NEWFANGLED AUDIO

Newfangled Audio
www.newfangledaudio.com

Contents

Chapter 1

Background on Auditory Filter Banks

In the 1930s a physicist at Bell Labs named Harvey Fletcher was studying the human auditory system. In 1933 he published a paper called "Loudness, Its Definition, Measurement and Calculation" which introduced the concept of critical bands in human hearing. This discovery showed that a human can only detect a the presence of a frequency if it is a certain distance from another frequency playing at the same time. This frequency distance changes depending on the frequencies of the tones that are playing. But generally, this and other research has found that we can divide the human auditory range into 26 critical bands between 0 Hz and 20 kHz, and within each critical band a human can really only make out one sound at a time. Because the critical band corresponds to action of the basilar membrane in the human ear it is referred to as an auditory filter, and the set of all 26 critical bands is referred to as an auditory filter bank.

In the years since, many successful models of the human auditory system have been developed which rely on these critical bands. Many of the most successful of these rely on the Mel Scale, which defines a particular arrangement of auditory frequency bands such that each band sounds equally spaced from all others. The idea is that by breaking up a sound using a mel spaced filter bank, the division of that sound will sound equal to a human listener.

Auditory scientists and engineers now use the mel scale in hearing research and in speech recognition research. You might not know it, but the mel scale is probably being used behind the scenes in various gadgets and equipment you already use. It's often used any time the signal processing could benefit from working in the same way as the human ear. After success using the mel scale auditory filter bank in EQuivocate and Elevate we decided to use it to create a more full featured transient modulator called Punctuate.

Chapter 2

Newfangled Audio Punctuate

Punctuate is heavily based on the Transient Emphasis section of the Elevate Mastering Limiter. It is a multi-band transient modulator (sometimes called a transient designer) that uses, by default, the 26 critical bands in the human ear. In addition to using the critical bands it uses intelligent algorithms to set the parameters of the transient modulator for each band. This allows you to control the transient emphasis (or suppression) and timing across all 26 bands with just 4 controls.

Like EQuivocate the filter bank in Punctuate supports between 1 and 26 bands which, by default, are distributed along the Mel Scale between

0 Hz and 20 kHz, however it does allow you to customize the center frequency of each band. The filters themselves are linear phase triangular filters, of the kind often used in human auditory models to represent critical bands. Unlike the filters used in analog graphic EQs, these filters are very well behaved over the mel space. With Transient Emphasis at 0% these filters will pass your audio untouched, and when the transients are modulated, each band will stay completely independent from its neighbor. And unlike some other linear phase filter implementations, these filters have minimal pre-echo or other time domain artifacts. The overall effect is a very pleasant and neutral tone modification, which sounds very natural.

By default, the number of bands is set to 26 and they are spread using the Mel Scale, so that filters should closely represent the critical bands of human hearing. This means each transient modulator is directly tickling a different section of your inner ear. For the purposes of modifying a complex sound, this should be the most direct way available.

This all works together to create an incredibly powerful, but very easy to use transient modulator.

Chapter 3

Installation and Instantiation

Newfangled Audio plug-ins are distributed by Eventide and like other plug-ins Eventide distributes, Punctuate uses PACE's ilok.com licensing system, with or without and iLok hardware dongle. Each license provides two activations which can reside on either your computer or on an iLok license dongle. Once you've purchased your plug-in, you'll need to register it on Eventide's website, activate your license, and install the plug-in on to your computer

3.1 Registering Your Plug-in

When you purchase Punctuate, you'll receive a Serial Number and License Key. The Serial Number will be two letters followed by 6 numbers. If you have an individual Punctuate license, the Serial Number will start with NP (i.e. NP-######). The License Key will be 3 sets of 4 characters, a letter or a number, each; like XXXX-XXXX-XXXX.

Once you've received these codes, you can register your plug-in on the Eventide website. To do so, please log in to `http://www.eventideaudio.com`, navigate to My Account in the top right corner, and select Register a New Product. Then, fill out the form by selecting Native Plug-in (VST, AU, AAX) in the Product Category field, select Punctuate in the Product list, and enter your Serial Number, License Key, and iLok.com account name. If you don't yet have an ilok.com account, you can create one for free at `http://www.ilok.com`. Once you've done so, press Register.

Once you've entered this information and pressed the Register button, Eventide will send the applicable plug-in license to your ilok.com account, which you will need to activate to your computer or iLok dongle.

3.2 Activating Your License

To activate and manage your plug-in licenses you'll need to install PACE's iLok License Manager software which you can download from `http://www.ilok.com`. If you don't have this software installed, please download and install it now.

Once you have installed and launched iLok License Manager you should be able to log in to your account by clicking the large "Sign In" button in the upper left hand corner of the application. Once you have, you should be able to see available licenses by choosing the Available tab at the top of the iLok License Manager application. If you have successfully registered your plugin, your Punctuate Native license will be available in this list. Please activate this license by dragging it to either your computer or iLok dongle listed on the left. When you do so, you will be asked to confirm the activation, and you will be able to see it by clicking on the location you have chosen. At this point your license is activated.

3.3 Installing Your Plug-In

You should have been given a link to the Punctuate plug-in installer when you purchased your plug-in, but if you haven't, you can find downloads for all of our plug-ins at `http://www.newfangledaudio.com/downloads`. Please download and launch the correct installer for your system.

