ATOM SQ

Hybrid MIDI Keyboard / Pad Performance and Production Controller

Owner's Manual

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1 Overview

1.1 Introduction

Thank you for purchasing the PreSonus® ATOM SQ hybrid MIDI keyboard / pad production and performance controller. ATOM SQ was designed as a versatile and expressive MIDI pad controller for contemporary music production. Its unique design is optimized for both classic TR-style 16-step beat sequencing and drum pattern editing in Studio One Pro or playing instruments and launching clips in Ableton Live—yet its staggered and RGB-lit 32-pad configuration is instantly familiar to anyone who's played a controller keyboard. Advanced features let you change the keyboard scale, and a built-in arpeggiator and user-configurable touch strip make the ATOM SQ the most expressive controller you'll ever use.

PreSonus Audio Electronics is committed to constant product improvement, and we highly value your suggestions. We believe the best way to achieve our goal of constant product improvement is by listening to the real experts: our valued customers. We appreciate the support you have shown us through the purchase of this product and are confident that you will enjoy your ATOM SQ!

About this manual: We suggest that you use this manual to familiarize yourself with the features, applications, and workflows for your ATOM SQ before trying to connect it to your computer. This will help you to get better performances and faster results.

Throughout this manual, you will find Power User Tips that can quickly make you an ATOM SQ expert and help you get the most out of your investment.

1.2 Product Registration

PreSonus is committed to delivering the best experience for our customers. My PreSonus is a one-stop portal for all our registered customers' needs. From your My PreSonus account, you can view all your PreSonus hardware and software registrations; download drivers, installers, and content; contact support; track orders and more.

To register your ATOM SQ:

Go to My.PreSonus.com and follow the onscreen instructions.

Don't have a My.PreSonus account yet? Here's why you should sign up.

One account gets you everything you need, from support to forums to product info and upgrades. Get the inside track on training videos, tutorials, special offers, and advance notifications.

Register a product on My.PreSonus and you're eligible for technical support, timely updates, expedited warranty service and quick tracking should you ever need repair. You also get special promotions that are 'members only'!

Join the ever-growing community of PreSonus users and share ideas, projects, and yes, gripes on our forum and blogs. It's a lively, Cajun-tinged vibe and it's waiting for you.

Create My.PreSonus Account

Or

Download the MyPreSonus app from the Apple App Store or Google Play.

1.3   What's in the box

Your ATOM SQ package contains the following:

ATOM SQ hybrid MIDI keyboard / pad production and performance controller

PreSonus ATOM SQ Quick Start Guide
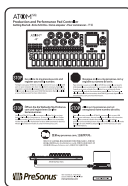
5' (1.5m) USB cable
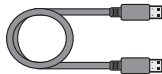
1.4   What's in your MyPreSonus account

Once you register your ATOM SQ, you will be able to download the following:

Studio One Pro recording software and content.

Universal Control (necessary for firmware updates)

Ableton Live Lite

EDM Elite Vol. 1 Library

Dirty Electro House Library

1.5   Companion PreSonus Products

Thanks for choosing PreSonus! As a solutions company, we believe the best way to take care of our customers (that's you) is to ensure that you have the best possible experience from the beginning of your signal chain to the end. To achieve this goal, we've prioritized seamless integration throughout every design phase of these products from day one. The result is systems that communicate with each other as intended—straight out of the box—without excessive configuration hassles.

We're here for you. Find out more at www.presonus.com.

1.6   Firmware Updates

PreSonus is committed to constant product improvement. As part of this commitment, we offer periodic firmware updates that add features, improve functionality, and resolve issues that are discovered in the field. Because of this, it is highly recommended that you download Universal Control from your My PreSonus account after registering your ATOM SQ.

Note: At the time of this manual's publication, a firmware update is required for full functionality of your ATOM SQ. You must download and install Universal Control and run the firmware update on your unit.

During installation, you will be given the option to install various PreSonus audio drivers. No driver installation is required to use the ATOM SQ.

Once installed, connect your ATOM SQ to your computer. Your ATOM SQ is entirely bus-powered. If you are using a USB hub, make sure you are connecting your ATOM SQ to a powered port.

Universal Control will alert you if there is new firmware available for your ATOM SQ. Clicking on the Update Firmware button will begin the update process. When the firmware update is complete, your ATOM SQ will reboot automatically.

2   Standard Controller Mode

While ATOM SQ is seamlessly integrated with Studio One Pro and Ableton Live, it is also a versatile controller that can be used with just about any production software. In Studio One Pro and Ableton Live, ATOM SQ will automatically configure itself and be ready for use.

To use ATOM SQ with other applications, you can choose from the following modes *(See Section 2.1 for details)*:

- **MIDI Mode.** Standard pad or keyboard controller with the flexibility to manually setup the controller to meet your production needs. While in MIDI mode, you will see two MIDI ports in the MIDI Preferences or Options for your software: ATM SQ and ATM SQ Control. Only the ATM SQ port needs to be configured to Send or Receive MIDI.

- **Mackie MCU Mode.** A hybrid control mode allowing flexibility and basic control surface support.

- **Mackie HUI Mode.** A hybrid control mode allowing flexibility and basic control surface support. This is the recommended mode for Pro Tools.

To use MCU or HUI modes, most software applications will require the ATOM SQ to be set up as a control surface. Consult your application's reference manual for set-up instructions. Ensure that a Mackie MCU or Mackie HUI device has been created and the MIDI ports are set to "ATM SQ Control" for both sending and receiving.

2.1   Setup Mode

Press the round Setup button to open Setup mode on the ATOM SQ display.

Setup Mode: Page 1
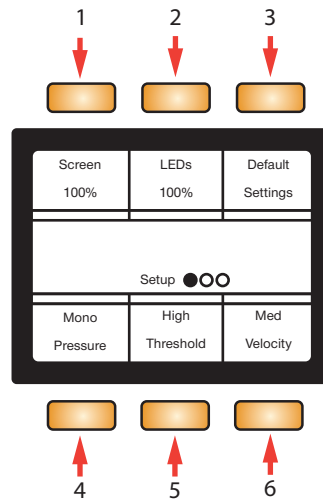
1. **Screen.** When selected, the Screen Encoder adjusts the overall brightness of the screen

2. **LEDs.** When selected, the Screen Encoder adjusts the overall brightness of all pads and buttons.

3. **Default Settings.** Resets ALL settings back to default.

4. **Pressure.** When selected, the Screen Encoder changes the type of pressure message being sent after an initial strike:

   • **Mono.** Monophonic aftertouch.

   • **Poly.** Polyphonic aftertouch.

   • **CC.** Sends a MIDI message that can easily be MIDI learned by software (monophonic).

   • **Off.** No pressure message will be sent.

   Note: Monophonic aftertouch, Polyphonic aftertouch, and MIDI learn is not supported by all applications.

5. **Threshold.** When selected, the Screen Encoder changes how much pressure is needed before a pressure message is sent:

   • **Low.** Not much pressure is needed to send a pressure message.

   • **Med.** More pressure is needed to send a pressure message.

   • **High.** The most amount of pressure needed to send a pressure message.

6. **Velocity.** When selected, the Screen Encoder changes how ATOM SQ will interpret strikes on the pads (velocity curve):
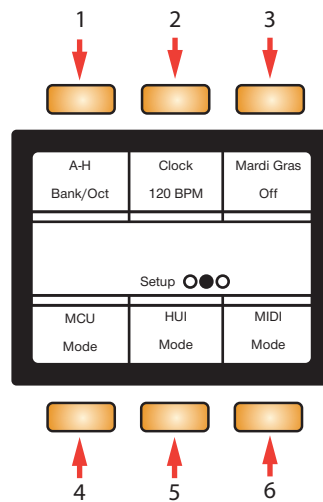
   • **Soft.** For players that prefer to strike pads lightly.

   • **Med.** Suitable for most players.

   • **Hard.** For players that prefer to strike pads with force.

Setup Mode: Page 2

1. **A-H buttons.** When selected, the Screen Encoder flips the primary and secondary modes.

   • **Bank/Oct.** Pressing the A-H buttons will change banks or octaves. Pressing and holding the Shift button while using the A-H buttons will send a MIDI learnable MIDI message.

   • **CC.** Pressing the A-H buttons will send a MIDI learnable MIDI message. Pressing and holding the Shift button while using the A-H buttons will change banks or octaves.

2. **Clock.** When selected while in Internal clock mode, turning the Screen Encoder will change the clock's BPM. When an External Clock is being sent from a host, External Clock will be displayed and BPM will not be adjustable from your ATOM SQ.

3. **Mardi Gras.** When pressed, all buttons, pads, and LEDs will cycle on/off or change colors. Press the Mardi Gras button again to disable.

4. **MCU Mode.** When selected, the Transport buttons, navigation buttons, and the display buttons for the first page of Song mode will send common Mackie MCU commands.

5. **HUI Mode.** When selected, the Transport buttons, navigation buttons, and the display buttons for the first page of Song mode will send common Mackie HUI commands.

6. **MIDI Mode.** This is default mode for ATOM SQ that allows for user customization.

   Note: HUI and MCU mode functions will vary depending on the software application being used. Mardi Gras, MCU, HUI, and MIDI modes are not available while using Studio One Pro.

Setup Mode: Page 3
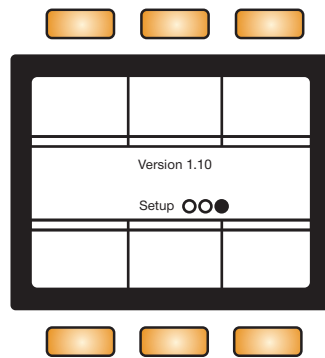
The last page of Setup Mode displays the firmware version installed on your ATOM SQ.

2.2   Pads

2.2.1   RGB Colors

Pads change color depending on which pad layout mode is selected. Pad color can also be changed in certain modes.

2.2.2   Triggering Notes

All 32 pads are velocity sensitive. Strikes with less force result in a quiet sound, and strikes with more force result in a louder sound (unless Full Velocity or 16-vel is enabled). All pads are also sensitive to pressure. After striking and pressing down on a pad, more or less pressure can be applied to control multiple expressive parameters, such as Aftertouch, if available in your software.

2.2.3   Plus and Minus Pads

The + and - pads are pressure sensitive buttons. They can be assigned to either Pitch Bend or Octave Up/Down commands.

2.3   Touch Strip
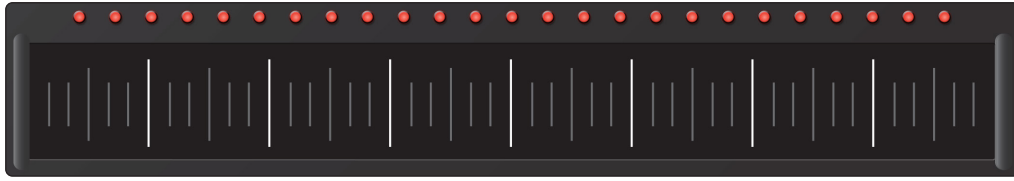
The touch strip adds expressive control to ATOM SQ. The touch strip can be assigned to musical functions like Pitch Bend, Modulation Wheel, etc. See Section 2.8.4 for details.

2.4   A-H Buttons

The A-H buttons can change the current drum bank or change the current Octave in Keyboard layout. In Keyboard layout, the A button is used as a momentary button for Sustain (press and hold to Sustain). Alternatively, if Shift is held, the A-H buttons send commands that can be assigned using MIDI Learn in supported software.

2.5   Knobs 1-8
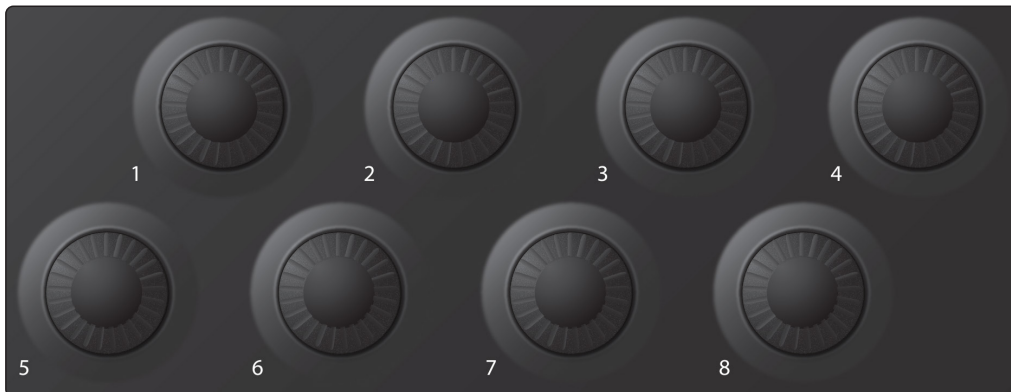
The 8 main knobs can be used to control parameters in your software.
Power User Tip: *These knobs have a velocity multiplier built in. The faster they are turned, the more quickly they reach min or max.*

2.6   Navigation Buttons

The Up, Down, Left, and Right navigation buttons to the left of the Shift button will change their functions depending on which mode ATOM SQ is in. In MCU or HUI modes, they can go to the next or previous track or control some Zoom functions. In MIDI mode, these buttons can be freely assigned in your software.

2.7   Transport Buttons

| Undo | Loop | Save | Count In |
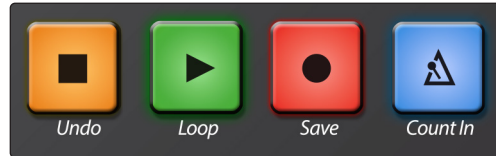
While in MCU and HUI modes, these are dedicated transport buttons. Some buttons have a primary and secondary command when Shift is held at the same time. In MIDI Mode, these buttons are freely assignable.

MCU/HUI mode

- **Stop.** Stops the transport from playing.
- **Shift + Stop.** Undo the last command or action. This is not available in all software.
- **Play.** Starts the transport from the point of the playhead.
- **Shift + Play.** Enables or disables Loop.
- **Record.** Begins recording from the point of the playhead. This is not available in all software.
- **Shift + Record.** Saves the current song. This is not available in all software.
- **Metronome.** Enables or disables the Metronome. This is not available in all software.

2.8   Screen Controls

ATOM SQ's screen functions use a paging system to accommodate many different commands and controls. The **Page Left** and **Page Right** buttons below the Screen Encoder will page through multiple screen commands, if available.

Power User Tip: To quickly jump back to the first page, press the mode button a second time.

Press a screen button to select a function or enable/disable it. Use the Screen Encoder to change the selected screen parameter value.

2.8.1   Instrument Mode

Instrument mode will change the screen to display functions used to control a virtual instrument and to access the Arpeggiator Mode built into the ATOM SQ firmware.

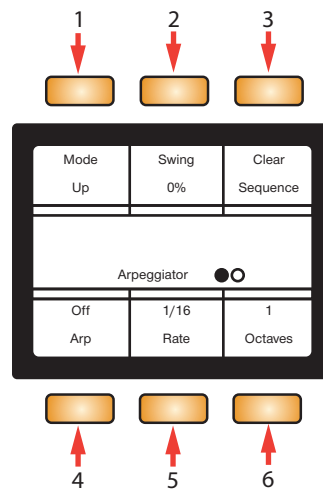### 2.8.1.1   Pad Configuration
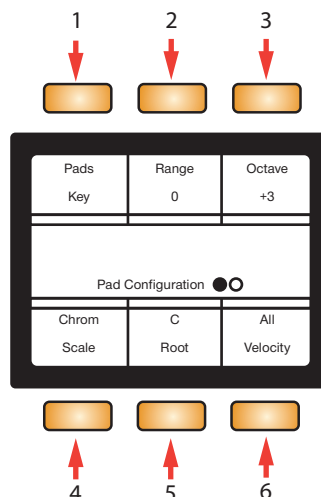
1. **Pads.** When selected, the Screen Encoder will change how the layout of the pads appear:

- **Key.** Follows the layout of a piano. White keys on the bottom lane and black keys on the top lane. If a Scale type other than Chromatic is selected, the bright pads will guide you to play the correct notes in the scale. The dim pads are considered "wrong notes" but are still playable.

