

Soundmagus Car Amplifier Specification

1 Model number: C90



2 Features:

- 4X90Wrms Class-AB amplifier.
- 2 ohm load stable.
- Double Side PCB and SMD components.
- Adjustable Input level, LPF, HPF.
- Advanced short circuit, overload, over heat and low voltage protection.
- 2-channel mode switch available.
- Gold-plated 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.

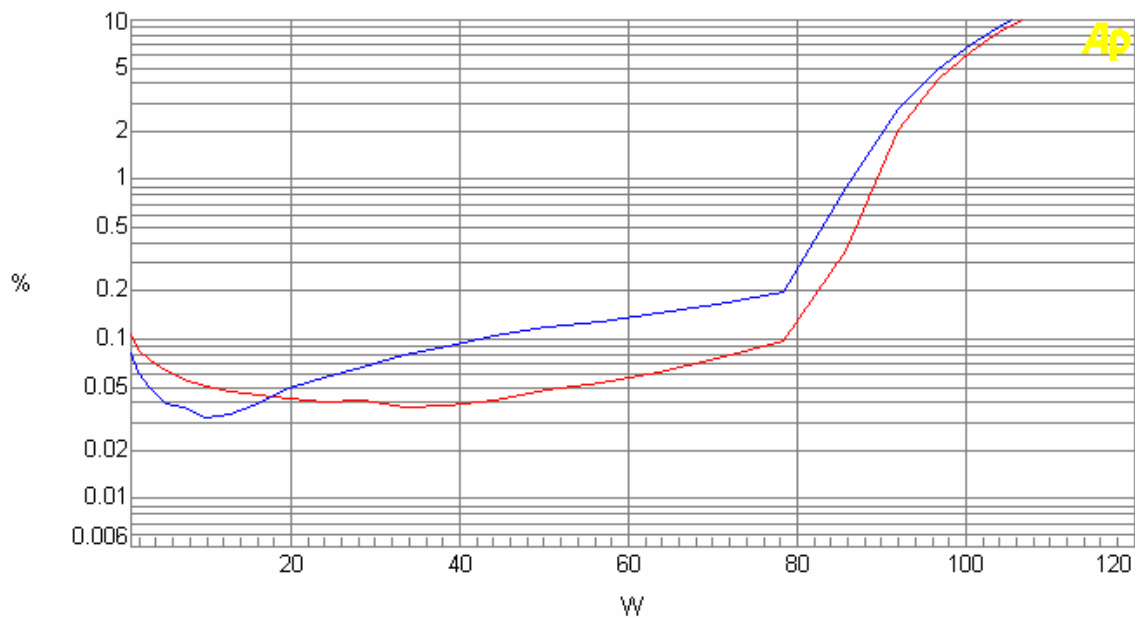
3.2 Output power performance.

Following table is the RMS output power with THD+N value at 5%, 3% and 2%.

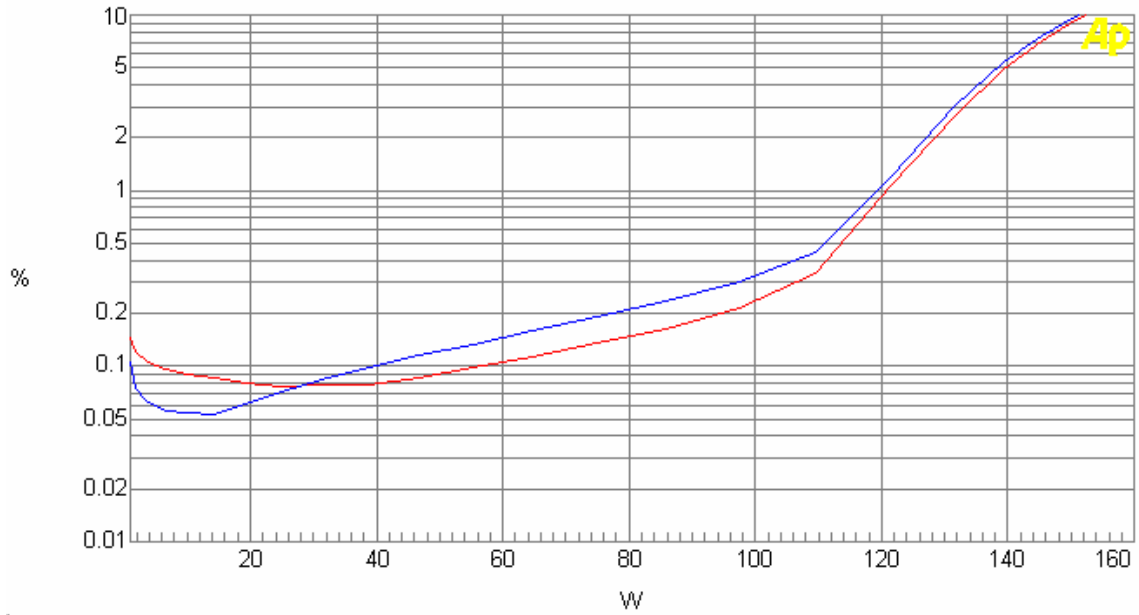
| Power THD+N | RMS power (4ohm) | | RMS power (2ohm) | | Bridged RMS power | |
|----------------|------------------|-------|------------------|-------|-------------------|------|
| | Left | Right | Left | Right | 8ohm | 4ohm |
| THD+N=5% | 96W | 98W | 138W | 140W | 189W | 262W |
| THD+N=3% | 92W | 93W | 131W | 133W | 183W | 249W |
| THD+N=1% | 85W | 88W | 119W | 121W | 170W | 226W |

