

ClyphX Pro v1.1.3

1 CHANGES IN THIS VERSION

2 SETUP

Installing ClyphX Pro
Live Settings
Documentation
Next Steps

3 CORE CONCEPTS

Action Lists
Identifiers
X-Triggers
Startup Actions
X-Cues
X-Clips
X-Scenes
X-Controls
X-OSC
XT Scripts
Max for Live
Settings Folders/Files
Script Linking
Macros
Variables (Advanced)
User Actions (Advanced)

4 ACTION REFERENCE

Global Actions
Scene Actions
Navigation and View Actions
Browser Actions
Midi Actions
Track Actions
Device Actions
Simpler Actions
Device Chain Actions
Drum Pad Actions

Snap Actions
Snap Legacy Action
Clip Actions
Clip Loop Actions
Clip Cue Action
Clip Envelope Actions
Clip Envelope Capture Action
Clip Note Actions
Control Surface Actions
DDC Actions
Arsenal Actions
Push Actions
Key Actions

5 GENERAL ACTION INFORMATION

Track-based Actions
Applying Actions to Specific Objects and Ranges
Applying Actions to Nested Devices
Adjustable Properties
Continuous Parameters
Quasi Continuous Parameters

6 ADDENDUM

7 UPDATING AND BACKING UP

Updating ClyphX Pro
Backing Up Your ClyphX Pro Installation

8 OPTIONAL ACCESSORIES

ClyphX Pro Bindings
ClyphX Pro Keys

9 TROUBLESHOOTING

Windows Troubleshooting
OS X Troubleshooting
General Troubleshooting
Live 10 Lessons Troubleshooting

10 SUPPORT

1 CHANGES IN THIS VERSION

NOTE: Many of these changes here were actually made in v1.1.2, which was not officially released.

General Additions/Improvements:

- Added `ALLOW_INDEPENDENT_MOVEMENT` option to *Script Linking.txt* to determine whether or not scripts can move independently when linked.

- Added new Optional Accessories section to the manual, which covers the optional accessories available for ClyphX Pro including the new Bindings Accessory.

- When operating upon Devices by name, Devices within Racks will now be included in the search. For backwards compatibility, `INCLUDE_NESTED_DEVS_IN_NAME_SEARCH` was added to *Preferences.txt* to allow you to opt out of this new behavior.

- Implemented workaround for issue where relative adjustment of certain parameters (such as the Pitch parameter of the Pitch device) wouldn't work correctly due to the way Live's API reported information about the parameter.

Global Action Additions:

- Added `BIND` and `BOUNDP` Actions for use with the new Bindings Accessory.

Scene Action Additions:

- Added `SCENE SEL` Action for selecting Scenes.

Clip Action Improvements:

- Replaced `CLIP` Action with `CLIP MUTE` Action to disambiguate its purpose. Note, however, that the `CLIP` Action is still present for backwards compatibility.

Clip Envelope Action Improvements:

- It is now possible to insert an envelope for the last parameter that was adjusted via the new Bindings Accessory.

Push Action Additions/Improvements:

- Added `PUSH PBMOD` Action that can force the Touch Strip into its Pitch Bend/Mod Wheel Mode.

- The `PUSH MODE x` Action now accepts `64PADS` to switch to its 64 Drum Pad Layout.

- It is now possible to apply Push Actions to multiple Push/Push2 Control Surface scripts.

2 SETUP

This section covers the initial installation steps you will need to complete in order to use ClyphX Pro. Please **take your time** when completing these steps. If you should run into trouble when performing any of these steps, please refer to the Troubleshooting section.

Installing ClyphX Pro

To install ClyphX Pro, first close Live and then run the provided Setup executable (Windows) or package (OS X). At the end of the installation, you'll be presented with a dialog box indicating the Live installation(s) that ClyphX Pro was installed into. If you do not see the Live installation you're using listed there, you can select it manually.

In most cases, you will only need to install ClyphX Pro once. It will remain installed even after updating to a newer version of Live (when using Live's autoupdate feature). However, if you re-install Live or install Live to a new location, you will need to install ClyphX Pro again. It's recommended that you keep the ClyphX Pro Setup files on hand for such cases.

Once installation is complete, please launch Live to complete setup.

Live Settings

The following settings will be found in Live's Preferences on the *Link/MIDI* tab.

1. Select *ClyphX Pro* as a **Control Surface**.
2. Leave the **Input** and **Output** set to *None* for now.

NOTE: *ClyphX should **not** be selected as a Control Surface when using ClyphX Pro.*

Documentation

In addition to this user manual, Live Lessons including example Sets are also provided. After installing ClyphX Pro, you can access the Lessons using the following steps:

1. Show Help View by selecting *Help View* from Live's Help menu.
2. Click the home button (rightmost button at the top of Help View) to return to the front page of Help View.
3. Scroll down to the bottom of Help View and click the *Show all built-in lessons* link to show the Table of Contents.
4. Scroll down to the bottom of the Table of Contents and you'll find the ClyphX Pro Lessons.

Next Steps

After completing installation and setup, you should verify that ClyphX Pro is working correctly. The first indicator that ClyphX Pro is working correctly is that you'll see a colored ring around the selected Clip Slot in Live. If you don't see this, please double-check that you've completed the steps listed above.

If you do see the colored ring, add a Clip to your Live Set and name it *[TEST] METRO*. Then launch this Clip and it should toggle the state of the Metronome. If so, everything is working and you can get started using ClyphX Pro in more interesting ways. However, before doing so it is recommended that you familiarize yourself with the Core Concepts of ClyphX Pro.

3 CORE CONCEPTS

ClyphX Pro is a deceptively simple scripting language for music producers and performers who use Ableton Live that allows for easy control and manipulation of virtually every aspect of a Live Set in highly useful and interesting ways.

At the heart of ClyphX Pro is its extensive list of Actions. Actions produce changes in Live and are associated with simple words or phrases. For examples, `BPM 100` will set the Tempo of the Set to 100 and `LOADDEV "Auto Filter"` will load Auto Filter onto the selected Track. Actions are specified in Action Lists, which are described below.

Action Lists are triggered by X-Triggers, which are events (such as a Clip being launched or a button on a controller being pressed) that occur in Live. So, the basic idea here is that you'll use X-Triggers to trigger Action Lists, which are comprised of Actions.

ClyphX Pro also includes a component called *Macrobat* that adds new functionality to Racks. This component is covered in its own manual, which is provided along with ClyphX Pro.

Action Lists

An Action List is comprised of one or more Actions. As an example, a simple Action List might toggle Session Record: `SREC`. A more complex Action List might mute Tracks 1 and 4, arm Track 2 and turn on the first Device on Track 2: `1, 4/MUTE ON ; 2/ARM ON ; 2/DEV(1) ON`

When specifying an Action List, each Action should be separated by a semicolon (`;`) as shown in the second example above.

The Actions in an Action List are performed sequentially (first action performed, then second action, etc), but the processing is nearly instantaneous, so it appears that all Actions in an Action List are performed at the same time.

On a related note, Actions that apply to selected items (such as a Track) will apply to the item selected at the time the Action List was processed as opposed to items that become selected as part of the same Action List. If you'd like an Action List to select an item and then apply to the item that was selected, you can use the `WAIT` Action after the selection Action.

It's also possible to step through an Action List and trigger each Action one at a time each time the Action List is triggered. To accomplish this, the Action List should be preceded by `(PSEQ)`. For example: `(PSEQ) 1/ARM ; 2/ARM ; 3/ARM`

In this example, the first time the Action List is triggered, Track 1 will be Armed. The second time, Track 2 will be Armed. The third time, Track 3 will be Armed. The fourth time, it will wrap back around to be beginning and Track 1 will be disarmed.

You can alternatively use `(RPSEQ)` instead of `(PSEQ)` to step through the Action List randomly.

In the rest of this document, we'll use `CAPITAL LETTERS` when referring to Action Lists. However, Action Lists are **not** case-sensitive. You can use capitalization that is comfortable for you. There is just one exception to this. Names specified within quotes **are** case-sensitive. So, for example, "My Name" is not the same as "my name".

Identifiers

Some of the X-Triggers (described below) require an Identifier at the beginning of their name before their Action List. For example, in the case of X-Clips (described below), the Identifier is what distinguishes an X-Clip from a regular Clip. An Identifier is any word or phrase enclosed in square brackets. As an example:

`[THIS IS AN IDENTIFIER]`

X-Triggers

X-Triggers are events that occur in Live that can, in turn, trigger Action Lists. There are currently six types of X-Triggers.

Startup Actions

This is an event that occurs each time a Live Set is loaded. The Action List it should trigger is specified in *Preferences.txt*.

X-Cues

An X-Cue is any Locator in Arrangement View that includes an Identifier (described above) and an Action List. An X-Cue will trigger its Action List when the playhead crosses over the X-Cue. Its Action List will **not** be triggered when the X-Cue to jumped to, only when the playhead crosses over it.

X-Clips

An X-Clip is any Clip in Session View that includes an Identifier (described above) and an Action List. There are several types of X-Clips:

Default

Example: `[IDENT] 3/CLIP SEMI > ; 3/CLIP CENT -25`

This X-Clip will trigger its Action List when the X-Clip starts playing (not when it's launched). This way, its Action List can be quantized via Global or Launch Quantization.

Default with Stop

Example: `[IDENT] REC ON ; 1-2/ARM : UNARM ; REC OFF`

This X-Clip has two Action Lists, that are separated by a colon (`:`). The first Action List will be triggered when the X-Clip is played. The second Action List will be triggered when the X-Clip stops playing. To trigger the same Action List for play and stop, specify an asterisk (`*`) for the second Action List (for example `[IDENT] MUTE : *`).

LSEQ or RLSEQ

Example: `[IDENT] (LSEQ) 1/CLIP(2) CUE >1 ; 1/MUTE`

This X-Clip works similar to a `PSEQ` Action List except it will step through and trigger the Actions in its Action List one at a time each time the X-Clip Loops.

You can alternatively use `(RLSEQ)` instead of `(LSEQ)` to step through the Action List randomly.

X-Clip Notes:

- An X-Clip's Action List will not be triggered while the X-Clip is recording.

- If a Clip Action is triggered from the X-Clip that it's applied to, this could cause the Action to be triggered repeatedly. In general, it's recommended that you do not trigger Clip Actions from the X-Clip that the Actions will be applied to.

- Selection and navigation-related Actions may not work correctly when triggered from an X-Clip if Select on Launch is turned on in your Live Preferences.

X-Scenes

An X-Scene is any Scene in Session View that includes an Identifier and an Action List. An X-Scene will trigger its Action List upon the X-Scene being triggered.

X-Controls

An X-Control is a control on a MIDI controller. An X-Control will trigger its Action List upon the control sending an on message (a MIDI message with a value that is 33 or higher). It can optionally trigger a second Action List upon the control sending an off message (a MIDI message with a value of 32 or less).

You'll define controls on your controller to use as X-Controls in *X-Controls.txt*. Once that's done, you'll select your controller as the **Input** and (if the controller has LEDs that can be remotely controlled) **Output** of the ClyphX Pro Control Surface. If you'd like to use the controls on multiple controllers as X-Controls, you can use one or more of the XT Scripts. In the rest of this section, when we refer to ClyphX Pro, we mean either ClyphX Pro or one of the XT Scripts.

When using controllers with ClyphX Pro, you can keep other settings for your controller(s) in place. However, if the controller is used as the **Input** for another Control Surface, you will need to ensure that the other Control Surface is not set up to receive the same MIDI messages that you've configured for the controller in ClyphX Pro.

In addition, if the **Remote** switch is turned on for the controller, make sure that MIDI mappings in your Live Set do not use the same MIDI messages you've configured for the controller in ClyphX Pro.

Lastly, if the **Track** switch is turned on for the controller, the MIDI messages you've configured for the controller in ClyphX Pro cannot be used for recording data into MIDI Clips or for playing instruments.

X-OSC

An X-OSC is an OSC address. An X-OSC will trigger its Action List upon receiving an on value (a value that is not 0). It can optionally trigger a second Action List upon receiving an off value (a value of 0).

You'll define OSC addresses to use as X-OSCs in *X-OSC.txt*. By default, ClyphX Pro will receive OSC messages on port 7005. If need be, you can change this in *Preferences.txt*. In either case, the port your OSC addresses are sent on and the port that ClyphX Pro receives from need to be the same.

XT Scripts

Upon installing ClyphX Pro, five additional Control Surface scripts (*ClyphX_Pro_XTA – ClyphX_Pro_XTE*) will be installed. XT Scripts allow you to use the controls on additional MIDI controllers as X-Controls.

Each XT Script has its own *X-Controls.txt* file where you'll define the controls on the controller you're using with the XT Script to use as X-Controls. Once that's done, you should select the controller as the **Input** and (if the controller has LEDs that can be remotely controlled) **Output** of the XT Script.

***NOTE**: XT Scripts **must** be selected in Control Surface slots **beneath** ClyphX Pro in order for them to properly connect to ClyphX Pro.*

Max for Live

In addition to X-Triggers and XT Scripts, it's also possible to trigger ClyphX Pro Actions from Max for Live. The ClyphX Pro Live Lessons include an *Max for Live Integration* Lesson and an example Max for Live Device that demonstrates how this works. Additionally, the *Triggering Actions via Notes in a Clip* Lesson provides a Max for Live Device that allows ClyphX Pro Actions to be triggered via Notes in MIDI Clips.

Settings Folders/Files

ClyphX Pro includes a variety of optional settings files that can be found within its settings folder. This folder will be created upon selecting ClyphX Pro or one of the XT Scripts as a Control Surface in Live. You can find this folder (named *ClyphX_Pro*) in the *nativeKONTROL* directory within your User directory. This folder will contain the following files:

- *Macros.txt* – Contains Macro definitions.
- *MIDI Rack-SysEx.txt* – Contains SysEx messages for use with the Macrobat MIDI Rack.
- *Preferences.txt* – Contains general preference settings.
- *Script Linking.txt* – Contains settings related to Script Linking.
- *Variables.txt* – Contains Variable definitions.
- *X-Controls.txt* – Contains X-Control definitions.
- *X-OSC.txt* – Contains X-OSC definitions.

Additionally, if you've used any of the XT Scripts, you'll find a sub-folder for each XT Script (*XTA* for example) that includes an *X-Controls.txt* file that contains X-Control definitions for the XT Script.

***NOTE:** Settings files are plain text files that should be edited with an application that does **not** apply formatting. On Windows, Notepad is recommended. On OS X, TextEdit can be used but, in later versions of OS X, it may apply formatting. See here for information on how to disable that.*

Script Linking

ClyphX Pro allows you to link up to 6 Control Surface scripts together so that they will control groups of Tracks and/or Scene relative to each other. In order for a script to be linked, it needs to include a linkable component. Many of the scripts built into Live (such as Push or APC40) include such a component. In general, if a script has an associated colored border (with a fixed size) that surrounds the Tracks and Scenes it's controlling, it can be linked.

Script Linking-related settings can be made in *Script Linking.txt*.

Macros

Macros are Action Lists that are associated with user-specified names. Here is an example of a Macro:

```
$MY_MACRO$ = 1, 4/MUTE ON ; 2/ARM ON ; 2/DEV(1) ON
```

To trigger a Macro from an X-Trigger, you simply have to specify its name:

```
$MY_MACRO$
```

Macros are useful in the case of X-Clips, X-Cues and X-Scenes as Macros allow you to trigger long Action Lists via the short names you specified for them and thus you don't need to have X-Clips, X-Cues and X-Scenes with really long names that are difficult to edit.

