WoodTroller

Woodman's Immaculate Maple Syrup Studio

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1.What

WoodTroller is NOT an app to annoy people.
It's an MPE multi touch bar keyboard and midi controller.

MPE means "Midi Polyphonic Expression" (see https://www.midi.org/midi-articles/midi-polyphonic-expression-mpe).

The MPE touch bar supports multiple notes with individual pitch shift (horizontal movement), pressure and CC74 (vertical movement).

WoodTroller has 8 general purpose rotary controls :
• Each can send 6 different CC messages to different channels.
• Each of the 6 command values can be mapped differently to the full rotary range.
• So 1 rotary can control several parameters on the same or on different instruments.
• Rotary names, colour, unit, range can all be user set.

WoodTroller has 8 general purpose on-off or push buttons :
• Each button can send up to 8 different midi commands (CC, PC, NoteOn, …) to different channels.
• This allows to quickly switch multiple midi instruments or devices to another program or to other settings.
• Each midi command's data value can be auto incremented/decremented.
• All button names, colour, type can be user set.

All settings can be stored in presets in iCloud which yield automatic preset syncing between several WoodTrollers on different devices.

The app can be used stand-alone (device midi output) or as a plugin in a DAW.

• IOS plugin type : AUv3 and stand-alone app.
• MacOS plugin type : AUv3 and stand-alone app.

2. Main window

Individual controls are explained below in section 4.

A large part is dedicated to the touch bar to have finer control over pressure and/or CC74. When the rotaries are not needed, the touch bar can be further extended by clicking the up/down button on the right.

Most rotaries can be double clicked which will set a minimum value or toggle to the maximum value.

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

3. Presets

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

User presets can also be selected via WoodTroller's own dropdown in the header bar.
Factory presets can also be selected with this dropdown menu.

After installing a new version, the Preset menu will have a "Copy factory presets" item which should be selected to copy the factory presets from internal storage to the user folder.

The WoodTroller User and Factory presets are made available to the DAW which can/will present them as factory presets.

The WoodTroller preset.json files are saved in your 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 and all DAW's running WoodTroller and are obviously backed-up as well.

Subfolders with preset files are supported and can be copied (Files app, Finder, …) into the WoodTroller preset folder.
WoodTroller will create a subfolder when saving a new preset with a name starting with the subfolder's name and separated with a "/", e.g. saving a new preset with name "strings/violin" will create a subfolder "strings" (if it does not exist yet) and save a preset "violin" into this subfolder.

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 * 's will disappear again.

Nervous chase *   ⌄
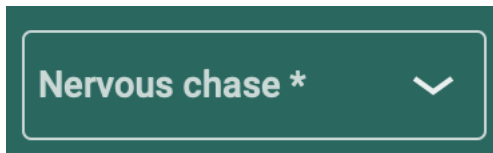
4. Main Controls

4.1 Touch Bar

The touch bar has polyphonic pitch bending (horizontal movement) input on iOS, monophonic on MacOS (mouse).
The vertical direction has 3 (or 2) regions :
• at the bottom : note on
• above the first divider line : pressure starts and keeps increasing when moving further upward
• above the second divider line : CC74 starts and keeps increasing.

When either Pressure or CC74 is switched off, there will be only 1 divider (2 regions) line giving finer control over the pressure or CC74.

4.2 Touch bar controls

Velocity rotary : sets the velocity value for notes-on.

Pressure : converts the vertical movement (above the first divider) to midi channel pressure.

Pitch Bend : converts the horizontal movement to midi pitch wheel values.

CC74 : converts the vertical movement (above the second divider) to midi CC74values.

Semitones rotary : sets the number of notes displayed in the touch bar.

Center note rotary : sets the center note of the touch bar.

4.3 User rotary controls

The 8 rotaries can each send up to 6 different midi commands to different channels.

The midi command can be : CC (default) , PC , Pitch wheel or Channel pressure.

