Multiclip

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Introduction

Welcome to Multiclip. This Max for Live device allows you to edit multiple MIDI clips in Ableton Live simultaneously in the same window. Along with a few additional features, such as a second pencil tool, which creates a longer note instead of a couple of shorter ones, or hiding pitches that aren't included in a specific scale.

This manual gives a basic overview on how to use the Editor. A lot of mechanics are similar to Lives MIDI editor, you won't have to relearn anything.

Important stuff

It's very helpful to know, how to use the editor efficiently. The graphics are rendered with OpenGL, which uses CPU instead of GPU. This means that every additional element that has to be rendered will make the whole rendering a lot slower. It is possible to edit an infinite number of clips, but the more you edit in the same window the slower it gets. You can read more under the topic "Performance" on page 13 to find out more about how to make it run smoother.

Because of limitations in the Live API the connection to a clip will be lost if you move it around in the arrangement view and if you change a note in a clip, the editor won't recognize it. The best way of using the editor is to not change the clips while you're editing them and to only use the "Reopen" button if you know the clip hasn't changed. If only the notes of a clip changed you can use the refresh button to reload on the spot. By default the notes will also be refreshed as soon as an overdub is being finished. I personally have the edit button key mapped to my keyboard, so I can edit multiple clips quickly without ever having to navigate to the editor device. The esc key will close the editor again, which makes editing very easy and fast.

Setup

Multiclip consists of two devices, the Editor "CC Multiclip.axmd" and a note preview device "CC Multiclip Note Preview.axmd". The Editor has two buttons that will either Edit MIDI clips or Reopen the Editor from its last state. You can have multiple instances of this Editor in your project, but usually it makes more sense to only use one. It doesn't matter where you put the Editor device, it makes sense to use an additional MIDI track for it with a simple instrument behind it to preview notes.
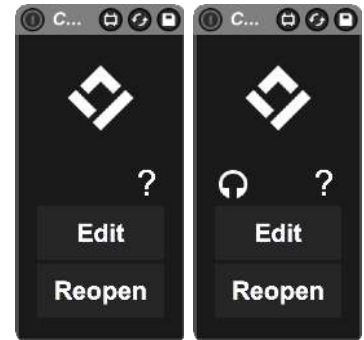
The Editor device (left) and the Note Preview device (right).

The Note Preview device is an additional device that will be used to preview MIDI notes from within the Editor. This device does not include the Editor, but the buttons will send specific messages to the Editor device to trigger the Edit mode or Reopen the Editor. These messages are sent globally to *all* Editors in your project and each instance will receive the edit or reopen message!

The Note Preview function works the same as in Live, but in order to output the selected notes for individual tracks, the Note Preview device is needed to be inserted onto all MIDI tracks.
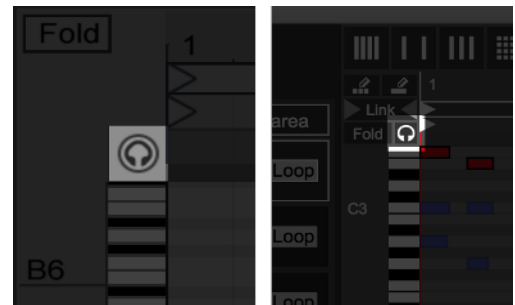
If a MIDI track does not include this device, the Editor itself will output the notes instead. You can use this feature and insert a simple instrument after the Editor. You can still preview notes with this method and even use a specific sound instead of the original instrument.

Editing clips

The "Edit" button will activate the Edit mode in which you can select clips with your mouse cursor by clicking on them. An additional graphic will appear next to the cursor, which will tell you the track and clip names of the clips you will be editing. This graphic can be turned off in the settings. At the same time all selected clips will turn white, or black if they were originally white. After selecting clips you want to edit, confirm your selection with the same button on the device, which now should be labeled as "Confirm". Technically it's the same button, which means if you key or MIDI map it, you can edit and confirm your selection with the same button on your keyboard or your MIDI controller.

