zynaptiq

UNCHIRP

User Manual V1.0.0

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UNCHIRP

Introducing UNCHIRP

What is UNCHIRP?

Both lossy codecs as well as many of today's DSP processes (like de-noisers) make heavy use of a process called the Fast Fourier Transform (FFT). This method has some major advantages. It also has some major drawbacks, which are the root cause for a variety of artifacts, such as *Musical Noise*, *High Frequency Modulation* (a.k.a. *Chirping, Underwater Sound or The Tweeties*), *Transient Smearing*, and overall "blurring" due to low localization in the time domain. Because of the way human hearing works, these artifacts are very obvious and sound distinctly unnatural. Additionally, lossy codecs and de-noisers often cause a loss of high frequencies, further degrading your audio. **UNCHIRP** is the medicine for all of these artifact types. If you need to salvage poorly encoded music, speech that has gone through a low bit rate uplink, material that has been de-noised too strongly, or footage recorded with consumer mobile devices – or if you simply want to add contour and vibrance to already good recordings – UNCHIRP is your (only) friend.

We sincerely hope you will enjoy using UNCHIRP.

Yours,

Stephan M. Bernsee & Denis H. Gökdag

zynaptiq headquarters

Hannover, Germany

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System Requirements

Mac Requirements

- Intel-based Apple Mac computer
- Minimum of 2 CPU cores running at 2.4 gHz or faster
- 1 GB of available RAM
- Mac OS X 10.6 or newer
- 60 MB free Hard-Disk space
- Apple AU (AudioUnits), Steinberg VST 2.4 or Avid RTAS/AAX compatible host software
- AAX requires Pro Tools version 10.3.5 or newer
- Internet Connection for Activation (though not necessarily on the Computer used for audio)

Windows Requirements

- Minimum of 2 CPU cores running at 2.4 gHz or faster
- 1 GB of available RAM
- Microsoft Windows XP SP3, Windows Vista or Windows 7/8
- 60 MB free Hard-Disk space
- Steinberg VST 2.4 or Avid RTAS/AAX compatible host software
- AAX requires Pro Tools 10.3.5 or newer
- Internet Connection for Activation (though not necessarily on the Computer used for audio)

Installation & Authorization

Installation Mac

Installing and authorizing **UNCHIRP** on a Mac is very straight-forward. Simply expand the ZIP file you received, navigate to the *Mac OS X* folder in the resulting directory and mount the contained disk image file (.dmg) by double-clicking it in the Finder. Then launch the installer contained on the resulting, auto-mounted volume. Follow the on-screen instructions to install.

The installer will install the following files to the following locations:

1) AudioUnits mono/stereo plug-in to <root drive>/Library/Audio/Plug-ins/Components/

2) VST mono/stereo plug-in to <root drive>/Library/Audio/Plug-ins/VST/

3) RTAS mono/stereo plug-in to /Library/Application Support/Digidesign/Plug-Ins/

4) AAX mono/stereo plug-in to /Library/Application Support/Avid/Audio/Plug-ins

5) Manual, UNCHIRP Authorizer app & stand-alone application to /Applications/Zynaptiq Plug-In Support/

During installation you will be prompted to activate your plug-in, so please keep your activation code at hand. Please note that we strongly advise to activate your software at this point, and not from within your host application.

Installation Windows

Installing and authorizing **UNCHIRP** on a Windows system is very straight-forward. Simply expand the ZIP file you received and navigate to the *Windows* folder in the resulting directory. Therein, you will find the following individual installers:

1) VST 2.4 mono/stereo plug-in (32bit)

1) VST 2.4 mono/stereo plug-in (64bit)

2) RTAS mono/stereo plug-in

3) AAX mono/stereo plug-in (32bit)

4) AAX mono/stereo plug-in (64bit)

Choose the appropriate installer and launch it. Please note that you need to be logged in as admin level user!

The installers create the following files:

1) The VST installer creates the UNCHIRP VST plug-in in <Program Files Folder>\Steinberg \VstPlugins. **Note:** should you keep your VST plug-ins in a different location, you should point the installer to that directory when provided with the option. **Note:** please do not rename, move or delete the "Data" folders installed next to the plug-ins

2) The RTAS installer creates the UNCHIRP RTAS plug-in as well as the UNCHIRP RTAS data folder in <Program Files Folder>\Common Files\Digidesign\DAE\Plug-Ins. **Note:** please do not rename, move or delete the "Data" folder installed next to the plug-in.