Each command value can be mapped to a smaller range of the full scale by setting a Map Start value > 0% and/or a Map End value < 100%.

So 1 rotary can be used to control different settings in 1 instrument (same channel) or the same setting in different instruments or any combination of those.

The name, colour, unit and range of the rotaries can be set in the Rotary settings panel.

4.4 User On/Off or Push buttons

The 8 buttons can each send up to 8 different midi commands to different channels.

Each button can be either an On-Off button (effect on-off) or a Push button (increase setting value).

The midi command can be : CC (default) , PC , Note On or Off, Pitch wheel or Channel pressure.

The name, colour, unit and range of the rotaries can be set in the Button settings panel.

4.5 Touch bar MPE mode dropdown

This allows to set the MPE mode to either MPE-1 or MPE-16 or to set the midi channel in non-MPE mode.

4.14 Add preset button

Allows to save a new preset. The "Save as" window will be displayed which also allows to save comments (and made by) for the new preset.
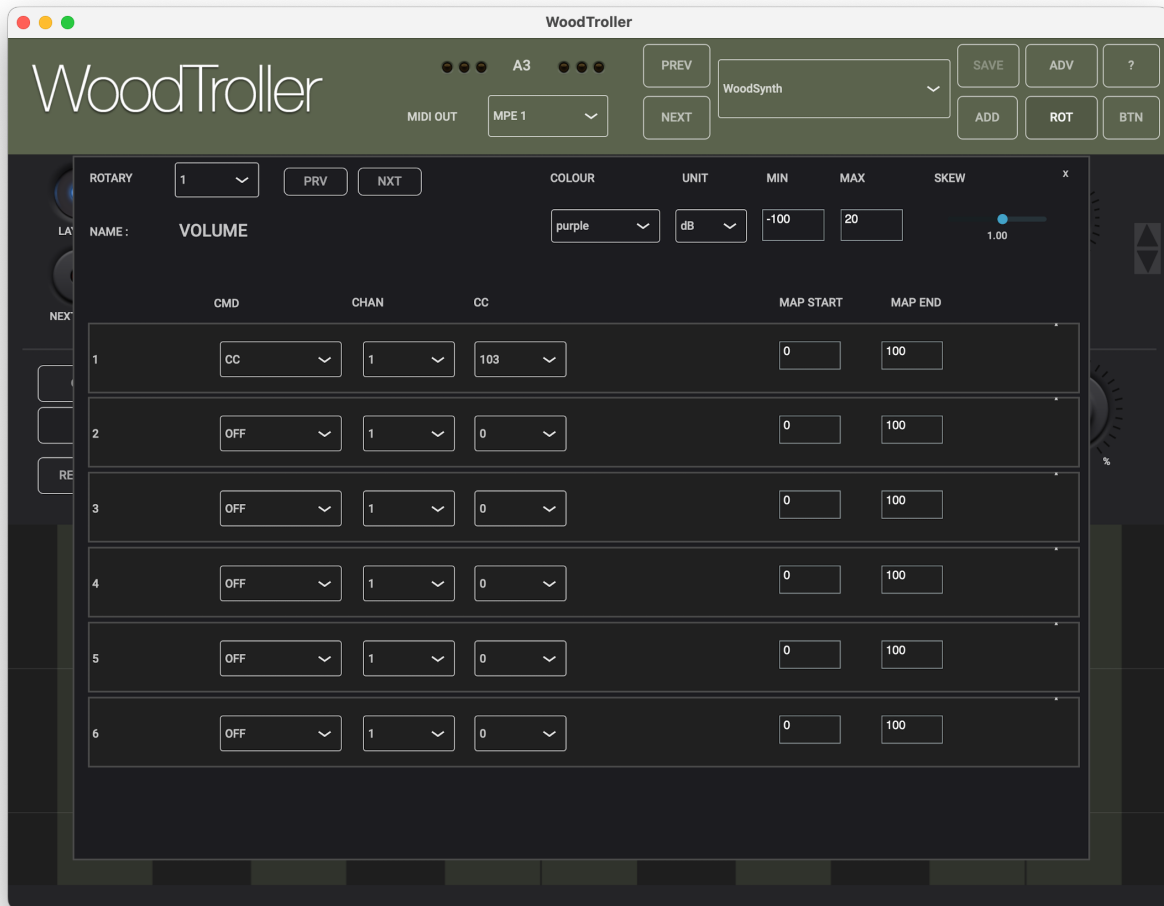
4.14 Save preset button

When an existing preset is modified, this button will become enabled and allows to save the changes under the same preset.

