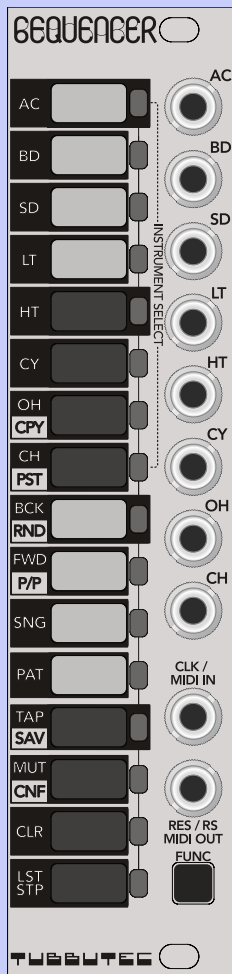
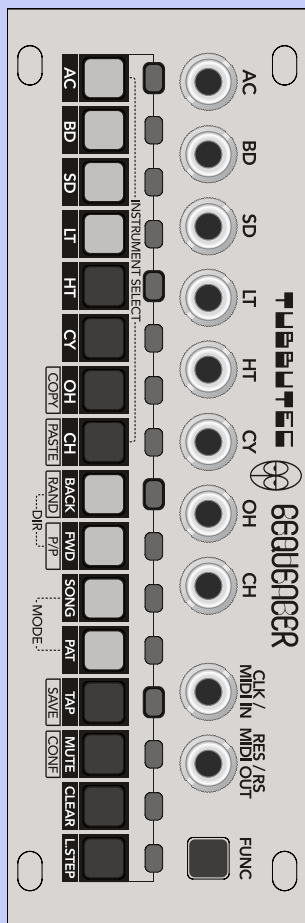


# Tubbutec 6equencer

## User manual rev 1.2



# Features

- Step-based drum sequencer with 8 instruments inspired by the TR-606.
- Compatible with analogue and midi-based systems
- 16 patterns, chainable in song mode, up to 32 patterns in a song
- Forward, backward, ping-pong and random play for patterns and songs
- Mute instruments live
- Probability control of steps
- Record steps by tapping or via midi
- Clear steps while playing
- Pattern length can be set individually
- Copy, Paste and Clear patterns in song mode
- All features can be used while sequences are playing
- 8 trigger outputs with adjustable trigger length, midi out
- Analogue or midi clock input with adjustable clock divider
- Multiple sequencers can be chained to achieve longer sequences or more instruments.
- Trigger and record via midi in, doubles as midi interface
- Trigger midi instruments via midi out
- Very compact, yet versatile: 3HE \* 6HP, or 1U Intellijel

This page intentionally left blank  
(not really blank because this text is here)

# Table of contents

<u>Features</u> .....	2
<u>Introduction</u> .....	6
<u>Sequencer user interface</u> .....	8
<u>Inputs, outputs and clock</u> .....	9
<u>Pattern view</u> .....	10
<u>Selecting the active instrument</u> .....	10
<u>Programming a pattern</u> .....	10
<u>Defining the length of a pattern</u> .....	11
<u>Copy and paste in pattern view</u> .....	11
<u>Editing and performance features in Pattern View</u> .....	12
<u>Play directions</u> .....	12
<u>Recording steps live (TAP)</u> .....	13
<u>CLEAR steps</u> .....	14
<u>MUTE instruments</u> .....	14
<u>Probability control</u> .....	15
<u>Song View</u> .....	16
<u>Changing the current pattern</u> .....	16
<u>Programming a new song</u> .....	17
<u>Copy and paste patterns</u> .....	19
<u>Clear patterns</u> .....	19
<u>Changing the direction a Song plays</u> .....	19
<u>Saving patterns and song</u> .....	20
<u>Using Sequencer as a Midi interface</u> .....	20
<u>Output modes and pulse lengths</u> .....	21
<u>Accented pulse length</u> .....	21
<u>Analog clock divider / DIN-Sync</u> .....	22
<u>Swing</u> .....	23
<u>Flam / Ratchet</u> .....	24