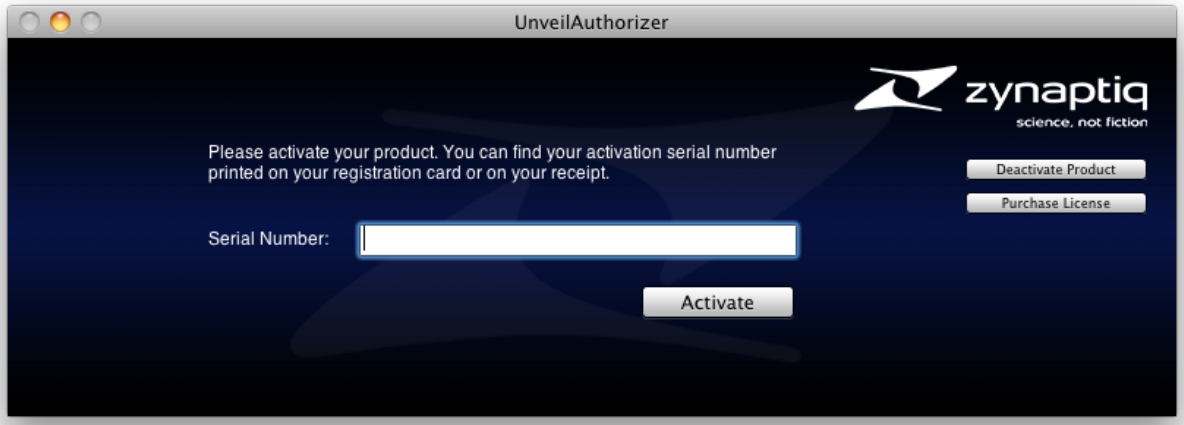
3) The AAX installer creates the UNCHIRP AAX plug-in in <Program Files Folder>\Common Files\Avid\Audio\Plug-Ins.

All Windows installers will install the UNCHIRP Authorizer app to <Program Files Folder>\Zynaptiq\UNCHIRP\.

Windows Vista, Windows 7/8 users: please make sure you activate the plug-in when the activation dialog is opened during install (and NOT from within your host!).

Authorization Mac & Windows

To be able to use your new software, it needs to be activated. During installation of **UNCHIRP,** the **UnchirpAuthorizer** app, will automatically be launched.



Authorization Details

Enter your serial number and click “Activate”. If your machine has access to the internet, you’ll be shown a confirmation of the successful authorization and you’re good to go. If the machine you’re activating on has no internet connection, you will be guided through the process.

Generally, our copy protection mechanism will allow you to have two machines authorized at the same time. It is essentially a challenge-response type system that takes specifics of your computer into account anonymously. However, unlike most other challenge-response systems,

the Zynaptiq copy protection allows the user to de-activate a system at any time, and re-activate it later - without contacting us. So essentially, you can pretty much move your authorizations around as needed. The only limitation is that in order to de-activate a machine, it needs to be connected to the internet.

De-Activating a Machine

To free up an activation, you can de-activate a machine. To do this, please launch the **UnchirpAuthorizer** app, and click “Deactivate Product”.

You will be presented with a confirmation message and you’re done.

Please note that the machine to be de-activated needs to be connected to the internet!

Overview

Applications for UNCHIRP

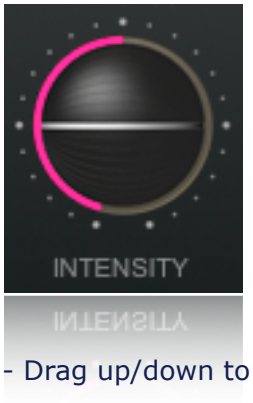
UNCHIRP has a lot of uses, here are some of them:

- Reduction of *chirps* on poorly encoded audio files, such as older MP3 files.
- Making recordings made with consumer mobile devices usable.
- Improving intelligibility on speech transferred through poor GSM codecs or bad satellite uplinks.
- Improving intelligibility of surveillance recordings recorded at low bit rates to conserve space.
- Reducing artifacts introduced by de-noisers and other frequency domain processes like pitch-shifting or time-stretching.
- Enhancing clarity and impact of already good recordings for mixing and mastering purposes.

The Parameters

General Controls Behavior

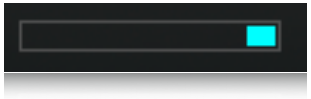
UNCHIRP sports several control types, which have a variety of usability features. We will describe the ones with extra functionality here.



"Trackball" Slider

This control is a unique Zynaptiq type - it is essentially a vertical fader, that looks like a knob. The benefits of this configuration are that they are simple to control with a mouse like a fader, yet conserve GUI space like a rotary control. Also, the combination of the horizontal marking on the "Trackball" and the circular value display make it very easy to tell the current value of the parameter.

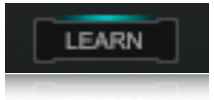
- Drag up/down to change the parameter value.
- Hold shift while dragging for finer resolution.
- When the control has focus, the up/down arrow keys and the mouse scroll-wheel can be used to increment or decrement the value. The control has focus whenever the mouse hovers over it.
- CTRL-click or right-click on the control to reset it to default.
- Double-click on the control opens a text box for numerical entry of the value.



