Patrick DSP's TR-1000 Cheat Sheet

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Start Here: The Big Picture

↑ Contents

Read this first. It explains what the TR-1000 is, how the sounds are made and how projects, kits, patterns and songs fit together.

What it is

The TR-1000 is a Roland drum machine with a step sequencer and 10 tracks. Each track plays one instrument made from a sound generator, a filter, an amp, a compressor and effects. It also has a sampler, reverb, delay, a master effect and an analog effect

Tracks: `BD` (bass drum), `SD` (snare drum), `LT` (low tom), `HT` (high tom), `RS` (rim shot), `HC` (hand clap), `CH` (closed hi-hat), `OH` (open hi-hat), `CC` (crash cymbal), `RC` (ride cymbal)

Layer tracks: `BD`, `SD`, `LT` and `HT` each have two sound sections, layer A and layer B, with their own generator, filter and amp. Both layers play together

Single tracks: `RS`, `HC`, `CH`, `OH`, `CC` and `RC` have one sound section. LAYER B enters alternate sounds (ALT `INST`) on them

Everything you play lives in a pattern. Patterns play the instruments of a kit

The sound generators (GENs)

A `GEN` (generator) is the sound source of a track. When it is OFF, the track is silent

Analog: 16 sounds from a real analog circuit. It recreates the TR-808 and TR-909 circuits with new controls

ACB: analog component modelling. It reproduces how analog circuits behave, customized with digital technology

FM: frequency modulation sounds with a bright, dynamic character. Every model has its own parameters

PCM: many preset samples. PCM means pulse code modulation, which is digitally recorded sound

Sample: your own recordings with loop and pitch settings

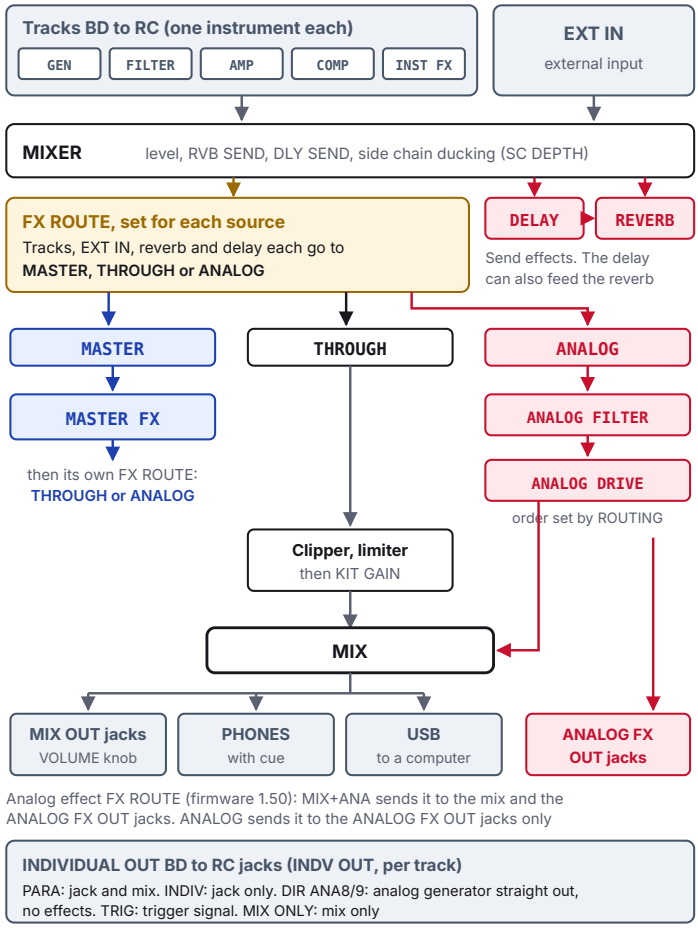
Signal flow

Each layer runs through its generator, filter and amp. The track then runs through the compressor and the instrument effects

The mixer then sends each track to the master effect (MASTER), the analog effect (ANALOG) or straight to the outputs (THROUGH)

The external input (EXT IN) goes through the same mixer, so it can use the effects, the side chain and the sampler

MIX OUT carries the mix. Every track can also have its own output, and the analog effect has its own output



Analog effect FX ROUTE (firmware 1.50): MIX+ANA sends it to the mix and the ANALOG FX OUT jacks. ANALOG sends it to the ANALOG FX OUT jacks only

