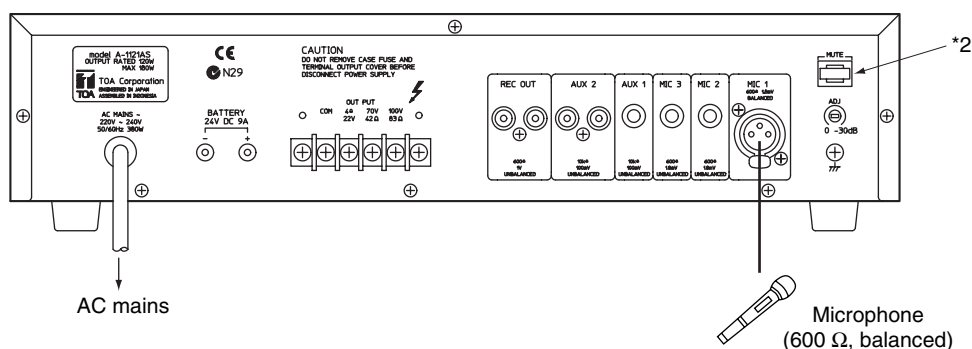
#### \*1 Phantom power switch (plug)

The setting position of this phantom plug switches on or off the phantom power to be supplied to MIC 1 input for condenser microphones. Insert the plug in the position shown in Figure A to switch on the phantom power, and in the position shown in Figure B to switch it off. The plug is set to the OFF position at the factory. Be sure to check the microphone specifications when using the phantom power.



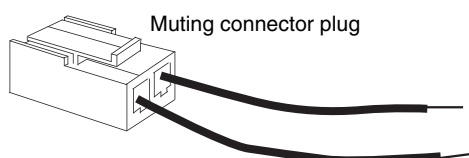
## ● S version

(Only the functions that differ from those of the ER and UK versions are described here. For connections not described, refer to the connections of other versions.)



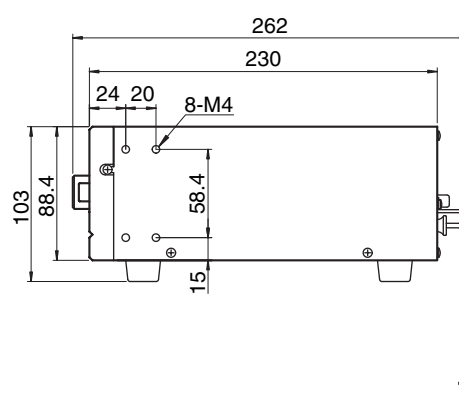
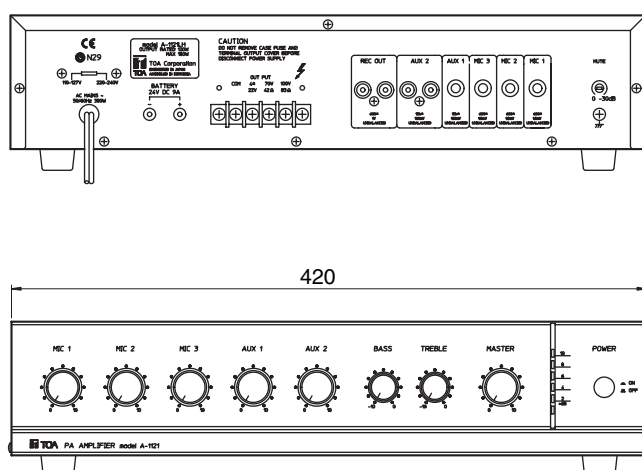
### \*2 Muting terminal

Connect the supplied connector plug with lead wires to the muting connector on the rear panel, and the lead wires to the muting switch. Turning on (shorting) the muting switch allows MIC 1 input to take precedence, muting signals of other inputs (MIC 1 and 2, and AUX 1 and 2 ).

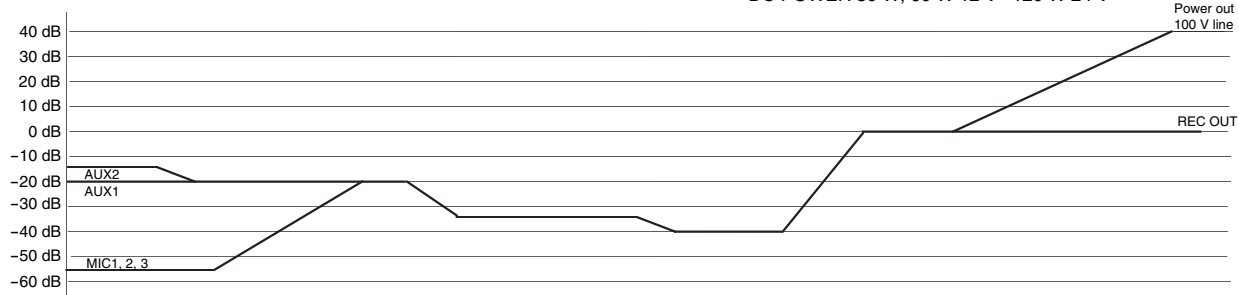


## 7. DIMENSIONAL DIAGRAM

(unit: mm)



● **H version**



## 9. SPECIFICATIONS

Model		A-1031	A-1061	A-1121
Output	Rated	30 W	60 W	120 W
	Max.	45 W	90 W	180 W
Output Regulation		Less than 3 dB, no load to full load		
Speaker Output		Balanced 4 ohms, 70 V and 100 V		
Recording Output		600 ohms, 1 V (0 dBV)		
Input	LH version	MIC 1, 2, 3: 600 ohms, 1.8 mV (–55 dBV) , unbalanced AUX 1, 2 : 10 kohms, 100 mV (–20 dBV) , unbalanced		
	ER	MIC 1 : 600 ohms, 1.8 mV (–55 dBV) , electrical balanced		
	UK versions	MIC 2, 3 : 600 ohms, 1.8 mV (–55 dBV) , unbalanced		
	AS	AUX 1, 2: 10 kohms, 100 mV (–20 dBV)		
MIC 1 Connector	LH version	1/4" phone jack		
	ER, UK versions	5P DIN		
	AS version	3P XLR type		
MIC 1 Phantom Power (ER/UK Versions)		9 VDC		21 VDC
Frequency Response		100 – 10,000 Hz (± 3 dB)		
Distortion		Less than 1% at 1 kHz, 1/3 rated power		
Signal-to-Noise Ratio		All volume controls ccw : 92 dB MASTER max., all input volume min.: 75 dB MIC 1, 2, and 3 : 70 dB AUX 1 and 2 : 75 dB		
Tone Controls		Bass : +0 dB, –10 dB at 100 Hz Treble: +0 dB, –10 dB at 10 kHz		
Protection Circuit		Current limiter, thermal protection, AC & DC fuse		
Muting Function		MIC1 overrides other input signals with 0 – 30 dB attenuation		
Power Requirements	AC 50/60 Hz	LH version : 110 – 120 V or 220 – 240 V (selectable) ER, UK, AS version: 220– 240 V		
	DC	12 V		24 V
Power Consumption (at rated output)	AC 50/60 Hz	120 W	220 W	380 W
	DC	5 A	9 A	
Color		Black		
Dimensions		420 (w) x 103 (h) x 262 (d) mm		
Weight		5.0 kg	7.5 kg	10 kg

**Note:** The design and specifications are subject to change without notice for improvement.  
Specifications are measured on 240 VAC power operation.  
The LH versions operating voltage is factory-preset at "220 V – 240 VAC".



TOA Corporation