
Q-Series
Sahara
Input-driven compression topology
SC HP
OS
VINTAGE

PREFACE

Sahara is a streamlined, musically responsive feed-forward compressor designed for quick workflows and intuitive results; it is the first release in our Q-Series of focused, affordable tools. At its core is the custom "recoil" compression circuit from our acclaimed P19 Igloo, re-voiced here for simplicity and immediacy. Sahara is built for those moments when you need to act fast and mix by feel—without juggling multiple parameters or interpreting millisecond values.

Employing a classic input-driven compression topology, Sahara triggers compression at a fixed internal threshold, so your dynamics are shaped by how hard you drive the input—just like vintage analog gear. Its behavior is musically scaled rather than numerically dictated: there are no fixed attack or release times, only a program-dependent response that breathes with your material. With no threshold control, no millisecond math, and no distractions, you simply push a signal into the Sahara, set your ratio, and go.

Engineered with ultra-low CPU overhead, Sahara was designed as a true channel compressor, ready to run hundreds of instances per session without breaking a sweat. It doesn't try to do everything; it just does compression, and it does it beautifully, delivering the essence of vintage dynamics processing in a fast, modern form. Like its namesake, Sahara shapes the landscape it touches, bringing smooth, flowing contours to the peaks and valleys of your sound.

Ziad Sidawi—Audio Equipment Designer & CEO
Pulsar Modular

Peak input level in dBFS.

Real-time gain reduction LED display

Displays gain reduction in dB with short peak hold for precise readings

Black needle: raw input signal (RMS)

Red needle: output signal (RMS)

Peak output level in dBFS.

Curved White Meter: Displays RAW input + Input knob gain

Vertical meters: real-time peak level of in/out signal

RMS input and output level in dBFS

Controls compression amount and knee; gentle for smooth leveling, higher for punchier control

Controls how quickly peaks are compressed; faster = tighter, slower = punchier

Controls how quickly compression eases off; Fast = more reactive; Slow = smoother

Drive the input level into the internal threshold. Press the SHIFT key to compensate with the output knob

Blends compressed & dry signals

HPF for the detection circuit; reduces LF triggering

Adjust post-compression level to compensate for gain reduction

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Input

Controls how hard the signal is pushed into the Recoil compression circuit; increasing Input directly increases the amount of compression.

> Users who want “no compression” can simply trim the input down, which is intuitive once they realize Sahara is designed this way.

Ratio

Sets the compression ratio while also dynamically adjusting the knee curve. Lower ratios yield smoother, more transparent control (soft knee); higher ratios produce tighter, more assertive compression (hard knee).

Output

Adjusts the post-compression level. Use it to compensate for gain reduction and match output volume with the dry signal.

Sidechain HPF

Applies a stepped HPF to the signal feeding the compressor’s detection circuit. This prevents low-frequency content from triggering unnecessary gain reduction. Useful for preserving punch and preventing pumping.

Mix

Blends the compressed signal with the dry (unprocessed) signal using a Sin 6 dB mix rule for natural loudness perception. At 0% Dry, you hear only the compressed signal; at 100% Dry, only the raw input signal is heard. Useful for parallel compression and subtle dynamic enhancement.

Attack: Controls how quickly the compressor responds to incoming peaks. A faster Attack reduces transients more aggressively, while a slower Attack lets transients pass through, producing a punchier sound.

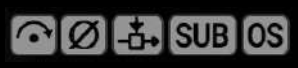
Release: Determines how quickly the compressor stops compressing after the signal drops below the threshold. Sahara's Release is program-dependent: higher settings (slow) make the compression linger longer, smoothing the level, while lower settings (fast) release more quickly, making the compression more reactive.

