

Soundmagus Car Amplifier Specification

1 Model number: CP91



2 Features:

- 4X90Wrms Class-AB amplifier.
- Full function complex crossover.
- 2 ohm load stable.
- Double Side PCB and SMD components.
- High-level input.
- Advanced short circuit, overload, over heat and low voltage protection.
- 2-channel mode switch available.

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.

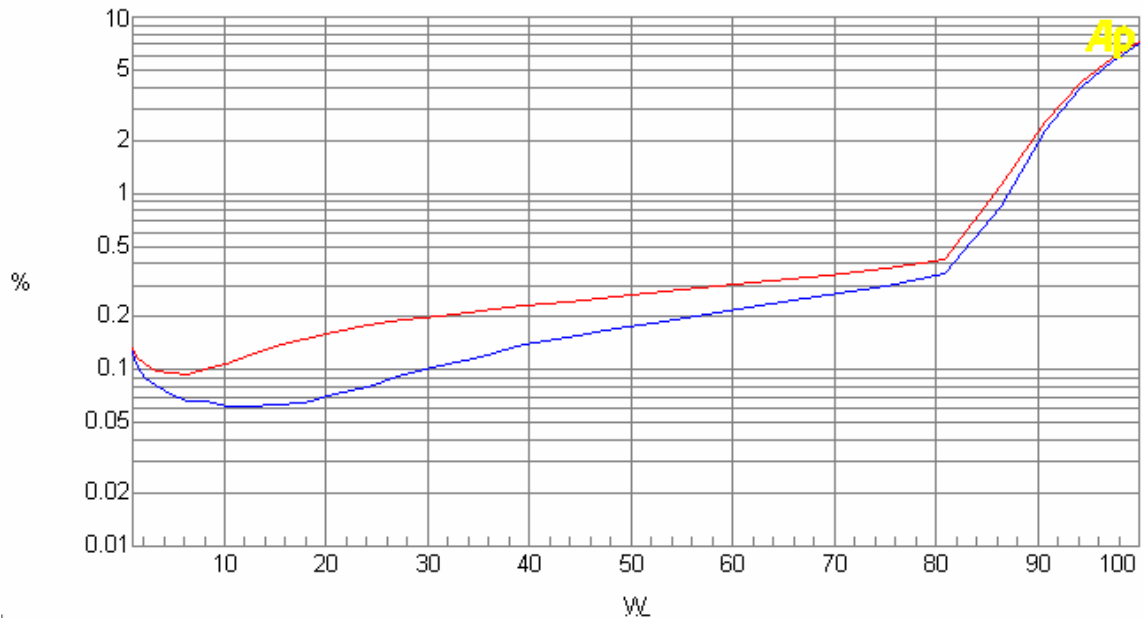
3.2 Output power performance.