“Standard” Slider

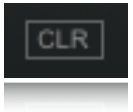
This is a straight-forward slider control, which comes in horizontal as well as vertical configurations. Essentially, it follows the same rules as the “Trackball”:

- Drag the thumb along the slider axis to adjust the value
- Click anywhere in the slider groove to set the value directly
- Hold shift while dragging for finer resolution.
- When the control has focus, the up/down arrow keys and mouse scroll-wheel can be used to increment or decrement the value. This control type has focus after it was clicked on AND the mouse hovers over it.
- CTRL-click or right-click on the control to reset it to default.
- Double-click on the control opens a text box for numerical entry of the value.



Toggle Switch

A latching switch that activates a function or switches between two different functions. CTRL-click resets it to default.



Momentary Button

A momentary switch that triggers an action, such as a reset/clear. This control type comes in several sizes, but is always essentially a rectangular outline.

Pull-down Selector/Menu

Opens a menu on click. You can recognize this control type by its “cut off” top right corner. CTRL-click resets this to default value.

Checkbox Switch

Functionally identical to the Toggle Switch, this switch type is used within the display area.

General GUI Layout

The **UNCHIRP** user interface is divided into 4 sections: the Header Bar, the Graphic Display & Editor Area, the Process Section, and the Global Parameters Section.

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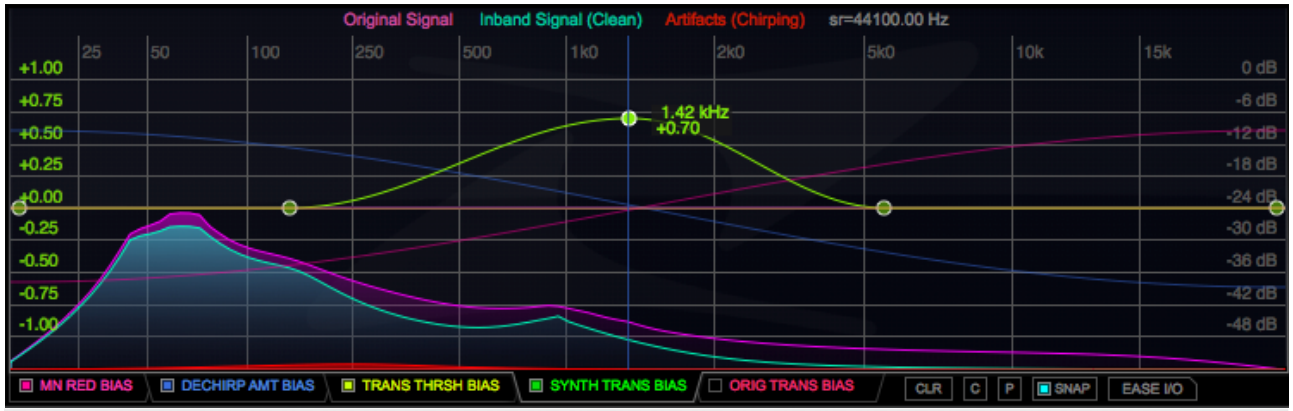
UNCHIRP

The Graphic Display & Editor

Overview



Display

The Graphic Display & Editor area serves two purposes:it displays various pieces of information and allows creating and editing breakpoint curves that generate a frequency dependent bias (offset) to the MUSICAL NOISE REDUCTION, TRANSIENT THRESHOLD & LEVEL, and DECHIRPING AMOUNT parameters.

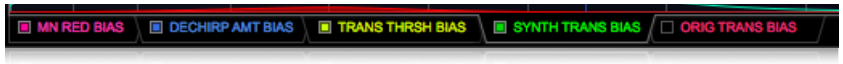
The display shows amplitude versus frequency plots for the input signal (magenta), clean signal components (mint), and detected artifacts (red).

You will note that this “analyzer” type display is extremely fast and accurate - on low-pitched sounds you can actually see the individual harmonics!

Also shown are a legend as well as the current sample rate.

Breakpoint Editor: Overview

The Breakpoint Editor allows creating 5 separate free-form curves, each defined by an arbitrary number of nodes, which are connected by line segments with user selected interpolation. The breakpoint curves can be used to add to or subtract an offset – we call this "bias" – from the value of the MUSICAL NOISE REDUCTION, TRANSIENT THRESHOLD, SYNTH(ETIC) TRANSIENT LEVEL, ORIG(INAL) TRANSIENT LEVEL and DECHIRPING AMOUNT parameters, frequency dependently. Which of these five curves is currently selected for editing is set by clicking on the relevant tab underneath the editor:



The breakpoint curve & nodes are displayed in

- magenta for the MN RED BIAS curve
- blue for the DECHIRP AMT BIAS curve
- yellow for the TRANS THRSH BIAS curve
- green for the SYNTH TRANS BIAS curve, and
- red for the ORIG TRANS BIAS curve.

These colors correspond to the colors of the controls to which they relate.

The x and y axis values are displayed next to a node when moving it; the horizontal node position in Hz, the vertical node position as value -1…1.