- **Blocks.** Assigns one drum bank to the left side and one drum bank to the right side. The first bank begins on Pad 1 and the second bank begins on Pad 9.

- **Continuous.** Assigns all pitches from left to right starting from the bottom lane (pads 1-16), then continuing in the upper lane (pads 17-32).

2. **Range/Transpose.** When selected, turning the Screen Encoder will either change the viewable range of the keyboard in Key mode, or transpose the pads in either Blocks or Continuous modes.

3. **Octave.** When selected, the Screen Encoder will transpose the pads note assignments up or down in musical octaves (7 possible octaves). Octave can also be changed using the B-H buttons.

4. **Scale.** When selected, the Screen Encoder will change the pads note assignments and constrain them to the selected musical Scale.

   - Chromatic, all possible notes are available

   - Major

   - Melodic Minor

   - Harmonic Minor

   - Natural Minor

   - Major Pentatonic

   - Minor Pentatonic

   - Blues

   - Dorian Minor

   - Mixolydian

   - Phrygian

5. **Root.** When selected, the Screen Encoder will change the Root note of a scale (C, C#, D, D#, E, F, F#, G, G#, A, A#, B). The Root note is indicated by the green pads.

6. **Velocity.** When selected, the Screen Encoder will toggle between three velocity modes.

   - **All.** The pads can trigger all possible velocities from 1-127

   - **Full.** The pads will send a fixed velocity of 127

   - **16-vel.** Only available when in Blocks or Continuous modes, 16-vel takes a selected MIDI note from the top lane, and maps the selected note across 16 possible fixed velocities in the bottom lane. Pad 1 is fixed at a velocity of 7, and pad 16 is fixed at a velocity of 127.

2.8.1.2 **Arpeggiator**

Press the right arrow button below the Screen Encoder to navigate to the Arpeggiator Page. *Please note: Arpeggiator Mode will only remain engaged while on the arpeggiator page.*

1. **Mode.** When selected, the Screen Encoder changes the Play Mode for the Arpeggitator.

   - **Up.** The arpeggio starts at the lowest held note and travels upward through the held notes, then returns to the lowest note as the arpeggio begins again.

   - **Down.** The arpeggio starts at the highest held note and travels downward through the held notes, then returns to the highest note as the arpeggio begins again.

   - **Up/Down.** The arpeggio starts at the lowest held note, travels upward to the highest, then travels back down to the lowest note, and the arpeggio begins again.

   - **Down/Up.** The arpeggio starts at the highest held note, travels downward to the lowest, then travels back up to the highest note, and the arpeggio begins again.

   - **Random.** The arpeggio plays the currently held notes in a random pattern.

   - **Chord.** The currently held chord (or single note) is repeated as long as it is held.

   - **Input.** The arpeggio pattern is derived from the order in which notes are played and held.

2. **Swing.** When selected, the Screen Encoder will adjust the amount of Swing that is applied to the sequence.

3. **Clear Sequence.** Stops a held sequence.

4. **Arp.** Toggles between the Arpeggiator's Off, On, and Hold modes.

5. **Rate.** When selected, the Screen Encoder will adjust how fast or slow the arpeggiator steps through each note in the sequence.

6. **Octaves.** When selected, the Screen Encoder will change how many octaves the sequence will step through before restarting.

2.8.2 Song Mode

When in MCU or HUI modes, Song mode's first page will display commonly used functions and commands for your project. In Song mode's second page, the screen buttons are freely MIDI assignable and are labeled as buttons 1-6. In MIDI mode, only the assignable buttons appear on page 1.

MCU/HUI Page 1
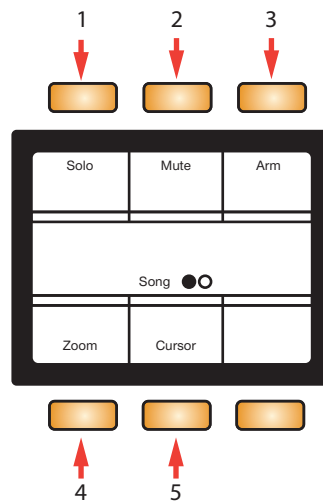
1. **Solo.** Solos the currently selected track.

2. **Mute.** Mutes the currently selected track.

3. **Arm.** Record arms the currently selected track.

4. **Zoom.** When latched, the Screen Encoder as well as the Navigation Left or Right arrows will control horizontal zooming.

5. **Cursor.** When latched, the Screen Encoder will move the playhead across the timeline.

2.8.3   **Editor Modes**

Press the Editor button to access the Control Editor. This Control Editor lets you customize the messages sent from the different controllers on your ATOM SQ. Move a knob, press a button, touch the Touch Strip, or press a pad to edit the controller.

To change the assignment of the Touch Strip from the Control Editor, you must first put it in CC mode. This can be done from the User menu. *See Section 2.1 for details*.

Knob 1-8, A-H buttons, or Touch Strip Editor, page 1

Store to Current	Preset 1	Reset Control
	Control Editor ●○	
25 CC	1 Channel	
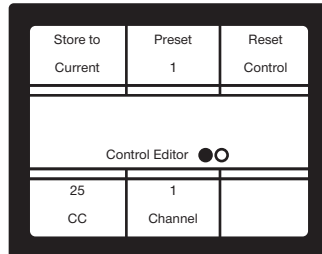
Note: Channel is not available when the touch strip is selected.

Knob 1-8, or Touch Strip Editor, page 2

Store to Current	Preset 1	Reset Control
	Control Editor ○●	
	1 Min	127 Max
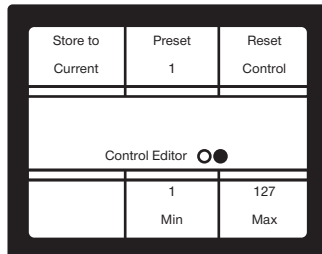
Note: Min and Max are not available when one of the A-H buttons is selected.

Pad Editor

Store to Current	Preset 1	Reset Control
	Control Editor	
	1 Channel	
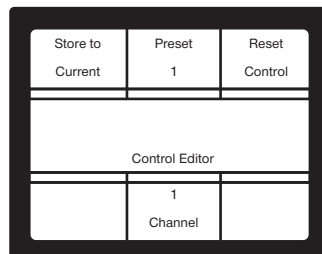
2.8.4   User Mode
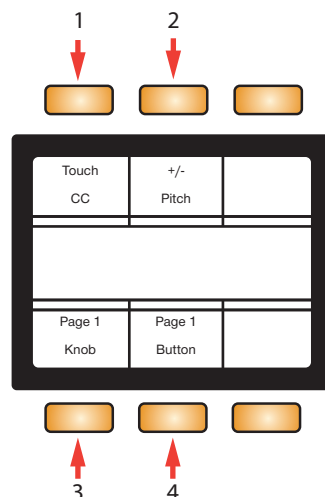
1. **Touch Strip.** When selected, the Screen Encoder will change how the touch strip behaves:

    *   **Range.** Touching and sliding will change the viewable range in Key mode or change transposition in Blocks or Continuous modes.

    *   **Mod.** Touching and sliding will control Mod Wheel messages from from minimum (left) to maximum (right).

    *   **Pitch.** Touching and sliding will control Pitch Bend messages. While active, pitch always resets to center.

    *   **CC.** Touching and sliding will control the CC message sent via the strip from minimum (left) to maximum (right).

    *   **Arp.** the touch strip will use the 8 divisions (tall white lines) to change the arpeggiator's rate. From left to right: 1/4, 1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T, 1/32T. In this mode, all red LEDs will remain off indicating that the Touch Strip is controlling rate.

2. **+/-.** When selected, the Screen Encoder will change how the + and - buttons behave:

    *   **Pitch.** The plus and minus buttons control pitch bend using pressure. The Plus button sends pitch up and the Minus button sends pitch down. Releasing a button will reset back to center.

    *   **Octave.** The plus and minus buttons will cycle up (plus) or down (minus) through octaves.

3. **Knob.** When selected, the Screen Encoder will change the MIDI assignments for Knobs 1-8 (4 pages/banks total).

4. **Button.** When selected, the Screen Encoder will change the assignments for the A-H buttons MIDI messages (2 pages/banks total).

3   Advanced Studio One Pro Integration

When ATOM SQ is connected to Studio One Pro, the Studio One Pro logo light on the ATOM SQ will turn blue. No setup is required. Studio One Pro will automatically detect and enable your ATOM SQ for advanced integrated control.

To confirm External Device settings, click on the External Devices link on the Studio One Pro Start page and select the ATOM SQ device. From here, you can confirm that both the Send and Receive ports are set to "ATOM SQ."

You can also open the External Device Editor at any time by pressing Shift+User the ATOM SQ.

Please note that the ATOM SQ pads, buttons, and touch strip LEDs will remain dark and the screen will not have any functions until a New Song is created or an existing Song is opened.

Once a New Song is created, all pads will turn white, the screen will default to Inst (Instrument) mode and bank buttons A-H will be active, however, until an Instrument is loaded into Studio One Pro, the pads and bank buttons have no function.

3.1   Controls

3.1.1   Pad Controllers

All 32 pads on your ATOM SQ are velocity-sensitive. Strikes with less force result in a quiet sound, while strikes with more force result in a louder sound (unless Full Velocity is enabled). All pads are also sensitive to pressure. After striking and pressing down on a pad, more or less pressure can be applied to control multiple expressive parameters in Studio One Pro when available (i.e. Aftertouch).

The + and - pads are pressure-sensitive pads only. They can be assigned to either Pitch Bend or Breath/Mod Wheel commands

The pads on your ATOM SQ will change colors dynamically, depending on what they are currently controlling in Studio One Pro as follows:

- **Impact XT.** While controlling an instance of Impact XT, the pads on your ATOM SQ will match the corresponding color of each pad in Impact XT. These colors can be changed from within Impact XT. Impact XT as 8 banks of 16 pads. Because ATOM SQ features two 16-pad banks, it will display two Impact XT banks simultaneously for quick access to multiple banks: A/B, C/D, E/F, and G/H. Banks can be changed using the A-H bank buttons. When triggering a sound in Impact XT, the pad on your ATOM SQ will change to white while being pressed.

- **Native Studio One Pro or third-party virtual instruments.** When controlling virtual instruments, the pads on your ATOM SQ will reflect the current Layout Mode you have selected. For most virtual instruments, Keyboard Mode will be the best choice. When active, Keyboard mode changes the function of the ATOM SQ pads to behave in a traditional piano layout. Continuous or Scale Only will lay out notes from left to right starting with Pad 1. When triggering a sound, each pad on your ATOM SQ will change to Light Blue while being pressed. *Note: The root of a scale will change color depending on your current track color.*

- **Pattern Editor.** While the Pattern Editor in Studio One Pro is active, the top lane of pads on your ATOM SQ can be used to select the sample or note you would like to program. The bottom lane of pads control 16 steps of the Studio One Pro step sequencer, allowing the programming of 16 steps in banks of 16. This is true for both Drum and Melodic Pattern Modes. While in a pattern mode, octaves or banks can be changed using the A-H bank buttons. A step that is On will be at full pad brightness while a step that is Off will be very dim. As the sequence plays, the pad brightness of the current step will be slightly dim.

3.1.2   Touch Strip
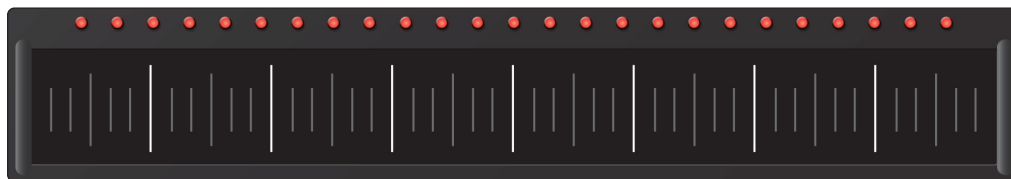
The touch strip adds expressive control to ATOM SQ. The touch strip can be assigned to musical functions like Pitch Bend, Modulation Wheel, etc. *See Section 3.2.1.3 for details*.
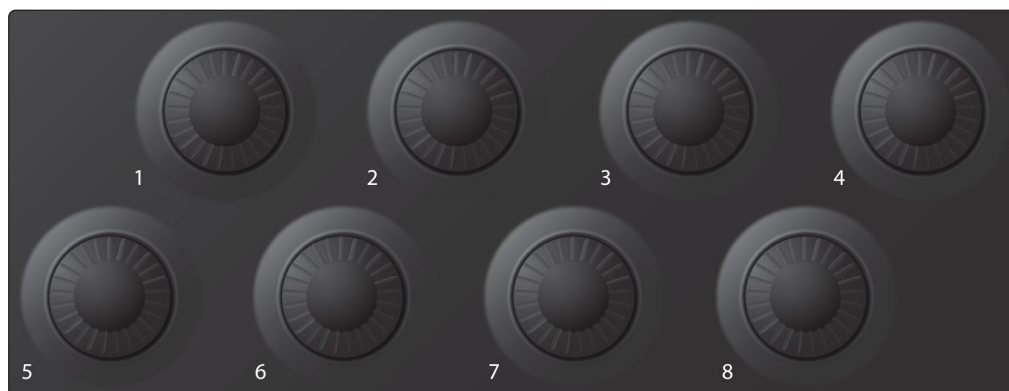
3.1.3   A-H Buttons

Use the A-H buttons to switch the current drum bank in Impact XT or change the current Octave in Keyboard, Continuous, or Scale Only layout Modes.

In Keyboard, Continuous, and Scale Only layouts, the A button will always be orange. This button is used as a momentary button for Sustain (press and hold for Sustain).

3.1.4   Encoders

The 8 large encoders on your ATOM SQ can back used to control plug-in parameters when a plug-in is in focus, whether the plug-in is a Virtual Instrument, Effect, or Note FX. Depending on which plug-in is in focus, the parameter mapped to each encoder will vary.

All Studio One Pro Native plug-ins have a default mapping, however, these controls can be reassigned using the Control Link window. Some third-party plug-ins may not have a default mapping, in this case, you must use Control Link to assign the desired parameter to each encoder. All custom assignments will work in any Studio One Pro Song, so you only have to make the assignment once to use it anytime you open the plug-in.

As of Studio One Pro 5.2, ATOM SQ supports Autofill. Open Studio One Pro's External Device Editor and select ATOM SQ. Click the Autofill button to have all pages of knob control filled in automatically.

When controlling plug-ins, ATOM SQ supports up to 8 pages of controls in Control Link for up to 64 individual controls. Press and hold the User button and press any of the A-H buttons to jump directly to a specific control page. You can also access these pages from Studio One Pro's External Device Editor and trigger them with a mouse click.

Power User Tip: Your ATOM SQ encoders have a built-in velocity multiplier, so the faster you turn them, the more quickly they will reach the minimum or maximum of the parameter range.

3.1.5   Navigation Buttons

The Up, Down, Left, and Right navigation buttons to the left of the Shift button will change their functions depending on what is in focus in Studio One Pro. They can go to the next or previous track, navigate the Browser, or select events, notes, and Arranger sections. Pressing and holding the ATOM SQ's Shift button while pressing a navigation button will have different behaviors depending on what is in focus at the moment. For example, pressing and holding Shift while an Event is selected, then pressing Navigation Left will add the Event on the left to the selection.

