

# TS1 Multi-track Midi Sequencer

## Quick Guide



Thank you for choosing the multitrack sequencer TS1 from bvr-Instruments.  
You will find in this booklet how to make your first steps with the TS1.  
Full documentation at: <https://bvr-instruments.net/support>



## General principles

### Starting the TS1 after power-up.

On startup, the splash screen appears briefly with the installed software version. Press **SHIFT** to shorten this step.

### Enter a menu.

**MENU** allows you to enter and exit a menu.

### Enter in edit session.

**EDIT** allow you to enter and exit an edit session.

### Starting and stopping the sequencer.

**START/STOP** starts and stops the sequencer.

### Mode selection.

To choose a mode, turn **MODE** among the following positions:  
Trigger, Drums, Sequence 1,2,3,4/Chord, Song, Scene/Settings.

**Note:** The scene and setting modes share the same position:  
Selection is made moving the line with **SELECT** then pressing **SELECT**.

### Page selection in a menu. (Trigger, Drums Seq 1,2,3,4/Chord)

Press **MENU** then turn **SELECT** to choose a page.

**Note:** the selection icon **▶** appears on line 1 in front of the page title.

### Access to parameters in a page.

Pressing **SELECT** gives access to parameters. Turn **SELECT** to choose one.

**Note:** the selection icon **▶** appears on line 2 in front of current parameter.

### Modifying a parameter.

Press **SELECT** to enter parameter modification.

The selection icon **▶** blink, turn **SELECT** to change the value.

Press **SELECT** to finish modification. The selection icon **▶** becomes fixed.

### Return to page selection menu.

When the selection icon **▶** reaches the end of parameter line, it goes to end of line 1. Pressing **SELECT** returns it to the start of page selection.

## Common commands

### Quick data backup in the selected mode.

**SHIFT** (keep pressed) + **EDIT**. Allows you to save associated data of the current mode: Trigger Drums, Sequence 1-4/Chord, Song, Scene, Setting.

**Note:** Quick data backup is available anytime.

### Direct access to Mute, Solo, Transpose.

A cursor is displayed in trigger/drums, seq 1,2,3,4/Chord modes.

Turning **SELECT** move this cursor to the following positions, from left to right:

- 4 vertical positions facing to the Trigger/Drums tracks and sequences 1,2,3,4/Chord parameters.
- 1 central position, cursor changes into an arrow to access pattern number.
- 4 horizontal positions: S1, S2, S3, S4 relative to sequences 1,2,3,4/Chord.

Available controls for Sequence 1,2,3,4/Chord modes.

Cursor position	Press <b>SELECT</b>
'V' Velocity 'T' Type(for chords)	Sequence Mute On/Off
'D' Degree	Sequence Solo On/Off
'D' Duration	Sequence Transpose On/Off

Available controls for Trigger and Drums modes.

Cursor position	Press <b>SELECT</b>	Press <b>SHIFT</b> + Press <b>SELECT</b>	Press <b>SHIFT</b> + turn <b>SELECT</b> left/right
1	Mute track 1	Mute All tracks	Solo track 1
2	Mute track 2		Solo track 2
3	Mute track 3		Solo track 3
4	Mute track 4		Solo track 4

Available controls for Trigger, Drums, Sequences 1,2,3,4/Chord modes.

Cursor position	Press <b>SELECT</b>	Press <b>SHIFT</b> + Press <b>SELECT</b>	Press <b>SHIFT</b> + turn <b>SELECT</b> right/left
S1	Mute Seq1	Solo Seq1	Transpose Seq1
S2	Mute Seq2	Solo Seq2	Transpose Seq2
S3	Mute Seq3	Solo Seq3	Transpose Seq3
S4	Mute Seq4/Chord	Solo Seq4/Chord	Transpose Seq4/Chord

**Note:** The pattern name display (8 characters) momentarily displays the possible action depending on the position of the cursor.

## Patterns

The patterns are formed from a parameter's matrix consisting of icons.

A pattern is made up of 16 notes each representing a semi quaver.

- The 99 Trigger/Drums patterns consist of 4 step tracks.
- The 99 patterns of Sequences 1 to 4 are composed of notes.
- The 49 chord patterns are reserved for Seq4/Chord mode with option seq4 as chord = On in setting mode.

## Editing a pattern

Switch to edit session with **EDIT**. The edit cursor  appears.

Turn **SELECT** to the icon to be modified then press **SELECT** to edit it.

On line 1 is displayed all the icons available for the selected mode.

