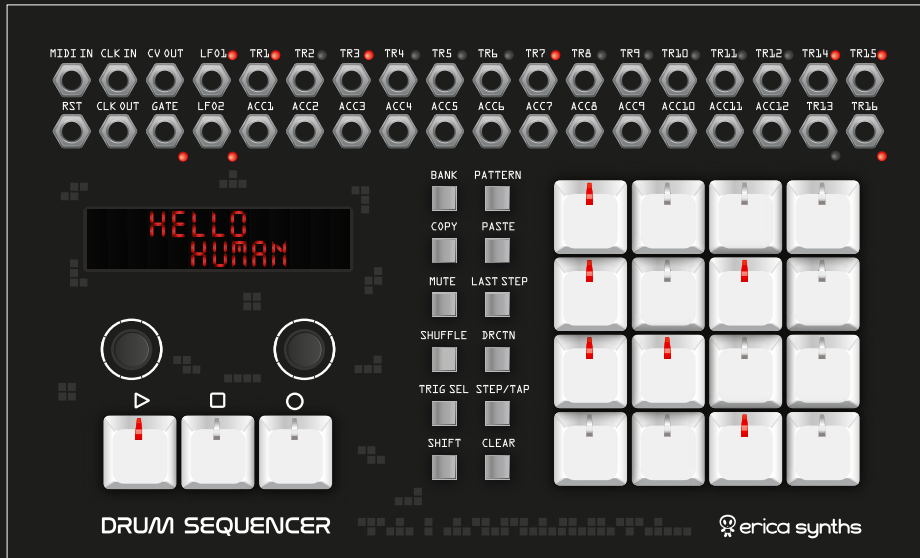


DRUM SEQUENCER



**THANK YOU
FOR PURCHASING
ERICA SYNTHS
DRUM SEQUENCER!**

We believe, this is the end of the history performance sequencer for modular drums and basslines. It's easy to use, classical, XOX style live performance oriented module that provides the ultimate control over your modular system.

Enjoy, and let us know, what you think!

This is manual for the Drum Sequencer Firmware 1.047.
For the latest firmware and manual please check:
www.ericasynths.tv

FEATURES



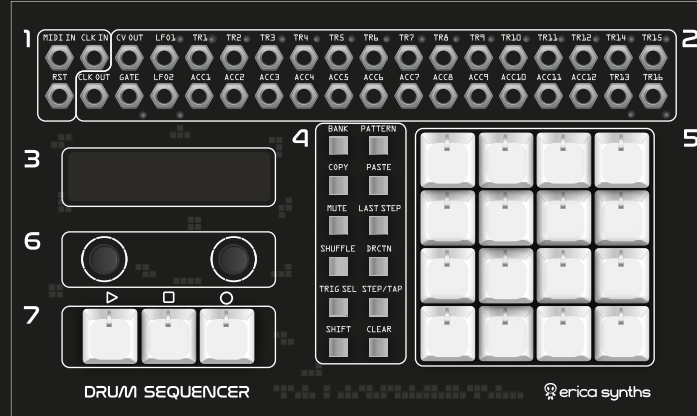
- 16x Trigger outputs
- 12x Accent outputs
- 1x CV track
- 1x Gate track
- 2xLFO with independent or synced to the BPM frequency
- Time signature per Track
- Pattern length per Track
- Shuffle per track
- Probability per step
- Retrigger per step
- Instant pattern switching
- Solo/Mute tracks
- Step/Tap record modes
- 16 Banks of 16 Patterns
- Quick Copy/Paste per tracks & patterns
- Instant pattern switching
- Pattern linking
- MIDI sync in
- Firmware update via MIDI SysEx

SPECIFICATIONS

Trigger amplitude	5V
Panel width	42HP
Module depth	220mm
Power consumption	152mA@+12V, 56mA@-12V



DRUM SEQUENCER QUICK START



- 1 INPUTS (MIDI IN, Clock IN, Reset)
- 2 OUTPUTS (16x triggers, 12x accents, 2xLFOs, 1x CV & 1x Gate)
- 3 OLED Display
- 4 FUNCTION KEYS
- 5 STEP KEYS
- 6 DATA ENTRY ENCODERS
- 7 PLAY / STOP / RECORD (SAVE)



BASIC PATTERN PROGRAMMING:

1) Set the desired tempo by entering the Pattern Play mode by pressing the PATTERN key.

