WoodVerberator

Woodman’s Immaculate Maple Syrup Studio

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Presets : Sander Cliquet, Thomas Walravens, Woodman

1. What

WoodVerberator is a convolution based reverb with some extra features :

- Reverb time can be set from 0 to 10s or to the IR file native length.
- Has controls to adjust the reverb (damping, distribution).
- Stereo can be created by either using a stereo IR file or by de-correlating a mono file.
- Has an HPF, LPF and saturator which work on the reverb late part only, the early-late boundary can be set.
- Had Amplitude and Phase modulation which work on the reverb late part only, the early-late boundary can be set.
- Has Gating which can also be driven by the side chain.
- Has Ducking which can also be driven by the side chain.
- Has an extra Delay which works on the reverb late part only, the early-late boundary can be set.
- Has general HPF, LPF and De-Essing filters.
- Has a quality control to balance the CPU load.
- Has the standard Mix and Pre-Delay controls.
- User IR files can be tried and added to the WoodVerberator IR folder so they appear in the IR dropdown.
- Has Input and Output level meters.
- Can generate Surround and Immersive 3D output (MacOS).
- Has a graph displaying the IR.

v 1.0.2
IR file chooser on iOS can now choose any file type to solve problem with .SDIR extensions.

v 1.0.3
Fixed iCloud WoodVerberator folder visibility on iOS.

v 1.0.7
Fixed potential crash in LogicPro on iOS.

v 2.0

- Added new preset browser.
- Added 29 new presets.
- Added Tail Bandpass filter.
- Added Midi V2 UMP (32 bits) and PE (Property Exchange).

v 2.0.3
- Fixed Preset Up/Down arrows.
- Fixed UI update in iOS LogicPro after loading a saved project.
- Fixed name of preset after reloading DAW project.

2. Main window

Individual controls are explained below.

Resizing the plugin window (smaller only) scales the UI and saves the new size in the plugin state.

When the plugin is inserted on a track with more than 2 channels, an extra button (“W” from weights) in the header bar will become visible which allows to set channel weights in an extra panel similar to the Advanced panel.

You have pressed the Question-mark button already as you are reading this manual.

3. Presets

3.1 User Presets

User presets can normally be set via the DAW specific popup / controls. Those presets will be saved in a specific format and location dependant on the DAW.

User presets can also be set via WoodVerberator's own popup in the header bar.

The preset.json files are saved in your iCloud Drive (when enabled) or else in the app's local folder: ~/Library/Application Support/WoodVerberator/userPresets (~ is the user's home dir).

When saved to iCloud Drive the presets are automatically available (and synced) to all devices and all DAW's running WoodVerberator and are obviously backed-up as well.

When iCloud Drive is enabled, previously local saved presets will also be shown in the preset popup with ".local" appended to their name. And when for some reason a new preset still has to be written to the local folder, this can be done by appending ".local" to the name typed in the text edit box.

When a preset is selected and any parameter is changed afterwards, the name of the preset will be marked with a * at the end to indicate the settings are now different than those from the saved preset. When this preset is re-saved the * will disappear again.

Groups (drums, Vocals, …) can be created by typing the group name followed by a "/" (backslash character) followed by the preset name. Multi level groups are possible as well.

The current selected preset can be removed by selecting “Remove Preset” from the popup however NO “Are you sure” warnings/popups are given. (I am sure you are sure).

The User presets can also be selected by a Midi Program Change. In the Advanced “More” panel the Midi channel can be selected and Program Change can be enabled.

3.2 Factory Presets

Factory presets are stored and read from the app/plugin package.
This means they don’t have to be copied to the User preset folder and that they can’t be changed any more.

When changing parameters and clicking the “Save” button, a new User preset will be created with the same name in the User space.

Factory presets are shown on top of the User presets in the dropdown.

3.3 Preset Browser

Select “Browse” in the preset dropdown menu to reveal the new browser.

WoodVerberator

4. Main Controls

4.1 Time

4.1.1 Use File Length

When on, no resampling is done on the IR file and hence the reverb time is determined by the file length minus the silence (below -90 dB) at beginning and end.

When off, the Time rotary becomes active and allows to set the reverb time by resampling the IR file.

4.1.2 Time Rotary

Sets the reverb time : 0 .. 10s

4.1.3 RT60

The IR file length does not always give a good indication of the RT60 (reverb energy has dropped by 60 dB).
Hence the RT60 is calculated and displayed.

