

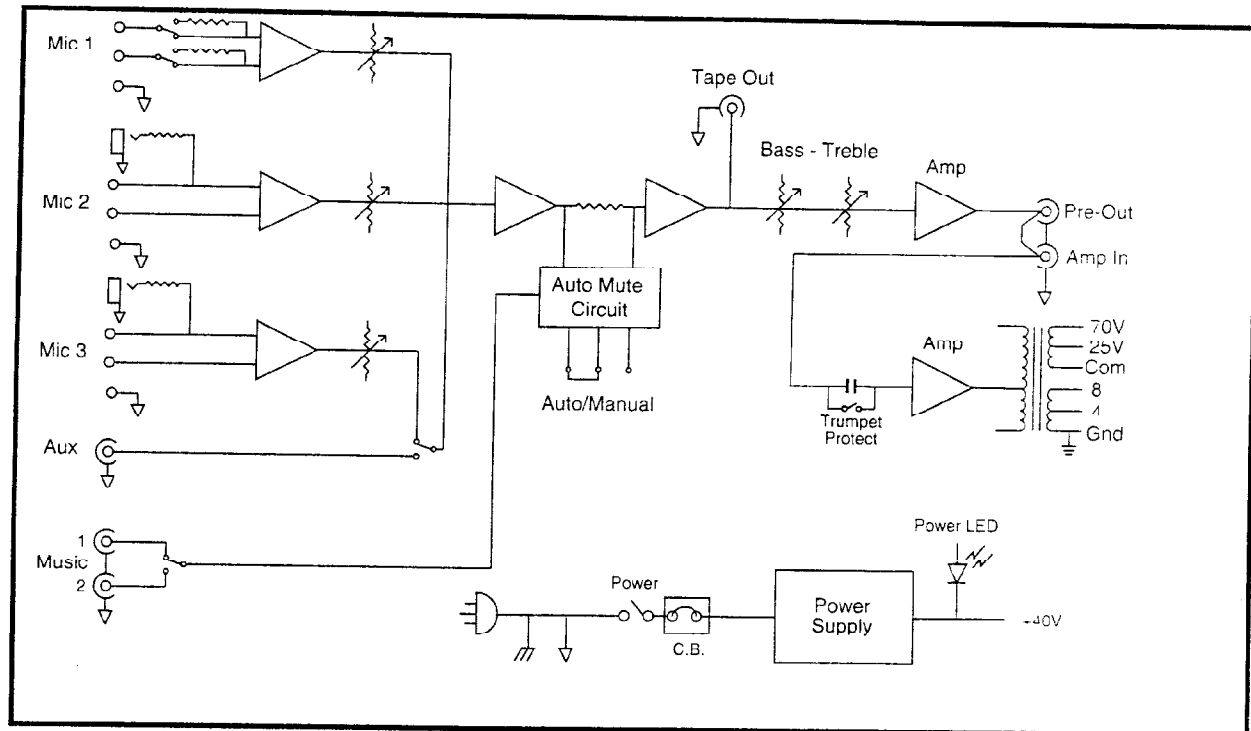
Product Data

- **60 watts (1808-60) or 100 watts (1810-100) RMS power output**
- **Three paging inputs and one music input**
- **4 ohm, 8 ohm, 25V, and 70.7V outputs**
- **MIC1 can match balanced Lo-Z microphone level or balanced line level**
- **MIC2 can match balanced Lo-Z microphone or unbalanced Hi-Z levels**
- **MIC3 can match balanced Lo-Z, unbalanced Hi-Z, or Aux levels**
- **MUSIC input can switch between two sources**
- **Automatic or manual muting of music input during page**
- **Separate Bass and Treble controls with 12 dB boost and cut each**
- **UL Listed**

Specifications:

- Power Output:** 60 watts RMS @ 1kHz (1808)
100 watts RMS @ 1kHz (1810)
- Frequency Response:** 50 Hz – 15 kHz, ± 2 dB
- Distortion:** <1.0% THD @ 1 kHz, rated output
- Outputs:** 4 Ω , 8 Ω , 25V, and 70.7V
- Output Regulation:** <2 dB from no load to full load
- Bass Control:** ± 12 dB @ 50 Hz
- Treble Control:** ± 12 dB @ 15 kHz
- Input Sensitivity/Impedance**
- | | |
|---------------|-------------------------------|
| MIC1: | 0.5mV/200 Ω (Lo-Z mic) |
| | 50mV/1k Ω (Line) |
| MIC2: | 0.5mV/200 Ω (Lo-Z mic) |
| | 5.0mV/47k Ω (Hi-Z mic) |
| MIC3: | 0.5mV/200 Ω (Lo-Z mic) |
| | 5.0mV/47k Ω (Hi-Z mic) |
| | 220mV/330k Ω (Aux) |
| Music: | 240mV/50k Ω |
| Power Amp In: | 280mV/75k Ω |
- Output Level/Impedance**
- | | |
|--------------|--------------------|
| Tape Out: | 1V/600 Ω |
| Pre-Amp Out: | 280mV/600 Ω |
- Circuit Protection:** Push-to-Reset breaker
- Power Consumption:** 0.8A 120 VAC 60 Hz (1808)
1.0A 120 VAC 60 Hz (1810)
- Dimensions:** 16.625" W x 4.0" H x
12.563" D (42.2 cm x 10.2 cm x 31.9 cm)
- Shipping Weight:** 22 lbs. (10 kg) (Model 1808)
28 lbs. (12 kg) (Model 1810)