Macros are also useful in the case of X-Controls and X-OSCs since Macros can be reassigned on the fly. So, you can assign a Macro to an X-Control or X-OSC and then reassign the Macro at will and thus change the Actions the X-Control or X-OSC triggers.

There are two ways to define Macros:

- You can define Macros in *Macros.txt*. Macros you define here will always be available in any Live Set.

- You can define Macros and reassign existing Macros from within Action Lists. Macros defined this way are temporary (only accessible to the current Live Set). Note, however, that Macro definitions/reassignments cannot be combined with other Actions. They should be the only Action in an Action List. The reason for this is that Macros *are* Action Lists themselves.

In both cases, the syntax is as shown in the example above. Also, as shown in the examples above, when defining, reassigning or using Macros, the Macro's name always needs to be enclosed in dollar signs ($).

Variables (Advanced)

This is an advanced concept that is really only useful in very rare circumstances. If you're not already familiar with the concept of Variables in other programming scenarios, you can safely skip this section.

Variables are values of some sort that are associated with user-specified names, which can be used in your Action Lists. Here is an example of a Variable:

```
%MY_VARIABLE% = 10
```

To use a Variable in an Action List, you simply have to specify its name:

```
%MY_VARIABLE%/MUTE
```

There are two ways to define Variables:

- You can define Variables in *Variables.txt*. Variables you define here will always be available to any Action List in any Live Set.

- You can define Variables and reassign existing Variables from within Action Lists. Variables defined/assigned this way are temporary (only accessible to the current Live Set). Also, Variables defined/assigned this way can only be assigned once within an Action List.

In both cases, the syntax is as shown in the example above. Also, as shown in the examples above, when defining, reassigning or using Variables, the Variable's name always needs to be enclosed in percent signs (%).

As far as values, Variables can be assigned to virtually any value or to any valid Python expression, but the value cannot include a semicolon (;). Also, Variables can access properties of a Live Set through an attribute named *song*. This attribute provides access to the majority of Live's API. For example, through it, you can access the name of the selected Track like so:

```
%MY_VARIABLE% = song.view.selected_track.name
```

To learn more about what you can access through *song*, see the LOM documentation, which covers a subset of the API (known as the LOM). Note, however, API paths and LOM paths are slightly different. This example demonstrates how to transpose LOM paths to API paths:

LOM: `live_set tracks 4 clip_slots 6`
API: `song.tracks[4].clip_slots[6]`

In addition to Variables you define, you also have access to builtin Variables. The following builtin Variables are available:

- **`BPM`** – The current Tempo of the Live Set in BPMs.
- **`TIME`** – The current date and time in the format of year-month-day hour:minute:second.

User Actions (Advanced)

This is an advanced concept that is really only useful to Python programmers. If you're not already familiar with Python, you can safely skip this section.

In addition to all of the Actions you can access with ClyphX Pro, you can also create your own User Actions that function just like builtin Actions. User Actions are created in the following location:

On **Windows**:
ProgramData\Ableton\Live x\Resources\MIDI Remote Scripts\ClyphX_Pro\clyphx_pro\user_actions

On **OS X**, go to Applications, find *Live.app* or *Ableton Live x.app*, Control-click or right click on it and select S*how Package Contents* and then go to:
Contents/App-Resources/MIDI Remote Scripts/ClyphX_Pro/clyphx_pro/user_actions

In that location, you'll find a file name *ExampleActions.py* that includes instructions and examples on how to create User Actions. Although it is possible to edit/view this file with any text editor, it is recommended that you use an IDE when creating User Actions.

4 ACTION REFERENCE

The following sections provide information on all of the Actions that are available in ClyphX Pro.

Global Actions

The following Actions allow you to control Live Set-wide properties and functions as well as access internal ClyphX Pro features.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
ADDAUDIO	Create an Audio Track to the right of the selected Track.	-
ADDAUDIO X	Create an Audio Track where **X** is the Track number of the new Track. Specify -1 to create the Track at the end of the Track list.	`ADDAUDIO 5`, `ADDAUDIO -1`
ADDMIDI	Create a MIDI Track to the right of the selected Track.	-
ADDMIDI X	Create a MIDI Track where **X** is the Track number of the new Track. Specify -1 to create the Track at the end of the Track list.	`ADDMIDI 10`, `ADDMIDI -1`
ADDRETURN	Create a Return Track at the end of the Return list.	-
B2A	Back to Arrangement.	-
BIND i X	*(For use with the optional ClyphX Pro Bindings Accessory)* Bind the control named **i** to **X**.	`BIND MY_BUTTON SELP`, `BIND MY_KNOB SEL/VOL`
BOUNDP X	*(For use with the optional ClyphX Pro Bindings Accessory)* Adjust the value of the last parameter that was adjusted via the Bindings Accessory. This is a Continuous Parameter.	`BOUNDP 100`, `BOUNDP RND`
BPM X	Adjust Tempo. This is a Quasi Continuous Parameter.	`BPM 100`, `BPM 85.53`, `BPM >`
CAP	*(Live 10 only)* Trigger Capture.	-
DEBUG	Activate debugging mode, which causes ClyphX Pro to log events as they occur to assist in Troubleshooting.	-
DRAW	Toggle, turn on or turn off Draw Mode.	`DRAW`, `DRAW ON`, `DRAW OFF`
DUMMY or **D**	This Action does nothing. This is intended for use with PSEQ Action Lists as well as LSEQ and Default with Stop X-Clips.	-
FOLLOW	Toggle, turn on or turn off Follow.	`FOLLOW`, `FOLLOW ON`, `FOLLOW OFF`
FULLVELO	Toggle, turn on or turn off Full Velocity. When on, notes send from the controller selected as the Input of the ClyphX Pro Control Surface will have full velocity (127).	`FULLVELO`, `FULLVELO ON`, `FULLVELO OFF`
GQ	Toggle Global Quantization value between None and the last value.	-
GQ X	Adjust Global Quantization. This is an Adjustable Property.	`GQ NONE`, `GQ 8 BARS`, `GQ >`
GRV X	Adjust Global Groove Amount. This is a Quasi Continuous Parameter.	`GRV 50`, `GRV 0`, `GRV >`
INSAUDIO or **INSMIDI**	Insert an Audio or MIDI Track to the right of the selected Track that will be armed and routed from the selected Track. This will not perform an insertion if the selected Track is not the correct type. For example, if the selected Track doesn't have Audio output, `INSAUDIO` will do nothing.	`INSAUDIO`, `INSMIDI`
LOC X	**X** is the name of the Arrangement Locator to jump to.	`LOC "Verse 1"`
LOC < or **>**	Jump to the Prev/Next Arrangement Locator.	`LOC <`, `LOC >`
LOCLOOP X	**X** is the name of the Arrangement Locator to jump to. Also, the Arrangement Loop Start position will move to the position of this Locator.	`LOCLOOP "Hook"`
LOOP	Toggle, turn on or turn off Arrangement Loop.	`LOOP`, `LOOP ON`, `LOOP OFF`
LOOP X	**X** is the Arrangement Loop Length to set in Beats (specify `B` for Bars). If the Song is playing, this will move the Loop Start position to the current Playback Position. Alternatively, you can specify the name of an Arrangement Locator to move the end of the Arrangement Loop to the position of the named Locator.	`LOOP 4B`, `LOOP 16`, `LOOP "My Locator"`
LOOP *X	**X** is the value to multiply the Arrangement Loop Length by.	`LOOP *0.5`, `LOOP *2`
LOOP < or **>**	Move the Arrangement Loop Backward/Forward by its length.	`LOOP <`, `LOOP >`
LOOP <X or **>X**	Move the Arrangement Loop Backward/Forward by **X** Beats (specify `B` for Bars).	`LOOP <4`, `LOOP >16`, `LOOP >8B`
LOOP RESET	Reset Arrangement Loop Start position to 1.1.1.	-
LOOP START X	**X** is the Arrangement Loop Start position to set in Bars.Beats.Sixteenths. Alternatively, you can specify the name of an Arrangement Locator to move the Arrangement Loop Start position to the position of the named Locator.	`LOOP START 4.1.1`, `LOOP START 1.1.1`, `LOOP START "My Locator"`
METRO	Toggle, turn on or turn off Metronome.	`METRO`, `METRO ON`, `METRO OFF`

MSG	Show a message in Live's Status Bar. By default, this will show the message in lower case. If you'd like capitalization to be preserved, use quotes.	`MSG HELLO WORLD,` `MSG "Preserve Caps"`
OVER	Toggle, turn on or turn off Arrangement Overdub.	`OVER, OVER ON, OVER OFF`
PIN	Toggle, turn on or turn off Punch In.	`PIN, PIN ON, PIN OFF`
POUT	Toggle, turn on or turn off Punch Out.	`POUT, POUT ON, POUT OFF`
PSEQ RESET	Reset all PSEQ Action Lists so that they start back at their beginning.	-
PSEQ RESET X	**X** is the Identifier of the PSEQ Action List to reset.	`PSEQ RESET MY PSEQ`
REC	Toggle, turn on or turn off Arrangement Record.	`REC, REC ON, REC OFF`
REINIT	Reinitialize all Macros and Variables to their initial states. This will cause the related files to be re-read allowing you to modify the files, trigger this Action and have the changes to the files immediately be applied.	-
REDO or **UNDO**	Redo or Undo.	`REDO, UNDO`
RESTART	Restart Arrangement to Position 1.1.1.	-
RQ	Toggle Record Quantization value between None and the last value.	-
RQ X	Adjust Record Quantization. This is an Adjustable Property.	`RQ NONE, RQ 1/4, RQ >`
RPT	Toggle Note Repeat on/off. [1]	-
RPT X	**X** is the Note Repeat rate to set. [1]	`RPT OFF, RPT 1/4, RPT 1/32T`
RTRIG	Retrigger all Clips that are currently recording.	-
SATM	Toggle, turn on or turn off Automation Arm.	`SATM, SATM ON, SATM OFF`
SATMR	Re-enable automation that has been overridden.	-
SELP X	Adjust the value of the selected parameter. This is a Continuous Parameter.	`SELP 100, SELP >`
SETCONT	Continue playback from the last stop point. This is only useful when triggered from an X-Control or X-OSC.	-
SETJUMP X	**X** is the Arrangement Playback Position to jump to in Bars.Beats.Sixteenths.	`SETJUMP 8.1.1`
SETJUMP < or **>**	Jump the Arrangement's Playback Position Backward/Forward by 1 Beat.	`SETJUMP <, SETJUMP >`
SETJUMP <X or **>X**	Jump the Arrangement's Playback Position Backward/Forward by **X** Beats (specify `B` for Bars).	`SETJUMP <4B,` `SETJUMP >16`
SETLOC	Add a Locator at the current Arrangement position or, if a Locator already exists at the position, delete the Locator.	-
SETPLAY	Toggle, turn on or turn off playback.	`SETPLAY, SETPLAY ON, SETPLAY OFF`
SETSTOP	Stop playback. This will actually toggle playback state, so it can be used to start/stop playback when triggered from an X-Control or X-OSC.	-
SIG X/y	**X** is the Time Signature Numerator and **y** is the Denominator.	`SIG 4/4, SIG 6/8`
SREC	Toggle, turn on or turn off Session Record.	`SREC, SREC ON, SREC OFF`
SRECFIX X	Trigger fixed-length Session Record on all armed Tracks where **X** is the length to record in Bars.	`SRECFIX 4,` `SRECFIX 16`
STOPALL	Stop all Clips.	-
STOPALL NQ	Stop all Clips immediately (not quantized).	-
SWING X	Adjust the Swing amount (in the range of 0 - 100) to apply to Note Repeat (`RPT`). This is a Quasi Continuous Parameter.	`SWING 50,` `SWING >`
TAPBPM	Tap Tempo.	-
TIME	Display the amount of time spent (in the format of hours:minutes:seconds) in Live's Status Bar since the current Live Set was loaded.	-
WAIT X	**X** is the amount of time (in hundreds of milliseconds) to wait before proceeding to the next Action in the Action List. This cannot be used in PSEQ Action Lists or LSEQ X-Clips.	`WAIT 2,` `WAIT 10`
WAITS X	Same as above except **X** is the amount of time in Beats (specify `B` for Bars) to wait.	`WAITS 2B,` `WAITS 8`

[1] The `RPT` Actions require that a controller be selected as the Input of the ClyphX Pro Control Surface and that its Track switch be turned on. When `RPT` is on, notes sent from the controller will produce a consistent stream of rhythmic notes at the specified rate. Additionally, the available Note Repeat rates are as follows: OFF, 1/4D, 1/4, 1/4T, 1/8D, 1/8, 1/8T, 1/16D, 1/16, 1/16T, 1/32D, 1/32, 1/32T, 1/64D, 1/64, 1/64T (where 'D' stands for dotted and 'T' stands for triplet).

Scene Actions

The following Actions allow you to manipulate and Launch Scenes in various ways. Unless otherwise noted, if no Scene number or name is specified, these Actions will apply to the selected Scene or, when triggered by an X-Clip, the Scene the X-Clip is on. Alternatively, you can specify the Scene to apply the Actions to by Scene number, name, SEL for the selected Scene or LAST for the last Scene.

In the case of the Launch-related Actions, these will not allow an X-Clip to Launch the Scene it resides on as that would cause a feedback loop. If you're using an X-Clip and need to Launch Clips on the same Scene as the X-Clip, you can use a Track Action (like ALL/PLAY).

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
ADDSCENE	Create a Scene below the selected Scene. [1]	-
ADDSCENE X	Create a Scene where **X** is the Scene number of the new Scene. Specify -1 to create the Scene at the end of the Scene list. [1]	ADDSCENE 10, ADDSCENE -1
CAPSCENE	Trigger Live's Capture and Insert Scene function.	-
SCENE X	**X** is the Scene to Launch.	SCENE 10, SCENE SEL, SCENE "My Scene"
SCENE < or **>**	Launch the Prev/Next Scene relative to the last launched Scene.	SCENE <, SCENE >
SCENE <X or **>X**	Launch the Scene that is **X**-Scenes prior to or after the last launched Scene.	SCENE <5, SCENE >3
SCENE COLOR X	**X** is the index of the Color (in the range of 1 - 60 for Live 9 or 1 - 70 for Live 10) to set the Scene to.	SCENE COLOR 5, SCENE 10 COLOR 43, SCENE "My Scene" COLOR 60, SCENE SEL COLOR 25
SCENE COLOR < or **>**	Select the Prev/Next Color for the Scene.	SCENE COLOR <, SCENE 10 COLOR >, SCENE "My Scene" COLOR <, SCENE SEL COLOR >
SCENE DEL	Delete the Scene. It is not possible to Delete a Scene if it's the only Scene in the Set. [1]	SCENE DEL, SCENE LAST DEL, SCENE "My Scene" DEL, SCENE SEL DEL
SCENE DUPE	Duplicate the Scene. [1]	SCENE DUPE, SCENE 10 DUPE, SCENE "My Scene" DUPE, SCENE SEL DUPE
SCENE NAME X	**X** is the new name for the Scene.	SCENE NAME "Verse", SCENE 10 NAME "Hook", SCENE SEL DUPE "Bridge"
SCENE NAMEA X	Similar to SCENE NAME, but adds **x** after the current name.	SCENE NAMEA "Alt"
SCENE NAMEP X	Similar to SCENE NAME, but adds **x** before the current name.	SCENE NAMEP "My Song"
SCENE NAMED i X	Same as SCENE NAME, but **i** is the new Identifier of the Scene. A timestamp will be added to the Identifier in order to make the Identifier unique for use in Snap Actions.	SCENE NAMED [My Snap] "ALL/SNAP"
SCENE RND	Launch a randomly selected Scene.	-
SCENE RNDX-Y	Launch a randomly selected Scene in the range of **X-Y** (where both **X** and **Y** are in the range of 1 - the number of Scenes in the Set).	SCENE RND5-10, SCENE RND96-142
SCENE SEL	Select the Scene.	SCENE 10, SCENE "My Scene"

[1] When these Actions are triggered via an X-Clip, the X-Clip will be stopped to prevent the Actions from being retriggered.

