Pure DCompressor

FLUX:: Immersive

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1 Pure DCompressor

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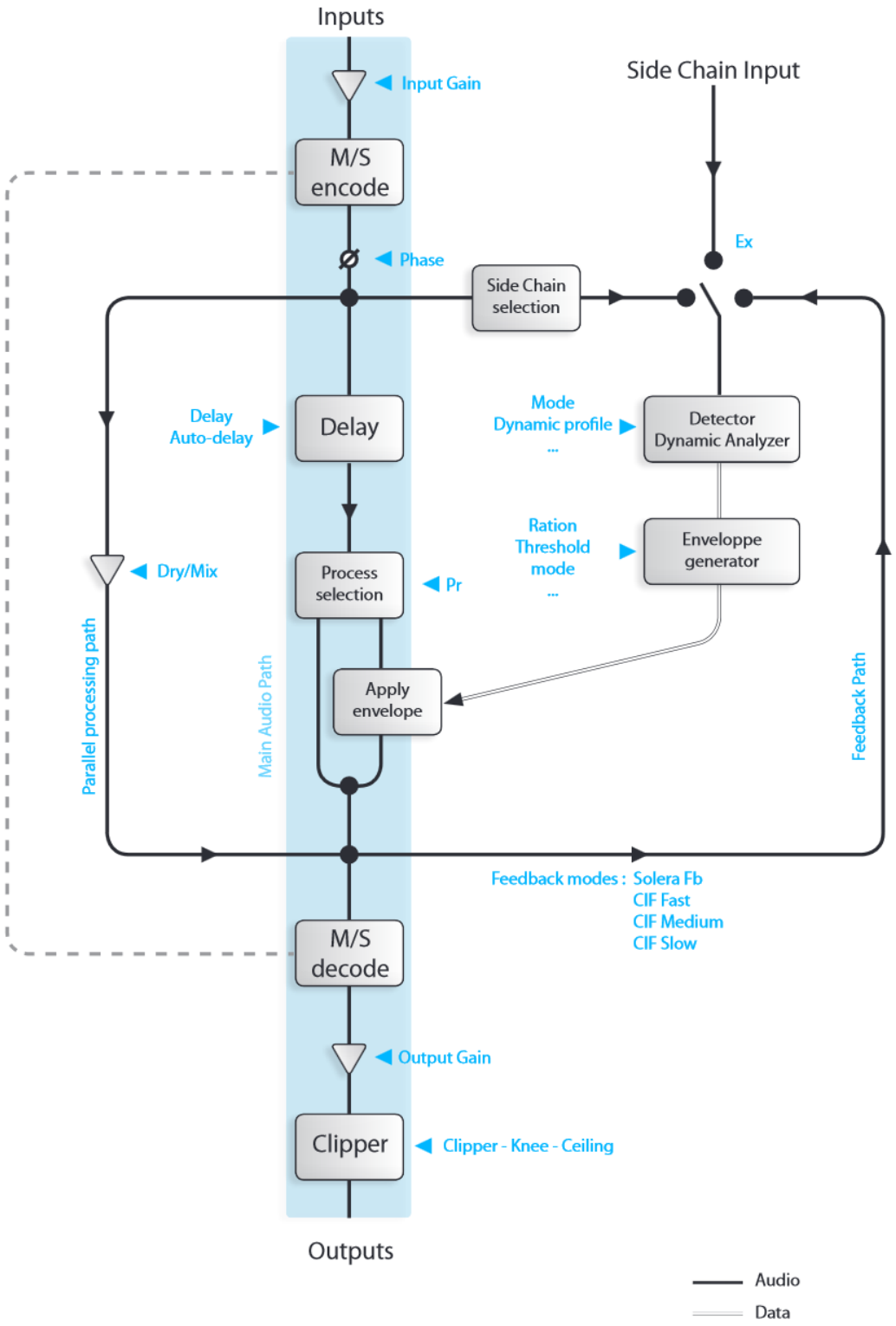

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Pure DCompressor is the de-compressor section of the Solera. A De-compressor must be used to automatically increase the peak dynamic. Pure DCompressor allows you to restore the original dynamic of a sound. It's very useful for heavily compressed signal. Pure DCompressor adds some naturalness.

