NEOLD

V76U73

Manual

THE GOLDEN CHANNEL

The King of Preamps meets the German Fairchild… the V and U series modules from the 1950s and 60s are legend. Created by the most experienced engineers with nearly unlimited resources made possible by government funding, these milestones in analog audio processing have enchanted countless music productions to the present day, while their original broadcasting domain has become almost completely digital in the meantime.

A CHALLENGE

Obviously, these analog originals have not been designed for DAW use at all, and they come with a couple of pitfalls for modern day music production. Besides the fact they become more and more expensive and in need of service from one year to the next, there are integrated broadcast filters, limited dynamics parameters and tricky gain staging, especially when combining several modules in a chain – just to name a few.

PLUG & PLAY

The V76U73 manages the tricky balancing act of providing an absolutely accurate emulation of the real analog circuits with all their gorgeous components, while optimizing workflow and usability to meet modern day production requirements in your DAW. Enjoy!

V76/80

Without a doubt, the V76 is one of the most iconic and sought after preamps ever. Its legendary design, stellar manufacturing quality and, most of all, its rich triple EF804S & E83F pentode-based tube sound have built an impeccable reputation since its creation in the 1950s, making it a number one choice for its lucky owners. The /80 suffix defines the low cut filter frequency.

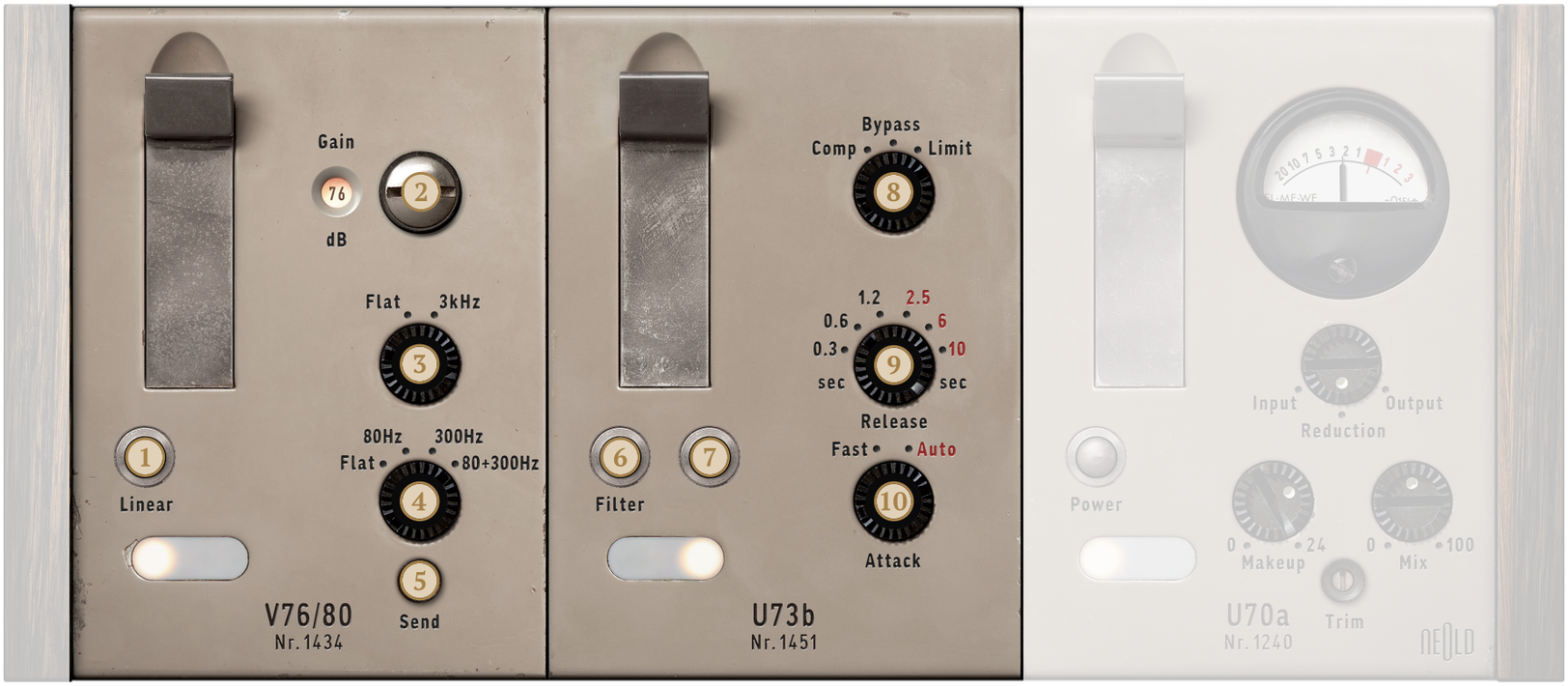
U73b

The U73 compressor has its place right next to the V76 in the hall of audio fame, and in fact it is even more scarce than its preamp brother. It features no less than five transformers implemented into an E99F-based variable mu topology. With its modified circuitry and advanced release, the b version was specifically designed for studio purposes in the 1960s. Its classic warm vintage tone has left its signature on countless recordings ever since.

U70a

The original purpose of the U70 and its variations (U70a, U71) is to drive an external light spot VU meter – one of the most effective and classy ways of level indication for sure. On this plugin, however, it has become a multipurpose command center for metering, parallel compression, output leveling and master bypass.