Navigation and View Actions

The following Actions allow you to navigate a Live Set and control views.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
DEVFIRST or **DEVLAST**	Move to the First or Last Device on the selected Track.	`DEVFIRST, DEVLAST`
DEVLEFT or **DEVRIGHT**	Move Left or Right between Devices on the selected Track.	`DEVLEFT, DEVRIGHT`
FOCBRWSR	Move the Focus to the Browser and show the Browser if it isn't visible.	-
FOCDETAIL	Move the Focus to Detail View and show Detail View if it isn't visible.	-
FOCMAIN	Move the Focus to the Main Focus.	-

HZOOM X or **VZOOM X**	Horizontally or vertically zoom in or out in Arrangement View where **X** is the number of times to zoom. Positive numbers zoom in, negative numbers zoom out. For vertical zooming, you can also include the word `ALL`, which will cause all Tracks to be vertically zoomed instead of just the selected Track.	`HZOOM 1, HZOOM -10,`
		`VZOOM 10, VZOOM -1,`
		`VZOOM ALL-5`

LEFT or **RIGHT** or **UP** or **DOWN**	Move Left or Right or Up or Down in Session or Arrangement View.	`LEFT, RIGHT,` `UP, DOWN`
SHOWCLIP	Show Clip View.	-
SHOWDETAIL	Toggle between showing and hiding Detail View.	-
SHOWDEV	Show Track View.	-
TGLBRWSR	Toggle the Browser and move the Focus to it or the Main Focus.	-
TGLDETAIL	Toggle between Clip and Track View.	-
TGLMAIN	Toggle between Session and Arrangement View.	-

Browser Actions

The following Actions allow you to load items from Live's Browser and control hotswapping. In all cases, only items that exist in the root folders of the Browser (listed in the CATEGORIES section of the Browser) can be loaded/swapped. Also, when specifying the name of an item, the name should be exactly as it appears in the Browser.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
LOADCLIP X	**X** is the name of the Clip (from the Clips category) to load. This will create a new Track.	`LOADCLIP "01_DemonChoir.alc",` `LOADCLIP "2+2=4.alc"`
LOADDEV X	**X** is the name of the native Live Device to load onto the selected Track.	`LOADDEV "Amp",` `LOADDEV "Auto Filter"`
LOADDRUMS X	**X** is the name of the item (from the Drums category) to load onto the selected Track.	`LOADDRUMS "Analog Bully Kit.adg",` `LOADDRUMS "A-Ping Ride 1.aif"`
LOADM4L X	**X** the name of the M4L Device to load onto the selected Track.	`LOADM4L "LFO.amxd",` `LOADM4L "Max Cutkiller.amxd"`
LOADPACK X	**X** is the name of the item (from the Packs category) to load.	`LOADPACK "HHat2.aif",` `LOADPACK "Drums On Song 1.alc"`
LOADPLUG X	**X** is the name of the Plug-in (from the Plug-ins category) to load onto the selected Track.	`LOADPLUG "Diva",` `LOADPLUG "Transient Master"`
LOADSAMPLE X	**X** is the name of the Sample (from the Samples category) to load into a Simpler Device on the selected Track.	`LOADSAMPLE "Junk Mail1.aif",` `LOADSAMPLE "Mama Slug.aif"`
LOADSOUND X	**X** is the name of the Sound (from the Sounds category) to load onto the selected Track.	`LOADSOUND "2020 Bass.adv",` `LOADSOUND "Once Beaten.adg"`
LOADUSER X	**X** is the name of the item (from the User Library category) to load.	`LOADPACK "My Rack.adg",` `LOADPACK "My Clip.alc"`
SWAP	Open the Browser and activate hotswapping for the selected native Live Device.	-
SWAP X	**X** is the name of the Preset to hotswap into the selected native Live Device.	`SWAP "Bass Roundup.adv",` `SWAP "Beat Morpher.adg"`
SWAP < or **>**	Swap to the Prev/Next Preset (with wrapping) for the selected native Live Device. Also, the navigation here is done alphabetically (sub-folders will be entered into alphabetically as well), so it won't necessarily line up with how you'd navigate in the Browser.	`SWAP <,` `SWAP >`

Midi Actions

The following Actions allow you to send MIDI messages to the MIDI port selected as the **Output** of the ClyphX Pro Control Surface. In all cases, the values used in these Actions should be entered in decimal (as opposed to hexadecimal).

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
MIDI x	x is the MIDI message (of any type/length) to send.	`MIDI 192 6,` `MIDI 240 1 2 3 4 247`
MIDI CC x y z	Send a MIDI Control Change message where x is the Channel (in the range of 1 - 16), y is the Control number (in the range of 0 - 127) and z is the Value (in the range of 0 - 127).	`MIDI CC 1 0 127,` `MIDI CC 16 10 127`
MIDI NOTE x y z	Send a MIDI Note message where x is the Channel (in the range of 1 - 16), y is the Note number (in the range of 0 - 127) and z is the Velocity (in the range of 0 - 127). This will send a Note message with virtually no length.	`MIDI NOTE 1 0 127,` `MIDI NOTE 16 10 127`
MIDI PC x y	Send a MIDI Program Change message where x is the Channel (in the range of 1 - 16) and y is the Value (in the range of 0 - 127).	`MIDI PC 1 0,` `MIDI PC 16 10`

Routing Options:

The MIDI data that these Actions send can be used in a variety of ways via several routing options:

Option A *(This is the only option usable with SysEx data in Live 9)*
MIDI data to external MIDI device. In order to accomplish this, select the external MIDI device as the **Output** of the ClyphX Pro Control Surface.

The next two options require a loopback device such as loopMIDI (Windows) or IAC (OS X).

Option B *(This is the recommended option, but is not compatible with SysEx data in Live 9)*
MIDI data to loopback device, re-routed back into Live as Track data. This option allows the MIDI data to be sent into MIDI Tracks in Live. From there, the data can be routed via the MIDI Track's output routing and/or recorded.

In order to accomplish this, select the loopback device as the **Output** of the ClyphX Pro Control Surface and turn the **Track** switch on for the loopback device's input.

For any MIDI Tracks you wish to use this with, leave the Track's input set to *All Ins* or choose the loopback device as the input, leave the Track's input channel set to *All Channels* and Arm the Track or set its Monitor to *In*.

Option C
MIDI data to loopback device, re-routed back into Live as Remote data. This option allows the MIDI data to be sent back into Live as Remote data (for MIDI mapping parameters).

In order to accomplish this, select the loopback device as the **Output** of the ClyphX Pro Control Surface and turn the **Remote** switch on for the loopback device's input.

Track Actions

The following Actions are Track-based Actions that allow you to control parameters, properties and functions of Tracks.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
ADDCLIP	Create a 1 Bar MIDI Clip in the selected Clip Slot on the Track.	-
ADDCLIP X	**X** is the Scene number of the Clip Slot where a 1 Bar MIDI Clip will be created. Specify `SEL` for the selected Scene or `LAST` for the last Scene.	`ADDCLIP 10`, `ADDCLIP SEL`
ADDCLIP X y	**X** is the Scene number of the Clip Slot where a MIDI Clip will be created that is **y** Bars long. Specify `SEL` for the selected Scene or `LAST` for the last Scene.	`ADDCLIP 10 4`, `ADDCLIP SEL 0.25`
ARM	Toggle, turn on or turn off Track Arm. [1]	`ARM, ARM ON, ARM OFF`
COLOR X	**X** is the index of the Color (in the range of 1 - 60 for Live 9 or 1 - 70 for Live 10) to set the Track to.	`COLOR 5`, `COLOR 43`
COLOR < or **>**	Select the Prev/Next Color for the Track.	`COLOR <, COLOR >`
COPYCLIP X	**X** is the Scene number of the Clip Slot or the name of the Clip to copy for use with the `PASTECLIP` Action. Specify `SEL` for the selected Scene or `LAST` for the last Scene.	`COPYCLIP 10, COPYCLIP "My Clip"`, `COPYCLIP SEL`
CUE	Adjust Preview Volume (Master Track only). This is a Continuous Parameter.	`MST/CUE 50`, `MST/CUE >`
DEL	Delete the Track. It is not possible to Delete a Track if it's the only Track in the Set or if it's the Master Track.	-
DUPE	Duplicate the Track. Returns and the Master Track cannot be Duplicated.	-
FOLD	Toggle, turn on or turn off Track Fold.	`FOLD, FOLD ON, FOLD OFF`
IN X	Adjust Input Routing. This is an Adjustable Property.	`IN "Computer Keyboard, IN >`
INSUB X	Adjust Input Sub-Routing. This is an Adjustable Property.	`INSUB "Ch. 1", INSUB >`
JUMP < or **>**	Jump the Playback Position of the playing Clip on the Track Backward/Forward by 1 Beat.	`JUMP <`, `JUMP >`
JUMP <X or **>X**	Jump the Playback Position of the playing Clip on the Track Backward/Forward by **X** Beats (specify `B` for Bars).	`JUMP <4B`, `JUMP >16`
MON or **MON X**	Toggle Track Monitoring state or set a particular state where **X** is the state to set.	`MON`, `MON IN, MON AUTO, MON OFF`
MUTE	Toggle, turn on or turn off Track Mute.	`MUTE, MUTE ON, MUTE OFF`
NAME X	**X** is the new name for the Track.	`NAME "Bkg Vocals"`
NAMEA X	Similar to `NAME`, but adds **x** after the current name.	`NAMEA "Synth"`
NAMEP X	Similar to `NAME`, but adds **x** before the current name.	`NAMEP "Layer"`
OUT X	Adjust Output Routing. This is an Adjustable Property.	`OUT "To MT Player 1", OUT >`
OUTSUB X	Adjust Output Sub-Routing. This is an Adjustable Property.	`OUTSUB "Ch. 10", OUTSUB >`
PAN X	Adjust Track Pan. This is a Continuous Parameter.	`PAN 100, PAN >`
PASTECLIP X	**X** is the Scene number of the Clip Slot to paste into for use with the `COPYCLIP` Action. Specify `SEL` for the selected Scene or `LAST` for the last Scene.	`PASTECLIP 10`, `PASTECLIP SEL`
PLAY	When triggered via an X-Clip, Launch the Clip Slot on the same Scene as the X-Clip. Otherwise, re-Launch the playing Clip Slot or Launch the Clip Slot at the selected Scene.	-
PLAY X	**X** is the Scene number of the Clip Slot or the name of the Clip to Launch. Specify `SEL` for the selected Scene or `LAST` for the last Scene.	`PLAY 10, PLAY SEL`, `PLAY "My Clip"`
PLAY RND	Launch a Clip Slot at a randomly selected Scene.	-
PLAY RNDC	Launch a Clip at a randomly selected Scene. This will not launch empty Clip Slots and does not apply to Group Tracks.	-
PLAY RNDX-y	Launch a Clip Slot at a randomly selected Scene in the range of **X-y** (where both **X** and **y** are in the range of 1 - the number of Scenes in the Set).	`PLAY RND5-10, PLAY RND96-142`
PLAY < or **>**	Launch the Prev/Next Clip Slot relative to the playing Clip. This will not Launch empty Clip Slots and does not apply to Group Tracks.	`PLAY <, PLAY >`
PLAY <X or **>X**	Launch the Clip Slot that is **X**-Scenes prior to or after the playing Clip. This does not apply to Group Tracks.	`PLAY <5, PLAY >3`
PLAYL	Same as the `PLAY` Actions listed above, but Launches the Clip with Legato using the current Global Quantization value, does not apply to Group Tracks and will not launch empty Clip Slots.	`PLAYL "My Clip", PLAYL RND`, `PLAYL >`

PLAYQ	Same as the PLAY Actions listed above, but Launches the Clip using a specific quantization value (regardless of the current Global Quantization value or the Launch Quantization value of the Clip), does not apply to Group Tracks and will not launch empty Clip Slots.	`PLAYQ NONE "My Clip",`
		`PLAYQ 1 BAR RND,`
		`PLAYQ 1/4 >`

PLAYLQ	This is a combination of PLAYL and PLAYQ.	-
RECFIX x	Trigger fixed-length Session Record into the Clip Slot on the same Scene as the X-Clip or (for other X-Trigger types) the selected Scene where **X** is the length to record in Bars.	`RECFIX 4,` `RECFIX 16`
RECFIX X y	Same as above, but **y** is the Scene number of the Clip Slot to record into.	`RECFIX 2 5, RECFIX 16 10`
REMSTOP	Remove the Stop Button from the selected Clip Slot on the Track.	-
REMSTOP X	**X** is the Scene number of the Clip Slot whose Stop Button will be removed. Specify SEL for the selected Scene, LAST for the last Scene. or ALL for all Clip Slots.	`REMSTOP 10, REMSTOP SEL,` `REMSTOP ALL`
RENAMEALL	Rename all the Clips on the Track based on the Track's name.	-
RENAMEALL X	Rename all the Clips on the Track where **X** is the base name to use.	`RENAMEALL "Drums"`
SEL	Select the Track and highlight the playing Clip or the Clip at the selected Scene.	-

SEL X	Select the Track and a particular Clip Slot where **X** is the Scene number of the Clip Slot or the name of the Clip. Specify LAST for the last Scene or EMPTY to select the first empty Clip Slot on the Track.	`SEL 10,`
		`SEL "My Clip",`
		`SEL EMPTY`

SEND ltr X	**ltr** is the letter of the Track Send to adjust. Specify ALL to adjust all Track Sends. This is a Continuous Parameter.	`SEND A 50, SEND B >,` `SEND ALL RND`
SOLO	Toggle, turn on or turn off Track Solo. [1]	`SOLO, SOLO ON, SOLO OFF`
STOP	Stop the playing Clip on the Track.	-
STOP NQ	Stop the playing Clip on the Track immediately (not quantized).	-
VOL X	Adjust Track Volume. This is a Continuous Parameter.	`VOL 100, VOL >`
XFADE or **XFADE X**	Toggle Track Crossfade assignment or set a particular state where **X** is the state to set.	`XFADE,` `XFADE A, XFADE B, XFADE OFF`
XFADER X	Adjust Master Crossfader (Master Track only). This is a Continuous Parameter.	`MST/XFADER 50,` `MST/XFADER >`

[1] The ARM and SOLO Actions will not obey your Preference settings for Exclusive Arm and Solo. If you'd like to exclusively arm/solo a Track, you can first disarm/unsolo all Tracks. For example, to exclusively solo the selected Track: `ALL/SOLO OFF ; SEL/SOLO`

