



# Polaris – Digital Echo/Reverb

(VST2, VST3, AU, AAX)

produced by Luca Capozzi (Audiority), April 2016.

**Current Manual version:** v1.7.2 (April 2020)

**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.

# Polaris

produced by Audiority, April 2016.

## Credits

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

GUI Design: Luca Capozzi

Code & DSP: 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 7 64bit or later
- Intel i5 or equivalent
- 2 GB RAM
- Screen resolution: 1024×768
- VST2, VST3, AAX 64-bit host

### MAC

- OSX 10.8 or later
- Intel i5 or equivalent
- 2 GB RAM
- Screen resolution: 1024×768
- VST2, VST3, AU, AAX 64-bit host

## Behind Polaris

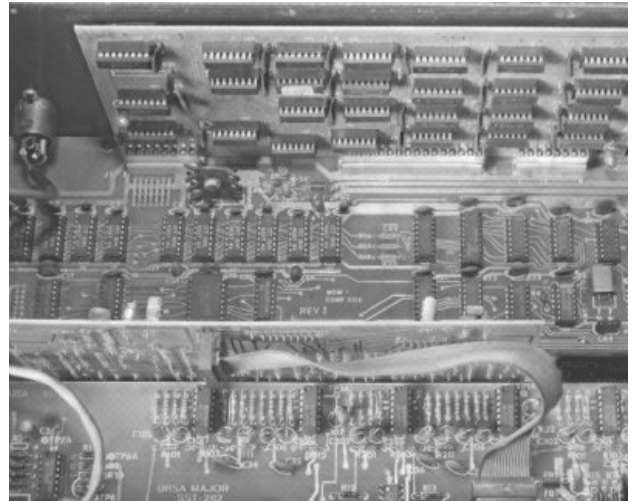
When hardware digital reverbs came out to the market they were really expensive. Most manufacturers were already exploiting chains of comb and allpass filters (smoother reverbs, but expensive in both resources and chips), there were other techniques involving the use of a single multitap delay line to 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 v1.6.x and lower

### PLEASE NOTE:

If you are upgrading from v1.6.x (or lower) there would be two backwards compatibility problems with your saved projects.

- 1) Pro Tools reporting the plugin as missing
- 2) Existing automations assigned to wrong parameters

### HOW TO FIX THIS IF I UPGRADE

- 1) Open your DAW and load the plugin in a new project
- 2) Click on the Audiority logo → Settings and enable “Use Legacy Settings”
- 3) Click on the Save button and restart your DAW

Now your project will load as expected and automations are assigned to the correct parameters.

## FILE LOCATIONS

### Mac

All presets, license files and settings are 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

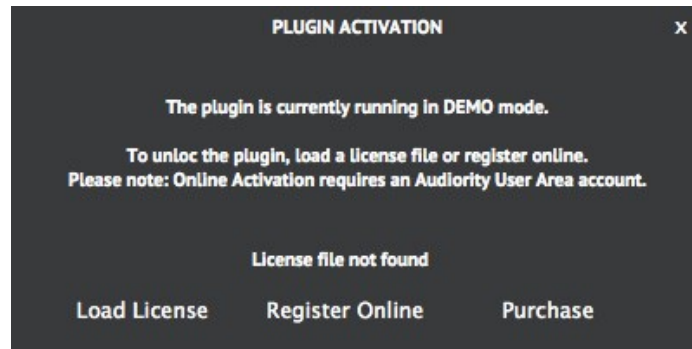
All presets, license files and settings are located to:  
C:\Users\Public\Public Documents\Audiority

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

## PLUGIN 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.

You can activate the plugin either OFFLINE or ONLINE.

