The DrivenByMoss Manual

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1 Welcome to the DrivenByMoss Documentation

DrivenByMoss is an extension for the digital audio workstations (DAW) **Bitwig Studio** and **Cockos Reaper**. It provides support for many hardware controllers as well as protocols like OSC. Furthermore, it brings some tools and utilities.

DrivenByMoss is written by Jürgen Moßgraber also known as MOSS.

1.1 Feedback and Bug Reports

Post all questions, bug reports wishes and discussion

- related to **Bitwig Studio** into the KVR Thread.
- related to **Cockos Reaper** into the Reaper Forum Thread.

1.2 Download latest Release

Always download the latest release from my homepage.

> **The version on GitHub might always be in an alpha or beta state, you have been warned!**

List with Bitwig Changes.

List with Reaper Changes.

1.3 Video Tutorials

There are many in-depth video tutorials available on my Youtube channel.

1.4 Installation & Feature Documentation

Follow the Installation instructions.

After that check the specific controller documentation below for additional installation notes:

- Ableton
  - Push I & II
- Akai
  - APC40 & APC40mkII
  - APCmini
  - Fire
- Arturia
  - Beatstep
- Mackie
  - HUI Protocol
  - MCU Protocol
- Native Instruments
  - Kontrol S25, S49, S61, S88 mk I
  - Kontrol S49, S61, S88 mk II, A-series, M32
  - Maschine Mk3
  - Maschine Mikro Mk3
- Novation
  - Launchkey Mini Mk3
  - Launchpad MkII, Pro, Mini Mk3, X
  - SL MkI & MkII
  - SL Mk III
- Generic, Tools & Protocols

- Auto Color
- Generic Flexi
- Midi Monitor
- Open Sound Control (OSC)

2 Installation

2.1 Bitwig Studio

1. Extract the ZIP file. It contains a file named **DrivenByMoss.bwextension**.
2. Copy that file in the following location depending on your OS:
   - Windows: `%USERPROFILE%\Documents\Bitwig Studio\Extensions\`
   - Mac: `~/Documents/Bitwig Studio/Extensions/`
   - Linux: `~/Bitwig Studio/Extensions/`
3. Start Bitwig Studio and open the *Dashboard*. Select *Settings* and *Controllers*.
4. If **Autdetect** is enabled for most of the controllers you automatically get a popup notification.
5. Alternatively, click on *Add controller*, select the manufacturer, then the controller and click on *Add*. In that case note that the extension does not start until you configured the necessary in- and outputs!

See the documentation of the individual controllers for further installation/configuration instructions.

2.2 Cockos Reaper

2.2.1 Updating a previous version

Important: If you update from a previous version make sure to delete the old files first. Otherwise you will have files in different versions, which will result in several problems.

2.2.2 Installation

Unzip the downloaded file "DrivenByMoss4Reaper-X.XX-PLATFORM.zip" to the Reaper UserPlugins folder.

Important:

1. Make sure you keep the folder structure of the ZIP file intact (UserPlugins/java-runtime, UserPlugins/drivenbymoss-libs, . . .)!
2. Do not put the files in an additional sub-folder (e.g. DO NOT: UserPlugins/DrivenByMoss-6.11/reaper-drivenbymoss.lib)!

Note: For the Portable Reaper installation drop the files into the "Plugins" folder of your portable installation.

You find the UserPlugins folder at the following locations:

- Windows 10 > `C:\Users\<YOUR_USER_NAME>\AppData\Roaming\REAPER\UserPlugins` Note that the AppData folder is hidden, you need to make it visible by enabling "Show hidden files" in the View tab of explorer.

- Mac OS X (minimum version 10.12 Sierra) > `~/Library/Application Support/REAPER/UserPlugins` These folders are hidden as well. Press cmd+shift+. in the finder to make them visible.

- Linux (I am testing on Ubuntu Studio) Look up the location at which you have installed Reaper. Install the *.so file into `~/.config/REAPER/UserPlugins` or in the case of a portable install into REAPER/UserPlugins.

Alternatively, you can start Reaper and click in the Options menu on *Show REAPER resource path in explorer/finder. . . ". In the folder that open navigate into the UserPlugins subfolder.

2.2.3 Mac OS specifics

If you get the following error when starting Reaper: `"reaper_drivenbymoss.dylib" can't be opened because Apple cannot check it for malicious software.`, do the following:

1. Run Reaper to get the error
2. Close Reaper
3. Open the System Settings
4. Open the Security tab

5. Click the Lock icon at the bottom of the window and enter your password
6. Above it you should see the notification that "reaper_drivenbymoss.dylib" was blocked
7. Click the button to "allow it anyway"

2.2.4   Accessibility Support

If you have a screen reader installed you might get the following error: `drivenbymoss: ERROR: Could not call startup.java.lang.UnsatisfiedLinkError: bin\javaaccessbridge.dll: Can't find dependent libraries`

In that case try to install the full Java JDK from: https://adoptopenjdk.net/ This should install the missing files.

2.2.5   Configuration in Reaper

1. Start Reaper
2. Open the Preferences (Ctrl+P)
3. Scroll down and select "Control/OSC/web"
4. Click on "Add"
5. In the "Control surface mode" select "DrivenByMoss4Reaper" (if it is not there, you put the reaper_drivenbymoss library file into a wrong location).
6. The configuration displays the JAVA_HOME path for information and contains a button to open the DrivenByMoss user interface. You can keep this user interface open if you want and only close the Reaper dialogs.

2.2.6   Adding and configuring devices

The DrivenByMoss window consists of three parts:

1. The list of the configured controllers. The listbox before the controller name depicts if he controller is active (checked) or deactivated.
2. The lower part displays logging information about started controllers and errors.
3. The buttons on the right have the following functions:
   - **Detect** - Automatically adds connected controllers.
   - **Add** - Not all controllers can be detected automatically. Use the Add button and select the controller to add from the appearing menu.
   - **Remove** - Removes the controller which is selected in the list.
   - **Configuration** - Opens the configuration dialog for the controller. Make sure that the correct in-/outputs are selected. All other options are described in the specific controller section in this manual.
   - **Projects** - Opens the dialog with controller settings which are stored individually with each Reaper project, e.g. Scale settings. See the specific controller section in this manual.
   - **Dis-/enable** - Disable a controller to save performance if you do not use it (or it is not connected).
   - **Debug** - Only used for development, ignore it. However, the *Device simulator* might be handy for some people with a touch display.

Note:

- Make sure that all MIDI inputs and outputs you configure in DrivenByMoss are fully disabled in the Reaper MIDI settings! Otherwise you will have strange effects!
- Your setup will automatically be loaded if you run Reaper and stored when you close Reaper.

3 Known Issues

- You might get the following error on Windows: **Could not open MIDI output. There is not enough Memory for this Task**. This error means that Windows cannot open the device since another process already opened it. Check if you have accidently assigned it to another script or any MIDI tool which is runing in the background. If it is a Native Instruments device also check if the NI background services work correctly.

3.1 Bitwig Studio

- Novation SL MkIII: If the keyboard is transposed the pressed notes are off for the light guide.
- User Parameters cannot be reset

3.2 Cockos Reaper

3.2.1 Limitations

DrivenByMoss is developed for Bitwig Studio. Bitwig has several concepts, which are not available in Reaper, e.g. Scenes, Clips and User parameters.

- Since Reaper does not have specific track types FX Track Banks do not appear (or cannot be selected) on the devices. E.g. in Generic Flexi the *FX Track* actions do nothing. Furthermore, options to in-/exclude FX tracks have no effect.
- The only way to insert MIDI messages into Reaper is via the Virtual MIDI keyboard input. If you map something with generic Flexi, it goes only into that channel (but not into the Action mapping) and does only work if the channel is record enabled. Therefore, the use-case is only to control devices which react or require MIDI CC.
- Browser support (devices and presets) is only available on devices with a display. Since the browser of Reaper cannot be controlled you are currently navigating blind.
- MIDI clock cannot be sent to the device since this would require to enable the MIDI output of the device in Reaper.
- The metronome volume text description is not updated (always shows -6.0dB).
- The Groove settings allow to dis-/enable the arrange swing grid and set the amount.

3.2.2 Workarounds

For some limitations there are workarounds available:

- **Scenes**: Scenes are emulated by range markers. Starting the n-th Scene triggers playback from the start of the n-th range marker.
- **User Parameters**: On devices which support User Parameters, these control the Track FX parameters in Reaper. If a user mode is active and a new Track FX parameter is added, the user mode must be left and reentered to make the parameter work.
- **Crossfader**: On devices which support a crossfader it controls the 1st track FX parameter on the master track.

3.2.3 Further issues

- If you use Melda plugins, turn off GPU acceleration in the Melda plugin settings. Otherwise Reaper will crash.

4 Ableton Push 1 / 2

Support script for Ableton's Push 1 and Push 2 controller. You can control track parameters, devices, transport, session view and play the pads.

4.1 Installation

To add the controller manually, choose **Ableton -> Push** or **Ableton -> Push 2** depending on your specific controller. On **Push 1** make sure that for MIDI in- and output the 2nd port is selected (**MIDIIN2 (Ableton Push)** and **MIDIOUT2 (Ableton Push)** on Windows). For **Push 2** it is the first port.

4.1.1 Installation on Linux

Accessing USB requires root access. To run the Application as a normal user copy the file `99-userusbdevices.rules` to the folder `/etc/udev/rules.d/`. It gives the group **audio** access to the Push 2 controller. Make sure that your user is a member of that group and the group does exist. A more in-depth explanation can be found here. After you have copied the file reboot your computer.

4.2 Global Features

- **Play** - Start/Stop playback. Double click to move play cursor to start of song. You can configure the behavior on stop in the preferences.
- **Shift+Play** - Toggle repeat
- **Select+Play** - Toggle Punch In
- **Select+Shift+Play** - Toggle Punch Out
- **Record** - Start/Stop recording
- **Shift+Record** - Toggle launcher overdub
- **New** - Creates a new clip on the selected track and slot, starts playback and enables overdub.
- **Shift+New** - Like New button but without activating launcher overdub.
- **Automation** - Toggle Automation Write. Long press to bring up the Automation dialog which allows you to change the automation mode.
- **Shift + Automation** - Toggles the clip launcher automation write enabled state of the transport.
- **Delete + Automation** - Resets any automation overrides.
- **Fixed Length** - Select the length of the midi clip for *New*. The upper row gives you the option to create a new clip of the selected length without storing it.
- **Duplicate** - Combine with a scene pad (duplicate scene) or a track select button (duplicate track). To copy clips in session mode keep the Duplicate button pressed; choose the source clip (it must be a clip with content, you can still select a different clip as the source); select the destination clip (this must be an empty clip, which can also be on a different track); release the Duplicate button.
- **Shift+Duplicate** - Create a new scene from the currently playing clips
- **Quantize** - Quantizes the currently selected clip.
- **Shift+Quantize** (or long press Quantize) - Access the Quantize and Groove configuration modes
- **Double (Loop)** - Duplicate the content of the currently selected clip (not the clip itself)
- **Convert** (Push 2) - Brings up the Slice to Drum Machine dialog.
- **Shift+Convert** (Push 2) - Bring up the Slice to Multi-sample dialog.
- **Undo** - Undo. Press Shift for Redo.
- **Delete** - Like pressing the delete key. Hold the button for additional functionality in combination with other buttons knobs, see the mode and view explanations below.
- **Small Knob 1** - Change tempo (press *Shift* for fine adjustment).
- **Small Knob 2** - Move play cursor (press *Shift* for fine adjustment).
- **Metronome** - Toggle metronome. Long press to bring up the metronome settings mode.
- **Shift + Metronome** - Toggle metronome ticks
- **Tap Tempo** - Tap Tempo
- **Mute** - Push 1: Selects track mute state of 2nd row. Push 2: Mutes the currently selected track. Long press for the Push 1 behavior. Lock it with **Shift+Solo**.

- **Solo** - Push 1: Selects track solo state of 2nd row. Push 2: Solos the currently selected track. Long press for the Push 1 behavior. Lock it with **Shift+Solo**.
- **Select + Mute**: Deactivate all mutes
- **Select + Solo**: Deactivate all solos
- **Knobs 1-8** Value encoders, [Shift + Knob] fine increment value change.
- **Knob 9** - Changes Master Volume
- **Select + Knob 9** - Changes the Metronome Volume
- Keep the **Master button** pressed for a screen which allows to toggle perspectives and panels.
- **Stop/Stop Clip** - Press *Shift + Stop* to stop all playing clips. Keep pressed and press one of the second row buttons to stop the clip on the specific track.
- **Footswitch 1** - Sends sustain
- **Footswitch 2** - Triggers the new button.
- **Arrows** The cursor keys now consistently always change the track (device, layers) and scene bank, except in the browser they change the browser tabs.
- **Shift+Touchstrip** - Change behavior of touchstrip: Send pitch bend, a midi CC or a mixed mode. If mixed mode is selected upwards pitch bend is sent and downwards the select midi cc.
- **Shift+Track** - Turn off/on VU meters.
- **Browse** - Enters Preset selection mode for a device. If no device is selected the browser is opened to add a device.
- **Add Track**: Adds a new instrument track
- **Shift+Add Track**: Adds a new effect track
- **Select+Add Track**: Adds a new audio track
- **Add Device** (Push 2) / **Add Effect** (Push 1): Add a device after the currently selected one
- **Shift+Add Device** (Push 2) / **Shift+Add Effect** (Push 1): Add a device before the currently selected one
- **Shift+User** (Push 1) / **Setup** (Push 2): Adjust some hardware settings like pad sensitivity. Also configurable in the script settings.
- **Repeat**: Toggles note repeat. Long press to enter Note Repeat Mode to configure the note repeat settings.
- **Repeat + Scene**: Changes note repeat period.
- **Shift + Note Repeat + Scene**: Changes note repeat note length
- **Accent** - If active, velocity is always max in Sequencer and Play modes. Long press Accent to change fixed accent value.
- **Scale**: De-/Activates the Scale mode
- **Layout** (Push 2): Layout button steps through the play or sequencer modes (depending on which type is active). **Shift+Layout** button toggles between play and sequencer modes.

4.3   Edit Modes

- Hold Delete and Touch Encoder to reset a value to its default value in all modes.
- Since the Push 2 is missing the buttons Volume and Pan & Send use the navigation knobs above the display. Since you loose the Mute/Solo buttons for the navigation long press Mute or Solo for the same behavior as with Push 1. You can also lock that functionality by pressing **Shift+Mute** or **Shift+Solo**. Press the same combination to unlock it.
- Press the Duplicate button and one of the Track-Select buttons to duplicate a track.
- In all track modes, hold the Select button to enter the track details mode. In this mode you can set different states like enable, solo, mute, rec arm, monitor and change the color of the track. If you currently have a layer selected this brings up a similar view to edit the states of the layer. Furthermore, the note insert/edit MIDI channel can be selected in this mode.
- Push 2: Hold Shift to access the Send 4 and 8 mode.

1. **Volume** - Push 1: Press "Volume" to enter - Push 2: Press "Mix" and "Volume" above the display
   - 8 edit knobs: Change volume of selected 8 tracks. Hold **Shift** for fine adjustments.
   - 1st 8 button row: Press to select a track, press again to enter a group. To rec arm a track, keep the record button pressed and select the channel (first button row). Use in combination with the

Delete button to delete a track. Long press a button to leave a track group.
- **Toggle monitor and auto monitor**: Keep pressed Select. First row toggles Monitor, second row Auto Monitor.
- **De-/activate a track**: Select+Shift+1st button row.
- 2nd 8 button row: Toggle mute or solo of track, dependent of Mute or Solo button selection
- Left/Right arrows: Select next/previous track
- Shift+Left/right arrows: Select next/previous track bank

2. **Crossfader** - Push 1: Press "Volume" twice to enter - Push 2: Press "Mix" and "Crossfader" above the display
   - 8 edit knobs: Change crossfader setting of selected 8 tracks.
   - Buttons behave as above.

3. **Pan & Send** - Push 1: Press "Pan & Send" to enter (press multiple times to switch between the 7 modes) - Push 2: Press "Mix" and "Send X" above the display. Toggle between the Sends 1-4 and 5-8.
   - 8 edit knobs: Change pan/send1-6 of selected 8 tracks. Hold **Shift** for fine adjustments.
   - Buttons behave as above.

4. **Track** - Press "Track" (Push 1) or "Mix" (Push 2) to enter (press twice to toggle between normal and effect tracks)
   - 8 edit knobs: Change volume/pan/crossfader/Send1-5 of selected track. Hold **Shift** for fine adjustments.
   - Buttons behave as above.

5. **Clip** - Press "Clip" to modify clip properties
   - Loop, Play range, Shuffle and Accent
   - Other buttons behave as above.

6. **Device** - Press "Device" to enter
   - Buttons of 1st row select the device or the parameter banks. Use in combibation with the Delete button to delete a device.
   - 1st button on 2nd row in device modes dis-/enables device (button above display on Push 2).
   - 7th button on 2nd row in device modes displays VST window or pop-out window of specific Bitwig devices (button above display on Push 2).
   - 8th button on 2nd row in device modes moves up to tracks.
   - To navigate groups, layers and devices press now the respective first row button. Long press any of the first row buttons to move up the hierarchy again.
   - 8 edit knobs: Change 8 parameters of the selected device (FX). Hold **Shift** for fine adjustments. Hold the delete key and touch a knob to reset its value.
   - Left/Right buttons: Select next/previous device or parameter bank
   - Press Browse to select a different patch of the device. Hold the Shift button in Preset mode to scroll quickly.
   - Push 1: Use **Select+Volume/Pan/Track** buttons to activate the different layer modes. For Send modes press **Pan** multiple times.

7. **Browse** - Press "Browse" to enter (a device must be selected)
   - Edit knob 8: Change the patch
   - Edit knobs 1-7: Change the different filters
   - Tempo knob: Changes the value of the last selected column
   - Hold the Shift button in Preset mode to scroll quickly.
   - 1st button row: Select the previous patch/filter
   - 2nd button row: Select the next patch/filter
   - Use the arrow left and right to switch between the browser tabs
   - **Delete+touch knob**: Resets a filter to its default value
   - Press *Browse* again to Confirm the selection or *Shift+Browse* to Cancel.

8. **Master** - Press "Master" to enter
   - 8 edit knobs: Change volume, pan of master track and Cue Volume and Mix. Hold **Shift** for fine adjustments.
   - Dis-/Enable audio engine
   - Switch to the next/previous opened project with buttons 7 and 8.

9. **User** - Press "User" to enter Allows to map up to 64 user parameters divided into 8 pages with 8 parameters. Right click on any parameter in Bitwig and select *Map to controller*. After that move one of the knobs in user mode to complete the mapping. Mappings are stored with each project. IMPORTANT: Do not try to map any of the buttons below (or above) the display! Also do not map any other buttons or knob on the controller! This will create weird behaviour.
   - 8 edit knobs: Change value of a mapped parameter. Hold **Shift** for fine adjustments.
   - Left/Right buttons: Select next/previous parameter page
   - Buttons of 1st row select the parameter page.
   - Buttons of 2nd row select currently have no function.
   - User page names can be edited in the document settings.

4.4 Play Modes

4.4.1 Note Mode

Press *"Note"* and select *Play* to change to the Play view.

- The key layout is like running the Push with Ableton
- The Touchstrip (Ribbon) can be configured for different tasks. Call up the configuration mode with Shift+Touchstrip.
- Press *"Scales"* (keep pressed for temporary) to change the scales (Chromatic, Major, Minor, etc.) and the root note with the 16 buttons below the display. Press and keep the **Shift** button to change the scale layout.
- The played keys are lighting red if global or clip recording (does not work if recording clip is outside of the monitored 8x8 matrix)
- Use the Delete button in combination with a pad. This deletes all appearances of that note in the currently selected clip. Use with care since the notes you see lit might not come from the currently selected clip!

4.4.2 Chords Mode

Press *"Note"* and select *Chords* to change to the Chords view.

This mode allows to play a chord by pressing a single pad. The base note is taken from the current scale and increases from left to right. The same octave, scale and base note settings apply as with the play mode. The rows from bottom to top contain the following chords:

- Triads,
- Dyads (Powerchords),
- Suspended second (Sus2),
- Suspended fourth (Sus4),
- Add sixth (6),
- Major seventh chord (maj7),
- Add ninth (9),
- Add eleventh (11).

Other functions are identical to the Play view.

4.4.3 Piano Mode

Press *"Note"* and select *Piano* to enter **Piano** mode.

- Arranges the pads like a classic piano keyboard.
- The white lit pads are the white keys.
- The gray lit pads are the black keys.
- You get 4 octaves to play with.
- Other functions are identical to the Play view.

4.4.4 Drum 64 play mode

Press *"Note"* and select *Drum 64*.

This mode gives you 64 pads for playing a drum device. The 16 pads in the left lower area are the same as in the drum sequencer mode.

4.5 Session Mode

Press *"Session"* to enter **Session** mode. Keep button pressed to switch back to Note mode on release. This allows you to launch clips then release the Session button to jump straight back into Note mode.

Delete + Scene button (in Play, Piano, Drum 64, Session view) deletes the scene.

Hold *Browse* and select a pad to browse for clips.

All the buttons and knobs behave like in Play mode with the following exceptions:

- The buttons on the grid start/record the clips.
- Long press a pad to select the clip without starting it.
- If Select is pressed when pressing a pad it is only selected and not started.
- The 1/4 to 1/32t buttons start scenes.
- The arrow keys scroll the grid. Hold **Shift** to scroll in blocks of 8.
- Pressing Shift+1st row buttons returns to the arrangement for that track.
- Press the *Fixed Length* button to choose the length for new clips.
- Press *Clip* to display the current clip in the editor.
- The ribbon controls the crossfader. Press Shift and touch the Ribbon to center the crossfader.
- Press *Delete* + Pad In Session Mode to the delete the clip.

Press the Session button twice to flip the grid which then matches the arrangement view.

When in Session view and press Session again a menu turns up (like in note view) where you can select different views. The normal Session view, the flipped version and the Scene view. Use the Layout button on Push 2 to quickly step through these views. Furthermore, you can select the Marker and Clip mode.

4.6 Scene view

This view displays the first 64 scenes ready for jamming. The color of a scene uses the color of the first clip found in the scene (only checks in the first 8 tracks). **Delete + pad** deletes a scene.

4.7 Sequencers

4.7.1 Sequencer Functions common to all sequencers (except Raindrop)

- To navigate in a clip use the Page left/right (device in/out on Push 1) buttons.
- Note that you can scroll past the end of the clip (to the right).
- Press pads to enter/delete notes. The velocity of the pressed key is set as well.
- Change the note length or create long notes by pressing a note pad and then a pad right of it.
- To duplicate notes keep the Dulicate button pressed, select the source note, press empty destination pad(s). The note will be copied with all settings.
- Note starts and lengths are lit in different colors.
- Long press a pad which contains a note to edit the parameters of the note (except Poly Sequencer).
- Use the Scene buttons to change the grids resolution.

4.7.2 Note Sequencer

Press *"Note"* and select *Squencr* to enter **Sequencer** mode.

- The pads display an 8x8 view of the selected clips note grid.
- The rows represent the notes of the selected scale.

- Use Shift+Octave Up/Down to transpose by 1 step. Select+Octave transposes in 12 steps.

4.7.3 Poly Sequencer

Press *"Note"* and select *Poly Seq.* to enter **Poly Sequencer** mode:

- The lower half displays the playable notes like in the Note Mode
- Play one or more notes in that area
- Create a step in the upper part by pressing a pad. The step will contain the last notes you played in the lower part.

4.7.4 Drum Sequencer

Press *"Note"* and select *Drum* to change to the Drum Sequencer.

- The drum sequencer works as described in the Push manual.
- Note starts and lengths are lit in different colors.
- Hold *Delete* + Drumpad to delete the midi notes of the current clip on that 'pad'.
- Hold *Mute/Solo* button + Drumpad to mute/solo the drumpad.
- To make the display of mute/solo/exists states work, the primary device needs to be the drum machine (which is normally the case).
- Hold down the *Select* button while pressing a drumpad to select it without playing its sound. This also selects the according drum pad layer in the display.
- Press *Browser + Drum Pad* in Drum View and Drum 64 to open the browser.
- The Drumpads use the colors set in the drum machine for each pad.
- There are three additional drum sequencers. Press Shift in drum mode and use upper 4 scene buttons to change between the four modes. 2nd mode displays 4 drum sound, 3rd mode 8. Use the lower 4 scene buttons (while holding Shift) in 2nd mode to toggle between the drum sounds 1-4, 5-8, 9-12, 13-16. Use the lower 2 scene buttons in 3rd mode to toggle the drum sounds 1-8, 9-16. The fourth mode displays 64 drum pads.
- Use Octave Up/Down to move the pads by 16.
- Use Shift+Octave Up/Down to move the pads by 4.

4.7.5 Drum 4 and Drum 8 sequencer

Press *"Note"* and select *Drum 4* or *Drum 8*.

These drum sequencers show 4 or 8 drum sounds for sequencing. Use the Page buttons to move in the clip.

4.7.6 Raindrop sequencer

Press *"Note"* and select *Raindrp* to change to the Raindrop Sequencer.

- The lowest row displays the playable notes
- The row above a note starts a raindrop
- If the raindrop reaches the note it sounds
- Use Shift+Octave Up/Down to transpose by 1 step. Select+Octave transposes in 12 steps.

4.8 Program Change Mode

Press *"Note"* and select *PrgChang* to enter **Program Change** mode.

- Pads send program change
- Scene buttons switch banks
- Pressing scene button twice toggles 0-63 and 64-127.

4.9   Clip Mode

- The pads change the length of the currently selected clip loop
- This is the default view for audio tracks.

4.10   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

4.10.1   Session

- Session View: How/what to display on the grid
- Display scenes/clips: Display the names of scenes/clips in the display
- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.
- Display clips of record enabled tracks in red: if enabled, in the session view for record enabled tracks the empty pads are displayed in red.
- Action for pressing rec armed empty clip: what should happen if you press an empty clip in the session view.

4.10.2   Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record / automation: if enabled, the functionality of the Record and Automation button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

4.10.3   Play and Sequence

- Activate Fixed Accent: If a note is played the velocity is ignored and a fixed value is used.
- Fixed Accent Value: The velocity value to use when fixed accent is active.
- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.
- Default note view: The view should be the default when you select an instrument track.

4.10.4   Drum Sequencer

- Auto-select drum settings: If *channel* is selected and a drum pad is played the display switches to the layer settings of the drum cell.
- Turn off empty drum pads: Empty drum cells are displayed in orange. If enabled they pad LEDs are off.

4.10.5   Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- VU meters: The display of VU meters can be disabled with this option
- Footswitch 2: What action to execute if you press the 2nd footswitch (1st footswitch is always assigned to MIDI sustain).
- Stop automation recording on knob release: If you e.g. change the volume of a track for automation and release the knob, automation recording is automatically switched off.
- New clip length: The length of a clip created with the New function.
- Knob Speed Normal: Adjust the speed of the knobs
- Knob Speed Slow: Adjust the speed of the knobs when used with Shift for fine adjustments

4.10.6 Add Track - favorite devices

- Select your favorite devices for the *Add Track* menu.

4.10.7 Ribbon

- Mode: What the Ribbon should do
- CC: The MIDI CC command to send if CC is selected as the mode.
- Function if Note Repeat is active: Option to use the ribbon for note repeat (or always use the selected Mode).

4.10.8 Pads

- Sensitivty: Adjust the hardware sensitivity of the pads
- Gain: Adjust the hardware gain of the pads
- Dynamics: Adjust the hardware dynamics of the pads
- Convert Poly Aftertouch to: The pads support poly aftertouch. If the device you play does not support this option allows to change it to Channel Aftertouch or a MIDI CC command.

4.10.9 Browser

- Options to hide filter columns which are not used to easier spot the relevant ones

4.10.10 Hardware Setup

- Display brightness: Dims down the display
- LED brightness: Dims down the pad LEDs

4.10.11 Display Colors

- Reset colors to default: Sets all values to their defualt value
- Color options: Changes the color of different elements of the display graphics

4.10.12 Debug

These options are only for testing. Ignore them.

4.11 Document Settings

These settings are specific to each project.

4.11.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

4.11.2 Note Repeat

- Active: Enable note repeat
- Period: The repeat rate of the note repeat
- Length: The length of a repeated note
- Mode: The arpeggiator mode
- Octave: The octave range which is used by the arpeggiator

4.11.3   Play and Sequence

- MIDI Edit: Select the MIDI channel to use to display and edit MIDI notes in sequencers

4.11.4   Workflow

- User Page 1-8: Allows to set a name for the user parameter pages

5   Akai APC40 / APC40mkII

Support script for Akais' APC40 and APC40mkII controller.

5.1   Navigation

- **Play** - Start/Stop playback. Double click to move play cursor to start of song.
- **Shift+Play** - Toggle repeat
- **Stop** *only mkI* - Stop playback. Press again to move play cursor to start of the song. Double click to move play cursor to end of song.
- **Record** - Start/Stop recording
- **Shift+Record** - Creates a new clip on the selected track and slot, starts play and enables overdub.
- **Shift+Track selection buttons** - Select the length for new clips: 16 bars, 8 bars, 4 bars, 2 bars, 1 bar, 2 beats, 1 beat, 32 bars
- **Metronome** - Toggle metronome
- **Shift + Metronome** - Enable Metronome Ticks
- **Detail View** - Toggle plugin window (if any)
- **Shift+Detail View** - Step through the layout perspectives
- **Cue Level** - Move play cursor (press shift for finer adjustment)
- **Tap Tempo** - Tap Tempo
- APC40: **Tap Tempo + Cue Level** changes tempo.
- **Nudge+** - Redo
- **Nudge-** - Undo

5.1.1   Specifics for the Mk I

- **Midi Overdub** - Toggle launcher overdub.
- **Rec Quantization** - Quantize selected clip.

5.1.2   Specifics for the Mk II

- **Session** - Toggle launcher overdub
- **Shift + Session** - Enable automation write in clip launcher
- **Dev. Lock** - Quantize selected clip.
- **Shift + Dev. Lock** - Pin the cursor track and the cursor device.
- **Tempo** - Change the tempo. Keep Shift pressed for fine adjustment.

5.2   Device and Parameters

- **Device Knobs 1-8** - Change the currently selected 8 device parameters
- **Device On/Off** - Turn the selected device on/off
- **Clip/Track** - Toggles the devices panel

5.2.1   Devices - Specifics for the Mk I

- **Arrow left** - Select previous parameter bank of device
- **Arrow right** - Select next parameter bank of device
- **Shift+Arrow left** - Move focus to previous device
- **Shift+Arrow right** - Move focus to next device

5.2.2   Devices - Specifics for the Mk II

- **Device Arrow left** - Move focus to previous device or select previous layer if in layer mode
- **Device Arrow right** - Move focus to next device or select next layer if in layer mode
- **Shift+Device Arrow left** - Exit layer mode or a layer ("out")
- **Shift+Device Arrow right** - Enter layer mode or enter a layer ("in")

- **Bank Arrow left** - Select previous parameter bank of device
- **Bank Arrow right** - Select next parameter bank of device

5.3 Browser

- MkI: Press *Shift+Stop All Clips* button to open/close the browser.
- MkII: Press the *Bank* button to open/close the browser. To discard the patch selection press *Shift+Bank*.
- Navigate filter and result columns with the *Track Control knobs*.
- Cursor left/right: select the previous/next browser tab.
- Cursor up/Down: select the previous/next result item.

5.4 Tracks

- **8 faders** - Change volume of selected 8 tracks.
- Press Shift and move Volume Fader to move the fader to the current value of the matching track. On the screen you get information if you need to move it up or down.
- **Master fader** - Change volume of master fader
- **Activator buttons** - Un-/mute the specific track
- **Solo buttons** - Un-/solo the specific track
- **Record-arm buttons** - Press to arm the specific track for recording.
- **Shift+Mute, Shift+Solo** - Toggle monitor and auto monitor
- ****A|B buttons*** (on first version press Shift+RecArm) - Select channel A or B for crossfader.
- **Cursor right** - Move track bank focus 1 track up
- **Cursor left** - Move track bank focus 1 track down
- **Shift+Cursor right** - Move track bank focus 8 tracks up
- **Shift+Cursor left** - Move track bank focus 8 tracks down
- **Track selection buttons** - Select the specific track
- **Master button** - Select the master track
- **Shift+Master button** - Toggles between editing of normal and effect tracks.
- **Track control**
  - Press and hold **Sends/Send A** button and press **Track Select 1-8** to select the sends 1 to 8.
  - *only mkI* Press Shift+Send A/B/C to select the sends 4 to 6.

5.5 User mode - *only mkII*

- Press USER to select the user mode.
- **Device Knobs 1-8** - Change the mapped user parameter.
- **User+Select 1-8** - Select one of the 8 user pages.

5.6 Clip/scene control

- **Clip Stop** - Stop the clip on the specific track.
- **Shift+Clip Stop** - Returns to the arrangement of that track.
- **Stop all clips** - Press this button to stop all playing clips.
- **Scene launch buttons** - Start the specific scene
- **Cursor up** - Move scene focus 1 scene up
- **Cursor down** - Move scene focus 1 scene down
- **Clip launch** - The buttons on the grid start/record the clips.

5.7 Foot switches

- **Footswitch 1** - Sends sustain
- **Footswitch 2** *only mkI* - Creates a new clip on the selected track and slot, starts play and enables overdub.

But there is MUCH more! If you keep the Shift button pressed and press one of the five Scene Launch buttons you will change the main modes of the script:

- 1st button: Session mode - if already enabled toggles the birds-eye view
- 2nd button: Play mode, allows you to play notes in different scales
- 3rd button: Drum sequencer (as known from the Push) - Requires a selected midi clip
- 4th button: Note sequencer (as known from the Push) - Requires a selected midi clip
- 5th button: Raindrop sequencer - Requires a selected midi clip

5.8   Session Mode

- Press pad to start clip
- Long press a pad to select the clip without starting it.
- Press the **Stop Clip** button of the track and a pad to delete the clip.
- Press the **Select** button of the track and a pad to duplicate the clip.

5.9   Session Mode - Birds-eye-view

If Session Mode is already enabled select it again to toggle the birds-eye view. In this mode one pad represents a 8x5 area in the clip grid. Press a pad to quickly move to that area.

5.10   Play Mode

- *Grid* - Play notes in the currently selected scale.
- *Scene Launch button 1* - Selects the next Scale. The new scale is displayed on the computer screen.
- *Scene Launch button 2* - Selects the previous Scale. The new scale is displayed on the computer screen.
- *Scene Launch button 3* - Switch between Chromatic and In-Key.
- *Scene Launch button 4* - Transpose notes 1 octave up. The new key range is displayed on the computer screen.
- *Scene Launch button 5* - Transpose notes 1 octave down. The new key range is displayed on the computer screen.
- Press **Shift** and use the first two row buttons (arranged like a keyboard) to select the root note of the scale.

5.11   Sequencers

5.11.1   Drum Sequencer

- The drum sequencer works as described in the Ableton Push manual. The differences are:
  - Since the APCs have only 5 rows of clip buttons the selection/play grid has only 3 rows and the notes have only 2 rows.
  - The 4th drum row cannot be accessed
  - Use the measure bars to select unseen notes.
- *Clip Stop buttons* - Select the note resolution (displayed on computer screen)
- *Scene Launch button 4* - Transpose notes 1 block up. The new key range is displayed on the computer screen.
- *Scene Launch button 5* - Transpose notes 1 block down. The new key range is displayed on the computer screen.

Editing notes

Press the pad of an existing note and keep it pressed to edit the values of a note with the 8 mode knobs. The knobs edit the following parameters:

1. Duration (1/32 to 4 bars (128 * 32th))
2. Velocity
3. Release Velocity

4. Gain
5. Panorama
6. Pitch
7. Timbre
8. Pitch

Parameter 3 to 8 are only available with Bitwig.

5.11.2   Note Sequencer

- The pads display an 5x8 view of the selected clips note grid.
- The rows represent the notes of the selected scale.
- Note that you can scroll past the end of the clip (to the right).
- Press pads to enter/delete notes.
- Change note length or create long notes in the Sequencers (Note, Drum) by pressing a note pad and then a pad right of it.
- Use the Clip Stop buttons to change the grids resolution.
- *Scene Launch button 1* - Selects the next Scale. The new scale is displayed on the computer screen.
- *Scene Launch button 2* - Selects the previous Scale. The new scale is displayed on the computer screen.
- *Scene Launch button 3* - Switch between Chromatic and In-Key.
- *Scene Launch button 4* - Transpose notes 1 octave up. The new key range is displayed on the computer screen.
- *Scene Launch button 5* - Transpose notes 1 octave down. The new key range is displayed on the computer screen.
- Press **Shift** and use the first two row buttons (arranged like a keyboard) to select the root note of the scale.
- **Editing notes**, see the Drum Sequencer

5.11.3   Raindrop sequencer

- The lowest row displays the playable notes
- Pressing a pad in a row above a note start a raindrop
- If the raindrop reaches the note it makes the note sound
- *Clip Stop buttons* - Select the note resolution (displayed on computer screen)
- *Scene Launch button 1* - Selects the next Scale. The new scale is displayed on the computer screen.
- *Scene Launch button 2* - Selects the previous Scale. The new scale is displayed on the computer screen.
- *Scene Launch button 3* - Switch between Chromatic and In-Key.
- *Scene Launch button 4* - Transpose notes 1 octave up. The new key range is displayed on the computer screen.
- *Scene Launch button 5* - Transpose notes 1 octave down. The new key range is displayed on the computer screen.
- Press **Shift** and use the first two row buttons (arranged like a keyboard) to select the root note of the scale.

5.12   Functions in Shift mode

If you keep Shift pressed there are additional functions available on the pads of the 5th (top) row:

- 1st: Add instrument track
- 2nd: Add audio track
- 3rd: Add effect track
- 4th: Add device before
- 5th: Add device after
- 7th: Undo
- 8th: Redo

The 2 rows at the bottom represent a keyboard, which allows you to select the root note of the scale.

5.13 Preferences dialog

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

5.13.1 Play and Sequence

- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.

5.13.2 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.

5.13.3 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button

5.13.4 Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.

5.14 Document Settings

These settings are specific to each project.

5.14.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

6 Akai APCmini

Support script for Akais' APCmini controller. You can control track parameters, devices and session view.

6.1 Installation

If you added the controller manually, select the MIDI input without an extension (not: "EXT, DAW") and the USB connection (there should be only one option for that).

6.2 Features

For the basic usage see the APCmini manual. The differences are as follows:

- *Shift+Device* - Pressing multiple times toggles between Device and Macro editing.
- *Shift+Scene button 6* - Toggles between editing of normal and effect tracks.
- *Shift+Scene button 7* - Toggles VST window.

But there is MUCH more! If you keep the *Shift* button pressed the grid reveals more options:

- **Buttons in left upper corner** - These five buttons change the main modes of the script
    - 1st button: Session mode (the basic functionality)
    - 2nd button: Play mode, allows you to play notes in different scales
    - 3rd button: Drum sequencer (as known from the Push) - Requires a selected midi clip
    - 4th button: Note sequencer (as known from the Push) - Requires a selected midi clip
    - 5th button: Raindrop sequencer - Requires a selected midi clip
- *Buttons on the bottom** - These buttons form a 1 octave keyboard. Press one of the keys to select the base note of the current scale. Used for *Play*, *Rain* and *Note Sequencer* mode.
- **8th column buttons** (from to to bottom) - Transport control
    - Play/Stop
    - Record on/off
    - Toggle arrangement loop on/off
    - Toggle click on/off
- **7th column buttons** (from to to bottom) - Clip/global control
    - Create a new 1 bar clip
    - Toggle overdub recording on/off
    - Quantize
    - Undo
- **Buttons in the center of the Shift-page**
    - Select next / previous device with the two green buttons on the left.
    - Select next / previous device parameter bank with the two orange buttons on the left of the Shift-page.
    - The two red buttons in the middle change the scale.
    - Toggle in-key/chromatic with pad below the scale selection pads).
- *Shift+Cursor up* - Scrolls scene bank down (8 scenes)
- *Shift+Cursor down* - Scrolls scene bank up (8 scenes)
- *Shift+Cursor left* - Scrolls track bank down (8 tracks)
- *Shift+Cursor right* - Scrolls track bank up (8 tracks)

6.3 Browser Mode

Press *"Shift+Device"* twice to enter the browser mode for preset selection. It will only enter the mode if a device is currently selected.

- The first 6 columns of the grid relate to the first 6 columns of the preset browser.
- The 8th column (yellow) relates to the result (preset) column of the browser.
- The 1st row moves the selection up by 1.
- The 2nd row moves the selection up by 8.

- The 3rd row moves the selection down by 8.
- The 4th row moves the selection down by 1.
- The red button dismisses the new preset selection and closes the browser.
- The green button confirms the new preset selection and closes the browser.
- The yellow buttons of the 1st row are for previewing presets of instrument devices.

6.4   Session Mode

- Press pad to start clip
  - Yellow: Present clip
  - Green: Playing clip
  - Red: Recording clip
- Long press a pad in session mode to select the clip without starting it.
- **Track buttons** - Clip stop, solo, rec arm, mute or select

6.5   Play Mode

- *Grid* - Play notes in the currently selected scale. Yellow pads are the base notes.
- **Track buttons** - like in Session mode
- *Scene Launch buttons* - Top 2 buttons change the scale layout. 3rd button has no function. 4th and 5th button change the scale. 6th button toggles chromatic mode. 7th and 8th button change the octave.

6.6   Drum Sequencer

- The drum sequencer works as described in the Ableton Push manual.
- *Cursor up* - Move the note range up.
- *Cursor down* - Move the note range down.
- *Cursor left* - Decrease the edit page of the clip.
- *Cursor right* - Increase the edit page of the clip.
- *Scene Launch buttons* - Select the note resolution (displayed on computer screen)

6.7   Note Sequencer

- The pads display an 8x8 view of the selected clips note grid.
- The rows represent the notes of the selected scale.
- Note that you can scroll past the end of the clip (to the right).
- Press pads to enter/delete notes.
- Change note length or create long notes in the Sequencers (Note, Drum) by pressing a note pad and then a pad right of it.
- Use the Scene buttons to change the grids resolution.
- *Cursor up* - Move the note range up.
- *Cursor down* - Move the note range down.
- *Cursor left* - Decrease the edit page of the clip.
- *Cursor right* - Increase the edit page of the clip.

6.8   Raindrop sequencer

- The lowest row displays the playable notes
- The row above a note starts a raindrop
- If the raindrop reaches the note it sounds
- *Cursor up* - Move the note range up.
- *Cursor down* - Move the note range down.
- *Cursor left* - No function.
- *Cursor right* - No function.

6.9 Preferences dialog

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

6.9.1 Play and Sequence

- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.

6.9.2 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.

6.9.3 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button

6.9.4 Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.

6.9.5 Button Control

- Fader Ctrl: Select the function of the faders
- Soft keys: Select the function of the vertical buttons

6.10 Document Settings

These settings are specific to each project.

6.10.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

7   Akai Fire

Support script for Akai Fire controller.

7.1   Transport

- **Pattern/Song** - Toggle metronome
- **Shift + Pattern/Song** - Toggle metronome ticks
- **Play** - Start/Stop playback. Double click to move play cursor to start of song. You can configure the behavior on stop in the preferences.
- **Shift + Play** - Toggle repeat
- **Alt + Play** - Toggle Punch In
- **Alt + Shift + Play** - Toggle Punch Out
- **Stop** - Stop playback. If already stopped the play cursor is set to the start of the arranger timeline. Double click to move play cursor to the end of the arranger timeline.
- **Shift + Stop** - Toggle clip automation write
- **Alt + Stop** - Toggle arranger automation write
- **Record** - Start/Stop recording
- **Shift + Record** - Toggle launcher overdub
- **Alt + Record** - Creates a new clip on the selected track and slot, starts playback and enables overdub.

7.2   Knob Modes

In all modes use the knobs in combination with the Shift key for fine adjustments.

- **Bank button**: Select the next Knob mode
- **Shift + Bank button**: Select the previous Knob mode
- **Alt + Bank button**: If MIXER is active it switches to a new display mode, which shows the volume, pan and sends of 16 tracks depending on the touched knob. Especially, helpful in the performance mix view. If CHANNEL is active it shows the volume, pan and sends of the 4 drum machine channels depending on the touched knob. If playback is active and no knob is touched it shows the VU meter activity of all 16 tracks.

7.2.1   Channel Mode

Changes the parameters of the selected layer of the first instrument device on the channel. Has no effect if the device does not have layers. Especially useful, for drum devices.

- **Volume knob**: Change the layers volume
- **Pan knob**: Change the layers panorama
- **Filter knob**: Change the layers send 1
- **Resonance knob**: Change the layers send 2
- **Alt + Volume knob**: Change the layers send 3
- **Alt + Pan knob**: Change the layers send 4
- **Alt + Filter knob**: Change the layers send 5
- **Alt + Resonance knob**: Change the layers send 6

- **Alt + Select Knob**: Select the previous/next track. In addition you can press the knob while turning to switch between track pages (a page contains 16 tracks).

7.2.2 Track Mode

Change parameters of the currently selected track. Combine with **Shift** for fine adjustments.

- **Volume knob**: Change the tracks volume
- **Pan knob**: Change the tracks panorama
- **Filter knob**: Change the tracks send 1
- **Resonance knob**: Change the tracks send 2
- **Alt + Volume knob**: Change the tracks send 3
- **Alt + Pan knob**: Change the tracks send 4
- **Alt + Filter knob**: Change the tracks send 5
- **Alt + Resonance knob**: Change the tracks send 6
- **Alt + Select Knob**: Select the previous/next track. In addition you can press the knob while turning to switch between track pages (a page contains 16 tracks).

7.2.3 Mixer Mode

TODO

7.2.4 User 1 Mode (Device Mode)

Change parameters of the currently selected device. Combine with **Shift** for fine adjustments.

