



IMPORTANT PLEASE READ: SPECTRALIVE V3.5 on some systems (PC only) may require the latest Microsoft Visual C++ Runtime Libraries installed. If they are not installed you may not be able to see Spectralive in your host program. Please download the latest version from the link provided below and install this small file from Microsoft. After installing this file Spectralive V3.5 will work as it requires these latest files.

<http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=9b2da534-3e03-4391-8a4d-074b9f2bc1bf>



MANUALS

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SPECTRALIVE NXT V3.5 OVERVIEW

SPECTRALIVE NXT V3.5 is " the" definitive secret weapon for attaining that professional "commercial" sound. The Spectralive™ process is a novel and proprietary approach for imparting Vitality and warmth to all your audio material "

INTRODUCING SPECTRALIVE NXT V3.5 - Crysonic's flagship third Generation professional Spectral Audio Vitality and Enhancement Processor incorporates many new features and improvements with a beautiful new GUI at the same time keeping the CPU utilization to an absolute minimum by utilizing highly efficient assembly DSP code while everything is enabled. Utilizing a completely new engine Spectralive NXT V3.5 is a completely re-coded new product with everything using 64-bit internal precision designed for high end professional use.

Some new features include an 11 Band Look-ahead Soft Peak limiter /EQ /Maximizer with intelligent clip warning assistant. Final Master Clipping prevention ensures your audio does not distort and this can be switched on or off. The New multi-band effects Mix Palette section provides you with an infinite combination of algorithms and processes to enable better targeting the source audio.

Spectralive NXT V3.5 can now be used with Mono sources with exceptional and unrivaled results ! Convert any Mono audio source such as guitars, vocals, bass to stereo with a combination of three choices (MTS1, MTS2, ATMOSPHERICS) in any combination or all at once before applying the Spectralive effect! The all new ATMOSPHERICS section can be used as an additional enhancement process which can be applied to either stereo or mono signals on top of the Spectralive effect to

further impart balance, clarity, definition and stereo



Spectralive NXT V3 now provides you with unprecedented 64-combinations of algorithms and processors together with A-B comparison which can be used in conjunction with the Mix palette providing an insane amount of combinations. The new Level meters also provide invaluable information during tweaking while mastering /mixing /tracking and audio restoration or re-mastering. Further more, Spectralive NXT V3.5 now incorporates a smooth high-resolution Real-Time FFT Spectrum and a Spectrogram display enabling precise monitoring of the effected audio plus many other new features and improvements.

The main VITALITY Dial controls the final Spectralive effect for easy adjustment to taste, input/output gain dials can further be used to control the final audio output. As with all professional crysonic audio plug-ins, Every parameter is fully automatable via the host including algorithm and process selection, Mix Palettes, Atmospherics and everything else.

Master, Mix, Track your music on an even playing field regardless of your monitor speakers setup or quality.

NEW UPDATED SPECTRALIVE NXT V3.5 main features

- **V3.5-** DRAMATIC UI and RENDER PERFORMANCE INCREASE Mac OSX and PC
- **V3.5-** SPECTRALIVE NOW COMES IN ANY COLOR YOU WISH, IT'S YOUR CHOICE, ADJUST THE HUE, SATURATION and BRIGHTNESS TO YOU LIKING !
- **V3.5-** CUSTOM USER PRESETS - Save and Recall
- **V3.5-** UPDATED FFT Spectrum Display now much more accurate
- **V3.5-** NEW BYPASS Button
- **V3.5-** AUTOMATION PERFORMANCE INCREASE
- **V3.5-** BETTER MONO COMPATIBILITY
- **V3.5-** FASTER FINAL AUDIO RENDER

SPECTRALIVE NXT V3.5 GENERAL FEATURES

- Native PC and Mac Compatibility (Mac OS Universal Binary AU,VST and PC VST Native)

