

# Wood'nGate

## Woodman's Immaculate Maple Syrup Studio

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# 1.What

The Wood'nGate is a fairly standard gate with familiar controls like “Threshold”, “Attack”, “Sustain”, and “Release” but also has some extra features not found commonly on other gates:

- Has separate Open and Close modes : e.g. Open with side chain, Close with track audio; Open with Midi, Close with audio reverb tale
- Has 2 side chain channels : e.g. Open with Kick, Close with Snare.
- Open and Close can be triggered by Midi commands (Note On, ...)
- Midi Note On Velocity can be used to set the Open Gate Level.
- Has an ADSR mode (Close is only determined by the ADSR timing).
- Supports multi-channel (surround, 3D) sum mode (other gates can often only be used in multi-mono mode when the number of channels > stereo)  
In this case the weight of each channel in the sum can be set.
- Presets can be stored in iCloud Drive (makes them available on all your devices).
- Includes 2 filters (1 for Open and 1 for Close) which can be applied on the analysed signals.
- Presets can be switched with Midi Program Changes.

## 1.1 Versions

### 1.1

- Fixed Side Chain bug when using in AUM
- Fixed Close Gate Bandpass Filter Frequency bug

### 1.2

- When the Gate is Opened or Closed a Midi command (Note On, CC, ...) can be sent (to other plugins, devices, computers).

This allows for example an analog drum track on which WoodnGate is inserted to play notes/sounds on another synth plugin for each drum beat triggering the Gate.

- All major Gate controls can now be set by received Midi CC commands.

### 1.3

- Small fix : Midi Send (when Gate is triggered) was on by default and is now off by default.

### 1.4 (iOS)

- Midi (Gate open/close control, CC , ..) can now also be received from the DAW (internal keyboard routed to WoodnGate).
- A new button allows to select external or DAW Midi.
- Fixed User presets subfolders.

### v1.5 (iOS)

- Added AUv3 multi-bus (side chain) support.

## 2. Main window



Individual controls are explained below.

The metering shows gain reductions up to 80 dB.

A green led (left) shows when the Gate Open is triggered and a red led (right) shows when the Close is triggered.

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.

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## 2.1 Presets

Factory/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 Wood'nGate'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 documents folder.

When saved to iCloud Drive the presets are automatically available (and synced) to all devices and all DAW's running Wood'nGate 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 beginning and 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.



Groups (drums, Vocals, ...) can be created by typing the group name followed by a ":" (colon character) followed by the preset name. Multi level groups are possible as well on OSX.



The current selected preset can be removed by selecting "remove" 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 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.

### 3. Advanced Panel and Channel Weights Panel



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



The Channel Weights Panel is shown when pressing the “W” button. This button is only visible when the plugin is inserted on a track with more than 2 channels.

## 4. Controls

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### 4.1 Open Mode

Selects how the gate is opened.

Opening the gate can be triggered by audio or by Midi.

modes :

- multi-mono : puts a separate gate on each channel
- sum : all track channels are summed
- side : the DAW side chain audio
- side send : used to send audio from a side channel to a receiving WoodnGate.
- side receive : used to receive audio from another track
  
- midi : a midi command (set in the Advanced Panel) like Note On will trigger the gate.

When the midi command is set to Note On and the checkbox "Use Velocity" (Advanced Panel) is on, the gate Open level will be modulated by the velocity (maximum velocity -> 0dB , minimum velocity -> Close level).

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### 4.2 Close Mode

Selects how the gate is closed.

Closing the gate can be triggered by audio or by Midi or by the ADSR mode.

modes :

- multi-mono : puts a separate gate on each channel (only when also selected in open mode)
- sum : all track channels are summed
- side : the DAW side chain audio
- side receive : used to receive audio from another track
  
- midi : a midi command (set in the Advanced Panel) like Note Off will trigger the gate.
- ADSR : the gate is closed when all steps of the ADSR have finished, hence after a finite time.

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### 4.3 Threshold

0 dB to -60 dB

Signals above this value will open the gate.