Pattern Play mode screen:



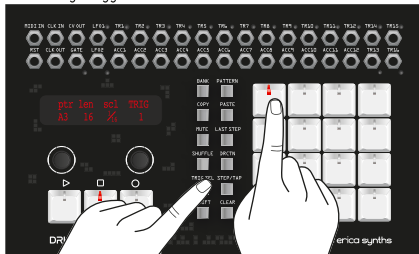
2) Now when you are in the Pattern Play mode set the desired BPM with ENCODER 2

3) Now exit the Pattern Play mode by pressing the PATTERN key again

Pattern Edit mode screen:



4) Now press the PLAY button and Drum Sequencer will start to run!
5) Select the trigger track 1 by holding down TRIG SEL and pressing step button 1, or navigate to TRIG setting with ENCODER 1 and scroll through trigger tracks with ENCODER 2.

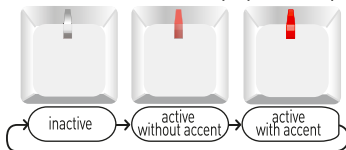


6) Now you are in trigger track 1 and you can program in a sequence with step keys.

6A) By default the accents are disabled on trigger tracks, if you want to enable accents on a track press TRIG SEL while holding down SHIFT) On the OLED Display: 1 (track number) = no accents, 1+ = track with accents enabled.

You can also enable accents on a track by pressing ENC2 while the TRIG is selected with ENC1.

When the accents are enabled the step keys have three positions:



NB! Accents take your analogue drum modules sound to the next level, so try not to overlook them.

7) To select and program different trigger track press and hold TRIG SEL and corresponding step (Trigger track) button!

7A) To clear a track press and hold the CLEAR button while the pattern is playing.

If you want to clear the whole track instantly hold down SHIFT and promptly press CLEAR.

7B) To change scale of the track turn the ENCODER 1 and select the SCL parameter and choose between 1/4, 1/8, 1/8t, 1/16, 1/16t, 1/32 settings with ENCODER 2.

Scale setting selected:



8) To copy trigger track press COPY and track will be copied to the buffer, to paste it go to the trigger track where you want to paste it and press PASTE.

9) Now when you have made a pattern you can save it by pressing the RECORD key

10) If you want to make a variation of the pattern you just made go to Pattern Play screen by pressing PATTERN key.

11) To copy pattern press the COPY key and pattern will be copied to the buffer.

12) Now select desired pattern slot where you want to paste your pattern with the step keys and press PASTE button! The pattern will be copied from the buffer to selected slot.

13) Now press RECORD key to save the pasted pattern in the selected slot!

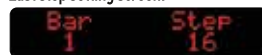
14) To edit copied pattern press the PATTERN key and you will get back to Pattern Edit screen.

PROGRAMMING A PATTERN LONGER THAN 16 STEPS:

Maximum Pattern length of the Drum sequencer is 64 steps and there is different ways to set it.

1) To set all tracks to be 64 step (or any other step amount) long go to the Pattern Play screen and press and hold the LAST STEP function key.

Last step setting screen:



2) Now while holding down the LAST STEP function key you can dial in 64 with the ENCODER 2, or dial in Bar 4 with the ENCODER 1 and set the last step with STEP KEY 16. Both of these methods will set all tracks to be 64 steps long.

3) Now get back to Pattern Edit mode by pressing PATTERN function key.

Pattern Edit screen with 64 steps:



4) Now you can press PLAY and the sequencer will start to run with all tracks set to 64 steps, but you will see only the first 16 steps.

There is two ways how you can navigate through all 64 steps:

1. Scrolling through BARs manually with ENCODER 2. (each bar is 16 steps so there is 4 bars totally). First number under BAR shows which BAR is playing now and second number shows which BAR you are editing.

2. Enabling BAR auto follow by pressing the ENCODER 2 while the BAR setting is selected with ENCODER 1.

Pattern Edit screen with 64 steps and BAR follow enabled:



5) So now you have a set up a pattern which is 64 steps long. You can still set the individual tracks to be shorter by simply going to track and pressing LAST STEP and desired STEP KEY (depending on in which BAR are you now) or by selecting LEN parameter with ENCODER 1 and setting the desired step amount with ENCODER 2.