Block Diagram



Description

The University Sound Models 1808-60 and 1810-100 are multi-purpose monaural solid state mixer/amplifiers. They are designed for dependable continuous operation in background music, public address, paging and sound reinforcement systems. The Model 1808-60 has a rated power output of 60 watts RMS, while the Model 1810-100 has a rated power output of 100 watts RMS. All other characteristics, controls, and functions of the two models are identical.

This amplifier has provisions for mixing four inputs, consisting of three paging inputs and one background music input. Each of the paging inputs can match Lo-Z balanced microphone levels, or can also be used at a pre-configured alternate impedance. MIC1 can be changed to a balanced line input by means of a rear panel switch. MIC2 and MIC3 will switch to a high impedance unbalanced input by simply plugging a source into the rear panel 1/4-inch phone jacks. The MIC3 input can be used as an AUX level input by changing the position of a front panel selector switch.

The MUSIC input may take its source from either of two rear panel RCA phono input jacks, as selected by a front panel switch. This input is fed to a MUSIC MUTE circuit, which may be used to fade out the music during a page. The muting circuitry can be activated either automatically or manually. The circuit is activated automatically when a signal is present on any of the three microphone inputs. This automatic muting feature can be deactivated from the rear panel. Manual muting is triggered by a contact closure across the two rear panel screw terminals marked MUTE and GROUND.

Separate BASS and TREBLE controls are provided to compensate for room and speaker characteristics. A MASTER gain control is provided to permit adjustment of the overall output without upsetting the balance of the input controls.

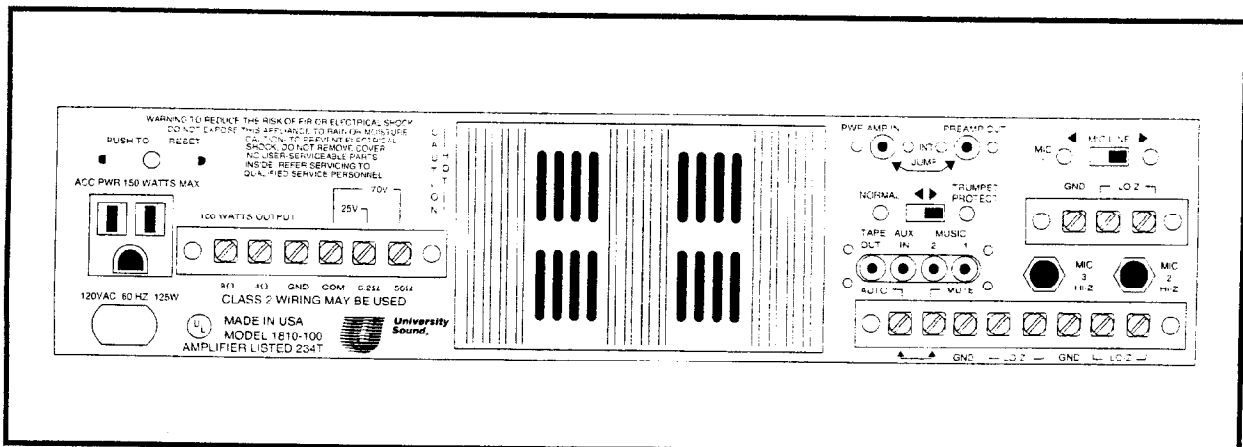
A red LED overload indicator on the front panel provides a visual warning when the amplifier is operating improperly. This may be caused by overdriving the unit, a mismatched load condition, or oscillation due to coupling between the input and output circuits. The TRUMPET PROTECT switch on the rear panel reduces the power delivered to trumpet-type speakers below the horn's "low frequency cutoff point." This protects the speaker diaphragms from damage and reduces the excessive loading caused by trumpet speakers at low frequencies.

