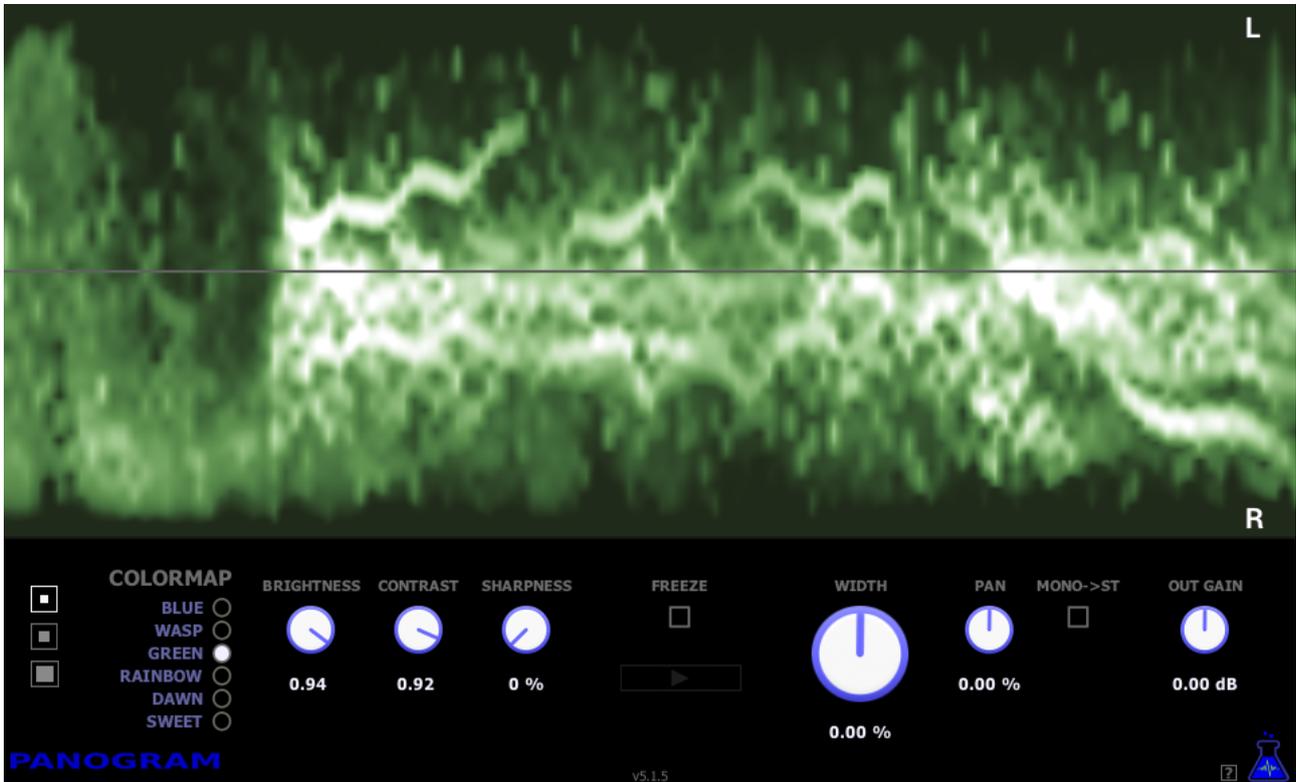


PANOGRAM



DESCRIPTION

Panogram is a panogram visualization plugin, which lets you explore and understand the stereo field. It displays the sound energy distributed over the stereo field. It shows the stereo width of a sound and the stereo position of the different frequencies contained in the sound. The **Panogram** plugin is also a stereo widening tool.



FEATURES

- Panogram visualization with colormap, brightness, contrast and sharpness
- Play only a selection of a part of the panogram
- Freeze mode
- Stereo widen
- Pan knob
- Mono to stereo (state of the art technique with no delay and no sound coloration)
- Output gain
- Resizable GUI

EXAMPLES OF USE

Understand the stereo field while mixing

The **Panogram** plugin can be used to understand the stereo field while mixing. It can be inserted on the master track, to visualize the stereo field made from all the tracks simultaneously. It can also be inserted on a single stereo track, to visualize only the sound of this track.

