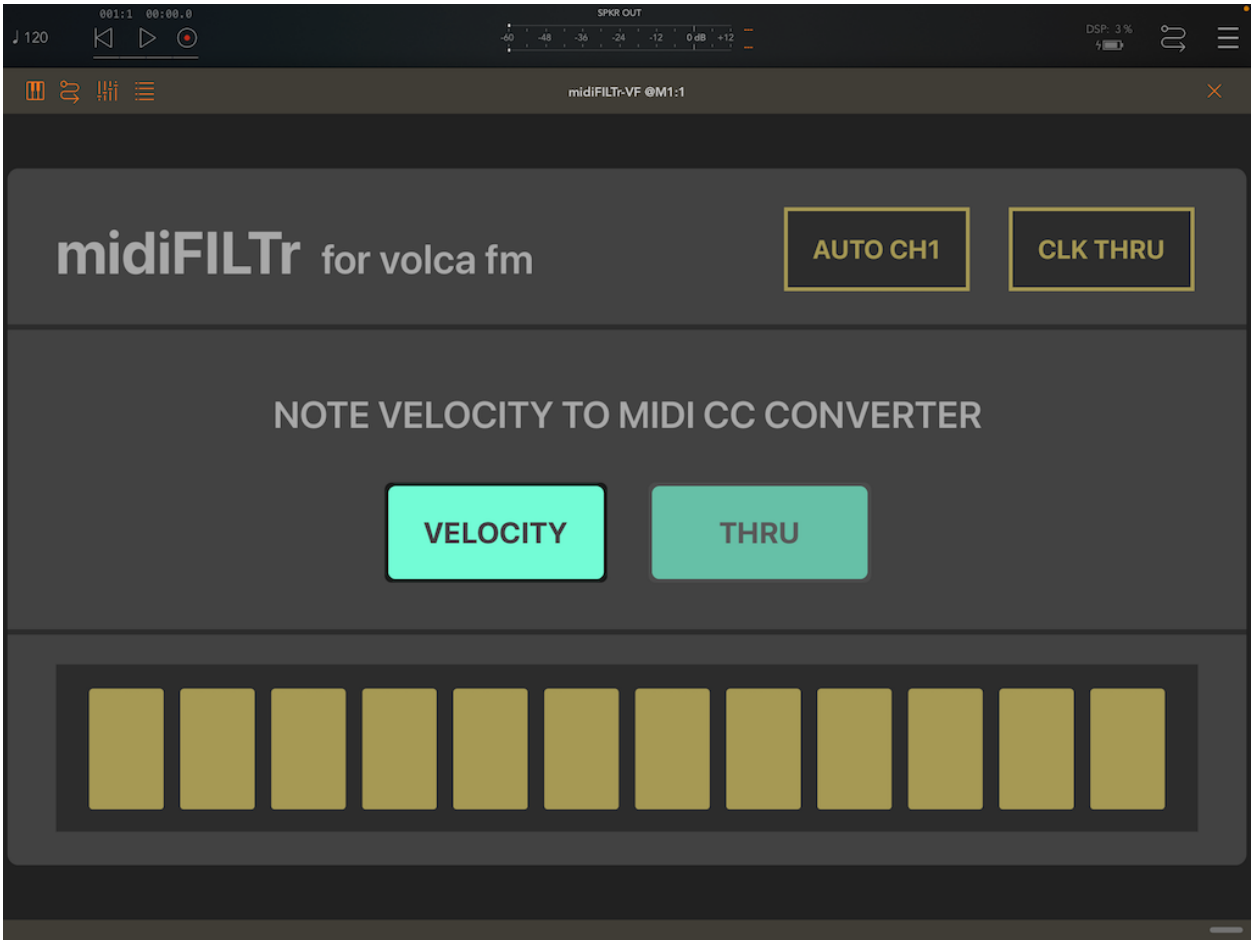
midiFILTr-VF

midi AUv3 effect plugin for volca fm



app v2.0, user manual v2.0

Introduction

Welcome to midiFILTr-VF, an AUv3 MIDI effect plugin for the Volca FM.

midiFILTr-VF requires the following:
- Korg Volca FM hardware synthesizer
- USB MIDI interface connected to your iOS device and Volca
- Preferably, Audiobus 3 or AUM for AUv3 hosting

The Volca FM is a fun, cheap, easy to use FM synth with one puzzling omission in its MIDI specification: it does not respond to the velocity of incoming MIDI notes. midiFILTr-VF fixes this by peeking at incoming MIDI notes and then sending a MIDI CC controlling the Volca FM's velocity slider along with the original note.

