

Waves SSL 4000 Collection

SSL G-Equalizer



1. Introduction

The unique sound of Solid State Logic's 4000 Series analogue mixing consoles is sought after worldwide. Engineers of pop and rock music, broadcast transmissions and television post-production value the SSL 4000's flexible dynamics chain as much as the trademark SSL "punchy" sound. Waves and SSL engineers have worked together for over a year to recreate the sound characteristics of the classic SSL 4000 Series E and G Series consoles. Now, those who "mix in the box" can achieve the sound they thought they'd lost when they moved to the digital world.

The SL4000 console was the first mixing desk to incorporate dynamics processing into every channel, as well as a master bus compressor in the console's center section. The ability to 'patch' into the SL4000's master bus compressor and to control its sidechain from an internal sub-mix allowed sound engineers to discover unique, history-making applications of this console technology. Whether used to record instruments such as piano and drums or for final mixing, these innovative console sections - master bus compressor, EQ and dynamics - opened up a new world of opportunities. For years, workstation users have sought this unusual flexibility and signature sound. But conventional dynamics and EQ plug-ins couldn't produce the unique SSL color.

The Waves SSL 4000 Collection is the result of a partnership between Waves Audio and Solid State Logic. These processors faithfully recreate the same EQ and dynamics characteristics which made legendary the SL4000 consoles. Plus, the interface accurately reflects the classic SSL console. Couple all of this with state-of-the art Waves software and you suddenly find yourself working with the same tools that have provided countless hit mixes for the world's best audio engineers.

The Waves SSL 4000 Collection consists of three separate sections:

- The SSL E-Channel
- The SSL 4000 G-Master Bus Compressor
- The SSL G-Equalizer

2. Description of the SSL G-Equalizer

The SSL G-Equalizer is modeled after the rack-mounted version of SSL's G 292 EQ. The SSL G-Equalizer functions much like the E-Series EQ in Waves' SSL E-Channel, so it is very easy to move back and forth between these two equalizers. This four-band equalizer offers marginally greater gain change than the E-Series EQ, and each EQ offers a slightly different equalization curve, so you will need to experiment with each equalizer to discover which best suits your specific needs.

Veteran SSL users will already have their own ideas as to how to best pair the 242 EQ in the SSL E-Channel Strip with the SSL G 292-Equalizer. With a bit of experimentation you will discover how to best use each EQ, but we can offer a few generalizations with which to start:

- In general, the SSL G-Equalizer allows you to create a more extreme EQ than with the E-Channel Strip.
- The E-Channel EQ typically allows for a narrower Q than the SSL G-Equalizer.
- The SSL G-Equalizer affords a bit more gain change than the E-Channel Strip.

Many engineers choose to use the E-Channel's EQ for detail work and mixing, employing the SSL G-Equalizer as a downstream device to shape and give character to the sound. How you choose to use each of these EQs will depend on your program material as well as your own taste and style.

3. SSL G-Equalizer Controls and Indicators



1. **High pass filter** (white knobs on the left) 18 dB/octave, 16 Hz – 350 Hz. Filter in/out switch, with indicator.
2. **Low frequency EQ section** (black knobs) Shelving. Range 30 Hz – 450 Hz. Gain range ± 17 dB.
3. **Low medium frequency EQ section** (blue knobs) Range 200 Hz – 2.5 kHz. Q is continuously adjustable from 0.1 to 3.5. Gain varies from ± 20 dB when Q is set at 3.5, to ± 15 dB when Q is set at 0.1. The $\div 3$ button divides the selected frequency by three (e.g., if you have selected a center frequency of 300 Hz, pressing the $\div 3$ button will result in a frequency of 100 Hz.)
4. **High medium frequency EQ section** (green knobs) Range 600 Hz – 7 kHz. As in the LMF EQ section, Q is continuously adjustable from 0.1 to 3.5. Gain varies from ± 20 dB when Q is set at 3.5, to ± 15 dB when Q is set at 0.1. The $\times 3$ button allows you to multiply the selected frequency by three.
5. **High frequency EQ section** (purple knobs) Range 1.5 kHz – 16 kHz. Gain range ± 17 dB, shelving.
6. **EQ IN** (far right) The **EQ IN** button bypasses the EQ section but leaves the filter in (if engaged.)
7. **Phase reverse** (\emptyset) This button reverses the phase of the input signal.
8. **Master Output** (far right) Master Output fader controls overall output of the processor.
9. **Trim button** Above the meter display is a trim button (12). Pressing the trim button will trim the output level by the amount indicated on the button this trim will bring you to -0.1db in peak which is the full 24bit output level. A positive indication in this mode expresses how much headroom you have remaining. A negative display indicates how much you must reduce your signal to avoid digital clipping.
10. **Analogue on/off.** Classic analogue processors necessarily create more noise and harmonic distortions than modern digital devices. This is, in part, what gives analogue processors their desired sound. By default, all components of the SSL

4000 Collection operate in a mode which enables emulation of the SSL console. However, there may be times when you prefer to use this plug-in without these special attributes. Switching off *Analogue* disables analogue emulation.

SSL G-Equalizer Indicators

Meter section The output meter indicates mono/stereo output level, displayed in dBFS. Note that all parameters for the SSL 4000 Collection processors are expressed in dBu, in keeping with the original analogue SSL 4000 console. Output levels, however, must be expressed in dBFS, since the processor operates in a digital environment.

4. The Waves System Bar

All Waves plug-ins share a common feature, the Waves System Bar, which takes care of most administrative functions you will encounter while working with Waves plug-ins. Since the Waves System Bar is virtually identical on all Waves plug-ins, you will always know how to file, compare, load and copy the parameters of a Waves plug-in, even if you have never before worked with that particular processor.

Commands common to all Waves plug-ins:

- Undo** undoes the last performed action
- Redo** redoes the last undone action, there are 6 levels of undo/redo.
- Setup A/B** toggles between two sets of parameters within the same processor – useful when comparing different parameter settings in order to achieve optimal results
- Copy A->B** copies the current settings to the second setup register
- Save** used for saving presets in the Waves file format (.xps)
There are two options for saving:
 - Save to new file:** creates a new .xps file wherein multiple presets can be saved.
 - Save into preset menu:** saves the preset into the default list of the plug-in.

Pressing the **?** button will open the manual for the plug-in you are using.