



TS1 Sequencer Quick Guide



Firmware V4.1x

**Thank you for choosing Bvr-Instrument
and the TS1 multi-track sequencer for your future compositions.
Full documentations at : <https://bvr-instruments.net>**

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The TS1 is a hardware sequencer designed to transform your initial musical ideas into concrete sketches for your compositions. With its capabilities, you're ready to play your instruments without the need for a computer.



The TS1 offers 12 sequences covering 64 steps across 4 bars. Sequences are divided among 4 note sequences and 8 event tracks.

Front pannel description

EXTStart
CV Input for external controls: Start, Reset, Mute.

Menu button
Enter/Quit Menu session

Shift
Allows Extra possibilities and shortcut access.

Start/Stop
Start/stop the sequencer according to the selected mode.

Midi interface
5 pin Din Input receive notes, Mute, solo, MidiClock.
5 pin Din Output send the 12 notes sequences on separated channels.

OLED screen with graphical user interface
Displays current Mode.

Clk/Tr5
CV Output for Clock or extra from drum track.

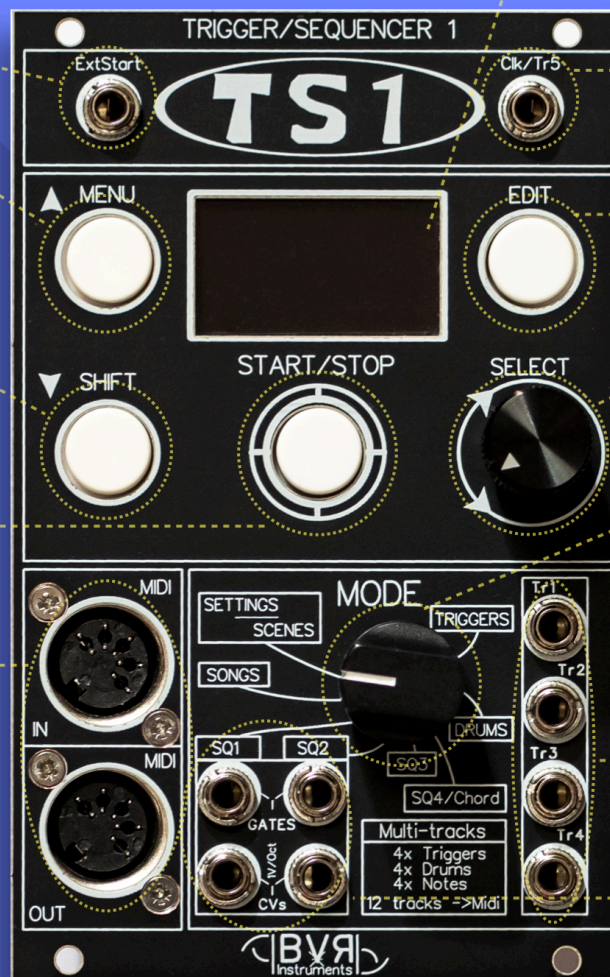
Edit button
Enter/Quit edit session.

Select button
Select and validate values.

Mode selector
Mode selector for : Trigger, Drums, Sequences 1 to 4, Song, Scene, Settings.

Tr1 to TR4
Trigger output for 4 trigger tracks.

CV/Gates 1 & 2
Send analogue CV/Gate controls from sequence 1 and 2.



Data structure for Songs, Scenes and Sequences

Song slots (49) :

Each song contains 3 lines :

- Scenes number.
- Repeat number before next scene.
- Information to start or stop song.

Each song contains 4 pages, chaining up to 24 scenes.

SONG slot 1						
S	1	2	4	3	10	11
R	2	4	1	2	1	1
I	St					En

Repeat scene

End song

Start song

Scene slots (99) :

Each scene contains 2 lines :

- Sequences number to be played.
- Information to mute or transpose.