The original clip colors will be used for displaying the notes. Your colorcoding in Live will therefore transfer directly into the editor.

You can close the editor and reopen it with the same clips you edited before with the "Reopen" button which of course can also be key or MIDI mapped.

> Instead of key or MIDI mapping you can also trigger these buttons within a Max for Live device by sending the message "logic_edit_button" or "logic_reopen_button" to a send object with the name "ChaosCultureMultiClip". In return the receive object with the name "ChaosCultureMultiClipEditButtonText" will give you the state of the edit button. This might be helpful if you're using a custom Max for Live patch to control things inside of Live. By using this method you can link any input to the Multiclip device and trigger it.

Using the editor
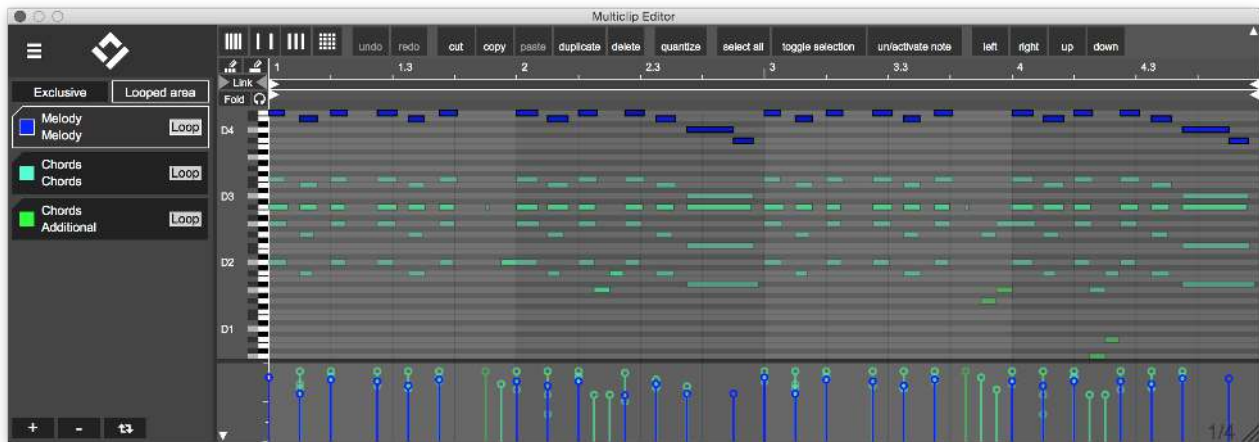
Using the editor is similar to using Lives MIDI editor. You can move notes, double click to create new ones, select multiple notes, move them with the *alt* key to copy them as well as create velocity ramps by dragging on the velocity window while holding the *cmd* key (*ctrl* key on Windows). Even the song position in Live will be updated to the one in the editor (unless Live is currently playing). If you select a time or notes in the editor, pressing the *alt* key and the space bar will play back the song from this position if you're in the arrangement view. Everything should work as usual with only a few differences. The right mouse button will act just as the left one, there is no context menu so far. There are plans for it though, you might see a context menu in future updates. Also the scroll wheel doesn't have any effect. In order to quickly move around on the grid, you can of course use the timeline or the keyboard to zoom and shift the displayed area, but also you can click and drag in the main grid in an empty space while holding the *cmd* key (*ctrl* key on Windows).

The list on the side of the grid displays all clips that are being edited. One of them is the *selected clip* and only one at a time can be selected. Unless the "Exclusive" button above the list is activated, you can still interact with the background notes and the selected clip will change if you do so. You can also deactivate the automatic change of the selected clip or set it to "hover" which selects the clip of a note by hovering over it. The *alt* key inverts the "Exclusive" button, which is handy if you only want to select a few notes of a the selected clip for a short time, without having to toggle the exclusive mode with the mouse.

The selected is be the priority of the editor. The notes of the selected clip are rendered on top. When selecting notes, the ones in the selected clip will be the first to be selected, which is helpful when multiple clips have the same notes in the same positions.

