

# SD-250 | Mini Amplifier

Preliminary Technical Information for System Engineers

SolidDrive®



## Preliminary Specifications:

### SD-250

System Type	50 w per channel (8 ohm) class D amplifier
Frequency Response	20 Hz - 20 kHz
Max gain	34 dB (8 ohm)
Power per channel @ < 10 % THD	55 watts (8 ohm) 2 x 70 watts (4 ohms)
Power per channel @ < 1 % THD	50 watts (8 ohm) 65 watt (4 ohm)
Bridged mono power @ < 1 % THD	90 watts (4 ohm)
Power supply requirement	32 v DC, 3.75A
Signal to noise ratio	> 83 dB (50 watts)
Input impedance	47 kohm line level, 600 ohm balanced
Input sensitivity	0.5 v line input
High-pass filter (F <sub>c</sub> )	120 Hz (12 dB per octave) selectable
Height	30.5 mm (1.2 in.)
Width	99.1 mm (3.9 in.)
Depth	101.6 mm (4.0 in.)
Weight - amp only	0.26 kg (0.56 lbs)
Packaging	One per box
Included accessories	Power supply, stereo RCA female to mini male adaptor, pole/surface mount adaptor, two male 4 pin euroblock connectors and two 3 pin Euroblock connector.
Optional accessory (SD-250)	Rack mount adapter (AC-SA502-RMA)
Regulatory - UL	Planned
Regulatory - CE	Approved
RoHS	Approved

## Preliminary Technical Information

- 34 dB maximum gain with 2 x 50 watt output.
- Built-in, selectable SolidDrive EQ for wood, glass, drywall or flat setting.
- Three operating modes: stereo, mono or bridged mono
- Three user selectable inputs: balanced stereo (euroblock), stereo unbalanced mini jack, or high level euroblock.
- External 12-32 V trigger
- Signal detecting auto standby to conserve energy
- Dual concentric gain controls for independent channel control
- 20 Hz- 20 kHz frequency response
- Small size- 1.2" x 3.9" x 4"
- Rugged aluminum housing
- Optional Accessories: rack mount adaptor kit (AC-SA502-RMA)

## Description

The SD-250 is 50-watt per channel (4 ohm) Class D amplifier with maximum gain of 34 dB. The amplifier has built-in, selectable equalization settings for use with the SolidDrive products on wood, glass, drywall and flat setting. Input options include balanced stereo euroblock, unbalanced line level mini jack, and a stereo speaker level (amplified) Euroblock input for applications with low wattage speaker outputs. The SD-250 has three operating modes: stereo, dual mono, or bridged mono. In stereo, each input channel flows directly to its corresponding output channel. In dual mono, the left input is fed to both output channels. In bridged mono, the left input is fed to the bridged output. System includes selectable 12-32 v external trigger input or auto standby to conserve energy.

## Applications

Small, powerful and cost-effective, the SD250 is engineered for external amplification with SolidDrive transducers. Additional applications include digital signage, education, point of purchase, museums, surgical centers, AV carts or any application where a small amplifier is needed to boost a limited source output (e.g., computers, A/V projectors, etc.).

## Patented Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop new technologies which enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure and dispersion technologies. The MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end-users.

## Technical Data and Specification Tools

### Technical Data

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data are available from SoundTube Entertainment or at [www.soundtube.com](http://www.soundtube.com).

Technical data and downloads include:  
EASE™ data – 3-D polar plots.

EASE™ Address – 2-D modeling for distributed systems

Autodesk® Revit® software

Tech Sheets – Technical information and architectural specs for system engineers

SoundTubeSPEC™ – Proprietary speaker placement software

## Independant Data Acquisition and Verification

All data for SoundTube speakers are independently collected and verified by NWAALabs ([www.nwaalabs.com](http://www.nwaalabs.com)) using their proprietary MACH testing system. All data are collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude are compiled into a variety of formats including EASE 4.x, GLL and CLF.

## Architectural Specifications

The amplifier shall be a 50-watt per channel (8 ohm) Class D amplifier.

The amplifier shall provide three inputs including a balanced stereo Euroblock, unbalanced line level mini jack, and a

stereo speaker level (amplified) Euroblock input for applications with low wattage speaker outputs. The amplifier shall also include a variable 34 dB maximum gain control. The amplifier shall provide three operating modes including stereo, dual mono, or bridged mono.

Performance specifications of a typical production unit shall be as follows: 50 watts per channel (20 Hz – 20 kHz, 8 ohm, stereo) or 65 watt per channel (20 Hz – 20 kHz, 4 ohm stereo) at 1% THD.

The external wiring output connector shall be a Euroblock connector that accepts from 12 – 22-gauge wire. The power input shall either be by three-pin Euroblock that accepts from 12 - 22-gauge wire or barrel connection. The system shall be for indoor applications.

The enclosure shall be constructed of extruded aluminum with integrated heat-sink fins. Overall cabinet dimensions shall be no more than 30.5 mm (1.2 in.) in height by 99.1 mm (3.9 in.) in width and 101.6 mm (4.0 in.) in depth.

The system shall include the amplifier, pole/surface mount adaptor, power supply, stereo RCA female to mini male adapter, two male 4-pin Euroblock connectors and two 3-pin Euroblock connectors.

The system shall be the SD-250 for amplification.

