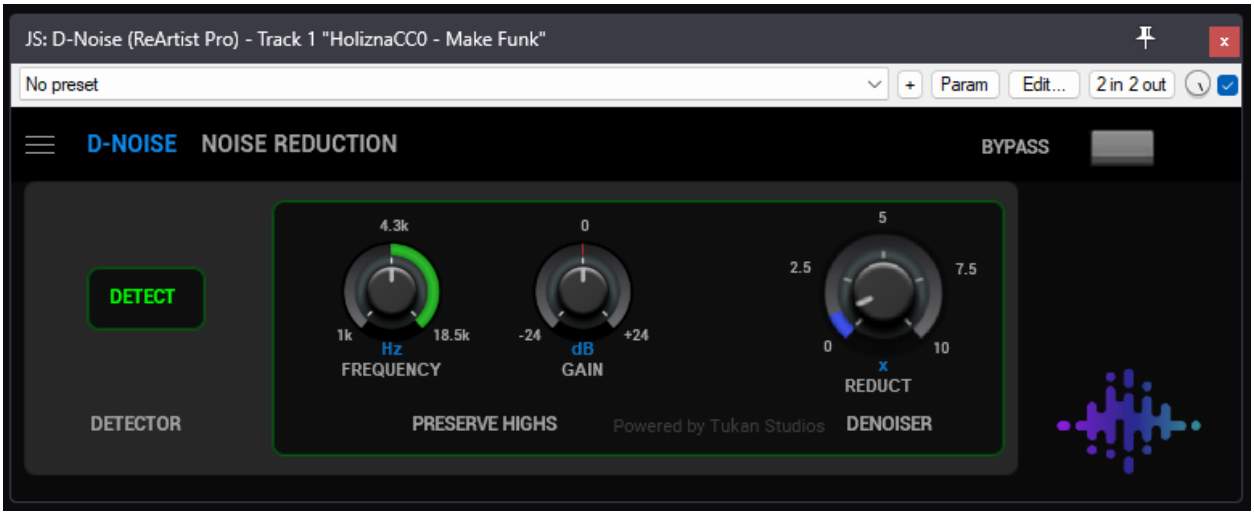

D-Noise

Noise Reducer

Description

D-Noise is a dedicated denoiser plugin that combines FFT spectral analysis techniques with a filter to **preserve or adjust** high frequencies. The main objective is to identify the noise (by recording its "footprint" or profile) and then attenuate it, all with the possibility of enhancing or suppressing the treble as necessary.

Some highlights:

- **Detect mode** to learn the noise profile.
- **Adjustable noise reduction** that is selectively applied in the spectrum.
- **High Shelf filter** to compensate for loss of brightness or control excesses in the treble.
- **Internal latency** (pdc_delay) compensation of 16k samples (16384), automatically handled by REAPER.
- **Integration with internal menus** that allow you to define whether the plugin is applied during playback, recording or just paused, as well as the possibility of "grouping" instances.

Internally, D-Noise uses **overlap-add** with **Hann windows**, applying Weiner filtering on each FFT block. To do this, the plugin manages two input buffers (tiles), two output buffers and a special buffer where the maximum spectral power of the detected noise is stored.

Parameters

In the GUI the following sliders **and main buttons** are visible (and in the code are confirmed):

1. **Mode**
    - **Range**: *0 = Denoise*, *1 = Detect*.
    - *Detect* (1): The noise profile is recorded in the internal buffer.
    - *Denoise* (0): The captured profile is used to attenuate the noise.
2. **Noise Reduction**
    - **Range**: 0.0 to 10.0.
    - Low values mean more subtle attenuation; high values, a more aggressive noise reduction (with greater risk of artifacts).
3. **High Freq**
    - **Range (internal):** Approx. 60 Hz ~ 98 kHz on the scale.
    - Defines the center frequency of the *High Shelf* used to **preserve or trim** the tweeter band after (or before) noise reduction.
4. **High Gain**
    - **Range**: -24 dB to +24 dB.
    - Adjust the gain of the *High Shelf filter* to compensate for any loss of brightness when reducing noise, or to attenuate if there is excess treble.
5. **Bypass**
    - If Bypass is enabled, the plugin lets the signal through without noise reduction or filtering in the "Preserve Highs".

In the Menu

1. **Processing**
    - *On Playback / On Recording / On Stop*
    - Allows you to enable or disable processing based on the transport status in REAPER (playback, record, or stop).
2. **Groups**
    - Up to 16 groups.
    - You can "join" this plugin to an existing group or create a new one. When multiple D-Noises share a group, adjusting them together makes it easy to configure unified noise across multiple tracks.

3. **Scaling**
    - *Automatic Scaling / No scaling*
    - Control the zoom in the interface, adapting the GUI to screens of different resolutions.
4. **Show Info/Help**
    - It shows a box with information and tips for use.
5. **Delete Group**
    - Option to release a specified group, if the "link group" function is being used.
6. **Reset/Sample Rate Messages**
    - In case the sample rate (Sample Rate) changes, the plugin is put to bypass. An additional prompt to *reset* the noise profile may appear here if you want to resume the reduction on the new SR.

Usage Tips

1. **Learn Silent Noise**
    - Set *Mode* to *Detect* and play only the section where the noise is heard without a useful signal (if possible). This ensures a more accurate profile.
2. **Adjust the Reduction Sparingly**
    - Start with *Noise Reduction* in intermediate values (1-3) and gradually increase. Values that are too high can lead to "aquatic artifacts" or excessive loss of texture.
3. **Compensate Brightness with High Shelf**
    - After the reduction, if you notice that your signal has been turned off, increase *High Gain* (slider4) by 2-4 dB.~~6 dB. Si en cambio los agudos se sienten muy duros, atenúa en -2~~
4. **Check on critical passages**
    - Make comparisons (bypass ON/OFF) in different sections of your mix: the very soft parts, transitions, etc. Make sure the noise is attenuated without removing important details.
5. **Retrain Noise if the Environment Changes**
    - If the noise changes or the microphone changes position, go back to *Detect* to update the profile. Using an outdated profile reduces effectiveness.

Acknowledgments

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Summary

All in all, **D-Noise (ReArtist Pro) – Noise Reducer** is a powerful tool for those looking to **clean** up ambient noise or hiss recordings, with a friendly "Detection" procedure followed by "Reduction". Its integrated **High Shelf** allows you to recover the clarity of the treble or control it in case of saturation. Support for different processing modes (depending on playback/recording status) and the option to group instances make it extremely versatile. With moderate settings and a well-captured noise profile, **D-Noise** delivers highly effective results, becoming a valuable addition to REAPER mixing and post-production sessions.