

Polyend Tracker Mini Essentials

A Collection of Essential References
for The Polyend Tracker Mini



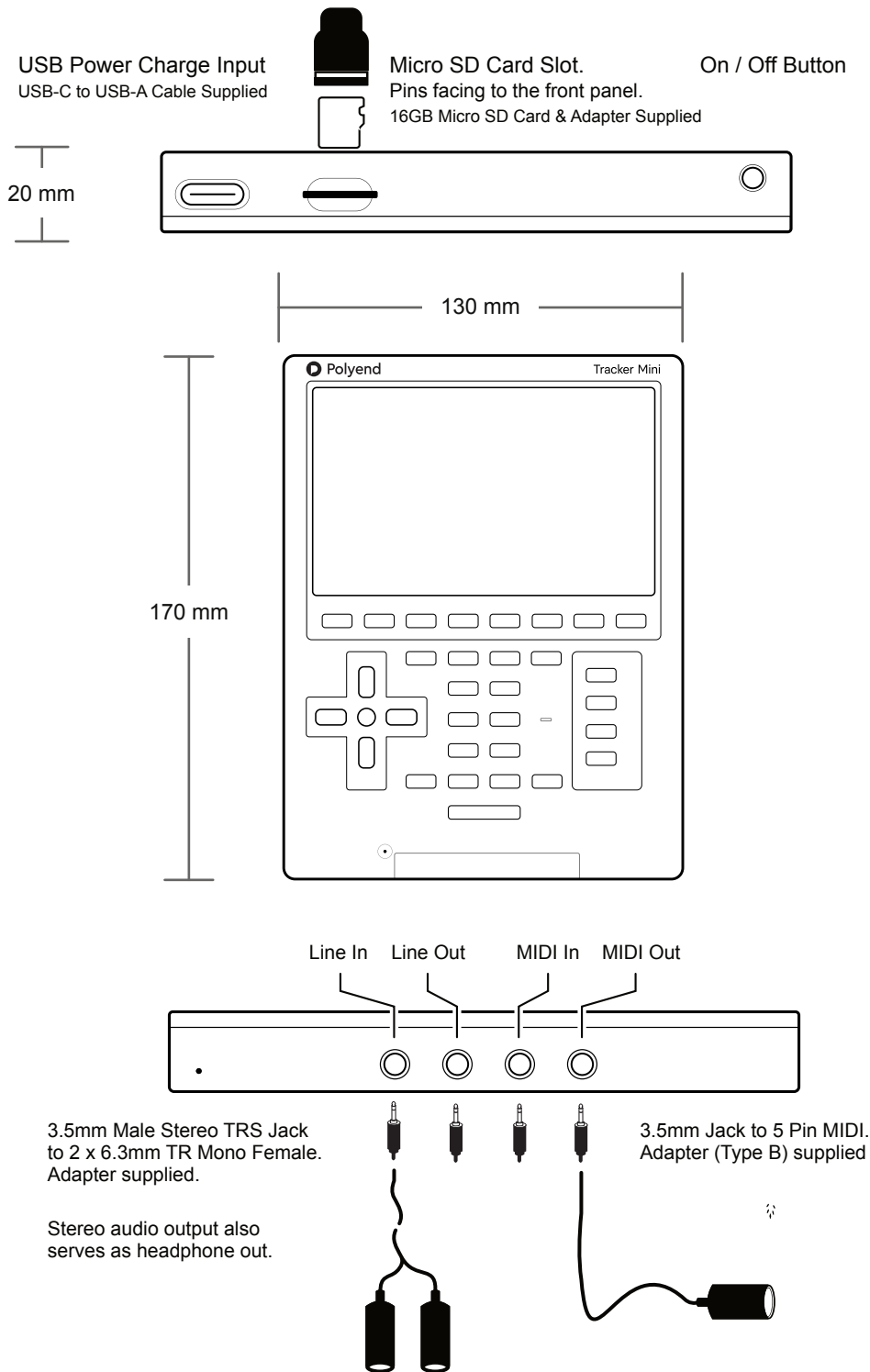
Overview

Polyend Tracker Mini is a handheld version of Polyend's desktop Tracker. This is a modern hardware implementation of a classic software music application which emerged in the late 80's as music making tools mainly on gaming machines and later on personal computers. A Tracker is a utility that assembles a linear series of notes that typically triggers samples and associated parameters. Unlike standard digital audio workstations (DAW's), Trackers generally run top to bottom when playing tracks. Trackers usually had a niche community of followers and never reached the same height of popularity as other DAW's. Polyend Tracker Mini reignites the interest and presents the composition features of a Tracker into a portable and immediate format. Don't be fooled by this quirky programming style of music making which may appear unusual, but does provide a very powerful and creative approach to production. Polyend Tracker Mini presents this vintage application in a modern and stylish

handheld box with 8 sequenced tracks and a variety of effects, MIDI and Audio In / Out and multiple workflow environments. With a small form factor and rechargeable battery, Tracker Mini is an ideal portable 'all in one' workstation. The feature set is wide with some interestingly creative functions. Tracker Mini isn't a particularly difficult instrument to use but the unusual and less familiar core concept and workflow may mean that getting started is a little confusing and the learning curve is drawn out. This may be a different twist on music production but hey, that's what makes it fun. This guide aims to help with the speed up of learning and also to get the very best from the device. As always the Synthdawg notebook style allows for your notes to be added and to make the guidebook personal for you. The Tracker Mini journey is unusual, yet fun and at the same time a powerful music making unit giving some rewarding results. Enjoy.

Tracker Mini Essentials

Hardware Overview



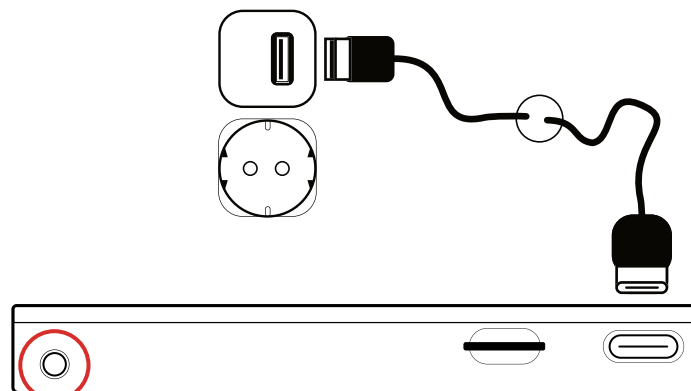
Start Up

Tracker Mini is powered from the an internal rechargeable battery which is charged using the supplied USB cable and charger. When restarting Tracker Mini the previously open project will be re-opened.

POWERING ON / OFF TRACKER MINI

1. To recharge Tracker Mini, connect the supplied USB-C Mains cable between Tracker Mini and the supplied USB plug to charge the unit. Once charged Tracker Mini will operate without the USB power supply being connected.
2. Ensure the SD Card is installed correctly for Tracker Mini to operate. Pins should face up towards the front panel.
3. To power up, hold the small power on/off button located on the top right (looking from the front) for 1 second. Start up will open the previously opened project.
4. To power off, press and hold the small power button located on the top right (looking from the top) until the timer bar ends. Tracker Mini will then power off.
5. To check battery power charge when the unit is off, press quickly the power button. The battery indicator will display for a short period to indicate the charging state. The battery state is also displayed if the power cable is connected while powered off.

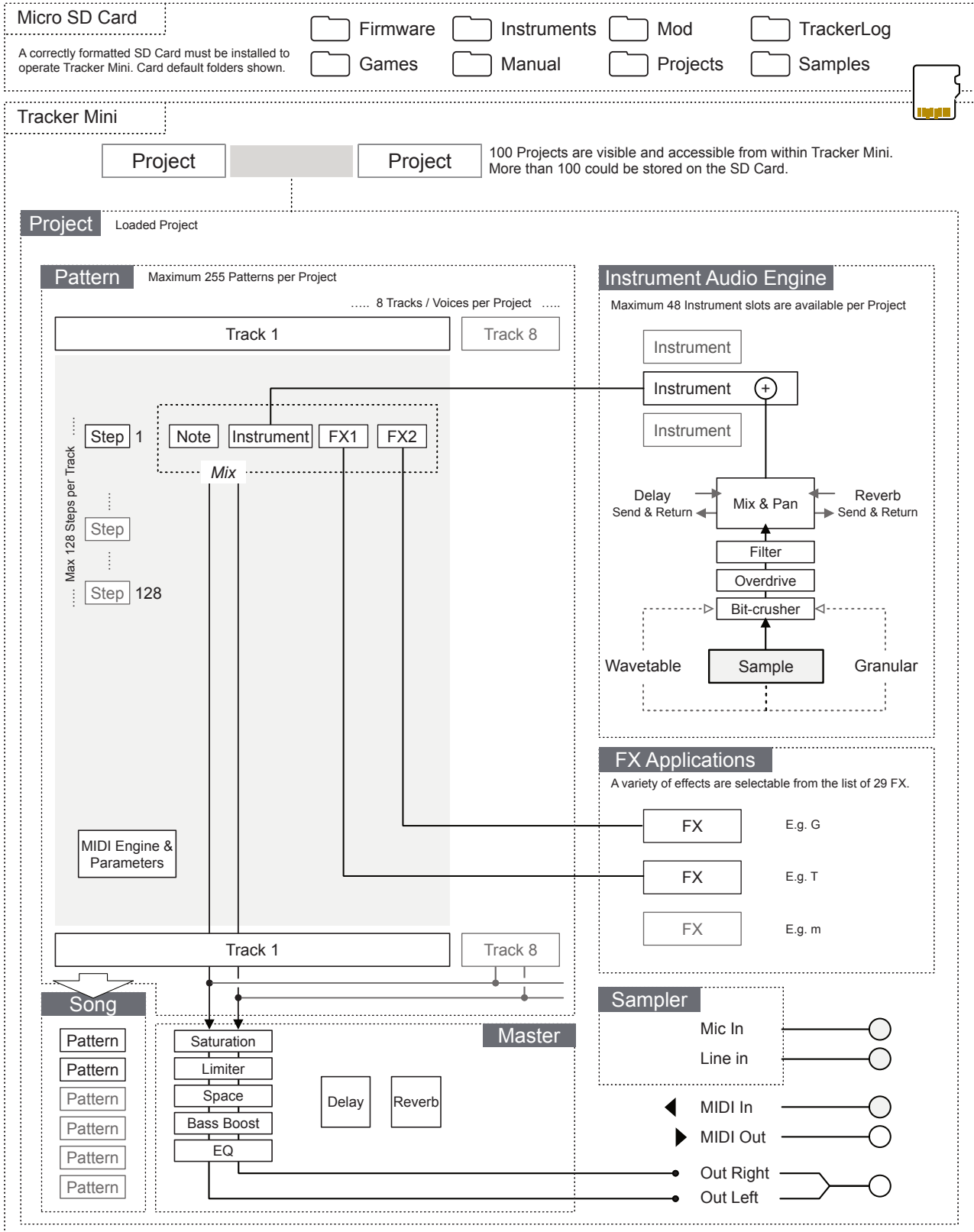
The charging supply is 5V, 2A from the supplied mains to USB adapter.