The Threshold value is expressed in dB – The plug-in compares it to the RMS (Root Mean Square or effective power) of the input signal. This value is displayed as a green rectangle on the input level meter. The level variations above the threshold are affected by the Ratio value. For a 1:1 de-compressor ratio, the processed signal isn't affected by the processing: A 1 dB variation above the threshold at the input is reflected by a 1 dB variation at the output. Let's apply now a 3:1 ratio. If the input signal rises above 1 dB the threshold value, the output signal rises from 3 dB: Here is the de-compressor action. The input signal gain is increased by a 3:1 ratio above the threshold point.

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The Knee sets how progressive is the start up of the compressor action – In other words, It smoothes the transition point between no processing and full processing. If the Knee value expressed in dB is increased, the progressiveness of the action will be spread below and above the threshold point. The Range value sets the processing maximum action. No gain variation can exceed this value.

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2 General Settings

Unit: dB
Value Range: -48 / +48
Step: 0.01
Default Value: 0 dB

Sets the gain applied to the dynamic processing input.

2.1 Output Gain (2)

Unit: dB
Value Range: -48 / +48
Step: 0.01
Default Value: 0 dB

Sets the global gain applied to the dynamic processing output.

2.2 Invert Phase (3)

Default Value: Off

When this button is engaged, the phase of the processed signal is inverted.

This 180° phase shift is also applied on the Solo of the detector Equalizer.

2.3 Dry Mix (4)

Default Value: -144 dB

This slider controls the amount of the original signal that can be added to the processed audio. This feature is dedicated to mastering works requiring both heavy processing and subtle control. The mix is done before the output gain.

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2.4 Clipper Knee (5)

Unit: dB
Value Range: 0 / +3
Step: 0.01
Default Value: 1 dB

Sets the smoothness of the transmission curve.

2.5 Enable Clipper (6)

The Clipper is the very last stage of the processing chain.

2.6 Clipper Celling (7)

The Clipper is the very last stage of the processing chain.

2.7 Bypass (50)

It's a global bypass.

2.8 Channel Processing Selector (8)

When operating on a multi-channel bus, all channels are processed by default, but it can be useful to remove some channels from the processing for some reasons. This selector allows to keep the unchecked channels untouched.

This feature may be used if different settings are required. Several instances of a plug-in can be used in series, each one processing a particular channel with its own settings.

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2.9 Channel Side Chain Routing (9)

Side chain is only available for mono and stereo.

When operating on a multi-channel bus, all channels are feeding the side chain by default, but it can be useful to prevent some channels feeding the side chain for some reasons. The external side chain button is the one that appear with the channel count + 1 label (for mono, label is "2", for stereo label is "3").

Here are the different behaviors for external side chain depending of the host applications:

- Audio Unit : The side chain button is displayed when the side chain is connected by the host.
- AAX : The side chain button is only active if a side chain buss is selected from the plug-in handler.
- VST : No side chain feature is available.

2.10 MS Width Control (10)

Unit: dB
Value Range: -6 / +6
Step: 0.01
Default Value: 0

Sets the stereo width of the processed signal. A -6 dB value deceases the stereo width. A +6 dB value increases the wideness of the stereo mix but can produce phase issue.

2.11 MS Mode On/Off (11)

Default Value: Off

Enables one MS encoding matrix at the input and one MS decoding matrix at the output of the dynamic processing in order to control the stereo width of the mix. When engaged, the side chain is fed by a MS encoded signal that is reflected in the display section. M channel corresponds to the normal left channel. And the S channel corresponds to the normal right channel This feature is only available when two channels (no more, no less) are processed.

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2.12 Link (12)

Default: Enabled

By default the maximum value issued from all channels feeding the side chain is retained as source for processing. This manner, the space information is kept for the processed multi-channel signals.

When disabled, every channel uses its own value for individual processing.

This configuration may be used in conjunction with the MS width section which encode the signal in MS before processing, and decode at the output. This manner, the M signal can be processed while keeping the S channel untouched.

2.13 Smooth (13)

Default: Enabled

When engaged, the side chain is set to preserve bass frequencies from excessive processing.

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3 Time Related Settings

3.1 Delay (14)

Unit: ms
Value Range: 0 to 50.0 ms
Default Value: 0 ms

A delay reflecting the attack time can be introduced into the signal path in order to produce a zero attack time for the dynamic processing. Shifting the delay value from the attack time allows to control transients. A delay value inferior to the attack value lets peaks untouched by the processing.