PROGRAMMING ADVANCED PATTERNS - SHUFFLE, DIRECTION, LAST STEP AND STEP EVENTS:

1) To add some groove, for example to a hi hat track press and hold the SHUFFLE button and dial in desired shuffle amount for the track with ENCODER 2.

Shuffle screen:



NB! Shuffle also works globally so you can set shuffle for all tracks at the same time.

To do that go to Pattern Play mode and press and hold down the SHUFFLE function key and dial in the desired shuffle amount with ENCODER 2 (This is how shuffle works on the 909 for example).

2) If you want to make the track run in different direction from other tracks press and hold DRCTN and dial in the direction with ENCODER 2. Available directions are: FORWARD, BACKWARD, PING-PONG and RANDOM

NB! Same as for the shuffle the Direction setting can be also set globally. Just go to the Pattern Play screen and press and hold down the DRCTN function key and dial in the direction with ENCODER 2.

This works great especially when you jump from FORWARD then to RANDOM and then back to FORWARD.

3) To set individual track length for a track press and hold the LAST STEP function key and with STEP key set in the desired length. This way you can create interesting polyrhythmic sequences!

4) To get into STEP EVENTS press and hold SHIFT and select step you want to edit.

Step events screen:



Now you can navigate through options with ENCODER 1 and set value with ENCODER 2

You can jump to steps you want to edit with STEP KEYS as pressing a step key in Step Event screen wont remove the trigger from the trigger track, but just jump to the STEP EVENTS page of selected step.

BAR = shows the BAR location. Works same way as in the pattern edit.
UTM = Micro timing – this allows to move the selected step left or right from the grid and lets you create your own shuffle!

PRO = Probability/Ratio – with this setting you can set the probability or ratio of trigger being triggered. (for example if its set to 1:4 ratio the trigger will occur every 4 plays, but if set to 25% there is 25% chance that trigger will be executed).

RTRG = With this setting you can set how many times the selected step should be retrigged within the step duration.

5) To exit STEP EVENTS press the PATTERN key

NB! You can add or remove triggers on the STEP EVENTS page. To do so press SHIFT + STEP KEY of the trigger you want to turn on/off in the STEP EVENTS page.

PROGRAMMING CV/GATE TRACK:

CV/Gate track have two screens, so before you program in CV and GATE values you have to enable steps on the track. Just like you would enable triggers on a trigger track.

1) Enter CV/Gate trigger track – press and hold TRIG SEL and then promptly press ENCODER 2 Or you can enter CV/Gate trigger track by selecting the TRIG setting in Pattern Edit mode with ENCODER 1, and turn the ENCODER 2 while you reach trig track which is after the 16th trigger track.

CV/Gate trigger track screen:



BAR nte oct stp leng
1+1 16 1/2 0 CV

In this screen you can enter the triggers into the CV/Gate track – these will be the active steps for the CV/Gate track!

NB! The CV trigger acts the same way as other trigger tracks so STEP EVENTS, SHUFFLE, LAST STEP and DIRECTIONS are also available by pressing SHIFT and desired STEP KEY.

2) Now to enter note values and gate times for the active steps you just entered you need to enter Note Edit screen by pressing the ENCODER 1!

Note Edit screen:



BAR nte oct leng
1+1 C -2 12

3) Now when you are in the note edit screen you can navigate through parameters with ENCODER 1 and dial in values with ENCODER 2.

Also you can jump to steps you want to edit with STEP KEYS as pressing a step key in Note Edit screen wont remove the trigger from the CV/Gate track same as for the Step Events edit screen.

4) Dial ENCODER 1 to NTE setting and jump through steps with STEP KEYS

and dial in different note values in the sequence with ENCODER 2.

5) Now move to LENG setting with ENCODER 1 and jump through steps with STEP KEYS and dial in different gate lengths with ENCODER 2.

6) To set SCALE for the CV/Gate track promptly press the ENCODER 1 (While in Note edit screen).

CV Track Scale screen:



CV Track Scale:
CHROMATIC

Set desired scale with ENCODER 2! Available scales are: Chromatic, Major, Minor, Pentatonic, Dorian, Phrygian, Lydian, Mixolydian, Locrian. To get back to Note Edit screen press ENCODER 1, to get back to CV/Gate trig track press ENCODER 1 or PATTERN key.