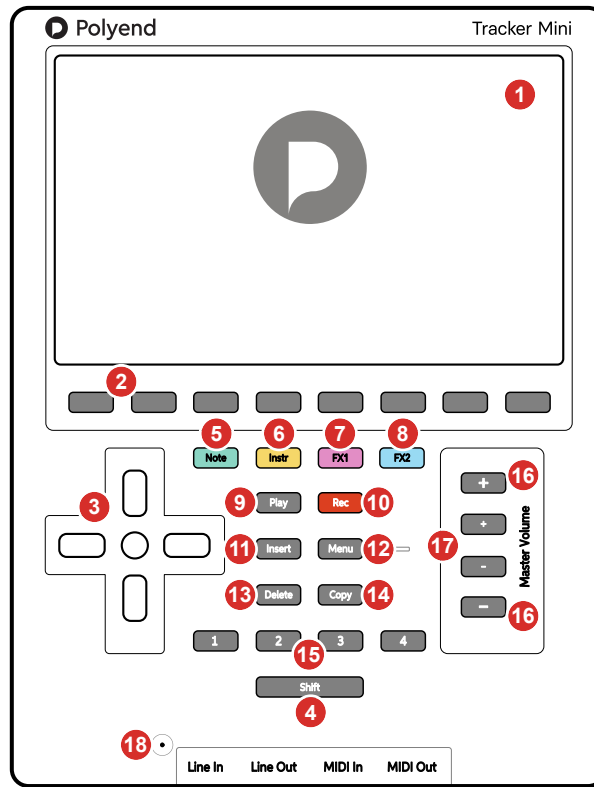


Hold the On/Off Button to Power Up
Hold the On/Off Button to Power Down

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Tracker Mini Audio Structure





- 1** LCD Display
5 Inch, LCD TFT 800 x 480 Display.
- 2** Screen Buttons
Dynamic [*Screen buttons*] are dependant on the function displayed above each button.
- 3** D-Pad Navigator Buttons
Four navigation pad buttons (Up), (Down), (Left), (Right) and one (Enter). Manoeuvre through the grid and options.
- 4** Shift Button
Pressing [Shift] + Another button will select its secondary function.
- 5** Dedicated Note Button
Selection of the [Note] element of a step.
- 6** Dedicated Instrument Button
Selection of the [Instrument] for a step.
- 7** Dedicated FX1 Button
Effect selection for [FX1] of a step.
- 8** Dedicated FX2 Button
Effect selection for [FX2] of a step.
- 9** Play Button
Plays when pressing [Play] the pattern or song. Pressing again stops playback. Play again restarts.
- 10** Rec Button
Pressing [Rec] will toggle the record mode on or off for editing patterns and perform settings.
- 11** Insert / Home Button
Pressing [Insert] will insert. Pressing [Shift] + [Insert] will return 'home', to the top of the pattern.
- 12** Menu Button
Hold to open the menu. Navigate to highlight a selection from the available options. Release to select.
- 13** Delete Button
Pressing [Delete] will reset or step back.
[Shift] + [Delete] will backspace delete the selected item.
- 14** Copy Button
Pressing [Copy] will copy the selected item.
Use [Shift] + [Copy] to paste any copied item.
- 15** Function Buttons
Assignable function buttons. Default: 1 - Pattern, 2 - Inst Automation, 3 - Sample Playback, 4 - Master.
- 16** Master [+] / [-] Buttons - Course
Adjusts the master volume +/- in large increments. Also navigates and adjusts values within certain menus.
- 17** Master [+] / [-] Buttons - Fine
Increases the master volume +/- in fine increments.
Also navigates and adjusts values within certain menus.
- 18** Microphone
Internal microphone.

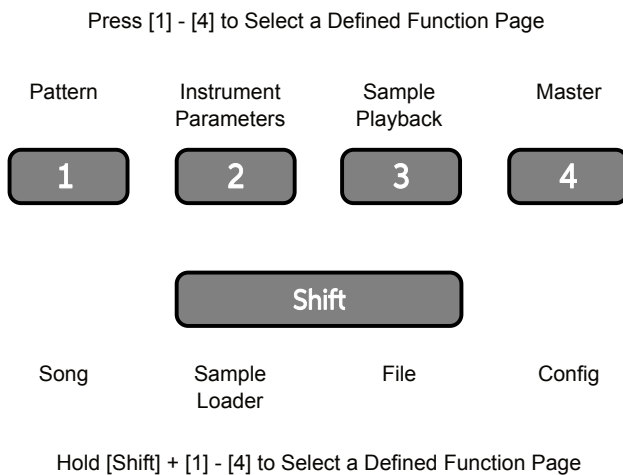
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Functions Buttons.

There are 4 dedicated function buttons which allow quick access to 8 pre-defined pages. These are numbered 1 - 4 for the first 4 functions and also have an additional set of 4 functions by using [Shift]. These function buttons are assignable and can be reconfigured to a range of page options but it is recommended to start with the defaults in order to build your workflow.

Using the assignable Function Buttons

Tap one of the Function buttons or use [Shift] + Tap, to immediately access the defined page. The default pages that are assigned are illustrated below.



The main page is selected when pressing the function buttons. If multiple pages exist, continue to tap the respective function button to cycle through the available pages.

There are 12 available functions which can be assigned to the Function buttons with up to 8 slots available, 2 for each button. Other than those assigned by default, the 'Sample Recorder', 'Sample Editor', 'Perform' and 'Games' functions can also be assigned in place of the default settings. The process of binding a page to a button is explained in the configuration settings section.

The processes described in this manual will assume the default function button assignments as stated here. The [Menu] options are an alternate method of selecting a specific function page.

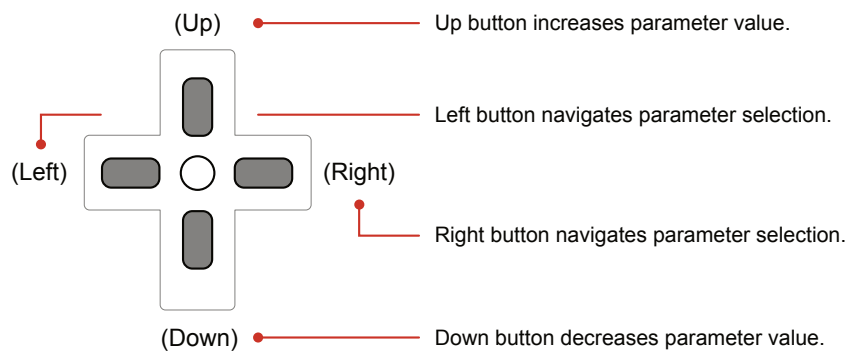
Generic Controls.

Pages may contain parameters and functions which once selected can be adjusted in value. These controls also navigate in menus.

Parameter Editing

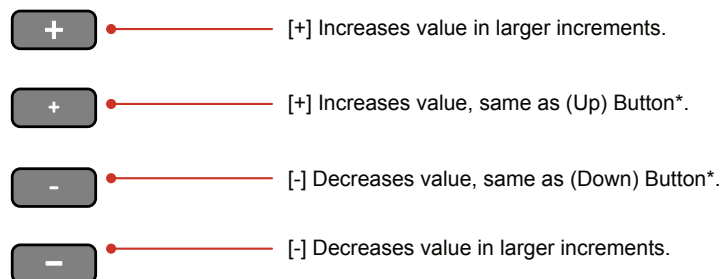
A page will need to be selected which contains the parameters to edit. For example the 'Master' page contains a series of adjustable settings. The highlighted and selected parameter will be indicated with a red bounding box. It is this parameter that will be changed when using the D-Pad Navigator and +/- buttons.