- The third generation Audio Plug-in to utilize the spectral-vitality process
- Completely re-coded new product with a gorgeous new GUI
- Now with 64 Algorithms and Processor Combinations
- 11- Band Look-Ahead smooth Peak limiter /EQ /Maximizer
- Intelligent Clip warning Assistant LED's
- Automatic Look-ahead Final Master Clipping Prevention
- Multi-Band Effect Mix Palette providing an insane number of combinations
- NOW can be used with Mono Audio signals
- Three methods to convert mono to stereo
- All new ATMOSPHERICS Enhancement process can be used on Stereo or mono signals
- Real-Time smooth FFT Spectrum Analysis
- Hi-Resolution Spectrogram
- Single VITALITY Dial for global tweak
- A-B Comparison of chosen effect
- Increase Stereo coherence
- Sonically Correct mastering
- Audio Frequency targeting
- Intelligent Phase control
- Highly optimized custom DSP code
- Greatly Improved Audio Quality!
- Double click to set each control to default value!
- Press Ctrl for finer Adjustment
- Very Intuitive and easy to use User Interface
- Full automation for every parameter via the host
- custom and user presets
- Very Low CPU usage
- 64-bit internal precision
- Highly optimized Assembly DSP code with Vectorization on the Mac OS X Platform
- The Spectralive™ process is a novel and proprietary approach for imparting Vitality and warmth to all your audio material
- Master, Mix, Track your music on an even playing field regardless of your monitor speakers setup or quality
- For Mastering, Mixing, Tracking, Vocals, Guitars, Keyboards, Virtual Instruments and Live

Minimum system requirements and compatibility

WINDOWS - NATIVE PC VST Plug-in Format

- Intel Celeron 800 or faster processor
- 256MB RAM or more
- Windows 7/ Vista /Windows XP
- VST compatible audio application
- A one-time only Activation. We also guarantee life time ownership and use in any event when you like to move your product to a different DAW or PC

MACINTOSH - NATIVE Universal Binary (Intel / PPC) AU or VST Plug-in Format

- PowerPC or Intel Mac
- 512MB RAM or more
- Mac OS X 10.5 or newer
- AU or VST compatible audio application
- A one-time only Activation. We also guarantee life time ownership and use in any event when you like to move your product to a different DAW or PC

HOW DOES IT WORK?

The Spectralive process is a novel and proprietary approach to facilitating Mixing and Mastering of music for professional and “commercial” quality results.

Spectralive uses a considerably different method to achieve it's pleasing (sonically correct, phase-accurate) and fresh sound in an unexpected way when compared with other enharmonic exciters, analog tube simulators. Spectralive does not add any artificial harmonics or overtone content thereby eliminating the inherent “hiss” introduced by other exciter and enhancer type effects. There are a number of ways in which we can describe the effect of Spectralive and some of them would be Vitality (this we believe is the primary description), Warmth, Better stereo coherence, Less phase distortion, reduction of frequency masking, extra sparkle, more presence, greatly improved spectral definition and less Harmonic distortion.

Spectralive has been designed from the outset to be used in many configurations in your rig and to provide full technical details regarding the Spectralive process is beyond the scope of this overview, however, providing a brief application of Spectralive should give you a basic idea in it's capabilities. One of the most important areas of usage for Spectralive is in the final Mastering stage of your music, so lets have a look in to this a little more.

Mastering is probably the single most important aspects of music production, which is often overlooked and misunderstood by many. The mastering stage is usually the final stage before the production goes on to CD, Radio, TV, tape or Internet distribution via suitable compression methods such as mp3. One important aim of mastering is to make your music sound as close as possible to the “intended” sound on truly extraordinary number of different loudspeaker systems in use today. The “intended” sound is the problem area since how does one know what is the intended sound?

Part of the problem lies with how loudspeakers with multiple drivers are designed and how the human ear perceives sound. Speakers with multiple drivers i.e. with tweeters, woofers and midrange limit the signal entering in to the drivers via filters know as a cross over network such as Linkwitz-Riley, Bessel and Butterworth. Primarily most cross over networks alter what is known as frequency phase relationship, even though ever so slightly in most cases this causes “Phase Distortion”

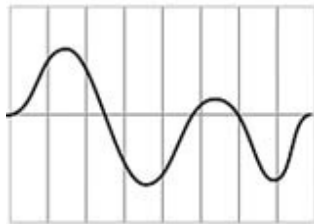


figure 1a

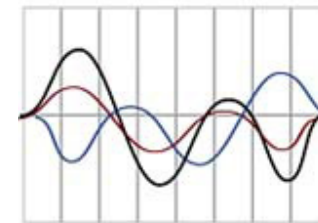
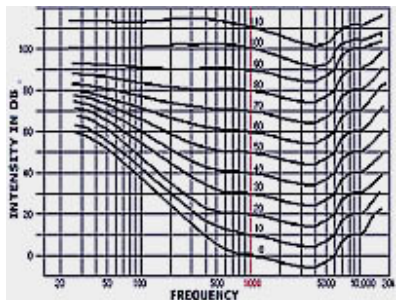


figure 1b

If any of the frequency components in a signal (figure 1a) shifts by a certain time other then zero (figure 1b) the signal suffers from phase distortion. In 1827, Georg Ohm stated that the phase of a wave has no perceptible significance and many loudspeaker designs have taken this to be the case. However, latest research shows that in most cases it is perceptible and is a significant aspect of the character or the “timbre” of a sound i.e. the fundamental and harmonic constituent of the sound. The interesting trait of most speaker designs is that the “relative” amount of modification required to correct the signal from these artifacts is minimal and approximately equal in amounts across a broad range of loudspeakers.