Table 1 Output Power with THD+N

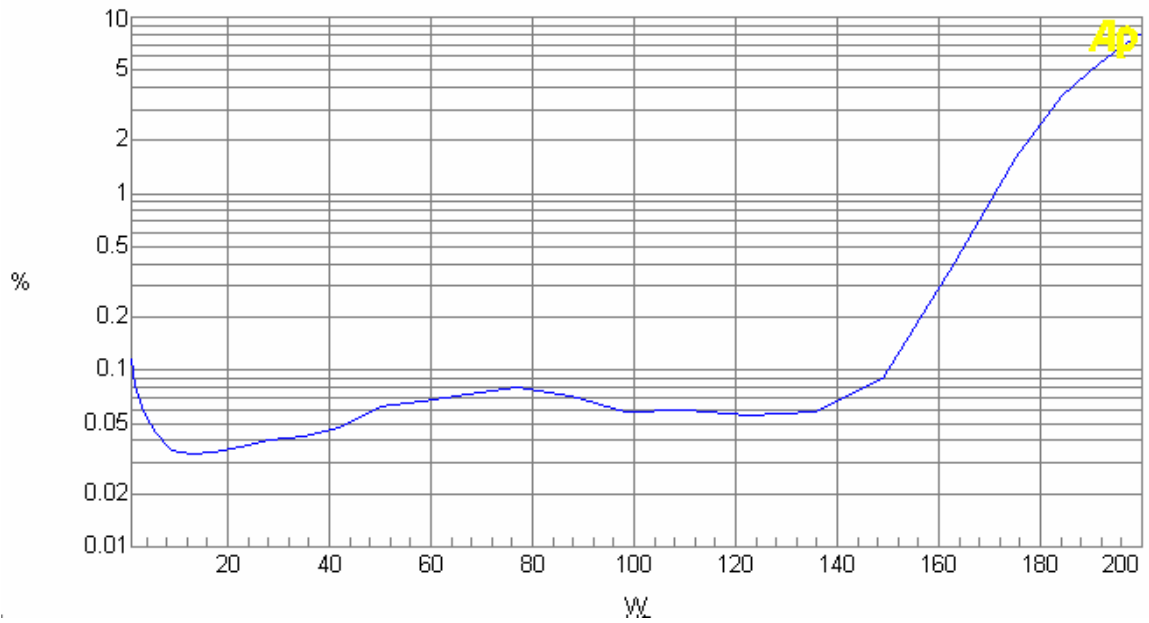
Following charts show the output power with THD curve at 4ohm load, 2ohm load stereo and bridged power at 8ohm, 4ohm.



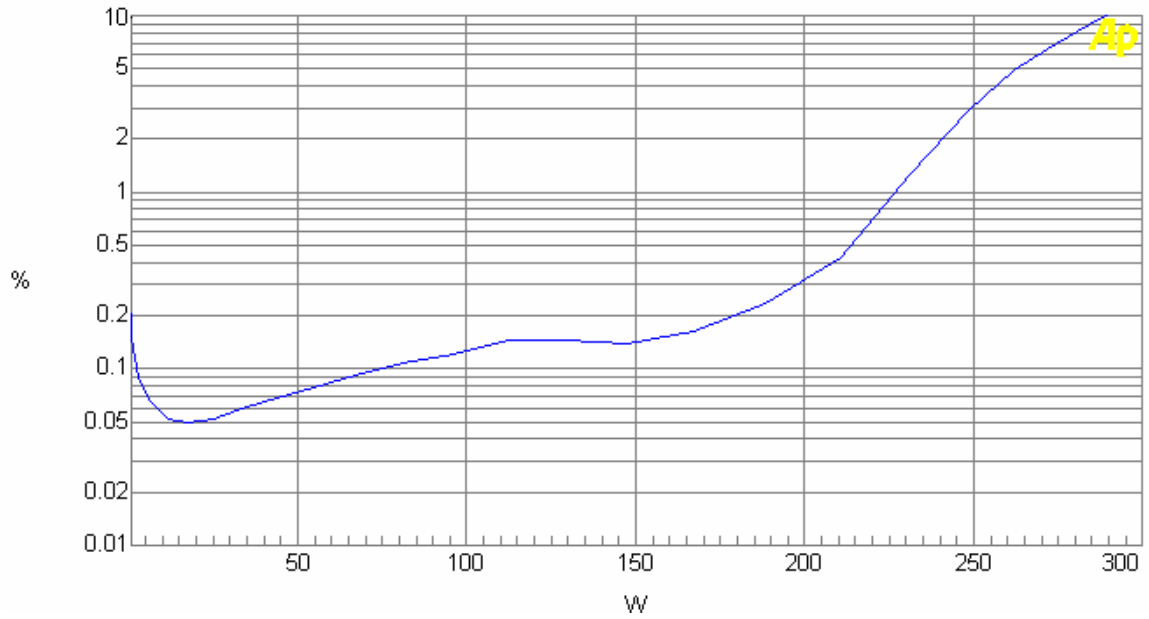
Chat 1. RMS output power @4ohm with THD+N



