

LUSHTRAQ 1.0

BY FLANDERSH.TECH



USER MANUAL

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Introduction

Thank you for choosing Lushtraq. We appreciate your support and hope this tool helps make your creative ideas lush. This manual will guide you through setup, controls, and tips to get the most out of your experience.

Lushtraq is a precision-crafted multiband dynamics and tone-shaping tool, combining tailored compression, analog-style saturation, and intelligent workflow enhancements.

Each band features a uniquely tuned signal path—custom compressors, saturation curves, and wide-knee dynamics—carefully matched to its frequency range for musical, natural results. Minimal-phase crossovers ensure smooth transitions with minimal phase distortion, preserving the integrity of your mix.

Take control with per-band gain reduction meters, external sidechain inputs, and a global tape-style master drive for cohesive warmth and punch. At the core is a built-in AI-powered Smart Assistant, offering instrument-specific and mix-ready modes that suggest optimal settings for faster, more confident decisions. Whether you're enhancing individual elements or refining a full mix, Lushtraq delivers polished, analog-inspired results with modern control.

System Requirements

- Microsoft Windows 7 or higher.
- Modern processor with SSE2 or higher.
- 64-bit VST3 compatible host.

Installation

Please read before installing

By installing or using this plugin, you agree to the terms outlined in the included End User License Agreement (EULA). We recommend reading the EULA in full before proceeding.

Installation on Windows

- 1 Download and unzip the plugin files.
- 2 Copy the files to the following location: `C:\Program Files\Common Files\VST3`
- 3 Restart your DAW. The plugin should now appear in your plugin list.

Quick start

1. Start by adjusting each instrument's input level in the masterbus so that the full signal sits comfortably below 0 dB. Aim for -6 dB to -12 dB peaks. This gives your dynamics processors and saturators room to breathe.
2. If compression is needed, start with that. Adjust threshold and ratio for each band, using default crossover range, until the gain reduction meter shows modest control (typically 2–6 dB of GR) and the advice indicator is green. Don't overcompress — aim for dynamic consistency, not flatness.
3. Use the input level controls for each band to shape the tonal balance. This works a lot like EQ, but with loudness context:
 - a. If it is grey, boost low band input.
 - b. If it is red, reduce high band input.
 - c. Adjust until you get green or neutral feedback per band.
4. Add warmth or texture as needed using saturation controls.

You can go subtle or aggressive but check the advice indicators — if a band starts showing red, dial it back a bit.
5. Once each instrument is tuned in isolation, play your full mix. Thanks to consistent loudness balance across bands and instruments, you'll likely hear:
 - a. Clearer separation.
 - b. Less masking.
 - c. A more polished and mix-ready sound.

Parameter Descriptions

Bands



Each band is equipped with its own input level, mute, saturator, compressor, and Smart Assistant—giving you complete control and clear feedback at every step. Details on each feature can be found below.

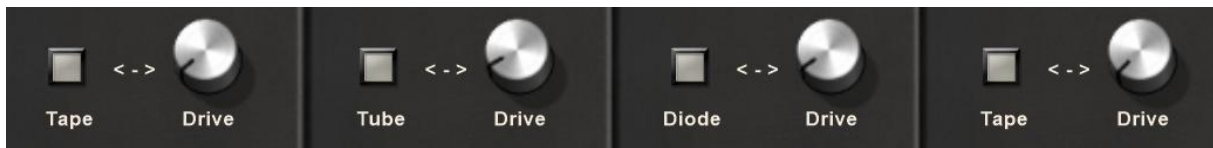
General



Input level - Adjusts the signal level entering the band. The Smart Assistant actively monitors this and may suggest raising or lowering the input level based on the band's loudness profile—helping you find the sweet spot faster.

Mute - Silences the band completely. Perfect for soloing other bands, isolating problem areas, or carving out space during mixing decisions. Use it to quickly A/B what each band contributes to the overall sound.

Saturators



Each band features one of three saturator types - *tape*, *tube*, or *diode* - carefully chosen to suit its frequency range. While the control parameters remain consistent across all bands, the underlying saturation style is tailored for optimal response:

- **Tape saturation** is used on the low and high bands, adding warmth and rounding. Higher drive increases low-end warmth and softens transients. On the high band, more drive gently rolls off harshness. *Ideal for glue, smoothness, and analog flavor.*
- **A tube-style saturator** shapes the low-mid band, delivering rich harmonics. Higher drive produces stronger even-order harmonics, enhancing warmth and body. *Great for thickening guitars, synths, and vocals without sharp edges.*
- **A diode saturation circuit** is applied to the mid-high band for focused edge. Higher drive introduces sharper transients and adds upper harmonic content. *Enhances presence for snares, vocals, or lead synths.*

Tape; Tube; Diode - Turn the saturation on or off, on each band.