- **Volume knob**: Change the 1st device parameter
- **Pan knob**: Change the 2nd device parameter
- **Filter knob**: Change the 3rd device parameter
- **Resonance knob**: Change the 4th device parameter
- **Alt + Volume knob**: Change the 5th device parameter
- **Alt + Pan knob**: Change the 6th device parameter
- **Alt + Filter knob**: Change the 7th device parameter
- **Alt + Resonance knob**: Change the 8th device parameter
- **Alt + Select Knob**: Select the previous/next device.
- **Shift + Alt + Select Knob**: Select the previous/next parameter page.
- Press the **Select knob** to toggle the window of the current device.
- Activate delete mode and press the **Select knob** to delete the currently selected device.

7.2.5 User 2 Mode (User Mode)

Change user parameters. Combine with **Shift** for fine adjustments.

- **Volume knob**: Change the 1st user parameter
- **Pan knob**: Change the 2nd user parameter
- **Filter knob**: Change the 3rd user parameter

- **Resonance knob**: Change the 4th user parameter
- **Alt + Volume knob**: Change the 5th user parameter
- **Alt + Pan knob**: Change the 6th user parameter
- **Alt + Filter knob**: Change the 7th user parameter
- **Alt + Resonance knob**: Change the 8th user parameter
- **Alt + Select Knob**: Select the previous/next user parameter page (1-8).

7.3 Pad Modes

The play and sequencer modes are selected with the **Step**, **Note** and **Drum** buttons. All of the three buttons have two modes. Press the button again when selected to call up the second mode. The buttons can also be used in combination with Shift and have then the following functions:

- **Shift + Step** - Toggle Accent on/off. If enabled, the velocity of the pads is ignored and the accent value, which can be configured in the settings, is used instead.
- **Shift + Note** - Toggle through Record Quantisation setting values
- **Alt + Note** - Quantise the selected clip
- **Shift + Perform** - Toggle the birdseye view of the session

Changing the tempo:

- **Shift + Drum** - Tap tempo
- **Drum + Select knob** - Change tempo in steps of 1
- **Drum + Select + Select knob** - Change tempo in steps of 10
- **Drum + Shift + Select knob** - Change tempo in steps of 0.01
- **Drum + Shift + Select + Select knob** - Change tempo in steps of 0.1

The following functions are available in all modes:

- **Pattern up/down**: Select the next/previous clip of the currently selected track
- **Alt + Pattern down**: Undo
- **Alt + Pattern up**: Redo

7.3.1 Note Sequencer Mode

Press the **Step** button to activate. The STEP LED is lit orange.

- **Select Knob**: Move the note range up/down
- **Grid buttons**: Move to the previous/next page of the clip
- **Alt + Grid buttons**: Change the step resolution
- **Shift + Grid buttons**: Change the Scale
- **Shift + Alt + Grid buttons**: Change the Scale Base key
- **Shift + Select knob**: Transpose notes of clip up/down

To change the other scale settings switch to the Play Mode and change it there.

- **Mute/Solo 1** (from top): Stop playing clip of selected track
- **Mute/Solo 2**: Toggle Mute of selected track
- **Mute/Solo 3**: Toggle Solo of selected track
- **Mute/Solo 4**: Toggle Record Arm of selected track

To edit a note, press the pad with the note (and keep it pressed) and then turn the knobs:

- **Volume knob**: Changes the gain of the note
- **Pan knob**: Changes the panorama of the note
- **Filter knob**: Changes the duration of the note
- **Resonance knob**: Changes the velocity of the note

- **Select knob**: Changes the pitch of the note

7.3.2   Poly Sequencer Mode

Press the **Step** button twice to activate. The STEP LED is lit red.

The buttons behave as with Note Sequencer. Play a chord in the lower part then enable steps in the upper chord which will be filled with the played chord.

To change the other scale settings switch to the Play Mode and change it there.

7.3.3   Play Mode

Press the **Note** button to activate. The NOTE LED is lit orange.

- **Select Knob**: Move the note range one octave up/down
- **Grid buttons**: Toggle Chromatic / In Scale
- **Shift + Grid buttons**: Change the Scale
- **Alt + Grid buttons**: Change the Scale Layout
- **Shift + Alt + Grid buttons**: Change the Scale Base key
- **Mute/Solo 1-4**: Same as in Note Sequencer mode

7.3.4   Piano Mode

Press the **Note** button twice to activate. The NOTE LED is lit red. The grid buttons form a piano style keyboard. The *black keys* are in the color of the selected track. The functions are the same as described for the Play mode but the scale settings do not apply.

7.3.5   Drum 4 Sequencer Mode

Press the **Drum** button to activate. The DRUM LED is lit orange.

- **Select Knob**: Move the note range up/down
- **Grid buttons**: Move to the previous/next page of the clip
- **Alt + Grid buttons**: Change the step resolution
- **Mute/Solo 1-4**: Mute the drum sound of the row
- **Shift + Mute/Solo 1-4**: Solo the drum sound of the row
- **Alt + Mute/Solo**: Display the drum sounds name in drum sequencer mode

Editing a note works like in the note sequencer.

7.3.6   Drum 64 Mode

Press the **Drum** button twice to activate. The DRUM LED is lit red.

64 drum sounds can be played.

- **Select Knob**: -
- **Grid buttons**: -
- **Mute/Solo 1-4**: -

7.3.7   Session Mode

Press the **Perform** button to activate. The PERFORM LED is lit orange.

- Long press a pad in session mode to select the clip without starting it.
- **Select Knob**: Scroll to the previous/next scene. In addition you can press the knob while turning to switch .between scene pages (a page contains 4 scenes).
- **Grid buttons**: Select the previous/next page of the track bank.
- **Mute/Solo 1-4**: Start Scene 1-4; the LED is lit if the scene is selected.

- **Shift + Mute/Solo 1-4** Selects the scene without starting it.
- **Alt + Mute/Solo 1-4**: Stop all playing clips.

Use **Shift + Perform** to toggle the birdseye view of the session. In this view a pad represents a block of 16x4 tracks/clips. Press a pad to move the view to that range.

7.3.8 Mix Mode

Press the **Perform** button twice to activate. The PERFORM LED is lit red.

- **Select Knob**: Select the previous/next track. In addition you can press the knob while turning to switch between track pages (a page contains 16 tracks).

- **Grid buttons**: Select the previous/next page of the track bank

- **Mute/Solo 1** (from top): -

- **Mute/Solo 2**: Turn off mute on all tracks; the LED is lit red if there is at least one muted track

- **Mute/Solo 3**: Turn off solo on all tracks; the LED is lit green if there is at least one soloed track

- **Mute/Solo 4**: -

7.3.9 Shift Mode

If you press the Shift button (and keep it pressed) the grid changes to the Shift mode.

In the first 2 4x4 blocks the note *repeat settings* can be configured:

- The left/top button dis-/enables note repeat
- The buttons 3 and 4 in the top row select the arpeggiator modes
- All other buttons in the first block select the number of octaves
- The first to columns in the second block select the period length
- The remaining two columns in the second block select the note length

The other buttons have the following functions:

- With the bottom row of the 3rd and 4th block the length of new clips are selected (which can be created with Alt+Record).
- The 10th button of the first row (blue) activates duplicate mode. Can be used with the first row of the Mix mode to duplicate tracks and with clips in the Session mode.
- The 11th button of the first row (green) doubles the content of the currently selected clip.
- The 12th button of the first row (red) activates delete mode. Can be used with the first row of the Mix mode to delete tracks and with clips in the Session mode.
- The three buttons in the upper right corner create new Instrument, Audio and Effect tracks.

The Mute/Solo buttons have the following functions:

- **Mute/Solo 1** (from top): Undo
- **Mute/Solo 2**: Redo
- **Mute/Solo 3**: Quantize
- **Mute/Solo 4**: -

7.3.10 Browser Mode

You can use the browser to add devices, switch presets and select sounds for the drum machine.

You can activate the browser in different ways, depending on the use-case:

- **Browser**: Activates the browser mode to exchange the currently selected device or select a different preset for the device.
- **Shift + Browser**: Activates the browser mode to insert a device *before* the currently selected one.
- **Alt + Browser**: Activates the browser mode to insert a device *after* the currently selected one.

- **Browser + Pad**: If the drum sequencer is active and the Bitwig drum machine is loaded in the selected track you can exchange the sound of one of the drum machine pads by keeping the browser button pressed and pressing any of the grid pads. The sound of the row which contains the pressed pad will be exchanged.

The browser is used in the same way no matter how you opened it:

- **Knobs 1-4**: Change the filter value of the respective filter column
- **Alt + Knobs 1-3**: dito, for column 5-7
- **Select Knob**: Choose a new result item. If you keep the knob pressed while turning the knob you switch sounds in steps of 3.
- **Grid left/right**: Change the browser pane (Devices, Presets, . . .)

To close the browser and confirm the selection press either the select knob or the browser button. To discard the selection press **Alt + Browser**.

7.4   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

7.4.1   Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.
- Display clips of record enabled tracks in red: if enabled, in the session view for record enabled tracks the empty pads are displayed in red.
- Action for pressing rec armed empty clip: what should happen if you press an empty clip in the session view.

7.4.2   Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record: if enabled, the functionality of the Record button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

7.4.3   Play and Sequence

- Activate Fixed Accent: If a note is played the velocity is ignored and a fixed value is used.
- Fixed Accent Value: The velocity value to use when fixed accent is active.
- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.

7.4.4   Drum Sequencer

- Turn off empty drum pads: Empty drum cells are displayed in orange. If enabled they pad LEDs are off.

7.4.5   Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.

7.5   Document Settings

These settings are specific to each project.

7.5.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

7.5.2 Note Repeat

- Active: Enable note repeat
- Period: The repeat rate of the note repeat
- Length: The length of a repeated note
- Mode: The arpeggiator mode
- Octave: The octave range which is used by the arpeggiator

7.5.3 Play and Sequence

- MIDI Edit: Select the MIDI channel to use to display and edit MIDI notes in sequencers

8   Arturia Beatstep

Support script for Arturia's Beatstep controller. You can control track parameters incl. groups, devices, transport, browse patches, session view, play the pads and have a drum and note sequencer.

Known Issues: - The LEDs update unreliably on macOS and Linux

8.1   Installation

Load the respective template from the folder *resources/Beatstep* into the device by using Arturias Midi Control Center.

Make sure that the Global MIDI channel is set to 3.

8.2   Features

The buttons on the left are not usable for scripting since they do not send MIDI data. Luckily, I could facilitate the Shift button for an extended functionality. The Play and Stop button do send midi data but also start the internal sequencer which overwrites the knob colors. If you do not care about that problem you can use the hardware sequencer as well. For that there is a specific midi input to select in Bitwig.

The big knob is used to move the play cursor in the Arrange view. Warning: Don't use it in combination with the Shift button or you will (still) transpose the midi notes sent by the pads, which will make the pads act funny.

8.3   Shift-Mode (when the Shift button is pressed) - Mode change and Transport

The script provides several modes which you can switch when keeped the Shift button pressed and press one of the first 6 pads on the upper row.

The following lists display the functionality of the knobs and pads in the different modes. The first line is knob row 1, the second line knob row 2, the third line pad row 1 and finally the fourth line pad row 2.

8.4   Track (and Transport)

In this mode you can edit the parameters of the selected track (First 5 knobs of the first row and the first 6 buttons of the second row). To select a track use the first row of pads. 7th and 8th pad of the second row moves the track page up and down by 8. The other knobs and pads are for controlling the transport (play position and state) and tempo.

8.5   Device

In this mode you can edit the parameters of the selected device. The first knob is identical to the *Track mode*. The 2nd knob row edits the 8 parameters of the currently selected parameter page. To change the page use the first row of pads. To move the page bank up and down use the 7th and 8th pad of the second row. The second pad row allows to turn the device off/on, select the previous or next device, move *in* and *out* of layers and toggle between device parameters and direct parameters (useful for VSTs).

8.6   Play

This mode is for playing notes in a selected scale. The first knob and half of the second knob row is identical to the *Track mode*. The pads play the notes of the current scale and octave. The pads containing the root notes are coloured. The second row knobs 5 to 8 allows you to toggle between chromatic and scale mode, select the base note for the scale, the scale and the octave.

8.7 Drum Sequencer

This mode is for playing drum notes and drum sequencing. The first knob and half of the second knob row is identical to the *Track mode*. The sequencer uses the pads which form 16 steps. They have two modes which are toggled with the 8th knob of the 2nd row. The Play mode is for playing the notes, the last played note selects it for the step sequencer. The Sequencer mode allows to dis/enable each step of the selected note. The sequencer works on a clip. Therefore, you need to have a (playing) clip selected on the respective track. The 6th knob of the 2nd row changes the resolution of the grid (default is 16th notes). If you have more than 16 steps use the 5th knob to move between the different parts. The 7th knob changes the octave of the notes.

8.8 Sequencer

This mode is for playing notes and step sequencing. The first knob and half of the second knob row is identical to the *Track mode*. The usage is identical to the *Drum Sequencer* but respects the selected scale settings.

8.9 Session

This mode is for launch the 8 scenes of the current scene bank. The first knob and half of the second knob row is identical to the *Track mode*. Press the first row pads to launch one of the 8 scenes of the current scene bank. Use the pads 7 and 8 to move the scene bank by 8.

8.10 Patch Browser

This mode is for browsing patches of a device. The first knob row has no function and the second row corresponds to the columns of the browser. The blue pad accepts the selection, the red one discards it.

8.11 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

8.11.1 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.

8.11.2 Pads

- Convert Poly Aftertouch to: The pads support poly aftertouch. If the device you play does not support this option allows to change it to Channel Aftertouch or a MIDI CC command.

8.12 Document Settings

These settings are specific to each project.

8.12.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

9 Auto Color

This extensions allows to automatically assign a color to your tracks based on the tracks' name.

9.1 Installation

The *Auto Color* extension needs to be added manually. Open the controller settings and click on *Add controller*, select *Utilities*, and then *Auto Color* from the list.

9.2 Usage

The first parameter allows to turn auto-coloring on and off.

Below that there is a search string for each color. E.g. if you write *Bass* in the text field *Red*, all tracks, which contain the word *Bass* in their name will automatically be colored in red. For multiple search strings use a comma, e.g. I put "Drum,BD,Snare,HiHat,Crash" after blue to auto color all drum related tracks.

10   Generic Flexi

Supports any MIDI controller with 1 midi in-/output. You can assign several commands in Bitwig to the knobs, button, faders, etc. of your controller, which will then be readily available each time you start your DAW.

The Generic Flexi needs to be added manually. Open the controller settings and click on *Add controller*, select *Generic*, and then *Flexi* from the list. After that, select the input and output of your MIDI controller.

10.1   Installation

Linux: If the file dialogs to save/load do not work make sure you have *zenity* installed. To install zenity from the command line enter: sudo apt install zenity

10.2   Important notes

- Your settings are not automatically stored! Use *Save* (see below).
- MIDI notes are blocked when mapped
  - If you have selected *All* for the keyboard channel the note is blocked on all channels!
  - The blocked notes are only updated when loading a configuration or when switching between slots.
- Using CC as a target can only be used with VST plugins in Bitwig. It cannot be mapped with the Bitwig mapping system, which will always see the original MIDI command. Instead use User parameters.

10.3   Storing and loading a configuration

- In the **Load/Save section** click on the Save button, enter a file name and confirm the dialog to store the settings.
- Click on *Load* to load a configuration (make sure to *Save* your current configuration first).
- The last selected file (shown in the filename text field) will automatically be loaded when the DAW starts the next time.

10.4   Configuration

You have 200 slots to map buttons, knobs, faders, etc. to a function in your DAW. It is a good idea to save the settings to a file before you start to do any mapping, then regularily click on *Save* again.

To map your controller do the following:

1. Select the slot in which you want to put a mapping.

2. Next press a button, move a knob/fader or press a pad/key on your controller. You should see the transmitted MIDI command (CC, note, Program Change, Pitchbend or MMC (other MIDI data types are not supported)) that was sent by your controller. Alternatively, you can select the values manually.

3. Click the Set button to assign the received MIDI values to the selected slot.

4. Finally, select the function you want to assign from the various drop down lists. The special *mode commands* are explained below.

5. Select the next slot and continue with step 2. If you want to clear a slot, set the MIDI trigger type to "Off".

10.5   Parameters for each slot

Each slot has the following parameters:

- Type: MIDI status type, which triggers the function: CC, a note, program change command or pitchbend
- Number: The CC, note or Program change number, which should trigger the function (ignored for pitchbend)

- Midi Channel: The midi channel (1-16), on which the MIDI message should be accepted/received
- Resolution: High resolution of 14-bit is available for pitchbend (always) and CC messages below 32.
- Knob Mode: This option only applies to continuous functions like changing the volume of a track. Depending on the possibilities of your controller knob you need to choose the matching mode.
- Function: Choose a function from the different categories that should be executed, when the configured MIDI message is received.
- Send value to device: This option only applies to continuous functions like changing the volume of a track. If it is enabled, the current value is sent to the controller with the configured CC.

10.6   Features of Modes

10.6.1   Track Mode

- Set Item value 1-8: 1) Change Volume of selected track 2) Change Panorama of selected track 3-8) Change volume of Send 1-6
- Select Item 1-8: Select track 1-8 in the current bank page
- Select Next Item: Select the next track (if any)
- Select Previous Item: Select the previous track (if any)
- Select Next Item Page: Select the next page of the track bank
- Select Previous Item Page: Select the previous page of the track bank

10.6.2   Volume Mode

- Set Item value 1-8: Change Volume of track 1-8 in the current bank page
- Other controls are the same as in track mode

10.6.3   Panorama Mode

- Set Item value 1-8: Change Panorama of track 1-8 in the current bank page
- Other controls are the same as in track mode

10.6.4   Send 1-8 Mode

- Set Item value 1-8: Change Volume of the Send X of track 1-8 in the current bank page
- Other controls are the same as in track mode

10.6.5   Device Mode

- Set Item value 1-8: Change the value of parameter 1-8 in the current bank page
- Select Item 1-8: Select parameter page 1-8
- Select Next Item: Select the next device (if any)
- Select Previous Item: Select the previous device (if any)
- Select Next Item Page: Select the next page of parameters
- Select Previous Item Page: Select the previous page of parameters

10.6.6   Browser Mode

- Set Item value 1-8: Change the selection of filter 1-7, knob 8 changes the selected result
- Select Item 1-8: Select next item in filter columns 1-7 and result column
- Select Next Item: Select the next tab in the browser (if any)
- Select Previous Item: Select the previous tab in the browser (if any)
- Select Next Item Page: Confirm the browser selection and close the browser
- Select Previous Item Page: Discard the browser selection and close the browser

10.7   Configuring Program Banks

If the controller is a synthesizer (or only a synthesizer) you can configure Program Banks from which you can select Programs to send MIDI program changes to the synthesizer. This way you can select patches directly from the document settings in Bitwig (right hand pane).

The program banks are contained in a file which must be placed in the same directory as the properties file for the Flexi configuration. The difference is that the ending is *programs* instead of *properties*. E.g. if you created a setup *MatrixBrute.properties* you need to have a file *MatrixBrute.programs*. The **resources** folder of DrivenByMoss contains an example file (Example.programs).

For each bank in the file you need to have one line of the format

for example to have a bank named *Bank A*, which is addressed by MSB 0 and LSB 0 on MIDI channel 1, write:

After that up to 127 lines with program names can follow (you can have less).

10.8   Configure the keyboard / pads

If your controller has a keyboards or pads you can enable it by configuring the MIDI channel. The MIDI channel can also be turned off or set to all. If a MIDI note is mapped to a function on this MIDI channel, the note is blocked from being played.

The Modulation Wheel (CC 01), Sustain Pedal (CC 64) and Pitchbend can automatically be routed to your DAW. Turn them off if you want to map them to something else.

10.9   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

10.9.1   Slot

- Selected: The selected mapping slot to edit (1-200)

10.9.2   Selected Slot - MIDI trigger

This block configures the MIDI command, which needs to be received to trigger the function of this slot.

- Type: The type of MIDI command to trigger the command
- Number: The number of the MIDI command
- Midi Channel: The MIDI channel on which to receive the command
- Resolution: High resolution of 14-bit (16384 values instead of 128) is available for pitchbend (always) and CC messages below 32.
- Knob Mode: The encoding of the value sent by a knob, e.g. relative or absolute knobs
- Send value to device: Enable if value changes of the assigned function should be reflected back to the controller. Only works, if the controller uses the exact same command for sending and receiving.
- Send value to device when received: Sends back the received value to the controller. This is necessary to update button states on some controllers but can confuse others.

10.9.3   Selected Slot - Function

You can select only one function from the lists. If you select a function from a different list the previous list will be set to *Off*.

- Browser: Select a browser related function
- Clip: Select a clip related function
- Device: Select a device related function

- FX Track: Select an effect track related function
- Global: Select global commands
- Layout: Select layout related function
- Marker: Select a marker related function
- Master: Select a function which is related to the Master track
- MIDI CC: Sends a MIDI CC message to the DAW. This can also be used to transform a MIDI CC to a different one (e.g. Expression to Modulation)
- Modes: Select a mode related function. See the mode descriptions above.
- Note Input: Functions to control Note Repeat and Tranposition of the attached keyboard/pads.
- Scene: Select a scene related function
- Track: Select a track related function. The function *Toggle trackbank* allows to switch between the Instrument/Audio track bank and the Effect track bank.
- Transport: Select a transport related function
- User: Select a user parameter related function
- Action: Function to execute one of 8 actions. The 8 actions are selected below under *Options*

10.9.4 Use a knob/fader/button then click Set. . .

- Type, Number, Midi channel: Displays the received MIDI values
- Set: Press the button to assign the received MIDI command as the MIDI trigger for the currently selected mapping slot.

10.9.5 Load/Save

- Filename: An absolute path to the filename to automatically load when started.
- Save: Store the current configuration into the selected file.
- Load: Load the configuration from the selected file.

10.9.6 Keyboard / Pads

Changing these settings requires restarting the extension to make them active! If the connected device has a keyboard or pads, the following settings allow to configure it.

- Midi Channel: The MIDI channel on which the keyboard sends its data
- Route Modulation: Enable to send received MIDI modulation commands to the DAW. Disable if you use MIDI modulation as a slot trigger.
- Route Sustain: Enable to send received MIDI sustain commands to the DAW. Disable if you use MIDI sustain as a slot trigger.
- Route Pitchbend: Enable to send received MIDI pitchbend commands to the DAW. Disable if you use MIDI pitchbend as a slot trigger.

10.9.7 Options

- Selected Mode: The currently selected mode (if modes are used).
- Action 1-8: Select the DAW Action to execute if the functions Action 1-8 are used.

10.9.8 Workflow

- Knob Speed Normal: Adjust the speed of the knobs
- Knob Speed Slow: Adjust the speed of the knobs when used with Shift for fine adjustments
- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.

10.10 Document Settings

These settings are specific to each project.

10.10.1   Note Repeat

- Active: Enable note repeat
- Period: The repeat rate of the note repeat
- Length: The length of a repeated note
- Mode: The arpeggiator mode
- Octave: The octave range which is used by the arpeggiator

10.10.2   Program Banks

In this section configured program banks are displayed for selection. See *Configuring Program Banks* above.

11 Mackie HUI

Support script for the Mackie HUI protocol. While this extension supports the Mackie HUI protocol in general I could only test it with the following devices:

- icon QConPro X (in Pro Tools mode)
- Novation SLMkIII

In the following, the supported features are described. In brackets the names of the HUI buttons are noted which trigger the feature.

The settings dialog contains profiles for several devices, which sets the correct hardware settings.

11.1 Transport

- **«** (HUI REWIND) - Move the play cursor to the left.
- **»** (HUI FORWARD) - Move the play cursor to the right.
- **Repeat** (HUI LOOP) - Toggle repeat
- **Stop** (HUI STOP) - Stop playback. Press again to move play cursor to start of song. Double click to move play cursor to the end of the song.
- **Play** (HUI PLAY) - Start/Stop playback. Double click to move play cursor to start of song.
- **Shift (HUI SHIFT) + Play** - Toggle repeat
- **Option (HUI OPTION) + Play** - Toggle Punch In
- **Option + Shift + Play** - Toggle Punch Out
- **Record** (HUI RECORD) - Start/Stop recording
- **Shift + Record** - Toggle launcher overdub
- **Jog Wheel** - Move play cursor (press **Shift** for fine adjustment)
- **Scrub** - Toggles between Track and Device editing mode
- **Arrow left, right, up, down** - Like pressing the arrow keys on the computer keyboard
- **Zoom** - If active, the arrow buttons left/right zoom the arranger horizontally. The up/down arrows both toggle the height of the track.
- **Metronome** (HUI PRE) - Toggle metronome
- **Tap Tempo** - (HUI POST) - Executes Tap Tempo
- **Quick Punch** - (HUI QICK PUNCH) - Toggle Punch In
- **In** - (HUI IN) - Toggle Punch In
- **Out** - (HUI OUT) - Toggle Punch Out
- **Audio Engine** (HUI ON LINE) - Toggle Audio Engine on/off for current project
- **Return to Zero** (HUI RETURN TO ZERO) - Return the play cursor to the start of the arranger

11.2 Buttons

11.2.1 Functions

- **Shift** (HUI SHIFT) - Use in combination with other buttons for additional functions.
- **Option** (HUI OPTION) - Use in combination with other buttons for additional functions.
- **F1-F8** (HUI F1-F8) - Functions for these buttons can be assigned in the settings dialog.
- **Undo** (HUI UNDO) - Undos the last action
- **Shift+Undo** - Redos the last undone action

11.2.2 Assignment

- **Pan** (HUI MODE PAN) - Select the Panorama edit mode. See the section **Edit Modes** below.
- **Send A-E** (HUI MODE SEND A-E) - Select the Send edit mode A-E.

11.2.3 Automation

- **Read/Off** (HUI READ) - Disables arranger automation recording.

- **Write** (HUI WRITE) - Enables arranger automation recording and sets it to Write mode.
- **Trim** (HUI TRIM) - Since Bitwig has not Trim mode, this button toggles the clip automation recording.
- **Touch** (HUI TOUCH) - Enables arranger automation recording and sets it to Touch mode.
- **Latch** (HUI LATCH) - Enables arranger automation recording and sets it to Latch mode.

11.2.4   Utilities

- **Note Editor** (HUI WINDOW EDIT) - Toggles the display of the note editor pane
- **Automation Editor** (HUI WINDOW TRANSPORT) - Toggles the display of the automation editor pane
- **Toggle Device** (HUI WINDOW STATUS) - Toggles the display of the device pane
- **Shift+Toggle Device** - Toggles the display of a plugin window
- **Mixer** (HUI WINDOW MIXER) - Toggles the display of the mixer pane
- **Save** (HUI SAVE) - Save button saves the current project

11.2.5   Fader Controls

- **|<** (HUI TRACK LEFT) - Select the previous track.
- **>|** (HUI TRACK RIGHT) - Select the next track.
- **« 8** (HUI BANK LEFT) - Move track bank focus 8 tracks up.
- **8 »** (HUI BANK RIGHT) - Move track bank focus 8 tracks down.

11.3   Edit Modes

11.3.1   Common functions in all modes

- **Record-arm buttons** (HUI ARM1-8) - Press to arm the specific track for recording.
- **Mute buttons** (HUI MUTE1-8) - Un-/mute the specific track
- **Solo buttons** (HUI SOLO1-8) - Un-/solo the specific track
- **Track selection buttons** (HUI SELECT1-8) - Select the specific track.
- **Shift+Solo** - Toggle auto monitor
- **Shift+Mute** - Toggle monitor
- **8 faders** (HUI FADER_TOUCH1-8) - Change volume of selected 8 tracks. Touching a fader automatically selects the track.
- **Press knob** (HUI VSELECT1-8) - Resets the current parameter to its default value.

11.3.2   Panorama edit mode

Press *Pan* to enter.

- **8 knobs** - Change the panorama of that channel.

11.3.3   Send 1 - 8 edit mode

Press *Send* to enter. Press multiple times to select the Send channels 1 to 8. Use in combination with the **Track select** buttons to select the respective Send channel 1-8.

- **8 knobs** - Change the volume of send of that channel.

11.4   Foot switches

- **Footswitch 1** (HUI FOOTSWITCH A) - Function be assigned in the settings dialog.
- **Footswitch 2** (HUI FOOTSWITCH B) - Function be assigned in the settings dialog.

11.5   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

11.5.1 Hardware Setup

- Profile: This list contains some presets to setup the following hardware settings. If one of the controllers from the list is connected select the acoording entry from the list.
- Has a display: Enable if the HUI compatible controller has a display.
- Has a position/tempo: Enable if the HUI compatible controller has an additional position display.
- Has motor faders: Enable if the HUI compatible controller has motor faders.
- VU meters: Enable if the HUI compatible controller supports the display of VU values.

11.5.2 Assignable buttons

- Footswitch 1/2: Select a function to execute when the first/second footswitch is pressed
- F1-F8: Select a function to execute when the respective function key is pressed

11.5.3 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button

11.5.4 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- Zoom: If enabled, cursor keys are used for zooming in the arranger.
- Select Channel on Fader Touch: The channel to which the touched fader belongs is selected if this option is enabled.

12 Mackie MCU

Support script for the Mackie MCU protocol. While this extension supports the Mackie MCU protocol in general I could only test it with the following devices:

- Behringer X-Touch One
- Mackie MCU Pro
- icon QConPro X - Select the Bitwig mode and use the Bitwig overlay!
- icon Platform M/M+ with extender
- Zoom R16

In the following the supported features are described. In brackets the names of the MCU buttons are noted which trigger the feature.

12.1 Configuration

The settings dialog contains profiles for several devices, which sets the correct hardware settings. If your device is not listed make sure you configure the hardware settings manually to match your device.

12.1.1 Parameter page changes X-Touch One

In device mode the FADER BANK left/right buttons change the devices, while the CHANNEL left/right buttons change single parameters of the current bank page. To also be able to switch parameter pages, you can sacrifice 2 buttons, e.g. F1 and F2:

1. Press Stop + Press the edit knob to enter the configuration mode
2. Make sure that you have selected the "MCU user" mode.
3. Keep F1 pressed and select "CHAN <" with the edit knob.
4. Keep F2 pressed and select "CHAN >" with the edit knob.
5. Press the edit knob 3 times to leave configuration mode

F1 will now select the previous page, and F2 the next.

12.2 Transport

- **Play** (MCU PLAY) - Start/Stop playback. Double click to move play cursor to start of song.
- **Shift (MCU SHIFT) + Play** - Toggle repeat
- **Option (MCU OPTION) + Play** - Toggle Punch In
- **Option + Shift + Play** - Toggle Punch Out
- **Punch in** (MCU F6) - Toggle punch in
- **Punch out** (MCU F7) - Toggle punch in
- **Record** (MCU RECORD) - Start/Stop recording
- **Shift + Record** - Toggle launcher overdub
- **Option + Record** - Creates a new clip on the selected track and slot, starts play and enables overdub.
- **«** (MCU REWIND) - Move the play cursor to the left.
- **»** (MCU FORWARD) - Move the play cursor to the right.
- **Repeat** (MCU REPEAT) - Toggle repeat
- **Stop** (MCU STOP) - Stop playback. Press again to move play cursor to start of song. Double click to move play cursor to the end of the song.
- **Jog Wheel** - Move play cursor (press **Shift** for fine adjustment)
- **Option + Jog Wheel** - Change tempo (press **Shift** for fine adjustment)
- **Scrub** - Toggles between all editing mode
- **Arrow left, right, up, down** - Like pressing the arrow keys on the computer keyboard
- **Zoom** - If active, the arrow buttons left/right zoom the arranger horizontally. The up/down arrows both toggle the height of the track.
- **Nudge** - Executes Tap Tempo

12.3 Buttons

12.3.1 Display Mode

- **Display Mode** - Toggles the display of the track names in the 1st display.
- **Tempo/Ticks** - Toggle content of segment display. The last 3 digits toggle between ticks or the song tempo.
- **Global View (MCU EDIT)** - Toggle VU meters on/off
- **Aux (MCU AUX)** - Switches to Arrange layout.
- **Busses (MCU BUSSES)** - Switches to Mix layout.
- **Outputs (MCU OUTPUTS)** - Switches to Edit layout.
- **Shift+Track selection buttons** - Select the length for new clips: 16 bars, 8 bars, 4 bars, 2 bars, 1 bar, 2 beats, 1 beat, 32 bars

12.3.2 Functions

- **Shift** (MCU SHIFT) - Use in combination with other buttons for additional functions.
- **Option** (MCU OPTION) - Use in combination with other buttons for additional functions.
- **F1-F5** (MCU F1-F5) - Functions for these buttons can be assigned in the settings dialog.
- **Device On/Off** (MCU F8) - Toggle device on/off
- **Undo** (MCU UNDO) - Undos the last action
- **Shift+Undo** - Redos the last undone action

12.3.3 Assignment

- **Track** (MCU MODE IO, TRACK) - Select the Track edit mode. Press again to select the Volume edit mode. See the section **Edit Modes** below.
- **Option + Track** - Pin cursor track
- **Pan** (MCU MODE PAN/SURROUND) - Select the Panorama edit mode. See the section **Edit Modes** below.
- **Send** (MCU MODE SENDS) - Select the Send edit mode. Press multiple times to select the Send channels 1 to 8. See the section **Edit Modes** below. Use in combination with the **Track select** buttons to select the respective Send channel 1-8. Use **Shift+Send** to move backwards.
- **Device** (MCU DEVICE, PLUG-IN) - Select the Device edit mode. Press again to select User mode. See the section **Edit Modes** below.
- **Option + Device** - Pin cursor device
- **Page Up** (MCU MODE EQ) - Move track bank focus 1 track up. If Device mode is active, the previous device parameter bank is selected.
- **Page Down** (MCU MODE DYN, INSTRUMENT) - Move track bank focus 1 track down. If Device mode is active, the next device parameter bank is selected.

12.3.4 Automation

- **Read/Off** (MCU READ) - Disables arranger automation recording.
- **Option + Read/Off** - Resets any automation overrides.
- **Write** (MCU WRITE, MCU GROUP) - Enables arranger automation recording and sets it to Write mode.
- **Trim** (MCU TRIM) - Since Bitwig has not Trim mode, this button toggles the clip automation recording.
- **Touch** (MCU TOUCH) - Enables arranger automation recording and sets it to Touch mode.
- **Latch** (MCU LATCH) - Enables arranger automation recording and sets it to Latch mode.

12.3.5 Utilities

- **Note Editor** (MCU MIDI TRACKS) - Toggles the display of the note editor pane
- **Automation Editor** (MCU INPUTS) - Toggles the display of the automation editor pane
- **Toggle Device** (MCU AUDIO TRACKS) - Toggles the display of a plugin window

- **Shift+Toggle Device** - Toggles the different layouts
- **Mixer** (MCU AUDIO INSTRUMENT) - Toggles the display of the mixer pane
- **Browser** (MCU USER) - Starts the browser to browse for presets
- **Shift+Browser** - Starts the browser to insert a new device before the current one
- **Option+Browser** - Starts the browser to insert a new device after the current one
- **Metronome** (MCU CLICK) - Toggle metronome
- **Shift + Metronome** - Toggle Metronome Ticks
- **Shift + Masterfader** - Changes Metronome Volume
- **Groove** (MCU SOLO) - Dis-/Enable the Groove
- **OVR** (MCU REPLACE) - Toggle arranger overdub
- **Shift+OVR** - Toggle launcher overdub
- **Save** (MCU SAVE) - Save button saves the current project
- **Marker** (MCU MARKER) - Toggles the display of markers in the arranger
- **Drop** (MCU DROP) - Duplicate (depending on the focus)

12.3.6 Fader Controls

- **Lock** (Not on MCU) - Locks the faders.
- **Flip** (MCU FLIP) - Toggles **Use faders like knobs** option.
- **Shift+Flip** - Toggles between Instrument/Audio/Hybrid tracks and the Effect tracks.
- **Cancel** (MCU CANCEL) - Cancels browsing when the Browser is active, otherwise like pressing the Escape key on the computer keyboard.
- **Enter** (MCU ENTER) - Confirms browsing when the Browser is active, otherwise like pressing the Enter key on the computer keyboard.
- **|<** (MCU BANK LEFT) - Move track bank focus 8 track up. If Device mode is active, the previous device parameter bank is selected.
- **>|** (MCU BANK RIGHT) - Move track bank focus 8 track down. If Device mode is active, the next device parameter bank is selected.
- **« 8** (MCU TRACK LEFT) - Move track bank focus 1 tracks up. If Device mode is active, the previous device is selected.
- **8 »** (MCU TRACK RIGHT) - Move track bank focus 1 tracks down. If Device mode is active, the next device is selected.

12.4   Edit Modes

12.4.1   Common functions in all modes

- **Record-arm buttons** (MCU ARM1-8) - Press to arm the specific track for recording.
- **Mute buttons** (MCU MUTE1-8) - Un-/mute the specific track
- **Solo buttons** (MCU SOLO1-8) - Un-/solo the specific track
- **Option + one of the Mute buttons**: Deactivate all mutes
- **Option + one of the Solo buttons**: Deactivate all solos
- **Track selection buttons** (MCU SELECT1-8) - Select the specific track.
- **Send (MCU MODE SENDS) + Track selection buttons** - Select the send channel 1-8.
- **Shift + Track selection buttons** - Set the length of a new clip.
- **Option + Track selection buttons** - Stop the playing clip on the specific track.
- **Shift+Solo** - Toggle auto monitor
- **Shift+Mute** - Toggle monitor
- **8 faders** (MCU FADER_TOUCH1-8) - Change volume of selected 8 tracks. Touching a fader automatically selects the track.
- **Master fader** (MCU FADER MASTER) - Change volume of master fader. Touching the fader selects the master track.
- **Press knob** (MCU VSELECT1-8) - Resets the current parameter to its default value.

12.4.2 Track edit mode

Press *Track* to enter.

- **8 knobs** - Change the volume, panorama, crossfader and Send 1-5 of the selected track. Hold **Shift** for fine adjustments.
- You can configure in the preferences that the crossfader option is hidden and you get 6 sends instead.

12.4.3 Volume edit mode

Press *Track* twice to enter.

- **8 knobs** - Change the volume of that channel. Hold **Shift** for fine adjustments.

12.4.4 Panorama edit mode

Press *Pan* to enter.

- **8 knobs** - Change the panorama of that channel. Hold **Shift** for fine adjustments.

12.4.5 Send 1 - 8 edit mode

Press *Send* to enter. Press multiple times to select the Send channels 1 to 8. Use in combination with the **Track select** buttons to select the respective Send channel 1-8.

- **8 knobs** - Change the volume of send of that channel. Hold **Shift** for fine adjustments.

12.4.6 Master edit mode

Touch the master fader to enter

- **1st knob** - Change the master volume. Press to reset.
- **2nd knob** - Change the master panorama. Press to reset.
- **knob 3-5** - Press to toggle the audio engine on/off for this project
- **7th knob** - Press to switch to the previous project.
- **8th knob** - Press to switch to the next project.

12.4.7 Devices edit mode

- **Device Knobs 1-8** - Change the currently selected 8 device parameters
- **|<** (MCU BANK LEFT) - If Device mode is active, the previous device parameter bank is selected.
- **>|** (MCU BANK RIGHT) - If Device mode is active, the next device parameter bank is selected.
- **« 8** (MCU TRACK LEFT) - If Device mode is active, the previous device is selected.
- **8 »** (MCU TRACK RIGHT) - If Device mode is active, the next device is selected.
- **Page Up** (MCU MODE EQ) - If Device mode is active, the previous device parameter bank is selected.
- **Page Down** (MCU MODE DYN, INSTRUMENT) - If Device mode is active, the next device parameter bank is selected.

12.4.8 User Parameter edit mode

- **Device Knobs 1-8** - Change the currently selected 8 user parameters.

12.4.9 Browser

- Press the *Browser* button to start
- Navigate columns with the *Track Control knobs.*
- Click the knobs to enter a filter or the results. Click again to confirm.
- To confirm a patch or device selection and close the Browser press the *Enter* button.
- To discard the patch selection press the *Cancel* button.

12.4.10 Marker

- Press the *Marker* button to start. If you do not have a marker button you can assign this command to a function button.
- Click the knobs to start the playback from a marker position.

12.5 Foot switches

- **Footswitch 1** (MCU USER A) - Function be assigned in the settings dialog.
- **Footswitch 2** (MCU USER B) - Function be assigned in the settings dialog.

12.6 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

12.6.1 Hardware Setup

- Profile: This list contains some presets to setup the following hardware settings. If one of the controllers from the list is connected select the acoording entry from the list.
- Has a display: Enable if the MCU compatible controller has a display.
- Has a second display: Enable if the controller has a second display, which supports the specific iCON protocol extension.
- Has a segment display: Enable if the MCU compatible controller has an additional segment display (for play position and tempo).
- Has a assignment display: Enable if the MCU compatible controller has an additional assignment display (to display to current mode).
- Has motor faders: Enable if the MCU compatible controller has motor faders.
- Has only 1 fader: Enables a specific handling of banks to support controllers with only 1 fader
- Display track names in 1st display: If enabled to 1st row of the 1st display the track names instead of the mode labels.
- Use vertical zoom to change tracks: If enabled, the up/down cursor keys in zoom mode can be used to select tracks
- Use faders like editing knobs: If enabled, the faders execute the same functions as the knobs. Handy for e.g. recording automation data.
- VU meters: Enable if the MCU compatible controller supports the display of VU values.
- Master VU Meter: Enable if the controller support the protocol extensions for VU values of the master fader.

12.6.2 Extender Setup

Select the type of the MCU compatible controller. The number of slots depends on which extension is chosen. Select *Main* for the main device, this enables the master fader as well as all additional commands like transport control. Select *Extender* if the device is an extender which uses the same MCU protocol as the main device. Select *MCU Extender* if the extender uses the original Mackie MCU extender protocol. It is possible to select multiple main devices. Changing these settings requires a restart of the extension.

12.6.3 Segment Display

- Display time or beats: If a segment display is present, selects to display time or beats (measures) of the play position.
- Display tempo or ticks: Select what to display with the last 3 digits

12.6.4 Tracks

- Include FX and master tracks in track bank: If enabled, all tracks are included in the track bank. Handy if the controller misses a master track or has no button to toggle between track banks.
- Pin FX tracks to last device: If enabled the FX track bank is created with a page of 8 fx tracks and is always displayed on the last (right most) controller. The page size of the instrument/audio track bank is reduced accordingly.

12.6.5 Assignable buttons

- Footswitch 1/2: Select a function to execute when the first/second footswitch is pressed
- F1-F5: Select a function to execute when the respective function key is pressed
- If *Action* is selected as the function, the field below allows to select the action to execute

12.6.6 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record / automation: if enabled, the functionality of the Record and Automation button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

12.6.7 Play and Sequence

- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.

12.6.8 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.
- Zoom: If enabled, cursor keys are used for zooming in the arranger.
- Select Channel on Fader Touch: The channel to which the touched fader belongs is selected if this option is enabled.
- Knob Sensitivity Default: Negative values slow the knobs changes down, positive values speed them up
- Knob Sensitivity Slow: Negative values slow the knobs changes down, positive values speed them up

12.6.9 Browser

- Options to hide filter columns which are not used to easier spot the relevant ones

13 Midi Monitor

Displays all midi information of the selected input device in the logging area of the extension console.

13.1 Installation

The *Midi Monitor* extension needs to be added manually. Open the controller settings and click on *Add controller*, select *Utilities*, and then *Midi Monitor* from the list.

13.2 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

13.2.1 Filter

- System Realtime: Filters System Realtime commands from the logging if enabled.

14   Native Instruments Komplete Kontrol 1 S25, S49, S61, S88

Provides support for the Native Instruments Komplete Kontrol controller Version 1.

14.1   Installation

Important: This implementation accesses the device directly via USB. This has several advantages but also disadvantages. On the positive side, you get useful information in the display, e.g. you can see track and parameter names and it works on Linux. On the negative side, the Komplete Kontrol integration cannot be used.

The device cannot be auto-detected and needs to be manually added. From the controller menu select *Native Instruments* and then *Komplete Kontrol Sxx mk I*, where xx is the number of keys of your specific device (25, 49, 61 or 88). As MIDI input select the *normal* Komplete Kontrol input (not the external (EXT) and not the DAW (DAW) one). For the USB port there should only be one option show up, select that one. If none shows up, there is an issue with the USB detection. In that case, try disabling the NI service and/or try different USB ports and cables. Explaining how to disable the NI hardware integration service would lead too far in this manual, search the web for a tutorial how to disable a system service on your OS.

14.1.1   Installation on Linux

Accessing USB requires root access. To run the Application as a normal user copy the file `99-userusbdevices.rules` to the folder `/etc/udev/rules.d/`. It gives the group **audio** access to the controller. Make sure that your user is a member of that group and the group does exist. A more in-depth explanation can be found here. After you have copied the file reboot your computer.

14.2   Global

- **SHIFT** - Use in combination with other buttons for additional functionality.
- **SCALE** - Activates the currently configured scale. The scale is only indicated by the LEDs above the keys, the keys always behave the same.
- **SHIFT+SCALE** - Enter scale configuration mode.
- **ARP** - Toggle Metronome.
- **SHIFT+ARP** - Toggle metronome ticks.
- **SHIFT+MAIN ENCODER** - Changes the volume of the master track.

14.3   Transport buttons

- **LOOP** - Toggle repeat
- **RWD (Rewind)** - Rewinds play cursor position until released.
- **SHIFT+RWD (Rewind)** - Slowly rewinds play cursor position until released.
- **FFW (Forward)** - Forwards play cursor position until released.
- **SHIFT+FFW (Forward)** - Slowly forwards play cursor position until released.
- **PLAY** - Start/Stop playback. Double click to move play cursor to start of song. You can configure the behaviour on stop in the preferences.
- **SHIFT+PLAY** - Create new clip, start playback and activate overdub
- **REC (Record)** - Start/Stop recording
- **SHIFT+REC** - Toggle launcher overdub
- **STOP** - Stop playback. Press again to move the playback cursor to the start of the arranger. Double click to move play cursor to the end of the song.