Each tab also features an on/off switch on the left side, which allows switching the corresponding bias curve on or off, for example for comparison purposes.

Breakpoint Editor: Operation

Operation of the Breakpoint Editor is described here. While there are many rules on how this works, in practice you will find the breakpoint editor workflow to be very intuitive and fast.

Adding and removing nodes

- Click anywhere in the Editor area to insert a new node
- To remove a node, a) CTRL-click or right-click it, b) drag it out of the editor area and let the mouse button go, or c) select it and press delete/backspace. Whether and how the delete/backspace keys will work depends on how your DAW handles keyboard events when a plug-in window is in focus.
- The first and last nodes can not be removed, a CTRL-click or right-click on either of these will reset them to a vertical zero (= center) position.
- Similarly, CTRL-click, right-click and del/backspace will remove multiple selected nodes (see below for selection mechanics).
- The CLR button will remove all except the first and last nodes, which are set to 0.
- CLR affects the curve currently selected for editing. Alt/Option-click on CLR will clear all 5 curves.
- The buttons labelled “C” and “P” will copy the current curve, or paste the copied curve into the currently selected curve, respectively.

Selecting nodes

- Click on a node to select it
- Shift-click on a selected node to de-select it
- Shift-click another node to add it to the selection
- Shift-click on a selected node to remove it from the selection
- Shift-drag from anywhere in the Editor area draws a selection box that selects nodes or adds them to an existing selection
- If multiple nodes are selected, clicking anywhere in the editor area will clear the selection

Moving nodes

- Move a node or multiple selected nodes by dragging with the mouse, use the cursor keys on your keyboard or the mouse wheel to move selected nodes.
- The first and last nodes can be moved vertically only.
- Moving a node past another node horizontally will remove the other node when you release the mouse button. If you drag the first node back without having released the mouse button, the other node will re-appear. The same is true when moving multiple selected nodes.
- When moving multiple nodes, the vertical movement stops when one of the nodes reaches the boundaries of the editor, so you can not accidentally drag *out of the* editor area (which would remove the relevant node).
- Also, when moving multiple nodes, horizontal movement is stopped when one of the outer selected nodes reaches the editor's left or right boundaries.
- When the first or last node is selected together with other nodes, the entire group can be moved vertically only.

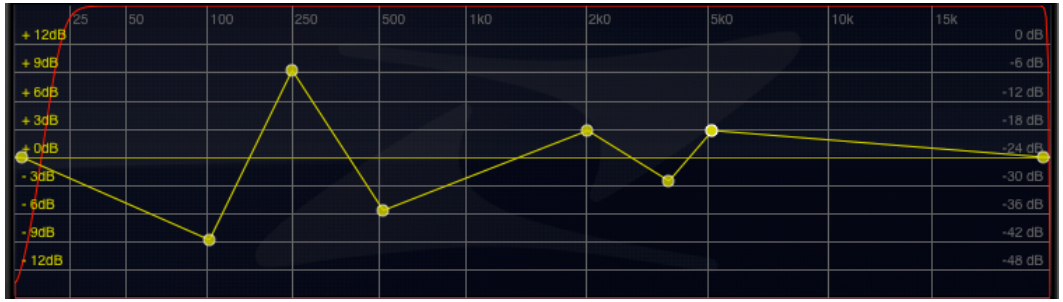
Breakpoint Editor: SNAP

When SNAP is on, a node will snap to zero when moved to within +-14 pixels of the respective vertical value. This makes it easy to set a specific frequency range up to have no BIAS at all and thus be at exactly the current parameter value.

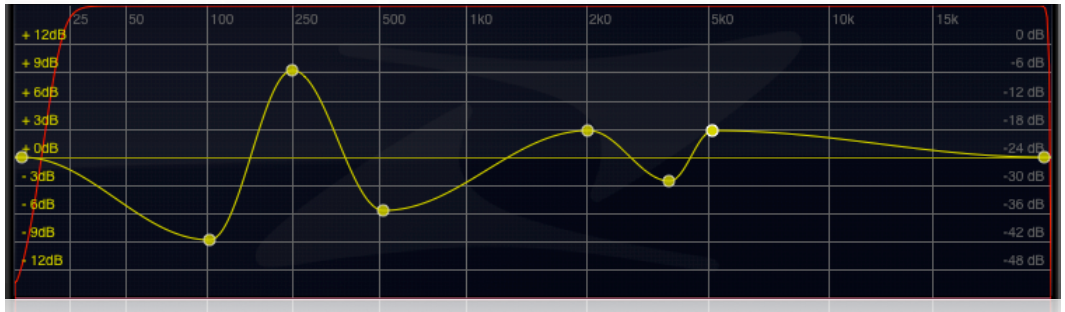
Breakpoint Editor: Curve Type

The curve type selector lets you choose the shape of the line segments connecting the nodes of the breakpoint curve. Choices are LINEAR, EASE I/O (ease-in/ease-out), PEAK/DIP, STEP EDGE and STEP MID. This curve type setting is used for all 5 curves.