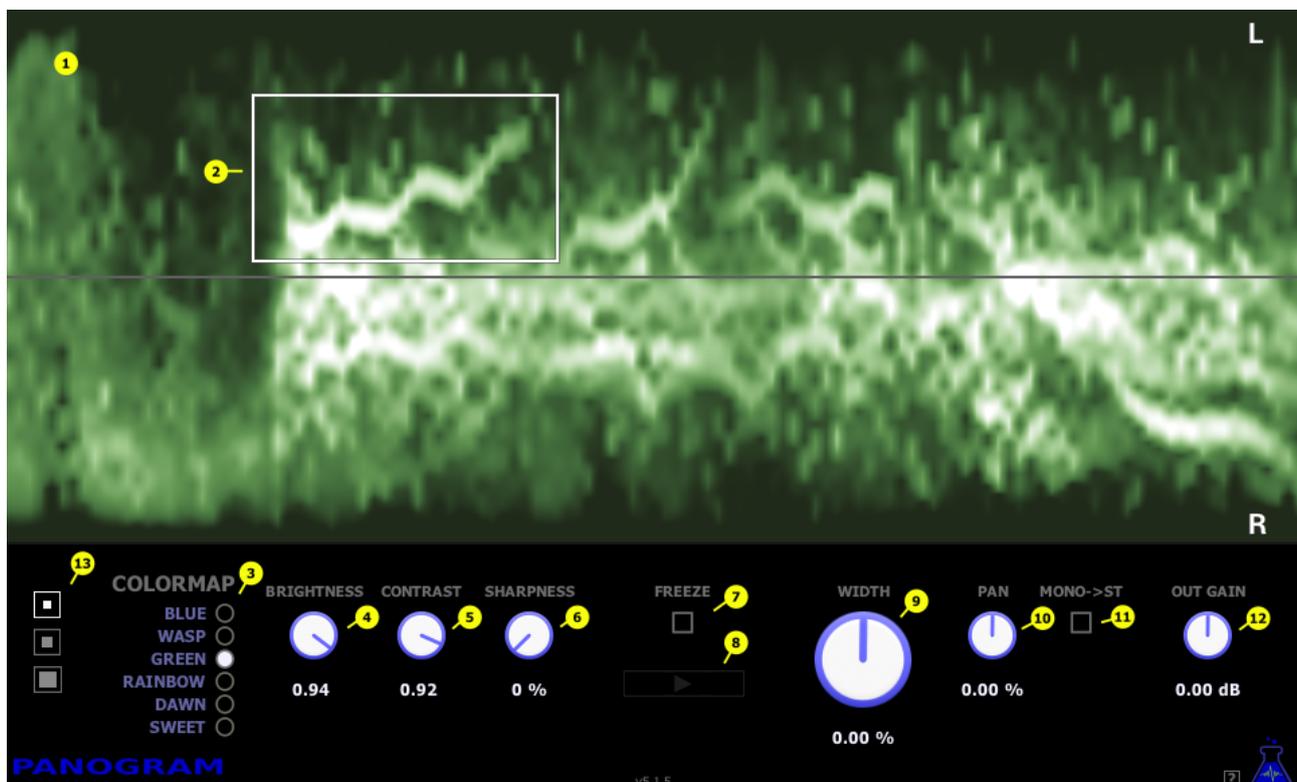
Understand a particular section of the sound

The **Panogram** plugin provides a **freeze mode**, to stop the scrolling of the panogram, and target to a particular section of the track. Once the panogram is frozen, a particular section of the panogram can be selected and the plugin plays the sound of the selection only.

Modify the sound field

The **Panogram** plugin provides stereo widening features. The width of the stereo field can be increased or decreased. The position in the stereo field can be modified using a pan knob. Finally, a mono sound can be converted to stereo. When these parameters are modified, the panogram visualization is updated in real-time.

USAGE



NOTE: the **Panogram** plugin works on stereo tracks. With many hosts, if the plugin is inserted on a mono track, the track will be automatically converted to stereo. But on some other hosts (e.g Cubase), it is necessary to be sure to have a stereo track before inserting the plugin on it.

The **GRAPH (1)** displays the panogram of the sound that is currently played by the DAW.

A rectangular **SELECTION (2)** can be defined to play only a particular section of the panogram.

The **COLORMAP (3)** parameter changes the color scheme of the panogram. Some colormaps are more suitable for displaying the panogram smoothly, some other can be used to highlight more the zones with high sound energy.

The **BRIGHTNESS (4)** and **CONTRAST (5)** and **SHARPNESS (6)** parameters adjust the brightness, contrast and sharpness of the panogram.

The **FREEZE (7)** parameter freezes the scrolling of the panogram when the DAW is playing, in order to inspect a particular zone of the panogram. The **PLAY BUTTON (8)** plays the frozen panogram, or a rectangular selection of the panogram only.

NOTE: with some DAWs (e.g. Logic Pro X), the transport bar of the DAW must still be playing in order to be able to play a frozen panogram or a selection of a frozen panogram. The output sound will be the sound of the frozen panogram as expected, whatever the position of the DAW transport bar. But the transport bar must not be stopped.

DISCLAIMER: Playing a selection of a panogram is designed to have an idea of the sound energy contained in a zone of the panogram, but it is not designed to extract the sound for future use. When playing a rectangular selection of a panogram, the output sound can contain musical noise. Particularly if the selection is over a zone containing few sound energy.

The **WIDTH (9)** parameter increases or decreases the stereo width of the sound. It narrows or spreads the sound energy over the stereo field.

The **PAN (10)** parameter adjusts the balance of the sound. It moves the sound energy left or right.

The **MONO->ST (11)** parameter converts a mono input signal to stereo. It is not recommended to apply this parameter on an already stereo sound. If it is applied to a sound that is already stereo, the sound is converted to mono first, then converted back to stereo.

