

160A COMPRESSOR / LIMITER

dbx[®]
PROFESSIONAL PRODUCTS

VISIONARY DESIGN

Since its introduction in the mid 1970's, the dbx 160 series has been the world's most popular line of audio compressors. After the classic 160 (which is still used daily in many world class studios), came the 165, the 160X and the 160XT. The 160X/XT were the models that truly became the industry standard. Solid construction, fool proof operation, great sound, at-a-glance metering and a bulletproof output stage all contributed to its popularity with musicians, recording studios, consultants and installers, and broadcast media production people alike. In updating the design, dbx has chosen to maintain all the key characteristics that have made the 160X/XT the icon that it is. At the same time, we have improved the design.

The dbx 160A is the latest generation of the legendary dbx 160 family of compressor/limiters. The same classic sound, easy set-up and no compromise metering is now married to an improved signal path and stronger chassis design. The result is the new industry standard compressor/limiter which is digital-ready and road tough.

Featuring switch-selectable OverEasy[®] and Hard Knee compression curves along with extremely wide-ranging threshold, ratio and output controls, the dbx 160A is up to any task. True RMS level detection provides the most natural-sounding dynamics processing available, from subtle compression to "brick wall" peak limiting. Choose low ratios and OverEasy[®] compression to transparently smooth out fluctuating vocal and instrumental levels. Or use the 160A's Hard Knee compression and high ratios (up to and beyond $\infty:1$ and over 60dB gain reduction) for bombproof protection against overload distortion in digital recording, P.A. systems and broadcast signals. The 160A is fully compatible with +4/-10dB and balanced/ unbalanced systems, and its electronically balanced output stage is an outstanding line driver for long cable runs (an output transformer is optional). The 19-segment, switchable input/ output LED metering can be easily calibrated to any operating level. 12-segment gain reduction LEDs provide precise analysis at a glance.

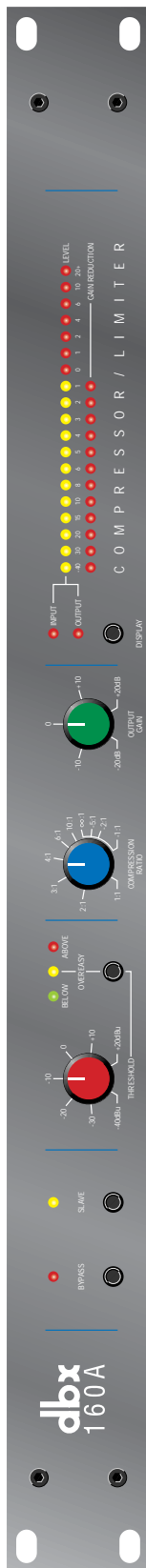
The dbx 160A's unique "INFINITY +" inverse-compression mode actually decreases the audio output level below unity gain when the input exceeds threshold, a real lifesaver for correcting overbearing vocal choruses and controlling runaway house mix levels. A detector input can be used with an equalizer for de-essing sibilant vocals and selectively smoothing out boomy notes on acoustic guitar and bass. And two 160As can be stereo-coupled to process an entire mix or instruments mic'd in stereo, without shifting the left/right image. Its musical sound, easy operation and unequalled versatility made the original dbx 160 a world standard. The 160A follows that tradition, while meeting the challenges of a digital world.

FEATURES

- OverEasy[®] or classic hard knee compression with dbx's ultra-musical program dependent attack and release times
- Compression Ratio variable from 1:1 through infinity :1 to negative compression
- Precision dual RMS LED display monitors input or output and gain reduction over a wide range and calibrates for different operating levels
- Over 60dB of gain reduction available
- Exclusive Infinity+ compression allows negative compression
- Independent balanced and unbalanced outputs can drive 600 Ω loads to +24dBm simultaneously. New floating balanced output stage drives any load
- Optional output transformer capable
- Strappable with another 160A for true RMS stereo summing operation
- Made in the USA

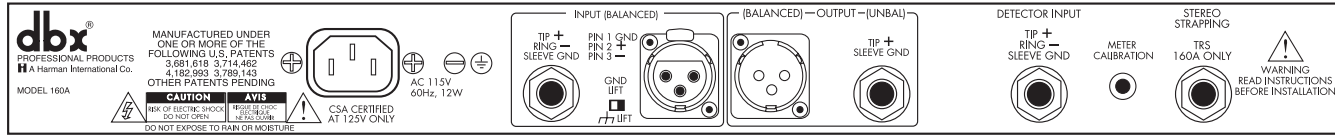
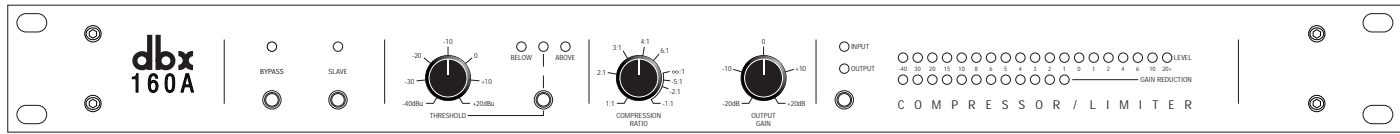
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H A Harman International Company



