Scaler 3

MIDI Output – DAW Routing Guide

Scaler Music

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Multichannel MIDI Output from Scaler 3

Using Scaler 3's Arrange page, each track can be assigned a specific MIDI output channel, or have its MIDI output disabled. This is accomplished via the three-dot menu in each track's header.

This channel assignment flexibility makes it possible to route MIDI data from tracks in Scaler 3 to one or multiple MIDI tracks in your host DAW, which is helpful for a number of reasons:

- Perhaps you'd prefer to host instrument plugins in your DAW rather than Scaler to take advantage of certain DAW routing or processing features.
- Or to utilize software instruments in proprietary plugin formats e.g. Ableton Live devices or Logic Pro instruments, which Scaler 3 does not natively support.
- Or to route MIDI externally to hardware devices using your DAW's MIDI routing capabilities.

The process by which this is done varies depending on your host DAW, so please refer to the relevant section below for tips on configuring MIDI routing in your preferred DAW host.

If you are on an Apple Mac computer, it is important to use the VST2 or VST3 version of the Scaler 3 plugin where possible, rather than an AU plugin. AU plugins are not able to output MIDI data to other tracks, unless hosted by Apple's Logic Pro version 11 or higher.

Note that instrument plugins generally fall into one of two categories:

1. Mono-timbral. These plugins respond to a single MIDI channel and can play one ‘sound’ e.g. preset at a time. Most instrument plugins fall into this category.

Note that this is unrelated to the instrument’s polyphony, or how many notes it can play at once. So a mono-timbral instrument may be able to play upwards of 12 notes at one time, but all those notes will share the same ‘sound’ type i.e. based on the same preset. All MIDI notes sent to mono-timbral instruments will be generally transmitted on the same MIDI channel.

2. Multi-timbral. These plugins respond to notes across multiple discrete MIDI channels and can play several different ‘sounds’ or presets at the same time.

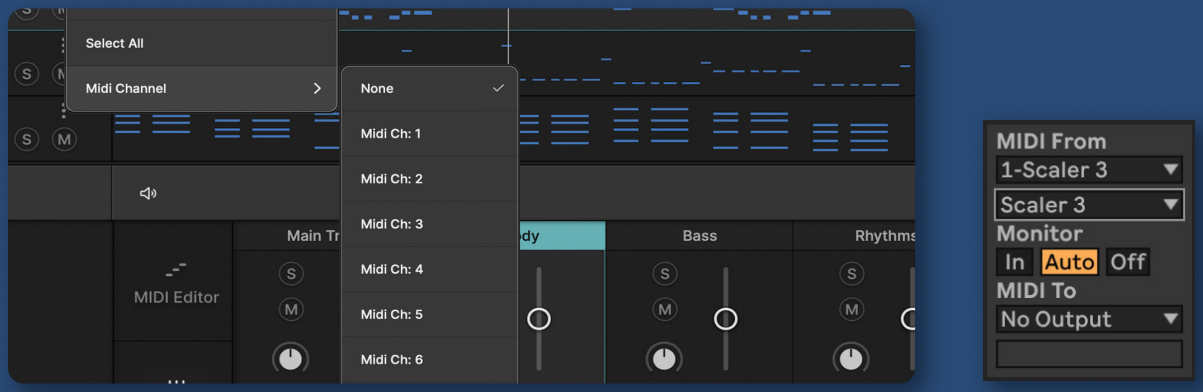
A popular example of this is Native Instruments’ Kontakt, which despite being just one plugin hosted on a single MIDI track, can load multiple different Kontakt instruments simultaneously, each producing a different sound and responding to MIDI notes on its own MIDI channel.

Ableton Live

Ableton Live does not natively support multi-channel MIDI routing between tracks/plugins and combines all internal MIDI routings into one MIDI channel. So you are effectively limited to routing one discrete MIDI channel from Scaler 3 to another track/plugin in Ableton Live.

Be sure to use the 'VST2/3' version of Scaler 3, not the 'AU' version, as AU plugins cannot send MIDI to other tracks.

Given all MIDI data sent from Scaler will be combined into one MIDI channel, it is advisable to ensure that only one track in Scaler is outputting MIDI data. This can be done by setting the MIDI output channel of all Scaler 3 tracks to 'none', except for the track you wish to output MIDI from. For that track, you can choose any MIDI channel.



1. With the Scaler 3 VST plugin added to a MIDI track in Ableton Live, and MIDI channel assignments configured in Scaler 3's Arrange Page, select 'Scaler 3' from both the Input Type and Input Channel drop-down menus on the MIDI track hosting the recipient virtual instrument.