When the open mode is set to Midi, this control is disabled.



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## 4.4 Attack

0 ms ... 100 ms (milliseconds)

When the gate is opened, the gate open level (0dB) will be reached after this time.

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## 4.5 Sustain (aka Hold)

1 ms ... 4000 ms

When the gate closes (signal drops below the threshold again), the gain level will stay at the Open level during this time.

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## 4.6 Release

1 ms ... 4000 ms

When the gate closes and the Sustain time has passed, the gain level will start decreasing and reaches the Close level after this time.

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## 4.7 Close Level

-100 .. 0 dB

Gain level when the gate is closed.

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## 4.8 Hysteresis (or Close Threshold)

-60 ... 0 dB

When the gate open and close modes are the same (so when the same signal is used), this control is an offset from the Threshold so that the gate closes when the signal drops below Threshold + Hysteresis.

When the gate open and close mode are different (or the side chain channels are different) and hence the analysis audio is not the same, this control changes into an absolute "Close Threshold".

When the close mode is set to Midi or to ADSR, this control is disabled.

### 4.8.1 Close when > T

Normally the gate closes when the audio drops again below the threshold but when the open and close signals are different (e.g. Kick drum opens the gate, Snare drum on another track closes the

gate), it may be needed that the close trigger also comes from a signal going above the threshold (drum beat !).

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## 4.9 BP (bandpass) Filter On

Can be set independently on the Open signal and Close signal.

Applies a filter on the analysed signal to better control the open or close triggering.  
The filter is not applied on the track audio.

The filter type and Q factor (for band-pass and notch filter) can be set in the Advanced panel.

### 4.9.1 BP Filter Frequency

50 Hz ... 20 kHz

Sets the center (band-pass or notch) or cutoff (high-pass or low-pass) frequency.

### 4.9.2 "Listen" button

When on the plugin output is just the filtered original signal.  
Can be very useful to check a side chain signal.

### 4.9.3 "Q" rotary (Advanced panel)

0.1 ... 10

Setting is shared between the 2 filters.

### 4.9.4 Filter Type (Advanced panel)

Type can be set to band-pass, low-pass, high-pass and notch

Setting is shared between the 2 filters.

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## 4.10 Decay Time and Sustain Level

Those 2 controls become active in the ADSR mode and are the "D" part (which is not part of a normal gate).

After reaching the Open Level (Attack done) the level goes down and reaches the Sustain level after the Decay time.

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## 4.11 Midi Settings to Trigger the Gate (Advanced Panel)

When the Gate Open or Close mode is set to “MIDI”, midi commands are received from external midi sources on the midi channel set under the Midi Program Change popup.

On iOS midi commands can also be received from the DAW itself (when routing an internal keyboard to WoodnGate) when the button “DAW Midi” is on. In that case external midi is disabled to avoid double commands reaching WoodnGate.

### 4.11.1 Midi Command

The specific midi command used to trigger the gate (open or close)

Usually Note On or Off will be used but CC (Control Change) may also be useful.

Often keyboards don't send a Note Off midi command when releasing the key but send a Note On with velocity = 0.

Therefore WoodnGate converts this internally to a Note Off command.

### 4.11.2 Range

When specifying a Note the range popup allows to trigger when the incoming note is exactly the same or when it is lower or higher than the note specified in the Note popup.

### 4.11.3 Use Velocity

Only for the Open Gate trigger.

When on the note velocity will be used to modulate the gate open level.

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## 4.12 Midi Settings to Send Midi (Advanced Panel)

A midi command can be sent when the gate is opened and/or closed.  
e.g. Note On can be sent when the gate opens and Note Off can be sent when the gate closes.

This way analog recorded audio (drums ...) can control midi instruments.

As WoodnGate can also be triggered by received midi, this can be used as another way to have a side chain : on track 1 WoodnGate sends a CC command when triggered by the audio and on track 2 WoodnGate is triggered by this received CC command. It even makes it possible to have a side chain mechanism from 1 device/DAW to another (as Midi travels over the network) !

