D-MS

Stereo & Mid/Side Compressor

Description

D-MS is a **compressor that can operate in both Stereo and Mid/Side modes** for detailed control of the stereo field. And

This plugin offers:

- **Three main modes**:
    1. **Stereo** (processes L and R together).
    2. **Dual** (processes L and R separately, each with its own settings).
    3. **M/S** (converts the signal to Mid/Side, compresses each component, and returns it to stereo).
- **Independent Threshold, Ratio, Attack, Release, and Knee controls** for each channel or band (depending on mode selected).
- **Input/Output section** and GR (gain reduction) meters.
- **Display** of the waveform (Scope) and the compression curve (plots), plus a context menu for GUI settings.
- **Bypass alternation** for each band or channel (Left/Mid and Right/Side) separately.

The Mid/Side capability is extremely useful for tweaking the stereo width of mixes, allowing the "Mid" channel (center part and shared frequencies) to be compressed differently from the "Side" channel (stereo or "spatial" information).

Parameters

1. **Threshold**
    - Range: -40 dB to 0 dB.
    - **Function**: Adjusts the compressor threshold level. Signals that exceed this level will be attenuated according to the Ratio and the rest of the parameters.
2. **Ratio**
    - Range: 1:1 to 15:1 (internally 1 to 15).
    - **Function**: Determines the amount of compression to be applied after the threshold is exceeded. High values produce more aggressive compression.
3. **Attack**
    - Range: 0.1 ms to 50 ms.
    - **Function**: Controls the speed with which the compressor reacts and reduces the gain when the signal exceeds the Threshold. A short Attack captures transients immediately; with long Attack, the compressor reacts more slowly.
4. **Release**
    - Range: 10 ms to 1000 ms.
    - **Function**: Determines the time it takes for the compressor to return to the normal gain state after the signal no longer exceeds the threshold. With very long values, it can keep the signal compressed for a long time.
5. **Knee**
    - Range: 0% to 100%.
    - **Function**: Defines the transition around the threshold:
        - **Hard** Knee = abrupt transition.
        - **High** knee (Soft Knee) = more gradual transition.
6. **Output**
    - Range: -24 dB to +24 dB.
    - **Function**: Adjusts the output gain of each band/channel to compensate for compression.
7. **Comp On**
    - Type: On/Off (0 or 1).
    - **Function**: Activates or deactivates the individual compressor (left or right, or mid or side) independently.

8. **Mode**
    - Values:
        - 0 = **Stereo**: Processes L and R with the same settings.
        - 1 = **Dual**: allows you to adjust L and R independently.
        - 2 = **M/S**: Converts the signal to Mid (L+R) and Side (L-R) to compress each component separately.
    - **Function**: Defines how the two sets of controls (Left/Mid and Right/Side) are handled.
9. **Scope**
    - Type: On/Off (0 or 1).
    - **Function**: Toggles the display of the waveform at the top of the GUI (in/out) and the compression curve.
10. **Window Size**
    - Range: 1 ms to 8000 ms (0.001 s to 8 s).
    - **Function**: Adjust the temporal duration of the *scope* (sampling window in the waveform view).
11. **Zoom Gain**
    - Range: -24 dB to +24 dB.
    - **Function**: Amplifies or attenuates the display of the signal in the scope (does not affect the audio, only the graph).
12. **RMS Window**
    - Range: 1 ms to 1000 ms.
    - **Function**: Adjusts the RMS window if the plugin applies any internal RMS calculations for display or compression (depending on the exact implementation).
13. **Scaling**
    - Controls the scale factor (zoom) of the interface when working with different resolutions.

In the Menu

1. **Scope**
    - Allows you to select different window sizes for the waveform (500 ms, 1 s, 2 s, 4 s, 6 s, 8 s).
    - Option to reset the view (empty the waveform).
2. **Scaling**
    - Adjust the GUI scale (50%, 75%, 100%, 150%, 200%, or "Free" for automatic resizing).

3. **Show Info/Help**
    - It displays a pop-up window with basic usage information, mouse shortcuts (Shift for fine-tuning, Ctrl/Cmd for reset), etc.

4. Usage Tips

1. **Take advantage of Mid/Side for stereo width**
    - In M/S mode, compress the Mid (center) to control voice or core elements, and a lower ratio or higher threshold on the Side to maintain spatiality.
2. **Make subtle use in Dual mode**
    - If you have problems balancing between L and R channels, Dual Mode allows you to compress each one independently. Be careful not to overdo it or the stereo image could "dance."
3. **High knee for music mixing**
    - A higher knee (Soft Knee) smooths out the compressor action, resulting in more musical control, especially in signals with a lot of dynamics.
4. **Check the Input/Output and GR meters**
    - Look at the difference between the input (IN), gain reduction (GR), and output (OUT) meters to make sure the compression is as desired.
5. **Toggle between Scope On/Off**
    - If you need CPU or would prefer to see the compression curve, turn off the Scope. Turning it on, on the other hand, helps you visualize transients and waveform before and after compression.

5. Acknowledgments

This plugin is based on technology and libraries created by Tukan Studios. Special thanks are due to John Matthews, whose exceptional work served as the basis for the plugin series. On that basis, **Edu Serra** has added and modified features of the design of the revamped graphical interface and the visual style of ReArtist Pro.

6. Summary

In conclusion, **D-MS COMP (ReArtist Pro)** is a highly versatile **stereo and Mid/Side compressor**. With the ability to operate in **Stereo, Dual, or M/S** modes, a full set of controls for each channel or band, and a graphical interface with waveform display and compression curves, it offers deep control over dynamics and stereo amplitude. Whether for subtle adjustments in mixing or creative manipulation of the Mid/Side signal, this plugin becomes an **essential tool** in any audio processing chain.