



***PROFESSIONAL PRODUCTS***

***586***

***Vacuum Tube  
Preamplifier***

***Owner's Manual***



**ATTENTION:** RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrow-point in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

**WARNING**

**FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:**

**WATER AND MOISTURE:** Appliance should not be used near water (e.g. near a bathtub, wash-bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

**POWER SOURCES:** The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**GROUNDING OR POLARIZATION:** Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

**POWER CORD PROTECTION:** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**SERVICING:** To reduce the risk of fire or electric shock, the user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

**FOR UNITS EQUIPPED WITH EXTERNALLY ACCESSIBLE FUSE RECEPTACLE:** Replace fuse with same type and rating only.

**MULTIPLE-INPUT VOLTAGE:** This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. Connect this equipment only to the power source indicated on the equipment rear panel. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel or equivalent.

**U.K. MAINS PLUG WARNING**

A moulded mains plug that has been cut off from the cord is unsafe. Discard the mains plug at a suitable disposal facility. **NEVER UNDER ANY CIRCUMSTANCES SHOULD YOU INSERT A DAMAGED OR CUT MAINS PLUG INTO A 13 AMP POWER SOCKET.** Do not use the mains plug without the fuse cover in place. Replacement fuse covers can be obtained from your local retailer. Replacement fuses are 13 amps and **MUST** be ASTA approved to BS1362.

**ELECTROMAGNETIC COMPATIBILITY**

This unit conforms to the Product Specifications noted on the **Declaration of Conformity**. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Operation of this unit within significant electromagnetic fields should be avoided.

- use only shielded interconnecting cables.

**SAFETY INSTRUCTIONS**

**NOTICE FOR CUSTOMERS IF YOUR UNIT IS EQUIPPED WITH A POWER CORD.**

**WARNING: THIS APPLIANCE MUST BE EARTHED.**

The cores in the mains lead are coloured in accordance with the following code:

GREEN and YELLOW - Earth    BLUE - Neutral    BROWN - Live

As colours of the cores in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or coloured green, or green and yellow.
- The core which is coloured blue must be connected to the terminal marked N or coloured black.
- The core which is coloured brown must be connected to the terminal marked L or coloured red.

CONDUCTOR		WIRE COLOR	
		Normal	Alt
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN/YEL	GREEN

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table above. The green/yellow wire shall be connected directly to the unit's chassis.

**WARNING:** If the ground is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously.

**DECLARATION OF CONFORMITY**

Manufacturer's Name: dbx Professional Products  
 Manufacturer's Address: 8760 S. Sandy Parkway  
 Sandy, Utah 84070, USA

declares that the product:

dbx 586

conforms to the following Product Specifications:

Safety: EN 60065 (1993)  
 IEC65 (1985) with Amendments 1, 2, 3

EMC: EN 55013 (1990)  
 EN 55020 (1991)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC as amended by Directive 93/68/EEC.

dbx Professional Products  
 Vice-President of Engineering  
 8760 S. Sandy Parkway  
 Sandy, Utah 84070, USA  
 February 16, 1998

European Contact: Your Local dbx Sales and Service Office or

International Sales Office  
 68 Sheila Lane  
 Valparaiso, Indiana  
 46383, USA  
 Tel: (219) 462-0938  
 Fax: (219) 462-4596



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## *Introduction*

Thank you for purchasing the dbx 586 vacuum tube preamplifier. This product was developed to help you improve the sound of your digital and analog recordings, and live performances. The dbx 586 offers a better alternative to using the average quality microphone preamps found in the typical multi-input console. For economic reasons, these console preamps are typically of lower quality than a single, dedicated unit. You can use the dbx 586 to get your basic tracks sounding great and then you can run the finished mix through it for final “tube” treatment and equalization. The dbx 586’s preamplifier circuit is a hybrid design consisting of a high-voltage class A vacuum tube amplification stage, coupled with an ultra low noise, low distortion solid-state driver stage.

The vacuum tube amplification stage is a classic, high plate-voltage design utilizing a pure class A topology. A parallel-triode arrangement is employed, in addition to a fully-regulated plate supply to maximize noise performance and transient response. The premium-grade 12AU7 vacuum tubes used in the dbx 586 are hand tested and graded specifically for gain, noise, and microphonics. Precision 1% resistors are used throughout the audio path to ensure performance stability and low noise. To ensure years of trouble-free operation, each dbx 586 must pass a rigorous set of performance tests and a 24-hour burn-in period before it is shipped from the factory.