<u>LINKing multiple 6equencers</u> .....	26
<u>Serial mode</u> .....	26
<u>Parallel mode</u> .....	27
<u>Combining LINK modes</u> .....	28
<u>Other uses of the LINK interface</u> .....	27
<u>Config menu</u> .....	28
<u>Config parameters</u> .....	29
<u>Midi</u> .....	30
<u>Midi TRS connectors</u> .....	31
<u>Midi In</u> .....	31
<u>Midi Clock</u> .....	32
<u>Midi out</u> .....	32
<u>Midi CC</u> .....	33
<u>Cheat sheet</u> .....	34
<u>6equencer config menu overview</u> .....	36
<u>1U Version</u> .....	36
<u>3U Version</u> .....	36

## Technical specifications

Output trigger / gate voltage	5V
Clock and reset input voltage	$\geq 3.5V$
Midi TRS type	A
Supply voltage	+12V
Supply current	20-40mA

1U Intellijel / 24HP or 3U / 6HP

Printed aluminum panel, 2mm thickness

Depth (not including power connector)	20mm
---------------------------------------	------

Weight:	1U: 58g, 3U: 54g
---------	------------------

# Introduction

Tubbutec 6equencer (pronounced sequencer, sixquencer, or whatever you prefer) is a TR-606 inspired step sequencer.

It is available in different Eurorack form factors (1U and 3U) and despite being compact has many powerful features.

6equencer is optimized for live performance and allows quick programming and editing of drum patterns.

Both analogue clock and triggers as well as midi input and output are supported.

6equencer has eight instrument channels and is pattern based. Each pattern can have up to 16 steps and 16 different patterns can be programmed.

Multiple patterns can be chained to a 'song'. Each song consists of up to 32 patterns, a single pattern can occur multiple times in a song.

Additionally, multiple 6equencer modules can be connected to form patterns with more than 16 steps or used in parallel to effectively get more instrument channels. Up to 4 6equencers can be connected for a maximum of 48 steps per pattern or 32 instrument channels. The connection is achieved via a 'LINK' connector on the back of the module.

Many features exist to ease pattern programming and live performance:

Multiple play directions can be selected including a musically usable random mode.

The user can mute and un-mute instruments with the press of a button.

The Low Tom and High Tom instruments can be used to control the probability of other instruments playing.

Steps can be recorded by tapping or via midi input.

Similarly, steps can be cleared while playing.

You can record a new song while another is playing and start the new song in sync. This allows very flexible and intuitive live performances.

Patterns can also be copied and pasted, allowing the quick programming of variations.

Patterns and songs can be saved and will be available the next time you power on the module.

More features are accessible via a config menu. You can define midi channels, pulse lengths, clock mode and more.

This manual contains a detailed description of all features, followed by a short 'cheat sheet'.

## 6equencer user interface

The 6equencer user interface features 16 buttons with LEDs and a **FUNC** button. Each LED can be red, blue or purple. Typically a blue LED will indicate a mode or setting, while a red LED will indicate an active step or parameter. When both, red and blue LEDs are turned on, the resulting color will be purple. This means both are set (e.g. a step is set and a parameter is selected).

So when this manual speaks of a red or blue led, it may look purple depending on which function is selected.

In pattern view, each of the 16 buttons is a specific step, in song view each is a specific pattern.

By pressing and holding the **FUNC** button, the other 16 buttons can be used to change modes and settings.

Throughout this document, we will refer to this method as **FUNC** + button

Other functions are accessible by pressing **FUNC** and while holding it, long-pressing another button (for about a second).

Throughout this document, we will refer to this method as **FUNC** + button (long-press)



## Inputs, outputs and clock

6equencer has 8 instrument outputs, a clock and midi input and a reset (RES) or run-stop (RS) input or midi output.

The instrument outputs gates or trigger with specific lengths depending on the settings in the config menu (see Config Menu). They are labelled:

**ACcent**, **BaseDrum**, **SnareDrum**, **LowTom**  
**HighTom**, **CYmbal**, **OpenHihat** and **ClosedHihat**

They can of course also be used to trigger any instrument or event (like envelopes, an arpeggiator, or other sequencers).

The ACcent track behaves differently from the rest when using midi input and output (see Midi). It can also be used to alter the pulse lengths of other instruments.

6equencer can be clocked using an analogue clock or trigger or alternatively using a midi clock. The clock source and midi clock divider can be adjusted in the config menu. It is also possible to trigger the instruments via midi directly.

The sequencer can reset on the rising edge of a signal in RESET mode. Alternatively it can be used in RUN-STOP mode where the sequencer will only play as long as the signal at the input is high. This socket also doubles as midi out and can output instrument data to trigger a midi drum machine.

