

Professional Series Model 7130 Compressor/Limiter

Selectable compression or limiting
30 dB maximum compression
Selectable attack and release times
Two channel mic/line mixer



The 7130 is a solid-state, dual-input compressor/limiter capable of automatic gain control over a range of 30 dB. It offers three switch selectable functions (OUT, COMPRESS, and LIMIT) as well as three selectable release and attack times. The threshold of compression is controlled by a variable input level attenuator. This combination of features ensures optimum performance under a variety of sound reinforcement conditions.

In the function OUT mode, the 7130 operates as a line amplifier and may be utilized to maintain the proper gain structure within a system. The COMPRESS and LIMIT modes offer 2:1 and 20:1 compression ratios, respectively.

The 7130 accepts high impedance, unbalanced microphone or line inputs. The output is either transformer isolated or direct and will drive a 600 ohm balanced or unbalanced line. Added versatility is provided through alternate input configurations. Balanced low impedance microphone or

line inputs can be accommodated by inserting JBL 5901 microphone input transformers or JBL 5195 matching/bridging transformers in the nine-pin sockets on the rear of the chassis.

The 7130's flexibility is matched by its ease of operation. The large, illuminated VU meter, for example, can be used to indicate the amount of compression or the actual output level. The meter's scale can be switched so that 0 VU indicates +4 or +8 dBm to facilitate readings over a broad range of output levels. Controls are placed on the front panel for ease of access. Terminal strips, XL-type connectors, and transformer sockets are mounted on the rear panel.

The compressor may be rack mounted in two EIA standard rack spaces or placed on a counter top using the supplied feet.

Model 7130—Compressor/Limiter

Architectural Specifications

The compressor/limiter shall have an output capability of +18 dBm from 20 Hz - 20 kHz ± 1 dB and shall be capable of automatically controlling gain over a range of 30 dB. Total harmonic distortion shall be less than 0.25% to +18 dBm, 20 Hz - 20 kHz in either the compression or limiting mode with up to 30 dB of gain reduction.

The unit shall accept high impedance, unbalanced microphones. The microphone preamplifier circuitry shall employ field effect transistors for low noise. The compressor shall be capable of any combination of line-line, mic-mic, or line-mic operation through the use of two push-button switches. Balanced inputs shall be possible by using optional input transformers. Outputs shall be transformer isolated or direct for connection to a balanced or unbalanced 600 ohm line.

The compressor shall be equipped with a selector switch to place the unit in one of three modes of operation—*OUT*, *COMPRESS*, or *LIMIT*. The nominal threshold of compression shall be at 0 dBm output. An input level control shall vary gain when the selector switch is in the *OUT* mode. It shall also determine the relative threshold when the unit is in the *COMPRESS* or *LIMIT* mode. Two switches shall be provided for the selection of three preset release times and three preset attack times.

The unit shall be equipped with a meter, governed by a function selector switch, which indicates amount of compression or output level in dB. When indicating output level, three ranges shall be selectable so that 0 on the meter corresponds to an output level of 0 dBm, +4 dBm, or +8 dBm direct output and +2 dBm, +6 dBm, or +10 dBm balanced output. The compressor shall operate on 120/240 V AC, 50/60 Hz.

The compressor/limiter shall be JBL Model 7130.

Specifications

Gain	
Microphone	60 dB hi Z unbalanced 80 dB balanced with transformer
Line	30 dB hi Z unbalanced 30 dB balanced with bridging transformer
Output Level	+18 dBm (Ref. 600 Ω)
Frequency Response	± 1 dB 20 Hz - 20 kHz
Total Harmonic Distortion	
Linear	Less than 0.2%, 20 Hz - 20 kHz @ +18 dBm
Compression	Less than 0.25%, 30 dB compression, 20 Hz - 20 kHz @ +18 dB
Maximum Compression	30 dB
Compression Threshold	Adjustable -10 to +6 dBm continuously variable
Compression Ratio	
COMPRESS Mode	2:1
LIMIT Mode	20:1
Equivalent Input Noise	Less than -124 dBm
Attack Time	
Fast	400 μ s
Medium	3.0 ms
Slow	140 ms
Release Time	
Fast	30 dB/s
Medium	8 dB/s
Slow	4 dB/s
Input Impedance	
Microphone	50 k Ω hi Z 800 Ω lo Z balanced
Line	15 k Ω unbalanced 15 k Ω balanced
Output Impedance	Less than 100 Ω
Controls	
Front Panel	Input 1—level control, rotary Input 2—level control, rotary Threshold—control, rotary Mic Pads—3-position slide switches Output Volume—level control, rotary Function—3-position slide switch Meter Range—3-position slide switch Meter Select—2-position slide switch Attack Time—3-position slide switch Release Time—3-position slide switch Power—push on/push off switch
Rear Panel	Input Selector, line/mic, push switch Input Selector, line/mic, push switch
Indicators	Power indicator Illuminated VU meter
Power	120/240 V AC, 50/60 Hz
Panel Finish	Semi-gloss baked enamel, dark gray
Dimensions	
Front Panel	483 x 89 mm 19 x 3 $\frac{1}{2}$ in
Depth of Controls	19 mm $\frac{3}{4}$ in
Depth Behind Panel	176 mm 6 $\frac{5}{16}$ in
Mounting	2 EIA standard rack spaces
Net Weight	4 kg 9 lb
Shipping Weight	5.4 kg 12 lb
Accessories	5195 Matching/Bridging Transformer 5901 Microphone Input Transformer

JBL continually engages in research related to product improvement. New materials, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

Professional Division

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