Elixir V3 (Legacy)

FLUX:: Immersive

2/6/23

Table of contents

1 Elixir v3 - Real Multichannel True Peak Limiter

Product Page | Shop Page

Thank you for using Elixir v3. We hope that you will get good use of the information found in this manual.

2 Introduction

Elixir v3 is a novel kind of program limiter carefully designed to accomplish a truly natural sounding result without changing the nature of the audio material and its timbre, presenting none, or effectively reduced, conventional limiting "pumping" effects even during heavy processing.

It's a REAL True Peak Limiter, providing a guaranteed True Peak output level according to the ITU-R-BS 1770 and EBU R128 norms. The algorithm is using an oversampled representation of the audio sample as a reference when it defines the gain envelope; still, the processing is only applied to the original none oversampled data in order to reduce artifacts (like aliasing), and to achieve the most excellent sounding result.

Elixir v3 is incredibly easy to achieve great results with, simply set the input level, then adjust 'Threshold' according to the amount of limiting you want, and enable 'Make Up' to compensate the gain and to add loudness - That's it! There is no need to care about release time or any other conventional limiter settings!

There's an additional feature provided to increase the processing quality in Elixir v3 called 'Stages'. Stages present the option to set the algorithm to perform the limiting processing in multi-stages.

3 About True Peak

All digital audio wave signal is ultimately converted back to analog at some point, and while it is often desirable to maximize the overall volume of a signal or a complete mix, care must be taken in order not to go above the digital scale zero decibel ceiling, or nasty distortion and clipping will occur. This common and widely used rule is however not entirely sufficient, as the digital and analog processing involved in a D/A converter does not guarantee that a 0dBfs peak signal will exactly translate to a 0dB peak in the analog domain.

Without getting into too much detail, this phenomenon can be attributed to the over-sampling and reconstruction filters present in D/A converters, whose role are to rebuild a continuous time signal from a set of discrete digital values sampled at regularly spaced time intervals. This interpolation process can therefore generate values, which lie above 0dB, and is known as overshoot.

Relying solely on the peak value of samples can lead to the following problems:

- Inconsistent readings between successive playbacks of the same material.
- Unexpected overloads of the D/A output converter.
- Under-readings and beating of pure tones.

Using True Peak value aims to overcome these limitations by mimicking parts of the D/A conversion process, effectively up-sampling the measured signal, in order to use the true value of peaks that occur in the analog domain.

4 Installation

First of all, make sure you have the latest version of the installer.

To download the latest installer, please go to:
http://www.flux.audio/download/

From this page you will be able access the user download section by entering either your registered email address or your product reference.

Your product reference is the serial number of your Flux:: dongle (the serial number can be found using the Security Manager, see the "Authorization" section below), or your iLok.com user id if you use the iLok dongle for authorization.

When logged in to the user download section, download the latest installer according to your operating system, run the installer, and you should be up to date in a few minutes only.

5 Authorization

5.1 Using iLok

Unless you purchased your license in the fluxhome.com online store, you need to activate your license.

To activate your license, please go to:
https://www.flux.audio/activation/

When your license is activated, you need to login with iLok.com and synchronize your iLok in order to download the new license to your iLok.

5.2 Using Flux:: dongle

If you have purchased the license together with a new Flux:: dongle, the license is already present on the dongle and no further action is needed.

If you already own a Flux:: dongle and purchased a new license, please login to the user download area, then follow the instructions in the Authorization Updates section at the top of the page. http://www.flux.audio/download/

When the corresponding authorization update is downloaded you need to install the license on your Flux:: dongle.

Run the security manager and the serial number of the dongle currently plugged in to your computer will be presented.

5.2.1 Windows

SecurityManager.exe located in: C:\ProgramFiles\Flux\Plug-ins\Misc

5.2.2 OS X

SecurityManager.app is found on the download section of fluxhome.com.

http://www.flux.audio/download/

Then press the Update button, select the license update that you previously downloaded, then press Open.

