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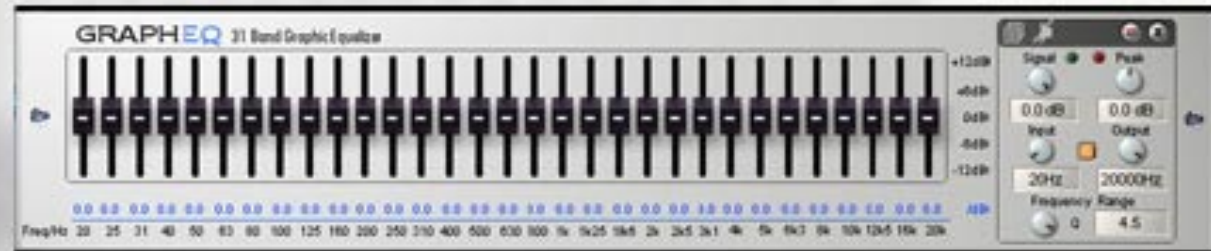
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31 Band Equalizer

Version 2.0

Overview

The 31 band EQ Stereo is a powerful and versatile equalizer that can be used in the SCOPE Fusion Platform.

The equalizer processes your audio signals with highest precision, but is very easy to operate, probably easier and more comfortable than many analog devices. As it works at true 32 bit resolution, it requires the power of about one full DSP (at 44.1 kHz).

The link mode allows identical settings for both channels.

The variable Q value (filter quality) allows to use the equalizer in different situations. Use it with maximum Q value for the precise processing of particular frequencies, or with minimum Q value to make the transition between different frequency bands smoother.

The preset list lets you save all your settings for different situations and restore them whenever you need them again.

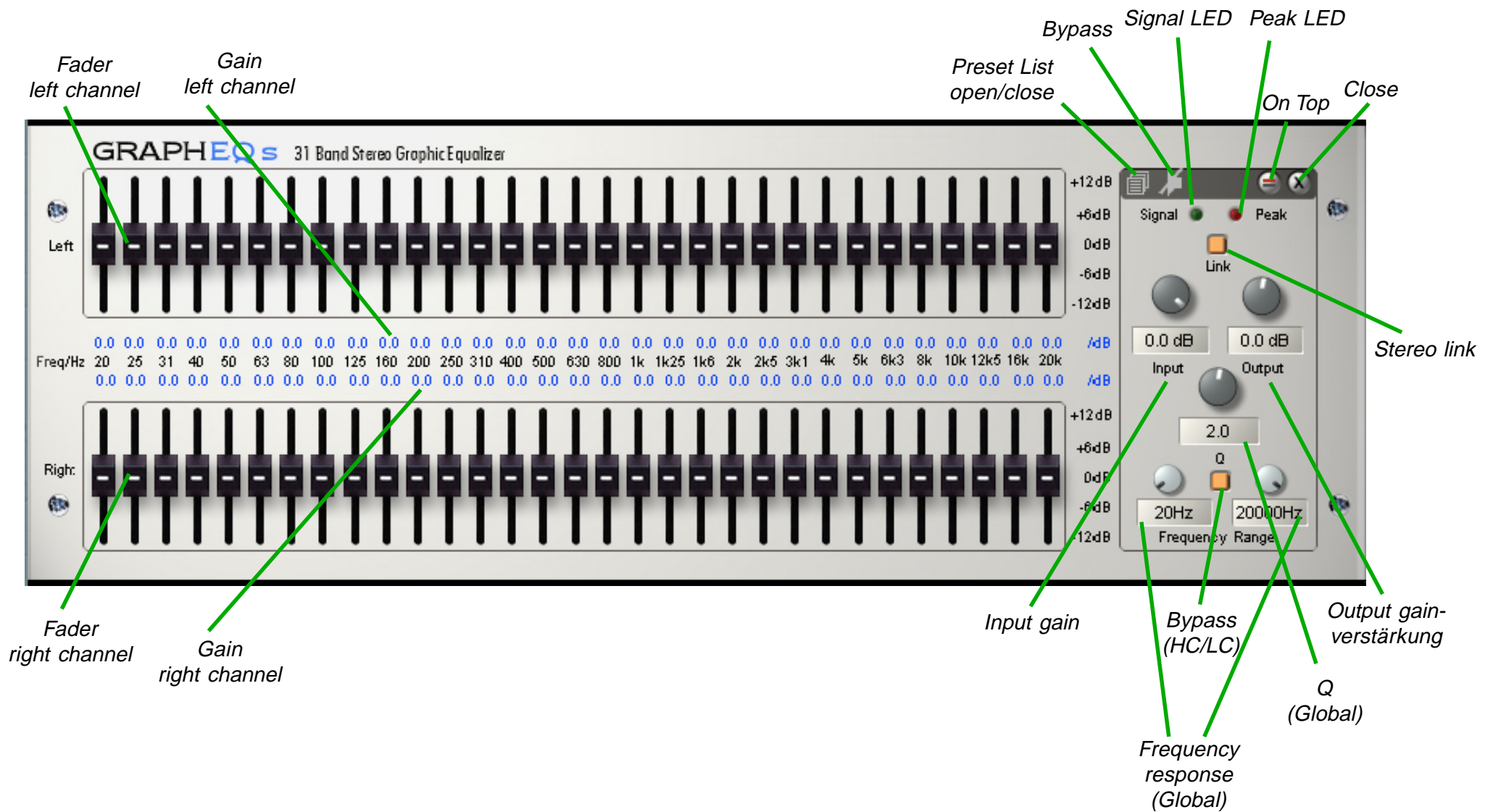
Since the equalizer allows some extreme settings (± 12 dB for all 31 bands), it can be necessary to adjust the input sensitivity and output volume accordingly with the two Gain controls. Both allow a range from -60 dB to $+12$ dB.

