SNELL ACOUSTICS TYPE EC-2 ELECTRONIC CROSSOVER

The Snell Acoustics Type EC-2 electronic crossover is designed to be the perfect compliment for all versions of our Type A loudspeakers. Through the use of model-specific plug-in modules, the crossover can be optimized for any of these loudspeakers. The EC-2 represents the state of the art in electronic crossovers, and is an ideal choice for use with the world's finest electronics, as well as more moderate equipment. The EC-2 provides the opportunity to upgrade your system without having to replace your loudspeakers by permitting the addition of a second power amplifier. The bi-amp capability common to all Snell Acoustics loudspeakers permitting such system upgrades is an example of our commitment to practicality and convenience as well as great sound reproduction.

The EC-2 electronic crossover opens up several possible options. Many people prefer the sound of large solid-state amplifiers at low frequencies, and the sound of tube amplifiers at mid and high frequencies. The EC-2 allows for the utilization of each type of amplifier where it is ideally suited. The EC-2's ultra-low output impedance will drive virtually any length of any kind of interconnect, allowing for the placement of the amplifiers near the speakers. Short speaker leads provide less signal loss, and lower cost than the more normal alternative of using shorter interconnects with longer speaker leads.

Another excellent option which the EC-2 provides is for the use of two identical amplifiers in "vertical" bi-amp mode. This configuration is ideal for use with more modest amplifiers, since each stereo amp is used to drive one speaker. One channel of each amplifier is used for low frequencies, and one channel is used for high frequencies. The result of this Snell innovation is completely independent left-right amplifier channels, with absolutely no channel interaction. This system provides optimum imaging, an important output goal in itself. It also splits the low frequency load between the amplifiers, which is an especially useful feature when budget amplifiers are being used with less than optimum power supplies.

The EC-2 is an all FET design, using no feedback. It is inherently stable and does not produce dangerous turn-on or off thumps. It's 47K Ohm input impedance assures compatibility with any preamplifier. It does not invert phase, and provides nearly unity gain. Individual level controls for each channel provide for 0 to 7 volts RMS output (depending on input voltage). Harmonic and intermodulation distortion are less than .01% with a 1.5 volt input. Frequency response is 2 Hz to 1 mHz, and output impedance is less than 4 Ohms. Only the finest parts are used, with metal film resistors, polypropylene capacitors, and an oversize regulated power supply.

The Snell Acoustics EC-2 electronic crossover: Continuing in our promise to build timeless investments in music!

INSTALLATION
Snell Model EC-2 Electronic Crossover

Congratulations on your choice of the Snell Acoustics EC-2 Electronic Crossover. Its high quality design insures you years of premium performance. To realize its full potential, we recommend that you read these guidelines for installation.

Circuit Highlights

The EC-2 is all "FET" design. It features an extremely low output impedance which allows it to drive any cable and amplifier under the most adverse situations. High and low outputs to the amplifiers are adjustable to allow for different amplifier sensitivities. Both inputs and outputs feature gold plated switching jacks that maintain a grounded center conductor until the actual ground is connected in order to ensure a high degree of protection for both amplifiers and speakers.

Metal film resisters, Polypropylene capacitors, oversized regulated power supply, and careful attention to circuit layout ensure the utmost in performance.

Installation

The EC-2 is always on when it's ac cord is plugged into a live socket. If you choose, for sound quality reasons, to leave the EC-2 always on, this is fine. If you choose to have it go "on" and "off" with your system, we recommend that you connect it to one of the "switched" outlets on your pre-amp. The EC-2 itself will produce no turn-on or turn-off thumps that may be dangerous to your speaker or amplifiers. Because of the switching jacks, the EC-2 may be connected into your system turned either "on" or "off".

The outputs from the pre-amp should be connected to the "right" and "left" input jacks. Outputs to the amplifiers for low and high frequency drivers should be connected to their respective amplifiers via the "high" and "low" outputs for both right and left channels. The EC-2 is "set-up" with modules for the Snell type A/III speakers and balanced for amplifiers of identical input sensitivities. If non-identical amplifiers are used, the "high" to "low" balance may be adjusted with "level" controls on the rear panel for correct total balance. The balance for the type A/III set-up is described in the owners manual. We recommend that no changes be made in either set up of the A/III's or the crossover frequencies of the EC-2 if State-Of-The-Art performance is to be achieved.

As with any high quality components, we recommend High Quality interconnects in order to fully realize the many benefits of Bi-Amplification.

Because of it's extremely low output impedance, the EC-2 will easily drive long interconnects to amplifiers placed near the speakers. However, the choice of long interconnects or long speaker wires in best determined by careful listening tests and results will be based upon set-up and types of cables employed. Only you will know what works best for your system.

SPECIFICATIONS
Snell Model EC-2 Electronic Crossover

All specifications are measured straight through with no crossover frequency. Input voltage is 1.5V, with both input level controls at maximum gain. Specifications refer to all four output channels.

FREQUENCY RESPONSE: 2Hz to 1 MHz

TOTAL HARMONIC DISTORTION: Full bandwidth, less than .1%.

INTERMODULATION DISTORTION: Full bandwidth, any combination of frequencies or ratios; Less than .1%.

NOISE: Less than -90db, wide band no weighting.

MAXIMUM INPUT LEVEL: 7V rms.

MAXIMUM OUTPUT LEVEL: Before clipping, 7V.

GAIN: 95% of unity.

OUTPUT IMPEDANCE: Less than 4 ohms.

INPUT IMPEDANCE: 47K Ohms.

CROSSOVER MODULES: Unit is shipped with Snell Type A/III crossover modules, unless otherwise specified. Crossover modules for other Snell models are available upon request.

SEMICONDUCTOR COMPLIMENT: 4-dual J-FET's, 8 Power MOS FET's, 8 Constant current diodes, 20-Zener diodes, 6-signal diodes.

PACKAGING: Black wrinkle finish metal cabinet, Black anodized faceplate with white lettering. Optional silver faceplate with black lettering available at additional cost.

POWER REQUIREMENTS: 120V 50-60 Hz, 1A. @ full drive all four channels. 230V version available.

APPEARANCE AND CARE
Snell Model EC-2 Electronic Crossover

Because the unit tends to run somewhat warm, adequate space should be allowed for ventilation. It's cabinet and faceplate may be cleaned with a soft towel and window cleaner, ie. Windex, Glass Plus, etc.. No other type of solvents should be used as the quality of the finish may not be preserved.