Once you've launched the plug-in installer, it will take you through several pages of options. We have tried to choose defaults for these options which will best serve the majority of users, but it is worth a minute to make sure you understand these options before clicking through to the next page. A common issue with Windows VST plug-ins is choosing the correct VST directory, which can be different on each system. Please pay special attention to this setting. Once you have followed through the installer, your plug-ins and presets should be in your chosen locations, and you can hit finish to end the installer application.

At this point, you should be ready to use your Punctuate Plug-In.

3.4 Moving or Removing an Activation

If at any point, you decide to move your plug-in activation, you can do so in iLok license manager. To move an activation between an iLok dongle and your computer, simply plug in the iLok, locate the license in its current location, and drag it to its new location. To deactivate a license, find it in its location, right click on it, and choose deactivate.

Remember that each Punctuate Plug-In License comes with two activations, which can be used on either a computer or iLok dongle, meaning you can use Punctuate in two locations at the same time.

3.5 Removing or Uninstalling your Plug-In

We're sure you'll love your Newfangled Audio plug-ins, but if you ever want to remove them from your machine it's as easy as removing the following files.

For Mac:

- Macintosh HD/Library/Audio/Plug-Ins/Components/<Plug-In Name>.component
- Macintosh HD/Library/Audio/Plug-Ins/VST/Newfangled Audio/<Plug-In Name>.vst
- Macintosh HD/Library/Audio/Plug-Ins/VST3/Newfangled Audio/<Plug-In Name>.vst3
- Macintosh HD/Library/Application Support/Avid/Audio/Plug-Ins/Newfangled Audio/<Plug-In Name>.aaxplugin
- /Music/Newfangled Audio/<Plug-In Name>/
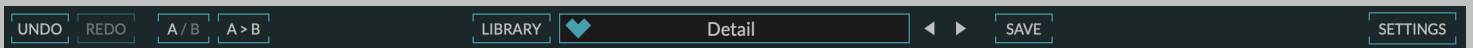
For Windows:

- c:\Program Files\Common\Steinberg\VST2\Newfangled Audio\<Plug-In Name>.dll
- c:\Program Files\Common\VST3\Newfangled Audio\<Plug-In Name>.vst3
- c:\Program Files\Common\Avid\Audio\Plug-Ins\Newfangled Audio
<Plug-In Name>.aaxplugin
- My Documents\Newfangled Audio\<Plug-In Name>\

Chapter 4

Navigation Bar

At the very top of the plug-in is a navigation bar which allows you to undo and redo changes, access the preset librarian, settings, and manage several other global features of the plug-in.

| UNDO | REDO | A / B | A > B | LIBRARY | ◆ | Detail | ◀ ▶ | SAVE | SETTINGS |

4.1 UNDO/REDO

On the far left is an UNDO and REDO button. After changing any plug-in parameter in the plug-in interface the UNDO button will activate. Pressing it at this point will undo this action. At this point the REDO button will become active, and pressing it will redo this action. Multiple levels of undo are available and you can move back through several changes to reach an earlier state.

4.2 A/B COMPARE

Next you'll find buttons labeled A/B and A>B. These two buttons allow you to easily toggle between two states of the plug-in and compare the sounds. By default the plug-in is in the A state and you'll notice that the "A" is highlighted. In this state pressing the A>B button will copy the A state to the B state. Toggling the A/B button will switch to the B state, highlighting the "B" and switching the A>B button to B>A (allowing you to copy the B state to the A state).

Any changes you make in the plug-in interface will update the highlighted state. In this way, you can copy the A state of the plug-in to the B state, make changes to the A state, and use the A/B button to compare these two states.

4.3 LIBRARY

The Library button launches the Preset Librarian which can be used to explore the plug-ins presets based on any combination of category, author, tags, or favorites.
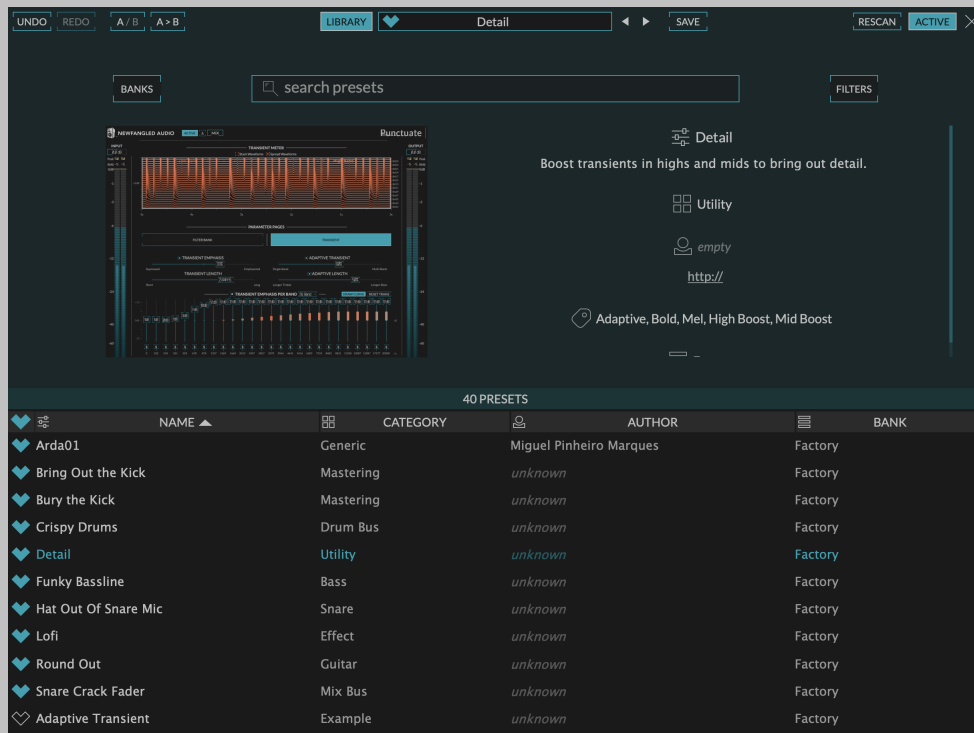
The Preset Librarian is split into four main sections.

