PROTOVERB

User Guide

version 1.0.1

Heckmann Audio GmbH • Berlin

About Protoverb

Protoverb is an experimental room simulator reverb. Most algorithmic reverbs try to avoid resonances or model the reflections of sound from a room's walls. Protoverb does the opposite. It builds up as many room resonances as possible, modelling the body of air in the room. No need to modulate or colour the signal. The result is a very natural sounding reverberation with interesting characteristics, properties found in churches and large halls, but are rarely in conventional algorithmic reverbs:

- Longer notes tend to build up resonance, as if the air takes a while to get excited
- Multiple instruments remain distinct, without disappearing in a wash
- When you play a short melody, the room repeats a ghost echo

Protoverb works with many parallel, serial and networked delays. With such a structure, no mathematical formula can make it sound 'right'. It is down to trial and error using random values. Protoverb generates random delay line lengths, networks and feedback strategies. If you are lucky you will find a great setting, which you can send to us!

We call Protoverb **RESEARCHWARE**. Instead of spending months researching and testing networks ourselves, we encourage our community to share their settings and thoughts with us and each other. Click on the SEND CODE button if you find something that's fantastic!

Protoverb is free and does not require a serial number to unlock it. Enjoy!

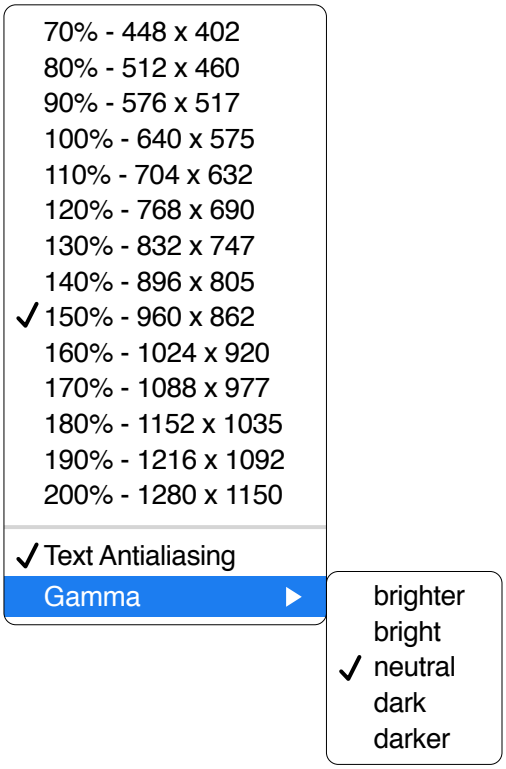
- Urs

Team 2025 (Q4)

Team 2025 (Q4)
Urs Heckmann (concepts, code); Jayney Klimek (accounting, procuration); Howard Scarr (sound design, user guides, grump); Sebastian Greger (UI design, 3D graphics);
Jan Storm (framework, hardware code); Oddvar Manlig (business development);
Viktor Weimer (customer support, sound design); Thomas Binek (QA, betas, customer support); Henna Gramentz (accounting, customer support); Frank Hoffmann (framework, browser); Alf Klimek (studio, voiceovers); Sebastian Hübert (media creation);
David Schornsheim (framework, CLAP); Kay Knofe (hardware development); Tim Fröhlich (more code); Sadjad Siddiq (DSP); Petros Karagkounidis (web development,);
Simon Schrape (web development), Max Steimel (DSP); Henry Lau (accounting, customer support); Mine Hahn (DSP), Vadim Zavalishin (filter design, DSP)

Appearance

Right-click anywhere in the background to open this menu:



Size

Protoverb can be resized to anywhere between 70% and 200% of the ‘standard’. Values larger than your screen will appear greyed-out and cannot be selected.

Antialiasing

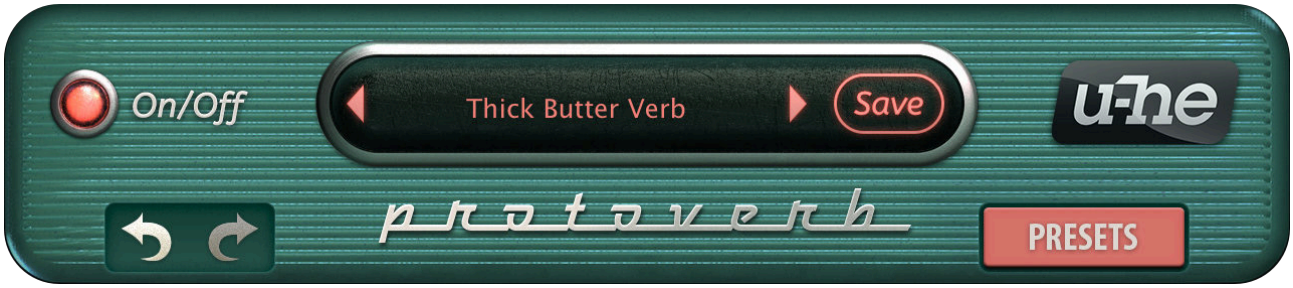
Smoothing of labels and values. Normally left on – only in special cases will switching it off improve readability.