D-Pad Navigation



- The central navigation button typically acts as a 'select' or 'enter' button

Master +/- Buttons



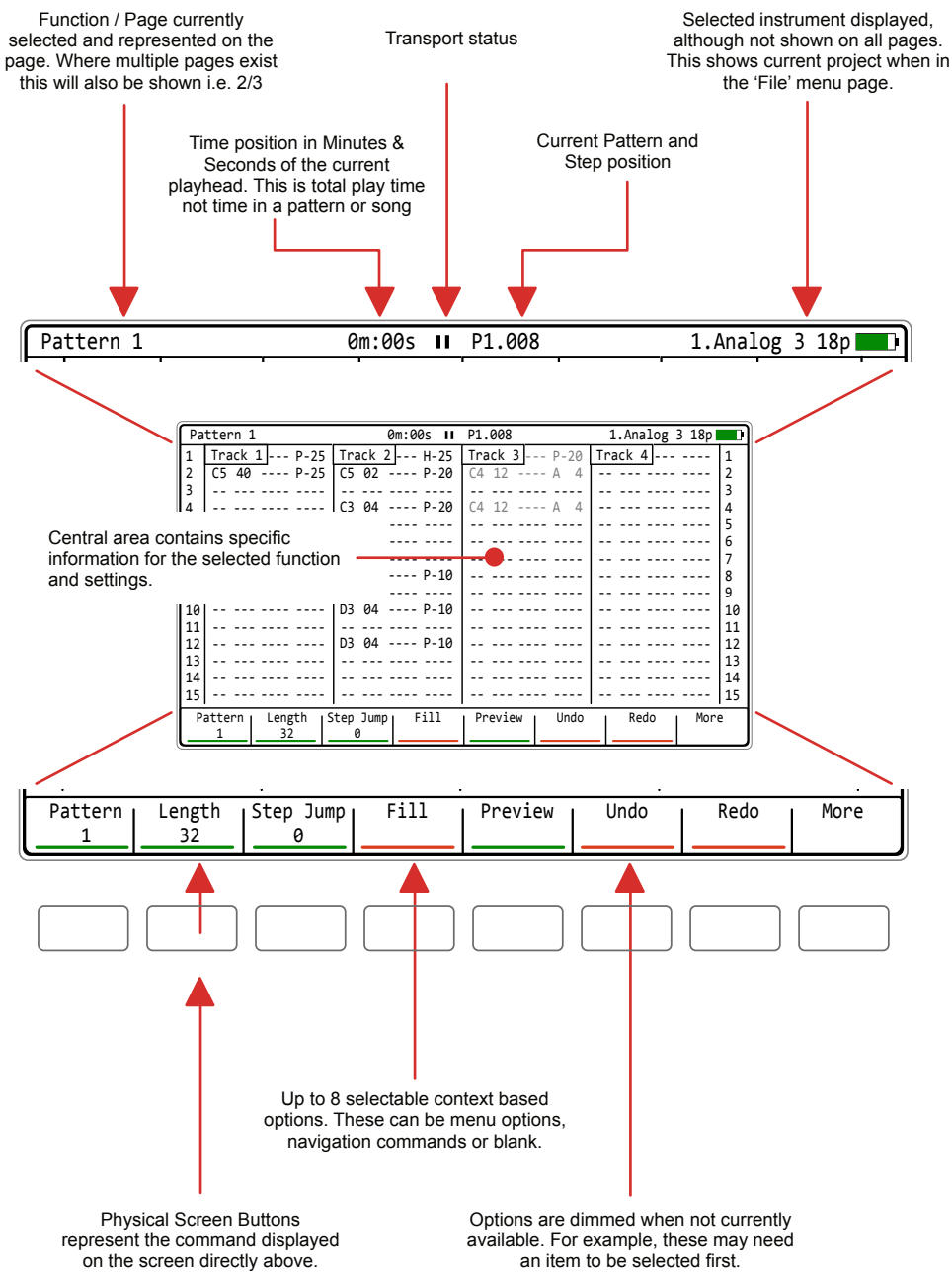
Within fixed page menu options, the D-Pad navigation buttons and +/- master buttons will scroll through the available options. The option is also automatically selected when it is highlighted. The respective screen button may also cycle through menu options when pressed repeatedly in pages.

* Inner +/- and D-Pad Up / down may operate in similar fashion in some menu and value setting options

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Page Layout.

Each page will display the information and control options for the selected function. While this may be unique to the context there are some common features and navigation principles that apply across all (or most) of the generic pages of Tracker Mini.

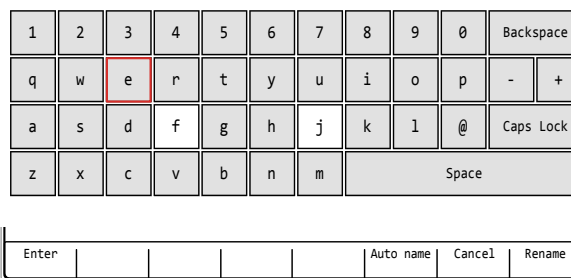


The button underscore colours represent the mode in which the command is available. Options underscored in red are available only in [Rec] mode. Green options are available generically.

QWERTY Keyboard.

Some pages will require text editing for naming tracks or projects etc. The same functionality applies whenever the Alpha numeric pop-up editor is used. The screen will display the QWERTY keys and the text to edit. The screen buttons are used to enter, cancel or save while the D-Pad Navigator buttons perform the editing. Auto naming is also an option.

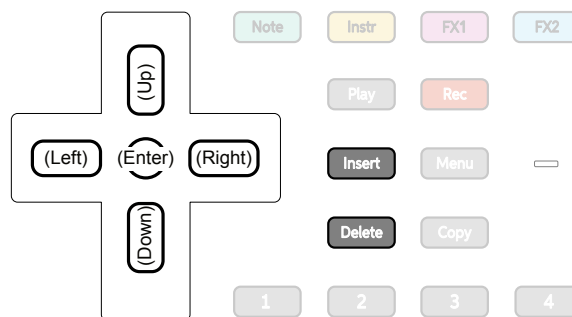
The screen will display the keys laid out in a QWERTY formation.



The characters and the title can be selected by using (Up), (Down), (Left) or (Right) to navigate and Press the centre D-Pad Navigator button or Press [Insert] or Press [Enter] - 1st Screen Button to select and add the selected character.

Option to [Cancel] - 7th from Left Screen Button is also possible.

Save when complete using [Save] - 8th Screen Button to save the name.



The Tracker Mini buttons operate in the naming editor screen when presented:-

- D-Pad (Up), (Down), (Left), (Right) will navigate the selection across the keyboard. Will also navigate left / right in the text of the name when the name is highlighted .
- D-Pad Navigator (Centre) button or [Insert] will insert the currently highlighted character into the name at the cursor position. Also a screen button option.
- [Delete] to delete characters and use with [Shift] to backspace in the name from the text cursor position.

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Summary of Configuration Options

A number of options can be set in the 'Config' menu. These defaults may be good enough to get started but specific changes may suit certain workflows and situations better. The details of these will be covered in relevant sections and only an overview of global settings is provided here.

Config Options

Menu	Option	Description
Project Settings	Performance Presets	Allows performance presets to be saved either as a global configuration or local to each project.
Project Settings	Pattern Divider	Sets the highlight level for the selected step offering better pattern visualisation.
Project Settings	Anti-aliasing	Anti-aliasing set to 'On' gives a cleaner sound for sample playback. Off is more lo-fi vintage feel.
Project Settings	Limiter Mode	Sets the characteristics of the limiter attack and release between subtle and extreme.
Project Settings	Sends Mode	Sets the sends to pre-fader i.e. independent of volume or post-fader.
Project Settings	Extra Headroom	Avoid clipping by adding extra headroom in the output audio.
General	Display Brightness	Adjusts the brightness level of the 7" display between three settings: High, Medium, Low.
General	Display Theme	The colour scheme of the screen. Original has the dark background while monochrome is bright.
General	Display Font	Text font option. Original has the classic consolas look while 'new' is smaller, more standard.
General	Recording Options	Sets the options for what is recorded i.e. notes, quantization, micro-timing, velocity.
General	Numbering Mode	Sets all numbers to the hexadecimal or decimal start at step 1 or 0 format. Used for that classic tracker look and feel.
General	Pattern Arrangement	Sets the pattern display to the traditional vertical view or alternative horizontal display.
General	Pattern Top Info	Allows the top part of the pattern screen to display only the track name, additional info or off.
General	Line In Channel	Selects the audio input of the line in between stereo, mono left or mono right.

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Menu	Option	Description
MIDI	Clock In	Sets the source of the master clock, Internal (default) or external USB or MIDI In jack.
MIDI	Clock Out	Sets the Tracker Mini clock output. Off, USB, MIDI Out jack, USB + MIDI Out jack.
MIDI	Transport In	Sets the source of transport control commands, Internal (default) or external USB or MIDI In jack.
MIDI	Transport Out	Sets the output of transport control commands, Off, USB, MIDI Out jack or USB+MIDI jack options.
MIDI	Notes In	Sets the input routing of external notes in. Set to Off, USB, MIDI In jack or USB+MIDI jack options.
MIDI	Notes Input Channel	Sets the MIDI channel for incoming notes from external gear. Select All channels or Ch 1-16.
MIDI	MIDI Out	Sets the MIDI output routing between, Off, USB, MIDI Out jack or USB+MIDI jack options.
MIDI	CC In	Sets CC (control change) input routing to Off, USB, MIDI In jack, USB+MIDI In jack.
MIDI	CC In channel	Sets MIDI channel for CC (control change) incoming messages. Select All channels or Ch 1-16.
MIDI	Middle C	Sets middle C as C-3, C-4, C-5, C-6. Calibrates range in Tracker Mini with external gear.
MIDI	Clock Sync Delay	Latency compensation for incoming sync.
Metronome	State	Turns the metronome on or off for live recording.
Metronome	Pre Roll	Provides a count in of 4 before starting to record.
Metronome	Time signature num	Upper numerator of the time signature
Metronome	Time signature denum	Lower denominator of the time signature
Metronome	Volume	Volume level of metronome

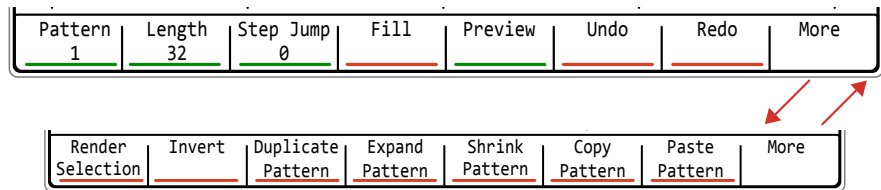
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Menu	Option	Description
Firmware	Firmware Update	Activates a firmware update based on the OS located on the SD card in the 'firmware' folder.
Firmware	Current version	Displays current version of installed OS. Visual indicator only.
Firmware	Build	Firmware build version display
Firmware	Reset config	Resets this configuration menu to the default original settings.
Fn buttons binding	Fn1	Sets the page associated with function button [1]
Fn buttons binding	Fn2	Sets the page associated with function button [2]
Fn buttons binding	Fn3	Sets the page associated with function button [3]
Fn buttons binding	Fn4	Sets the page associated with function button [4]
Fn buttons binding	Fn1+Shift	Sets the page associated with function button combo [Shift] + [1]
Fn buttons binding	Fn2+Shift	Sets the page associated with function button combo [Shift] + [2]
Fn buttons binding	Fn3+Shift	Sets the page associated with function button combo [Shift] + [3]
Fn buttons binding	Fn4+Shift	Sets the page associated with function button combo [Shift] + [4]
Info	- -	Additional information

Configuring a Pattern.