## Pattern view

After power on, 6equencer defaults to pattern view. This is indicated by the **PAT** led lit up in blue. Pattern view can be used to program patterns and most live performance tools are also available here.

Active steps are shown by the red being on.

For inactive steps the red led is off.

When the sequencer is running, the current position is indicated by a short blink in red if the step is off, or alternatively if a step is on, the red led briefly turns off.

## Selecting the active instrument

The currently active instrument is indicated by a blue led.

To change the instrument press **FUNC** and the instrument button. Alternatively you can long-press an instrument to make it active. Once an instrument is selected, the active steps for that instrument are displayed in red.

## Programming a pattern

To set or delete a step, just press the corresponding step.

When a step is activated, the red led lights up.

## Defining the length of a pattern

The length of a pattern can be changed using the last step function. To access last step mode, press **FUNC** + **LSTEP**. The **LSTEP** led lights up in blue and the last step of the pattern is shown in red. Press any button to make it the last step of the pattern. Press the **FUNC** button again to exit last step mode.

## Copy and paste in pattern view

It is possible to copy the steps of one instrument and paste them into another instrument or into another pattern.

It is also possible to copy and paste whole patterns in Song View (See chapter Song View)

To copy the currently visible steps press **FUNC** + **COPY** (long-press). The **COPY** led will blink in blue as confirmation.

To paste the copied steps, change to another instrument and press

**FUNC** + **PASTE** (long-press). The **PASTE** led will blink in blue as confirmation. You can also switch to another pattern (see Song View) and paste the steps there.

This can also be used as a performance tool: Copy an instrument, modify it and later paste the original steps back in place.

# Editing and performance features in Pattern View

In Pattern View several performance-oriented features are available. Some features also ease editing and pattern programming.

## Play directions

Four play directions are available: Forward, Backward, Ping-Pong and Random.

In each case, the actual play position in a pattern is memorized, so switching between these modes will not cause the sequencer to become out of sync.

Pattern changes in song mode also use this underlying position, so a pattern change always occurs correctly in sync. Forward and Backward modes are self-explaining.

You can switch between them by pressing **FUNC** + **FWD** or **FUNC** + **BACK**.

The Ping-Pong mode alternates between first playing the pattern forwards and then playing backwards. The first and last step of a pattern is played twice to maintain the correct pattern length.

Ping-Pong mode can be accessed by pressing **FUNC** + **P/P** (long-press). The **P/P** led will blink in blue to show Ping-Pong mode and light up to show Forward mode.

Random play can be activated by pressing **FUNC** + **RND** (long-press). The led will blink in blue.

The Random play mode does not play the steps in completely random order, but rather jump in the pattern based on an algorithm that is optimized to produce interesting and rhythmically usable results.

The four play directions act on all patterns and are not saved.

## Recording steps live (TAP)

While the sequencer is running, TAP mode can be used to record steps live.

To enter TAP mode, press **FUNC** + **TAP**.

The instrument buttons can now be used to record steps.

When pressing the instrument button, the instrument plays and the current step is turned on.

If several patterns are connected as a song, recording can be performed over several patterns.

You can also send an instruments midi notes to the sequencer when in TAP mode and they will be recorded the same way.

To exit TAP mode, press **FUNC** again.

## CLEAR steps

While the sequencer is running, press FUNC + **CLEAR** to clear the current step of the currently selected instrument. The mode is immediately deactivated when releasing the **FUNC** button.

## MUTE instruments

A handy performance tool is the mute mode. Here you can activate and deactivate instruments while the sequencer is playing and without modifying the patterns.

To enter MUTE mode, press **FUNC** + **MUTE**. The blue **MUTE** led will light up.

In mute mode, the 8 instrument's leds will light up in red when active, or be off if the instrument is muted. Pressing each of the instrument's buttons will switch between the muted and active states.

Whenever the instruments are triggered, the leds will shortly flash as additional optical feedback.

The other eight, non-instrument buttons control the probability (see Probability control).

To exit MUTE mode, press **FUNC**.

Mute acts on all patterns globally and is not saved.

## Probability control

The **LT** and **HT** instruments can be used to control the probability of other instruments playing or not. You can select which instruments are affected with the other eight, non-instrument buttons in the **MUTE** menu.

Each of these buttons controls the instrument located eight buttons to the left.

