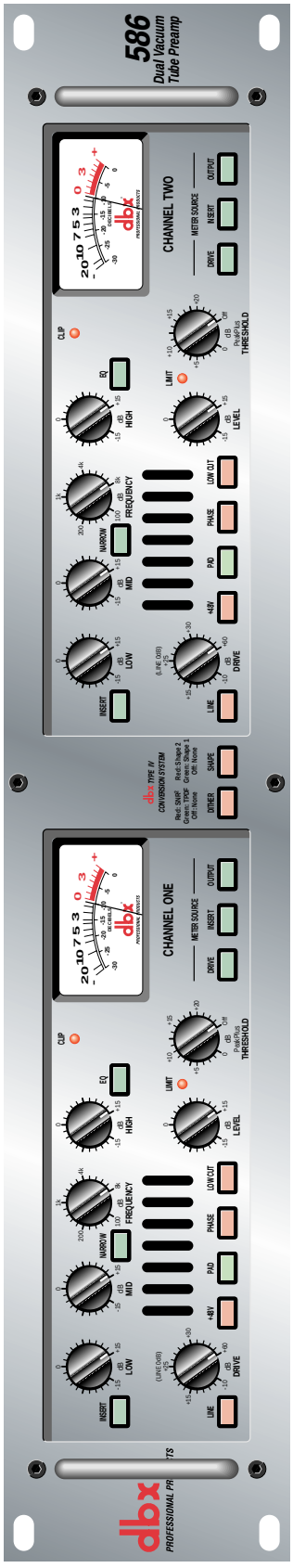
586 DUAL VACUUM TUBE PREAMP

dbx PROFESSIONAL PRODUCTS



VISIONARY DESIGN

Mic preamps have long been a part of dbx's reputation as the leader in signal processing technology. In keeping with that proven tradition, dbx proudly enters the vacuum tube domain with the 586 Dual Vacuum Tube Preamp. The 586 is loaded with all the standard features you'd expect to find in a mic preamp including custom designed analog VU meters that monitor tube level, insert path or output levels, +48V Phantom Power, 20dB pad, phase invert, and low cut filter. Line/Instrument and mic inputs make the 586 versatile enough to use with virtually *any* source device. Add to this comprehensive list of standard features extras like a three band EQ with sweepable mids and selectable mid Q (with EQ hardwire bypass), available insert loop, and the new PeakPlus™ limiting topology and you have the latest in a long line of dbx achievements.

REVOLUTIONARY ENGINEERING

All this would be enough, but our customers have come to expect more from us than just "enough", and we deliver the goods with the 586. Hand selected and matched premium 12AU7 vacuum tubes ensure the ideal triode gain matching, distortion, microphonics and drive characteristics. What does all that mean? It means you get the best tube sound with the most versatility available today. Have you ever wanted to go directly from the wonderfully warm sound of tube processing to the digital domain without loosing that great sound? Well, now you can. With the optional dbx TYPE IV™ Conversion System output, you can capture the essence of tube processing directly into the digital world, without leaving the box. The digital output offers the ability to communicate in either AES/EBU or S/PDIF at up to 16 or 20bit word lengths. In addition, TYPE IV™ offers the ability to select Noise shape algorithms and dither types that best suit your music and your medium. Never before has so much flexibility been offered to digital users. The 586 has all the rear panel versatility and connectivity that make it easy to setup and patch into any system. No custom cables or adapters. Gold plated Neutrik® connectors for the audio ins and outs ensure solid connections and pristine sound every time. Separate 1/4" connectors for the insert sends and returns, as well as +4/-10 operating level switching make it a snap.