Note that Scaler 3 will only appear as an option in the Input Channel menu when using the VST Scaler 3 plugin version.

Individual MIDI channels cannot be selected here due to the aforementioned Ableton Live routing limitation, so the recipient MIDI track will receive MIDI from all Scaler 3 tracks regardless of their output channel assignment, except for those with 'None' selected as a MIDI channel as per the above image.

2. Then either set the recipient instrument track's monitor mode to 'Auto' or 'In'. When setting to 'Auto' you will also need to record arm the recipient track.

One potential workaround to Ableton Live's MIDI routing limitation is to take advantage of Scaler 3.1's multi-instance sync functionality, and use a separate instance of Scaler 3 for each external instrument you'd like to control with Scaler.

In this case, after creating multiple instances of Scaler 3 across various Ableton Live tracks, repeat the above process for each instance of Scaler 3 and its associated external instrument plugin track.

Logic Pro

There are two possible ways to send MIDI from Scaler 3 to 3rd party instrument plugins using Logic Pro 11 described below. If you are using Logic Pro version 10 or earlier, you will need to use method #1. For Logic Pro version 11 or later, you can use either method.

'Scaler 3 Control' MIDI Effect Plugin

Prior to Logic Pro version 11, multi-channel MIDI routing between plugins was challenging due to Logic Pro's lack of VST plugin support. Logic only supports AU format plugins which are not able to output MIDI to other tracks.

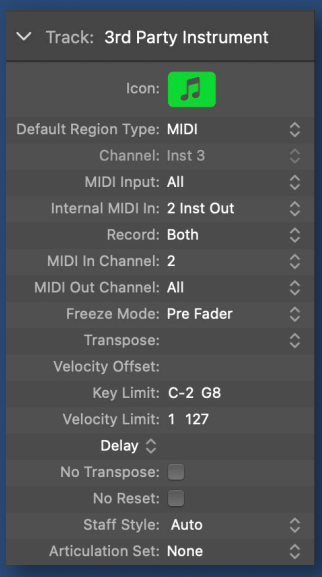
To overcome this, Scaler 3 includes a 'Scaler 3 Control' MIDI effect plugin which you can insert on the same MIDI track as the software instrument you wish to send MIDI data to. This makes it very easy to send MIDI data from Scaler 3 to a single instrument plugin.

1. If the recipient instrument plugin is a mono-timbral plugin, by default all MIDI notes across all Scaler 3 tracks will be sent to this instrument. To prevent MIDI notes from a particular Scaler 3 track from being sent to the recipient instrument plugin, set that Scaler 3 track's MIDI output channel to 'None'.
2. If the recipient instrument plugin is a multi-timbral plugin, make sure each timbre or part in that plugin is configured to receive MIDI from unique MIDI channels e.g. timbre #1 = MIDI input channel 1 etc.
3. Then assign the appropriate MIDI output channel for each track in Scaler 3, corresponding to the preferred timbre or part in the recipient multi-timbral plugin.

Logic Pro Internal MIDI Routing

Logic Pro 11 added support for internal MIDI routing between AU plugins on different tracks.

1. Start by adding the Scaler 3 instrument plugin to a Software Instrument track.
2. Then set a unique MIDI output channel for each Scaler 3 track which you would like to externally route MIDI from.
3. Create a new Software Instrument track in Logic and add a software instrument.
4. Using that track's 'Track Inspector' panel, set 'Internal MIDI In' to 'Instrument Output', and choose your Scaler 3 software instrument track as the source.
5. Then for 'MIDI In Channel' select a channel corresponding with the MIDI output channel selected for the desired MIDI source track in Scaler 3.
6. Then make sure Input Monitoring is enabled on the recipient Software Instrument track, and start playback in Scaler 3.



Reaper

Reaper offers full support for multi-channel MIDI routing between plugins and there are two primary ways to accomplish this, depending on the type of instrument receiving the MIDI data, and the number of MIDI channels being transmitted.

Input FX

Unlike many other DAWs, Reaper allows virtual instrument plugins to be used as MIDI insert effects known as Input FX. This way, MIDI notes produced by the Input FX instrument e.g. Scaler 3 are passed to the track's primary virtual instrument.