Device Actions

The following Actions are Track-based Actions that allow you to control parameters, properties and functions of Devices. By default, these Actions will apply to the Device selected on the Track. If no Device is selected, these Actions will apply to the first Device on the Track. You can apply these Actions to other Devices or to ranges of Devices as described here. However, unless a Device's name is specified, these will strictly apply to Devices that are not nested within Racks. You can apply these Actions to Devices that are nested within Racks by specifying the Device's name or as described here.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
DEV	Toggle, turn on or turn off Device On/Off switch.	`DEV, DEV ON, DEV OFF`
DEV X	**X** is the name of the Device parameter to adjust. This is a Continuous Parameter. [1]	`DEV "Frequency" RND,` `DEV "My Parameter" 100`
DEV Bn Pp X	Adjust Device Bank parameter 1 - 8 where **n** in the number of the bank and **p** in the number of the parameter within the bank to adjust. This is a Continuous Parameter. [1]	`DEV B1 P1 50,` `DEV B2 P1 >`
DEV CS X	Adjust Device Chain Selector value. This is a Continuous Parameter.	`DEV CS 50, DEV CS >`
DEV CSEL X	**X** is the number or name of the Device Chain to select.	`DEV CSEL 10, DEV CSEL "My Chain"`
DEV CSEL < or **>**	Navigate to the Prev/Next Device Chain.	`DEV CSEL <, DEV CSEL >`
DEV DEL	Delete the Device. Only top-level Devices (Devices that aren't nested within Racks) can be Deleted.	-
DEV DR SCROLL X	Adjust the Drum Rack's Selector. This is an Adjustable Property.	`DEV DR SCROLL 5, DEV DR SCROLL >`
DEV FOLD	Toggle, turn on or turn off Device Fold.	`DEV FOLD, DEV FOLD ON, DEV FOLD OFF`
DEV Pp X	Adjust Device Best-of-Bank parameter 1 - 8 where **p** in the number of the parameter (or Macro in the case of Racks) to adjust. This is a Continuous Parameter. [1]	`DEV P1 50,` `DEV P1 >`
DEV PRESET X	Adjust the preset selection of the Plug-in. Preset selection is only possible if the Plug-in's preset list is exposed (visible in the Plug-in's container in Live). This is an Adjustable Property.	`DEV PRESET >,` `DEV PRESET "Lead Synth"`
DEV RESET	Reset Device parameters. [2]	-
DEV RND	Randomize Device parameters. [2]	-
DEV SEL	Select the Device and bring the Track it is on into view. If the Device is nested in a Rack and is hidden, it cannot be selected.	-
DEV SET	This Action is only accessible to X-Clips and X-Scenes and should not be combined with other Actions. This will capture the values of the 8 Macros in a Rack and add them to the X-Clip/X-Scenes's name, thus creating a `DEV SET X` Action. Once the `DEV SET X` Action has been created, you can then combine it with other Actions if you like.	-
DEV SET X	**X** is a space-separated list of 8 Continuous Parameter values/keywords (except for `RAMP`) that will set the values of all 8 Macros in a Rack at once. You can alternatively specify `CUR` to leave a Macro's value unchanged.	`DEV SET 0 10 20 30 40 50 60 70,` `DEV SET 1 RND 3 > < 127 CUR <5`
DEV SHOWCH	Toggle, turn on or turn off the visibility of Devices on a Rack's Chains.	`DEV SHOWCH,` `DEV SHOWCH ON, DEV SHOWCH OFF`

[1] See the Device Parameter Reference and/or the Device Parameter Name Reference section of the ClyphX Pro Live Lessons for more information on the parameters of Live's builtin Devices. In the case of non-native Devices, the parameter names you should use are defined in the Device itself. For example, for a Plug-in Device, you can find its parameter names by clicking the *Unfold Device Parameters* button for the Plug-in.

[2] The `DEV RND` and `DEV RST` Actions will not affect Chain Selectors, on/off switches or multi-option controls (like a filter type chooser).

NOTES: *If the Device you're looking to control is not a native Live Device, Actions will only apply to the configured parameters of the Device.*

When it comes to controlling parameters, if the parameter is mapped to a Macro, the parameter cannot be controlled. You should control the Macro instead.

Simpler Actions

The following Actions are Track-based Actions that allow you to control parameters, properties and functions of Simpler. The Device to apply these Actions to can be specified in the same way as described in Device Actions.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
DEV SIMP BPM X	Halve or double the Tempo of the Sample.	`DEV SIMP BPM *0.5,` `DEV SIMP BPM *2`
DEV SIMP CLR	Clear all Slices when in Transient or Manual Slicing Mode.	-
DEV SIMP CROP	Crop the loaded Sample.	-
DEV SIMP DEL	Delete the selected Slice when in Transient or Manual Slicing Mode.	-
DEV SIMP END X	Adjust the Sampler's End Marker (in the range of 0 - 127). This is a Quasi Continuous Parameter.	`DEV SIMP END 100,` `DEV SIMP END >`
DEV SIMP GAIN X	Adjust the Sample's Gain value (in the range of 0 - 127). This is a Quasi Continuous Parameter.	`DEV SIMP GAIN 64,` `DEV SIMP GAIN >`
DEV SIMP GATE	Toggle, turn on or turn off Gate Trigger Mode.	`DEV SIMP GATE,` `DEV SIMP GATE ON, DEV SIMP GATE OFF`
DEV SIMP MULT X	Adjust the primary property of the current Slicing Mode. For Transient, this will adjust Sensitivity. For Beat, this will adjust Beat Division. For Region, this will adjust Regions. This is a Quasi Continuous Parameter, but because it applies to multiple properties of differing types, it's recommended that you primarily only use it for relative adjustments.	`DEV SIMP MULT <,` `DEV SIMP MULT >`
DEV SIMP NUDGE < or **>**	Nudge the selected slice Backwards or Forwards when in Transient or Manual Slicing Mode.	`DEV SIMP NUDGE <,` `DEV SIMP NUDGE >`

DEV SIMP PLAYMODE X	Toggle Playback Mode or set a particular Mode where **X** is the Mode to set.	`DEV SIMP PLAYMODE,`
		`DEV SIMP PLAYMODE CLASSIC,`
		`DEV SIMP PLAYMODE 1-SHOT,`
		`DEV SIMP PLAYMODE SLICE`

DEV SIMP PSLICE	Toggle, turn on or turn off Pad Slicing. When on, Slices can be created by playing notes on a MIDI controller (starting at C1) while the Sample is playing back.	`DEV SIMP PSLICE,`
		`DEV SIMP PSLICE ON,`
		`DEV SIMP PSLICE OFF`

DEV SIMP RESET	Reset all Slices back to their default positions when in Transient or Manual Slicing Mode.	-

DEV SIMP RETRIG	Toggle, turn on or turn off Retrigger.	`DEV SIMP RETRIG,`
		`DEV SIMP RETRIG ON,`
		`DEV SIMP RETRIG OFF`

DEV SIMP REV	Reverse the loaded Sample.	-

DEV SIMP SMODE X	Toggle Slicing Mode or set a particular Mode where **X** is the Mode to set.	`DEV SIMP SMODE,`
		`DEV SIMP SMODE TRANSIENT,`
		`DEV SIMP SMODE BEAT,`
		`DEV SIMP SMODE REGION,`
		`DEV SIMP SMODE MANUAL`

DEV SIMP SPLAYMODE X	Toggle Slice Playback Mode or set a particular Mode where **X** is the Mode to set.	`DEV SIMP SPLAYMODE,`
		`DEV SIMP SPLAYMODE MONO,`
		`DEV SIMP SPLAYMODE POLY,`
		`DEV SIMP SPLAYMODE THRU`

DEV SIMP START X	Adjust the Sample's Start Marker (in the range of 0 - 127). This is a Quasi Continuous Parameter.	`DEV SIMP START 4,` `DEV SIMP START >`
DEV SIMP TODR	Convert Simpler slices to a Drum Rack.	-
DEV SIMP WARP	Toggle, turn on or turn off Warping.	`DEV SIMP WARP,` `DEV SIMP WARP ON, DEV SIMP WARP OFF`
DEV SIMP WARP AS	Trigger Warp As.	-
DEV SIMP WARPMODE X	Adjust the Sample's Warp Mode. This is an Adjustable Property.	`DEV SIMP WARPMODE BEATS,` `DEV SIMP WARPMODE >`

Device Chain Actions

The following Actions are Track-based Actions that allow you to control parameters, properties and functions of Device Chains as well as Drum Rack Pads. The Device to apply these Actions to can be specified in the same way as described in Device Actions. By default, these Actions will apply to the Chain that is selected within the Device. You can apply these Actions to other Chains or to ranges of Chains as described here.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
DEV CH CHOKE X	Adjust Drum Rack Chain Choke Group. This is an Adjustable Property.	`DEV CH CHOKE 5, DEV CH CHOKE >`
DEV CH COLOR X	**X** is the index of the Color (in the range of 1 - 60 for Live 9 or 1 - 70 for Live 10) to set the Chain to.	`DEV CH COLOR 5, DEV CH COLOR 43`
DEV CH COLOR < or **>**	Select the Prev/Next Color for the Chain.	`DEV CH COLOR <, DEV CH COLOR >`
DEV CH MUTE	Toggle, turn on or turn off Chain Mute.	`DEV CH MUTE,` `DEV CH MUTE ON, DEV CH MUTE OFF`
DEV CH NOTE X	Adjust Drum Rack Chain Out Note (in the range of 0 - 127) allowing for transposition. This is a Quasi Continuous Parameter.	`DEV CH NOTE 60,` `DEV CH NOTE >`
DEV CH PAN X	Adjust Chain Pan. This is a Continuous Parameter.	`DEV CH PAN 100, DEV CH PAN >`
DEV CH SEND ltr X	**ltr** is the letter of the Chain Send to adjust. Specify `ALL` to adjust all Chain Sends. This is a Continuous Parameter.	`DEV CH SEND A 50, DEV CH SEND B >,` `DEV CH SEND ALL RND`
DEV CH SOLO	Toggle, turn on or turn off Chain Solo.	`DEV CH SOLO,` `DEV CH SOLO ON, DEV CH SOLO OFF`
DEV CH VOL X	Adjust Chain Volume. This is a Continuous Parameter.	`DEV CH VOL 100, DEV CH VOL`

NOTE: *If the Chain parameter you're looking to control is mapped to a Macro, the parameter cannot be controlled. You should control the Macro instead.*

Drum Pad Actions

Drum Pad Actions are just convenience Actions that allow you to apply Device Chain Actions to the visible Drum Pads in a Drum Rack. To use these Actions, simply replace the `CH` in the associated Device Chain Action with `DR PAD`. For example:

`DEV DR PAD MUTE`

When applying these Actions to ranges of Drum Pads, the range strictly applies to the visible Drum Pads in a Drum Rack. So, when using numbers, the numbers should be in the range of 1 – 16. And, when using the `ALL` keyword, these Actions will be applied just to the visible Drum Pads as opposed to all Drum Pads.

Snap Actions

The following Actions are Track-based Actions that allow you to store and recall Snapshots (Snaps) of Track and Device settings. Unlike other Actions, when using these Actions in an Action List, the Action List **must** be preceded by a unique Identifier (even in the case of X-Controls and X-OSCs, which normally don't require any sort of Identifier). The Identifier is used as the unique name for the Snap. Additionally, Snap Actions should always be the first (or only) Action in an Action List.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
RECALL	Recall the settings stored in a Snap immediately.	-
RECALL RAMP X	Recall the settings stored in a Snap with ramping where **X** is the ramp duration in hundreds of milliseconds.	`RECALL RAMP 5`, `RECALL RAMP 20`
RECALL RAMPS X	Recall the settings stored in a Snap with ramping synced to Live's playback where **X** is the ramp duration in Beats (specify `B` for Bars).	`RECALL RAMPS 4B`, `RECALL RAMPS 16`
SNAP	Store a Snap.	-
SNAPDEL X	Delete the Snap named **X**.	`SNAPDEL MY SNAP`
SNAPDELALL	Delete all Snaps stored within the Set. [1]	-
SNAPSHOW	Create a MIDI Track at the end of the Track list that contains an X-Clip for each Snap stored within the Set. [1]	

[1] These Actions are only usable with Snaps stored with ClyphX Pro v1.0.4 or later.

By default, the `SNAP` Action will store the Volume, Pan and Send settings of the Track as well as the settings of the first Device on the Track. It's possible to modify the settings that will be stored as we'll see shortly.

The `RECALL` Action will recall the Snap associated with the Identifier used when storing the Snap. This makes it possible to recall a Snap from multiple different X-Triggers. Each X-Trigger simply has to include the Identifier of the Snap. It's also possible to recall Snaps with morphing using the Macrobat Snap or Snap Alt Rack.

When the `SNAP` Action is triggered from an X-Clip or X-Scene, the name of the X-Clip/X-Scene will be updated such that the `SNAP` Action will be removed and replaced by the `RECALL` Action. This allows you to store and then recall Snaps without having to change anything in your X-Clip/X-Scene. You can achieve the same effect with X-Controls and X-OSCs as described here. Unfortunately, this is not possible with X-Cues. For that reason, it's recommended that you only use X-Cues for recalling (not storing) Snaps.

Snap Action Modifiers

You can use the following Modifiers with the `SNAP` Action to modify the settings that will be stored.

MODIFIER	DESCRIPTION	VARIATIONS/EXAMPLES
DEV(X)	**X** specifies the Device(s) whose settings should be stored. You can specify Devices as covered in Device Actions.	`SNAP DEV(ALL)`, `SNAP DEV("My Cool Device")`
DEV-	Do not store the settings of any Devices. Unless this is used, the settings of the first Device on the Track (at the very least) will be stored.	-
MIX	Store the Volume, Pan and Sends settings of the Track.	-
MIX+	Same as `MIX`, but also store Mute, Solo and Crossfade settings of the Track. You can opt to also store Arm and Monitoring status in *Preferences.txt*.	-
MIX-	Same as `MIX+`, but without Sends.	-
MIXS	Store the Sends settings of the Track.	-
PLAY	Store the playing status of the Track. This does not apply to Group Tracks, Return Tracks or the Master Track.	-

Multiple Modifiers can be used although you should not use more than one of the Mix Modifiers. For example, to store all of the Devices on Tracks 1-3 as well as settings stored by `MIX+`:

```
[MY SNAP] 1-3/SNAP DEV(ALL.ALL) MIX+
```

Snap Action General Notes

- A Snap recalled from an X-Clip can alternatively use the recall keyword enclosed in brackets at the end of the name of the Track the X-Clip is on. For example, you could name the Track something like this:
  `My Track [RAMPS 10]`

  That would cause all Snaps recalled from the Track to be recalled with the specified smoothing or (in the case of the RACK recall keyword) to be sent to the Macrobat Snap Alt Rack. However, any X-Clip on the Track that contains its own recall keyword will override the recall keyword specified in the Track name.

- A special reserved Identifier (LAST_SNAP) can be used with the RECALL Action to recall the last Snap that was stored or recalled. This would allow you to recall Snaps stored/recalled via X-Clips from a single X-Control (or other X-Trigger). Or, you could have several X-Triggers that all used the LAST_SNAP Identifier with each having a different recall keyword to allow Snaps to be recalled in different ways.

- Snaps are stored within your Live Set. After storing the Snap, the Live Set will be marked as changed so that you'll be prompted to save the Set if you try to close it after storing a Snap and before you've saved the Set.

- Snaps are stored based on the Identifier of the Action List containing them. You can overwrite a Snap by storing a new Snap using the Identifier associated with the Snap to overwrite.

- It may take a few moments to entirely recall Snaps of large numbers of Tracks and/or Devices.

- If you're attempting to take a Snap that would exceed the Snapshot Parameter Limit specified in *Preferences.txt*, an error message will be shown in Live's status bar.