On line 2 is displayed the icon description.

Turn **SELECT** to choose the icon and press **SELECT** to confirm.

**Note1:** MENU and SHIFT allow to move the cursor vertically in addition to moving the previous or next line with **SELECT** navigation.

**Note2:** For sequence modes, only existing icons can be edited.

If no Icon (therefore no note) is present, you have to create one.

Positioning cursor on the 'V' line then press **SELECT** and choose 'Init Note'.

**Note3:** same thing for Seq4/Chords with cursor on 'T' line and Init chord.

### Moving through the bars of a pattern.

In edit session, turning **SELECT** moves the cursor from bar to bar, which allows access to all bars from 1 to 4. Note that "MaxBar" parameter shall be >1.

## Quick editing with 'Pencil Mode'

This mode allows using the Shift, Menu and Select keys to: Create, Delete, Copy or Move icons in the matrix.

Switch to edit session and move the cursor to the desired icon or location

Action	Result
SHIFT (keep pressed) + SELECT -> right	Creation of a note or step (if empty icon).
SHIFT (keep pressed) + SELECT <- left	Copy of a note or step (if icon exists).
MENU (keep pressed) + SELECT left/right	Deleting a note, chord or step.

### On-the-fly modification of a Step, Note or Chord Icon.

By pressing SELECT + rotate left or right, you can select the next or previous icon from the list of available ones.

## TS1 Modes

### Trigger Mode:

It allows you to view, play and modify one of the 99 step patterns available for Triggers and Drums. These patterns are composed of 4 tracks played on:

- **Tr1, Tr2, Tr3, Tr4.**
- **MIDI Out.**

### Drum mode:

It is identical to the Trigger mode: the tracks are played on:

- **MIDI Out.**
- **Tr5/Cik** (see settings parameters).

**Note:** Each trigger or drums track is associated with a **MIDI** note. This one must match the MIDI note of the controlled instrument.

### Sequence mode 1 and 2:

It allows you to view, play and modify one of the 99 note patterns. Each pattern is composed of a matrix of 4 lines of parameters: These parameters are the following:

'V' for velocity,  
'D' for degree,  
'L' for length.  
'O' for octave.

They are played respectively on the following outputs:

- **Cv/Gate1, Cv/Gate2.**
- **MIDI Out.**

### Sequence Mode 3 and 4:

Sequence modes 3 and 4 are identical to 1 and 2 except that the notes will be played on the following output:

- **MIDI Out.**

### Sequence Mode 4/Chord:

With Seq4asChord parameter = On (see in settings)  
Ts1 can plays one of the 49 chords pattern following output:

- **MIDI Out.**

**Note:** The TS1 has 12 separate **MIDI** channels for the 8 tracks and the 4 sequences.

### Setting Mode:

This mode accesses the TS1 parameters. To enter settings set **MODE** to Settings/Scene. With **SELECT** move the horizontal line to "settings" and press **SELECT**. Turning **SELECT** moves among setting pages. **EDIT** allows you to enter the settings page. Possible actions with **SELECT** are:

- Push to entry into parameter editing: arrow is flashing.
- Rotation to modify a parameter.
- Push is used to complete the modification: arrow return to fixed.

**EDIT** returns to setting page selection.

## Step patterns

### Trigger and drum type patterns.

Trigger and Drums patterns contain icons that represents triggering possibilities. They are composed of a matrix of 4 rows or tracks on 16 columns.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	■				■				■				■			
2					■						X		■		/4	
3				x3			■	■			■					x7
4			■		X		X			X		■	X		■	X

Each line corresponds to one of the 4 tracks of the pattern.

### List of available icons:

- Step with 100% velocity.
- Step with 80 % velocity.
- Step with 60 % velocity.
- Step with 50 % velocity.
- Step with 30 % velocity.
- Step with 0% velocity (no trigger or MIDI note played).
- || 'Ratchet' plays two triggers in one step.
- /8 : plays the step 1 out of 8 times.
- /4 : plays the step 1 out of 4 times.
- /2 : plays the step 1 out of 2 times.
- X 'Chance' plays the step randomly (+/- 50% probability).
- || 'Ratchet Chance' plays two triggers randomly.
- x7 plays the step 7 out of 8 times.
- x3 plays the step 3 out of 4 times.

