

Stereo/Home Theatre Alternative Versions

The prototype 5.2HT system described on this website involves construction of multi-channel amplifier, and a separate subwoofer amplifier. This is because one of the goals of this project was to show how and why such system could be heavily customized. This approach involved assembling Class-AB amplifier modules, power supplies and building chassis for them. Even though the activities required only medium level of electronic skills, and in general, there are many options opened up to you, this may not be what you are looking for in your own version of the UE system.

There seems to be quite a number of cost-effective versions of amplifications for the UE system possible. Some of the concepts presented below maybe more attractive to you, should you prefer not to built any amplifiers, or try simpler system at first.

1. **Some systems are simply 2-channel stereo versions.** These would use single Delta1010LT sound card and a minimum of six-channel amplifier.



An example of multi-channel amplifier MA1240, from Parts-Express.
<http://www.parts-express.com/pe/showdetl.cfm?Partnumber=300-815>

This version of UE3 system incorporates 40W/channel amplifier MA1240 (12 channels) from Parts Express (\$400) and would suffice for a small to medium size of a AV room, and would provide you will all amplification you need, not only for stereo application, but also for a HT application.

2. System based on Channel Vision A1260 Aria 6 Zone Power Amplifier

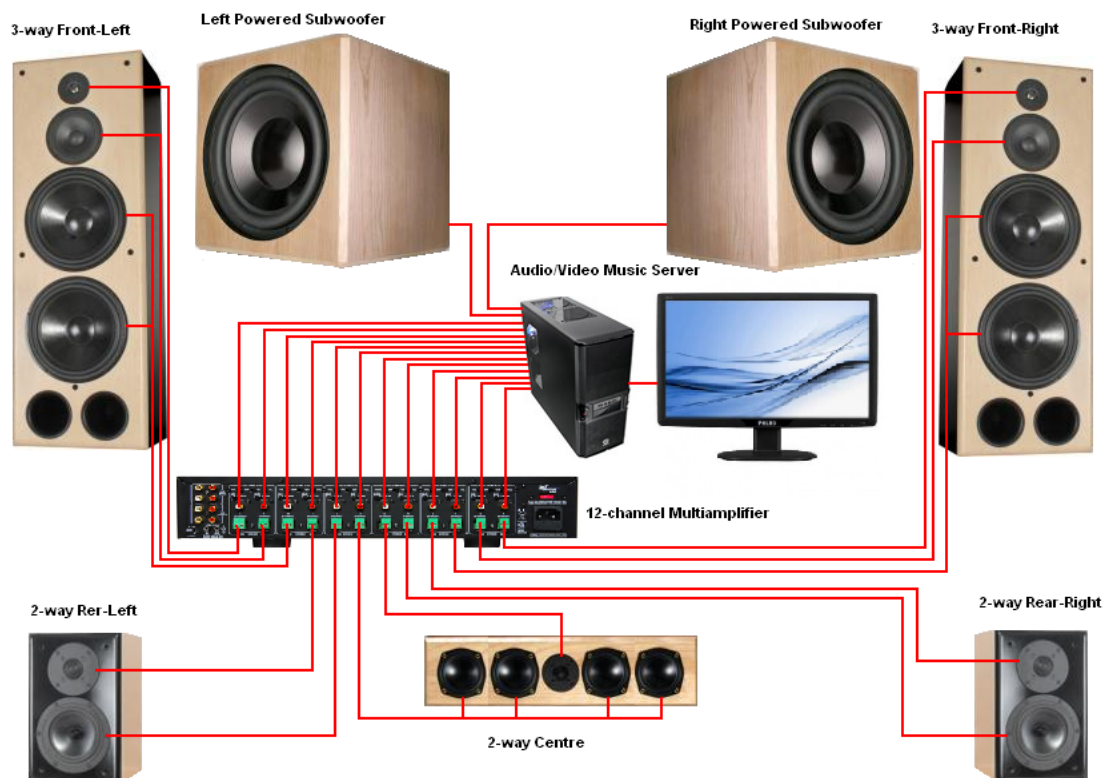
Designed in the USA, the A1260 is a 12 channel/6 zone amp that delivers 60 watts per channel with full loads on each channel. Each zone can switch between either a global input or a local input; the global input is sent to all 6 zones. The A1260 offers plenty of power, clean sound, and reliable performance to satisfy the most discerning audio and home theatre enthusiasts.