The “ PROCESS “ and the “ ALGORITHM ” section in Spectralive does this process intelligently depending on the type of source signal. There are many types of processes currently available and we examine their usage environments comprehensively in the manual as they each behave differently.



There is also an important concept that needs to be understood and that is Humans don't hear all frequencies of sound at the same level. The perception of a particular frequency at a particular intensity in decibels is expressed by a Fletcher Munson Equal Loudness curve. As can be seen from the graph, we are more sensitive to frequencies between 3K-5K then other frequencies, also notice that our sensitivity changes with respect to intensity. This is partly the reason why the bottom-end and the top-end (frequencies above 5K) definition dissipates when listening at low volumes. Provided that you have a very good quality monitoring setup and an environment to match and you are experienced, most often then not the results you achieve will be a hit and miss affair i.e. dull sound, boomy-bass on other loudspeakers and reduced perceptibility of instruments in the mix and so forth.

The points we have raised so far highlight the importance of the existing relationships between modulation, phase and the fundamentals. Spectralive reduces these inherent problems and many others significantly, there by allowing you to master your mixes on an "even playing field".

INSTALLATION and ACTIVATION

IMPORTANT: SPECTRALIVE V3.5 on some systems may require the latest Microsoft Visual C++ Runtime Libraries installed. If they are not installed you may not be able to see Spectralive in your host program. Please download the latest version from the link provided below and install this small file from Microsoft. After installing this file Spectralive V3.5 will work as it requires these latest files.

<http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=9b2da534-3e03-4391-8a4d-074b9f2bc1bf>

INSTALLATION

WINDOWS PC

Just unzip the provided file to your respective hosts VST or Plug-ins Directory, that's it ! If you were using Please make sure to delete the demo version if you were demoing the product before purchase.

MACINTOSH Mac OS X

You have two choices where the Mac VST or the Mac AU (Audio Unit) plug-ins can be installed. Just place the respective file you have in either one of these two directories below,

LOCAL - Administrative privileges may be required

YourDrive/Library/Audio/Plug-ins/

USER -

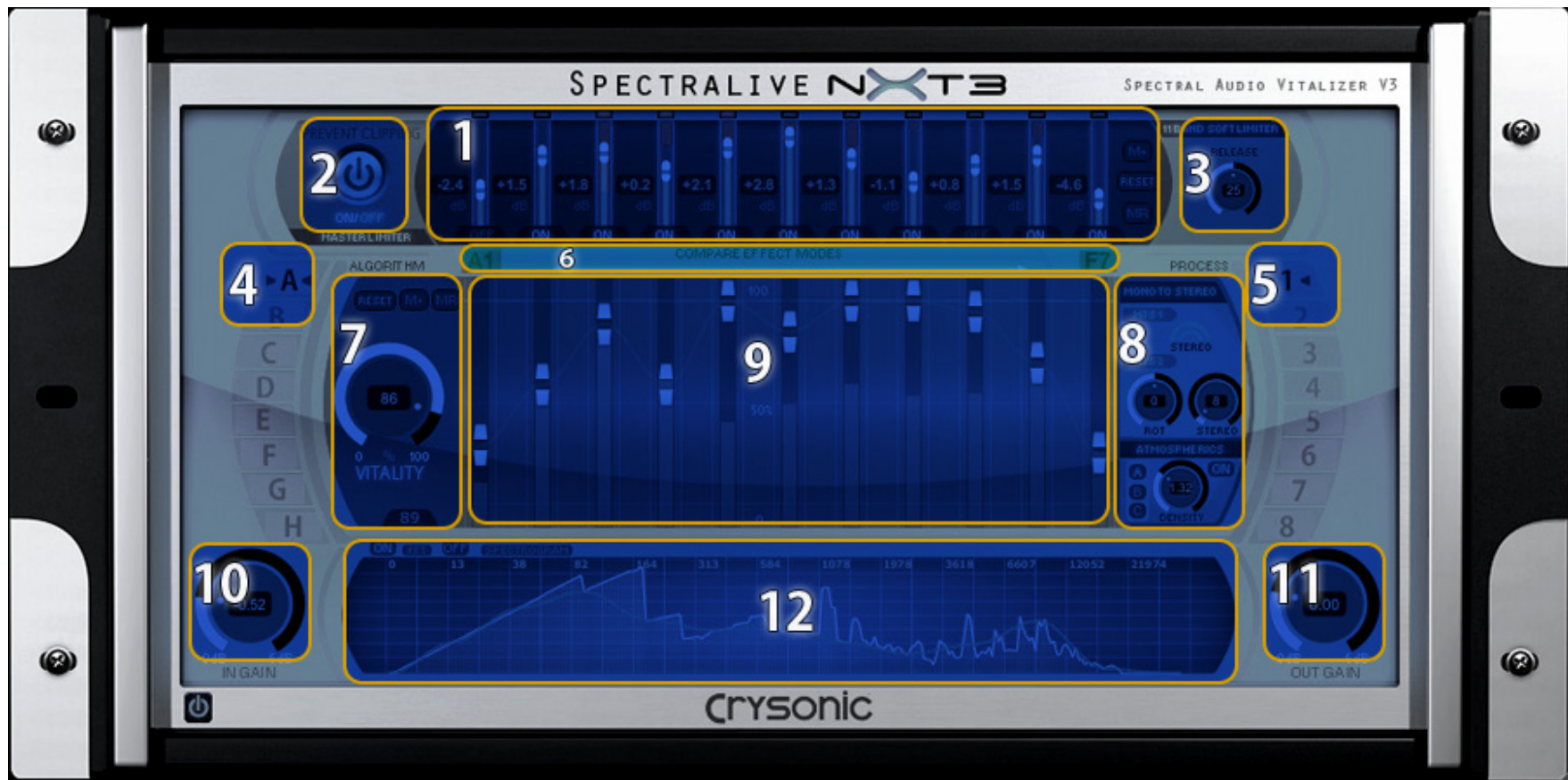
YourDrive/Users/YourUserAccount/Library/Audio/Plug-ins/