7) To add NOTE SLIDE press two step keys next to each other to enable slide from the left step to the right step. To remove note slide repeat the same procedure. Small "s" symbol at the length setting indicates that the slide is on.

8) To add GATE TIE in CV track note edit page scroll the ENC 2 on the length setting until you reach the TIE setting. The gate will be high until next note trigger is reached.

9) To exit CV/Gate track select any other trigger track by pressing TRIG SEL and any of the Step keys.

CV TRACK RANDOMISATION:

1) To access CV randomisation track while in CV track press and hold SHIFT button + promptly press SHUFFLE encoder button.

CV TRACK RND screen:



NTE oct stp leng
25 50 75 100

2) Select the parameters with ENC1 and set the value with ENC2.

3) For each of parameter you can set the probability percentage for these parameters NTE - note, OCT - octave, STP - step, LENG - length of step.

4) To randomise track promptly press BANK button.

5) To exit this mode press the Pattern button promptly.

CV TRACK TRANSPOSE:

1) While in CV track NOTE EDIT menu with ENC1 set to NOTE edit press and hold SHIFT button + turn the ENCODER 2 to transpose notes.

2) Hold SHIFT + TRIG SEL button while changing value to transpose only the selected BAR.

MUTE AND SOLO TRACKS:

1) Enter MUTE screen by pressing MUTE key in any of screens.

Mute screen:



LFO ON CV/Gate OFF

2) Press STEP KEY to mute a trigger track.

3) To mute LFO press ENCODER1, To mute CV/Gate track press ENCODER1.

4) To unmute all tracks press and hold SHIFT and then promptly press MUTE function key.

5) To SOLO tracks press and hold SHIFT and then STEP KEY or ENCODERS depending on which track you want to SOLO. To UNSOLO press and hold SHIFT and then promptly press the soloed track button (STEP key or ENCODER). You can also clear all mutes by pressing SHIFT + MUTE function keys.

6) To exit MUTE screen press PATTERN or MUTE function key.

MUTE ARMING:

1) Hold down MUTE button and select the tracks you want to arm for muting with the STEP KEYS.

2) As you release the MUTE button all selected tracks will be muted.

3) To clear all mutes press SHIFT + MUTE.

LFO OUT:

1) To enter LFO setting screen press TRIG SEL + ENCODER1

LFO Settings screen:



LFO wav frq amp
1 SIN 100 100

2) Navigate through options with ENCODER 1 and set the value with ENCODER 2

(To speed up value entering press and hold SHIFT and then turn ENCODER2)

LFO – Switch between LFO out 1 and 2

WAV – Select the LFO waveform (SIN, TRI, SAW, SQR, S&H)

FREQ – Set the LFO frequency, or enable LFO sync by pressing ENCODER 2 while you are on the FREQ parameter and then set the desired sync rate.

AMP – Set the LFO amplitude

NB! LFO settings are saved within a pattern.

TAP MODE:

Instead of just step sequencing you can also program beats by tapping them in using the STEP KEYS. To do that:

1) Get in the Pattern edit mode and press STEP/TAP key.

(When the STEP/TAP key blinks you are in TAP mode.)

2) Now when hitting STEP KEYS you will launch the corresponding triggers.

3) To record your playing press the RECORD key – it will stay lit, that means Drum Sequencer is now recording – STEP KEY playing will be recorded to the sequence.

- 4) To exit RECORD mode press RECORD KEY.
- 5) To clear a track press and hold CLEAR key and the corresponding track STEP KEY.

(Erasing happens while both keys are being held down)

- 6) To get back to STEP mode press the STEP/TAP key.
- 7) You can also do fills in the TAP mode, to do that press and hold SHIFT button and promptly press the BANK key.

PATTERN RELOAD:

Pattern reload allows you to reload previously saved state of the pattern.
1) press and hold ENC1 and then promptly press the ENC2 to reload previously saved pattern.

FILL MODE:

Fill mode lets you record notes and create fills by holding STEP keys. It is also known as Note Repeat function in other sequencers.