Pattern and step editing is performed in 'Pattern' Mode. The first requirement is to create the pattern itself where steps can later be added to create the melody or beat. Commands for the pattern are available from the dynamic screen buttons located at the bottom of the page. These will change depending on the mode or selection made.

The dynamic screen buttons labelled at the bottom of the page will control options for creating patterns. Underscore colour represents mode i.e. Red means accessible in [Rec] mode only.



Menu Option	Function	Description
Pattern	Pattern Selection	Selects a pattern to edit. This will select a pattern number between 1-255 in the project.
Length	Pattern Length	Adjust the number of step rows in the pattern. Default is 32 but a maximum of 128 rows are available in a pattern.
Step Jump	Programming Aid	Assists in recording steps with the pads. Will automatically jump the selection cursor in defined steps.
Fill	Programming Aid	Assists in programming steps. Will automatically fill steps based on defined selection criteria
Preview	Instrument Preview	Will play the instrument for the step to allow previewing of the sound.
Undo	Undo Last Command	If available, will reset the previous state prior to the last action, effectively undoing the last (up to 20) commands.
Redo	Redo Last Command	If available, will restore the previous state after to the last action, effectively redoing the last (up to 20) commands.
More	Next Page	Selects the next page of commands - see below
Render Selection	Bounce Audio	Renders the selection to a new audio sample. Useful to use elsewhere or to reduce track consumption.
Invert	Invert Steps	Inverts all steps in the selection vertically
Duplicate Pattern	Extends Pattern	Extends the entire pattern and its associated steps, extending the pattern to double the length.
Expand Pattern	Extends Pattern	Extends the pattern by adding blank steps in between existing steps, extending the pattern to double the length.
Shrink Pattern	Contracts Pattern	Contracts the pattern length by deleting every 2nd step, reducing the pattern to half the length.
Copy Pattern	Copy	Copies the entire pattern to the virtual clipboard.
Paste Pattern	Paste	Pastes the copied pattern from the virtual clipboard into the location starting at the current position.
More	Prior Page	Selects the previous page of commands - see above

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Pattern Mode Page Layout Options.

Pattern and step editing is performed in 'Pattern' Mode, selected by pressing the default assigned button [1] or using [Menu]. To edit steps, select [Rec]. The pattern mode view can be changed in the config options.

Press [Shift] + [Insert] to reset the cursor position to the start, step 1

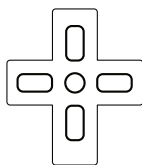
Change the pattern info for the top bar in the Config settings: General > Pattern top info.
Top bar: Off, Tracks Only or additional Info

Step Row

Green Play or Red Rec Mode

The 'top down' view can be changed to 'left right' in the Config settings; General > Pattern Arrangement

To select a step
Press (Up) or (Down) to navigate vertically in the Tracker Mini grid. Cursor will wrap past the end to the start when using arrow keys



Press (Left) or (Right) to navigate horizontally in the Tracker Mini grid

Switch to 8 Track view.
Displays a single element across all 8 tracks

Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7	Track 8
---	C5	---	---	---	---	---	---
---	C5	C4	D2	---	---	---	---
---	---	C4	---	---	---	---	---

- [1] + [Note] - Displays all 8 tracks, with only the note parameters
- [1] + [Instrument] - Displays all 8 tracks, with only the instrument parameters
- [1] + [FX1] - Displays all 8 tracks, with only FX1 parameters
- [1] + [FX2] - Displays all 8 tracks, with only FX2 parameters

Hold [1] + A combo of max 2 parameter buttons: Note, Instrument, FX1, FX2 to display 2 parameters per track across 8 tracks.

Press [1] to return to 4 tracks, all step parameters

Dedicated Step Parameter Buttons.

A step is a building block which triggers events such as playing a note or beat or activating a MIDI action and is used for creating patterns. Steps are programmed across pattern rows which represent each of the eight available tracks in the pattern sequence.

A step is a combination of 4 main components each of which has a dedicated selection button:-

Note. This sets the pitch of the step and is important for creating melodies or beats based on sample mapped drum hits.

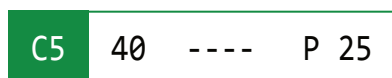
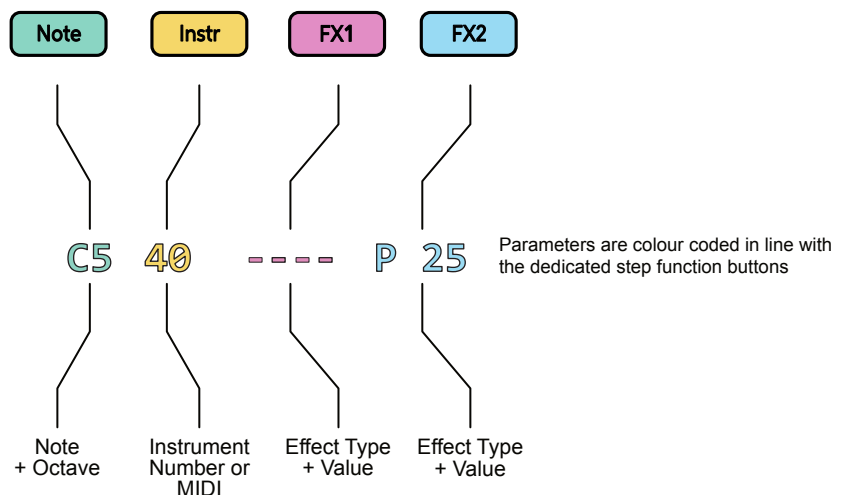
Instrument. This is a combination of a sample and the parameters and settings assigned to it. Also for setting MIDI Channel.

FX1. The first effect slot where the modulation and audio effects can be applied for the step.

FX2. The second effect slot where the modulation and audio effects can be applied for the step.

Step Dedicated Parameter Buttons

Pattern page is selected by pressing [1] or from the [Menu] while the Note, Instrument, FX1 and FX2 have dedicated buttons for editing the selected step.



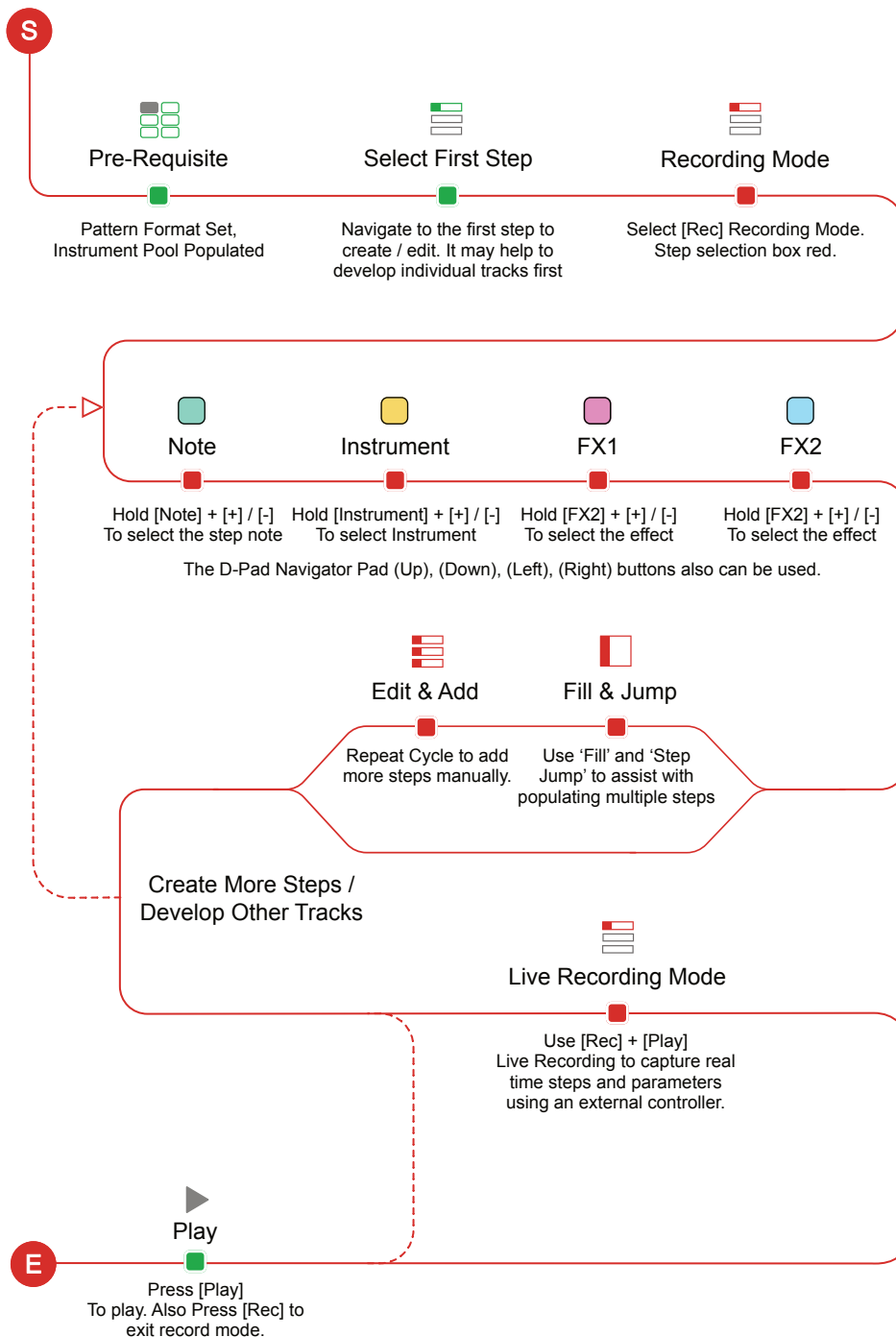
The step selection box will show solid colour on the selected option part. Example: Note is shown highlighted here.

