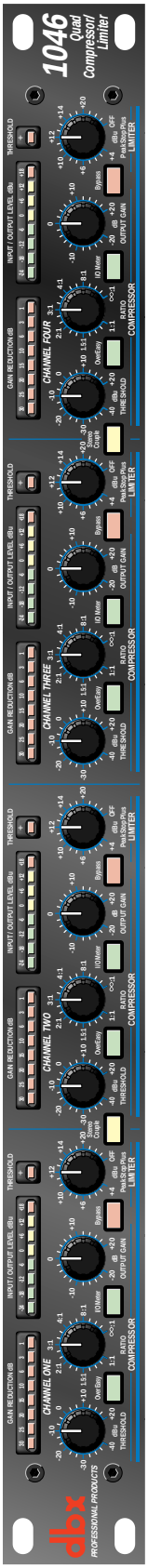
1046 QUAD COMPRESSOR

dbx PROFESSIONAL PRODUCTS



VISIONARY DESIGN

In today's recording and sound reinforcement environments, the need for multiple channels of high quality, easy to use compression is growing rapidly. The new dbx 1046 is designed to provide the audio professional with just that: 4 channels of great sounding dbx compression for a variety of applications. Incorporating the industry standard dbx designs and the latest available manufacturing techniques, the dbx 1046 provides pristine sonic quality with that classic dbx sound.

The 1046 provides 4 channels of smooth classic dbx OverEasy® or hard knee compression that are perfectly suited for use on individual tracks of your multitrack recorder, and in virtually all applications the separate channels can be individually interfaced and used for entirely independent purposes. Additionally the newly developed PeakStopPlus™ is ideal for protecting your system from the oppressive peaks that can take out valuable drivers in your sound reinforcement rig or studio monitors.

All four channels have the following controls:
Threshold - allows you to set the level at which the compressor starts affecting the gain

OverEasy® - allows you to select between soft compression for overall gain control or hard-knee compression based on the characteristics of the original dbx160.

Ratio - allows you to set the slope of gain reduction affecting the signal over the threshold level.

Input/Output Meter - allows you to set the meter to check the input and output levels for maximum signal-to-noise ratio and best level matching.

Output Gain - allows you to add make-up gain or to adjust the output level for that channel to match the next device's input gain.

Bypass - hard wire bypass allows you to hear how the compressor is affecting your signal.

PeakStopPlus™ - allows you to set the maximum signal level you want to pass through this channel. While it's virtually impossible to eliminate distortion, the PeakStopPlus™ circuit does it gracefully and effectively with minimal distortion.

Stereo Link - allows you to link channels 1&2 and 3&4 for two channels of true stereo compression.

All four channels feature balanced gold plated XLR and 1/4" inputs and outputs, and switchable +4dBu or -10dBV operating level to interface each individual channel with any other device.

So whether you need to control the level, placement in the mix, or overall characteristics of 4 independent signals or control the gain leveling on a couple of stereo pairs, the dbx1046 is for you.

FEATURES

- *4 independent channels of operation, stereo linkable in two pairs.*
- *PeakStopPlus™ limiting control for setting maximum allowable level regardless of compressor settings.*
- *Switchable OverEasy® or hard-knee compression.*
- *Selectable Auto (classic dbx) or manual (variable Attack and Release) compression*
- *Differentially balanced gold-plated XLR and 1/4" inputs and outputs.*
- *True RMS level detection*
- *Precision metering of input level, output level, and gain reduction*
- *Dual True stereo or quad mono operation*
- *Switchable +4dBu or -10dBV operation per channel*
- *Proudly designed, manufactured and tested in the USA*

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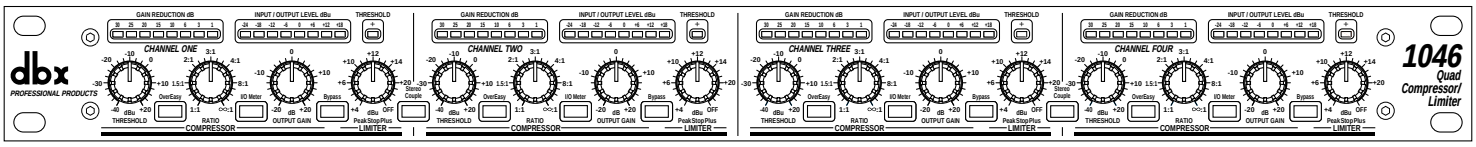

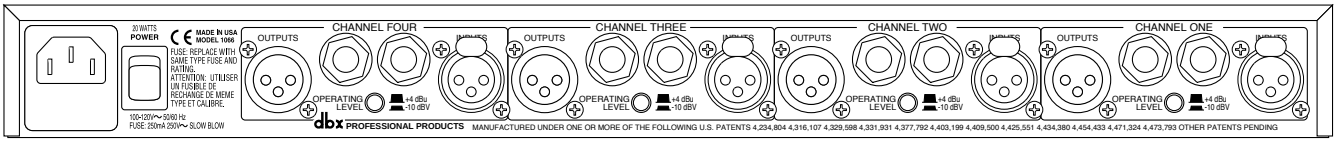

ARTISTS' AND ENGINEERS' SPECIFICATIONS

The compressor/limiter shall have four identical channels, each with an audio frequency response of 20Hz to 25kHz, +0/-0.5dB , an electronically floating balanced input impedance of not less than 50kΩ, balanced and 20kΩ unbalanced, and a maximum input level of not less than +22dBu and 1/4" TRS and XLR connectors. The output shall have an impedance of no more than 30Ω with a maximum output level of not less than +22dBm balanced and +20dBm unbalanced, into a minimum load impedance of 600Ω and 1/4" TRS and XLR type connectors.

