

TASCAM

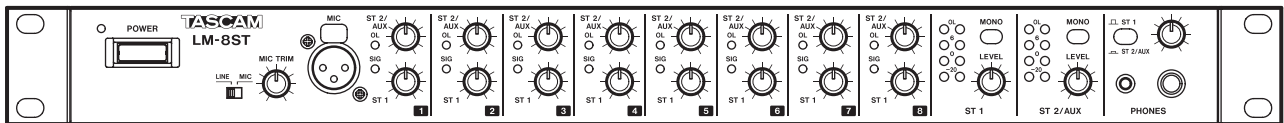
TEAC PROFESSIONAL

D01098820A

LM-8ST

Line Mixer

OWNER'S MANUAL



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IMPORTANT SAFETY INSTRUCTIONS



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.

Model number _____

Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CE Marking Information

- a) Applicable electromagnetic environment: E4
- b) Peak inrush current: 3.75 A

For U.S.A.

TO THE USER

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION

Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user's authority to operate this equipment.

In North America use only on 120V supply.

产品有毒有害物质或元素的名称及含量

机种: LM-8ST		有毒有害物质或元素					
品名	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	
1 CHASSIS部份	×	○	○	○	○	○	
2 线材部份	×	○	○	○	○	○	
3 PCB Assy部份	×	○	○	○	○	○	
4 电源部份	×	○	○	○	○	○	
5 附属品部份	×	○	○	○	○	○	
6 SEAL部份	×	○	○	○	○	○	
7 包装部份	○	○	○	○	○	○	

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

(针对现在代替技术困难的电子部品及合金中的铅)

IMPORTANT SAFETY INSTRUCTIONS

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this apparatus near water.
- 6 Clean only with dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11 Only use attachments/accessories specified by the manufacturer.
- 12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



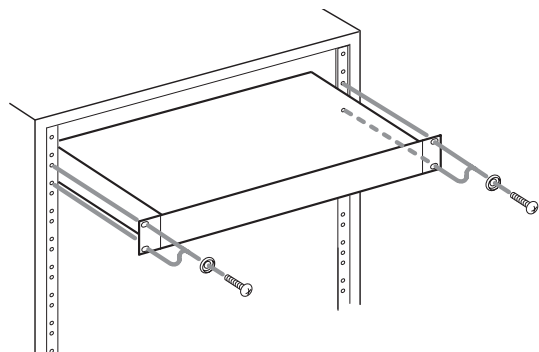
- 13 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Do not expose this apparatus to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on the apparatus.
- Do not install this apparatus in a confined space such as a book case or similar unit.
- The apparatus draws nominal non-operating power from the AC outlet with its POWER or STANDBY/ON switch not in the ON position.
- The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.
- The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.
- Products with Class I construction are equipped with a power supply cord that has a grounding plug. The cord of such a product must be plugged into an AC outlet that has a protective grounding connection.
- If the product uses batteries (including a battery pack or installed batteries), they should not be exposed to sunshine, fire or excessive heat.
- CAUTION for products that use replaceable lithium batteries: there is danger of explosion if a battery is replaced with an incorrect type of battery. Replace only with the same or equivalent type.
- Caution should be taken when using earphones or headphones with the product because excessive sound pressure (volume) from earphones or headphones can cause hearing loss.
- If you are experiencing problems with this product, contact TEAC for a service referral. Do not use the product until it has been repaired.

■ RACK-MOUNTING THE UNIT

Use the supplied rack-mounting kit to mount the unit in a standard 19-inch rack, as shown below.

Remove the feet of the unit before mounting.



NOTE

- Leave 1U of space above the unit for ventilation.
- Allow at least 10 cm (4 in) at the rear of the unit for ventilation.

1 – Introduction

Thank you for your purchase of the TASCAM LM-8ST Line Mixer.

Before connecting and using the unit, please take time to read this manual thoroughly to ensure you understand how to properly set up and connect the unit, as well as the operation of its many useful and convenient functions. After you have finished reading this manual, please keep it in a safe place for future reference.

You can also download the Owner's Manual from the TASCAM web site (<http://www.tascam.com>).

Features

- Rack-mountable 1U size
- 8 stereo line inputs, 2 stereo bus outputs
- Each channel has balanced TRS input jacks
- Channel 1 has an XLR microphone input connector and a trim knob
- Nominal input level can be switched between +4 dB and -10 dBV
- Each input has overload and signal indicators
- Each output bus has a 4-segment output level meter
- 1/4-inch (6.3-mm) and 1/8-inch (3.5-mm) headphone output connectors
- Ground lift switch allows signal grounding to be turned ON or OFF for all channels at the same time

Included items

The included items are listed below.