**MUTE**   **AC**   **BD**   **SN**   **LT**   **HT**   **CY**   **OH**   **CH**  
**PROBABILITY**   **BACK**   **FWD**   **SONG**   **PAT**   **TAP**   **MUTE**   **CLEAR**   **L.STEP**

If the leds are off, the instrument's probability is not altered and acts normally. If a led is turned on, the instrument will react to the **LT** and **HT** instruments in the following way:

LT	HT	Probability of the instrument playing
		1.00 (100%)
X		0.75 (75%)
	X	0.50 (50%)
X	X	0.25 (25%)

Where X means a step is set

Probability acts on the LT and HT outputs as well. The probability settings are saved when saving via **SAVE** (long-press).

## Song View

In Song View you can select patterns for playing and editing, create songs by chaining patterns, copy and paste patterns and change the playing direction of the song.

Some performance features are also available here and work the same way as they do in Pattern View - these are:

**TAP**, **MUTE** and **LAST STEP**.

In Song View each button/led visualizes one of 16 patterns. Patterns which are part of the song will light up in red. The current pattern is shown blinking in red and switching back to Pattern View will show this pattern.

### Changing the pattern that is playing

To instantly change the currently playing pattern, press the pattern's button in song mode and release the button again. The pattern will change instantly while staying in sync. This will replace any playing song with a song containing one pattern.



# Programming a new song

There two ways to program new songs:

## Song programming method 1

To record a song, select multiple patterns while holding down at least one pattern button. Patterns will be added to the song in the order you press them and you can add a pattern multiple times.

Once you release all buttons the new song is programmed. After the current pattern is finished playing, the new song will start in sync.

The patterns used in the song are shown in red, and the currently playing pattern's led will be blinking.

Program: With at least one pattern button pressed at any time:

PAT1 → PAT2 → PAT3 → PAT2 → PAT2 → .....

Finish: Release all buttons

## Song programming method 2

An alternative song programming mode can be accessed by pressing only one single pattern button for about a second and then releasing it.

The **SONG** and **PAT** leds will light up in blue to indicate this mode.

The long-pressed pattern is now the first pattern of the new song, and you can add more patterns by pressing their buttons.

If you are finished recording the song, press **FUNC** to exit song recording method 2.

After the current pattern is finished playing, the new song will start in sync.

The patterns used in the song are shown in red, and the currently playing pattern's led will be blinking.

## Programming another song

While a song is playing, you can simultaneously program another one. When recording is finished, the the new song starts when the current pattern finishes playing.

Songs will always play in a loop – when the last step of the last pattern is played, the song starts again from the first step of the first pattern.

## Copy and paste patterns

To copy a pattern press **FUNC** + **COPY**. **COPY** lights up in blue and you can select the pattern you want to copy. By pressing a pattern button the pattern is copied into memory and the copy mode is exited. You can also exit copy mode by pressing **FUNC** again.

To paste a previously copied pattern into another pattern slot press **FUNC** + **PASTE**. **PASTE** lights up in blue and you can paste the previously copied pattern into another pattern by pressing that pattern's button. You can continue to paste the copied pattern into different patterns as long as **PASTE** mode is active. Exit **PASTE** mode by pressing **FUNC** again.

## Clear patterns

In order to clear complete patterns press **FUNC** + **CLEAR** whilst in song mode. **CLEAR** will blink in blue to indicate **CLEAR** mode is active.

To clear a pattern press its button. You can clear multiple patterns while in **CLEAR** mode.

To exit **CLEAR** mode, press **FUNC** again.

## Changing the direction a Song plays

Similar to the play directions in pattern mode, you can also change the play direction of a song. The song can play forward, backward ping-pong or randomly, while the pattern play direction is completely independent and not changed.

## Saving patterns and song

If 6equencer is turned off, the currently programmed patterns and song is lost unless you manually save it.

To do so, simply press **FUNC** + **SAVE** (long-press).

A progress bar in blue will show that the data is saved.

Data can be saved while the sequencer is playing without performance issues.

When 6equencer is turned on, it will load the previously saved configuration, patterns and song.

## Using 6equencer as a Midi interface

6equencer can also be used as an 8-channel midi interface to output triggers or gates.

This can simply be achieved by sending Note-On and Note-Off messages for the instruments (see chapter Midi).

If the Pulse Length setting is set to "Gate", 6equencer will react to both Note-On and Note-Off messages, with the gate staying open from Note-On and closing at Note-Off. Otherwise it will only react to Note-On messages.

