

## CX 335 Stereo compressor limiter

The Cloud CX335 stereo compressor-limiter is designed to provide all the functional needs of the system engineer with a desire to perform signal levelling and overload protection. The CX335 can be utilised in any club or live installation as well as in the recording studio, broadcast studio or mastering facility.

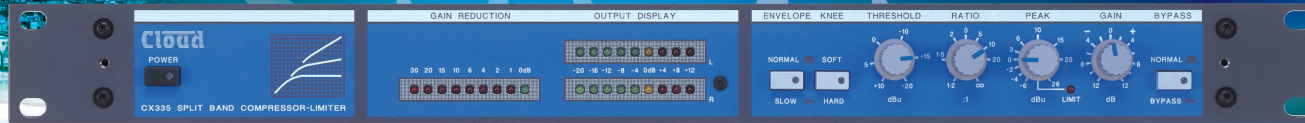
The CX335 has intelligent “Programme Dependant” circuitry, which makes the need for attack and release controls totally redundant. Other key features include the options of hard-knee or soft-knee characteristics, a fully controllable “Instant Attack” Peak Limiter, accurate and informative metering, and remote control of the compressor side chain.

Not only can the CX335 be set to operate transparently, the simple and logical control layout make setting up an easy and swift operation. The supplied tamperproof cover will ensure the integrity of the settings, and therefore the performance and the reliability of the system.



**Cloud**  
Clearly better sound

# CX 335 Stereo compressor limiter



With tamperproof cover

## Compressor

The Cloud CX335 features a stereo compressor designed for optimum performance when processing recorded music. The impossible task of trying to establish what time constants are to be applied to a compressor's attack and release envelope when the signal dynamics are an unknown quantity, is solved by the use of intelligent "Programme Dependant" side chain circuitry. Thereby making the need for difficult to optimise attack and release controls totally redundant.

Because the CX335 compressor offers a choice of hard-knee, ratio style compression, or soft-knee compression, it is equally adept at controlling signal levels within tight limits or performing unobtrusively transparent "soft" control. With high ratio settings the compressor can perform the functions of an intelligent programme dependant limiter.

Soft-knee compressors are often chosen in applications that call for less conspicuous level control whereas ratio style hard-knee compressors are generally considered more successful where large amounts of gain reduction are required. By offering both alternatives the CX335 is capable of outstanding results in a very wide range of club, studio, live and broadcast applications. The addition of the "slow" switch provides a facility to preserve the fast dynamic peaks yet still control the signal if the threshold is exceeded for more than a few seconds.

## Limiter

A feature of the CX335 is a highly effective "Peak Limiter" which allows the user to set the absolute output level that will never be exceeded. This facility is extremely valuable for speaker driver protection. With correct Threshold and Ratio settings, the Compressor can be set to act as a primary level controller with the Peak Limiter set above this to perform secondary security.

## Tamperproof cover

The prime reason for the inclusion of a CX335 within many systems is to control and protect the system from damage that can occur when power amplifiers are overdriven. This results in distortion and clipped waveforms generated by high power amplifiers which can be potentially destructive to transducers. It is essential therefore that when a CX335 is installed and set up that these settings are only changed by qualified technicians. To prevent unauthorised adjustment of the settings a tamperproof cover is supplied with each CX335. Special recessed "Allen" cap screws are used to secure the cover and "one time" locks are also provided. This will discourage unauthorised adjustment and will also provide evidence if there has been unauthorised access to the controls.

## Front panel controls

**Normal/Slow Switch:** This modifies the programme-dependant circuitry to allow fast dynamic peaks through unprocessed, yet still monitoring and controlling level when the threshold is exceeded for periods of a second or more.

**Hard/Soft Knee Switch:** This determines the effect of the ratio setting when threshold is exceeded. In the Hard knee mode the effect of the compression ratio is linear; whereas in the Soft knee mode the effect of the compression ratio changes gradually as the signal rises above the threshold setting, this changing ratio is far more musical and disguises the fact that any manipulation of the dynamic range is taking place.

**Threshold:** This determines the input level above which gain reduction will take place and may be set between +10dBu and -20dBu.

**Ratio:** This controls how much the input level must rise relative to an increased output level.

The performance is linear in the Hard knee mode and in the Soft knee mode the setting is the final compression ratio that will be applied once the 'soft knee' region is exceeded. The ratio can be adjusted from 1.2:1 to  $\infty$ :1.

**Gain:** This control sets the output level of the compressor and has a range of -12dB to +12dB.

**Peak Limit:** This sets the absolute level that the output signal will not be permitted to exceed. The limiter is very fast acting enabling it to control any peaks without audible distortion. The limit can be set in the range -6dBu to +26dBu. An led indicates when the limiter is operational.

**Bypass:** This switch can be used to bypass all signal processing and allows comparison between the raw unprocessed signals against the effect of any compression or limiting.

## LED display

**Gain Reduction meter:** This nine segment LED bargraph meter continually displays any gain reduction applied by the compressor or limiter.

**Output Level Meters:** The twin nine segment LED bargraphs display the level of the two output signals over the range of -20dBu to +12dBu.

## Inputs/outputs

All signal connections are by way of balanced XLR connectors on the rear panel.

## External VCA interface

This connector allows for direct connection to the VCA's that can be utilised for analogue control of the VCA's. This can be used for simple remote level control or remote muting purposes.

## Technical Specification

Input impedance	10k $\Omega$ Balanced
Frequency response	20Hz - 20kHz $\pm$ 0.5dB
Nominal signal level	0dBu
Headroom	26dB
Noise at unity gain	-90dB RMS 22Hz -22kHz -90dB CCIR (2K) ARM -90dB IEC A
Distortion	Unity gain 0dBu <0.1% 1kHz +10dBu I/P 10dB gain reduction <0.1% 1kHz
Compressor	Threshold -20dB to +10dB Ratio 1.2 : 1 to $\infty$ : 1 Attack automatic - signal related Release automatic - signal related Gain -12dB to +12dB
Peak limiter	Threshold -6dBu to +26dBu Ratio infinity: 1 Attack 50 $\mu$ s Release automatic
Gain reduction display	0dB to -30dB nine segment
Output display	-20dBu to +12dBu nine segment

## General Specification

Power requirements	115V or 230V
Fuse rating	T100mA for 230V or T200mA for 115V
Width	482.6mm
Height	44.0mm
Depth	160.0mm
Weight	3.5kgs including packing

# Cloud

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Manufactured in England