Snap Action Settings Notes

- The settings for each Track are stored by the name of the Track. This allows you to add/remove/re-arrange Tracks without affecting your ability to recall Snaps you've stored. However, if multiple Tracks have the same name, only the first of these will apply in Snaps.

- The settings for each Device are stored by the Device's position on the Track. If Devices are added/removed/re-arranged, this may affect your ability to recall Snaps you've stored.

- Snaps store all of the exposed parameters of a Device. If the number of exposed parameters changes, which can occur with some of Live's native Devices when certain parts of the Device are turned on/off and can also occur with Plug-ins, this may affect your ability to recall Snaps you've stored.

- The mixer settings of the Chains of Racks will be stored along with the Rack itself.

Snap Legacy Action

This Action is quite similar to the standard Snap Actions, so please refer to that section for information on Snaps in general. In this section, we'll cover how this Action differs from the standard Snap Actions and why you might use it.

Snap Legacy Action General Notes

- Unlike the standard Snap Actions, this Action stores Snap data within the name of the X-Clip that triggered it. This has several implications: (a) **Only X-Clips** can use this Action. (b) This Action should **not** be used in Action Lists with other Actions. (c) Since the Snap data is stored within the name of the X-Clip itself, the X-Clip can be used in other Live Sets. This is the primary benefit of this Action.

- The Identifier that precedes this Action is not relevant and does not have to be unique. This has two implications: (a) You can create a bunch of X-Clips containing this Action without concerning yourself with unique Identifiers, which is preferable in certain use cases. (b) Since the Snap data is not associated with an Identifier, it **cannot** be used with the Macrobat Snap Rack. However, it **can** be used with the Macrobat Snap Alt Rack.

Storing Snaps

Storing Snaps with this Action is virtually identical to storing Snaps using the standard Snap Action and all of the Snap Action Modifiers can be used. The only difference is the name of the Action, which is `SNAPLEG`

Upon triggering this Action, a Snap will be stored in the name of the X-Clip. The name is not meant to be readable and will look something like this:

```
[IDENT] Recleg ||(dp0 w”1-MIDI” p1 (dp2 S'devices'
```

Once the Snap has been stored, you should **not** alter the name of the X-Clip except as is covered in the next section.

Recalling Snaps

Once a Snap has been stored by this Action, it will immediately be ready for recall. As with the standard Snap Actions, you have options in terms of how the Snap will be recalled. By default, it will be recalled immediately.

You can add the `RAMP x`, `RAMPS x` or `RACK` (for use with the Macrobat Snap Alt Rack) recall keywords after the word `Recleg` to recall the Snap with smoothing or morphing. For example:

```
[IDENT] Recleg RAMP 4||(dp0 w”1-MIDI” p1 (dp2 S'devices'
```

Clip Actions

The following Actions are Track-based Actions that allow you to control properties and functions of Clips. By default, these Actions will apply to the playing Clip or (if no Clip is playing) the selected Clip Slot on the Track. You can apply these Actions to other Clips or to ranges of Clips as described here.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
CLIP CENT X	Adjust Audio Clip Detune value. This is a Quasi Continuous Parameter.	`CLIP CENT -12, CLIP CENT >`
CLIP CHOP	Duplicate the Clip 8 times and set evenly distributed Start/Loop Start positions (starting from the Clip's current Start/Loop Start) across the duplicates. As with any duplication of a Clip, this will overwrite Clips that exist in the Clip Slots beneath the Clip that will be duplicated.	-
CLIP CHOP X	Same as `CLIP CHOP`, but X is the number of times to duplicate.	`CHOP 4, CHOP 16`
CLIP COLOR X	X is the index of the Color (in the range of 1 - 60 for Live 9 or 1 - 70 for Live 10) to set the Clip to.	`CLIP COLOR 5,` `CLIP COLOR 43`
CLIP COLOR < or **>**	Select the Prev/Next Color for the Clip.	`CLIP COLOR <, CLIP COLOR >`
CLIP COLOR ASCOL	Set the Color of the Clip to be the same as the column (Track) it's on.	-
CLIP COLOR ASROW	Set the Color of the Clip to be the same as the row (Scene) it's on.	-
CLIP CROP	*(Live 10 only)* Crop the Clip.	-
CLIP DEL	Delete the Clip.	-
CLIP DUPE	Duplicate the Clip.	-
CLIP END X	X is the Clip End to set in Bars.Beats.Sixteenths (for Clips that are Warped) or absolute beat time.	`CLIP END 1.4.1,` `CLIP END 16`
CLIP END < or **>**	Dec/Inc the Clip's End by 1 Beat.	`CLIP END <, CLIP END >`
CLIP END <X or **>**X	Dec/Inc the Clip's End by X Beats (specify `B` for Bars).	`CLIP END <2B, CLIP END >1`
CLIP EXTEND	Double the Loop Length of the MIDI Clip and duplicate its content. If Loop is on, this will zoom out to show the entire Loop.	-
CLIP GAIN X	Adjust Audio Clip Gain value (in the range of 0 - 127). This is a Quasi Continuous Parameter.	`CLIP GAIN 64, CLIP GAIN >`
CLIP GRID X	X is the fixed grid setting to apply to the Clip.	`CLIP GRID OFF, CLIP GRID 1/32`
CLIP MUTE	Toggle, turn on or turn off Clip Mute.	`CLIP MUTE,` `CLIP MUTE ON, CLIP MUTE OFF`
CLIP NAME X	X is the new name for the Clip.	`CLIP NAME "Drums"`
CLIP NAMEA X	Similar to `CLIP NAME`, but adds X after the current name.	`CLIP NAMEA "Alt"`
CLIP NAMEP X	Similar to `CLIP NAME`, but adds X before the current name.	`CLIP NAMEP "Sub"`
CLIP NAMED i X	Same as `CLIP NAME`, but i is the new Identifier of the Clip. A timestamp will be added to the Identifier in order to make the Identifier unique for use in Snap Actions. Action Lists containing this Action **must** contain an Identifier at the beginning of the Action List.	`CLIP NAMED [My Snap] "ALL/SNAP"`
CLIP NAMES X	Same as `CLIP NAME` except an Identifier for the Clip will be generated based on the name of the Track and Scene the Clip resides on to make the Identifier unique for use in Snap Actions.	`CLIP NAMES "ALL/SNAP"`
CLIP QNTZ X	X is the value to Quantize the Clip's Notes or Warp markers to.	`CLIP QNTZ 1/4, CLIP QNTZ 1/32`
CLIP QNTZ X y	Same as `CLIP QNTZ X`, but y is the Strength of quantization (in the range of 0 - 100) to apply.	`CLIP QNTZ 1/16 50,` `CLIP QNTZ 1/8 25`
CLIP QNTZ X y z	Same as `CLIP QNTZ X Y`, but z is the amount of Swing (in the range of 0 - 100) to apply.	`CLIP QNTZ 1/16 100 50,` `CLIP QNTZ 1/16 50 25`

CLIP QNTZ n X or
CLIP QNTZ n X y or
CLIP QNTZ n X y z
	Same as the `CLIP QNTZ` Actions listed above, but n is the Pitch name or Pitch range to Quantize. See Clip Note Actions for more info on how to specify Pitches to operate upon.	`CLIP QNTZ (C3) 1/8,`
		`CLIP QNTZ (D#4-C5) 1/32 50,`
		`CLIP QNTZ (E1) 1/16 50 25`

CLIP RAM	Toggle, turn on or turn off the Audio Clip's RAM mode switch.	`CLIP RAM, CLIP RAM ON, CLIP RAM OFF`
CLIP SEMI X	Adjust Audio Clip Transpose value. This is a Quasi Continuous Parameter.	`CLIP SEMI -12, CLIP SEMI >`
CLIP SIG X/y	X is the Time Signature Numerator and y is the Denominator.	`CLIP SIG 4/4, CLIP SIG 6/8`
CLIP SPLIT X	X is the length of the segments in Beats (specify `B` for Bars) to split a Clip into. This will duplicate the Clip and set each segment to be the specified length. As with any duplication of a Clip, this will overwrite Clips that exist in the Clip Slots beneath the Clip that will be duplicated.	`CLIP SPLIT 4,` `CLIP SPLIT 1B`
CLIP START X	Adjust Clip Start position. This is a Quasi Continuous Parameter.	`CLIP START 1.4.2, CLIP START 4,` `CLIP START >`

CLIP START <X or >X	Dec/Inc the Clip's Start by **X** Beats (specify **B** for Bars).	`CLIP START <2B, CLIP START >1`
CLIP TODR	Create a new MIDI Track with a Drum Rack containing the Audio Clip as well as any other Devices that were on the Clip's Track.	-

CLIP TOMIDI X	*(Live 10 only)* Convert the Audio Clip to a MIDI Clip where **X** is the type of conversion to perform.	`CLIP TOMIDI DRUMS,`
		`CLIP TOMIDI HARMONY,`
		`CLIP TOMIDI MELODY`

CLIP TOSIMP	Create a new MIDI Track with a Simpler device containing the Audio Clip as well as any other Devices that were on the Clip's Track.	-
CLIP TGRID	Toggle, turn on or turn off the Clip's triplet grid setting.	`CLIP TGRID, CLIP TGRID ON,` `CLIP TGRID OFF`
CLIP WARP	Toggle, turn on or turn off the Clip's Warp switch.	`CLIP WARP,` `CLIP WARP ON, CLIP WARP OFF`
CLIP WARPMODE X	Adjust Audio Clip Warp Mode. This is an Adjustable Property.	`CLIP WARPMODE BEATS, CLIP WARPMODE >`

Clip Loop Actions

The following Actions are all Track-based Actions that allow you to manipulate the Loop of a Clip in various ways. These Actions can be applied to Clips in the same as Clip Actions.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
CLIP LOOP	Toggle, turn on or turn off Clip Loop.	`CLIP LOOP, CLIP LOOP ON,` `CLIP LOOP OFF`
CLIP LOOP X	**X** is the Loop Length to set in Beats (specify **B** for Bars). If the Clip is playing, this will move the start of the Loop to the current Playback Position.	`CLIP LOOP 1, CLIP LOOP 5,` `CLIP LOOP 1B, CLIP LOOP 2B`
CLIP LOOP *X	**X** is the value to multiply the Loop Length by.	`CLIP LOOP *0.5, CLIP LOOP *2`
CLIP LOOP < or **>**	Move the Clip Loop Backward/Forward by its length.	`CLIP LOOP <, CLIP LOOP >`
CLIP LOOP <X or **>X**	Move the Clip Loop Backward/Forward by **X** Beats (specify **B** for Bars).	`CLIP LOOP <4, CLIP LOOP >16B`
CLIP LOOP END X	**X** is the Clip Loop End (or Clip End if Loop is off) to set in Bars.Beats.Sixteenths (for Clips that are Warped) or absolute beat time.	`CLIP LOOP END 1.4.1,` `CLIP LOOP END 16`
CLIP LOOP END < or **>**	Dec/Inc the Clip Loop End (or Clip End if Loop is off) by 1 Beat.	`CLIP LOOP END <, CLIP LOOP END >`
CLIP LOOP END <X or **>X**	Dec/Inc the Clip Loop End (or Clip End if Loop is off) by **X** Beats (specify **B** for Bars).	`CLIP LOOP END <2,` `CLIP LOOP END >4B`
CLIP LOOP RESET	Reset Clip Loop Start to 1.1.1 and Clip Loop End to Clip End Marker.	-
CLIP LOOP SHOW	Zoom in or out to show the Clip's entire Loop. This will do nothing if the Clip isn't visible or its Loop is off.	-

CLIP LOOP START X	Adjust Clip Loop Start (or Clip Start if Loop is off) position. This is a Quasi Continuous Parameter.	`CLIP LOOP START 1.4.2,`
		`CLIP LOOP START 4,`
		`CLIP LOOP START >`

CLIP LOOP START <X or **>X**	Dec/Inc the Clip Loop Start (or Clip End if Loop is off) by **X** Beats (specify **B** for Bars).	`CLIP LOOP START <2,` `CLIP LOOP START >4B`

Clip Cue Action

This Action sets the Cue point (position to play from) of the Clip. Upon triggering an X-Trigger with a Clip Cue Action, the specified Clip's Start and Loop Start (if Loop is on) will move to the specified Cue point. This is a Track-based Action and can be applied to Clips in the same way as Clip Actions.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
CLIP CUE X	**X** is the position of the Cue in Bars.Beat.Sixteenths.	`CLIP CUE 1.2.1, CLIP CUE 4.1.1`
CLIP CUE < or **>**	Move the Cue point Backward/Forward by 1 Beat.	`CLIP CUE <, CLIP CUE >`
CLIP CUE <X or **>X**	Move the Cue point Backward/Forward by **X** Beats (specify **B** for Bars).	`CLIP CUE <2, CLIP CUE >4B`

NOTE: *This Action will not work on Audio Clips that aren't Warped and will not work correctly with a Global or Launch Quantization of None.*

Clip Envelope Actions

The following Actions are all Track-based Actions that allow you to insert and manipulate the Envelopes of a Clip in various ways. These Actions can be applied to Clips in the same as Clip Actions.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
CLIP ENVCLR	Clear all Envelopes from the Clip.	-
CLIP ENVCLR X	X is the parameter associated with the Envelope to clear from the Clip.	`CLIP ENVCLR VOL,` `CLIP ENVCLR DEV B1 P6`
CLIP ENVCLRD DEV(X**)**	X is the Device(s) whose Envelopes should be cleared from the Clip. You can specify Devices as covered in Device Actions.	`CLIP ENVCLRD DEV(SEL),` `CLIP ENDVLRD DEV(2-4)`
CLIP ENVHIDE	Hide the Clip's Envelope view. This actually applies to all Clips.	-
CLIP ENVINS X	X is the parameter to insert a single point Envelope for in the Clip. This will first clear the parameter's Envelope if one exists.	`CLIP ENVINS VOL,` `CLIP ENVINS SEL`

CLIP ENVINS X y	Same as above, but insert a shaped Envelope where y is the type of Envelope to insert (the available types are listed below). This will first clear the parameter's Envelope if one exists.
	
	If the Clip is Looping, the Envelope will start and end within the Loop. Otherwise, the Envelope will span the entire length of the Clip.
	
	Shaped Envelopes can only be inserted for parameters that are not quantized. Examples of quantized parameters are an on/off switch or a filter type chooser.
		`CLIP ENVINS PAN SAW,`
		`CLIP ENVINS DEV P5 IRAMP,`
		`CLIP ENVINS SEND A DPYR,`
		`CLIP ENVINS SEL SQR`

CLIP ENVINS X y a b	Same as above except that a is the minimum value and b is the max value of the Envelope. These values are specified in terms of percentages (in the range of 0 - 100) of the parameter's max value. You can alternatively use CUR (the parameter's current value) as the minimum or max value.	`CLIP ENVINS PAN SAW 50 75,`
		`CLIP ENVINS DEV P5 IRAMP 0 10,`
		`CLIP ENVINS SEND A DPYR CUR 60,`
		`CLIP ENVINS SEL SQR 75 100`

CLIP ENVSHOW	Show the Clip's Envelope view. This actually applies to all Clips.	-

CLIP ENVSHOW X	X is the parameter associated with the Envelope to show in Envelope view.	`CLIP ENVSHOW VOL,`
		`CLIP ENVSHOW DEV B1 P6`
		`CLIP ENVSHOW SEL`

Specifying Parameters

To specify the parameter to insert an Envelope for, you can use the following:

- VOL – Track Volume
- PAN – Track Pan
- MUTE – Track Mute
- SEND ltr – Track Send where ltr is the letter of the Send (such as SEND C).
- SEL – The last parameter on the Track that was clicked on with your mouse.
- BOUND – *(For use with the optional ClyphX Pro Bindings Accessory)* The last parameter that was adjusted via the Bindings Accessory.

