



## Studio 2 Digital-to-Analog Processor





**S**ince entering the digital processor market in 1989, Krell has established a position as the industry leader in original engineering. Software based processing, jitter rejection circuitry and innovative digital-to-analog conversion techniques have all been designed in house, without use of common, off-the-shelf processing components. The Studio 2 continues this tradition of original engineering. Designed with distilled versions of our most advanced technologies, it delivers a performance previously available only in components many times its cost.

#### SPECIFICATIONS

##### Input Connections

- 2 Coaxial via RCA connector
- 1 Fibre Optic in AT&T format
- 1 Fibre Optic in Toshiba format
- 1 balanced in AES/EBU format via XLR connector

##### Performance

**Frequency Response:**  $-25\text{dB}$  @  $8\text{Hz}$  &  $20\text{KHz}$

**Signal to Noise:**  $-94\text{dB}$

##### Channel Separation:

- $-115\text{dB}$  @  $125\text{Hz}$
- $-118\text{dB}$  @  $1\text{KHz}$
- $-114\text{dB}$  @  $4\text{KHz}$
- $-111\text{dB}$  @  $10\text{KHz}$
- $-109\text{dB}$  @  $16\text{KHz}$

**THD + N:**  $.0025\%$

**Noise Floor:**  $-102\text{dB}$  "A" weighted

**Linearity:**  $\pm .3\text{dB}$  @  $-90\text{dB}$

##### Dimensions

19"W x 12"D x 2.2"H

##### Warranty

Five years parts and labor

Krell Digital Inc. reserves the right to change the features, specifications and price of this product without notice.

#### INNOVATIVE INPUT TECHNOLOGY

The Studio 2 uses the Data Recovery/Jitter Rejection technology developed for our Reference 64 and Studio processors. Typical decoding circuits add jitter, or timing errors, to the incoming data, resulting in an audible loss of sonic quality. With the Krell system jitter is virtually unmeasurable, and all related clock rates are perfectly coordinated.

#### SOFTWARE BASED PROCESSING AND DACS

The processing stage in the conversion from digital-to-analog establishes the degree of detail and resolution in the reconstructed analog signal. It is where



Separate power supplies are provided for the analog and digital circuitry. Digital circuitry is in the center of the unit with the analog stages at far right.



All standard input and output connections are provided: Coax, AT&T/ST, Tosh, and AES/EBU digital inputs; balanced and singled-ended analog outputs.

the input data is interpreted and output data for the digital-to-analog converter (DAC) stage are generated. Krell is one of very few companies writing its own software. The vast majority use mass produced processing stages and surround them with different cosmetics and

features. This method is cost-effective, fixed in performance and not upgradeable.

The Studio 2 uses one Motorola DSP-56001 processor operating at 34MHz to process data. Software to control the processor is a version of that written for our more expensive products. This advanced software allows processing of both channels with 16 times oversampling, insuring that every subtle recorded nuance is reproduced intact. Further, every effort has been made to eliminate loss of detail caused by mathematical rounding errors. The software is stored in easily changed socketed EEPROM chips to allow for future upgrades.

The processor section output is fed to one 18 bit DAC per channel. These DACs are sorted prior to installation and trimmed before initial burn-in and during final testing at operating temperature. The DACs operate in conjunction with the processor stage to generate an extremely refined and detailed reproduction of the original musical program.

#### CLASSIC KRELL ANALOG

The analog output section following the DACs is a classic high bias, Class A, direct coupled, complementary design. These output amplifiers provide the final component in assembling the expansive sonic presentation of the Studio 2. With a sonic quality firmly in the Krell tradition, the Studio 2 will illuminate your recordings anew, revealing unheard layers of detail, depth and impact of bass, and a lush tonal character best described as seductive. Install the Studio 2 in your system and experience, perhaps for the first time, true high end digital audio performance.



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