> **Note**
>
> Note that the different delay values of every band are automatically compensated. Solera can't be used to produce delay based special effects.

> **Warning**
>
> Warning: Morphing between presets with different delay values produces sound artefacts. Of course this delay introduces latency in the processing.

3.2 Auto Delay (15)

Default Value: Off

When enabled, the delay value is linked to the attack value. Be aware that the latency introduced by this function is now equal to your attack time devide by 2.

3.3 Mode (16)

Default Value: Solera

8 different detection modes are available:

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- Solera: The Attack setting also controls the integration time for RMS detection. When “Auto” is engaged for the delay value, the produced attack time is zero.
- Solera Feed Backward: The Attack setting also controls the integration time for RMS detection which is done on the output of the processor. This mode disables the Delay feature. Note also that the Solera Feed Backward prevents to use the external side chain because it’s the processed signal which feed the side chain.
- Classic Fast: The integration time for RMS detection is 10 ms with no direct relation with the Attack setting. But when “Auto” is engaged for the delay value, the produced attack time is zero.
- Classic Medium: The integration time for RMS detection is 40 ms with no direct relation with the Attack setting. But when “Auto” is engaged for the delay value, the produced attack time is zero.
- Classic Slow: The integration time for RMS detection is 80 ms with no direct relation with the Attack setting. But when “Auto” is engaged for the delay value, the produced attack time is zero.
- Classic Feed Backward Fast: The integration time is 10 ms for RMS detection which is done on the output of the processor. This mode disables the Delay feature. Note also that the Feed Backward mode prevents to use the external side chain because it’s the processed signal which feed the side chain.
- Classic Feed Backward Medium: The integration time is 40 ms for RMS detection which is done on the output of the processor. Note also that the Feed Backward mode prevents to use the external side chain because it’s the processed signal which feed the side chain.
- Classic Feed Backward Slow: The integration time is 80 ms for RMS detection which is done on the output of the processor. Note also that the Feed Backward mode prevents to use the external side chain because it’s the processed signal which feed the side chain.

These Feed Backward modes have been inspired by vintage hardware architectures. they create a sort of auto regulation of the processing which produces a naturally beefy sound.

3.4 Attack (17)

Unit: ms
Value Range: 0 ms to 100 ms
Default Value: 0.0 ms

Sets the attack time of the processing envelop. It also controls the manner the RMS value is computed from the incoming signal.

> **Warning**
>
> Warning : The Attack setting also controls the integration time for RMS detection.

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3.5 Hold (18)

Unit: ms
Value Range: 0 ms / 500 ms.
Default Value: 0 ms

This parameter is the only one in the time related settings, that is independent per dynamic processor. The compressor and the expander may have different hold time.

Used in the Expander section, this setting allows very precise gating of drum tracks. It can also be used for creative purpose on the other dynamic sections.

3.6 Release Mode (19)

Default Value: Auto

Three release modes are available for the envelop of the dynamic processing.

- Manual corresponds to the value you have set.
- Auto enables our specific algorithm to generate a signal dependent value to avoid typical pumping effects.
- Advanced gives access to two different values for release and to the control of the velocity of the variations between the maximum and the minimum release values.

3.7 Release (20)

Unit: ms
Value Range: 0.67 ms / 10000.00 ms
Default Value: 500.00 ms

Sets the manual release value and the maximum release value when in Advanced Mode.

3.8 Release Minimum (21)

Unit: ms
Value Range: 0.67ms / 5000.00
Step: 0.01
Default Value: 1.30 ms

Sets the minimum release value when in Advanced Mode.

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3.9 Dynamic Factor (22)

Unit: x
Value Range: 0 / 3.0
Step: variable.
Default Value: 1

Amplify or dim the extracted real time dynamic informations.

3.10 Dynamic Velocity (23)

Unit: %
Value Range: 10 / 1000
Step: 1
Default Value: 50 %

Sets the speed of variation on the dynamic informations.

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4 Dynamic Section Settings

4.1 Threshold (24)

Unit: dB
Value Range: -32 to +16
Default Value: 0

Sets the threshold of the specific dynamic processing section. This dB scale refers to an RMS value.