We recommend that you take a moment to read through this operation manual. It provides valuable information that will assist you in setting up and operating your dbx 586.

## *Features*

- Low noise, pure Class A vacuum tube preamplifier stage
- Single vacuum tube per channel with adjustable Drive and Level controls
- Three band semi-parametric equalization with switchable mid-frequency bandwidth and hardware EQ bypass switch
- 75 Hz low cut filter with 12 dB/octave slope
- Ready for optional dbx TYPE IV™ Conversion System digital output module
- XLR and TRS 1/4” balanced inputs and outputs
- Pre EQ insert loop
- Multi-source VU metering and Peak indication
- Switchable 48 Volt phantom power, phase invert, 20 dB gain pad, low-cut filter and input select



## *Inspection*

Verify that the 586's package contains the following:

- 586 Unit (according to Model number marked on package)
- AC Power Cord
- Operation Manual
- Registration Card
- Rack screws

If any of these items are missing, contact dbx customer service at (801) 568-7660.

## *Warranty*

This warranty is valid only for the original purchaser and only in the United States. We warrant dbx products against defects in materials or workmanship for a period of two years from the date of original purchase for use, and agree to repair or, at our option, replace any defective item, except external power transformers, without charge for either parts or labor.

**IMPORTANT:** This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, the affixing of an attachment not provided with the product, loss of parts, or connecting the product to any but the specified receptacles. This warranty is void unless service or repairs are performed by an authorized service center. No responsibility is assumed for any special, incidental or consequential damages. However, the limitation of any right or remedy shall not be effective where such is prohibited or restricted by law.

Simply take or ship your dbx product prepaid to our service department. Be sure to include your sales slip as proof of purchase date. (We will not repair transit damage under the no-charge terms of this warranty.) dbx will pay return shipping.

**NOTE:** No other warranty, written or oral is authorized for dbx products.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion of limitations of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusion and limitations may not apply to you.

## *Background*

When you use a microphone to record vocals and acoustic instruments, make recordings to DAT, or sample acoustic sounds, you want the best definition and character possible from your microphone. Sometimes the electronics of recording or PA consoles “color” the sound of a microphone in a curiously unpleasant fashion, or add noise to the signal. In the 1960s, it became popular to use an outboard mic pre-amp rather than using the one usually installed on a console. Engineers and technicians took the preamps out of famous vintage consoles and installed them in “lunch boxes”, or cases with a power supply and audio connectors. This was done to bring the benefits of the characteristic sound to another recording or PA console.

In years since, the business of designing stand-alone preamps has grown significantly, as the quality and space dedicated to “stock” preamps installed in most middle-cost consoles has declined, usually consisting of only one op-amp and some supporting transistors. During this period of years’ worth of development, it has been proven that better performance is inherent in designs that incorporate larger circuit boards dedicated to the mic pre, resulting in better frequency and dynamic range, as well as better noise specs. The 586 is the perfect partner for your microphone, providing you with two channels of exceptional quality microphone preamplification with enough available gain to reveal the detail and audio signature of even the most esoteric studio mics. It transforms their low level output signal to a clean high current output for direct connection to the line level inputs of your mixer, DAT machine, sampler, or any other recording medium that accepts line level, analog input.

Another benefit of the dbx 586 is its high Common Mode Rejection Ratio (CMRR) with its inherent ability to reject hum and Radio Frequency (RF) interference. With the published frequency range of 200kHz at +0/-3dB, as well as a specially designed hard wire bypassable EQ circuit, the 586 is equal to any challenge.

With the optional digital output featuring dbx TYPE IV™ Conversion System with TSE™ (Tape Saturation Emulation), a signal may be amplified and converted to the digital domain, ready for use in any other digital medium. This allows the user to choose a mic for any application with the knowledge that the qualities of that mic will be preserved through the amplification and/or conversion process.



## *Connecting the 586 to Your System*

To connect the 586 to your system, refer to the following steps:

- Turn off all equipment before making any connections.
- If desired, install the 586 in your rack with the rack screws provided.

The 586 can be mounted above or below anything that does not generate excessive heat. Ambient temperatures should not exceed 113°F (45°C) when equipment is in use. Although the unit is shielded against radio frequency and electromagnetic interference, extremely high fields of RF and EMI should be avoided where possible.

- Make audio connections via XLR, 1/4"TRS, or 1/4"TS plugs.

