



## Laboratory Measurement Report

### Audio Performance of Moving Air TrueRMS 4CH Power Amplifier

#### Used equipments:

- Audio Precision Professional Measurement System Two 2322
- Behringer Measurement Microphone Model: ECM8000
- Behringer Phantom MicroPower Model: PS400
- Leader Audio Signal Generator LAG-126S
- Yamaha Pro Power Amplifier PS4050
- Philips DC Power Supply PE9540
- Philips Digital Multimeter PM2525
- Realtek HD Audio Soundcard
- IBM PIII Desktop PC with APWIN V2.24 Software



#### Conclusion:

- An excellent wideband freq. response is measured on the DUT, ranging from 10Hz to 50kHz taken at -3dB scale and 10Hz to 100kHz taken at -6dB. The amplifier has a crossover point of 100Hz. In low pass filter mode, it operates from 10Hz to 100Hz (-3dB) and high pass filter mode, it starts at 100Hz to an impressive 100kHz (-3dB).
- The distortion figure range from 0.1% to 0.4% throughout the entire freq. band which is typical of most amplifiers. No major THD overshoot is observed. A decent signal to noise ratio figure of 95dB is measured at 1W into 4ohms.

#### Recommendation:

- **For Best Sound Performance, it is recommended to operate the device in All Pass/Full Mode.**
- **Signal separation and crossing over is preferred to be done at the headunit.**

#### Measurement Plots:

- Frequency Resp. (Hz): 10Hz – 100kHz, Sine sweep 100 step, at 1W into 4 Ohms Resistive Load.
- Total Harmonic Distortion (THD): 10Hz – 20kHz, Sine Tracking 100 step, at 1W into 4 Ohms Resistive Load.

#### Electrical Test Parameters (12Vdc Supply):

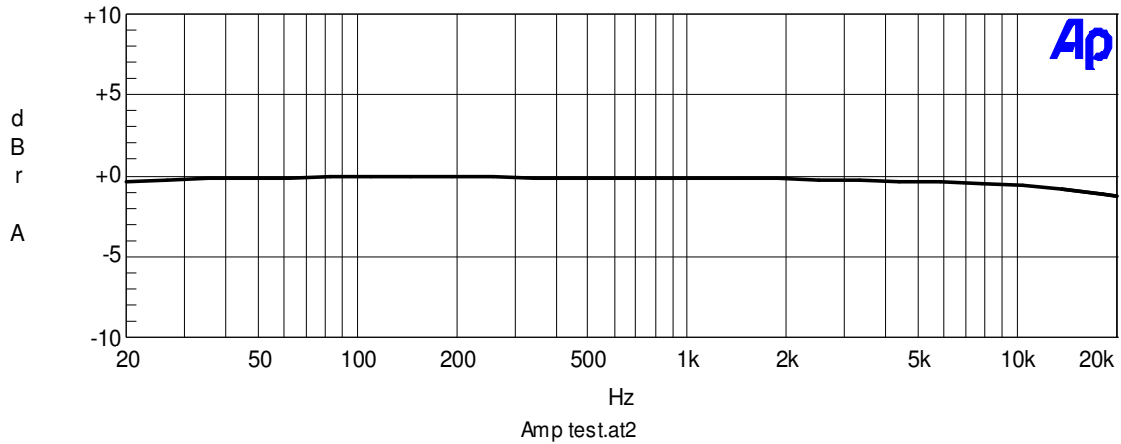
- Frequency Resp. at all pass mode (-6dB): 10Hz – 100kHz
- Frequency Resp. at LPF mode (-3dB): 10Hz – 100Hz
- Frequency Resp. at HPF mode (-3dB): 100Hz – 100kHz
- Total Harmonic Distortion (10 to 100kHz @100mW into 4ohms): 0.1 – 0.4%
- Total Harmonic Distortion (10 to 100kHz @1W into 4ohms): 0.1%
- Rated RMS Output Power in Single Ended @10% THD into 2ohms: 4 x 75Wrms
- Rated RMS Output Power in Bridge Mode @10% THD into 4ohms: 2 x 150Wrms
- Signal to Noise Ratio @1W into 4ohms: 95dB



- Freq. Resp. at All Pass/Full mode, left channel only, 10Hz – 50kHz at -3dB.