Total Harmonic Distortion plus Noise shall be less than 0.1% with any amount of compression (up to 40dB) at 1kHz and Intermodulation Distortion shall be less than 0.1% SMPTE. The unit shall have an Equivalent Input Noise level of not more than -96dBu unweighted, and a dynamic range of not less than 118dB. Output gain adjustment shall be variable from -20 to +20dB. The compression threshold range shall be variable from -40 to +20dBu and compression ratio shall be variable from 1:1 to ∞:1. The peak limiter threshold range shall be variable from 0 to +24dBu. The compressor attack and release times shall be program dependent. The compression ratio characteristic shall be selectable for either the hard or soft knee curve type with a maximum compression of no less than 60dB. All input and output signal connections shall be via the rear panel. The channel-to-channel stereo links shall be of the true RMS summing type. Channel 1 shall link to Channel 2 and Channel 3 shall link to Channel 4 with channels 1 and 3 becoming the masters. The unit shall have the following front panel switches for each channel, with each switch incorporating an integral LED to signal selection of that switch: OverEasy, I/O Meter, and Bypass. There shall also be one Stereo Link switch for each pair of channels. Each channel shall have the following identical controls: compression Threshold, compression Ratio, compression Output Gain, limiter Threshold; and the following identical metering and indicator LEDs for each channel: Gain Reduction (8 LEDs), Input or Output Level (8 LEDs), peak limiter active. There shall be a rear panel switch for each channel to select nominal input and output operating levels at -10dBV or +4 dBu. The unit shall be capable of accepting one compatible audio transformer installed for each channel. The power requirements shall be 100-120VAC 50/60Hz or 200-240VAC, 50/60Hz, 20W, via a detachable IEC type AC cable. The size of the unit shall be 1.75" x 19" x 7.9" (4.4cm x 48.3cm x 20.1cm) with a net weight of 5.2 lbs (2.4 kg) and a shipping weight of 7.6 lbs (3.5 kg). The 1U high, full rack width 4 channel compressor/limiter shall be a dbx 1046.

SPECIFICATIONS

Input	
Connectors:	XLR and 1/4" TRS (Pin 2 and tip hot)
Type:	Electronically balanced/unbalanced, RF filtered
Impedance:	Balanced > 40 kOhm, unbalanced >20 kOhm
Max Input Level:	> +22 dBu balanced or unbalanced
CMRR:	Typically >50 dB at 1 kHz
Output	
Connectors:	XLR and 1/4" TRS (Pin 2 and tip hot)
Type:	Servo-balanced/unbalanced, RF filtered
Impedance:	Balanced 30 Ohm, unbalanced 15 Ohm
Max Output Level:	> +22 dBm balanced, > +20 dBm unbalanced
System Performance	
Bandwidth:	20 Hz to 20 kHz, +0/-0.5 dB
Frequency Response:	0.35 Hz to 90 kHz, +0/-3 dB
Noise:	< -96 dBu, unweighted, 22 kHz measurement bandwidth
Dynamic Range:	> 118 dB, unweighted
THD+Noise:	0.008% typical at +4 dBu, 1 kHz unity gain
	0.08% typical at +20 dBu, 1 kHz, unity gain
	< 0.1% any amount of compression up to 40 dB, 1 kHz
IMD:	< 0.1% SMPTE
Interchannel Crosstalk:	< -80 dB 20 Hz to 20 kHz
Stereo Coupling:	True RMS Power Summing
Compressor	
Threshold Range:	-40 dBu to +20 dBu
Ratio:	1:1 to ∞:1
Threshold Characteristic:	Selectable OverEasy® or hard knee
Attack/Release Characteristic:	AutoDynamic™
Attack Time:	Program-dependent
Release Time:	Program-dependent
Output Gain:	-20 to +20 dB
Limiter	
Threshold Range:	0 dBu to +24 dBu (off)
Ratio:	∞:1
Limiter Type:	PeakStopPlus™ two-stage limiter
Stage 1:	PeakStop® brickwall limiter
Attack Time:	Zero
Release Time:	Zero
Stage 2:	Predictive intelligent program limiter
Attack Time:	Program-dependent
Release Time:	Program-dependent

Function Switches	
OverEasy®:	Activates the OverEasy® compression function.
I/O Meter:	Switches between monitoring input and output levels on the Input/Output Level meter.
Bypass:	Activates the direct input-to-output hard-wire bypass.
Operating Level (rear panel):	Switches the nominal operating level between -10 dBV and +4 dBu simultaneously for both input and output levels.
ST Link:	Links channels in stereo pairs. Channels One and Three become the master channels.
Indicators	
Gain Reduction Meter:	8 segment LED bar graph at 1, 3, 6, 10, 15, 20, 25, and 30 dB
Input/Ouptut Meter:	8-segment LED bar graph at -24, -18, -12, -6, 0, +6, +12, and +18 dBu
PeakStop®:	1 LED to indicate PeakStop® limiting
Function Switches:	LED indicator for each front-panel switch
Options	
Output Transformer Per Channel:	Jensen® JT-123-dbx or JT-11-dbx, BCI™ RE-123-dbx or RE-11-dbx
Power Supply	
Operating Voltage:	Switchable: 100-120 VAC 50-60 Hz or 200-240 VAC 50/60 Hz
Power Consumption:	20 Watts
Fuse:	100-120 VAC:250 mA Slow Blow
	200-240 VAC: 125 mA Type T
Mains Connection:	IEC receptacle
Physical	
Dimensions: (4.4cmx48.3cmx20.1cm)	1.75"Hx19"Wx9"D
Weight:	5.2 lbs. (2.4 kg)
Shipping Weight:	7.6 lbs. (3.5 kg)

Note: Specifications subject to change.

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

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