4.3.1 SEARCH and FILTERS

The top of the Preset Librarian shows the BANKS, SEARCH BAR, and FILTERS.

Typing a phrase into the search bar will allow you to search all the presets by a given phrase. You can further restrict this search by selecting a BANK or FILTERS.

Pressing the BANKS button opens a screen which allows you to restrict your search to the presets in either the FACTORY or USER bank. Or additional preset banks if you have any installed.

Pressing the FILTERS button opens a screen which allows you to restrict your search to presets matching a specific CATEGORY, AUTHOR, or one of several TAGS. Additionally, you can restrict your search to FAVORITES if desired.
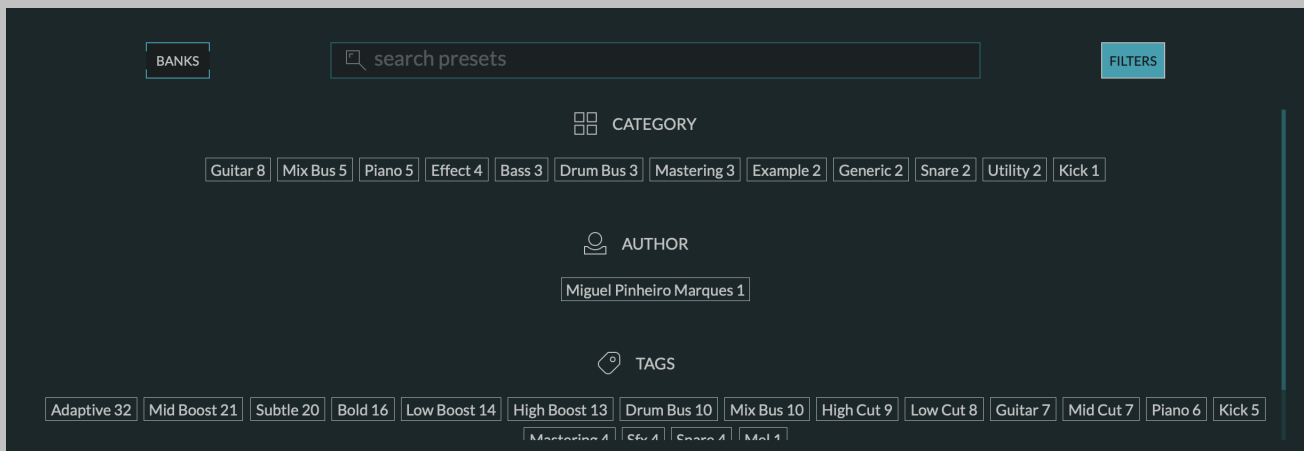
4.3.2 PRESET LIST

The bottom of the Preset Librarian shows the list of presets which match the current criteria. It displays the FAVORITE status using a heart icon, the preset NAME, the preset CATEGORY, the preset AUTHOR, and the preset BANK. You can sort the list by any of these. The up and down arrows on your keyboard will allow you to toggle through the presets.

4.3.3 PRESET INFO

The center right of the Preset Librarian displays information about the currently loaded preset. This area shows the preset name, a short description if available, the category, the preset author - including a link to their work, the preset's tags, and its bank.

4.3.4 PLUGIN UI

The center left of the Preset Librarian displays a miniature version of the plug-in UI. This plug-in UI is not editable, but it is live and will show you the current settings of the plug-in, as well as any meters. We've found it incredibly useful to see this display as we've toggled through presets to get a sense of what each preset does.

4.4   PRESET SELECTOR
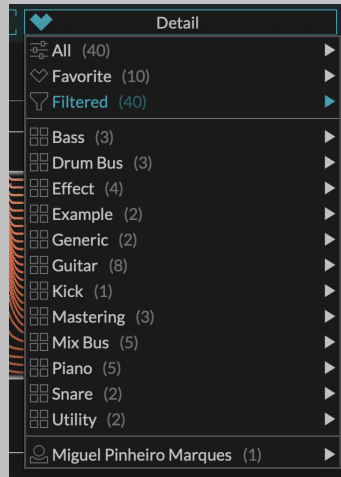
In the center of the navigation bar is a dropdown preset selector. Clicking on this preset selector will show you the plug-ins presets in several views.

1. All will show you all the presets in alphabetical order.

2. Favorite will show you all your favorite presets in alphabetical order.

3. Filtered will show you all the presets which correspond to the current filter in alphabetical order. This filter is set up in the preset librarian.

4. Underneath these the presets are displayed according to their Category, as assigned when a preset is saved.

Once you load a preset from this dropdown list the Left and Right arrow buttons allow you to toggle through the selected subgroup in order. For more advanced preset selection click the LIBRARY button to enter the preset librarian.