Take care when opening the package not to damage the items. Keep the package materials for transportation in the future.

Please contact the store where you purchased this unit if any of these items are missing or have been damaged during transportation.

- Main unit (LM-8ST) 1
- Power cord..... 1
- A rack-mounting screw kit..... 1
- A warranty card 1
- Owner's manual (this manual) 1

About this manual

In this manual, we use the following conventions:

- The names of keys and controls are given in the following typeface: **POWER**.
- Additional information is introduced in the styles below when needed:

NOTE

Explanation of actions in special situation and supplement.

CAUTION

Instructions that should be followed to avoid injury, damage to the unit or other equipment.

Trademarks

- TASCAM is a trademark of TEAC Corporation, registered in the U.S. and other countries.
- Other company names, product names and logos in this document are the trademarks or registered trademarks of their respective owners.

Precautions and notes for placement and use

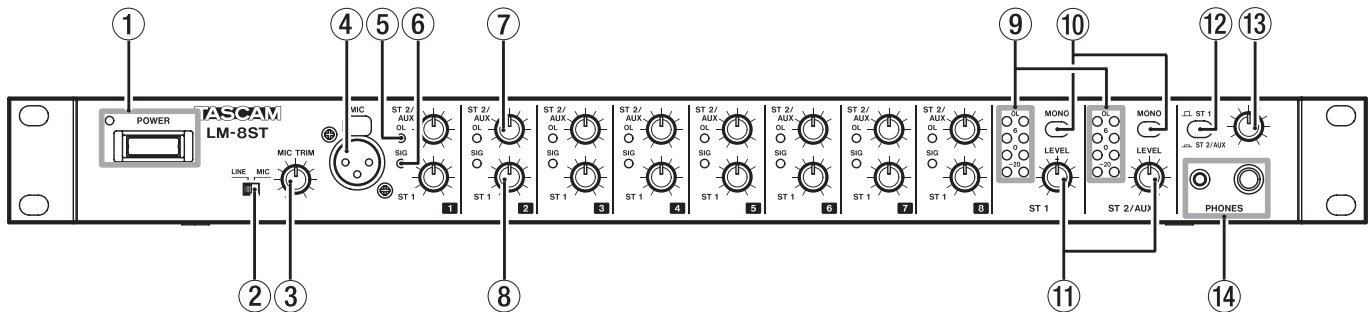
- The operating temperature should be between 5°C and 35°C (41°F and 95°F).
- Make sure that the unit is mounted in a level position for correct operation.
- Do not place any object on the unit for heat dissipation.
- Avoid installing this unit on top of any heat-generating electrical device such as a power amplifier.

Cleaning the unit

To clean the unit, wipe it gently with a soft dry cloth. Do not wipe with chemical cleaning cloths, benzene, paint thinner, ethyl alcohol or other chemical agents to clean the unit as they could damage the surface.

