

# Soundmagus Car Amplifier Specification

## 1 Model number: E-150



## 2 Features:

- 2X140Wrms Class-AB amplifier.
- 2 ohm load stable.
- Double Side PCB and SMD components.
- Adjustable Input level, LPF, HPF.
- Advanced short circuit, overload, over heat protection.
- Tempered glass panel.
- Auto cooling fan.
- Isolation terminals.

## 3 Detailed specs:

### 3.1 Test Condition.

All the specs were tested with following condition unless noted.

1. Power supply: 14.4V DC power supply



2. Test signal: 1KHz sine wave.
3. Loads: Resistor dummy load.
4. Environment: 25 degree C, open air.
5. Relative humidity: 70%.
6. Test Instruments: Audio Precision SYS-2322A.

### 3.2 Output power performance.

Following table is the RMS output power with THD+N value at 5%, 3% and 1%.

Power THD+N	RMS power (4ohm)		RMS power (2ohm)		Bridged RMS power	
	Left	Right	Left	Right	8ohm	4ohm
THD+N=5%	124W	126W	148W	153W	247W	312W
THD+N=3%	118W	120W	139W	146W	235W	291W
THD+N=1%	109W	111W	112W	126W	220W	246W

Table 1 Output Power with THD+N

Following charts show the output power with THD curve at 4ohm load, 2ohm load stereo and bridged power at 8ohm, 4ohm.

