ARCHITECTS AND ENGINEERS SPECIFICATION

MaxxBCL

The MaxxBCL shall be a two-channel (stereo) processing unit and have a processing chain comprised of the following processing blocks: a compressor, a bass enhancer and a limiter - it shall be possible to activate all or any of the processing blocks independently of each other.
The MaxxBCL shall have a processing input/output delay of:

Digital to Digital: 133 @44.1, 48K sampling rates, 261 @88.2, 96K sampling rates
Analog to Digital: 176 @44.1, 48K sampling rates, 301 @88.2, 96K sampling rates
Digital to Analog: 182 @44.1, 48K sampling rates, 313 @88.2, 96K sampling rates
Analog to Analog: 225 @44.1, 48K sampling rates, 353 @88.2, 96K sampling rates

Compressor

The compressor section shall have the ability to continously change depending on several controls. It shall have an S-curve soft-knee compression characteristics allowing for both high and low compression or expansion with automatic makeup gain.This dynamic activity shall be selectable on each step in the signal chain in order to affect signals BELOW the threshold only. Compression shall be bypassed with the Bypass button which is lit when activated.

Compression type shall be set with the Opto/Elct button, allowing to choose between Opto or Electro compression behavior affecting release time.

Compressor Ratio Range : 1:1 to 1:12, calibration: 0.1 steps

Compressor threshold parameter Range: -60.0 to 0.0dB, calibration: 0.1dB steps.

Attack shall be set by the Attack button, selecting one value out of eight settings, and shown on the Attack LEDs, offering the following values (in milliseconds): 0.5, 1, 2, 5, 10, 15, 20 or 50. The compression automatic makeup gain shall be set to accommodate the different attack setting.

Release time is set automatically utilizing Waves ARC™ (Automatic Release Control) technology.

Attenuation shall be displayed on the Atten. (Attenuation) LED bar graph in the range of -12 to 0.5 dB.

The order of the compressor and bass enhancer in the processing chain shall be set with the Comp4Bass/Bass4Comp button. When the button is off the order shall be as follows: compressor first followed by the bass enhancer.

MaxxBass

The bass enhancement (MaxxBass™ second generation alogirthm) section shall have the ability to continuously change based on several controls, and shall be bypassed with the Bypass button which is lit when activated.

The cuttoff frequerncy parameter, determining the range that the generated harmonics are based on, shall be set by the Frequency knob and shown on the Frequency seven-segment display in the range of 25.0Hz to 120Hz.

The intensity parameter, determining the amount of generated harmonics that are mixed into the output signal, shall be set by the Intensity knob and shown on the Intensity seven-segment display in the range of 20% to 100% in steps of 1%.

The original bass frequencies shall be removed from the input signal by the HPF button. When lit, the HPF button indicates that the original bass frequencies will not be present in the output signal.

Limiter

The limiter section shall have the ability to continously change based on several controls having an overshoot-free brick-wall limiting behavior, and shall be bypassed with the Bypass button which is lit when activated.

The out ceiling parameter, determining the absolute output level in dBFS, shall be set by the Out Ceiling knob and shown on the Out Ceiling seven-segment display in the range of -18.0dB to 0.0dB in steps of 0.1dB.

The threshold parameter shall be set by the Threshold knob and shown on the Threshold seven-segment display in the range from -18.0dB to 0.0dB in steps of 0.1dB.

Attenuation shall be displayed on the Atten. (Attenuation) LED bar graph in the range of -12 to 0.5 dB.

Release time is set automatically utilizing Waves ARC™ (Automatic Release Control) technology.

The Threshold and Out Ceiling parameters shall be controlled simultaneously by the Threshold knob when the Link button is set to On. When set to Off, each parameter shall be controlled separately. When the Link button is lit both parameters are linked together.

General

MaxxBCL input and output levels are displayed in dBFS on the input and output meters in the range of -90 to 0 dBFS.

MaxxBCL shall be capable of restoring up to 4 presets that can be recalled instantaneously.

MaxxBCL shall be capable of operating at 44.1, 48, 88.2 and 96 kHz. It shall be acappable of receiving and outputting both analog and digital signals in AES/EBU and SPDIF formats. It shall be capable of synching to internal clock and external signal either via AES/EBU or Word Clock. When set to analog MaxxBCL shall be capable of operating at the range of +4dBU to +29dBU as set by the rear panel calibration setting and the front panel Input Trim rotary switches.

The MaxxBCL shall be capable of operating with a normal frequency response of :
20Hz-21kHz / - 0.4dB@20Hz ÷ 0.05dB@21kHz.

Output noise shall be ≤ -108 dB (unweighted).
harmonic distortion shall be ≤ 0.003% (-90 dB) @1kHz, -1dBFS.
Main power supply: Linear Power Supply   Adjustable Fuse: 100VAC, 110VAC, 220VAC, 240VAC. 50-60Hz
The MaxxBCL shall be standard 19" rack mount, 2U high.