#### 4.12.1 *Midi Command*

The specific midi command sent when the gate is triggered (open or close)

Usually Note On or Off will be used but CC (Control Change) may also be useful.

#### 4.12.2 *Midi Note or Controller*

#### 4.12.3 *Midi Note velocity or Controller value*

0 .. 127

#### 4.12.4 *Midi Channel*

The channel on which the command is sent : 1 .. 16

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### 4.13 *Midi CC to set the Gate controls (Advanced Panel)*

When this button is on, CC commands received on the same channel set for Program Changes, will control following parameters.

Controller : Parameter

102 : Threshold

103 : Attack

104 : Decay Time

105 : Sustain Level

106 : Sustain Time

107 : Release

108 : Off Level

109 : Hysteresis (or Close Threshold)

## 5. Running on iOS (iPad, iPhone)

The Wood'nGate app supports IAA (Inter App Audio) which allows audio host apps (supporting IAA) to use the Wood'nGate.

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

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

The number of channels will normally be limited to stereo.

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### 5.1 Presets

Presets can be loaded/saved via Wood'nGate'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 Wood'nGate 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 Documents, this can be done by appending “.local” to the name typed in the text edit box.

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 Wood'nGate should be on as well (which it is by default).

Groups are possible by typing the group name followed by a “:” (colon 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 Wood'nGate'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.