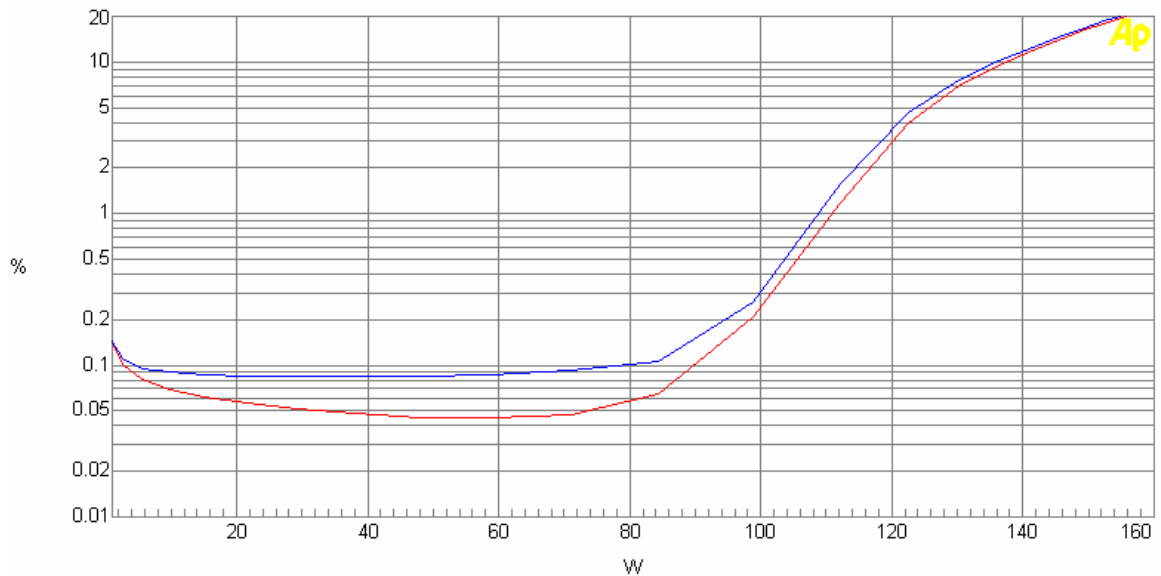


Chart 1. RMS output power @4ohm with THD+N

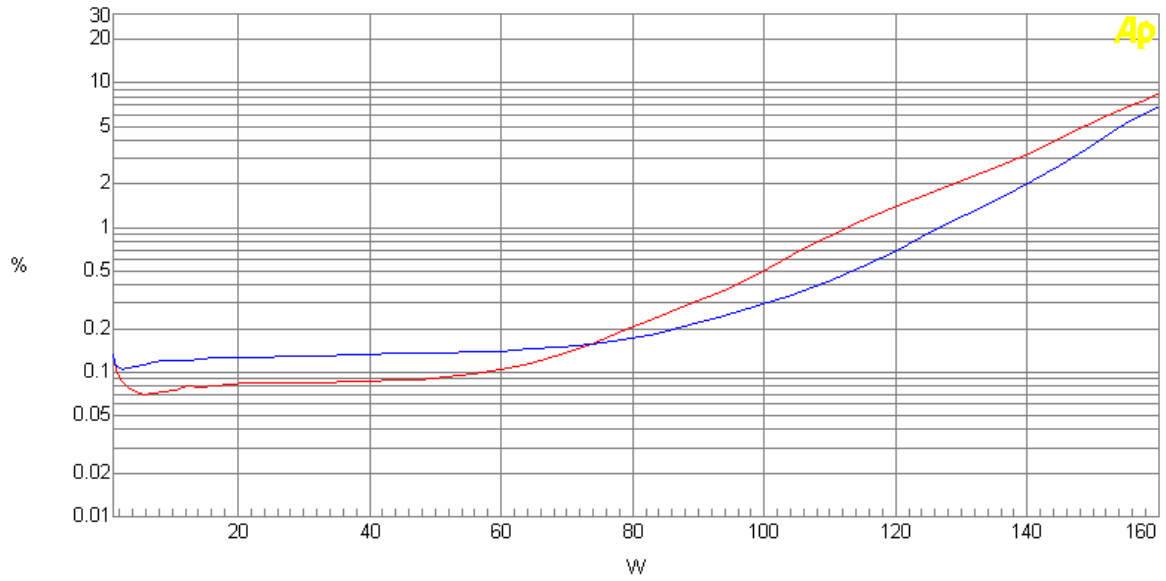


Chart 2. RMS output power @2ohm with THD+N

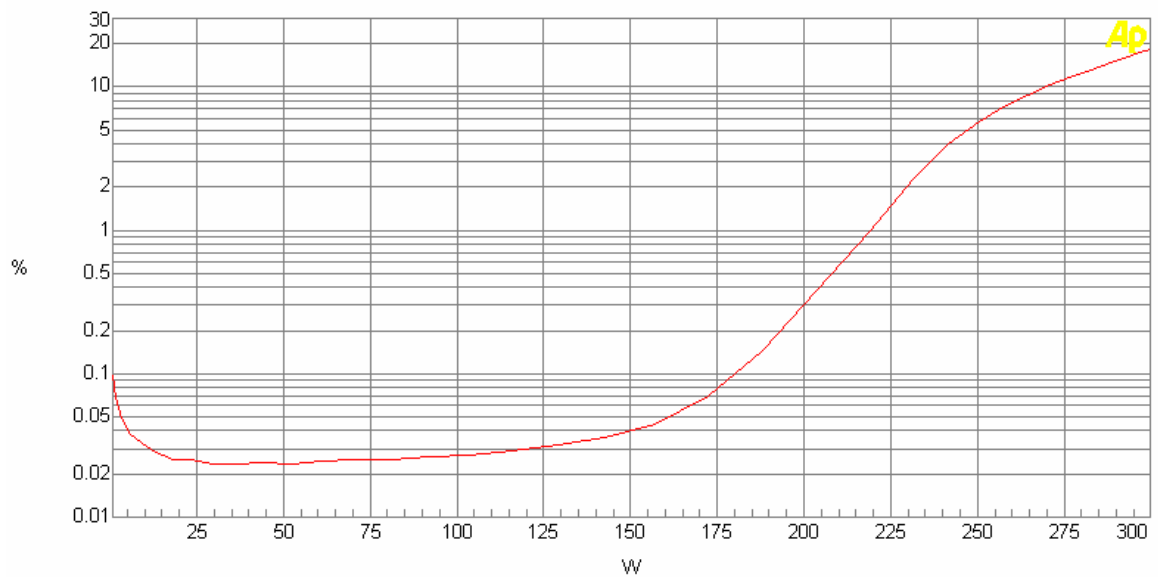


