

CLP160 is a cost-effective dynamics processor. It provides two independent full-featured compressor/limiters in one rack space while offering excellent sonic quality for any application from studio recording to live sound or broadcast. The Compressor function is based on evaluation of an input signal calculating its RMS value in a time frame of 50ms. The True RMS level detection provides the most natural-sounding dynamics processing available allowing the compressor to maintain a constant RMS output level even with input sources with different harmonic content. The **CLP160** offers Ratio, Hard/Soft Knee controls to customize its compression response for even the toughest signals. The Ratio allows the user to control the proportion by which

signal exceeding the threshold will be reduced. It is based on a precise Look UP Table Log computation process with 0.1 dBu resolution step. Hard Knee compression reduces gain abruptly on any signal exceeding the threshold. Soft knee compression introduces gain reduction gradually on signals approaching the threshold, and progressively, up to the ratio set by the user, as they exceed it. In addition the **CLP160** features a powerful sub harmonics synthesizer allows the sound to be enhanced by generating a copy of the signals in their bass range, typically around 65Hz, but shifted an octave lower. With intuitive control layout and bright LED meters that display and input/output levels per channel, the **CLP160** ensures constant visual feedback.



Features

Outstanding Performance

Great sounding dynamics control for any type of program material

High quality sonic performance with 24bit high end converters coupled with 48kHz sample rate

Extremely low noise and distortion

Balanced inputs and outputs on 1/4" TRS and XLR

Top-grade DSP Engine

Intelligent Knee for musical performance with soft and hard-knee envelopes

RMS averaging dynamic detection

Variable Attack and Release, with Hard or Soft Knee topology

Compression ratio variable from 2:1 through 32:1

Threshold from 0dBu (bypass) up to -10dBu

Adjustable attack and release time for manual control

Sub Harmonics generator for bass frequency enhancement by generating a copy of the signals in their bass range, but shifted an octave lower

Control

Front panel 10-LED level meter indicators per channel

16-step Rotary encoder switch for HARD/SOFT Knee and ratio selections

Threshold, Attack and Release controls

Bypass switch

Applications

- Recording Studio
- Houses of Worship
- Theaters
- Performing Art Centers
- Broadcast
- Stadiums and Arenas
- Touring Musicians
- Auditoriums



Audio

Analog Input	2 x XLR/TRS electronically balanced
Analog Output	4 x XLR/TRS electronically balanced
Input Max Level	+15 dBu
Output Max Level	+9.8 dBu
THD+N	0.01% @ -6dBu (Bypass)
S/N	>100 dBA (Bypass)
Frequency Response	20Hz - 20kHz; -0.5dBu at 20Hz and 20kHz
AD & DA Converters	1x AK5388 24bit, 2x AK4396 24bit

DSP & Processing

DSP Engine	Dream SAM3716, 24bit (data) x 48 bit (coeff.)
DSP Resolution	24x32 bit for filtering process; 48 bits resolution on intermediate computation results
Hard Knee Compression	Ratio: 8 steps (2:1, 3:1, 4:1, 5:1, 6:1, 7:1, 8:1, 32:1)
Soft Knee Compression	Ratio: 8 steps (2:1, 3:1, 4:1, 5:1, 6:1, 7:1, 8:1, 32:1)
Threshold	From 0dBu (bypass) up to -10dBu
Attack Time	From 10ms up to 200ms
Release Time	From 28 ms up to 1.7 sec
Sub Harmonics Generator	Detected frequencies from 40Hz to 500Hz Sub harmonics generation from 20Hz to 250Hz with center frequency on 65Hz Gain Amplitude at 65Hz for Sub Harmonics generation from 0dBu (bypass) up to +18,4dBu

General

Front Panel	10-LED meter per channel (-32, -24, -18, -12, -6, -3, 0, 3, 6, 9 dBu) Input Level POT Output Level POT Threshold POT RATIO/KNEE 16-step Rotary encoder switch (HARD 1~8, SOFT 1~8) 3 x Switch button (Process ON/OFF, ATK/REL Select, ATK/REL Confirm, Power ON/OFF) 2 x Red LED (CLIP, Power on) 2 Green LED (ATK/REL Select, ATK/REL Confirm)
Rear Panel	2 x XLR female connector (Input) 2 x XLR male connector (Output) 2 x 1/4" TRS line jack female connector (Input) 2 x 1/4" TRS line jack female connector (Output) 1 x Voltage setting toggle switch (110/220V) IEC C13 16A connector;
Main AC	110-220VAC (50/60Hz) – 40W
Dimensions	19" x 1.75" x 9" (483x44x229mm) 1RU
Weight, Net / Shipping	7.71 lbs (3.5 Kg) / 8.82 lb (4 Kg)