The threshold effective value is modified by the L.I.D., the L.I.D. Threshold and, the L.I.D. Maximum settings.

4.2 Ratio (25)

Unit: dB
Value Range: 1 to 10
Step: 0.01
Default Value: 1

Sets the ratio of the specific dynamic processing section.
The ratio effective value is modified by the Dynamic Ratio amount.

4.3 Infinite (26)

Sets the ratio to its maximum.

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4.4 Range (27)

Unit: dB
Value Range: 0 to 48
Default Value: 24

Sets the maximum allowed gain variation for a specific dynamic processing section.

4.5 Knee (28)

Unit: dB
Value Range: 0 to +24
Default Value: 0

Sets the smoothness of the transmission curve for the specific dynamic processing section. The curve is smoothed around the threshold value of the dB amount set with the knee value.

4.6 Peak Detection Amount (29)

Unit: %
Value Range: 0 / 100
Step: 1
Default Value: 0 %

Instant peak value can be added to the RMS signal feeding the detector section, making the dynamic processing more sensitive to audio transients.

4.7 Dynamic Ratio (30)

Unit: %
Value Range: 0 / 100
Step: 1
Default Value: 0 %

This setting relaxes the ratio applied to the processor section when the detected signal dynamic raises.
This setting literally opens the sound, increases the dynamic impression and keeps some crest by adjusting in real time the ratio of every dynamic processing section regarding both their current settings about ratio and the signal content (mainly dynamic range). To start understanding this setting and easily hear it, take a full mixed drum kit or a complete mix with

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punchy drums, set the compression threshold, ratio to get something near pumping or an aggressive compression.
Then increase the output gain to compensate the gain lost and then toggle between 0 and 100% of Dynamic Ratio. At 100 % you should hear more air in the sound, more transient and less compression impression; especially in terms of attack.

4.8 Dynamic Ratio Inverter (31)

When engaged, the behavior of the Dynamic Ratio is inverted. The ratio value is increased depending of the detected signal dynamic.

4.9 L.I.D.. (Level Independent Detector) (32)

Unit: %
Value Range: 0 / 100
Step: 1
Default Value: 0 %

Allows process the audio signal independently of the sound level but regarding the signal dynamic range. It is mixed with the standard compression scheme.

> **Note**
>
> *Take a piece of full mixed music, set the ratio to 3-4 and the compression will start working. Now set the threshold of the compressor to the maximum value, the compressor will stop working because the sound level will never reach the threshold. Then increase the L.I.D.. and you will see (and hear) the compression working again!!! Now decrease or increase the input gain (in Solera or before, as you want) and you will see that the compression will continue to work equally; it's totally, completely independent of the sound level and depends only on Ratio, Knee and sound content. How can this be used? When you have too much dynamic in the sound, going for e.g. from -3, -6 dB Vu (or less) to +12 dB; If you want to compress the low levels you will hear the sound "pumping" when the sound reaches the High levels and the only thing to do with standard compressor will be to increase the threshold to rescue some airiness in the sound. But when doing that the compressor will not work any more on the low levels and you will hear some sound differences (in term density, live space, grain etc…) especially when the compressor starts working. With Solera L.I.D.., adjust the threshold and ratio on the High levels to what you think OK, then increase the L.I.D.. (from 20 to 50 %) and listen now the low levels and especially the transition between Low and High levels. You can also start increasing the ratio to increase the effect. You'll then notice that the compression will always be*

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> *active but can still take care of High, loud levels (unless you set 100% L.I.D..) and make the compression very smooth and no more pumping… In addition with the Dynamic Ratio function, you'll be able to set a constant and very natural envelop that allows to increase low levels, low frequency and to keep important transients.*

4.10 L.I.D.. Threshold (33)

Sets the gain range of the L.I.D. parameter.

- Up: Increasing of the L.I.D. action
- Down: Decreasing of the L.I.D. action

The current L.I.D. Threshold value is reflected by two blue lines on the Dynamic Activity display.

For Compressor and DCompressor sections, the L.I.D. action is effective only when the orange Dynamic Activity (18) exceeds the area between the two blue lines. For Expander and DExpander sections, the L.I.D. action is effective only when the orange Dynamic Activity (18) stays inside the area between the two blue lines.