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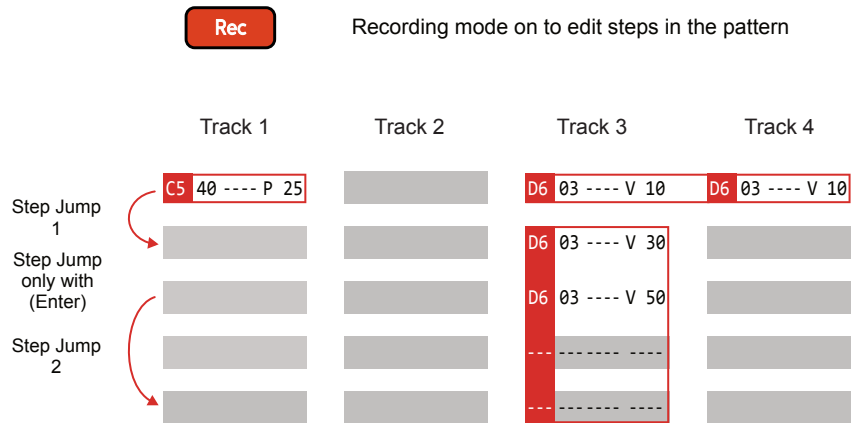
Process of Creating a Step

NOTES

Steps are sequenced in the Tracker Mini each of which contains a Note, Instrument, and two FX slot options. It is good practice to structure these into tracks of relevance. For example kick drum on track 1, especially at the starting point.



Manual Step Entry



Steps can be added individually.
 Example: Hold [Note] + Navigate with (Up), (Down), (Left), (Right) to select a note from the note grid.

Subsequent steps are recorded in when pressing the D-Pad navigator (Enter) button. This will record iteratively the selected note parameter into rows defined by the 'Step jump' intervals.

Select multiple step rows with [Shift] + (Up) or (Down).
 Also across multiple tracks [Shift] + (Left) + (Right)

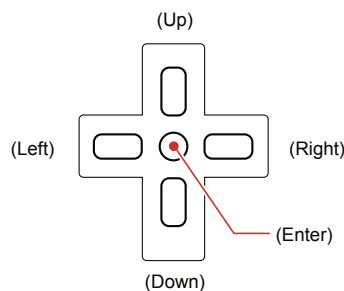
On the top row [Shift] + (Up) will select all steps in the track. Press [Shift] + (Up) + (Up) to select all steps.

Edits to any existing parameters can be made simultaneously, but only if a parameter is already set. These changes will be relative to the original value. Unassigned elements of a step will remain empty.

Pressing the (Enter) button in recording mode will record the note and instrument into subsequent steps. This is applied when the note or instrument which is selected and not applied for FX parameters.

D-Pad Navigator for moving around the pattern.

Master [+] / [-] for editing of step parameter values.



- [+] Empty Step: Place a 'C5' note
Existing Note: Increment an octave
- [+] Empty Step: Place a 'C5' note
Existing Note: Increment a semitone
- [-] Empty Step: Place a 'FAD' command
Existing Note: Decrement a semitone
- [-] Empty Step: Place an 'OFF' command
Existing Note: Decrement an octave

- C5** 03 ---- V 50 Note Selected, C5.
- C5 **03** ---- V 50 Instrument Selected, Instrument #3.
- C5 03 ---- **V** 50 FX1 Selected, Effect not applied.
- C5 03 ---- V **50** FX2 Selected, Volume = 50.

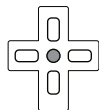
Quick Tap Dedicated Parameter Button to lock the selection e.g. [Instrument] for editing


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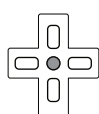
When steps are added using the D-Pad (Enter) button the active step is automatically advanced to the next step when complete. The intervals for this are based on the 'Step Jump' feature. This is useful for creating patterns with defined intervals and speeding up workflow. Step jump does not operate when using the [+] / [-] step entry method.

Step Jump Examples

Rec Recording mode on to edit steps in the pattern

		Track 1	Track 2	
	Step Jump 0	1 = ▶ C5 40 ---- P 25	D5 40 ---- P 25	The selected step will not advance and will remain at the same step position
	[Enter]	2	D5 40 ---- P 45	

	Step Jump 1	1 C5 40 ---- P 25	D5 40 ---- P 25	The selected step will advance automatically to select the next step position
	[Enter]	2 C5 40 ---- P 25	D5 40 ---- P 45	

	Step Jump 4	1 C5 40 ---- P 25	D5 40 ---- P 25	The selected step will advance four steps forward. In this example selecting the next 'on beat' position.
		2	D5 40 ---- P 45	
		3		
		4		
	[Enter]	5 C5 40 ---- P 25		
		6		

The Step Jump setting is useful when populating specific intervals, for example each on beat step or each off beat step or alternate steps for percussion. This speeds up the workflow and helps with creating interesting sequences.

FX Steps.

The two FX slots can be populated from a library of FX effects. Each FX has an effect type plus the associated value.

FX Type	Description
-	None. Empty FX1 or FX2 effect. No effect applied.
!	Off. Will toggle off the effect used on the prior effect step.
V	Volume or Velocity (NOTE OFF) for MIDI.
P	Positions the step sound left / right in the stereo plane.
M	Micro Tune. Fine pitch tuning of note and MIDI Out.
G	Glide time from previous to current note - based on the note pitch.
T	Tempo change. Changes the pattern tempo.
I	Swing. Applies a swing from any step track for the entire pattern.
m	Micro move nudges forward by a small amount the step position.
q	Gate length. Adjusts the step note gate length.
C	Chance is the probability of a note playing.
R	Roll, beat repeats the note also with options for volume or pitch inc/dec.
A	Arpeggiator, for creating pitch based melodies. (Also needs MIDI Chord)
n	Random note. Sets a range of notes for random playback.
i	Random instrument. Sets a range of instruments for random playback.
f	Random FX. Sets a random FX to the step from a selected range.
v	Random Volume. Sets a random velocity variation on each cycle
r	Reverses sample playback. Played end to start.
p	Sets the playback position for a sample start, wavetable or granular position
S	Plays the selected slice for the step - sliced samples
g	Volume LFO Rate
h	Panning LFO Rate
j	Filter LFO Rate
k	Position LFO Rate
l	Finetune LFO Rate

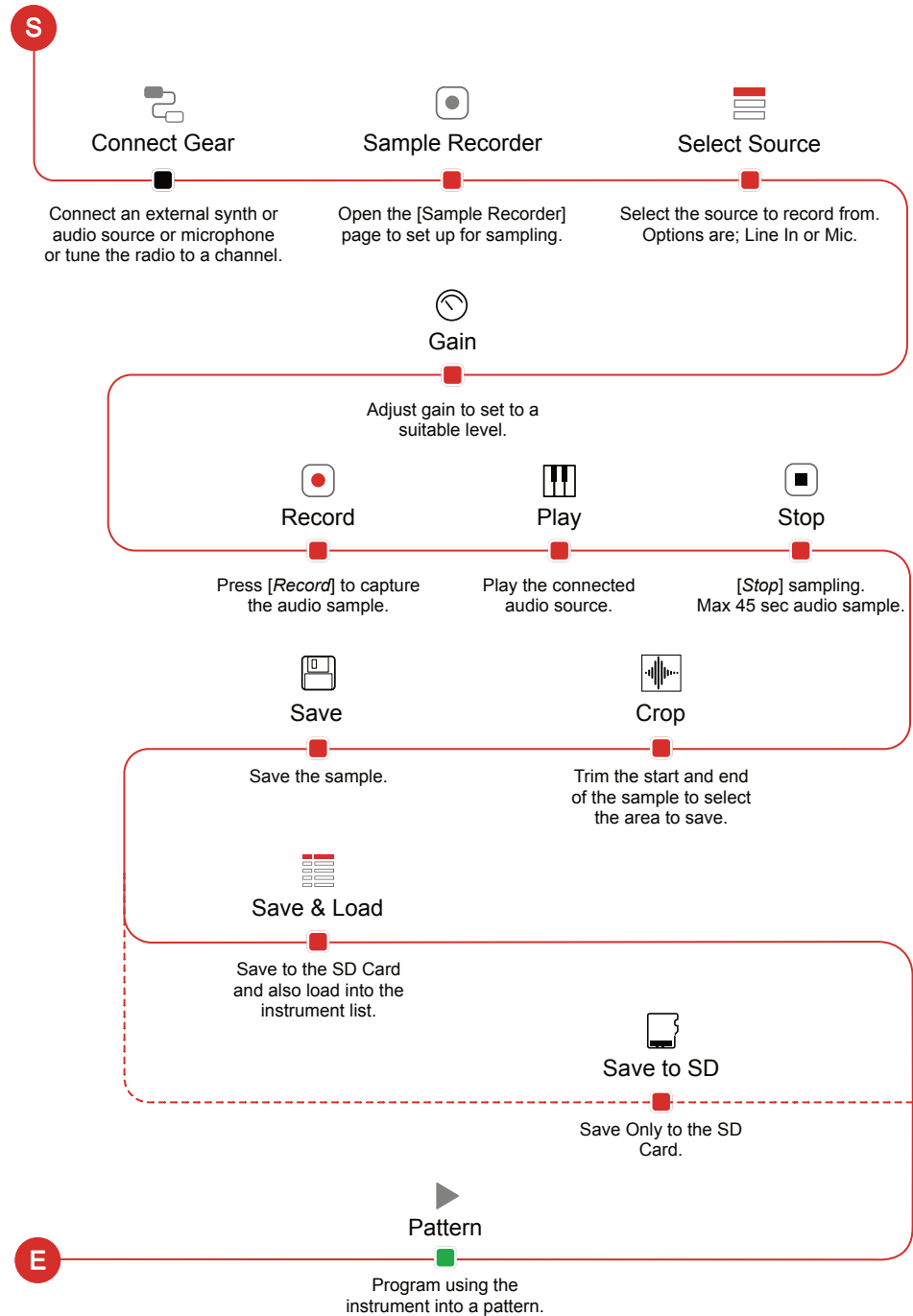
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NOTES

FX Type	Description
D	Overdrive amount for the step
L	Low Pass Filter Cutoff. Frequency represented by 0-100%
B	Low Pass Filter Cutoff. Frequency represented by 0-100%
H	Low Pass Filter Cutoff. Frequency represented by 0-100%
s	Delay. Amount of send effect 0-100%
t	Reverb. Amount of send effect 0-100%
E	Bit depth. 4 Bits to 16 Bits.
U	Tuning. -24 semitones to +24 Semitones. 4 Octave range.
F	Slide up amount. Range is 0-255 with 1/16 th semitone increments.
J	Slide down amount. Range is 0-255 with 1/16 th semitone increments.
a	MIDI Out (CC, PC, Chan & Poly Aftertouch). Needs a channel & Instrument
b	MIDI Out (CC, PC, Chan & Poly Aftertouch). Needs a channel & Instrument
c	MIDI Out (CC, PC, Chan & Poly Aftertouch). Needs a channel & Instrument
d	MIDI Out (CC, PC, Chan & Poly Aftertouch). Needs a channel & Instrument
e	MIDI Out (CC, PC, Chan & Poly Aftertouch). Needs a channel & Instrument
f	MIDI Out (CC, PC, Chan & Poly Aftertouch). Needs a channel & Instrument
0	MIDI Chord, note output. (Used also with Arp).

