

# 1066 COMPRESSOR / LIMITER / GATE

**dbx**<sup>®</sup>  
PROFESSIONAL PRODUCTS

## VISIONARY DESIGN

The dbx 1066 is the Stereo Compressor/Limiter/Gate of the 90's. After producing the world's most renowned series of compressors, the task of producing a new compressor worthy of our reputation would be daunting for most engineers. Not for dbx. Our engineers know audio like no one else in the world. Now the fruits of their talents are available to you in the form of the 1066 Stereo Compressor/Limiter/Gate.

Want to instantly add that classic dbx response to your mix? It's there at the touch of the "Auto" button. Or use the independent Attack and Release controls to tailor the 1066 to your specific needs. Unwanted frequencies or mic bleed in the signal path? Frequency dependent gain control is a snap to set up and execute with our Side Chain External button (SC Ext). Use the Side Chain Monitor button (SC Mon) and your favorite EQ to dial in the specific frequencies you want to trigger the device. As has become our standard, the contour switch allows entire mixes to be easily smoothed with soft compression while keeping low frequencies from punching holes in the overall mix. Selectable input and output metering allow you to make sure that everything is matched up level-wise, maximizing your signal-to-noise ratio.

For overall speaker protection, our new PeakStopPlus™ does all previous circuits one better. With a new design, the PeakStopPlus™ represses those unwanted transients from blowing your drivers while minimizing the distortion common to many other "hard" limiters. Selectable Hard-Knee or OverEasy® characteristics make the 1066 ideal for your gain control needs, whether you're looking for "heavy" almost-special-effects compression or soft, smooth gain leveling. New lightpipe technology replaces standard LED's found on most other units, making the 1066 both very easy to read and much easier to operate.

In the studio, broadcast facility or on the road with a P.A. system, the 1066 is designed for perfectly simple operation. The 1066 allows you to eliminate unwanted signals, flexibly control overall signal gain and guard your overall mix in dual mono or stereo operation.

At the heart of the 1066 is our new dbx V2™ VCA. Developed especially for the 1066, 1046 and other 10 series products to come, this revolutionary VCA boasts superb dynamic range characteristics while maintaining very low distortion and almost immeasurable noise characteristics. The bottom line is this: a new VCA working in conjunction with world class design makes the dbx 1066 perform better than compressors selling for hundreds more.

State-of-the-technology VCA's, meticulous component selection, and scrupulous testing procedures are just a few more reasons that the new dbx 1066 is the latest in a long line of pedigreed dbx signal processors.

## FEATURES

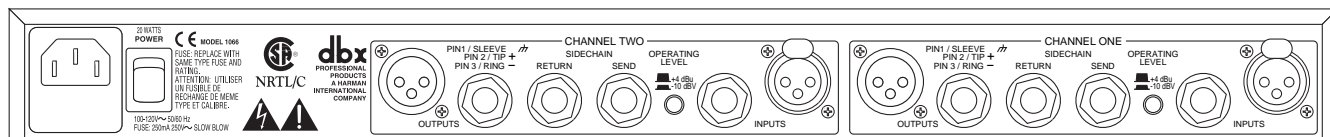
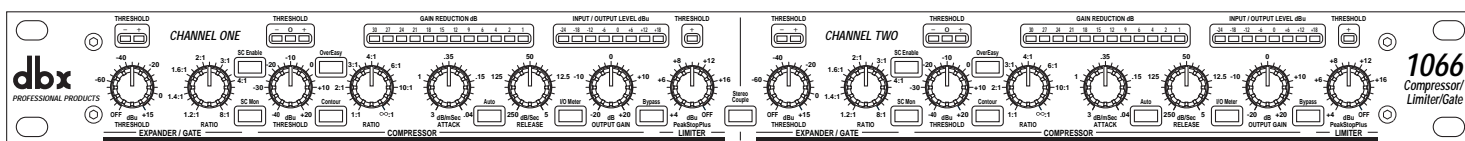
- Selectable auto (classic dbx) or manual (variable Attack and Release) compression
- Contour switch removes unwanted low frequency information from detector circuit
- Selectable OverEasy® or Hard Knee compression modes
- PeakStopPlus™ limiting for setting maximum allowable level with minimal distortion
- SC Ext and SC Mon for setting up and monitoring external devices for gating function
- True 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
- True stereo or dual mono operation
- Switchable +4dBu or -10dBV operation per channel
- Proudly designed, manufactured and tested in the USA

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1066

## COMPRESSOR / LIMITER / GATE



## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The compressor/limiter/gate shall have two identical channels, each with an audio frequency response of 20Hz to 20kHz,  $\pm 0.5$ dB, an electronically floating balanced input impedance of not less than 40k $\Omega$ , balanced and 20k $\Omega$  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 120 $\Omega$  balanced or 60 $\Omega$  unbalanced with a maximum output level of not less than +20dBm, into a minimum load impedance of 600 $\Omega$  and 1/4" TRS and XLR type connectors. The unit shall also have a sidechain detector with an input impedance of not less than 10k $\Omega$  unbalanced, a maximum input level of not less than +24dBu and a maximum output level of not less than +21 dBu balanced or unbalanced and an output impedance of not more than 2k $\Omega$  balanced and 1k $\Omega$  unbalanced. Sidechain input jack shall be a 1/4" TS jack; sidechain output shall be a 1/4" TRS jack.