4.2 Mix

0% … 100%

Allows to do parallel processing : 0% will output the original signal, 100% will only output the reverb signal.

Double clicking on the Mix rotary will jump alternatively to 0% and 100%.

4.3 IR File

4.3.1 IR File dropdown

Allows to select an IR file from the Factory list or from the WoodVerberator samples folder.

4.3.2 Reverse

Reverses the IR. Useful for special effects.

4.3.3 File buttons

File : allows to select an IR file and try it.

Add : the chosen file is copied to the WoodVerberator samples folder and is added to the dropdown list.

Delete : the file is removed from the dropdown and deleted from the WoodVerberator folder.

4.4 PreDelay

Delays the input signal before entering the reverb.

0 .. 1000 ms

4.5 Room Controls

4.5.1 Damping

The 2 controls use 2 different methods to modify the IR file to simulate more or less room/space damping. Changing the damping will strongly impact the RT60.

-100 .. 100 %

4.5.2 Distribution

This control influences how the IR coefficients are distributed.
0 means an equal distribution.
Higher values will use more coefficients in the early part.

4.5.3 Diffusion

This controls a subtle effect by applying some all-pass filters after the reverb.

0 .. 100 %

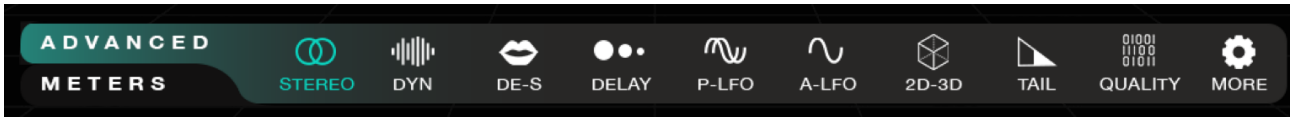
4.6 HPF and LPF Filters

Lowpass and Highpass filters applied on the input signal before going through the reverb.

50 .. 20000 Hz.

5. Advanced Controls

Clicking on the “Advanced” button above the Meters will reveal a row of buttons to select a specific panel.



5.1 Stereo

Stereo reverb can be obtained by 2 distinct ways :

- The IR File is stereo and has a different L and R signal
- WoodVerberator can generate stereo by de-correlating a mono IR.

5.1.1 Stereo Rotary

0 .. 100%

0 will output a mono or equal L&R reverb, even if the IR file is stereo.

100 will fully use the difference between L&R or will create a maximum de-correlated L&R from a mono IR file.

5.1.2 Stereo File Mode dropdown

- Stereo
- L + R
- L
- R
- Stereo + De-Correlate

For a mono file WoodVerberator uses a de-correlation algorithm to create a stereo reverb.
For stereo files (L & R) with L and R (enough) different, it already sounds stereo.

However if L&R are the same (or not stereo enough) L&R + DeCorr can be used which applies the WoodVerberator de-correlation algorithm on top of the L&R.

The other modes (L,R,L+R) create a mono file out of the stereo after which the de-correlation algorithm is applied to create the stereo reverb.

5.2 Dynamic Controls

5.2.1 Rev Out Gain

-30 dB … +30 dB

Adjusts the reverb output level. When Mix is 100% this is the effective output level.

5.2.2 Ducking Amount

Ducking will reduce the reverb level for louder signals and outputs the full reverb when the signal drops below a certain value. Often used on vocals.

The amount controls the reduction level : 0 .. 100%

5.2.3 Gating Amount

Gating is the opposite effect of Ducking : when the signal drops below a certain value the reverb level starts to go down to reach zero after an even lower signal value. Used to create the 80's gated snare sound.

The amount controls the reduction level : 0 .. 100%

5.2.4 Ducking / Gate button

Switches between Ducking (button off) and Gating (button on).

5.2.5 Ducking/Gating Start

-60 .. 0 dB

Signal level where the reduction starts.

5.2.6 Ducking/Gating Range

0 .. 60 dB

Is added to the Start and determines where the reduction reaches its maximum.

5.2.7 Ducking Release / Gating Attack

0 .. 10s

The time to release the ducking when the signal is back above the Ducking Start level.

5.2.8 Peak / RMS button

Selects if either the peak or the RMS is used to start the reduction.

5.2.9 Side

When on, the side chain will be used to determine the levels to trigger the ducking or gating.