Gamma

Brightness. It can take a moment or two before Protoverb responds to the new setting.

Upper Panel

The upper panel contains several global elements surrounding the central data display…



On/Off

Effect bypass.

Data Display

This normally shows the name of the selected preset. While you are adjusting anything it shows the value of that parameter instead. After a few seconds of inactivity the data display reverts to showing the preset name again.

Preset Select

Click to select a preset from the current folder without having to open the browser. The triangles to the left and right of the name step through all presets – even across the boundary into neighbouring folders.

Initialize function

To reset to Protoverb's default values, right-click on the data display and select *init*.

Save

Stores the loaded preset in the *User* root or in the currently open sub-folder.

Right-clicking on the [SAVE] button lets you set the preset format first. The default *.h2p* has the advantage of being cross platform compatible. *.h2p extended* is similar but also allows per-line comments, so the preset files are slightly larger. A *native* option is also available, but is not recommended as it is platform-specific.

u-he Badge

Click on the 'badge' to open a popup menu containing links to this guide, to the documentation folder, to our web- site, to our support forum at KVR as well as our address in various social networks.

Undo / Redo

Click on the **curved arrows** to UNDO or REDO an action. You can even undo a change of preset so that you don't lose edits made to the previous one. If an UNDO or REDO step is available, the arrow will be highlighted (white).

PRESETS

Click on this button to open the powerful new preset browser. Details can be found in any of the **u-he user guides**, for instance this one (for ACE = Any Cable Anywhere):

https://u-he.com/downloads/manuals/plugins/ace/ACE-user-guide.pdf

Note that the Protoverb browser is simpler, e.g. preset tagging is not available.

Centre Panel

The 3 main controls:

Revision

Along the top of the panel you will see some information about the plug-in. If you hover over the '**REV. nnnn**' label the core revision number will appear in the data display.

Decay

Adjusts the length of the reverb.

Dry / Wet

Volume controls for the unprocessed (dry) and processed (wet) signals. If you are using Protoverb as a send effect you should set Dry to minimum and Wet to maximum.

Lower Panel

The playground where you can randomize all the hidden reverb parameters:

Code

This is a string made up of two parts: All text before the hyphen (Model) defines the network structure, strategies for spatial layout and distribution of delay taps, for finding useful delay lengths and so on. All text after the hyphen (Delays) is a seed for the pseudo-random number generator which sets various parameters – average delay length, prime number choice etcetera.

You can edit the text by double-clicking on the field, or randomise each part independently using the pair of buttons…

RND

Randomize the Model and Delays. Listen carefully to the results before clicking again.

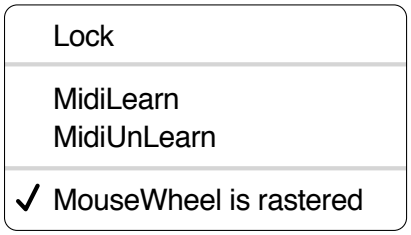
SEND CODE

This button opens the Protoverb Settings webpage at u-he.com. Once a valid code has been sent or entered manually / pasted, a few questions will appear on the page (‘Tell us more about this setting’).

You can also write a comment here (‘Additional Notes’, maximum 256 characters).

Parameter Context Menu

Right-clicking on any knob or button opens this menu:



Lock

To ensure that the value of a parameter doesn't change when you switch presets, knobs and buttons can can be 'locked': Right-click on any knob or button, then select *Lock* in the context menu. Note that locked parameters can still be adjusted manually!

MIDI Learn

Protoverb's MidiLearn function lets you remote-control parameters from a hardware device without having to reach for the mouse. Most contemporary MIDI keyboards offer a set of knobs or faders that can send 'MIDI Continuous Control' messages (often abbreviated to 'MIDI CC'). There are also dedicated MIDI control boxes with 8, 16 or more knobs / sliders.

The 3 knobs and the RND buttons can be MIDI-learned. Right-click on the knob/button to open the context menu, choose *MidiLearn* then move a physical control on your MIDI hardware to assign it to the chosen parameter. To remove the connection again, select *MidiUnLearn* from the same menu.

Note: MidiLearn will only work if the host application passes incoming MIDI onto the effect. To find out how to set up MIDI for effect plug-ins, please refer to the manual of your host software.

Mousewheel

If your mouse wheel is rastered (you can feel it clicking slightly as you roll the wheel), set this option to 'on' so that each little click increments the value in sensible steps.