5. Rotary Settings

The rotary settings panel can be made visible by pressing the "Rot" button.

The rotary number can be set by the dropdown or pressing Prev or Next.

The top part has the controls to set the rotary name, colour, unit displayed, range (minimum and maximum values) and a skew factor.
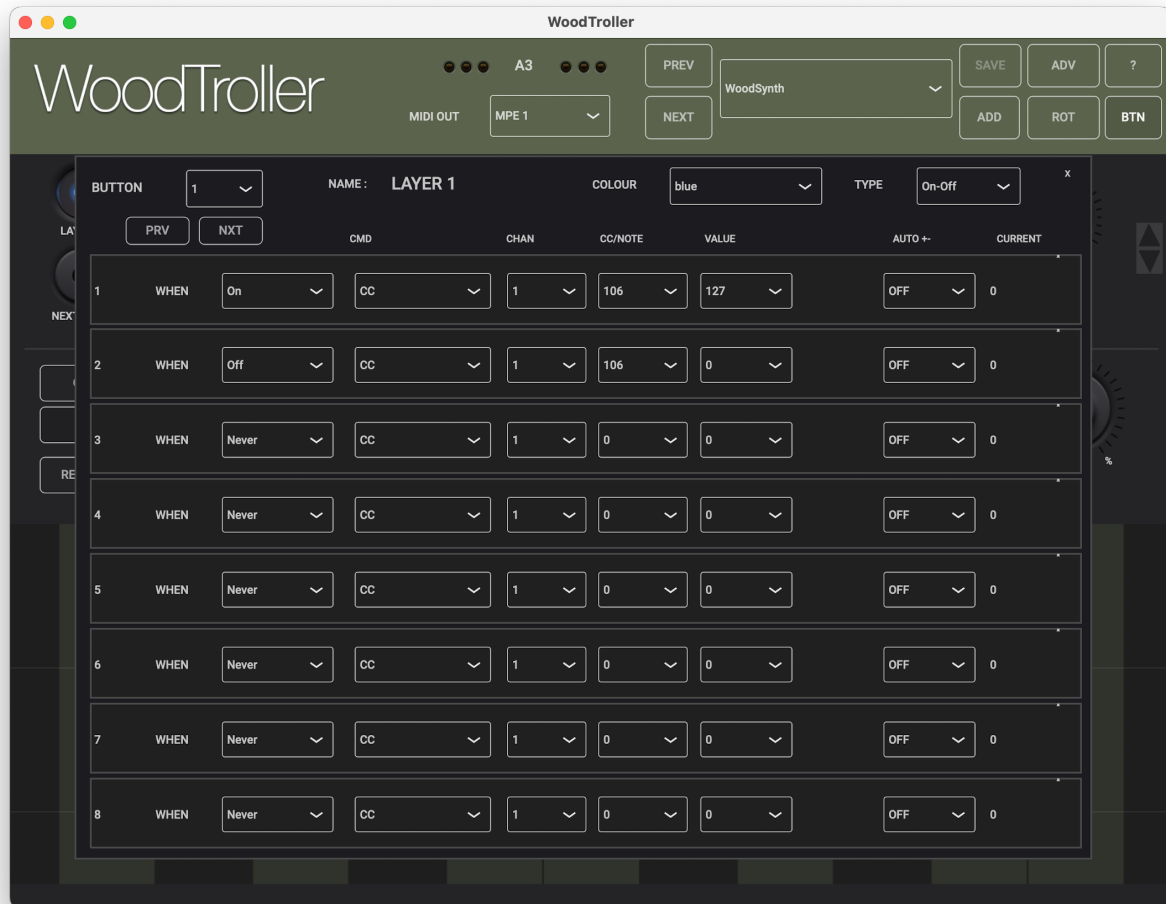
The skew factor allows to have finer control (more of the rotary range used) over either the smaller values or the larger values in stead of having a linear range.