Sending a note with maximum velocity (127) will also trigger the ACcent channel.

Note that "Clock Mode" must be set to Midi I/O to activate the midi input.

## Output modes and pulse lengths

6equencer can output pulses with various lengths, or "gates", depending on the settings in the config menu. Fixed pulse lengths from 1ms (default) to 100ms are provided as well as the "clock width" mode, which turns on an output for the duration the incoming clock is high.

This means the pulse-width of the incoming clock defines the pulse-width of the sequencer. When clocked via midi, pulse-width will be a half step, e.g. if the clock divider is set to 1/8th, the pulse will be 1/16th long.

Finally, the "Gate" setting turns on the output when a step is set and turns it off when a step is not set. This mode can be used to control envelopes for example.

### Accented pulse length

The ACcent instrument can control the pulse length of other instruments. In the configuration menu, you can define a second "accented" pulse length that is used instead of the "normal one" whenever an AC step is set. If the accented pulse-length is set to OFF, the normal one is used. Accented pulse lengths are also used for midi out.

Note: If the pulse mode is set to gate, the accented pulse-length parameter has no effect.

## Analog clock divider / DIN-sync

The incoming analog clock can be divided and the divider adjusted in the config menu. This allows speed adjustments, but also provides a direct way to connect a DIN-Sync signal to 6equencer.

In the config menu, press **FUNC** + **BACK** to open the analog clock divider page. The table below shows the possible dividers along with their DIN-Sync24 speeds:

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
48	36	32	24	18	16	12	9	8	7	6	5	4	3	2	1
1/2	3/8	1/2T	1/4	3/16	1/4T	1/8	3/32	1/8T		1/16		1/24	1/32		

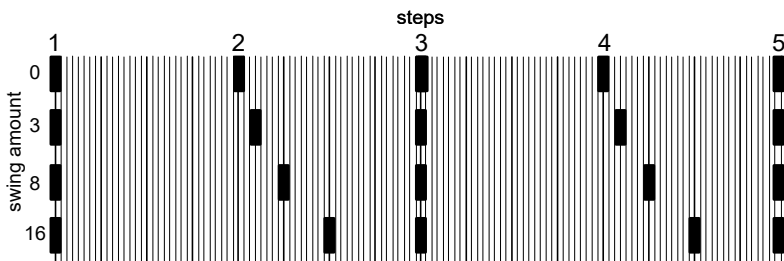
## Swing

6equencer includes a swing clock generator that works with all types of clock inputs.

When swing is activated, every second step is delayed by a time proportional to the step length. Fifteen swing amounts are possible ranging from  $1/32^{\text{th}}$  to  $16/32^{\text{th}}$ .

The maximum setting of 16 results in a 3-to-1 rhythm, a setting of 8 in a 5-to-3 rhythm.

You can use one of the trigger outputs to clock other gear, effectively converting a straight clock into a 'swung' clock.



Swing amount can be set in the config menu by pressing **FUNC** + **FWD** and then selecting the amount from no swing ( **AC** ), to 16 ( **LSTEP** ).

## Flam / Ratchet

6equencer includes a flam or ratchet effect that can be used to create subdivisions of steps as well as various kinds of tuplets, e.g. triplets or quintuplets.

One of the 8 instruments is selected as flam trigger and one or more instruments can be selected as flam targets. Each time a flam trigger is played, it will trigger the flam effect on the target instruments if a step is also set here.

Multiple flam types are available. Three of them create subdivisions of a single step. Assuming a step to be a 16<sup>th</sup> note, these would be 2x 32<sup>th</sup>, 3x 32<sup>th</sup> triplet, and 4x64<sup>th</sup> notes.

There are also four flam settings that span multiple steps: 16<sup>th</sup> triplet (3 beats in the duration of 2 steps), dotted 16<sup>th</sup> (2 beats in the duration of 3 steps) 8<sup>th</sup> triplet (3 beats in the duration of 4 steps), and 8<sup>th</sup> quintuplet (5 beats in the duration of 4 steps).

Setting a closed hihat at every second step, selecting 16<sup>th</sup> triplet as type and triggering the flam effect by the hihat itself will result in a triplet hihat groove for example. But you could also trigger the effect only occasionally, which creates alternating 8<sup>th</sup> notes and 16ths triplet notes.