LINEAR simply connects the nodes with straight lines:



EASE I/O creates a smooth curve between the nodes:



PEAK/DIP creates a narrow peak or dip curve referenced around zero, whose width (aka “Q”) is defined by the distance to the neighboring nodes:

STEP EDGE creates a stepped shape without transition, with the edge of the step being placed at the node position:

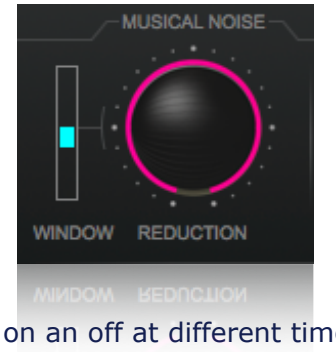
STEP MID also creates a stepped shape, but the node is placed in the center of the segment, the edges being halfway between the node and its neighbors (in terms of frequency, not necessarily in terms of graphical representation):

Notes on BIAS

As described earlier, the breakpoint curves are added/subtracted to/from the MUSICAL NOISE REDUCTION, SYNTH(ETIC TRANSIENT LEVEL), ORIG(INAL TRANSIENT LEVEL), TRANSIENT THRESHOLD and DECHIRPING AMOUNT control values, allowing you to adjust the processing threshold or amount frequency dependently. This feature allows for great flexibility in fine-tuning the processing – you could, for example, remove chirping in the upper midrange and treble, while leaving intended water-like effects in the low mid range untouched.

The BIAS value set with the Breakpoint Curve has a range of -1...+1, and this is added to the current value of the corresponding control, with summed values outside of the range -1...+1 being clipped. This means that when the biased control is in its minimum position, you can set it frequency dependently using positive node values, and when the control is at maximum, you can reduce processing for specific frequencies using negative node values. Effectively, you can see either the control or the breakpoint curve as base value, and the other as offset.

MUSICAL NOISE SECTION



This section is used to reduce *Musical Noise*, aka *rogue tones*. This artifact is a low to mid frequency side effect created by Fourier transform based processes that use soft or hard thresholding to remove partials that are low in amplitude, typically denoisers or bad codecs (especially ones that use environmental noise suppression). The artifacts are the result of noisy signal components repeatedly crossing the detection threshold being switched on and off, while the neighboring partials are switched on an off at different times. This causes the creation of random tones that occur at instances that previously had high noise levels. UNCHIRP can alleviate this effect by reducing rogue tones that have no relevance to the signal and are not part of any instrument that is currently playing. UNCHIRP will not reduce musical noise artifacts that occur as part of an instrument or voice, so it might not be able to remove all of the musical noise for any given signal.

REDUCTION

This control adjusts the Musical Noise reduction amount, from none to maximum. As a rule of thumb, set this as high as needed to remove the artifacts you wish to get rid off, and as low as possible to touch the rest of your signal as little as possible.

WINDOW

Sets the “window” length that is used to detect the Musical Noise artifacts, or in other words: this control adjusts the maximum length of the artifacts to be removed. High values will remove longer artifacts (as well as shorter ones). Set this as high as needed and as low as possible to avoid removing desirable signal components and avoid “smearing”.

TRANSIENTS SECTION

Typically, FFT algorithms change the magnitude ("loudness") of the filter channels only, preserving their phase (their time delay with respect to each other). In other words, most algorithms change only the loudness of the individual frequency channels, very much like you would change the loudness of individual channels on a mixing console to balance instruments in a recording. Because the frequency channels are not localized in the time domain and are calculated for the entire block of samples without respecting time, the phase response of the filters is said to have "linear phase". For very steep linear phase filters, you inevitably get ringing before and after peaks in the time domain (sometimes referred to as the "Gibbs phenomenon"). As long as the mix is left unchanged this effect cancels out, but if the mix of the channels is changed this is no longer guaranteed, giving rise to transient smearing and pre-echo artifacts (the signal sounds reverberated or diffuse, and transients are faded in before they actually occur). Transient smearing for example occurs if adjacent channels are included and excluded from codec processing when a wideband transient occurs. UNCHIRP can alleviate the smearing by re-syncing the transients (see the SYNC control) and filling the gaps with synthesized content.

THRESHOLD

Sets the threshold for bypassing original transients and for creating synthetic transients, based on the statistical properties of the input signal. At maximum threshold, no transients are bypassed/generated. This parameter can be adjusted frequency dependently using the TRANS THRESH BIAS breakpoint curve.

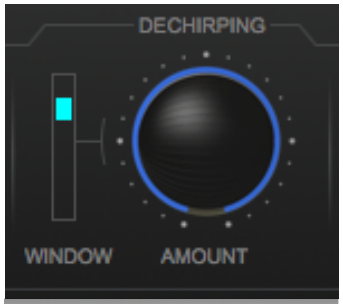
ORIG

Adjusts the level of the bypassed original transients. In the center position, no level change is applied. At minimum position, the original transients are muted, and at the maximum position the original transients are boosted by +6dB. This parameter can be adjusted frequency dependently using the ORIG TRANS BIAS breakpoint curve.