NOTE: The **MONO->ST (11)** parameter is optimal when using a power of two buffer sizes in the DAW (buffer size of values 64, 128, 256, 512, 1024, 2048...). If the buffer size is not a power of two, the plugin will add a latency (which will be obviously compensated by the DAW latency compensation system). But if you want a process with zero latency, it is necessary to use a power of two buffer size.

The **OUT GAIN (12)** parameter adjusts the output gain.

The **GUI SIZE (13)** buttons change the plugin window size (small, medium or big).

APPENDIX 1 – PANOGRAM EXAMPLES

Example of different pan configurations.



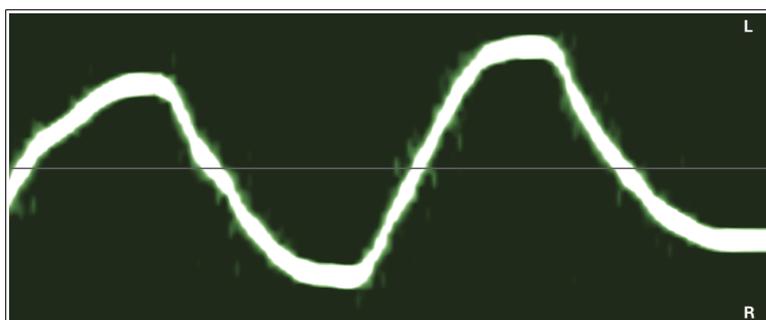
Panogram of a mono signal, centered.



Panogram of a mono signal, panned left.

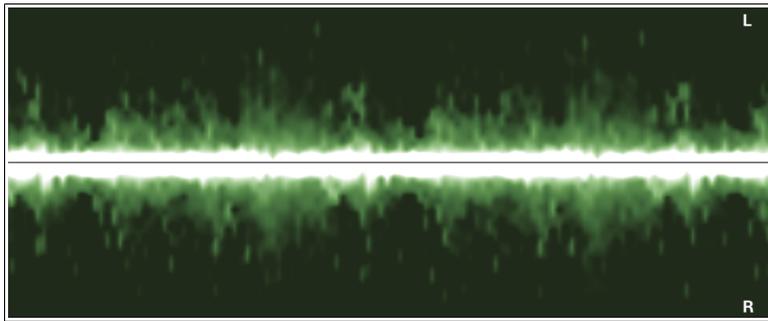


Panogram of a mono signal, panned right at the maximum.

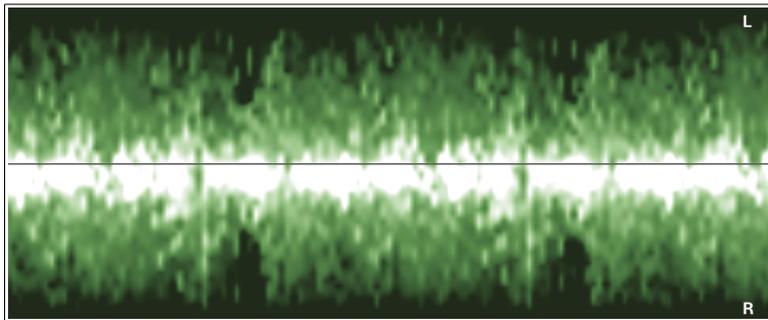


Panogram of a mono signal, pan varying over the time.

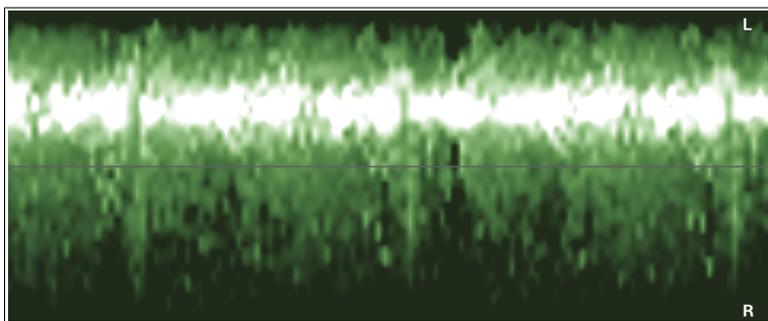
Examples of different stereo width configurations.



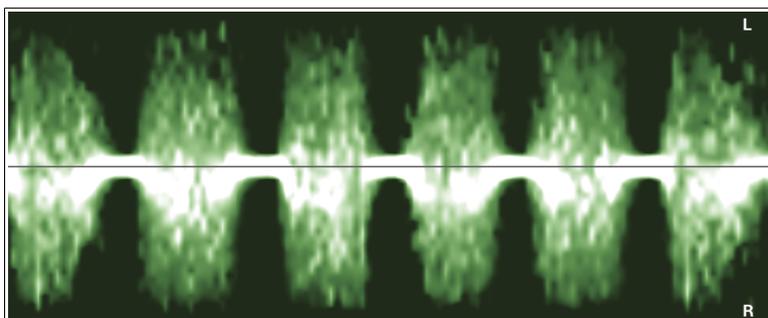
Panogram of a stereo signal with narrow stereo width.



Panogram of a stereo signal with large stereo width.



Panogram of a stereo signal with large stereo width, panned left.



Panogram of a stereo signal with stereo width varying over the time.