

SCLPL

5-BAND STEREO EQ W/ MORPHING

The WMD SCLPL (scalpel) is a compact stereo or dual-mono 5-band parametric equalizer with parameter morphing. We all agree that EQ is tremendously helpful in a studio, but powerful, high-fidelity EQ hasn't been available in Eurorack. SCLPL is a small form factor EQ that gives you five fully parametric bands, like what you'll find in analog outboard EQs and modern plug-ins. It's dual-mono or stereo design lets you set up two fully independent EQs or process a stereo field. The real fun begins with parameter morphing. Nine "presets" can be stored (per side), and morphed through with knob control or CV, dramatically transforming the spectral content of your signal. Morphing through extreme settings will breathe new life into otherwise static sounds or samples. Whether subtly tweaking a sound or mangling your master, SCLPL gives you the precision to cut your mix.



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DUAL MONO AND STEREO OPERATION:

By taking advantage of a digital interface and the Stereo/Mono Switch, SCLPL is capable of operating in linked stereo mode where every operation is mirrored on both A and B channels, or a dual mono mode where every parameter for channels A and B is modified independently. When the switch is in either the left or right position the unit is operating as a Dual Mono effect. The effect will be stereo if the switch is in the center position.

OPERATING MODES:

SCLPL has three main operating modes: EDIT MODE, PRESET MODE, and MORPH MODE.

EDIT MODE:

EDIT MODE is used to set up and modify the parameters of the EQ. In this mode the Frequency Knob, Q Knob, and Level Knob each control their respective parameters. Rough visualizations of this data are shown on the main LED display. One frequency band is editable at a time. Cycle through frequency band selections by pressing the Band Button. Holding this button will bypass all other bands creating a type of "band solo" for detailed tweaks. An additional overall input level parameter is available by holding the IO Button and turning Level Knob. No level change is applied when the knob is in the 12 O'clock position.

PRESET MODE:

SCLPL has 9 preset memory locations that can be saved to or loaded from. These are accessed from PRESET MODE. Enter PRESET MODE by holding the Morph Button. Once in PRESET MODE turn the Level Knob to select the desired preset memory location. Press the Band Button to save the current EQ settings over the selected location. Alternatively, release the Morph Button to load the settings saved at the selected memory location. Loading an initialized preset is also available by holding the IO Button until the Main LED Display fills.

MORPH MODE:

When SCLPL is filled with the desired presets, MORPH MODE can be used to "morph" or smoothly interpolate between the EQ settings stored in the 9 preset memory locations. Access this mode by pressing the Morph Button. The Morph CV Inputs are only active in MORPH MODE, and change function depending whether the interface is set to Stereo or Dual Mono. In stereo sending a single CV to either jack will control the other jack as long as nothing is plugged into it. In dual mono there is no normalizing operation between the two inputs. The two channels can be controlled independently with separate CVs in either stereo or dual mono operation. The physical controls also change based on whether the interface is set to Stereo or Dual Mono. In Stereo the Frequency Knob controls the left channel independently, the Q Knob controls the right channel independently, and the Level Knob controls both channels simultaneously overriding the independent controls.

At any time, a single SCLPL channel, or both, can be put into BYPASS MODE by pressing the IO Button. In this mode audio is passed directly from the input to the output with no equalization applied.

EQ SETTINGS RANGES:

Frequency Band

Top: 1KHz - 20KHz
Mid Top: 800Hz - 16KHz
Mid: 200Hz - 4KHz
Mid Low: 50Hz - 1KHz
Low: 15Hz - 300Hz

Q

Top: Shelving
Mid Top: 1.6 - 14
Mid: 1.6 - 14
Mid Low: 1.6 - 14
Low: Shelving

Level

Top: -40dB - +18dB
Mid Top: -40dB - +18dB
Mid: -40dB - +18dB
Mid Low: -40dB - +18dB
Low: -40dB - +18dB

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EDIT MODE

I/O Button: Bypass SCLPL.

MORPH Button: Press to enter MORPH mode, hold to enter PRESET MODE.

Q Knob: Set the Q of the EQ band,

LEVEL Knob: Set the level of the EQ band.

Audio Inputs



Channel LED Display: Indicates selected band and bypass status.

BAND Button: Cycle through frequency bands. Hold to solo a band.

Stereo / Mono Switch: Select between stereo and dual mono operation.

FREQ Knob: Control the frequency of the EQ band.

Main LED Display: Gives feedback on various aspects of the frequency band's current settings.

MORPH CV Inputs: Deactivated in edit mode.

Audio Outputs

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PRESET MODE

I/O Button: Holding this button will load an initialized preset.

MORPH Button: Releasing this button will return to edit mode. If a new preset was selected, it will load the settings of that preset.

Q Knob: No function in this mode.

LEVEL Knob: Selects a memory preset.

Audio Inputs



Channel LED Display

BAND Button: Pressing this button will overwrite the current EQ settings to the selected memory preset.

Stereo / Mono Switch: In mono modes, separate presets exist for the A and B channels. In stereo, channel A's presets are loaded to both A and B.

FREQ Knob: Disabled in this mode.

Main LED Display: The current selected preset is shown as a bright LED. The last saved or loaded preset is shown with a dim LED.

MORPH CV Inputs: Disabled in this mode.

Audio Outputs

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MORPH MODE

I/O Button: Bypass SCLPL.

MORPH Button: Switch back to EDIT MODE.

The **FREQ**, **Q**, and **LEVEL** controls change based on whether the interface is set to Stereo or Dual Mono. In Stereo the Frequency Knob controls the left channel independently, the **Q** Knob controls the right channel independently, and the Level Knob controls both channels simultaneously overriding the independent controls.

Audio Inputs



Channel LED Display

BAND Button: No function in this mode.

Main LED Display: Shows morph position in preset memory.

MORPH CV Inputs: Controls the morph position with a 0-5V CV.

Audio Outputs

WORDS FROM THE DESIGNER

I've always wanted to make a morphing EQ. After prototyping many analog designs over the years, two major challenges continued to lambaste this project into the box of broken dreams:

1. Scope control – Feature creep (that would be cool if...) kept bloating these analog designs into absolute monsters of space and cost.

2. Interface – The old concepts were huge, with screens and buttons and tons of knobs and jacks. Paring down to just the essentials in an elegant way took a lot of time and a lot of learning along the way.

Moving to all digital allowed the WMD design team to accomplish a fully morphing EQ without a massive amount of space or unit cost. A simple LED meter instead of a massive screen kept the size down, still gives valuable feedback, and requires the use of your ears!

And so, we present SCLPL: A module that excels as a powerful static equalizer, with a morphing layer that unfolds a multitude of uses inside any modular system.

W. Mathewson

SPECS

Size: 4hp
Depth: 38mm (with cables)
Power: +93mA, -65mA

Audio Inputs:
100k ohm input/CV impedance

Audio Outputs:
1k ohm output impedance

CV Inputs:
100k ohm input/CV impedance

Sample Rate: 48KHz
Bit Depth: 16-Bit

WMD