The exclusive mode also changes how the "select all" function is either selecting all notes from all clips or only the selected clip. By pressing "a" or the "select all" button while holding the *alt* key you can invert this behavior as well.
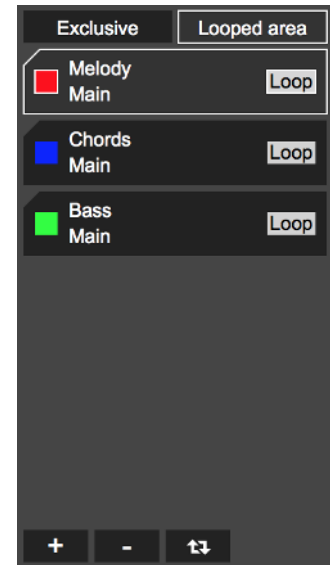
Next to the "Exclusive" button is the "Looped area" button. When activated, the notes of a looped clip will be duplicated on the grid. This is handy if you're editing a longer MIDI clip and a shorter looped clip, which is playing along with it. Then you can still see the loop and you can even interact with the notes in the looped area without having to manually duplicate the notes of the looped clip. Please note, that it's not possible for the device to observe the length of a looped clip in Live. Therefore a looped clip has an infinite length inside the Editor.

After you started editing clips you might want to add another clip without having to reselect all of them again. In order to do so you can press the "+" button at the bottom of the list to add a single clip to the list. As soon as a clip has been added, the button will turn off again. If you want to add a couple of clips without having to press the "+" button all the time, simply press it twice and it will show "++" instead. Then you can add or delete as many clips as you want from editing in Live. With the "-" button next to it or by holding the *alt* key you can delete clips from editing. With the third button in this row you can refresh the notes for all clips, which is useful If you changed any notes outside of Multiclip. In the settings you can also enable an automatic refresh everytime the transport stops or a recording stops.
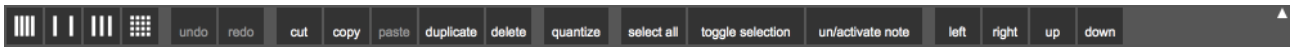
At the top of the grid is a range of buttons that performs functions as copy, paste, undo, redo or changing the grid detail. All these buttons can be triggered with the keyboard just like the shortcuts in Live. You simply have to leave out the *cmd* key (*ctrl* key on Windows). Here are a few examples:

- the "c" button on your keyboard to copy selected notes
- "v" for pasting them
- "z" to undo the last action
- "u" to quantize
- "4" to turn the grid snapping on and off
- "1" for a more detailed grid

If you press the *cmd* key (*ctrl* key on Windows) as normal, the keyboard input will be ignored in the editor and Live will react to it. You can turn off the keyboard input in the settings, if it's getting in the way and just use the buttons on screen to trigger the functions. You can click these buttons with your cursor while holding any modifier keys as well to perform different actions, everything should work as it does in Live. Only the arrow keys have a slight difference. Pressing "up" and "down" while holding the *alt* key will select the previous or next clip as the selected clip.

With the buttons at the top left of the grid you can toggle the Fold mode as in Live. If you turn on the MIDI preview button, all note you select will be played back, insert an instrument after the editor device to listen to the notes. As explained earlier you can also insert the Note preview device to any MIDI tracks in your project and if you're editing a clip on that track, the notes will be played back by the Note preview device. It makes sense to insert the Note preview device on all MIDI tracks in your set. The Link button will link the loop handles for all clips together when you're changing the loop area for a clip. Please note, that the clip start and end point can't be changed, because of limitations in the Live API.

The difference between the pencil tool 1 and 2.