Use the page left and right buttons to switch modes.

14.4   Track mode

- Controls the volume, panorama and effect sends of the selected track.

- The most left display shows the name and the number of the selected track.
- Use the knobs to change a value.
- Change the selected track by 1 with the cursor left and right buttons or use the main encoder.
- Change the selected track by 8 with the cursor up and down buttons.
- **BACK** - Toggles mute on the selected track.
- **SHIFT+BACK** - Toggles monitor on the selected track.
- **ENTER** - Toggles solo on the selected track.
- **SHIFT+ENTER** - Toggles rec arm on the selected track.
- **MAIN ENCODER** - Toggles between instrument/audio bank and effect bank.

14.5   Volume mode

- Controls the volume of the displayed tracks.
- The most left display displays the number of the first and last displayed track.
- Use the knobs to change a volume.
- All other knobs and buttons behave like in the Track mode.

14.6   Device/Parameter Mode

- Controls the parameters of the currently selected device.
- The most left display displays the name of the selected device and the name of the selected parameter bank.
- Use the knobs to change a value.
- Change the parameter bank with the cursor left and right buttons or use the main encoder.
- Change to the next/previous device with the cursor up and down buttons.
- **BACK** - Toggles the on/off state of the device
- **ENTER** - Toggles the visibility of the parameters
- **MAIN ENCODER** - Toggles the display of the device window (if any) of the device

14.7   Browser Mode

Press the **BROWSE** button to open the browser for the selected device. If no device is selected the browser is opened to insert a new device on the selected track. Press **SHIFT+BROWSE** to insert a new device before the selected one.

- Use the main encoder to change the selection. Click the main encoder to display 16 items to select from. Click again to close.
- The first 7 columns display the filters. Touch a knob above a filter to select it. Use the main encoder to change the filter selection. Click the main encoder or touch any of the knobs to close the filter selection.
- **BROWSER / ENTER** - Commits/accepts the new selection and closes the browser
- **SHIFT+BROWSER / BACK** - Cancels the new selection and closes the browser
- Cursor left/right switches to the next / previous browser tab

14.8   Scale Mode

Press **SHIFT+SCALE** button to enter the configuration mode for the current scale. Press again to close this mode. The scale is only indicated by the LEDs above the keys, the keys always behave the same.

- Use the knobs above the parameters to change their value.
- Use the cursor left and right buttons or the main encoder to change the scale.
- Use the cursor up and down to change the base note.
- **BACK** - Closes the scale mode
- **ENTER** - Closes the scale mode

14.9 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

14.9.1 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record / automation: if enabled, the functionality of the Record and Automation button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

14.9.2 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- VU meters: The display of VU meters can be disabled with this option
- Knob Sensitivity Default: Negative values slow the knobs changes down, positive values speed them up
- Knob Sensitivity Slow: Negative values slow the knobs changes down, positive values speed them up

14.10 Document Settings

These settings are specific to each project.

14.10.1 Scales

- Is active: Turn the light guide scale on/off
- Scale: Select the scale
- Base: Select the base note of the scale

15 Native Instruments Komplete Kontrol 2 S49, S61, S88, Komplete Kontrol A49, A61, M32

Support for Native Instruments Komplete Kontrol controllers, which use the NI Host Integration protocol. Since Native Instruments Host Integration service is only available for Windows and Macos, **Linux is not supported**.

15.1 Installation

Native Instruments Host Integration service must be installed and running. It is automatically the case if you installed Komplete Kontrol on your machine.

1. Select the MIDI input and output ending with "DAW" as the first channel.
2. Select the MIDI input and output without an ending as the second.

15.2 Features

The basic feature set is identical to Ableton Live as described in the respective Kontrol manuals. Additionally, there are some settings to change the behaviour.

15.2.1 Extended feature set for S-series

The S-series has additional device/parameters and send modes. **Toggle these modes with the CLEAR button.**

15.2.2 Send mode

- The screens display 8 sends of the currently selected track
- The volume and pan display represents the value of each send
- The knobs below changes the send values (both in volume and pan mode)
- The bank left/right buttons switch between the sends 1-8 and 9-16 of the channel
- The encoder left/right/up/down switch between the sends 1-8 and 9-16 of the channel as well
- Select/Mute/Solo buttons always control the tracks

15.2.3 Device/parameters mode

- The screens display 8 parameters
- The volume and pan display represents the value of each parameter
- The knobs below changes the parameter values (both in volume and pan mode)
- The bank left/right buttons switch between the devices of the channel
- The encoder up/down switches between the devices of the channel as well
- The encoder left/right switches between the parameter pages of the selected device
- Pressing the encoder toggles the window of the selected device (if any)
- Select/Mute/Solo buttons always control the tracks

15.3 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

15.3.1 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Record button: Select the function of the record button.
- Shift + Record button: Select the function of the record button when used in combination with the Shift key.

15.3.2 Behaviour on Stop

- Flip track/clip navigation: Flips the direction (previous/next) if enabled
- Flip clip/scene navigation: Flips the direction (previous/next) if enabled

15.3.3 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.
- Knob Speed Normal: Adjust the speed of the knobs
- Knob Speed Slow: Adjust the speed of the knobs when used with Shift for fine adjustments

16 Native Instruments Maschine Mk3

Support for Native Instruments Maschine Mk3.

16.1 Installation

Load the respective template from the folder *resources/Maschine Mk3* into the device by using Native Instruments Controller Editor.

16.2 Important notes

This extension uses the MIDI mode of the device. Press **Shift + CHANNEL** (on the left / top) buttons to enter MIDI mode. Since there is no notification when the user switches to MIDI mode, the displayed state can be inconsistent. In that case, press the Stop button once to update it.

Since the extension requires the Native Instruments Host Integration service it **only works on Windows and Mac (no Linux)**.

The **Shift** button does not send MIDI values, therefore it cannot be used. Some button combinations use the **Stop** button as a replacement.

16.3 Global

- **Channel** - Insert a new instrument channel
- **Stop + Channel** - Insert a new audio channel
- **Plugin** - Toggle device window
- **Arranger** - Toggle layouts (Arrange, Mix, Edit)
- **Mixer** - Toggle the mixer
- **Sampling** - Brings up the Slice to Drum Machine dialog.
- **Stop + Sampling** - Bring up the Slice to Multi-sample dialog.
- **Page left / right** moves to the previous/next clip on the selected track (moved the scene page before)
- **Stop + Page left / right** moves to the previous/next clip page
- **File** - Saves the project.
- **Auto** - Toggle write arranger automation.
- **Shift + Auto** - Toggle write clip launcher automation.
- **Lock** - Toggle arranger overdub.
- **Shift + Lock** - Toggle clip launcher overdub.
- **Macro** - Creates a new clip on the selected track and slot, starts play and enables overdub.
- **Note Repeat** - Toggle Note repeat. Long press the button to enter note repeat configuration mode. Use the display knobs to edit the settings. Press Note Repeat again to leave the configuration mode.

16.4 Transport

- **Play** - Start/Stop playback. Double click to move play cursor to the start of song. You can configure the behavior on stop in the preferences.
- **Rec** - Start/Stop recording.
- **Stop** - Stop playback. If pressed when stopped the play cursor is moved to the start of the song. Use in combination with a pad in Clip Mode to stop the clip.
- **Restart/Loop** - Toggle transport loop
- **Erase** - Use in combinbation with a pad to delete a scene, clip or track depending on the selected mode.
- **Erase + touch encoder knob** - Reset the currently edited value to its default.
- **Tap** - Tap Tempo
- **Stop + Tap** - Toggle metronome
- **Follow** - Toggles the display of the step sequencer grid resolution

16.5   Bank buttons

The bank buttons select the tracks in the current page of the track bank. They can be used with the following button combinations:

- **Select** - Toggle rec arm of the track
- **Solo** - Toggle solo of the track
- **Mute** - Toggle mute of the track
- **Erase** - Delete the track
- **Duplicate** - Duplicate the track

16.6   Browser

- **Browser** - Opens the browser on the current device. If there is no device the browser is opened to insert a new device. If the browser is active, the browser is closed and the selection is accepted. Use in combination with a pad in Clip Mode to open the browser to load a clip.
- **Settings** - Open the browser to add a device on the selected channel. If the browser is active, toggles the selection of Favorites in the browser.

If the browser is active...

- **Knob 1-8** - Changes the selection of the filter or results
- **Page left/right** - Selects the previous/next browser tab
- **Encoder left/right** - Selects the previous/next value of the selected column
- **Encoder up/down** - Selects the previous/next browser tab
- **Encoder turn** - Changes the selection of the selected column
- Press the Encoder to confirm your selection and close the browser.
- Press the browse button to discard your selection and close the browser.

16.7   Encoder modes

- **Volume** - Enables volume/pan/Sends mode. Press again to toggle between volume, pan and send modes. The encoder changes the volume/pan/sends of the selected track. Keep the Erase button pressed and touch the encoder to set the parameter to its default value. Press the encoder to toggle between fast and slow value changes.
- **Stop + Volume** - Toggles VU meter display.
- **Swing** - Enables position mode. The encoder changes the position of the play cursor in the arranger. Press the encoder to toggle between fast and slow movement.
- **Tempo** - Enables tempo mode. Press again to toggle between fine tune and normal change. The encoder changes the tempo of the song. Press the encoder to toggle between fast and slow value changes.
- **Plug-In** - Toggle the window (if any) of the selected device (if any).

The buttons above the display have the following functions:

- **Volume** - Enables volume mode
- **Panorama** - Enables panorama mode
- **Send -** - Select the previous send mode (1-8)
- **Send +** - Select the next send mode (1-8)
- **Pin** - Pins either the currently selected track or device depending on the active mode
- **Active** - Either activates the currently selected track or turns on/off the selected device depending on the active mode
- **User Params** - Activates user mode which allows to map the 8 knobs to any possible target in Bitwig in 8 pages resulting in 64 user parameters
- **Parameters** - Activates the device/parameters mode

16.7.1   Volume mode

- **Knob 1-8** - Changes the volume of the 8 tracks of the current track bank page

- **Erase + Knob 1-8** - Reset the volume to the default value
- **Page left/right** - Selects the previous/next clips/scenes page
- **Encoder left/right** - Selects the previous/next track
- **Encoder up/down** - Selects the previous/next track bank page
- **Encoder turn** - Changes the volume of the selected track

16.7.2   Panorama mode

- **Knob 1-8** - Changes the panorama of the 8 tracks of the current track bank page
- **Erase + Knob 1-8** - Reset the panorama to the default value
- **Page left/right** - Selects the previous/next clips/scenes page
- **Encoder left/right** - Selects the previous/next track
- **Encoder up/down** - Selects the previous/next track bank page
- **Encoder turn** - Changes the panorama of the selected track

16.7.3   Send 1-8 mode

- **Knob 1-8** - Changes the volume of the selected send of the 8 tracks of the current track bank page
- **Erase + Knob 1-8** - Reset the volume of the send to the default value
- **Page left/right** - Selects the previous/next clips/scenes page
- **Encoder left/right** - Selects the previous/next track
- **Encoder up/down** - Selects the previous/next track bank page
- **Encoder turn** - Changes the volume of the selected send of the selected track

16.7.4   User Params mode

- **Knob 1-8** - Changes / maps the value of the 8 user parameters of the current user parameter page
- **Page left/right** - Selects the previous/next user parameters page
- **Encoder left/right** - Selects the previous/next user parameter
- **Encoder up/down** - Selects the previous/next user parameters page
- **Encoder turn** - Changes the value of the selected user parameter

16.7.5   Device Parameters mode

- **Knob 1-8** - Changes the value of the 8 parameters of the current parameter page
- **Erase + Knob 1-8** - Reset the value of the parameter to the default value
- **Page left/right** - Selects the previous/next device of the selected track
- **Encoder left/right** - Selects the previous/next parameter
- **Encoder up/down** - Selects the previous/next parameters page
- **Encoder turn** - Changes the value of the selected parameter

16.8   Touchstrip

The Touchstrip behaves based on the following modes.

- **Pitch** - Set the Touchstrip to send pitch bend. Press multiple times to toggle between Down, Up and Down/Up.
- **Mod** - Set the Touchstrip to send Modulation (CC 1). Press again to send Expression (CC 11).
- **Perform/FX Select** - Set the Touchstrip to change the volume of the Master track.
- **Notes** - Set the Touchstrip to change the note repeat period. Press again to change the note repeat length.

16.9   Pad Modes

- **Fixed Vel** - If active, velocity of a played pad is fixed. Keep the button pressed and turn the encoder to set the fixed value.

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- **Scene** - Press a pad to start one of the 16 scenes of the current bank page.
- **Pattern** - Press a pad to start one of 16 clips of the current bank page on the selected track.
- **Variation** - Press a pad to select one of 8 or 9 parameters of the current device on the selected track. The parameter pads are colored in the Bitwig parameter colors. The select parameter blinks. Pads 13/14 select the device to edit on the current track. Pads 15/16 select the parameter page.
- **Duplicate** - Use in combination with a pad to duplicate a scene, clip or track depending on the selected mode.
- **Select** - Toggles the rec arm state of the currently selected track. Keep pressed and use in combination with the bank buttons to toggle the rec arm state of the track.
- **Solo** - Toggles the solo state of the currently selected track. Keep pressed and use in combination with the bank buttons to toggle the solo state of the track.
- **Mute** - Toggles the mute state of the currently selected track. Keep pressed and use in combination with the bank buttons to toggle the mute state of the track.

16.9.1 Drum Mode

Press *Pad Mode* to activate. Press again to toggle to the configuration page. On this page pad 15/16 transpose the drum pads up/down. Enable the step sequencer by pressing **Step**. The pads represent 16 steps of the currently selected drum cell. Press the **Follow** button to activate the grid configuration. The lower 8 buttons select the grid resolution. Pads 13/14 select the current edit page. To edit a note in the step sequencer press **Events**. In this mode, press a pad which contains a note to select it for editing. Use the display knobs to edit the parameters of the selected note.

16.9.2 Play Mode

Press *Keyboard* to activate. Press again to toggle to the configuration mode. Use the display knobs to edit the settings.

Enable the step sequencer by pressing **Step**. The pads represent 16 steps of the last played note. Press the **Follow** button to activate the grid configuration. The lower 8 buttons select the grid resolution. Pads 13/14 select the current edit page. To edit a note in the step sequencer press **Events**. In this mode, press a pad which contains a note to select it for editing. Use the display knobs to edit the parameters of the selected note.

Enable the chord mode by pressing **Chords**. Playing a pad adds 2 thirds on top of the played note. The second visible octave plays the inversion (added notes are lower than the played note).

16.9.3 Shift Mode

Keep the *Stop* button pressed to activate.

- **Stop + Pad 1 (Undo)** - Undo
- **Stop + Pad 2 (Redo)** - Redo
- **Stop + Pad 5 (Quantize)** - Quantizes the selected MIDI 100%
- **Stop + Pad 6 (QUANTIZE 50%)** - Quantizes the selected MIDI 50%
- **Stop + Pad 9 (CLEAR)** - Deletes all MIDI notes from the selected MIDI clip
- **Stop + Pad 13 (SEMITONE -)** - Transpose the selected MIDI clip a semitone down
- **Stop + Pad 14 (SEMITONE +)** - Transpose the selected MIDI clip a semitone up
- **Stop + Pad 15 (OCTAVE -)** - Transpose the selected MIDI clip an octave down
- **Stop + Pad 16 (OCTAVE +)** - Transpose the selected MIDI clip an octave up

16.10 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

16.10.1 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record / automation: if enabled, the functionality of the Record and Automation button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

16.10.2 Play and Sequence

- Activate Fixed Accent: If a note is played the velocity is ignored and a fixed value is used.
- Fixed Accent Value: The velocity value to use when fixed accent is active.
- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.
- Ribbon Mode: Select the function of the ribbon strip

16.10.3 Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.
- Action for pressing rec armed empty clip: what should happen if you press an empty clip in the session view.

16.10.4 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.
- Knob Sensitivity Default: Negative values slow the knobs changes down, positive values speed them up
- Knob Sensitivity Slow: Negative values slow the knobs changes down, positive values speed them up

16.11 Document Settings

These settings are specific to each project.

16.11.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

16.11.2 Note Repeat

- Active: Enable note repeat
- Period: The repeat rate of the note repeat
- Length: The length of a repeated note
- Mode: The arpeggiator mode
- Octave: The octave range which is used by the arpeggiator

17 Native Instruments Maschine Mikro Mk3

Support for Native Instruments Maschine Mikro Mk3.

17.1 Installation

Load the respective template from the folder *resources/Maschine Mikro Mk3* into the device by using Native Instruments Controller Editor. Since there is no notification when the user switches to MIDI mode, the displayed state can be inconsistent. In that case, press the Stop button once to update it.

17.2 Important notes

This extension uses the MIDI mode of the device. Press **Shift + Project** (on the left / top) buttons to enter MIDI mode.

Since the extension requires the Native Instruments Host Integration service it **only works on Windows and Mac (no Linux)**.

The **Shift** and **Cursor buttons** do not send MIDI values, therefore they cannot be used. Some button combinations use the **Stop** button as a replacement for Shift.

17.3 Global

- **Sampling** - Brings up the Slice to Drum Machine dialog.
- **Stop + Sampling** - Bring up the Slice to Multi-sample dialog.
- **Group** - Creates a new clip on the selected track and slot, starts play and enables overdub.
- **Auto** - Toggle write arranger automation.
- **Shift + Auto** - Toggle write clip launcher automation.
- **Lock** - Toggle arranger overdub.
- **Shift + Lock** - Toggle clip launcher overdub.
- **Note Repeat** - Toggle Note repeat. Long press the button to enter note repeat configuration mode. In that mode the first two pad columns allow to change the period of the note repeat and the last two columns the length of the notes. Press Note Repeat again to leave the configuration mode.

17.4 Transport

- **Play** - Start/Stop playback. Double click to move play cursor to the start of song. You can configure the behavior on stop in the preferences.
- **Rec** - Start/Stop recording.
- **Stop** - Stop playback. If pressed when stopped the play cursor is moved to the start of the song.
- **Restart/Loop** - Toggle transport loop
- **Erase** - Use in combinbation with a pad to delete a scene, clip or track depending on the selected mode.
- **Erase + touch encoder knob** - Reset the currently edited value to its default.
- **Tap** - Tap Tempo
- **Stop + Tap** - Toggle metronome
- **Follow** - Toggles the display of the step sequencer grid resolution

17.5 Browser

- **Projects** - Adds an instrument track. If the browser is active, it closes the browser and discards the new selection.
- **Stop + Projects** - Save the project.
- **Favorites** - Opens the browser to add a device on the selected channel. If the browser is active, toggles the selection of Favorites in the browser.

- **Browser** - Opens the browser on the current device. If there is no device the browser is opened to insert a new device. If the browser is active, the browser is closed and the selection is accepted. Use in combination with a pad in Clip Mode to open the browser to load a clip.

If the browser is active. . . * use the Encoder to scroll through the items. * Press the Encoder to confirm your selection and close the browser. * Press the browse button to discard your selection and close the browser.

17.6 Encoder modes

- **Volume** - Enables volume/pan/Sends mode. Press again to toggle between volume, pan and send modes. The encoder changes the volume/pan/sends of the selected track. Keep the Erase button pressed and touch the encoder to set the parameter to its default value. Press the encoder to toggle between fast and slow value changes.
- **Swing** - Enables position mode. The encoder changes the position of the play cursor in the arranger. Press the encoder to toggle between fast and slow movement.
- **Tempo** - Enables tempo mode. Press again to toggle between fine tune and normal change. The encoder changes the tempo of the song. Press the encoder multiple times to tap the tempo.
- **Plug-In** - Enables device mode. The encoder changes the value of a device parameter. Keep the Erase button pressed and touch the encoder to set the parameter to its default value. Press the encoder to toggle between fast and slow value changes.
- **Stop + Plug-In** - Toggle the window (if any) of the selected device (if any).

17.7 Touchstrip

The Touchstrip behaves based on the following modes.

- **Pitch** - Set the Touchstrip to send pitch bend. Press multiple times to toggle between Down, Up and Down/Up.
- **Mod** - Set the Touchstrip to send Modulation (CC 1). Press again to send Expression (CC 11).
- **Perform/FX Select** - Set the Touchstrip to change the volume of the Master track.
- **Notes** - Set the Touchstrip to change the note repeat period. Press again to change the note repeat length.

17.8 Pad Modes

- **Fixed Vel** - If active, velocity of a played pad is fixed. Keep the button pressed and turn the encoder to set the fixed value.
- **Scene** - Press a pad to start one of the 16 scenes of the current bank page.
- **Pattern** - Press a pad to start one of 16 clips of the current bank page on the selected track.
- **Pattern + Pad** - Stops the clip.
- **Variation** - Press a pad to select one of 8 or 9 parameters of the current device on the selected track. The parameter pads are colored in the Bitwig parameter colors. The select parameter blinks. Pads 13/14 select the device to edit on the current track. Pads 15/16 select the parameter page.
- **Duplicate** - Use in combination with a pad to duplicate a scene, clip or track depending on the selected mode.
- **Select** - Press a pad to select one of 16 channels of the current bank page. The selected track blinks.
- **Solo** - Press a pad to toggle Solo of 16 channels of the current bank page. Soloed tracks blink.
- **Mute** - Press a pad to toggle Mute of 16 channels of the current bank page. Muted tracks blink.

To change bank pages turn the encoder and keep the related button pressed (scenes - *Scene*, clips - *Pattern*, tracks - *Select, Solo or Mute*))

17.8.1 Drum Mode

Press *Pad Mode* to activate. Press again to toggle to the configuration page. On this page pad 15/16 transpose the drum pads up/down. Enable the step sequencer by pressing **Step**. The pads represent 16 steps of the

currently selected drum cell. Press the **Follow** button to activate the grid configuration. The lower 8 buttons select the grid resolution. Pads 13/14 select the current edit page. To edit a note in the step sequencer press **Events**. In this mode, press a pad which contains a note to select it for editing. Turn the encoder to change the value of the selected note parameter. Select the 6 available parameters by pressing the *Volume*, *Swing* and *Tempo* buttons. Press the buttons twice for the second parameter.

17.8.2   Play Mode

Press *Keyboard* to activate. Press again to toggle to the configuration page:

- Pad 1 toggles chromatic or scale notes only modes
- Pad 5/6 select the scale layout
- Pad 9/10 select the root note for the active scale
- Pad 13/14 select the active scale
- Pad 15/16 transpose the grid up/down by an octave

Enable the step sequencer by pressing **Step**. The pads represent 16 steps of the last played note. Press the **Follow** button to activate the grid configuration. The lower 8 buttons select the grid resolution. Pads 13/14 select the current edit page. To edit a note in the step sequencer press **Events**. In this mode, press a pad which contains a note to select it for editing. Use the display knobs to edit the parameters of the selected note.

Enable the chord mode by pressing **Chords**. Playing a pad adds 2 thirds on top of the played note. The second visible octave plays the inversion (added notes are lower than the played note).

17.9   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

17.9.1   Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record / automation: if enabled, the functionality of the Record and Automation button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

17.9.2   Play and Sequence

- Activate Fixed Accent: If a note is played the velocity is ignored and a fixed value is used.
- Fixed Accent Value: The velocity value to use when fixed accent is active.
- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.
- Ribbon Mode: Select the function of the ribbon strip

17.9.3   Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.
- Action for pressing rec armed empty clip: what should happen if you press an empty clip in the session view.

17.9.4   Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.

17.10   Document Settings

These settings are specific to each project.

17.10.1   Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

17.10.2   Note Repeat

- Active: Enable note repeat
- Period: The repeat rate of the note repeat
- Length: The length of a repeated note
- Mode: The arpeggiator mode
- Octave: The octave range which is used by the arpeggiator

18   Novation Launchkey Mk3

Support for the Novation Launchkey Mini Mk3 controller models 25, 37, 49 and 61.

18.1   Installation

- If you added the controller manually, choose the 2nd MIDI port ("DAW port") of the device as in-/output. Select the first port as the 2nd input ("MIDI port").
- If you want to use the arpeggiator of the Launchkey you need to enable sending MIDI clock to the device.

18.2   Global Features

- **Capture MIDI** - Creates a new clip on the selected track and slot, starts playback and enables overdub.
- **Shift+Capute MIDI** - Like New button but without activating launcher overdub.
- **Quantise** - Quantises the selected clip.
- **Shift+Quantise** - Press multiple times to toggle through the record quantisation settings.
- **Click** - Toggle the metronome.
- **Shift+Click** - Tap Tempo.
- **Undo** - Undoes the last action.
- **Shift+Undo** - Executes the last undone action.
- **Shift + Play** switches playback back to arranger on all tracks.
- **Play + Pad** switches playback back to arranger on the track which contains the clip.
- **Stop** - Stops playback. If stopped moves the play cursor to start of song.
- **Shift+Stop** - Stops all playing clips.
- **Record** - Start/Stop recording. Can be changed in the settings.
- **Shift+Record** - Toggle launcher overdub. Can be changed in the settings.
- **Repeat** - Toggle repeat.
- **Track Left/Right**: Select the previous/next track.
- **Device Lock** - Toggle pinning the cursor device.
- **Shift+Device Lock** - Toggle the cursor devices' window (if any).
- **. . .** - Opens the browser for the selected device. If no device is selected the browser is opened to insert a new device on the selected channel.
- **Shift+. . .** - Opens the browser to add a new device after the currently selected.

The following buttons behave like described in the Novation manual:

- Fixed Chord
- Arp
- Scale
- Octave-, Octave+

18.3   Modes

By using the Shift button in combination with the pads, you can switch between two kinds of modes: modes for the knobs (colored blue) and modes for the pads (colored green).

18.3.1   Knob modes

Use the 8 green buttons to switch between the modes for the knobs. The text above the pads indicate their function. Press the Sends pad twice to toggle between send 1 and send 2.

The 4 custom modes can be configured with the Novation Components application and can be used accordingly in the DAW.

18.3.1.1 Device Mode The display shows the name of the selected device and parameter page in the first row. The second row shows the selected track which contains the device.

- **Knob 1-8**: Changes the value of the 8 parameters on the current device parameter page.
- **Device Select**: Keep pressed to bring up the device selection mode. In this mode the Scene up/down buttons select the next/previous device. The pads select the up to 16 parameter pages of the current device. The Scene 1 button toggles the enabled state of the device.

18.3.1.2 Volume Mode The display shows the name of the mode and the range of the tracks on the selected page in the first row. The second row shows the selected track.

- **Knob 1-8**: Changes the volume of the 8 tracks on the current track bank page.

18.3.1.3 Pan Mode The display shows the name of the mode and the range of the tracks on the selected page in the first row. The second row shows the selected track.

- **Knob 1-8**: Changes the panorama of the 8 tracks on the current track bank page.
- **Track Left/Right**: Select the previous/next track.
- **Shift+Track Left/Right**: Select the previous/next track bank page

18.3.1.4 Sends Mode The display shows the name of the send 1 or 2 and the range of the tracks on the selected page in the first row. The second row shows the selected track.

- **Knob 1-8**: Changes the Send 1 or 2 volume of the 8 tracks on the current track bank page.
- **Track Left/Right**: Select the previous/next track.
- **Shift+Track Left/Right**: Select the previous/next track bank page

18.3.2 Pad Modes

Use the green colored buttons to switch between the modes for the pads. The text above the pads indicate their function.

The Scale Chord and User Chord are provided by the hardware and behave like described in the Novation manual. They cannot be changed.

The 4 custom modes can be configured with the Novation Components application and can be used accordingly in the DAW.

18.3.2.1 Session Mode The Session mode is quite complex since it provides several sub-modes for controlling solo, mute, record arm, etc. Long press the SSM (Scene 2) button to switch between the sub-modes or turn them off. The SSM button is also lit in the color of the selected sub-mode.

- The pads start playback or recording of the respective clip.
- Long press a pad to only select the clip without starting it.
- The Scene and SSM buttons start the first and second scene in the selected scene window.
- Use Scene up/down buttons to move the clip/scene window.
- Press **Stop** + Pad In Session Mode to stop the clip.

If one of the sub-modes is enabled, the lower pad row changes and displays the states of the sub-mode. Press one of these pads to toggle the state. The following sub-modes are available:

1) **Record Arm**: Toggle the recording armed state of the 8 tracks on the selected track bank page.
2) **Track select**: Select one of the 8 tracks on the selected track bank page.
3) **Mute**: Toggle the mute state of the 8 tracks on the selected track bank page.
4) **Solo**: Toggle the solo of the 8 tracks on the selected track bank page.
5) **Stop clip**: Stop the playing clip on one of the 8 tracks on the selected track bank page.

18.3.2.2 Drum Mode   This mode provides a simple drum sequencer and access to the drum instrument but is also usable with any other device.

This mode can be toggled with the Scene button between two views: one to play the 16 sounds and one to toggle the note steps of one of the 16 sounds. If you have a Bitwig drum device selected, the play view displays the colors of the sounds as well if there is an instrument loaded in a slot. The last selected pad is the one you can edit when switching to the note steps view.

Long press the SSM (Scene 2) button to enter the drum sequencer settings (only available if a clip is selected!). While keeping the SSM button pressed, select an uppper row pad to select a grid resolution. The selected resolution is shown in the display. Use the first 2 lower row pads to select one of the previous/next edit page.

The **Scene up/down** buttons scroll the drum pad range up/down.

18.3.2.3 Browser Mode   The browser mode facilitates the Navigation mode of the Launchkey, which means that the lit pads send cursor keys and the return key. Luckily, the Bitwig browser can be navigated nicely with cursor keys. Pressing the **...** button again discards the selection and closes the browser.

- The **Scene up/down** buttons flip through the tabs of the browser.
- The **Scene 1** button confirms the selection and closes the browser.
- The **Scene 2** button discards the selection and closes the browser.

Note: There is a little bug in Launchkey, which causes the **...** button to be lit when closed with the Return key or the scene buttons.

18.4   Fader modes (only Launchkey 46 and 61 models)

The faders control the values selected by their mode: Device parameters, volume, send 1/2 and the 4 custom modes. The master fader always controls the volume of the master track. The buttons below the faders selects or arms record of a track depending on the Arm/Select button state.

18.5   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

18.5.1   Transport

- Record button: Setting the function for the record button.
- Shift + Record button: Setting the function for the record button used in combination with Shift.

18.5.2   Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- Include (Group-)Mastertrack: If set to off, the group-master tracks are removed from the track bank.

18.5.3   Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.

19 Novation Launchkey Mini Mk3

Support for the Novation Launchkey Mini Mk3 controller.

19.1 Installation

- If you added the controller manually, choose the 2nd MIDI port ("DAW port") of the device as in-/output. Select the first port as the 2nd input ("MIDI port").

19.2 Global Features

- **Play** - Start/Stop playback. Double click to move play cursor to start of song.
- **Shift+Play** - Toggle repeat.
- **Record** - Start/Stop recording. Can be changed in the settings.
- **Shift+Record** - Toggle launcher overdub. Can be changed in the settings.

19.3 Modes

By using the Shift button in combination with the upper row pads, you can switch between two kinds of modes: modes for the knobs (colored green) and modes for the pads (colored orange).

19.3.1 Knob modes

Use the 5 green buttons to switch between the modes for the knobs. The text above the pads indicate their function.

19.3.1.1 Device Mode

- Knob 1-8: Changes the value of the 8 parameters on the current device parameter page.
- Track Left/Right buttons (Shift + Arp/Fixed Chord): Select the previous/next device
- Program Change (Shift + +/-): Select the previous/next parameter page

19.3.1.2 Volume Mode

- Knob 1-8: Changes the volume of the 8 tracks on the current track bank page.
- Track Left/Right buttons (Shift + Arp/Fixed Chord): Select the previous/next track
- Program Change (Shift + +/-): Select the previous/next track bank page

19.3.1.3 Pan Mode

- Knob 1-8: Changes the panorama of the 8 tracks on the current track bank page.
- Track Left/Right buttons (Shift + Arp/Fixed Chord): Select the previous/next track
- Program Change (Shift + +/-): Select the previous/next track bank page

19.3.1.4 Sends Mode

- Press Shift and use pad 7 and 8 on the lower pad row to switch between Send 1 and Send 2.
- Knob 1-8: Changes the Send 1 or 2 volume of the 8 tracks on the current track bank page.
- Track Left/Right buttons (Shift + Arp/Fixed Chord): Select the previous/next track
- Program Change (Shift + +/-): Select the previous/next track bank page

19.3.1.5 Custom Mode

- Knob 1-8: Changes the value of a user mapped parameter. Right click any parameter in Bitwig and select to learn. After that move the knob to which you want to map the parameter. The mapped parameters are stored per project.
- Track Left/Right buttons (Shift + Arp/Fixed Chord): -

- Program Change (Shift + +/-): -

19.3.2 Pad Modes

Use the 3 amber colored buttons to switch between the modes for the knobs. The text above the pads indicate their function.

19.3.2.1 Session Mode The Session mode is quite complex since it provides several sub-modes for controlling solo, mute, record arm, etc. Long press the SSM (Scene 2) button to switch between the sub-modes or turn them off. The SSM button is also lit in the color of the selected sub-mode.

The pads start playback or recording of the respective clip. The Scene and SSM buttons start the first and second scene in the selected scene window. Use Shift+Scene/SSM buttons to move the scene window.

If one of the sub-modes is enabled, the lower pad row changes and displays the states of the sub-mode. Press one of these pads to toggle the state. The following sub-modes are available:

1) **Record Arm**: Toggle the recording armed state of the 8 tracks on the selected track bank page.
2) **Track select**: Select one of the 8 tracks on the selected track bank page.
3) **Mute**: Toggle the mute state of the 8 tracks on the selected track bank page.
4) **Solo**: Toggle the solo of the 8 tracks on the selected track bank page.
5) **Stop clip**: Stop the playing clip on one of the 8 tracks on the selected track bank page.

19.3.2.2 Drum Mode This mode provides a simple drum sequencer and access to the drum instrument but is also usable with any other device. Since the number of buttons on the device is limited you can only access the main 16 notes.

This mode can be toggled with the Scene button between two views: one to play the 16 sounds and one to toggle the note steps of one of the 16 sounds. If you have a Bitwig drum device selected, the play view displays the colors of the sounds as well if there is an instrument loaded in a slot. The last selected pad is the one you can edit when switching to the note steps view.

Long press the SSM (Scene 2) button to enter the drum sequencer settings. While keeping the SSM button pressed, select an uppper row pad to select a grid resolution, which is displayed in Bitwig as well. Use the first 2 lower row pads to select one of the previous/next edit page. The 4th pad toggles the metronome. Use the last 2 lower row pads to scroll the drum pads up/down.

19.3.2.3 Custom Mode This is the MIDI note configuration you can setup in the Novation Components application. Note: Do only change the pad display, not the knob settings!

19.4 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

19.4.1 Transport

- Record button: Setting the function for the record button.
- Shift + Record button: Setting the function for the record button used in combination with Shift.

19.4.2 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- Include (Group-)Mastertrack: If set to off, the group-master tracks are removed from the track bank.

19.4.3 Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.

20 Novation Launchpad

The following of Novation's Launchpad controllers are supported:

- Launchpad Pro
- Launchpad ProMk3
- Launchpad Mk2
- Launchpad Mini Mk3
- Launchpad X

20.1 Installation

Important: If you have one of the newer models which are supported by the Novation Components application, first make sure to update to the latest firmware for your device! Otherwise, you might have strange effects!

If you added the controller manually, choose the following in-/output ports:

- Pro Mk3: choose the 1st port (e.g. *LPProMK3 MIDI* on Windows).
- Pro, Mini Mk3, X: choose the 2nd port (e.g. *MIDIIN2 (Launchpad Pro)* and *MIDIOUT2 (Launchpad Pro)* on Windows).
- Make sure the Launchpad sends on Midi Channel 1!
- To have pads blinking in sync with your song tempo activate to send MIDI clock to the device.

20.2 Differences between the Launchpad models

The Pro models have an additional left column and bottom row of buttons.

Especially, they have a **Shift** button to access additional functionality (see the *Shift Mode* below). To work around this missing button on the other models another button has to function as the Shift button. It is the last button of the top button row (MkII: **Mixer**, Mini Mk3: **User**, X: **Capture Midi**).

The three buttons on the top row, right to the cursor keys are named differently on the models:

- Pro Mk1: Session, Note, Device
- MkII: Session, User 1, User 2
- X: Session, Note, Custom
- Mini Mk3: Session, Drums, Keys

These differences will not be mentioned again in the following text and **only the names of the Pro model will be used!**

20.2.1 Pro Mk3

The differences on the Pro Mk3 are more drastic. It contains an additional row of buttons to select a track on the bottom. Additional functions are available in combination with the Clear button, to delete a track and the Duplicate button to duplicate a track.

Furthermore, some buttons were moved to a button which needs to be used in combination with the Shift button, e.g. for Undo press Shift+Record Arm. The implementation follows the labels on the buttons.

20.3 Transport and Editing (Left button column)

- **Shift** - Use in combination with other buttons for additional functionality.
- **Click** - Toggle the metronome.
- **Shift+Click** - Tap Tempo.
- **Undo** - Undo. Press Shift for Redo.
- **Delete** - Hold the button for additional functionality in combination with other buttons knobs, see the view explanations below.
- **Shift+Delete** - Toggle repeat

- **Quantise** - Quantises the selected clip.
- **Record Quantise** - Press multiple times to toggle through the record quantisation settings.
- **Duplicate** (**Clear** on the Pro Mk3) - Always duplicates the first selected clip on the current track if pressed with no other button.
  - To copy clips in Session mode on Pro models: Keep Duplicate button pressed; choose the source clip (it must be a clip with content, you can still select a different clip with content); select the destination clip (this must be an empty clip, which can also be on a different track); release the Duplicate button. On the non-pro models, activate duplicate mode, duplicate mode is deactivated, as soon as you select an empty clip as the destination.
  - Launchpad Pro: Keep the Duplicate button pressed and select a pad from the 1st row when a track mode is on to duplicate the track.
  - Launchpad Pro: Keep the Duplicate button pressed and select a scene to duplicate it.
- **Shift+Duplicate** - Double the currently selected MIDI clip incl. its' content.
- **Double** (**Play** on the Pro Mk3) - Start/Stop playback. Double click to move play cursor to start of song.
- **Shift+Double** (**Play** on the Pro Mk3) - Creates a new clip on the selected track and slot, starts play and enables overdub.
- **Record** - Start/Stop recording
- **Shift+Record** - Toggle launcher overdub
- **Fixed Length** (only Pro Mk3) - Executes the *New* function.

20.4 Cursors and Mode selection (Upper button row)

- **Arrows** - Navigate in the different modes (see below), holding an arrow button down will scroll through the specific View (e.g. track, scene).
- **Session** - Selects the Session mode to start, stop and record clips. Session can be flipped if Session button is pressed twice. Long press Session to select *birds-eye-view* to quickly navigate the clip grid. Press Session again to leave this mode. Temporary session mode: if any mode except session is active, hold the session button and then start a clip or scene. When the session button is released the previous mode is restored.
- **Note** - Pressing the Note button brings up a menu where you can select the note/sequencer mode. First row (from top) selects play modes, 3rd row drum modes and 5th row sequencer modes. On the **Pro Mk3** pressing the Note button toggles through the 3 play modes.
- **Device** - Selects the Device mode to change the Parameters of the currently selected device. If pressed again it opens the browser for preset selection mode. If no device is selected the browser is opened to insert a device.
- **Shift+Device** - Opens the device browser to add a device after the currently selected one
- **User** (only Pro, **Custom** on the Mk3) - Brings up the user mode.
- **Chord** (only Pro Mk3) - Toggles through the 3 drum sequencer modes.
- **Sequencer** (only Pro Mk3) - Toggles through the 3 note sequencer modes.

Note: The preferred play/sequencer mode is remembered for each track.

20.5 Shift Mode

If you press the Shift button (and keep it pressed) the grid changes to the Shift mode.

20.5.1 All models

- Press the **Session** button to enter Mix-Mode.
- The pads of the first row (from the bottom) change the length of newly created clips.
- The three green buttons in the right upper corner insert an instrument, audio or effect track.
- The yellow button in the right upper corner toggles between fixed accent/velocity for the pads in note/drum modes. The percentage value of the fixed accent can be set in the controller settings panel.

OVERVIEW

LAUNCHPAD X

SESSION OVERVIEW /
CLIP LAUNCHER

NOTE /
SEQ.
MODES

DEVICE/INST CONTROLS (1 TAP)
BROWSER (2 TAP)

SESSION   NOTE   CUSTOM   CAPTURE MIDI

SHIFT MENU

VOLUME
PAN
SEND A
SEND B
STOP CLIP
MUTE
SOLO
RECORD ARM
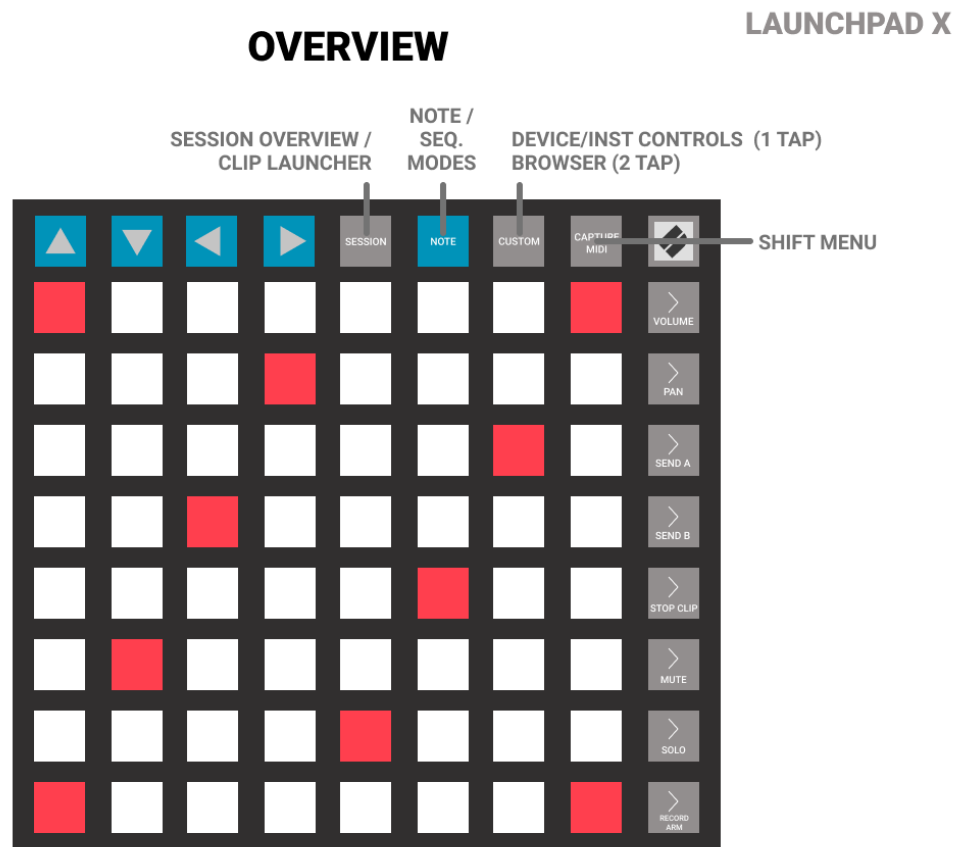
Figure 1: Overview

- The buttons in the center control note repeat for play modes. The blue button on top de-/activates note repeat. The pads of the first two columns below change the note repeat period and the other two columns the note length.
- Up/down cursor buttons activate **Tempo mode**.
- Left/right cursor buttons activate **Swing mode**.
- The red button in the lower right corner stops the playback of all clips.

20.5.2 Non-pro models

- The **first column (from the left)** of the grid now represents the missing left column of the Pro model. The **second column** represents the functions of these buttons in Shift state.
- Pressing the **Delete (pink) or Duplicate (purple) pads** in shift mode activates the related mode. The pad starts to blink to indicate that the Delete/Duplicate mode is enabled. Press the pad again to cancel the mode. Leaving the shift mode and entering session mode allows then to delete/duplicate clips, scenes and tracks. After deleting/duplicating an item the delete/duplicate mode is automatically turned off.
- The **Scene buttons** represent the missing bottom row of the Pro (Volume, Pan, etc. but differently ordered). The colors of the buttons are identical. This area is empty on the Pro model.
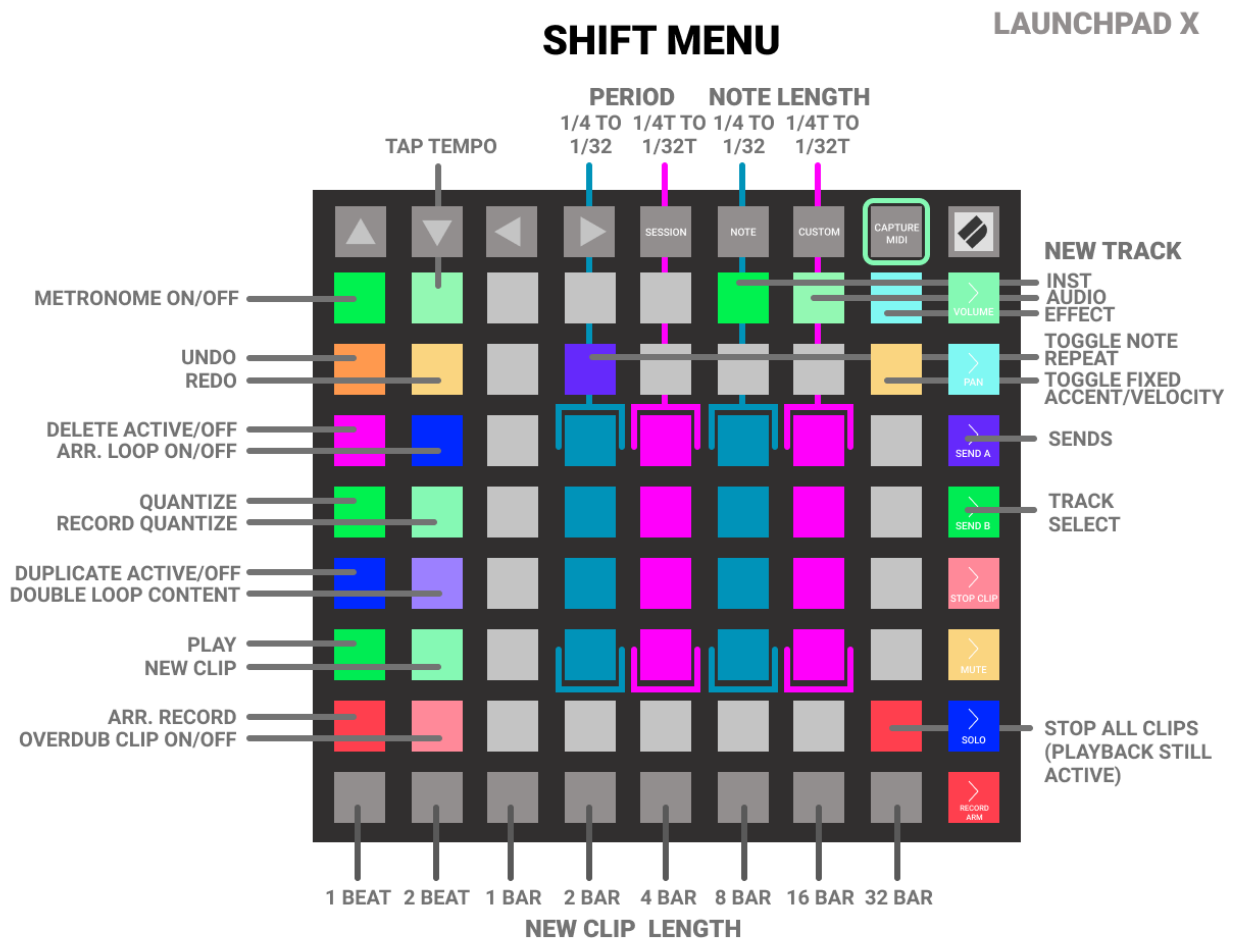
Figure 2: Shift menu diagram

20.6   Track Control (Lower button row)

These buttons only work in the Session mode. If the Session mode is not yet selected it gets activated.