MIDI velocity is often used to control the volume of a sound, allowing you to play more expressively by varying how loud each note is. Beyond that, a lot of the Volca FM presets respond to velocity by changing other parameters as well, so that different velocities shape the sound as well as the volume. For instance, some presets make the sound sharper with higher velocities so the harder you press the keys the more the sound digs in. Try midiFILTr-VF out with some presets and you'll be surprised how expressive the velocity changes can be.

The midiFILTr-VF AUv3 plugin also maps some of the synth's MIDI CCs to AU parameters to make them easier to use in a modular AU environment like AUM.

And that's pretty much all this app does! Simple and to the point.

Thanks again for buying midiFILTr-VF! I hope you make some great music with it.

Using midiFILTr-VF as an AUv3 in AudioBus

Open AudioBus, then go to the MIDI page by tapping the MIDI button in the lower left corner.

Start with a MIDI input on the left, in the picture above by adding a hardware MIDI interface (Cubit Go) input connected to a keyboard. Next add a MIDI output on the right, in this case that USB MIDI interface's (Cubit) output that is connected to a Volca FM.

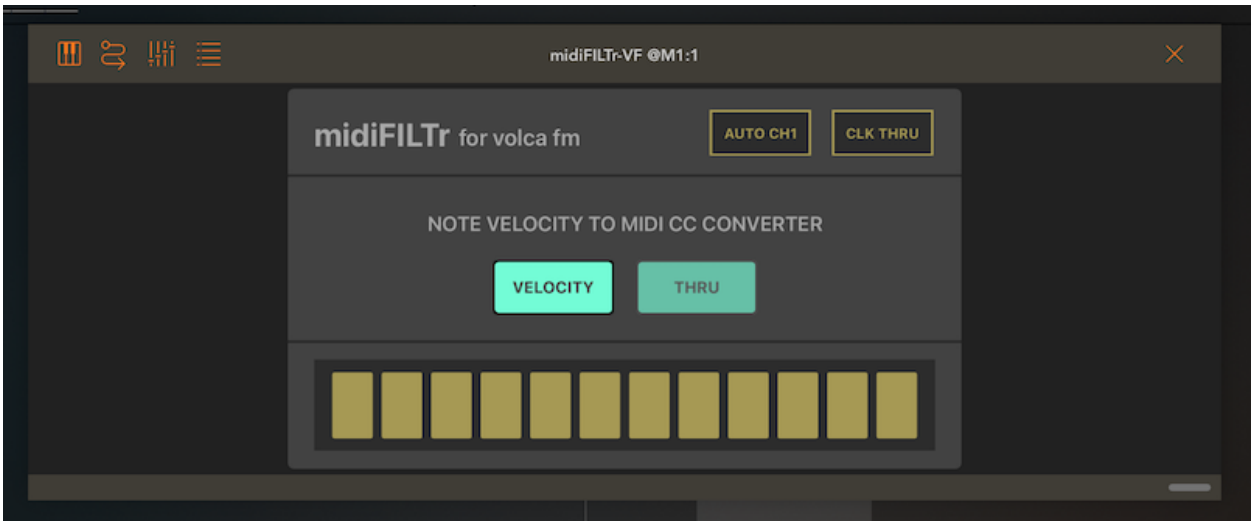
Play some notes to make sure the MIDI connection is working. Make sure you are sending notes on the MIDI channel that the Volca is listening to. The Volca should make sound but will not respond to keyboard velocity.

Add midiFILTr-VF as a MIDI insert filter effect, in the middle slot. Touch the “+” button, then choose the “Audio Units” tab on the bottom (this part is important! use the Audio Units version and not the Apps version), then choose “midiFILTr-VF fm” which will load the app into the filter slot. Tap the midi icon and the full screen interface of the app should open.