Additionally, if you like the sound of the current preset you can click the heart icon to set the loaded preset as a favorite. If a loaded preset is modified the heart icon will become an asterisk and the preset name is italicized, indicating that the current sate no longer matches that of the saved preset.

4.5   SAVE

The SAVE button launches the preset save screen where you can save a preset and assign categories, tags, and descriptions, as well as set the default state of the plug-in.
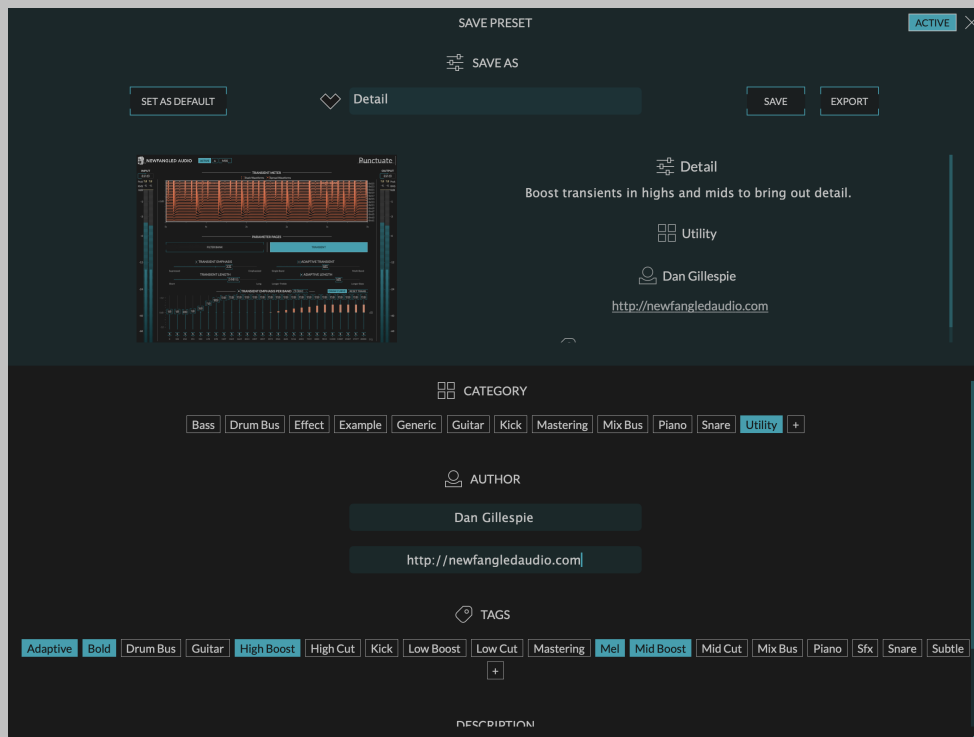
4.5.1 PRESET NAME

This field sets the preset name. There can only be one preset with a given name.

4.5.2 SET AS DEFAULT

This button will set the current state of the plug-in as a plug-ins default. This means when you load the plug-in the it will default to these settings.

4.5.3 HEART ICON

This will mark this preset as a favorite when you save it.

4.5.4 SAVE BUTTON

This button saves the preset

4.5.5 EXPORT BUTTON

In order to be browsed by the plug-in the presets are saved in a particular folder. However, if you want to save the preset elsewhere on your computer you can use the EXPORT button to export it as a file.

4.5.6   PLUGIN UI and DESCRIPTION

This section shows the current settings of the plug-in, and how it will appear in the preset librarian.

4.5.7   CATEGORY

Set the category for the preset you are saving. A preset can have only one category. If the preset doesn't fit into any of the existing categories you can use the (+) button to create a new one.

The existing categories are based on those that are found in the existing presets. If you create a new one it will appear in this list with an "X" on it. If you decide not to use the newly created CATEGORY you can remove it by clicking on the "X". However, once the preset is saved this category will be permanent and available to all newly saved presets, unless you delete all presets which use it.

4.5.8   AUTHOR

The AUTHOR section allows you to add your name and a url if you maintain a presence on the web. This will be automatically populated with the information from the last saved preset, so you will only likely need to enter it once.

4.5.9   TAGS

You can add any number of TAGS to a saved preset. These TAGS will allow your preset to be found in the preset librarian. It's best to add the tags that apply to the preset, and don't add the ones that don't. You can create a new tag using the (+) button.

The existing tags are based on those that are found in the existing presets. If you create a new one it will appear in this list with an "X" on it. If you decide not to use the newly created TAG you can remove it by clicking on the "X". However, once the preset is saved this tag will be permanent and available to all newly saved presets, unless you delete all presets which use it.

4.5.10   DESCRIPTION

If desired you can add a short description to the preset. It's best to use this field to add information about what a preset is for, or any hints for a user about how to use it.

4.6   SETTINGS

The SETTINGS button pops down a settings page which contains additional options.