Chart 3. Bridged RMS power @8ohm with THD+N

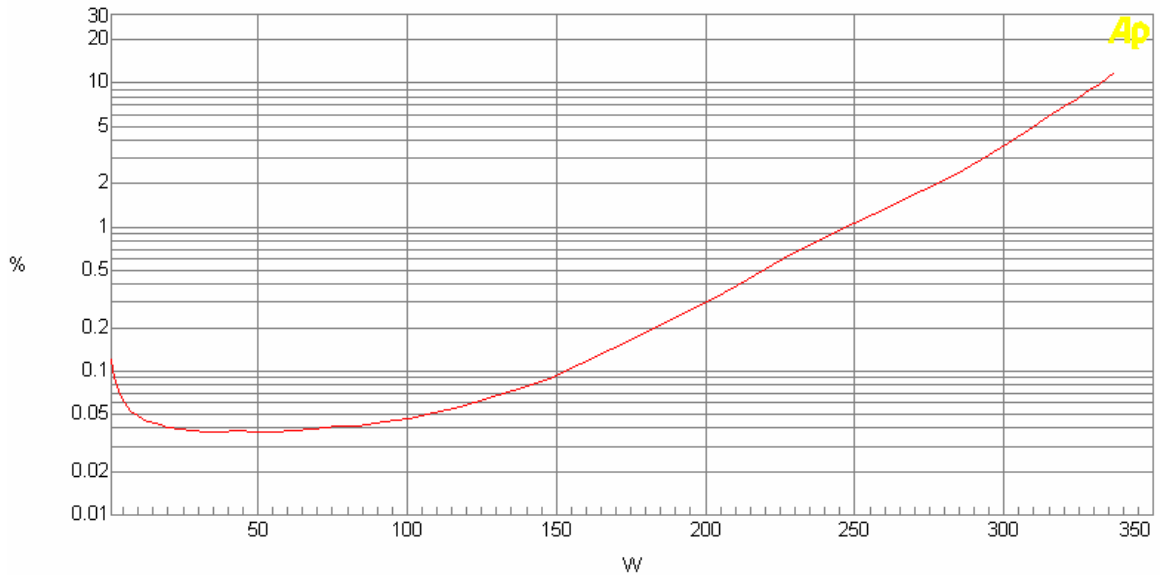


Chart 4. Bridged RMS power @4ohm with THD+N

### 3.3 Frequency Response

1. -3dB frequency response: 15Hz~43KHz.