At the top of these buttons are two different pencil tools. The first one to the left will work just like the pencil tool in Live. It creates multiple notes depending on the grid size as shown while second pencil tool creates a single note while dragging. The activation of the pencil tool is linked with Lives pencil tool by default. By pressing "b" or by turning the pencil tool in Live on, the last used pencil tool in the editor will also turn on. The other way around if you toggle any of the pencil tools on, Lives pencil tool will as well. You can deactivate this behavior in the settings.

Settings
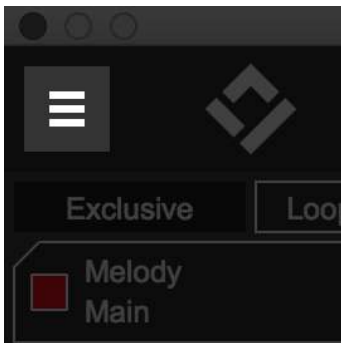
On top of the cliplist you can access the settings. You can change the workflow and the appearance of the editor and save your changes. Every parameter you're changing inside the settings will be stored within the device. If you then save your project and reopen it, they will reload. You can also save your changes as a preset and reload the editor anywhere with the exact same settings. Press the "save preset" button in Live and name it however you like. This way you can completely change your workflow and color scheme and you'll never have to set it up again. Simply load your preset next time you want to insert the editor into your project.

Save the changes and use them in other projects.

If you're changing the colors of the editor you don't have to constantly go back out of the settings window to check what you just changed. If you change any value in the settings while holding the *shift* key, it will automatically show the editor until you release the mouse button. You can then watch how the changes you're currently making effect the editor. This works for any parameter, even toggle switches.

Please note, that only the changes you make within the settings will be stored. You can change the exclusive mode for example in the settings and if you open the preset the exclusive mode will be set to your desired state as a default position. But if you press the "Exclusive" button outside the settings window, no changes will be made to the stored default state. This way you can freely set up default states for every parameter.
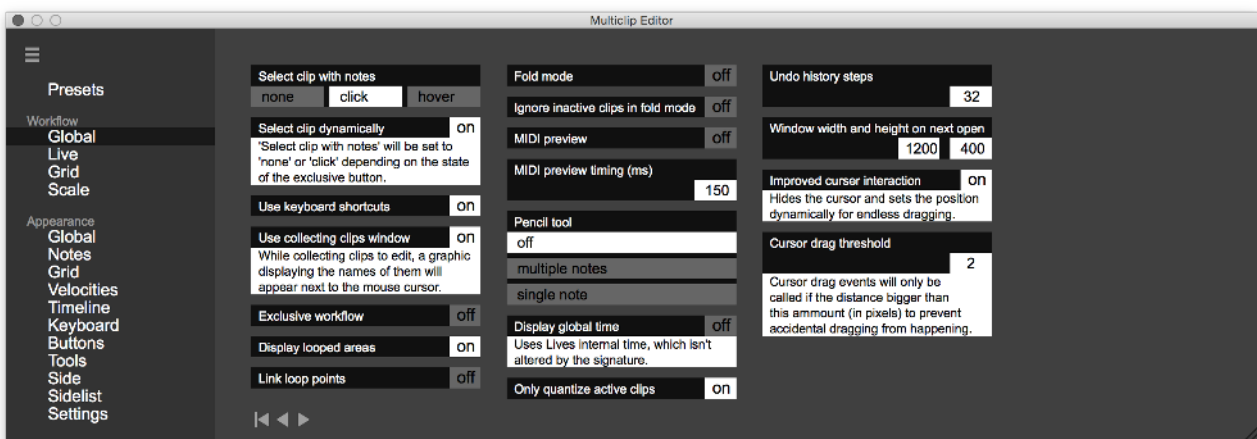
In the settings window you can also access a few presets to quickly see what is possible. When calling a preset all parameters will be reset to their default value unless you're holding the *alt* key while doing so. If you bypass the reset function you can merge presets into each other. For example if you would like to use the preset "Bigger fonts" and also use the colors of the preset "Orange", this will let you do that.