- **Record Arm** - The 8 buttons of the bottom row of the grid allow to toggle record arm of the currently focused 8 tracks of the track bank.
- **Track Select** - The 8 buttons of the bottom row of the grid allow to select one of the currently focused 8 tracks of the track bank. The currently selected track is indicated on the first row (round) buttons by a brighter white. Furthermore, the front LED is also lit in the color of the current track.
- **Mute** - The 8 buttons of the bottom row of the grid allow to toggle Mute of the currently focused 8 tracks of the track bank.
- **Solo** - The 8 buttons of the bottom row of the grid allow to toggle Solo of the currently focused 8 tracks of the track bank.
- **Volume** - Each column of the grid controls the Volume of the currently focused 8 tracks of the track bank. Hit buttons harder for faster change. The color of a fader is the same as the color of the track. Use the scene buttons for master volume.
- **Pan** - Each column of the grid controls the Panorama of the currently focused 8 tracks of the track bank. Hit buttons harder for faster change. The color of a fader is the same as the color of the track.
- **Sends** - Each column of the grid controls the Send of the currently focused 8 tracks of the track bank. Hit buttons harder for faster change. The color of a fader is the same as the color of the track. Use the Scene buttons to select the Sends 1 to 8.
- **Stop Clip** - The 8 buttons of the bottom row of the grid allow to stop the playing clip of the track of the currently focused 8 tracks of the track bank.

20.6.1   Shifted functions on the Pro models

- **Shift+Record Arm**: Undo
- **Shift+Mute**: Redo
- **Shift+Solo**: Toggle Metronome
- **Shift+Sends**: Tap Tempo
- **Shift+Solo**: Toggle Metronome
- **Shift+Device**: Enter tempo mode
- **Shift+Stop Clip**: Enter swing mode

20.7   Session Mode

Press *"Session"* to enter **Session** mode. Press again to toggle the clip orientation (vertical or horizontal). *Long press* to enter birds-eye-view.

- The buttons on the grid start/record the clips.
- Long press a pad to select the clip without starting it.
- The 8 scene buttons on the right start the scenes.
- The arrow keys scroll the grid.
- Hold **Delete** and press a clip button to delete the clip.
- Hold **Delete** and press a Scene button to delete the scene.

SESSION / CLIP VIEW

NEXT/PREV
GROUP (8X8)

NEXT/PREV
TRACK

SESSION
OVERVIEW
(LONG PRESS)

SESSION   NOTE   CUSTOM   CAPTURE
MIDI

VOLUME

PAN

EMPTY
CLIPS

SEND A

ACTIVE
TRACK

SEND B

SCENE
TRIGGER

STOP CLIP

MUTE

SOLO

RECORD
ARM

TRACK
1

TRACK
2

TRACK
3

TRACK
4

TRACK
5

TRACK
6

TRACK
7

TRACK
8

SESSION BIRDS EYE VIEW

NEXT/PREV GROUP (8X8)   NEXT/PREV TRACK   SESSION / CLIP VIEW

CURR. SELECTION GROUP (8X8)

INACTIVE GROUPS (8X8)

SCENE 1 LAUNCH

SCENE 2 LAUNCH

SCENE 3 LAUNCH

SCENE 4 LAUNCH

EMPTY SCENE

RECORD ARM TOGGLE

TRACK 1   TRACK 2   TRACK 3   TRACK 4   TRACK 5   EMPTY TRACK

20.8 Selecting Note or Sequencer Modes

Press *"Note"* to choose a **Note** or **Sequencer** mode. On the **Pro Mk3** use the **Note**, **Chord** and **Sequencer** buttons to toggle through the modes.

- The first three (red) pads represent **Play** modes - Scale, Piano, and Drum64.
- The second three (blue) pads represent **Drum Sequencer** modes - Drum, Drum4, and Drum 8
- The final three (orange) pads represent **Note Sequencer** modes - Sequencer, Poly, and Raindrop

20.9 Play modes

20.9.1 Note Mode (Playing the pads)

Press *"Note"* and select the first red pad to change to **Scale** mode.

- The key layout is the same one used with Ableton Push
- Left/Right buttons change the scale (Major, Minor, etc.)
- Up/Down buttons transpose the note range (pitch) up/down.
- The played keys are lighting red if global or clip recording (does not work if recording clip is outside of the monitored 8x8 matrix)

Scene buttons have to following functions:

- The upper 2 scene buttons change the key layout.

NOTE MODE SELECTION
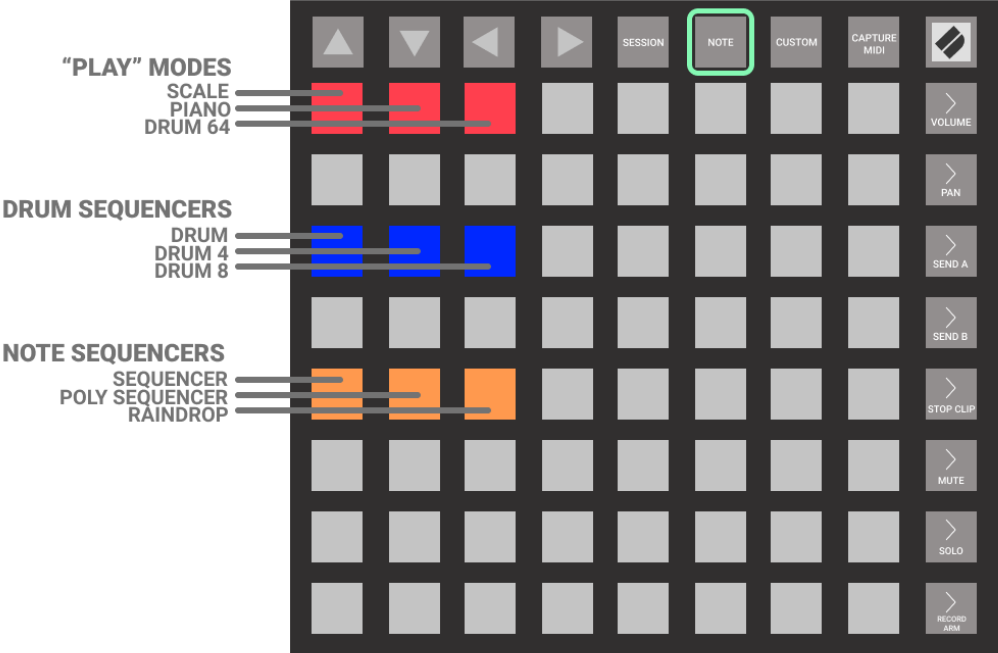
Figure 3: Session mode diagram

- The 4th scene button (green) in the play mode activates additional controls in the first pad row. First pad toggles sustain. Second and third pad are pitch down/up and the following pads switch to different intensities of the modulation wheel. You can slide these modulation wheel pads to imitate a modulation wheel.
- The 5th scene button (amber) in the play mode activates the chords mode. This mode allows to play a chord by pressing a single pad. The base note is taken from the current scale and increases from left to right. The rows from bottom to top contain the following chords: Triads, Dyads (Powerchords), Suspended second (Sus2), Suspended fourth (Sus4), Add sixth (6), Major seventh chord (maj7), Add ninth (9), Add eleventh (11). The same octave, scale and base note settings apply as with the play mode.
- The white scene button toggles between Chromatic and Scale Only mode.
- The lower 2 scene buttons change the root note of the scale.
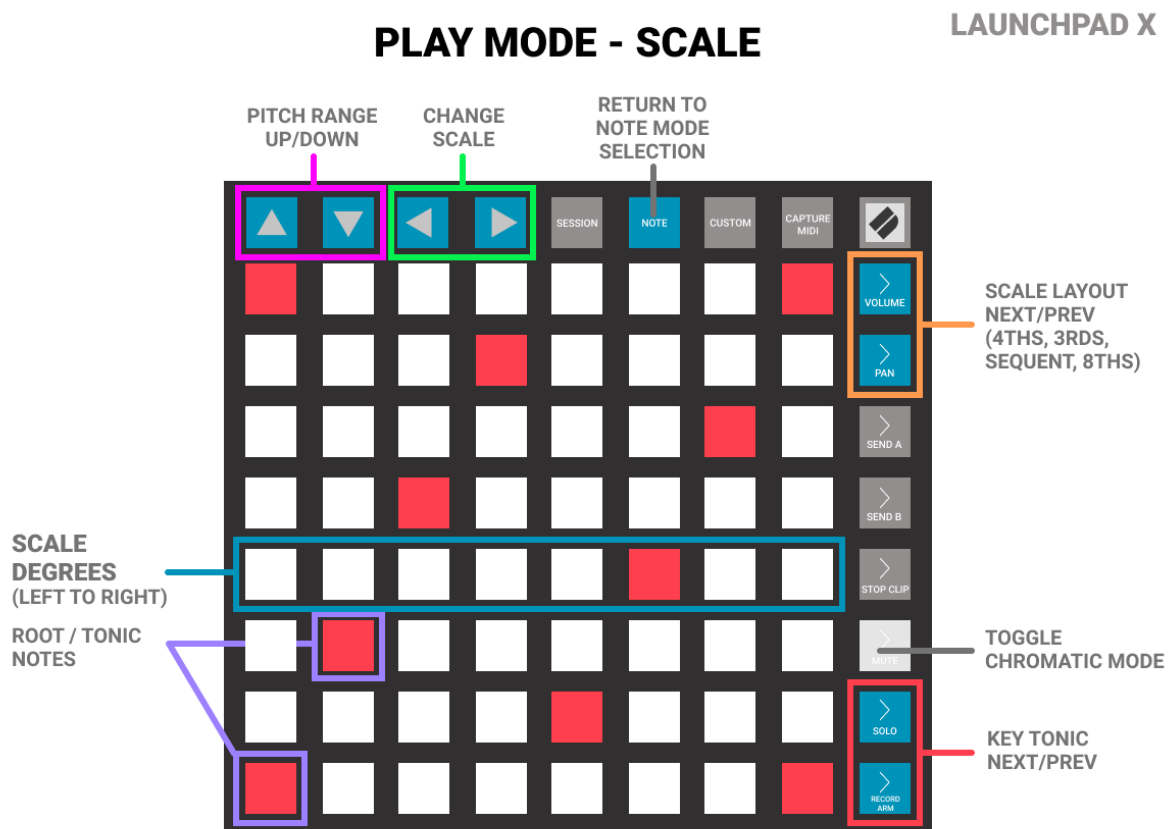
Figure 4: Play Mode - Scale

20.9.2 Piano Mode

Press *"Note"* twice to enter.

- Arranges the pads like a classic piano keyboard.
- The white lit pads are the white keys.
- The gray lit pads are the black keys.

- You get 4 octaves to play with
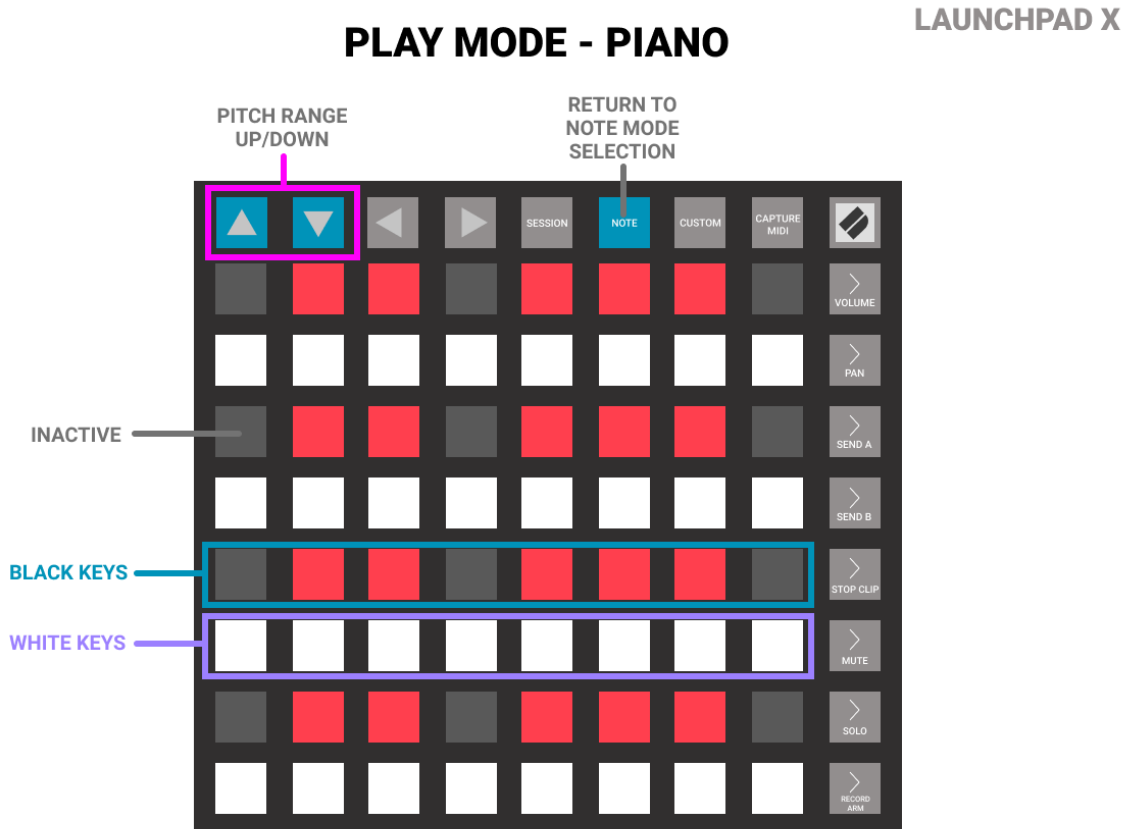
Figure 5: Play Mode - Piano

20.9.3 Drum 64 play mode

Press *"Note"* multiple times to select *Drum 64*.

This mode gives you 64 pads for playing a drum device. The 16 pads in the left lower area are the same as in the drum sequencer mode.

20.10 Sequencers

20.10.1 Sequencer Functions common to all sequencers (except Raindrop)

- Use the arrow keys to navigate in the grid.
- Note that you can scroll past the end of the clip (to the right).
- Press pads to enter/delete notes. The velocity of the pressed key is set as well.
- Change the note length or create long notes by pressing a note pad and then a pad right of it.
- To duplicate notes keep the Dulicate button pressed, select the source note, press empty destination pad(s). The note will be copied with all settings.
- Note starts and lengths are lit in different colors.
- Use the Scene buttons to change the grids resolution.

PLAY MODE - DRUM64

LAUNCHPAD X
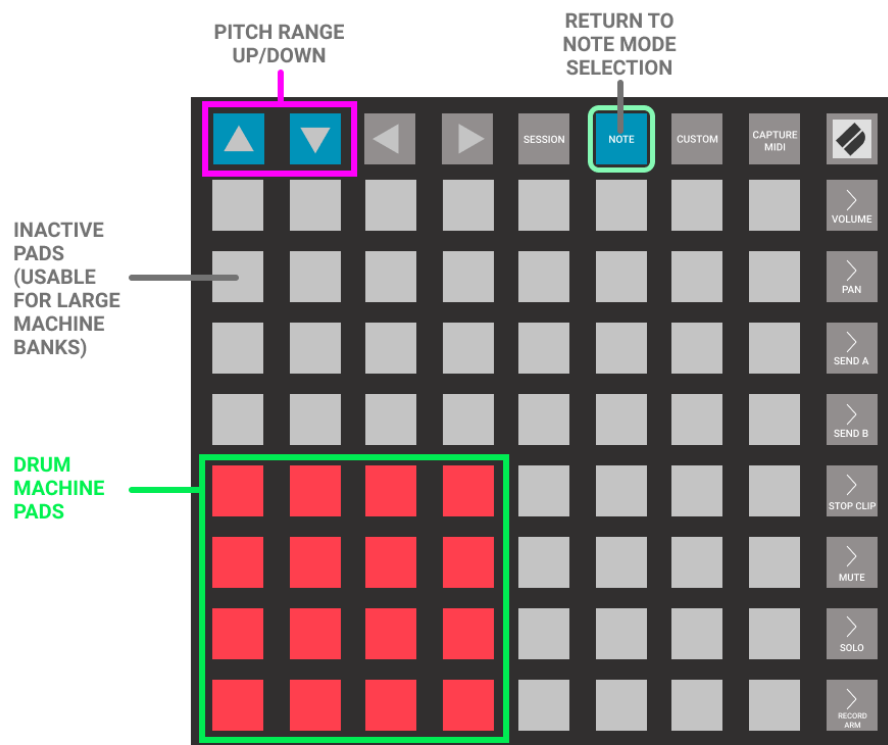
Figure 6: Play Mode - Drum64

20.10.2 Sequencer Mode

Press *"Note"* and select the first orange pad to enter the **Sequencer** mode:

- The pads display an 8x8 view of the selected clips note grid.
- The rows represent the notes of the selected scale.
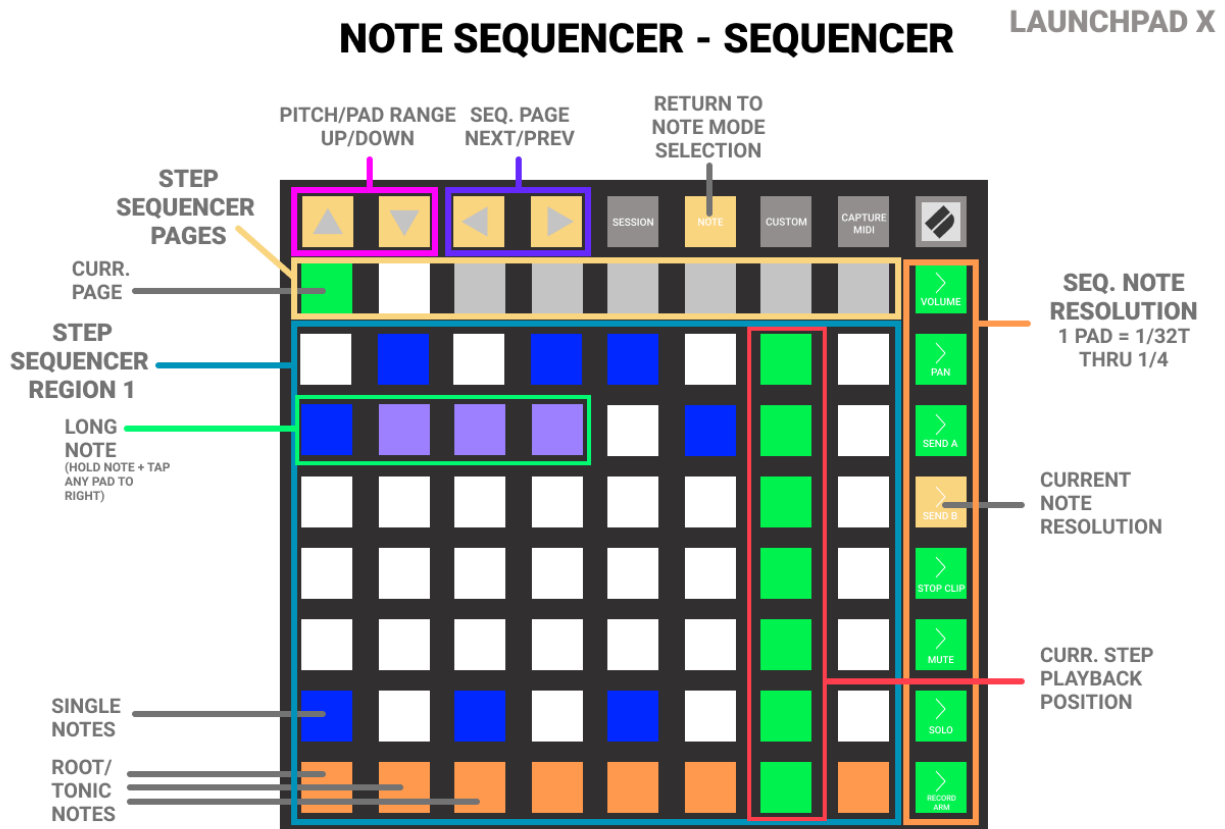
Figure 7: Sequencer Mode - Sequencer

20.10.3 Poly Sequencer

Press *"Note"* and select the second orange pad to change to the **Poly Sequencer**:

- The lower half displays the playable notes like in the Note Mode
- Play one or more notes in that area
- Create a step in the upper part by pressing a pad. The step will contain the last notes you played in the lower part.
- Arrow keys change the octaves and step pages

20.10.4 Raindrop sequencer

Press *"Note"* and select the third orange pad to change to the **Raindrop Sequencer**:

- The lowest row displays the playable notes

NOTE SEQUENCER - POLY

PITCH/PAD RANGE
UP/DOWN

SEQ. PAGE
NEXT/PREV

RETURN TO
NOTE MODE
SELECTION

STEP
SEQUENCER
REGION

SESSION | NOTE | CUSTOM | CAPTURE MIDI

CURR. STEP
POSITION

SINGLE
NOTES

LONG
NOTE
(HOLD NOTE + TAP
ANY PAD TO
RIGHT)

VOLUME

PAN

SEND A

SEND B

STOP CLIP

MUTE

SOLO

RECORD ARM

SEQ. NOTE
RESOLUTION
1 PAD = 1/32T
THRU 1/4

CURRENT
NOTE
RESOLUTION

SCALE
DEGREES
(LEFT TO RIGHT)

ROOT / TONIC
NOTES

SCALE
MODE REGION
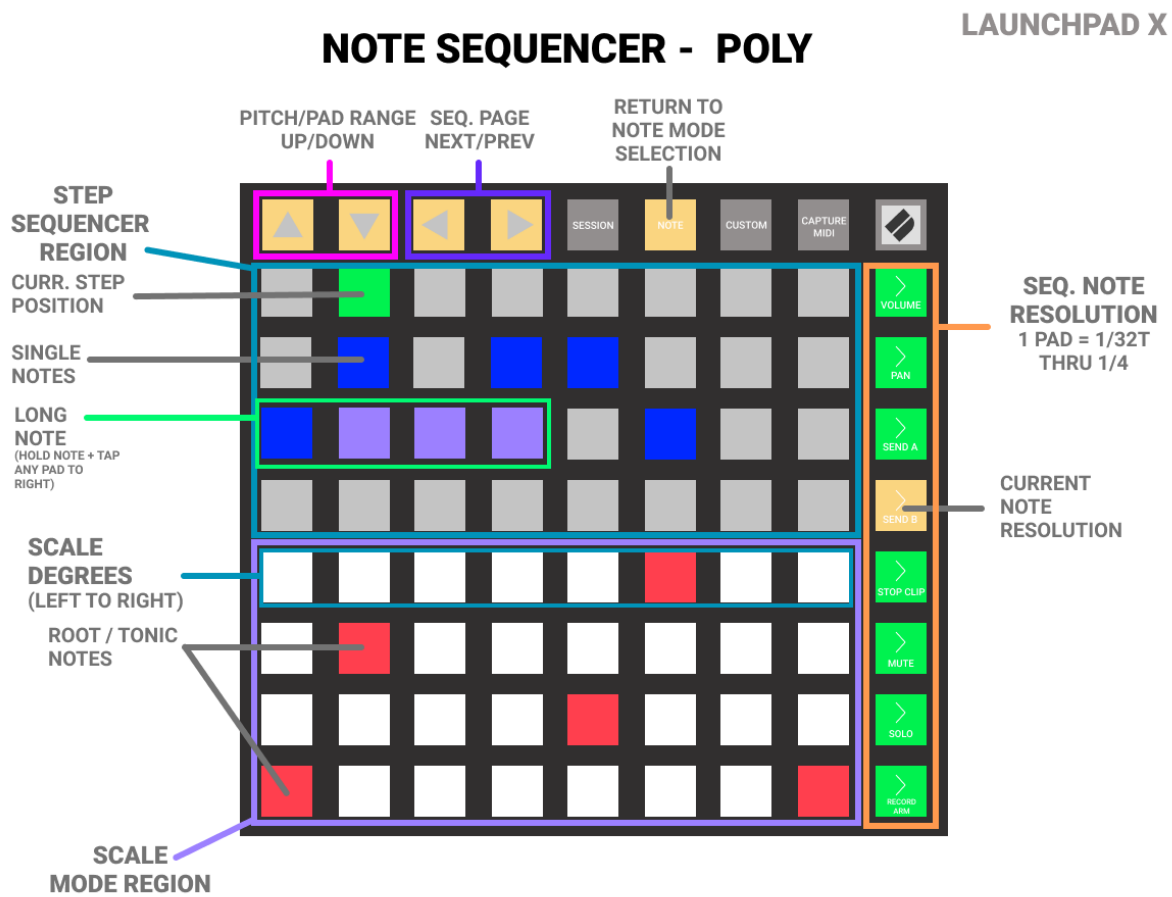
Figure 8: Sequencer Mode - Poly

- The row above a note starts a raindrop
- If the raindrop reaches the note it sounds
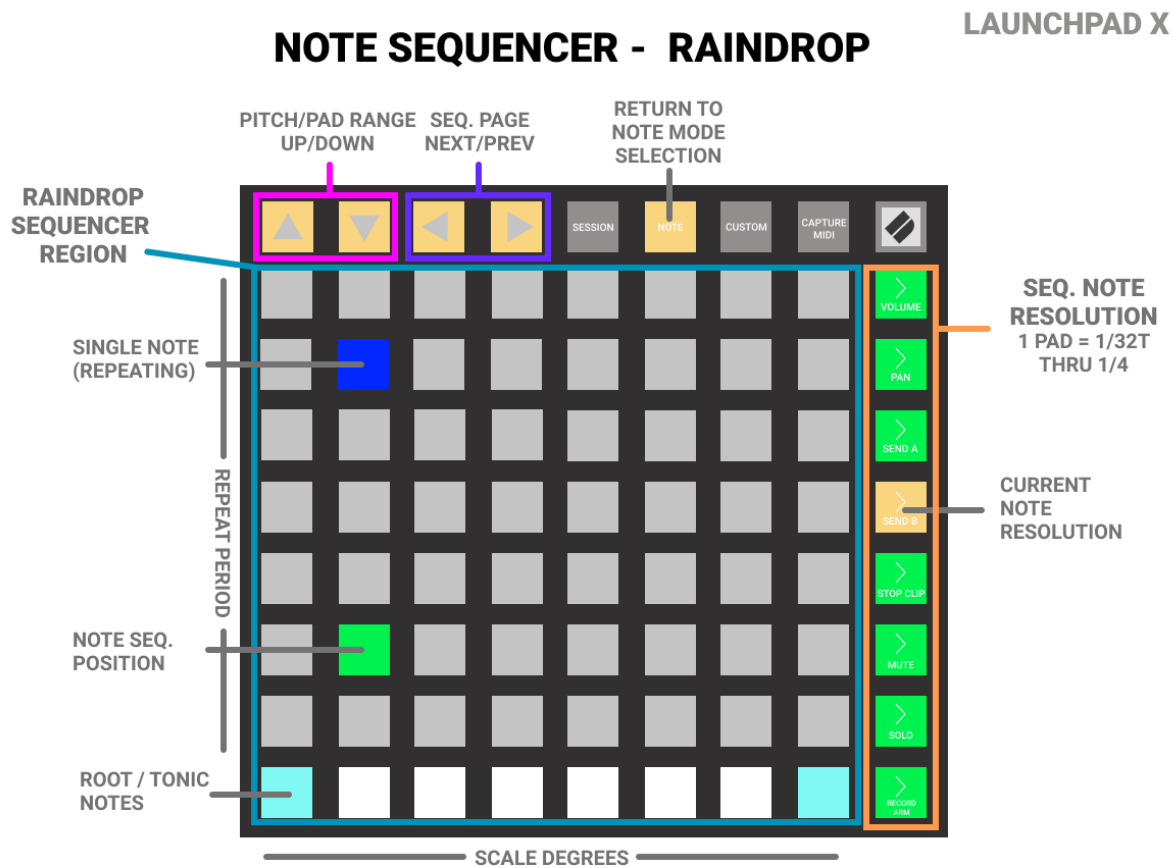
Figure 9: Sequencer Mode - Raindrop

20.10.5 Drum Sequencer Mode

Press *"Note"* and select the first blue pad to change to the **Drum Sequencer**.

- The drum sequencer works as described in the Ableton Push manual.
- Hold *Delete* + Drumpad to delete the midi notes of the current clip on that 'pad'.
- To make the display of mute/solo/exists states work, the primary device needs to be the drum machine (which is normally the case).
- The Drumpads use the colors set in the drum machine for each pad.
- The loop area in the drum sequencer is shortened by 4 pads. These 4 pads can be used in combination with the play area. From left to right they provide the following functions: select a drum pad without playing the sound, mute the drum pad, solo the drum pad, open the browser for the drum pad. With Reaper only selection is functional.

20.10.6 Drum 4 and Drum 8 sequencer

Press *"Note"* and select the second or third blue pad to change to *Drum 4* or *Drum 8*.
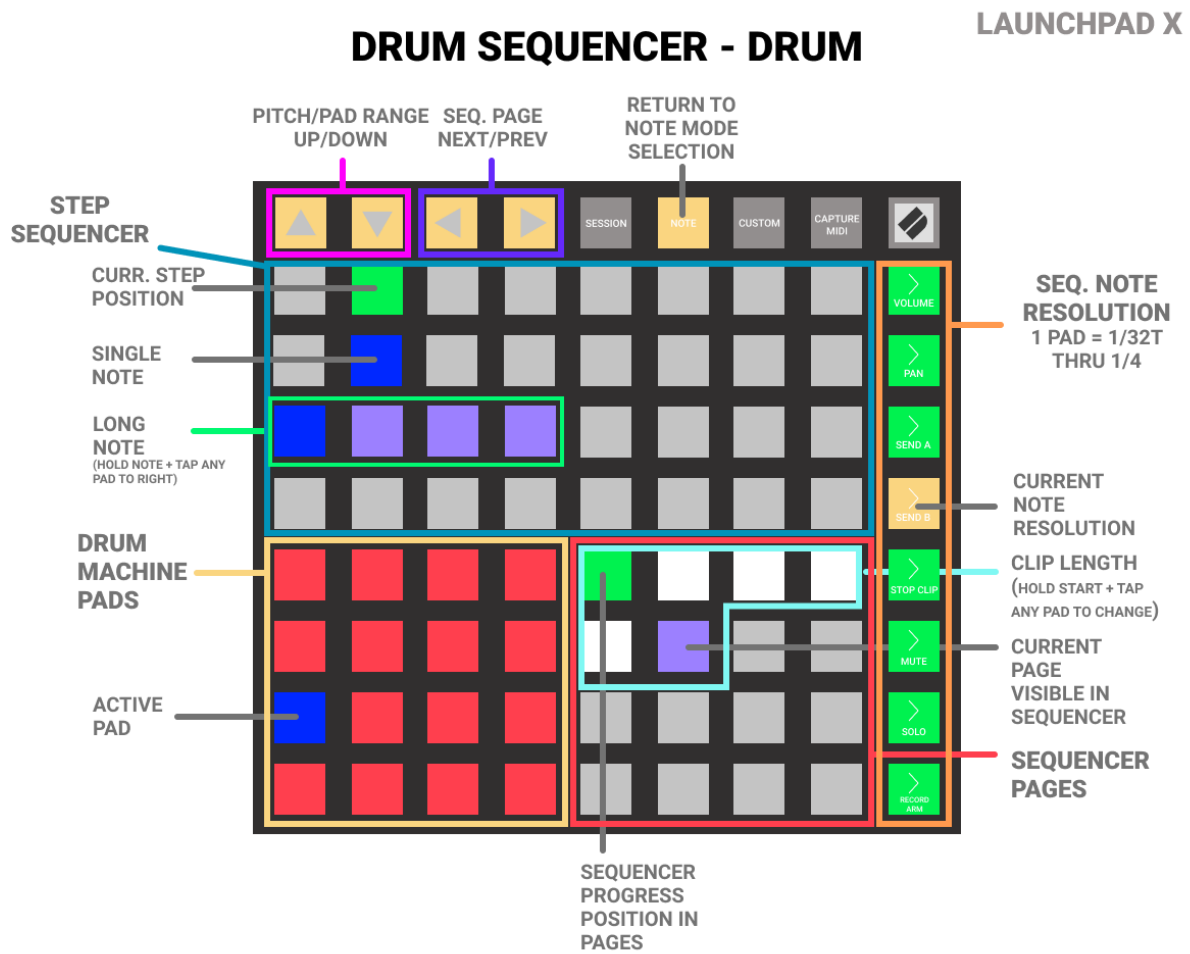
Figure 10: Drum Sequencer Mode - Drum

These drum sequencers show 4 or 8 drum sounds for sequencing. Use the cursor buttons to move in the clip.

DRUM SEQUENCER - DRUM4

LAUNCHPAD X

PITCH/PAD RANGE UP/DOWN

SEQ. PAGE NEXT/PREV

RETURN TO NOTE MODE SELECTION

STEP SEQUENCER REGION 1

SESSION   NOTE   CUSTOM   CAPTURE MIDI

PAD 4

SINGLE NOTES

PAD 3

LONG NOTE
(HOLD NOTE + TAP ANY PAD TO RIGHT)

PAD 2

PAD 1

PAD 4

PAD 3

PAD 2

PAD 1

STEP SEQUENCER REGION 2

SEQ. NOTE RESOLUTION
1 PAD = 1/32T THRU 1/4

VOLUME

PAN

SEND A

SEND B

CURRENT NOTE RESOLUTION

STOP CLIP

MUTE

CURR. STEP PLAYBACK POSITION

SOLO

RECORD ARM

DRUM SEQUENCER - DRUM8

20.11 Device Mode

Press *"Device"* to enter the **Device** mode:

- Each column of the grid controls a parameter of the currently selected device.
- These virtual faders use the same colors as the Bitwig highlight colors.
- Hit buttons harder for faster fader change.
- Cursor up/down to the next / previous device
- Cursor left/right to the next / previous parameter bank

20.12 Browser Mode

Press *"Device"* twice to enter the browser mode for preset selection. It will only enter the mode if a device is currently selected. Press *"Shift+Device"* to open the device browser to add a device after the currently selected one.

- The first 6 columns of the grid relate to the first 6 columns of the preset browser.
- The 8th column (yellow) relates to the result (preset or device) column of the browser.
- The 1st row moves the selection up by 1.
- The 2nd row moves the selection up by 8.
- The 3rd row moves the selection down by 8.
- The 4th row moves the selection down by 1.
- The red button dismisses the new preset or device selection and closes the browser.

DEVICE PARAMETERS

NEXT/PREV DEVICE

NEXT/PREV PARAM PAGE

OPEN BROWSER

TOGGLE DEVICE WINDOW

TAP TO INCREASE OR DECREASE (VELOCITY SENSITIVE)

PARTIAL INCREMENT

PARAM VALUE

DEVICE PARAMS
(COLOR CORRESPSONDS TO "KNOB" COLOR)

SESSION   NOTE   CUSTOM   CAPTURE MIDI

VOLUME   PAN   SEND A   SEND B   STOP CLIP   MUTE   SOLO   RECORD ARM
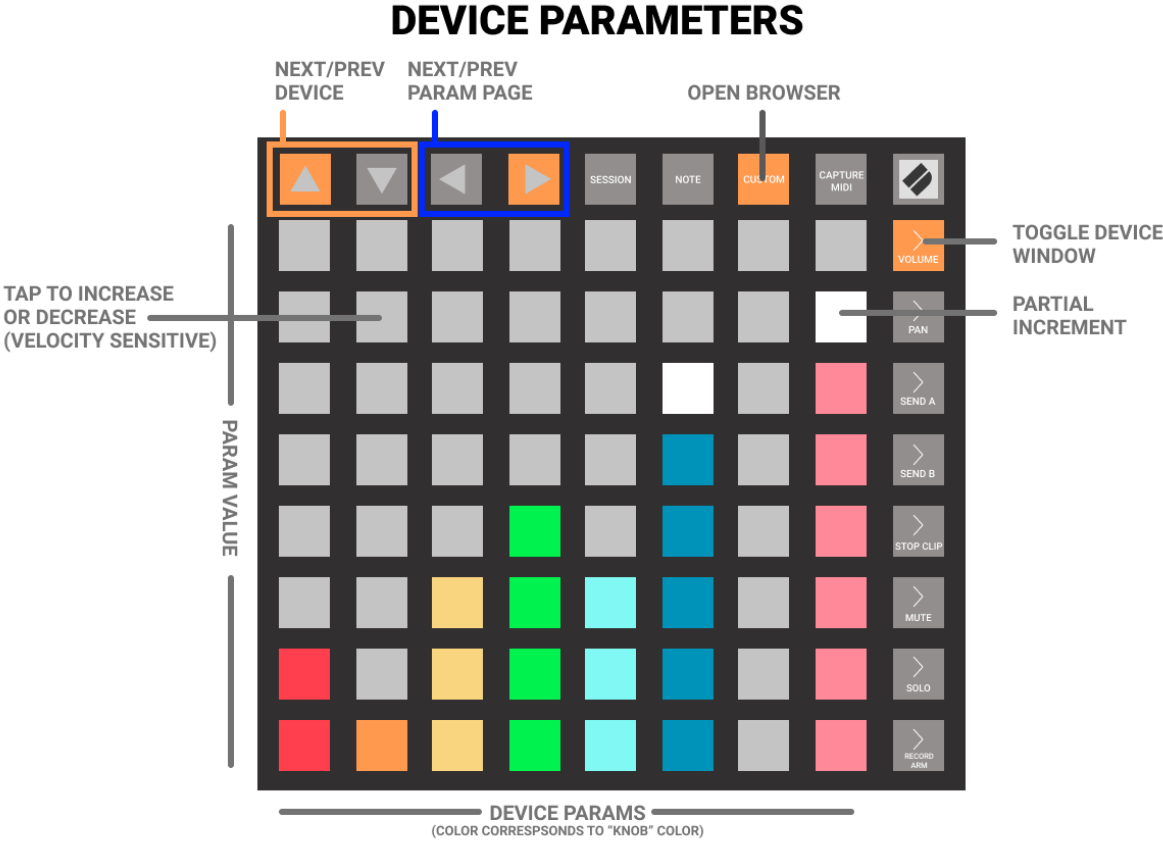
Figure 11: Device Mode

- The green button confirms the new preset or device selection and closes the browser.
- The purple buttons are for previewing presets of instrument devices.
- Left/Right buttons switch to the next / previous browser tab.
- Up/Down buttons switch from replacing the current device to inserting a new device before or after it.
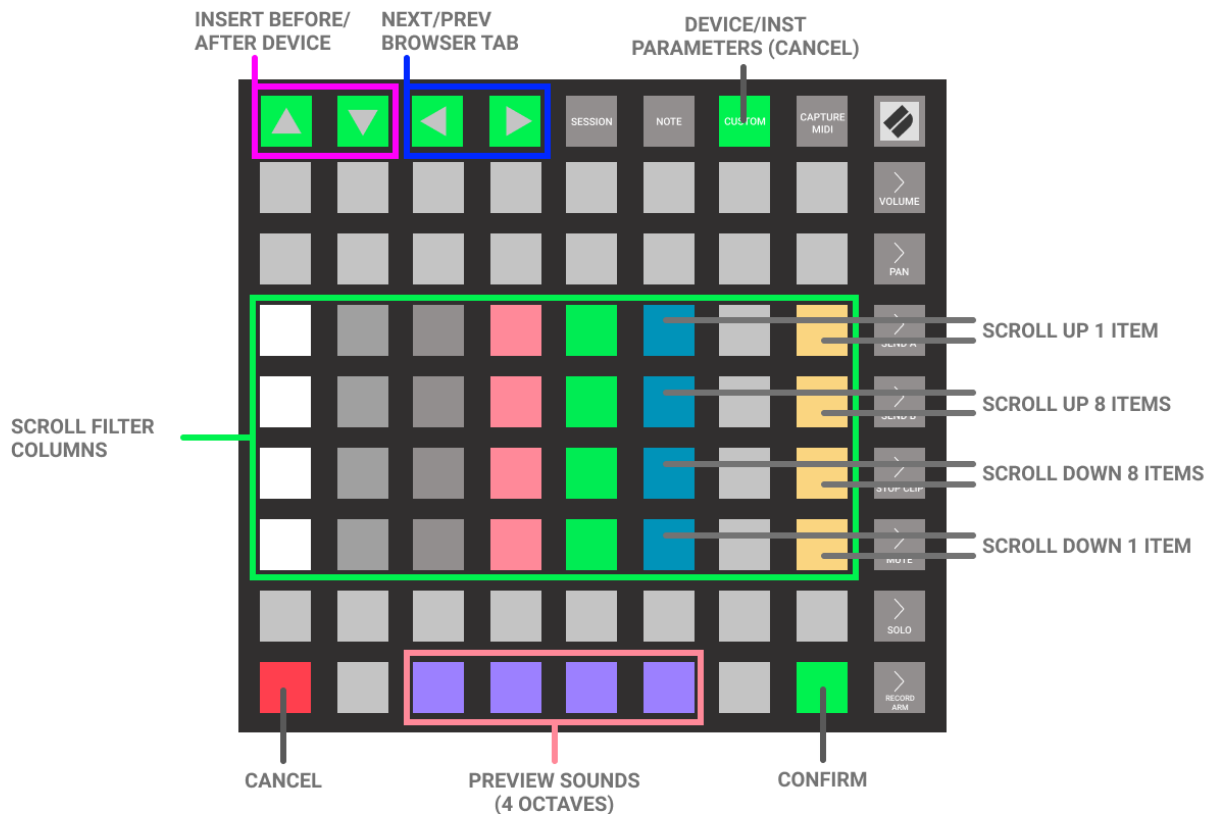
Figure 12: Browser Mode

20.13   Mix Mode

Press *"Shift+Session"* to activate Mix mode.

This mode contains all session modes at once. The rows from bottom to top are:

- rec arm,
- solo,
- mute,
- clip stop,
- send 2,
- send 1,
- panorama,
- volume.

The panorama and sends pad are only colored for the selected track. Press one of the pads of the upper 4

rows to select a track. Select a volume, panorama or sends pad to activate it and then change its value with the virtual fader of the scene buttons.
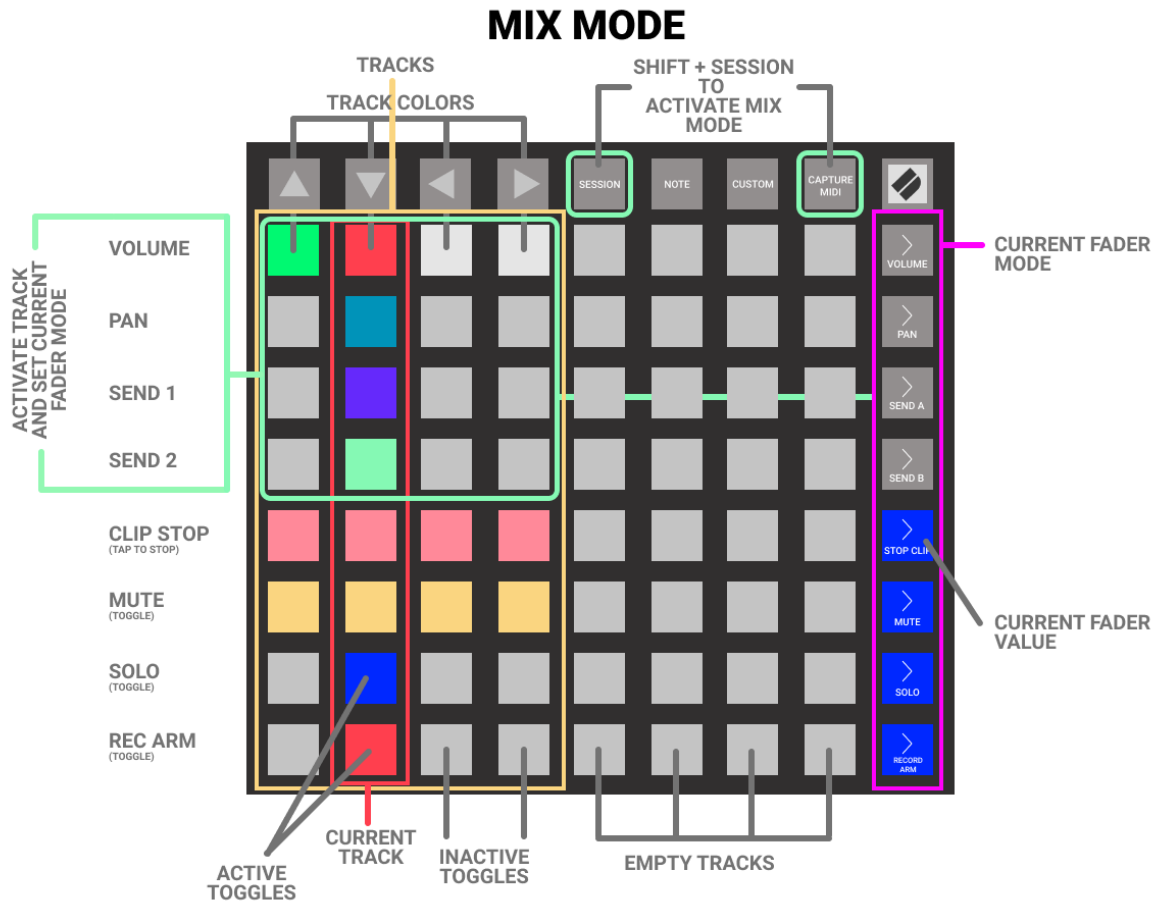
Figure 13: Mix Mode

20.14   Tempo mode

On all models, press Shift and either the arrow up or down button. On the Pro models you can also press **Shift+Device**.