---Info---

Punctuate

Installed version:	v1.12.0

You are running the latest available version

User Guide	SHOW

---Graphics---

Show meters	ON
Brightness	100%
OpenGL graphics rendering	OFF
Color scheme	MODERN ∨

---Presets---

Presets folder	REVEAL
Default settings	SAVE
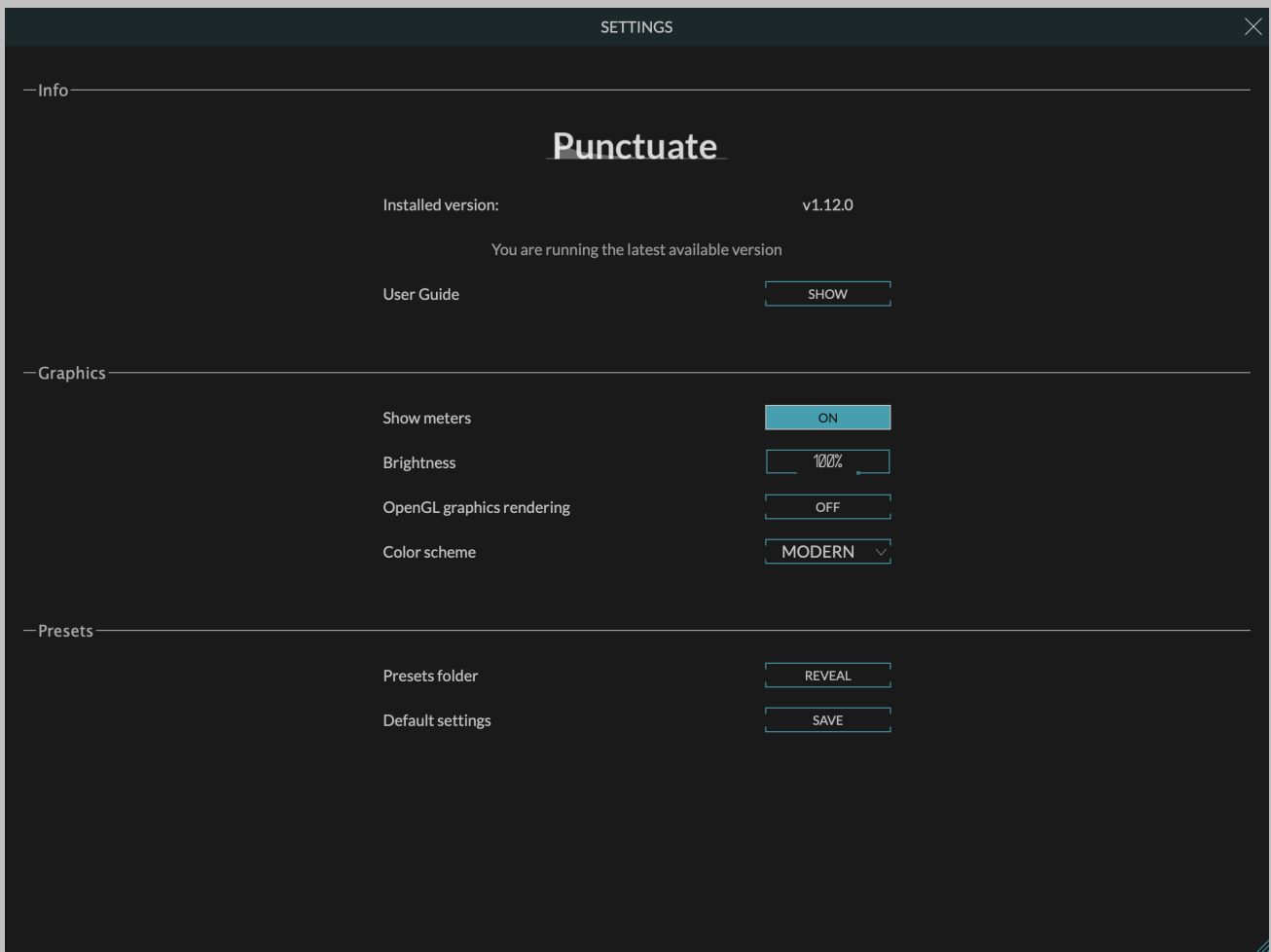
4.6.1   INSTALLED VERSION

This displays the version number that is currently installed. If you are running the latest version it will tell you. If there is an update an UPDATE button will appear. Clicking this button will bring you to the downloads page where you can get the latest version.

4.6.2   USER GUIDE

Pressing the SHOW button will launch this user guide.

4.6.3   SHOW METERS

The SHOW METERS button will show or hide the additional meters in the plug-in. Specifically, turning it off will hide the glow in the RADAR control, the envelope graph behind the LEVEL DETECTOR section, and the curve graphic behind the CURVE section.

4.6.4   BRIGHTNESS

The BRIGHTNESS control will control the brightness of the glow in the RADAR control, the envelope graph behind the LEVEL DETECTOR section, and the curve graphic behind the CURVE section.

4.6.5   OPENGL GRAPHICS RENDERING

The USE OPENGL button will enable OpenGL rendering of the UI. For this setting to take effect you must close and reopen the UI. If you that the plug-in UI renders better with OpenGL on or off on your computer you can save this as the default setting and new instantiations will always load using this setting.

4.6.6   COLOR SCHEME

The COLOR SCHEME dropdown will allow you to choose one of several different color schemes for your viewing pleasure.

4.6.7   PRESETS FOLDER

Clicking the REVEAL button will bring you to the presets folder. This is only necessary if you want to share you presets with someone else, or access these files for another reason.

4.6.8   DEFAULT SETTINGS

Pressing the SAVE button will save all the current settings as the default for the plug-in. This is useful if you'd like a different starting point than the one we've provided.

4.7   Resize

The bottom right corner of the UI will allow you to resize the plug-in. To change the default plug-in size drag the plug-in to the desired size and save over the default preset.