SYNTH Sets the amount of synthetic transients that are added. The minimum position equals “off”. This parameter can be adjusted frequency dependently using the SYNTH TRANS BIAS breakpoint curve.

SOLO Solos both the original as well as the synthetic transients.

DECHIRPING SECTION



Since the FFT is a bank of constant bandwidth filters, it resolves all frequency ranges with the same resolution. Our auditory system however, uses wider "bands" for high frequencies than for lower frequencies, it has less resolution at high frequencies. Thus it is unable to detect single short lived tones at very high frequencies as individual tones. Instead, our ear perceives high frequency FFT thresholding artifacts as an effect like running water in the background. UNCHIRP can reduce this artifact using its DECHIRPING circuitry.

AMOUNT

Sets the reduction amount for the high frequency *Chirping*. Set this as high as needed and as low as possible. This parameter can be adjusted frequency dependently using the DECHIRP AMT BIAS breakpoint curve.

WINDOW

This parameter adjusts the maximum length of the artifacts to be removed. Use low values for removing short chirps and higher values for longer chirps or “warbling”. Set as long as needed but as short as possible to avoid removing desirable signal components and introducing “smearing”.

TREBLE BOOST SECTION

Codecs and denoisers can cause high frequency loss. Many codecs use bandwidth reduction to reduce the amount of information that they need to encode by discarding high frequency content, which effectively eliminates all frequencies above a certain threshold. This "dead band" is essentially silent, so regular EQ won't help – there's simply nothing to boost. Additionally, in most cases a brick wall low pass filter is used as part of the Fourier transform thresholding process, which introduces ringing at the cutoff frequency. Also, some denoisers, especially the ones programmed to remove white noise, use a constant amplitude threshold and will remove most of the high frequency content. UNCHIRP can help restore some of these lost frequencies using the TREBLE BOOST section (and can be used to remove the ringing at the LPF cutoff frequency, using the MUSICAL NOISE REDUCTION and SYNC). The plug-in uses two approaches, called ENHANCE and EXCITE. ENHANCE applies a psycho-acoustically optimised, program dependent EQ that is tailored in such a way that it implies frequency content in the dead band to the listener. EXCITE synthesizes new harmonics to "fill the gap" (and just to be clear: it is NOT in any way related to the rather unsubtle exciter designs of the last century, which essentially applied polynomial distortion and a high pass filter to generate "treble"!).

AMOUNT

Adjusts the amount of treble added. This control has a very wide range to allow for working with strongly degraded material, so adjust it carefully!

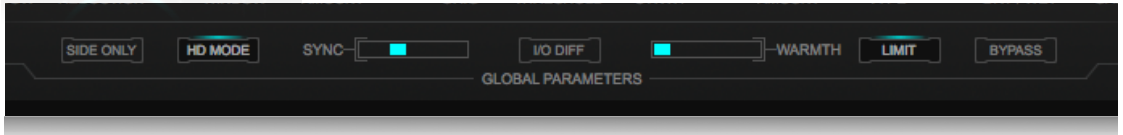
TYPE

Crossfades from EXCITE (minimum position) to ENHANCE (maximum position). As EXCITE is very sensitive to the input signal features, it tends to bring out any crackling or distortion already present - so if you hear crackling, use ENHANCE instead.

MIX SECTION

This section is an output mixer for the process. There's a global Dry/Wet mix control, as well as an output gain. The GAIN control is placed after the Dry/Wet, but before the output limiter.

GLOBAL PARAMETERS SECTION



The GLOBAL PARAMETERS section contains all controls that affect the processing globally or relate to monitoring, routing and output.

SIDE ONLY

When active, the input signal is mid-side encoded, and processing applied only to the side channel. This is beneficial when the signal was encoded in "joint stereo" or using AAC-HE v2 (parametric stereo), in which case the thresholding artifacts typically reside mainly in the side channel.

HD MODE

When on, all processing is done at a higher internal resolution, giving overall improved results at the expense of noticeably higher CPU load.

SYNC This function synchronizes all processing of the signal to its transients, adding overall clarity and coherence. Use this function to reduce transient smearing, tighten up the sound when doing aggressive processing, or to generally “un-blur” mixed signals. Very high values of SYNC may suppress some musical sounds such as shakers or remove high frequency content during sustained sounds.

I/O DIFF Activating this switch creates a volume compensated difference between the input and the output signal, not including the effects of Treble Boost and Transient Synthesis. This means that you will be hearing whatever you are removing from or adding to the sound. This is very useful to fine-tune the WINDOW parameters for both the MUSICAL NOISE and DECHIRPING sections, as well as the THRESHOLD of the TRANSIENTS section.