Please note that 'SpectraliveV3.component' should be placed the the components directory and 'SpectraliveV3.vst' should be in the VST directory

ACTIVATION

Activating Spectralive NXT V3.5 is extremely simple! After Downloading the full version please install the product as outlined above. The first time Spectralive is loaded in any host both Mac and PC you will be provided with a serial number, just click and copy this number and e-mail it to support@crysonic.com and we will provide you the code to activate. This is a one time only activation and your host / music computer does not require an internet connection.

CONTROLS & GETTING STARTED



SECTION

INFORMATION



11 Band look ahead Soft Limiter- This section represents a very unique method of audio control and can be used for soft limiting / EQ adjustments and minor tweaking and Maximizing on per frequency basis. The 11 Vertical faders represent gain adjustments on each individual bands ranging from +3dB to negative infinity, default at 0dB is no change. These faders can also be effectively used as a minimum-phase EQ adjustment either by increasing or decreasing the respective fader per-band regardless of the individual limiter being at the on or off state. Each fader has on/off states which activate smooth gain reduction which is unique to Spectralive NXT V3.

Each fader also comprises of an intelligent look-ahead warning LED (PLEASE NOTE these LED's do not represent clipping as

you would find in other similar products). These LED can be looked as an assistant while tweaking and essentially they represent that the audio (for that frequency) is getting 'HOT' when active and has the potential to clip. It is best to enable that individual bands limiter to 'tame' or smoothly limit transient signals. It is also important to note that just enabling limiting on a 'HOT' signal will not prevent clipping on the summed i.e. final audio unless the MASTER LIMITER (Section 2) is switched ON.

A good method of usage by all means not the only method is to perhaps start by adjusting and selecting the appropriate settings in other sections of spectralive first and getting as close to the sound that you are happy with and then if needed or required use section 1. The global 'VITALITY' dial will effect this section as well i.e. if you have made some adjustments such as boosting some frequencies, cutting others and enabling soft limiting on some, if you decrease the Global VITALITY in section 7, you will effectively decrease the process of this section.

RESET button can reset the faders to default 0dB value, if you like to store a setting just press M+ and MR to recall the previous setting.

2



MASTER LIMITER /CLIPP PREVENTION - Look ahead Brickwall Limiter, this can be enabled if the final audio is clipping. This is based on our Physics based SpectraPhy process ensuring a very transparent sound with maximum loudness and no digital-over's.

3



Global Release - 0ms to 50ms Release adjustment for the limiting section, shorter release for fast transient response and long release for slow i.e. rounder, smoother transient response.

4



ALGORITHM SELECTION (Linked to section 5)- There are in total 8 algorithms to choose from and each algorithm has

8 variation in SECTION 5 a total of 64 combinations. Each individual algorithm primarily deals with phase, time relation with fundamental and harmonics intelligently. There are no restrictions as to what algorithm to use in conjunction with a Process (section 5) that is selected.