2 – Names and Functions of Parts

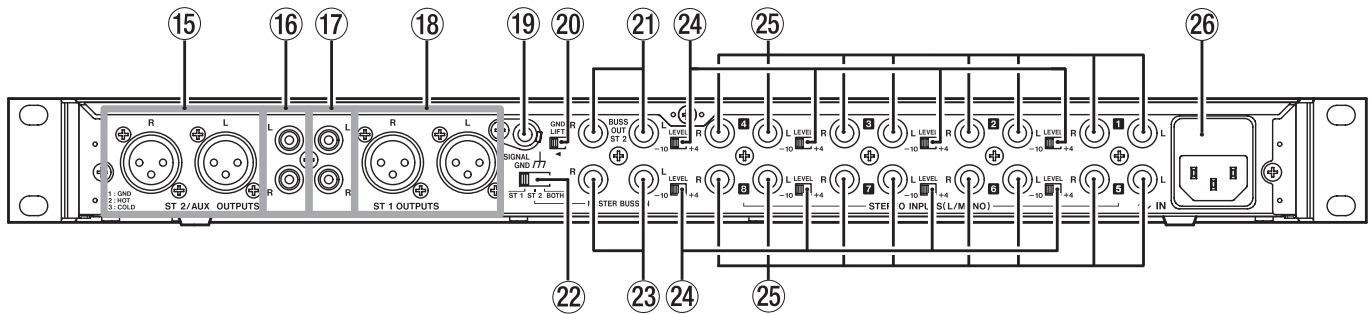
Front panel



- ① **POWER switch and indicator**
Press to turn power ON or OFF. The **POWER** indicator lights when the power is ON.
- ② **MIC/LINE switch**
Set whether the input source for channel 1 is the microphone input or the line input.
- ③ **MIC trim knob**
Use this to adjust the microphone input level.
- ④ **MIC input connector**
Use this balanced XLR connector for microphone input.
- ⑤ **Overload (OL) indicator**
This lights if the level input to this device is too high (overloading with a clipping level of -3 dB or higher).
- ⑥ **Signal (SIG) indicator**
This lights when a signal (-20 dBu or greater) is detected at the input connector.
- ⑦ **ST 2/AUX knobs**
Use these to adjust the levels sent from each channel to the ST 2/AUX bus.
- ⑧ **ST 1 knobs**
Use these to adjust the levels sent from each channel to the ST 1 bus.
- ⑨ **Output level meters**
The top segment of each 4-segment output level meter is an overload indicator.
- ⑩ **MONO buttons**
Push in to set the output to monaural.
- ⑪ **LEVEL knobs**
Use these to adjust the output levels.
- ⑫ **ST 1, ST 2/AUX switch**
Set which output to use for headphone monitoring.
Set it to **ST 1** to monitor the ST 1 bus signal or **ST 2/AUX** to monitor the ST 2/AUX bus signal.
- ⑬ **PHONES knob**
Adjust the headphones output level.
- ⑭ **PHONES jacks**
Connect headphones to these 1/4-inch (6.3 mm) and 1/8-inch (3.5 mm) jacks.

2 – Names and Functions of Parts

Rear panel



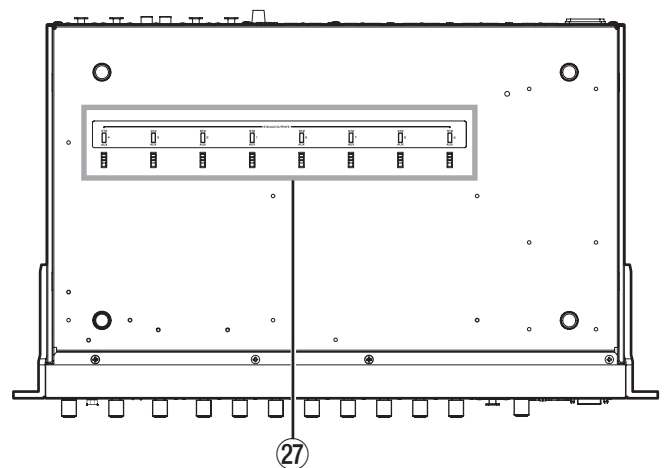
- ⑮ **ST 2/AUX OUTPUTS (XLR connectors)**
These balanced XLR connectors output the ST 2/AUX bus signal.
(1: GND 2: HOT 3: COLD)
- ⑯ **ST 2/AUX OUTPUTS (RCA pin jacks)**
These unbalanced RCA pin jacks output the ST 2/AUX bus signal.
- ⑰ **ST 1 OUTPUTS (RCA pin jacks)**
These unbalanced RCA pin jacks output the ST 1 bus signal.
- ⑱ **ST 1 OUTPUTS (XLR connectors)**
These balanced XLR connectors output the ST 1 bus signal.
(1: GND 2: HOT 3: COLD)
- ⑲ **Signal ground (SIGNAL GND) connector**
Use a commercially available PVC-covered cord to connect this connector to the signal ground. Note that this is NOT an electrical safety ground (earth).
- ⑳ **Ground lift (GND LIFT) switch**
Even when the ground connector is used to ground the unit, this ground connection can be interrupted (ground lift) by setting the **GND LIFT** switch to the left.
- ㉑ **BUSS OUTPUT connectors**
The ST 2/AUX bus signal is output through these balanced TRS connectors. (Tip: HOT, Ring: COLD, Sleeve: GND)
- ㉒ **MASTER BUSS IN switch**
Set where the signals input from the **MASTER BUSS IN** connectors are sent.
- ㉓ **MASTER BUSS IN input connectors**
The signal input through the balanced TRS **MASTER BUSS IN** connectors can be set to be sent to the ST 1 (MAIN), ST 2/AUX or both busses at once.
- ㉔ **LEVEL switches**
Set the nominal input/output levels for the channel inputs/outputs to +4 dBu or -10 dBV.
- ㉕ **STEREO INPUTS (L/MONO) connectors**
These are balanced TRS line input connectors for each channel. (Tip: HOT, Ring: COLD, Sleeve: GND)

- ⑳ **Power connector**
Use the included power cord to connect the power source.