FEATURES

- *Hand selected and matched Premium 12AU7 vacuum tubes in path*
- *Mic or line/instrument inputs on each channel. +4/-10 operation*
- *Drive control for a wide variety of great tube effects*
- *PeakPlus™ limiting control*
- *3-Band EQ with sweepable frequency, wide / narrow Q and hardwire bypass*
- *Optional TYPE IV™ Conversion System outputs*
- *Separate 1/4" insert sends and returns on each channel*
- *Custom designed analog VU meters monitor tube drive, insert, or output levels*

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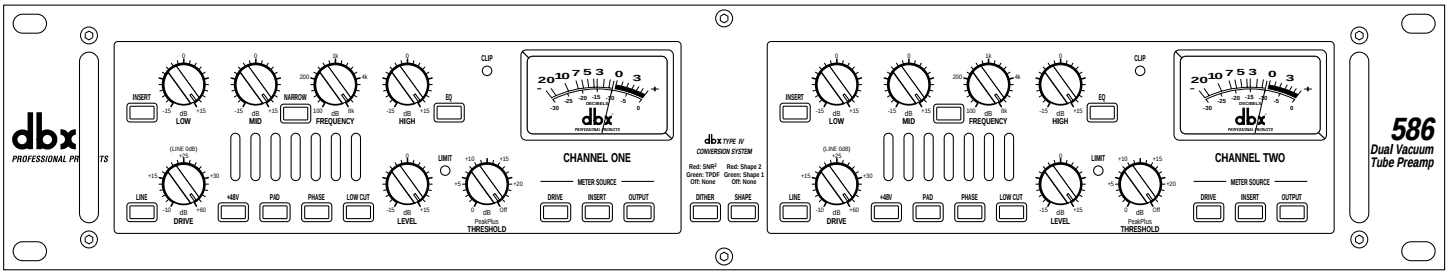

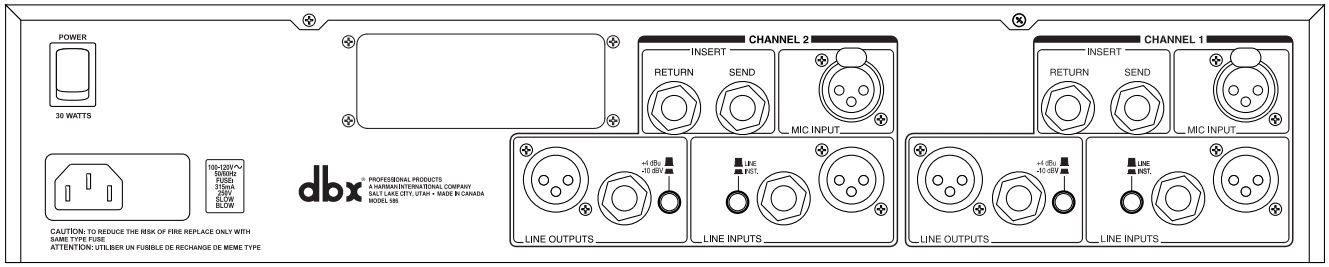

SPECIFICATIONS

MICROPHONE INPUTS

Connectors:	Female XLR Pin 2 hot
Type:	Electronically balanced/unbalanced
Impedance:	1.70 kΩ
Optimum Microphone Impedance:	150 - 200 Ω
Maximum Input Level:	> +13 dBu, or +33 dBu with 20 dB pad engaged
CMRR:	> 115 dB at 60 Hz, > 110 dB at 1 kHz, > 75dB at 10 kHz

LINE INPUTS

Connectors:	Female XLR Pin 2 hot and TRS 1/4"
Type:	Electronically balanced/unbalanced
Impedance:	20.1 kΩ nominal, or 470 kΩ with rear-panel INST switch engaged
Maximum Input Level:	> +30 dBu, or +22 dBu with rear-panel INST switch engaged

OUTPUTS

Connectors:	Male XLR Pin 2 hot and TRS 1/4"
Type:	Servo-balanced/unbalanced, RF filtered
Impedance:	Balanced 120Ω, unbalanced 60Ω
Maximum Output Level:	+21.5 dBu, balanced or unbalanced

