



## Studio Digital-to-Analog Processor



**K**rell has developed a set of guiding principles during its twelve year existence. The concept of product evolution is central, fueling a relentless drive for increased performance and value. Evolution is not constant, however. Periodically a product is developed when creative forces are at a peak. The Studio is such a product. Its design joins the knowledge gained from over three years continuous research with recent breakthroughs. It is destined to become one of the few — a product that redefines expectations by establishing new performance standards.



A comprehensive array of input and output formats allows easy connection to a variety of sources.

## SPECIFICATIONS

### Digital Processing

Processors: Two Motorola DSP-56001, one per channel

Data Output: 24 bit word, 56 bit accuracy

DACs: Two 20 bit per channel, operated in a complimentary configuration

Software: Proprietary Krell software, upgradeable PC Boards: Four layer, glass epoxy

### Analog Outputs

Discrete, complimentary, direct-coupled, pure Class A

### Input Connections

2 Coaxial via RCA connector

1 Fibre Optic in Toshiba Optic format

1 Fibre Optic in AT&T format

1 balanced in AES/EBU via XLR connector

### Output Connections

Digital: One coaxial via RCA connector

Analog: One set balanced via XLR connectors

One set single-ended via RCA connectors

### Front Panel Controls

Input Selection

Phase Inversion

Tape Monitor

### Dimensions

15" wide, 2.5" high, 14.5" deep

### Warranty

Five years, limited and transferable



The Data Recovery/Jitter Rejection and DAC circuits are installed in special metalwork to provide thermal and electrical stability.

output a full 24 bit digital word to the DACs, providing an extraordinary degree of accuracy. User-replaceable EEPROM chips allow for future software upgrades.

The STUDIO DAC section is another engineering milestone. Each channel uses two 20 bit DACs, operated in push-pull configuration, yielding two distinct advantages. First, processing the 24 bit digital word through 20 bit DACs delivers substantially better detail resolution than any other system. Second, due to the push-pull arrangement, zero crossing distortion is eliminated.

## KRELL DIGITAL TECHNOLOGY

Innovative digital input circuitry was developed to receive the data stream from the source and eliminate jitter from degrading signal accuracy. Krell-programmed PALs (logic chips) control data recovery and establish clock synchronization between all stages within the Studio. The result is an absolutely stable data stream, with all clock-driven stages operating in perfect coordination.

The latest generation Krell software reconstructs the musical performance from the input data. Software complexity requires the use of one Motorola DSP-56001 processor per channel, running at 34MHz. These processors

## KRELL ANALOG TECHNOLOGY

Output from the high resolution DACs is direct-coupled to the analog output stages. In fact, the entire signal path of the STUDIO is direct-coupled: there are no capacitors in the signal path. Ultra-fast servo amplifiers insure against DC at the main outputs. Output amplifiers are classic Krell high bias, complimentary, Class A designs, similar to those in our finest preamplifiers.

## THE KRELL SONIC SIGNATURE

Krell has an established reputation for dramatic dynamic presentation and robust low frequency performance. The

STUDIO builds on this foundation with a warm and fluid mid-range that does not come at the expense of accuracy. High frequencies are never harsh or strident. They have a natural grace — a glistening, life-like quality. Image presentation is exceptionally three dimensional, with the most subtle spatial energy suddenly revealed.

The effort required to develop the STUDIO was formidable. Defining the goal was less difficult: that the STUDIO present a new dimension in digital-to-analog processors; that its sonic quality, technical innovation,

and construction technique be unparalleled in its product class. In all the above, the STUDIO delivers. It will, in the Krell tradition, provide a lifetime of consistent excellence.