Chapter 5

Parameters and Metering

All of Punctuate's controls fit on a single page, in this section we will describe each control and call out some features and tips.

5.1   Global Controls

Punctuate has several control types, including vertical and horizontal sliders, rotary knobs, drop-down menus, and toggle and radio buttons, all of which have tool-tips which will give you more information about their function if you hover your mouse above them.

In general, all sliders and knobs can be double clicked to type in a specific value, option-clicked to return them to their default value, or command-clicked or control-clicked to enter a vernier mode for fine tuning. In addition, some controls support special shift-click functionality, such as using shift-swipe to draw and EQ curve, or shift clicking the gain sliders to set output level compensation. Where available, these shift-click functions are mentioned in the tool-tips for the individual controls.

Where appropriate, many controls have a related on/off button which will deactivate this control, or even the entire section. Turning sections off when you're not using them may reduce the amount of processing power used by Punctuate.

5.2   Global Parameters

5.2.1   INPUT AND OUTPUT LEVEL AND BAR METERS
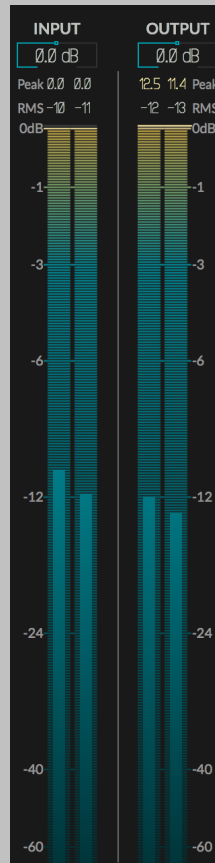
The left and right hand sides of the plug-in have matching vertical bar meters which display the INPUT (on the left) and OUTPUT (on the right) levels in levels in Peak (horizontal ticks), RMS (solid bar and numerical display), and Peak Hold (numerical display) formats. These meters are always present in the display and clicking the Peak Hold section, or by-passing the plug-in will clear the held peak value.

Above the INPUT meter is a knob for the MASTER INPUT LEVEL, and above the OUTPUT meter is a knob for the MASTER OUTPUT LEVEL. The MASTER INPUT LEVEL is just before the INPUT meter and the MASTER OUTPUT LEVEL is just before the OUTPUT meter. The Punctuate Transient Designer is linear and floating point, so it will not saturate your audio at any step in it's process, but the INPUT and OUTPUT level can be used to set optimize the meters and make up for any throughput gain change.
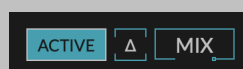
5.2.2 ACTIVE

The ACTIVE button is located near the top left of the plug-in UI near the NEWFANGLED AUDIO label in the header. It activates or bypasses all the processing in the plug-in.

5.2.3 △

The △ symbol engages Delta Listen Mode. When you toggle this button we subtract the plug-in output from the input to show only what is changing in the processor. Think of this as what the process is removing. Careful use of this can be a powerful tool to hear what the plug-in is doing to your audio.

5.2.4 MIX

The MIX knob is located next to the ACTIVE button. When the plug-in is ACTIVE the MIX knob blends the output signal between the wet (transient modulated) sound and the dry input sound.
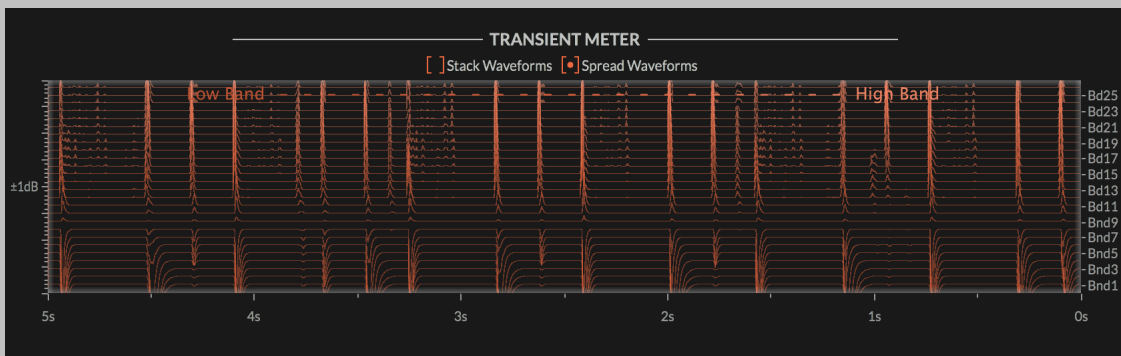
5.2.5 SCROLLING TRANSIENT METER

In the top center of the screen is a scrolling transient meter. This will show you the transient modification applied to each band in either a stacked or spread configuration. When the waveforms are stacked you will see each transient modulations waveform stacked on top of each other on the same axis. When the waveforms are spread you will see the individual waveforms spread out so you can see each a bit more clearly.