WARMTH Removing Musical Noise and Chirping can cause the regularity of the FFT whose artifacts UNCHIRP is removing to become audible, as a light “buzz” or “metallic ringing”. Increasing WARMTH slightly can break this regularity up by adding some random modulation, and give a more natural sounding result. High values of WARMTH may however cause some loss of transient detail, so use this parameter only as much as needed.

LIMIT Activates a brickwall limiter with a fixed threshold at 0dBFS to catch any overs. Please note that this is a very fast limiter, so if you are boosting transients but not hearing more transients, most likely it’s the limiter “eating” them!

BYPASS Bypasses all processing and routes the input signal directly to the output.

Presets

The Preset Manager

To make working with the different plug-in formats easier, UNCHIRP provides it's own preset manager and preset format. This way, you can load your custom settings exactly the same way regardless of whether you're working on the Mac or on a Windows machine, whether you're using RTAS or VST.

The Preset manager is accessed using the small triangle icon in the upper left corner of the GUI:

A click on the triangle icon brings up a menu that provides options for saving and loading presets, saving the current setting as default and re-setting the default preset to factory default values. If you edit a recalled preset, the triangle icon will be lit up to indicate that the current and saved values don't match.

Storage Locations

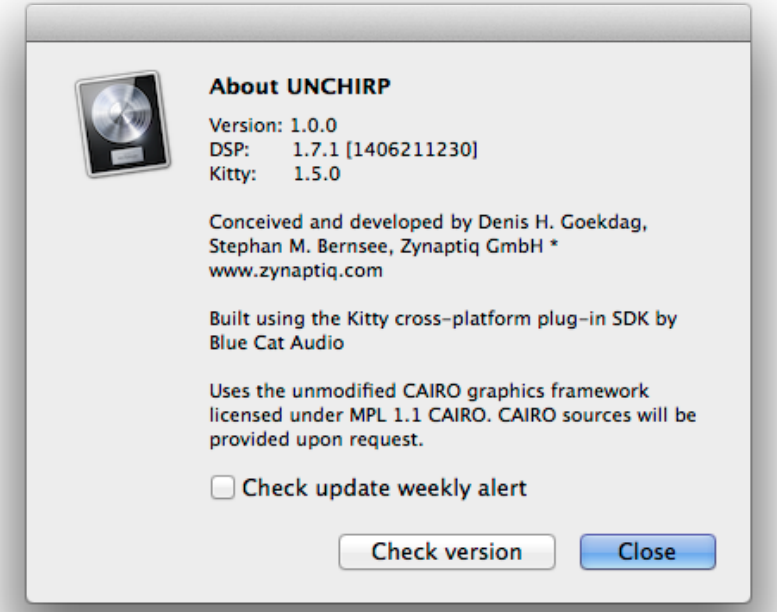
There are separate locations for factory presets and user presets, and they both depend on the OS platform you're working on:

Factory presets (Mac OS X): these are stored inside the actual plug-in.

Factory presets (Windows): these are stored in the UNCHIRP VST/RTAS/AAX Data folder, which is installed next to the plug-in.

User presets (Mac OS X and Windows): these are stored to <your user document directory>/Zynaptiq/UNCHIRP/Presets/

The "About" Screen



Clicking on the **zynaptiq** logo in the top right of the plugin GUI opens the "About" screen. It displays copyright information and version numbers, and provides functions to check for updates manually and weekly.

UPDATE CHECK & DOWNLOAD

To check availability of an update, simply click on the "Check Version" button. Provided your machine has internet access, the plugin will check for available updates. Should an update be available, you will be offered the option to download it. By checking the "Check update weekly" box, you can have the plugin check for updates automatically every week; it will notify you if an update is available. Only the version number is transmitted when checking for updates.

The Standalone App

On Mac OS X, UNCHIRP comes with a simple stand-alone application, the *Zynaptiq Stand-Alone*. This application is intended for quickly previewing audio through the plug-in, and is explicitly NOT intended to be an editing application. See it as a free bonus FYC.

The application allows playing files through UNCHIRP, as well as recording the results to a new file. As the application is not a full-blown host, it uses the Mac system audio preferences - including device & sample rate. As any open application including browsers, the finder etc can request to change the system sample rate, this means that in order to make sure your new file has the correct sample rate written, you should follow the following steps:

1) make sure you set the system sample rate to the rate that your source & destination files have/should have, from within the Audio MIDI Setup utility

2) start playback on the source file *before* you start recording

FAQ

Questions & Answers

Q: I am hearing ugly drop-outs/ring-modulation/distortion, what is causing that & what can I do?

A: Most likely, you are overloading your CPU. UNCHIRP is a computationally very “heavy-weight” process. The first thing you should try is to set the I/O and/or processing buffers of your host to higher values, ideally 2048 samples or higher. This will significantly decrease the CPU use and in most cases eliminates the artifacts mentioned above. Also, in Pro Tools, using multi-mono instances instead of multi-channel instances is easier on the system CPU load as this allows Pro Tools to distribute processing of the channels across multiple CPU cores.