Audio Precision

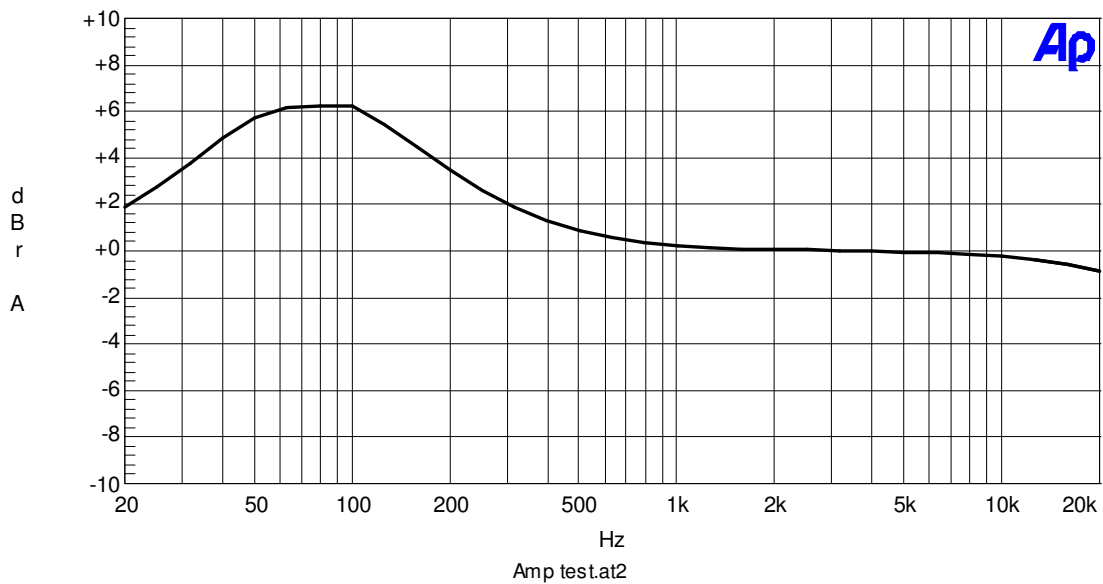
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- Freq. Resp. at All Pass/Full mode with Bass Boost On, left channel only, 6dB Gain in the region of 50Hz to 100Hz.

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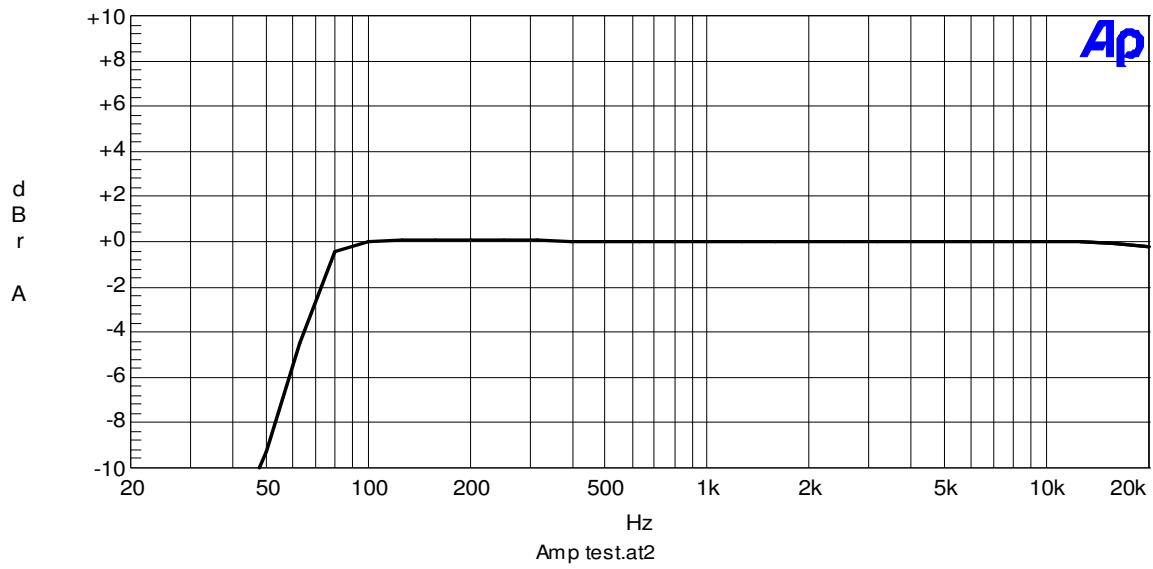




- Freq. Resp. at HPF mode (Non-Adjustable), left channel only, 100Hz – 50kHz at -3dB.