Recording Audio Workflow

Sampling in Tracker Mini takes place in the 'Sample Recorder' page. This is the first step in the process and is followed by editing the audio captured. Sampling in this page can be from the Line In or Mic audio sources.

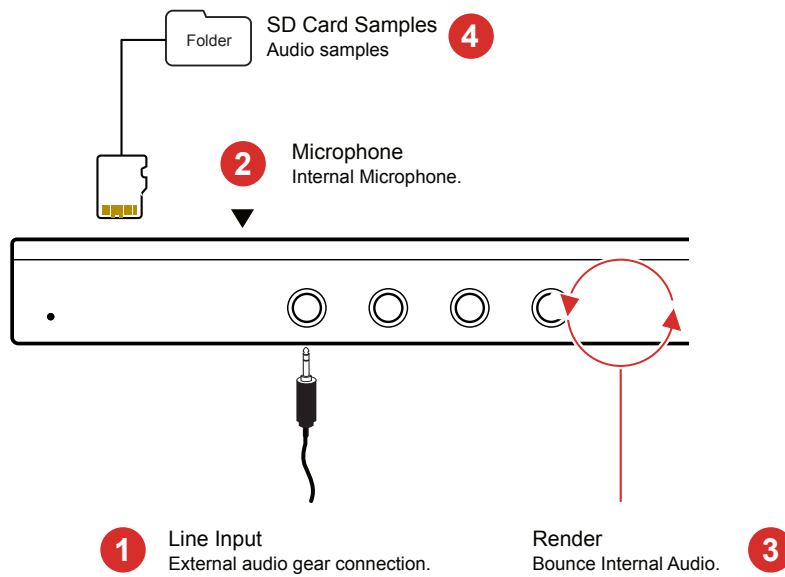


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Audio Sources

NOTES

There are a number of sources where Tracker Mini can access audio. Some of which are 'live' sources and can easily be sampled. Others are manually managed or rendered within the device.



- 1 Line Input**
3.5mm Input jack which allows Stereo (TRS) and Mono (TS) audio inputs. Stereo signals are converted to mono when recorded and the L & R channels can also be selected individually.
- 2 Microphone**
The Tracker Mini has an internal microphone located on the front panel. This allows direct recording of vocals, environmental sounds and general audio.
- 3 Render**
A feature which is available with the internal functions is render. This bounces or exports an audio file based on the selected pattern / tracks which can then be made immediately available as a sample or to use from the instrument list.
- 4 SD Card**
Audio samples are stored on the SD Card. These can be sampled and stored from within Tracker Mini but also can be manually transferred onto the SD card from an external source using a PC or Mac.

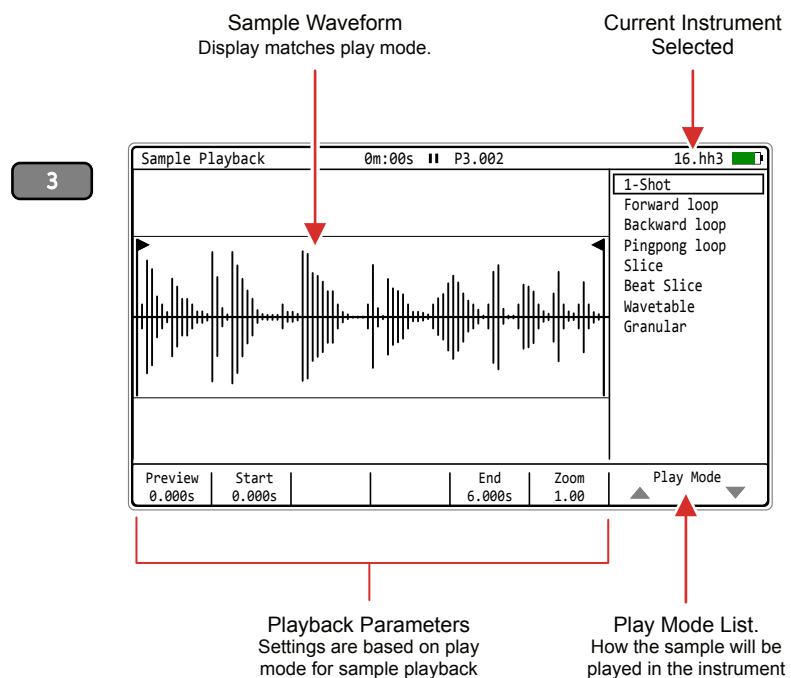
Tracker Mini is supplied with a 3.5mm Stereo Male Jack to 2 x 6.3mm Mono Female Socket adapter to allow interfacing with external gear and using the more common 6.3mm mono cables.

Sample Playback Overview

An instrument can be a sample, edited or raw. A raw '.wav' sample can be added to the instrument list. When a sample is edited and developed further as an instrument it can be saved as a '.pti' instrument, for example 'drumkit1.pti'. This can be used across all projects or distributed to other Tracker producers.

This section covers the basics of using .pti instruments. The end-to-end capturing, editing and use of audio sampling is covered elsewhere.

How a sample is applied as an instrument is handled in the 'Sample Playback' page, accessed by default to [3] button or from the [Menu].



Note: Playback is not visually animated in the waveform display when playing but the playhead is displayed when previewed.

Type	Play Mode	Description
Play	1-Shot	Basic sample playback. Plays start to end once.
Loop	Forward Loop	Sample playback. Plays start to end and cycles on loop.
Loop	Backward Loop	Sample playback. Plays end to start and cycles on loop.
Loop	Pingpong Loop	Sample playback. Plays start to end to start on loop.
Slice	Slice	Sample is sliced. Used for pitch base melodies.
Slice	Beat Slice	Sample is sliced. Used for beat based instruments.
Synthesizer	Wavetable	Sample is used as the wavetable, like a synth.
Synthesizer	Granular	Sample grains are used and played, like a granular synth

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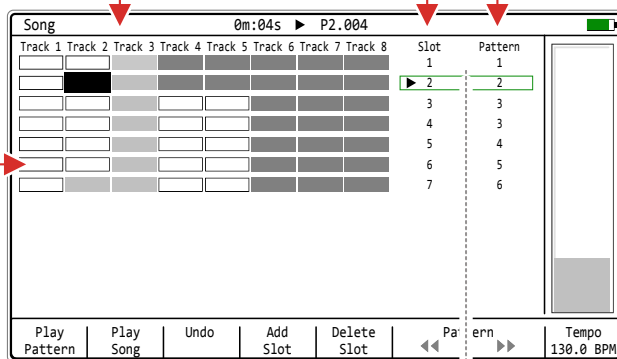
Song Mode Interface

Select the song page by pressing [Shift] + [1] or hold [Shift] + [1] to temporarily display the page from within another page, reverting back to when buttons are released. The interface for song mode is by default empty other than a single slot 1 with pattern 1. Up to 255 Song slots are available. Pressing [Play] in song mode will play the song not just individual pattern. Tracks in a pattern for the slot are represented as cell clips.

Tracks
Columns represent each of the tracks in a pattern

Slot
Each slot row hosts a pattern and plays top to bottom

Pattern
Pattern number assigned to the song slot



Play Pattern Play Song

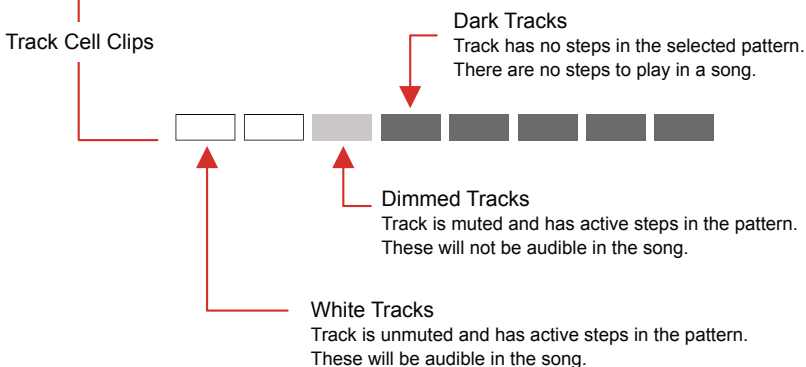
'Green' Mode - [Rec] Off.
Only playback options are available

Off

Rec

Play Pattern Play Song Undo Add Slot Delete Slot Pattern << >>

'Red' Mode - [Rec] On.
Playback and edit options are available



Muting Tracks

Muting is not performed in song mode. Use the Pattern page or the Track Mixer - Master Page 2/3 to mute / unmute.

MIDI Configuration

A pre-requisite when working with MIDI is to ensure that the configuration settings in the 'Config' options accessed by [Menu] are applied for the desired MIDI gear setup. These will dictate if Tracker Mini leads on functions like clock and transport or if it acts as a secondary follower, responding to control and synchronisation from another primary device control. Also Note and CC behaviour can be set.