5.3 TRANSIENT PAGE

The rest of the controls are split between a TRANSIENT page for controlling the TRANSIENT EMPHASIS or SUPPRESSION algorithms and a FILTER BANK page for fine tuning the filter bank settings. First the controls on the TRANSIENT PAGE:

PARAMETER PAGES

FILTER BANK | TRANSIENT

[•] TRANSIENT EMPHASIS — 100%
Supressed — Emphasized

TRANSIENT LENGTH — 200mS
Short — Long

[•] ADAPTIVE TRANSIENT — 80%
Single Band — Multi Band

[•] ADAPTIVE LENGTH — 50%
Same Legnth — Different Lengths

[•] TRANSIENT EMPHASIS PER BAND   26 Band ▾   DRAW CURVE   RESET TRANS

+12 / 0dB / -12 — dB

Band values: -12, -10, -8dB, -7dB, -6dB, -5dB, -3dB, -2dB, 0dB, 1dB, 2dB, 3dB, 4dB, 5dB, 6dB, 8dB, 9dB, 11dB, 12dB, 12dB, 12dB, 12dB, 12dB, 12dB, 12dB, 12dB, 12dB

Hz: 0, 102, 218, 351, 503, 678, 878, 1107, 1369, 1669, 2013, 2407, 2857, 3373, 3964, 4641, 5416, 6303, 7319, 8483, 9815, 11340, 13087, 15087, 17377, 20000

5.3.1   TRANSIENT EMPHASIS

This is the plug-ins main TRANSIENT EMPHASIS control. This control works in tandem with the individual band controls to set the TRANSIENT EMPHASIS or TRANSIENT SUPPRESSION in each band. By default, when the TRANSIENT EMPHASIS control is above 0% Punctuate is emphasizing transients, when it's below 0% it's suppressing transients. However, in the TRANSIENT EMPHASIS PER BAND section you can change each band from emphasizing (+dB) to suppressing (-dB) allowing you to invert this action for specific bands, or all bands if you choose. This action may seem a little confusing at first but is very powerful because it allows you to emphasize transients in one section of the frequency spectrum while suppressing them in another. This can be useful for getting the high hats out of the snare mic, or boosting the kick while cutting the snare in the room mic, for just two examples.

5.3.2   ADAPTIVE TRANSIENT

The ADAPTIVE TRANSIENT slider will set how much Punctuate is allowed to adapt each bands modulation to the transients it sees in that band, or how much it must consider the other bands when setting it's transient level. When the ADAPTIVE TRANSIENT slider is pulled to 0% the intelligent algorithm is turned off, forcing all bands to respond at the same level to incoming transients. When the ADAPTIVE TRANSIENT slider is turned to 100% each band totally ignores the other bands and responds only to transient in it's own frequency range. At settings between these two extremes the bands work together to identify transients in sections of the signal and boost and cut these in the most natural way.

5.3.3   TRANSIENT LENGTH

The TRANSIENT LENGTH slider allows you to set the length of what Punctuate considers to be a transient. When this is set to be very short only the very beginning of each attack is modulated, but when it's set longer more of the attack sound is captured in the modulation. When it's set to be very long it can take a while to recover and might be less sensitive to many quick transients.

5.3.4   ADAPTIVE LENGTH

The ADAPTIVE LENGTH control allows each of Punctuate's bands to adapt it's own length parameter to the signal it sees. This means that, in general, lower bands will have longer lengths and react more slowly while higher bands have shorter lengths and react more quickly. This is a powerful control and it's setting can greatly effect the sound of Punctuate.

5.3.5   TRANSIENT EMPHASIS PER BAND

Below the four main sliders are individual TRANSIENT EMPHASIS PER BAND sliders. Each of these sets the total amount of transient emphasis being applied to that band, when the TRANSIENT EMPHASIS slider is at 100%. By default these are all set to +12 dB and the amount of global transient emphasis is applied using the TRANSIENT EMPHASIS slider, but my modifying these band sliders you can create complex modulations which effect different parts of the spectrum differently, or even suppress some bands while emphasizing others.

5.3.6   TRANSIENT EMPHASIS PER BAND METERS

Behind the TRANSIENT EMPHASIS PER BAND sliders are meters showing the transient emphasis being applied in each band. Similar to the sliders themselves these range from -12 dB to +12 dB.

5.3.7   SOLO BUTTONS

Below each TRANSIENT EMPHASIS PER BAND slider is a solo button which allows you to solo that specific band and each what's happening there, only.

5.3.8   RESET TRANS

Hitting the RESET TRANS button will reset all transient per band sliders to 0.0 dB.

5.3.9 DRAW CURVE

The DRAW CURVE button is on by default, which allows you to click and swipe your mouse across the GAIN SLIDER FIELD to draw a curve on the transient sliders. If you toggle the DRAW CURVE button off you will be able to manipulate only one band at a time, but will be able to fine tune it using a command click.