## Note Patterns

### Patterns of the Note Sequence type.

Sequence type patterns contain sets of 4 parameters for each note. They are composed of a matrix of 4 rows of 16 columns: Each column represents a note among the 16 in the bar.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
V																
D	G				D				D			A	G			
L	1				1				1				1			
O	3				4				3			2	4			

#### First line: "V" for Velocity + extra icons:

##### List of available icons:

- Note with 100 % velocity.
- Note with 80 velocity %.
- Note with 50 velocity %.
- Note with 30 velocity %.
- M : Mute note
- I : Creating a Note: velocity : 100%, degree : C, Len : 1, Octave : 3.
- E : Delete the note at the cursor location.
- /8 : Plays the note 1 out of 8 times.
- /4 : Plays the note 1 out of 4 times.
- /2 : Plays the note 1 out of 2 times.
- X 'Chance' plays the note randomly (+/- 50% probability).
- x7 plays the note 7 times out of 8.
- x3 plays the note 3 times out of 4.

#### Second line: "D" for note Degree:

- 7 complete notes: C, D, E, F, G, A, B. (uppercase)
- 5 altered or flat note: d, e, g, a, b. (lowercase)
- Random note chosen from the user scale.

#### Third line: "L" note Duration:

- 5 types of duration: 1, 2, 4, 6 or 8 sixteenth notes.
- Note type legato with icon:
- Note with short trigger with icon:

#### Fourth line: "O" note Octave:

- 7 types: 1,2,3,4,5,6,7 corresponding to the note octave.

## Chord patterns

### Chord Sequence Patterns.

Chord sequence type patterns contain sets of 4 parameters for each chord forming a triad of notes.

Note: The chords are accessible in SEQ4 with option seq4 as chord. They are composed of a matrix of 4 rows of 16 columns: Each represents one of the 16 chords in the bar.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T	M				m				m		M		M			
D	G				D				D		C		G			
L	4				4				2		2		4			
O	3				4				3		3		4			

#### First line: "T" for Chord type + extra icons:

##### List of available icons:

- M : Major chord.
- m : Minor chord.
- /M : Inverted major chord (2nd inversion).
- /m : Inverted minor chord (2nd inversion).
- I : Chord Creation : Major, degree : C, Len : 1, Octave : 3.
- E : Clears the chord at the cursor location.
- A : Augmented chord.
- D : Diminished chord.
- /A : Reverse (2<sup>nd</sup>) augmented chord.
- /D : Reverse (2<sup>nd</sup>) Diminished chord.

#### Second line: "D" for Degree of note:

- 7 complete notes: C, D, E, F, G, A, B. (uppercase)
- 5 altered or flat note: d, e, g, a, b. (lowercase)
- Random note chosen from the user scale.

#### Third line: "L" Duration of note:

- 5 types of duration: 1, 2, 4, 6 or 8 sixteenth notes.

#### Fourth line: "O" Octave of note:

- 7 types: 1,2,3,4,5,6,7 corresponding to the octave root note.

Note: In edit mode, when the cursor hovers over a chord, the respective chord notes are displayed instead of the name of the pattern.

## Specifications

Sequencer with 12 sequences played simultaneously:

- 8 Sequences of steps: 64 steps with 4 bars each.
- 4 Note Sequences: 64 notes with 4 bars each.

Central rotary selector for direct access to modes:

- Trigger/Drum, Sequences 1,2,3,4/Chord.
- Song, Scene/Settings.

Memory capacity:

- 99 Trigger/Drum sequences.
- 99 Note Sequences.
- 49 Chord sequences.
- 99 Scenes for Trigger/Drum and Sequences recall.
- 49 Song containing the sequence of scenes with their repetitions.

CV/Gates interface with 10 connectors: 3.5 jack socket.

- 1 ExtStart input for Start/Stop, Ext-Step, Reset, MuteTr1.
- 1 TR5/CLK output for external clock or Drum output (1-5).
- 4 trigger outputs: Tr1, Tr2, Tr3, Tr4.
- 4 Cv / Gates outputs for SQ1 and SQ2 (1 Volt/Octave).
- 1 DCO (LoFi/Sawtooth) from octave 0 to 3. On Cv/Gate1.

5-pin DIN MIDI input and output interface.

- External keyboard and Ts1AppControl 1.6 (IPad/Android).
- 1 Midi output with 12 independent channels: 4 Seqs, 8 Triggers.
- Bpm received and sent via MIDI in and out.
- Start/Stop via Midi in.

Display screen: 128x64, OLED.

Power consumption: 60mA @ +12V, 15mA @ -12V.

Euro-rack format: 16HP, depth 23mm.

**Software version: V3.9x.**

## Display screen overview

