pure and simple

TRUE

TRUE systems

P2*analog*

2-CHANNEL MICROPHONE PREAMPLIFIER

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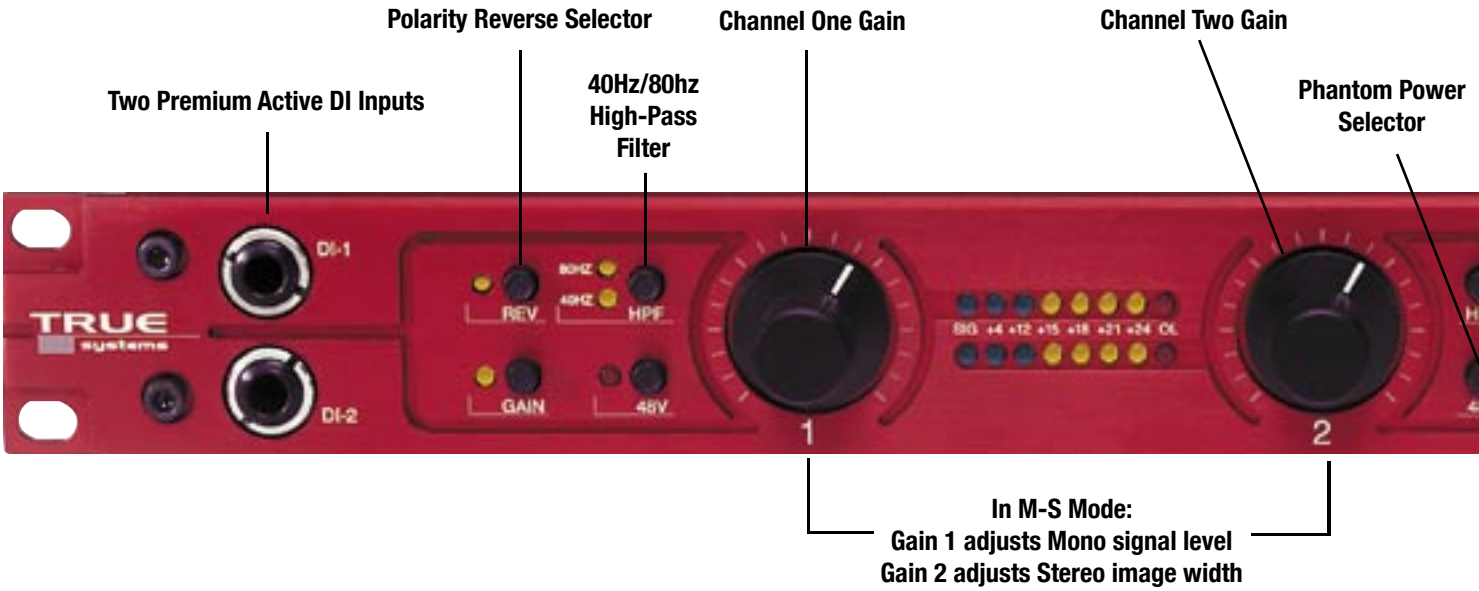


Applications:

The P2analog is designed to provide detailed, transparent sonic performance necessary for the most critical direct tracking and live sound applications. It includes a unique combination of functions that make it useful as a complete input system for standalone or PC-based recording systems. And, the P2analog has special features that provide the serious musician or recordist with useful tools to get the best sound more quickly and easily.

In addition to our acclaimed microphone inputs, the P2analog features two instrument direct inputs (DIs) offering sonic performance previously thought to be available only with dedicated, high-end DIs. You'll get incredible articulation and control for electric bass, detail and smoothness for stringed instruments and punchy, clean sound with keyboards.

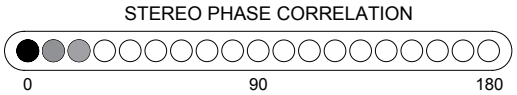
Even with today's emphasis on powerful digital audio platforms and software plug-ins to perform signal-processing tasks, the issue of microphone placement remains a critical variable in determining the quality of your final sonic product. The P2analog incorporates powerful features that assist you in achieving optimum microphone placement for nearly any stereo recording situation. One of these features is a selectable M-S (mid-side) decoder which provides creative spatial control that is useful in attaining an exciting stereo image with minimum effort and microphone repositioning.

The M-S microphone technique can be employed effectively in a wide variety of circumstances, from classical ensemble, to drum kit overheads, to solo vocal or instrument – whenever accurate capture of the performance and its acoustical space is desired. M-S technique also eliminates the "hole-in-the-middle" effect.

