

# Real-time MIDI CC control

The Octopus encoders may be used to send MIDI CC data and hence control both external gear and internal sequences. Here's how to put them to work.

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## Standard implementation

Octopus has a standard MIDI CC implementation that spits out a CC amount per step. To set this up is a three step process:

1. Go into Track mode and set the MIDI CC (MCC) to a particular controller number.
2. Either zoom into a particular step, or else bring up the Track attribute Map for MCC. This is done by pressing the MCC Selector button then pressing ZOM to bring up the MCC map.
3. Set the MCC amount for any step or steps in the track.

As the track plays, you'll hear the MIDI CC affecting your sound. Remember to set your synthesizer to respond to that CC message.

In addition to this method, Octopus gives you real-time control for sending MIDI CC data.

## Real-time MIDI CC

Using the MIX knobs in Page mode, you have control of up to 10 different MIDI cc streams PER MAP PER PAGE.

That means with the touch of a button, you have control over 50 MIDI CCs on a page.

## Setting it up

- In Page mode select a Page that has some active steps.
- Double-click on the MAP 1 button under the matrix. You should see 3 SEL buttons light up (AMT, MCC, MCH) and one (AMT) should be blinking.
- For this tutorial, skip changing the AMT and press the MCH button. This allows you to set the MIDI channel for each knob.

The MIDI channel selected here does not have to match the Track channel. The MIX knobs are completely independent of the Tracks.

After setting the channels, press the MCC button. This is where you set the MIDI CC number for each knob. ESC out and try it.

With the sequencer running, start twisting the MIX knobs and listen to what happens. You should hear the MIDI CCs having an effect on the synthesizer.

### Advanced tweaking

- Go back to Grid mode (press the GRID button).
- Turn on Page Clustering (press the SEL button for that row turning the LED green).
- Activate a second page next to the current one by double-clicking on the next button in the same row.
- Program some steps in that page as well.
- Go back to Grid mode.

When the sequencer starts, you should see the two adjacent Page LEDs changing as first one page is played then the next. For now, turn Follow off (green LED) and go back into the first page you set up (with the MIX MIDI cc knobs).

Start the sequencer and watch as the chase light plays this page and then disappears while it plays the second page in the cluster. Now try turning the MIX MIDI cc knobs.

You will find that the MIDI cc changes will have an effect even if the Octopus is playing another page in the cluster. This allows you to make real-time changes to a track or tracks even if you have many pages clustered together.

### Interesting side effect

There is an interesting and useful side effect to this behavior. If you set up different MIX mode cc maps on different pages, they will only be active when that page data is displayed in the matrix.

So, by turning Follow on and off, or by leaving Follow off and directly selecting pages with a double-click, you can freeze different pages (and hence different MIDI CC maps) in the display. This gives you quick access to a lot of MIDI CC potential while the song is playing.

Note that each page allows up to 5 CC maps to be defined and the currently selected map is saved with each page so you can have Page 1 with map 1 selected, Page 2 with map 2, and Page 3 with map 5 selected and the display will update accordingly with each page change.

### Banks

Octopus has a setup for banks (a row of pages) to let you make some global changes to a group of pages when you're in Grid mode.

That frees you up from being on a specific page, but it constrains you to a specific set of MIDI controllers at that point (although you can still have 5 different MIDI maps and switch between them using the row of buttons under the matrix).

You set up the MIX knob functionality for the Grid CCs the same way you did for Pages.