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

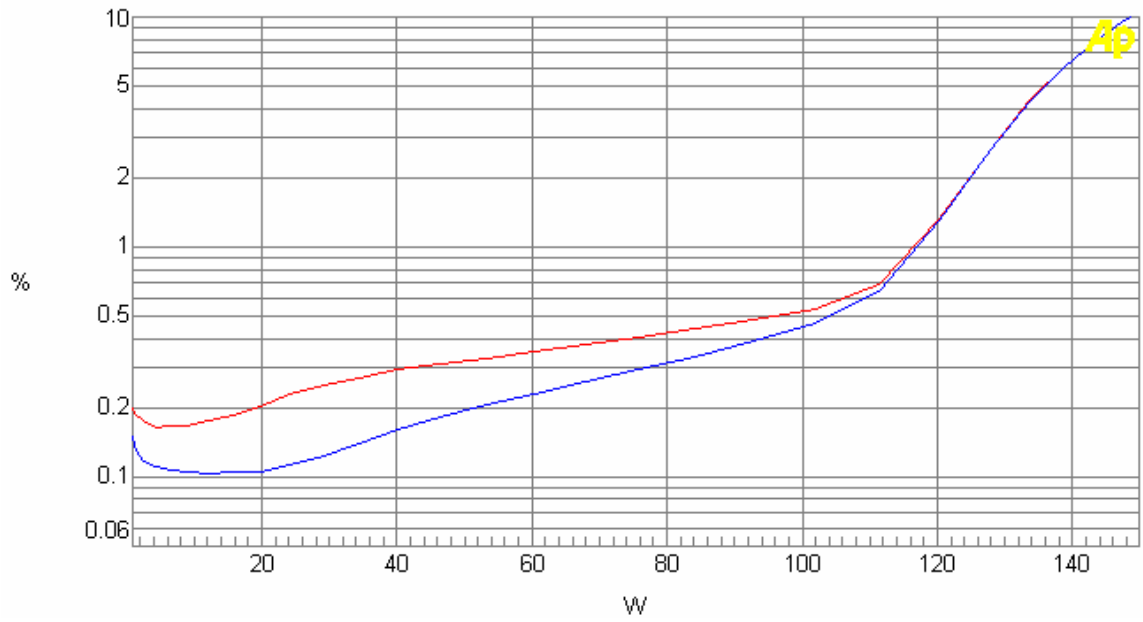
Power THD+N	RMS power (4ohm)		RMS power (2ohm)		Bridged RMS power	
	Left	Right	Left	Right	8ohm	4ohm
THD+N=5%	96W	97W	135W	135W	193W	273W
THD+N=3%	92W	93W	129W	129W	186W	260W
THD+N=1%	86W	87W	116W	117W	175W	233W

Output Power with THD+N

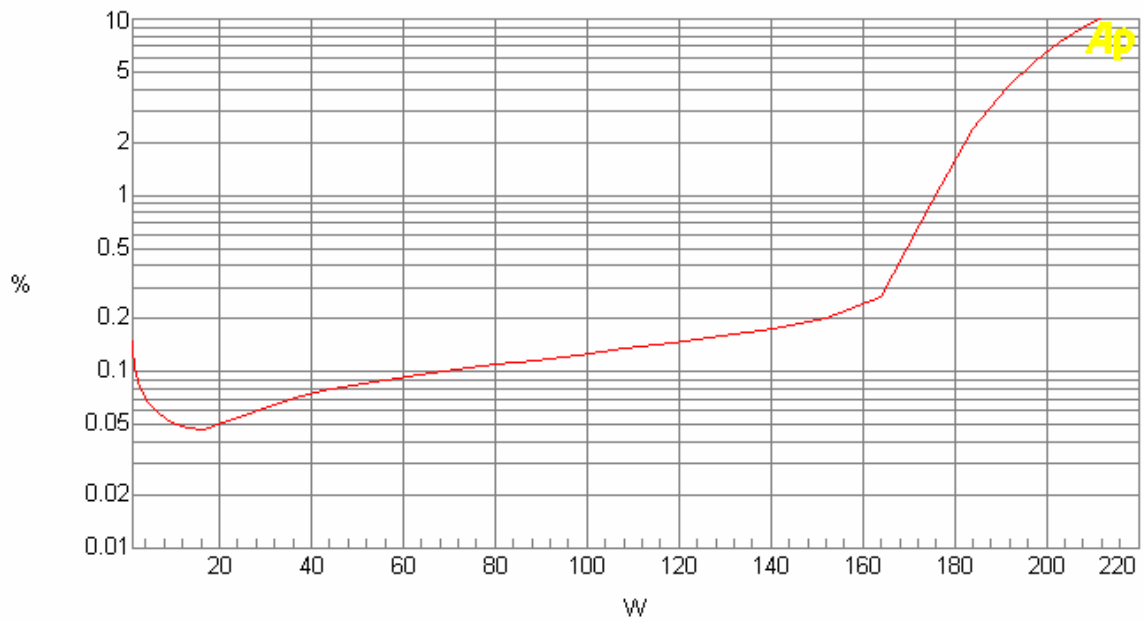
Following charts show the output power with THD curve at 4ohm load, 2ohm load stereo and bridged power at 8ohm, 4ohm.