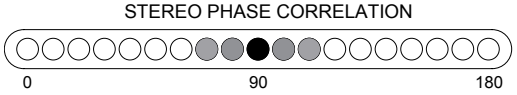
Gain Range Selector
3.5 to 52dB or 15.5 to 64dB

M-S (MID-SIDE) Mode Selector

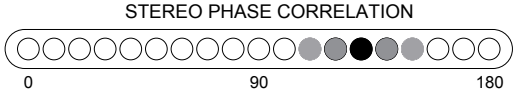
Stereo Phase Correlation Display Selector



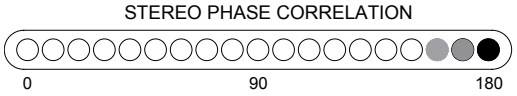
Output signals are essentially MONO



Typical STEREO display



Excessive PHASE ERRORS
(Adjust microphones)



PHASE REVERSAL
(Reverse polarity on one microphone)

And, whether using M-S, X-Y or other stereo mic techniques, our Stereo Phase Correlation Display can assist in positioning the microphones for a rich stereo image. The Stereo Phase Correlation circuit "listens" to the two preamp outputs in the frequency range where human hearing is most sensitive to audio phase information. It analyzes the phase information and displays the following conditions:

- Output signals are essentially mono
- Output signals exhibit phase information that indicates a good stereo image
- Output contains too much out-of-phase information, producing tonal variance or mudiness (Adjust the microphone positions)
- Outputs are completely out-of-phase. (Select the "180°" polarity reverse on one channel)

The Stereo Phase Correlation Display is also useful when placing two mics on an instrument (for instance, acoustic guitar) to achieve a particular tonal effect. The Display will show any phase errors that produce a comb-filtering effect, allowing you to interactively adjust the microphone position for optimum sound.

After the performer and the microphone, the mic preamp has the most influence on your final sound quality. The P2analog is designed to be one of the most flexible, best-sounding preamps available—at any price.

P2analog

Design and Specifications:

P2analog features a high-voltage composite architecture with discrete devices plus integrated circuits. The totally balanced, dual servo, dc-coupled design provides exceptional transient response, head room, imaging and noise performance. Military grade, hand-matched components are utilized in critical circuit areas. All signal switching is done via hi-reliability gold-contact relays in order to maintain an extremely short signal path. These design features result in the transparent, detailed sound quality for which TRUE preamps have become known.

***Features*:**

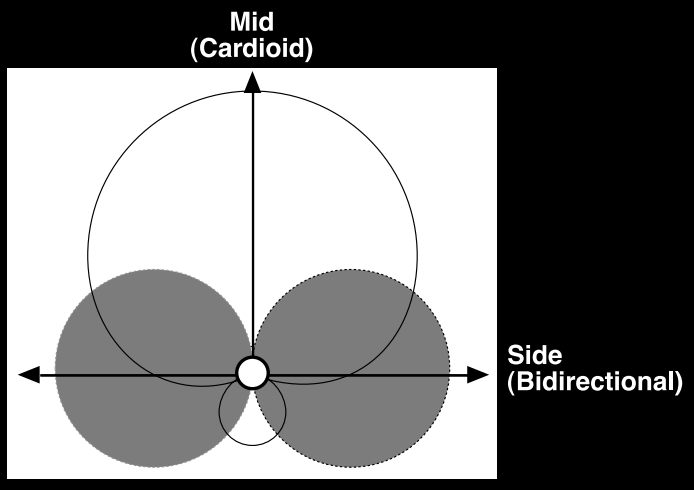
- Ultimate sonic performance for critical recording and sound reinforcement
- Two active high-impedance DIs – comparable to high-end dedicated DIs
- M-S (Mid-Side) Decoder for creative spacial image control
- Stereo Phase Correlation Display speeds effective mic positioning
- Selectable high-pass filters
- Relay-switched signal routing
- Dual gain range
- Solid construction—with striking, machined front panel

Gain, preamp: **DI:**	**3.5 to 52dB and 15.5 to 64dB (dual range)** **-16 to 32dB and –4 to 44dB**
Frequency Response:	**1.5 Hz to 500kHz (-3dB) (gain=40dB)**
Maximum Output Level:	**+31 dBu (+27 dBu in low gain mode)**
Maximum Input Level:	**+15 dBu (+25 dBu in low gain mode)**
Noise (Rs=0 Ohms):	**-132 dB e.i.n.**
Slew Rate:	**>40 V/uS**
CMRR (CMV= +10 dBu):	**85 dB**
THD (preamp) (+26dBu, 100kOhm)	**.0008%**
Input Impedance, preamp: **DI:**	**5.5 kOhm** **2.5 Mohm**

Typical performance. Specifications subject to change without notice.

...more about M-S Decoding

the M-S (Mid-Slide) stereo microphone technique involves the use of a center, forward-facing omni or cardioid mic (Mid) and a side-facing bidirectional mic (Side). The signals from these two mics are passed through decoding circiutry which combines them in a sum and difference arrangment to produce a stereo L and R output. Originally, M-S was used because it provided a stereo signal with good mono capability. While this is not as important today, there is another significant benefit: varying the gain of the Side mic in relation to the Mid mic causes variation in the stereo image—from mono, to extreme separation. It is not necessary to change the angle or position of the microphones in order to change the stereo width. And, in many cases, there is an improvement in the general sonic quality of the recorded sound when compared to X-Y technique, due to the fact that the Mid facing mic in M-S is directly on axis to the sound source.



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