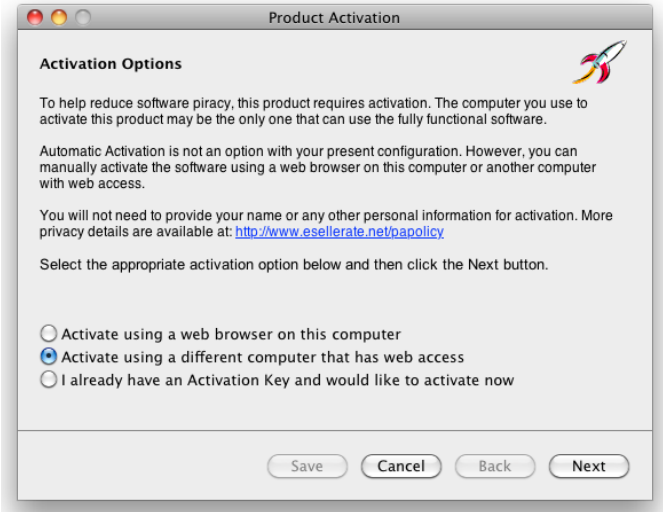
Q: (Mac) Logic Pro shows me a “Sample Rate Mismatch” or similar error when inserting UNCHIRP, and sound is distorted or stops altogether. What can I do?

A: You are overloading the CPU, but Logic is displaying the wrong error message. Increasing the I/O and process buffer sizes usually cures this issue. If not, see the CPU load optimization section below for some tips on how to get more out of your machine.

Authorization Issues Windows

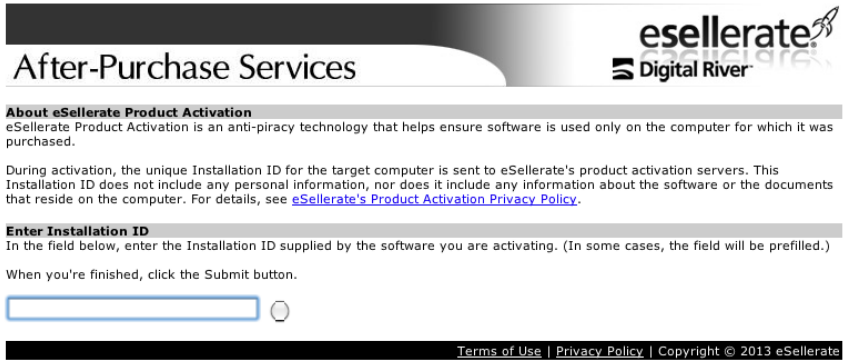
Q: I am using Windows and when I try to activate UNCHIRP, I am seeing an error message stating there has been an “Unknown Error” and activation fails. What can I do?

A: This means that there is something interfering with the activation process. Disable any firewall, security or anti-virus software and try again. If the problem persists you should temporarily disable your internet connection (by pulling the ethernet cable, for example). The Authorizer app will now display a dialog window that gives you several options for off-line activation:



Choose “Activate using a different computer that has web access” and click “next”. This will bring up another window.

Enter the Installation ID into the webform found at the URL displayed, using a different computer to access the web:



You will then receive a response code.

Enter the response code into the Authorizer app, click “activate”...and your software should now be activated successfully.

CPU Load optimization

UNCHIRP uses a lot of CPU. The mathematics involved are highly complex, so there's a lot of computation to be done. However, CPU load is affected by a couple of variables. We'll outline strategies to get the most out of UNCHIRP on your CPU here.

1) **Use large buffer sizes**. UNCHIRP needs to look at a certain amount of signal to be able to discern which parts of the signal are chirping and which aren't. If your buffers are set to values that are shorter than that, CPU load increases significantly. UNCHIRP internally operates on a buffer size of 4096 samples, so in most host applications, you'll want to set the buffer size to the highest possible value. We recommend *at least* 1024 samples.

2) In Pro Tools, **use multi-mono instances if possible**. Pro Tools can compute the channels of a multi-mono instance on separate CPU cores, which distributes the CPU load more evenly and allows larger channel counts than when running a multi-channel instance on just one core.

3) In Logic Pro, all plug-in that are inserted on a bus, output or aux strip that is fed by a live input source - such as a live input or a virtual instrument track set to record enabled - are rendered on one core. This may result in CPU overload messages even while all except one core are idling. Try changing the routing or disabling any record enable switches on virtual instrument tracks.

4) Closing the plug-in GUI saves some CPU cycles, too.

5) HD MODE uses a lot of extra CPU. If your audio requires HD MODE, please consider bouncing the track to disk and disabling the plugin after applying any processing.

Getting Support

If you're having trouble with UNCHIRP that isn't covered in these FAQ, please email us & we'll get you up and running ASAP. We can be reached via http://www.zynaptiq.com/support-form/

zynaptiq

UNCHIRP