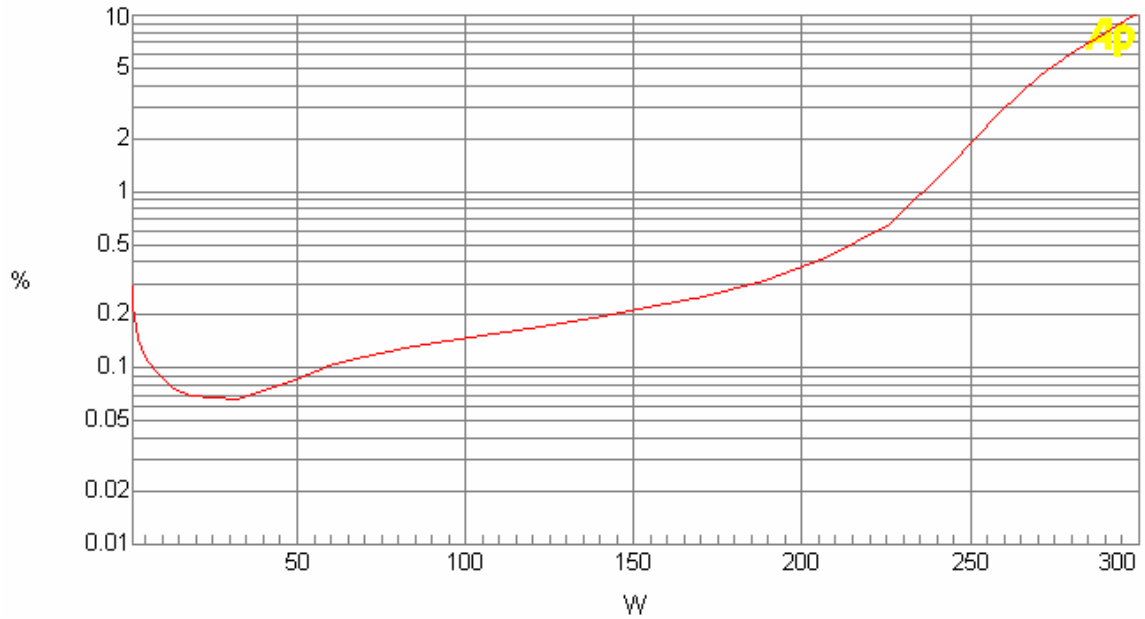
Chat 1. RMS output power @4ohm with THD+N



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



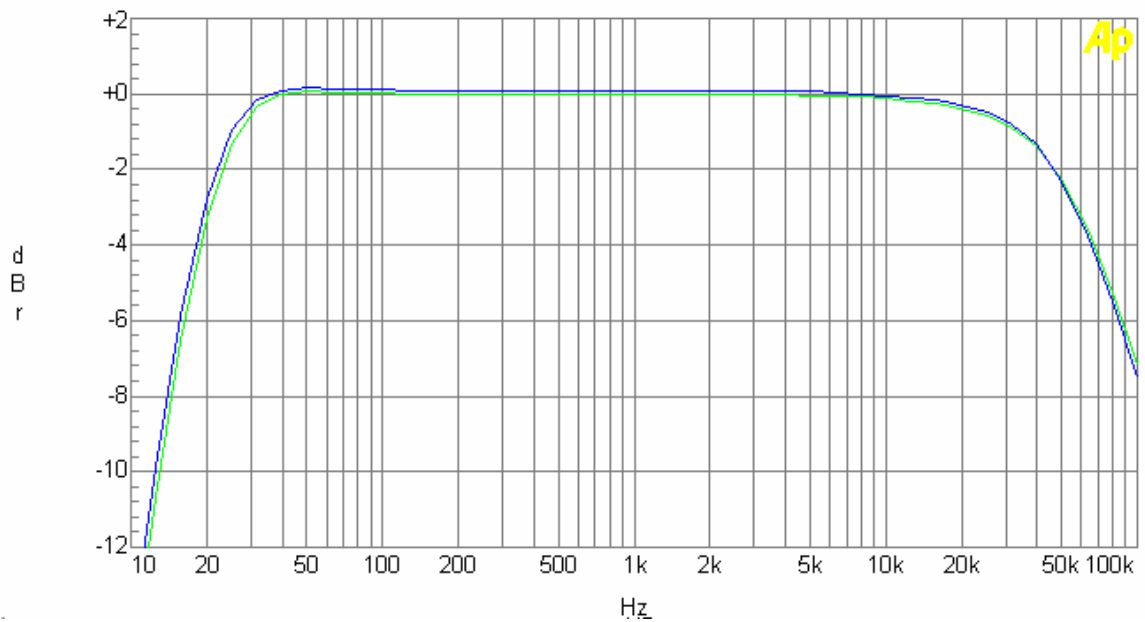
Chat 3. Bridged RMS power @8ohm with THD+N