5



PROCESS SELECTION (Linked to section 4)- There are in total 8 processes per algorithm to choose from and each algorithm has 8 variation a total of 64 combinations. Each individual algorithm primarily deals with phase, time relation with fundamental and harmonics intelligently. There are no restrictions as to what algorithm to use in conjunction with a Process (section 5) that is selected.

6



A / B - Easily compare your current selections, just click the appropriate button to hear the different selected algorithm /process

7



VITALITY - GLobal Spectralive effect ranging from 0 - 100% at 0 there is effectively no Spectralive effect, at 50% the original audio is cross-mixed at 50% - 50%



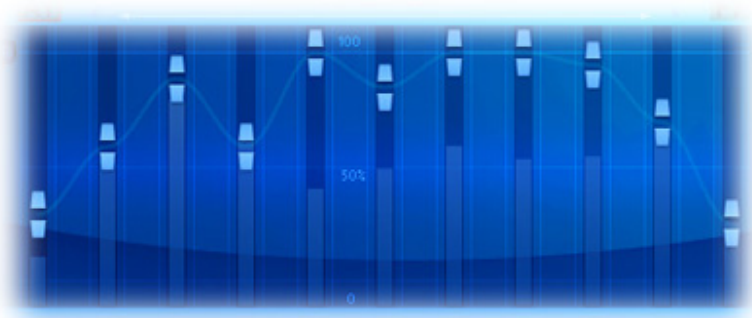
8

MONO to STEREO and ATMOSPHERICS- This section primarily deals with whether mono to stereo conversion is required as in the case of any incoming mono signal and whether Extra-Enhancement of the audio is required regardless if it is a mono or a stereo signal. One or all of these can be used to achieving great stereo results. ATMOSPHERICS can be used to achieve an outstanding stereo simulation.

MONO to STEREO- Two types of mono to stereo algorithms are available (Actually there are three with the atmospherics section), MTS1 and MTS2 are available to convert a mono signal to stereo and both can be used individually or can be used together. MTS2 also comprises of an Audio rotation dial to adjust for any inherent imbalance between Left and Right channels when active.

ATMOSPHERICS- IMPORTANT: This can be used for both Mono (converting mono to stereo) and Stereo signals. ATMOSPHERICS is a proprietary system that simulates the physical effects on sound in a real world environment without coloration. Perceived sounds are always under the influence of atmospheric variations after leaving the sound source before reaching our ears. When we hear sound we hear the slightly altered or effected version in our ears respectively. ATMOSPHERICS exploits the fact that these influences are not pure chaotic or random in nature but are either periodic or have a distinct temporal pattern. This now gives Spectralive the ability to render ultra-natural sounding stereo, although not limited to just mono to stereo conversion. Enable Atmospherics to further enhance your sound. Three modes are available and these can be looked at as different atmospheric conditions. (Please note that this option will utilize more cpu resources)

9



VITALITY MIX PALETTE - This section gives you the ability to control Vitality levels on per band basis. Double clicking on each slider will set it to it's default value, you can also CNTRL click for fine adjustment.

10



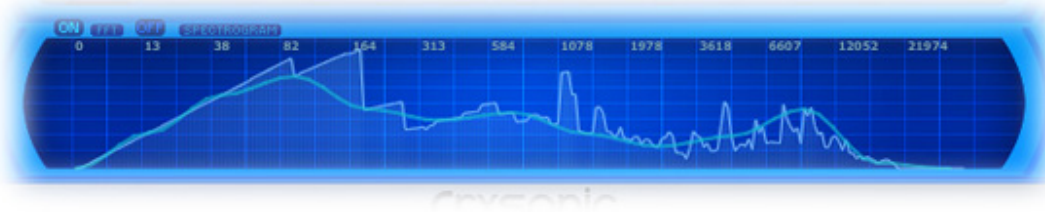
IN GAIN - With a range of 6dB to negative infinity

11



GLOBAL OUT GAIN - With a range of 6dB to negative infinity, please note that this is the global output gain and increasing this can induce clipping as it is the final Spectralived audio.

12



FFT DISPLAY - Real-time smooth 512 Band logarithmic spectrum analyzer display
SPECTROGRAM - Real-time smooth 512 Band linear spectrogram display

CONTACT / SUPPORT

Please contact us at the below e-mail addresses for any further information regarding support, requests and for any other information you would like to share with us.

Support
support@crysonic.com

Information
info@crysonic.com

We welcome any feedback or comments, we would also like to hear about your experiences using Spectralive NXT V3 in your productions.