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



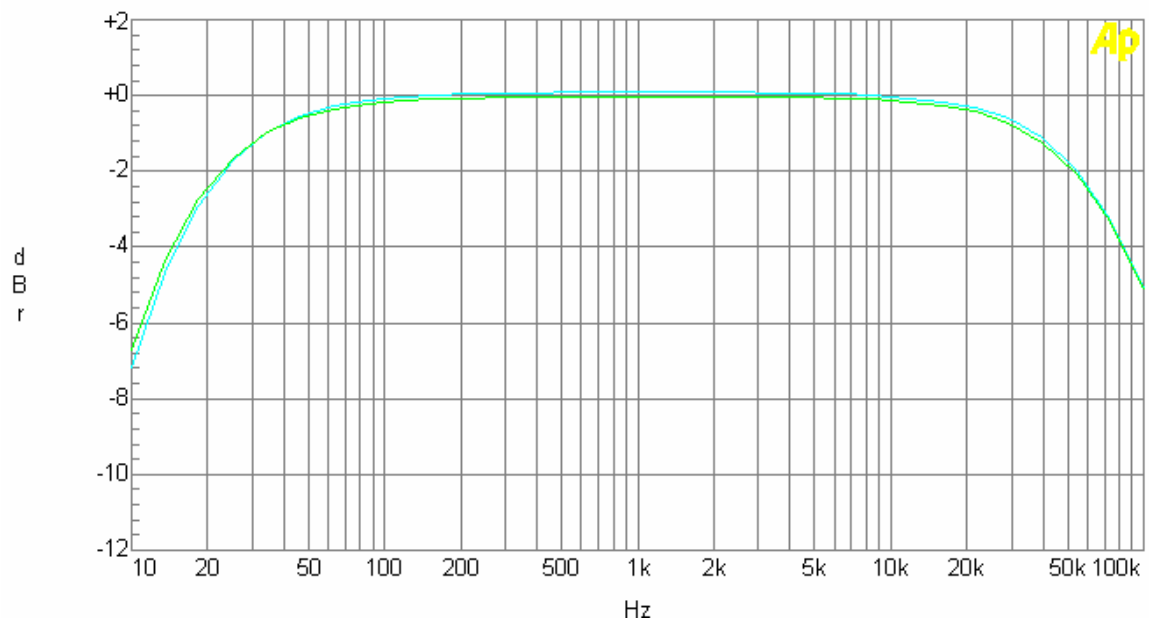
Chat 3. Bridged RMS power @8ohm with THD+N



