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## Bulletin 0313

### Product Overview

# Introducing the Ultralinear Series III Spectral/MIT Cables

In the early 1980s, a joint development effort between Spectral Audio and Music Interface Technologies (MIT) resulted in the first time-aligned audio cables for use with high-speed audio components. The Spectral MI-500 Interconnect and MH-750 Speaker Cable completed the performance envelope of the Spectral electronics and became instant classics.

The Spectral/MIT collaboration represented the first fully integrated, ultralinear system of active components and passive cable networks in audio. By working with MIT to develop measurement techniques to observe minute noise and phase distortions in signal cables, Spectral was able to create an integrated system of electronics and optimized cables which was truly accurate in the time domain. Whereas these types of tuned systems have been routine in radio and microwave design, the Spectral/MIT venture led the way in introducing this important system concept to high-end audio for the first time.

Since the introduction of the original MIT/Spectral cables, successive stages of development have further optimized the component—component and the component—speaker interface. Breakthrough cable networks such as MI-500 and MH-750 Shotgun, CVT and finally Terminator have been designed around Spectral's audio components and have earned MIT worldwide recognition as the premiere high-end cable specialists. The combination of these cables with

Spectral's ultralinear high-speed circuitry represents the most uncompromising implementation of the MIT technology.

### **The Spectral Ultralinear System Concept**

The dc coupled, high-speed amplifier circuitry developed for Spectral audio components offers many practical advantages over conventional audio amplifier designs, from superior transient and phase accuracy to lower time based distortions and noise. In Spectral components this "ultralinear" circuit capability translates into improved linearity for greater resolution of a musical event occurring in a distinctive acoustic space.

Uncompromising audio circuitry must be extremely wideband, but wideband output can broadcast like a transmitter, to produce megahertz oscillations which ring and distort the audio signal. To prevent oscillations in the Spectral system, conventional "wire" cables have been replaced with precision tuned cable "networks" developed by MIT. The modular terminations of the MIT cables tune them to function like ideal low-pass filters, the perfect match for Spectral's high-speed, high-resolution circuitry. Tuning for ultra-high frequency roll-off achieves the best of both worlds — very fast rise and settling time in the audio circuitry for exceptional signal resolution, and precise bandwidth tailoring for absolute amplifier stability and RFI isolation. Integrating MIT cable networks with Spectral wideband components easily outperforms conventional bandwidth limited audio components and wire cable combinations in virtually all domains.

### **The Spectral Ultralinear Series III Cables**

Now after thirty years of development experience with the MIT network technology, a third generation of cables designed by Bruce Brisson for Spectral systems is available. The Spectral Ultralinear Series III cables simplify system building with optimized interconnect /

speaker cable pairs to support foundation as well as reference level applications. The Ultralinear III cables also represent excellent value in the Spectral tradition, providing performance associated with the more costly MIT premium networks.

### **Spectral UL-230 Ultralinear III Interconnect**

The Spectral UL-230 Ultralinear III interconnect cable is the **foundation** choice for component interface in the Spectral system. UL-230 Ultralinear III has been designed to offer maximum performance and sonic sophistication with an emphasis on high value. As a dedicated Spectral cable network, the UL-230 assures the precision time alignment and critical impedance matching that Spectral components require. The overall performance envelope of considerably more expensive MIT interconnects has been achieved in the UL-230 Ultralinear with exceptional balance and musicality. The Spectral UL-230 is also the ideal match to the UL-38 Ultralinear III speaker cable and combines with the Spectral components for a powerfully real and transparent resolution of the source. The UL-230 Ultralinear is a superb choice for all low level applications in the Spectral system.

### **Spectral UL-38 HD Ultralinear III Speaker Cable**

The Spectral UL-38 HD Ultralinear III cable is the **foundation** choice for speaker interface with Spectral high-speed amplifiers. UL-38 Ultralinear III has been designed to offer maximum overall performance with an emphasis on high value. The UL-38 is a dedicated Spectral cable network which assures the precision time alignment, critical termination and tuned roll-off required for stable operation of Spectral's megahertz amplifier designs. This proprietary tuning of UL-38 gives Spectral amplifiers broad stability margin into the most complex and difficult speaker loads. As a result, UL-38 Ultralinear achieves the overall performance envelope of more expensive MIT cables for exceptional sonic balance and inner life. UL-38 Ultralinear III is the perfect match for the UL-230 Ultralinear interconnect and combines with Spectral components for powerfully real and transparent reproduction. The Spectral UL-38 Ultralinear III cable represents the finest balance of performance and value in the Spectral system.

### **Spectral UL-350 Ultralinear III Interconnect**

The Spectral UL-350 Ultralinear III interconnect cable is our **reference** component interface in the Spectral system. UL-350 Ultralinear has been designed to offer reference level performance with Spectral components and introduces the new generation 350 series MIT design optimized for our exclusive applications. The UL-350 Ultralinear draws upon decades of advancements made in the Spectral MI-350 series interconnects which culminated in the world-recognized MI-350 CVT/Terminator. The new generation Spectral UL-350 advances the leading edge tradition of the MI-350 series with remarkable improvements in overall performance and value. All the patented design features pioneered in MIT reference cables are optimized for the Spectral system in UL-350 Ultralinear for a new level of quietude and transparency. UL-350 Ultralinear is the ideal match for the Spectral UL-60 Ultralinear III speaker cable and Spectral's reference series of high-resolution audio components. This low capacitance custom cable is ideal for longer interconnect runs. As an investment in sonic excellence UL-350 Ultralinear III will compliment any Spectral system.

### **Spectral UL-60 HD Ultralinear III Speaker Cable**

The Spectral UL-60 HD Ultralinear III speaker cable is our **reference** speaker interface in the Spectral system. UL-60 Ultralinear has been designed to offer reference level performance with Spectral amplifiers and introduces a new generation MIT Matrix design optimized for our ultralinear application. UL-60 Ultralinear is inspired by decades of advances made in the Spectral MH-770 series speaker cables which culminated in the world recognized MH-770 Ultralinear II. The new generation Spectral UL-60 continues this leading edge tradition with significant improvements in performance and value. All of MIT's patented design features are optimized for the Spectral system in the UL-60 Ultralinear for a new level of accuracy and realism. UL-60 Ultralinear is the ideal match for Spectral's reference series of high-resolution audio components. The MH-60 Ultralinear III is a solid advancement in sonic excellence and value and will compliment any Spectral reference system.