You can also insert an Envelope for the parameter of a Device. You'll specify the Device containing the parameter as covered in Device Actions (DEV(1) for example). Then, to specify the parameter to insert an Envelope for, you'll specify the parameter's name or DEV Bn Pp (DEV B2 P8 for example) or DEV Pp (DEV P5 for example), all of which work in the same way as they do in Device Actions.

Available Envelope Types:

- IRAMP – Linear increasing ramp.
- DRAMP – Linear decreasing ramp.
- IPYR – Linear increase until midpoint and then linear decrease.
- DPYR – Linear decrease until midpoint and then linear increase.
- SAW – Saw wave synced to 1/4 notes.
- SQR – Square wave synced to 1/4 notes.
- TRI – Triangle wave synced to 1/4 notes.

Clip Envelope Capture Action

This Action creates Envelopes in the Clip for the current settings of the associated Track's mixer and/or Devices. This is a Track-based Action and can be applied to Clips in the same way as Clip Actions.

The default Action name is `CLIP ENVCAP`. This will apply to the Volume, Pan and Sends settings of the associated Track. This also applies to the settings of the first Device on the associated Track.

You can modify the settings that the Action will capture by using optional words/numbers (Modifiers) in the Action Name.

MODIFIER	DESCRIPTION	VARIATIONS/EXAMPLES
DEV(X)	X specifies the Device(s) whose settings should be captured. You can specify Devices as covered in Device Actions.	`CLIP ENVCAP DEV(ALL),` `CLIP ENVCAP DEV("My Cool Device")`
MIX	Capture the Volume, Pan and Sends settings of the Track.	-
MIX-	Same as `MIX`, but without Sends.	-
MIXS	Store the Sends settings of the Track.	-

Multiple Modifiers can be used although you should not use more than one of the Mix Modifiers. For example, to capture the settings of all of the Devices on a Track as well as settings stored by `MIX-`:
`CLIP ENVCAP DEV(ALL.ALL) MIX-`

NOTES: *When creating Envelopes for a large number of parameters, Live's GUI may momentarily freeze. Also, the mixer settings of the Chains of Racks will be captured along with the Rack itself.*

Clip Note Actions

The following Actions are all Track-based Actions that allow you to manipulate the Notes within a Clip in various ways. These Actions can be applied to Clips in the same as Clip Actions.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
CLIP NOTES	Toggle, turn on or turn off the mute status of Notes.	`CLIP NOTES, CLIP NOTES ON, CLIP NOTES OFF`
CLIP NOTES CMB	Combine each set of two consecutive Notes into a single Note.	-
CLIP NOTES COMP	Compress the duration of Notes.	-
CLIP NOTES DEL	Delete Notes.	-
CLIP NOTES EXP	Expand the duration of Notes.	-
CLIP NOTES GATE < or **>**	Dec/Inc the length of Notes by one 128th Note.	`CLIP NOTES GATE <, CLIP NOTES GATE >`
CLIP NOTES GATE <X or **>X**	Dec/Inc the length of Notes by **X** 128th Notes.	`CLIP NOTES GATE <4, CLIP NOTES GATE >8`
CLIP NOTES INV	Invert the pitches of Notes.	-
CLIP NOTES NUDGE < or **>**	Nudge Notes Backward/Forward by one 128th Note.	`CLIP NOTES NUDGE <, CLIP NOTES NUDGE >`
CLIP NOTES NUDGE <X or **>X**	Nudge Notes Backward/Forward by **X** 128th Notes.	`CLIP NOTES NUDGE <4, CLIP NOTES NUDGE >8`
CLIP NOTES REV	Reverse the position of Notes.	-
CLIP NOTES SCRP	Scramble the position of Notes while maintaining pitches.	-
CLIP NOTES SEMI < or **>**	Transpose Notes up or down by 1 semitone.	`CLIP NOTES SEMI >, CLIP NOTES SEMI <`
CLIP NOTES SEMI <x or **>x**	Transpose Notes up or down by **X** semitones.	`CLIP NOTES SEMI >12, CLIP NOTES SEMI <4`
CLIP NOTES SPLIT	Split each Note into two equally sized Notes.	-
CLIP NOTES VELO X	**X** is the Note velocity to set.	`CLIP NOTES VELO 64, CLIP NOTES VELO 127`
CLIP NOTES VELO < or **>**	Dec/Inc the velocity of Notes by increment of 1.	`CLIP NOTES VELO <, CLIP NOTES VELO >`
CLIP NOTES VELO <X or **>X**	Dec/Inc the velocity of Notes by increment of **X**.	`CLIP NOTES VELO <5, CLIP NOTES VELO >10`
CLIP NOTES VELO << or **>>**	Apply a decrescendo (descending velocities) or a crescendo (ascending velocities) to Notes.	`CLIP NOTES VELO <<, CLIP NOTES VELO >>`
CLIP NOTES VELO RND	Randomize the velocity of Notes in the range of 64 - 127.	-
CLIP NOTES VELO RNDX-Y	Randomize the velocity of Notes in the range of **X-Y** (where both **X** and **Y** are in the range of 1 - 127).	`CLIP NOTES VELO RND1-32, CLIP NOTES VELO RND32-127`

By default, these Actions will apply to all the Notes in a MIDI Clip that fall within the Loop Start/End markers (if Loop is on) or the Start/End markers (if Loop is off). To operate only on Notes selected within the Clip, specify `SEL` enclosed in parentheses after the word `NOTES`. For example:

```
CLIP NOTES(SEL) SCRP
```

To operate just on a particular Pitch (or a range of Pitches), specify the name (or number) of the Pitch (or range) enclosed in parentheses after the word `NOTES`. For example:

```
CLIP NOTES(C#3) REV
CLIP NOTES(F4-F#5) VELO <<
CLIP NOTES(60) NUDGE >
```

To operate on Notes that fall on a particular time position (or a range of time positions) in the Clip, specify the position (or range) and use `@` as a prefix. For example:

```
CLIP NOTES @1.1.1 GATE >
CLIP NOTES @2.1.4-5.1.1 SPLIT
```

You can specify both a Pitch (or Pitch range) and a position (or position range) to operate on. For example: `CLIP NOTES(C3-F3) @2.1.1 DEL`

Control Surface Actions

The following Actions apply to Control Surface scripts that are selected in Live's Control Surface section (in Preferences on the *Link/MIDI* tab) where **N** is the name or number of the script to operate on.

When specifying a script by number, the numbering is based on the number of Control Surface scripts that are selected. For example, if only two scripts are selected, the second script will be 2 even if the script is selected in Control Surface slot #6.

When specifying a script by name, if the name appears to have spaces in it (such as *PXT Live*), the spaces should be replaced by underscores (such as *PXT_Live*). If multiple scripts with the same name are in use, it is recommended that you specify the number of the script instead of its name. In the case of User Remote Scripts, the (one-word) name specified for *InputName* in the script's *UserConfiguration* file is the name you should use when accessing the script by name.

Except where noted, these Actions will work with most of the Control Surface scripts built into Live (as well as User Remote Scripts and most user-created Framework scripts). However, they will not work with some of the legacy scripts such as the Mackie scripts and the Tranzport script.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
CS N X/ACTION NAME	Apply a Track-based Action to Channel Strip number **X**. [1]	`CS 1 1/MUTE, CS "APC40" 4/DEV RND, CS 3 8/CLIP SEMI >`
CS N X-Y/ACTION NAME	Apply a Track-based Action to a range of Channel Strips. You can use a range specification, but should strictly use Channel Strip numbers or `ALL` when specifying the range. [1]	`CS 1 1-4/FOLD, CS "Push" 4, 8/DEV, CS 3 ALL/CLIP START >`
CS N BANK < or **>**	Move the script's Track Bank selection Backward/Forward by increment of 1 Track and (if the script doesn't indicate the Track it's controlling) select the first Track in the new Bank selection. [1]	`CS 1 BANK <, CS "MPD32" BANK >`
CS N BANK <X or **>X**	Same as above except **X** is the increment to use. [1]	`CS 1 BANK <2, CS "MPD32" BANK >8`
CS N BANK LAST or **FIRST**	Move the script's Track Bank selection to the first or last Bank.	`CS 1 BANK FIRST, CS "MPD32" BANK LAST`
CS N COLORS X Y Z	Change the color of the Clip Launch LEDs where **X** is the color to use for playing Clips, **Y** is the color to use for recording Clips and **Z** is the color to use for stopped Clips. The available colors are: Amber, Green and Red. [4] This is a temporary change that will be reverted upon loading a Set.	`CS 1 COLORS RED AMBER GREEN, CS "APC20" COLORS GREEN RED AMBER`
CS N DEV BANK X	**X** is the number of the Bank of Device parameters to select. [2]	`CS 1 DEV BANK 2, CS "APC40" DEV BANK 5`
CS N DEV BANK < or **>**	Move to the Prev/Next Bank of Device parameters.	`CS 1 DV BANK >, CS "Push" DEV BANK <`
CS N DEV LOCK	Toggle the script's lock on Devices. [2]	`CS 1 DEV LOCK`
CS N FULLVELO	Toggle, turn on or turn off Full Velocity for the script. When on, notes send from the controller will have full velocity (127).	`CS 4 FULLVELO, CS 1 FULLVELO ON CS "Launchpad_Pro" FULLVELO OFF`
CS N RING TX SY	**X** is the name or number of the first Track outlined by the ring. **Y** is the name or number of the first Scene outlined by the ring. Only one of these has to be specified so that you can change the Scene offset without changing the Track offset and vice versa. [3]	`CS 1 RING T1 S20, CS "APC40" RING S"My Scene", CS 4 RING T5, CS "Push" RING T"My Track" S100`
CS N RING T< or **>** **S<** or **>**	Move the ring Backward/Forward by increment of 1 Track and/or 1 Scene. Only one of these has to be specified so that you can increment Tracks without incrementing Scenes and vice versa. [3]	`CS "APC40" RING T> S<, CS 1 RING T<, CS 1 RING T>, CS 4 RING S<, CS 4 RING S>`
CS N RING T<X or **>X** **S<X** or **>X**	Same as above except **X** is the increment to use. [3]	`CS "APC40" RING T>4 S<8, CS 1 RING T<2, CS 1 RING T>10`
CS N RING LAST	Move the ring back to the position it was at prior to triggering one of the Ring Actions described above. [3]	`CS "APC40" RING LAST, CS 1 RING LAST`

CS N RINGLINK T S	Cause the script's ring to be linked to the selected Track and/or Scene. Only one of these has to be specified so that you can link to Tracks without linking to Scenes and vice versa. You can also specify `CENTER`, which will cause the ring to be centered around the selected Track and/or Scene. [3]	`CS "APC40" RINGLINK T S,`
		`CS 1 RINGLINK T CENTER,`
		`CS "Push" RINGLINK S`

CS N RINGLINK OFF	Turn the script's ring linking off. [3]	`CS "APC40" RINGLINK OFF`
CS N RPT	Toggle Note Repeat on/off. [5]	`CS 1 RPT`
CS N RPT X	**X** is the Note Repeat rate to set. [5]	`CS 1 RPT OFF, CS "MPD32" RPT 1/4,` `CS 4 RPT 1/32T`

[1] Requires that the script has Channel Strip controls (like Volume, Pan, Mute, etc).

[2] Requires that the script has Device controls.

[3] Requires that the script has a grid selector (aka red ring). Also, in order for a Track to be outlined by the ring, the Track needs be visible. In other words, it isn't possible to move the ring to a Track that is inside of a Group Track that is closed.

[4] Only applies to the builtin APC20, APC40, APC mini and Launchpad scripts.

[5] Requires that the controller can send notes to MIDI Tracks and that its Track switch be turned on. When `RPT` is on, notes sent from the controller will produce a consistent stream of rhythmic notes at the specified rate. Additionally, the available Note Repeat rates are as follows: OFF, 1/4D, 1/4, 1/4T, 1/8D, 1/8, 1/8T, 1/16D, 1/16, 1/16T, 1/32D, 1/32, 1/32T, 1/64D, 1/64, 1/64T (where 'D' stands for dotted and 'T' stands for triplet). Swing can also be applied by using the `SWING` Actions covered in Global Actions.

DDC Actions

The following Actions apply to DDC Control Surface scripts where **N** is the number of the script to operate on. These all require that at least one DDC Control Surface script is selected as a Control Surface.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
DDC N LOCK	Lock to or unlock from the current Track.	`DDC 2 LOCK,` `DDC 5 LOCK`
DDC N PAGE X	Select the Page of mappings. This is an Adjustable Property.	`DDC 1 PAGE 4,` `DDC 3 PAGE >`

Arsenal Actions

The following Actions apply to Arsenal-powered Control Surface scripts where **N** is the name of the script to operate on. These all require that at least one Arsenal-powered Control Surface script is selected as a Control Surface.

In addition to the Actions listed here, the standard Control Surface Actions can also be applied to Arsenal-powered Control Surface scripts.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
ARSENAL N E_MODE X	Select Encoder Mode. This is an Adjustable Property. [1]	`ARSENAL AP2_A E_MODE 4,` `ARSENAL NLCX_C E_MODE >`
ARSENAL N LOCK	Lock to or unlock from the current Track.	`ARSENAL NK2_A LOCK,` `ARSENAL LP1_F LOCK`
ARSENAL N LOCK MODES	Toggle the Mode-specific lock function of any Modes that have such a function.	`ARSENAL NLCX_A LOCK MODES,` `ARSENAL NK1_F LOCK MODES`
ARSENAL N M_MODE X	Select Matrix Mode. This is an Adjustable Property. [2]	`ARSENAL AP4_A M_MODE 4,` `ARSENAL LPP_C M_MODE >`
ARSENAL N SCL	This Action is only accessible to X-Clips and X-Scenes and should not be combined with other Actions. This will capture the current Scale settings and store them in the X-Clip/X-Scene. Once settings have been stored, you can then add other Actions if you like or copy the stored settings and paste them into the Action List of other X-Trigger types. [3]	`ARSENAL LP2_A SCL,` `ARSENAL AP2_F SCL`

ARSENAL N SCL HORZ	Toggle, turn on of turn off the Horizontal Scale setting. [3]	`ARSENAL APM_A SCL HORZ,`
		`ARSENAL LPP_B SCL HORZ ON,`
		`ARSENAL PS1_F SCL HORZ OFF`

ARSENAL N SCL INKEY	Toggle, turn on or turn off the In Key Scale setting. [3]	`ARSENAL AP4_A SCL INKEY,`
		`ARSENAL APM_B SCL INKEY ON,`
		`ARSENAL LPP_F SCL INKEY OFF`

ARSENAL N SCL OFFSET X	Select the Scale Offset (the available offsets are listed below) to use. This is an Adjustable Property. [3]	`ARSENAL AP4_A SCL OFFSET SEQUENT,` `ARSENAL LPP_F SCL OFFSET >`
ARSENAL N SCL ROOT X	Select the Root Note (only natural and sharp note names are recognized) to use. This is an Adjustable Property. [3]	`ARSENAL LP1_A SCL ROOT C,` `ARSENAL AP2_F SCL ROOT >`

ARSENAL N SCL SEQ	Toggle, turn on or turn off the Sequent Layout Scale setting. [3]	`ARSENAL AP2_A SCL SEQ,`
		`ARSENAL APM_C SCL SEQ ON,`
		`ARSENAL LP1_F SCL SEQ OFF`

ARSENAL N SCL TYPE X	Select the Scale Type (the available types are listed below) to use. This is an Adjustable Property. [3]	`ARSENAL AP4_A SCL TYPE MAJOR,` `ARSENAL LPP_F SCL TYPE >`

[1] Requires that the script has Encoder Modes.