INSERT

Connectors:	TRS 1/4"
Type:	Impedance balanced/unbalanced (SEND), electronically balanced/unbalanced (RETURN)
Impedance:	100Ω bal./50Ω unbal. (SEND), 20kΩ (RETURN)
Nominal Send Level:	+4 dBu
Nominal Return Level:	+4 dBu

SYSTEM PERFORMANCE

DRIVE Control Range:	+10 dB to +60 dB
LEVEL Control Range:	-15 dB to +15 dB
0.5 dB Bandwidth:	15 Hz to > 90 kHz +0/-0.5 dB
Frequency Response:	<10 Hz to >200 kHz +0/-3.0 dB
EIN:	Typically -126 dBu, 150Ω source impedance, unweighted, 20 Hz to 20 kHz measurement bandwidth
THD + Noise:	0.04% typical at +0 dBu out, 1kHz, 33 dB gain 3.5% typical at +21 dBu out, 1kHz, 35 dB gain
Deviation From Linear Phase:	< 20 degrees, 20 Hz to 20 kHz.
Interchannel Crosstalk:	Typically -98 dB, 20 Hz to 20 kHz.

EQUALIZER

LOW Frequency:	80 Hz, shelving filter
HIGH Frequency:	12 kHz, shelving filter
MID Frequency:	Sweepable from 100 Hz to 8 kHz, bandwidth 1.5 octaves (WIDE) or 0.5 octaves (NARROW)
Gain (all bands):	Sweepable from -15 to +15 dB.

PeakPlus LIMITER

Type:	Two-stage proprietary
Threshold Range:	0 dBu to + 22 dBu (off)

FUNCTION SWITCHES

INSERT:	Inserts a device connected to the rear-panel Return jack into the signal path.
NARROW:	Selects narrow (0.5 octave) bandwidth for the MID frequency control
EQ:	Enables the equalizer section
LINE:	Selects the Line inputs
+48V:	Enables the 48V phantom power for the Microphone input
PAD:	Attenuates the input signal by 20 dB.
PHASE:	Reverses pins 2 and 3 of the input XLR connector.
LO CUT:	Enables the 75 Hz, 12 dB/octave low cut filter

METER SOURCE SWITCHES

DRIVE:	Monitors the signal level at the input to the vacuum tube
INSERT:	Monitors the signal level at the Insert Return jack
OUTPUT:	Monitors the output signal level

DIGITAL OUTPUT OPTION SWITCHES

(Note: The digital output option switches are enabled only when the optional dbx TYPE IV is installed in the unit.)

DITHER:	Selects between Dither algorithms
SHAPE:	Selects between Noise Shape algorithms

REAR PANEL SWITCHES

INST:	Switches the gain and impedance of the Line Inputs to allow for connection of unbalanced devices with passive instrument pick-ups
+4 dBu/-10 dBV:	Switches the nominal output level between +4 dBu and -10 dBV

INDICATORS

CLIP	Red LED to indicate when the internal signal level is within 3 dB of actual waveform clipping; sense points are at all critical stages of the circuit
LIMIT:	Red LED to indicated when the PeakPlus limiter is active

OPTIONS

Digital output module:	Contact dbx for further details.

POWER SUPPLY

Operating Voltage:	100V, 120V, or 220-240VAC 50/60 Hz.
Power Consumption:	30 Watts maximum.
Fuse:	100V: 315mA 250V Slow Blow 5mm X 20mm 120V: 315mA 250V Slow Blow 5mm X 20mm 220-240V: T160 mA 250V 5mm X 20mm
Mains Connection:	IEC 320 Receptacle

PHYSICAL

Dimensions:	3.5" H X 19" W X 8" D
Weight:	12 lbs (5.5 kg)
Shipping Weight:	13 lbs (5.9 kg)

Note: 0 dBu = 0.775V RMS.

dbx engineers are constantly working to improve the quality of our products.
Specifications are, therefore subject to change without notice.

FOR MORE INFORMATION CONTACT:
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