
# Distress

**Description**

Distres is a digital emulation of the renowned Distressor analogue compressor, known for its ability to deliver versatile musical compression. This plugin not only tries to replicate the dynamic and warm character of the original hardware, but also incorporates additional features that expand its creative and technical potential. Its features include:

- **High-pass filters (HPF) in detection and audio:** These allow you to eliminate unwanted components (such as noise or unmusical low frequencies) at different points in the process.
- **Detection Modes:** The peak-based detection method can be selected to accurately capture transients.
- **Compression Ratio Selection:** With options that emulate classic ratios (e.g., 1:1, 2:1, 3:1, 4:1, 6:1, 10:1, 20:1) and even a "limit" mode for extreme compression.
- **Input and Output Gain Control:** Allows you to adjust the signal calibration before and after processing to achieve the desired level.
- **Timing adjustment:** Attack and release time controls make it easy to set how quickly the compressor responds to transients and releases the signal.
- **Compression Type Selection:** A parameter called "Disttype" provides internal variants of the circuit, allowing you to modify the processing character.
- **Forward Mode:** A function that modifies the processing chain to obtain alternative responses in the detection or handling of dynamics.
- **Adjustable Headroom:** Allows you to define the headroom before compression is activated, affecting the action threshold.
- **Special Operating Modes:** An option to activate a "Bug Version" of the processing, as well as a "Card Mode" to emulate different types of circuits.

- **Interactive Feature:** An interactive mode that dynamically modifies the relationship between attack and release times and other parameters, based on user interaction.
- **Side chain and side chain listening:** Allows an external signal to control compression and provides the ability to monitor that signal.
- **Internal Scaling:** A "Scaling" control that internally adjusts compressor calculations to adapt its response to different signal levels or sound preferences.
- **Link Group Features:** Menu options to group and synchronize parameters between multiple instances of the plugin, facilitating automation and maintaining consistency in complex projects.

**Parameters**

The controls visible in the **Distres** interface are as follows:

- **HP-Detect:** Enables or disables a high-pass filter applied to the detection signal to prevent unwanted low frequencies from influencing the compressor action.
- **HP-Sat:** Allows you to activate a high-pass filter on the audio signal, cleaning up the input and preventing unwanted components from altering dynamic processing.
- **Band-Detect:** Selects the peak-based detection method, essential for capturing transients and defining compressor response.
- **Ratio:** Defines the compression ratio. Different ratios are offered ranging from soft values to "limit" modes for extreme compression.
- **Input:** Adjusts the level of the signal before it is processed, allowing you to compensate for variations in the source or prepare the signal for optimal compression.
- **Output:** Controls the final level of the signal after compression, making it easy to integrate into the mix.
- **Attack:** Determines how quickly the compressor acts on transients. A fast attack aggressively captures spikes, while a slower one allows for a more natural response.
- **Release:** Adjusts the compression release time, affecting signal recovery and the possibility of generating pumping effects.
- **2nd, 3rd-Sat:** Allows you to choose between different "types" or internal variants of the circuit, modifying the character of the compression.
- **Bypass:** Allows you to activate or deactivate the compressor processing, making the signal transmit without modifications.
- **Forward Mode:** Selects an alternate processing path that can modify the way transients are detected and processed.
- **Headroom:** Adjusts the available level range before compression is triggered, influencing the compressor's threshold and response.
- **Bug Version:** Enables an alternate mode of processing, intended to emulate experimental or compatibility behaviors.

- **Interact:** Enables an interactive mode in which certain parameters (such as attack and release times) are dynamically adjusted based on user interaction.
- **SC Listen:** Allows you to listen to the control signal of the side chain, which is useful for adjusting and checking the source that is modulating the compression.
- **Side Chain:** Enables or disables processing based on an external signal that controls compression, ideal for ducking techniques or for highlighting vocals in a mix.
- **Scaling:** Adjusts an internal scaling factor that affects compressor calculations, allowing its response to be adapted to different signal levels or user preferences.

**Menu Options**

The plugin incorporates an interactive menu that allows access to advanced features and options. Among the available options are:

- **Link Group and Extended Automation:**
  Allows you to group multiple instances of **Distress** together to share settings and states (such as playback, recording, and stopping). This function is ideal for working on parallel buses or tracks, ensuring consistency in dynamic processing.
- **Selection of Processing Modes:**
  Through the menu you can change operating modes, for example, toggling between "Feedback Detection" mode and "Fast-FWD" mode, which affect the way transients are detected and processed.
- **Interaction and Response Settings:**
  The menu allows you to activate or deactivate the interactive mode, which modifies the relationship between attack and release times according to the user's interaction. The internal scaling ("Scaling") can also be adjusted to modify the visual and processing response of the compressor.
- **Side Chain and Monitoring Options:**
  The possibility of activating side chain listening and selecting the side chain method is included, facilitating the integration of an external source for compression control.
- **Display and Feedback Settings:**
  Through the menu, aspects of the visualization can be modified, such as the graphical representation of the levels, LED indicators and other elements that facilitate the monitoring of the dynamic behavior of the compressor.

These options are usually accessed via a "MENU" button present in the interface and offer an additional level of control for advanced users who wish to customize their workflow.

**Usage Tips**

1. **Signal Debugging and Cleanup:**
   Activate the high-pass filter on the detection and audio signal to remove unwanted components, especially in low-frequency high-noise signals.
2. **Ratio Adjustment for Different Materials:**
   Select lower ratios for subtle compression and high ratios or the "limit" mode for very strong compression. Experiment to find the ratio that best suits the material in question.
3. **Gain Calibration:**
   Use the input and output gain controls to ensure that the processed signal is maintained at an appropriate level within the mix, avoiding distortion or loss of dynamics.
4. **Attack and Release Times:**
   Carefully adjust the attack time to capture transients without sacrificing naturalness and modify the release to avoid unwanted pumping effects. Use interactive mode if you want these parameters to adapt in real time to the signal.
5. **Using the Side Chain:**
   Activate the side chain for an external source to control compression, a useful technique for "opening up" space for other elements (such as vocals) in the mix. Also, use the sidechain listening function to ensure that the control signal is adequate.
6. **Experimentation with Special Modes:**
   Try "fwd", "Bug Version", and "Card Mode" modes to explore different compression behaviors and find the character that best complements your production.
7. **Instance Grouping:**
   Take advantage of the Link Group feature to synchronize parameters between multiple instances of the plugin, which is especially useful in bus configurations or in situations where uniform compression across multiple tracks is required.

**Acknowledgments "Powered by Tukan Studios"**

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**Summary**

**Distres** is a digital emulation of the legendary Distressor compressor that offers exceptional dynamic and musical control. With an intuitive interface that integrates filter controls, peak detection, rate selection, gain settings, and attack and release times, the plugin adapts to a wide variety of applications in mixing and mastering. In addition, its advanced features—such as side chain modes, interactive options, and instance grouping using Link Group—give users an extra level of flexibility and creativity to model signal dynamics accurately and musically.