Play some more notes and you will notice that your Volca FM now responds to the velocity of the MIDI notes being sent to it.

Using midiFILTr-VF as an AUv3 in AUM

Open AUM, tap the big square “+” button, and choose “+ MIDI” from the options. Tap the “+” button that appears to get the “MIDI PROCESSORS” menu and choose the “Audio Unit MIDI Processor” option. From that menu, choose “midiFILTr-VF fm”. The midiFILTr-VF icon should replace the “+”.



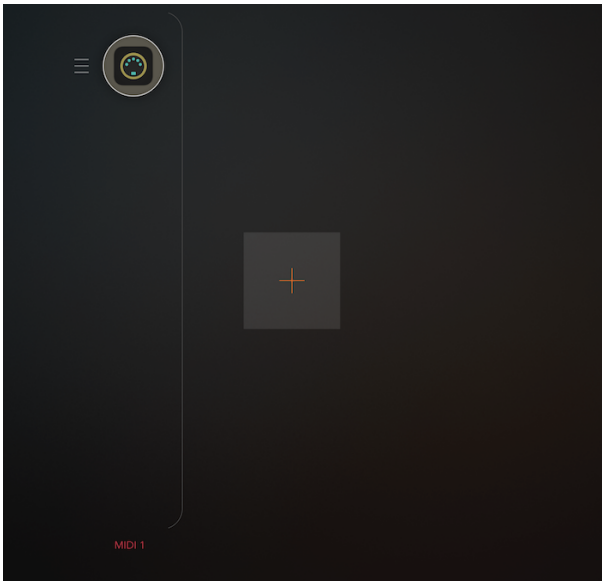
Tap the midiFILTr-VF icon and you should see the resizable interface of the app.

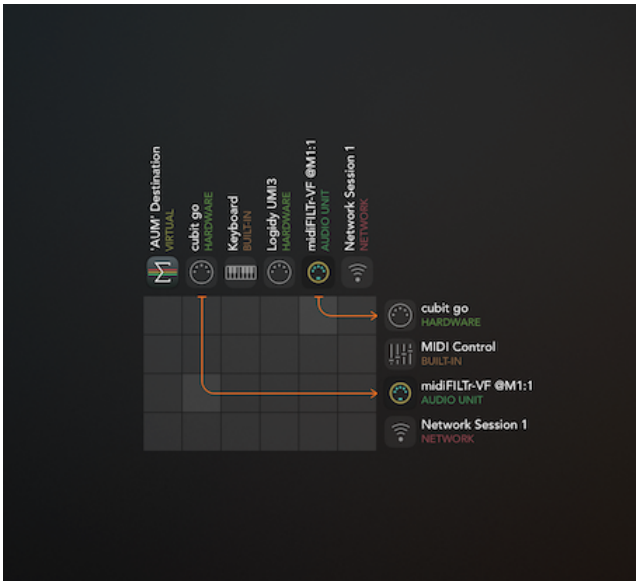
Next, go to the “MIDI ROUTING” menu by tapping the squiggly reverse-S icon in the upper right corner of AUM. You want to route MIDI data from your MIDI interface (or another MIDI app) into midiFILTr-VF and then route data out

of midiFILTr-VF to the hardware MIDI interface connected to your Volca, as shown in the picture.

In AUM, the flow is Cubit Go (my interface) input -> midiFILTr-FM -> Cubit Go (my interface) output

