



Polaris – Digital Echo/Reverb

(VST, AU, AAX)

produced by Luca Capozzi (Audiority), April 2016.

Current Manual version: v1.6 (September 2018)

Polaris is an echo/reverb plugin inspired by early hardware digital reverbs of the late 1970s and able to provide echo, ambience and reverb out of a single multitap delay line.

Please, read carefully both product specifications and system requirements **before** purchasing any **Audiority** products.

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produced by Audiority, April 2016.

Credits

Concept & DSP: Luca Capozzi (Progsounds / Audiority), April 2016.

GUI Design: Luca Capozzi

Code & DSP: Luca Capozzi

Published under Audiority brand by Progsounds by Luca Capozzi

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Specifications

- Single Multitap Delay Line
- Pre-Delay
- Early Reflections (8 Programmable Taps)
- Diffusion (16 Programmable Modulated Taps)
- Echo (Ms, Sync, Tuned, Long)
- Echo Modulation
- 3 Band Feedback Equalizer
- Shimmer
- Sample Rate Reduction
- Width (Ping Pong Delay)
- Swell

System Requirements

PC

- Windows XP SP3 or later
- Intel Core 2 Duo 2GHz / AMD Athlon 64 or equivalent
- 2 GB RAM
- Screen resolution: 1024×768
- VST2, AAX 32-bit or 64-bit host

MAC

- OSX 10.7.5 or later
- Core Duo 2GHz
- 2 GB RAM
- Screen resolution: 1024×768
- VST2, AU, AAX 32-bit or 64-bit host

Behind Polaris

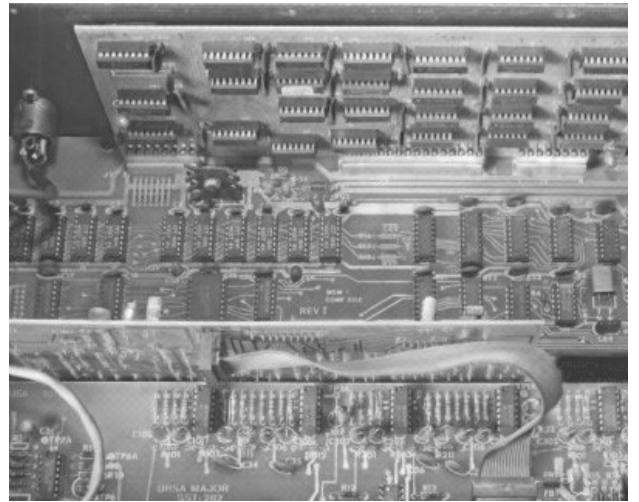
When hardware digital reverbs came out to the market they were really expensive. Most manufacturers were already exploiting chains of comb and allpass filters (smoother reverbs, but expensive in both resources and chips), there were other techniques involving the use of a single multitap delay line to create a reasonable reverb while keeping the cost affordable.

That idea is so simple yet powerful: you mix a bunch of unmodulated taps (Early Reflections) with the remaining modulated taps (Diffusion) to create a cheap but convincing reverb.

We extended this technique by making the Echo tap recirculating with the Diffusion section, allowing longer reverb tails. Furthermore you can easily edit all taps to create your own room responses.

Happy playing!

Luca



Upgrading from v1.5.x or lower

Please, read carefully if you are upgrading from any v1.5.x or lower version of this plugin.

This version will replace your current Polaris installation. Please, backup your presets and license file before continuing.

Old presets, licenses and settings files were located to

Mac

~/Music/Audio Music Apps/Audiority

PC

Documents\Audiority

New Paths

Mac

All presets, license files and settings will be now located in:
/Users/Shared/Audiority/

AAX and VST plugins will be placed in their own Audiority sub-folder located in:

AAX: /Library/Application Support/Avid/Audio/Plug-Ins/Audiority
VST: /Library/Audio/Plug-Ins/VST/Audiority

PC

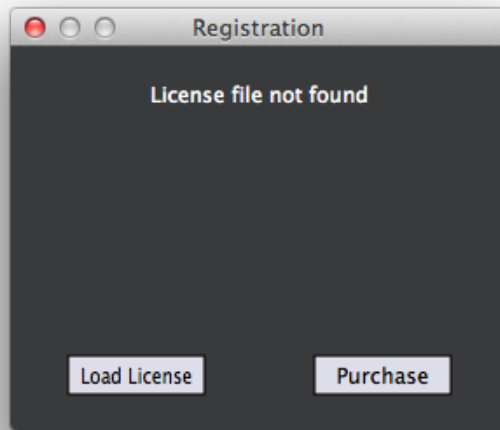
All presets, license files and settings will be now located to:
C:\Users\Public\Public Documents\Audiority

AAX and VST plugins will be placed in their own Audiority sub-folder, usually located in:

AAX: C:\Program Files\Avid\Audio\Plug-Ins\Audiority
VST: {Your VST Path}\Audiority

If you are upgrading from a previous version, please remove the old plugin from their related folders.

