

NEOLD



WUNDERLICH

Manual



MOJO MACHINE

Wunderlich means time traveling in sound. Based on highly esoteric Arcturus tubes from 1932, this one-off experiment is an epitome of vintage vibes and old-school tones. Its unique sound profile grows from the offbeat topology and components of the analog hardware prototype developed exclusively for this plugin.

BACK THEN

The harmonics living inside the age-old Wunderlich tubes appear incredibly rich and authentic, coupling the drive stage and the variable mu compressor for inspiring interaction in between saturation and dynamics. A classic EQ stage provides excellent tonal balance and shaping, while the Travel control takes you from now to then in just a second.

FLUX RECAPPED

Wunderlich is a tone marvel for creating all kinds of exciting patina and lo-fi textures – a stunning mixing tool for providing that old character whenever a track requires it. Beyond that, it shines as a creative playground for exploring venerable styles: Instant Motown, true analog vibes, vintage mojo galore... beautiful things are going to happen.



PROTOTYPE BUILD

Trial and error.





COBALT

There is no doubt about it: Introduced in 1927, the blue series by Arcturus belongs to the most beautiful tubes ever built. Actually, they were a clever promotion stunt in a time when the market for radio tubes was extremely crowded and the bulbs were still visible from the outside. The latter changed shortly after, so around 1932 the blue period came to an early end.

ARCTURUS

Unfortunately, not much is known about the history of this company these days. Arcturus began as an independent tube manufacturer in the 1920s, producing the typical types needed for radios at the time. However, they also filed many patents on tube technology and released some pretty special types in form of the AD, AE, AF, AG, and... the Wunderlich! The business lasted into the early 1940s, when the company went bankrupt in the end.

WUNDERLICH

The Wunderlich is a full-wave detector designed for AM radio receivers. Named for its inventor, Norman Wunderlich, this special tube was announced in July 1932. Only very few were ever built, since the unusual design effectively prevented it from conquering the market. And yes, using Wunderlichs in a pro audio environment is somewhat experimental – to say the least.

QUICK START



- ① Sets the amount of saturation produced by the wonderful Arcturus tube circuit.
- ② Controls a shelving filter for cutting or boosting the low frequencies.
- ③ Cuts or boosts the high frequencies. This is a shelving filter type as well.
- ④ Defines the amount of peak reduction applied to the incoming signal. Think of it as threshold.
- ⑤ Shifts the threshold towards higher levels and simultaneously affects the knee and ratio.
- ⑥ Offers slow, medium and fast attack/release time combinations.
- ⑦ Activates or bypasses the compressor. SCF engages an additional sidechain filter.
- ⑧ Provides makeup gain to compensate for the level drop resulting from compression.

QUICK START



- ⑨ Shows either input level, gain reduction or output level (meter screw changes mode).
- ⑩ Timewarps sounds from now to then by applying increasing aging effects when turned clockwise.
- ⑪ Adjusts the output level, implemented as linear gain without additional coloration.
- ⑫ Mixes the dry and processed signals for on-board parallel mojo blending.
- ⑬ Engages or bypasses the entire signal processing chain.

① Basic Workflow

- Create vibe with Drive and Travel.
- Bend tone with Low and High filters.
- Tweak dynamics with compressor section.
- Finish off by adjusting Level and Mix.

PARAMETERS



Drive

Provides 0 to 40 dB of compensated gain for controlling the intensity of saturation produced by the driven Arcturus tube circuit.

Low

Controls the amount of low shelf equalization. The actual cut/boost range is about -4 to +8 dB.

High

Sets the amount of high shelf equalization. The cut/boost range is about -4 to +8 dB as well.

Travel

Use the travel screw to blend from a more modern signal path (Left = Now) to all the way Lo-Fi (Right = Then). The trip is implemented by means of a highcut filter and modifying the gain staging, which results in additional THD.

Note: If you push the Drive to full throttle and still feel you could use some extra edge, why not benefit from some additional dirt coming from the Travel stage... its parallel highcut filter will help to prevent things from sounding overly scratchy.

PARAMETERS



AC Thresh

Controls the amount of peak reduction applied to the incoming signal – basically the threshold. Unlike a typical analog topology, this parameter is decoupled from the input gain, so its effect remains independent of the Drive setting.

DC Thresh

Sets the DC voltage offset added before the rectifier tube. This imposes an additional threshold shift and also affects the knee and compression ratio: 0 = hard knee at 10:1 ratio, 10 = very soft knee at 3:1 ratio.

Timing

Offers slow, medium and fast attack/release time combinations.

Status

Off bypasses the compressor completely. *On* activates it, and *SCF* engages an additional 40 Hz side-chain filter.

Makeup

0 to 24 dB of gain, which is only applied if the Status switch is in *On* or *SCF* position, infusing subtle THD by driving the following buffer stages.

PARAMETERS



Drive vs. Compression

A special trait of the variable mu feedback topology is the interdependency of its drive and compression stages. As a result, saturation is modulated by compression in subtle yet very musical ways.

Wunderlich features a compensated Drive control, so you don't have to adapt the overall output level all the time. The Drive level feeding the sidechain of the compressor is compensated as well, so you don't have to adjust the threshold when the input gain is changed.

However, stronger Drive settings will cause increasing signal clipping, which will continuously cancel both compensation mechanisms. As a result, plethoric Drive may also reduce the intensity of compression at a given threshold setting.

At this point, the convenient compensation can no longer take effect, so you need to increase the AC and/or DC threshold settings manually to counteract this phenomenon if desired.