This system has higher output power (60W/channel) and is suitable for medium-size AV rooms.



<http://www.parts-express.com/pe/showdetl.cfm?Partnumber=183-240>

3. Full-size HT system with subwoofer plate amplifiers.



This system incorporates MA1240 multi-channel amplifier and subwoofer amplifiers with the following specification:

Specifications: • Measured power output: 200 watts RMS into 4 ohms @ < 1.0% THD • Signal to noise ratio (at rated power): >90 dB • Input sensitivity (@ low level): 210 mV/50 Hz • Low pass adjustment: 40 Hz to 200 Hz • Phase adjustment: Continuously variable from 0° (normal) to 180° (reverse) • Power requirements: Switchable, 115/230 VAC, 50/60 Hz • Dimensions: 8" W x 7" H x 2-1/4" D; Cutout dimensions: 7-1/4" W x 6-1/4" H.



<http://www.parts-express.com/pe/showdetl.cfm?Partnumber=301-504>

4. System based on HT Receivers.

Sherwood RD-5405 5.1 Home Theater Receiver (\$149)

Versatile yet affordable, the Sherwood RD-5405 5.1 home theater receiver features two HDMI inputs and one HDMI output, as well as five DSP surround modes. Totally discrete amplifier stage for each channel. Quartz synthesized digital tuning with 30 station presets.

Specifications: • Power output: 60 watts RMS per channel @ 6 ohms, 40 Hz - 20 kHz, 0.2% THD in stereo mode • Dolby Digital, Dolby Prologic II • 2-in / 2-out composite video • 192 kHz / 24-bit D/A converter (all channels) • Digital audio input (one Optical / one Coaxial) • Two HDMI inputs and one HDMI output • Three digital inputs (two Coaxial and one Optical) • Preamp level subwoofer output • Adjustable A/V sync delay • Multi-stage Dynamic Range Control • TDAS (Totally Discrete

Amplifier Stage) for all channels • Quartz synthesized digital tuning with 30 station presets • Headphone jack • Remote controller included • Dimensions: 17-1/8" W x 5-1/2" H x 15" D.