SCENE slot 1						
	S1	S2	S3	S4	Dr	Tr
N	2	4	6	5	10	9
I	M					

2						
					t 4	
Dr	Tr				10	9
I	M					

t 3						
					t 10	
Dr	Tr				10	9
I	M					

t 11						
					t 11	
Dr	Tr				10	9
I	M					

SQ1						
		135	1:1		T	M
V	D					
L	O					
		2				

SQ2						
		135	1:1		T	M
V	D					
L	O					
		4				

SQ3						
		135	1:1		T	M
V	D					
L	O					
		6				

SQ4						
		135	1:1		T	M
V	D					
L	O					
		5				
		C	E	C	G	
		1	1	2	4	
		3	2	2	2	

DRM						
		135	1:1		T	M
V	D					
L	O					
		10				
1						
2						
3	X					
4	/2					

TRG						
		135	1:1		T	M
V	D					
L	O					
		9				
1						
2					/4	/8
3	X		X	X		
4	/2	X	<		X3	X7

Note sequences (99) :

- Seq 1.
- Seq 2
- Seq 3
- Seq 4/Chord.

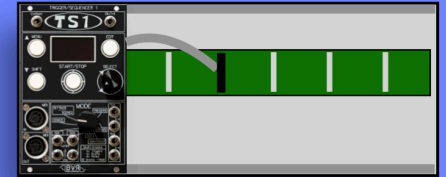
Rhythmic Sequences (99) :

- Trigger.
- Drum.

Connecting the TS1 and starting exploring Modes

Connecting the TS1

Connect the included power cable starting with the 14-pin plug to the power strip of your case (make sure to connect red mark on bottom). Then, plug the 10-pin side into the rear connector of the TS1. This one is equipped with a keyed socket to prevent connection errors. You can now screw in the TS1 using the provided screws.



Switch on your case to start the TS1

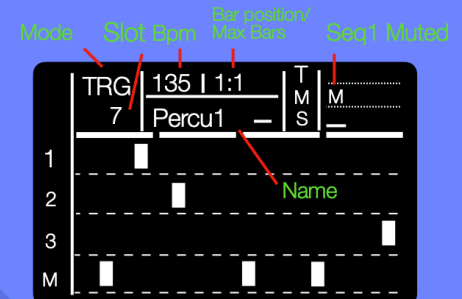
Switch on the power of your case. At startup, the TS1 displays an animated splash screen with the logo and the firmware version. Press **SHIFT** during startup to skip animation.



Introducing TS1 sequence Modes

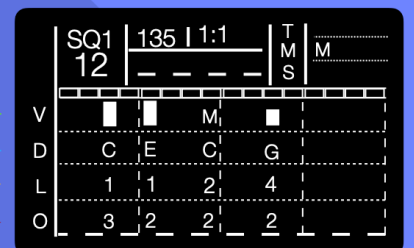
Turn the **MODE** selector to display the different screens available. Starting from the right and moving leftwards, there are 8 positions, we will focus to explore 6 of them for the moment.

Turn **Mode** selector to discover **TRG** and **Drums** modes:
The first two lines are reserved for the following informations:
Current Mode, Bpm, current bar, Max bar, Slot number and Name.
The following four lines are reserved for displaying a one bar rhythm sequence with 16 events per track. Tracks contains events as icons.



Turn **Mode** selector to to discover **SQ4/Chord**, **SQ3**, **SQ2**, **SQ1** modes:
The first two lines contain similar infos previously observed with **TRG**.
The following 4 lines contains a on bar sequence with 16 notes:
Each note is represented with 4 parameter, one per line.

- **First** line is the **note velocity**.
- **Second** line represents **note degree**.
- **Third** line is for note **length**.
- **Fourth** line is for note **octave**.



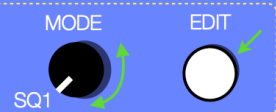
Entering your first notes and saving your sequence

We are going to use the **shortcuts** available, with these we can quickly : **Write**, **Modify**, **Erase** notes and **Save our sequence**.