- 1) As first get in the TAP mode by pressing the STEP/TAP key.
- 2) Now press and hold down SHIFT button and press the STEP/TAP button promptly.

Fill mode screen:

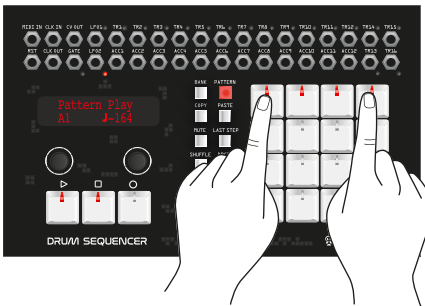


- 3) Set the desired FILL rate with ENCODER 1.
- 4) Press the STEP KEY of corresponding trigger track you want to fill to launch the triggers!
- 5) To record press the RECORD key
- 6) To exit press STEP/TAP or PATTERN key

PATTERN LINKING:

You can make longer sequences by linking together multiple patterns. For example to link first four patterns:

- 1) Get into the Pattern Play mode by pressing PATTERN key.



- 2) Press and hold down the STEP KEY 1 and while holding it down press the STEP KEY 4. Now all STEP keys of the first row will light up - that means that the patterns are linked. 3) To unlink patterns and continue to play one pattern press any of the STEP KEYS.

SONG MODE:

1) To enter SONG WRITE mode press SHIFT + BANK.
SONG WRITE screen:



- 2) With ENC1 select the parameter and with ENC2 set the value:
SNG - Song number

POS - Song position

PTR - Pattern

LEN - Song Length

- 3) To enter SONG PLAY mode press SHIFT + BANK while in SONG WRITE mode.

SONG PLAY screen:



- 4) Select the SONG which you want to play with STEP KEYS.
- 5) To start playing selected SONG press PLAY.
- 6) To exit SONG MODE press PATTERN.

SETTINGS:

- 1) To enter SETTINGS screen press and hold SHIFT and then press PLAY button

(You can only enter settings when Drum Sequencer is not playing!).

SETTINGS screen:



- 2) Navigate through options with ENCODER 1 and set the value with ENCODER 2.

SYN - Synchronisation:

MST = Master clock

MID = MIDI Slave mode (This mode also responds to Start/Stop messages from external MIDI clock source)

CLK = Analog clock slave (This mode waits for 4PPQ clock signal which equals to 16 ticks per one beat)

BPM - Set the default sequencer BPM

PUL - Sets the pulse width of the Trigger outputs. (Take note that analog drum modules work better with shorter trigger signals, but digital ones usually want longer triggers so you have to find the sweet spot with this setting and your setup)

CLK - Sets the clock output rate

- 3) To enter SETTINGS 2nd screen press and hold SHIFT and then

press PLAY button while in SETTINGS 1 screen.
Settings 2nd screen:



CPY - Bar auto copy. If you extend 1 bar sequence to example to 2 or 4 bars the first bar is automatically copied to the new bars.

RST - Reset out. You can configure the 16th trigger out to work as a reset out. It will send out a trigger signal when the sequencer will be stopped

AC - Accent out level. You can set accent level for each of the accent outs separately.

When cursor is on AC1 select the channel you want to adjust with the regarding step key and then set the out level (5v or 10v) with ENC2.

INITIALISE EEPROM:

Hold START & STOP keys when powering up the Drum Sequencer and EEPROM initialisation will happen. This will clear the whole memory of the Trigger Sequencer and should be done if you are experiencing problems with your Drum Sequencer.

This is also highly recommend after firmware updates.

FIRMWARE UPDATE:

You need a SysEx transmitter software (MidiOx on Windows or SysEx Librarian on macOS), MIDI interface and a MIDI 5DIN to stereo minijack cable converter which was included in the module package.

1) Download the latest Drum Sequencer firmware *.hex file from www.ericasyths.com

2) Connect Drum Sequencer MIDI IN to your MIDI interface OUT with the included adapter.

3) In you SysEx software preferences set the buffer size to 64 bytes. (This is very important as otherwise update will fail!).

4) Turn on Drum Sequencer while holding 1 & 4 step key buttons while powering one the sequencer and "Waiting for SysEx..." message should appear.

5) Now start playback of the Drum Sequencer MIDI SysEx file on the software you are using.

