# Presonus Atom Sq MIDI Script Manual

ver 0.7.0

The layout used by this script will likely change as more features are introduced. Currently, most navigation will involve using **E** to switch between Step, Keyboard and Alter modes and the **+/-** buttons to rotate through sub-menus within those modes.

## Jog Wheel and Arrows

The jog wheel will scroll through browser sounds, mixer tracks and channels when their respective window is focused. Due to an unfortunate quirk with the SQ, the first page of the Song mode must be open on the controller and the cursor selected or the jog wheel does not send any midi data. Arrows can be used for the same functionality. The left and right arrows can be used to move through patterns when the Channel Rack window is focused.

## Letter Buttons

**A** is the enter button. It will open channels when the Channel Rack is focused. It is used with **B** to copy/paste.

**B** rotates through copy channel/copy pattern/paste/enter options for the **A** button.

**C** is not currently used

**D** brings up the plugin picker

**E** toggles through 4 main modes listed below

**F** selects layout of the main modes

**G** can be configured to rotate between windows (see config)

**H** rotates between Mixer and Channel Rack windows

## Transport buttons

The Transport buttons function as labeled. **Shift** can be used to access the secondary functions with the exception of Count-in.

## Song buttons

### Page 1

**Solo** and **Mute** work as expected. If the Mixer window is focused the **Arm** button will toggle record. If the Channel Rack window is focused, it will set the current channel to the mixer path of the last selected mixer track.

### Page 2

**Button 1** applies the quantizer to the selected channel.

**Button 4** adds random steps to the selected channel in step-mode. (See below)

**Button 5** applies random notes to the selected channel. (See below)

**Button 6** currently applies to Accumulator Mode only and allows all Accum-steps to be cleared with the **A** button.

# Pad Modes

The **E** button rotates through the major modes: Notes, Step-Sequencing, Pad per Channel and Alter.

**Notes**

Notes mode has two layouts, which **F** rotates through.

In Continuous Notes, the root notes (C is default) are highlighted in blue and play notes sequentially. The **+/-** buttons rotate through root notes and scales selectively.

In Keyboard Modes, pads light and play as a keyboard. The **+/-** buttons will rotate through octaves.

Additionally, when either FPC or Slicex windows are focused, the pads are automatically mapped.

**Step Sequencer**

When Channels are focused and Step Sequencer is selected the pads will input steps. The jog wheel and up/down arrows select channels. The leds will change to reflect the state of the currently selected channel's pattern.

The step-sequencer has four layouts.

**32 Steps** - Blank

In 32 steps, the top row extends access to steps 17-32.

**Pattern Access** - White

The top row allows instant access to patterns 1-16.

**Channel Select** - Light Purple

The top row selects channel 1-16 for quick editing.

**Channel Mute** - Yellow

The top row mutes channels 1-16.

**Pad per Channel** - Purple

As expected, in this mode the pads represent each channel and trigger it accordingly. The pads are purple in this mode.

## Sub Menus

In keyboard mode, the **+/-** buttons button will rotate through different octaves. In continuous mode, they rotate through various root notes and scales. Pads per Channel mode currently has no sub modes.

**Standard, Random Notes, Parameter Edit and Accumulator**

Pressing the **+/-** buttons in step mode will rotate through Standard (blue leds), Parameter Edit (white), and Random Notes (purple).

**Standard Mode** - Blue

When Channels are focused and Standard Mode is active, **Knob 5** will control the volume of the selected channel. **Knob 6** will control the panning and **Knob 8** will change the color of the selected channel. **Knob 7** rotates through preset patterns that are adjustable in the data.py page. If you wish to turn this

functionality off (as accidentally adjusting the knob can change your pattern), open the config.py file in a text editor and change the saved_patterns entry from *True* to *False*.

**Parameter Entry** - White

In Parameter Entry mode, steps are no longer entered or removed. Instead, individual steps can be selected to edit their parameters. Select an active step and the knobs can be used to edit the Pitch, Velocity, Release, Fine Pitch, Panning, Mod X, and Mod Y of that step using the knobs 1-7 respectively. The step LEDs turn white when in this mode. Pushing any step shows its current note in the message window.

**Random Notes** - Purple

In Random Notes mode, the knobs control various scales that can be applied to notes on a channel's sequence. **Knob 5** will choose the root note, shown in the message window. **Knob 6** chooses the scale and **7** and **8** control the low and high range of notes to be used. Push Button **5** to apply. It can take some experimentation to find the right high and low range.

## Alter Modes

Alter mode allows experimental editing of steps. It currently has two sub-modes which **+/-** rotate through.