6. Button Settings

The button settings panel can be made visible by pressing the "But" button.

The rotary number can be set by the dropdown or pressing Prev or Next.

The top part has the controls to set the button name, colour and type.

6.1 Button type

Type can be On-Off or Push.

6.2 When (midi command sent) dropdown

The "When" dropdown allows to send the midi command either when the button is on or when it is off. "Never" disables sending the command.

When the button type is set to Push, the When setting can be on or off to enable the command.

6.3 Auto increment or decrement

The "Auto +-" dropdown allows to increment or decrement the midi command value after each push. This can be used for example to increment the Program number in a PC command each time the button is pushed.

7. Advanced Panel

The Advanced panel can be made visible by pressing the "Advanced" button.

7.1 Touch bar Key and Limit Scale popup

Allows to limit notes played to the selected scale in the specified key.

7.2 Sensitivity rotaries

-100% .. 100%

Applies a non-linear curve on the values of Pressure and CC74.

7.3 Pitch bend popups.

Pitch bend values can be set for normal keyboards (non-MPE mode) and for MPE controllers.

7.4 Send midi Ext and DAW buttons

External : sends the touch bar notes and midi commands directly to the OS midi handler which allows to reach other devices or apps independent of the DAW settings or routing.
Obviously the stand-alone app can only use this.

DAW : the midi is sent to the DAW which can decide how to route these further.

8. Midi Out

8.1 AUv3 midi out

Normally you will want the midi out to go via the DAW system as this one can do further routing.

So make sure the "Send midi to DAW" button is switched on in Advanced Settings.

When you also want to send the midi to external (outside the DAW) instruments (hard or soft), switch on the "Send midi to Ext" button.