A signal LED (green) indicates incoming audio signals (threshold -60 dB).

The red peak LED flashes if the input or output level exceeds 0.5 dB. In this case, simply reduce the input sensitivity until the peak LED stops flashing.

The bypass function also effects the gain settings. This means you can switch back and forth to compare the equalized and the original signal.

Additional highcut and lowcut filters can be used to limit the overall processing range. These filters have their own bypass switches.



Operation

Controls

Fader

The left channel bands are located in the upper half of the equalizer surface, those for the right channel in the lower half.

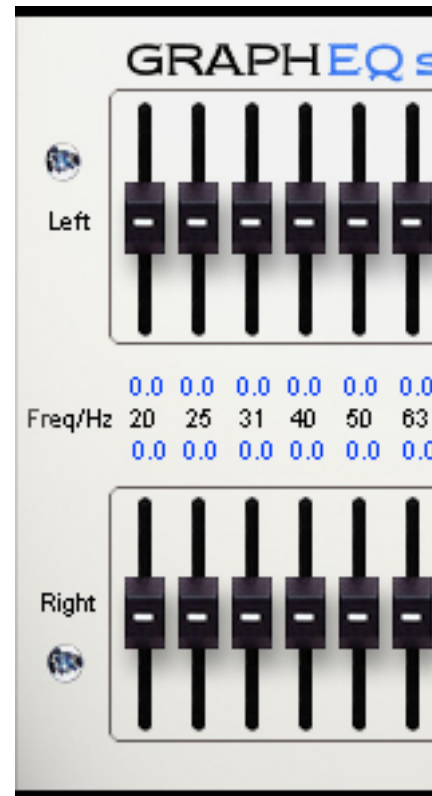
You can manipulate incoming signals over the whole audible frequency range of 20 Hz to 20 kHz.

Each channel has a fader for each frequency band. Moving the fader fully up boosts this frequency band about +12 dB. A double-click resets the fader to the center position at 0 dB. Moving the fader fully down reduces the frequency band about 12 dB.

If the link mode is enabled, corresponding faders of both channels will move together.

Signal LED

A signal LED (green) indicates incoming audio signals (threshold – 60 dB).



Left view of the equalizer (stereo)

Peak LED

The red peak LED flashes if the input or output level exceeds 0.5 dB. In this case, simply reduce the input sensitivity until the peak LED stops flashing.



Signal LED and Peak LED

Link

If the link mode is enabled (Link button is pressed, as shown in the picture), faders of both channels can be moved together. In this mode the settings of both channels are always identical.

Input/ Output (Gain)

Since the equalizer allows some extreme settings (± 12 dB for all 31 bands), it can be necessary to adjust the input sensitivity and output volume accordingly with the two Gain controls. Both allow a range from -60 dB to $+12$ dB.

A signal LED (green) indicates incoming audio signals (threshold -60 dB).