4.11 L.I.D.. Maximum (34)

When engaged, the threshold for the processing is determined by the maximum values from RMS/peak detection OR from the signal dynamic detection. The L.I.D. Threshold is still active, but the L.I.D. mix button is disabled. This feature allows the whole process to be more reactive to the signal content. It worth to be tried on drum tracks.

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5 Display

5.1 Resulting Transfer Curve (35)

Auto Scale depending of the threshold value(s)

5.2 Input Level Meter (36)

Vu-meter not peak-meter, referenced to -16 dB Fs by default, with auto scale depending of the threshold values. When the MS Width section is engaged, the M (Middle) level is displayed on the left meter. S (Side) is displayed on the right meter.

The green index reflects the threshold value.

5.3 Output Level Meter (37)

Vu-meter not peak-meter, referenced to -16 dB Fs by default, with auto scale depending of the threshold values. When the MS Width section is engaged, the M (Middle) level is displayed on the left meter. S (Side) is displayed on the right meter.

5.4 Resultant Envelop (38)

Vu-meter not peak-meter, referenced to -16 dB Fs by default. The scale is +/- 12 dB.
This is the compression, decompression, expander and de-expander summing envelop.

5.5 Dynamic difference between in and out (39)

Vu-meter not peak-meter, referenced to -16 dB Fs by default. The scale is +/- 12 dB.

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5.6 Level difference between in and out (40)

Vu-meter not peak-meter, referenced to -16 dB Fs by default. The scale is +/- 12 dB.
This is the compression, decompression, expander and de-expander summing envelop which also takes account of the input and output gains of the band.

5.7 Dynamic Activity Display (41)

No scale
The current L.I.D. Threshold value is reflected by two blue lines on the Dynamic Activity display.
The L.I.D. action is effective only when the orange Dynamic Activity (41) exceeds the area between the two blue lines.

5.8 Instant Release Value (42)

Auto Scale depending of the release value(s)

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6 Preset Management

6.1 Save (43)

Save replaces the selected preset by a new one under the same name featuring the current settings. If you want to keep an existing preset without your new modifications, just select an empty place into the preset list, enter a new name for this modified preset featuring the current settings and press Save.

6.2 Recall (44)

Once a preset is selected from the preset list it must be explicitly loaded into section A or the section B by using the recall button. A preset is effective only after it has been recalled.

6.3 Copy A / Copy B (45)

The current parameters of a section are copied to the other one. The section A or B is re-initialized with the current values and the morphing slider is parked at 100% of the corresponding section.

6.4 Morphing Slider (46)

This horizontal slider has no unity nor specific value display. It allows to morph current settings between two loaded presets. Double-click on one side of the slider area toggles between full A and full B settings.

The results of an in-between setting can be saved as a new preset.

A global preset including the two loaded presets and the morphing slider position can also be saved from preset management window.

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6.5 Automation Control of the Morphing Slider (47)

Default Value: Off

When this button is disabled, all the plug-in parameters values are recorded when writing automation. The morphing slider is ignored.

When reading automation, if this button is disabled, all the plug-in parameters are controlled by the host automation except the morphing slider.

When this button is engaged, all parameters are recorded when writing automation uncluding the morphing slider.

When this button is engaged, ONLY the morphing slider value is applied when reading automation.

The Automation button must be engaged if the morphing slider has to be mapped on a control surface.

6.6 Loaded Preset Display (48)

6.7 Preset Manager Access (49)

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7 Specifications

7.1 Processing Specifications - Pure DCompressor

- Up to 16 channels Input/Output.
- 64-bits internal floating point processing.
- Sampling rate up to 384 kHz DXD (Pyramix and Ovation MassCore/Native).
- Sampling rate up to 192 kHz for Native (AU/VST/ST3/AAX/AAX AudioSuite).

7.2 Processing Specifications - Pure DCompressor Session

- Mono/Stereo Input/Output.
- 64-bits internal floating point processing.
- Sampling rate up to 96 kHz.

7.3 Licence Requirements

In order to use Pure DCompressor or Pure DCompressor Studio Session, one of the following is required: - An iLok.com user account (the iLok USB Smart Key is not required). - A Flux:: USB Dongle (Available in our online store).