QUICK START



1. Bypasses the broadcast filter (band limit between 40 Hz and 15 kHz) before the preamp.
2. Drives compression intensity and increases harmonics at high settings (level compensated).
3. Engages or bypasses the high cut filter with a frequency of 3 kHz.
4. Activates, bypasses or combines the 80 Hz and 300 Hz low cut filters.
5. Increases or reduces the preamp level sent into the compressor (level compensated).
6. Switches a low cut filter with 12 dB/octave at 100 Hz into the sidechain of the dynamics section.
7. Operates the compressor/limiter in stereo link mode when pressed, otherwise dual mono.
8. Toggles between the compressor and limiter modes or bypasses the dynamics section.
9. Sets the release time. Black values are fixed, while red indicates program-dependent release.
10. Switches from the original very fast 0.5 ms to a program-dependent auto attack mode.

QUICK START

(11) Engages or bypasses the entire signal processing chain.

(12) Shows either input level, gain reduction or output level.

(13) Toggles between input level, gain reduction or output level metering.

(14) Sets the makeup gain of the U73b to compensate for level decrease caused by compression.

(15) Offers parallel compression by mixing post-V76 with post-U73b signals.

(16) Adjusts the output level, implemented as linear gain without additional coloration.

(i) **Basic Workflow**

◔ Set gain and compression parameters.

◑ Match level using the makeup gain.

◕ Adjust desired parallel compression mix.

● Trim output level if needed.

PARAMETERS

Linear

The V/U series modules were originally designed for broadcast, which is why they have an integrated filter with a band limit between 40 Hz and 15 kHz. While this is an important aspect of the original sound, sometimes it is just too much. If this is the case, activate Linear and the filter will be gone.

Gain

The Gain control is responsible for two things at the same time: It drives the intensity of the following compressor/limiter, and it increases harmonics when driven hot. The input gain is compensated for at the output in order to provide a full normalization of level and loudness.

The original, massive gain of 76 dB has been reduced to the range between 43 and 76 dB in order to prevent the compressor from being pushed out of its intended operating range.

The original 6/9/10 dB have been refined to 3 dB gain steps in order to drive the compressor with more precision.

PARAMETERS

High Cut

Engages or bypasses a high cut filter with a cutoff frequency around 3 kHz.

Low Cut

This filter is based on a passive T-style network which is located in between the two amplifier stages, using various capacitor/inductor combinations to cause 80 or 300 Hz or combined 80+300 Hz cutoff frequencies. The input transformer circuitry also causes a slightly resonant high pass at 40 Hz, which is always present (unless Linear is active).

Send

This control increases or decreases the level sent into the compressor (+/-24 dB). It's a clean gain stage which does not add any further coloration to the chain. As this control is compensated for, it will not change the output level of the plugin but have an influence on the intensity of compression instead: Turning it to the right results in stronger compression, while turning it to the left reduces the amount of gain reduction. Just think of it as an option for fine-tuning the threshold of the compressor based on the setting of the Gain control.

PARAMETERS

Filter

This button engages or bypasses a low cut filter with 12 dB per octave at 100 Hz in the sidechain path of the compressor. This reduces the influence of low frequency content on compression, which helps to maintain a tight low end. A typical use case would be a mix with a prominent kick drum, triggering strong compression with every single beat caused by its high amount of low frequency energy: The complete mix starts to wobble as a result. The Filter helps to solve this problem by reducing the influence of that kick on overall compression.

Stereo

This option switches between dual mono and linked stereo operation. Stereo linking is achieved by averaging the control voltages of the left and right channel. When the channels are not linked, you get slightly different compression on the left side vs. the right, which can result in a more vivid impression and a more spacious result. However, if cohesion, glue and a generally tighter sound are priority, this button should be disengaged. Obviously, the Stereo function is not available on mono tracks.

PARAMETERS

Mode

This switch toggles between compressor and limiter modes or bypasses the entire dynamics section.

While the original hardware uses shifted threshold ranges between compressor and limiter mode to secure its 6 dBu ceiling, the plugin uses the same threshold range for both modes to avoid considerable level jumps when switching back and forth.

This essentially makes the limiter mode a harder knee version of the compressor mode.

Release

Sets the release time in seconds. The three positions marked in red (2.5/6/10 s) offer program dependent dual-release curves that are less prone to pumping artifacts.

Attack

If you want to preserve transient impact when using strong compression settings, the original attack time of only 0.5 ms is just too fast. Switching to Auto will engage a convenient, program dependent attack automation between 1 and 10 ms instead.

PARAMETERS

Power
Engages or bypasses the entire plugin.

Meter
Depending on the position of the source switch, this classic VU meter shows either input level, gain reduction or output level. The meter reference point can be set in the preferences menu.

Source
Toggles between input level, gain reduction or output level metering. The meter reference point can be set in the preferences menu.

Makeup
Compensates gain reduction caused by compression/limiting within a range of 0 to 24 dB.

Mix
This control blends the uncompressed (0%: post V76) and compressed (100%: post U73b) signals, providing onboard parallel compression.

Trim
The output level of the entire processing chain can be increased or decreased by up to 18 dB.

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.

i System Requirements & Supported Platforms
Installation, Activation, Authorization, FAQs

Version 1.2