Product Activation



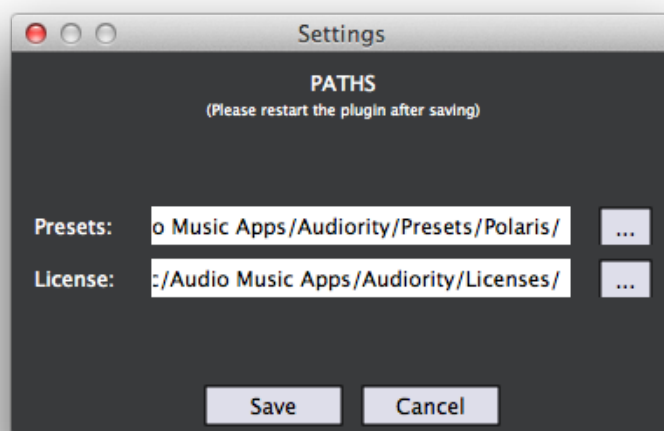
Once you install and open the plugin for the first time, it will be in **Demo Mode** until a license file is loaded. In Demo Mode the plugin will output 3 seconds of silence every minute.

Save the license file* you got with your purchase email (or via our User Area) anywhere on your computer.

Then, to activate the plugin, click on the **Audiority** logo and select "**Register**". The Registration window will pop up allowing you to load the license file you got while purchasing the plugin.

***PLEASE NOTE: Do not try to open the ".alf" license file. Just save it anywhere on your computer and follow the procedure above.**

User Paths Setting



By selecting "**Settings**" from the logo menu, you can change the path for **Presets** and **License** folders. **Note:** Please do not move the **Settings** folder from its default location.

Parameters

Polaris **User Interface** is very straightforward, allowing you to easily shape your sound.



Top Row

Input (0..100%)	Incoming signal volume
LF/HF Cut (-10..0dB)	Low/High Shelving Filters. Low Shelving is set to 300Hz. High Shelving to 2kHz
Pre Dly	Adjust the pre-delay time (up to 255ms)
Dry/Wet (0..100%)	Direct and Processed signals volume
Smp Rate	Set the internal sample rate. Useful to get the grit of vintage digital effects and samplers. Unlike usual decimation effects, this resampling algorithm reduces the artefacts by reconstructing the new signal with a 4-point interpolator.
Shim	Shimmer volume
Width	Ping-Pong delay mix
Swell	Adjust the attack time according with the current delay time. Use this to create atmosphere and pads.

Early Reflections

Magnifier Icon	Open/Close ER Taps settings
ER 1-2..7-8 (0..100%)	ER couples volumes
ER Mix (0..100%)	Global ER volume

Diffusion

Magnifier Icon	Open/Close Diffusion Taps settings
Level (0..100%)	Global Diffusion amount

Echo

Time (ms / Sync / Tune / Long)	Set the Echo time in either milliseconds, beat sync and notes (C0 to B4). "Long" mode allows delay time up to 2500ms. Click on the Time label to switch between modes.
Feedback (0..100%)	Echo feedback amount. Also influences reverb duration when Diffusion is up.
Smooth (0..50ms)	Increase this parameter to get tape delay/echo effect while modulating the Echo Time parameter
LFO Wave	Switch between Sine, Triangle and Random
Mod Rate (Hz, Sync)	Set the LFO Rate in either Hz or Beat Sync (1/1 to 1/16th, including dotted and triplets). Click on the Mod Rate label to switch between modes.
Mod Amount (0..100%)	Modulation amount. Press x10 to increase the modulation range by 10 times.

Early Reflections / Diffusion / Echo settings

You can set the duration of each of the 8 Early Reflections and 16 Diffusion taps by clicking the **Magnifier** icon near each section label.

Taps are coupled and hard panned: odd numbered taps are panned to left, while even taps are panned to right.



On the Early Reflections page you can set the time of each tap and the volume of each couple, while on the Diffusion page you can also individually mute unused taps.



You can find **Randomize** and **Reset** buttons at the bottom corners of each section. The **Reset** button will restore the tap times to the settings saved in the current preset.



In the **Echo** page you can color the feedback signal with a **3 Band Equalizer**:

LOW FREQ: 31Hz - 1kHz; **MID FREQ:** 80Hz - 8kHz; **HIGH FREQ:** 1kHz - 16kHz

MID Q: 0.1 - 4.0; **GAIN:** +/- 24dB

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We hope you will enjoy it as much as we did.

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info@audiority.com

or checkout our site at www.audiority.com

Cheers,
Luca

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