Drive - Controls how much saturation is applied to the signal.

Compressors

Each band features one of three compressor types - *RMS*, *feedback*, or *peak* - carefully chosen to suit its frequency range. While the control parameters remain consistent across all bands, the underlying compression style is tailored for optimal response:

- RMS compression is used on the low and high bands for smooth, musical control.
- A feedback compressor shapes the low-mid band, offering dynamic responsiveness.
- A peak compressor is applied to the mid-high band for fast, transient-focused control.

Threshold - Sets the level at which compression starts. Range from -60 to 0 dB.



Ratio - Controls how much compression is applied once the signal exceeds the threshold.

Range from 1:1 (no compression) to 10:1 (gentle limiting).

Attack - Determines how quickly the compressor responds once the signal crosses the threshold. Range from 0.5 ms to 50 ms.

Examples:

Fast attack = tighter control, tames transients (e.g., vocals, bass).

Slow attack = keeps punch and impact (e.g., drums, guitars).

Release - Controls how quickly the compressor stops compressing after the signal drops back below the threshold. Range from 100 ms to 1000 ms.

Examples:

Fast release = more transparent, energetic feel.

Slow release = smoother, glue-like sound.

Knee - Defines how gradually compression is applied around the threshold.

Range from 0 to 50 dB.

Examples:

Hard knee = sudden, snappy compression.

Soft knee = smooth, musical transitions.

Wide knees (e.g., 20–50 dB) are great for subtle levelling.

Makeup Gain - Restores level lost during compression. Range from 0 to 12 dB.

External Sidechain - Lets the compressor respond to an external signal instead of the one it's compressing. Make sure sidechain filtering and routing are set up properly in your DAW.

Meter – Visualizes the input level, how much the compressor is reducing the signal level in real time (GR=Gain Reduction), and output level. This is controlled by the switch between In, GR, Out.

Master Section



The Master section is your digital control center. It brings together precision crossover filters, master input and output level control, rich console-style tape saturation for final glue and warmth, and the powerful Profiles section—home to the Smart Assistant and your preset library.

Crossover Filters



The three **crossover knobs** define the cutoff frequencies between bands, giving you precise control over how your audio is divided across the spectrum. Behind the scenes, a minimal-phase filter ensures smooth, phase-coherent transitions without introducing unwanted smearing or coloration.

A real-time visual graph, complete with a spectrum meter, displays the crossover regions and their placement across the frequency spectrum—helping you dial in your splits with confidence and clarity.

Examples:

General-Purpose Mix: Low–Low Mid: 120 Hz | Low Mid–Mid High: 700 Hz | Mid High–High: 5 kHz

Vocal Processing: Low–Low Mid: 150 Hz | Low Mid–Mid High: 1 kHz | Mid High–High: 6.5 kHz

Masterbus



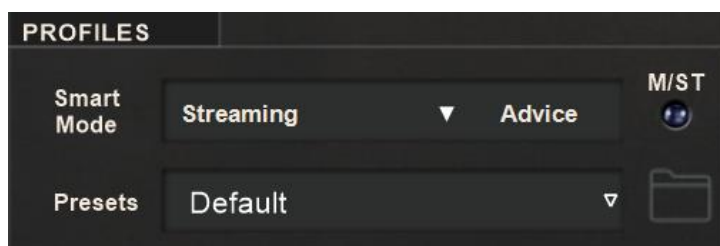
Input - Controls the overall signal level entering the plugin. Range from -18 dB to +12 dB. Use it to drive the entire processing chain—including compression and saturation—more or less aggressively. Push it for extra punch, or pull back to maintain headroom and subtlety.

Tape - Toggles the master console-style tape saturation.

Tape Drive - Adjusts the intensity of the tape saturation effect. Higher settings increase harmonic density, low-end fullness, and transient rounding. Use it to add weight and analog warmth to sterile or overly digital mixes.