[2] Requires that the script has Matrix Modes.

[3] Requires that the script has at least one Matrix Mode that utilizes Scale settings (such as the Note, Note Plus, Scale or Scale Sequence Mode).

Available Scale Offsets:

Sequent, 2nds, 3rds, 4ths, 5ths, 6ths

Available Scale Types:

Major, Minor, Dorian, Mixolydian, Lydian, Phrygian, Locrian, Diminished, Whole-half, Whole Tone, Minor Blues, Minor Pentatonic, Major Pentatonic, Harmonic Minor, Melodic Minor, Super Locrian, Bhairav, Hungarian Minor, Minor Gypsy, Hirojoshi, In-Sen, Iwato, Kumoi, Pelog

Push Actions

The following Actions apply to the Push and Push2 Control Surface scripts. These all require that either Push or Push2 is selected as a Control Surface. By default, these Actions will apply to the last (or only) Push or Push2 Control Surface script selected in Live's Preferences. When working with more than one Push and/or Push2 Control Surface script, you can target them by specifying their number. For examples:

```
PUSH 1 MODE SESSION
PUSH 4 MSG "I am the 4th Push script"
```

In addition to the Actions listed here, the standard Control Surface Actions can also be applied to the Push and Push2 Control Surface scripts. However, with Push2, the RING-related Actions may produce undesirable results due to Push2's inclusion of Chain mixer settings alongside normal Track mixer settings.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
PUSH MODE X	**X** is the Push Mode to select. For the most part, these work in the same way they would work when pressing buttons on Push. So, for example, if you're in Device Mode, you can't select Stop Mode as it's not available when Device Mode is selected. [1]	PUSH MODE SESSION, PUSH MODE NOTE, PUSH MODE STOP, PUSH MODE SOLO, PUSH MODE MUTE, PUSH MODE VOLUME, PUSH MODE PAN, PUSH MODE TRACK, PUSH MODE CLIP, PUSH MODE DEVICE, PUSH MODE MIX, PUSH MODE 64PADS PUSH MODE USER, PUSH MODE LIVE
PUSH MSG	Temporarily show a message in Push's display. By default, this will show the message in lower case. If you'd like capitalization to be preserved, use quotes.	PUSH MSG TRIGGER THE VERSE IN 4 BARS, PUSH MSG "Preserve Caps"
PUSH PBMOD	Force the Touch Strip to enter its Pitch Bend/Mod Wheel Mode. This is particularly useful in Note Mode when controlling a Drum Rack.	-
PUSH SCL	This Action is only accessible to X-Clips and X-Scenes and should not be combined with other Actions. This will capture the current Scale settings and store them in the X-Clip/X-Scene. Once settings have been stored, you can then add other Actions if you like or copy the stored settings and paste them into the Action List of other X-Trigger types.	-
PUSH SCL FIXED	Toggle, turn on or turn off the Fixed Scale setting.	PUSH SCL FIXED, PUSH SCL FIXED ON, PUSH SCL FIXED OFF
PUSH SCL INKEY	Toggle, turn on or turn off the In Key setting.	PUSH SCL INKEY, PUSH SCL INKEY ON, PUSH SCL INKEY OFF
PUSH SCL OCT < or **>**	Move to the Prev/Next Octave offset in Note Mode.	PUSH SCL OCT <, PUSH SCL OCT >
PUSH SCL ROOT X	Select the Root Note (only natural and sharp note names are recognized) to use. This is an Adjustable Property.	PUSH SCL ROOT C, PUSH SCL ROOT >
PUSH SCL TYPE X	Select the Scale Type (the available types are listed below) to use. This is an Adjustable Property.	PUSH SCL TYPE MAJOR, PUSH SCL TYPE >

[1] Push does not have a MIX Mode. Push2 does not have a VOLUME, PAN or TRACK Mode. USER and LIVE Mode select User Mode and Live Mode (where the default functionality lives) respectively.

Available Scale Types:

Major, Minor, Dorian, Mixolydian, Lydian, Phrygian, Locrian, Diminished, Whole-half, Whole Tone, Minor Blues, Minor Pentatonic, Major Pentatonic, Harmonic Minor, Melodic Minor, Super Locrian, Bhairav, Hungarian Minor, Minor Gypsy, Hirojoshi, In-Sen, Iwato, Kumoi, Pelog, Spanish

Key Actions

The following Actions send keystrokes and mouse events and are **only** accessible if you've purchased the optional ClyphX Pro Keys accessory available at https://isotonikstudios.com. They require that MT Player is running, the ClyphX Pro Keys preset is selected in MT Player and *To MT Player 1* is selected as the **Output** of the ClyphX Pro Control Surface. More details on all of this can be found in the documentation provided with ClyphX Pro Keys.

ACTION	DESCRIPTION	VARIATIONS/EXAMPLES
KEY A - KEY Z	Send standard alphabetical key.	`KEY A, KEY O`
KEY 0 - KEY 9	Send standard numerical key.	`KEY 0, KEY 9`
KEY F1 - KEY F12	Send F key.	`KEY F5 - KEY F11`
KEY NUM0 - KEY NUM9	Send numeric keypad numerical key.	`KEY NUM1, KEY NUM7`
KEY NUMDOT	Send numeric keypad dot/period (.).	-
KEY NUMENTER	Send numeric keypad enter.	-
KEY NUMMINUS	Send numeric keypad minus (-).	-
KEY NUMMULT	Send numeric keypad multiply/asterisks (*).	-
KEY NUMPLUS	Send numeric keypad plus (+).	-
KEY NUMSLASH	Send numeric keypad forward slash (/).	-
KEY ALT or **KEY CTRL** or **KEY CMD** or **KEY SHIFT**	Send a modifier key.	`KEY ALT, KEY CTRL,` `KEY CMD, KEY SHIFT`
KEY MOD	Send a platform agnostic main modifier key (`CTRL` on Windows or `CMD` on OS X).	-
KEY BACKSPACE	Send backspace key.	-
KEY CAPSLOCK	Send caps lock key.	-
KEY DELETE	Send delete key.	-
KEY END	Send end key.	-
KEY ENTER	Send enter key.	-
KEY ESC	Send escape key.	-
KEY HOME	Send home key.	-
KEY LEFT or **KEY RIGHT** or **KEY UP** or **KEY DOWN**	Send arrow key.	`KEY LEFT, KEY RIGHT,` `KEY UP, KEY DOWN`
KEY PAGEDOWN or **KEY PAGEUP**	Send page key.	`KEY PAGEDOWN,` `KEY PAGEUP`
KEY SPACE	Send space bar key.	-
KEY TAB	Send tab key.	-
KEY BACKSLASH	Send backslash (\ ).	-
KEY COLON	Send semicolon (;).	-
KEY COMMA	Send comma (,).	-
KEY DOT	Send dot/period (.).	-
KEY EQUALS	Send equal sign (=).	-
KEY HYPHEN	Send hyphen (-).	-
KEY LBRACKET or **KEY RBRACKET**	Send left ([ ) or right ( ]) bracket.	`KEY LBRACKET,` `KEY RBRACKET`
KEY QUOTE	Send quote (').	-
KEY SLASH	Send forward slash (/).	-
KEY STRIKE	Send strike (`).	-
KEY LBUTTON or **KEY RBUTTON**	Click left or right mouse button.	`KEY LBUTTON,` `KEY RBUTTON`
KEY MLEFT or **KEY MRIGHT** or **KEY MDOWN** or **KEY MUP**	Move the mouse cursor.	`KEY MLEFT, KEY MRIGHT,` `KEY MDOWN, KEY MUP`
KEY WHEELUP or **KEY WHEELDOWN**	Scroll mouse wheel up or down.	`KEY WHEELUP,` `KEY WHEELDOWN`

All of the key and mouse events covered in the table above can be triggered in one of three ways.

Default
Example: `KEY A`

This will simply press/release the key/mouse button or slightly move the mouse cursor/wheel.

Press
Example: `KEY CTRL DN`

This will press and hold the key/mouse button down or repeatedly move the mouse cursor/wheel. In the case of keys, pressed down keys will function just as they do from your keyboard. So, for example, `KEY LEFT DN` will repeatedly send the left arrow key after a short delay.

Release
Example: `KEY RIGHT UP`

This will release the key/mouse button or stop moving the mouse cursor/wheel.

The Default option is useful for when you simply need to send a single keystroke or click a mouse button.

The Press and Release options are useful for navigation. For example, from an X-Control, you could press down an arrow key in an On Action List and release it in an Off Action List like so:
```
KEY UP DN : KEY UP UP
```

The Press and Release options are also necessary for shortcuts. For example, to save a Live Set:
```
KEY MOD DN ; KEY S ; KEY MOD UP
```

In the case of more complicated shortcuts (those that utilize more than one modifier key), you can use `KEY FLUSH` to release all held down keys. For example:
```
KEY MOD DN ; KEY ALT DN ; KEY G ; KEY FLUSH
```

Here are a couple more complicated examples to give you some ideas on how you can leverage Key Actions.

These two examples accomplish a mouse click and diagonal drag in either direction. `KEY MREM` is somewhat of an "Easter egg" feature that will move the mouse cursor back to where it was prior to the drag.
```
KEY MREM DN; KEY LBUTTON DN ; KEY MDOWN DN ; KEY MLEFT DN : KEY FLUSH
KEY MREM DN; KEY LBUTTON DN ; KEY MUP DN ; KEY MRIGHT DN : KEY FLUSH
```

This example will copy the item(s) selected in the Browser, paste them onto the selected Track and then move the focus back to the Browser. This is useful for loading Clips. Note that `KEY MOD` is used here so that the Action List will work on Windows or OS X.
```
KEY MOD DN ; KEY C ; KEY TAB ; KEY TAB ; KEY V ; KEY ALT DN ; KEY G ;
KEY G ; KEY FLUSH
```

NOTES: *Key and mouse events occur at a different rate as compared to other ClyphX Pro Actions. For that reason, it is typically best to not mix Key Actions and other Actions within a single Action List. Also, key events are subject to the caps lock and num lock keys on your keyboard.*

5 GENERAL ACTION INFORMATION

The following sections provide general information that applies to various ClyphX Pro Actions.

Track-based Actions

Track-based Actions, which include Track Actions through Clip Note Actions, are Actions that can be applied to Tracks and the objects they contain (such as Devices and Clips). If no Track is specified, these Actions will be applied to either the Track the X-Clip resides on or (in the case of other X-Triggers) the selected Track. You can apply these Actions to other Tracks or to ranges of Tracks as described below.

Applying Actions to Specific Objects and Ranges

At the topmost level, Track-based Actions can be applied to Tracks or ranges of Tracks. You'll specify the Track or range followed by a slash (/) before the Action name. For example:

`1/MUTE` ← *Toggle the Mute state of Track 1.*

When applying Actions to the objects a Track contains, you'll specify the object or range enclosed in parentheses after the word `DEV`, `CH`, `PAD` or `CLIP`. For examples:

`DEV(2) RND` ← *Randomize the parameters of the 2nd Device on the Track.*

`CLIP(5) LOOP` ← *Toggle the Loop state of the Clip on the 5th Scene on the Track.*

In all cases, objects can be specified by their Track number, Device number (based on the Device's position on the Track), Device Chain number, Drum Pad number or the Clip Slot number of the Clip as shown in the previous examples. Objects can also be specified by their name enclosed in quotes. For examples:

`"Vox"/DEV("EQ") CH(1) MUTE` ← *Toggle the Mute state of the 1st Chain in the Device named EQ on the Track named Vox.*

`"Bass"/CLIP("Verse") LOOP` ← *Toggle the Loop state of the Clip named Verse on the Track named Bass.*

When specifying names, Actions will be applied to the last object with the given name. When working with multiple objects that have the same name, you should use numbers instead of names in most cases. Also, Tracks that are autonamed by Live are not displayed correctly in Live (Live omits the hyphen). For example, an autonamed Track that is displayed as *1 MIDI* is actually named *1-MIDI*. You need to use the Track's actual name when accessing it by name in ClyphX Pro.

Objects can also be specified via keywords:

- **SEL** applies to the selected object. In the case of Device and Drum Pad Actions, this cannot be used in ranges.
- **LAST** applies to the last object.
- **<** and **>** apply to the previous or next object relative to the selected object. This is not supported for Device or Drum Pad Actions.
- **ALL** applies to all objects (all Tracks in the Set, all Devices/Clips on a Track, all Chains in a Rack or all visible Drum Rack Pads). This cannot be used in ranges.

When specifying Tracks, some additional keywords are available:

- **MST** applies to the Master Track.

- **A** – **L** apply to Return Tracks A – L.

For Device Actions, the **RACKS** keyword is available which applies to all of the Racks (including nested Racks) on a Track. This cannot be used in ranges.

For Clip Actions, some additional keywords are available:

- **DETAIL** applies to the Clip selected in Detail View and cannot be used in ranges. This is useful for applying Actions to Clips in Arrangement View.

- **SELF** applies to the X-Clip that triggered the Action and cannot be used in ranges. This is really only useful for applying Actions to an X-Clip after it has stopped playing. For example:
  `[] D : CLIP(SELF) COLOR 12`

Unless otherwise noted, object numbers, names and keywords can all be utilized when specifying ranges of objects to apply Actions to. Contiguous ranges (like `1-5`), broken ranges (like `1, 3, 5`) and mixed ranges (like `1-2, 5, 10-15`) are supported. Here are some examples:

`"My Track"/DEV(ALL) OFF` ← *Turn off all Devices on the Track named My Track.*

`1, 3, 5, "My Track", A-MST/MUTE` ← *Toggle the Mute state of Tracks 1, 3, 5, My Track and Return A through the Master Track.*

`>-5/CLIP(SEL-7) WARP` ← *Toggle the Warp state of the Clip on the selected Scene through the Clip on the 7th Scene on the Track to the right of the selected Track though Track 5.*

Applying Actions to Nested Devices

All Actions that work with Devices can be applied to Devices that are not nested within Racks as covered in Device Actions. It's also possible to apply actions to Devices nested within Racks by either specifying the Device's name or by using the following dotted notation.

Single Devices

To apply Actions to a single Device nested within a Rack, specify the number (based on the Rack's position on the Track) or name of the Rack, then the number or name of the Chain and then the number (based on the Device's position on the Chain) or name of the nested Device. For example, this will apply to the 3rd Device on the 2nd Chain of the 1st Rack (*it's easier to comprehend this notation when read from right to left*): `DEV(1.2.3)`

It's also possible to use the `LAST` keyword to specify the last Rack, Chain or nested Device. Additionally, this notation can be extended as far as needed to access deeply nested Devices. For example, this will apply to the 7th Device on the 6th Chain of the 5th Rack on the 4th Chain of the 3rd Rack on the 2nd Chain of the 1st Rack: `DEV(1.2.3.4.5.6.7)`

Multiple Devices

You can also apply Actions to multiple nested Devices by using the `ALL` keyword. For example, this will apply to all of the Devices on the 1st Chain of the Rack named *My Rack*:

```
DEV("My Rack".1.ALL)
```

This will apply to the Device named *My Device* on all of the Chains of the 2nd Rack:

```
DEV(2.ALL."My Device")
```

This will apply to all of the Devices nested within the 1st Rack:

```
DEV(1.ALL)
```

This will apply to all of the Devices (nested and non-nested) on the Track:

```
DEV(ALL.ALL)
```

As with Single Devices, this notation can be extended as far as needed to access deeply nested Devices. For example, this will apply to all of the Devices on the 1st Chain of the 2nd Rack on the 1st Chain of the 1st Rack:

```
DEV(1.1.2.1.ALL)
```

Adjustable Properties

All of the Adjustable Properties offer several control options via keywords.