Note : if the shortcuts doesn't suit to you, go to page 12 to edit in the traditional way.

Turn the **MODE** selector to the SQ1 position to select Sequence1.

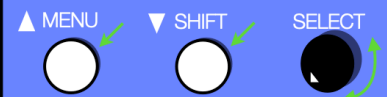
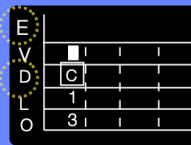
Press **EDIT** to enter In edit session. 'E' icon is displayed on top left position.



Press **SHIFT** or **MENU** to move cursor **vertically**.

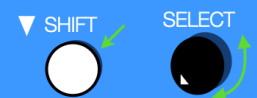
Turn **SELECT Left** or **Right** to move it **horizontally**.

Move the cursor on the note Degree Line (2nd line).



Keep **SHIFT** pressed and turn **SELECT** to the **right** to write one or a series of new notes at cursor's position.

All new notes are initialized with C3, 1 semiquaver length and 100% velocity.

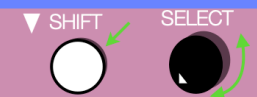


Hold down **SELECT** and rotate it **left** or **right** to **modify** any note parameter :
The parameters will be chosen among the available possible icons.

Note: If you press **SELECT** and release it, you'll enter the icon selection (see page 12). Choose an icon and press **SELECT** to quit selection.



Keep **SHIFT** pressed and turn **SELECT** to the **left** to erase a note at cursor's position.



Keep **SHIFT** pressed and press **EDIT** shortly to **Save your sequence**.

The screen display "Saved" in the center once Saving is completed. (Fw V4.2)

Note: Changes are not recorded until you explicitly save them permanently. You can reload your sequence (refer to page 7) to undo any modifications.



Playing your sequence and entering a one bar music score

Now let's play our first notes in the Sequence1.

Press **START/STOP** to start and stop the sequencer in the following modes: TRIGGERS, DRUMS, SEQ1, SEQ2, SEQ3, SEQ4.

Icon Play '▶' is displayed at top left position and replace Stop '◻' icon.

START/STOP



Note: Seq 1 and Seq 2 modes send notes to CV1/GATE1 and CV2/GATE2 respectively. Connect two jacks cable, from CV1 and Gate1 on the TS1 to your VCO with CV and VCA with Gate. To send notes to the MIDI output, refer to page 10 for Midi channel configuration.

Now that we've learned to input and play notes, we are going to exercise entering the following one bar score.

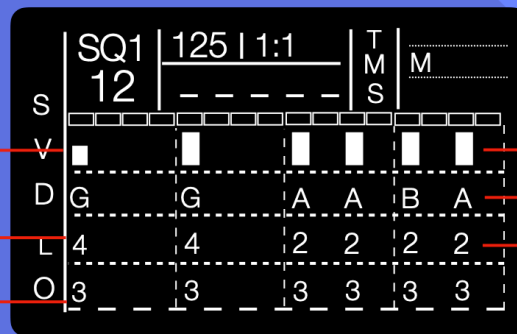


Note parameter

50% velocity

Quarter note

Octave 3



Note parameter

100% velocity

A note degree

Semiquaver note

This screen represents the musical score adapted to the note arrangement parameters of the TS1. Note: The TS1 has a fixed time signature of 4/4, so all your compositions will be based on this one.

Changing the sequence's slot

Now we are going to navigate among the slots :

The TS1 has 3 types of sequences:

- Trigger sequences with 99 slots on TRIGGER/DRUMS modes.
- Notes sequences with 99 slots on SQ1 to 4 modes.
- Chords sequences with 49 slots on SQ4/Chord mode.

We have also two others data sequences:

- Scenes with 99 slots on SCENES mode.
- Songs with 49 slots on SONG mode.

All data slots are modifiable in the same following way.

Note: Be sure to be outside of Edit or Menu session.