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

3.3 Frequency Response

1. -3dB frequency response: 20Hz~55KHz.

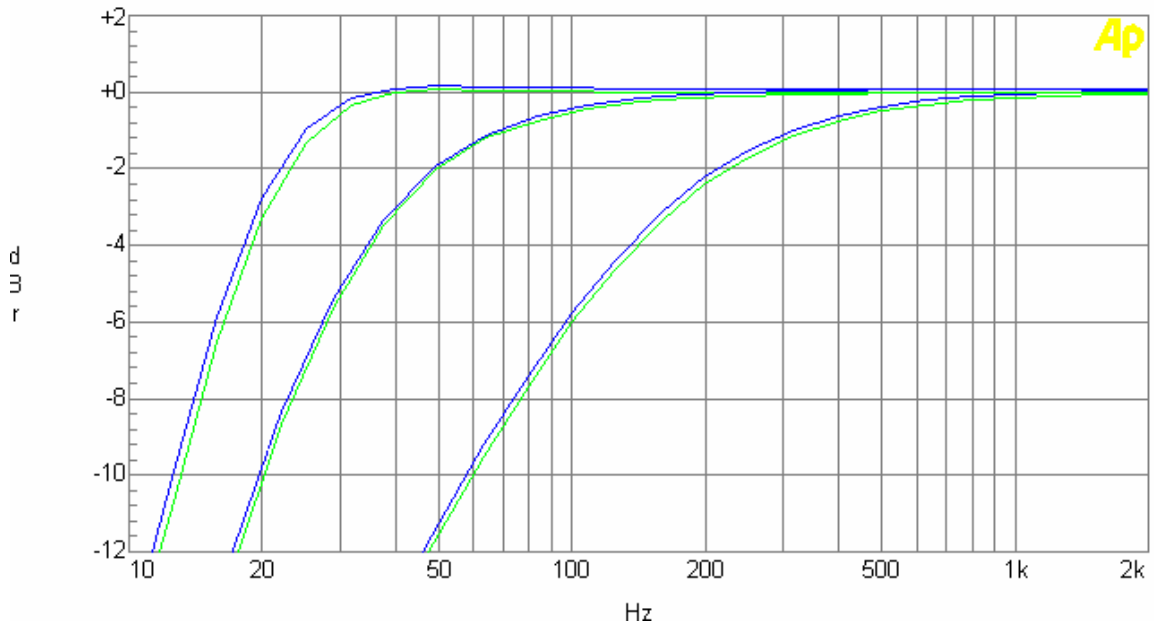


Chat 5. Frequency Response

3.4 Crossover features

1. Subsonic feature.

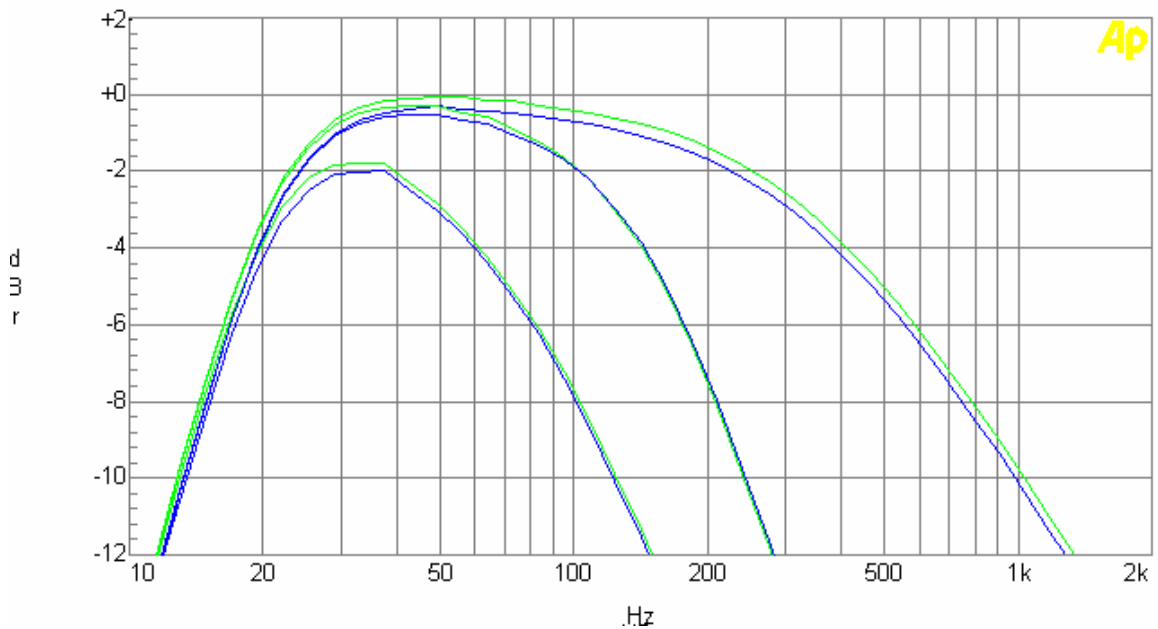
Ch-A and Ch-B subsonic all adjustable from 20Hz~140Hz.