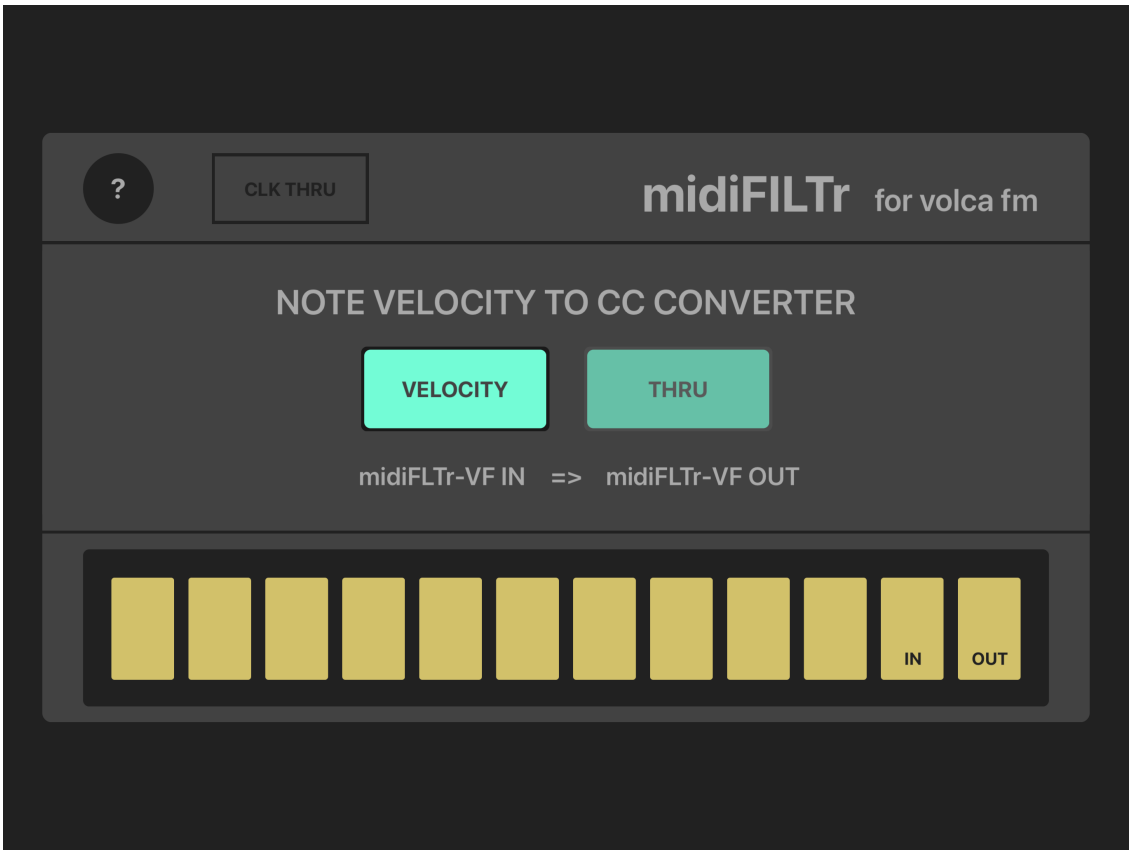
In the physical world, my hardware keyboard is connected to the Cubit Go MIDI input. My Volca FM is attached to the Cubit Go MIDI output.





Once the connection has been made, play some more notes and you will notice that your Volca FM now responds to the velocity of the MIDI notes being sent to it. Note: make sure you are sending MIDI notes on the same MIDI channel that the Volca is receiving them on.