Menu	Option	Description
MIDI	Clock In	Sets the Tracker Mini clock between the internal generated clock (default) or an external clock received through the USB or MIDI In jack.
MIDI	Clock Out	Sends the Tracker Mini clock output to other devices. Off, USB, MIDI Out jack or USB+MIDI jack options.
MIDI	Transport In	Sets the source of transport control commands, Internal (default), or control from an external device received through the USB or MIDI In jack.
MIDI	Transport Out	Sends Tracker Mini transport control commands to other devices. Set to Off, USB, MIDI Out jack or USB+MIDI jack options.
MIDI	Notes In	Sets the input of how notes are received from an external device. Set to Off, USB, MIDI In jack or USB+MIDI jack options.
MIDI	Notes Input Channel	Sets the MIDI channel for external note inputs. Select All channels or Ch 1-16.
MIDI	MIDI Out	Sets the output routing of MIDI to communicate to other devices. Set to Off, USB, MIDI Out jack or USB+MIDI jack options.
MIDI	CC In	Defines how the CC (control change) input from external devices is handled. Set to Off, USB, MIDI In jack, USB+MIDI In jack.
MIDI	CC In channel	Sets the MIDI channel that is used to receive CC (control change) messages. Select All channels or Ch 1-16.
MIDI	Middle C	Sets Tracker Mini's middle C as C-3, C-4, C-5, C-6. This will calibrate the note ranges to external gear if this does not naturally match.
MIDI	Clock Sync Delay	Latency compensation for incoming clock synchronisation. Leave at the default unless there are synchronisation errors.

Velocity can be recorded from an external MIDI controller, but this must be set in the recording options.

Menu	Option	Description
Project	Recording Options	This option sets the recording options for the project. To record velocity from an external controller one of the velocity inclusive options should be selected.

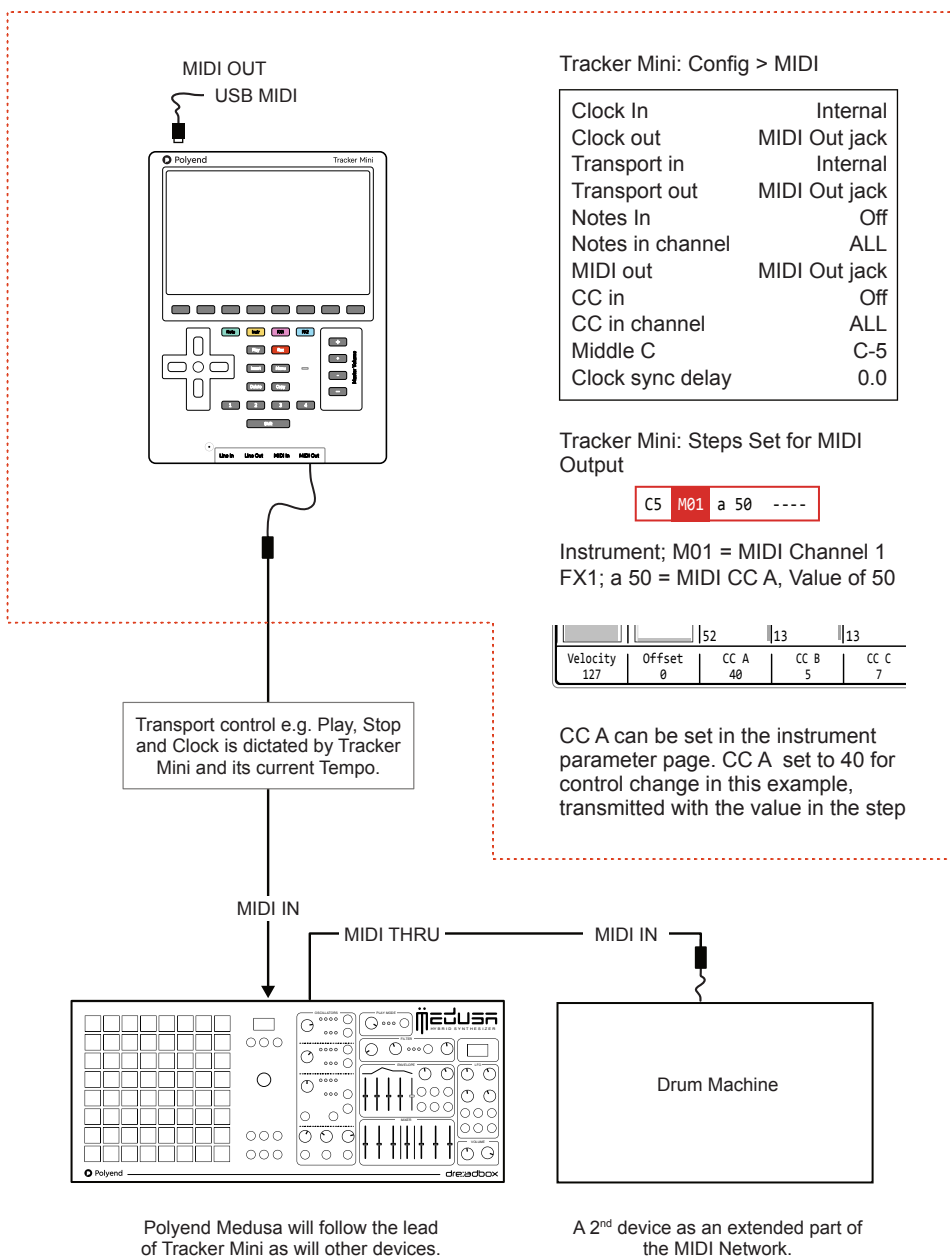
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Typical MIDI Configurations

NOTES

There are many configurations that can be set up with MIDI gear. Some are complex and involve multiple devices while a simple set up can have two devices communicating. Some typical examples are shown.

Example Configuration 1: Tracker Mini as the primary lead.



Devices should be configured to receive clock and transport and the MIDI Channel which Tracker Mini communicates, for example, Channel 1. CC 40 In Medusa represents the Filter Cutoff frequency in this example each step in Tracker will set the filter cutoff.

Performance Mode Overview

Performance mode allows real time improvisation control over tracks, patterns and songs adding variation and interest when playing live. This is normally handled in the [Menu] 'Perform' page although MIDI Input can also be set to control the performance parameters.

Performance Mode

Press [Menu] to access and navigate the options. Select the 'Perform' option and display the performance mode screen. Editing parameters and configuring the effects is handled in [Rec] record mode]. It is possible to cycle between pattern and song pages while performance mode is active.

Playback Status
Shows pattern loop ↻ playback or full song ▶ playback

Perform Status
Shows Performance Mode is active.

MIDI CC
Indicates the top row, MIDI CC controllable values.

Performance FX											
Volume	Panning	Tune	Low-pass cutoff	High-pass cutoff	Band-pass cutoff	Delay send	Reverb send	Sample position	Sample end	Sample Playback	Volume LFO
---	---	---	---	---	---	---	---	---	---	>>>	---
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	/16	-1
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	/16	-1
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	/16	-1

Punch In Effects
12 Configurable performance effect slots

Punch In Parameters
4 Effect parameter values. Triggered by [+], [+], [-], [-]

Track Selection
Selects which tracks will be affected by the performance effects applied, indicated red.

Perform Slot Trigger
Each [+] / [-] buttons trigger the respective effect value row.
The effect values are configurable with row 1, by default set to off (- - -).

---	Row 1 Value	+
-5	Row 2 Value	+
+5	Row 3 Value	-
-7	Row 4 Value	-

Selected effects are indicated green or red (if editing) on the Tracker Mini screen



REC Mode

Press [Rec] to edit the perform configuration. The selections will be indicated red as will the effect selection bounding box. Effects can be configured and the values edited when in Rec mode of Perform.

---	---	---
Panning	Tune	Low-pass cutoff
---	---	---
-1	-5	-1
-1	+5	-1
-1	-7	-1

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Perform Effects List

NOTES

Tracker Mini has 21 performance effects that can be selected and loaded into each of the 12 effect slots. The same effect can be applied to multiple slots. While these are called effects, they in fact control parameters that apply variations to the parameter values.

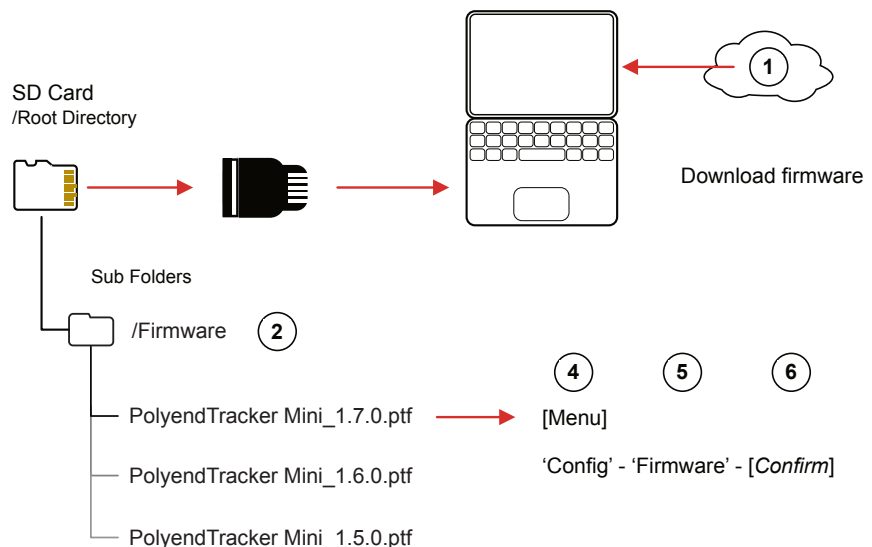
Effect #	Name	Range / Comments
1	Volume	-100 to +100. Volume level adjustment
2	Panning	-100 to +100 Stereo Position
3	Tune	-48 to +48 Semitones. Also applies to MIDI.
4	Low-Pass Cutoff	-100 to +100. Filter frequency adjustment
5	High-Pass Cutoff	-100 to +100. Filter frequency adjustment
6	Band-Pass Cutoff	-100 to +100. Filter frequency adjustment
7	Reverb Send	-100 to +100. FX Send level
8	Delay Send	-100 to +100. FX Send level
9	Sample Position	-100 to +100. Audio sample start position
10	Sample End	-100 to +100. Audio sample end position
11	Sample Playback	<<< >>> Backward, Forward direction.
12	Volume LFO Speed	-28 to +28. LFO Speed
13	Panning LFO Speed	-28 to +28. LFO Speed
14	Finetune LFO Speed	-28 to +28. LFO Speed
15	Filter LFO Speed	-28 to +28. LFO Speed
16	Grain/WT LFO Speed	-28 to +28. LFO Speed
17	Step Repeater	Off, 16, 12, 8, 6, 4, 3, 2, 1, 1/2, 1/3, 1/4, 1/6, 1/8, 1/12, 1/16.
18	Pattern Play Mode	Fwd, Back, Rnd, C1-C20 Fixed or Predefined algorithm 'C' play modes
19	Pattern Length	1-128 Total length (all tracks - selected or not)
20	Bit Depth	-12 to +12 Bit depth adjustment
21	Overdrive	-100 to +100 Overdrive adjustment

Generic Firmware Update

Firmware updates may be provided by Polyend from time to time, to fix bugs or add new features. The process of updating can be performed in several ways. When performing updates it is strongly advised to follow the Polyend instructions supplied with each update. The instructions here are a generic guide.