160A

COMPRESSOR / LIMITER



ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The compressor shall be a single channel unit, with an audio frequency response of 20—20kHz +0, -0.5dB, an electronically floating balanced input impedance of not less than 38kΩ with a maximum input level of not less than +24dBu and 1/4" TRS and XLR input connectors. The output impedance of the electronically floating balanced output shall be no more than 32Ω (balanced or unbalanced) with a maximum output level of not less than +24dBu, into a balanced load with a minimum impedance of not less than 600Ω, and +21dBu into and unbalanced load with a minimum impedance of not less than 600Ω. It shall use an XLR connector. The output impedance of the separate, 1/4" TRS unbalanced output shall be no more than 21Ω with a maximum output level of not less than +24dBm. Total harmonic distortion shall be no more than 0.2% in typical operation with any amount of compression up to 40dB. The unit shall have an output noise level of not more than -90dBu and a dynamic range of not less than 113dB. Output level shall be gain adjustable from -20dB to +20dB from nominal gain via front panel gain controls and all outputs shall be capable of driving a short circuit indefinitely with maximum input applied. The compressor attack and release times shall be program dependent. The compression threshold shall range from -40dB to +20dB, and the compression ratio shall be variable from 1:1 through Infinity:1 through negative compression to -1:1. The unit shall have a detector input, with a 1/4" TRS jack capable of balanced or unbalanced operation. The front panel shall have the following controls and switches: Bypass switch, Master/Slave switch, Compressor Threshold, OverEasy or Hard Knee selector switch, Compression Ratio, Output Gain, and Display Selector switch. The following LEDs for metering and status indication shall exist: Bypass, Slave, Threshold (3 LEDs), Input/ Output Display Selected (2 LEDs), Input/Output Level (19 LEDs) and Gain Reduction (12 LEDs). The unit shall have a 1/4" TRS jack at the rear panel, allowing stereo strapping with a second unit of the same design for stereo operation with true RMS summing of input levels. There shall also be a calibration control for the level meter, at the rear panel. The unit shall incorporate a detachable IEC mains cable and the power requirement shall be 90—130VAC 50/60Hz or 200—250VAC 50/60Hz. Dimensions shall be 1.75" x 19" x 6.5" (4.45cm x 48.2cm x 16.51cm). The net weight shall be 4.41lbs (1.99 kg) and the shipping weight shall be 6.62 lbs (2.99kg). The unit shall be a dbx 160A Compressor/Limiter.

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



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SPECIFICATIONS

Input: Connector: 1/4" TRS and XLR, Floating Balanced; XLR: Pin 2 hot,

Phone: Tip Hot.
 Impedance: 40kΩ.
 Maximum Level: +24dBu, Balanced or Unbalanced (Absolute).
 CMRR: >45dB (Any Frequency).
 Detector Input: Connector: 1/4" TRS phone, Floating Balanced.
 Impedance: >200kΩ.
 Maximum Level: +28dBu, Balanced or Unbalanced.
 Output: Connector: XLR, Floating Balanced; Pin 2 Hot.
 Impedance: 30Ω.
 Maximum Level: (Balanced): +24dBm; <0.3% THD.
 Maximum Level: (Unbalanced): +20dBm; <0.3% THD.
 Noise: <-90dBu, Unweighted (20Hz — 20kHz).
 Frequency Response: 20Hz — 20kHz, +0, -0.5dB; +0, -3dB 0.5Hz and 90kHz.
 THD: <0.2%, Typical, any amount of compression up to 40dB @ 1kHz.

Output: Connector: 1/4" TRS phone, Unbalanced.
 Impedance: 20Ω.

Maximum Level: +24dBm.

Compression: Threshold Range: -40dBu to +20dBu.
 Threshold Characteristic: OverEasy® or Hard Knee.
 Compression Ratio: Variable 1:1 to 1:1 thru to -1:1; >60dB maximum compression.
 Attack Time: Program dependent; typically 15ms for 10dB, 5ms for 20dB, 3ms for 30dB.
 Release Time: Program Dependent; Typically 8ms for 1dB, 80ms for 10dB, 400ms for 50dB; 125dB/sec rate.
System Performance:
 Dynamic Range: >113dB.
 Gain Adjustment Range: Variable from -20dB to +20dB.
 Stereo Coupling: True RMS Power Summing™
 Summing: 1/4" TRS phone jack.

Hardware: Power Cord: IEC-Type connector.
 Operating Voltage: DO: 90-130VAC, 50/60Hz; EU: 200-250VAC, 50/60Hz.
 Operating Temperature: 0°C to 45°C (32°F to 113°F).
 Dimensions (H x W x D): 1.75" x 19" x 6.5" (4.45cm x 48.2cm x 16.51cm).
 Weight: Net Weight: 4.45 lbs (1.99 kg) Shipping Weight: 6.62 lbs (2.99 kg)

FOR MORE INFORMATION CONTACT:

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