Output - Sets the final output level after all processing. Range from -18 dB to +12 dB. Use this to match loudness when A/B comparing, avoid clipping, or balance your signal before the next stage in your chain. It's your final gain trim for controlled, polished delivery.

Profiles



AI-Powered Smart Assistant

Lushtraq features an AI-powered Smart Assistant that gives you real-time, per-band advice based on the loudness of your audio — not just how loud it spikes, but how loud it actually feels to the listener over time. While traditional meters respond to fast transients or peak levels, this assistant focuses on perceived loudness, which is more closely tied to how our ears interpret musical balance. This distinction is important:

A signal can have high peaks but still sound underpowered or hollow in loudness terms.

Or it can be relatively quiet in peak level, but the assistant may show "Too hot" if the signal is dense, sustained, or overly compressed — all of which increase perceived loudness.

This is why the Smart Assistant is so valuable: it helps you see your signal in context, not just by numbers, but by what they mean for mixing and sound design.

As your track plays, the assistant analyzes each band continuously and gives simple, color-coded advice like “Too quiet,” “Nice balance,” or “Bold and hot.” In default it reacts before any compression, gain, or saturation is applied — so you get an honest, unprocessed look at what’s happening. This allows you to make smarter decisions about gain staging, tonal balance, or compression settings before applying any processing. You’ll find this feedback at the top of each band — making it easy to see which parts of your mix need attention at a glance.



Smart Modes are available in the Profiles section, providing templates tailored for different instruments, genres, and platforms. Within each Smart Mode, you can also choose how advice is presented—whether through standard **terms** (ideal for precise, descriptive feedback), to-the-point **advice**, or casual **slang**.

Behind the scenes, Lushtraq analyses loudness using either momentary (400 ms) or short-term (3 seconds) detection, depending on the **M/ST button**. *Momentary (M) mode* offers quicker, more detailed feedback for fast-changing sounds, while *short-term (ST) mode* gives smoother guidance over longer musical phrases. Detection is always based on thresholds specific to the chosen Smart Mode—helping you stay stylistically on track.

You may see one of these four advice levels during analysis:

- **Boost Input:** The signal is too quiet or underdeveloped for this source. This means the level in the selected band is significantly below what's typical for this type of instrument, genre, or source. It may be missing key frequencies or simply too low in volume to contribute

effectively in a mix. Try increasing gain or layering to enhance presence. Some instruments don't use all bands. A "Boost Input" reading in an unused range (e.g., highs on a bass) is normal.

- **Comp/Sat:** The signal is present, but lacks control, consistency, or clarity. It's not too quiet — but it's not yet balanced or mix-ready. This often points to a need for compression, saturation, or tonal shaping to bring the sound into focus.
- **Do nothing:** The signal is well-balanced and dynamically appropriate.
- **Limit/Trim:** The signal is too loud, overly compressed, or dynamically unnatural. This may indicate clipping, distortion, or a lack of dynamic contrast. It could also mean that a specific frequency band is overpowering, leading to tonal imbalance. Try reducing level or softening dynamics.

Presets Manager

Lushtraq includes a full-featured Preset Manager located within the Profile section. You can load and save your own presets, and Lushtraq also comes with a curated selection of starting points.

These presets offer a quick way to explore the plugin's capabilities, but because they are static, it's important to monitor the Smart Assistant and adjust the input level to match the level of the audio you're working with.

End User License Agreement

1. General

- 1.1 This agreement ("EULA") is between you and Flandersh Tech.
- 1.2 It covers your use of the Lushtraq software ("Software"), whether you got it directly from us or through one of our authorized partners.
- 1.3 By clicking "Download," installing, or using Lushtraq, you agree to the terms of this agreement.
- 1.4 If you accept on behalf of a company or organization, you confirm that you have the authority to do so. (If not, or if you don't agree with the terms, please don't install or use Lushtraq.)
- 1.5 This agreement applies only to the Software and any updates, add-ons, or online services we provide—unless other terms come with them.

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- 2.1 This Software is provided as "careware." By using it, you agree to contribute, with humility and goodwill, to positive social actions of your choice aimed at improving human relationships and society.
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7. Governing Law

- 7.1 This EULA agreement, and any dispute arising out of or in connection with this EULA agreement, shall be governed by and construed in accordance with the laws of Norway.

8. Third-Party Software

- 8.1 This Software is VST Compatible. VST is a registered trademark of Steinberg Media Technologies GmbH.