6) Have a drink and patiently wait. (This will take a while...)

7) After successful update Drum Sequencer should start automatically, if it doesn't start try to restart the unit.

NB! Try to start sending SysEx as fast as possible after entering boot-loader mode.

This seems to be a solution for a lot of users who couldn't do the update with the first try!



KEYS IN PATTERN EDIT MODE:

PATTERN – Switch between Pattern Edit & Pattern Play modes.

BANK – ****

COPY – Copy selected trigger track to buffer

PASTE – Paste selected track from buffer

MUTE – Mute brings you to MUTE screen where with step keys you can mute tracks

LAST STEP – While holding down set the last step of the track with step key.

SHUFFLE – While holding down set the shuffle for selected track with Encoder 2

DRCTN – While holding down set the direction of track with Encoder 2

TRIG SEL – Select the Trigger track you want to edit

STEP/TAP – Switch between STEP RECORD and TAP RECORD modes

SHIFT – While pressed down brings alternate functions for function keys

CLEAR – Clear the recorded notes while holding down

PLAY – Starts to play the sequence

STOP – Stops the sequence and when the STOP is pressed again continues to play the sequence from the place it was stopped

RECORD – Saves the sequence

ENCODER 1 – Navigate trough screen settings

ENCODER 2 – Change the selected option value

ENCODER 2 PRESS – Works as reset to default value in LFO & CV edit screens

SHIFT KEY SHORTCUTS IN PATTERN EDIT MODE:

SHIFT + CLEAR – Clears the whole track triggers instantly

SHIFT + TRIG SEL – Enable or disable accents for a track (+1 = acc on / 1 = acc off)

KEYS IN PATTERN PLAY MODE:

PATTERN – switch between Pattern Edit & Pattern Select modes.

BANK – While pressed down press step button to select a BANK. (8 BANKS = A-H)

COPY – Copy pattern to buffer

PASTE – Paste track from buffer

MUTE – Mute brings you to MUTE screen where with step keys you can mute tracks

LAST STEP – While holding down set the last step of the pattern with step key

SHUFFLE – While holding down set the shuffle amount for all tracks with Encoder 2

DRCTN – While holding down set the direction for all tracks with Encoder 2

TRIG SEL – Select the trigger track with step buttons and edit it

STEP/TAP – ****

CLEAR – Clears the Selected pattern

PLAY – Starts to play the sequence from beginning

STOP – Stops the sequence and when the STOP is pressed again continues to play the sequence from the place it was stopped

RECORD – Saves the pattern

SHIFT KEY SHORTCUTS IN PATTERN EDIT MODE:

SHIFT + STEP KEY – Switches to selected pattern instantly

SHIFT + MUTE – Clears all mutes

SAFETY INSTRUCTIONS



Please follow the instructions for use of the Erica Synths module below, 'cause only this will guarantee proper operation of the module and ensure warranty from Erica Synths.



Water is lethal for most of the electric devices, unless they are made waterproof. This Erica Synths module is NOT intended for use in a humid or wet environment. No liquids or other conducting substances must get into the module. Should this happen, the module should be disconnected from mains power immediately, dried, examined and cleaned by a qualified technician.



Do not expose the module to temperatures above +50° C or below -20° C. If you have transported module in extreme low temperatures, leave it in room temperature for an hour before plugging it in.



Transport the instrument carefully, never let it drop or fall over. Warranty does not apply to modules with visual damages.



The module has to be shipped in the original packaging only. Any module shipped to us for return, exchange and/or warranty repair has to be in its original packaging. All other deliveries will be rejected and returned to you. Make sure you keep the original packaging and technical documentation.



This device complies to the EU guidelines and is manufactured RoHS conforming without use of lead, mercury, cadmium and chrome. Nevertheless, this device is special waste and disposal in household waste is not recommended.

You will find Erica Synths terms of warranty at www.ericasynths.lv

Items for return, exchange and/or warranty repair have to be sent to:

Erica Synths
Andrejostas Str. 43
Riga
Latvia
LV-1045

User manual by Raivo Vainovskis@Erica Synths.

Design by Ineta Briede@Carre Branding.

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Specifications are subject to change without notice.

In case of any questions, feel free to contact us through www.ericasynths.lv or via e-mail info@ericasynths.lv