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Chord Builder Quickstart

Map new output notes to any input note and trigger different sounds on any track from any note.

The Chord Builder is a Max for Live MIDI device which allows you to map notes to any key on a keyboard. Each note can have a different chord built on it using any number of notes.

Using the Mixer interface, each note in the chord can have a different level. This works similarly to an EQ, or an additive synthesizer. Chords can be made to sound low and warm by turning up the low notes, or you can create overtones which cut through a mix by making high notes louder. The device is also velocity sensitive, so the harder you play, the louder the overall chord will be.

Another technique is to use a Chord Builder device on several midi tracks, each playing different instruments. Each input note can trigger different combinations of synth sounds with different notes at the same time, layering multiple synths together.

This technique allows you to split up your controller. A low octave on your controller could trigger chords on a bass instrument, while the high octave is not mapped on the bass track, but instead it is mapped to a drum rack triggering beat slices. This device allows you to turn any keyboard into a complex controller without any break in your creative process.

Setup:

1. Place the included file Chord Builder.amxd in Live's folder "Max MIDI Effects."

Mac:

Macintosh HD/Users/[USER]/Music/Ableton/UserLibrary/Presets/MidiEffects/Max Midi Effect/

Windows 7:

C:\Users\[USER]\Documents\Ableton\Library\Presets\MIDI Effects\Max MIDI Effect\

Windows XP:

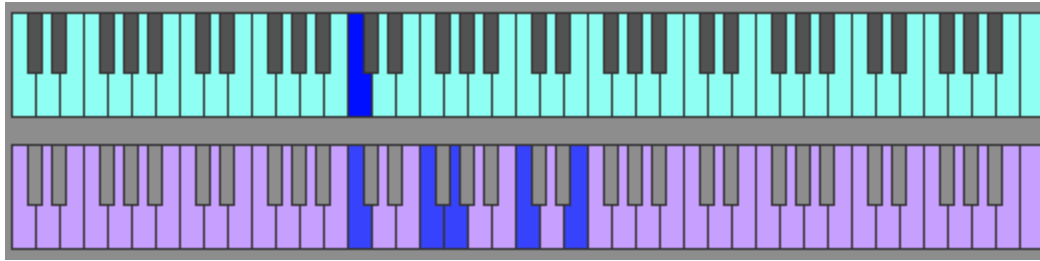
C:\Documents and Settings\[USER]\My Documents\Ableton\Library\Presets\MIDI Effects\Max MIDI Effects\

2. Launch Ableton and connect your midi controller. You must have Max for Live installed.
3. Drag the file Chord Builder.amxd into any MIDI track and then record-enable the track.

In the Browser pane, under Categories, select Max for Live. In the Browser Content Pane just to the right under Name, open the folder Max MIDI Effect. In here you will find Chord Builder.amxd. Drag it into any MIDI track. Make sure to place it to the left of any instruments already in the track. If there aren't any open instruments, drag one into the track to the right of the Chord Builder.

Turn on the track's Arm Session Recording switch. Under MIDI From in the io section, the track can be set to accept all ins and all channels. By default, all input notes are sent out at their input velocity because the MIDI Thru switch is activated.

The Two Keyboards:



- The upper keyboard, colored light blue, displays the input notes received.
- The lower keyboard, colored purple, displays all the notes that are triggered by the most recent input note.
- Select a key to edit by playing it on your controller with the track's Arm Session Recording switch on.
- Now click the notes on the lower keyboard that you would like to add.
- To delete a note from the current chord, just click it a second time.

The device is polyphonic, and notes that are currently on are colored green. When you select a note for editing by playing it, the notes currently assigned to its chord are highlighted in blue on the purple keyboard for editing.



The Mixer:

The Mixer allows you to have a volume slider for each note in the currently selected chord. These velocity levels are saved with their assigned chord when you save your live set and they are multiplied by your input velocity.

To explain, here is an example:

- Select a note by playing it into the track on your midi controller. It should be displayed on the upper blue keyboard.
- Select 6 notes by clicking on the lower purple keyboard to create a chord with six voices on the selected input note.
- In the Mixer to the right of the two keyboards, you will see a horizontal straight line in the middle. This means that all notes in the chord will be played at the input velocity. If a Mixer slider is at center, the input velocity is multiplied by 1 for that note.
- Click and drag the mouse diagonally from somewhere in the upper left corner of the Mixer interface to its lower right corner. You will see that there are six levels shown - one for each note in the chord.

The velocity values always match the notes from left to right where the far left is the lowest note in the chord and the far right is the highest note in the chord. Now play your chord and you can hear how the lower notes are emphasized.

- Click and drag your mouse from the lower left corner of the Mixer to the upper right corner, this time when you play the chord the higher notes will be emphasized.

If the level for a note is in the center of the table, then the input velocity will be equal to the output velocity. If the level is pulled up to maximum, then that note's output velocity will be double the input velocity. At minimum, the note will not sound because the input velocity will be multiplied by 0. In this case the note will still be displayed as blue because it is active in the mixer, but it will not turn green when triggered because it is never turned on.

When a new note is added, its velocity level will default to the center so that the output velocity is equal to the input velocity. If MIDI Thru is off then notes without chords assigned to them will have no output on that track, and the Mixer will be cleared. Add notes by clicking on the lower keyboard and then draw in their relative levels on the Mixer.

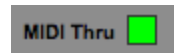


The Gain Slider:

The Gain Slider adjusts the global velocity of all notes triggered by the Chord Builder. It can also be automated in Arrange view.

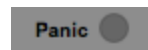
This slider is useful because if you stack many notes on one key, the instrument may start clipping even though all the velocities are within the normal range of 0 to 127. If you start to hear clipping on a track, pull the Gain Slider down. If you set it to 50%, all the notes played on that track will be at half of their original velocity, but also multiplied by the values set in the Mixer.

The Gain Slider is also useful if you are layering two instruments together and one is louder than the other, you can balance them with this gain slider before the notes reach the output.



The MIDI Thru Switch:

Located in the lower left corner of the Chord Builder, this switch passes all input notes directly to the output without passing them through the Mixer. The switch is initially turned on. This way, you can click on the lower keyboard to create chords, but any notes that don't have chords assigned to them will still echo the notes you play. This switch can also be automated in Arrange view.



The Panic Button:

Located in the lower left corner of the Chord Builder next to the MIDI Thru switch, this button simply stops all notes on the current track from playing. This button does not erase anything.

The Chord Builder Example Live Set:

Included in this package is the Live Set “Chord Builder Example Project”, which was used in the demo movie. Playing this set is a good way to get started and see what the device can be used for. (Note: It runs in Live 9 Suite.)

This set uses a different Chord Builder device on each track. There are 2 groups of tracks. The first group is made up of melodic synth and bass sounds, and these tracks are only triggered from the white keys. The other group of tracks is a set of drum racks, and these are assigned to be triggered by the black keys. To try it out, plug in your midi controller and launch the set. Make sure your controller is sending notes in the range of notes 36 - 84, on any channel. Also, make sure that midi input from your controller is enabled in Live's Preferences window. Then you're ready to play.

Thank you for downloading!

This Max for Live device was written by Diane Douglas.

If you want to find more of her tools, presets, programs and music for download go to: www.dianedouglas.net

If you have any questions, or if you'd like to hire her programming services send her a message:

www.dianedouglas.net/contact