

Pyramid Sequencer User Guide

Squarp Instruments

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1 Pyramid Workflow

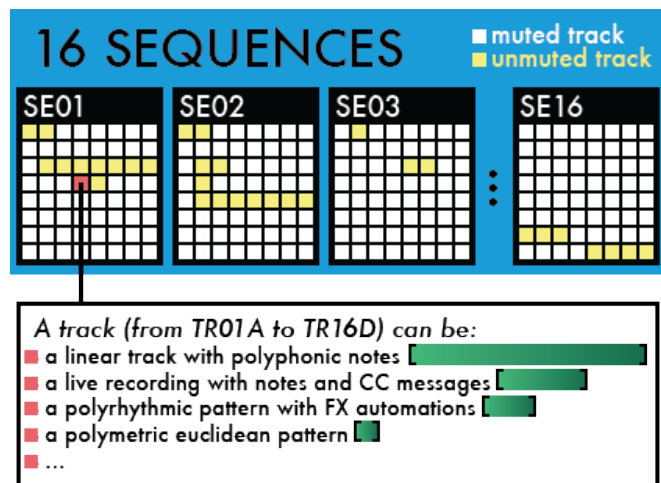
Wire up

Connect Pyramid with a mini USB cable plugged in a standard USB power supply or a computer, and press the on/off button.

Sequencer workflow

Pyramid is based on 64 tracks. A track is a loop that contains polyphonic or monophonic notes, automations and effects, plays repeatedly and controls one of the musical instruments connected to midi A, midi B, USB or CV output.

By muting/unmuting each track, you will be able to shape your song.



Pyramid allows you to easily produce your tracks from scratch thanks to powerful creative tools, such as:

- smart chord harmonizer,
- scales generator,
- beat repeat,
- hold and relatch,
- groundbreaking step sequencer (unlimited number of notes and CC messages per step, FX parameters step lock)
- euclidean sequencer,
- polyrhythmy & polymetry,
- real-time effects.

Pyramid is an instant source of inspiration, to start and finish your song. You will never be out of ideas!

Tracks vs Sequences

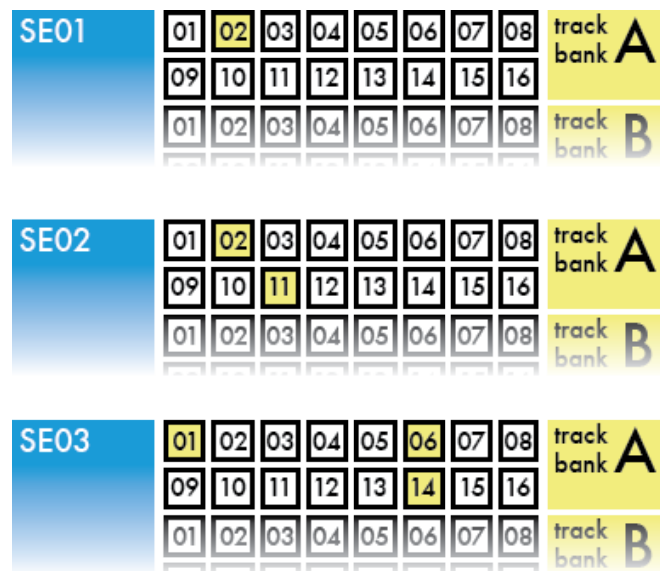
In Pyramid, a project song can include up to 64 tracks in total (from TR01A to TR16D). A track can either be a linear clip (e.g. a 384 bars track, with micro editing), a standard pattern (e.g. a 4 bars track), a polymetric pattern (e.g. a 1+1/4 bar track), a polyrhythmic pattern (e.g. a 8 bars track with 7/8 time signature)...

A project song is composed of 16 sequences. A sequence is a group defining the 64 tracks mute states: you can see sequences as links to tracks. In each sequence, you can choose which track is unmuted (active) or muted (inactive), in order to build your song or arrange your set:



That means that you can choose to play at the same time 64 tracks in a single sequence, or mute/unmute the 64 tracks across in the 16 sequences: it's a great and versatile way to create songs very quickly.

For example in SE01 (sequence 01), only TR02 is unmuted. In SE02, TR02A and TR11A are unmuted. In SE03, TR01A, TR06A and TR15A are unmuted:



The TR02A of the SE01 is always the same track as the TR02A of SE02. If you made a change on TR02A, it will apply on all sequences where TR02A is active (SE01 and SE02 in the example above).