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  $\infty$ :1. The peak limiter threshold range shall be variable from +4 to +24dBu. The compressor attack and release times shall be selectable for either program dependent or manually adjustable, scalable, program dependent operation. 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. The expander/gate shall have a threshold of  $\infty$  to no less than +15 dBu, an attack time of no more than 100 $\mu$ sec, a program dependent release time and a downward expansion ratio variable from 1:1 to 8:1. All input, output and control signals shall be via the rear panel. The stereo link shall be of the true RMS summing type with Channel 1 as the master when linked. 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: Sidechain Monitor, Sidechain Bypass, OverEasy, Contour, Auto, I/O Meter, and Bypass. There shall also be one Stereo Link switch. Each channel shall have the following identical controls: expander/gate Threshold, expander/gate Ratio, compression Threshold, compression Ratio, compression Attack time, compression Release time, Output Gain, limiter Threshold; and the following identical metering and indicator LEDs for each channel: Below/Above gate threshold, Below/At/Above compression threshold. Gain Reduction (12 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" (4.4cmx48.3cmx20.1cm) with a net weight of 5.11 lbs (2.3 kg) and a shipping weight of 7.5 lbs (3.4 kg). The 1U high, full rack width stereo compressor/limiter/gate shall be a dbx 1066.

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

**dbx** PROFESSIONAL PRODUCTS

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## SPECIFICATIONS

<b>Input</b>		
Connectors:	XLR and 1/4" TRS (Pin 2 and tip hot)	
Type:	Electronically balanced/unbalanced, RF filtered	
Impedance:	Balanced > 50 kOhm, unbalanced > 25 kOhm	
Max Input Level:	> +24 dBu balanced or unbalanced	
CMRR:	Typically > 50 dB at 1 kHz	
<b>Outputs</b>		
Connectors:	XLR and 1/4" TRS (Pin 2 and tip hot)	
Type:	Servo-balanced/unbalanced, RF filtered	
Impedance:	Balanced 120 Ohm, unbalanced 60 Ohm	
Max Output Level:	> +21 dBu, > +20 dBm	
<b>Sidechain Input</b>		
Connector:	1/4" TS	
Type:	Unbalanced, RF filtered	
Impedance:	> 10 kOhm	
Max Input Level:	> +24 dBu	
<b>Sidechain Output</b>		
Connector:	1/4" TRS (tip hot)	
Type:	Impedance balanced, RF filtered	
Impedance:	Balanced 2 kOhm, unbalanced 1 kOhm	
Max Output Level:	> +21 dBu balanced or unbalanced	
<b>System Performance</b>		
Bandwidth:	20 Hz to 20 kHz, $\pm 0.5$ dB	
Frequency Response:	0.35 Hz to 90 kHz, $\pm 0.3$ 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	
	< 0.1% SMPTE	
IMD:	< -80 dB, 20 Hz to 20 kHz	
Interchannel Crosstalk:	True RMS Power Summing™	
Stereo Coupling:		
<b>Compressor</b>		
Threshold Range:	-40 dBu to +20 dBu	
Ratio:	1:1 to $\infty$ :1	
Threshold Characteristic:	Selectable OverEasy® or hard knee	
Attack/Release Characteristic:	AutoDynamic™	
Attack/Release Modes:	Selectable Manual or Auto	
Manual Attack Time:	Scalable program-dependent	
Manual Release Time:	Scalable program-dependent	
Auto Attack Time:	Program-dependent	
Auto Release Time:	Program-dependent	
Output Gain:	-20 to +20 dB	
<b>Limiter</b>		
Threshold Range:	+4 dBu to +24 dBu (off)	
Ratio:	$\infty$ :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	
<b>Expander/Gate</b>		
Threshold Range:	Off to +15 dBu	
Ratio:	1:1 to 30:1	
Attack Time:	< 100 $\mu$ sec	
Release Time:	Program-dependent	
<b>Function Switches</b>		
SC Ext:	Routes the external sidechain input signal to the detector.	
SC Mon:	Routes the sidechain signal to the output, interrupting the normal audio.	
OverEasy®:	Activates the OverEasy® compression function.	
Contour:	Activates the frequency-dependent detector function.	
Auto:	Activates automatic program-dependent attack and release times, disabling the manual Attack and Release controls.	
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 relay bypass. Relay automatically hard-wire bypasses unit at power-down and provides a power-on delay of 1.5 sec.	
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 both channels for stereo operation. Channel One becomes the master.	
<b>Indicators</b>		
Gain Reduction Meter:	12-segment LED bar graph at 1, 2, 4, 6, 9, 12, 15, 18, 21, 24, 27 and 30 dB	
Input/Output Meter:	8-segment LED bar graph at -24, -18, -12, -6, 0, +6, +12, and +18 dBu	
Compressor Threshold Meter:	3-segment LED bar graph at Below (-), OverEasy®, and Above (+)	
Exp/Gate Threshold Meter:	2-segment LED bar graph at Below (-) and Above (+)	
Limiter, Threshold Meter:	1 LED to indicate PeakStopPlus™ limiting	
Function Switches:	LED indicator for each front-panel switch	
<b>Options</b>		
Output Transformer		
Per Channel:	Jensen®JT-123-dbx or JT-11-dbx, BCI™	
RE-123-dbx or	RE-11-dbx	
<b>Power Supply</b>		
Operating Voltage:	100-120 VAC 50/60 Hz 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	
<b>Physical</b>		
Dimensions:	1.75"Hx19"Wx9"D	
(4.4cmx48.3cmx20.1cm)		
Weight:	5.1 lbs (2.3 kg)	
Shipping Weight:	7.5 lbs (3.4 kg)	

## FOR MORE INFORMATION CONTACT:

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