3.1.6   Transport Buttons
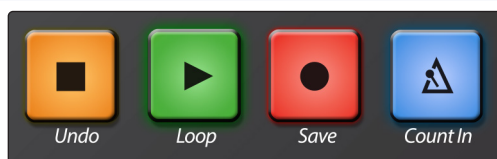
These are dedicated Transport buttons on ATOM SQ. Each button has a primary and secondary command. To access the secondary command, press and hold Shift while pressing a Transport button.

- **Stop.** Stops the transport.

- **Shift + Stop.** Undo the last command or action in Studio One Pro.

- **Play.** Starts playback from the current position. Press Play to stop playback.

- **Shift + Play.** Enables or disables Loop. While enabled, the Play button will illuminate blue.

- **Record.** Starts recording from current playback position. When the Pattern Editor is active, press to enable Record / Step Record.

- **Shift + Record.** Saves the current Song.

- **Metronome.** Enables or disables the Metronome.

- **Shift + Metronome.** Enables or disables the Precount.

3.1.7   Global Controls

ATOM SQ keeps certain commonly used controls and commands available at all times to minimize jumping back and forth through different menus. These are accessed by pressing and holding down the Shift button while pressing any of the A-H buttons or while turning any of the encoders.

A-H buttons

While accessing their global functions, the A-H buttons will illuminate orange. To change these buttons to their global control functions, hold the Shift button while pressing the desired button. These are functions that are fixed. Commands are shown on ATOM SQ's screen while pressing and holding the Shift button.
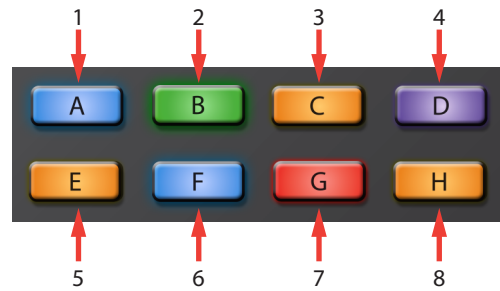

1. Windows Show/Hide

2. Select All on Track

3. Copy

4. Duplicate

5. Redo

6. Retrospective Record

7. Paste

8. Delete

Encoders 1-8

Holding down the ATOM SQ's Shift button will change the knob assignments to their global control functions. These are controls that are fixed.

Power User Tip: Because these knobs have a velocity multiplier built-in, the faster they are turned, the more quickly they reach the minimum or maximum value. Slow turns are best for precise movements.
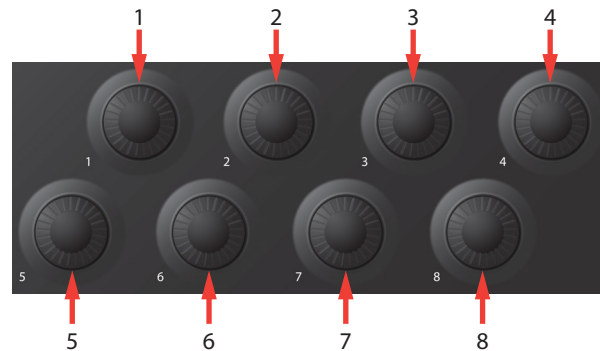
1. Move Loop

2. Vertical Zoom

3. Loop Start

4. Grid

5. Playhead

6. Horizontal Zoom

7. Loop End

8. Nudge

17

Screen Encoder

The Screen Encoder also features a global function to change presets. If an Instrument, Effect, or Note FX Editor is in focus, pressing and holding the Shift button while turning the Screen Encoder will change to the next or previous preset. The name of the preset will also briefly show on ATOM SQ's display.

Power User Tip: Be sure to save a custom preset before changing the preset or your work will be lost!

Touch Strip
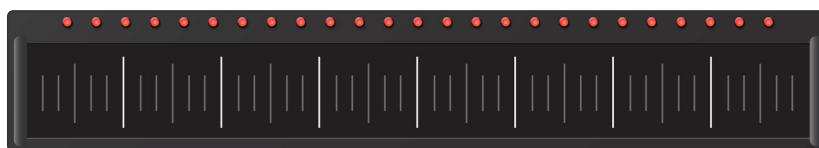
The Touch Strip will control Track Volume when used with the Shift Button. When Shift is held, touching the strip and sliding to the left will decrease the selected track's volume and sliding to the right will increase the selected track's volume.

Power User Tip: You can also change the touch strip's primary assignment to Volume from the "Performance Config" menu in Inst mode.

3.2   Screen Controls

ATOM SQ's flexible screen puts many different commands and controls at your fingertips. The **Page Left** and **Page Right** buttons will page through additional screen commands, if available.

Power User Tip: To quickly jump back to the first page, press the Page Left button a second time.

Use the button above or below a function to send a command, enable/disable functions, or show/hide Studio One Pro windows. Use the Screen Encoder to change a selected screen parameter value like Octave, Rate, etc.

ATOM SQ will dynamically follow what function is currently in focus in Studio One Pro. Focus is indicated in two different ways:

- **Arrangement, Browser, Editor, and Console.** When one of these windows is in focus on ATOM SQ, you will see a thin blue rectangle around it.

- **Instrument, Effect, Note FX editors.** When one of these editors is in focus on ATOM SQ, you see a bright yellow button labeled ATOM SQ. If the button is not yellow, the editor is not in focus.

3.2.1   Instrument Mode

When Instrument mode is engaged, the screen on your ATOM SQ will display commonly used commands to browse and load Instruments, add or manage Events, as well as configure certain pad and performance parameters.

3.2.1.1   Browse
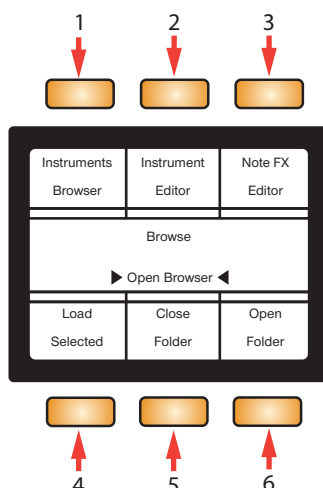
1. **Instruments Browser.** Opens or closes the Instruments tab of the browser. *Note: that Studio One Pro initially defaults to the "Home" tab at launch. Pressing the "Instruments Browser" button will jump directly to the Instruments tab.*

    While the Browser is open:

    - **Screen Encoder** will select the next or previous item in the list

    - **Navigation arrows Up, Down, Left, and Right** will also select the next or previous item in the list. *Note: These arrows are different than the **Page Left** and **Page Right** arrows which are directly below the Screen Encoder.*

2. **Instrument Editor.** Shows or hides the currently selected virtual instrument window.

3. **Note FX Editor.** Shows or hides the Note FX Editor.

4. **Load Selected.** Loads the currently selected Instrument or Instrument Preset onto a new track. Press Shift + Load Selected to replace a track's current Instrument with the newly selected Instrument from the Browser.

5. **Close Folder.** Closes the current folder or collapses a menu depending on the folder tree mode selected in the Browser.

6. **Open Folder.** Opens the next folder or expands a menu depending on the folder tree mode selected in the Browser.

### 3.2.1.2 Instrument Track Editing Controls

Page Up to access the Track Editing Controls. From here you can add Parts and Patterns, Chorder FX, and more.
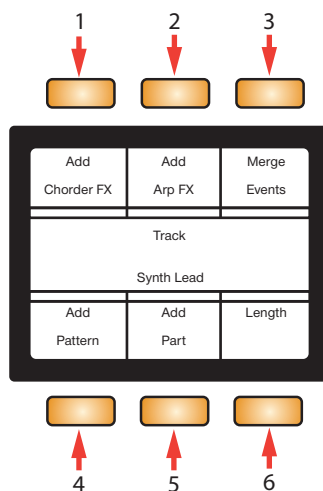
1. **Add Chorder FX.** Loads a Chorder Note FX onto the selected track*.

2. **Add Arp FX.** Loads an Arpeggiator Note FX onto the selected track*.

3. **Merge Events.** The currently selected Events will be merged together.

4. **Add Pattern.** Adds a one-bar Pattern Event at the current playhead position.

5. **Add Part.** Adds a one-bar Instrument Part Event at the current playhead position.

6. **Length.** Select length to use the Screen Encoder to change the length of the selected Event (Instrument Part, Pattern, or Audio) by the Grid amount.

3.2.1.3 Performance Configuration

Page Up again to access the Performance Configuration page. This page lets you adjust the controls on your ATOM SQ to suit your performance needs.
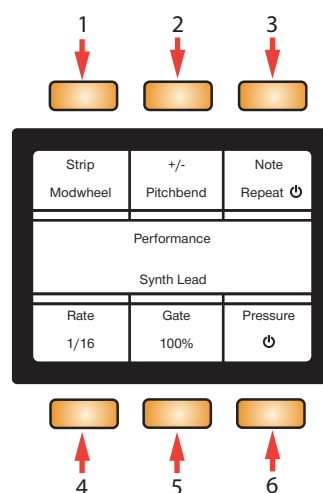

1. **Strip.** Select Strip to use the Screen Encoder to change the function of the Touch Strip as follows:

   - **Pitchbend.** The Touch Strip will be assigned to the Pitch Bend MIDI control and always reset back to center on release, indicated by the red LEDs above the strip.

- **Modwheel.** The Touch Strip will be assigned to the Modulation Wheel MIDI control with minimum value at the far left position and the maximum value at the far right. While active, the modulation will stay in the last position that was touched, indicated by the red LEDs above the strip.

- **Expression.** The Touch Strip will be assigned to the Expression MIDI control with the minimum value at the far left and the maximum value at the far right. While active, expression will stay in the last position that was touched, indicated by the red LEDs above the strip.

- **Breath CC.** The Touch Strip will be assigned to the Breath MIDI control with the minimum value at the far left and the maximum value at the far right. Breath will stay in the last position that was touched (indicated by the red LEDs above the strip).

- **Repeater (Note Repeat).** The Touch Strip will use the 8 divisions (tall white lines) to change the Note Repeat rate. From left to right: 1/4, 1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T, 1/32T. In this mode, all red LEDs will remain lit indicating that the Touch Strip is controlling repeat rate.

- **Ch.Vol.** The Touch Strip will be assigned to control the currently selected track's volume.

- **Control Link.** The Touch Strip will be assignable to any parameter using the Control Link function in Studio One Pro.

2. **+/-.** Select to use the Screen Encoder to change the plus and minus buttons assignment:

   - **Pitchbend,** plus pad will raise the pitch as more pressure is applied and minus will lower the pitch as more pressure is applied.

   - **Breath/Mod,** minus pad's pressure controls Modulation Wheel and the plus pad's pressure controls the Breath MIDI control.

3. **Note Repeat.** When enabled, any note(s) played will repeat at the current Rate.

4. **Rate.** When selected, the Screen Encoder will change Note Repeat's rate.

5. **Gate.** Decreases or increases a note's repeat length.

6. **Pressure.** Enables or disables the ability to control note repeat velocity with more or less pressure.

3.2.1.4   Pad Configuration

Page Up again to access the Pads configuration page. From here you can set the layout modes of the pads, set the scale mode, and more.
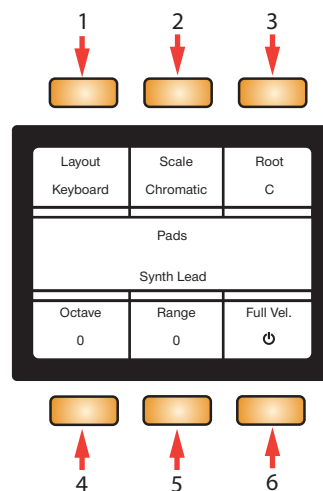
1. **Layout.** When selected, the Screen Encoder will change how the layout of the pads appear. Note that this feature is not available when using Impact XT.

   - **Keyboard.** Follows the layout of a piano. White keys on the bottom lane and black keys on the top lane. If a Scale type is selected (other than

Chromatic), the bright pads will guide you to play the correct notes in the scale. The dim pads are considered "wrong notes" but are still playable.

- **Continuous.** Assigns all pitches from left to right starting from the bottom lane (pads 1-16), then continuing in the upper lane (pads 17-32). If a Scale type is selected (other than Chromatic), the bright pads will guide you to play the correct notes in the scale. The dim pads are considered "wrong notes" but are still playable.

- **Scale Only.** Assigns only the pitches that are part of a selected Scale type without access to "wrong notes" from left to right starting from the bottom lane (1-16), then continuing to the upper lane (17-32).

2. **Scale.** When selected, the Screen Encoder will change the pads note assignments and bind them to the selected musical Scale. Note that this feature is not available when using Impact XT.

    - Chromatic, all possible notes are available

    - Major

    - Melodic Minor

    - Harmonic Minor

    - Natural Minor

    - Major Pentatonic

    - Minor Pentatonic

    - Blues

    - Dorian Minor

    - Mixolydian

    - Phrygian

    - Major Triad

    - Minor Triad

3. **Root.** When selected, the Screen Encoder will change the Root note of a scale (C, C#, D, D#, E, F, F#, G, G#, A, A#, B). The Root note is the pad that mirrors the color of whatever the track color is set to. Note that this feature is not available when using Impact XT.

4. **Octave.** When selected, the Screen Encoder will transpose the pads note assignments up or down in musical octaves (7 possible octaves). The octave can also be changed using the B-H buttons. Note that this feature is not available when using Impact XT.

5. **Range.** When selected, the Screen Encoder will move the viewable cross-section of a Piano left or right when in Keyboard layout and will shift the playable note range of Continuous or Scale Only layouts lower or higher. Note that this feature is not available when using Impact XT.

6. **Full Vel.** When enabled, notes will always trigger at a fixed velocity of 127.

### 3.2.1.5   Advanced Sample Control Mode

It's possible to control Loop Start/End in Impact XT or SampleOne as well as Sample Start/End in SampleOne from an ATOM SQ if you're using Studio One Pro 5.5 or later.

Impact XT
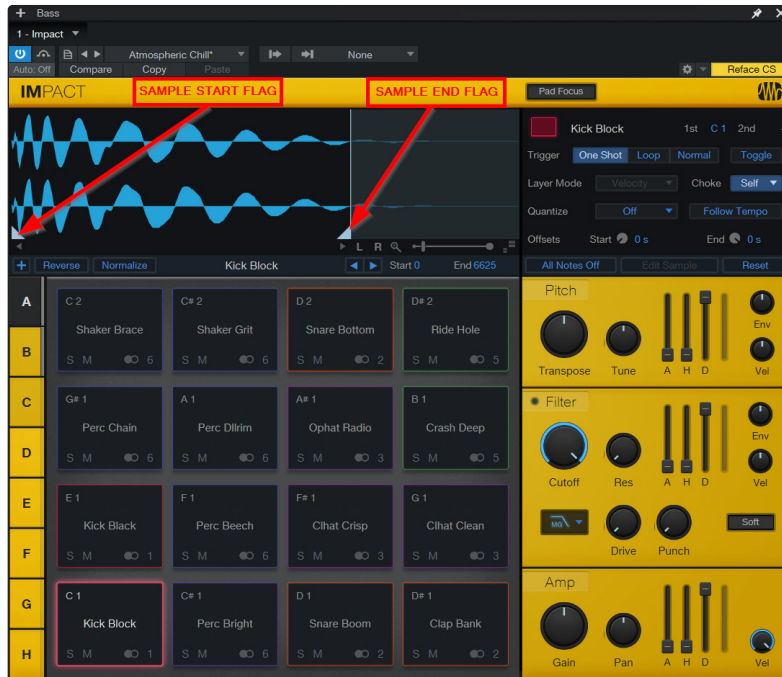
Press the Instrument (Inst) button on ATOM SQ, then navigate to Page 5 titled "Impact Wave Editor."