The grid displays the current tempo. Change the tempo with the cursor keys. Up/down change by 1 and left/right by steps of 10. You can also keep a button pressed for continuous changes. If you do not release the Shift button when entering the mode with up/down the up/down buttons change the fractions of the tempo.

Press any of the grid pads to exit this mode.

20.15   Shuffle mode

Press **Shift+Stop clip** on the Pro models. On all other models. Press Shift and either the arrow left or right button.

The grid displays the current shuffle value. Change the value with the cursor keys. Up/down change by 1 and left/right by steps of (about) 10. You can also keep a button pressed for continuous changes.

TEMPO MODE

**SHIFT +
UP/DOWN TO
ACTIVATE
TEMPO MODE**

**TEMPO +/-
(BY 10)**

**TEMPO +/-
(BY 1)**

SESSION NOTE CUSTOM CAPTURE MIDI

**CURRENT TEMPO
VALUE**

VOLUME

PAN

SEND A

SEND B

STOP CLIP

**PRESS ANY PAD
TO EXIT**

MUTE

SOLO

RECORD ARM
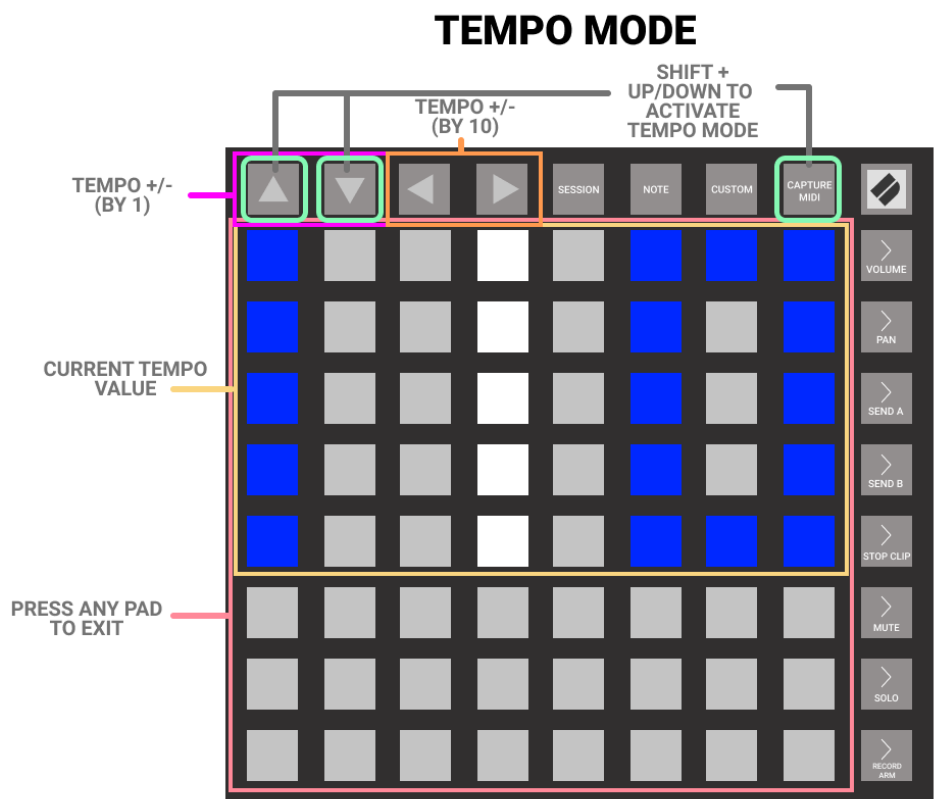
Figure 14: Tempo Mode

Press any of the grid pads to exit this mode.
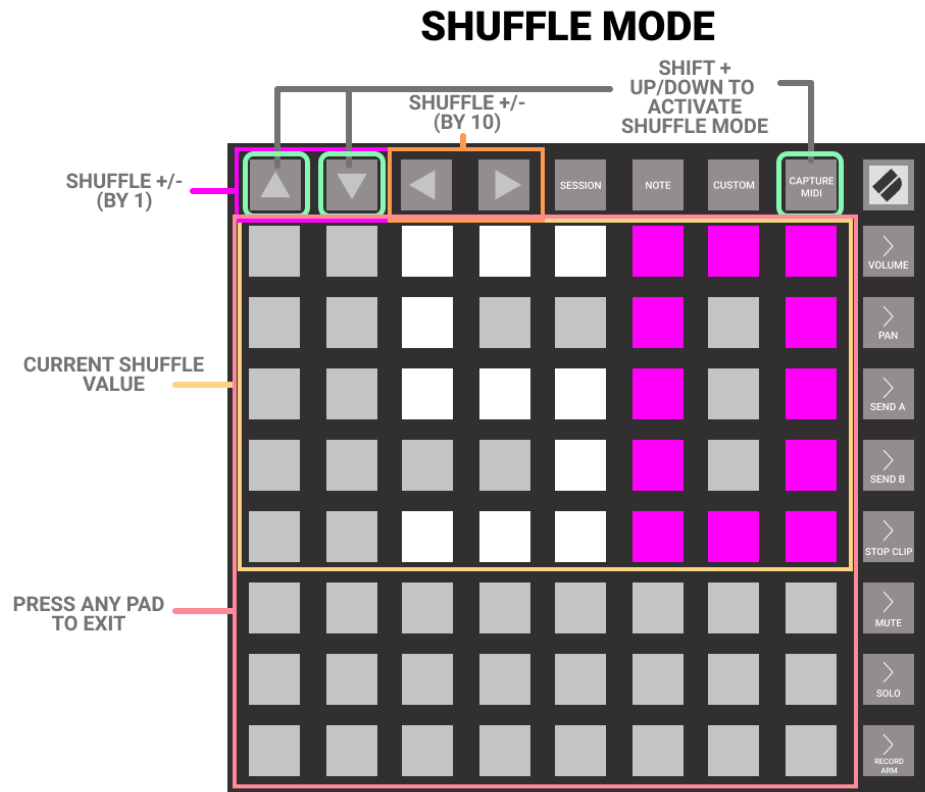
Figure 15: Shuffle Mode

20.16   Project mode (only Launchpad Pro Mk3)

Press the **Project** button to enter.

- Top Border (from left to right):
    - Switch to previous project (if multiple projects are open)
    - Toggle Audio Engine on/off of the selected project
    - Switch to next project (if multiple projects are open)
- Left Border: Toggle the inspector pane
- Right Border: Toggle the Browser pane
- Bottom Border (from left to right):
    - Toggle Note editor pane
    - Toggle Automation editor pane
    - Toggle Devices pane
    - Toggle Mixer pane
- Center buttons: Select layouts 1-3
- Cursor keys left/right: Zoom the arranger (arranger pane needs to be active!)
- Cursor keys up/down: Toggle track height (arranger or clip pane needs to be active!)

20.17 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

20.17.1 Play and Sequence

- Quantize Amount: The amount of quantization to use when Quantize is executed. 100% alignes all notes fully to the grid.

20.17.2 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button
- Flip arranger and clip record / automation: if enabled, the functionality of the Record and Automation button when used with Shift is flipped with the function when not using Shift. Enable this if you tend to work more in the Clip Launcher than the Arranger.

20.17.3 Session

- Flip Session: Change the orientation of the tracks/clips horizontal or vertical
- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.

20.17.4 Drum Sequencer

- Auto-select drum settings: If *channel* is selected and a drum pad is played the display switches to the layer settings of the drum cell.
- Turn off empty drum pads: Empty drum cells are displayed in orange. If enabled they pad LEDs are off.

20.17.5 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- Include (Group-)Mastertrack: If set to off, the group-master tracks are removed from the track bank.
- New clip length: The length of a clip created with the New function.

20.17.6 Pads

- Convert Poly Aftertouch to: The pads support poly aftertouch. If the device you play does not support this option allows to change it to Channel Aftertouch or a MIDI CC command.

20.18 Document Settings

These settings are specific to each project.

20.18.1 Scales

- Scale: Select the scale
- Base: Select the base note of the scale
- In Key: Select *Chromatic* to also display notes which are not part of the scale.
- Layout: Select the layout of the scale for the Play mode. The numbers are the offsets between the rows of the grid. The arrows depict the direction from lower to higher notes: left to right or bottom to top.

20.18.2 Note Repeat

- Active: Enable note repeat
- Period: The repeat rate of the note repeat
- Length: The length of a repeated note
- Mode: The arpeggiator mode
- Octave: The octave range which is used by the arpeggiator

21 Novation Remote SL MkI & MkII

Support script for Novations' Remote MkII controller. You can control track parameters, devices, transport, play the pads, start scenes and a step sequencer.

21.1 Installation

- If you added the controller manually, choose the 2nd MIDI port of the device as in-/output. Select the first port as the 2nd input.

21.2 Introduction

The Transport button acts as a kind of Shift key. If you press it (no need to keep pressed) the behaviour of the Transport buttons changes slightly and you can switch between Control and Play mode. To switch mode use the first row buttons. Use the P1 buttons to access several menus of a specific row.

Notes for the **ZeRO SL MkII**:

- The script also supports this model
- The P1 up/down buttons are the Page left/right buttons on the ZeRO
- The P2 up/down buttons are the Page left/right buttons with keeping the Preview button pressed at the same time on the ZeRO
- To switch the display to a specific row keep the Preview button pressed and press a button on the row.
- The Crossfader is the same as the X-axis of the Touchpad and therefore can be configured with the Touchpad settings.

21.3 Control Mode

1. 1st button row - Various functions

   - **Undo** - Undoes the last operation.
   - **Redo** - Redoes the last operation.
   - **Delete** - Like pressing the delete key.
   - **Double** - Duplicates the selected item(s), notes, etc.
   - **New** - It creates a new clip on the selected track and slot, starts play and enables overdub.
   - **Window** - Open/close the VST window.
   - **Metronome** - Toggle the metronome.
   - **Tap Tempo** - Tap Tempo.
   - Press row selection button twice (or use the P1 buttons) to edit the length of the clip which is created when you execute the **New** function.

2. 1st knob row - Edit device parameters

   - Use the up/down P1 buttons to select the next/previous 8 device parameters.
   - 8 edit knobs: Change 8 parameters of the selected device (FX).

3. 2nd button row - Toggle parameters of selected track and device

   - **Mute** - (Un-)mutes the selected track.
   - **Solo** - (Un-)solos the selected track.
   - **Rec Arm** - Arm/disarm the selected track.
   - **Write** - Toggle Automation Write of selected track.
   - **Browse** - Press Browse to enter patch selection mode for the currently selected device. Press one of the buttons to select changing of a filter or patch. Then use the first 2 buttons for navigation. Confirm with the 8th button or discard with all others.
   - **Device** - Dis-/Enable the currently selected device.
   - **«Device** - Select the previous device in the chain.
   - **Device»** - Select the next device in the chain.

- Press row selection button twice (or use the P1 buttons) to switch perspectives and dis-/enable panels.

4. 2nd knob row - Edit parameters of selected track.

   - **Volume** - Change the volume of the selected track.
   - **Pan** - Change the panning of the selected track.
   - **Crossfader** - Change the crossfader A or B setting of the selected track.
   - **Send 1** - Change the volume of 1st send of the selected track.
   - **Send 2** - Change the volume of 2nd send of the selected track.
   - **Send 3** - Change the volume of 3rd send of the selected track.
   - **Send 4** - Change the volume of 4th send of the selected track.
   - **Send 5** - Change the volume of 5th send of the selected track.

5. Drum Pads - Plays the Midi notes 36 to 43

6. Sliders - Change volume of selected 8 tracks

   - Select row to see the track names and volumes
   - Use the up/down P2 buttons to select the next/previous 8 tracks (track bank)

7. 3rd button row - Track selection

   - Press one of the buttons to select one of the 8 tracks of the current track bank.

8. 4th button row - Transport Off

   - « **(Rewind)** - Rewinds play cursor position until released.
   - « **(Forward)** - Forwards play cursor position until released.
   - [] **(Stop)** - Stop playback. Press twice to move play cursor to start of song.
   - > **(Play)** - Start/Stop playback. Double click to move play cursor to start of song.
   - **Loop** - Toggle repeat
   - **Record** - Toggle Arranger recording
   - **7th button** - Decreases tempo until released.
   - **8th button** - Increases tempo until released.

9. 4th button row - Transport On Same as above but

   - **Record** - Toggle launcher overdub
   - 7th and 8th button do not work

21.4   Play Mode

The functionality of this mode is twofold: You can start scenes and sequence. The step sequencer is mainly intended for drums but works also with notes. The sequencer uses the buttons below the faders which form 16 steps. They have two modes which are toggled with the 8th button of the 2nd button row. The first mode is for playing the notes, the last played note selects it for the step sequencer. The second mode allows to dis/enable each step.

1. 1st button row - Launch Scenes

   - Launch the 8 scenes of the current scene bank
   - Use the P1 buttons to move the page bank. **Note:** The names are always Scene 1 to Scene 8 on each page (API limitation). To prevent confusion give names to your scenes.

2. 1st knob row - Same as in Control mode

3. 2nd button row - Toggle parameters of selected track and device

   - Octave down
   - Octave up
   - Resolution down

- Resolution up
- Scroll grid left
- Scroll grid right
- No function
- Toggle Play / Sequence

4. 2nd knob row - Same as in Control mode

5. Drum Pads - Same as in Control mode

6. Sliders - Same as in Control mode

7. 3rd + 4th button row - Play notes / sequence

- Toggle step or play/select notes

21.5   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

21.5.1   Touchpad

- Mode: Select what to control with the touchpad

21.5.2   Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.
- Use drum pads for mode selection: The drums can be used to select the different modes if enabled

21.5.3   Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button

22 Novation SL Mk III

Support for Novations' SL Mk III controller.

22.1 Installation

- If you added the controller manually, choose the 2nd MIDI port of the device as in-/output. Select the first port as the 2nd input.

22.2 Global Features

- « - Move the playcursor to the left in the arranger.
- » - Move the playcursor to the right in the arranger.
- **Stop** - Stop playback. Press again to move play cursor to start of song. Double click to move play cursor to the end of the song.
- **Play** - Start/Stop playback. Double click to move play cursor to start of song. You can configure the behavior on stop in the preferences.
- **Shift+Play** - Toggle repeat.
- **Repeat** - Toggle repeat.
- **Record** - Start/Stop recording.
- **Shift+Record** - Toggle launcher overdub.
- **Duplicate** - Duplicates the first selected clip on the current track. Combine with a pad in session mode (duplicate clip) or a track select button (duplicate track).
- **Clear** - Like pressing the delete key. Hold the button for additional functionality in combination with other buttons and knobs, see the mode and view explanations below.

22.3 Fader and button section

- The faders always control the volume of the 8 tracks currently in view.
- The LEDs above the faders show the color of the track. The higher the volume of the track, the brighter the LED.
- The buttons above the LEDs allow to control either Mute/Solo or Monitor/Arm states. Use the up/down buttons to the right to switch between the two options.

22.4 Modes

- Hold the Clear button and move an encoder to reset a value to its default value in all modes.
- Hold the Duplicate button and press one of the Select buttons below the display to duplicate an item.
- Hold the Clear button and press one of the Select buttons below the display to remove an item.
- Hold the Shift button when using the Encoders for fine increment value changes.

22.4.1 Options Mode

Press the "Options" button to activate.

- Knob 1 **Mstr Vol** - Changes the Master Volume

- Knob 2 **Mstr Pan** - Changes the Master Panorama

- Knob 5 **Tempo** - Changes the Tempo

- Knob 6 **Metronome** - Changes the Metronome Volume

- Button 1 **Undo** - Undoes the last action

- Button 2 **Redo** - Redoes the previously undone action

- Button 3 « **Project** - Switch to the previous opened project

- Button 4 **Project»** - Switch to the next opened project

- Button 5 **Tap** - Press multiple times to tap a new tempo

- Button 6 **Off/On** - De-/activate the Metronome

- Button 7 **Engine** - Dis-/Enable audio engine

- Button 8 **Quantize** - Quantizes the currently selected clip

22.4.2 Track Modes

Press the **Down button** left to the display to switch between the different modes. Alternatively, hold the Down button and select one of the modes with the select buttons below the display.

1. **Track** - The Down button LED is lit **Green**
   - 8 edit knobs: Change volume/pan/Send1-6 of selected track. Hold **Shift** for fine adjustments.
   - 8 buttons: Press to select a track
   - Track Left/Right buttons: Select next/previous track
   - Shift+Left/right arrows: Select next/previous track bank
2. **Volume** - The Down button LED is lit **Blue**
   - 8 edit knobs: Change volume of selected 8 tracks. Hold **Shift** for fine adjustments.
   - Buttons behave as above.
3. **Pan** - The Down button LED is lit **Amber**
   - 8 edit knobs: Change pan of selected 8 tracks. Hold **Shift** for fine adjustments.
   - Buttons behave as above.
4. **Send 1-8** - The Down button LED is lit **Yellow**
   - 8 edit knobs: Change volume of Send 1-8 selected 8 tracks. Hold **Shift** for fine adjustments.
   - Buttons behave as above.

In all track modes hold **Shift** for additional functions:

- Button 1 **On/Off**: De-/Activate track
- Button 2 **Pin**: Pin the track (does no longer follow the selection in Bitwig)
- Button 3 **Color**: Select a new color for the track. After pressing the button press one of the pads to select a color. You can access more colors by using the Scene up/down buttons.
- Button 6 **Add Instr**: Adds a new instrument track
- Button 7 **Add Audio**: Adds a new audio track
- Button 8 **Add FX**: Adds a new effect track

22.4.3 Device Modes

Press the **Up button** left to the display to switch to Device mode and toggle between the display of devices and parameter pages. Alternatively, hold the **Up button** and select one of the modes with the select buttons below the display. This menu also contains the **User Mode** (press 8th button).

1. **Device - Devices** - The Up button LED is lit **Mint**
   - 8 edit knobs: Change 8 parameters of the selected device (FX). Hold **Shift** for fine adjustments. Hold the Clear key and turn the encoder to reset its value.
   - Buttons select a device of the selected track.
2. **Device - Parameter Pages** - The Up button LED is lit **Purple**
   - 8 edit knobs: As above.
   - Buttons select a parameter page of the selected device.
3. **User Mode** - The Up button LED is lit **White**
   - 8 edit knobs: Change the value of the mapped user parameters.
   - Buttons select a user parameter page (8x8). The pages can be named in the settings.

In the device and parameters modes hold **Shift** for additional functions:

- Button 1 **On/Off**: De-/Activate the selected device

- Button 2 **Params**: Show/hide the remote controls section of the currently selected device
- Button 3 **Expanded**: Show the currently selected device in narrow or wide form
- Button 4 **Window**: Show/hide the device window (if any)
- Button 5 **Pin**: Pin the device (does no longer follow the device selection in Bitwig)
- Button 6 **« Insert**: Open the browser to add a device before the currently selected one
- Button 7 **Replace**: Open the browser to replace the currently selected device or select a different preset
- Button 8 **Insert »**: Open the browser to add a device after the currently selected one

Buttons 6-8 open the browser mode, which works as follows:

- Columns 1/2 buttons/knobs: Select the browser tab
- Columns 3/4 buttons/knobs: Select the filter column
- Columns 5/6 buttons/knobs: Select the filter columns value
- Columns 7/8 buttons/knobs: Select the result value

22.5   Grid Modes

1. **Session** - The Grid button LED is lit **Green**

Press the Grid button till the LED is lit Green to enter **Session** mode.

- The buttons on the grid start/record the clips.
- Long press a pad to select the clip without starting it.
- The 2 scene buttons start scenes.
- The arrow keys left of the grid scroll the grid. Hold **Shift** to scroll in blocks of 8.
- Press **Clear** + Pad In Session Mode to delete the clip.
- Press **Stop** + Pad In Session Mode to stop the clip.

2. **Sequencer** - The Grid button LED is lit **Blue**

Press the Grid button till the LED is lit Blue to enter **Sequencer** mode.

The Sequencer is mainly intended for Drum Sequencing but can also be used for instruments. A clip needs to be selected. Press one of the pads to play and select a note. Switch to step view with the Scene 1 button. In step view dis-/enable the steps by pressing the pads. If a Drum Instrument is selected the steps are drawn in the color of the selected drum pad.

- **Scene 1** - Toggle between note and step view
- **Scene 2** - Open the resolution selection mode. Press one of the buttons below the display to select a resolution.
- **Scene up/down** - Change the range of selected notes.
- **Shift+Scene up/down** - Navigate the pages of a clip.

22.6   Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

22.6.1   Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- New clip length: The length of a clip created with the New function.
- Enable Faders: Option to disable the faders to prevent unwanted value changes.
- Enable Lightguide: Activates the lightguide, which displays the currently selected scale. The root note is lit in the color of the currently selected track. Change the scale and root note in the document settings.
- User Page 1-8: Allows to set a name for the user parameter pages

22.6.2 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button

22.6.3 Session

- Select clip/scene on launch: If a clip/scene is started from the controller and this setting is off the clip/scene will not be selected. Use if you edit another clip and want not to change the focus.
- Display clips of record enabled tracks in red: if enabled, in the session view for record enabled tracks the empty pads are displayed in red.
- Action for pressing rec armed empty clip: what should happen if you press an empty clip in the session view.

23   Open Sound Control (OSC) protocol

Supports the OSC protocol.

23.1   Installation

1. Click on *Add controller*, select *Open Sound Control* and click on *Add*.
2. Select a midi input port. It is not really important which one you choose because it is just used to insert midi notes into the DAW received as an OSC command. Best thing is to use a virtual midi port.
3. Adjust the IP-addresses and ports of your computer and the client device you want to use.

The ZIP file has a folder *resources/OSC* which contains example files for Cycling 74s Max, TouchOSC and Open Stage Control. Note: The templates require the setting "resolution" to be set to low.

23.2   Command documentation

The parameters of the command documentation below are as follows: * Possible values are shown in curly braces, e.g. {0,1} means that the value can either be 1 or 0. * A dash means an integer value range, e.g. {0-20} means all value starting from 0 up to and including 20. * *MAX_VALUE* is configured in the configuration settings. * If the comment contains a question the value 1 means *Yes* and the value 0 *No*. * {color} depicts an RGB color formatted as: *rgb(r,g,b)* with r,g,b in the range of {0-255}. * {0,1,-} means that either the off/on value can be turned on (1) or off (0) or toggled if the value is omitted.

23.3   The following OSC messages are sent from the script

23.3.1   Send - Global

Command	Value	Comment
/update	{0,1}	Sent before / after each update cycle (if there is at least 1 message).
/crossfade	{0-MAX_VALUE}	The crossfader value. 0 is to the left and MAX_VALUE to the right.
/project/name	{text}	The name of the project.
/project/engine	{0,1}	Is audio active (1) or off (0).

23.3.2   Send - Transport

Command	Value	Comment
/play	{0,1}	Is playback active?
/record	{0,1}	Is recording active?
/repeat	{0,1}	Is repeat active?
/click	{0,1}	Is the metronome active?
/click/volume	{0-MAX_VALUE}	The volume of the metronome.
/click/volumeStr	{text}	The volume of the metronome formatted as a text.
/click/ticks	{0,1}	Should there be ticks played between the main metronome beats?
/click/preroll	{0,1}	Should there be a preroll before recording?
/preroll	{0,1,2,4}	The number of bars to preroll before recording?
/punchIn	{0,1}	Is punch in active?
/punchOut	{0,1}	Is punch out active?
/overdub	{0,1}	Is arranger overdub active?
/overdub/launcher	{0,1}	Is clip launcher overdub active?
/autowrite	{0,1}	Is arranger automation write active?

Command	Value	Comment
/autowrite/launcher	{0,1}	Is clip launcher automation write active?
/automationWriteMode	{latch,touch,write}	The active automation mode.
/time/str	{text}	Play position formatted as time: hours.minutes.seconds:milliseconds
/time/signature	{text}	The signature at the play position: numerator / denominator
/beat/str	{text}	Play position as beats: Bitwig: measures.quarters.eights:ticks Reaper: measures.beats:ticks,
/tempo/raw	{0-666}	The tempo at the play position.
/quantize		Quantizes the currently selected clip.

23.3.3 Send - Layout and panels

Command	Value	Comment
/layout	{arrange,mix,edit}	Selects the active layout
/arranger/playbackFollow	{0,1}	Is *follow playback* active?
/arranger/trackRowHeight	{0,1}	Is track row height large (1) or small(0)?
/arranger/cueMarkerVisibility	{0,1}	Are markers visible?
/arranger/clipLauncherSectionVisibility	{0,1}	Is the clip launcher section visible in the arranger layout?
/arranger/timeLineVisibility	{0,1}	Is the time line visible in the arranger layout?
/arranger/ioSectionVisibility	{0,1}	Is the input/output section visible?
/arranger/effectTracksVisibility	{0,1}	Are effect tracks visible?
/mixer/clipLauncherSectionVisibility	{0,1}	Is the clip launcher section visible in the mixer layout?
/mixer/crossFadeSectionVisibility	{0,1}	Is the crossfade section visible?
/mixer/deviceSectionVisibility	{0,1}	Is the device section visible in the mixer layout?
/mixer/sendsSectionVisibility	{0,1}	Are the sends visible in the mixer layout?
/mixer/ioSectionVisibility	{0,1}	Is the input/output section visible in the mixer?
/mixer/meterSectionVisibility	{0,1}	Is the meter section visible in the mixer?

23.3.4 Send - Track

Command	Value	Comment
/track/toggleBank	{0,1}	Is the Effect track bank is active?
/track/hasParent	{0,1}	Is there a parent group track? A group/folder content is displayed.
/track/{1-8}/name	{text}	The name of the track.

Command	Value	Comment
/track/{1-8}/type	{unknown, audio, instrument, hybrid, group, effect, master, layer}	The type of the track.
/track/{1-8}/isGroup	{0,1}	Is the track a group track?
/track/{1-8}/activated	{0,1}	Is the track active?
/track/{1-8}/exists	{0,1}	Does the track exist?
/track/{1-8}/canHoldNotes	{0,1}	Can the track hold notes (aka a MIDI track)?
/track/{1-8}/canHoldAudioData	{0,1}	Can the track hold audio?
/track/{1-8}/position	{0-N-1}	The position of the track in all tracks, 0-based
/track/{1-8}/selected	{0,1}	Is the track selected?
/track/{1-8}/volume	{0-MAX_VALUE}	The volume of the track.
/track/{1-8}/volumeStr	{text}	The volume of the track formatted as text.
/track/{1-8}/pan	{0-MAX_VALUE}	The panorama of the track. 0 is full left. MAX_VALUE full right.
/track/{1-8}/panStr	{text}	The panorama of the track formatted as text.
/track/{1-8}/mute	{0,1}	Is the track muted?
/track/{1-8}/solo	{0,1}	Is the track soloed?
/track/{1-8}/recarm	{0,1}	Is the track armed for recording?
/track/{1-8}/monitor	{0,1}	Is monitoring enabled for the track?
/track/{1-8}/autoMonitor	{0,1}	Is auto monitoring enabled for the track?
/track/{1-8}/crossfadeMode/{A,B,AB}	Crossfade mode set for the track: A = Channel A, B = Channel B, AB = both.	
/track/{1-8}/vu	{0-MAX_VALUE}	The current VU meter output value of the track when played back.
/track/{1-8}/color	{color}	The color fo the track.
/track/{1-8}/send/{1-8}/volume	{0-MAX_VALUE}	The volume send to the send channel.
/track/{1-8}/send/{1-8}/volumeStr	{text}	The volume send to the send channel formatted as text.
/track/{1-8}/send/{1-8}/name	{text}	The name of the send channel.
/track/selected/pinned	{0,1}	Is the cursor track pinned? Doesn't follow selection in DAW.
/track/selected/{attribute}	{value}	All attributes as above for the currently selected track.
/master/{attribute}	{value}	All attributes as above for the master track, except sends.

23.3.5   Send - Scenes, Slots and Clips

Command	Value	Comment
/scene/{1-8}/exists	{0,1}	Does the scene exist?
/scene/{1-8}/name	{text}	The name of the scene.
/scene/{1-8}/selected	{0,1}	Is the scene selected?
/track/{1-8}/clip/{1-8}/name	{text}	The name of the clipin the slot (if any).
/track/{1-8}/clip/{1-8}/isSelected	{0,1}	Is the slot selected.
/track/{1-8}/clip/{1-8}/hasContent	{0,1}	Does the slot has a clip as content.
/track/{1-8}/clip/{1-8}/color	{color}	The color of the clip.
/track/{1-8}/clip/{1-8}/isPlaying	{0,1}	Is the clip playing back?
/track/{1-8}/clip/{1-8}/isRecording	{0,1}	Is the slot currently recording a clip?
/track/{1-8}/clip/{1-8}/isPlayingQueued	{0,1}	Is the clip queued for playback?
/track/{1-8}/clip/{1-8}/isStopQueued	{0,1}	Is the clip queued to be stopped? (does not work)
/track/{1-8}/clip/{1-8}/isRecordingQueued	{0,1}	Is the slot queued to record a clip?
/clip/exists	{0,1}	Does the cursor clip point to an existing clip?
/clip/color	{color}	The color of the clip the cursor clip is pointing to.
/clip/pinned	{0,1}	Is the cursor clip pinned? Doesn't follow selection in DAW.

23.3.6   Send - Cursor Device / Primary Device / EQ

Command	Value	Comment
/device/exists	{0,1}	Does the device exist?
/device/name	{text}	The name of the device.
/device/bypass	{0,1}	Is the device bypassed?
/device/pinned	{0,1}	Is the cursor device pinned? Only for cursor device.
/device/expand	{0,1}	Is the device display expanded?
/device/parameters	{0,1}	Are the parameters of the device displayed?
/device/window	{0,1}	Is the plugin window displayed (if it has one)?
/device/param/{1-8}/name	{text}	The name of the parameter.
/device/param/{1-8}/value	{0-MAX_VALUE}	The value of the parameter.
/device/param/{1-8}/valueStr	{text}	The value of the parameter formatted as a text.
/device/param/{1-8}/modulatedValue	{0-MAX_VALUE}	The modulated value of the parameter.
/device/page/{1-8}/selected	{0,1}	Is the parameter page selected?
/device/page/{1-8}/	{text}	The name of the parameter page.
/device/page/selected/name	{text}	The name of the selected parameter page.
/device/sibling/{1-8}/name	{text}	The name of the devices sibling (devices before or after the device).
/device/sibling/{1-8}/selected	{0,1}	Is the sibling selected?

Command	Value	Comment
/device/layer/{1-8}/exists	{0,1}	Does the layer exist?
/device/layer/{1-8}/activated	{0,1}	Is the layer active?
/device/layer/{1-8}/selected	{0,1}	Is the layer selected?
/device/layer/{1-8}/name	{text}	The name of the layer.
/device/layer/{1-8}/volume	{0-MAX_VALUE}	The volume of the layer.
/device/layer/{1-8}/volumeStr	{text}	The volume of the layer formatted as a text.
/device/layer/{1-8}/pan	{0-MAX_VALUE}	The panorama of the layer.
/device/layer/{1-8}/panStr	{text}	The panorama of the layer formatted as a text.
/device/layer/{1-8}/vu	{0-MAX_VALUE}	The current VU meter output value of the layer.
/device/layer/{1-8}/mute	{0,1}	Is the layer muted?
/device/layer/{1-8}/solo	{0,1}	Is the layer soloed?
/device/layer/{1-8}/color	{color}	The color of the layer.
/device/layer/{1-8}/send/{1-8}/volume	{0-MAX_VALUE}	The volume send to the send channel.
/device/layer/{1-8}/send/{1-8}/volumeStr	{text}	The volume send to the send channel formatted as a text.
/device/layer/selected/{attribute}	{value}	All attributes as above for the currently selected layer.
/device/drumpad/{1-16}/{attribute}	{value}	All attributes as above for a drum pad layer.
/device/drumpad/selected/{attribute}	{value}	All attributes as above for the selected drum pad layer.
/primary/{attribute}	{value}	All attributes as above for the primary device of the channel, except siblings and pinning.
/eq/{attribute}	{value}	All attributes as above for the equalizer device of the channel, except siblings and pinning.

Additional EQ parameters

Command	Value	Comment
/eq/type/{1-8}	{off, lowcut, lowshelf, bell, highcut, highshelf, notch}	The type of the band.
/eq/{param}/{1-8}/name	{text}	The name of the parameter.
/eq/{param}/{1-8}/value	{0-MAX_VALUE}	The value of the parameter.
/eq/{param}/{1-8}/valueStr	{text}	The value of the parameter formatted as a text.
/eq/{param}/{1-8}/modulatedValue	{0-MAX_VALUE}	The modulated value of the parameter.

{param} is *freq* for the frequency, *gain* for the The gain and *q* for the q-factor of the n-th band.

23.3.7   Send - User Parameters

Command	Value	Comment
/user/{1-8}/name	{text}	The name of the parameter.
/user/selected/name	{text}	The name of the selectzed user parameter.
/user/{1-8}/value	{0-MAX_VALUE}	The value of the parameter.
/user/{1-8}/valueStr	{text}	The value of the parameter formatted as a text.
/user/{1-8}/modulatedValue	{0-MAX_VALUE}	The modulated value of the parameter.
/user/{1-8}/selected	{0,1}	The name of the selected user parameter page.
/user/{1-8}/	{text}	The name of the user parameter page.

23.3.8   Send - Browser

Command	Value	Comment
/browser/isActive	{0,1}	Is the browser active?
/browser/filter/{1-6}/wildcard	{text}	The name of the wildcard for the filter.
/browser/filter/{1-6}/exists	{0,1}	Does the filter exist?
/browser/filter/{1-6}/name	{text}	The name of the filter.
/browser/filter/{1-6}/item/{1-16}/exists	{0,1}	Does the filter item exist?
/browser/filter/{1-6}/item/{1-16}/name	{text}	The name of the filter item.
/browser/filter/{1-6}/item/{1-16}/hits	{0-N}	The number of result hits if this filter item is applied.
/browser/filter/{1-6}/item/{1-16}/isSelected	{0,1}	Is the filter item selected?
/browser/result/{1-16}/exists	{0,1}	Does the result item exist?
/browser/result/{1-16}/name	{text}	The name of the result item.
/browser/result/{1-16}/isSelected	{0,1}	Is the result item selected?
/browser/tab	{name}	The name of the selected browser tab.

23.3.9   Send - Marker

Command	Value	Comment
/marker/{1-8}/exists	{0,1}	Does the marker exist?
/marker/{1-8}/name	{name}	The name of the marker.
/marker/{1-8}/color	{color}	The color of the marker.

23.3.10   Send - Play

Command	Value	Comment
/vkb_midi/note/{0-127}/color	{color}	The color to use for the note. These are colors for root notes, scale notes, out-of-scale notes, pressed or sequence notes (in red if recording is enabled).

23.4 The following OSC messages can be received by the script

23.4.1 Receive - Global

Command	Value	Comment
/refresh		Flushes all values to the clients.
/undo		Undoes the last action.
/redo		Redoes the last undone action.
/project/{+,-}		Switch to the next/previous opened project.
/project/engine	{0,1,-}	De-/Activate the audio engine.
/project/save		Save the current project.

23.4.2 Receive - Transport

Command	Value	Comment
/stop		Stop playback.
/play	{0,1,-}	Stop/Start/toggle playback.
/playbutton	{1,-}	Toggles playback, you can configure the Stop behaviour in the configuration settings.
/restart	{1,-}	Restarts playback from the beginning of the timeline.
/record		Start recording in the arranger.
/repeat	{0,1,-}	Disable, enable, toggle repeat (loop).
/click	{0,1,-}	Disable, enable, toggle the metronome.
/click/volume	{0-MAX_VALUE}	Set the metronome volume.
/click/ticks	{0,1,-}	Disable, enable, toggle the metronome ticks.
/click/preroll	{1,-}	Toggles the metronome in preroll.
/preroll	{0,1,2,4}	Set the number of bars to preroll before recording.
/punchIn	{0,1,-}	Disable, enable, toggle punch in.
/punchOut	{0,1,-}	Disable, enable, toggle punch out.
/overdub	{1,-}	Toggle arranger overdub.
/overdub/launcher	{1,-}	Toggle clip launcher overdub.
/crossfade	{0-MAX_VALUE}	Sets the crossfader value. 0 is to the left and MAX_VALUE to the right.
/autowrite	{1,-}	Toggle arranger automation write.
/autowrite/launcher	{1,-}	Toggle clip laucnher automation write.
/automationWriteMode	{latch, touch, write}	Set the automation write mode.

Command	Value	Comment
/tempo/raw	{0-666}	Set the tempo. Can be a decimal value.
/tempo/tap	{1,-}	Trigger the tapping the tempo.
/tempo/{+,-}		In-/decreases the tempo by 1.
/time	{0-N}	Set the transport playback position. The new playback position in beats.
/position/{+,-}		Small in-/decrease of play position.
/position/{++,–}		Large in-/decrease of play position.
/position {-2,-1,1,2}		Small in-/decrease of play position for -1 and 1, large for all other values.

23.4.3 Receive - Layout and panels

Command	Value	Comment
/layout/{arrange,mix,edit}		Switch to the given layout.
/panel/noteEditor		Toggle the note editor.
/panel/automationEditor		Toggle the automation editor.
/panel/devices		Toggle the devices section.
/panel/mixer		Toggle the mixer.
/panel/fullscreen		Toggle the main window fullscreen.
/arranger/cueMarkerVisibility		Toggle the visibility of the marker section.
/arranger/playbackFollow		Toggle *playback follow*.
/arranger/trackRowHeight		Toggle the track row height large (1) or small(0).
/arranger/clipLauncherSectionVisibility		Toggle the visibility of the clip launcher.
/arranger/timeLineVisibility		Toggle the visibility of the time line.
/arranger/ioSectionVisibility		Toggle the visibility of the arranger IO section.
/arranger/effectTracksVisibility		Toggle the visibility of the effect tracks.
/mixer/clipLauncherSectionVisibility		Toggle the visibility of the clip launcher.
/mixer/crossFadeSectionVisibility		Toggle the visibility of the crossfade section.
/mixer/deviceSectionVisibility		Toggle the visibility of the devices in the mixer.
/mixer/sendsSectionVisibility		Toggle the visibility of the sends in the mixer.
/mixer/ioSectionVisibility		Toggle the visibility of the IO section in the mixer.
/mixer/meterSectionVisibility		Toggle the visibility of VU meters in the mixer.

23.4.4 Receive - Track

Command	Value	Comment
/track/indicate/volume	{0,1,-}	Dis-/enable, toggle the indication of the volumes on all 8 tracks.
/track/indicate/pan	{0,1,-}	Dis-/enable, toggle the indication of the pans of all 8 tracks.
/track/indicate/send/{1-8}	{0,1,-}	Dis-/enable, toggle the indication of the send 1-8 of all 8 tracks.
/track/bank/{+,-}		Scroll the track bank by 1.
/track/bank/page/{+,-}		Scroll the track bank by 8.
/track/{+,-}		Select the next/previous track.
/track/add/audio		Add a new audio track.
/track/add/effect		Add a new effect track.
/track/add/instrument		Add a new instrument track.
/track/toggleBank		Toggles between the Audio/Instrument and Effect track bank.
/track/vu	{0,1,-}	En-/Disable VU-Meter notifications.
/track/stop		Stop the playing clip on the track.
/track/parent		Select the parent group, if any.
/track/{1-8}/name {text}		Set a new name for the track.
/track/{1-8}/activated	{0,1,-}	Dis-/enable, toggle the track activation.
/track/{1-8}/crossfadeMode/{A,B,AB}		Set the crossfade mode: A = Channel A, B = Channel B, AB = both.
/track/{1-8}/select	{1,-}	Select the track.
/track/{1-8}/duplicate		Duplicate the track.
/track/{1-8}/remove		Remove/delete the track.
/track/{1-8}/volume	{0-MAX_VALUE}	Set the volume of the track.
/track/{1-8}/volume/indicate	{0,1,-}	Turn off/on, toggle the volume indication.
/track/{1-8}/volume/reset		Reset the volume value to its' default.
/track/{1-8}/volume/touched	{0,1}	Turn off/on, toggle the volume touched state.
/track/{1-8}/pan	{0-MAX_VALUE}	Set the panorama of the track.
/track/{1-8}/pan/indicate	{0,1}	Turn off/on, toggle the panorama indication.
/track/{1-8}/pan/reset		Reset the panorama value to its' default.
/track/{1-8}/pan/touched	{0,1}	Turn off/on, toggle the panorama touched state.
/track/{1-8}/mute	{0,1,-}	Dis-/enable, toggle mute.
/track/{1-8}/solo	{0,1,-}	Dis-/enable, toggle solo.
/track/{1-8}/recarm	{0,1,-}	Dis-/enable, toggle record arm.
/track/{1-8}/monitor		Dis-/enable, toggle monitoring.
/track/{1-8}/autoMonitor		Dis-/enable, toggle auto monitoring.
/track/{1-8}/send/{1-8}/volume	{0-MAX_VALUE}	Set the volume of the send of the track.
/track/{1-8}/send/{1-8}/volume/indicate	{0,1}	Turn off/on, toggle the send volume indication.

Command	Value	Comment
/track/{1-8}/send/{1-8}/volume/touched	{0,1}	Turn off/on, toggle the send volume touched state.
/track/{1-8}/enter		Enter the group, if the track is a group/folder track.
/track/{1-8}/color	{color}	Set the color of the track.
/track/selected/pinned	{0,1,-}	Unpin, pin, toggle pinning of the selected track.
/track/selected/{attribute}	{value}	As above.
/master/{attribute}	{value}	As above, except sends.

23.4.5 Receive - Scenes, Slots and Clips

Command	Value	Comment
/scene/{+,-}	{1,-}	Step by 1.
/scene/bank/{+,-}	{1,-}	Step by 8.
/scene/create	{1,-}	Create a new scene from all playing clips.
/scene/{1-8}/launch		Launches the scene.
/scene/{1-8}/duplicate		Duplicates the scene.
/scene/{1-8}/remove		Remove/delete the scene.
/track/{1-8}/clip/{1-8}/select		Select the clip.
/track/{1-8}/clip/{1-8}/launch		Launch the clip.
/track/{1-8}/clip/{1-8}/record		Record a clip in the slot.
/track/{1-8}/clip/{1-8}/create	{beats}	Create new clip, activate overdub and start it. Beats is the length of the clip in quarter notes.
/track/{1-8}/clip/{1-8}/duplicate		Duplicate the clip.
/track/{1-8}/clip/{1-8}/remove		Remove/delete the clip.
/track/{1-8}/clip/{1-8}/color	{color}	Set the color of the clip.
/track/{1-8}/clip/stop		Stop the playing clip on the track.
/track/{1-8}/clip/returntoarrangement		Switch playback back to the arrangement.
/clip/pinned	{0,1,-}	Unpin, pin, toggle pinning of the cursor clip.
/clip/{+,-}		Select the next/previous slot on the track.
/clip/launch		Launch the cursor clip.
/clip/stop		Stop the playback of the cursor clip.
/clip/stopall		Stop the playback of all playing clips.
/clip/record		Record a clip in the selected slot.
/clip/create	{beats}	Create new clip, activate overdub and start it. Beats is the length of the clip in quarter notes.
/clip/quantize		Quantize the cursor clip.