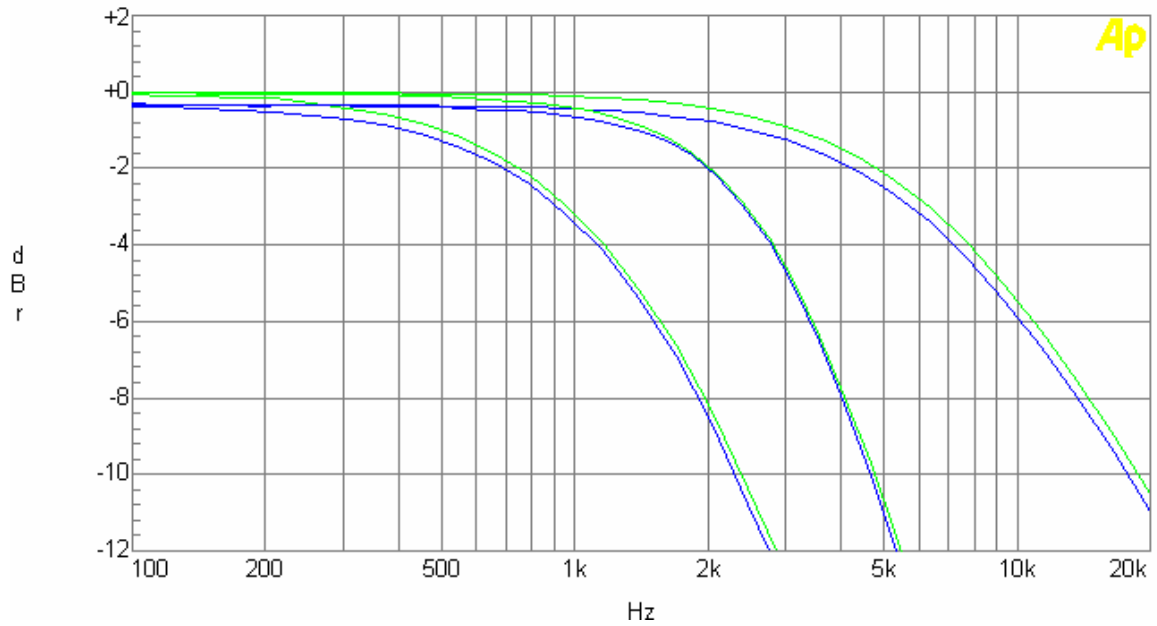
Chat 6. CH-B subsonic feature

2. Ch-A LPF feature.

Ch-A LPF frequency can be adjusted from 50~320Hz or 900Hz~6KHz, can be switched with a "Freq 1x / 20x" switch.



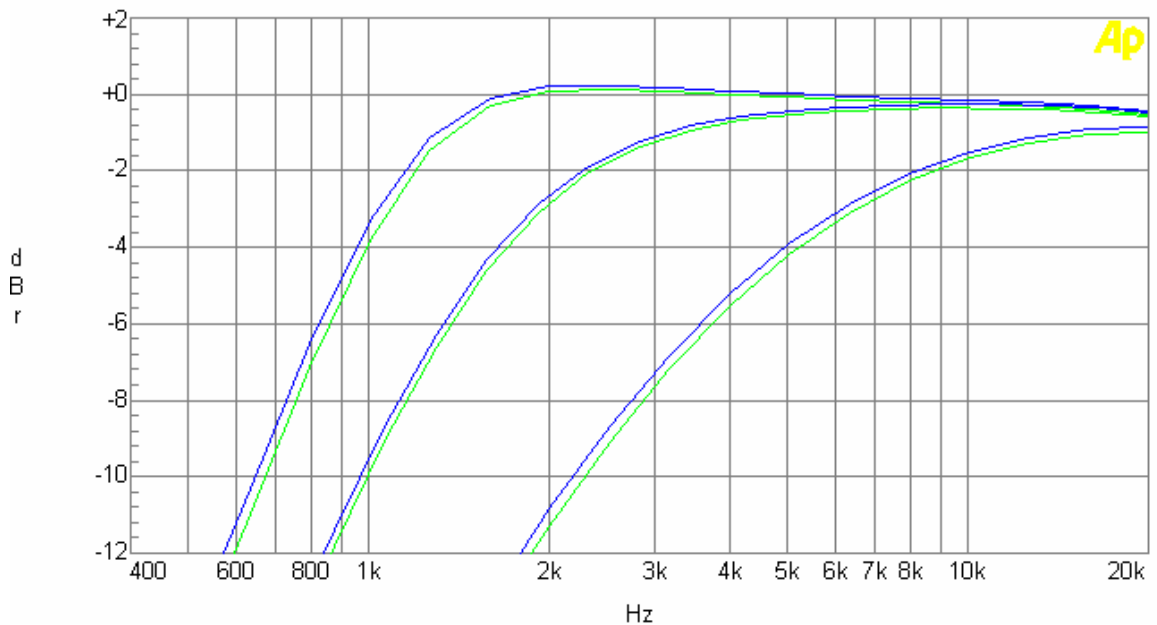
Chat 7. Ch-A LPF with 1X frequency



Chat 8. Ch-A LPF with 20X frequency

3. Ch-B HPF feature.

Ch-B HPF frequency can be adjusted from 1KHz~6KHz.



Chat 9. HPF Filter response

3.5 Total Harmonic Distortion

THD+N=0.1%(A-weighted) @ 30W with 4ohm load.

3.6 Protection System



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1. Overload:

Protect at 1.3Ohm 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 80 degree C.

4. Low voltage:

Protect while power supply voltage lower than 7.9V.

3.7 Idle current and Efficiency:

1. Idle current: 0.57A.

2. Efficiency: 63% at 85W 4ohm load (stereo).

3.8 Dimension

This amplifier's size is at 228mmX260mmX53mm(W,L,H).