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8 Credits

8.1 Software development

8.1.1 Project Manager and Designer:

Gaël Martinet

8.1.2 Application Development:

Gaël Martinet, Alexis Gentil, Bastien Prevosto, Anthony Belard, Maxence Grandidier, Siegfried Hand and Antoine Lorence.

8.1.3 FLUX:: DSP Design and Development:

Gaël Martinet, Maxence Grandidier and Lorcan Mc Donagh

8.1.4 Graphic design:

Nicolas Philippot

8.1.5 FLUX:: Framework development:

Gaël Martinet, Florie-Anne Lafaye, Alexis Gentil, Lorcan Mc Donagh, Bastien Prevosto, Anthony Belard, Siegfried Hand and Antoine Lorence

Additional contributions: Vincent Carlier, Jean-Loup Pecquais, Nicolas Erard, Jean Cruypenynck, Pablo Arias, Samuel Tracol

8.1.6 FLUX:: Framework graphic engine:

Emmanuel Julien (GS lib) and Gaël Martinet

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8.1.7 And

thanks to all fantastic testers…

8.1.8 FLUX:: Special Thanks to:

Alain, Yves, Bruno and Claude for helping to shape our minds over the years.

8.2 FLUX::

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8.3 Additional libs

- GS lib Emmanuel Julien, Gael Martinet (Copyright 2013 Emmanuel Julien)
- ThorVG, Copyright (c) 2020 - 2023 notice for the ThorVG Project (see AUTHORS)
- r8brain free - Copyright (c) 2013-2023 Aleksey Vaneev
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8.4.5 LibJpeg - Custom (BSD-like)

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8.4.9 bzip2 - Modified zlib

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8.4.10 Boost - BSL-1.0

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8.4.11 mimalloc - MIT

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8.4.12 ni-media - MIT

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8.4.13 pfft

https://github.com/marton78/pffft/blob/master/LICENSE.txt

8.4.14 pybind11

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8.4.15 rtaudio

https://github.com/thestk/rtaudio/blob/master/LICENSE

8.4.16 rtmidi

https://github.com/thestk/rtmidi/blob/master/LICENSE

8.4.17 concurrentqueue - Simplified BSD

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8.4.26 libcurl - MIT like

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8.4.29 nlohmann_json - MIT

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8.4.38 sqlite_orm - MIT

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8.4.46 dotenv - “BSD 3-Clause”“New”” or ““Revised””“ ”

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A Release Notes

A.1 Build 23.07.50310 - All plugins

A.1.1 New features

- Support Pro Tools new track formats

A.1.2 Bugs fixes

- All plugins - Nuendo - VST3 - crash when stereo plugins are instantiated on multichannel tracks (StereoTools, …)
- All plugins - Pace protected plugins fail to scan on Da Vinci Resolve mac
- All plugins - Popups wrong metrics when changing screen
- All plugins - Presets not imported
- All plugins - VST3 - Nuendo - WIN (UHD360) - Wrong window size init
- All plugins - VST3 - WIN (UHD630) - REAPER - GUI refresh issue when in single window mode
- All plugins - GUI issue with AMD graphics on windows - flickering issue
- All plugins - AU - Plugins parameters are reset when bouncing in Reaper
- All plugins - VST2 - no multichannel with the plugins 23.X in Reaper
- All plugins - VST - Resizing the GUI does not update the floating window size in Nuendo on Windows with UHD630 graphics
- Bittersweet - VST3 - crashes on Pyramix on instantiation
- StereoTool / EVO Channel - VST3 - No goniometer / analyzer in Wavelab
- Elixir - Not available as 32 channels in Reaper
- EVO series - AAX - Dark Mode wrong GUI init
- EVO series - remove unused and duplicated presets
- EVO Channel - VST3 - spectrum smoothing slider crashes Studio one
- EVO Channel / EVO Eq - VST3 - Analyzer not working in Ableton Live
- EVO Channel / EVO Eq - scale eq control always reload on auto mode
- EVO Eq - weird release on meter
- EVO In - GUI refresh issue when toggling night/day mode
- EVO Touch - Zero Crossing Threshold label missing in the geek panel