GR Meter (LEDs)

A 10-segment LED meter (plus 1 "off" state) that displays up to -20 dB of gain reduction. The scale emphasizes resolution in the 0–6 dB range for musical feedback during typical use.The gain reduction (GR) meter uses a 10-LED display to show the real-time amount of compression. A separate value window displays the current gain reduction in dB and briefly holds the peak value before returning to real-time tracking, allowing for precise readings of transient compression. The LED meter updates instantly for an immediate visual response, while the value window gives you a short peak hold for easier monitoring.

A/B preset slots let you store and compare two different preset or parameter settings within the same session. Use them to quickly switch between variations, and copy settings from A to B or B to A for further adjustments. These are temporary preset holders and they are not saved within the preset.

Sahara being an input-driven compressor, both parameters, attack and release, are "musical" rather than fixed-time, adapting dynamically to the signal.



The bypass button allows the unaffected audio signal to flow through without processing.

Dry polarity inverts the unaffected dry audio signal.

The external sidechain button enables the use of an external source as the signal feeding the compression detector circuit. Consult the documentation for your DAW for external routing options and instructions.

The SUB button bypasses the plugin's internal high-pass filter (HPF), which is fixed at 20 Hz. This prevents the filter from attenuating frequencies below the cutoff, preserving sub-bass content that contributes to deep low-end energy. Use this feature to maintain the powerful bass foundation essential in genres like electronic music, hip-hop, or dubstep.

The Hammer circuit delivers a halo effect around the audio. It is frequency dependent and is optimized for voice frequencies.

OS OS Oversampling options apply to the whole signal. When OS is off, Sahara operates with zero latency.

VNT VNT (vintage) mode operates at double the host sample rate, applying smooth filters to the upper frequencies, creating a classic rolled-off character. It intentionally leaves aliasing signals unfiltered, enabling a blend of vintage smoothness with modern inharmonic distortion.

INT INT (intelligent) mode operates at double the host sample rate, scanning the full frequency spectrum and attenuating aliasing signals. This advanced filtering heavily depends on the frequency and intensity of the signal.

HD HD Does 8x for 44.1, 48; 4x for 88.2, 96; and 2x for 192 kHz.

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A/B enables temporary storage (not stored within the preset) to facilitate quick comparisons between A and B. Click on the A | B area to alternate between the two (no need to move the mouse). The arrow button allows for copying the active side to the inactive side. Presets can also be loaded into either of the A or B placeholders for comparison.

Browse, load and save presets using the Preset Browser. Save over the current preset by clicking the left save icon or create a new preset with the right save icon. A red dot present on the left save icon indicates the preset has been changed.
Modified factory presets will be overwritten when updating the software unless the install presets option is deselected. User-created presets with different names than the provided preset names will not be replaced or deleted.

About: Displays the version number and the expiration date.
License Status: Authorize/deauthorize your plugin.
User Guide: Open thae user guide.
Set Default Size: This global setting defines the current GUI window size as the default for all new instances.

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Sahara Tips

1. Preview Presets at Matching Levels
Hold SHIFT and adjust INPUT until input and output needles overlap. This ensures you hear the preset as intended.

2. Understand the Hammer Icon
Represents a frequency-dependent circuit optimized for vocals. Can work on other instruments—experiment.

3. Fixed Threshold Awareness
If the plugin compresses too much on insertion, hold SHIFT and lower the INPUT knob. Compensate for level changes with the OUTPUT knob to maintain your mix balance.

4. Parallel Compression Made Simple
Sahara is a peak compressor capable of very high compression ratios (up to 40:1). Use the MIX knob to blend the compressed signal with your dry signal for effective parallel compression.

5. Make Friends with the Sidechain HPF
Dramatically affects compression behavior. It's especially useful for taming low-end energy or making the compressor respond more musically on bass-heavy material.

Sahara Tricks

1. High Ratios Subtle Effect
Difference between 20:1 and 40:1 is subtle but adds a perceptible “hardening” to the sound.

2. Custom Sidechain Filtering
For advanced control, use the External SC icon to route a custom sidechain. This allows for creative shaping of what triggers the compressor.

