

FZ1622 – Hi-Fi Preamplifier with Zigbee Remote Control

Description:

This is a simple audiophile grade Preamplifier with a Zigbee Remote Control. The Remote control does use an accelerometer to sense the tilt to the left or right of the remote and like this to decide the increase/decrease of the Volume, Bass and Treble controls. If the user will keep the Volume button pressed and will tilt the remote left/right the Volume control will follow the movements of the remote!

The analog part is built for best performance with an acceptable cost. It is made with usual components but overall is a special design. All the switching is made with miniature relays for minimum distortions. The Treble and Bass usual potentiometers are replaced with resistors/relays combination for increased precision.

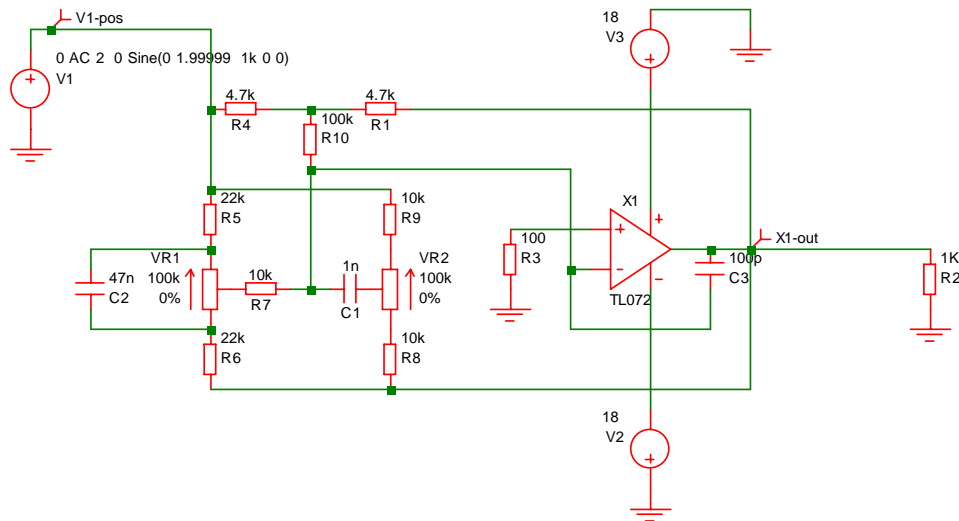
Overall is a high performance preamplifier completely controlled by a microcontroller.



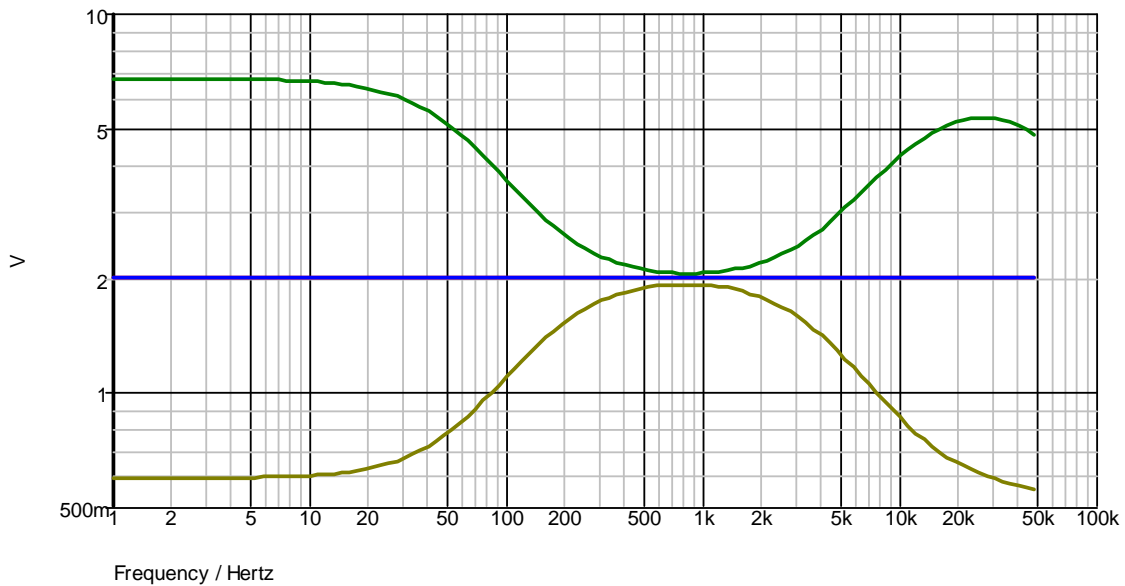
Hardware:

The Zigbee part is based on the SARD boards. One board is used as the transmitter (remote) and the other one is used like the receiver (preamp unit).

The analog part is a classical tone control circuit based on AO's.



The result is an almost perfect tone control circuit – as per the simulation with a real AO model. A special feature is the Tone Defeat - by placing a short over R10/100k the tone control will be almost flat.



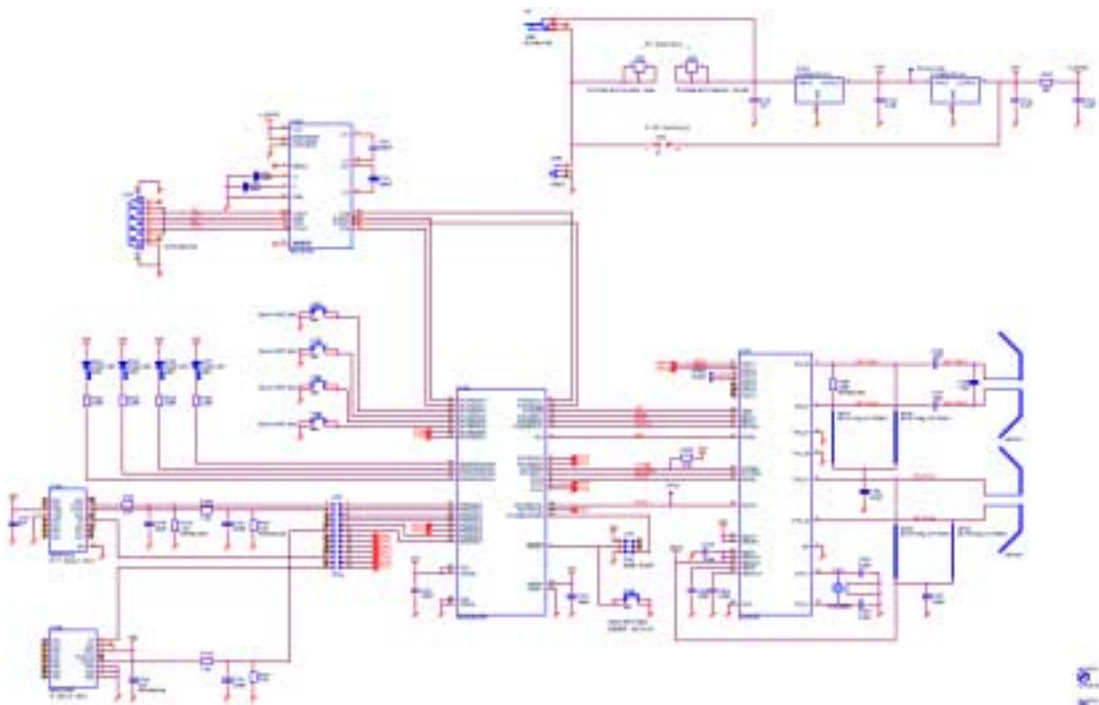
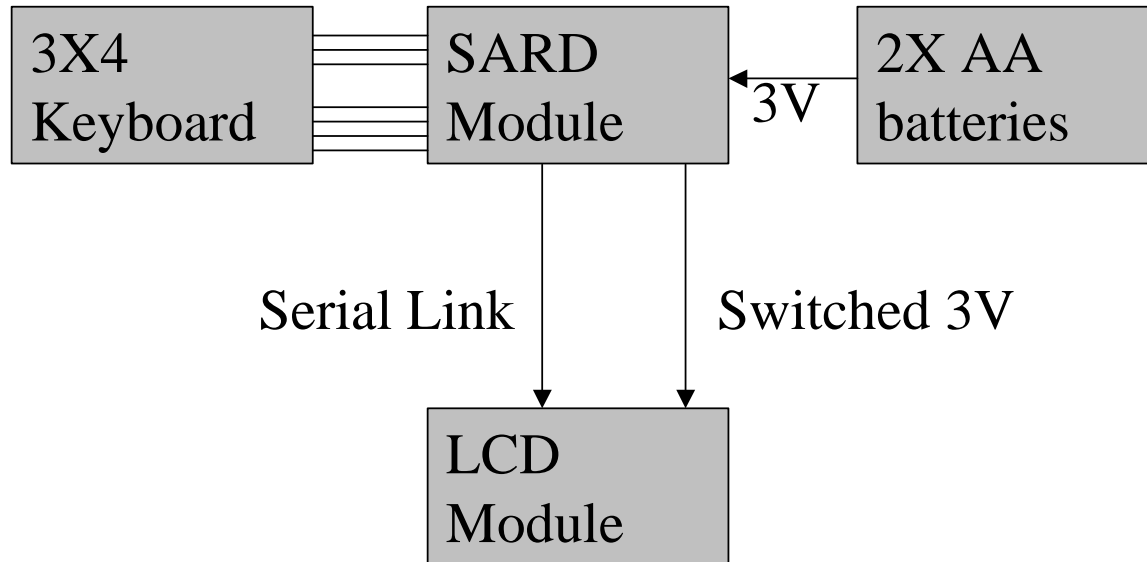