FIRMWARE UPDATE

1. Download the latest firmware. Access firmware updates for your device from your registered account at Polyend.
2. Copy the downloaded .ptf firmware file into the /Firmware folder. This can be found in the root directory of the SD Card.
3. Insert the SD card into Tracker Mini and power up
4. Hold [Shift] + [4] or use [Menu] to select the 'Config' Menu.
5. Navigate to the 'Firmware' menu. In the central window, select the firmware option to install.
6. Press [Confirm], Screen button.
7. The firmware will install and the on screen prompts provided will guide. The install process is typically less than 1 minute.
8. Tracker Mini should restart, but press On/Off if a manual start is required after 100% of the update is completed.



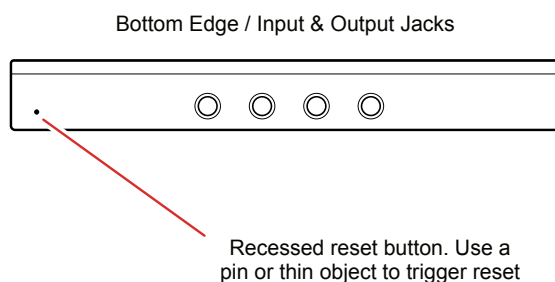
Tracker Mini Essentials

Emergency Firmware Update

Firmware updates are available from the polyend portal for your registered device. A reset button is provided, recessed behind the rear panel for emergency situations. A reset can be performed if there are issues with the update method or to clear Tracker Mini issues but should not be used as a regular process for updates.

TRACKER MIDI & FIRMWARE RESET

1. Download the latest firmware. Access firmware updates for your device from your registered account at Polyend.
2. Copy the downloaded .ptf firmware file into the /Firmware folder. This can be found in the root directory of the SD Card. Also ensure any previous update files remain in the firmware folder.
3. Insert the SD card into Tracker Mini.
4. Use a pin or thin object to press the internal reset button. This is located on the bottom of the device to the left of the input and output jacks.
5. Tracker Mini will reset and search the firmware folder on the SD Card. A random firmware will be selected and installed in order to recover Tracker Mini to a working state. The install process is typically less than 1 minute duration.



The reset option is useful if any lock ups or freezing occurs on Tracker Mini. It is not necessary in these situations to download a new OS. It is advised to keep a series official, known good, firmware releases in the /firmware folder. For example 1.5.0, 1.6.0, 1.4.0. That way steps 4-5 can be performed in case of issues and a random update will be performed from a known state. A manual update in the 'config' menu to select the latest version can then follow.

Quick Reference Commands

Assumes default assignment of function buttons [1] to [4]. D-Pad Navigation referenced in rounded () parenthesis. Dynamic screen keys in *italic*.

Function	Action	Tracker Mini Buttons	Description
Master	Master Volume	Hold [Shift] + [+] or [-]	Adjusts the master output. The +/- offer fine and course adjustment options. Also use (Up) or (Down)
General	General Navigation	(Up), (Down), (Right), (Left)	D-Pad, generally navigate, scroll menu selections and options
General	Copy	[Copy]	Depending on the context, will copy and paste between functions ie copy patterns. Use [Shift] + [Copy] to Paste.
General	Delete	[Delete]	Depending on the context, will delete. Will reset any selected parameter to its default state. Also use with shift to backspace
Pattern	Pattern Mode Page	[1]	Selects the pattern mode page. Button 1 is by default assigned to pattern page in the configurable page settings.
Pattern	Play Pattern	[Play]	Plays the pattern from the start. Stops / Pauses the pattern if it is already playing. Restarts play if paused mid pattern.
Pattern	Continue Play	[Shift] + [Play]	Restarts play of the pattern from the currently paused position
Pattern	8 Track Note View	[1] + [Note]	Display all 8 tracks with only notes instead of default 4 tracks. 2 elements can be displayed i.e. + [FX1], [FX2], [Instrument]
Pattern	8 Track Inst View	[1] + [Instrument]	Display 8 tracks with only instrument instead of 4 tracks. 2 elements can be displayed i.e. + [FX1], [FX2], [Note]
Pattern	8 Track FX View	[1] + [FX1] or [FX2]	Display all 8 tracks with only FX instead of default 4 tracks. 2 elements can be displayed i.e. + [Note], [Instrument]
Pattern	4 Track View	[1]	Restores default 4 tracks when viewing 8 tracks
Pattern	Select Pattern	[1] + (Up), (Down) or [+] / [-]	Select Pattern by number.
Pattern	Sequential change	[1] + (Left) or (Right)	When playing, selects a new pattern to cue playback to start when the current pattern ends. Pattern blinks red.
Pattern	Sequential change	[<i>Pattern</i>] + (Left) or (Right)	When playing, selects a new pattern to cue playback to start when the current pattern ends. Pattern blinks red.
Pattern	Immediate change	[1] + (Up) (Down) or [+] / [-]	When playing, selects a new pattern to trigger and starts playback in sync, immediately.
Pattern	Immediate change	[<i>Pattern</i>] + (Up) (Down) or [+] / [-]	When playing, selects a new pattern to trigger a start playback, in sync, immediately.
Pattern	Multiple Step Select	[Shift] + (Up) (Down) (Left) (Right)	Will select a range of multiple steps for editing collectively.
Pattern	Select Top Row	[Shift] + [Insert]	When stopped, resets the playhead to the top row start.
Pattern	Multiple Step Select	[Shift] + (Up) When on the first step	Will select all steps for the currently selected track
Pattern	Multiple Step Select	[Shift] + (Up) (Up) When on the first step	Will select all steps for all of the tracks
Pattern	Mute Tracks	[Shift] + [<i>Screen</i>] Button	Screen button 1 - 8 will toggle mute or unmute for tracks 1 - 8 respectively when in pattern mode page.
Pattern	Parameter Selection	Tap Dedicated Param Button	Will lock the selection of the Note, Instrument, FX1 or FX2 parameter when editing or navigating.
Pattern	Arm / Disarm	[Shift] + [Rec] + [<i>Screen</i>] Button	Arms or Disarms the track for recording. Disarmed tracks will not allow recording. Screen buttons represent tracks.
Pattern	Live Rec Start	[Shift] + [Rec]	Start Live Recording. Requires an external keyboard to record notes into the pattern.
Pattern	Live Rec > Play	[Rec]	When live recording, pressing [Rec] will continue to play but exit recording mode.

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1.12 Quick Reference Commands

Assumes default assignment of function buttons [1] to [4]. D-Pad Navigation referenced in rounded () parenthesis. Dynamic screen keys in *italic*.

Function	Action	Tracker Mini Buttons	Description
Song Mode	Song	Press [Shift] + [1]	Pressing [Song] switches to song page.
Song Mode	Song	Hold [Shift] + [1] long press	Holding buttons will temporarily display song page from within another page i.e. from Pattern page. Release [1] before [Shift]
Song Mode	Select Row	Press (Up) (Down) or [+] / [-]	Navigate the song row slot / pattern. One row can be selected
Song Mode	Select Top Row	[Shift] + [Insert]	When stopped, resets playhead to the top row start.
Song Mode	Play Song	[Play]	Plays the song from the start of the selected slot / pattern row.
Song Mode	Stop Song	[Play]	Stops / Pauses the song playback. Pressing Play again will restart in the song at the start of the current slot / pattern row.
Song Mode	Loop Row	[Shift] + [Play]	Loops playback on the current song slot / pattern row. Essentially plays the selected pattern.
Song Mode	Tempo	Hold [<i>Tempo</i>] + (Up) (Down)	Adjust project tempo, 40 - 800 BPM in 1 BPM increments
Song Mode	Tempo	Hold [<i>Tempo</i>] + [+] / [-]	Adjust project tempo, 40 - 800 BPM in 10 BPM increments when using outer +/- and 1 BPM increments with inner +/-
Perform	Perform	Use Menu to select perform	
Perform	Play	[Play]	Plays current pattern on loop. Also stops playback.
Perform	Play	[Shift] + [Play]	Plays the song on loop. Also toggles pattern / song playback.
Perform	Edit	[Rec]	Edit mode selected. Navigation and slot values in red.
Perform	Navigate Column	(Left) or (Right)	Selects one of the 12 effect slot columns.
Perform	Select	[<i>Track x</i>]	Selects tracks to apply any triggered effect. Track labelled red.
Perform	Trigger effect	[+], [+], [-], [-]	Triggers, while held, one of the effect value slots in perform, green mode. In Rec mode this will allow editing of the values.
Perform	In Rec Mode	(Up), (Down)	Change performance effect in the current slot
Perform	In Rec Mode	[Shift] + (Left) or (Right)	Swap effects between slots
Perform	In Rec Mode	[+] / [-] + (Up) or (Down)	Edit the effect value offset for the respective effect and row
Perform	Remix	[<i>Track x</i>] + (Up) (Down) or [+] / [-]	Load a new pattern for the selected track(s). Plays immediately. Live remix mode.
Perform	Remix	[<i>Track x</i>] + (Left) or (Right)	Arm a new pattern for the selected track(s) once the current pattern completes. Live remix mode.
Perform	Mute / Unmute	[Shift] + [<i>Track x</i>]	Mute or unmute the selected track

The Full Tracker Mini Manual can be downloaded from your Polyend account

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by

Synthdawg

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