INDIVIDUAL OUT BD to RC jacks (INDV OUT, per track)
PARA: jack and mix. INDIV: jack only. DIR ANA8/9: analog generator straight out, no effects. TRIG: trigger signal. MIX ONLY: mix only

How the data is organized

Project: 128 kits, 128 patterns, instruments and songs managed as one collection. The unit stores 16 projects

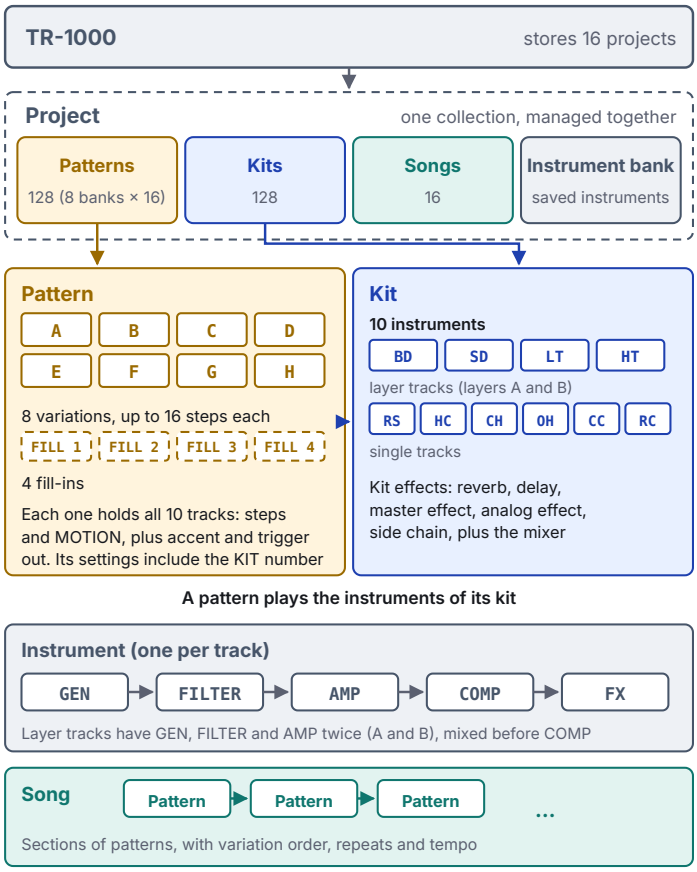
Pattern: 8 banks of 16, 128 in all. Each pattern has 8 variations (A to H) and 4 fill-ins, each with 10 tracks

Kit: 10 instruments plus the reverb, delay and master effect settings. 128 kits per project. A pattern plays the kit it is linked to

Instrument: all settings of one track (generator, filter, amp, compressor, effects, modulation). Save it in the instrument bank and recall it from any kit

Song: 16 per project. A song contains multiple patterns that are chained and played back, with the sequence of variations, the number of repeats and the tempo

`MOTION`: recorded knob and switch movements saved with the pattern. It works like automation in a DAW (digital audio workstation)



A pattern plays the instruments of its kit

Core ideas

Select a track with the track buttons `BD` to `RC`. Edit with the knobs `C1` to `C6` /VALUE under the display. The arrow buttons switch pages

`SHIFT` plus another button opens that button's settings screen

Patterns and kits that are being edited are stored in memory until the power is switched off. To keep them, save first: `SHIFT` + `COPY` › `OVERWRITE` saves the pattern and the kit together. An asterisk marks patterns and kits that are being edited

Patterns always reference a kit, so the kit changes every time the pattern changes (see Transport and Tempo)

Firmware versions

Check the version: `MENU` › UTILITY › INFO

Update from a USB flash drive: format the drive on the TR-1000 (64 GB or less), copy TR1000_UPDATER.bin to its root folder, then `MENU` › UTILITY › INFO shows Update available. The update takes about 3 minutes. Never switch off during the update

Back up to USB before updating: `MENU` › FILE › BACKUP (takes about 20 minutes)

The TR-1000 app can also update the unit

1.20: MOD MODE and S&H, 909 and 808 Bass Line, 4 new MFX types, Mute Trigger for 8X Crash Cymbal and 8X Hand Clap, Roll 1st Note, MIDI MODE with one channel per track, slices over MIDI, higher `AMP` GAIN, Mix Out Gain and USB Out Bst. 1.20

1.50: NOTE per step and KEYBOARD play mode, Keep Efx and ExtIn, MIX ONLY output, analog effect routing, new effects, 50 FM instruments, COARSE for FM, new MOD destinations, Ptn Select Mode, Sample Level Adjust, Auto Track Select, new screens 1.50