CAUTION

When using this unit, always use the included power cord. Moreover, do not use the included power cord with any other equipment. Misuse of a power cord could cause malfunction, fire or electric shock.

Bottom panel



- ㉗ **ST 2/AUX switch**
Set this to **ST 2** to send the input signals directly to the ST 2/AUX buss after being adjusted by the **ST 2/AUX** knobs. Since this has no effect on the signals sent to the ST 1 buss, this unit can be used as mixer with two independent stereo busses.

Set this to **AUX** to send the signals to the ST 2/AUX buss after being adjusted by the ST 1 and then the **ST 2/AUX** knobs. Set this way, ST 1 can be used as the main buss and ST 2/AUX can be used as an AUX send.

3 – Troubleshooting

If you are having trouble with the operation of this unit, please try the following before seeking repair. If these measures do not solve the problem, please contact the store where you bought the unit or a TASCAM Service Center.

■ Power will not turn ON.

- Confirm that the power plug is securely inserted.

■ No sound is output.

- Are the input sources connected correctly?
- Are the input selections correct?
- Are the input **LEVEL** knobs minimized?
- Are all the output **LEVEL** knobs minimized?
- Are the headphone output (**PHONES**) knobs minimized?
- Are the volume levels of connected external equipment (amplifiers, speakers) minimized?

■ There is noise.

- Check the connecting cables for incomplete connections.

4 – Specifications

Audio inputs and outputs

MIC input

Connector	XLR-3-31 (1: GND, 2: HOT, 3: COLD)
Input impedance	2.4 k Ω
Nominal input level	-58 dBu (1 mV) - -12 dBu (195 mV)
Maximum input level	+10 dBu (2.45 V)

STEREO INPUT

Connectors	6.3 mm (1/4") TRS Standard phone jacks (Tip: HOT, Ring: COLD, Sleeve: GND)
Input impedance	16 k Ω
Nominal input level	+4 dBu (1.23 V)
Maximum input level	+24 dBu (12.3 V)

MASTER BUSS IN

Connectors	6.3 mm (1/4") TRS Standard phone jacks (Tip: HOT, Ring: COLD, Sleeve: GND)
Input impedance	16 k Ω
Nominal input level	+4 dBu (1.23 V)
Maximum input level	+24 dBu (12.3 V)

ST 1 and ST 2/AUX OUTPUTS

Connectors	XLR-3-32 (1: GND, 2: HOT, 3: COLD)
Output impedance	94 Ω
Nominal output level	+4 dBu (1.23 V)
Maximum output level	+24 dBu (12.3 V)

ST 1 and ST 2/AUX OUTPUTS

Connectors	RCA pin jacks
Output impedance	200 Ω
Nominal output level	-10 dBV (0.3V)
Maximum output level	+10 dBV (3.16 V)

BUSS OUT

Connectors	6.3 mm (1/4") TRS Standard phone jacks (Tip: HOT, Ring: COLD, Sleeve: GND)
Output impedance	94 Ω
Nominal output level	+4 dBu (1.23 V)
Maximum output level	+24 dBu (12.3 V)