Both types of connectors for the inputs and outputs can be used for balanced or unbalanced connections. However, the use of more than one connector at a time for the input pair could unbalance balanced lines, cause phase cancellations, short a conductor to ground, or cause damage to other equipment connected to the 586.

- Verify that the fuse installed in the pull-out fuse holder of the fuse receptacle matches the type and rating corresponding to the voltage in use as indicated on the rear panel of the 586.
- Apply power to the 586. Connect the AC power cord to the AC power receptacle on the back of the unit. Route the AC power cord to a convenient power outlet away from audio lines. The unit may be turned on and off from the rear panel power switch or from a master equipment power switch.

### Connecting a mic to a console.

1. Connect your mic cable to the Mic input of the 586 (See Figure 1, next page).

**NOTE:** If you are using a mic with a separate power supply, such as a tube microphone, make sure that you are not sending 2 sources of +48V phantom power to the mic. Use the +48V from the mic's power supply. Use the +48V Phantom Power switch on the 586 for all other microphones which require phantom power.

2. Set the front panel of the 586 to the desired settings, including phantom power, pad, phase, etc. Connect the Line Output of the 586 to the console's LINE INPUT, and ensure that the console's input selection switch is set to LINE, and the console's gain control is set appropriately low. Set the rear panel switch on the 586.

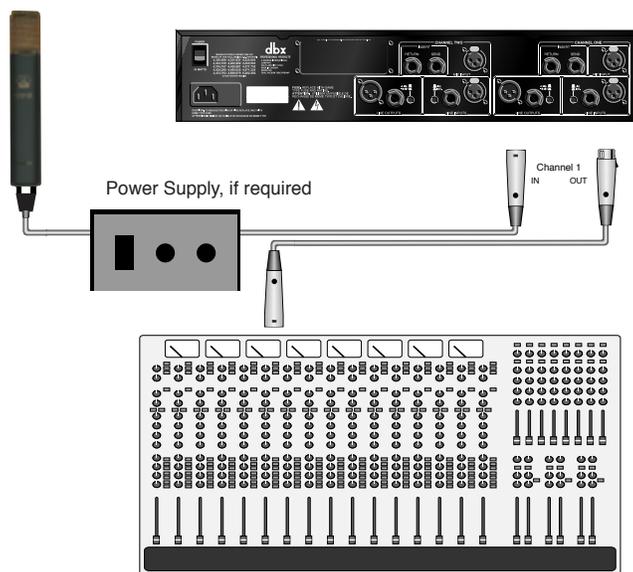


Figure 1: Connecting a Mic to a console.

3. Turn the 586's Drive control to the minimum (+10 dB) position, the Level control to the 12 o'clock (0 dB) position, and apply power to the 586. Make sure your console's gain slider is at approximately nominal level ("0 dB") and begin to slowly increase the gain of the 586 using the Drive control. You should increase the gain until the recording device is operating at nominal signal input level. Experiment with the Drive and Level controls to achieve the level of desired tube saturation, i.e., low settings of the Drive control in conjunction with higher settings of the Level control will result in minimal amounts of tube character; higher settings of the Drive control in conjunction with lower settings of the Level control will result in more audible tube saturation.

### Connecting the 586 directly to a recorder (see Figure 2, next page).

1. Make microphone connections, being careful to keep the Drive control in the minimum (+10 dB) position.
2. Connect the 586's Line Outputs directly to the audio inputs of your recorder. This will require the disconnection of the console's audio output to the specific track of the recorder.
3. Enable the record function of the specific track of the recorder and open the specific tape track return in the console which corresponds to the track to which the 586 is connected. As you increase the setting of the Drive control, you should begin to hear the input of the 586 running through the recorder and returning to your console as a tape return.

NOTE: When recording in this way, the dbx PeakPlus™ limiter can be used to ensure that the level going to tape does not exceed the level set by the limiter's Threshold control. This is especially useful for recording to a DAT or digital multitrack recorder where exceeding 0dB FS on the recorder can cause catastrophic distortion. Simply set the 586's limiter Threshold control such that 0dB FS is never allowed to be exceeded on the recording device.