5.3 DeEssing

Especially for reverbs on vocals the Ess-es are often too much amplified so this filter allows to attenuate the Ess frequencies

5.3.1 Ess Frequency

Sets the center of the Ess frequencies.

50 .. 20000 Hz

Full range allows for special effects outside the normal Ess range (6000 .. 12000 Hz).

5.3.2 Filter Q

0 .. 4

5.3.3 Amount

-100 .. 100%

Negative values will amplify the Ess frequencies which could be useful for special effects.

5.4 Delay

A delay can be added to the input before entering the reverb however more special is that it can be added after the reverb and on the late part of the reverb only.

5.4.1 Delay Amount

0 .. 100%

Amount sent to the delay line.

5.4.2 Delay Time

0 .. 4000ms

5.4.3 Delay Feedback

0 .. 100%

Amount of delay out fed back to the input.

5.4.4 Late Start

Determines when the late part starts which is fed to the delay line.

0 .. 2000 ms

5.4.5 LPF Filter

50 .. 20000Hz

Applied on the output of the delay line.

5.4.6 Before/After button.

Delay line before or after the reverb.

5.5 Phase Modulation

Opposed to a modulation applied on the input before the reverb, this one allows to modulate the late part only.

5.5.1 Late Start

Determines when the late part starts.
0 .. 4000 ms

5.5.2 LFO Frequency

LFO frequency in Hz : 0 … 400 Hz

When set to a fraction of the BPM, the LFO frequency will automatically be calculated and be adjusted when the DAW BPM changes.

5.5.3 Modulation Depth

0 .. 100%

5.6 Amplitude Modulation

Opposed to a modulation applied on the input before the reverb, this one allows to modulate the late part only.

5.5.1 Late Start

Determines when the late part starts.
0 .. 4000 ms

5.5.2 LFO Frequency

LFO frequency in Hz : 0 … 400 Hz

When set to a fraction of the BPM, the LFO frequency will automatically be calculated and be adjusted when the DAW BPM changes.

5.5.3 Modulation Depth

0 .. 100%

5.7 Surround and 3D (MacOS)

When WoodVerberator is inserted on a track/bus with more than 2 outputs (5.1, 7.1.4, …) , an immersive reverb can be generated.
Similar to the de-correlated stereo, a Front-Back and Bottom-Height de-correlated reverb output can be generated.

5.7.1 Front-Back

0 .. 100%

Sets the amount of de-correlation between Front and Back creating a surround feel.

5.7.2 Bottom-Height

0 .. 100%

Sets the amount of de-correlation between Bottom and Height creating an immersive feel.

5.7.3 Bleed

0 .. 100%

Sends a part of the input signals to all reverb channels.

If this is set to zero, an input signal on only L&R would only generate reverb on L&R out which would not sound immersive at all.
By increasing the bleed, the L&R will also be sent to the other reverb channels to generate reverb output there as well.

5.7.4 Gains

-30 .. 30 dB

- Front
- Back
- Center
- Height

5.8 Reverb Tail

Allows to change only the late part of the reverb.

5.8.1 Late Start

Determines when the late part starts.
0 .. 4000 ms

5.8.2 LPF and HPF filters

50 .. 20000 Hz.

Could be used to create a dark reverb tail while the early reverb is bright.
Another use case could be to have a tail which has no more bass.

5.8.3 Saturation

0 .. 100%

Sends the late part through a saturator which creates harmonic distortion on that part.

5.8.4 BandPass Filter

- Frequency : 50 … 20000Hz
- Q : 0 .. 4
- Amount : -100 .. +100

The bandpass filtered can be added or subtracted from the tail signal.

5.9 Quality-Speed

A convolution based reverb is quite CPU intensive.

This control allows to balance the speed (CPU usage) versus the quality (number of coefficients used).

Both CPU usage and% and number of coefficients are displayed.

0 .. 100%.

Using a small number of coefficients can also be used when a distinct number of reflections is wanted, sounding more like a tapped delay unit.

Time Smoothing determines if a smoothing will be applied when changing the time or damping. If a faster response is wanted or the CPU load becomes to high, it can be switched off.

5.10 More

5.10.1 Midi Receive from DAW button

Normally WoodVerberator listens for external midi commands (sent by devices or apps outside the DAW).

However if you want to receive midi commands generated by or inside the DAW (internal keyboard, midi track on which WoodVerberator is inserted, …), set this to on. You still may have to do additional midi routing in the DAW.

