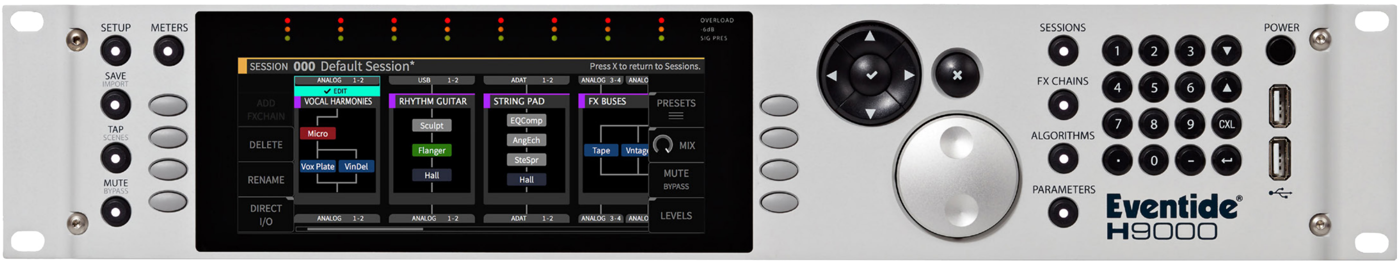

Instruction Manual

Phoenix Head

Godlike Productions

Creating Art from Technology

Revision 1.00

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Caution

Ensure you have backed up all algorithms and other data of your H9000 prior to use of this product. You use these algorithms, chains, presets, sessions and/or other content entirely at your own risk and to all extents allowable under the law of Western Australia, Godlike Productions is not liable for loss of damage, direct, consequential or otherwise.

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Getting Started

This manual is for a custom algorithm for the Eventide H9000 available at https://godlike.com.au/index.php?id=420. The Phoenix Head algorithm can be downloaded as an algorithm that you can import from a USB drive (FAT32 formatted) onto your H9000 from the front panel, via Emote.

There will also be a copy of this manual in PDF format. If you lose your copy of the files, please contact us at https://godlike.com.au/index.php?id=contact and we will be happy to send you another copy, or re download the algorithm from the link above. This manual will be available within the zip file.

Installation and Activation

Method 1 - Install from USB

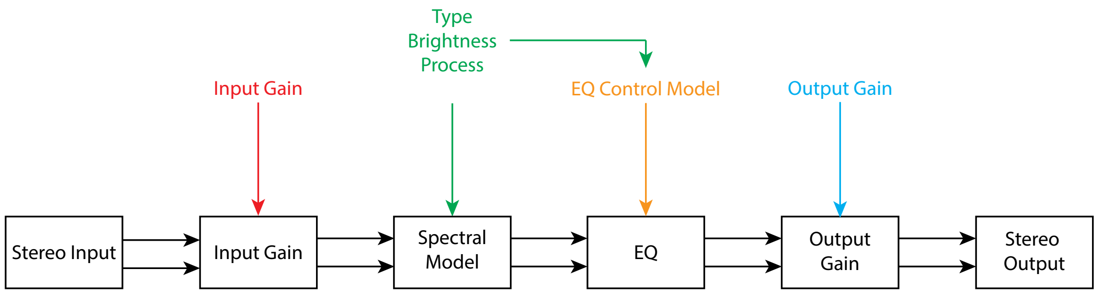
- Unzip the Algorithm and any presets. Copy Phoenix Head.9ka as well as the .9kp files to your USB drive and insert into your H9000.
- Long press the front panel Save/Import button; the Load Options screen will appear.
- Use the cursor up/down buttons or the wheel to navigate to Algorithms and press the Enter Key.
- Use the cursor up/down keys or wheel to select the Phoenix Hea algorithm and then press the SELECT Key.
- If you do not wish to load presets, then you can use this algorithm as is. If you wish to use the presets, you will need to repeat this proceedure until this algorithm appears as algorithm 10171. If you have installed to 10171, copies at lower numbers can be safely deleted using Emote (see below).
- Open the .9kf files from your USB drive using the same procedure.