1. After inserting a virtual instrument on a new track, click the IN FX button, then select the Scaler 3 VST plugin. Make sure to not select the AU Scaler 3 plugin as this is not capable of outputting MIDI data.
2. If the primary virtual instrument is a mono-timbral plugin, by default all MIDI notes across all Scaler 3 tracks will be sent to this instrument. To prevent MIDI notes from a particular Scaler 3 track from being sent to the recipient instrument plugin, set that Scaler 3 track's MIDI output channel to 'None'.
3. If the recipient virtual instrument is a multi-timbral plugin, make sure each timbre or part in that plugin is configured to receive MIDI from unique MIDI channels e.g. timbre #1 = MIDI channel 1 etc. Then select the appropriate MIDI output channel for each track in Scaler 3, corresponding to the preferred timbre or part in the recipient multi-timbral plugin.

MIDI Sends

To send MIDI notes from a Scaler 3 track to multiple virtual instrument tracks, you can create a MIDI send on the Scaler 3 track for each virtual instrument track you'd like to receive MIDI from Scaler 3.

1. To create a MIDI send, click in an empty send slot on the Scaler 3 track's mixer channel, or click the 'Sends, Receives, and Hardware Output Options' button. Click the drop-down menu to create a new send, then select the desired recipient virtual instrument track from the list.
2. Click the drop-down menu next to 'Audio' and select none to prevent audio from being sent from Scaler to the destination track. Then select a MIDI input channel from the left drop-down menu next to 'MIDI'. This specifies which Scaler 3 MIDI output channel will be sent to the destination virtual instrument track, so make sure you have a Scaler 3 track's MIDI output channel assigned appropriately.
3. Then create additional sends as necessary for any other tracks you wish to receive MIDI from Scaler 3, making sure to configure MIDI channels appropriately.

Cubase / Nuendo

MIDI routing between tracks in Cubase or Nuendo is very straightforward requiring very little configuration.

1. After adding Scaler 3 to an Instrument track, make sure you assign a unique MIDI output channel to each Scaler track you would like to externally route MIDI from.
2. Then add another instrument plugin to another instrument track in Cubase/Nuendo. Open the routing tab on the recipient track's Inspector and select your Scaler 3 instrument track as the MIDI input.
3. Then select the appropriate MIDI input channel from the menu beneath, corresponding with the assigned MIDI output channel for the Scaler 3 track that you wish to receive MIDI from.
4. Then enable monitoring on the recipient instrument track, and repeat this process for any additional tracks as desired.

Studio One

MIDI routing between tracks in Studio One is very straightforward requiring very little configuration.

1. After adding Scaler 3 to an Instrument track, make sure you assign a unique MIDI output channel to each Scaler track you would like to externally route MIDI from.
2. Then add another instrument plugin to another instrument track in Studio One. Expand the track's header to reveal the input/output assignments. Select your Scaler 3 instrument track as the MIDI input.
3. Then select the appropriate MIDI input channel from the menu to the right, corresponding with the assigned MIDI output channel for the Scaler 3 track that you wish to receive MIDI from.
4. Then enable monitoring on the recipient instrument track, and repeat this process for any additional tracks as desired.

FL Studio

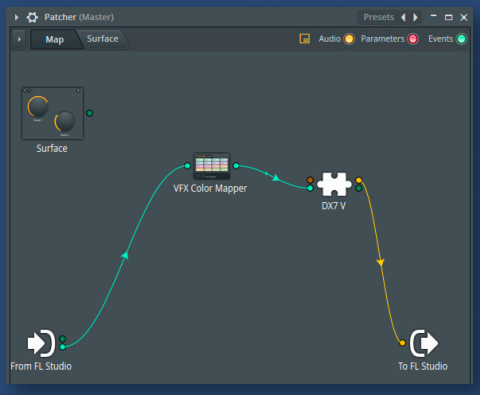
FL Studio makes it very easy to route all MIDI notes from a plugin such as Scaler 3 to a single instrument on another track. This procedure works very well for sending all MIDI notes to multi-timbral plugins, or for routing notes from a single Scaler 3 track to a single mono-timbral plugin. Routing MIDI notes from multiple Scaler 3 tracks to multiple mono-timbral tracks is slightly more complicated, however both procedures are described below.

Multi-timbral plugins or single MIDI channel routing

1. With Scaler 3 added to a Channel in FL Studio, set unique MIDI output channels for all Scaler 3 tracks you wish to externally route MIDI from. If the destination is a single mono-timbral plugin, set the MIDI output channel to 'none' for all tracks aside from the track you wish to output MIDI from.
2. Then click on the cog at the top of the plugin window to open the plugin settings and select the VST wrapper settings. From this page, select a MIDI Output port e.g. 1.
3. Then open the VST wrapper settings on the recipient virtual instrument plugin window and set the same MIDI Input port as Scaler 3's output port e.g. 1.
4. If the recipient virtual instrument is a multi-timbral plugin, make sure each timbre or part in that plugin is configured to receive MIDI from the appropriate MIDI channels according to Scaler 3's track's MIDI output channel assignments.