Every preset, as well as your custom settings, will only store parameters which have been changed. The preset "Bigger fonts" will only change the font size parameters and it will leave the colors alone. If you then select another preset while holding the *alt* key, only the content of "Bigger fonts" will be applied and since there aren't any colors saved, it won't change any colors.

Workflow settings

Global

Select clips with notes	Interacting with a note can change the selected clip and therefore set the focus on it. With this parameter you can change or deactivate this behavior. Please note that this parameter will be changed automatically if the following parameter "Select clip dynamically" is activated.
	By using the "hover", you only have to move the mouse cursor on a note and the selected clip will change.
Select clip dynamically	With this function the "Select clips wit notes" parameter will be set to "none" if the exclusive button is active. Otherwise, it will be set to "click".
Use keyboard shortcuts	If this parameter is turned off, keyboard input will be ignored. This might be useful, if you have the keyboard key mapped in Live, since this device can't grab the focus of the keyboard. Keyboard shortcuts aren't needed, you can still access every function by the tool bar at the top.
Use collecting clips window	When activating the edit mode and selecting clips in Live a graphic will appear next to the mouse cursor to list what clips have already been added. You can hide this graphic by turning this parameter off.
Exclusive workflow	The state of the "Exclusive" button. Changing this value in the settings will store the new value in the preset or your project. By reloading it will get recalled, but if you change this value outside of the settings screen, the change won't get stored.
Display looped areas	The state of the "Looped area" button.
Link loop points	The state of the "Link" button at the top left of the grid. Activating it will link the loop markers of every looped clip together. This allows you to change the loop position and length for multiple clips at the same time.
Fold mode	This value determines if the fold mode is active or not. This can also be changed by the interface, but changing in the settings will save it within your preset or your Live project and it will get called again on reloading it.
Ignore inactive clips in fold mode	If this function is turned on, the notes of inactive clips will be ignored when creating the note rows.
MIDI preview	The headphone symbol at the top left of the grid. If this function is turned on, selected notes will be played back. Place the "CC Multiclip Note Preview.amxd" device on other MIDI tracks and they will output those notes if needed.
MIDI preview timing (ms)	The note length for previewing notes.
Pencil tool	With this parameter you can set the current pencil tool and store it for future reloading.
Display global time	By turning this parameter on, Multiclip will display Lives internal time instead of the clips time, which is altered by its signature. The clip offset in the arrangement view will also be ignored.
Only quantize active clips	When pressing the quantize button, all deactivated clips will be ignored if this value is active.
Undo history steps	This parameter determines how many steps the history will contain.

Window with and height on next open	When opening the editor, these values will be used. Resizing the window will change them automatically, but if you change them in the settings, the values will get stored and recalled on reloading the preset or your project.
Improved mouse interaction	When clicking and dragging on certain areas, the mouse will be hidden and its position will change. This way you can scroll without reaching the end of your screen. If there are any problems and zooming or scrolling are problematic on your system you can turn this function off.
Cursor drag threshold	This value determines how many pixels you have to drag the cursor until the device will recognize it as a drag. This helps to prevent accidental drags from happening.

Live

Link clip activation	By deactivating a clip in the editor, the clip will also be deactivated in Live if this function is turned on. By turning it off, deactivating a clip will only hide its notes and leave the clip in Live alone.
Change song position	Unless Live is currently playing, you can change the current song position of Live within the editor. By using Lives shortcut alt + spacebar you can play back from this position and listen to your song from a specific point in time.
Observe song position	This function will observe the time position of Live and display it within the Editor. You can turn it off if you're experiencing performance problems and the device feels slow. You can read more about this subject in "Performance" on page 13.
Observe song position rate	This value determines how often the song position will refreshed. This heavily influences the performance.
Edit button: add selected clip	By pressing the "edit button" of the device in Live, an already selected clip will be added to the list.
Interface: add selected clip	By pressing the "+" button in the interface twice you can add multiple clips to the list. If this value is turned on an already selected clip will be added to the list.
Change clip while importing	After you selected and confirmed the clips you wish to edit, this function will change the selected clip to the latest one.
Reset zoom while importing	After you selected and confirmed the clips you wish to edit, the zoom on the x and y axis will be reset to display all imported notes.
Refresh clips automatically	The notes for all clips will be refreshed whenever the selected option happens.

