

The following information was copied and pasted directly from the Maxxsonix web site shown below.

<http://hifonics.com/colossus-35/>

Comments shown in Red.

**Would love to hear from car audio enthusiasts what they think about all this "rocket science" these guys put out.**

#### **Features & Benefits**

##### **PRE-AMP CIRCUITRY: Low Noise PreAmplifier**

Low voltage signal from the source unit comes into the amplifier pre-amplifier circuit with minimal distortion

How do these great Hifonics engineers KNOW that the "low voltage signal from the source unit comes into the amplifier pre-amplifier (Such bad English again) with minimal distortion" simply because they use a "low noise PreAmplifier", whatever this may actually mean?

- **CROSSOVER / SIGNAL SHAPING: Accu-Cross & XCurve (X1/X10)**  
Accu-Cross crossovers allow for complete control of the signal directing to all speakers. XCurve allows for chosen frequencies to be as stated (X1) or multiplied by 10.

Accu-Cross crossovers - give me a break. They are using standard 9mm potentiometers which have a section to section tracking error of 6dB and I presume the engineers use the acronym "Accu" for accurate. You call many dB's of mistracking accurate?

Now this XCurve has got us all thinking hard, what could this fancy design do. Oh well it really is a just a simple x10 multiplying switch to give the potentiometers more resolution. Ah ha XCurve what a cute dumb name.

Kind of reminds me of Soundstream when they used an acronym for their remote turn on!

- **OPERATION MODE: One Channel (Mono)**  
Mono mode is intended for subwoofers only

Now again this one is a real doozy. Very good it is a mono amplifier and we all understand that it is a (one) channel amplifier.

Now look what they show below (I brought it up here so we can all see).

- **TOTAL CHANNELS**  
2

- **CLASS / TOPOLOGY: Dual Ultra D-Class™**  
Ultra D-Class™ technology is at the very nerve center of Colossus. The proprietary “Ultra-D” design uses high-speed microprocessors with proprietary D/A conversion algorithms to efficiently control the dual mono current consumption. At very high listening levels. Hifonics Ultra D-Class results in lower distortion, higher current efficiencies and less heat than conventional D-Class amplifier designs.

I guess these Hifonics engineering folks know a thing or two about all this class D stuff.....well maybe not.

A fact, a class D amplifier is NOT digital, it simply got it's name because Class A, B and C had been used and the next letter in the English alphabet happens to be D.

There is NO D/A conversion as there is no digital signal....period!

What does "higher current efficiencies" mean? These guys just make up nonsense.

- **OUTPUT DEVICES TECHNOLOGY: Ultra-Fi™ MOSFET**  
The Ultra-Fi™ MOSFET is designed for music production vs just electronics output power. It produces very musical high power with high efficiency for cooling and minimal distortion

What pray is an "Ultra-Fi MOSFET"? Is this from a galaxy far far away?

A MOSFET in any class D amplifier operates as a switch, either fully on or fully off (In a correctly designed circuit). In an amplifier of this supposed power level, the MOSFETs chosen should be for low Rds-on, Low Qg and

correct breakdown voltage. There is NO MOSFET in the approximate 200-250v range that is designed for music.....a lot of nonsense if ever I have heard.

Musical high power MOSFETs with high efficiency. MOSFETs do not have "high efficiency" they are entirely dependent on the circuits around them on how well they operate. Just read the Maxxsonix paragraph above a few times and in the space of 4 lines I have never read so much BS.

- **POWER SUPPLY:** Twin turbo  
The Twin Turbo Coil PS is a Pulse Width Modulated power supply keeps voltage constant through the Ultra-Fi output devices

Oh dear here we go again with these turbo charged power supplies. Wonder where these rocket scientists get the exhaust gases from in order to get their turbos to spool up?

- **DIAGNOSTICS:** Three-stage protection circuits  
Monitor thermal, overload, DC, and speaker short protection with lighted indicators on the amplifier end panel

The bad grammer again boys. "Lighted indicators" is really poor English.

- **POWER @ 1-OHM**  
2 x 1700 RMS  
2 x 3400 Peak
- **POWER @ 2-OHMS**  
2 x 1200 RMS  
2 x 2400 Peak
- **POWER @ 4-OHMS**  
2 x 650 RMS  
2 x 1300 Peak
- **MONO BRIDGED @ 2-OHMS**  
1 x 3400 RMS  
1 x 6800 Peak
- **MONO BRIDGED @ 4-OHMS**  
1 x 2400 RMS  
1 x 4800 Peak
- **TOTAL CHANNELS**  
2
- **AUDIO INPUTS**  
Yes

Now for the biggest lot of drivel I have read about on this amplifier.

In order to develop 650w into 4 ohms one must output 51v RMS.

Assuming a perfectly regulated power supply and ZERO losses in either the power supply or class D, we require a net rail of +/-72volts.

OK they do not use regulated supplies so the static supply rails are about +/-85v under no load.

Now for the KOOL AID drinkers. They claim 1300w peak into 4 ohm which means they must deliver 72 volts across the load. Now peak power assumes NO clipping and thus they would then have to run their rails at well over +/-100v.....I doubt it.

Oh by the way, THERE IS NO SUCH THING AS "WATTS RMS"

Power in watts = RMS volts x RMS amps, and Root Mean Square x Root Mean Square cannot = another Root Mean Square number.

It's like saying  $\text{sq root } 4 \times \text{sq root } 4 = \text{sq root } 4$ .

Let's not even get into these 2 and 1 ohm power ratings.

OK let's go to this URL

<http://hifonics.com/zxx-3200-1d/>

- **OUTPUT DEVICES TECHNOLOGY:** PWM MOSFET Power Supply  
Stable power through the PC board with minimal heat generation
- **HEAT SINK:** Aluminum  
Old School Hifonics Heat sink for Superior Heat Dissipation
- **POWER SUPPLY:** Simpatico Coil Design  
The dual coil Pulse Width Modulated power supply keeps voltage constant through the Ultra-Fi output devices

What is heaven's name does "Stable power through the PC board" actually mean? I do not believe that the person(s) who wrote this drivel know themselves.

"Simpatico Coil design" Nah you must be kidding on this one!

Wonder what phrases these boyz in the backrooms will think up next.