The flam trigger instrument is also affected by MUTE and Probability. This allows sequences with flams or triplets inserted randomly.

## Flam menu page

Flam can be configured by pressing

**FUNC** + **LSTEP** (long-press).

You can see the following settings:

The flam trigger instrument in blue, the selected flam target instruments in red (**AC** – **CH**), and the current flam type in red (**BACK** – **L.STEP**).

To select the target instruments, press one or more of the instrument buttons. To select the flam type, press one of the non-instrument buttons according to the table below. Finally, to select the trigger instrument press **FUNC** + an instrument button.

Exit the Flam menu by pressing **FUNC** + **LSTEP**.

	1	2	3	4	(no flam)
<b>BACK</b>	■				32th
<b>FWD</b>		■			32th triplets
<b>SONG</b>	■	■			64th
<b>PAT</b>	■	■			16th triplets
<b>TAP</b>		■			dotted 16th
<b>MUTE</b>		■			8th triplets
<b>CLEAR</b>		■		■	8th quintuplet
<b>L.STEP</b>		■		■	

## LINKing multiple 6sequencers

Using the LINK interface on the back and the supplied cable, it is possible to chain multiple 6sequencers to create longer patterns, or have them play in sync.

The first 6sequencer in the chain acts as 'controller' accepting clock or midi sync and forwarding it to the other 6sequencers. 6sequencer automatically detects both if it is linked, and also how many 6sequencers are linked

Connect LINK OUT of the first 6sequencer to LINK IN of the second. Connect LINK OUT of the second 6sequencer to LINK IN of the third and so on.

**IMPORTANT: DO NOT connect the last 6sequencer in the chain to the first.**

In the config menu (see below) you can select serial or parallel mode or turn LINK OFF completely.

### Serial mode

In serial mode the 6sequencer will forward its clock to the next 6sequencer in the chain when a pattern has reached its last step. This is continued until the last 6sequencer in the chain has finished playing after which the first 6sequencer will start again.

Instrument events are distributed among the connected 6sequencers and each will output the same instruments. However one might output 1ms pulses, another 40ms pulses

depending on the pulse length setting of the individual 6sequencers.

The following actions will also be distributed to all following 6sequencers in the chain:

- MUTE
- TAP
- CLEAR
- INSTRUMENT SELECT

## Parallel mode

In parallel mode, the clock is distributed to all 6sequencers and they play together in sync. Instrument triggers are not distributed, so more instruments can be used in parallel.

## Combining LINK modes

Link modes may be combined to create combinations of serial and parallel sequences.

Note that in both modes, pattern lengths and song structures are not synchronized. This can be used to create interesting variations and polyrhythmic structures.

## Other uses of the LINK interface

The link interface outputs instrument triggers to both LINK IN and LINK OUT. Compatible devices, such as the 6m0d6 drum module can make use of this.

## Config menu

The config menu contains rarely used settings and configurations. These settings are not printed on the front panel, instead the user may refer to this manual or use the provided quick-reference cards. A cheat sheet with all settings can be found at the end of this manual.

To enter the config menu, press

**FUNC** + **CONF** (long-press).

A blue **CONF** led shows an active config menu. To exit the config menu press **FUNC** + **CONF** again.

The config menu consists of several parameters, shown in blue and an associated value shown in red. You can select a parameter by pressing **FUNC** + the parameter button and can select its value by pressing a button without **FUNC**.

An example:

In order to set the midi output channel to 5, enter the config menu and press

**FUNC** + **BD**. Now **without** pressing **FUNC**, press **HT**

The following parameters are available and the default configurations are underlined.

## Config parameters

- **AC**: Midi in channel, with channel numbers 1-16, default 10
- **BD**: Midi out channel, with channel numbers 1-16, default 10

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

- **SD**: Midi Clock divider. When the sequencer is clocked via midi, a midi clock divider can be selected to clock 6eqeuncer at different speeds: (default: 1/16th)

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
2	1.5	1	4/3	1T	½	3/8	1/2T	¼	3/16	1/4T	1/8	3/32	1/8T	1/16	1/32

- **LT**: Clock mode. This parameter defines the function of the Clock/Midi-in and Reset/RS/Midi-Out sockets:
  - **AC**: Analogue clock input is used and the sequencer is reset when the RESET input goes high
  - **BD**: Analogue clock input is used and the sequencer is running as long as the RS input is high
  - **SD**: Sockets function as Midi input and Midi output. Sequencer is clocked by a midi clock and Midi-out outputs instrument data.
  - **LT**: Sequencer is clocked via an analogue clock, but no reset input exists. Instead Midi-out outputs instrument data

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
Reset	S/S	Midi I/O	Clk/M.O												

- **HT**: Pulse length. Various pulse lengths can be defined as shown in the table below. Two are special:
  - **LSTEP** (Gate) will turn an output on when a step is set and turn it off when a step is not set.
  - **CLEAR**(Clock width) will turn on an output for the high time of the incoming clock signal.