Audio Precision

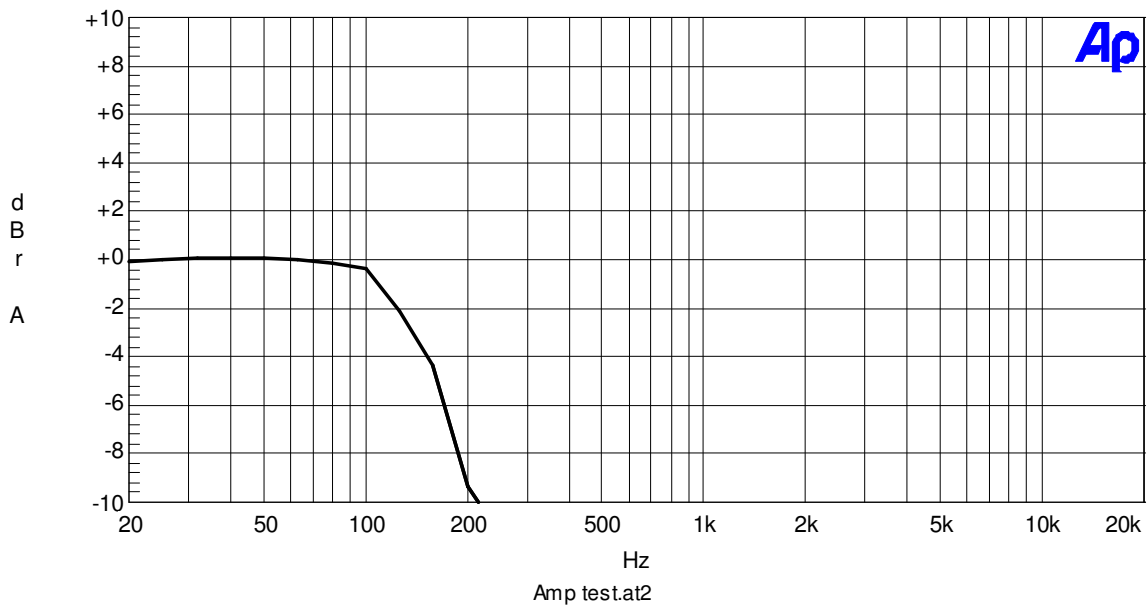
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- Freq. Resp at LPF Mode (Adjustable), left channel only, 20Hz – 100Hz at -1dB.

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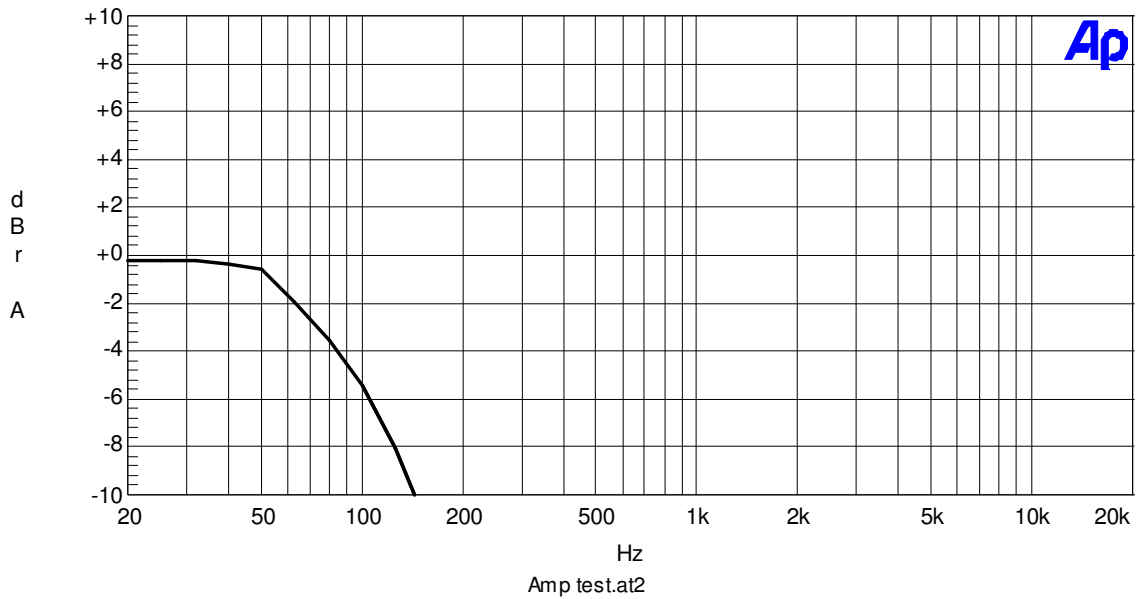




- Freq. Resp at LPF Mode (Adjustable), left channel only, 20Hz – 60Hz at -2dB.

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- Total Harmonics Distortion at All Pass mode, left channel only, range from 10Hz – 300Hz, 1W into 4Ohms.

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