Routing MIDI to multiple mono-timbral plugins

1. First create an instance of Scaler on a new channel, and specify a MIDI out port e.g. port 1.
2. Then create an instance of Patcher on a new channel. Inside the Patcher, right click the 'From FL Studio' object and set 'Outputs-Events' to the same port as Scaler's output.
3. Then add a 'VFX Color Mapper' plugin and connect its MIDI input to 'From FL Studio's' MIDI output. Right click the Color Mapper plugin and via 'Outputs-Events' activate all necessary Voice Outputs (MIDI channels).
4. Then add instrument plugins as required connecting their MIDI inputs to the appropriate voice output of the Color Mapper in accordance with your MIDI output channel assignments in Scaler 3.
5. Alternatively create multiple Patcher instances across multiple FL Studio channels so that each recipient instrument receives its own FL Studio channel.

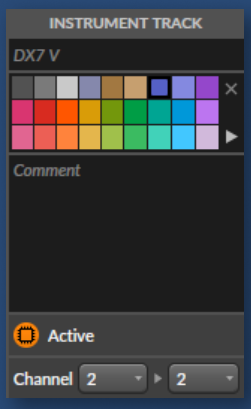


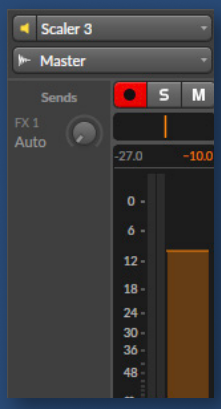
Bitwig Studio

MIDI routing between tracks in Bitwig is very straightforward requiring very little configuration.

To route MIDI from individual Scaler 3 tracks to multiple mono-timbral instruments:

1. Add Scaler 3 to a new Instrument track, and assign a discrete MIDI output channel for each Scaler 3 track you would like to externally route MIDI from.
2. Create one or more additional instrument tracks, each with their own mono-timbral instrument plugin.
3. Set each instrument track's MIDI input to Scaler 3 output, and set 'Accepted Channel' and 'Destination Channel' to desired MIDI channel e.g. channel 2, according to Scaler 3's MIDI Output channel assignments.





To route MIDI from Scaler 3 to a multi-timbral instrument:

1. For multi-timbral instruments, set the Scaler 3 track's 'Notes to Tracks' MIDI output via the output drop-down menu to the multi-timbral recipient instrument's host track e.g. Kontakt (track not plugin).
2. Then set the destination track's 'Accepted Channels' to 'all'.

Pro Tools

MIDI routing between tracks in Pro Tools is fairly straightforward requiring little configuration when sending MIDI to multiple mono-timbral plugins. Routing to a single multi-timbral plugin is possible but requires a few extra steps.

To route MIDI from Scaler 3 tracks to multiple mono-timbral plugins:

1. First create a Stereo Instrument Track and load the Scaler 3 plugin as an insert. Then assign discrete MIDI output channels for any Scaler 3 tracks you would like to externally route MIDI data from.
2. Then create additional Instrument Tracks in Pro Tools for each of those Scaler 3 tracks, and load a mono-timbral instrument plugin in their insert slot.
3. On the Mix window, right-click on where it says 'Inserts A-E' on any track and select 'Instrument' to display each track's MIDI I/O settings.
4. Set each mono-timbral instrument track's MIDI input to your preferred Scaler 3 MIDI output channel. Then if necessary set each track's MIDI output as the instrument plugin loaded on that same track.
5. Then record arm each instrument track and it should all be working.

To route MIDI from Scaler 3 to a single multi-timbral instrument plugin:

1. First create two Stereo Instrument Tracks, and an additional MIDI track for each Scaler 3 track you would like to externally route MIDI from.
2. Load the Scaler 3 plugin as an insert on the first Instrument track and assign discrete MIDI output channels for any Scaler 3 tracks you would like to externally route MIDI data from.
3. Then load a Multi-Timbral instrument plugin as an insert on the second Instrument track. Inside the Multi-Timbral plugin, create one timbre/part for each Scaler 3 track you would like to route MIDI from, and assign MIDI input channels accordingly.
4. Then set each MIDI track's MIDI input to 'Scaler 3 Out' choosing a separate MIDI channel for each track in accordance with your Scaler 3 tracks' MIDI output channel assignments.
5. Then record arm all MIDI tracks (use shift to arm multiple tracks).