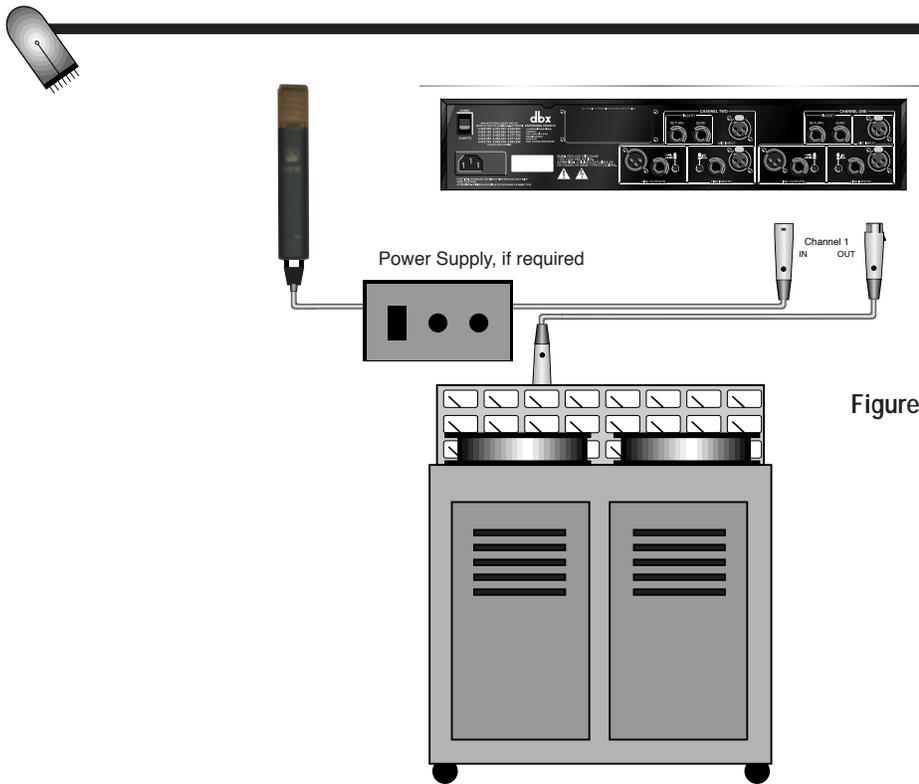
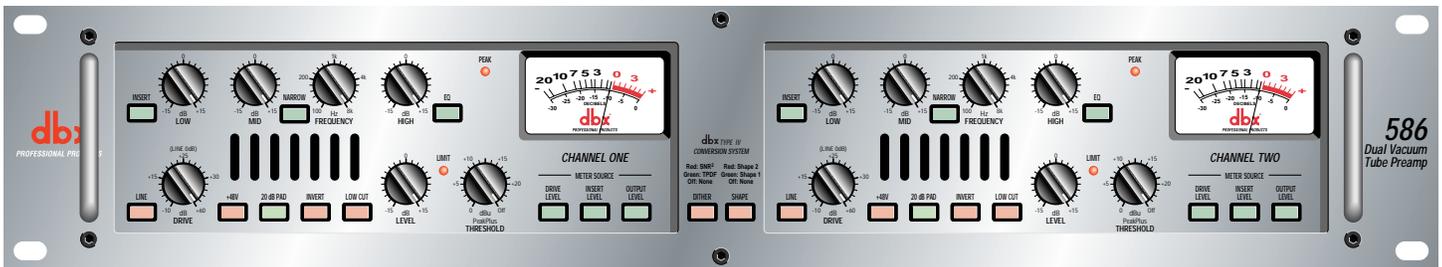


Figure 2: Connecting the 586 to a recorder

## Operating Controls

### FRONT PANEL



#### INSERT switch

This switch enables the rear-panel insert loop by inserting any device connected to the Send and Return jacks into the signal path. The insertion point is post-tube, pre-EQ.

#### LOW control

This control varies the gain of the low frequency equalization; the gain range is -15 to +15 dB. The low frequency filter is a shelving lowpass configuration with a knee frequency of 80 Hz.

#### MID control

This control varies the gain of the mid frequency equalization; the gain range is -15 to +15 dB. The mid frequency filter is a bandpass configuration with variable frequency and switchable bandwidth.

#### NARROW switch

This switch selects the bandwidth for the mid frequency filter. The default bandwidth is 1.5 octaves; with the NARROW switch depressed, the bandwidth is 0.5 octaves.

**FREQUENCY control**

This control selects the center frequency for the mid frequency filter. The frequency range is 100 Hz to 8 kHz.