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

3.3 Frequency Response

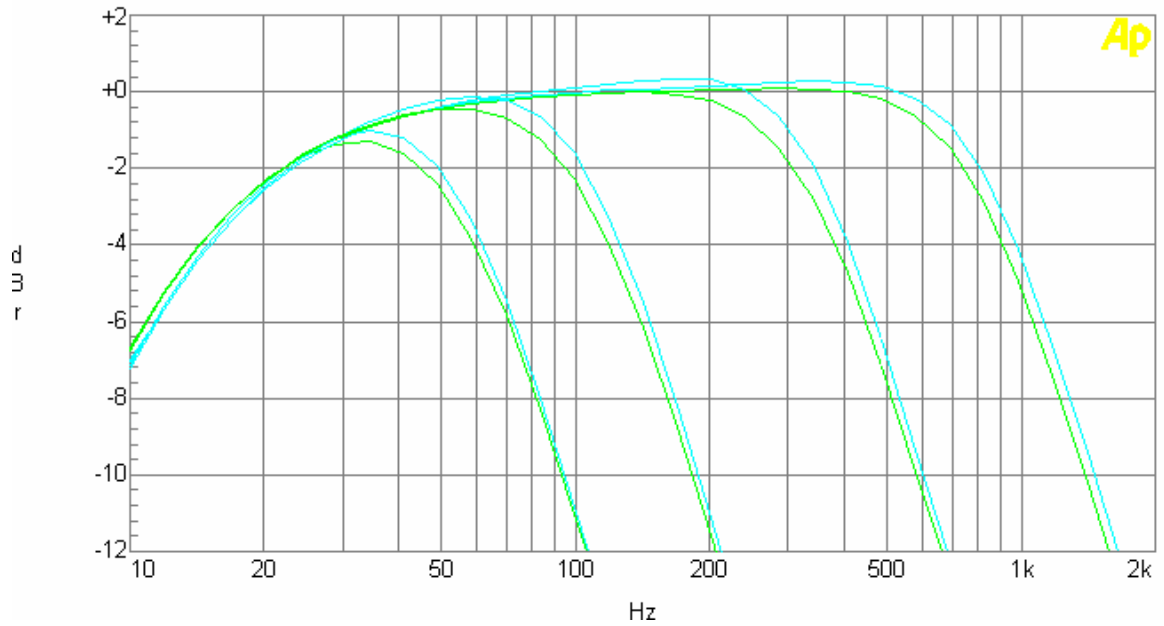
1. -3dB frequency response: 15Hz~68KHz.



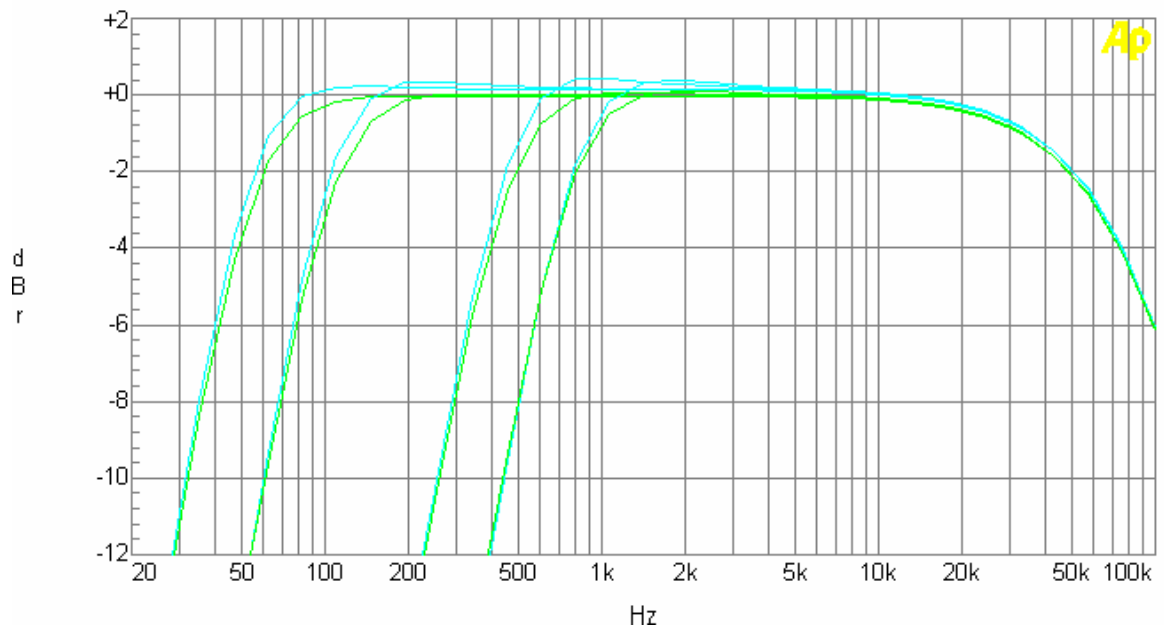
Chat 5. Frequency Response

3.4 LPF & HPF Filter feature

1. LPF adjustable from 55Hz~820Hz.
2. HPF adjustable from 50Hz~740Hz.



Chat 6. LPF response



Chat 7. HPF Filter response

3.5 Total Harmonic Distortion

THD+N=0.05%(A-weighted) @ 50W with 4ohm load.

3.6 Protection System

1. Overload:

Protect at 1.30hm load at full rated output power.



2. Short Circuit:

Full rated power short circuit protect test: passed.

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

3. Over temperature:

Protect while heat sink temperature over 83 degree C.

4. Low voltage:

Protect while power supply voltage lower than 7.8V.

3.7 Idle current and Efficiency:

1. Idle current: 0.57A.
2. Efficiency: 62% at 80W 4ohm load (stereo).

3.8 Dimension

This amplifier's size is at 228mmX282mmX53mm(W,L,H).