Terms and abbreviations used in this sheet

ACB: analog component modelling

AFX: analog effect (filter and drive)

ALT `INST`**:** alternate instrument sounds on single tracks

BPM: beats per minute (tempo)

`CC`**:** control change (a type of MIDI message)

CV: control voltage, an analog control signal

DIN sync: a timing signal for older gear. The Deutsches Institut für Normung (DIN) is the German standards body

EXT IN: external input

FM: frequency modulation

`GEN`**:** generator (sound source)

IFX: instrument effect

`INST`**:** instrument

LFO: low-frequency oscillator, a slow wave that changes a parameter (the MOD screen)

MFX: master effect

MIDI: Musical Instrument Digital Interface

PCM: pulse code modulation (digitally recorded sound)

USB: universal serial bus

Panel and Connections

↑ Contents

Read when you want to know what every button, knob and connector does, or how to start up and format a USB drive.

Panel buttons

Button	Press	With SHIFT
`ACCENT (STEP)`	Enter accents on steps. Also edits effect motion	
`AMP`	Amp settings	Compressor (COMP)
`ANALOG FX (ON)`	Turn the analog effect on or off	Edit the analog effect (EDIT)
`ARROW buttons (left and right)`	Switch pages	Raise or lower the value being set (DEC/INC)
`CLEAR`	Erase a track, a variation or a pattern	
`COPY`	Copy a pattern, kit or other data	Save pattern, kit or system settings (WRITE)
`ENTER`	Confirm a menu choice or run an operation	
`EXIT`	Go back one screen or cancel	Load default values for a kit or pattern (INIT)
`FILL IN TRIG`	Play a fill	Fill settings (EDIT)
`FILTER`	Filter settings	Modulation (MOD)
`FX`	Instrument effect settings	Mixer (MIXER)
`GEN`	Generator settings	Choose the generator (SELECT)
`INST`	Choose an instrument	Show the information of the recalled instrument (INFO)
`INST PLAY`	Play tracks with step keys 1 to 10. With step keys 13 to 16: choose the play mode	Play mode settings (PLAY MODE)
`INST REC`	Real-time recording	Quantize setting (QUANTIZE)
`KIT`	Choose a kit	Kit settings (EDIT)
`KNOB ASSIGN`	Assign parameters to the CTRL knobs of each track	
`LAST`	Set the pattern or track length	
`LAYER A and B`	Choose the layer to record or edit	
`MASTER FX (ON)`	Turn the master effect on or off	Edit the master effect (EDIT)

Button	Press	With SHIFT
`MENU`	Settings, utilities and initialize	Reload the saved state of a kit or pattern (RELOAD)
`MORPH (button)`	Turn morphing on or off	Morph settings (EDIT)
`MOTION (ON)`	Play back recorded motion	Delete recorded motion (ERASE)
`MOTION (REC)`	Record motion	
`MUTE`	Mute the selected track	Send the selected tracks to the headphones only (CUE)
`PTN SELECT`	Choose a pattern	Pattern settings (SETTING)
`SAMPLE`	Sample	Sample editor (EDIT)
`SONG`	Song mode	Song edit (EDIT)
`START`	Play the pattern	Start again from the first step (RESTART)
`STEP keys 1 to 16`	Enter steps, choose patterns and songs	Enter a weak step (WEAK VELOCITY)
`STEP LOOP`	Loop a step or a range of steps	
`STOP/CONT`	Stop. Press again to continue from where it stopped	Stop the sound of generators that do not stop on their own (ALL SOUND OFF)
`SUB`	Enter sub-steps such as duplets, triplets and quadruplets	
`TEMPO`	Tempo screen	Tap tempo (TAP). Press three or more times
`TR-REC`	Step recording	
`Track buttons BD to RC`	Choose the track to record or edit	Track settings (EDIT)
`VARI CHAIN`	Variation chain on or off	
`VARIATION A to H`	Choose a variation	

Knobs, faders and slider

ACCENT LEVEL: accent volume

`ANALOG FX` `FILTER` **and DRIVE:** cutoff and distortion of the analog effect

`C1` **to** `C6`**/VALUE:** set the parameters shown on the display. `C3` is also SCROLL and `C6` is also VALUE