Method 2 - Install from Emote

- Unzip the Algorithm and any Presets.
- In Emote, select Algorithm -> Import
- Navigate to the unzipped Phoenix Head.9ka file and press open.
- If you do not wish to load presets, then you can use this algorithm as is. If you wish to use the presets, you will need to repeat this proceedure until this algorithm appears as algorithm 10171.
- You can safely delete lower numbered algorithms used to bump this to 10171 by right clicking on the lower numbered algorithm and selecting Delete. Continue doing this until the only copy of is the one loaded into slot 10171.
- To load the chains select Chains and then Open. Navigate to the .9kf chain files and press Open. Repeat for each chain.

Setting Things Up

The diagram below shows the signal flow of this algorithm.



Parameters

Parameter	Description	Range
	Global Menu	
Input Gain	Gain adjustment for the input to the algorithm. For results that match the Phoenix 2 plugin ensure that you don't overdrive the input. Overdriving will result in mainly odd harmonics, especially higher order, which sounds quite pleasing, but it is different to Phoenix 2.	-20 to +10 dB Default: 0dB
Process	The amount of process applied. At 0% none of the spectral model or EQ is applied to the sound. Input and output gain are still active.	0-100% Default: 0%
Output Gain	Output amplification	-6 to +6dB Default: 0dB

Parameter	Description	Range
Brightness	This control feeds into an EQ control model and combined with the type and process the EQ. Opal is the warmest, Gold the most neutral and Sapphire is the brightest. Following the EQ is an anti-aliasing filter that reduces high order inharmonic saturation. This is an enahancement over the Phoenix 2 plugin, where there is significant distortion at some settings, particularly at 44.1kHz. The antialiasing filter reduces high frequencies at and above Nyquist.	Opal, Gold, Sapphire Default: Gold
Type	This controls the harmonic saturation model, and influences the EQ control model. There are 5 models that are influenced by the Process knob. At 0% there is no EQ or Harmonic Saturation. While the harmonic saturation model emulates the spectral content of the Phoenix 2 plugin, it is not an exact match due to some limitations in the DSP available in the H9000, however the difference is very minor up until the input is overdriven, at which point harmonic content increases significantly above that available in Phoenix 2. The spectral compression behaviour of the Phoenix 2 models is modelled in detail in this emulation. The five models available are: Luminescent is the most neutral sounding process of the five, and mainly adds lower order odd harmonics. Iridescent has a similar character, but with a fatter bottom and midrange, and a little more harmonic content. (This plug-in is the most similar to the tape knob on HEDD-192.) Radiant is characterized by a more aggressive compression curve and has significant high order harmonic content added. Dark Essence is more aggressive again. This model has a wider frequency range with high order harmonics, and when used on a vocal Dark Essence can reduce sibilance problems by increasing the apparent loudness of the rest of the signal. Luster starts more gently than the other four processes, but becomes more agressive at high levels of process. The harmonic additions are less compressed than the other models.	Luminescent, Irridescent, Radiant, Dark Essense, Luster Default: Luminescent

This algorithm provides an emulation of the Cranesong Phoenix 2 plugin. This algorithm emulates different types of tape saturation with a brightness control and has been emulated by spectral modelling. This algorithm adds harmonic content up to the 41st harmonic to the original signal, mainly adding odd harmonics which are more pleasing to the ear than even harmonics.

There were some complaints of aliasing on the original plugin and some significant distortion on some settings, especially at 44.1kHz sampling rate, so an antialiasing filter at the nyquist at all sample rates has been implemented to reduce inharmonic distortion especially at 44.1 and 48kHz. This does impact high frequency content slightly, but the high frequency response has less than 0.5dB difference to original plugin up to the nyquist limit.

This algorithm adds subtle noise and works best on good quality digital input signals. Some analog signals may have a noise floor above the levels of harmonic content added at some settings.

This algorithm was originally commissioned by 7 Vinyl Suite (https://7vinylsuite.com/), who has kindly agreed for this algorithm to be made available to the public. We thank them for their ongoing support and valuable feedback during the development of this algorithm.

For a demo of this algorithm visit https://youtu.be/NF5lrR-ljTM