**Accumulator Mode** - Yellow

Accumulator mode is based on the Intellijel Metropolix sequencer's function of the same name. It allows individual step notes to increase or decrease with each pass by a set interval and is limited by a set number of passes. These notes can individually be set to stay within a scale or play any note.

When Accumulator Mode is active and the Channels window is focused, **Knob 5** controls the root note of the scale, **Knob 6** controls the scale to use, **Knob 7** controls the interval to change with each pass and **Knob 8** controls the number of passes before it resets. To add a step into the Accumulator, set the knobs to the desired settings first and then press the desired step (This is opposite of how changes are made to steps in the Parameter Entry mode).

If the Chromatic scale is selected, any note can play. If any other scale is selected, the interval decides how many steps within the scale to change.

If a particular scale is selected, and the step's note is not in it, the step won't be added to the Accumulator (You can enter Param Edit Mode and press any highlighted step to find its note. To clear all steps, push **Button 6** then press **A**. The steps will all return to their original note. There is no way to clear a particular note. If you select the same note twice, both intervals/pass limits will apply to the step resulting in unpredictable, but perhaps interesting, behavior. Also, please note that in its current iteration, the Accumulator does not respect groups and does not function as intended if the pattern uses them. It is recommended to only use the Accumulator with "All" selected rather than any particular group. Similarly, the Accumulator currently relies on the order of channels, so moving channels around will alter which one gets affected.

This is an experimental functionality and not how FL Studio is designed to be used, but nevertheless functions well. While there is no limit on the number of steps you can set to accumulate, it may be best not to get carried away. The functionality continues to work in Playlist mode, although not when consolidating Playlist tracks. Currently, it is not possible to save the Accumulator settings with your project, so

perhaps the audio should be recorded if you want to keep your work made with the Accumulator.

**Shifter** - Light Blue

The Shifter mode uses bit-shifting to change a pattern's step-sequence every bar. It can shift a particular channel's sequence left, right, or invert the steps. While the Channel Rack is focused and Shifter active, **Knob 5** can be used to select Left, Right, Invert, or Clear for a particular channel within a pattern. As with the accumulator, this information is not saved with the project.

# Random Steps

In any step-sequencer sub-menu, **Button 4** under **Song** can be used to add random steps. The touchpad controls the likelihood of each step being set on. Touch to the left and all steps will be filled and to the right for less. All the way right will result in a clear pattern.

# Knobs

If the Mixer is focused, **Knob 5** will control the volume of the selected channel and **Knob 6** will control the panning.

Plugin parameters are controlled by the knobs when they are focused. Some plugins (Transistor Bass, Osc 3, Drumpad et al) are mapped to a more reasonable layout than the default, with more coming. This can be adjusted in the pluginsdata.py file.

# Touchpad

**Plugins**

The current implementation is to use the touchpad as a meta-controller when certain plugins are focused. Open Transistor Bass or Drumpad to sample this functionality. Multiple parameters can be set to be controlled by the touchpad at the same time. They can also be set to react differently to the touchpad, so some parameters can increase and others decrease. (See plugindata.py to set-up and the vst-parameter repository on my github for more information and plugin values to use)

# Browser

The browser can be selected with the **G** button if set to in the config.py file (see below). The **jog wheel** or **up/ down arrows** can be used along with the **A** button to select samples and add them to channels.

# Troubleshooting

Most issues have been solved by updating to the latest version of FL Studio. This script will not work on all earlier versions.

The **+/-** buttons should be pushed rather than tapped. If hit too quickly, they may result in double taps.

The step-sequencer control is dependent on the step 1 pad sending CC #36. It does this in the default mode when the Octave under **Inst** is set to 0. If your steps are out of alignment you may have selected the wrong octave.

This is also true of the keyboard mode. Adjusting the octave of the keyboard through the SQ (under **Inst**) will result in notes not playing. This script is designed to avoid having to change any of the layout settings, aside from the knob pages under **User** to access more plugin parameters.

If everything is out of alignment, you can always return to default settings under the **Setup** button and follow the Instructions pdf to get everything in order.

This script is still in early development, so bugs may exist that I am unaware of. Please create an issue on GitHub with a description of the bug and the output of View/Script Output when you encounter the issue.

## Configuration Options

Currently, a few options in the config.py file are available to configure. This currently includes turning on/off the active step led when playing. Also, the options for which windows rotate via the **G** button can be configured here. If a window is not open, but the button is pressed to rotate to it, an error may occur. Make sure you do not close windows you want to be able to rotate to but minimize them or select other windows instead. This includes the browser.

If you have ideas for future functionality or find there is something you feel missing, please email me at forgery810@gmail.com.