Turn **MODE** selector to the SQ1 position.

Note : After changing mode, the cursor is positioned at the slot location.

If cursor is in vertical or horizontal position:

Turn **SELECT** to move cursor on Slot number position.

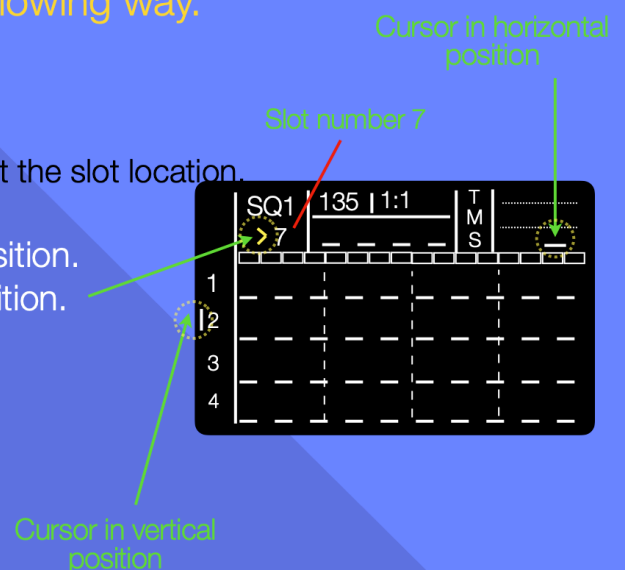
The cursor takes the form of an arrow on slot position.

Push **SELECT** to edit slot.

Note Cursor is blinking during editing.

Turn **SELECT** to change slot value

Push **SELECT** to exit editing.



Changing and saving Bpm

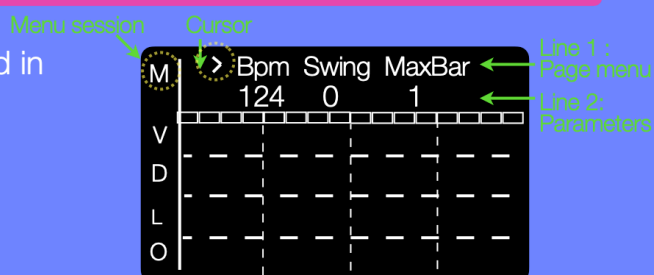
Entering general menu.

Turn the **MODE** selector to the SQ1 position to select Sequence1.
Press **MENU** button enter Menu session.
'M' icon is displayed on top left position.



The menu session display and arrow cursor be positioned in front of the parameter to modify and two specific lines :

- The first line displays the Page menu.
- The second line displays the available Parameters.



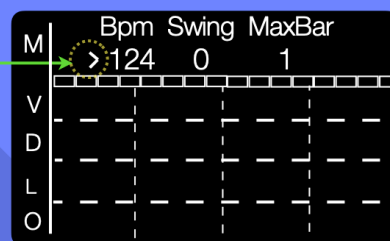
To change BPM

Turn **SELECT** button to navigate from **page** to **page**.
Select the « Bpm Swing Maxbar » page (default page).
Press **SELECT** to enter the line parameter. (Arrow moves in 2nd line)



Turn **SELECT** to move arrow in front of Bpm (default parameter).
Press **SELECT** to edit it. Arrow is blinking during editing.

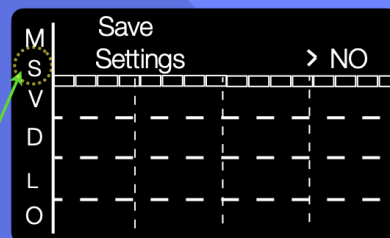
Turn **SELECT** to change the Bpm value.
Press **SELECT** to exit editing, the arrow will remain steady.
Press **MENU** return to go back to page menu selection.