NOTE: If there is not an instance of Impact XT or SampleOne on a track, Page 5 will read "Sample Wave Editor" and state "No Sampler Track Selected."
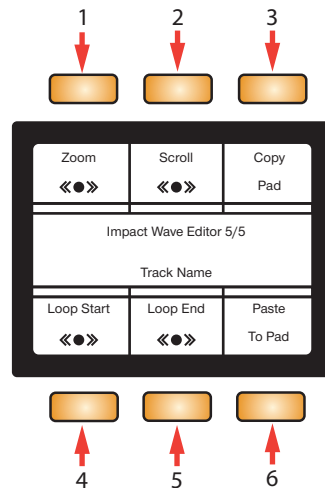
1. **Zoom.** When selected, use the screen encoder to Zoom in or out on the last moved Start or End flag.

2. **Scroll.** When selected, use the screen encoder to Scroll the view of a sample to the left or right.

3. **Copy Pad.** When pressed, copies the currently selected sample and some sample settings.

4. **Loop Start.** When selected, use the screen encoder to move the Loop Start position of the sample.
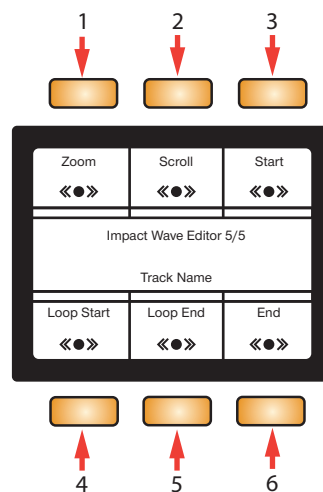
5. **Loop End.** When selected, use the screen encoder to move the Loop End position of the sample.

6. **Paste to Pad.** When pressed, pastes the previously copied sample onto a new pad.

SampleOne

Press the Instrument (Inst) button on ATOM SQ, then navigate to Page 5 titled "SampleOne Wave Editor."

NOTE: If there is not an instance of Impact XT or SampleOne on a track, Page 5 will read "Sample Wave Editor" and state, "No Sampler Track Selected".


1. **Zoom.** When selected, use the screen encoder to Zoom in or out on the last moved Start or End flag.

2. **Scroll.** When selected, use the screen encoder to Scroll the view of a sample to the left or right.

3. **Start.** When selected, use the screen encoder to move the Sample Start position of the sample.

4. **Loop Start.** When selected, use the screen encoder to move the Loop Start position of the sample. **NOTE:** Loop must be enabled in SampleOne.

5. **Loop End.** When selected, use the screen encoder to move the Loop End position of the sample. **NOTE:** Loop must be enabled in SampleOne.

6. **End.** When selected, use the screen encoder to move the Sample End position of the sample.

3.2.2 Song Mode

ATOM SQ's Song mode will change the screen to display commonly used functions and commands for the overall song like Tempo, showing or hiding the Console, adding effects, working with the Arranger Track, etc.

3.2.2.1 Transport
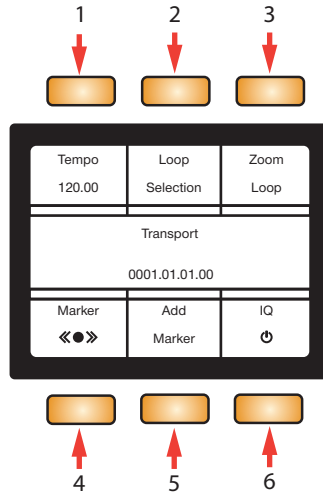
1. **Tempo.** When selected, the Screen Encoder will adjust the tempo in ±1 BPM increments.

2. **Loop Selection.** The currently selected Event(s) will be used to set Loop In and Out points. You must enable/disable looping using the Transport's Loop button. If a loop range has not been set, looping will not be available.

3. **Zoom Loop.** The selected Event(s) will be used to set the Zoom level.

4. **Marker.** When selected, the Screen Encoder will go to the next or previous marker.

5. **Add Marker.** Creates a Marker at the current playhead position.

6. **IQ.** Enables or disables Input Quantize. When enabled, your performance will automatically be quantized after recording (when using a virtual instrument).

3.2.2.2 Console
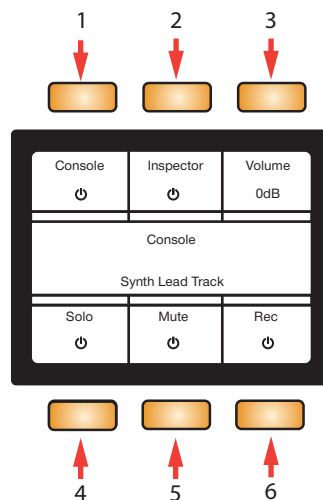
1. **Console.** Shows or hides Studio One Pro's Console.

2. **Inspector.** Shows or hides Studio One Pro's Inspector.

3. **Volume.** When selected, the Screen Encoder changes
    the volume of the currently selected track.

4. **Solo.** Solos the currently selected track.

5. **Mute.** Mutes the currently selected track.

6. **Rec.** Record enables the currently selected track.

3.2.2.3 Arranger Track
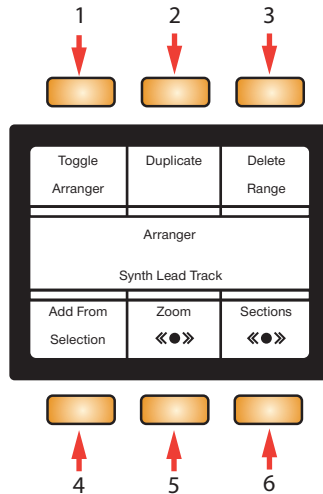
1. **Toggle Arranger.** Opens or closes the Arranger Track.

2. **Duplicate.** Creates a copy of the currently selected section.

3. **Delete Range.** Deletes the currently selected section.

4. **Add From Selection.** Creates a new Arranger section
    from the currently selected Event(s).

5. **Zoom.** Zooms in or out horizontally.

6. **Sections.** When selected, the Screen Encoder moves the playhead to
    the next or previous Arranger section and selects that section.

3.2.2.4 Effects
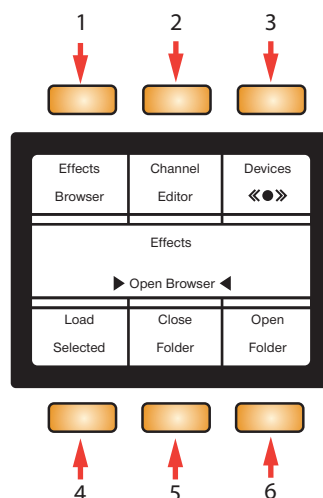
1. **Effects Browser.** Opens or closes the Effects tab of the browser. Note that
    Studio One Pro initially defaults to the Home tab at launch. Pressing the Effects
    Browser button will jump directly to the Effects tab. While the Browser is open:

- **Screen Encoder** will select the next or previous item in the list

- Navigation arrows **Up, Down, Left and Right** will select the next or previous item in the list (note that these arrows are different than the Page Left and Page Right arrows which are directly below the Screen Encoder)

2. **Channel Editor.** Shows or hides the Effects' interface, the Effects Editor.

3. **Devices.** When enabled and the Channel Editor is in focus, the Screen Encoder selects the next or previous Effect in the Channel Editor.

4. **Load Selected.** Loads the currently selected Effect or Effect Preset onto the selected track. This option will always be visible on the screen.

5. **Close Folder.** Either exits the current folder if available or collapses a menu depending on the Tree mode being used for the Browser. This option will always be visible on the screen.

6. **Open Folder.** Either dives into the next folder if available or expands a menu depending on the Tree mode being used for the Browser. This option will always be visible on the screen.

   Note: Load Selected, Close Folder, and Open Folder will be available on the screen whether these functions are possible or not.

   *3.2.3   Editor Modes*

ATOM SQ's Editor mode will change the screen to display commonly used functions and commands for each of Studio One Pro's Editor windows (Audio, Pattern, and Part). **Note:** Pressing the Editor button will open the respective editor type for the currently selected Event(s) in the Editor Window. Pressing the Song or Inst buttons will close the Editor window in Studio One Pro and ATOM SQ's screen will change accordingly. The User buttons are also available while in Editor mode.

3.2.3.1   Pattern Editor

When the Pattern Editor is active, these controls will function as follows:

- **Navigation Left and Right Arrows.** Bank to the next or previous 16 steps (if available). Holding down Shift + either Navigation Left or Right will select the next or previous Pattern Event in the Arrangement.

- **Navigation Up and Down Arrows.** Select the next or previous lane for programming (tapping a pad in the upper lane will also select the pad's respective lane in the Pattern Editor).

- **Plus (+).** Use the Plus (+) to add an accent to a step. Press and hold +, then tap a pad in the lower lane to add an accent.

- **Minus (-).** Use the Minus (-) button to add a tie across multiple steps. Press and hold -, then tap a pad in the lower lane where the note should start and tap a step later in the pattern where you want the note to end.

Pattern: Variations
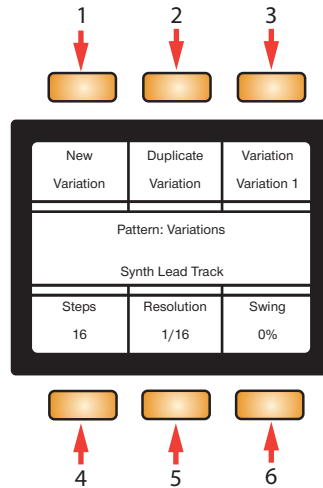
1. **New Variation.** Creates a new, empty pattern variation.

2. **Duplicate Variation.** Copies the current variation's pattern into a new variation.

3. **Variation.** When selected, the Screen Encoder will switch to the next or previous Variation. If a variation is renamed in Studio One Pro, the new name will be reflected here as well.

4. **Steps.** When selected, the Screen Encoder will change the amount of steps for the pattern. If more than 16 steps are created, the Navigation Left and Right Arrow buttons will bank to the next or previous 16 steps.

5. **Resolution.** When selected, the Screen Encoder will change the resolution of the pattern to be shorter note durations like 1/32 notes, or longer durations like 1/4 notes.

6. **Swing.** When selected, the Screen Encoder will apply more or less swing feel (delaying the 2nd and 4th notes) to the pattern where 0% is no swing and 100% is the maximum amount of swing.

Pattern: Lanes (Drum Mode only)
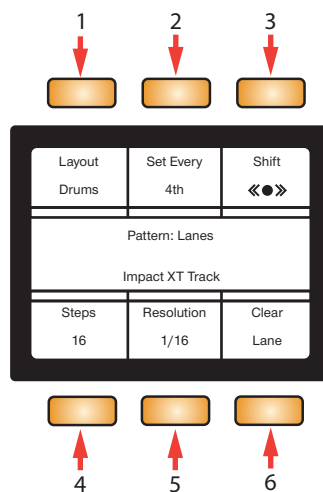
1. **Layout.** Choose between Drums and Melodic layout.

2. **Set Every 4th.** Fills each 4th step in the selected lane with notes.

3. **Shift.** When selected, the Screen Encoder will shift a lane's existing notes either right or left.

4. **Lane Steps.** When selected, the Screen Encoder will change the amount of steps in the selected lane independent of a pattern's steps.

5. **Lane Resolution.** When selected, the Screen Encoder will change a lane's resolution to shorter or longer durations independent of the pattern's resolution.

6. **Clear Lane.** Clears all notes in the selected lane.

Pattern: Steps
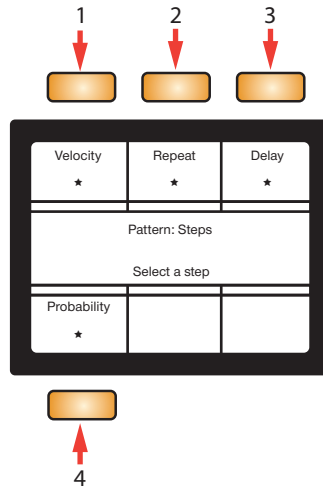
You can edit details of individual Pattern Steps with ATOM SQ. Select a Pattern in Studio One Pro and press the left or right arrow keys below the screen encoder until you are on the Pattern: Steps page.

Next, tap an active step on ATOM SQ's lower lane to select it for editing. The knob functions are as follows:

Velocity. When selected, the Screen Encoder will change the velocity of the currently selected step.

Repeat. When selected, the Screen Encoder will change the amount of times a step is repeated.
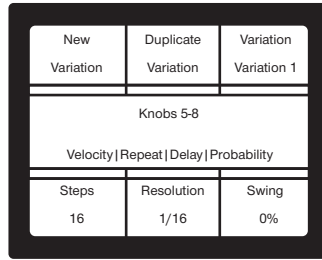
Delay. When selected, the Screen Encoder will change the timing of a step either earlier (negative amount) or later (positive amount) from the grid.

Probability. When selected, the Screen Encoder will change the probability that a step will play (100% = always played, 0% = never played).
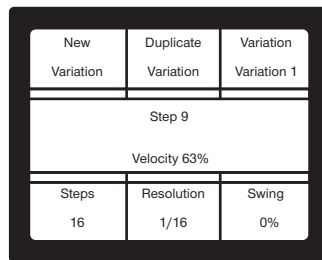
To add a new step in the sequence from this page, press and hold a pad in the lower lane.

3.2.3.2   Editing Step Automation on the Fly

When in any page other than Patterns: Steps, you can quickly select a step to edit by pressing and holding an active step in the lower lane.

New Variation	Duplicate Variation	Variation Variation 1
Knobs 5-8		
Velocity | Repeat | Delay | Probability		
Steps	Resolution	Swing
16	1/16	0%

ATOM SQ's screen will display "Knobs 5-8" and Velocity | Repeat | Delay | Probability. While holding a step in the lower lane, use Knobs 5-8 to adjust the corresponding parameters.

| New Variation	Duplicate Variation	Variation Variation 1
Step 9		
Velocity 63%		
Steps	Resolution	Swing
16	1/16	0%

As values are changed, the ATOM SQ's screen will display the currently-edited value.

3.2.3.3   Part Editor

When in the Part Editor, ATOM SQ's **Navigation Left and Right** arrows will select the next or previous note. Holding down Shift + either Navigation Left or Right will select multiple notes.

Part: Main
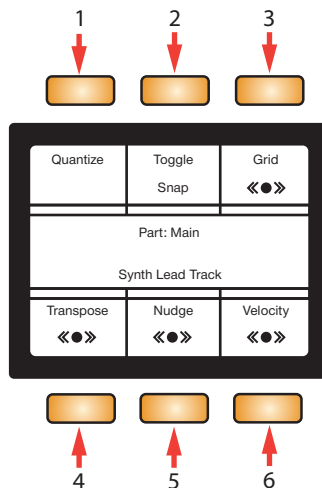
1. **Quantize.** Moves all selected notes' start positions precisely on the nearest grid point.

2. **Toggle Snap.** Toggles snap to grid on or off.

3. **Grid.** Changes the quantization grid to shorter or longer note values.

4. **Transpose.** When selected, the Screen Encoder will transpose the selected note(s) up or down. Alternatively, the Navigation Up and Down buttons will also transpose the selected note(s) up or down. Holding down ATOM SQ's Shift button + either Navigation Up or Down will transpose a note Up or Down one musical octave respectively.