Using the midiFILTr-VF standalone app

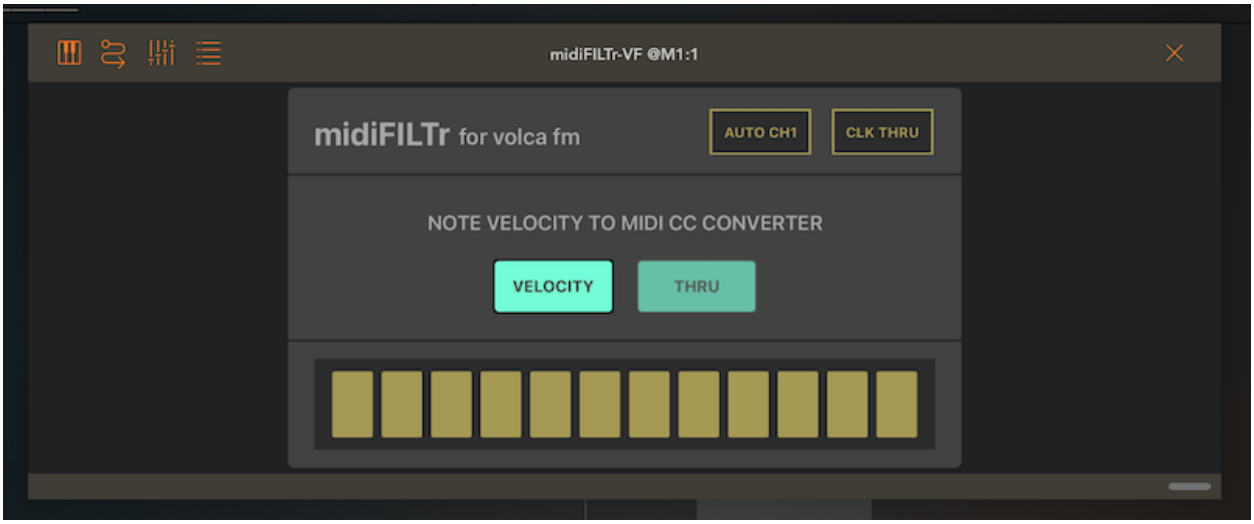


In almost all situations you will want to use the AUv3 version of midiFILTr-VF. It has the most recent tweaks and updates, plus AU parameters.

If you really want to, however, you can use midiFILTr-VF in its original standalone mode. Load the app and choose a MIDI input and a MIDI output by tapping the input and output buttons in the lower right of the interface. A tap on the appropriate button will cycle through the available CoreMIDI inputs or outputs, keep tapping until you see the one you want to use.

Any notes that come through the selected MIDI input should now have their velocity transformed to work with the Volca FM and are then sent to the selected MIDI output.

Main midiFILTr-VF interface



The main midiFILTr-VF page is very simple. You have two converter mode buttons: VELOCITY and THRU. In general you will only ever want to use VELOCITY, but if you'd like midiFILTr-VF to stop doing anything, you can use THRU mode and MIDI notes will pass through unchanged.

Troubleshooting

midiFILTr-VF should be working but doesn't seem to be working? The following suggestions may seem obvious but these are problems I've run into myself at one point or another, got mad at my own dumb app for not working right, then realized there was an obvious or not so obvious answer. Here's a few ideas on things to look for when things go wrong:

AudioBus 3 "Apps" Mode in iOS 14 Doesn't Work

If you are using midiFILTr-VF in AudioBus 3, and your device is using iOS14+, be sure you are using the Audio Unit version of midiFILTr-VF rather than the Apps version. When you add midiFILTr-VF to the project, you will see a list of "Audio Units" (good!) or if you have a different tab selected "Apps" (bad!). This is the blue selection in the bottom tab of that menu. You want to be looking at "Audio Units".

Audio Units allow you to add multiple copies of midiFILTr-VF to your project, has additional features and tweaks, and is the preferred way to use midiFILTr-VF moving forward. The AUv3 version is better in every way.

The app version is only still included for compatibility with old projects but is buggy and not recommended otherwise. Avoid it when possible, but especially within AudioBus and iOS14.

Check MIDI inputs and outputs

If you are using an AUv3 host, make sure there's a virtual connection between your MIDI generator output (a keyboard input or MIDI sequencer such as midiDREAMs) and the input of midiFILTr-VF. Then make sure the output of midiFILTr-VF is going to the MIDI output that connects to your hardware Volca FM. Very basic I know but sometimes I load midiFILTr-VF and forget to do this. Also make sure the sequencer pattern has notes in it, the synth plugin is on a patch that makes noise, that it's audio channel isn't muted, that your headphones are plugged in, etc.

If things still aren't working, take midiFILTr-VF out of the equation and connect the sequencer directly to the synth. Make sure that's working before trying to debug the midiFILTr-VF part.

AU Parameters

The first three AU parameters control the plugin itself. The remaining parameters that start “CCXX” are mapped to a MIDI CC that midiFILTr-VF will send out to the Volca FM. This is mostly for convenience sake so you don’t have to look up the synth’s MIDI CCs every time you want to use them.

MIDI Clock Thru
MIDI Channel
Last MIDI Channel
CC40 Transpose
CC41 Velocity
CC42 Mod Attack
CC43 Mod Decay
CC44 Carrier Attack
CC45 Carrier Decay
CC46 LFO Rate
CC47 LFO Pitch Depth
CC48 Algorithm
CC49 Arp Type
CC50 Arp Division