To save BPM

Bpm depends of data settings.
Turn **SELECT** top left to chose Save Page.
Press **SELECT** to go to 2nd line and choose « Settings ».
Turn **SELECT** to go to YES/NO parameter and choose YES.
Press **SELECT** to perform the action.
Parameter return normally to 'NO' after completion.

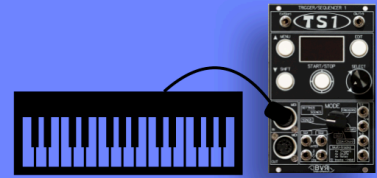
Note: You can also save bpm in Settings mode with :
SHIFT pressed + EDIT. ('S' icon appears briefly) to confirm.



Configuring Midi and record notes with external Keyboard

Connecting the Midi Keyboard

Connect your keyboard to the TS1 Midi in with a 5 pin Midi cable.



Enter setting Mode to configure the Midi input channel

Turn Mode Selector to Settings/scenes

Turn **SELECT** to Setting (central line to left) then press **SELECT**.



Configure the « MIDI CHANNELS 1 » setting page

Turn **SELECT** to right until « MIDI CHANNELS 1 » page.

Press **SELECT** or **EDIT** to enter in page parameters:

Vertical cursor appears on margin in front of parameter name.

Turn **SELECT** to chose Input Channel (first parameter).

Press **SELECT** to edit value, the arrow cursor blink while editing.

Turn **SELECT** to match midi channel with your External Keyboard.

Press **SELECT** to quit editing. Press **EDIT** to quit current setting page.



Configure the Midi output channels to your equipments

Use same method to configure midi output with the following pages :
MIDI SEQUENCES, MIDI TRIGGER, MIDI DRUMS.

Enable recording midi Mode

Turn the **MODE** selector to any sequence SQ1,2,3 or 4.

Enter in general menu with same method for changing Bpm see above.

Go to « Midi Mode » the midi mode has four configuration options; we will discuss two of them:

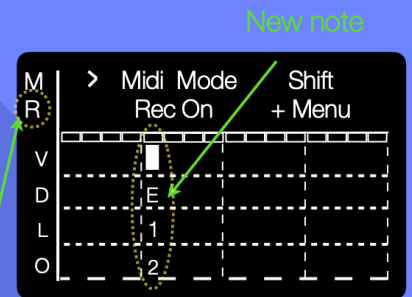
Rec Off: No recording of notes via MIDI In (default mode).

Rec On: Records a note at cursor's position.

Icon « R » appears when Rec is on.

Note: Use **SHIFT** pressed + **MENU** < 2 secs to Enable/Disable Rec On.

Note: Depending on the "Inc step auto" option in GENERAL SETTINGS 2 page, the cursor will advance one step for each note entered if activated.



Pressing **SHIFT** while pressing a key, clear note at cursor's position.

Positioning cursor for Mute/Solo/transpose

Position the cursor for the following actions:

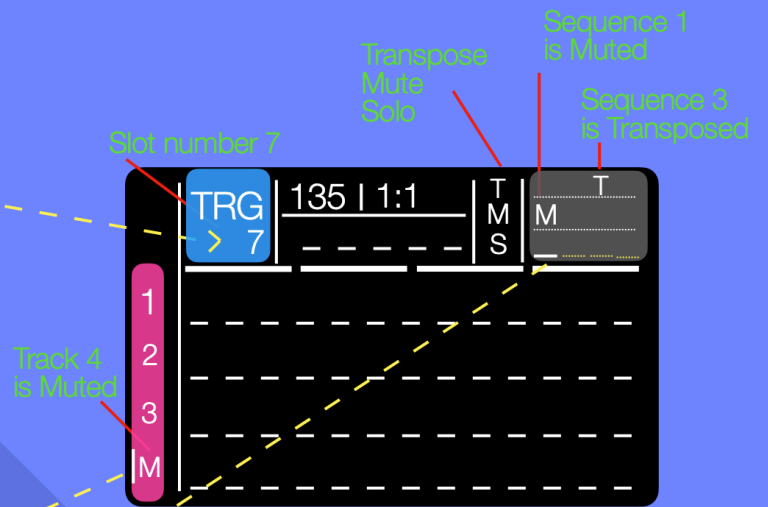
Outside of edit our menu sessions :

- Turn **SELECT** To move cursor position
- Far right to enter horizontal zone
- Far left to enter vertical zone
- In the intermediate to select slot number.