Using this midi path currently does not support midi v2 and the midi CI Property Exchange.

5.10.2 Midi receive channel

1 .. 16 or All

Used both for PC and CC messages.

5.10.3 Midi V2 Off/On

When on, both Midi V2 UMP 32 bits messages and Midi V2 PE (Property Exchange) are enabled.

5.10.4 Midi V2 Group

The Midi V2 Group is an extension of the Midi V1 channel and allows to address 256 destinations in stead of the 16 classic Midi V1 channels.

1 .. 16 or All

5.10.3 Enable Midi PC (Program Change)

Allows to select a preset with the Midi PC message.

5.10.4 Enable Midi CC (Control Change)

Allows to set parameters with the Midi CC message.

Assigned CC numbers :

- 9 : Stereo
-
- 23 : Phase Mod LFO Frequency
- 24 : Phase Mod Amount
- 25 : Amplitude Mod Frequency
- 26 : Amplitude Mod Amount
- 27 : Modulation Late Start
-
- 71 : Tail LPF Frequency
- 72 : Tail HPF Frequency
- 73 : Tail Saturation
- 74 : Tail Start
- 75 : Tail BPF Frequency
- 76 : Tail BPF Amount
- 77 : Tail BPF Q
-
- 80 : Delay Amount
- 81 : Delay Feedback
- 82 : Delay Time
- 83 : Delay LPF Frequency
- 84 : Delay Late Start
-
- 91 : 3D Gain Front
- 92 : 3D Gain Back
- 93 : 3D Gain Center
- 94 : 3D Gain Height
- 95 : 3D Bleed Amount
-
- 102 : Mix
- 103 : Out Gain
- 104 : Reverb Time
- 105 : Damping 1
- 106 : Damping 2
- 107 : LPF Frequency
- 108 : HPF Frequency
- 109 : Reverse Off/On
- 110 :
- 111 :
- 112 : Ducking Amount
- 113 : De-Ess Amount
- 114 : De-Ess Frequency
- 115 : De-Ess Q
- 116 : Speed-Quality
- 117 : Use File Length Off/On
- 118 : Pre Delay Time
- 119 : Gate Threshold

6. Running on iOS (iPad, iPhone)

Without a host app the use case for the WoodVerberator standalone app could be to use your iOS device as a “hardware saturator ” sending and receiving audio via the mic/headphone connector or via some audio docking station.

The WoodVerberator app also contains the AUv3 audio unit plugin. Host apps using the AUv3 plugin will present the WoodVerberator UI in their own window which usually can be resized. The WoodVerberator UI will scale to follow the resizing.

The number of channels will normally be limited to stereo.

6.1 Presets

Presets can be loaded/saved via WoodVerberator’s preset popup.
The preset.json files are saved in iCloud Drive when enabled or else in the app’s local Documents folder.
When saved to iCloud Drive the presets are automatically available (and synced) to all devices running WoodVerberator and are obviously backed-up as well.

When iCloud Drive is enabled, previously local saved presets will also be shown in the preset popup with “.local” appended to their name.

To Enable iCloud Drive you should be signed-in in iCloud (normally the case when you also want Contacts, Calendars, Mail, etc to be synced to iCloud) and the iCloud Drive switch should be on. Under iCloud Drive all apps using iCloud Drive are listed and obviously WoodVerberator should be on as well (which it is by default).

Preset groups are possible by typing the group name followed by a “/” (backslash character) followed by the preset name.

Presets for the AUv3 plugin can also be provided by the host app or can be saved/loaded via WoodVerberator’s popup as described above.