KEYWORD	DESCRIPTION	EXAMPLES
x	x is the property value/name to set as shown in Live..	IN "My Track", GQ 1 BAR
< or >	Dec/Inc the property value by increment of 1.	RQ <, CLIP WARPMODE >
<x or >x	Dec/Inc the property value by increment of x.	DEV PRESET <5, DEV DR SCROLL >4

Continuous Parameters

All of the Continuous Parameters offer several control options via keywords.

KEYWORD	DESCRIPTION	EXAMPLES
x	x is the parameter value to set (in the range of 0 – 127). The value of some parameters can be set by the value's name. These names are listed in the Device Parameter Name Reference Lesson.	DEV CS 100, DEV "Filter Type" "Bandpass"
x%	x is the parameter value to set in terms of a percentage (in the range of 0 – 100).	DEV "Frequency" 70.2%, SEND A 50%
*x	x is the value to multiply the parameter's value by.	VOL *0.5
< or >	Dec/Inc the parameter value by increment of 1.	VOL <, PAN >
<x or >x	Dec/Inc the parameter value by increment of x.	PAN <5, DEV B2 P1 >10
ENABLE	Re-enable automation that has been overridden for the parameter.	SEND C ENABLE
RESET	Reset the parameter value to its default value.	DEV P1 RESET
RND	Randomize the parameter value. The value produced will be in the range of 0 – 127 and will then be scaled to match the range of the given parameter.	SEND A RND
RNDx-y	Randomize the parameter value. The value produced will be in the range of x-y (where both x and y are in the range of 0 – 127) and will then be scaled to match the range of the given parameter.	VOL RND50-60, DEV P5 RND5-10
TGL	Toggle the parameter's value between its minimum and maximum value.	DEV "Resonance" TGL

The values of Continuous Parameters can also be ramped up or down over a number of milliseconds or in sync with Live's playback via the RAMP or RAMPS keywords respectively. After this keyword, you'll specify the ramp duration (in hundreds of milliseconds or Beats/Bars) and the keyword from above to use for setting the value at the end of the ramp. For examples:

VOL RAMP 8 *2 ← *Multiply the parameter value by 2 over 800 milliseconds*
DEV P1 RAMPS 16 RESET ← *Reset the parameter value over 16 Beats.*
SEND A RAMPS 16B RND ← *Randomize the parameter value over 16 Bars.*

Quasi Continuous Parameters

All of the Quasi Continuous Parameters offer the same control options as Continuous Parameters (described above) with a few exceptions:

- Unless otherwise noted, when setting the value of a Quasi Continuous Parameter, you'll use the value shown in Live. For example, when setting Tempo value, you'll specify the value in BPMs (like BPM 90.5). Also, the value of a Quasi Continuous Parameter cannot be set based on percentage.

- Quasi Continuous Parameters can be randomized, but do not support custom random ranges.

- Quasi Continuous Parameters cannot be automated and so ENABLE does not apply to them.

6 ADDENDUM

ClyphX Pro has many Actions and features that are useful in their own right but, when combined with each other, they become much more powerful. In this section, we'll look at some examples of how you can leverage the feature set in interesting ways.

Space-friendly navigation

Here are a couple of examples (best suited for use with X-Controls and X-OSCs) of alternate forms of navigation that are handy when screen real estate is limited.

These two Action Lists will navigate to the previous/next Device on the Track respectively, ensure Devices are visible and will fold all Devices except for the Device that is selected.

```
SHOWDEV ; DEV(ALL) FOLD ON ; DEVLEFT ; DEV FOLD OFF
SHOWDEV ; DEV(ALL) FOLD ON ; DEVRIGHT ; DEV FOLD OFF
```

The same approach works for Group Tracks in Session View as well.

```
ALL/FOLD ON ; LEFT ; FOLD OFF
ALL/FOLD ON ; RIGHT ; FOLD OFF
```

Which Clips have been played?

In some cases, it's useful to not allow a Clip to be played more than once in a performance. The following Action List (meant for use with X-Clips) deactivates the Clip once it's been played.

```
[My Clip] D : CLIP(SELF) MUTE ON
```

A variation on that approach, changing the color of the Clip to indicate that it has been played, can also be useful. Here, we change its color to white.

```
[My Clip] D : CLIP(SELF) COLOR 60
```

From Snap to ramp

The Snap Action will automatically rename X-Clips after they have stored a Snap so that the Snap can immediately be recalled. But what if you want to recall the Snap with ramping and don't want to have to manually change the X-Clip's name?

```
[IDENT] ALL/SNAP ; CLIP NAME "[IDENT] RECALL RAMP 10"
```

The same approach can be used with X-Controls and X-OSCs by using Macros. First, define a Macro like so:

```
$BTN_1$ = ALL/SNAP
```

Then, for the X-Control or X-OSC, specify the following for its On and Off Action Lists.

```
[IDENT] $BTN_1$ : $BTN_1$ = RECALL RAMP 10
```

Dynamic X-Control and X-OSC assignments

Unlike other X-Triggers, X-Control and X-OSC assignments are static (the same for every Live Set). It's possible to make their assignments dynamic by assigning them to Macros and then reassigning the Macros from other X-Triggers. This allows X-Controls and X-OSCs to have static (default) assignments that can be overridden as needed per Live Set.

First, define a Macro like so:

```
$BTN_1$ = MUTE
```

Then, for the X-Control/X-OSC, specify the Macro for its On Action List. So, by default, the X-Control/X-OSC will toggle the Mute state of the selected Track.

Now, you can use an X-Clip or X-Cue to change that assignment like so:
```
[IDENT] $BTN_1$ = SOLO
```

And, now, the X-Control/X-OSC will toggle the Solo state of the selected Track until the Macro is reassigned or a Live Set is loaded.

Omitting Devices from ranges

When using Device ranges in Snap Actions or the Clip Envelope Capture Action, you'll sometimes want to omit one or more Devices in the range so that they're not included in Snaps or captures. To do that, you can add `[omit]` to the Device's name and it will be omitted. If the Device is a Plug-in, it can be omitted by placing the Plug-in in a Rack and adding `[omit]` to the Rack's name.

Triggering multiple Actions per step in a sequence

By default, PSEQ/RPSEQ Action Lists and LSEQ/RLSEQ X-Clips can only sequentially trigger one Action at a time. This can be changed by using slightly different syntax. You simply have to enclose the Actions you'd like to be triggered simultaneously in curly brackets. For example:
```
[IDENT] (PSEQ) {BPM 100; GQ 1 BAR} ; METRO ; {BPM 200; GQ 2 BARS; RQ 1/4}
```

In that example, the first time it's triggered, `BPM 100` and `GQ 1 BAR` will be triggered. The second time, `METRO` will be triggered. And the third time `BPM 200`, `GQ 2 BARS` and `RQ 1/4` will be triggered. As you can see, you can have steps that include multiple Actions and steps that just consist of a single Action.

7 UPDATING AND BACKING UP

Updating ClyphX Pro

The process for updating to a new version of ClyphX Pro is the same as the process for installing ClyphX Pro. All of your settings will remain in place. However, if you have any User Actions that exist within the *user_actions* folder of ClyphX Pro, you will need to back these up **before** installing the new version of ClyphX Pro. You can use the procedure covered below for backing up.

Backing Up Your ClyphX Pro Installation

ClyphX Pro provides a simplified means of backing up your settings and any User Actions you're using. This is useful when you simply want to back up your installation before updating to a new version of ClyphX Pro or when you need to transfer all of your settings and User Actions to another system.

To create a backup, add an X-Clip to the set, name it `[] EXPORT_SETTINGS` and launch it to create a zip file in your settings folder. The zip file will be named *ClyphX Pro Export x.zip* (where *x* is a timestamp) and will contain two or more folders. Once the backup has been created, install the new version of ClyphX Pro or install ClyphX Pro on the other system and ensure that it's working. You will then restore the backup using the following procedure:

1. Unzip the backup zip file that you created.
2. Delete all of the files in your settings folder.
3. Copy all of the content within *ClyphX_Pro Settings* and place it in your settings folder.
4. *(Only necessary if you're using User Actions that exist within the user_actions folder of ClyphX Pro)*: Copy all of the content in *ClyphX_Pro User Actions* and place it in the user_actions folder.
5. *(Only necessary if you're using User Actions that exist outside of ClyphX Pro)*: Copy all of the content from *External User Actions* and place it in your *_user_actions* folder.

8 OPTIONAL ACCESSORIES

This section describes optional accessories that can be purchased for use with ClyphX Pro. All of these accessories can be purchased at https://isotonikstudios.com.

ClyphX Pro Bindings

The ClyphX Pro Bindings accessory allows controls on a MIDI controller to be dynamically bound and rebound to parameters in Live. This provides functionality that is somewhat similar to MIDI mapping in Live, but is far more dynamic in the sense that your bindings can change over the course of a Live Set (by using the `BIND` Action) and you can bind to parameters (such as parameters of the selected Track) that cannot be MIDI mapped.

There are two types of bindings:
Encoder Bindings allow you to bind knobs/faders/encoders to parameters. These bindings are defined in *Encoder Bindings.txt*, which you'll find within your settings folder.

Button Bindings allow you to bind buttons to parameters. These bindings are defined in *Button Bindings.txt*, which you'll find within your settings folder. These are really only useful in cases where LED feedback from a parameter is needed. In most cases, X-Controls should be preferred.

Once you've created some bindings in these files, you'll select your controller as the **Input** and (if the controller has LEDs that can be remotely controlled and/or motorized faders) **Output** of the ClyphX Pro Control Surface.

Each XT Script will have its own binding files where you'll create the bindings to use for them. Once that's done, you should select the controller as the **Input** and (if the controller has LEDs that can be remotely controlled and/or motorized faders) **Output** of the XT Script.

In the rest of this section, when we refer to ClyphX Pro, we mean either ClyphX Pro or one of the XT Scripts.

When using controllers with ClyphX Pro, you can keep other settings for your controller(s) in place. However, if the controller is used as the **Input** for another Control Surface, you will need to ensure that the other Control Surface is not set up to receive the same MIDI messages that you've configured for the controller in ClyphX Pro.

In addition, if the **Remote** switch is turned on for the controller, make sure that MIDI mappings in your Live Set do not use the same MIDI messages you've configured for the controller in ClyphX Pro.

Lastly, if the **Track** switch is turned on for the controller, the MIDI messages you've configured for the controller in ClyphX Pro cannot be used for recording data into MIDI Clips or for playing instruments.

ClyphX Pro Keys

The ClyphX Pro Keys accessory enables the use of ClyphX Pro's Key Actions and is covered in detail in the documentation supplied with the accessory as well as in the Key Actions section of this manual.

9 TROUBLESHOOTING

This section provides resolutions to common problems that you may run into when installing or using ClyphX Pro. If you do not find a resolution to your problem here, please contact Support.

Windows Troubleshooting

I ran the provided Setup executable, but don't find any ClyphX_Pro scripts listed under Control Surfaces.

If Live was running at the time you ran the Setup executable, you will need to restart Live. If this doesn't resolve the problem, then it's likely that you've installed Live in a protected location (such as Program Files). In this case, you will need to elevate the permissions on your Live installation directory so that you can write to it. Once this is done, re-run the Setup executable.

OS X Troubleshooting

I ran the provided Setup package, but don't find any ClyphX Pro scripts listed under Control Surfaces.

If Live was running at the time you ran the Setup package, you will need to restart Live.

When trying to run the Setup package, I receive a message stating "Setup can't be opened because it is from an unidentified developer".

Control-click or right click on the Setup package and select *Open* from the menu that appears.

When trying to run the Setup package, I receive a message stating "Not authorized to send Apple events to Finder".

Open Terminal, enter *tccutil reset AppleEvents; tccutil reset SystemPolicyAllFiles* and re-run the Setup package.

General Troubleshooting

I can't trigger any ClyphX Pro Actions.

Make sure that you've got *ClyphX Pro* selected as a Control Surface.

I can't trigger ClyphX Pro Actions from X-Clips, X-Cues or X-Scenes.

Make sure that you've listed an Identifier at the beginning of the X-Clip, X-Cue or X-Scene name.

I can't trigger ClyphX Pro Actions from X-Controls or X-OSCs.

Make sure that you've defined the X-Controls or X-OSCs correctly in *X-Controls.txt* or *X-OSC.txt* and that you've selected the controller as the **Input** of the ClyphX Pro Control Surface.

None of this troubleshooting helped or I think I've found a bug.

Please do the following:

1. Add an X-Clip named `[] DEBUG` in Session View and launch it.
2. Trigger the Action List(s) you're having trouble with.
3. Close Live (or load a new Live Set).
4. Submit a support ticket or post on the forum with your *Debug Log.txt* file as an attachment and please provide as much information on the problem as possible. You can find *Debug Log.txt* in the settings folder.

Live 10 Lessons Troubleshooting

I can't access the ClyphX Pro Lessons in Live 10.
In Live 10 (as of 10.0.5), the ClyphX Pro Lessons category will not show up by default. This is due to the lessons structure not being completed as of yet in Live 10. You can workaround this by modifying a file within Live. Once you modify this file, you'll access the ClyphX Pro Lessons by clicking on **Packs** at the home page in *Help View*. Note, however, that this doesn't resolve another bug where the formatting of text within lessons is not handled properly thus making the text a bit more difficult to read. If Ableton don't address this, we'll change the formatting in a future update.

At any rate, here's how to apply the workaround:

- On **Windows**, go to:
  ProgramData\Ableton\Live 10\Resources\Builtin Lessons\TableOfContents\DefaultToc Lessons

- On **OS X**, go to Applications, find the *Live 10 app*, Control-click or right click on it and select *Show Package Contents*. Then go to:
  Contents/App-Resources/Builtin Lessons/TableOfContents/DefaultToc Lessons

Within that folder, find the *Lessonsxx.txt* file corresponding to your language. For example, for English, you'll use the *LessonsEN.txt* file. Within that file, find the line that reads:
*$Link Packs.png <Lesson:Internal/**AutoToc**>*

Change that line to:
*$Link Packs.png <Lesson:Internal/**BuiltinAutoToc**>*

10 SUPPORT

Submit Support Ticket:

https://isotonikstudios.com/my-account/

Forum:

Beatwise Network

Copyright 2017 – 2018 nativeKONTROL. All rights reserved.

This document, as well as the software described in it, is provided under license and may be used or copied only in accordance with the terms of this license. The content of this document is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by nativeKONTROL. Every effort has been made to ensure that the information in this document is accurate. nativeKONTROL assumes no responsibility or liability for any errors or inaccuracies that may appear in this document.

All product and company names mentioned in this document, as well as the software it describes, are trademarks or registered trademarks of their respective owners. This software is solely endorsed and supported by nativeKONTROL.