- When the cursor is positioned in front of the slot number, you can change the number by pressing **SELECT**. The cursor will start blinking, and by turning it, you can modify the value until you press **SELECT** again to confirm. The cursor then returns to a fixed position.

- When the cursor positioned vertically in front of the track number from 1 to 4, you can adjust the following.

Press SELECT	Mute/Un-Mute
Press SHIFT + SELECT	Mute/Un-Mute all tracks
Press SHIFT + turn SELECT (L/R)	Solo/Un-Solo



- When the cursor is positioned horizontally you can Mute, Solo or Transpose the Sequences 1 to 4. The 4 positions represent the status T,M,S for sequences 1 to 4.

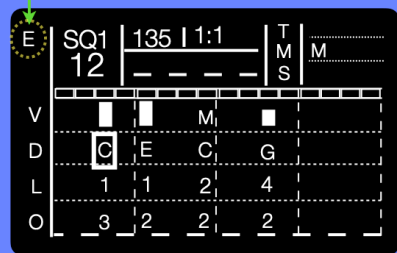
Press SELECT	Mute/Un-Mute
Press SHIFT + SELECT	Solo/Un-Solo
Press SHIFT + turn SELECT (L/R)	Transpose/Un-Transpose

Editing session and advanced shortcuts

Normal Edit session.

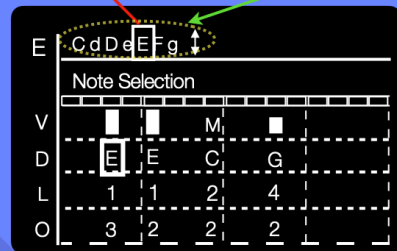


Edit session enabled



EDIT button allows you to **enter** and **exit** the edit session. It displays a square icon.
SELECT moves it left or right, while **MENU/SHIFT** adjusts its up and down position.
 Press **SELECT** to modify the selected parameter and enter icon selection zone to choose a new icon from the current scale.

Cursor in Icon selection zone. User scale



SELECT enables you to choose the new note within the selection zone.
 Moving the cursor selection left and right with **SELECT**, and validating the new parameter pushing **SELECT**.

Advanced edit with shortcuts : Duplicate or Move notes

Press edit to enter edit session

With SELECT left or right, position the cursor at the desired Row
 keep pressed **SHIFT** and turn **SELECT** to the **right** to **duplicate**.
 Keep pressed **MENU** and turn **SELECT** **left** or **right** to **move**.



Describing icons parameters

The rhythmic and note sequences are constructed using parameters in the form of icons, which are as follows.

Available icons for trigger and drums modes.

- Velocity levels. /2 /4 /8
- Play each 2, 4, 8 bars. II
- Ratchet. X
- Probabilities. X7 X3
- Play 3 (7) x out of 4(8). <

	TRG	135 1:1	T	M	M
	7	-----	S		
1					
2			/4		/8
3	X	X	X		
4	/2	X <	II	X3	X7

Available icons for Sequence 1 to 4 modes.

- Line1 : Velocity levels. M X
- Line2 : Note degree. C,d,D,e,E,F,g,G,a,A,b,B,
- Line3 : Length note. 1,2,4,6,8,b ▲▲
- Line4 : Octave note. 1,2,3,4,5,6,7 ↓

↓ Icon plays random note from current scale.
Lower case notes represent flat notes.

	SQ1	135 1:1	T	M	M
	12	-----	S		
V			M		
D	C	E	C	G	
L	1	1	2	4	
O	3	2	2	2	