5. **Nudge.** When selected, the Screen Encoder will move the selected note(s) left or right depending on the setting of the quantization grid.

6. **Velocity.** When selected, the Screen Encoder will change the velocity of the selected note(s).
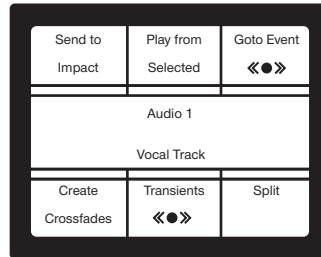
Part: Alt
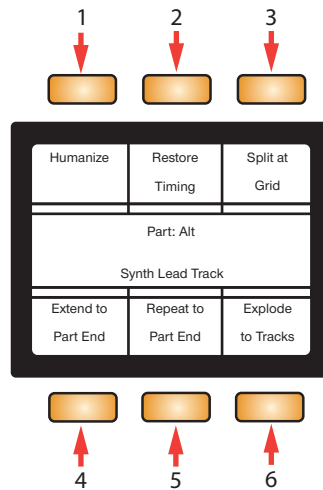
1. **Humanize.** Alters note start and end times and velocity within a very small threshold. This provides just enough variation to make a performance sound more like a human played the parts.

2. **Restore Timing.** Restores the original timing of quantized Instrument Parts or notes.

3. **Split at Grid.** Splits the selected note(s) on the current quantization grid.

4. **Extend to Part End.** Takes the selected note(s) and extends their end points to the end of the Event.

5. **Repeat to Part End.** Takes a selected note and repeats it according to the quantization grid until the end of the Part.

6. **Explode to Tracks.** Places each pitch within individual Instrument Parts on separate tracks.
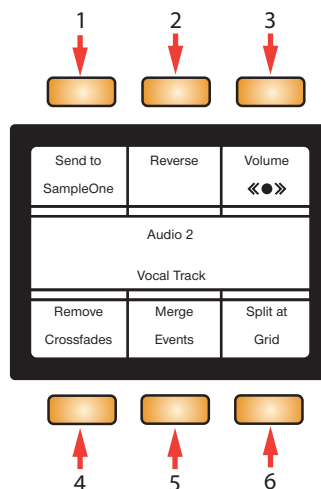
3.2.3.4 Audio Editor

Audio 1

Send to Impact	Play from Selected	Goto Event ≪●≫
	Audio 1	
	Vocal Track	
Create Crossfades	Transients ≪●≫	Split

1. **Send To Impact.** Creates a new instrument track with Impact XT loaded and assigns each selected audio Event or each bend marker to a pad.

2. **Play from Selected.** Moves the playhead to the beginning of an Event while the transport is stopped or playing.

3. **Goto Event.** Moves the playhead to the beginning of an Event if the transport is stopped.

4. **Create Crossfades.** Automatically creates crossfades in between selected split audio events.

5. **Transients.** Moves the playhead to the next or previous transient or Bend Marker.

6. **Split.** Splits the Event at the current playhead position.

Audio 2

	1	2	3

Send to SampleOne	Reverse	Volume ≪●≫
	Audio 2	
	Vocal Track	
Remove Crossfades	Merge Events	Split at Grid

|	4	5	6

1. **Send To SampleOne.** Creates a new instrument track with SampleOne XT loaded and assigns each selected audio Event to a piano key.

2. **Reverse.** Reverses the selected audio Event.

3. **Volume.** When selected, the Screen Encoder will increase or decrease the volume of the Audio Event. NOTE: this does not control a channel's volume in the Console.

4. **Remove Crossfades.** Removes crossfades between selected split audio events.

5. **Merge Events.** Merges the selected events.

6. **Split at Grid.** Splits the Event at every crossing in the current quantization grid.

3.2.4   User Mode

While in User mode, your ATOM SQ will send any commands currently assigned via Studio One Pro's External Devices Editor.

To open the External Device Editor in Studio One Pro, select External from the far left column in the Console, or press Shift+User on the ATOM SQ.
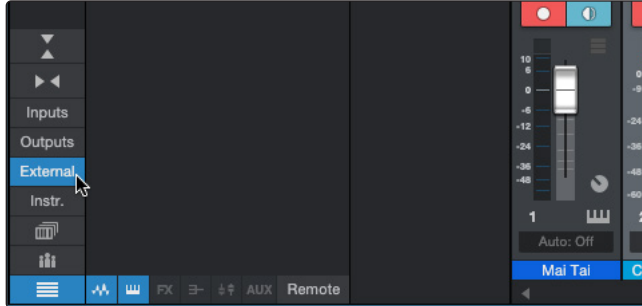
Double-click on ATOM SQ to bring up the Editor. User buttons have default commands assigned, but these can be changed and customized.

To assign a function to any of the ATOM SQ screen buttons, right-click on the User # label and choose "Assign Command".
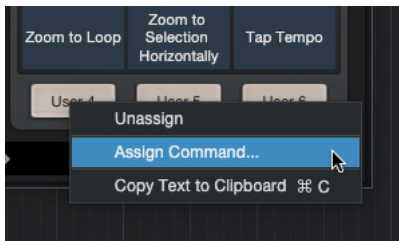
Select a command from the list then press "OK", or search for a specific command or Macro. After pressing "OK" the selected command will be assigned to that User button, and the name of the command will appear in that space on ATOM SQ's screen. User button assignments will always be there regardless of the session being worked on.

While the External Device Editor is open, you can also view the assignments for the focused object for 8 knobs on your ATOM SQ and the 8 respective pages.

The default User Button assignments are as follows:

Page 1:

Add Audio Track	Edit in Melodyne	Remove Melodyne
User Controls: Global Page 1/4		
Zoom Loop	Zoom to Selection	Tap Tempo

Page 2:

Convert To Part	Convert To Pattern	Clear Pattern
User Controls: Global Page 2/4		
Drum View	Piano View	Score View

Page 3:

Scratchpad	Toggle Detached	Tracklist
User Controls: Global Page 3/4		
Open... Track	Chord Selector	Apply Chords

Page 4:

This page displays specialized controls for the Studio One Pro Show Page:

| Next Patch	Next Setlist	Loop Setlist
User Controls: Global Page 4/4		
Previous Patch	Previous Setlist	Perform

Page 5-8:

These pages are user-customizable. Create the workflow that's best for you!

Not assigned	Not assigned	Not assigned
Commands 5/8 Control Link: Global		
Not assigned	Not assigned	Not assigned

3.3   The Launcher

Studio One Pro features a fully-integrated Launcher, which provides a new and exciting approach to writing, arranging, producing and performing music.
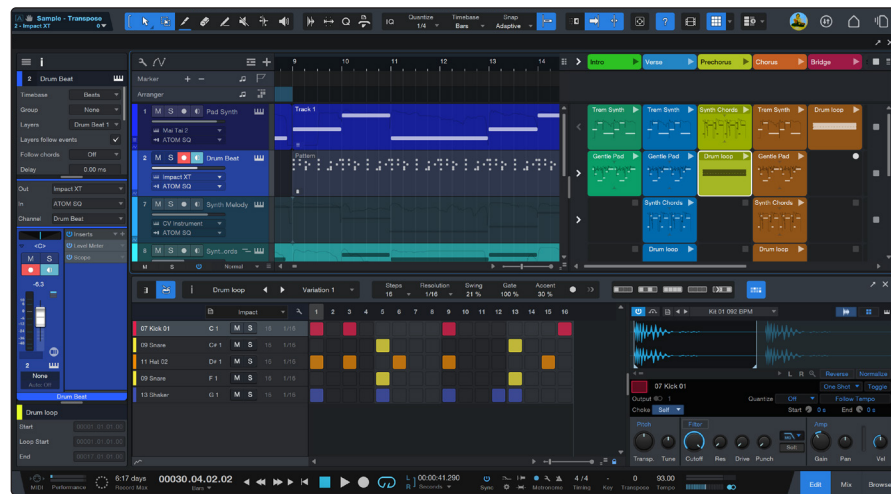

The Launcher is perfect for those interested in loop-based music creation and production; additionally, the Launcher can prove helpful if you would like to quickly test new song arrangements without affecting what's within the Timeline.

With Studio One Pro 7 or later, you can control the Launcher from your ATOM SQ.

3.3.1   Launcher Mode Controls

This section covers the Launcher Mode controls available from your ATOM SQ. For additional information about how the Launcher works within Studio One Pro, please refer to the Studio One Pro Reference Manual (to quickly open the Reference Manual while Studio One Pro is open, press ALT / Option + F1).

To enter Launcher mode:
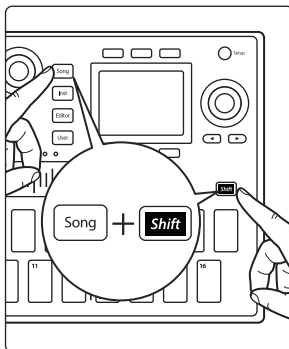
Press Shift + Song, or navigate to Page 5 of ATOM SQ's Song mode. The pads will change from Instrument mode, where pads will trigger notes in a virtual instrument, to Launcher mode. When in Launcher mode, pads represent Cells in the Launcher. If there is an Event in a Cell and the corresponding pad is pressed, the Event will trigger (more details below).

Note: Cells will launch or stop in time depending on what the Launcher's Quantize mode is set to.
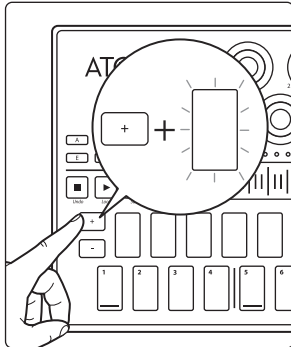
To exit Launcher mode:
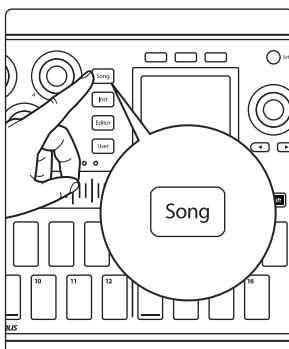
Press the Song button (without Shift) or any other screen mode button.

To Launch or stop a Cell:

While in Launcher mode, and an Event is in a Cell, tap any of the lighted pads. To stop a cell, tap an unlit pad (empty cell) in the same row.

To stop a Cell from playing:
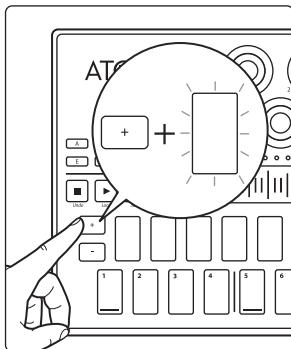

Press and hold the Plus (+) button, then tap the pad(s) with the "pulsing" light.

To Launch or stop a Scene:

When in Scenes or Hybrid view, each pad number in the lower lane corresponds with a Scene number (ex., Pad 1 = Scene 1, etc.). When a pad is tapped, the corresponding Scene will launch (all cells in the column will launch).

To stop a Scene from playing:

Press and hold the Plus (+) button, then tap the pad(s) with the "pulsing" light.

Note: Scenes will launch or stop in time depending on what the Launcher's Quantize mode is set to.

Moving Between Cells:

After selecting a cell in the Launcher, you can use the navigation buttons to move between cell to cell.


Moving the "Frame":

ATOM SQ has 32 pads arranged in a 2 x 16 grid. While in Cells or Hybrid View (see the Additional Functions section below), depending on the amount of tracks and scenes in a song, there will be a thin, yellow 2 x 16 outline to show which cells are in focus at any given time. In Scenes View, the frame is reduced to a 1x16 outline in the Launcher's grid.

To move the frame and focus on other cells, press the ATOM SQ's B (up), F (down), E (left), or G (right) bank buttons. Note that to move left and right with the E & G buttons, you'll need to add more than 16 scenes.

Press the A bank button to return the Frame to its "home" position.

Home   Up

Left   Down   Right
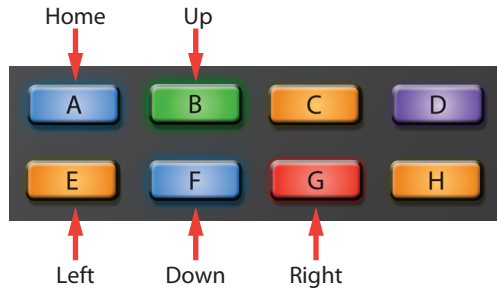
Pro User Tip: *The color of the frame in Studio One Pro can be customized. This is especially useful if you have multiple ATOMs. Go to Studio One Pro Preferences, then click on the External Devices tab. To change the frame color, double-click on the active ATOM SQ (or click, then press the Edit button), then click on the color patch next to the "Device Name." This will open the color picker.*

To Enter Track View:
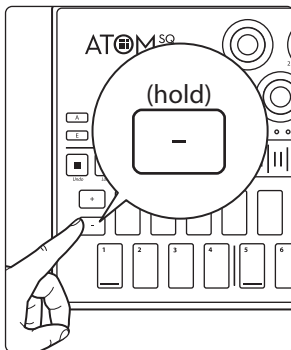
Press and hold the Minus (-) button to enter Track View. While in track view, each pad column becomes a shortcut for common track options:

- **Column 1** - Tap to Mute the corresponding track (illuminated blue).
- **Column 2** - Tap to Solo the corresponding track (illuminated yellow).
- **Column 3** - Tap to Record arm the corresponding track (illuminated red).
- **Column 4** - Tap to Stop any cell playing in the corresponding track (illumination color follows track color).

When Minus is released, the pads will return to Launcher mode.

To Record Arm a Cell:

If a track is record-armed, any empty cell's stop icon will change to the record icon.
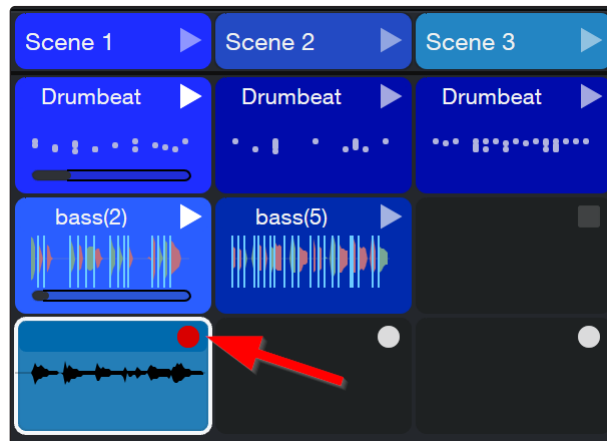
These record ready cells will light up solid red on ATOM SQ. When a solid red pad is tapped, the cell will begin recording audio or instrument notes. Tap the same pad again to stop the recording and begin a loop of the recorded audio or instrument notes.

Additional Functions:

ATOM SQ provides seven additional functions via the screen and screen encoder while in Launcher mode:

- **Toggle Launcher** - Shows or hides the Launcher in Studio One Pro (side-by-side or exclusive view must be set from within Studio One Pro).

- **Toggle Playlist** - Shows or hides the Launcher's Playlist in Studio One Pro.

- **Stop All** - Stops all currently playing, or paused cells.

- **Cells View** - Pads represent cells within the cells 'frame' in Studio One Pro.

- **Scenes View** - Pads represent scenes within the scenes 'frame' in Studio One Pro.

- **Hybrid** - The upper lane of pads represent cells within the cells 'frame' and the lower lane of pads represents the 'scenes' within the scenes 'frame'.

- **Screen Encoder** - Turn to navigate Studio One Pro tracks.

Note: These commands also appear on page 5 of 5 while in the Song screen mode.

3.3.2   Pulsing vs Blinking Lights

There are three types of indications to help understand what is about to launch and what is currently playing:

- When the cell is playing (launched), the pad will pulse (fade in and out) green in tempo with the song on every other beat.