23.4.6 Receive - Cursor Device / Primary Device / EQ

The following commands apply to all devices. The cursor device (/device), the primary device of the channel (/primary) and the equalizer device (/eq)

Command	Value	Comment
/device/page/selected	{1-8}	Select the device page.
/device/duplicate		Duplicate the device.
/device/remove		Remove/delete the device.
/device/bypass		Toggle bypass.
/device/expand	{0,1}	Toggle the devices' expanded display.
/device/parameters	{0,1}	Toggle the devices' parameters section.
/device/window		Toggle the devices' window, if any.
/device/indicate/param	{0,1,-}	Dis-/enable, toggle parameter indication.
/device/param/{+,-}	{0,1,-}	Select the next/previous parameter page.
/device/param/bank/page/{+,-}	{0,1,-}	Select the next/previous 8 parameter pages.
/device/param/{1-8}/value	{0-MAX_VALUE}	The value of the parameter.
/device/param/{1-8}/indicate	{0,1}	Turn off/on the parameter indication.
/device/param/{1-8}/reset		Sets the parameter to its' default value.
/device/param/{1-8}/touched	{0,1}	Turn off/on the touched state.
/device/layer/{1-8}/selected		Select the layer.
/device/layer/{1-8}/name	{text}	Set a new name for the layer.
/device/layer/{1-8}/volume	{0-MAX_VALUE}	Set the volume of the layer.
/device/layer/{1-8}/volume/indicate	{0,1}	Dis-/enable the layer volume indication.
/device/layer/{1-8}/volume/touched	{0,1}	Turn off/on the volume touched state.
/device/layer/{1-8}/pan	{0-MAX_VALUE}	Set the panorama of the layer.
/device/layer/{1-8}/pan/indicate	{0,1}	Dis-/enable the layer panorama indication.
/device/layer/{1-8}/pan/touched	{0,1}	Turn off/on the panorama touched state.
/device/layer/{1-8}/mute	{0,1,-}	Dis-/enable, toggle the layer mute.
/device/layer/{1-8}/solo	{0,1,-}	Dis-/enable, toggle the layer solo.
/device/layer/{1-8}/send/{1-8}/volume	{0-MAX_VALUE}	Set the send volume for the layer.
/device/layer/{1-8}/send/{1-8}/volume/indicate	{0,1}	Dis-/enable the layers' send volume indication.
/device/layer/{1-8}/send/{1-8}/volume/touched	{0,1}	Dis-/enable the layers' send touch state.
/device/layer/{1-8}/enter		Enter the device chain of the layer.
/device/layer/selected/{attributes}	{value}	The selected layer, same attributes as above.
/device/layer/parent		Leave the device chain of the layer.
/device/layer/{+,-}		Select the next/previous layer.
/device/layer/page/{+,-}		Select the next/previous layer page.
/device/drumpad/{1-16}/{attributes}	{value}	Same attributes as for a layer.

The following commands are additional for the cursor device.

Command	Value	Comment
/device/sibling/{1-8}/selected	{0,1}	Select a sibling device.
/device/{+,-}		Select the next/previous device.
/device/bank/page/{+,-}		Select the next/previous devices page.
/device/pinned	{0,1,-}	Unpin, pin, toggle pinning of the cursor device.

The following commands are additional for the equalizer device.

Command	Value	Comment
/eq/add		Add an equalizer device as the last device on the track.
/eq/type/{1-8}	{off, lowcut, lowshelf, bell, highcut, highshelf, notch}	Set the band type.
/eq/freq/{1-8}	{0-MAX_VALUE}	Set the frequency of the n-th band.
/eq/gain/{1-8}	{0-MAX_VALUE}	Set the gain of the n-th band.
/eq/q/{1-8}	{0-MAX_VALUE}	Set the q-factor of the n-th band.

23.4.7   Receive - User Parameters

Command	Value	Comment
/user/{+,-}		Select the next/previous device.
/user/page/selected	{1-8}	Select the user page.
/user/page/{1-8}		Select the user page.
/user/{1-8}/value	{0-MAX_VALUE}	Set the value of the user parameter.
/user/{1-8}/indicate		Toggle the edit indication.
/user/{1-8}/reset		Reset the parameter to its' default value.
/user/{1-8}/touched		Toggle the touched state.

23.4.8   Receive - Browser

Command	Value	Comment
/browser/preset		Activates the browser to browse for presets of the currently selected device.
/browser/device		Activates the browser to insert a device after the currently selected device.
/browser/device/after		Same as /browser/device.
/browser/device/before		Activates the browser to insert a device before the currently selected device.
/browser/commit		Commits the current selection in the browser.
/browser/cancel		Cancels the current browser session.
/browser/filter/{1-6}/{+,-}		The columns are as follows: 1: Favorites, 2: Location, 3: File Type, 4: Category, 5: Tags, 6: Creator
/browser/filter/{1-6}/reset		Resets the filter of the column.
/browser/result/{+,-}		Select the next/previous result.
/browser/tab/{+,-}		Select the next/previous tab (Devices/Presets/Multisamples/. . .).

23.4.9 Receive - Play

Command	Value	Comment
/vkb_midi/{Channel:1-16}/note/{Note:0-127}	{Velocity:0-127}	Plays a note.
/vkb_midi/{Channel:1-16}/note	{Note:0-127} {Velocity:0-127}	Plays a note.
/vkb_midi/{Channel:1-16}/note/+		Transposes 1 octave up.
/vkb_midi/{Channel:1-16}/note/-		Transposes 1 octave down.
/vkb_midi/{Channel:1-16}/drum/{Note:0-127}	{Velocity:0-127}	Play a drum note.
/vkb_midi/{Channel:1-16}/drum/+		Transposes 1 drum *octave* up.
/vkb_midi/{Channel:1-16}/drum/-		Transposes 1 drum *octave* down.
/vkb_midi/{Channel:1-16}/cc/{CC:0-127}	{Value:0-127}	Sends a MIDI CC message.
/vkb_midi/{Channel:1-16}/aftertouch/{Note:0-127}	{Pressure:0-127}	Sends Poly Aftertouch for a note.
/vkb_midi/{Channel:1-16}/aftertouch	{Pressure:0-127}	Sends Channel Aftertouch.
/vkb_midi/{Channel:1-16}/pitchbend	{Pitch:0-127}	Sends pitchbend. No-Bend: 64.
/vkb_midi/velocity	{0-127}	Sets a fixed velocity. 0: disables fixed velocity, 1-127: fixes the velocity to the value.
/vkb_midi/noterepeat/isActive	{0,1}	Turn on/off note repeat.
/vkb_midi/noterepeat/period	{1/4, 1/4t, 1/8, 1/8t, 1/16, 1/16t, 1/32, 1/32t}	The repeat period.
/vkb_midi/noterepeat/length	{1/4, 1/4t, 1/8, 1/8t, 1/16, 1/16t, 1/32, 1/32t}	The note length.

23.4.10 Receive - Marker

Command	Value	Comment
/marker/{1-8}/launch		Start playback at the marker position.
/marker/bank/{+,-}		Scroll the marker bank up-/down.

23.5 Preferences Settings

You can set several preferences which are stored when you exit the DAW. These are global settings and not specific to projects.

23.5.1 Setup

- Port to receive on: The port on which the OSC extension listens for incoming commands.
- Host to send to: The host address to which to send OSC commands from the OSC extension. Requires a restart of the extension if changed.
- Port to send to: The host port to which to send OSC commands from the OSC extension. Requires a restart of the extension if changed.

23.5.2 Protocol

- Value resolution: Configures the value range to use. Higher values provide a higer resolution but the client need (or OSC template of your clieant) needs to be configured accordingly! The included Open Stage Control template uses a 128 resolution.
- Bank page size: The number of entries to be used for bank pages. The default is 8. Increase the size to control more tracks, etc. at once but the OSC client must support that as well.

23.5.3 Transport

- Behaviour on Stop: Sets the action to be executed when playback is stopped with the Play button

23.5.4 Play and Sequence

- Activate Fixed Accent: If a note is played the velocity is ignored and a fixed value is used.
- Fixed Accent Value: The velocity value to use when fixed accent is active.

23.5.5 Workflow

- Exclude deactivated items: If active, deactivated items like tracks will not be displayed on the controller. This cleans up the displayed banks but also prevents the options to activate an deactivated item from the controller.
- VU meters: The display of VU meters can be disabled with this option

23.5.6 Actions

- Action 1-8: Select the Action to execute if an /action command is received

23.5.7 Debug

Enable only for finding issues since this has a performance impact.

- Log input commands: Received OSC commands are logged to the console if enabled
- Log output commands: Transmitted OSC commands are logged to the console if enabled
- Filter heartbeat commands: Ping commands are not logged if enabled

24 Changes - Bitwig Studio

11.7.2

- Requires Bitwig 3.2.5+ (3.3.4+ to use VST plugins in the Push favorites menu)
- Launchpad
  - Fixed: Fixed several issues introduced to the Shift view in 11.7.1.

11.7.1

- Requires Bitwig 3.2.5+ (3.3.4+ to use VST plugins in the Push favorites menu)
- Launchpad
  - Fixed: Play button in shift view did not work.
  - Fixed: Using browse button combination in drum mode did randomly change the pad mappings.
- Komplete Kontrol MkI
  - Fixed: Linux: Added USB access rights to rules file and added installation instructions to the manual.

11.7.0

- Requires Bitwig 3.2.5+ (3.3.4+ to use VST plugins in the Push favorites menu)
- Documentation
  - Clarified installation of the extensions which need to be added manually (Flexi, Auto Color, . . .)
- Fire
  - New: Added VU meters to the channel and mixer mode.
  - New: In Mixer mode press Alt+Bank button to switch to a new display mode, which shows the volume, pan and sends of 16 tracks depending on the touched knob. Especially, helpful in the performance mix view. If playback is active and no knob is touched it shows the VU meter activity of all 16 tracks.
  - New: In Channel mode you can press Alt+Bank button to switch to a new display mode, which shows the volume, pan and sends of the 4 drum machine channels depending on the touched knob. If playback is active and no knob is touched it shows the VU meter activity of the 4 channels.
- Generic Flexi
  - IMPORTANT: Remove all instances of Generic Flexi in the Bitwig settings and add them again. Otherwise you will have mixed up edit controls.
  - New: Added support for 14-bit CC values.
  - Fixed: 0x80 as Note off was missing
  - Fixed: Feedback was not send for notes (only CC and pitchbend).
- Komplete Kontrol Mk2
  - Fixed: Shorten device and page names in parameter mode to prevent too long text.
- Launchpad
  - New: The loop area in the drum sequencer was shortened by 4 pads. These 4 pads can now be used in combination with the play area. From left to right they provide the following functions: select a drum pad without playing the sound, mute the drum pad, solo the drum pad, open the browser for the drum pad.
- MCU
  - New: Hold arrow left/right and turn the jog wheel to zoom in/out
  - New: Hold arrow up/down and turn the jog wheel to change the track height
- OSC
  - New: Added /track/{1-8}/duplicate to duplicate a track.
  - New: Added /track/{1-8}/clip/{1-8}/duplicate to duplicate the clip.
  - New: Added /device/duplicate to duplicate the device.
  - New: Added /scene/{1-8}/duplicate to duplicate the scene.
  - New: Added /scene/{1-8}/remove to remove/delete the scene.
  - New: Added /track/{1-8}/clip/{1-8}/create {beats} creates a new clip, activates overdub and starts it.
  - New: Added /clip/create {beats} creates a new clip, activates overdub and starts it.

- New: /track/{1-8}/clip/{1-8}/record and /clip/record start now playback as well.
- Push
  - New: Added several VST plugins to the favorite menus. This requires Bitwig 3.3.4+ (crashes in older versions) and that you have the plugin installed.
  - New: Push 2: VUs of muted tracks are drawn in the mute-color.

11.6.1

- Requires Bitwig 3.2.5+
- APC40/mkII
  - New: Select Session mode again when already in Session mode to dis-/activate birds-eye view, which allows to quickly navigate the session grid.
  - Fixed: MkI: All clips did blink not only the selected one.
  - Fixed: Cursor up/down was mixed up in the simulator.
- APCmini
  - Fixed: Selecting a mode did still send the pad up event to the new mode and e.g. started a clip in session mode.
  - Fixed: Selected mode was not always displayed correctly.
  - Fixed: Play/Stop did not work.
- Launchpad
  - Fixed: Drum 64 mode: Selected pads in the right bottom corner were lit in the left upper corner.
- Push
  - Fixed: Drum 64 mode: Selected pads in the right bottom corner were lit in the left upper corner.
  - Fixed: Clip parameters could not be slowly changed with Shift.

11.6.0

- Requires Bitwig 3.2.5+
- APC40mkI/mkII
  - New: The selected clip in the session is now glowing white (mkII) or blinking yellow (mkI).
- Fire
  - New: The selected clip in the session is now blinking white (if not played back or recording).
- Generic Flexi
  - Fixed: Resolution for relative knobs was limited to 128 steps.
- Launchkey Mk3
  - New: Fader button is glowing if the track is selected.
  - New: Fader buttons are turned off if track does not exist.
  - New: **Shift + Play** switches playback back to arranger on all tracks.
  - New: **Play + Pad** switches playback back to arranger on the track which contains the clip.
- Maschine Mk3 / Mikro Mk3
  - New: **Pattern + Pad** stops the clip.
- MCU
  - New: If *Select Channel on Fader Touch* is set to *Off*, touching the master fader is ignored as well.
- Push
  - New: Adding a track has now a menu which allows to add favorite devices. These favorites can be configured in the settings (currently only Bitwig devices).
  - New: The selected clip in the session is now glowing white (if not played back or recording).

11.5.2

- Requires Bitwig 3.2.5+
- APC40mkI/mkII
  - New: Press **Stop Clip** + Pad In Session Mode to delete the clip.
  - New: Press **Select** + Pad In Session Mode to duplicate the clip.
- Fire
  - Fixed: Press **Stop** + Pad In Session Mode to stop the clip did not work.
- Launchkey Mk3

- New: Press **Shift + Stop** to stop all playing clips.
- New: Press **Stop** + Pad In Session Mode to stop the clip.
- New: Press **Undo** + Pad In Session Mode to delete the clip.
- New: Scenes/Clips scroll now by 1 instead of 2, which is a bit less confusing.
- Fixed: Browser did open when pressing a pad in session mode when browser was used before.
- Launchpad
  - New: Temporary session mode: if any mode except session is active, hold the session button and then start a clip or scene. When the session button is released the previous mode is restored.
  - Fixed: Virtual fader in mix mode did not work when Takover Mode was set to Relative Scaling or Catch.
- Maschine
  - Fixed: Could not scroll browser results.
- Novation SLMkIII
  - Fixed: Press **Stop** + Pad In Session Mode to stop the clip did not work and was missing in the documentation.

11.5.1

- Requires Bitwig 3.2.5+
- APC40
  - New: Knob LEDs are totally turned off if parameter does not exist.
- Fire
  - New: In Note Sequencer **Shift + Grid buttons** change the Scale, **Shift + Alt + Grid buttons** change the Scale Base key. For consistency the button combinations in Play and Piano modes are adjusted accordingly.
  - New: Use **Shift + Select knob** in note and Poly Sequencer mode to transpose notes of clip up/down.
  - Fixed: Channel parameters did not get reassigned when drum pad was changed.
  - Fixed: Selection got lost when scrolling too fast through drum pads in drum sequencer.
  - Fixed: Wrong parameter name was shown in combination with ALT button.
- Generic Flexi
  - New: Added functions to toggle user parameters between minimum and maximum value.
- Launchkey Mk3
  - Fixed: Endless opening / closing loop of browser if browser was opened in Bitwig instead of from the Launchkey.
- Launchpad
  - Fixed: Tap tempo in Shift Mode did not work.
- Maschine Mk3 / Mikro Mk3
  - New: Channel and Polyaftertouch of the pads are now routed to Bitwig.
- OSC
  - New: Added */clip/stopall* which stops all playing clips.
- Push
  - Fixed: Device data on Info page was not displayed.
  - Fixed: Several issues with knob mapping in layer modes.

11.5.0

- Requires Bitwig 3.2.5+
- Komplete Kontrol Mk2
  - New: Allow all MIDI channels for the keyboard, so far only channel 1 was enabled.
- Launchkey Mk3
  - New: Added support for models 25, 37, 49 and 61
- Launchkey Mini Mk3
  - Fixed: Session clip indication was no enabled.
  - Fixed: Improved contrast between selected and unselected scene.
  - Fixed: Long pressing a mode pad did crash.

- Launchpad
  - Fixed: Pro Mk3: *Fixed Length* button was missing in simulator.
- APC40, Fire, HUI, MCU, Kontrol MkI/MkII, SL MkIII
  - New: Double click the *stop* button when playback is stopped to move the play cursor to the end of the project.

11.0.0

- Requires Bitwig 3.2.5+
- All devices
  - Fixed: 8th layout for scales which do not have 7 intervals was not aligned correctly (Push, Launchpad, APC).
- Launchpad
  - New: Press the 4th scene button (green) in the play mode to activate additional controls in the first pad row. First pad toggles sustain. Second and third pad are pitch down/up and the following pads switch to different intensities of the modulation wheel. You can slide these modulation wheel pads to imitate a modulation wheel.
  - New: Press the 5th scene button (amber) in the play mode to activate chords mode. This mode allows to play a chord by pressing a single pad. The base note is taken from the current scale and increases from left to right. The rows from bottom to top contain the following chords: Triads, Dyads (Powerchords), Suspended second (Sus2), Suspended fourth (Sus4), Add sixth (6), Major seventh chord (maj7), Add ninth (9), Add eleventh (11). The same octave, scale and base note settings apply as with the play mode.
  - New: Pro Mk3: *Fixed Length* button triggers the New clip command.
  - New: The mode strip in session view is now displayed vertically if session is flipped (in the 8th column).
  - New: Show the flipped state in Bitwig when Session is activated from a different view.
  - New: Scrolling in Birdseye view is now per page.
  - Fixed: Birdseye view in session mode should not display mode button row.
- Push
  - New: Added chord mode. Press Note and select *Chords* to enable it or use the Layout button. Functionality is like described above for the launchpad.
  - Fixed: Push 2: Selected play view for a track was not remembered when changed via the Layout button.

10.9.6

- Requires Bitwig 3.2.5+
- All devices
  - Fixed: Some configuration values were not initialised correctly after startup (e.g. LED brightness).
- APC40 MkI
  - Fixed: Drum sequencer crashed.
- Generic Flexi
  - New: Added new function **Track Selected: Toggle Pin**.
  - New: Added new function **Track Selected: Set Pin**.
  - New: Added new function **Device: Toggle Pin**.
  - New: Added new function **Clip: Toggle Pin**.
- Launchpad
  - New: First button in Shuffle view toggles now Groove. 3rd and 4th button selects shuffle rate.
  - Fixed: Shuffle view could not be closed.
- MCU
  - New: Toggle **Use faders like knobs** has been moved to the Flip button to be more consistent with the intended MCU behaviour. Toggling instrument/audio and effect tracks is now on Shift+Flip.
- OSC
  - Documented all OSC commands in the manual.
  - New: New command for send and receive **/track/selected/pinned {0,1,-}**.

- New: New command for send and receive **/device/pinned {0,1,-}**.
    - New: New command for send **/clip/exists {0,1}**
    - New: New command for send **/clip/color** with rgb(r,g,b); r,g,b = 0..255.
    - New: New command for send and receive **/clip/pinned {0,1,-}**.
    - New: New command for receive **/clip/{+,-}**.
    - New: New command for receive **/clip/launch**.
    - New: New command for receive **/clip/stop**.
    - New: New command for receive **/clip/record**.
    - New: New command for receive **/clip/quantize**.
- Midi Monitor
    - Fixed: Crashed on startup.

10.9.5

- Requires Bitwig 3.2.5+
- All devices
    - Fixed: LEDs and controls did not update on Macos 11 on startup. All states are now flushed 10s after startup.
- Fire
    - New: The brightness and the color intensity of the pads can be adjusted in the settings.

10.9.4

- Requires Bitwig 3.2.5+
- Launchkey Mini Mk3
    - New: Added options to choose the function for the record and shift+record button.
- Fire
    - New: Alt + Mute/Solo buttons display the drum sounds name in drum sequencer mode.
- Generic Flexi
    - New: Replaced Select/Export/Import buttons with Load/Save buttons. Remove and add the extension to remove the old buttons (Bitwig bug)!
    - Fixed: File dialogs did not work on Linux.
    - Fixed: Dialog height was *jumping* until you changed the height.
    - Fixed: Item Select in Parameters mode did not set the parameter page.
- Push
    - Fíxed: Play view could be off if quickly switching between track pages.

10.9.3

- Requires Bitwig 3.2.5+
- All devices
    - New: The cursor clip can now be pinned in the studio pane (below the cursor track). By using this you can edit different launcher clips on multiple controllers.
- Novation SLMkIII
    - New: Press Stop + Clip in Session mode to stop the playback of the clip.
    - New: Shift + Play toggles write arranger automation.
    - New: Shift + Loop toggles write clip launcher automation.
- OSC
    - New: Added new command /track/{1-8}/remove
    - New: Added new command /device/remove
- Push 1/2
    - New: First button in the clip mode toggles if the clip is pinned.
    - New: Improved the layout of the Groove mode.

10.9.2

- Requires Bitwig 3.2.5+
- All devices

– Fixed: Implemented a workaround for parameters not showing their renamed labels.
- MCU
    – Fixed: Scrolling in browser did always jump between first and last item.

10.9.1

- Requires Bitwig 3.2.5+
- APCmini
    – Fixed: Switching modes was broken.
- Beatstep
    – Fixed: Changing scale base note did only work in one direction.
- Fire
    – New: Activate delete mode and press the select knob to delete the currently selected device.
    – Fixed: Don't apply knob speed settings in Browser mode.
- Generic Flexi
    – New: Display parameter changes for Note Input functions.
    – New: Scale Note Input period and length to 127 for better use with absolute faders and knobs. If you assigned these to multiple buttons you need to update their values.
- Launchpad
    – Fixed: Duplicating notes in Poly Sequencer did create notes with velocity of 0 for all notes.
- Push
    – Fixed: Duplicating notes in Poly Sequencer did create notes with velocity of 0 for all notes.

10.9.0

- Requires Bitwig 3.2.5+
- Fire
    – New: In Shift mode the 10th button of the first row (blue) activates duplicate mode. Can be used with the first row of the Mix mode to duplicate tracks and with clips in the Session mode.
    – New: In Shift mode the 12th button of the first row (red) activates delete mode. Can be used with the first row of the Mix mode to delete tracks and with clips in the Session mode.
    – New: In Shift mode the 11th button of the first row (green) doubles the content of the currently selected clip.
    – New: Press Stop+Clip in Session mode to stop the playback of the clip.
- Midi Monitor
    – Fixed: Displayed note octave was wrong for Note on/off and Poly aftertouch (e.g. showed C6 instead of C4).
- MCU
    – New: Added User mode. Press Device button twice to activate user mode.
- OSC
    – New: Added /update before and after each update cycle (if there is at least 1 update message).
    – New: /track/{1-8}/name {text} - Set a new name for the track
    – New: /device/layer/{1-8}/name {text} - Set a new name for the layer
    – New: Open Stage Control template: name of track and layer can be set
    – New: Open Stage Control template: added data receive indicator LED to transport bar
- SL Mk III
    – Fixed: Lightguide was only drawn black but not turned off on the hardware when disabled in the settings. The hardware light guide can now used again when the settings is disabled.

10.8.0

- Requires Bitwig 3.2.5+
- APC40
    – Fixed: Changing tempo in combination with Shift button left the shift mode active.
- Launchpad
    – Fixed: Crash when session mode was flipped and 8th row was active.
    – Fixed: Session grid was off by 1 if 8th row was active and long press was used (also crashed on 1st

row).
- – Fixed: Stop all clips button was missing in Shift mode on Pro models.
- Maschine Mk3
  - – New: Converted knobs to new hardware API.
  - – Fixed: Scene, pattern and fixed velocity with encoder knob did behave erroneous.
- MCU
  - – New: Converted knobs and faders to new hardware API.
  - – Fixed: Page Up/Down (MCU MODE EQ / DYN) did not work.
- SL Mk I + II
  - – New: Converted knobs and faders to new hardware API.
  - – New: Show all tracks in volume mode (no need to switch between instrument/audio tracks, effect tracks and master).
  - – Fixed: Crash in sequencer/play mode.
- SL Mk III
  - – New: Out of scale keys of the light guide can now also be lit in dark grey. Select *Chromatic* in the document settings.
  - – New: Converted faders and knobs to new hardware API.
  - – Fixed: Switching modes did not work with single button presses.

10.7.4

- Requires Bitwig 3.2.5+
- APC40
  - – New: Converted crossfader to new hardware API.
  - – Fixed: Knob value changes could hang if takeover mode was set to Catch.
  - – Fixed: Coloring of Tempo mode in simulator was wrong.
- Fire
  - – New: The pad index is now displayed (instead of the page index).
  - – New: Added knob speed settings.
  - – Fixed: Note was always created with velocity of 0 in drum sequencer (except when Accent was enabled).
- MCU
  - – Fixed: Motor fader value changes could hang if takeover mode was set to Catch.

10.7.3

- Requires Bitwig 3.2.5+
- All devices
  - – Fixed: Notification message display time was too short (since message was canceled straight away).
  - – Fixed: Added a workaround for new hardware API always showing "Send" as the send name.
- APC40
  - – New: Display Send index and name as well as user pages when changing to these modes.
  - – Fixed: Crash when switching to effect tracks.
  - – Fixed: Mk2: Do not switch to next Send when Send button was used in combination with track selection (to select Send N).
  - – Fixed: Mk2: Last send mode was not remembered when changed with track selection combination.
- Komplete Kontrol Mk2
  - – Fixed: Finished conversion to new hardware API, therefore volume and parameters change with the same speed again.
- Launchpad
  - – New: When duplicating a clip the destination clip can now be chosen. Pro models: Keep Duplicate button pressed; choose the source clip (it must be a clip with content, you can still select a different clip with content); select the destination clip (this must be an empty clip, which can also be on a different track); release the Duplicate button. On the non-pro models, activate duplicate mode, duplicate mode is deactivated, as soon as you select an empty clip as the destination.
- Push

- New: When duplicating a clip the destination clip can now be chosen. Keep Duplicate button pressed; choose the source clip (it must be a clip with content, you can still select a different clip with content); select the destination clip (this must be an empty clip, which can also be on a different track); release the Duplicate button.
- Fixed: Select button is now blocked in Browse mode since it does not have any function in that mode and left the extension with a blank screen when accidently pressed.

10.7.2

- Requires Bitwig 3.2.5+
- AutoColor
  - Fixed: Crashed on startup
- Komplete Kontrol
  - Fixed: Crashed on startup

10.7.1

- Requires Bitwig 3.2.5+
- APC40 / APC40 mk2
  - New: APC40 mk2: Select user mode pages now with User+Select 1-8. Cursor keys change tracks like in pan and send mode.
  - New: Knobs in panorama and send mode as well as the faders and device knobs use the new hardware API.
  - Fixed: Pressing notes in drum sequencer for editing did always select notes in the first sequencer row.
- Fire
  - New: Knobs in Mixer and Parameter mode use the new hardware API.
- Launchpad Pro Mk3
  - Fixed: (Regression in 10.7) Mode selection did not always work
- MCU / Novation SLMkI/II
  - New: Removed "Display Crossfader on Track". Does not make much sense with these devices.
- Push
  - New: Removed "Display Crossfader on Track". On Push 2 the crossfade mode setting is now always visble and can be changed with the third knob in track mode. On Push 1 it is never displayed in track mode. Use the crossfade mode instead to change the settings.
  - New: Push 2: Nicer drawing of crossfade mode on channel
  - New: Push 2: The 4th/8th send name is now always displayed if the current tracks are not inside of a group. Furthermore, it is displayed if the 8th knob is touched.

10.7.0

- Requires Bitwig 3.2.5+
- APCmini
  - New: Faders use new hardware API, simulator shows positions
- NI Kontrol Mk 1
  - New: Knobs use new hardware API, simulator shows positions
  - New: Added settings for knob speed
- NI Kontrol Mk 2
  - New: Knob speed settings are now from -100 to 100
- Launchpad
  - Fixed: Pro Mk3: The last selected play / sequencer mode was not restored
  - Fixed: Volume, Pan and Sends view was canceled when track selection changed.
- MCU
  - New: Added settings for knob speed
- NI Maschine Mk3
  - New: Added settings for knob speed
- OSC

- Fixed: /vkb_midi/note/{0-127}/color did not send scale colors, only played notes
  - Fixed: Page size of user parameters was not changed (was always 8)
- Push 2
  - New: Knobs use new hardware API, simulator shows positions
  - Fixed: Shutdown of the display process did not always exit cleanly
  - Fixed: In user mode the value changes couldn't be slowed down by using Shift

10.6.4

- Requires Bitwig 3.2.5+
- Push
  - Fixed: Grid resolution could not be changed in drum modes

10.6.3

- Requires Bitwig 3.2.5+
- All devices
  - Fixed: Raindrop sequencer did crash if more measures than 32 or 32 with 1/32t and 1/32 were used. The later issue is fixed and the first issue get blocked (only 32 measures get filled).
  - Fixed: Drum 4 / Drum 8 - setting note length on the grid was broken
- Akai Fire
  - New: Displays the number of the edit page when switching to the previous/next.
  - Fixed: Crash in browser when select knob was released.
- Launchpad
  - New: Updated documentation images
  - New: Added fixed accent option to the settings
  - New: Fixed accent can be toggled with the yellow pad in the right upper corner of the shift mode
- Push 2
  - Fixed: Long press delay was about double the time as with Push 1

10.6.2

- Requires Bitwig 3.2.5+
- Akai Fire
  - New: Shift + Scene: Selects the scene without starting it.
  - New: Selecting or starting a scene shows its' name in the display.
- Launchpad
  - New: Display the track number and name on track selection.
  - New: Display the function of the selected row in Mix mode.
  - New: Drum mode 4 and 8 move in steps of 4 and 8 up and down so that now all sounds can be reached.
  - Fixed: Not all selected modes were displayed in Bitwig and some names showed Session.
  - Fixed: Mix view was canceled when track selection changed.
  - Fixed: Long pressing a pad in a fader mode caused the selection of a track.
- Push
  - New: Drum mode 4 and 8 move in steps of 4 and 8 up and down so that now all sounds can be reached. The previous selection with Shift + Scene was removed.
  - New: Note Repeat + Scene - Change note repeat period
  - New: Shift + Note Repeat + Scene - Change note repeat note length

10.6.1

- Requires Bitwig 3.2.5+
- APC40MkII
  - New: Scene buttons are lit in the color of the scene.
- Akai Fire
  - Fixed: Ghost notes could appear when quickly editing pitches in the sequencer and create a new clip.

- Fixed: Removed session flip option, which did crash.
- Fixed: Also prevent deletion of note in sequencer when knob was touched but not turned.
- Komplete Kontrol MkI
  - Fixed: Interpretation of knob speed was wrong.
- Push
  - Fixed: Mapped User Parameters did not show their name and value.

10.6.0

- Requires Bitwig 3.2.5+
- APC40 / APC40MkII
  - Fixed: Insert device before / after current from Shift mode did crash.
  - Fixed: APC40: Shift+Stop All Clips did open the browser to insert before the device instead of replacing the current.
- Akai Fire
  - New: **Shift + Stop** - Toggle clip automation write
  - New: **Alt + Stop** - Toggle arranger automation write
- OSC
  - New: Added equalizer commands (uses first EQ+ device on a track)
    * /eq/. . . - All values/commands available for /device
    * /eq/add - Add an EQ+ device as the last device on the track
    * /eq/type/{1-8} - Set/get the band type (off, lowcut, lowshelf, bell, highcut, highshelf, notch)
    * /eq/freq/{1-8} - Set/get the frequency of the n-th band
    * /eq/gain/{1-8} - Set/get the gain of the n-th band
    * /eq/q/{1-8} - Set/get the q-factor of the n-th band
  - New: Added example Open Stage Control template for equalizer control
- Push 2
  - Fixed: Some device icons were not correct

10.5.0

- Requires Bitwig 3.2.5+
- All devices
  - New: Improved lookup of drum machine device for drum sequencers.
  - New: Only create the device monitors which are necessary for the specific extension.
  - New: Improved synchronization of device and Bitwig browser. If the browser is opened in Bitwig, it will open as well on the device (if browsing is supported on the device).
- APCMini
  - New: Long press a pad in session mode to select the clip without starting it.
- APC40 / APC40MkII
  - New: Long press a pad in session mode to select the clip without starting it.
  - New: Tempo is displayed on grid when tempo is changed.
  - New: APC40: Tap Tempo + Cue Level changes tempo.
  - Fixed: APC40: *Shift+Stop All Clips* did not open the browser.
  - Fixed: Browser mode was not cancelled when browser was close in Bitwig.
- Akai Fire
  - New: Long press a pad in session mode to select the clip without starting it.
  - Fixed: Drum sequencer crashed when changing note length on the grid.
  - Fixed: Note in sequencer could not be deleted if its' pitch was changed.
- Launchpad
  - New: Long press a pad in session mode to select the clip without starting it.
  - Fixed: Modes could only be activated once (non-pro models)
- Novation SLMkIII
  - New: Long press a pad in session mode to select the clip without starting it.
  - New: The lightguide displays the scale notes. The scale can be selected in the document settings.
  - New: The lightguide can be turned off in the settings.

- Push
  - New: Long press a pad in session mode to select the clip without starting it.
  - Fixed: Temporarily activating session mode did only work for starting clips but not for starting scenes.
  - Fixed: Longpressing a pad in Drum 4 mode to edit the note did not work.
  - Fixed: Add Device/Effect did call Replace effect instead of Insert.

10.2.0

- Requires Bitwig 3.2+
- All devices
  - New: All settings are now documented in the manual.
- Akai APC40
  - New: The cursor keys can now be used in the browser mode: Left/right select the previous/next tab. Up/Down select the previous/next result.
- Akai Fire
  - New: Pressing Select knob toggles the window of the current device.
- Generic Flexi
  - New: Option to execute one of 8 Actions.
- MCU
  - New: Added option - include FX and master tracks in track bank
  - New: Added option - pin FX tracks to last device
  - New: Footswitches and Functions keys can now execute an Action. Select *Action* from the list, then select the Action from the list below.
  - New: Option to disable Master VU (iCON extension)
  - Fixed: New function did not work
- OSC
  - New: Updated the Open Stage Control template for Open Stage Control 1.0.0. VU meters are now gray if track is muted.
  - New: /action/{1-8}/ to execute 8 different Actions.
  - Fixed: /automationWriteMode was broken
  - Fixed: /click/ticks did always toggle and was not documented
- Push
  - Fixed: Device and Parameter navigation was broken

10.1.0

- Requires Bitwig 3.2+
- All devices
  - Fixed: Replaced a special # character (e.g. from Diatonic Transposer) with the normal ASCII #.
  - Fixed: Prevent to display identical on-screen messages
- APCmini
  - Fixed: Scene buttons were not lit
  - Fixed: Drum sequencer crashed
- Komplete Kontrol MkI
  - Fixed: Several crashes when activating Scale due to not configured colors
  - Fixed: Light guide did not work correctly when keyboard was transposed
- MCU
  - New: *use faders as knobs* and *Marker mode* functions display their state on the screen if toggled.
  - Fixed: Do not select tracks on fader touch if *use faders as knobs* is active.
- Maschine Mk3
  - New: **Channel** - Insert a new instrument channel (was File)
  - New: **Stop + Channel** - Insert a new audio channel
  - New: **File** - Saves the project (was Stop + File)
  - New: **Page left / right** moves to the previous/next clip on the selected track (moved the scene page before)

- New: **Stop + Page left / right** moves to the previous/next clip page
- New: **Stop + Volume** - Toggles VU meter display
- New: Scale and Note Repeat settings are displayed and can be edited with knobs
- Mikro Mk3
  - New: In track and parameter selection modes the selected tracks/parameters blink.
- Maschine Mk3 / Mikro Mk3
  - New: Play mode is now accessed by pressing *Keyboard*. Press again for play configuration mode.
  - New: Drum mode is now accessed by pressing *Pad Mode*. Press again for drum configuration mode.
  - New: Activating Step provides a step sequencer for the currently selected *drum machine cell* or the last played note if *Keyboard* is active. Follow button provides grid resolution setting and page selection.
  - New: Chord button enables chords in play mode. Note of pad adds 2 thirds on top.
  - New: **Stop + Rec** - Start recording a clip in the currently selected (empty) slot
  - New: *Sequential up* is now the default play layout
  - New: **Erase** - Does no longer trigger Undo. Use **Stop + Pad 1** instead.
  - New: To change bank pages turn the encoder and keep the related button pressed (scenes - *Scene*, clips - *Pattern*, tracks - *Select, Solo or Mute*))
  - New: In the parameter selection (*Variation* button) use the top row pads to switch devices and parameter pages. The parameter pads are now colored in the Bitwig parameter colors
  - New: **Stop + Pad 1 (Undo)** - Undo
  - New: **Stop + Pad 2 (Redo)** - Redo
  - New: **Stop + Pad 5 (Quantize)** - Quantizes the selected MIDI 100%
  - New: **Stop + Pad 6 (QUANTIZE 50%)** - Quantizes the selected MIDI 50%
  - New: **Stop + Pad 9 (CLEAR)** - Deletes all MIDI notes from the selected MIDI clip
  - New: **Stop + Pad 13 (SEMITONE -)** - Transpose the selected MIDI clip a semitone down
  - New: **Stop + Pad 14 (SEMITONE +)** - Transpose the selected MIDI clip a semitone up
  - New: **Stop + Pad 15 (OCTAVE -)** - Transpose the selected MIDI clip an octave down
  - New: **Stop + Pad 16 (OCTAVE +)** - Transpose the selected MIDI clip an octave up
  - New: Keep **Fixed Vel** pressed and turn the encoder to change the fixed accent value
  - New: Pressing Stop flushes the whole state (display / buttons) to the device. This helps when you switch to MIDI mode and the DAW state changed meanwhile, since there is no way to get the information that the user switches to MIDI mode.
  - New: **Auto** - Toggle write arranger automation.
  - New: **Shift + Auto** - Toggle write clip launcher automation.
  - New: **Lock** - Toggle arranger overdub.
  - New: **Shift + Lock** - Toggle clip launcher overdub.
  - Fixed: *Sequential ^* and *Sequential >* scale layout were using 8 not 4 pads
  - Fixed: Auto and Lock buttons did not respect the setting "Flip arranger and clip record / automation"
- Novation SLMkIII
  - Fixed: Renamed remote control parameters changed to the original name when switching from devices to parameters mode.

10.0.0

- Requires Bitwig 3.2+
- The manual has now a *known issues* section
- New: Support for Akai Fire
  - Note: The display update of the Akai Fire is very slow on Macos and makes it nearly unusable
- New: Support for Native Instruments Maschine Mk3
- Akai APC40 / APC40mkII
  - Fixed: User mode did not work
- Maschine Mikro Mk3
  - New: Show more on-screen notifications (Tap Tempo, Fixed Velocity, value change speed)
  - New: **Stop + Pad Mode** - Selects the previous base note of the scale.

- New: **Stop + Keyboard** - Selects the next base note of the scale.
- New: **Stop + Chords** - Selects the previous note layout.
- New: **Stop + Step** - Selects the next note layout.
- New: **Stop + Plug-In** - Toggle the window (if any) of the selected device (if any).
- New: **Sampling** - Brings up the Slice to Drum Machine dialog.
- New: **Stop + Sampling** - Bring up the Slice to Multi-sample dialog.
- New: **Auto** - Toggle write arranger automation.
- New: **Stop + Auto** - Toggle write clip launcher automation.
- New: **Lock** - Toggle arranger overdub.
- New: **Stop + Lock** - Toggle clip launcher overdub.
- New: **Stop + Projects** - Save the project.
- New: **Tap** - Tap Tempo
- New: **Stop + Tap** - Toggle metronome
- Fixed: FX and Master track were missing in Select, Solo and Mute modes
- Push 2
  - New: Increased text size of list elements
- SL MkIII
  - Fixed: Updated MIDI port lookup names on Macos

9.10

- Requires Bitwig 3.2 Beta 8
- Known Issues with Bitwig 3.2 Beta 8
  - OSC User parameters are broken
  - User Parameters cannot be reset
- Launchpad
  - New: Support for Launchpad Pro Mk3
  - New: Drum sequencers use the colors of the drum pads of the drum machine device
  - New: Pads which show states in Shift mode are lit brighter when enabled (Play, Record, Metronome, . . .)
  - New: **Shift+Delete**: Toggle Repeat (was Shift+Duplicate)
  - New: **Shift+Duplicate**: Doubles the clips content
  - New: Simulator layout is now closer to the specific Launchpad model
  - New: In Shift mode, cursor up or down enters the tempo mode. In Tempo mode you can change the tempo with the cursor keys.
  - New: In Shift mode, cursor left or right enters the shuffle mode. In Shuffle mode you can change the shuffle amount with the cursor keys.
  - New: Added record quantization setting (Shift+Quantise)
- Push
  - New: Drum sequencers use the colors of the drum pads of the drum machine device

9.00

- All devices
  - New: Added setting to hide deactivated items (tracks, sends, devices, layers)
  - New: Drum modes: selection follows the selection if FOLLOW PLAYED NOTES is active, e.g. if triggered from a different keyboard/controller
  - Fixed: Grid pads did only play MIDI notes but did not execute secondary function (API 11 adaption)
- Akai APC40 / APC40mkII
  - New: Keep a note pressed and use the mode knobs to change the parameters of the note (Sequencer + Drum mode)
  - Fixed: Changing sequencer resolutions with Clip Stop buttons did not work
- Beatstep
  - New: Renamed note inputs
  - Fixed: Knobs did not work (API 11 adaption)

- Launchpad
    - New: Added a new Mixmode. Press Shift+Session to enable it. This mode contains session modes at once. The rows from bottom to top are: rec arm, solo, mute, clip stop, send 2, send 1, panorama, volume. The panorama and sends pad are only colored for the selected track. Press one of the pads of the upper 4 rows to select a track. Select a volume, panorama or sends pad to activate it and then change its value with the virtual fader of the scene buttons.
    - New: Masterfader in Volume mode now has 4 steps per pad (like the other track faders)
    - New: In Pan mode the scene buttons control now the panormama of the master fader (to be consistent with volume mode)
    - New: Stop Clip buttons are now lit in red if pressed
    - Fixed: 8th row in Session mode was not drawn on startup
- MCU
    - Fixed: Touching multiple faders did not restore Pan mode on release.
- Push
    - Fixed: User parameters did not display information, e.g. name, value, . . . (API 11 adaption)
    - Fixed: Push 2: Message was flickering if no presets matched the filter in the browser

8.98

- Requires Bitwig 3.1.3
- All devices
    - Fixed: Sometimes non-existing notes appeared when switching sequencer pages
- OSC
    - New: Added /device/parameters {0,1}
    - Fixed: OpenStageControl template: Fixed touch commands on faders

8.97

- Requires Bitwig 3.1.3
- Launchkey Mini Mk3
    - New: Display user pages when switching in user mode
    - Fixed: User mode mapping mapped to CC instead of user parameters.
- MCU
    - New: IMPORTANT: The device MIDI ports are now ordered left to right, which means if your main device is to the right, it needs to be the last!
    - New: You can configure for each of your MCU devices if it should act like the main device (e.g. enable transport controls; you can have multiple) and has now the option to support the specific Mackie extender protocol.
- OSC
    - New: The bank page size can be configured from 1-200.
- Push 1/2
    - New: In Marker mode it can now choose to either Launch or only Select the marker when pressed.
    - New: Color settings are used in MIDI clip mode. Furthermore, always at least 4 rows are displayed.

8.96

- Requires Bitwig 3.1.3
- All devices
    - New: Included PDF manual
    - Fixed: Fixed several issues with user modes
- APC40 MkII
    - New: Added user mode
- Launchkey Mini Mk III
    - New: Option to remove the master and group-master tracks from the track bank (requires restart of extension).
- Launchpad
    - Fixed: Do not switch to play mode when changing tracks in Volume, Pan and Send modes.

- MCU
  - New: **Option+Tempo/Ticks** toggles between displaying the time or beats. **Tempo/Ticks** toggles the display of ticks/milliseconds or the current tempo for the last 3 digits. Both are also available in the settings.
  - Fixed: Fixed some issues with fader touch
- Novation SLMkIII
  - New: Added user mode. Long press the UP button and then 8th row button below the display. Page names are configurable in the settings.
- OSC
  - Fixed: /time/str now really sends the time (did send measures before)
- Push 1/2
  - New: Cancel notification message when changing modes
  - Fixed: Position now really shows the time (did display measures before)

8.95

- Requires Bitwig 3.1.3
- APC / APCmini
  - Fixed: Fixed a crash in Raindrop sequencer
- Generic Flexi
  - New: Added option to send the LED value even when command is received from the device.
- Launchpad
  - New: Poly Sequencer: Currently played sequencer notes are also lit on the play area
  - Fixed: Fixed a crash in Raindrop sequencer
- Komplete Kontrol Mk 1
  - Fixed: Modulation wheel did trigger button press of the main encoder
- Mackie HUI:
  - Fixed: New command could not be triggered from footswitch
  - Fixed: Faders and knobs in simulator view did not work
- Push 1/2
  - New: Poly Sequencer: Currently played sequencer notes are also lit on the play area
  - Fixed: Fixed a crash in Raindrop sequencer

8.94

- Requires Bitwig 3.1.3
- Generic Flexi
  - New: The MIDI channel for the keyboard (or pads if it is a pad controller) can be explicitly set (previously it was fixed to channel 1). It can also be turned off or set to all. If a MIDI note is mapped to a function on this MIDI channel, the note is blocked from being played. Note: If you have selected All for the channel the note is blocked on all channels!
  - New: Modulation Wheel (CC 01), Sustain Pedal (CC 64) and Pitchbend were previously automatically routed to Bitwig. You can now turn them off individually if you want to map them to something else.
- Launchpad
  - New: Option to remove the master and group-master tracks from the track bank (requires restart of extension).
  - New: Pro: Disabled Delete button if used without button combination to prevent accidential deletions.
- OSC
  - Fixed: Changing output server/port did still not work.

8.92

- Requires Bitwig 3.1.3 (which fixes the issues with 8.80)
- Launchpad
  - Fixed: Note selection mode could not be activated on Launchpad Pro since it was mixed up with

the user mode.

– Fixed: Note selection was activated when coming from a non-note mode but should not.