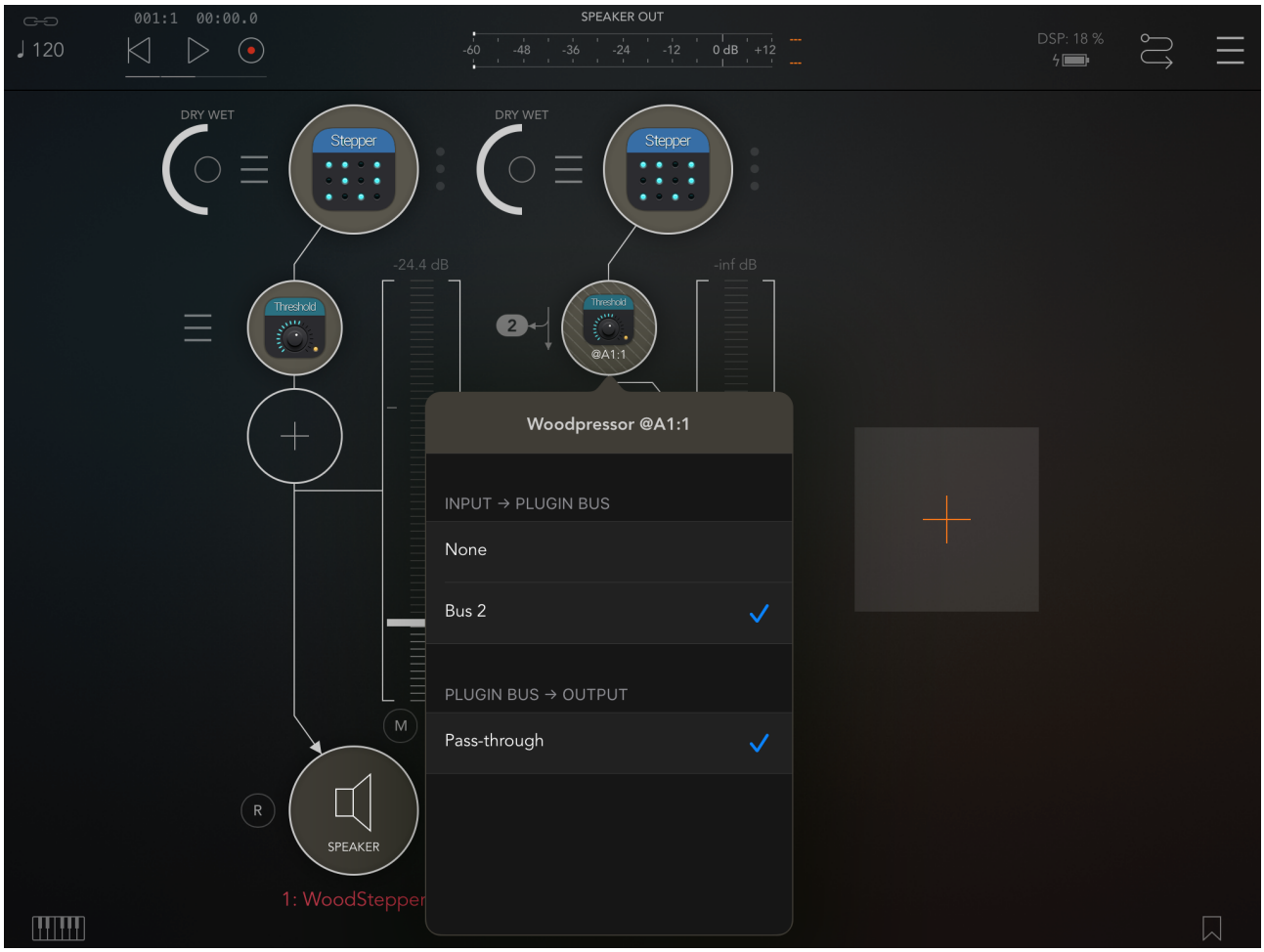
The User presets can also be selected by a Midi Program Change. In the Advanced panel the Midi channel and Program Change mode can be set :

- mode “Index” : program change number is the index in the preset list
- mode “Name” : add “.midiXY” to the preset name to select it with program change XY. (e.g. the preset with name “snaredrum.midi3” will be selected by program change 3. This method is preferred as the selection will not change when presets are added or removed.

6.2 DAW Side Chain

Most DAW's allow to send audio from another track to the side chain input of WoodVerberator on another track.

In AUM on iOS for example it looks like below : the second track is sending its audio to the side chain input of WoodVerberator on the first track. Note that the WoodVerberator seen in the second track is actually the same as the one in the first track.



6.3 UI Zoom

Especially when used as AUv3 plugin in a host app, it can happen that the window in which the WoodVerberator plugin is presented is too small (and sometimes can't be resized)

Pressing the "WoodVerberator" logo (top left) will zoom in 3 steps to a maximum size.
Next press will cycle back to the un-zoomed state.

When zoomed the UI can be panned by dragging in any spot which is not a control.

7. Running on MacOS

The standalone WoodVerberator app downloaded from the Mac App Store can be used as such but mainly acts as the license for all WoodVerberator plugins (AAX , AU , VST3).

This means there is no limit to the number of Macs on which you can run WoodVerberator (as long as the standalone app is in the Applications folder).