PARAMETERS



Meter

The VU meter displays either input level, gain reduction or output level in dB. Its mode can be changed with the black screw at the bottom of its housing. The meter reference point can be set in the preferences menu.

Level

This control provides linear/clean gain applied to the output signal within a range from -24 to +24 dB, which allows accurate manual level compensation.

Mix

This knob blends between the dry and the wet signals and therefore provides instant on-board parallel coloration/compression/filtering.

Power

Drag click the power switch to engage or bypass the entire plugin, or use the mouse wheel control alternatively. Try the Wunderlich rating plate if you prefer click-only instead.

CONTROLS



Quick Reference

Clicking the Neold logo brings up an on-screen quick start guide. Click again to close this screen.

Default Value

Double-clicking a knob resets its value to default.

Click & Set

Double-clicking the scale next to a knob sets its value exactly to the clicked position.

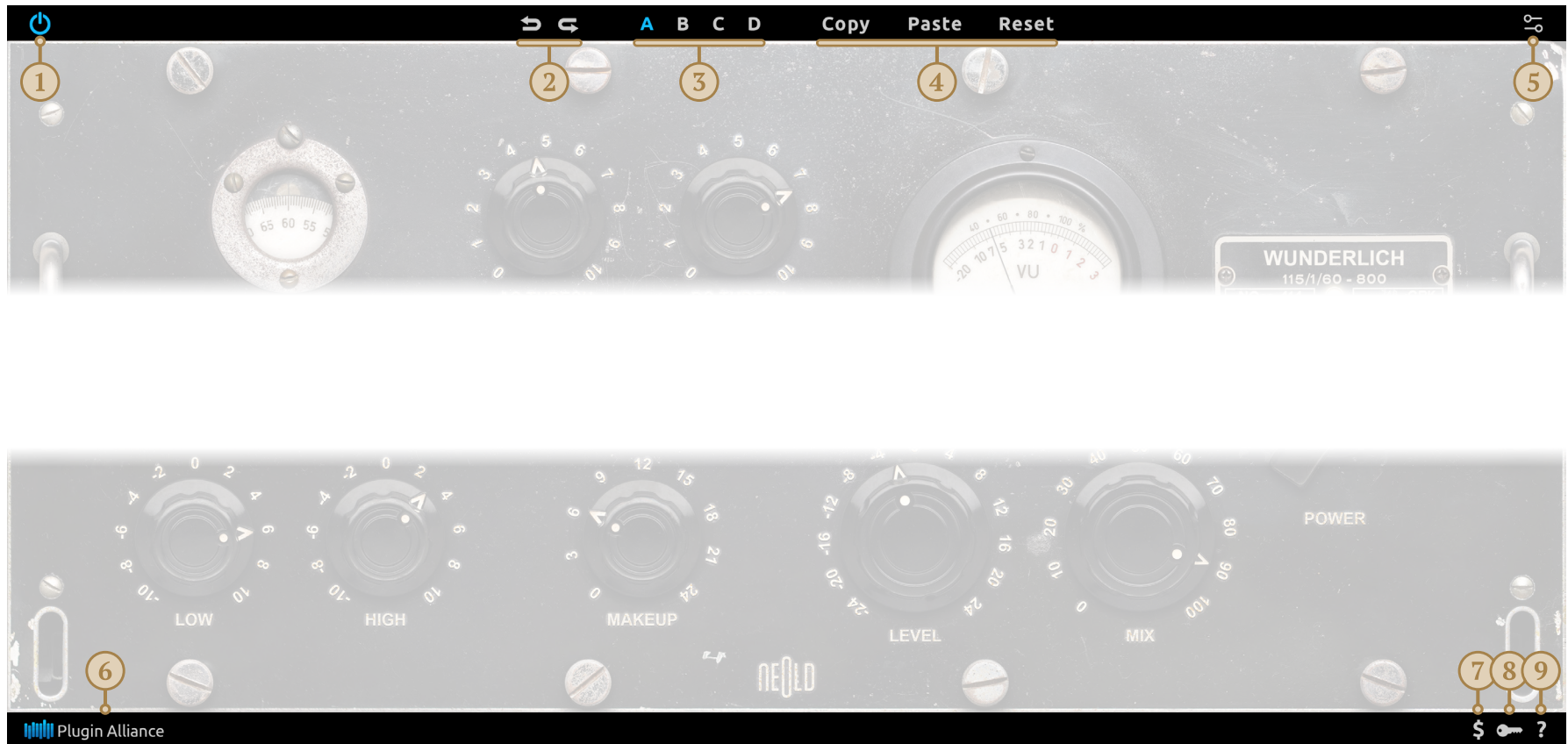
Field Entry

Double-clicking a parameter name opens a callout which allows inserting exact values via keyboard.

Precision Mode

Pressing the Shift key increases the resolution of a knob so that its value can be set more precisely.

TOOLBARS



- ① This icon provides a master bypass function for the entire plugin.
- ② Undo/Redo offers up to 32 steps of your recent settings. Just go back and forth.
- ③ Four individual preset banks which can also be automated in your DAW.
- ④ Copy and paste current settings to/from clipboard, or reset current settings to default.
- ⑤ Opens the preferences menu (e.g. interface size, meter reference point, mouse sensitivity).
- ⑥ Clicking the Plugin Alliance logo will send you to the PA website via your web browser.
- ⑦ This icon will guide you to the Plugin Alliance Store via your web browser.
- ⑧ Brings up the activation dialog for authorizing plugin licenses for your devices.
- ⑨ Here you will find the manual (requires PDF reader installed) and other useful info.
- ⑩ **System Requirements & Supported Platforms**
Installation, Activation, Authorization, FAQs