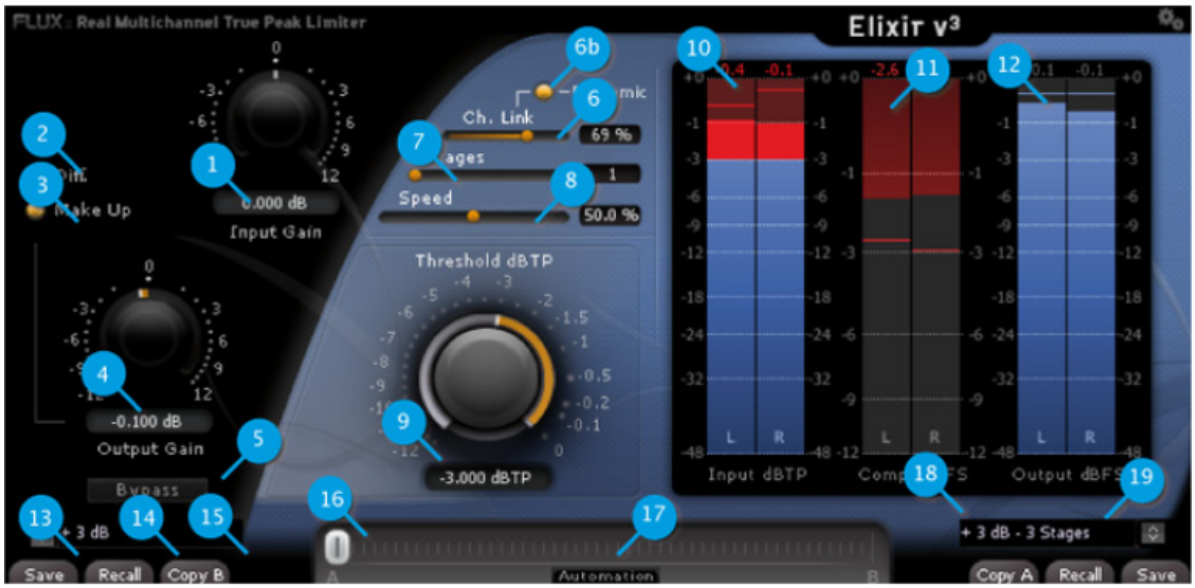
The active licenses are listed in the security manager, and you are now ready to start using Elixir v3.

If you are upgrading from a version prior to version 1.2, your Flux:: dongle requires an update in order to work. If you haven't already received this update by e-mail, please contact Flux:: support, (support@fluxhome.com).

6 User interface

As you may notice, the controls are not the usual suspects found on a dynamics processor (I/O Gain and Threshold excepted).

Instead, the controls provided typically affect more than one parameter in the underlying algorithms, with everything carefully tweaked allowing for creative processing still ensuring the finest sound achievable.



6.1 Input / Output Section

6.1.1 Input Gain (1)

Control the gain applied to the limiter input.

Unit: Decibel (dB)
Range: -12.000 to +12.
Min. Steps: 0.
Default Value: 0.

6.1.2 Output Gain (4)

Control the gain at the output stage of the limiter.

Unit: Decibel (dB)
Range: -12.000 to +12.
Min. Steps: 0.
Default Value: 0.

6.1.3 Diff. (2)

Allow to hear the difference only. Used to better understand the action and allow to easily tweak the parameters.

On/Off
Default Value: Off

6.1.4 Make Up (3)

Apply Gain compensation. Add invert of the threshold gain to the output gain.

On/Off
Default Value: Off

6.1.5 Bypass (5)

Bypasses the plug-in processing by routing the input direct to the output. The actual processing is still performed in the background allowing for a true and smooth transition between the processed and the actual incoming signal.

6.2 Processing Section

6.2.1 Ch. Link (6)

% of channels linkage

Unit: Percent (%)
Range: 0 to 100
Min. Steps: 1

Default Value: 0

6.2.2 Ch. Link Dynamic (6b)

Make the channels linkage dynamic according to the signal. It means; when On, the Channel Link will automatically move from 0 when High Dynamic (High transient) are detected and the desired value when no dynamic (low transient) are detected.

Unit: On/Off
Default Value: Off

6.2.3 Stages (7)

Number of stages (passes or steps) used by the algorithm. Because the algorithm adapt itself to the audio material, doing multi stages allow for the processing to be even more precise and provide an even more natural sounding result. For e.g. if the threshold is set to -3 dB and Stages set to 3: First stage will limit at -1dB, Second stage will limit at -2dB and third will limit at -3dB with analyzing done for each stages!

Range: 1 to 5
Min. Steps: 1
Default Value: 1

6.2.4 Speed (8)

Allow to change how the algorithm will react regarding to the audio material. This will change the how the gain envelop will be generated with more or less look-ahead, release and curve smoothing. Leave it at 50% by default which will be optimal for most case. prefer increasing stages before trying to reduce it and remember that from 50% to 100 % it can generate more and more distortion…

Unit: Percent (%)
Range: 0.0 to 100.
Min. Steps: 0.
Default Value: 50.

6.2.5 Theshold dBTP (9)

Control the threshold (or ceiling) used for limiting.

Unit: Decibel (dB)
Range: -12.000 to 0.
Min. Steps: 0.
Default Value: 0.

6.3 Metering Section

6.3.1 Signal Input dBTP True Peak Meter (10)

6.3.2 Signal Output dBFS True Peak Meter (11)

6.3.3 Comp. dBFS Meter (12)

All information is displayed at a refresh rate of 60 fps (if possible) and displaying the maximum action during the processing period.