Grid

Note handle size	To change the length of a note, you have to grab the start or end part of a note. This value determines the length of this area in pixels. If the displayed note is smaller than twice this value, you can only move the note and not change the length of it. If you have trouble hitting the start or end points of a note, increase this value.
Snap to grid	This value will turn the grid on or off. This can also be changed by the tool bar at the top or by using the keyboard shortcut "4".
Snap detail multiplier	The detail of the grid is influenced by this value. This value will be changed by tool bar or by the keyboard shortcuts "1" and "2".
Note position to grid threshold	When moving a note, its original position will be used as an additional snap point unless it's too close to the grid. If the notes position is too close to a grid point, it won't snap to it's original position. This is a pixel value and it's not affected by zooming in.
Timeline zoom speed	This value influences how quickly the x axis will zoom with the mouse movement.
Timeline zoom threshold	This value determines how many pixels you have to move the cursor until the device starts zooming, which is useful if you only want to offset the viewpoint. It keeps accidental zooming from happening.
Keyboard zoom threshold	The same as "Timeline zoom threshold", but for the keyboard.
Default keyboard zoom	The lowest and highest MIDI pitch values that needs to be shown if there are no notes imported.
Faked velocity window height	Changes how fast a velocity changes by dragging a note while holding the cmd key. Decrease this value and the velocity will change faster.
Velocity line hitbox width and height	All velocities that are shown in the velocity window at the bottom of the grid have a hidden hitbox you're interacting with. If you have trouble clicking on the velocity points and you miss them often, increase this value.
Velocity for new notes	When creating a note by double clicking or by using the pencil tools, the note will have this velocity. This value will be changed as soon as you created a note, so that the next one will match the previous one.

Scale

Use scale	By turning this function on, you can use a specific scale as your fold mode.
Display scale highlights	When using a scale, the keyboard will display the notes of it outside of the fold mode and highlight specific

	ones (Tonic and Dominant by default).
Key	With this parameter you can set the key of the scale.
Preset scales	You can choose a preset scale with this parameter or set up your own scale with the parameters next to it.
Display notes	With these parameters you can create a custom scale. Activate or deactivate the intervals you need. These values will be changed by selecting a scale preset.
Highlight notes	With these parameters you can highlight specific intervals in the piano roll. The parameter "Display scale highlights" need to be activated for it.

Performance

The interface is being rendered with OpenGL, which means that it can quickly consume processing speed. It uses CPU instead of GPL, both window size and amount of renderings will affect how quickly the window can be rendered. If you have performance issues and everything seems slow, try to resize the window and make it smaller.

The observed song position can also adversely affect processing speed. By default the line that displays the song position is being rendered every 50 ms (if the song is playing at all). You can change this rendering value in the settings (Live tab). You can also turn it off completely or change the appearance of it to display the position in fields instead of a line (Appearance / Other tab). Then the song position won't have to be rendered as often, which can improve performance speed.

Finally, the amount of notes can adversely affect performance speed. Turning off the "Looped area" mode can help in this case.

None of these performance issues are inherent to the Editor, and are contingent upon CPU.

Future updates

There are many plans on things I want to add this editor. Here are a couple of them:

- Velocity randomizer (actually writing the velocity with increasing options and more)
- Pitch randomizer (with scales)
- Creating (drawing) notes in multiple clips simultaneously
- Creating (drawing) chords instead of just notes
- Create string chord (offsets note positions increasing from bottom to top of chords)
- Split notes with grid
- Connect touching notes (not legato)
- Randomize clips (replace notes on a different clip, let a chord be played by multiple instruments)
- A lot of small improvements such as changing the clip color from within the editor

Stay in touch and let me know what you would like to see in future (free) updates.

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