**HIGH control**

This control varies the gain of the high frequency equalization; the gain range is -15 to +15 dB. The high frequency filter is a shelving highpass configuration with a knee frequency of 12 kHz.

**EQ switch**

This switch enables the equalizer. When the equalizer is disabled, the circuit is hardwire bypassed.

**PEAK LED**

This red LED illuminates when, at any point, the 586's internal signal level is within 3 dB of clipping. The signal level is monitored at all critical stages of the circuit

**LINE switch**

This switch, when lighted, selects the rear-panel line inputs as the source signal to the 586.

**DRIVE control**

This control sets the amount of gain that will be applied at the input of the vacuum tube stage. The range of gain available is +10 to +60 dB. The DRIVE control works in conjunction with the LEVEL control to determine the degree of tube saturation to be applied to the signal. For minimal tube saturation (cleanest possible sound), use relatively low settings of the DRIVE control and higher settings of the LEVEL control. Moderate amounts of tube character can be achieved with moderate settings of the DRIVE and LEVEL controls; if a high degree of tube saturation is desired, this result can be obtained by using higher settings of the DRIVE control in conjunction with lower settings of the LEVEL control. Experiment with different settings of the DRIVE and LEVEL controls to find the amount of tube saturation that is right for you.

**+48V switch**

This switch activates phantom power for condenser microphones on pins 2 and 3 of the XLR mic input. You should connect your microphone before turning on the phantom power to prevent high voltage arcing that may damage your mic.

**20dB PAD switch**

This switch inserts a 20 dB attenuator circuit into the signal path from the microphone input. The pad is inserted before the signal is routed through the mic pre gain stage. Use the 20 dB Pad to attenuate signals from "hot" sources such as high-output microphones.

**INVERT switch**

This switch inverts the phase of the incoming signal at the Mic input by swapping pins 2 and 3 on the XLR connector.



### LOW CUT switch

This switch places a 12 dB per octave shelving high pass filter in the signal path. The knee frequency of the Low Cut filter is 75 Hz. This filter is very useful for removing low frequency rumble or handling noise from a microphone input signal. It is also good for reducing the very low frequency components of signals that can damage speakers or sap amplifier power unnecessarily.

### LEVEL control

This control determines the output level of the 586. It is also used in conjunction with the DRIVE control to set the desired amount of tube saturation. (See description of DRIVE control above.)

### LIMIT LED

This LED illuminates when the PeakPlus™ limiter is active.

### PeakPlus™ THRESHOLD control

This control sets the threshold level at which the PeakPlus™ limiter circuit becomes active. The threshold range is from 0 dBu to +22 dBu (off).

### VU meter and METER SOURCE switches

The VU meter displays signal levels in accordance with the METER SOURCE switch settings as shown:

#### METER SOURCE switch setting

Selection:                      What is displayed:

DRIVE LEVEL	displays the signal level at the input to the vacuum tube
INSERT LEVEL	If INSERT is disabled, displays the signal level at the Insert Send jack If INSERT is enabled, displays the signal level at the Insert Return jack
OUTPUT LEVEL	displays the signal level at the output

NOTE: When the OUTPUT LEVEL meter source switch is selected, 0 VU corresponds to an output level of +4 dBu (providing the rear-panel +4 dBu/-10 dBV switch is in the +4 dBu position). When the rear-panel +4 dBu/-10 dBV switch is in the -10 dBV position, 0 VU corresponds to an output level of -10 dBV.

### DITHER switch

This switch becomes active only when the optional dbx TYPE IV™ Conversion System digital output module is installed. Refer to the manual for the TYPE IV™ Conversion System for a description of the function of this switch.

### SHAPE switch

This switch becomes active only when the optional dbx TYPE IV™ Conversion System output module is installed. Refer to the manual for the TYPE IV™ Conversion System module for a description of the function of this switch.

## Rear Panel



## WIRING SCHEME

All of the input and output connectors are “pin 2 hot” meaning that pin number 2 on the XLR connecting cables carries the positive side of the balanced signal. Pin number 3 is “cold”, carrying the negative polarity and pin 1 is the shield. The 1/4”TRS jacks are wired so that when you use 3 conductor cables and balanced signals, the tip is hot, the ring is cold and the sleeve is the shield. The 1/4” jacks can also be used with 2 conductor unbalanced cables. In this case, the tip is hot and the ring and sleeve are grounded.