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
1ms	2ms	3ms	4ms	5ms	6ms	7ms	10ms	20ms	30ms	40ms	50ms	70ms	100ms	Clock w.	Gate

- **CY**: Accented pulse length. If this parameter is set to anything but OFF, the accented trigger will have a different length.
  - **LSTEP**: OFF, use normal trigger lengths for accent

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
1ms	2ms	3ms	4ms	5ms	6ms	7ms	10ms	20ms	30ms	40ms	50ms	70ms	100ms	Clock w.	OFF

- **OH**: Brightness: The brightness of the leds can be adjusted in 6 levels. ( AC – CY ). Default is SD.
- **CH**: Link mode. This parameter defines how 6eqencer treats other 6eqencers linked via the LINK connector.
  - **AC**: OFF: Other 6eqeuncers are ignored
  - **BD**: Serial: Linked 6eqencers are chained together
  - **LT**: Parallel: Linked 6eqencers run in parallel

AC	BD	SD	LT	HT	CY	OH	CH	BACK	FWD	SONG	PAT	TAP	MUTE	CLEAR	LSTEP
OFF	Serial	Parallel													

- **L.STEP** Config reset. Press to reset all configuration parameters

# Midi

## Midi TRS connectors

6equencer uses TRS midi connectors Type A (the MIDI 2.0 Standard).

Adapters to DIN-Midi are available and use the following connections:

TRS	Tip	Ring	Sleeve
DIN	5	4	2

## Midi In

6equencer accepts midi CLOCK, NOTE ON and CC messages if "Clock Mode" is set to Midi I/O. Otherwise the connector is used as clock input and Midi reception is disabled.

## Note On

6equencer reacts to Note On messages on the Midi-In channel with the following notes:

Instrument	AC	BD	SD	LT	HT	CY	OH	CH
Midi note	34	35	38	45	50	49	46	42

These are the notes defined in the midi drum standard (with the exception of AC).

Reception of these notes will trigger the instruments. In TAP

record mode, these instruments will also be recorded in the current pattern.

Accent AC is also triggered when one of the other instruments receives velocity value 127 (the maximum volume).

The midi input channel can be set in the config menu and is 10 by default.

## **Midi Clock**

6equencer can be synced via midi clock if configured accordingly. A clock divider for the midi clock can be set in the config menu or via midi CC as shown below. By default 6equencer clocks at 1/16th.

## **Midi out**

6equencer outputs midi NOTE ON and NOTE OFF messages via its midi output. The midi notes will have the same length as the pulses (e.g. 100ms or 1/16 depending on the pulse length setting).

For steps without accent, the velocity sent is 80, steps with accent will send midi notes with velocity 127.

The midi output channel can be set in the config menu.



## Midi CC

Some parameters can also be controlled via midi CC.

The tables below show value ranges and the resulting parameter values. These changes are directly visible in the config menu. In order to save these settings, enter and exit the config menu or save via **SAVE** (long-press).

### Clock Mode CC 16:

Parameter	0-31	32-63	64-95	96-127
Clock mode	Reset	R / S	Midi I/O	Clk in, Midi out

### Clock Divider CC 17:

Parameter	0-7	8-15	16-23	24-31	32-39	40-47	48-55	56-63
Clock divider	2	1.5	1	4/3	1T	½	3/8	1/2T
Parameter	64-71	72-79	80-87	88-95	96-103	104-111	112-119	120-127
Clock divider	¼	3/16	1/4T	1/8	3/32	1/8T	1/16	1/32

### Pulse Length CC 18 and Accented Pulse Length CC 19:

Parameter	0-7	8-15	16-23	24-31	32-39	40-47	48-55	56-63
Pulse len [ms]	1	2	3	4	5	6	7	10
Parameter	64-71	72-79	80-87	88-95	96-103	104-111	112-119	120-127
Pulse len [ms]	20	30	40	50	70	100	Gate	Clock