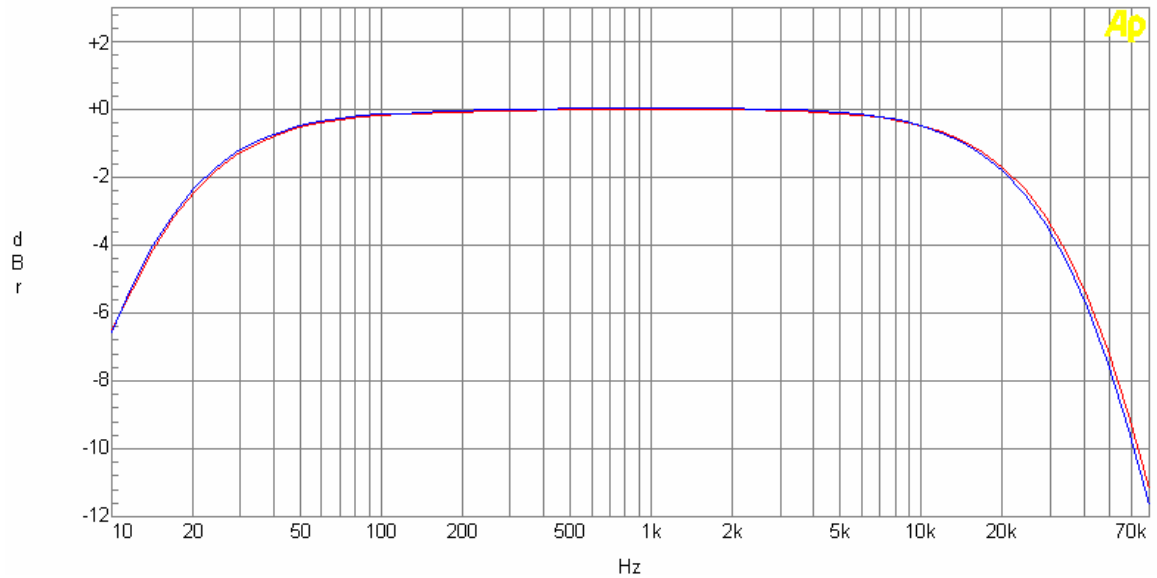


Chart 5. Frequency Response

### 3.4 LPF & HPF Filter feature

1. LPF adjustable from 53Hz~820Hz.
2. HPF adjustable from 52Hz~730Hz.

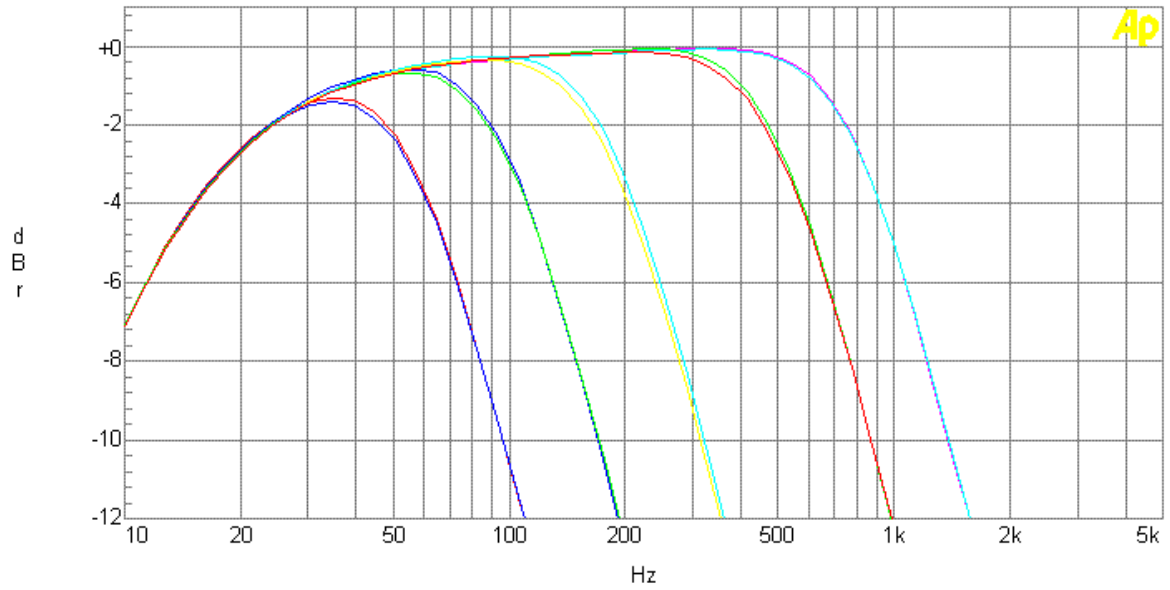


Chart 6. LPF response

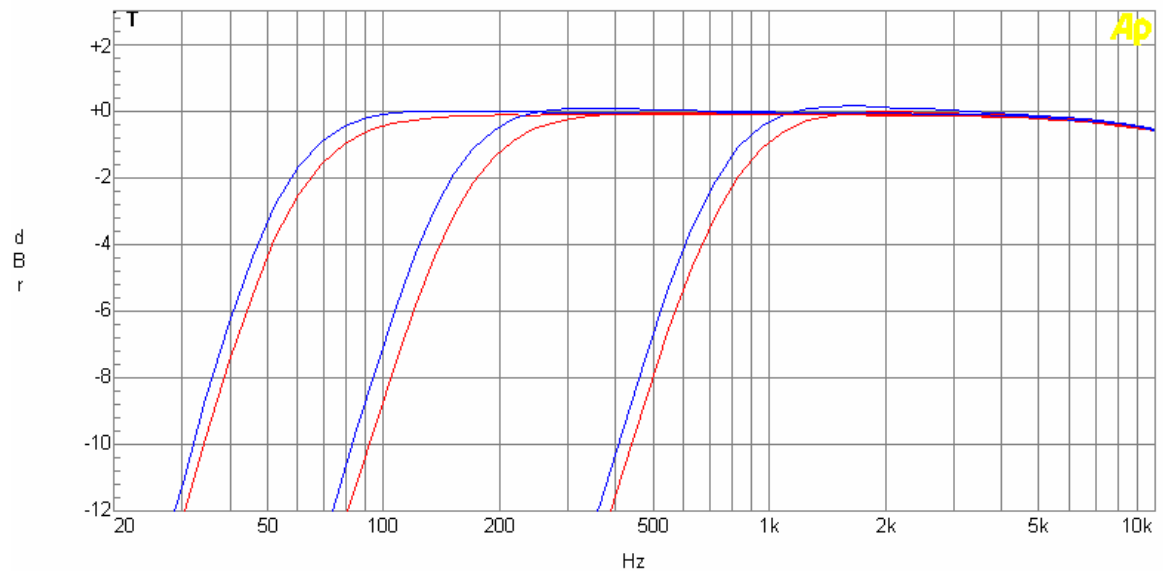


Chart 7. HPF response

### 3.5 Total Harmonic Distortion

THD+N=0.046%(A-weighted) @ 60W with 4ohm load.

### 3.6 Protection System

#### 1. Overload:

Protect at 1.30hm load at full rated output power.



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## 2. Short Circuit:

Full rated power short circuit protect test: passed.

Full rated power long last short circuit test: 10 minutes passed.

## 3. Cooling Fan and Over temperature:

Cooling fans start to work while heat sink at 42 degree C.

Protect while heat sink temperature over 78 degree C.

## 4. Low voltage:

Protect while power supply voltage lower than 7.9V.

## 3.7 Idle current and Efficiency:

1. Idle current: 0.49A.

2. Efficiency: 63% at 90W 4ohm load (stereo).

## 3.8 Dimension

This amplifier's size is at 180mmX270mmX51mm(W,L,H).