The Remote Control Unit

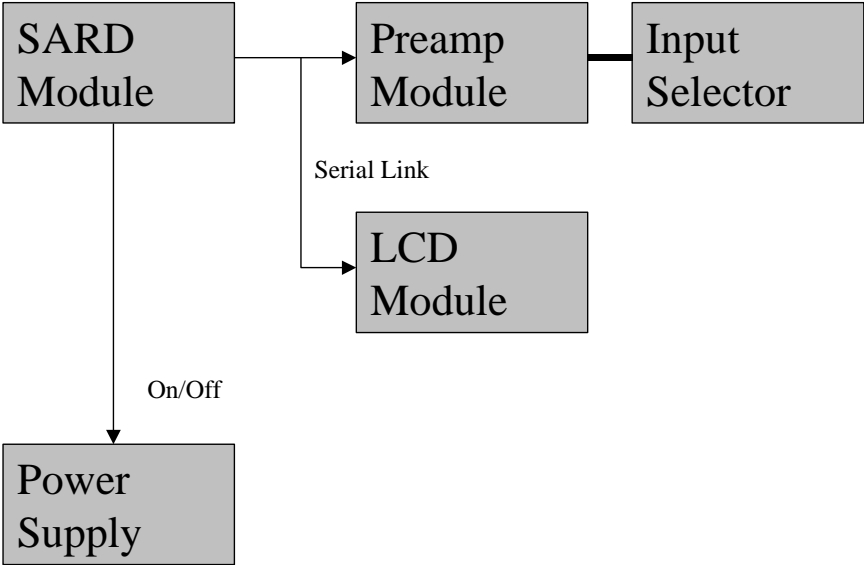
The Remote Control Unit is built around a Zigbee SARD board. A 3X4 keyboard is added and a LCD Display.