- When the cell is scheduled to launch or stop, the pad will blink (off and on) green in tempo with the song on each beat prior to launch, then change to pulsing. If a cell is scheduled to stop, the pad will blink prior to stop, then turn a solid color when stopped.

- If the transport is stopped while cells are playing back, cells will pause. These paused pads will keep a cell's specific color and blink (off and on) in tempo with the song on each beat while the transport is stopped, then they will return to pulsing when the transport starts again.

The same rules for pulsing vs blinking apply to recording in cells. Blinking red means that a start or stop has been scheduled dependent on the Launcher Quantization settings. Pulsing red means that recording is active.

| 4 | **Advanced Ableton Live Integration** |

ATOM SQ is also a unique Ableton Live controller, designed for production and live performance. You can launch clips and scenes during a performance, select devices and edit parameters, navigate tracks and scenes, control each track's volume, panning, and send levels—plus do all your drum programming in Ableton Live from the ATOM SQ!

When connected to Ableton Live, the Studio One Pro logo light on the ATOM SQ will turn blue and it will configure automatically.

You can confirm that ATOM SQ is connected by going to Live Menu>Preferences>Link MIDI in macOS or Options>Preferences>Link MIDI on Windows. There should be a control surface labeled "ATOMSQ" and both Input and Output ports should be set to "ATM SQ".

Note: Ableton Live version 10.1.15 or later is required for the features described in this section.

4.1   Control Functions

4.1.1   RGB Colors

Pads change color depending on which pad layout mode is selected while in Instrument mode. In Song mode, the clip color in Live's Session view will determine the color of the pads on the top lane of ATOM SQ.

4.1.2   Triggering Notes or Clips

All 32 pads are velocity sensitive in Instrument mode. Strikes with less force result in a quiet sound, and strikes with more force result in a louder sound (unless Full Velocity or 16-vel is enabled). All pads are also sensitive to pressure. After striking and pressing down on a pad, more or less pressure can be applied to control multiple expressive parameters when available in your software (ex., aftertouch, etc). In Song mode, the pads will trigger the corresponding clip in the "box" around the clips.

4.1.3   Plus and Minus Pads

In Instrument mode, the + and - pads are pressure sensitive buttons. They can be assigned to either Pitch Bend or Octave Up/Down commands. Please note: These assignments must be made before Live is launched. *See Section 2.1 for more information.*

In Song mode, the plus button will launch the currently selected Scene. The minus button toggles the lower lane from Track select mode to Clip stop mode. This button will latch if pressed; it will be momentary if pressed and held.

4.1.4   Touch Strip

In Instrument mode, the touch strip adds expressive control to ATOM SQ. The touch strip can be assigned to musical functions like Pitch Bend, Modulation Wheel, etc. In Song mode, the touch strip controls Live's crossfader. *Please note: This assignment must be made before Live is launched. See Section 2.1 for more information.*

4.1.5   A-H Buttons

In Instrument mode, the A-H buttons can change the current drum bank or change the current Octave in Keyboard layout. In Keyboard layout, the 'A' button is used as a momentary button for Sustain (press and hold to Sustain). In Song mode, the 'A' button will toggle between Arranger and Session views, the 'B' button will show or hide the Browser, the 'D' button will show or hide Details view, and the 'H' button will toggle between Device and Clip views.

4.1.6   Knobs 1-8

The 8 main knobs change what they control depending on the mode. In Instrument or Editor modes, they are used to control parameters in the currently selected Device or Instrument.

In Song mode, the knobs control channel parameters:
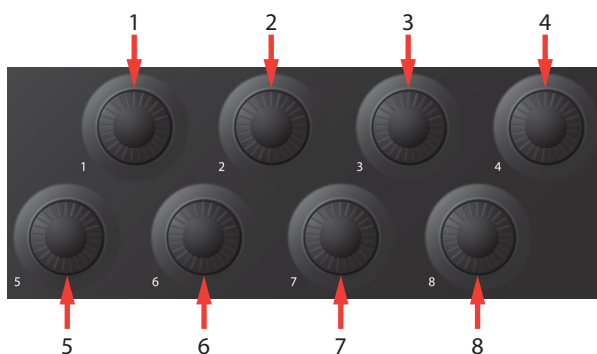
1. Volume

2. Pan

3. Send A

4. Send B

5. Send C

6. Send D

7. Send E

8. Send F

In User mode, there are 6 pages of knob user assignments for 48 possible knob assignments. Select a User Page from the screen, then map a knob using Live's MIDI Map mode. Note that it is possible to map the screen buttons, but this is not recommended as they are momentary switches. Make sure a User page is selected before entering Live's MIDI Map mode to or you will be mapping the User button.

Power User Tip: *These knobs have a velocity multiplier built in. The faster they are turned, the more quickly they reach min or max.*

4.1.7   Navigation Buttons

The Up, Down, Left, and Right navigation buttons to the left of the Shift button will navigate through clips and scenes in Session view. In the Arranger view, the navigation Left and Right buttons will select the next or previous track and the navigation Up and Down buttons plus Shift will move the "box" up or down respectively.

Note: Pressing the navigation Up and Down buttons without Shift will still control Scene selection in Session view even though Arranger view is still in focus.

4.1.8   Transport Buttons
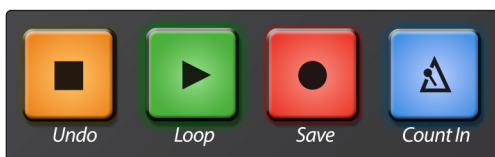
These are dedicated transport buttons on ATOM SQ. Some buttons have a primary and secondary command (when Shift is also held).

- **Stop.** Stops the transport from playing. Press a second time to return to zero.
- **Shift + Stop.** Undo the last command or action.
- **Play.** Starts the transport.
- **Shift + Play.** Enables or disables Loop.
- **Record.** Begins recording from the point of the playhead in Arranger view. In Session view, toggles Record Overdub mode.
- **Shift + Record.** Enables "Capture MIDI".
- **Metronome.** Enables or disables the Metronome.

4.2   Screen Controls

The screen commands on your ATOM SQ will change depending on the currently selected mode.

Press a screen button to either select a function or trigger a command. Use the Screen Encoder to change the selected screen parameter's value in Instrument mode (ex., Octave, Rate, etc.).
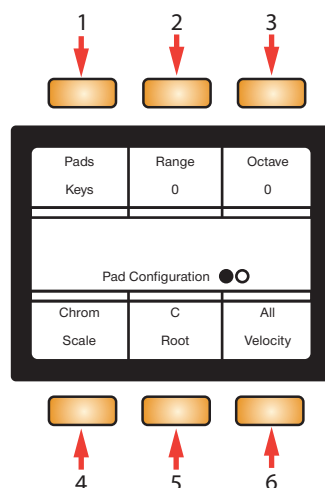
While in Song mode, the Screen Encoder will move the playhead forward or back. Holding down the Shift button while turning the Screen Encoder will change the master Tempo.

4.2.1   Instrument Mode

Instrument mode will change the screen to display functions used to control a virtual instrument.

4.2.1.1   Pad Configuration

1. **Pads.** When selected, the Screen Encoder will change how the layout of the pads appear.

2. **Keys.** Follows the layout of a piano. White keys on the bottom lane and black keys on the top lane. If a Scale type is selected (other than Chromatic), the bright pads will guide you to play the correct notes in the scale. The dim pads are considered "wrong notes" but are still playable.

   - **Blocks.** Assigns one drum bank to the left side and one drum bank to the right side. The first bank begins on Pad 1 and the second bank begins on Pad 9.

   - **Continuous.** Assigns all pitches from left to right starting from the bottom lane (pads 1-16), then continuing in the upper lane (pads 17-32).

3. **Range/Transpose.** When selected, turning the Screen Encoder will either change the viewable range of the keyboard in Key mode, or transpose the pads in either Blocks or Continuous modes.

4. **Octave.** When selected, the Screen Encoder will transpose the pads note assignments up or down in musical octaves (7 possible octaves). *Note: The octave can also be changed using the B-H buttons.*

5. **Scale.** When selected, the Screen Encoder will change the pads note assignments and constrain them to the selected musical Scale.

   - Chromatic, all possible notes are available

   - Major

   - Melodic Minor

   - Harmonic Minor

   - Natural Minor

   - Major Pentatonic

   - Minor Pentatonic

   - Blues

   - Dorian Minor

- Mixolydian

- Phrygian

6. **Root.** When selected, the Screen Encoder will change the Root note of a scale (C, C#, D, D#, E, F, F#, G, G#, A, A#, B). The Root note is indicated by the green pads.

7. **Velocity.** When selected, the Screen Encoder will toggle between three velocity modes:

- **All.** The pads can trigger all possible velocities from 1-127.

- **Full.** The pads will send a fixed velocity of 127.

- **16-vel.** Only available when in Blocks or Continuous modes, 16-vel takes a selected MIDI note from the top lane, and maps the selected note across 16 possible fixed velocities in the bottom lane. Pad 1 is fixed at a velocity of 7, and pad 16 is fixed at a velocity of 127.

4.2.1.2 Arpeggiator
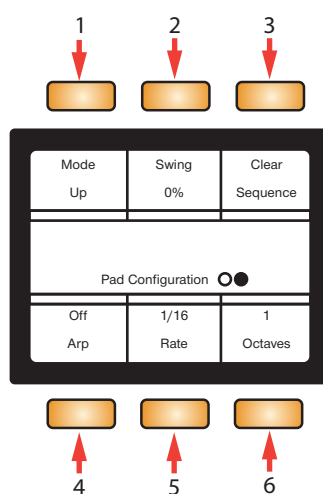
Page up to get to Arp Mode options. Arp mode only stays engaged while on the arpeggiator page.

1. **Mode.** When selected, the Screen Encoder changes the Play Mode for the Arpeggitator.

- **Up.** The arpeggio starts at the lowest held note and travels upward through the held notes, then returns to the lowest note as the arpeggio begins again.

- **Down.** The arpeggio starts at the highest held note and travels downward through the held notes, then returns to the highest note as the arpeggio begins again.

- **Up/Down.** The arpeggio starts at the lowest held note, travels upward to the highest, then travels back down to the lowest note, and the arpeggio begins again.

- **Down/Up.** The arpeggio starts at the highest held note, travels downward to the lowest, then travels back up to the highest note, and the arpeggio begins again.

- **Random.** The arpeggio plays the currently held notes in a random pattern.

- **Chord.** The currently held chord (or single note) is repeated as long as it is held.

- **Input.** The arpeggio pattern is derived from the order in which notes are played and held.

2. **Swing.** When selected, the Screen Encoder will adjust the amount of "Swing" that is applied to the sequence.

3. **Clear Sequence.** When pressed, stops a held sequence.

4. **Arp.** When pressed, toggles between the Arpeggiator's Off, On, and Hold modes.

5. **Rate.** When selected, the Screen Encoder will adjust how fast or slow the arpeggiator steps through each note in the sequence.

6. **Octaves.** When selected, the Screen Encoder will change how many octaves the sequence will step through before restarting.

4.2.2   Song Mode
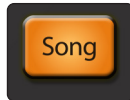
Song mode will display commonly used functions and commands for your Session.
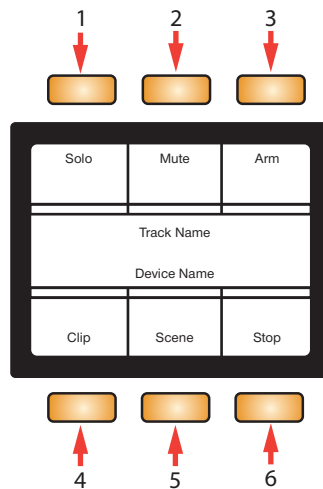
1. **Solo.** Solos the currently selected track.

2. **Mute.** Mutes the currently selected track.

3. **Arm.** Record arms the currently selected track.

4. **Clip.** Launches the currently selected clip.

5. **Scene.** Launches the currently selected scene (independent of the box).

6. **Stop.** Stops the currently playing clip.

4.2.3   Editor Mode

Editor mode will display functions specific to controlling a Device.
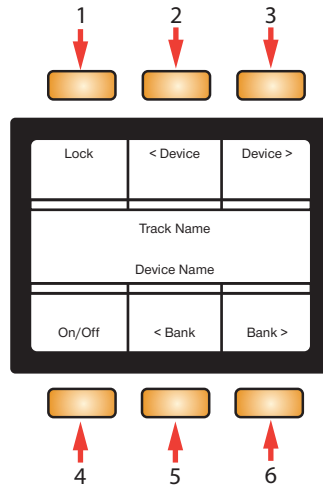
1. **Lock.** Locks knob 1-8 controls to the currently selected Device.

2. **< Device.** Selects the previous Device.

3. **Device >.** Selects the next Device.

4. **On/Off.** Turns the currently selected Device on or off.

5. **< Bank.** Selects the previous knob 1-8 Device assignments in banks of 8 (when applicable).

6. **Bank >.** Selects the next knob 1-8 Device assignments in banks of 8 (when applicable).

4.2.4   User Mode
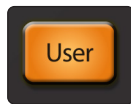
User mode allows for Knobs 1-8 to be completely user assignable using Live's MIDI Map mode. Each screen button will change the current bank of knobs for 48 possible assignments.
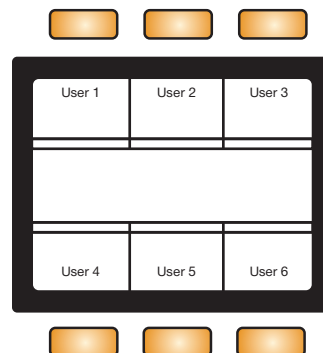
5   Studio One Pro Quick Start
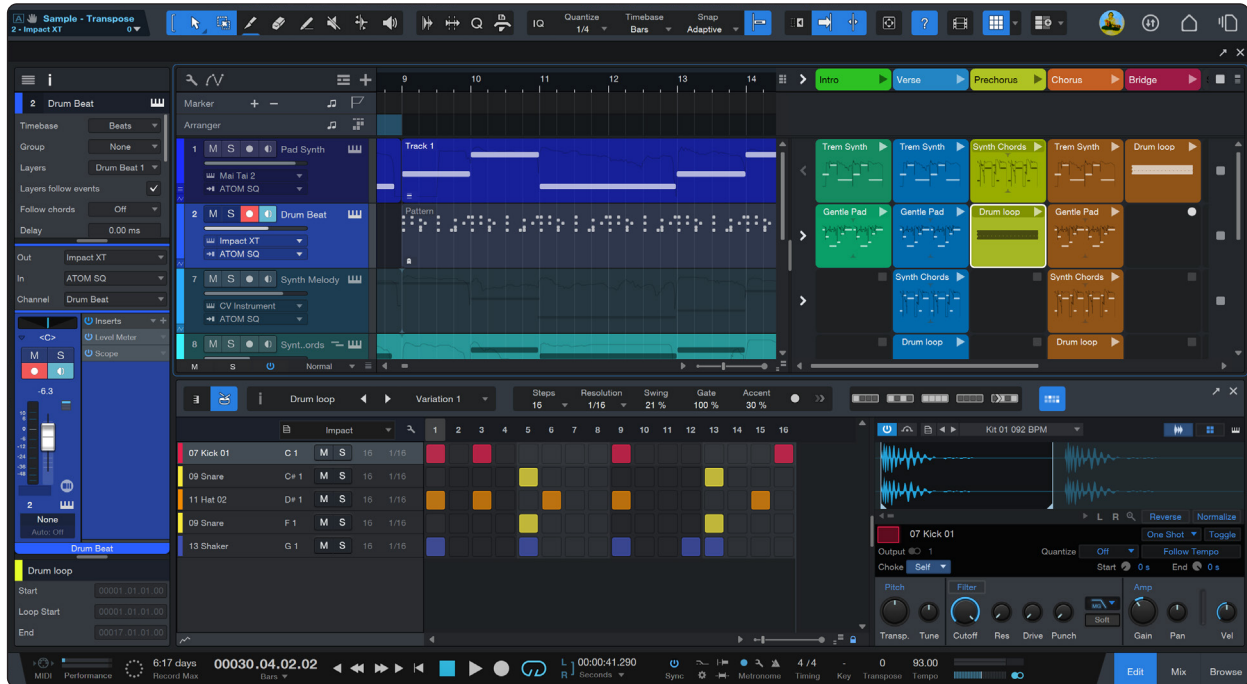
All registered ATOM SQ users receive Studio One Pro+ recording and production software. Whether you are about to record your first album or your fiftieth, Studio One Pro+ provides you with all of the tools necessary to capture and mix a great performance.