### OFFLINE ACTIVATION

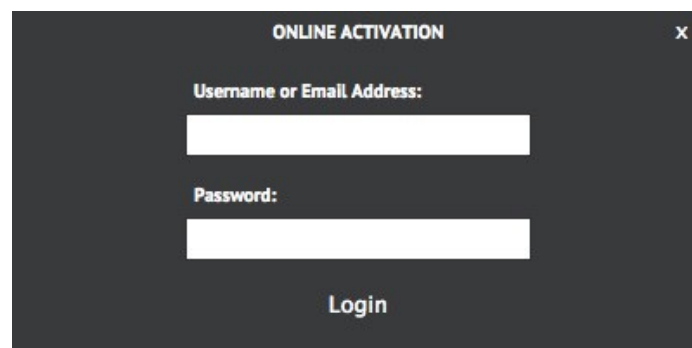
If you purchased the plugin from our site, you should have received an email to download the installers and the license file. Save the license file you got with your purchase email (or via our User Area) anywhere on your computer.

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 by clicking the "**Load License**" button.

**NOTE:** If you purchased the plugin from one of our dealers, please check the "**USER AREA AND REDEEM CODES**" section below.

### ONLINE ACTIVATION

If you are registered to our User Area, then you can activate the plugin online.



Insert your Username (or email address), your password and click the "**Login**" button. The license file will be automatically delivered in your computer and the plugin will be activated.

## USER AREA AND REDEEM CODES

If you purchased from one of our dealers, then you should have received an email with a redeem code. This code is required to deposit a license in your User Area account and let you download the license file or activate the plugin online.

If you don't have an User Area account yet, please follow these steps:

- 1) Go to <https://www.audiority.com/register> and fill out the signup form.

**IMPORTANT:** Please be sure to register with the **e-mail address you use for your purchases**, otherwise your products will not show. Since we use reCAPTCHA for registration only, please temporarily disable any ad blocker you are using.

**Username**

Heisenberg58

**First Name**

Walter

**Last Name**

White

**Purchase E-mail Address**

w.white@pollos.com

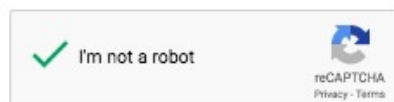
**Password**

.....

**Confirm Password**

.....

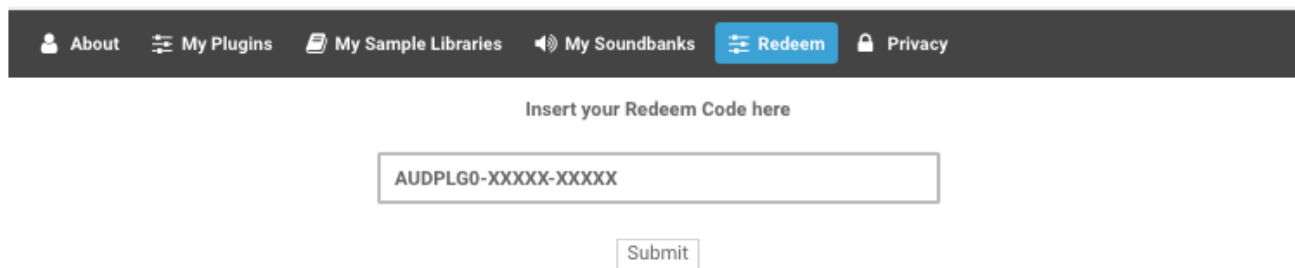
I read and agree to the Privacy Policy and Terms of Use