5.4 FILTER BANK PAGE

5.5 FILTER BANK SUB-MODULE PAGE
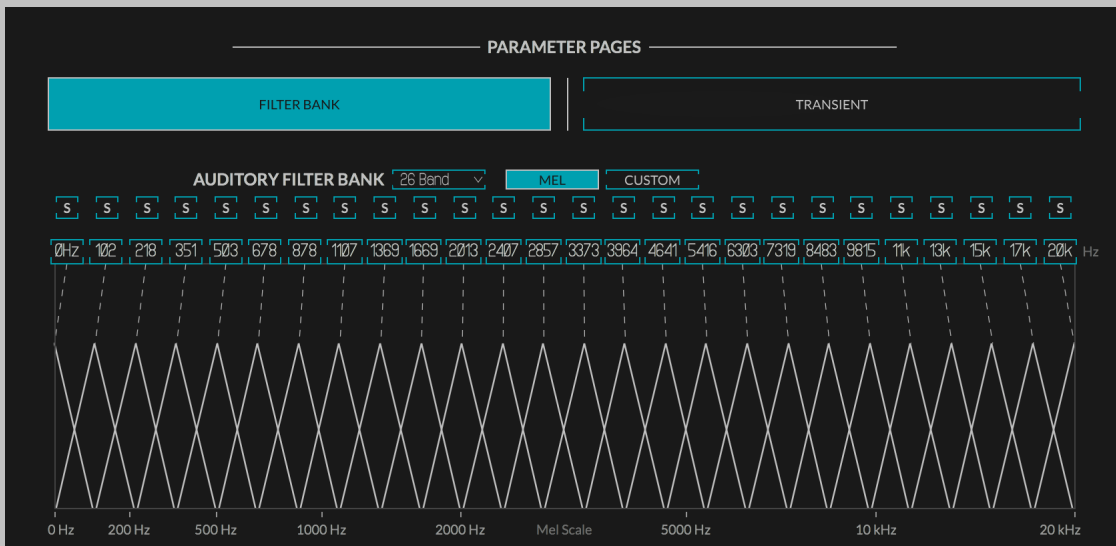
The Elevate plug-in uses a triangular filter bank to split the input signal into a number of frequency bands that resemble the critical bands in the human ear. The FILTER BANK parameter page allows you to control the filters that split the input signal into these frequency bands. This filter bank outputs a number of audio streams which the adaptive algorithm uses to set the gain reduction across bands. In general, the higher the number of bands, the more fine grained control the adaptive algorithms will have, and the more gain you can add before hearing artifacts. However, a larger numbers of bands does increase the algorithms processing requirements significantly, and increasing the number of bands may not always produce a noticeable increase in quality.

The number of bands selected in the auditory FILTER BANK will change the number and frequency of bands in the TRANSIENT emphasis pages. Selecting the 1 BAND option will also deactivate the ADAPTIVE parameters, as these work across the bands. By selecting 1 BAND you are turning the limiter section into a standard look-ahead limiter, with transient emphasis.

5.5.1   AUDITORY FILTER BANK

This drop-down allows you to select the number of bands you are splitting the signal into. Setting the number of bands using this drop-down will automatically space them on the mel scale between the minimum value and the maximum value.

5.5.2   MEL/CUSTOM

This set of interactive radio buttons allow you to distribute the filter center frequencies using the MEL scale or a CUSTOM scale of your choosing. The MEL scale is an auditory scale based on the perceptual distance between pitches, selecting MEL will equally distribute the chosen number of filters between the current minimum frequency and current maximum on the MEL scale. CUSTOM is selected by either choosing the radio button, or by moving any of the filter center frequencies away from their MEL based values. By customizing the filter bank to your program material you can use the TRANSIENT page to hone in on particular frequency ranges that are important in your program material.

5.5.3   SOLO BUTTONS

There is a set of toggle buttons which allow you to solo the output of one band, or for a number of bands by shift-clicking or ctrl-clicking. These are the same solo buttons that appear on the TRANSIENT page.

5.5.4   INSERT FILTER

The (+) button beneath the solo for the selected band will insert a new filter with a center frequency between the band chosen and the one to it's right. This can be especially helpful if you find you need more resolution in an area when fine tuning the filter center frequencies. If you are already using the maximum number of filters, the INSERT FILTER buttons will be greyed out.

5.5.5   REMOVE FILTER

The (-) button beneath the solo for the selected band will remove the current band without effecting the center frequencies of the surrounding bands. This can be helpful if you find one or more bands to be redundant while fine tuning center frequencies.

5.5.6   FILTER CENTER FREQUENCIES

There are also a set of text box sliders that allow you to set the CENTER FREQUENCY of each band. By default these are set to match the critical bands of the human ear, however these bands can be fine tuned

to more closely match important frequency ranges in your program material as well. Doing so will allow you to use the band specific gain and transient sliders in the other sub-modules to fine tune your result.

5.5.7   FILTER BANK DISPLAY

The FILTER BANK DISPLAY shows you the relative distance and shape of each filter using the MEL scale. This will help you visualize how the filters are arranged across the auditory spectrum. The triangular shape of these filters help adjacent band have some amount of similarity, leading to a smoother overall sound.

Chapter 6

Conclusion

We hope you enjoy Newfangled Audio's Punctuate Intelligent Transient Modulator plug-in. If you have any questions, comments, or concerns please write us at support@newfangledaudio.com

Chapter 7

About Newfangled Audio

The Oxford English Dictionary defines Newfangled as "objectionably new".

Music technology can sometimes be a backward looking pursuit. This is understandable, the purpose of music technology should be to help musicians make great music. There have been many great pieces of gear in the past and we should seek to keep these pieces and make them available to people who want to use them, and the time and dedication required to master a musical instrument means that changes in their design are often evolutionary rather than revolutionary.

However, the great pieces of gear from yesteryear are more often than not those that contained new ideas in their time. The reverence we have for these pieces can sometimes turn into fetishism, and mindless re-creation of classic gear can fail to inspire musicians and artists to take new risks. It's important to make sure artists and engineers have access to good tools that inspire them and don't stand in their way, but these tools should never be used as a security blanket to stand in the way of an artist or engineers ears and taste.

Newfangled Audio seeks to only make gear that incorporates new ideas. We want to make gear that is great, but only using ideas that others are not. We realize that deviation from the norm might sometimes be objectionable. The Oxford English Dictionary defines Newfangled as "objectionably new".