Due to Mac App sandbox security, you have to download the plugin(s) installer from my website. The installer will copy the plugins to the appropriate plugin folder :

- for AAX : /Library/Application Support/Avid/Audio/Plug-Ins
- for AU : /Library/Audio/Plug-Ins/Components
- for VST3 : /Library/Audio/Plug-Ins/VST3

https://wimsstudio.com/download (after making an account)

When the standalone app is not present, the plugins will run in trial mode : every 60s the audio will be silent for 3s.

Another licensing mechanism is present by using a license code obtained by registering a coupon on our website. Coupons can or will be sold for promotions, sales, etc on partner websites.
To enter the license code, click on the “No license found” label.

8. Impulse Response Files

8.1 Factory IR files

A number of IR files are factory provided which come from freely downloadable sources.

https://samplicity.com/bricasti-m7-impulse-response-files

https://www.openair.hosted.york.ac.uk/?page_id=36

https://www.openair.hosted.york.ac.uk/?page_id=435

https://www.echothief.com/conrad-prebys-concert-hall-seat-h111

https://www.echothief.com/steinman-hall/

https://www.echothief.com/square-victoria-dome/

8.2 Loading IR files

Audio File formats :

- WAV
- AIFF
- FLAC
- mp3
- SDIR

SDIR is the format Apple's Logic Pro (and Garageband) use.

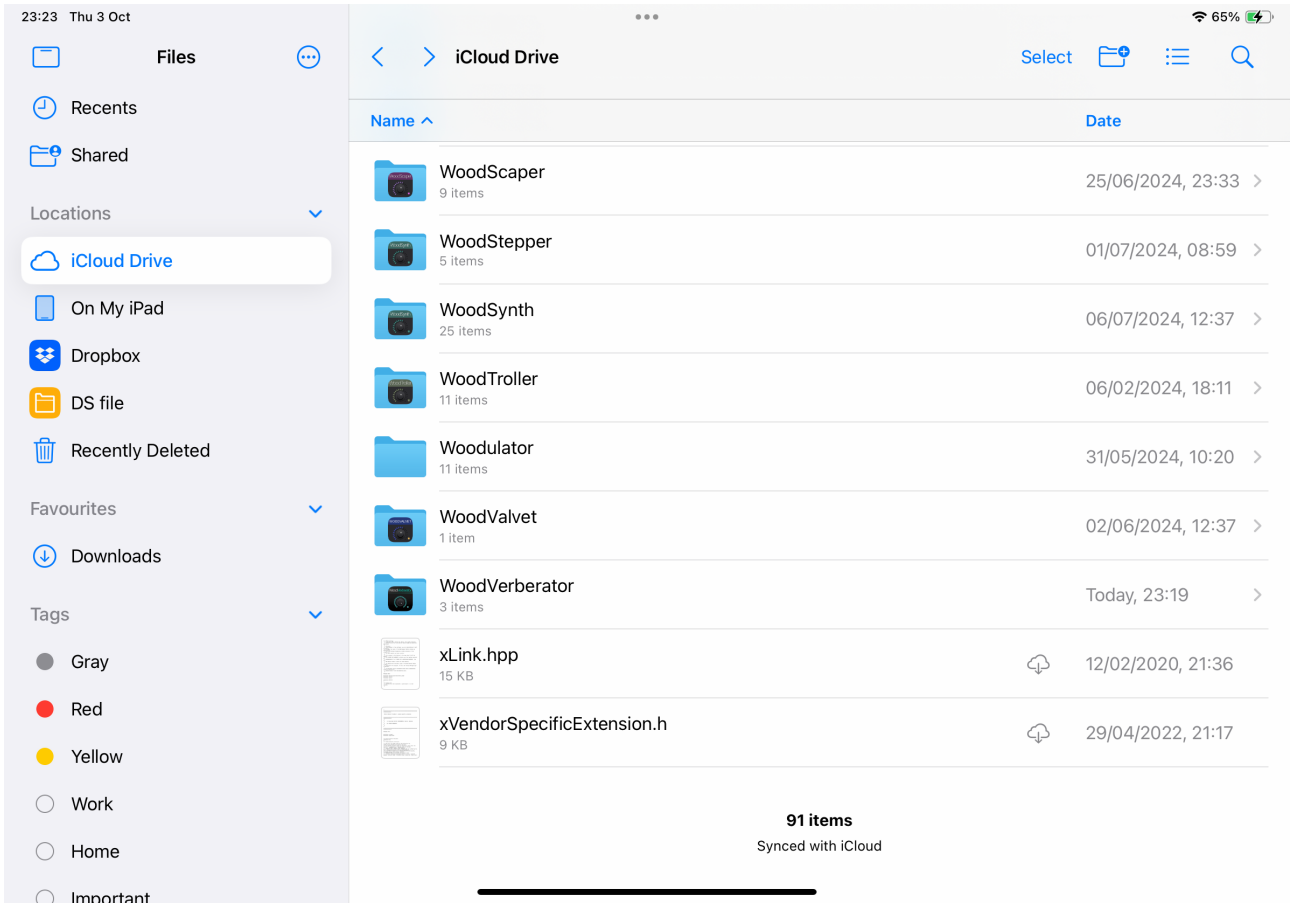
If they are installed a large number of IR files can be found at :