The PRE-AMP OUTPUT jack on the rear panel provides access to the output of the pre-amp mixer portion of the amplifier. An AMPLIFIER INPUT jack is also provided to input directly to the power amplifier portion of the 1808/1810. An internal jumper between these two jacks may be disconnected to allow signal processors (such as equalizers) exclusive access to the signal path. When the jumper is in place, the 1808/1810 can use these two jacks to connect in parallel to other University Sound mixer/amplifiers in the 1800 Series.

Power output connections are made by means of screw terminals on the back of the unit. Output connections include 4 ohm and 8 ohm for use when making direct speaker voice coil connections, as well as 25 volt and 70.7 volt connections for speaker distribution lines.

The units are housed in a sturdy steel cabinet measuring 16.625" x 4.0" x 12.563" (42.2 cm x 10.2 cm x 31.9 cm), and can be rack-mounted using the University Sound Model RPK-5 rack mounting kit. The unit operates from a standard 120 VAC 60 Hz power source and is protected by a Push-to-Reset circuit breaker.

Rear Panel View



Architect's and Engineer's Specifications

The units shall be multi-purpose monaural solid state mixer/amplifiers, and shall be designed for continuous operation in background music, public address, paging, and sound reinforcement applications.

There shall be provisions for mixing four inputs, consisting of three paging inputs (labeled MIC1, MIC2, and MIC3 on the unit) and one mutable MUSIC input. MIC1 shall be capable of matching a Lo-Z balanced microphone level or a balanced line level. A rear panel slide switch shall determine which of these two levels the MIC1 input shall match. A strip of three screw terminals shall provide the input connections to the MIC1 input in either its Lo-Z or line level mode. The MIC2 and MIC3 inputs shall match either a Lo-Z balanced microphone level or Hi-Z unbalanced microphone level. These inputs shall each have two different input connections: a strip of three screw terminals for Lo-Z operation and a 1/4" phone jack for Hi-Z operation. Either input shall independently switch from the Lo-Z to Hi-Z configuration when a 1/4" phone plug is inserted. Additionally, MIC3 shall have the capability to match an Aux level signal, and shall take this input source from a separate RCA phono jack. MIC3 shall switch between Aux and Mic operation by means of a front panel slide switch located directly below the MIC3 level control.

The MUSIC input shall match an unbalanced high-impedance input level, and shall take its input source from either of two rear panel RCA phono input jacks. A front panel switch directly below the MUSIC level control knob shall determine which input source is sent to the mixing buss. Between the MUSIC inputs and the mixing buss, there shall be a MUSIC MUTE circuit, which shall fade out the music signal when the circuit is activated. Circuit activation shall be take place automatically when a signal is detected on any of the three microphone inputs, or manually when contact closure is established across two rear panel screw terminals marked MUTE and GROUND. A rear panel screw terminal marked AUTO shall provide a means to disable the automatic muting feature by removing a jumper between the AUTO and MUTE screw terminals.

Separate BASS and TREBLE tone controls shall be provided to compensate for acoustic and speaker characteristics. A MASTER gain control shall be provided to permit adjustment of the overall output mix.

A red LED overload indicator located on the front panel shall light when the unit is operating improperly. A rear panel TRUMPET PROTECT switch shall reduce the low-frequency power delivered to trumpet-type speakers when engaged.

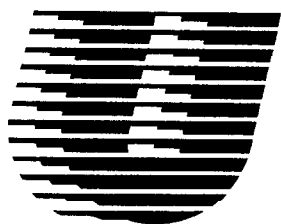
There shall be a PRE-AMP OUTPUT RCA phono jack on the rear panel to provide access to the output of the pre-amplifier mixer. An AMPLIFIER INPUT jack shall also be provided to input directly to the power amplifier portion of the unit. An internal jumper between these two connections shall be provided that may be disconnected to allow external signal processors exclusive access to the signal path.

Power output connections shall be made by means of screw terminals on the back of the unit. Output connections shall be available for 4 ohm, 8 ohm, 25 Volt, and 70.7 Volt lines.

The amplifier shall be housed in a sturdy steel cabinet measuring 16.625" x 4.0" x 12.563" (42.2 cm x 10.2 cm x 31.9 cm), and shall be rack-mountable using the University Sound Model RPK-5 rack mounting kit. The unit shall operate from a standard 120V AC 60 Hz power source and shall be protected by a Push-to-Reset circuit breaker.

[Paragraph below applies only to the Model 1808-60]
The unit shall provide a power output rated at 60 watts RMS. The unit shall be the University Sound Model 1808-60.

[Paragraph below applies only to the Model 1810-100]
The unit shall provide a power output rated at 100 watts RMS. The unit shall be the University Sound Model 1810-100.



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