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- EVO Touch - frequency band selector does not always recall the good settings on session reload
- EVO Touch/ EVO Channel - Frequency range slider is hard to handle
- Pure Serie - VST3 - Attack value max 80ms
- Pure Comp - Crash when loading “Bass guitar” preset
- Pure Limiter - VST3 - advanced mode does not turn on advanced settings
- StereoTool - VST3 - vector scope not working in Ableton Live on Windows
- StereoTool - Not working in Final Cut Pro
- TRAX - Crash using oversampling with sessions set at 2FS or higher
- TRAX Tr - not usable in Protools anymore (build 50123)

A.1.3 Known issues

- All plugins - VST - GUI issue in Izotope Ozone and RX
- All plugins - AAX - Preset manager - Default preset is not applied to parameters at plugin instantiation
- Elixir - Latency not properly compensated after changing stage parameters value in VST and AudioUnit
- TRAX tr - Learn function returning wrong values
- VerbV3 - HOA 3rd order not working properly

A.2 Build 23.1.0.50251 - All plugins

A.2.1 New features

- New plugins Evo Compressor, Evo Touch and Evo EQ.
- VST3 support
- ARM support for AAX, AU and VST3
- Plugins are now resizable
- Elixir now supports 32 channels
- Alchemist, BitterSweet, Epure, Pure Compressor, Pure DCompressor, Pure Expander, Pure DExpander, PureLimiter, Solera, Syrah now support 16 channels

A.2.2 Bugs fixes

- All plugins - Preset Manager - Update user preset do not work
- All plugins - Preset manager - Crash or freeze when saving a preset
- All plugins - UI may be black on Intel UHD 630 graphical cards

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- All plugins - AU/VST3 - Preset manager - Default preset is not applied to parameters at plugin instantiation
- All plugins - AAX - Crash with OSC when changing fx slot in Pro Tools
- All plugins - AU - Logic Pro - Automation of boolean/integer parameters broken
- All plugins - AU - Plugins crash in Da Vinci Resolve
- All plugins - DaVinci Resolve - VST - UI is truncated
- All plugins - Streamlabs - Plugins do not work
- All plugins - Licensing issue in DaVinci Resolve and GarageBand
- Alchemist - The range parameter works only for the 1st band
- BitterSweet - Not possible to tweak the Output gain after unlinking it
- BitterSweet - Output gain not reloaded properly when the link is disabled
- BSPro - some modes are not accessible due to GUI issue
- Epure - macOS - Bad graphic scale initialization at 2&4FS
- Evo Channel - Meter reference is not saved
- Syrah - Crash when selecting preset “Static fast compression”
- TRAX Tr - When the link is activated, the Formant slider does not have the expected audio effect
- TRAX Tr - ProTools - Issue in AudioStudio when the modulation is enabled
- VerbSession/VerbSession Studio Session and BSPro StudioSession - Pyramix - VST crash when instantiated
- Verb/Verb Studio Session - Crash when reloading session having 2 instances

A.2.3 Known issues

- All plugins - VST - GUI issue in Izotope Ozone and RX
- All plugins - AAX - Preset manager - Default preset is not applied to parameters at plugin instantiation
- Elixir - Latency not properly compensated after changing stage parameters value in VST and AudioUnit
- TRAX tr - Learn function returning wrong values
- VerbV3 - HOA 3rd order not working properly

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A.3 Build 21.12.0.50123 - All plugins except TRAX and StudioSession

Bug fixes

- All plugins AudioUnit - GUI issue with Hdpi displays on macOS Monterey
- All plugins VST - Plugin scan freeze in Wavelab 11 on Mac M1 machines
- All plugins VST - Crash in Adobe Audition on macOS
- All plugins VST macOS - Fix crashes with Ableton live
- Elixir - Automation is not read for toggle parameters.
- Elixir - Crash when clicking on the settings button on Session version
- Elixir - Several fixes on the UI
- Elixir - Windows AAX - Refresh issue with two instances in ProTools
- HEar - Bypass is working in AAX
- HEar AAX - Crash when doing offline bounce on macOS
- HEar AAX - Crash when editing the matrix on macOS
- HEar AAX - Stereo - Change on Matrix are not applied until we change the preset
- HEar AudioUnit - Ableton crashes when inserting a second instance

A.4 Build 21.11.0.50107 (HEar, IRCAM Verb)

NOTE: **CURRENTLY NOT COMPLIANT WITH ABLETON LIVE MACOS**

Improvement

- HEar - 5.1.4 & 5.0.4 now available

Bug fixes

- HEar - Fix meters refresh issue
- HEar - No verb on some presets
- HEar - Protools crashes when doing offline bounce on macOS

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A.5 FLUX:: Immersive - Plugins (including IRCAM Tools) 21.09

This release includes updates for all FLUX::Immersive plugin processing products with the exception of EVO Channel, Epure, IRCAM Trax, Studio Session.