When the sequence changes, if a previously active track is still active in the next sequence, it will not restart from the beginning like a classic sequencer. It will continue

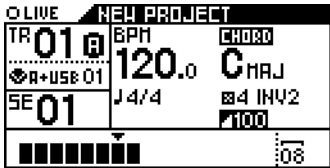
to play & loop and therefore keep its shift with the other tracks, to keep the polymetry running (see "Note about track lengths concurrence & sequences" section). If you want to restart your track from the beginning like a classic sequencer, configure your track in "relatch mode".

Moreover, if you want to add some MIDI effects on TR02A, you can assign a control (e.g. an encoder) for this effect, and affect the sound of the TR02A in real-time, no matter which sequence you are in.

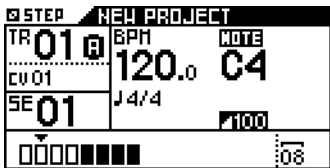
Pyramid 4 modes in brief

Pyramid is a dynamic sequencer, allowing an user-friendly interaction between tracks and sequences. All modes are always accessibles, that means that you can launch sequences in SEQ mode, then mute/unmute tracks in TRACK mode, play with effects, and even add notes and CC messages in LIVE and STEP modes.

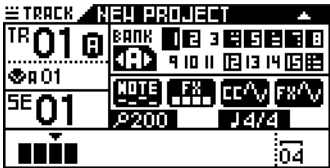
Press LIVE: record notes, CC automations of the current track. Use the built-in keypad or smartpads (8 pads that can be configured as chord generator, note repeat or scaled piano).



Press STEP: fill steps of the current track with notes and chords thanks to the 16 pads of the NOTE & CHORD stepmodes. Set up the velocity, width and offset of a note or a group of notes. Edit your live recording with surgical precision. Switch to the EUCLIDEAN stepmode to auto-fill the steps. Switch to the CC MESSAGES stepmode to create or edit midi CC automations. Switch to the EFFECTS stepmode to create or edit effect parameters locks. Each step (and even microstep) can contain an unlimited number of notes, CC and FX automations!



Press TRACK: mute/unmute the tracks with the 16 pads. Change the track BANK (A/B/C/D) with < and >. Set up the length, time signature, zoom and midi channel of the current track. Build the current sequence.

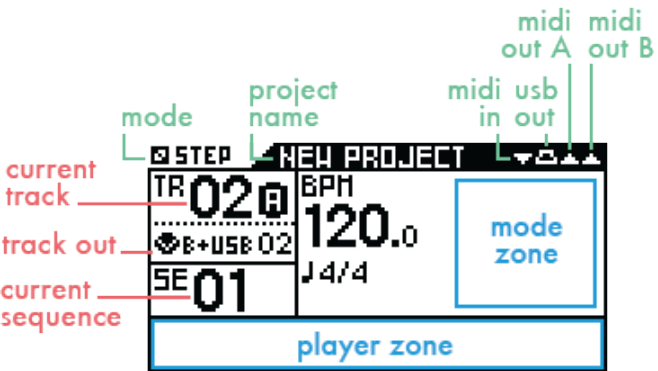


Press SEQ: launch your sequences (a set of the 64 muted/unmuted tracks) on the fly or program a chain of sequences to create a complete structured song.



Screen

In each of the 4 modes, some data is always displayed:



Mode can be one of the 4 modes: LIVE STEP TRACK SEQ

Project name is the name you gave to your song before saving it.

Midi in flashes if a midi message is received, midi out A, midi out B and USB out flashes if a midi message is sent.

Tempo displays the BPM of your project.

Current track is the track number that you are editing in Live and Step Modes, and its bank. Track out indicates on which output your sequenced musical instrument is plugged in (midi A, midi B, USB, CV) and which channel you configured. Multiple outputs can be selected.

Current sequence shows the sequence playing (and so the group of tracks you are editing in TRACK mode). Can also displays the next sequence to be played in the chain.

Mode zone spotlights the main parameters of each mode, which can be generally edited via the clickable data encoder.

Player zone displays the track player (a representation of the current track, considering the zoom, the track length,

the player position and the page you are viewing) in Live, Step and Track modes:



In the example above, you are viewing the first page (the 4 first bars of a 12 bars + 1/4 bars length track = 12 bars + 1 beat length). The player is playing the twelfth bar.

In Seq Mode the Player zone gives the set sequence chain:



In the example above, 6 sequences are chained and the SE06 (highlighted) will play during 2 bars.

2 Basics

How to select the current track

A project can include up to 64 tracks:

- 16 tracks in the bank A
- 16 tracks in the bank B
- 16 tracks in the bank C
- 16 tracks in the bank D

Regardless the mode you are using, hold TRACK and select the track of the current BANK you want to work on with one of the 16 pads (for example TR03A).