# Cheat sheet

Blue shows active mode(s), red shows steps

## Pattern mode specific functions

Select active instrument:	FUNC + Instrument OR (long press Instrument)
Play direction forward:	FUNC + FWD
Play direction backward:	FUNC + BCK
Play direction random:	FUNC + RND (long press)
Play direction ping-pong:	FUNC + P/P (long press)
Clear current step:	FUNC + CLEAR
Switch to song mode:	FUNC + SONG
Copy instrument track:	FUNC + COPY (long press)
Paste instrument track:	FUNC + PASTE (long press)

## Song Mode specific functions

Currently playing pattern led blinks, other patterns in song are shown in red.

Change playing pattern :	Press pattern button
Program song method 1:	Select multiple patterns
Finish song method 1:	Release all buttons
Program song method 2:	Long-press first pattern, then program other patterns
Finish song method 2:	FUNC

**Change song play direction:** See pattern play direction

**Clear pattern:** FUNC + CLEAR  
clear patterns by pressing them.

**Copy pattern:** FUNC + COPY  
press pattern number to copy

**Paste pattern:** FUNC + PASTE  
press one or more patterns to paste copied pattern

**Switch to pattern mode:** FUNC + PAT

### Globally available functions

**Tap / Record:** FUNC + TAP, TAP blinks  
AC, BD,.. to tap

**Save patterns / song:** FUNC + SAV (long press)

**Mute and probability mode:** FUNC + MUTE

Enable / disable instruments by pressing

Activate probability control with non-instrument buttons

**Set last Step:** FUNC + L.STEP.

Manual version 1.0

This work is licensed under CC BY-NC-SA 4.0. To view a copy of this license, visit  
<http://creativecommons.org/licenses/by-nc-sa/4.0/>

Author: Tubbutec

The most recent version of this manual can be found at [tubbutec.de/6equencer/](http://tubbutec.de/6equencer/)

Thank you Tamo, Zora, Alex, Ron, Tobi and Kay

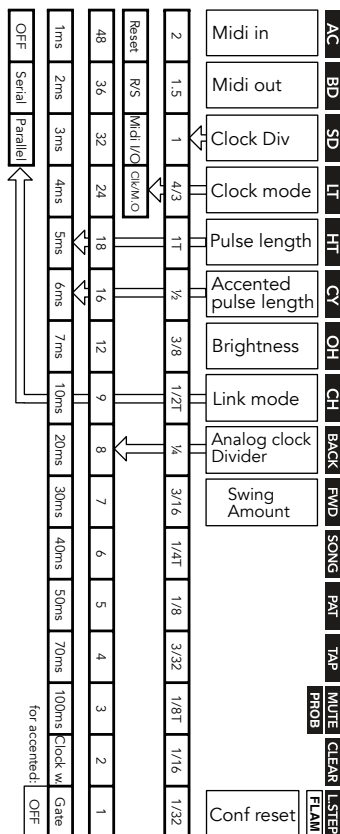
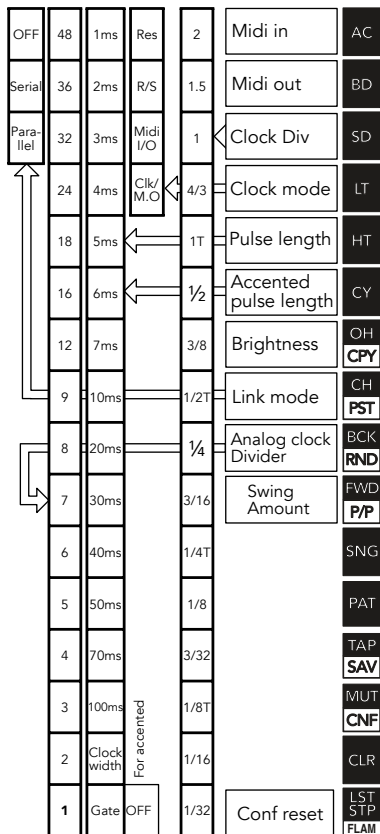
All trademarks, service marks and company names are the property of their respective owners.

# SEQUENCER

## config menu overview

### 3U Version

### 1U Version



(These cards are included with the module, but if you loose them you can cut them out here, too)