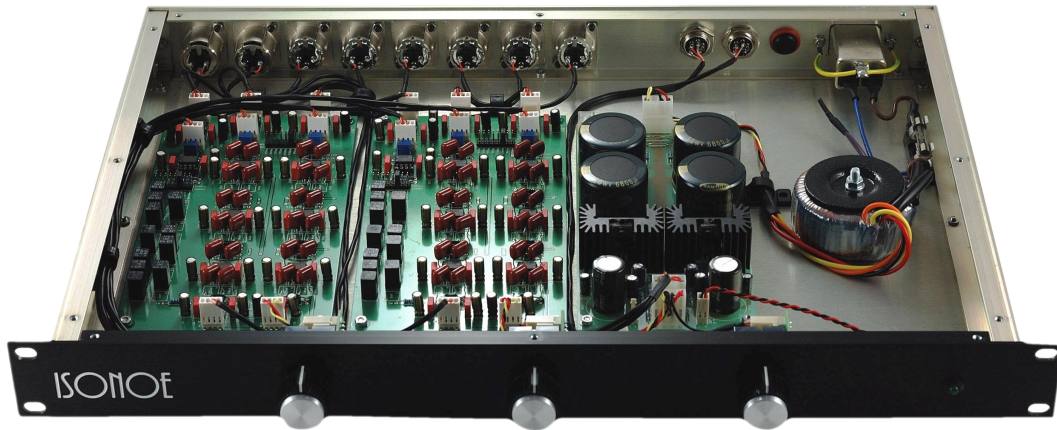


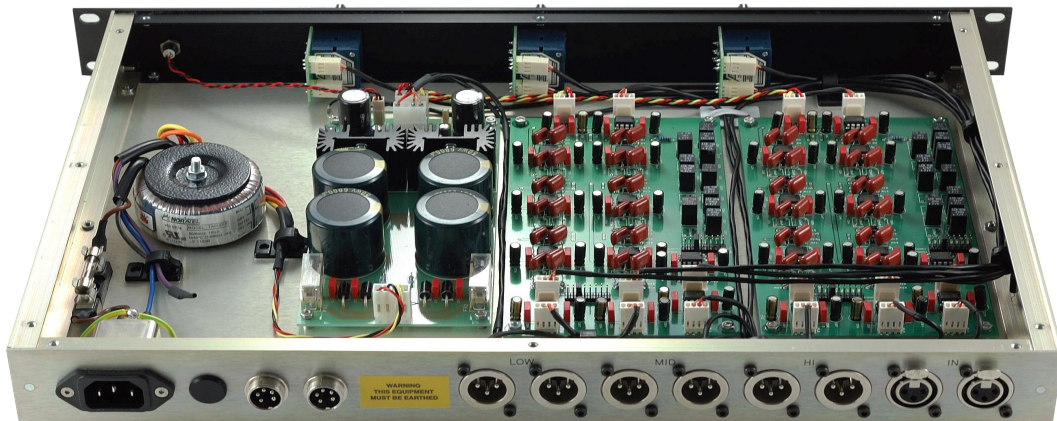
ISONOE

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'RLA-STYLE CROSSOVER'



Isonoe was approached by an owner of an original 'RLA-type' crossover, made by a Washington-based manufacturer. The unit in question was being used on a club system which employed extremely efficient horn-loaded speakers. As anyone with such speakers can tell you, their efficiency constrains the user to employ exceptionally quiet ancillary equipment. Background noise during quiet passages becomes far more of an issue than with less efficient speakers. Isonoe were commissioned to design and manufacture a one-off crossover, but with the added improvements.



The design draft was that the unit must achieve the following criteria:

Exceedingly low-noise. Double-layer circuit-boards with ground planes and plenty of power supply bypassing were employed, in a dual-mono layout. This ensured high bandwidth Burr-Brown op-amps could be employed without fear of oscillation. Signal-to-noise ratio measured in excess of 110dB, even with all controls at full gain (unit has a maximum of 6dB gain per band)

Total transparency, without the circuitry adding any colour whatsoever. The combination of PCB layout and Burr-Brown / Analog Devices ICs ensured a THD below that which can be measured with most test equipment

Adjustable frequency shelving points. The High-pass section can be configured via jumpers, with a selection of shelving points from 3Khz to 12Khz. The Low-pass section can similarly be configured to have shelving points anywhere between 50Hz and 130Hz. Ultimate matching between channels was ensured via the employment of precision 0.1% tolerance resistors and 1% polystyrene capacitors throughout

Each control to have a maximum of +6dB gain. Internal 25-turn trimmers enable the club's engineer to limit maximum output, so the operator can turn the front panel pots to any setting without fear of creating overload

Balanced Input / Output

Internal Power Supply, with additional Outputs to feed other equipment. Due to the unit only having +6dB of gain, it was decided that an external power supply would not yield the kind of benefits it offers equipment with higher gain capability. The internal PSU offers convenience, in that neighbouring isolators which have issues with power supply noise can be powered via a version of our renowned LRPS.