## SoundTube Entertainment

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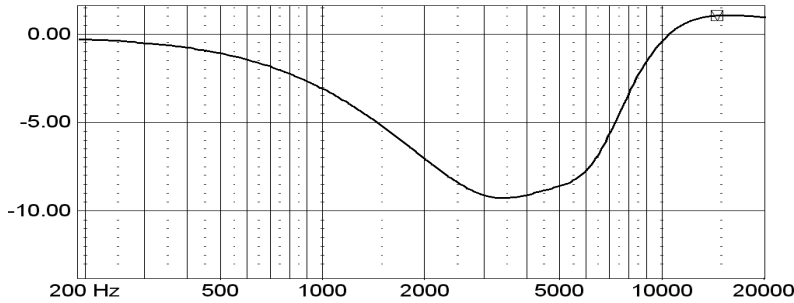
[www.soundtube.com](http://www.soundtube.com)

**All SoundTube speakers come with a limited five (5) year warranty and three (3) year warranty on all electronics.**

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### Graphs and Plots: EQ

#### Wood

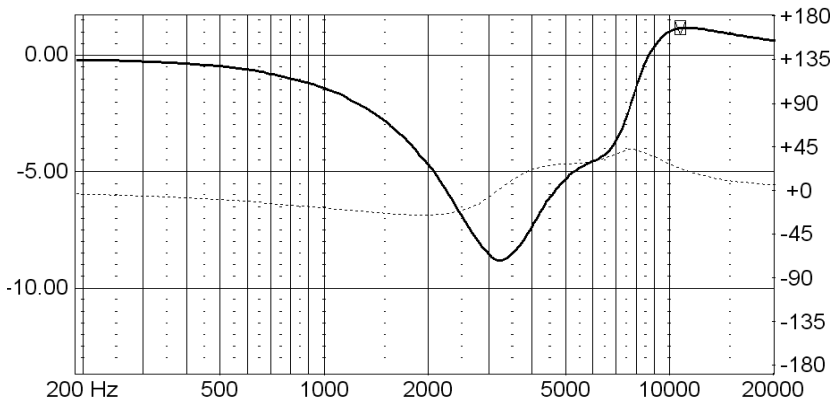


F1=3.43kHz, -9.1dB, Q=0.79, BW=1.27 Oct

F2=5.76kHz, -6.1dB, Q=1.49, BW=0.67 Oct

F3=11.3kHz, +5.55dB, Q=1.24, BW=0.8 Oct

#### DryWall Passive

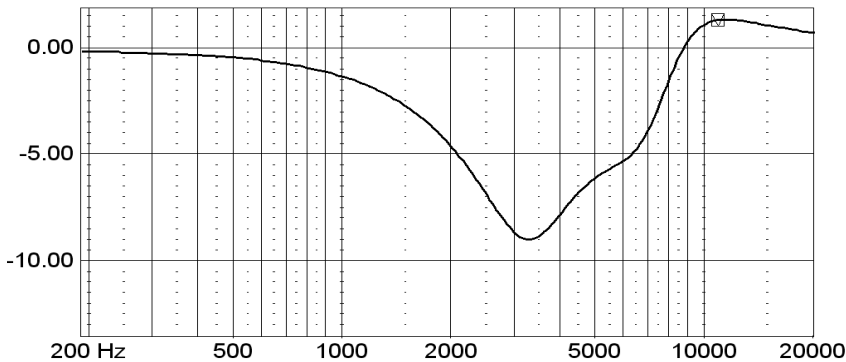


F1=3.25kHz, -9.0dB, Q=1.37, BW=0.73 Oct

F2=6.47kHz, -3.15dB, Q=2.5, BW=0.4 Oct

F3=9.77kHz, +2.9dB, Q=1.2, BW=0.82 Oct

#### Glass Passive



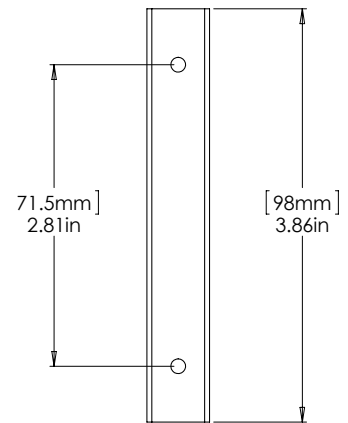
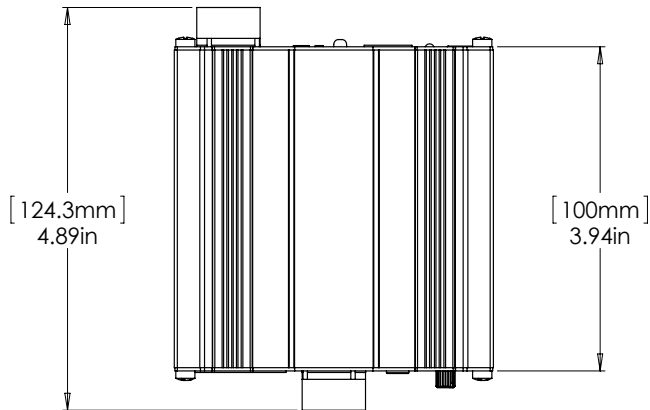
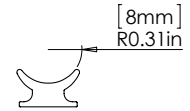
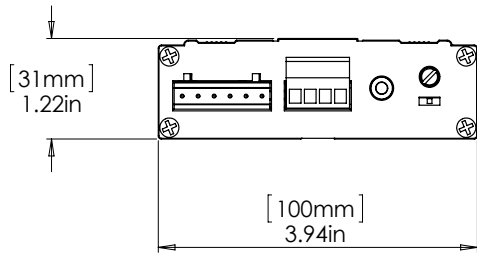
F1=3.4kHz, -9.3dB, Q=1.4, BW=0.71 Oct

F2=6.42kHz, -7.6dB, Q=1.47, BW=0.68 Oct

F3=9.48kHz, +6.4dB, Q=1.19, BW=0.84 Oct

**Mechanical Drawings**

**Included Accessories**



**Optional Accessories**

**RackMount Adaptor (AC-SA502-RMA)**