NOTE: **CURRENTLY NOT COMPLIANT WITH ABLETON LIVE MACOS**

Major optimizations

- Apple computers Big Sur (new M1 chips) AU validation

- Important updates to the Ircam Verb + Session
- Overall better handling of multichannel track setups such for Atmos. (Ircam Hear, Verb and more)
- Automatic detection of track format / channel order for DAWs when possible.

A.5.1 Build 21.9.0.50083

Bug fixes

- Apple computers Big Sur (new M1 chips) AU validation failing
- Empty GUI when close/reopen plugin - Windows 10 - UHD630 graphics
- AudioUnit in Reaper - do not process audio when offline bounce
- Default preset not loaded correctly on instantiation of Verb + Verb Session
- Evo.Channel on Retina - Input and Output Sliders badly scaled
- Incompatible AudioUnit issue in Apple Final Cut Pro
- Plugins: Recall Preset Flags (e.g. “All but setup”) recall always everything
- Preset Manager - UI issue with small plugins when a preset has been created
- Ircam Verb Session reload in VST with audio interruption
- VST Plugins Session not correctly reloaded if it integrate an IO configuration change
- Verb session - Dry/wet not applied in offline render
- Verb v3 Atmos crash on AAX
- Verb: AU validation failed on Apple M1
- Verb: LFE not disabled by default on ProTools
- Verb: Recall Preset may be not correct with double click inside the preset manager
- Verb: disabled channel is not re-injected according to dry/wet parameter (100 % wet means muted)
- Verb: init issue with Nuendo
- AAX - Some plugins - Crash on Mac / No GUI on Windows
- Overall reliability / stability fixes.
- Plugin size not correct
- Potential plugins crash when opening UI

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A.6 FLUX:: Immersive - Plugins (including IRCAM Tools) 20.12

This major release includes updates for all **FLUX::Immersive** products with the exception of IRCAM Spat V3 legacy product. Please refer to Spat V3 - Spat Revolution crossgrade options.

Major optimizations

- HiDPI / Retina support + display enhancements and fixes
- Page Table unification for **Avid Control**, S1, S3, S4, S6 and S6L.
- OSC Control for plugins.
- **IRCAM Verb** support for Dolby Atmos, Multichannel support up to 16 channels
- **IRCAM Hear** - Multichannel stability improvement, Now up to 10 channels. (Dolby Atmos 7.1.2)
- **IRCAM Tools** - Audio I/O Matrix and Multichannel enhancement
- Most plugins support of 8 channel.
- 16 channel support for **Bittersweet Pro, Evo In and Evo Channel**

A.6.1 Build 20.12.0.49880

Bug fixes

Core:

- BSPro - Latency report issue (AAX)
- IRCAM TRAX Tr - Latency report issue
- IRCAM Verb - Wrong initialization value for Reverb density
- IRCAM Verb -Dry signal still goes out in disabled channels when wet is 100%
- All Pure Dynamics PI + Alchemist - Wrong Thresholds initialization values
- AAX “monolithic” are broken like Hear, TRAX etc…
- Almost all AAX plugins don’t reload parameters from 47856 version session.
- Pure Limiter - Diff feature bypassed the input gain.
- Pure Limiter - Inverted sidechain filters.
- Any plugin except Evo Channel - Research Presets resets when click on a preset.
- Evo channel - Wrong values when reloading touch section.

UI:

- Current preset name disappear on re-opening GUI or session

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A.7 Known Issues

- Wavelab “Sample rate not supported” when a plugin is inserted on a clip, track or output section.
- TRAX Tr - Learn frequencies display wrong values (AAX only).
- Hear - Internal config labels change when modify LFE input config from routing matrix.
- When using OSC on a plugin in Pro Tools, a chrash will occur if you change/move FX insert slots

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