/Library/Audio/Impulse Responses/Apple/

CSV files are also supported (mainly for experimenting) : 1 coefficient per line.

Apart from the IR file buttons (see 4.3.3) to add a file, multiple files or folders can also be added by using the Files App :

- Navigate to iCloud Drive and find the WoodVerberator folder.
- In there find (or create) the folder "samples".
- Anything (files or folders) you copy in there will appear in the IR file dropdown..


23:23 Thu 3 Oct
65%
Files
Recents
Shared
Locations
iCloud Drive
On My iPad
Dropbox
DS file
Recently Deleted
Favourites
Downloads
Tags
Gray
Red
Yellow
Work
Home
Important
iCloud Drive
Select
Name
Date
WoodScaper
9 items
25/06/2024, 23:33
WoodStepper
5 items
01/07/2024, 08:59
WoodSynth
25 items
06/07/2024, 12:37
WoodTroller
11 items
06/02/2024, 18:11
Woodulator
11 items
31/05/2024, 10:20
WoodValvet
1 item
02/06/2024, 12:37
WoodVerberator
3 items
Today, 23:19
xLink.hpp
15 KB
12/02/2020, 21:36
xVendorSpecificExtension.h
9 KB
29/04/2022, 21:17
91 items
Synced with iCloud

9. Midi V2

https://www.midi.org/specifications/midi-2-0-specifications

Midi V2 main features :

- Controller (CC) values are all 32 bits (were 7 bits in midi v1).
- Has 16 groups (each group has 16 midi channels).

WoodVerberator is using the full resolution of midi v2 messages : 32 bits.

Midi v2 Property Exchange allows to send program info (presets) and midi CC controlled parameter info and values to a midi v2 initiator (keyboard, controller, …) which can then map parameter names and values automatically to its controllers (rotaries, …).

Note : currently Midi V2 is only implemented in the direct connection to the OS midi system so **switch off "Midi from DAW"** when running WoodVerberator in a DAW.
The Midi from DAW is handled by the juce framework which is not updated for midi v2 yet.

Both MacOS and iOS convert v1 messages sent to v2 receivers or v2 messages sent to v1 receivers.
So even with Midi V2 on, WoodVerberator should still work as before but of course may fall back on the lower bit resolutions of midi v1.

When sending midi v2 from iOS (WoodTroller on iPad) to the Mac (WoodVerberator) via the Audio-Midi Setup network connection, the v2 messages are unfortunately converted to v1.
However the midi v2 CI Property Exchange will still work as this is using 7 bits sysex messages.

9.1 Setup WoodTroller to send midi v2 to WoodVerberator on iOS.

- run WoodTroller as stand-alone app
- set WoodTroller midi chan to 1 (not MPE)
- set WoodTroller Send midi mode in Advanced to "Dests + Source"

Running WoodVerberator in AUM (either as Audio track source or as effect) :

- Switch off "Receive Midi DAW" in Advanced to let WoodVerberator receive midi v2 directly from iOS.
- Switch on MidiV2.
- Set Group and Channel to the same as set in WoodTroller

9.2 Check Extended resolution (32 bits)

Set a WoodTroller rotary to the WoodVerberator IR time (CC 104).

In Midi V1 the CC value is 7 bits (128 values) and the IR time range is 10 s, which leads to a time step of 10 s / 128 = 0.078 s.

When switching off Midi V2 in Woodtroller or in WoodVerberator and turning the WoodTroller rotary, you will indeed see that the IR time changes with jumps of +- 80 ms.