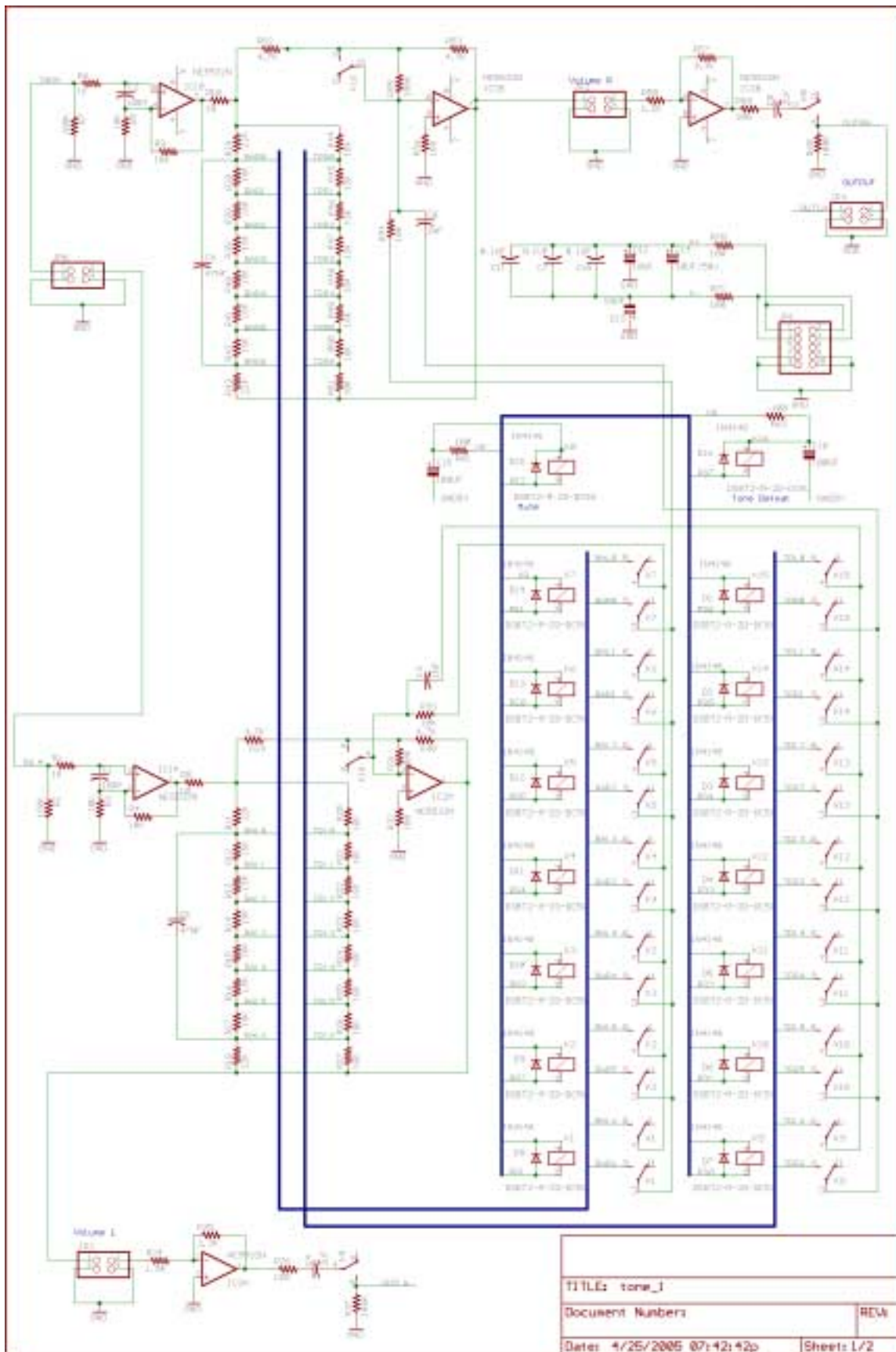


Zigbee Remote Control



Zigbee Receiver and Preamp





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