If the red peak LED flashes, simply reduce the input sensitivity until the peak LED stops flashing.

The reduced input level can be boosted accordingly with the output gain control.

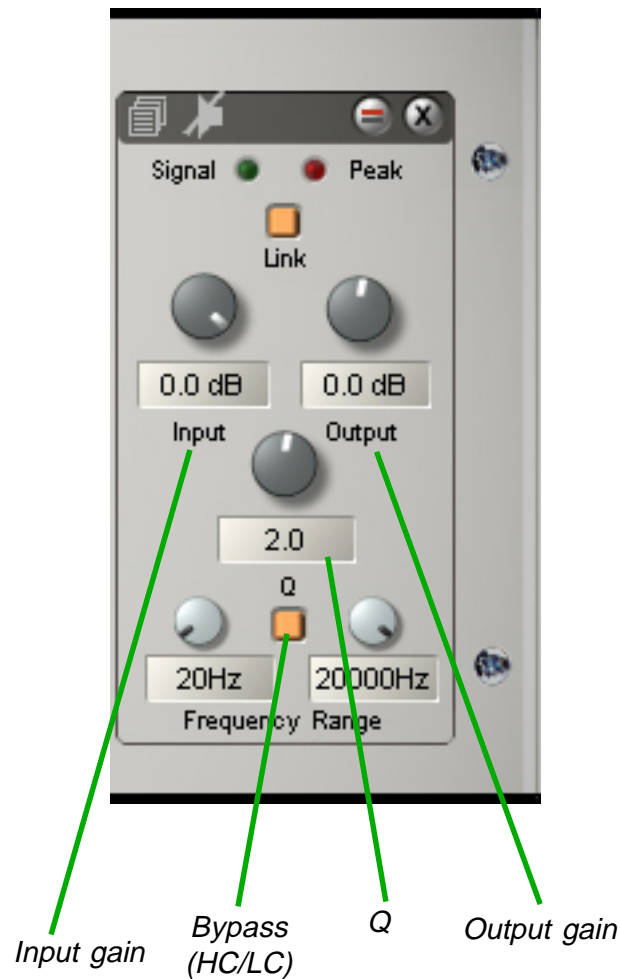


Fig.: Global settings
(Stereo version)

Q value

The filter quality (Q) of the equalizer has a strong influence on the effect of the single bands.

At maximum value ($Q = 5$) the filters work very selectively, i.e. adjacent frequency bands are hardly effected.

At minimum value ($Q = 0.7$) adjacent frequency bands are also effected.

A good value for many situations is normally $Q = 2$.

Note: Normally, graphic equalizers of this type do not provide a Q adjustment. To approximate the behavior of a typical fixed-Q graphic equalizer, set the Q control to a value of 2. Lower Q values yield broader filter bands which may overlap one another and will produce a cumulative effect where they overlap.

Frequency Range

You can control the EQ's frequency range with the highcut and lowcut filters.

Bypass HC/LC

If you do not want the highcut and lowcut filters to have any influence, click the Bypass switch between the two Frequency controls.

Bypass

The bypass function also effects the gain settings. This means you can switch back and forth to compare the equalized and the original signal. It is not necessary to compensate volume differences when comparing both signals.

Presets

As common with all SFP devices, all current settings can be saved as presets.



Fig.: Global settings

On Top, Close

When the On Top option is selected in the basic settings (see prev.) the control panel remains in the foreground and will never be covered by other windows. When not selected, other windows can open over the panel, obscuring it. The Close button removes the control panel from view. To open the panel, double-click on the module representation or click the minimized representation in the Device bar.

Connections

In the Routing Window

Drag & drop the GRAPHEQ into the Routing Window. As soon as the equalizer is loaded, it appears as module there, and as icon at the bottom of the SFP window. Connect the module as required.

Double-click on the minimized icon to open the equalizer surface, or directly on the module itself.

If you want to use MIDI controllers to remote control the GRAPHEQ, an Insert Rack module is required.

Affect

Load a Mixer into your project and open its surface. Drag & drop the GRAPHEQ into an insert slot of the mixer. The equalizer can now be MIDI controlled on the MIDI channel of the Mixer.

Effekt inputs



Effekt outputs

Module view (stereo version)



Minimized view (stereo version)

Effekt input



Effekt output

Module view (mono version)



Minimized view (mono version)

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