## MIC INPUT

Connect the cable from your microphone here. If your mic requires phantom power, ensure that the phantom power switch on the front panel is turned off before connecting your mic.

## LINE INPUTS

Both XLR and TRS 1/4” connectors are provided and either balanced or unbalanced line-level devices may be connected to the 586. These inputs can also be used for instrument-level devices, depending on the status of the LINE/INST. switch (described below).

## LINE/INST. switch

To connect instrument-level devices to the 586, use either the 1/4” or XLR Line Input connector and depress the LINE/INST. switch. Doing so will increase the input impedance and the gain applied to these inputs to make them suitable for devices using passive or piezoelectric pickups. The INST. setting also reconfigures the Line Inputs as strictly unbalanced, pin 2 (tip) hot, pins 1 and 3 (sleeve and ring) grounded.

## INSERT LOOP

These connectors allow you to insert another processor such as a compressor or de-esser into the signal path. You would insert your processor into this loop to place it in the path leading to the equalizer of the dbx 586. Both the SEND and RETURN are balanced TRS jacks with +4 dBU nominal sensitivity.

## SEND

The audio signal produced at the SEND output is taken from a point in the circuit after the dbx 586’s tube stages. You can run a cable from this jack to the input of your external processor. Inserting a jack here will not interrupt the audio output. This is to allow the SEND to be used as direct post-preamp output that bypasses the main output stage of the dbx 586.



### **RETURN**

Connect the output of your external processor back to the dbx 586 through this jack. An audio signal returning here is passed along to the EQ and the output stages. This input can also be used as an alternate input that makes use of the equalizer, limiter, and digital output option. This input source would be selected by enabling the insert switch on the front panel.

### **LINE OUTPUTS**

Both XLR and TRS 1/4" connectors are provided for connecting either balanced or unbalanced line-level devices to the 586. The nominal output level can be set to either +4 dBu or -10 dBV with the +4 dBu/-10 dBV switch.

#### **+4 dBu/-10 dBV switch**

Selects the nominal output level of the 586.

## Specifications

### MICROPHONE INPUTS

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

### LINE INPUTS

Connectors:	Female XLR Pin 2 hot and TRS 1/4"
Type:	Electronically balanced/unbalanced
Impedance:	>40k $\Omega$ balanced, >20k $\Omega$ unbalanced, or 470k $\Omega$ unbalanced 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 120W, unbalanced 60 $\Omega$
Maximum Output Level:	>+21 dBu, balanced or unbalanced

### INSERT

Connectors:	TRS 1/4"
Type:	Impedance balanced/unbalanced (SEND), Electronically balanced/unbalanced (RETURN)
Impedance:	SEND: 100 $\Omega$ balanced/50 $\Omega$ unbalanced RETURN: 40k $\Omega$ balanced, 20k $\Omega$ unbalanced
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, 150 $\Omega$ source impedance, unweighted, 22 kHz measurement bandwidth
THD + Noise:	0.04% typical at 0 dBu out, 1kHz, 33 dB gain (Drive control at minimum, Level control at maximum) 3.5% typical at +21 dBu out, 1kHz, 35 dB gain (tube saturation with Drive and Level controls at 50%)
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.

**LIMITER**

Type:	dbx PeakPlus™ (patent-pending)
Threshold Range:	0 dBu to + 22 dBu (off)
Ratio:	∞ : 1
Attack and Release:	Program-dependent

**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™ module is installed in the unit.)

DITHER:	See manual for dbx Type IV™ option
SHAPE:	See manual for dbx Type IV™ option

**REAR PANEL SWITCHES**

INST:	Switches the gain and impedance of the Line Inputs to allow for connection of unbalanced devices with passive instrument pickups
+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.
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**POWER SUPPLY**

Operating Voltage:	100V, 120V, 230V, 240 VAC 50/60 Hz.
Power Consumption:	30 Watts maximum.
Fuse:	100/120V: 315mA 250V Slow Blow 5mm X 20mm 230/240V: 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. Specifications are subject to change without notice.



## ***PROFESSIONAL PRODUCTS***

**H** A Harman International Company

8760 South Sandy Pkwy.

Sandy, Utah 84070

Phone: (801) 568-7660

Fax: (801) 568-7662

Int'l Fax: (603) 672-4246

Questions or comments?

E-mail us at: [customer@dbxpro.com](mailto:customer@dbxpro.com)

or visit our World Wide Web home page at:

[www.dbxpro.com](http://www.dbxpro.com)