



# KRELL Digital SBP-16X Software Based Processor



Krell Digital is dedicated to the reproduction of digitally encoded music, totally without compromise. It is our belief that in order to create truly superior audio components, a perfect blend of exacting, multi-faceted technologies is required. With our series of Software Based digital audio signal processors, we have found just such a blend. The SBP-16X has been engineered to preserve the performance and integrity standards set forth by the industry leading SBP-64X. Its playback capabilities are exceptionally musical and refined. In fact, knowledgeable, professional listeners have referred to the SBP-16X as "Ear Friendly". As with all Krell Digital components, the SBP-16X is designed and manufactured in the U.S.A.

### SOFTWARE BASED

The engineers at Krell Digital have pioneered new processing technologies for Digital Audio playback which improve the methods for the decoding and playback of digitally encoded music. These improved methods, which we call "Software Based Processing", incorporate a high-speed computer to perform the digital decoding of music through proprietary calculation techniques.

### 16 TIMES OVERSAMPLING & THE "WAVEFORM REPLICATOR"

The use of 16 times oversampling provides two distinct advantages over lesser sampling rates. The first is a more accurate time domain representation of the reproduced waveform. The other advantage is the extension of the first harmonic out past 705 kilohertz which enables the SBP-16X to avoid any type of "brick wall" filtration.

Our proprietary software, aptly named the "Waveform Replicator", utilizes high order, 24-bit coefficients coupled with polynomial calculations to deliver the most accurate re-creation of the original music waveform.

### FULL UPGRADABILITY

Stored in two EPROM's (Erasable, Programmable IC's), the "Waveform Replicator" is loaded into the Motorola DSP's when the SBP-16X is energized. The removable nature of these EPROM's allows the

SBP-16X to be improved with more powerful updated versions of the "Waveform Replicator". Software updatability, coupled with our fully-modular circuit design, shows a commitment to design longevity which will uphold this component's position as an industry leader long after other processors fall behind through obsolescence.

### THE MOTOROLA DSP-56001

For the SBP-16X, the DSP-56001 is the processor of choice due to its superior accuracy and precision. In fact, with its 24-bit coefficient capacity and 56-bit accumulator, it is the most accurate digital signal processor (DSP) in the industry for a similar application. Without these capabilities, we would have to settle for less powerful variations on the "Waveform Replicator".

### FEATURES

- Full compatibility with both coaxial and industry standard fiber optic input.
- Our utilization of sophisticated power supplies with low "self noise" and careful, proprietary grounding techniques eliminates any need to opto-isolate our circuitry.
- Twin 18-bit DAC's, individually calibrated at the KDI factory for high speed and superb accuracy. Utilizing only a single DAC per channel eliminates the stability and summing problems associated with multiple DAC designs.
- Classic Krell discrete, pure Class A, High Bias analog output stage.
- Two completely separate, discrete, double-regulated power supplies.
- The SBP-16X is completely contained in one heavy gauge, steel chassis, for maximum torsion resistance and high level shielding.

A premier performer today, with an even brighter future, the Krell Digital SBP-16X delivers a performance of spacious accuracy and unfatiguing detail. Visit your Krell Digital dealer for an experience you are not likely to forget.

### PROCESSING DATA

OVERSAMPLING: SAMPLING RATE	16 TIMES	SBP-16X	VS.	INDUSTRY STANDARD
Compact Disc		705.6 kHz - 705,600/sec		44.1 kHz - 44,100/sec
Dat		768.0 kHz - 768,000/sec		48.0 kHz - 48,000/sec
Satellite		512.0 kHz - 512,000/sec		32.0 kHz - 32,000/sec



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