PHONES outputs

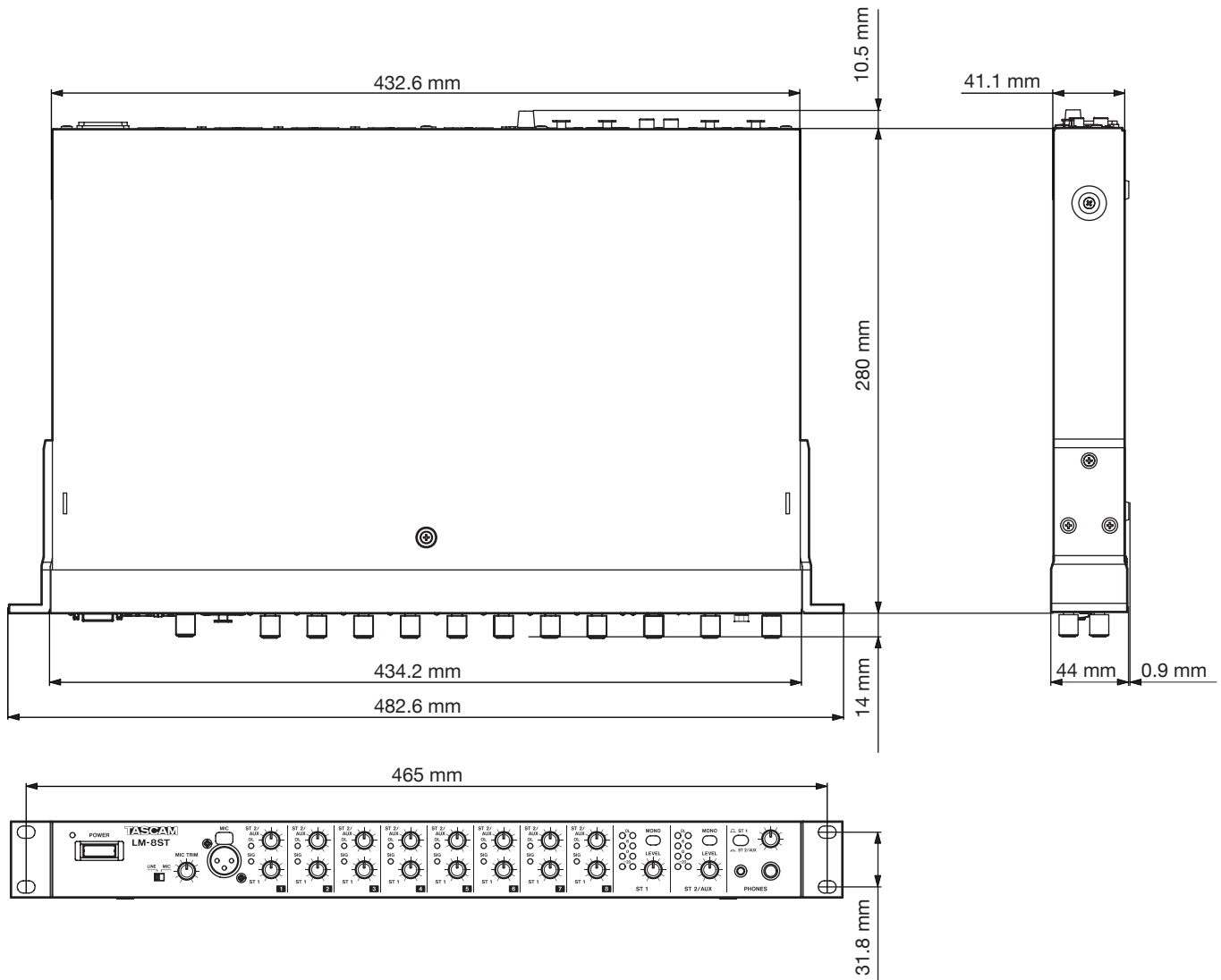
Connectors	6.3 mm (1/4") Standard stereo phone jacks and 3.5 mm (1/8") stereo mini jack
Maximum output level	250 mW + 250 mW (32 Ω)

Audio performance

Frequency response	20 Hz–50 kHz, ± 3 dB (PHONES outputs) 10 Hz–100 kHz, ± 3 dB (Each BUSS output)
S/N ratio	80 dB or greater (PHONES outputs, A-WTD, 20 kHz LPF) 80 dB or greater (Each BUSS output, A-WTD, 20 kHz LPF)
THD	0.07% or less (PHONES outputs, when outputting 100 mW + 100 mW (32 Ω), 20Hz HPF and 20 kHz LPF) 0.03% or less (each BUSS output, 20 Hz HPF and 20 kHz LPF)
Channel separation	50 dB or greater (PHONES outputs, A-WTD, 20 kHz LPF, 1 kHz nominal input and output, 32 Ω termination) 70 dB or greater (Each BUSS outputs, A-WTD, 20 kHz LPF, 1 kHz nominal input and output, 600 Ω termination)
Crosstalk	65 dB or greater (Each BUSS outputs, A-WTD, 20 kHz LPF, 1 kHz nominal input and output, 600 Ω termination)
Power	AC 100–240V, 50-60 Hz
Power consumption	15 W
Dimensions (WHD)	482 x 44 x 280 mm 18.98 x 1.73 x 11.02 in.
Weight	3.8 kg/8.378 lb

4 – Specifications

Dimensional drawings



- Illustrations and other depictions may differ in part from the actual product.
- Specifications and external appearance may be changed without notification to improve the product.

4 – Specifications

Block diagram