8.91

- Requires Bitwig 3.1+.
- All devices
  – Same known issues as with 8.80 still apply
- Generic Flexi
  – New: If you have multiple banks configured the selected patch of a bank is only reset if the new bank has the same MIDI channel. This allows to configure additional banks for multitimbral synthesizers (= can play different sounds on different MIDI channels).
- Launchpad
  – New: Easier selection of note modes. Pressing the note button brings up a menu where you can directly select the note/sequencer mode. First row (from top) selects play modes, 3rd row drum modes and 5th row sequencer modes.
  – New: Changing note length does now also work in Poly Sequencer
  – Fixed: Displaying longer notes did not work in Poly Sequencer
- Maschine Mikro 3
  – Fixed: Removed restriction that drum octave could only be changed if a clip was active.
- MCU
  – New: Group/Write Automation changed to trigger Latch automation
- Push 1/2
  – New: Changing note length does now also work in Poly Sequencer
  – Fixed: Displaying longer notes did not work in Poly Sequencer

8.90

- Requires Bitwig 3.1+.
- All devices
  – Same known issues as with 8.80 still apply
- Generic Flexi
  – New: Improved handling of Program Change as source. For trigger commands also a *button up* is executed; for continuous commands the value of the PC is sent (and not always replaced with 127). This allows e.g. to map different PC buttons to an Instrument selector device.
  – New: Patch Bank Selection, see Generic Flexi documentation for more info.
- Launchpad
  – New: Inverted back the clip/scene scroll direction (was also not conform with the LED lighting)
- Push 1/2
  – New: Last selected Layer mix mode is remembered
  – New: Inverted back the clip/scene scroll direction

8.80

- Requires Bitwig 3.1+.
- All devices
  – Known Issue: If the audio engine is off also the controller does not work anymore. Because the MIDI processing is now running in the audio process, which means if there is no audio process, there is also no midi. Will be fixed in an upcoming Bitwig Studio version.
- Akai APCmini
  – New: Change note length or create long notes in the Sequencers (Note, Drum) by pressing a note pad and then a pad right of it.
- Akai APC40 / APC40mkII
  – New: Change note length or create long notes in the Sequencers (Note, Drum) by pressing a note pad and then a pad right of it.
  – New: Improved scrolling of browser columns
  – Fixed: Browser crashed when activated

- Generic Flexi
  - New: Added new function: **Clip: Quantize**
  - New: Added functions for note repeat
  - New: Added functions for transposing the keyboard
  - Fixed: Configured knob speed settings were not set on startup
- Komplete Kontrol A-Series / M32
  - Fixed: Configured knob speed settings were not set on startup
- Launchpad
  - New: Virtual faders support 4 velocity steps (on all models)
  - New: Activates hardware play mode again when extension is stopped
  - New: Change note length or create long notes in the Sequencers (Note, Drum, Drum 4, Drum 8) by pressing a note pad and then a pad right of it.
  - New: Launchpad Pro: Duplicate notes in Drum 4 and Drum 8 sequencers
  - Fixed: Color of front LED was wrong when mode was changed
  - Fixed: Cursor left was not lit correctly in Drum 4 and Drum 8 mode
- OSC
  - Known Issue: Receive port is not set correctly on startup (1024). Therefore, the extension crashes and is currently not usable! Should be fixed in the next Bitwig update.
  - New: Check for lower port bound (1024)
  - New: Check that send and receive ports are different
- Push 1/2
  - New: Change note length or create long notes in the Sequencers (Note, Drum, Drum 4, Drum 8) by pressing a note pad and then a pad right of it.
  - Fixed: Master mode only showed up shortly when Master volume knob was touched
  - Fixed: Configured knob speed settings were not set on startup

8.70

- Requires Bitwig 3.1+.
- All devices
  - Known Issue: If the audio engine is off also the controller does not work anymore. Because the MIDI processing is now running in the audio process, which means if there is no audio process, there is also no midi. Will be fixed in an upcoming Bitwig Studio version. Should be fixed in the next Bitwig update.
  - Fixed: Browsing presets (or replacing) the selected device, always brought up the browser on the first device of the track
  - Fixed: Adding a device always added it relative to the first instrument device
  - Fixed: Devices could not be added to the master track if there was no other device yet
- Beatstep
  - New: Easier switching between note selection and step editing in sequencers. Turning knob left selects play/note select, turning it right selects step editing.
  - Fixed: Value change on some knobs were flipped (e.g. scrolling browser).
  - Fixed: The Note Sequencer used the drum mapping and octave shifting.
  - Fixed: Pads sometimes lit with wrong color after pad was pressed
  - Fixed: Pads sometimes lit with wrong color after leaving Shift mode
  - Fixed: Browser mode was canceled when Shift was released
- OSC
  - New: The address and port of the OSC client ("send to") can be configured again but requires restarting the extension (turn off/on).
- Launchpad
  - Known Issue: User mode crashes. Should be fixed in the next Bitwig update.
  - New: **Duplicate+Scene** duplicates the scene.
  - New: Up/Down buttons in browser mode switch from replacing the current device to inserting a new device before or after it.
  - New: Non-Pro models: Pressing the Delete and Duplicate pads in shift mode activates the related

mode. Leaving the shift mode and entering session mode allows then to delete/duplicate clips, scenes and tracks. After deleting/duplicating an item the delete/duplicate mode is turned off.
  – New: Turn off panorama lights for non-existing tracks, instead of showing them centered
  – Fixed: Fader scaling was wrong (except Launchpad Pro)
- Komplete Kontrol A-Series / S-Series Mk2 / M32
  – Fixed: Some buttons did not work (Quantize, Metro, Undo)
- MCU
  – Fixed: Crash in Track mode when toggling between fx and noirmal tracks
  – Fixed: Record button was not always lit correctly
- Push 1/2
  – New: Added duplicating notes in Note, Drum, Drum 4 and Drum 8 sequencers. Keep Dulicate button pressed, select the source note, press empty destination pad(s). The note will be copied with all settings.
  – New: Tempo and Position knobs only show their value as a popup notification. The metronome settings can now be accessed by long-pressing the **Metronome** button.

  – New: Push 2: Only the selected page in user mode is colored white, all others are grey.
  – New: **Duplicate+Scene** duplicates the scene now also in Play, Piano and Drum 64 modes.
  – Fixed: User mode works again
  – Fixed: Modified display colors were not applied after restart
  – Fixed: Layout of Touchstrip mode was not updated to new features on Push 1
  – Fixed: Push 1: Frame mode showed an empty display
- SL MkIII
  – Fixed: Crash when selecting track again to enter device mode

8.60

- Requires Bitwig 3.1+.
- Known Issues
  – User banks are broken since 3.1 (they do not work with the new hardware API).
- AutoColor
  – Fixed: Crashed on startup
- Launchpad
  – New: Drum 4 and Drum 8 Sequencers: draw longer notes in darker color
- Mackie MCU
  – New: Added an explicit setting for devices with only 1 channel ("Has only 1 fader"), e.g. the Behringer X-Touch One. For devices with the normal 8 channels the select button now works again in marker and device mode.
  – New: Send button states for function keys (F1-F5) which turns on the LED if the device has one and supports it (e.g. Behringer X-Touch One).
  – New: Knob LEDs in device mode show only one dot
  – Fixed: Knob speed was too slow
  – Fixed: Knob LEDs were off when panorama was fully left
- Maschine Mikro Mk3
  – Include Bitwig template as Template (Bitwig.ncmm3) again, not the full Memory dump (Bitwig.ncc).
  – You need to load this new template into the Maschine (Bitwig.ncmm3) first (due to changes to the Touchstrip settings).
  – New: Change note repeat period and length via ribbon (MOD: CC1, CC11; PERFORM: Master Volume; NOTES: Note Repeat Period / Length)
  – New: The touchstrip LEDs are updated matching the selected mode.
  – New: Pitchbend modes of touchstrip return to zero setting when finger is released.
  – New: Flipped direction of Pitchbend Down Mode of touchstrip to match the LEDs.
  – New: Added setting "Action for pressing rec armed empty clip"
  – New: Erase+pad deletes scene, clip, track (depending on the selected mode)
  – New: Duplicate+pad duplicates scene, clip, track (depending on the selected mode)

- – New: Browser+pad in Clip Mode opens the browser to load a clip
- – New: Stop+pad in Clip Mode stops the clip. Clips queued to be stopped are now lit in dark green
- Native Instruments Kontrol 1
  - – Fixed: Did crash when there was not track in the project
- Push 1/2
  - – New: Long press notes in Drum, Drum 4 and Drum 8 Sequencers to edit it.
  - – New: Drum 4 and Drum 8 Sequencers: draw longer notes in darker color
  - – New: Slow down value changes in note repeat mode
  - – New: Change note repeat period and length via ribbon

8.51

- Requires Bitwig 3.1+.
- Launchkey Mini Mk3
  - – New: Display info if the Metronome was toggled on/off and the drum sequencer page was changed
  - – Fixed: The pad rows of the drum configuration mode were flipped
- Maschine Mikro Mk3
  - – Fixed: Displayed Parameter names of row 3 and 4 were flipped

8.50

- Requires Bitwig 3.1+.
  - – All devices use the new Hardware API
- Removed support for Arturia Beatstep Pro due to too much limitations (use Generic Flexi instead).
- AutoColor
  - – Fixed: Auto coloring did not work on added tracks which had the same name as the track which was before at that position.
- APC40
  - – New: Changed direction of session-clip/scene scrolling
- Mackie HUI
  - – New: Added support for icon Master fader extension
  - – New: Insert buttons select track
  - – New: Added (HUI QICK PUNCH) - Toggle Punch In
  - – New: Added (HUI IN) - Toggle Punch In
  - – New: Added (HUI OUT) - Toggle Punch Out
  - – New: Added (HUI ON LINE) - Toggle Audio Engine on/off for current project
  - – New: Added (HUI RETURN TO ZERO) - Return the play cursor to the start of the arranger
  - – New: Improved unmute/unsolo all tracks
- Native Instruments Kontrol 1
  - – New: Improved speed of knobs
  - – New: Changed direction of session-clip/scene scrolling
- Launchpad
  - – New: Added Poly Sequencer
  - – New: Delete + Scene button in Session view deletes the scene
  - – New: Shift mode: Enable note repeat and set the note repeat period and length with the pads in the middle
  - – New: Sends mode: Display name of sends when selected
  - – New: Light buttons brighter when pressed
  - – New: Flipped Up/Down button in Device mode
  - – New: Changed direction of session-clip/scene scrolling
  - – New: Added notification messages to Shift view
  - – New: Used several colors in Shift view for easier function identification
  - – Fixed: Duplicate did not work on non-pro models
- Maschine Mikro Mk3
  - – You need to load the new template into the Maschine (Bitwig.ncc) first
  - – New: Use multiple colors on pads

- New: Added note repeat (long press note view to change settings)
- New: Pressing the encoder button always toggles between slow/fast value change, except tempo (tap tempo) and browser mode (confirm selection)

- OSC
  - New: The port of the OSC server ("receive on") can be configured again.
  - New: Added commands for note repeat (/vkb_midi/noterepeat/...)
  - New: Added /track/hasParent {0,1}
- Push 1/2
  - New: Added note repeat, long press Repeat button for configuration settings
  - New: Added cue volume and cue mix to Master mode
  - New: Delete + Track button: Delete the track
  - New: Delete + Scene button (in Play, Piano, Drum 64, Session view): Delete the scene
  - New: Delete + pad in scene play mode: Delete the scene
  - New: Added "Clear Mute/Solo" to drum channel details
  - New: The quantize mode now contains the record quantization configuration as well
  - New: More parameters for note editing
  - New: The note insert/edit MIDI channel can be selected in the Track Details mode and in the document settings
  - New: Buttons are lit brighter when pressed
  - New: Automate button is lit orange (instead of red) when Clip automation is displayed
  - New: Improved unmute/unsolo all tracks
  - New: Changed direction of session-clip/scene scrolling
  - New: Scrolling scenes in scene play view scrolls whole 64 scenes
  - New: User page names can be edited in the document settings
  - Fixed: Push 1: Header text in Master mode was missing
  - Fixed: Push 2: Scenes in scene mode were not immediately updated and not in sync Session Scene view.
- SL MkIII
  - New: Changed direction of session-clip/scene scrolling

7.60

- Requires Bitwig 2.4+.
- Support for Novation Launchpad X
- Support for Novation Launchpad Mini Mk3

7.50

- Requires Bitwig 2.4+.
- Support for Novation Launchkey Mini Mk3
- Launchpad MkII
  - Fixed: The Play and New functions in Shift mode were switched.
- MCU
  - Fixed: Do not set pan mode on fader touch release when volume mode was active before.
- OSC
  - Fixed: OSC did crash on startup
  - Fixed: Calls to /track/x/clip did not work

7.40

- Requires Bitwig 2.4+.
- New: Improved auto-detect of some devices
- Ableton Push
  - New: Prevent to enter a layer which has no devices, previously the container device was selected instead which could be confusing
  - New: Added info to the browser mode about if insert or replace is happening and selected track.
  - New: Add device to layer instead of track if a layer mode is active (but there are still some Bitwig

weirdnesses in that area)
- – New: Access to slot chains of devices
- – New: Added aftertouch processing to Drum and Drum 64 mode.
- – Fixed: Blinking on queued clips did not work
- Launchpad Pro/MkII
  - – New: All tracks are displayed (incl. fx and master track)
  - – New: Shift-mode can now also be accessed from the Session mode. To access the Bird-Eye view of the Session mode long press the Session button.
  - – New: Optimized Shift-mode, Scene buttons select (again) the Mix-mode of MkII, they have no function on the Pro. First row of buttons select the length of new clips on both models.
  - – New: Pro: Added aftertouch processing to Drum and Drum 64 mode.
  - – Fixed: Blinking on queued clips did not work
  - – Fixed: Page Left LED indication in Note and Raindrops Sequencer was not correct.
  - – Fixed: Play in Shift mode of MkII did not work (triggered toggle loop instead).
  - – Fixed: Mixer-LED on MkII was not lit.
  - – Fixed: Play-Layout was not set when first time switching between Session and Play.
  - – Fixed: Stop-Clip mode could not be activated on MkII
- Maschine Mikro MkIII
  - – New: Show info text when Duplicate is enabled
  - – New: Added template with required settings to the resources folder.
  - – New: Added flip arranger and clip recording option
- MCU
  - – New: Added preset for Behringer X-Touch One
  - – New: If device or marker mode is active, do not change track with MCU_SELECT (necessary for 1 channel controllers like Behringer X-Touch One)
- Native Instruments Komplete S-MkII, A-series/M32
  - – New: You can now set the speed of the knobs in the settings.

7.32

- Requires Bitwig 2.4+.
- Added a help page for the extension. Help button appears now with each instance.
- MCU
  - – New: Added new function key option "Toggle use faders like editing knobs".

7.31

- Requires Bitwig 2.4+.
- Added new scales
- Beatstep Pro
  - – Fixed: Some knobs did not toggle their value
- Mackie HUI
  - – Fixed: Crash on startup and shutdown if Display was active

7.30

- Requires Bitwig 2.4+.
- APCmini
  - – Fixed: Sometimes the pad grid was not drawn after startup, since the APCmini is slow to be ready for receiving commands.
- APC40mkI/mkII, APCmini, Launchpad MkII/Pro, Novation SL, Push
  - – Fixed: Deactivate all sequencers if no clip is selected. This caused weird effects if the grid resolution of the sequencer was changed with no clip selected and then a clip was selected.
- Native Instruments Komplete S-MkII, A-series/M32
  - – New: The extension is now split up into two. One for the S-series and one for the A-series/M32. You need to add your Kontrol device again.
- Novation SLMkIII

- New: Notification messages are also displayed on the SL display
- New: Firmware version is displayed on startup
- Push
  - Fixed: Display a message if no clip is selected in clip mode
  - Fixed: Octave buttons were not updated in sequencer modes.

7.21

- Requires Bitwig 2.4+.
- OSC
  - New: /playbutton - Toggles playback, you can configure the Stop behaviour in the configuration settings
  - Fixed: All /vkb_midi commands did crash

7.20

- Requires Bitwig 2.4+.
- Launchpad Pro
  - New: Added user mode. Press USER button to enter. Scene buttons switch between the 8 pages of 8 parameters.
- Novation Remote SL Mk III
  - New: Added setting to disable the faders (to prevent accidently changing volume)
- Push
  - New: Session: The octave and page buttons navigate the pages of the session grid
  - New: Second row buttons (buttons above display on Push 2) allows now to toggle between min/max values in User mode.
  - Fixed: Push 2: Notification messages were not shown on the display
- OSC
  - New: Added user parameters

7.10

- Requires Bitwig 2.4+.
- Generic Flexi
  - New: Commands to edit fx tracks. See commands in new category FX Track
  - New: Commands to edit 64 user parameters. See commands in new category User
  - Fixed: *Track: Toggle trackbank* had no effect
- Komplete Kontrol A-Series / M32
  - Fixed: Track name was not displayed
- Push 1/2
  - New: Added User mode. Allows to map 64 parameters. Press USER button to enter. Setup on Push 1 is now Shift+USER.
  - New: Push 1: Show longer track/layer names in Details mode
  - New: Push 1: Indicate volume with one bar when VU is active
  - New: Push 2: Improved layout of transport mode
  - New: Push 2: Only redraw display image if something has changed
  - Fixed: Layer details page did not close automatically when Select-button was released.
  - Fixed: Do not close transport mode when accidently tempo or position knob is touched.
  - Fixed: Push 1: Layout of panorama on max right
  - Fixed: Push 1: Send modes could not be accessed
  - Fixed: Push 1: NullPointerException if Track mode was active and an effect track was selected in Bitwig

7.05

- Requires Bitwig 2.4+.
- Generic Flexi:
  - New: Commands to set Solo, Mute, Rec Arm, Monitor and Auto Monitor (in addition to toggle).

- Komplete Kontrol MkII
  - New: Added control indication depending on selected mode (volume, pan, send, device parameters)
- Launchpad MkII
  - Fixed: Blinking of playing clips did not work
- MCU
  - Fixed: Volume indication was broken
- Push 1
  - Fixed: Do not send color palette request, which is only working for Push 2

7.04

- Requires Bitwig 2.4+.
- Ableton Push 2
  - Fixed: Improved stability writing the color palette
- Komplete Kontrol MkII
  - New: Added Send mode (CLEAR button to toggle). Edit all sends of the selected channel.
  - New: Add track number to mixer view channels
  - New: Added Recording Option: Toggle Rec Arm State of selected track
  - New: Now, first checks if the selected device on the selected channel is a Komplete Kontrol devcice, if not the first instrument device is checked. This way you can edit multiple Komplete Kontrol instances on a channel.

7.03

- Requires Bitwig 2.4+.
- All devices
  - New: Moved scale settings to document
- Ableton Push 2
  - New: Set a new color palette for the pad LEDs to be closer to the Bitwig colors.
  - Fixed: The default note view is set to Play again, was Drum View.
- APC40
  - Fixed: All views except Play View were drawn wrong.
- Komplete Kontrol MkII
  - New: Added a parameter/device mode (CLEAR button to toggle)!
- Maschine Mikro MkIII
  - Fixed: Display warning when no device is selected in parameter mode
  - Fixed: Indicate non-existing parameters as "None" in parameter mode
- MCU
  - Fixed: Jogwheel jumped back one step after movement ended
- Novation Remote SL Mk III
  - Fixed: Drawing of track and device modes were wrong when no track was selected (2nd try)
- OSC
  - Fixed: Open Stage Control template produced a crash if the master volume was changed.

7.02

- Requires Bitwig 2.4+.
- Novation Remote SL Mk II
  - Fixed: Drum pads did not work
  - Fixed: Crash displaying send and master track
- Novation Remote SL Mk III
  - New: The browser result name is now shown in two columns
  - Fixed: Drawing of track modes were wrong when no track was selected
  - Fixed: Track could not be added when no track was selected
  - Fixed: Browser mode could crash if a non-existing filter column was selected
  - Fixed: Button long press events caused unnecessary warnings in the log
- OSC

- New: Added layer tab to Open Stage Control template.
- New: Added sending of /device/layer/selected/{attributes}
- Fixed: Some types used "selected" and some "select". Both can be used now.
- Fixed: Fixed location of master track in Open Stage Control template for 0.47.1.

7.01

- Requires Bitwig 2.4+.
- Arturia Beatstep
  - Fixed: Caught exception when pads are transposed. Now an error is printed to the console.
- Generic Flexi
  - Fixed: MMC commands with device IDs > 15 did not work.
- Novation SL Mk III
  - New: Route all 16 MIDI channels to Bitwig (not only channel 1)

7.0

- Requires Bitwig 2.4+.
- New: Added support for Novation SL Mk III
- Fixed: scrolling of parameter pages by page bank did not work (e.g. Shift + cursor left/right on Push)
- Ableton Push 2
  - New: Deactivated channels and layers are drawn in dark colors
- Komplete Kontrol Mk II / A-series / M32
  - New: Light record button as well on clip recording and clip overdub

6.4

- Requires Bitwig 2.4+.
- Generic Flexi
  - New: The speed (fast and slow) for relative knob changes can be configured
  - New: A command can be assigned to be the Shift button (Global: Shift Button), which gives extra functionality if combined with another control (e.g. Play, Rewind, Forward and Knob Speeds).
- Komplete Kontrol
  - New: Mapping of first Komplete Kontrol parameter is no longer necessary
  - New: Improved automatic lookup

6.3

- Requires Bitwig 2.4+.
- Generic Flexi
  - New: Added setting to store the last selected mode
  - New: MIDI CC is now available as a function destination
- Komplete Kontrol
  - New: Added setting to flip the track/clip navigation of the encoder knob
  - New: Added setting to flip the clip and scene navigation of the encoder knob
  - New: Added setting to set the length of new clips
  - New: Added setting to set the behaviour on transport stop
  - New: Added M32 to the extension name

6.2

- Requires Bitwig 2.4+.
- APC40
  - New: Shift mode stays active until you release the Shift key.
  - Fixed: Clip indicator was not displayed.
- Launchpad Pro
  - Improved 2 colors.
- Komplete Kontrol
  - Fixed: Record option "Record clip" did not start recording when transport was stopped.

- – New: Adapted to protocol version 1.9
- Midi Monitor
  - – New: Log system realtime events
  - – New: Setting to filter system realtime events
- Push 1/2
  - – New: You can now tweak the speed of the knobs in the settings (Workflow -> Knob Speed Normal / Knob Speed Slow)

6.1

- Requires Bitwig 2.4.
- Generic Flexi
  - – Fixed: Exception when Send volume was mapped/changed and a FX or the Master track was selected.
- Komplete Kontrol
  - – New: Added information about mute state due to soloed track(s)
  - – New: Added more selected track information to confirm to updated protocol
  - – New: Added scene navigation and play
  - – New: Slowed down knob change rate on MkII
- OSC
  - – New: You can now configure the value range. So far, this was 128. Now you can increase the range to 1024 or 16384. Note that you also need to configure the widgets in your OSC client accordingly.

6.0

- Requires Bitwig 2.4+.
- Generic Flexi
  - – New: Use native dialog for selecting the configuration file.
  - – Fixed: Fixed a typo (CC40 was named CC30).
- Komplete Kontrol
  - – Switched to new MIDI protocol
  - – Support for A-series and M32
- Mackie HUI
  - – Support added
- Mackie MCU
  - – Fixed: Knob LED was not turned off on non-existing tracks for panorama mode.
- OSC
  - – Fixed: Reduced the size of a OSC bundles to stay below 64 Kb, which is the maximum for an UDP packet.
- Push
  - – Automation could not be activated if an effect track or the master track was selected.

5.9

- Requires Bitwig 2.4.
- Beatstep
  - – Fixed: Track and Device mode selection did not work.
- Maschine Mikro Mk3
  - – Fixed: Pan and Send modes could not be switched.
- MCU
  - – Display mode names for Track, Volume and Sends. Send modes also display the name of the send.
  - – You can flip backwards through the send modes with Shift+Send.

5.8

- Requires Bitwig 2.4.
- Launchpad: Fixed: Switching of Note and Sequencer did not work (only if also Push 1/2 was running)

5.7

- Requires Bitwig 2.4.
- Launchpad
  - New: The Bootloader and Firmware version is now logged to the console
  - New: Pro: The user button acts now like the Shift button
- MCU
  - New: Option + one of the Mute buttons: Deactivate all mutes
  - New: Option + one of the Solo buttons: Deactivate all solos
- Push 1/2
  - New: Select + Mute: Deactivate all mutes
  - New: Select + Solo: Deactivate all solos

5.6

- Requires Bitwig 2.4.
- MCU
  - Fixed: Removed unescessary clip indication.
- Midi Monitor
  - Fixed: System Exclusive formatting was wrong.
  - Fixed: Check for MMC was wrong.
- OSC
  - Fixed: Track selection did not work when using only "select" and/or did not set 1 as parameter.
  - Fixed: Decimal changes of tempo did not work.
  - Fixed: /device/layer/{1-8}/send/{1-8}/volume and /device/layer/{1-8}/send/{1-8}/volume/touched

5.5

- Requires Bitwig 2.4.
- New: There is now only one version number, the number of DrivenByMoss, and one changes file in the Wiki.
- New: Extension Midi Monitor added
- Fixed: Scene navigation with cursors was broken on most devices
- Push 1/2
  - Fixed: Clip indication was broken

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11.7.2

- Requires Reaper 6.12+
- Launchpad
    - Fixed: Fixed several issues introduced to the Shift view in 11.7.1.

11.7.1

- Requires Reaper 6.12+
- Launchpad
    - Fixed: Play button in shift view did not work.
- Komplete Kontrol MkI
    - Fixed: Linux: Added USB access rights to rules file and added installation instructions to the manual.

11.7.0

- Requires Reaper 6.12+
- Documentation
    - Clarified installation of the extensions which need to be added manually (Flexi, Auto Color, . . .)
- Fire
    - New: Added VU meters to the channel and mixer mode.
    - New: In Mixer mode press Alt+Bank button to switch to a new display mode, which shows the volume, pan and sends of 16 tracks depending on the touched knob. Especially, helpful in the performance mix view. If playback is active and no knob is touched it shows the VU meter activity of all 16 tracks.
- Generic Flexi
    - New: Added support for 14-bit CC values.
    - Fixed: 0x80 as Note off was missing
    - Fixed: Feedback was not send for notes (only CC and pitchbend).
- Komplete Kontrol Mk2
    - Fixed: Shorten device and page names in parameter mode to prevent too long text.
- Launchpad
    - New: The loop area in the drum sequencer was shortened by 4 pads. These 4 pads can now be used in combination with the play area. From left to right they provide the following functions: select a drum pad without playing the sound, mute the drum pad, solo the drum pad, open the browser for the drum pad. With Reaper only selection is functional.
- MCU
    - New: Hold arrow left/right and turn the jog wheel to zoom in/out
    - New: Hold arrow up/down and turn the jog wheel to change the track height
- OSC
    - New: Added /track/{1-8}/duplicate to duplicate a track.
    - New: Added /track/{1-8}/clip/{1-8}/duplicate to duplicate the clip.
    - New: Added /device/duplicate to duplicate the device.
    - New: Added /scene/{1-8}/remove to remove/delete the scene.
    - New: Added /track/{1-8}/clip/{1-8}/create {beats} creates a new clip, activates overdub and starts it.
    - New: Added /clip/create {beats} creates a new clip, activates overdub and starts it.
- Push
    - New: Push 2: VUs of muted tracks are drawn in the mute-color.

11.6.1

- Requires Reaper 6.12+
- All devices
    - New: Added AU ARM devices to browser.

- – Fixed: AU devices were missing from location browser column.
- APC40/mkII
  - – New: Select Session mode again when already in Session mode to dis-/activate birds-eye view, which allows to quickly navigate the session grid.
  - – Fixed: MkI: All clips did blink not only the selected one.
  - – Fixed: Cursor up/down was mixed up in the simulator.
- APCmini
  - – Fixed: Selecting a mode did still send the pad up event to the new mode and e.g. started a clip in session mode.
  - – Fixed: Selected mode was not always displayed correctly.
  - – Fixed: Play/Stop did not work.
- Launchpad
  - – Fixed: Drum 64 mode: Selected pads in the right bottom corner were lit in the left upper corner.
- Push
  - – New: Added device types to favorite selection.
  - – New: Added AU ARM devices to favorite selection.
  - – Fixed: AU plugins were missing from favorite selection.
  - – Fixed: Drum 64 mode: Selected pads in the right bottom corner were lit in the left upper corner.
  - – Fixed: Clip parameters could not be slowly changed with Shift.

11.6.0

- Requires Reaper 6.12+
- New: Supports now Macos on ARM!
- All devices
  - – Fixed: Removed dependency on SWS for doublicating clip content and deactivating track.
- APC40mkI/mkII
  - – New: The selected clip in the session is now glowing white (mkII) or blinking yellow (mkI).
- Fire
  - – New: The selected clip in the session is now blinking white (if not played back or recording).
- Generic Flexi
  - – Fixed: Resolution for relative knobs was limited to 128 steps.
- Launchkey Mk3
  - – New: Fader button is glowing if the track is selected.
  - – New: Fader buttons are turned off if track does not exist.
- MCU
  - – New: If *Select Channel on Fader Touch* is set to *Off*, touching the master fader is ignored as well.
- Push
  - – New: Adding a track has now a menu which allows to add favorite devices. These favorites can be configured in the settings.
  - – New: The selected clip in the session is now glowing white (if not played back or recording).

11.5.2

- Requires Reaper 6.12+
- APC40mkI/mkII
  - – New: Press **Stop Clip** + Pad In Session Mode to delete the clip.
  - – New: Press **Select** + Pad In Session Mode to duplicate the clip.
- Launchkey Mk3
  - – New: Press **Undo** + Pad In Session Mode to delete the clip.
  - – New: Scenes/Clips scroll now by 1 instead of 2, which is a bit less confusing.
- Launchpad
  - – New: Temporary session mode: if any mode except session is active, hold the session button and then start a clip or scene. When the session button is released the previous mode is restored.
- Maschine
  - – Fixed: Could not scroll browser results.

- MCU
  - New: The scaling of the VU meters is now in the range from -60 to +6dB like in the Reaper mixer display.

11.5.1

- Requires Reaper 6.12+
- All devices
  - New: Added 128 dummy drum channels to the drum pad bank. This allows e.g. to scroll now the rows of the drum sequencer of the Akai Fire.
  - Fixed: User parameters could not be changed.
- APC40
  - New: Knob LEDs are totally turned off if parameter does not exist.
- Fire
  - New: In Note Sequencer **Shift + Grid buttons** change the Scale, **Shift + Alt + Grid buttons** change the Scale Base key. For consistency the button combinations in Play and Piano modes are adjusted accordingly.
  - New: Use **Shift + Select knob** in note and Poly Sequencer mode to transpose notes of clip up/down.
  - Fixed: Channel parameters did not get reassigned when drum pad was changed.
  - Fixed: Selection got lost when scrolling too fast through drum pads in drum sequencer.
  - Fixed: Wrong parameter name was shown in combination with ALT button.
- Generic Flexi
  - New: Added functions to toggle user parameters between minimum and maximum value.
- Launchpad
  - Fixed: Tap tempo in Shift Mode did not work.
- Maschine Mk3 / Mikro Mk3
  - New: Channel and Polyaftertouch of the pads are now routed to Reaper.
- Push
  - Fixed: Device data on Info page was not displayed.

11.5.0

- Requires Reaper 6.12+
- Komplete Kontrol Mk2
  - New: Allow all MIDI channels for the keyboard, so far only channel 1 was enabled.
- Launchkey Mk3
  - New: Added support for models 25, 37, 49 and 61
- Launchkey Mini Mk3
  - Fixed: Session clip indication was no enabled.
  - Fixed: Improved contrast between selected and unselected scene.
  - Fixed: Long pressing a mode pad did crash.
- Launchpad
  - Fixed: Pro Mk3: *Fixed Length* button was missing in simulator.
- APC40, Fire, HUI, MCU, Kontrol MkI/MkII, SL MkIII
  - New: Double click the *stop* button when playback is stopped to move the play cursor to the end of the project.

11.0.0

- Requires Reaper 6.12+
- All devices
  - Fixed: 8th layout for scales which do not have 7 intervals was not aligned correctly (Push, Launchpad, APC).
- Launchpad
  - New: Press the 4th scene button (green) in the play mode to activate additional controls in the first pad row. First pad toggles sustain. Second and third pad are pitch down/up and the following

pads switch to different intensities of the modulation wheel. You can slide these modulation wheel pads to imitate a modulation wheel.

- New: Press the 5th scene button (amber) in the play mode to activate chords mode. This mode allows to play a chord by pressing a single pad. The base note is taken from the current scale and increases from left to right. The rows from bottom to top contain the following chords: Triads, Dyads (Powerchords), Suspended second (Sus2), Suspended fourth (Sus4), Add sixth (6), Major seventh chord (maj7), Add ninth (9), Add eleventh (11). The same octave, scale and base note settings apply as with the play mode.
- New: Pro Mk3: *Fixed Length* button triggers the New clip command.
- New: The mode strip in session view is now displayed vertically if session is flipped (in the 8th column).
- New: Show the flipped state in Bitwig when Session is activated from a different view.
- New: Scrolling in Birdseye view is now per page.
- Fixed: Birdseye view in session mode should not display mode button row.

- Push
  - New: Added chord mode. Press Note and select *Chords* to enable it or use the Layout button. Functionality is like described above for the launchpad.
  - Fixed: Push 2: Selected play view for a track was not remembered when changed via the Layout button.

10.9.6

- Requires Reaper 6.12+
- All devices
  - Fixed: Some configuration values were not initialised correctly after startup (e.g. LED brightness).
  - Fixed: Global settings were not stored when changed from the controller.
- APC40 MkI
  - Fixed: Drum sequencer crashed.
- Launchpad
  - New: First button in Shuffle view toggles now Shuffle grid.
  - Fixed: Shuffle view could not be closed.
- MCU
  - New: Toggle **Use faders like knobs** has been moved to the Flip button to be more consistent with the intended MCU behaviour. Toggling instrument/audio and effect tracks is now on Shift+Flip.
- Midi Monitor
  - Fixed: Crashed on startup.
- OSC
  - Documented all OSC commands in the manual.
  - New: New command for send **/clip/exists {0,1}**
  - New: New command for send **/clip/color** with rgb(r,g,b); r,g,b = 0..255.
  - New: New command for receive **/clip/{+,-}**.
  - New: New command for receive **/clip/launch**.
  - New: New command for receive **/clip/record**.
  - New: New command for receive **/clip/quantize**.
- Push
  - Fixed: Pin button LED was lit in track details mode which is not supported with Reaper.

10.9.5

- Requires Reaper 6.12+
- All devices
  - Fixed: Naming of attributes in DrivenByMoss settings files could be wrong depending on the OS' language locale (e.g. Turkish locale), which could have some strange side effects like e.g. sequencers not working. If this is the case for your OS check the controller settings after the update.
- Fire
  - New: The brightness and the color intensity of the pads can be adjusted in the settings.

- Push
  - New: The Groove mode allows now to dis-/enable the arrange swing grid and set the amount.

10.9.4

- Requires Reaper 6.12+
- All devices
  - Fixed: Switched to TAR files for Linux and Macos to preserve the permissions of the Java runtime files.
- Launchkey Mini Mk3
  - New: Added options to choose the function for the record and shift+record button.
- Generic Flexi
  - New: Replaced Select/Export/Import buttons with Load/Save buttons.
  - Fixed: File dialogs did not work on Linux.
  - Fixed: Dialog height was *jumping* between two heights until it was manually adjusted.

10.9.3

- Requires Reaper 6.12+
- All devices
  - Fixed: First track was renamed to 'Track' when first loading a project after startup.
  - Fixed: Implemented a workaround for pitchbend messages on Linux.
  - Fixed: Crash when a clip without a take was on a track.

- Novation SLMkIII
  - New: Shift + Play toggles write automation.
- OSC
  - New: Added new command /track/{1-8}/remove
  - New: Added new command /device/remove
- Push 1/2
  - New: Improved the layout of the Groove mode.

10.9.2

- Requires Reaper 6.12+
- All devices
  - Fixed: Changed that resetting volume sets it to 0.0dB (was -5.6dB).
  - Fixed: Setting absolute faders controlled by CC was broken.
- MCU
  - Fixed: Scrolling in browser did always jump between first and last item.

10.9.1

- Requires Reaper 6.12+
- Macos
  - New: Library is now a universal binary for Apple Silicon / Intel. Which is currently of no use since there is no Reaper version and no Jdk version available.
- APCmini
  - Fixed: Switching modes was broken.
- Beatstep
  - Fixed: Changing scale base note did only work in one direction.
- Fire
  - New: Activate delete mode and press the select knob to delete the currently selected device.
  - Fixed: Don't apply knob speed settings in Browser mode.
- Generic Flexi
  - New: Display parameter changes for Note Input functions.
  - New: Scale Note Input period and length to 127 for better use with absolute faders and knobs. If you assigned these to multiple buttons you need to update their values.

- Launchpad
  - Fixed: Duplicating notes in Poly Sequencer did create notes with velocity of 0 for all notes.
- Push
  - Fixed: Duplicating notes in Poly Sequencer did create notes with velocity of 0 for all notes.

10.9.0

- Requires Reaper 6.12+
- All devices
  - Fixed: Reduced compression of JDK to 1 (was 2) to prevent crash on some Windows 10 systems.
- Fire
  - New: In Shift mode the 10th button of the first row (blue) activates duplicate mode. Can be used with the first row of the Mix mode to duplicate tracks and with clips in the Session mode.
  - New: In Shift mode the 12th button of the first row (red) activates delete mode. Can be used with the first row of the Mix mode to delete tracks and with clips in the Session mode.
  - New: In Shift mode the 11th button of the first row (green) doubles the content of the currently selected clip.
- Midi Monitor
  - Fixed: Displayed note octave was wrong for Note on/off and Poly aftertouch (e.g. showed C6 instead of C4).
- MCU
  - New: Added User mode. Press Device button twice to activate user mode.
- OSC
  - New: Added /update before and after each update cycle (if there is at least 1 update message).
  - New: /track/{1-8}/name {text} - Set a new name for the track
  - New: Open Stage Control template: name of track can be set
  - New: Open Stage Control template: added data receive indicator LED to transport bar
- SL Mk III
  - Fixed: Lightguide was only drawn black but not turned off on the hardware when disabled in the settings. The hardware light guide can now used again when the settings is disabled.

10.8.0

- Requires Reaper 6.12+
- All devices
  - New: Support for AU devices in browser on Macos.
  - Fixed: Resetting volumes sets them to 0dB (was -Inf) and pan to center (was full left).
- APC40
  - Fixed: Changing tempo in combination with Shift button left the shift mode active.
- Launchpad
  - Fixed: Crash when session mode was flipped and 8th row was active
  - Fixed: Session grid was off by 1 if 8th row was active and long press was used (also crashed on 1st row).
  - Fixed: Stop all clips button was missing in Shift mode on Pro models.
- Maschine Mk3
  - Fixed: Scene, pattern and fixed velocity with encoder knob did behave erroneous.
- MCU
  - Fixed: Page Up/Down (MCU MODE EQ / DYN) did not work.
- SL Mk I + II
  - New: Show all tracks in volume mode (no need to switch between instrument/audio tracks and master).
  - Fixed: Crash in sequencer/play mode.
- SL Mk III
  - New: Out of scale keys of the light guide can now also be lit in dark grey. Select *Chromatic* in the document settings.
  - Fixed: Switching modes did not work with single button presses.

10.7.4

- Requires Reaper 6.12+
- All devices
  - New: Support for absolute metronome volume changes (e.g. MCU). Relative changes do no longer require SWS to be installed (e.g. Push). The metronome volume text description is still not updated (always shows -6.0dB).
- APC40
  - Fixed: Coloring of Tempo mode in simulator was wrong.
- Fire
  - New: Added knob speed settings

  - Fixed: Note was always created with velocity of 0 in drum sequencer (except when Accent was enabled).
- OSC
  - Fixed: Changing bank size did not work.

10.7.3

- Requires Reaper 6.12+
- All devices
  - New: Windows 10: Updated to latest JDK15 nightly build, which should fix the startup crash on older Windows 10 installations.
  - New: Parameter mapped knobs/faders display their value in the simulator.
  - Fixed: Notification message display time was too short (since message was canceled straight away).
- APC40
  - New: Display Send index and name as well as user pages when changing to these modes.
  - Fixed: Crash when switching to effect tracks.
  - Fixed: Mk2: Do not switch to next Send when Send button was used in combination with track selection (to select Send N).
  - Fixed: Mk2: Last send mode was not remembered when changed with track selection combination.
- Launchpad
  - New: The behaviour of duplicating a clip has changed. After selecting the source clip, press any free clip on the grid. The source clip will be duplicated at the end of the clips' track.
- Push
  - New: The behaviour of duplicating a clip has changed. After selecting the source clip, press any free clip on the grid. The source clip will be duplicated at the end of the clips' track.
  - Fixed: Select button is now blocked in Browse mode since it does not have any function in that mode and left the extension with a blank screen when accidently pressed.

10.7.2

- Requires Reaper 6.12+
- AutoColor
  - Fixed: Crashed on startup
- Komplete Kontrol
  - Fixed: Crashed on startup

10.7.1

- Requires Reaper 6.12+
- APC40 / APC40 mk2
  - New: APC40 mk2: Select user mode pages now with User+Select 1-8. Cursor keys change tracks like in pan and send mode.
  - Fixed: Pressing notes in drum sequencer for editing did always select notes in the first sequencer row.
- Launchpad Pro Mk3
  - Fixed: (Regression in 10.7) Mode selection did not always work

- Push 2
  - New: The 4th/8th send name is now always displayed if the current tracks are not inside of a group. Furthermore, it is displayed if the 8th knob is touched.

10.7.0

- Requires Reaper 6.12+
- NI Kontrol Mk 1
  - New: Added settings for knob speed
- NI Kontrol Mk 2
  - New: Knob speed settings are now from -100 to 100
- Launchpad
  - Fixed: Pro Mk3: The last selected play / sequencer mode was not restored
  - Fixed: Volume, Pan and Sends view was canceled when track selection changed.
  - Fixed: LED lighting of up/down buttons in scene and mix mode was wrong
- MCU
  - New: Added settings for knob speed
- NI Maschine Mk3
  - New: Added settings for knob speed
- OSC
  - Fixed: /vkb_midi/note/{0-127}/color did not send scale colors, only played notes
  - Fixed: Page size of user parameters was not changed (was always 8)
- Push 2
  - Fixed: Shutdown of the display process did not always exit cleanly

10.6.4

- Requires Reaper 6.12+
- Push
  - Fixed: Grid resolution could not be changed in drum modes

10.6.3

- Requires Reaper 6.12+
- All devices
  - Fixed: Raindrop sequencer did crash if more measures than 32 or 32 with 1/32t and 1/32 were used. The later issue is fixed and the first issue get blocked (only 32 measures get filled).
  - Fixed: Drum 4 / Drum 8 - setting note length on the grid was broken
- Akai Fire
  - New: Displays the number of the edit page when switching to the previous/next.
  - Fixed: Crash in browser when select knob was released.
- Launchpad
  - New: Updated documentation images
  - New: Added fixed accent option to the settings
  - New: Fixed accent can be toggled with the yellow pad in the right upper corner of the shift mode
- Push 2
  - Fixed: Long press delay was about double the time as with Push 1

10.6.2

- Requires Reaper 6.12+
- Akai Fire
  - New: Shift + Scene: Selects the scene without starting it.
  - New: Selecting or starting a scene shows its' name in the display.
- Launchpad
  - New: Display the track number and name on track selection.
  - New: Display the function of the selected row in Mix mode.
  - Fixed: Not all selected modes were displayed in Reaper and some names showed Session.

- – Fixed: Mix view was cancelled when track selection changed.
  - – Fixed: Long pressing a pad in a fader mode caused the selection of a track.
- Push
  - – New: Note Repeat + Scene - Change note repeat period
  - – New: Shift + Note Repeat + Scene - Change note repeat note length

10.6.1

- Requires Reaper 6.12+
- All devices
  - – New: The crossfader controls the 1st track FX parameter on the master track.
  - – Fixed: FX parameters (user parameters) on the master track could not be changed.
- Akai Fire
  - – Fixed: Removed session flip option, which did crash.
  - – Fixed: Also prevent deletion of note in sequencer when knob was touched but not turned.
- APC40MkII
  - – New: Scene buttons are lit in the color of the scene (region).
- Komplete Kontrol MkI
  - – Fixed: Interpretation of knob speed was wrong.

10.6.0

- Requires Reaper 6.12+
- APC40 / APC40MkII
  - – Fixed: Insert device before / after current from Shift mode did crash.
  - – Fixed: APC40: Shift+Stop All Clips did open the browser to insert before the device instead of replacing the current.
- Akai Fire
  - – New: **Alt + Stop** - Toggle arranger automation write
- OSC
  - – New: Added equalizer commands (uses first ReaEQ device on a track)
    - ∗ /eq/. . . - All values/commands available for /device
    - ∗ /eq/add - Add an ReaEQ device as the last device on the track
    - ∗ /eq/type/{1-8} - Set/get the band type (off, lowcut, lowshelf, bell, highcut, highshelf, notch)
    - ∗ /eq/freq/{1-8} - Set/get the frequency of the n-th band
    - ∗ /eq/gain/{1-8} - Set/get the gain of the n-th band
    - ∗ /eq/q/{1-8} - Set/get the q-factor of the n-th band
  - – New: Added example Open Stage Control template for equalizer control

10.5.0

- Requires Reaper 6.12+
- APCMini
  - – New: Long press a pad in session mode to select the clip without starting it.
- APC40 / APC40MkII
  - – New: Long press a pad in session mode to select the clip without starting it.
  - – New: Tempo is displayed on grid when tempo is changed
  - – New: APC40: Tap Tempo + Cue Level changes tempo
  - – Fixed: APC40: *Shift+Stop All Clips* did not open the browser
- Akai Fire
  - – New: Long press a pad in session mode to select the clip without starting it.
  - – Fixed: Drum sequencer crashed when changing note length on the grid
- Komplete Kontrol MkII, A-Series / M32
  - – Fixed: Lookup of Komplete instance did not work.
- Launchpad
  - – New: Long press a pad in session mode to select the clip without starting it.
  - – Fixed: Modes could only be activated once (non-pro models)

- Novation SLMkIII
  - New: Long press a pad in session mode to select the clip without starting it.
  - New: The lightguide displays the scale notes. The scale can be selected in the document settings.
  - New: The lightguide can be turned off in the settings.
- Push
  - New: Long press a pad in session mode to select the clip without starting it.
  - Fixed: Exception when selecting a drum pad
  - Fixed: Temporarily activating session mode did only work for starting clips but not for starting scenes.
  - Fixed: Longpressing a pad in Drum 4 mode to edit the note did not work.
  - Fixed: Add Device/Effect did call Replace effect instead of Insert.