3. Program-Dependent Attack & Release
Attack and release times in Sahara are program-dependent, giving natural behavior across sources. The More/Less range (fast/slow) is wide, allowing for creative and musical shaping of dynamics.

4. Automate INPUT for Dynamic Compression
Automate INPUT for dynamic compression: Hold SHIFT and adjust the INPUT knob over time to vary how hard Sahara compresses a signal, while keeping the output level compensated with the OUTPUT knob. This gives a “gain ride” effect without changing the fixed threshold.

5. Additional Tricks

- Use MIX creatively: Don’t just parallel compress—try blending subtly to retain dynamics while adding punch.
- Layering: Sahara works well on buses or groups; consider parallel compressing drums or vocals to glue your mix.
- Visual Feedback: Keep an eye on the needles—the INPUT/OUTPUT match trick also helps train your ears on true compression behavior.

Modifier keys

Temporarily bypass a parameter
CTRL+ALT (Windows) or CMD+OPTION (macOS) + Mouseover:

- INPUT (defaults to 0).
- MIX (defaults to WET).
- S/C HPF (defaults to OFF).

Cycle between options
Left-Click for forward, Right-Click for backward.

- OS VINT, INTEL, HD

Gain compensate
SHIFT

- INPUT (countered by the OUTPUT knob)
- OUTPUT (countered by the INPUT knob)

Enable parameters for automation (Pro Tools only)
Control + command + option (^ + ⌘ + ⌥) on macOS or CTRL + ALT + START on Windows.

Fine adjustment of knobs, sliders and other controls
Hold control (^) on macOS or CTRL on Windows, then click and drag. Alternatively, right-click and drag without a key modifier

Return controls to their default state
Press option (⌥) on macOS or ALT on Windows and left-click. Alternatively, double-click without a key modifier.

Managing Presets

Basics

If the option to install presets is not deselected during installation, the installer will overwrite the factory presets. User-created presets will remain unaltered. To safeguard any modifications made to factory presets and preserve them during an update, be sure to deselect the install presets option when running the installer. Also, remember to save your own presets with different names using the “Save as” option located to the right of the preset browser.

Backing Up Presets

Presets can be backed up and restored using your operating system file manager. Simply perform a copy/paste of either individual preset files or the full presets folder to a backup location of your choosing. The presets folder can be found in the following locations:

For Windows
‘C:\Users\Public\Documents\Pulsar Modular\Q Sahara\Presets’

For macOS
‘/Users/Shared/Pulsar Modular/Q Sahara/Presets’

Uninstalling Q Sahara

For Windows

- VST3: 'C:\Program Files\Common Files\VST3\Pulsar Modular', locate the 'Q Sahara.vst3' folder and delete it.
- AAX: 'C:\Program Files\Common Files\Avid\Audio\Plug-Ins\Pulsar Modular', locate the 'Q Sahara.aaxplugin' folder and delete it.
- Shared: 'C:\Users\Public\Documents\Pulsar Modular', locate the 'Q Sahara' folder and delete it. This folder contains the user guide and presets. If no other folders exist under 'Pulsar Modular', this can be deleted as well.

For macOS

- AU: '/Library/Audio/Plug-Ins/Components', locate the 'Q Sahara.component' file and delete it.
- VST3: '/Library/Audio/Plug-Ins/VST3/Pulsar Modular', locate the 'Q Sahara.vst3' file and delete it.
- AAX: '/Library/Application Support/Avid/Audio/Plug-Ins/Pulsar Modular', locate the 'Q Sahara.aaxplugin' folder and delete it.
- Shared: '/Users/Shared/Pulsar Modular', locate the 'Q Sahara' folder and delete it. This folder contains the user guide and presets. If no other folders exist under 'Pulsar Modular', this can be deleted as well.

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Please kindly report any errors or omissions in this user guide to psupport@pulsarmodular.com

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