5.1   Installation and Authorization

Once you have installed the drivers for your audio interface and connected it to your computer, you can use the included PreSonus Studio One Pro music-production software to begin recording, mixing, and producing your music. To install Studio One Pro, log into your My PreSonus account and register your ATOM SQ. Your product key for Studio One Pro will automatically be registered to your My PreSonus account, along with your hardware registration.

Downloading and Running the Studio One Pro Installer

To install Studio One Pro, download the Studio One Pro installer from your My PreSonus account to the computer on which you will use it.

Windows: Launch the Studio One Pro installer and follow the onscreen instructions.

Mac: Drag the Studio One Pro application into the Applications folder on your Mac hard drive.

Authorizing Studio One Pro

When Studio One Pro is launched for the first time on your computer, it will communicate with your My PreSonus account and verify your registration. To ensure a seamless authorization process, make sure to download your installer to the computer on which you will be using it, and be sure that your computer is connected to the Internet when you launch the application for the first time.

Installing Bundled Content for Studio One Pro+

Studio One Pro+ comes bundled with an array of demo and tutorial materials, instruments, loops, and samples. The Studio One Pro+ bundle includes all that you need to begin producing music.

The first time you launch Studio One Pro, you will be prompted to install its companion content. Select the content you wish to add and click "Install." The content will automatically begin to download and install from your My PreSonus user account.
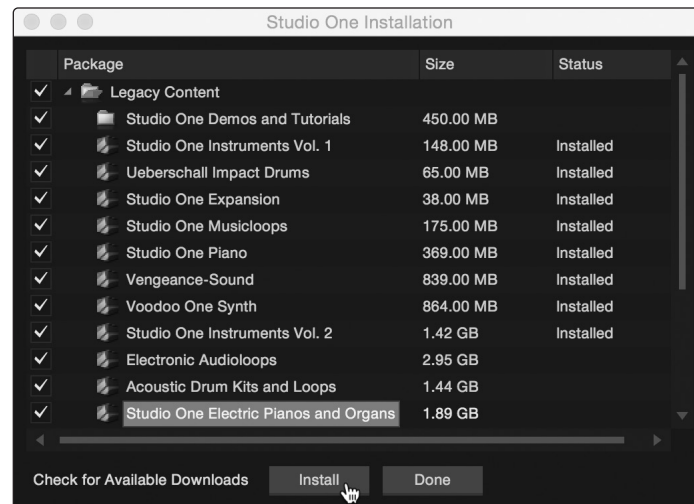
Power User Tip: You may be prompted to enter your My PreSonus user account information. Clicking "Remember Credentials" will allow you to have immediate access to any content you purchase from the PreSonus Marketplace.

5.2   Setting Up Studio One Pro

Studio One Pro was designed to work with PreSonus interfaces and provides unique interoperability and simplified setup. When Studio One Pro is launched, by default you will be taken to the Start page. On this page, you will find document-management and device-configuration controls, as well as a customizable artist profile, a news feed, and links to demos and tutorials from PreSonus. If your computer is connected to the Internet, these links will be updated as new tutorials become available on the PreSonus Web site.

Complete information on all aspects of Studio One Pro is available in the Reference Manual PDF located within Studio One Pro. The information in this tutorial covers only the basic aspects of Studio One Pro and is intended to get you set up and recording as quickly as possible.

5.2.1   Configuring Audio Devices

In the middle of the Start page, you will see the Setup area. Studio One Pro automatically scans your system for all available drivers and selects a driver. By default, it will choose a PreSonus driver if one is available.

1. Click on the Configure Audio Interface link to select your audio interface driver.
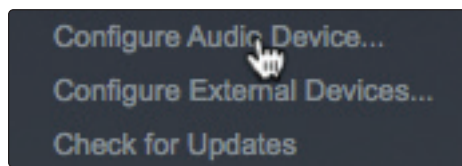
2. Select your audio interface from the Audio Device pull-down menu. From this page, you can also adjust your device buffer block size. Click OK when you are finished.
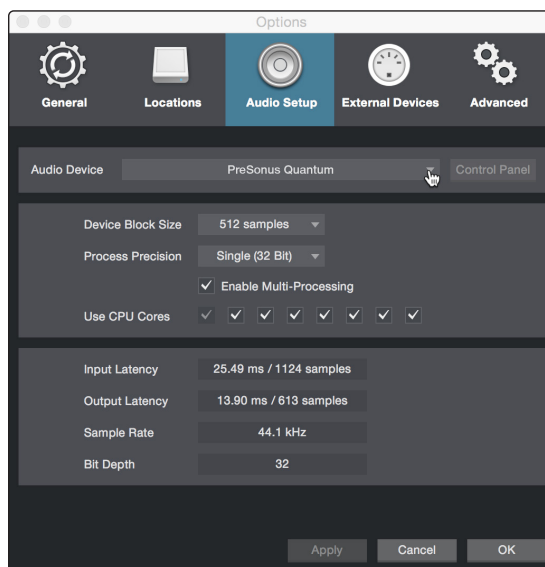
5.2.2   Configuring MIDI Devices

From the External Devices window in Studio One Pro, you can configure your MIDI keyboard controller, sound modules, and control surfaces. This section will guide you through setting up other MIDI keyboard controllers and sound modules. Please consult the Reference Manual located within Studio One Pro for complete setup instructions for other MIDI devices.

If you are using a third-party MIDI interface or USB MIDI-controller keyboard, you must install any required drivers for these devices before beginning this section. Please consult the documentation that came with your MIDI hardware for complete installation instructions.

Note: Studio One Pro will automatically configure your ATOM SQ for control. No setup is required.

Setting up a MIDI Keyboard controller

A MIDI keyboard controller is a hardware device that is generally used for playing and controlling other MIDI devices, virtual instruments, and software parameters. In Studio One Pro, these devices are referred to as Keyboards, and they must be configured before they are available for use. In some cases, your MIDI keyboard controller is also used as a tone generator. Studio One Pro views the controller and tone-generation functions as two different devices: a MIDI keyboard controller and a sound module. The MIDI controls (keyboard, knobs, faders, etc.) will be set up as a Keyboard. The sound modules will be set up as an Instrument.

You can set up your external MIDI devices from the Setup area in the Start page. Before setting up a new Song for recording, take a moment to configure external devices.

Make sure you have connected the MIDI Out of your external MIDI controller to a MIDI In on your PreSonus audio interface (if available) or another MIDI interface. If you are using a USB MIDI controller, connect it to your computer and power it on.

1. Click on the Configure External Devices link in the Setup area on the Start page to launch the External Devices window.
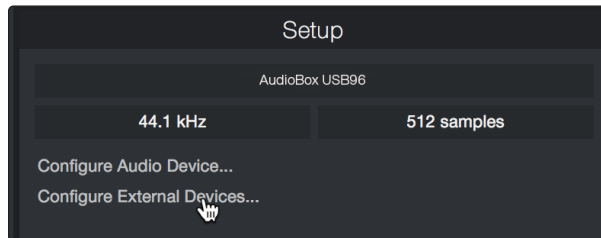
2. Click the Add button. This will launch the Add Device window.
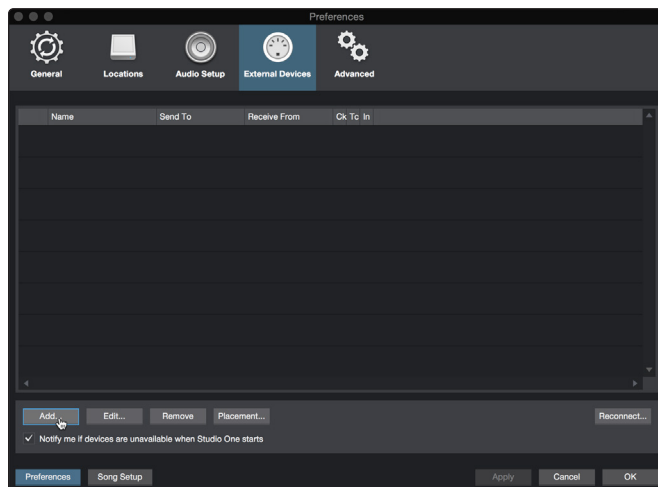
3.   From the menu on the left, select your MIDI controller from the list of
     manufacturers and models. If you do not see your MIDI controller listed,
     select New Keyboard. At this point, you can customize the name of
     your keyboard by entering the manufacturer and device names.
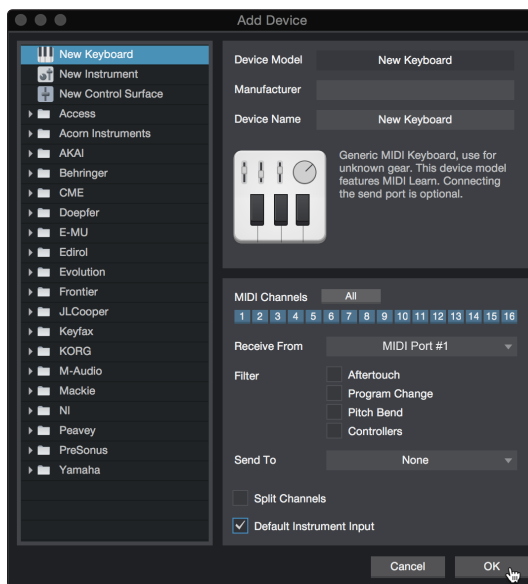
4.   You must specify which MIDI channels will be used to communicate with
     this keyboard. For most purposes, you should select all MIDI channels.
     If you are unsure of which MIDI channels to choose, select all 16.

5.   Studio One Pro allows you to filter out specific control functions. If you would
     like Studio One Pro to ignore Aftertouch, Pitch Bend, Program Change,
     or all CC messages, enable filtering for any or all of these messages.

6.   In the Receive From drop-down menu, select the MIDI interface
     input from which Studio One Pro will receive MIDI data (that
     is, the MIDI port to which your keyboard is connected).

     *Power User Tip: In the Send To drop-down menu, select the MIDI interface output
     from which your Studio One Pro will send MIDI data to your keyboard. If your
     keyboard controller doesn't need to receive MIDI data from Studio One Pro, you can
     leave this unselected.*

7.   If this is the only keyboard that you will use to control your external
     synthesizers and virtual instruments, you should check the box
     next to Default Instrument Input. This will automatically assign
     your keyboard to control all MIDI devices in Studio One Pro.

8.   Click "OK."

If you have a sound module that you'd like to connect, leave the External
Devices window open and proceed to the next part of this section.
If not, you can close the window and skip to the next section.

Setting up an External MIDI Sound Module

MIDI instrument controllers (keyboards, MIDI guitars, etc.) send musical information,
in the form of MIDI data, to tone modules and virtual instruments, which respond
by generating sound as instructed. Tone modules can be standalone sound devices
or can be integrated into a MIDI instrument, such as a keyboard synthesizer. Studio
One Pro refers to all tone generators as Instruments. Once you have set up your
MIDI keyboard controller, take a moment to configure your sound module.

Make sure you have connected the MIDI In of your external
sound module to the MIDI Out of your MIDI interface.

1.   In the External Devices window, click the Add button.
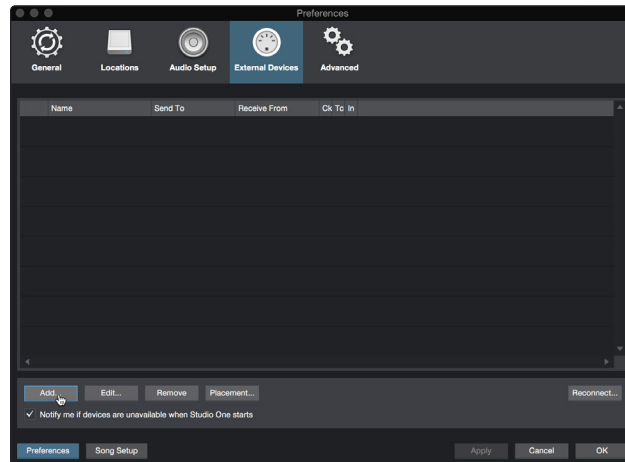
2.   Select your device in the menu on the left. If your device is not listed,
     select New Instrument. At this point you can customize the name of
     your keyboard by entering the manufacturer and device names.
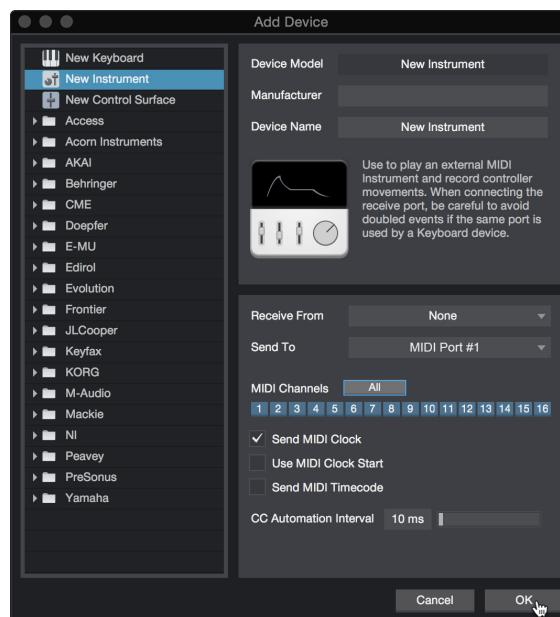

3.   Specify which MIDI channels will be used to communicate with this sound
     module. For most purposes, you should select all MIDI channels. If you are
     unsure of which MIDI channels to select, we suggest you select all 16.

4.   In the Send To menu, select the MIDI interface output from which Studio One
     Pro will send MIDI data to your sound module. Click "OK" and close the External
     Devices window. You are now ready to start recording in Studio One Pro.

5.   The rest of this Quick Start Guide will go over how to set
     up a Song and will discuss some general workflow tips for
   navigating through the Studio One Pro environment.

5.3   Creating a New Song

Now that you've configured your audio and MIDI devices, let's create a new Song. We'll start by setting up your default audio I/O.