To change the current track BANK (A/B/C/D), hold TRACK and press < or >.

The current track number and its output channel is displayed on the screen:

You can quickly change the output channel of the selected track by pressing TRACK + midi channel. The great thing is that you can create multiple tracks with the same midi channel, so they can be activated (unmuted) together or separately.

Note: as soon as you edit a note or a CC message (in LIVE or STEP mode), the track is created and you can mute/unmute it.

How to capture a performance

To record a live performance on the current track, press rec in LIVE mode.

You can play with the built-in keyboard and smartpads to record notes. Use the 5 assignable encoders and the assignable touchpad to record CC and FX automations.

You can also use any kind of midi controllers to record notes and automations. It's even possible to record CV events thanks to the CV/gate input!

The number of notes polyphony is unlimited, as well as the number of CC automations per tracks. By default, there is no quantize, so it's great for capturing the "human feel" of your performance.

Enter STEP mode and press DISP to view the piano roll and see the recorded notes:

Of course, it's possible to add, remove, edit notes in a flash in STEP mode with the step-by-step sequencer.

How to use the step-by-step sequencer

Enter STEP mode. The default stepmode is NOTE: that means that you can add, remove, edit notes on the current track:

- to select the note (e.g. C4), rotate
- to add a note, press one of the 16 steps
- to remove a note, press again this step
- you can also hold one of the 16 steps, and rotate to set the note.

Pyramid is fully polyphonic, so you can add as many notes as you want on one step. You can set the velocity, the width and the offset of a note. You can zoom to set the resolution of steps (by default 1 step = a quarter note, but you can zoom up to 1 step = a 1/64 note). Finally, you can set the length and the time signature of the track, so you can work on very short or very long patterns!

Press DISP to view the piano roll and see the track notes:

Change the stepmode by holding STEP and rotating . Changing the stepmode basically changes the step-by-step mode. In brief, there is 5 stepmodes:

- NOTE (add, delete, edit notes)
- CHORD (add, delete, edit chords)
- EUCLID (generate algorithmic patterns)
- CC MESSAGES (add, delete, edit CC automations)
- EFFECTS (add, delete, edit FX automations)

Each of the 5 stepmodes can work together, except EUCLID. That means that on a single track, you can add notes, chords, CC automations or FX automations. Of course, you can also create tracks that include only notes or CC automations.

How to mute/unmute tracks

Enter TRACK mode. Press < > to select the track bank.

Use the 16 pads to mute/unmute created tracks, from TR01A to TR16D.

You can play together up to 64 tracks! Muting/unmuting tracks is a great & intuitive way to perform your song on the fly.

Press DISP to display your tracks progressions:

Note: mute/unmute changes are in sync, depending on the PERFORM type selected in SEQ mode.

How to select the current sequence

The current sequence number is displayed on the screen:

Regardless the mode you are using, hold SEQ and select the sequence you want to work on with one of the 16 pads . If you select an empty sequence, the track mute states of the last sequence will be applied to this new sequence.

Selecting a sequence can only be done with SEQ PERFORM enabled. This action is not available with SEQ PLAY or SEQ LOOP enabled, because the sequencer will play the defined sequence chain (and therefore the selected sequence = the played sequence).

Holding SEQ and select the sequence will play the new selected sequence without waiting for the end of the currently playing sequence (instant jump). If you want to launch a new sequence after the end of the current sequence measure, enter the SEQ mode and press one of the 16 pads (without holding SEQ).

How to create and edit sequences

In TRACK mode, hold SEQ and select the sequence you want to create or edit with one of the 16 pads .

The current sequence number is displayed on the screen:

Then mute/unmute your active tracks to build the sequence. As soon as you made a mute state change, the sequence is created.

How to play with sequences

Once you created several sequences, enter SEQ mode to play with it. Make sure "PERFORM" is selected, in order the perform sequences on the fly, always in sync:

Press any sequence number to launch it. Pyramid waits until the current sequence ends (the end of the bar, if "1 BAR" selected) and then it launches the new sequence right away. The new sequence is now playing in a loop, until you press another sequence number.

You can select the delay Pyramid will wait before switching to the next sequence: instant, 1 beat, 1 bar, 2 bars, ... so you can deeply play with sequences!

Tempo

Tap BPM to set up the tempo, or hold BPM and turn the data knob .

To change the BPM decimal, turn while pressing it. The tempo resolution ranges from 10.0 BPM to 999.9 BPM.