Below is an example routing in AUM which sends midi from WoodTroller to WoodSynth.
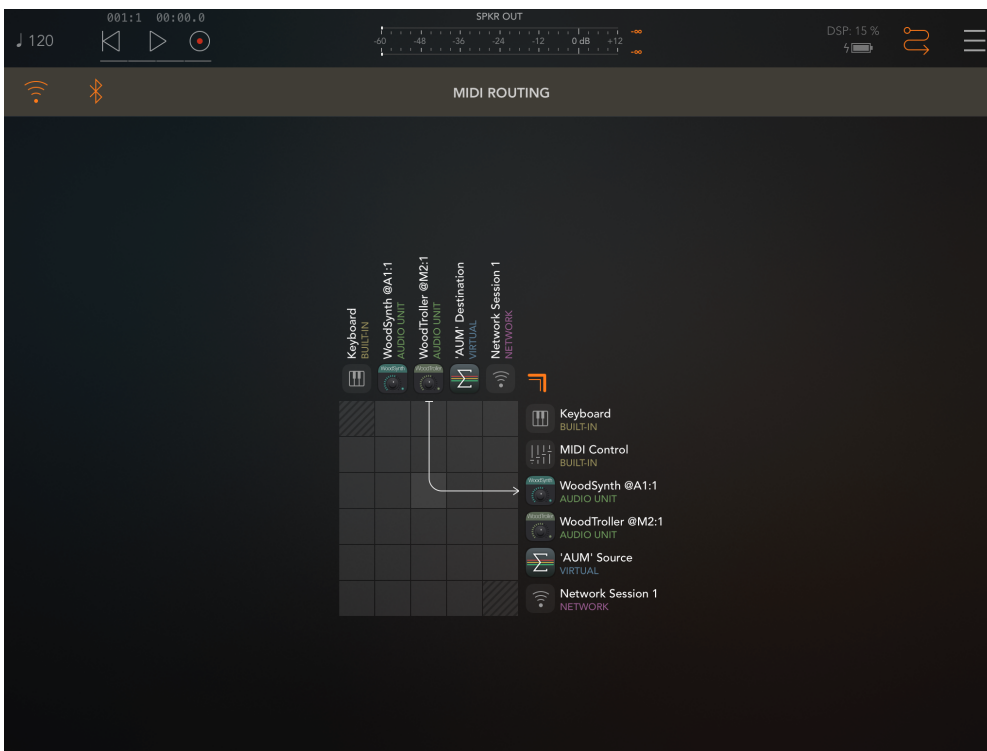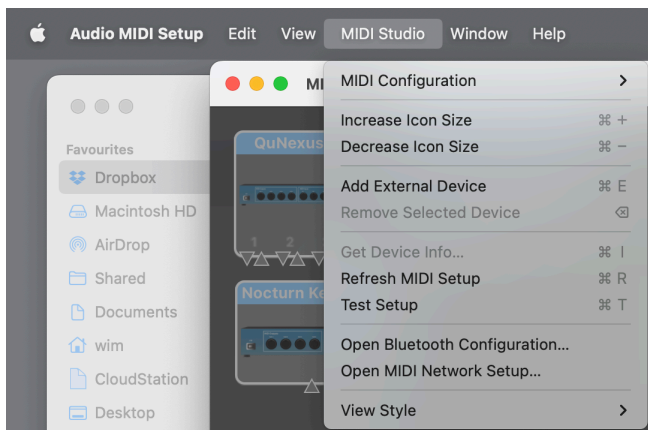
8.2 iPad midi out to Mac synth

Apple made it easy to send midi between different Apple devices (Mac, iPad, …) :

Make sure both iPad and Mac are on the same network.

Start WoodTroller on the iPad.

On the Mac open the "Audio Midi Setup" application (in Applications / Utilities).

In the menu "MIDI Studio" choose "Open MIDI Network Setup".

In the Network Setup window, create a session if there isn't one, select your iPad and press "Connect". Midi should now travel from iPad to receiving instruments or DAW's on the Mac.
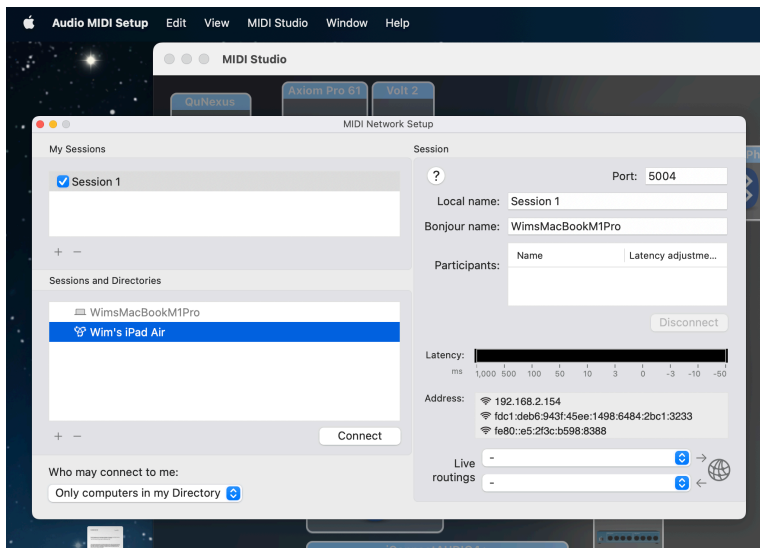
Remark : when connecting over wifi, there can be a rather big latency.

This can be avoided by connecting the iPad with USB cable to the Mac (and switching off wifi on the iPad).

8.3 iPad midi out to Bluetooth

Coming in the next version.