When Midi V2 is on the CC value now has 32 bits (4.3 Giga values) which is way more than the UI hardware can handle. Turning the rotary now allows any ms value.

9.3 Midi v2 CI (Capability Inquiry).

WoodVerberator midi v2 CI version : 1.2

WoodVerberator implements (replies to) the following CI messages :

Discovery message.
Midi Message Report (sending current CC values).
Property Exchange GET (see below)

Profiles are not supported.

9.4 Midi v2 CI Property Exchange.

WoodVerberator replies to Property Exchange GET resources :

ResourceList : list of the other resources below for which a reply is sent.
DeviceInfo : company name (yes the long one …), model, family name, version number.
ChannelList : current channel WoodVerberator is listening to + current preset.
allows subscription : sends message to initiator when preset is changed.
ProgramList : list of all preset names and the PC and bank values to set them.
AllCtrlList : list of all midi CC controlled parameters (names, CC, defaults).

X-ParameterList : Korg formatted parameter list.
X-ProgramEdit : Korg formatted current parameter values (allows subscription).

All non-X resources follow the standard midi v2 CI schemas.

AllCtrlList has 5 extra WoodVerberator unique keys :

“x-value” : the current parameter value, 0-1 based (multiplied with 232 - 1).
“x-min” : the minimum (real) value.
“x-max” : the maximum (real) value.
“x-skew” : skew factor used in the UI (rotary) control.
“x-unit” : Hz, dB, s, %

the real parameter value can be calculated as follows :

real_value = x-min + pow(x-value / (232 - 1) , 1/skew) * (x-max - x-min)

Typical AllCtrlList entry :


```
{
"title":"Mix" ,
"ctrlType":"cc" ,
"channel":1 ,
"default":4294967295 ,
```

"typeHint":"continuous" ,
"x-value":2732887807 ,
"priority":1 ,
"x-unit":"%" ,
"ctrlIndex": [102]
}

Typical ProgramList entry :

{
"title":"Woodman's Shack" ,
"category": ["Ambience"] ,
"bankPC": [0 , 0 , 8]
}

Typical ChannelList entry :

{
"channel":1 ,
"programTitle":"Woodman's Tiny House" ,
"bankPC": [0 , 0 , 16] ,
"title":"Ch1"
}

9.5 Midi v2 CI Property Exchange Subscriptions.

The resources ChannelList, ProgramList and X-ProgramEdit allow subscription.

When a parameter is changed either on the Initiator (keyboard, WoodTroller, …) or on the WoodVerberator UI itself, 2 subscription messages are sent to the Initiator as follows :

{“/currentValues/6/displayValue":"986.2"}
{"/currentValues/6/value":80}

This is the format Korg uses in their Keyscape keyboard.
The Initiator can use either the midi 7 bits value or the real display value or both.

When a preset (program) is changed on the Initiator or on WoodVerberator, 2 (short) notify messages are sent as possibly all the parameters are changed and the previous way of sending all those changes would be too long.
After receiving the notify messages, the Initiator can request the parameter resource (X-ProgramEdit or AllCtrlList) and the ChannelList resource (containing the current program).

When the preset category on WoodVerberator is changed, a ProgramList notify message is sent.

9.6 Testing Midi v2 CI Property Exchange.

Following apps can be used to test (and develop) midi v2 CI functionality :

- WoodTroller : implements CI initiator which will retrieve the Programs (presets) and CC parameters : https://www.wimsstudio.com
- Midi v2 Workbench : https://github.com/midi2-dev/MIDI2.0Workbench
- Bome software tools : https://www.bome.com/products/midi-ci-tools
- Korg Keystage keyboard

9.7 Connect WoodVerberator iPad to WoodTroller iPad on the same iPad

WoodTroller TO : from Source only
WoodTroller FROM ALL SOURCES : off

Make sure WoodTroller is running BEFORE starting the DAW with WoodVerberator.

When other Midi V2 apps/plugins (like WoodSynth) are running, make sure they have a different Midi V2 group or a different midi channel.

9.8 Connect WoodVerberator Mac to WoodTroller Mac on the same Mac

WoodTroller TO : from Source only
WoodTroller FROM ALL SOURCES : off

When other Midi V2 apps/plugins (like WoodSynth) are running, make sure they have a different Midi V2 group or a different midi channel.

9.9 Get Property Exchange in WoodTroller

Click the CI button in WoodTroller and press the Discover button.