6.4 Preset management

Elixir v3 , as well as all other Flux:: plug-ins, provides two preset slots referred to as slot A and slot B, which means that you can have direct access to two sets of parameter settings simultaneously. In addition to just recall (33) the settings for each of the slots individually and alternate between their settings, a morphing slider (35) is provided offering the possibility to morph between the slots and their corresponding settings. When clicking on one of the preset slots (38), the built in preset manager appears.

The preset manager contains three preset banks, the Factory bank contains factory presets, this bank is not available for saving of presets but any of the presets can be loaded into a preset slot and then saved into, the User bank, where all user presets are saved. Finally, the Global bank, which is a bit special, here you can save a complete snapshot with all the settings from both preset slots, as well as the position of the morphing slider.

In the preset manager, any preset can be loaded into a preset slot by double clicking on the name of the desired preset in the actual preset list, the preset will then be loaded into the preset slot corresponding to the position of the morphing slider.

6.5 Additional controls in the preset manager

- Recall A loads the selected preset into the corresponding slot.
- Recall B loads the selected preset into the corresponding slot.
- Update, saves the current settings into the selected preset.
- New, saves the current settings into a new preset.
- Duplicate creates a copy of the selected preset and saves it to the list.
- Edit allows for changes to the preset meta properties.
- Delete, removes the selected preset.
- Export, creates a file reflecting the content of the current preset bank.

- Import, allows for import of a preset bank file by adding the imported banks content to the content in the current preset bank.

When saving or editing a preset, an option to protect the preset is presented. The preset protection, if engaged, only allows the original preset author to uncheck and edit the preset. This means that you can protect your presets in a multi-user configuration. Protected presets can only be modified using the session used for their creation. If used in another user session they can only be imported or deleted.

6.6 Elixir v3 Preset Controls

6.6.1 Save (13)

To save a new preset using the built in preset manager, simply click Save in the corresponding preset slot (A/B), and to save changes to your preset, simply click Save again.

If you want to resave your preset under a new name, open the preset manager by clicking the corresponding (A/B) preset slot (38), select New, enter a name for your preset, and press Save.

6.6.2 Recall (14)

Recalls the settings of the corresponding slot.

6.6.3 Copy A/B (15)

To copy all parameters between the preset slots (A to B or B to A), press the Copy A or Copy B button, and the parameters from the corresponding preset slot will be copied into the current preset slot. When copying parameters from one slot to another, the preset morph slider will automatically slide to the slot the parameters where copied to.

6.6.4 Morphing Slider (16)

The morphing slider provides mixing between the settings of slot A and B and allows for some very creative tweaking.

The result of the morphing can be saved as a global preset containing the actual settings of both preset slots as well as the morphing slider position.

To save a Global preset, open the preset manager by clicking the corresponding (A/B) preset slot (38), then click Global, select New and enter a name for your global preset, then press Save.

6.6.5 Automation (Morphing Slider) (17)

When enabling the Automation control button, the morphing slider will be exposed and available for both automation read and write.

Though with the button engaged, only the morphing slider value is applied when reading automation.

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

6.6.6 Preset Name (18)

Displays the name of the current preset.

6.6.7 Preset Slot (19)

By pressing the little arrows in the preset slot, the built in preset manager appears

7 Technical Details

Elixir v3 can manage up to 8 channels and works with 64 bits floating point and a maximum sample rate of 384kHz. depending of the configurations. Please see below.

8 Plug-in formats and platforms supported

Windows XP, Vista, Windows 7, Windows 8 : All 32 / 64 bit
- AAX : 32 / 64 bit (ProTools 10 or later required)
- VST : 32 / 64 bit

OS X 10.7 (Lion), 10.8 (Mountain Lion)
- AAX : 32 / 64 bit (ProTools 10 or later required)
- VST : 32 / 64 bit
- AU : 32 / 64 bit

Due to AVID ProTools changing to AAX, from Version 3 (v3) RTAS for AVID ProTools is no longer supported.

9 Specifications

9.1 Elixir v3 AAX DSP Specifications:

Elixir v3: takes 100 % of 1 DSP * Support up to 4 stages * Support up to 48 KHz * Support up to 2 channels

Elixir v3 1 Stage: takes around 25 % of 1 DSP * Support only 1 stage * Support up to 192 KHz * Support up to 8 channels

9.2 Elixir v3 AAX Native Specifications:

Elixir v3 * Support up to 4 stages * Support up to 192 KHz * Support up to 8 channels

Elixir v3 1 Stage: has been added for session compatibility reason with the DSP versions * Support up to 1 stages * Support up to 192 KHz * Support up to 8 channels

9.3 Elixir v3 AU & VST Native Specifications:

- Support up to 4 stages
- Support up to 384 KHz
- Support up to 8 channels