1. From the Start page, select "Create a New Song."
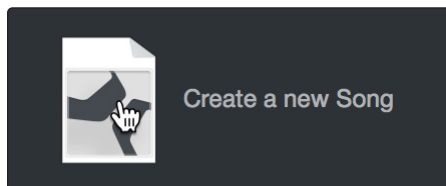
2. In the New Song window, name your Song and choose the directory in which you'd like it saved. You'll notice a list of templates on the left. These templates provide quick setups for a variety of devices and recording situations. The section will describe creating a Song from an empty session.
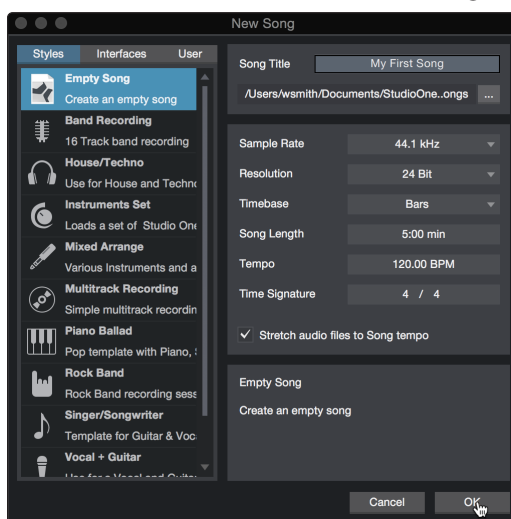
3. Select "Empty Song" from the Templates list. At this point, you should give your Song a name and select your preferred sample rate and bit depth for recording and playback. You can also set the length of your Song and the type of time format you would like the timeline to follow (notation bars, seconds, samples, or frames). Click the OK button when you are finished.

Power User Tip: If you plan to import loops into your Song, make sure that the Stretch Audio Files to Song Tempo option is selected. This will automatically import loops at the correct tempo.

5.3.1   Configuring Your Audio I/O

1. Click on Song | Song Setup to set your sample rate and resolution and configure your audio I/O.
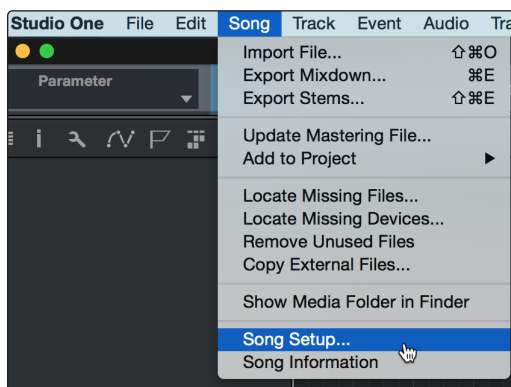
2. Click on the Audio I/O Setup tab.

3. From the Inputs tab, you can enable any or all of the inputs on your audio interface that you'd like to have available. We recommend that you create a mono input for each of the inputs on your interface. If you plan on recording in stereo, you should also create a few stereo inputs.
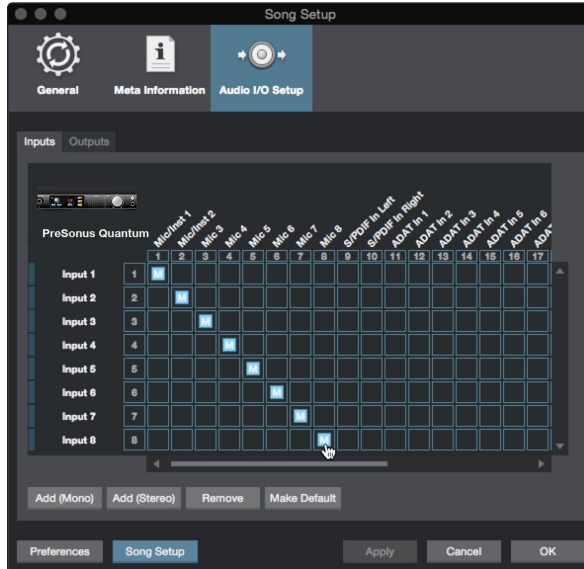

4. Click on the Outputs tabs to enable any or all of the outputs on your audio interface. In the lower right corner, you will see the Audition Select menu. This allows you to choose the output from which you will audition audio files prior to importing them into Studio One Pro. In general, you will want this to be the main output bus.
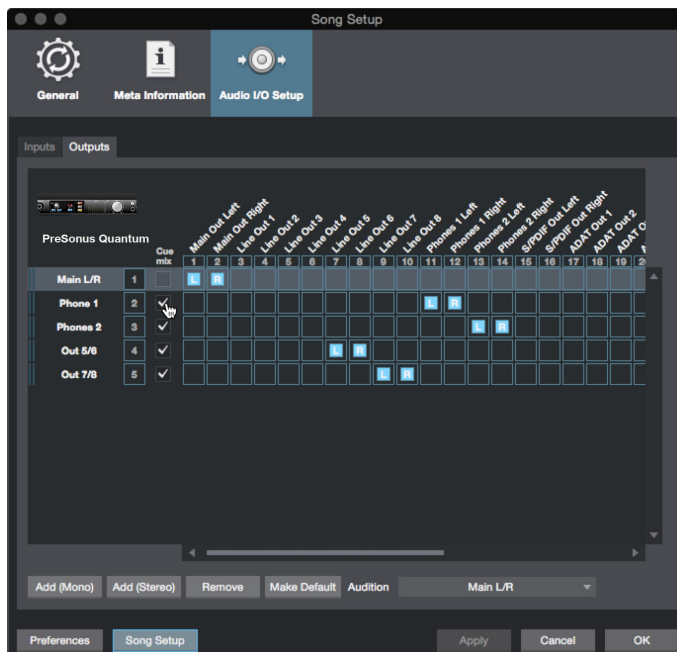

Power User Tip: If you would like this I/O configuration to be the same every time you open Studio One Pro, click the Make Default button.

5.3.2   Creating Audio and Instrument Tracks

1. In the upper left corner of the Arrange window, you will notice several buttons. The button furthest to the right is the Add Tracks button. Click on this button to open the Add Tracks window.
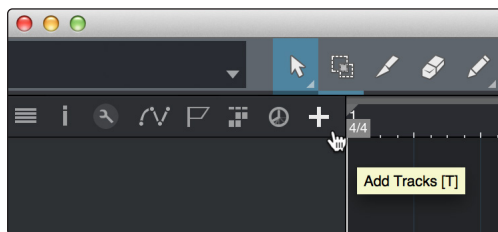
2. In the Add Tracks window, you can customize the track name and color, add a preset rack of effects, and set the physical source for the input and output of your audio tracks. Most important, you can select the number and type of tracks you'd like to create.
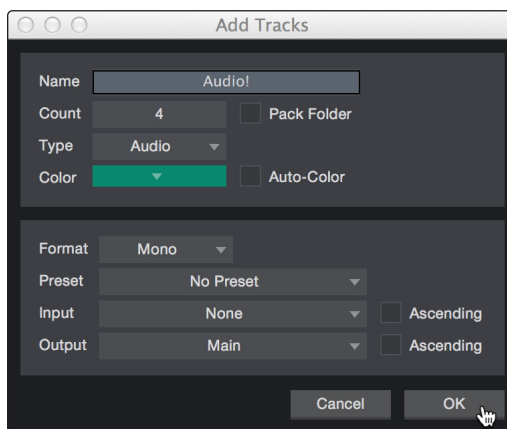

Audio. Use this track type to record and playback audio files.

Instrument. Use this track to record and playback MIDI data to control external MIDI devices or virtual instrument plug-ins.

Automation. This track type lets you create automated parameter controls for your session.

Folder. This track helps you to manage your session as well as to quickly edit multiple tracks at once.

Power User Tip: If you would like to add an audio track for each of the available inputs, go to Track | Add Tracks for All Inputs.
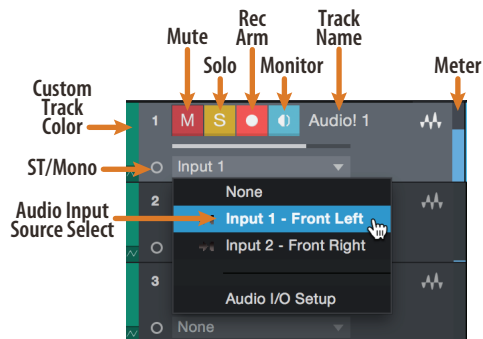

Note: Instrument tracks are nearly identical to audio tracks. The Input Source list for Instrument tracks lists available external MIDI devices as well as any virtual instruments that have been added to the Song.

5.3.3   Recording an Audio Track

1. To begin recording, create an audio track from the Add Tracks window, set its input to Input 1 on your audio interface, and connect a microphone to the same input.
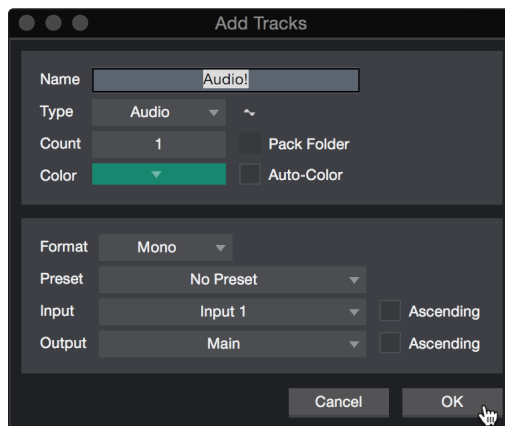
2. Select Record Enable on the track. Turn up the Input 1 level on your audio interface while speaking/singing into the microphone. You should see the input meter in Studio One Pro react to the input. Adjust the gain so the input level is near its maximum without clipping (distorting).
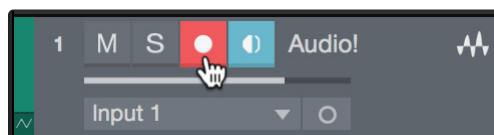

You are now ready to start recording. For complete instructions, please consult the Studio One Pro Reference manual located in Help | Studio One Pro Reference Manual.

5.3.4   Adding Virtual Instruments and Effects

You can add plug-ins and instruments to your Song by dragging-and-dropping them from the browser. You can also drag an effect or group of effects from one channel to another, drag in customized effects chains, and instantly load your favorite virtual-instrument preset without ever scrolling through a menu.

Opening the Browser

In the lower right corner of the Arrange window are three buttons:
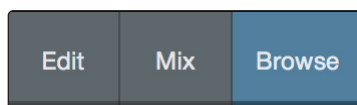
Edit. The Edit button opens and closes the audio and MIDI editors.

Mix. The Mix button opens and closes the Mixer window.

Browse. The Browse button opens the Browser, which displays all of the available virtual instruments, plug-in effects, audio files, and MIDI files, as well as the pool of audio files loaded into the current session.

Drag-and-Drop Virtual Instruments

To add a virtual instrument to your session, open the browser and click on the Instrument button. Select the instrument or one of its patches from the Instrument browser and drag it into the Arrange view. Studio One Pro will automatically create a new track and load the instrument as the input.
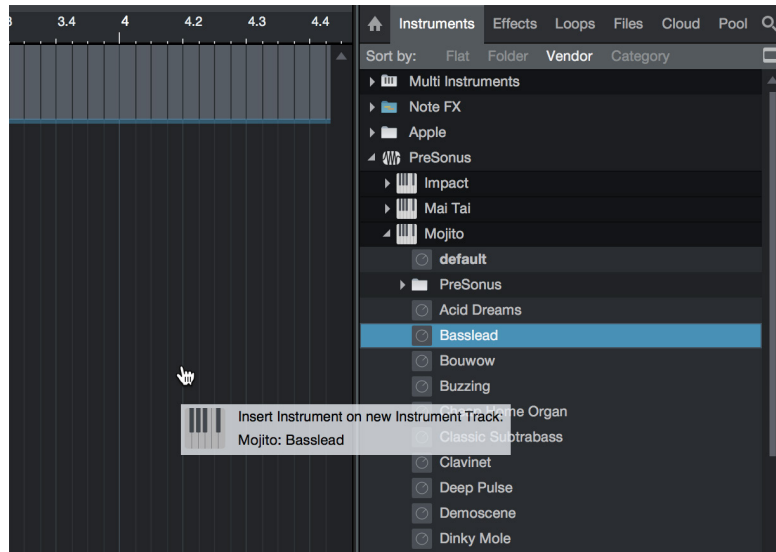

Drag-and-Drop Effects

To add a plug-in effect to a track, click the Effects button in the browser and select the plug-in or one of its presets in the effects browser. Drag-and-drop the selection over the track to which you would like to add the effect.
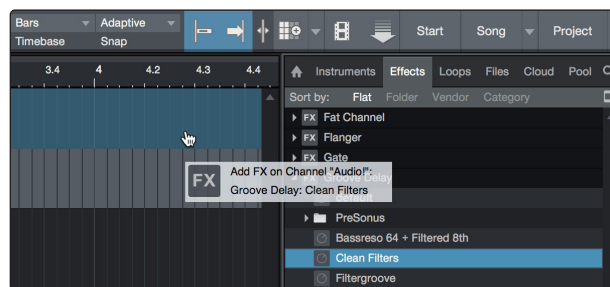
Drag-and-Drop Audio and MIDI Files

Audio and MIDI files can be quickly located, auditioned, and imported into your Song by dragging them from the file browser into the Arrange view. If you drag the file to an empty space, a new track will be created with that file placed at the position to which you dragged it. If you drag the file to an existing track, the file will be placed as a new part of the track.
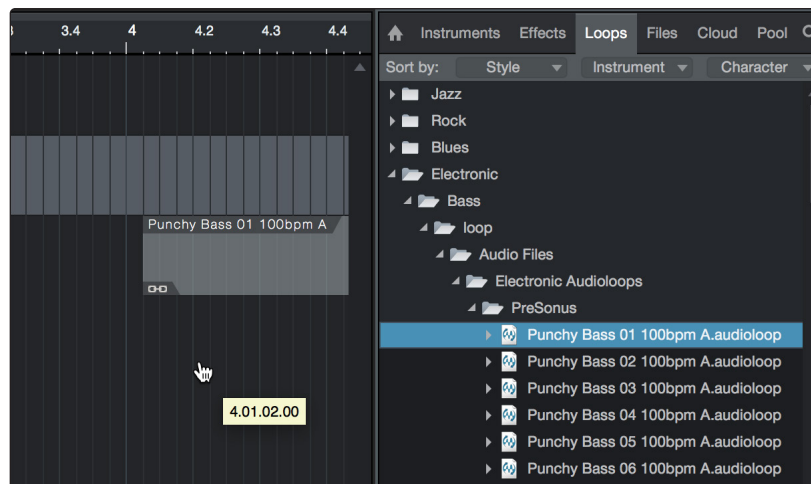
Added bonus: PreSonus' previously Top Secret recipe for…

Redfish Couvillion

Ingredients:

- ¼ C Vegetable oil
- ¼ C flour
- 1 onion diced
- 1 clove garlic minced
- 1 green pepper diced
- 3 celery stalks diced
- 1 14oz can diced tomatoes
- 1 bottle light beer
- 2 bay leaves
- 1 tsp thyme
- 2 lbs Redfish fillets

Cooking Instructions:

1. In a heavy saucepan or large skillet, heat oil on medium high and slowly add flour a tablespoon at a time to create a roux. Continue cooking the roux until it begins to brown, creating a dark blond roux.
2. Add garlic, onions, green pepper, and celery to roux.
3. Sauté vegetables for 3-5 minutes until they start to soften.
4. Add tomatoes, bay leaves, thyme, and redfish. Cook for several minutes.
5. Slowly add beer and bring to a low boil.
6. Reduce heat and simmer uncovered for 30-45 minutes until redfish and vegetables are completely cooked, stirring occasionally. Break up redfish into bite size chunks and stir in. Add pepper or hot sauce to taste. Do not cover.
7. Serve over rice

Serves 6-8

While not one of Southeast Louisiana's more famous dishes, Redfish Couvillion is a favorite way to serve our favorite Gulf fish. Also known as Reds or Red Drum, Redfish is not only fun to catch, it's also delicious!

ATOM SQ

Hybrid MIDI Keyboard / Pad Performance and Production Controller

Owner's Manual