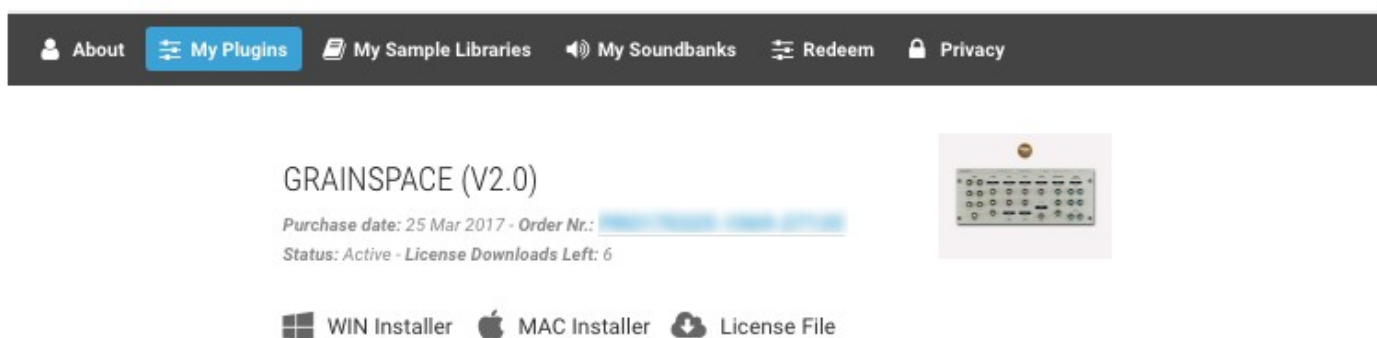
Register

Login

2) Once registered, log in to your account by clicking the User Area section of our site. Click the **REDEEM** section of your account and paste the code you received via email from our dealer.

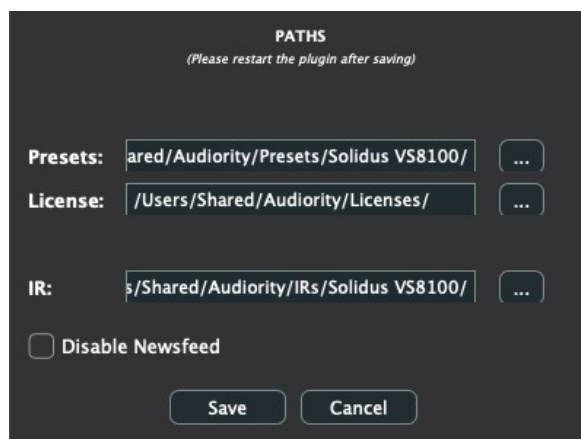


3) After submitting the code, a license will be deposited in your account and will be shown in “**MY PLUGINS**” section of your User Area.



4) Now you can click “License File” and save the license anywhere on your computer and ready to be loaded through the plugin registration window. You can also skip this part and activate your plugin online (see previous section of this manual).

## USER PATHS SETTING



By selecting “**Settings**” from the logo menu, you can change the path for **Presets**, **License** and **IR** folders. You can also disable our Newsfeed from here.

**Note:** Please do not move the **Settings** folder from its default location.



## PLUGIN PARAMETERS

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



### Top Row

<b>Input (0..100%)</b>	Incoming signal volume
<b>LF/HF Cut (-10..0dB)</b>	Low/High Shelving Filters. Low Shelving is set to 300Hz. High Shelving to 2kHz
<b>Pre Dly</b>	Adjust the pre-delay time (up to 255ms)
<b>Dry/Wet (0..100%)</b>	Direct and Processed signals volume
<b>Smp Rate</b>	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.
<b>Shim</b>	Shimmer volume
<b>Width</b>	Ping-Pong delay mix
<b>Swell</b>	Adjust the attack time according with the current delay time. Use this to create atmosphere and pads.

### Early Reflections

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

### Diffusion

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

### Echo

<b>Time (ms / Sync / Tune / Long)</b>	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 <b>Time</b> label to switch between modes.
<b>Feedback (0..100%)</b>	Echo feedback amount. Also influences reverb duration when Diffusion is up.
<b>Smooth (0..50ms)</b>	Increase this parameter to get tape delay/echo effect while modulating the Echo Time parameter
<b>LFO Wave</b>	Switch between Sine, Triangle and Random
<b>Mod Rate (Hz, Sync)</b>	Set the LFO Rate in either Hz or Beat Sync (1/1 to 1/16th, including dotted and triplets). Click on the <b>Mod Rate</b> label to switch between modes.
<b>Mod Amount (0..100%)</b>	Modulation amount. Press <b>x10</b> 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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Last updated on August 1, 2018

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

If you have any question, concerns, technical issues or even for just say 'Hello', get in touch with us at:

[info@audiority.com](mailto:info@audiority.com)

or checkout our site at [www.audiority.com](http://www.audiority.com)

Cheers,  
Luca

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[Audiority User Area](#)