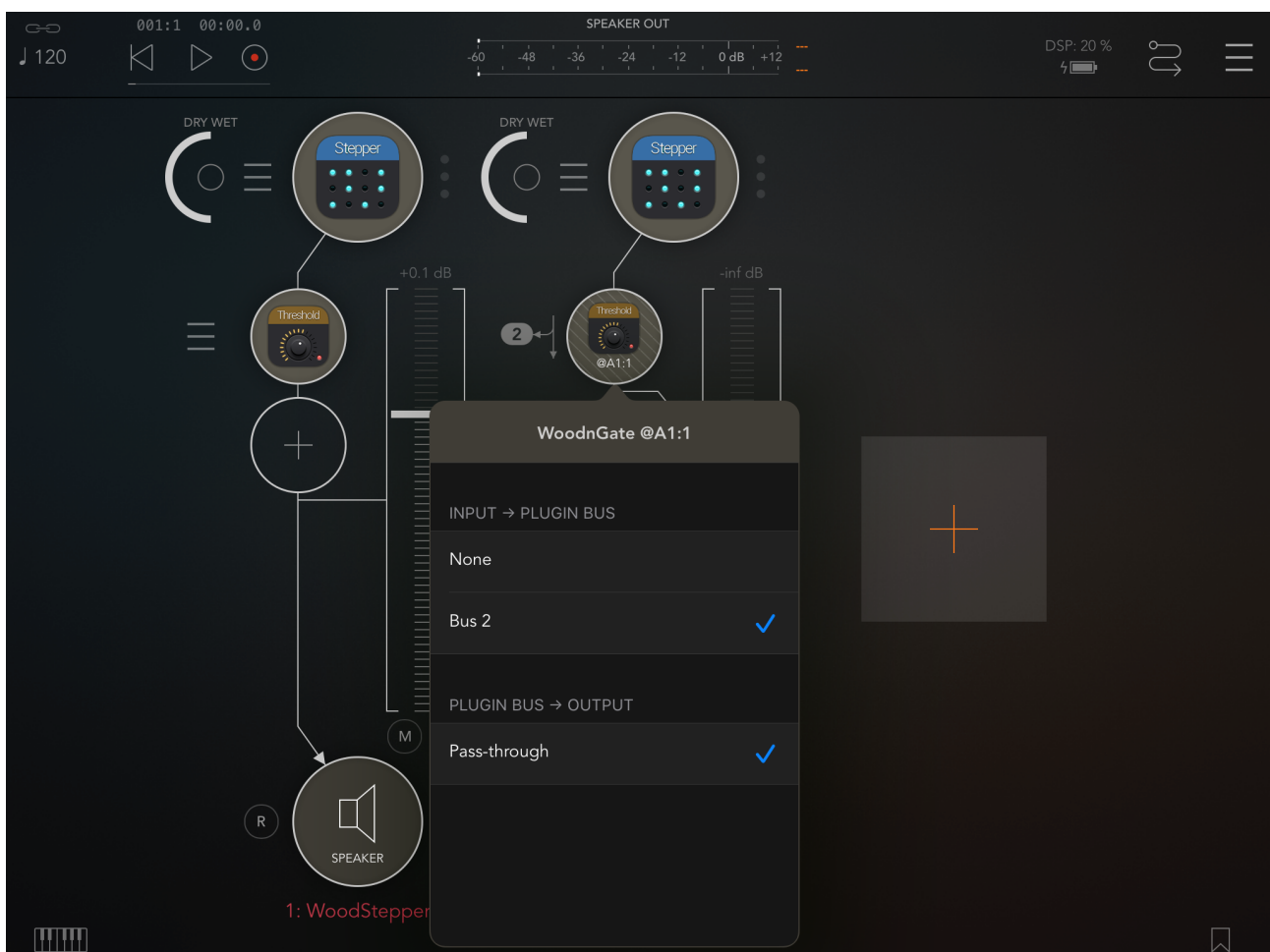
## 5.2 DAW Side Chain

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

In Wood'nGate you have to set the Open/Close Mode to "side" to use this side audio to trigger the gate.

In v1.5 this is now also supported for AUV3 on iOS which only recently implemented this side chain (or more general multi-bus) functionality. Of course the Wood'nGate 's own side chain mechanism described in 5.3 can also still be used.

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



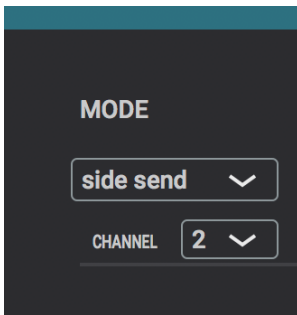
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## 5.3 WoodnGate Side Chain

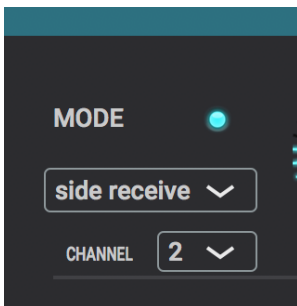
On iOS not many hosts are currently (before Wood'nGate v1.5) supporting a side chain mechanism.

Therefore Wood'nGate AUv3 has its own side send/receive mechanism.

On the track you want to use as side chain (Bass drum for example), insert a Wood'nGate and select Open/Close mode "side chain send". An extra popup will become visible in which you can select a side channel number (1..8).



On the track you want to compress (Bass guitar for example) you insert a Wood'nGate in which the Open/Close mode is set to "side chain receive". Obviously select the same side channel number here.



The audio from the side chain track (Base drum ...) will now be sent to the receiving Wood'nGate (Bass guitar) and be used as gate analysis signal which determines the open/close state on that track's audio.

The receiving Wood'nGate will show an extra led just above the mode popup.

When not lit, no audio from the side chain is received :

- check if the send Wood'nGate has the same channel
- check if there is audio on that track (hosts will often not call the plugin's processing when no audio is present).

When blue, audio is received and completely in sync.

When orange, audio is received but different track latencies cause the side chain signal to be shifted in time compared to the receiving track audio.

When this happens and is giving bad results, try to get the same latency on both tracks by having the same number and types of plugins on each track as well have the 2 Wood'nGates at the same relative plugin position (last plugin for example).

Different receiving Wood'nGates can receive from the same send channel.

In side chain receive mode, the side chain audio can be heard by switching on the BP Filter and switch on the "Listen" button.

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## 5.4 UI Zoom

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

Pressing the "Wood'nGate" 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.

## 6. Running on MacOS

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

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

Due to Mac App sandbox security, you have to download the plugin(s) from my website, un-zip the file(s) and move it/them to the normal plugin folder :

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

When the standalone app is not present, the plugins will run in trial mode : every 60s the audio will be silent for 2s.