TIP Hold 2ND + BPM and turn the data knob to change the tempo, which will apply only when you release 2ND.

If you link an instrument providing a sync signal on the midi input, by default Pyramid automatically synchronizes the BPM to this external BPM source.

Undo

In every mode, press 2ND + undo to cancel the last edition, for example notes or automations recorded in Live mode. Another press on undo will redo this last edition.

Last editions are stated by the following actions:

- a REC ON in Live mode,
- a PLAY ON,
- a stepmode change,
- a new track selection,
- a step copy,

- a track delete.

That means that the undo will refresh the current track as it was at the time of the last action.

Save and load a project

In every mode, press 2ND + save/load to access the menu and save, save as, load or create a new project.

To enter the save/load manager, make sure a SD card is inserted.

Effect manager

You can add up to 4 effects per track. Press FX and place a real time effect in the chain using , for example a quantizer humanizer, harmonizer, randomizer, swing or arpeggiator:

It is then possible to edit the effect with the 5 encoders and find your favorite setting:

TIP With the effect manager activated, you can still play or add notes in LIVE and STEP mode, mute/unmute tracks in TRACK mode, and even launch sequences in SEQ mode.

Once you edited an effect, feel free to add other effects and change their positions in the chain (in the manager with 2ND +) to go further in experimentation.

TIP The effect manager is also a great tool if you are a keyboardist and you want to revive your old synths. Give them new features, like arps and effects and they'll sound like they never did. You can also add deep control in your modular system in & out, and make it truly unique.

The effect engine also works when the player is stopped, as Pyramid clock always runs.

Assign a control

Pyramid includes 5 clickable encoders and a touchpad. You can assign these controls by holding ASSIGN and turning an encoder, sliding the touchpad or tilt Pyramid back/front.

At this point, you have two options:

- Link this control to a CC midi message of the current track channel (for example the pitch or a CC message)
- Link this control to the effect parameter of a track (for example the quantization grid, the swing % or the arpeggiator rate of the track 02)

TIP Press an encoder to display its assignment and its value (for example TR02A Swing Grid = 1/16).

Once the assignment is implemented, you can play in real time with all the controls in any mode.

Press rec in LIVE Mode and record automations on the current track:

- If the control is assigned to a CC message, you can record the automation on the track only if the midi out and the midi channel of the CC is the same as the current track out settings (for example midi A channel 04).
- If the control is assigned to an effect parameter, you can record the automation on the track only if this effect belongs to the current track.

Assignations are saved with the project and are independant of the current track and the current sequence. Selecting a new track or a new sequence will not unlink or change the assign.

Display features

Some modes include extra data that you can access by pressing DISP. In these displays, the user interface never changes, it's another graphic representation.

For example, in STEP mode, pressing DISP will lead to the piano roll editor:

An example of a track, programmed with notes of different lengths. You are viewing the page 1 of 4 pages. The current note is C4, the current velocity is 127, the current note length is 4 steps and the current offset is 0%. If you press a step to add a note, the note will be added with these parameters.

Quick track settings

This is one of the most helpful action, we seriously advise you to try it!

To change the current track settings, in any mode, hold TRACK to use the shortcuts:

- solo
- midi channel
- zoom
- length
- time signature

For example, when you are in STEP mode, hold TRACK + zoom to change the edition resolution (from 25% to 1600%) with , in a flash.

Play/Pause/Stop

Press to play/pause the sequencer.

This pad flashes (depending on the BPM and the current track time signature) if the project is played, and is softly backlit if the project is paused.

Press to stop the sequencer. Pressing once stops the player at the current track page if you work on multiple pages (see Step Mode section), while pressing twice rewinds it to the beginning of the track.

Two presses on STOP will send an All Note Off midi message to your instruments, a third press will send an All

Sound Off midi message in order to off the synths release instantly. Moreover, the third STOP press also send Program Change messages of active tracks, if set.

By default, the midi clock on midi A out, midi B out and USB out, as well as the play/stop/continue messages, are disable. You can activate them separately in the SETTINGS menu.

Metronome

Hold 2ND and press rec to activate the metronome:

The metronome is made with midi notes. The metronome will click on the selected output channel and selected note, and will follow the beat. You can configure it in SETTINGS > MISC.

Settings menu

Press 2ND + FX to enter General Settings.

Select a category to configure your project:

- MIDI IN (midi input configuration)
- MIDI OUT (midi outputs configuration)
- MISC (other project and core options)
- CV/PEDAL (CV/Gate inputs+outputs analog configuration, pedal control assignment)