<http://www.parts-express.com/pe/showdetl.cfm?Partnumber=252-226>

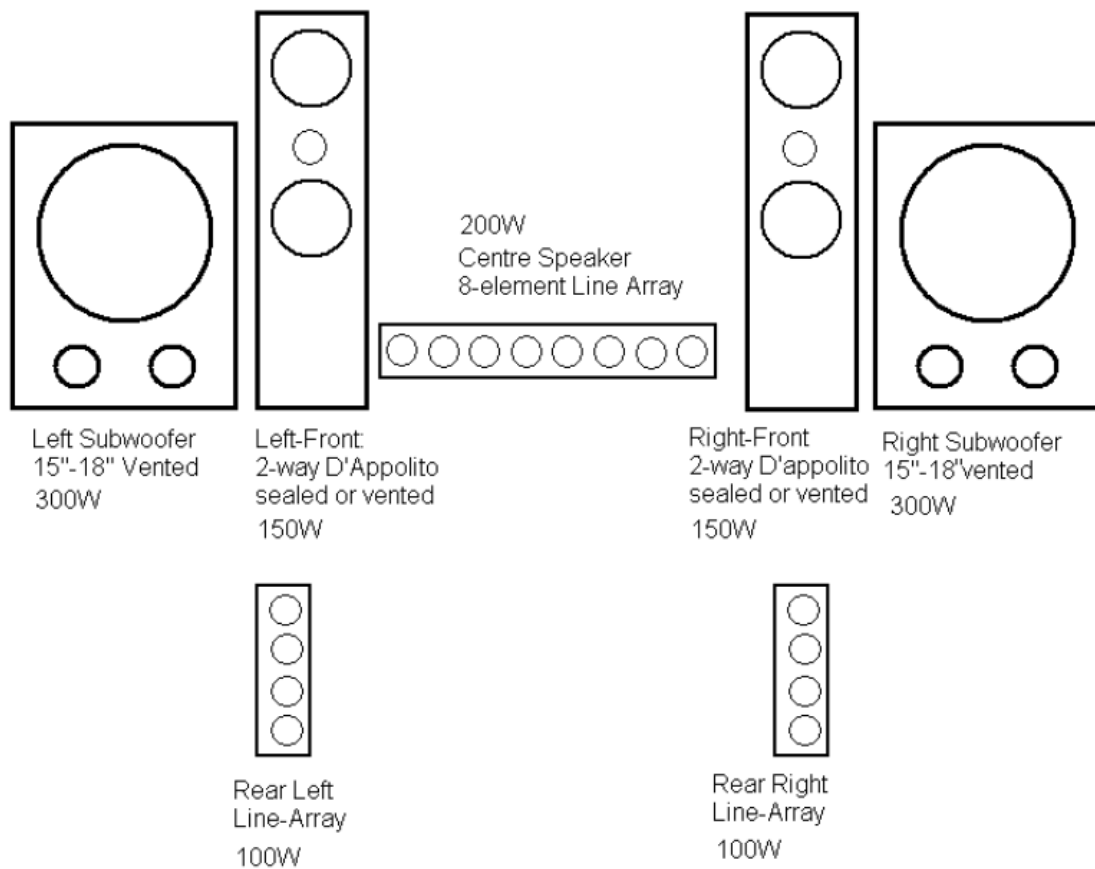
5. System based on JVC RX5032 HT receiver.

This is 5x100Watt HT receiver available at Ebay. They are inexpensive, and 2 or 3 such units can provide you with remote-control capabilities and 15x100W amplification channels.



http://www.ebay.de/sch/i.html?_nkw=jvc+rx+5032

6. HT system for single Delta1010LT sound card.



The 5.1 HT system with two subwoofers, conceptually shown above, can be easily built with single Delta1010LT sound card. It can be scaled down or up for power levels. Also, you can use full-range drivers instead of line arrays. <http://www.parts-express.com/pe/showdetl.cfm?Partnumber=295-346>



Dayton Audio PS220-8 8" Point Source Full-Range Neo Driver with phenomenal SPL

Specifications: • Power handling: 40 watts RMS/80 watts max • VCdia: 1" • Le: 0.75 mH • Impedance: 8 ohms • Re: 6.0 ohms • Frequency range: 40-25,000 Hz • Fs: 45 Hz • **SPL: 95.6 dB 1W/1m** • Vas: 2.79 cu. ft. • Qms: 3.61 • Qes: 0.32 • Qts: 0.30 • Xmax: 4.8 mm • Dimensions: Overall diameter: 8.7", Cutout diameter: 7.2", Depth: 3.7".

This would be the simplest and most cost effective HT system, which would take full advantage of UE Technology unique features, like HBT equalization, linear-phase, voicing etc.

7. Example of an amplifier design from internet

I found this interesting 5 x 100W amplifier design at <http://oamlabs.no-ip.org/a500.html>. It consists of 5 mono-block amplifiers in one enclosure. Amplifiers are completely separate, including individual power supplies. It would be a definite improvement over my design.



Conclusions

Surely, there is a multitude of other options, and the best one, is the one that suits your taste and budget. So, as you can see, opportunities are there to save yourself *significant amount of work and money*, if you are inspired by anyone of the above options, and see a variant for yourself.

Loudspeaker building is a separate issue, and should you decide on smaller or larger HT system, it will provide you with many months of enjoyment of creating something really uniquely yours.