10.2.0

- Requires Reaper 6.12+
- All devices
  - New: All settings are now documented in the manual.
- Akai Fire
  - New: Pressing Select knob toggles the window of the current device.
- MCU
  - New: Footswitches and Functions keys can now execute an Action. Select *Action* from the list, then select the Action from the list below.
  - New: Option to disable Master VU (iCON extension)
  - Fixed: New function did not work
- OSC
  - New: Updated the Open Stage Control template for Open Stage Control 1.0.0. VU meters are now gray if track is muted.
  - New: /action/{1-8}/ to execute 8 different Actions.
  - Fixed: /automationWriteMode was broken
- Push
  - Fixed: Device and Parameter navigation was broken

10.1.0

- All devices
  - Fixed: Replaced a special # character (e.g. from Diatonic Transposer) with the normal ASCII #.
  - Fixed: Prevent to display identical on-screen messages
- APCmini
  - Fixed: Scene buttons were not lit
  - Fixed: Drum sequencer crashed
- Komplete Kontrol MKI
  - Fixed: Several crashes when activating Scale due to not configured colors
  - Fixed: Light guide did not work correctly when keyboard was transposed
- MCU
  - New: *use faders as knobs* and *Marker mode* functions display their state on the screen if toggled.
  - Fixed: Do not select tracks on fader touch if *use faders as knobs* is active.
- Maschine Mk3
  - New: **Channel** - Insert a new instrument channel (was File)
  - New: **Stop + Channel** - Insert a new audio channel
  - New: **File** - Saves the project (was Stop + File)
  - New: **Page left / right** moves to the previous/next clip on the selected track (moved the scene page before)
  - New: **Stop + Page left / right** moves to the previous/next clip page
  - New: **Stop + Volume** - Toggles VU meter display
  - New: Scale and Note Repeat settings are displayed and can be edited with knobs
- Mikro Mk3

- New: In track and parameter selection modes the selected tracks/parameters blink.
- Maschine Mk3 / Mikro Mk3
  - New: Play mode is now accessed by pressing *Keyboard*. Press again for play configuration mode.
  - New: Drum mode is now accessed by pressing *Pad Mode*. Press again for drum configuration mode.
  - New: Activating Step provides a step sequencer for the currently selected *drum machine cell* or the last played note if *Keyboard* is active. Follow button provides grid resolution setting and page selection.
  - New: Chord button enables chords in play mode. Note of pad adds 2 thirds on top.
  - New: **Stop + Rec** - Start recording a clip in the currently selected (empty) slot
  - New: *Sequential up* is now the default play layout
  - New: **Erase** - Does no longer trigger Undo. Use **Stop + Pad 1** instead.
  - New: To change bank pages turn the encoder and keep the related button pressed (scenes - *Scene*, clips - *Pattern*, tracks - *Select, Solo or Mute*))
  - New: In the parameter selection (*Variation* button) use the top row pads to switch devices and parameter pages. The parameter pads are now colored in the Bitwig parameter colors
  - New: **Stop + Pad 1 (Undo)** - Undo
  - New: **Stop + Pad 2 (Redo)** - Redo
  - New: **Stop + Pad 5 (Quantize)** - Quantizes the selected MIDI 100%
  - New: **Stop + Pad 6 (QUANTIZE 50%)** - Quantizes the selected MIDI 50%
  - New: **Stop + Pad 9 (CLEAR)** - Deletes all MIDI notes from the selected MIDI clip
  - New: **Stop + Pad 13 (SEMITONE -)** - Transpose the selected MIDI clip a semitone down
  - New: **Stop + Pad 14 (SEMITONE +)** - Transpose the selected MIDI clip a semitone up
  - New: **Stop + Pad 15 (OCTAVE -)** - Transpose the selected MIDI clip an octave down
  - New: **Stop + Pad 16 (OCTAVE +)** - Transpose the selected MIDI clip an octave up
  - New: Keep **Fixed Vel** pressed and turn the encoder to change the fixed accent value
  - New: Pressing Stop flushes the whole state (display / buttons) to the device. This helps when you switch to MIDI mode and the DAW state changed meanwhile, since there is no way to get the information that the user switches to MIDI mode.
  - New: **Auto** - Toggle write arranger automation.
  - New: **Shift + Auto** - Toggle write clip launcher automation.
  - New: **Lock** - Toggle arranger overdub.
  - New: **Shift + Lock** - Toggle clip launcher overdub.
  - Fixed: *Sequential ˆ* and *Sequential >* scale layout were using 8 not 4 pads
  - Fixed: Auto and Lock buttons did not respect the setting "Flip arranger and clip record / automation"

10.0.0

- All devices
  - Fixed: MIDI Arp got unecessarily instantiated on project load even if Note Repeat was off
  - Fixed: Scrolling track bank by 1 was not implemented (e.g. MCU)
- The manual has now a *known issues* section
- New: Support for Akai Fire
- New: Support for Native Instruments Maschine Mk3
- Akai APC40 / APC40mkII
  - Fixed: User mode did not work
- Maschine Mikro
  - New: Show more on-screen notifications (Tap Tempo, Fixed Velocity, value change speed)
  - New: **Stop + Pad Mode** - Selects the previous base note of the scale.
  - New: **Stop + Keyboard** - Selects the next base note of the scale.
  - New: **Stop + Chords** - Selects the previous note layout.
  - New: **Stop + Step** - Selects the next note layout.
  - New: **Stop + Plug-In** - Toggle the window (if any) of the selected device (if any).
  - New: **Sampling** - Brings up the Slice to Drum Machine dialog.
  - New: **Stop + Sampling** - Bring up the Slice to Multi-sample dialog.

- New: **Auto** - Toggle write arranger automation.
- New: **Stop + Auto** - Toggle write clip launcher automation.
- New: **Lock** - Toggle arranger overdub.
- New: **Stop + Lock** - Toggle clip launcher overdub.
- New: **Stop + Projects** - Save the project.
- New: **Tap** - Tap Tempo
- New: **Stop + Tap** - Toggle metronome
- Fixed: FX and Master track were missing in Select, Solo and Mute modes
- Push 2
  - New: Increased text size of list elements
- SL MkIII
  - Fixed: Updated MIDI port lookup names on Macos

9.10

- Launchpad
  - New: Support for Launchpad Pro Mk3
  - New: Pads which show states in Shift mode are lit brighter when enabled (Play, Record, Metronome, . . .)
  - New: **Shift+Delete**: Toggle Repeat (was Shift+Duplicate)
  - New: **Shift+Duplicate**: Doubles the clips content
  - New: Simulator layout is now closer to the specific Launchpad model
  - New: In Shift mode, cursor up or down enters the tempo mode. In Tempo mode you can change the tempo with the cursor keys.
  - New: In Shift mode, cursor left or right enters the shuffle mode. In Shuffle mode you can change the shuffle amount with the cursor keys.
  - New: Added record quantization setting (Shift+Quantise)
- Push
  - New: Drum sequencers use the colors of the drum pads of the drum machine device

9.02

- All devices
  - Fixed: reaper-jsfx.ini could not be loaded if it contained non UTF-8 characters
- Push
  - Fixed: Push 2: Message was flickering if no presets matched the filter in the browser

9.01

- All devices
  - Fixed: Crash when closing Reaper device configuration dialog with OK.
- MCU
  - Fixed: Selecting *Mackie Extender* did not work
  - Fixed: Touching multiple faders did not restore Pan mode on release.

9.00

- All devices
  - New: Added setting to hide deactivated tracks (tracks with lock state)
  - Fixed: Retrieval of track lock state (used for active state) was broken
  - Fixed: Potential crash on shutdown of Reaper
  - Fixed: Only add MIDI arp to track if Repeat is on (was added always if track was selected)
- Akai APC40 / APC40mkII
  - New: Keep a note pressed and use the mode knobs to change the parameters of the note (Sequencer + Drum mode)
  - Fixed: Changing sequencer resolutions with Clip Stop buttons did not work
- Launchpad

- New: Added a new Mixmode. Press Shift+Session to enable it. This mode contains session modes at once. The rows from bottom to top are: rec arm, solo, mute, clip stop, send 2, send 1, panorama, volume. The panorama and sends pad are only colored for the selected track. Press one of the pads of the upper 4 rows to select a track. Select a volume, panorama or sends pad to activate it and then change its value with the virtual fader of the scene buttons.
    - New: Masterfader in Volume mode now has 4 steps per pad (like the other track faders)
    - New: In Pan mode the scene buttons control now the panormama of the master fader (to be consistent with volume mode)
    - New: Stop Clip buttons are now lit in red if pressed
    - Fixed: 8th row in Session mode was not drawn on startup
- Maschine Mikro Mk3
    - Fixed: Extension did crash on startup

8.98

- All devices
    - Fixed: Values of panorama envelope were flipped (left was right and vice versa)
    - Fixed: Document setting code must not be executed when extension is not running
    - Fixed: Fixed several issues on first startup (when DrivenByMoss is not yet added as control surface)

8.97

- All devices
    - New: Project/document specific settings (e.g. Scale or Note Repeat Settings) are now stored with the project.
    - New: There is now a dialog to edit project/document specific settings (click on the Project button or assign an Action key).
- Launchkey Mini Mk3
    - New: Display user pages when switching in user mode
- MCU
    - New: IMPORTANT: The device MIDI ports are now ordered left to right, which means if your main device is to the right, it needs to be the last!
    - New: You can configure for each of your MCU devices if it should act like the main device (e.g. enable transport controls; you can have multiple) and has now the option to support the specific Mackie extender protocol.
- OSC
    - New: The bank page size can be configured from 1-200.
- Push 2
    - New: Color settings are used in MIDI clip mode. Furthermore, always at least 4 rows are displayed.

8.96

- All devices
    - New: Included PDF manual
    - Fixed: Buttons in the Simulator UI which expect a specific CC value did not work
    - Fixed: Fader/knob touch states were not sent to Reaper
    - Fixed: Some texts were not displayed in the simulator
- APC40 MkII
    - New: Added user mode
- Launchpad
    - Fixed: Do not switch to play mode when changing tracks in Volume, Pan and Send modes.
- MCU
    - New: **Option+Tempo/Ticks** toggles between displaying the time or beats. **Tempo/Ticks** toggles the display of ticks/milliseconds or the current tempo for the last 3 digits. Both are also available in the settings.
    - Fixed: Fixed some issues with fader touch
- Novation SLMkIII

- New: Added user mode. Long press the UP button and then 8th row button below the display. Page names are configurable in the settings.
- OSC
  - Fixed: /time/str now really sends the time (did send measures before)
- Push 1/2
  - New: Cancel notification message when changing modes
  - Fixed: Position now really shows the time (did display measures before)

8.95

- APC / APCmini
  - Fixed: Fixed a crash in Raindrop sequencer
- Generic Flexi
  - New: Added option to send the LED value even when command is received from the device.
- Komplete Kontrol Mk 1
  - Fixed: Modulation wheel did trigger button press of the main encoder
- Komplete Kontrol Mk 2
  - Fixed: Simulator view did not work
- Launchpad
  - New: Poly Sequencer: Currently played sequencer notes are also lit on the play area
  - Fixed: Note mode menu could not be called up from any drum mode
  - Fixed: Fixed a crash in Raindrop sequencer
- Mackie HUI:
  - Fixed: New command could not be triggered from footswitch
  - Fixed: Simulator GUI did not work
  - Fixed: DO not light LEDs for non-existing tracks
- Push 1/2
  - New: Poly Sequencer: Currently played sequencer notes are also lit on the play area
  - New: When Automation is turned off it is set to Trim/Read instead of Read.
  - Fixed: Shift+New did also activate Record but should not
  - Fixed: Fixed a crash in Raindrop sequencer
  - Fixed: Push 2: Clip Mode in midi grid layout did not show the notes

8.94

- All devices
  - Fixed: Creating sequencer notes was broken
- Generic Flexi
  - New: Commands to edit 64 user parameters (controls track fx parameters). See commands in new category User.
  - New: The MIDI channel for the keyboard (or pads if it is a pad controller) can be explicitly set (previously it was fixed to channel 1). It can also be turned off or set to all. If a MIDI note is mapped to a function on this MIDI channel, the note is blocked from being played. Note: If you have selected All for the channel the note is blocked on all channels!
  - New: Modulation Wheel (CC 01), Sustain Pedal (CC 64) and Pitchbend can now automatically be routed to Reaper. You can now turn them off individually if you want to map them to something else.
- Launchpad
  - New: Option to remove the master track from the track bank (requires restart of extension).
  - New: Pro: Disabled Delete button if used without button combination to prevent accidential deletions.
  - New: Pro: Added user mode (controls track fx parameters). Press USER button to enter. Scene buttons switch between the 8 pages of 8 parameters.
- OSC
  - New: Added user parameters (controls track fx parameters).
  - Fixed: Changing output server/port did still not work.

- Push 1/2
  - New: Added User mode (controls track fx parameters). Allows to map 64 parameters. Press USER button to enter. Setup on Push 1 is now Shift+USER.

8.93

- All devices
  - Fixed: Pressing OK button in configuration dialog removed the extension.

8.92

- All devices
  - New: Added version information to Windows DLL
  - Fixed: Temporary freezes of the Reaper UI with heavy CPU plugins with lots of parameters
  - Fixed: Shutdown was not fully completed after JVM was stopped.
- Launchpad
  - Fixed: Note selection was activated when coming from a non-note mode but should not.

8.91

- All devices
  - Fixed: Pitchbend and Modulation Wheels did not work.
- Generic Flexi
  - New: Improved handling of Program Change as source. For trigger commands also a *button up* is executed; for continuous commands the value of the PC is sent (and not always replaced with 127).
  - New: Patch Bank Selection, see Generic Flexi documentation for more info. But this is currently not that helpful with Reaper since all settings are global.
- Launchpad
  - New: Easier selection of note modes. Pressing the note button brings up a menu where you can directly select the note/sequencer mode. First row (from top) selects play modes, 3rd row drum modes and 5th row sequencer modes.
  - New: Changing note length does now also work in Poly Sequencer
  - New: Inverted back the clip/scene scroll direction (was also not conform with the LED lighting)
  - Fixed: Displaying longer notes did not work in Poly Sequencer
- Maschine Mikro 3
  - Fixed: Removed restriction that drum octave could only be changed if a clip was active.
- MCU
  - New: Group/Write Automation changed to trigger Latch automation
  - New: Support for Read/Trim automation mode
- Push 1/2
  - New: Support for *Read/Trim* and *Latch Preview* automation modes
  - New: Inverted back the clip/scene scroll direction
  - New: Changing note length does now also work in Poly Sequencer
  - Fixed: Displaying longer notes did not work in Poly Sequencer

8.80

- All devices
  - New: The project start time, which can be configured in the project settings, is now added to the displayed time.
  - Fixed: jna-platform.jar file was missing. E.g. caused the file dialog in the Generic Flexi to crash.
  - Fixed: Blinking pads in simulator UI did not work
  - Fixed: Mapping of CC commands to specific values was broken. Mainly affected Kontrol keyboards.
  - Fixed: Scene/clip scrolling LEDs not indicated correctly. Session birds eye view navigation did not work.
- Akai APCmini
  - New: Change note length or create long notes in the Sequencers (Note, Drum) by pressing a note pad and then a pad right of it.

- Akai APC40 / APC40mkII
  - New: Change note length or create long notes in the Sequencers (Note, Drum) by pressing a note pad and then a pad right of it.
  - New: Improved scrolling of browser columns
  - Fixed: Browser crashed when activated
- Generic Flexi
  - New: Added new function: **Clip: Quantize**
  - New: Added functions for note repeat
  - New: Added functions for transposing the keyboard
  - Fixed: Configured knob speed settings were not set on startup
- Komplete Kontrol A-Series / M32
  - Fixed: Configured knob speed settings were not set on startup
  - Fixed: Crashes when scrolling clip page
- Launchpad
  - New: Virtual faders support 4 velocity steps (on all models)
  - New: Activates hardware play mode again when extension is stopped
  - New: Change note length or create long notes in the Sequencers (Note, Drum, Drum 4, Drum 8) by pressing a note pad and then a pad right of it.
  - New: Launchpad Pro: Duplicate notes in Drum 4 and Drum 8 sequencers
  - Fixed: Color of front LED was wrong when mode was changed
  - Fixed: Cursor left was not lit correctly in Drum 4 and Drum 8 mode
- Push 1/2
  - New: Change note length or create long notes in the Sequencers (Note, Drum, Drum 4, Drum 8) by pressing a note pad and then a pad right of it.
  - Fixed: Master mode only showed up shortly when Master volume knob was touched
  - Fixed: Configured knob speed settings were not set on startup

8.70

- All devices
  - New: Stop (or toggle playback) also disables record
  - New: Improved autodetect: Do not add a device if one of the midi ins/outs is already in use. Refresh midi devices before executing the autodetect.
  - New: Configuration window is now a top level window
  - New: Added simulator window for each device
  - Fixed: Some LEDs did not update correctly
  - Fixed: Duplicating media items from the session view did always duplicate the selected media items.
- Beatstep
  - New: Easier switching between note selection and step editing in sequencers. Turning knob left selects play/note select, turning it right selects step editing.
  - Fixed: Value change on some knobs were flipped (e.g. scrolling browser).
  - Fixed: The Note Sequencer used the drum mapping and octave shifting.
  - Fixed: Pads sometimes lit with wrong color after pad was pressed
  - Fixed: Pads sometimes lit with wrong color after leaving Shift mode
  - Fixed: Browser mode was canceled when Shift was released
- Push 1/2
  - Fixed: Filter active sensing warnings from log console
  - Fixed: Push 1: Frame mode showed an empty display
- Launchpad:
  - New: Non-Pro models: Pressing the Delete and Duplicate pads in shift mode activates the related mode. Leaving the shift mode and entering session mode allows then to delete/duplicate clips and tracks. After deleting/duplicating an item the delete/duplicate mode is turned off.
  - New: Turn of panorama lights for non-existing tracks, instead of showing them centered
  - Fixed: Launchpad X was not correctly using the velocity faders

- – Fixed: Fader scaling was wrong (except Launchpad Pro)
- Komplete Kontrol A-Series / S-Series Mk2 / M32
  - – Fixed: Some buttons did not work (Quantize, Metro, Undo)
- MCU
  - – Fixed: Record button was not always lit correctly
- Push 2
  - – New: Added duplicating notes in Note, Drum, Drum 4 and Drum 8 sequencers. Keep Dulicate button pressed, select the source note, press empty destination pad(s). The note will be copied with all settings.
  - – New: Tempo and Position knobs only show their value as a popup notification. The metronome settings can now be accessed by long-pressing the **Metronome** button. Note: play position text is only updated when playback is active!
  - – Fixed: Layout of Touchstrip mode was not updated to new features on Push 1
  - – Fixed: Play view was not active on a newly added track
- SL MkIII
  - – Fixed: Crash when selecting track again to enter device mode

8.60

- All devices
  - – New: Color drum pads in the tracks color
- AutoColor
  - – Fixed: Crashed on startup
- Launchpad
  - – New: Drum 4 and Drum 8 Sequencers: draw longer notes in darker color
- Mackie MCU
  - – New: Added an explicit setting for devices with only 1 channel ("Has only 1 fader"), e.g. the Behringer X-TOuch One. For devices with the normal 8 channels the select button now works again in marker and device mode.
  - – New: Send button states for function keys (F1-F5) which turns on the LED if the device has one and supports it (e.g. Behringer X-Touch One).
  - – New: Knob LEDs in device mode show only one dot
  - – Fixed: Knob speed was too slow
  - – Fixed: Knob LEDs were off when panorama was fully left
- Maschine Mikro Mk3
  - – Include Bitwig template as Template (Bitwig.ncmm3) again, not the full Memory dump (Bitwig.ncc).
  - – You need to load this new template into the Maschine (Bitwig.ncmm3) first (due to changes to the Touchstrip settings).
  - – New: Change note repeat period and length via ribbon (MOD: CC1, CC11; PERFORM: Master Volume; NOTES: Note Repeat Period / Length)
  - – New: The touchstrip LEDs are updated matching the selected mode.
  - – New: Pitchbend modes of touchstrip return to zero setting when finger is released.
  - – New: Flipped direction of Pitchbend Down Mode of touchstrip to match the LEDs.
  - – New: Added setting "Action for pressing rec armed empty clip"
  - – New: Erase+pad deletes scene, clip, track (depending on the selected mode)
  - – New: Duplicate+pad duplicates scene, clip, track (depending on the selected mode)
  - – New: Browser+pad in Clip Mode opens the browser to load a clip
  - – New: Stop+pad in Clip Mode stops the clip. Clips queued to be stopped are now lit in dark green
- Native Instruments Kontrol 1
  - – Fixed: Did crash when there was not track in the project
- Push 1/2
  - – New: Long press notes in Drum, Drum 4 and Drum 8 Sequencers to edit it.
  - – New: Drum 4 and Drum 8 Sequencers: draw longer notes in darker color
  - – New: Slow down value changes in note repeat mode
  - – New: Change note repeat period and length via ribbon

– Fixed: Fixed Length button was lit when volume mode was active

8.51

- All devices
  - Fixed: Log output was not visible on startup.
  - Removed support for Arturia Beatstep Pro due to too much limitations (use Generic Flexi instead).
- APC40
  - New: Changed direction of session-clip/scene scrolling
- Mackie HUI
  - New: Added support for icon Master fader extension
  - New: Insert buttons select track
  - New: Added (HUI QICK PUNCH) - Toggle Punch In
  - New: Added (HUI IN) - Toggle Punch In
  - New: Added (HUI OUT) - Toggle Punch Out
  - New: Added (HUI ON LINE) - Toggle Audio Engine on/off for current project
  - New: Added (HUI RETURN TO ZERO) - Return the play cursor to the start of the arranger
  - New: Improved unmute/unsolo all tracks
- Native Instruments Kontrol 1
  - New: Improved speed of knobs
  - New: Changed direction of session-clip/scene scrolling
- Launchpad
  - New: Added Poly Sequencer
  - New: Delete + Scene button in Session view deletes the scene
  - New: Shift mode: Enable note repeat and set the note repeat period and length with the pads in the middle
  - New: Sends mode: Display name of sends when selected
  - New: Light buttons brighter when pressed
  - New: Flipped Up/Down button in Device mode
  - New: Changed direction of session-clip/scene scrolling
  - New: Added notification messages to Shift view
  - New: Used several colors in Shift view for easier function identification
  - Fixed: Duplicate did not work on non-pro models
- Maschine Mikro Mk3
  - You need to load the new template into the Maschine (Bitwig.ncc) first
  - New: Use multiple colors on pads
  - New: Added note repeat (long press note view to change settings)
  - New: Pressing the encoder button always toggles between slow/fast value change, except tempo (tap tempo) and browser mode (confirm selection)
- OSC
  - New: Added commands for note repeat (/vkb_midi/noterepeat/. . .)
  - New: Added /track/hasParent {0,1}
- Push 1/2
  - New: Delete + Scene button (in Play, Piano, Drum 64, Session view): Delete the scene
  - New: Delete + pad in scene play mode: Delete the scene
  - New: The quantize mode now contains the record quantization configuration as well
  - New: The note insert/edit MIDI channel can be selected in the Track Details mode and in the document settings
  - New: Buttons are lit brighter when pressed
  - New: Changed direction of session-clip/scene scrolling
  - New: Scrolling scenes in scene play view scrolls whole 64 scenes
  - Fixed: Push 1: Header text in Master mode was missing
- SL MkIII
  - New: Changed direction of session-clip/scene scrolling

8.40

- New: Do not display note feedback from muted media items
- New: Switched to "MIDI Arpeggiator" instead of "MIDI Note Repeater" for Note Repeat. This requires a fix on the MIDI Arpeggiator JS plugin to make the note length work: Increase the note length step resolution from 0.1 to 0.001 like this: slider2:1<0.01,1,0.001>Note Length
- New: Support for Novation Launchpad X
- New: Support for Novation Launchpad Mini Mk3
- Fixed: Controller instance was not stopped when deactivated
- Launchpad
    - New: Shift mode: Enable note repeat and set the note repeat period and length with the pads in the middle
- Maschine Mikro Mk3
    - New: Added note repeat settings
- OSC
    - New: Added commands for note repeat
- Push 1/2
    - New: Added note repeat, long press Repeat button for configuration settings
    - New: The note insert/edit MIDI channel can be selected in the Track Details mode and in the document settings

8.30

- New: Speed up browsing filter columns
- Fixed: Last item in a browser filter column could not be selected.
- Support for Novation Launchkey Mini Mk3
- Launchpad MkII
    - Fixed: The Play and New functions in Shift mode were switched.
    - Fixed: Sequencers were not available
- MCU
    - Fixed: Do not set pan mode on fader touch release when volume mode was active before.
- OSC
    - Fixed: OSC did crash on startup
    - Fixed: Calls to /track/x/clip did not work

8.21

- Fixed: Endless recursion when accessing clips

8.20

- New: Improved auto-detect of some devices. Added CoreMidi4J prefix support on Macos.
- Ableton Push
    - New: Added info to the browser mode about if insert or replace is happending and selected track.
    - New: Added aftertouch processing to Drum and Drum 64 mode.
    - Fixed: Blinking on queued clips did not work
- Launchpad Pro/MkII
    - New: All tracks are displayed (incl. fx and master track)
    - New: Shift-mode can now also be accessed from the Session mode. To access the Bird-Eye view of the Session mode long press the Session button.
    - New: Optimized Shift-mode, Scene buttons select (again) the Mix-mode of MkII, they have no function on the Pro. First row of buttons select the length of new clips on both models.
    - New: Sequencers are now available.
    - New: Pro: Added aftertouch processing to Drum and Drum 64 mode.
    - Fixed: Blinking on queued clips did not work
    - Fixed: Page Left LED indication in Note and Raindrops Sequencer was not correct.
    - Fixed: Play in Shift mode of MkII did not work (triggered toggle loop instead).
    - Fixed: Mixer-LED on MkII was not lit.
    - Fixed: Play-Layout was not set when first time switching between Session and Play.

- – Fixed: Stop-Clip mode could not be activated on MkII
- Maschine Mikro MkIII
  - – New: Show info text when Duplicate is enabled
  - – New: Added template with required settings to the resources folder.
  - – New: Added flip arranger and clip recording option
- MCU
  - – New: Added preset for Behringer X-Touch One
  - – New: If device or marker mode is active, do not change track with MCU_SELECT (necessary for 1 channel controllers like Behringer X-Touch One)
- Native Instruments Komplete S-MkII, A-series/M32
  - – New: You can now set the speed of the knobs in the settings.

8.11

- All devices
  - – New: Detect button for auto-detecting connected devices.
  - – New: Many performance improvements: Some updates were put on a slower thread, track chunk only is read and analysed if playback is stopped, GUI only gets created if dialog is opened, . . .
  - – Fixed: Layout of Debug dialog
- MCU
  - – New: Added new function key option "Toggle use faders like editing knobs".
- Native Instruments Komplete S-MkII, A-series/M32
  - – Fixed: Definition files were mixed up and therefore the devices did not work properly
- Push 2
  - – Fixed: Display preview window did not update and window layout was wrong

8.10

- All devices
  - – New: Added new scales
  - – New: Added a Debug dialog where you can test to deactivate update routines
  - – Fixed: Creating clips did not start recording.
  - – Fixed: Send values were always sent for Send 1.
  - – Fixed: Only use send envelopes when active
- APCmini
  - – Fixed: Sometimes the pad grid was not drawn after startup, since the APCmini is slow to be ready for receiving commands.
- APC40mkI/mkII, APCmini, Launchpad MkII/Pro, Novation SL, Push
  - – Fixed: Deactivate all sequencers if no clip is selected. This caused weird effects if the grid resolution of the sequencer was changed with no clip selected and then a clip was selected.
- Beatstep Pro
  - – Fixed: Some knobs did not toggle its value
- Mackie HUI
  - – Fixed: Crash on startup and shutdown if Display was active
- Native Instruments Komplete S-MkII, A-series/M32
  - – New: The extension is now split up into two. One for the S-series and one for the A-series/M32. You need to add your Kontrol device again.
- Novation SLMkIII
  - – New: Notification messages are also displayed on the SL display
  - – New: Firmware version is displayed on startup
- OSC
  - – New: /playbutton - Toggles playback, you can configure the Stop behaviour in the configuration settings
  - – Fixed: All /vkb_midi commands did crash
- Push
  - – Fixed: Display a message if no clip is selected in clip mode

– Fixed: Octave buttons were not updated in sequencer modes.

8.00

- All devices
  – Fixed: Changing track selection did not correctly adjust the track bank page on the device (except Push)
- Komplete Kontrol A-Series / M32
  – Fixed: Track name was not displayed
- Novation Remote SL Mk III
  – New: Added setting to disable the faders (to prevent accidently changing volume)
- Push 1/2
  – New: Changed layout of Repeat configuration settings (long press Repeat button)
  – New: Changed the layout of the quantize/groove mode
  – New: Implemented editing of note parameters: length and velocity
  – New: Session: The octave and page buttons navigate the pages of the session grid
  – New: Push 1: Show longer track/layer names in Details mode
  – New: Push 1: Indicate volume with one bar when VU is active
  – New: Push 2: Improved layout of transport mode
  – New: Push 2: Only redraw display image if something has changed
  – Fixed: Stepping out of track folders did skip a level
  – Fixed: Do not close transport mode when accidently tempo or position knob is touched.
  – Fixed: Push 1: Groove mode crashed
  – Fixed: Push 1: Layout of panorama on max right
  – Fixed: Push 1: Send modes could not be accessed
  – Fixed: Push 2: Notification messages were not shown on the display

7.05

- Generic Flexi:
  – New: Commands to set Solo, Mute, Rec Arm, Monitor and Auto Monitor (in addition to toggle).
- Launchpad MkII
  – Fixed: Blinking of playing clips did not work
- Push 1
  – Fixed: Do not send color palette request, which is only working for Push 2

7.04

- All devices
  – New: Note feedback is implemented. Playing notes from MIDI clips are shown in play and drum views.
  – Fixed: Parameter updates are only slowed down if automation writing is enabled
  – Fixed: Setting automation mode sometimes addressed the wrong track

- Ableton Push 2
  – Fixed: Improved stability writing the color palette
- Komplete Kontrol MkII
  – New: Added Send mode (CLEAR button to toggle). Edit all sends of the selected channel.
  – New: Add track number to mixer view channels
  – New: Added Recording Option: Toggle Rec Arm State of selected track
  – New: Now, first checks if the selected device on the selected channel is a Komplete Kontrol devcice, if not the first instrument device is checked. This way you can edit multiple Komplete Kontrol instances on a channel.

7.03

- All devices
  – New: Reflect automation changes on device (Volume, Pan, Mute, Send Volume)

- New: Support for displaying and setting the color of the master track.
    - New: Support for Automation modes on master track.
    - Fixed: Writing Automation did not always work
- Ableton Push 2
    - New: Set a new color palette for the pad LEDs and improved the algorithm to calculate the closest available color.
    - Fixed: The default note view is set to Play again, was Drum View.
- APC40
    - Fixed: All views except Play View were drawn wrong.
- Komplete Kontrol MkII
    - New: Added a parameter/device mode (CLEAR button to toggle)!
- Maschine Mikro MkIII
    - Fixed: Display warning when no device is selected in parameter mode
    - Fixed: Indicate non-existing parameters as "None" in parameter mode
- MCU
    - Fixed: Jogwheel jumped back one step after movement ended
- Novation Remote SL Mk III
    - Fixed: Drawing of track and device modes were wrong when no track was selected (2nd try).
    - Fixed: Another crash in the browser.
- OSC
    - Fixed: Open Stage Control template produced a crash if the master volume was changed.

7.02

- Novation Remote SL Mk II
    - Fixed: Drum pads did not work
    - Fixed: Crash displaying send and master track
- Novation Remote SL Mk III
    - New: The browser result name is now shown in two columns
    - Fixed: Drawing of track modes were wrong when no track was selected
    - Fixed: Track could not be added when no track was selected
    - Fixed: Browser mode could crash if a non-existing filter column was selected
    - Fixed: Button long press events caused unnecessary warnings in the log
    - Fixed: Keyboard did not work
    - Fixed: Implemented a workaround for button LEDs being lit when knob or fader values were changed on Windows (bug with MIDI Sysex in JDK).
- OSC
    - New: Added layer tab to Open Stage Control template.
    - New: Added sending of /device/layer/selected/{attributes}
    - Fixed: Some types used "selected" and some "select". Both can be used now.
    - Fixed: Fixed location of master track in Open Stage Control template for 0.47.1.
- New: Updated to OpenJdk 11.0.3+7
- New: Faster calculation of browser results
- Fixed: Navigating parameter pages with cursor keys did not work
- Fixed: flush was still called when a device was set to be deactivated

7.01

- Fixed: Reaper INI was not read on Linux.
- Arturia Beatstep
    - Fixed: Caught exception when pads are transposed. Now an error is printed to the console.
- Generic Flexi
    - Fixed: MMC commands with device IDs > 15 did not work.
- Novation SL Mk III
    - New: Route all 16 MIDI channels to Reaper (not only channel 1)

7.0

- New: Added support for Novation SL Mk III
- Fixed: scrolling of parameter pages by page bank did not work (e.g. Shift + cursor left/right on Push)
- Ableton Push 2
  - New: Deactivated channels and layers are drawn in dark colors
- Komplete Kontrol Mk II / A-series / M32
  - New: Light record button as well on clip recording and clip overdub

6.4

- Generic Flexi
  - New: The speed (fast and slow) for relative knob changes can be configured
  - New: A command can be assigned to be the Shift button (Global: Shift Button), which gives extra functionality if combined with another control (e.g. Play, Rewind, Forward and Knob Speeds).
- Komplete Kontrol
  - New: Mapping of first Komplete Kontrol parameter is no longer necessary
  - New: Improved automatic lookup
- Changed storing of Reaper settings to prevent corruption of ini file.

6.3

- Generic Flexi
  - New: Added setting to store the last selected mode
  - New: MIDI CC is now available as a function destination
- Komplete Kontrol
  - New: Added setting to flip the track/clip navigation of the encoder knob
  - New: Added setting to flip the clip and scene navigation of the encoder knob
  - New: Added setting to set the length of new clips
  - New: Added setting to set the behaviour on transport stop
  - New: Added M32 to the extension name
- Fixed: Navigation from and to master track was reversed.

6.2

- APC40
  - New: Shift mode stays active until you release the Shift key.
  - Fixed: Clip indicator was not displayed.
- Launchpad Pro
  - Improved 2 colors.
- Komplete Kontrol
  - Fixed: Record option "Record clip" did not start recording when transport was stopped.
- Midi Monitor
  - New: Log system realtime events
  - New: Setting to filter system realtime events
- Push 1/2
  - New: You can now tweak the speed of the knobs in the settings (Workflow -> Knob Speed Normal / Knob Speed Slow)
- Fixed: Did crash Reaper on startup if UserPlugins folder was located in a path with non-ASCII characters.

6.1

- Generic Flexi
  - Fixed: Exception when Send volume was mapped/changed and a FX or the Master track was selected.
- Komplete Kontrol
  - New: Added information about mute state due to soloed track(s)
  - New: Added more selected track information to confirm to updated protocol
  - New: Added scene navigation and play

- – New: Slowed down knob change rate on MkII
- OSC
  - – New: You can now configure the value range. So far, this was 128. Now you can increase the range to 1024 or 16384. Note that you also need to configure the widgets in your OSC client accordingly.
- Fixed: NullPointerException on hierarchical track navigation
- Fixed: A Jar file was missing in the 6.0 release.
- Fixed: Toggling Note Repeat did not work

6.0

- Generic Flexi
  - – New: Use native dialog for selecting the configuration file.
  - – Fixed: Fixed a typo (CC40 was named CC30).
- Komplete Kontrol
  - – Switched to new MIDI protocol
  - – Support for A-series and M32
- Mackie HUI
  - – Support added
- Mackie MCU
  - – Fixed: Knob LED was not turned off on non-existing tracks for panorama mode.
- OSC
  - – Fixed: Reduced the size of a OSC bundles to stay below 64 Kb, which is the maximum for an UDP packet.
- Push
  - – Automation could not be activated if an effect track or the master track was selected.

5.91

- OSC
  - – Fixed: Reduced the size of a OSC bundles to stay below 64 Kb, which is the maximum for an UDP packet.

5.90

- Beatstep
  - – Fixed: Track and Device mode selection did not work.
- Maschine Mikro Mk3
  - – Fixed: Pan and Send modes could not be switched.
- MCU
  - – Display mode names for Track, Volume and Sends. Send modes also display the name of the send.
  - – You can flip backwards through the send modes with Shift+Send.

5.80

- Launchpad
  - – Fixed: Switching of Note and Sequencer did not work (only if also Push 1/2 was running)

5.70

- Launchpad
  - – New: The Bootloader and Firmware version is now logged to the console
  - – New: Pro: The user button acts now like the Shift button
- MCU
  - – New: Option + one of the Mute buttons: Deactivate all mutes
  - – New: Option + one of the Solo buttons: Deactivate all solos
- Push 1/2
  - – New: Select + Mute: Deactivate all mutes
  - – New: Select + Solo: Deactivate all solos

5.60

- MCU
  - Fixed: Removed unescessary clip indication.
- Midi Monitor
  - Fixed: System Exclusive formatting was wrong.
  - Fixed: Check for MMC was wrong.
- OSC
  - Fixed: Track selection did not work when using only "select" and/or did not set 1 as parameter.
  - Fixed: Decimal changes of tempo did not work.
  - Fixed: /device/layer/{1-8}/send/{1-8}/volume and /device/layer/{1-8}/send/{1-8}/volume/touched

5.50

- New: Integrated DrivenByMoss 5.5
  - New: There is now only one version number, the number of DrivenByMoss, and one changes file in the Wiki.
  - New: Extension Midi Monitor added
  - Fixed: Scene navigation with cursors was broken on most devices
  - Ableton Push / Push 2 11.04
    * Fixed: Clip indication was broken

5.30

- New: Integrated DrivenByMoss 5.30
  - Added new Midi Monitor extension.
  - Renamed Utilities extension to Auto Color
- Fixed: Removed stretching of dialog configuration widgets when only a view elements are present.

5.20

- New: Integrated DrivenByMoss 5.20
  - Ableton Push / Push 2 11.04
    * New: Use Shift+Octave Up/Down in Drum Sequencer modes to move the pads by 4.
    * Fixed: Marker mode was broken.
  - Akai APC40 / APC40mkII 5.20
    * New: Changed Nudge- to Undo and Nudge+ to Redo.
    * New: Flipped functionality of "Detail View" (is now "Toggle plugin window") and Shift+"Details View" (is now "Step through the layout perspectives").
    * New: Drum sequencer: The highlighted grid in the drum machine now only show the 12 pads. The scene buttons 1/2 move the pad view by 4. The scene buttons 4/5 move the pad view by 12 (previously 16).
    * Fixed: "Step through the layout perspectives" did not work on some display profiles.
  - Generic Flexi 2.2
    * New: Added commands to control Browser filter columns 7 and 8.
    * New: Added Browser mode.
    * New: Added absolute mode for toggle buttons.
    * New: Added support for MMC.
    * New: Added "Transport: Rewind" and "Transport: Fast Forward"
    * New: Select buttons in Parametermode select parameter pages instead of devices.
    * Fixed: Removed duplicated function "Transport: Set Crossfader", use "Master: Crossfader" instead.
    * Fixed: Mode knobs did always use relative mode 1, even if 2 or 3 was selected.
    * Fixed: Values of Track-, Volume- and Parametermode were not reflected correctly back to the device.
    * Fixed: Prevent console warnings when values go out of bounds in relative modes.
- New: Added an action to open the DrivenByMoss extension window (search for "DrivenByMoss" in the action list).
- New: The DrivenByMoss extension and configuration windows can now be closed with the Escape key.

5.10

- New: Integrated DrivenByMoss 5.10
  - Native Instruments Komplete Kontrol 1 S25, S49, S61, S88 1.1
    * New: Improved displayed scale colors. Only the root note is now displayed in the track color. All other notes are colored in white. Played note are in green or red if recording. Furthermore, sequenced notes are also displayed in green.
    * New: If a track with a drum device is selected the keyboard LEDs display the according slot colors.
    * New: Keyboard range is displayed on screen and display if changed.
    * New: SHIFT+BACK - Toggles monitor on the selected track.
    * New: SHIFT+ENTER - Toggles rec arm on the selected track.
  - Generic Flexi 2.1
    * New: Added command: "Device: Parameters"
  - Generic Utilities 1.0 added (AutoColor)
- New: Controllers can be deactivated so they do not use any resources when they are not connected.
- New: Speed up of Java/C++ communication; fixes lag of controller playing
- New: Menu for adding controllers is now hierarchical
- New: Improved folder navigation
- New: Implemented sending of Escape and Enter key to Reaper (used by MCU protocol, only Windows & macOS)
- New: Implemented transport restart function (used by Generic Flexi and OSC)
- Fixed: Toggling of plugin window did not work
- Fixed: MIDI editor is no longer closing when executing quantize from a controller, if it was already open.

5.021

- Fixed: Widgets in configuration dialog did not always update their values correctly.
- Fixed: The integrated Java VM did not contain the accessibility module. Therefore, DrivenByMoss crashed on system with enabled accessibility support.

5.01

- Fixed: "error -99" on Macos with Push 2.
- Fixed: NullPointerException in Color Picker, if Cancel is selected.

5.00

- Integrated DrivenByMoss 5.0
  - Open Sound Control (OSC) protocol - 6.12
    * Fixed: Potential synchronisation issue when sending OSC messages.
  - Generic Flexi - 2.0
    * New: Completely new settings user interface
    * New: Support for modes: Track, Volume, Panorama, Send 1-8, Parameters
    * New: Support for using Pitchbend as a controller
    * New: Added command: "Master: Crossfader"
    * Fixed: Blocking notes which are mapped to a command did only work after restart.
    * Fixed: "Send value to device" did always send on midi channel 1.
- Bundled Java Virtual Machine for easier installation

4.03

- Integrated DrivenByMoss 4.03
  - Ableton Push / Push 2 - 11.03
    * Fixed: Fixed resetting of Push 2 display colors.
  - Novation Launchpad Pro & MkII - 3.45
    * Fixed: Transposing the piano view was broken
- Fixed: New tracks with no name did sometimes not turn up until given a name

4.02

- Integrated DrivenByMoss 4.02
    - Ableton Push / Push 2 11.02
        * New: Mute and Solo work now in all modes (not only in track modes).
        * Fixed: Fixed a crash in the Browser.
- Fixed: The track for setting the automation mode was off by 1.
- Fixed: Komplete Kontrol 2 plugin browsing and selection works now.

4.01

- Integrated DrivenByMoss 4.01
    - Ableton Push / Push 2 11.01
        * New: Push 2: You can now use Delete+Touch knob in the Setup mode to reset the values to its default.
    - Open Sound Control (OSC) protocol 6.11
        * Fixed: Changed midi channel range for /vkb_midi to 1-16 to be consistent to all other numberings, which start with 1. Furthermore, fixed the documentation which indicated 0-16.
    - Novation Launchpad Pro & MkII 3.44
        * Fixed: Flipped session view triggered the wrong clips
        * Fixed: Temporary modes Rec Arm, Track Select, Mute, Solo and Stop Clip did not return to previous views.
- Fixed: Setting sequencer "loops" was broken.
- Fixed: Push 2: Changing values in Setup mode was buggy.

4.00

- Integrated DrivenByMoss 4.00
    - Mackie MCU - Changes 2.63
        * Fixed: Crash if Marker mode was selected and Assignment display was enabled.
    - Native Instruments Komplete Kontrol 2 S49, S61 * Changes 1.20
        * Fixed: Mute and Solo did not work on Hybrid tracks
    - Maschine Mikro Mk3
        * Initial release

3.31

- New: Clip Loop parameter turns on/off the media items "Loop item source" parameter.
- Fixed: Recording Track Automation did not work.

3.30

- New: Integrated DrivenByMoss 3.30.
- Fixed: Push 2: Clip piano roll: Note texts could not be seen when notes were black.
- Fixed: Scrolling of clips did not work.

3.20

- New: Integrated DrivenByMoss 3.20.
- New: Repeat can be enabled (this uses an Arp in the channel insert). Long press Repeat button to set the speed.
- New: Using 'New' to create a clip does not start recording anymore for easier use with sequencers.
- Fixed: Creating a new clip did not set the selection state correctly.

3.02

- Fixed: Scrolling tracks on Push 1/2 was broken when folders are in the project.

3.01

- Fixed: Tracks without a name did not show up.
- Fixed: New clip did sometimes not work.

- Fixed: Notes in Sequencer were not updated when clip was deselected and selected again.

3.00

- New: Replaced the Reaper EEL backend with a C++ implementation.
- New: Support for clips
- New: Support for scenes
- New: Support for markers
- New: Support for sequencers

2.10

- New: If supported by the Java/OS platform the application is run as a tray icon. Closing the app minimizes it to the tray. Double click the tray icon to show it again. Right click on the tray icon to show the context menu with the options to show the application or to exit it. If Auto-run is enabled, the app is automatically minimized on startup.
- New: The console window is no longer shown on startup.
- New: 64 drum pad view for Ableton Push and Novation Launchpad Pro / MkII.
- New: Bank page is now automatically adjusted on controller if changed in Reaper.
- Fixed: Midi In-/Outpus were not correctly restarted when Configuration dialog was closed.
- Fixed: Push 2 preview display window was still drawn when hidden.
- Fixed: Push 2 preview display window producerd OutOfMemoryExceptions after a while.

2.03

- Fixed: The Reaper start path was not stored.

2.02

- Fixed: Could not start Reaper when spaces are included in the path.

2.01

- New: Added more logging information for loading Reaper INI files

2.00

- New: Initial release after switching to Java