CTRL 1-3: parameters you choose with `KNOB ASSIGN`

EXT IN: input level of the EXTERNAL IN jacks

Level faders: volume of the instruments `BD` to `RC`

`MASTER FX` **CTRL 1-3:** amount of the master effect

MIX: balance between layer A and layer B

`MORPH` **slider:** applies the morph settings you saved

PHONES VOLUME: level of the headphone jack

REVERB LEVEL and TIME, DELAY LEVEL, TIME and FEEDBACK: reverb and delay settings

TUNE and DECAY: pitch and decay length of the selected instrument

VOLUME: level of the MIX OUT jacks. It does not change the INDIVIDUAL OUT or `ANALOG FX` OUT jacks

Display and keys

The display shows information depending on what you do

Step keys 1 to 16: enter steps and select patterns, songs and more

`START` **and STOP/CONT:** play and stop

Rear connectors

AC IN and power switch: use the supplied power cord. Unplug the cord to cut power completely

USB COMPUTER: connects to a computer with a USB 3.0 Type-C to Type-C cable, for performance data and audio. Install the Roland driver first. Use a data cable, not a charge-only cable, and connect the end with the ferrite core to the computer

USB EXTERNAL DEVICE: USB flash drive, 64 GB or less. Never remove it while the screen says Executing

MIDI IN, OUT 1 and OUT 2/THRU: MIDI and DIN sync. OUT 2 can act as THRU

PEDAL (CONTROL jack): expression pedal EV-5, or pedal switch FS-5U or FS-6. Use only these

TRIGGER/CV: TRG IN takes trigger signals. TRG OUT sends triggers for the selected track. `FILTER` CV IN takes up to ±2.5 V to control the analog effect filter cutoff. CLK OUT sends sync to external gear. Use mono mini plug cables, not stereo

EXTERNAL IN L/MONO 1 and R/MONO 2: audio input as one stereo pair or two mono channels

INDIVIDUAL OUT/TRIGGER OUT `BD` to `RC`**:** each jack outputs the track audio or its trigger signal. Analog sounds can also go straight out, without effects

MIX OUT L/MONO and R: main outputs to your amp or monitors

`ANALOG FX` **OUT L/MONO and R:** direct output of the analog effect

Starting up

Before connecting anything, turn the volume down and switch all units off

Power on in this order: TR-1000, then the connected devices. Then raise the volume of the connected devices

Power off in this order: connected devices, then the TR-1000

AUTO OFF: `MENU` › SYSTEM › GENERAL › Auto Off. OFF, 20 min (default) or 240 min. Unsaved data is lost when the unit switches itself off

Format a USB flash drive on the TR-1000: `MENU` › UTILITY › FORMAT › `ENTER` › OK

Specifications

Power consumption 38 W, 0.2 W when switched off by AUTO OFF

Size 486 × 311 × 125 mm. Weight 5.5 kg

Supplied: power cord, owner's manual and a USB Type-C to Type-C cable with a ferrite core

Organization

↑ Contents

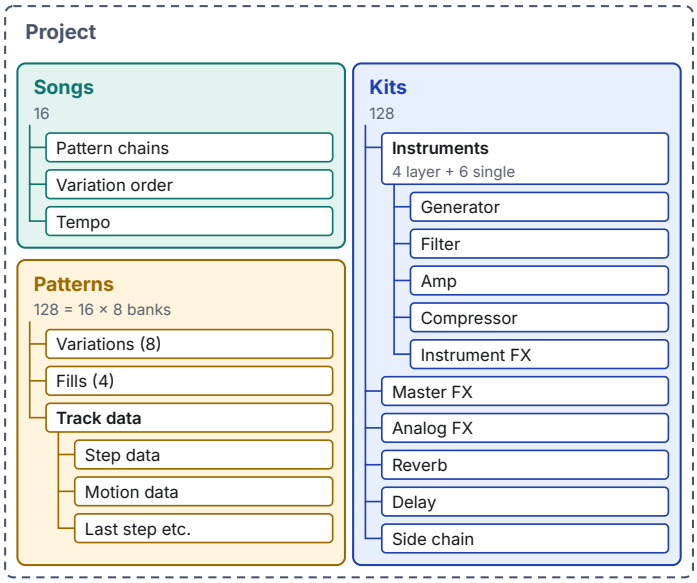
Read when you want more detail on projects, kits, instruments, clock source and shuffle.

Project

`GEN` *(sound generator) is the sound source of a track, such as analog, ACB, FM, PCM or a sample*

`INST` *(instrument) is one track's generator, filter, amp, compressor and instrument* `FX`*, saved in the* `INST` *BANK and usable in any kit*

`KIT` *is 10 instruments, one per track, plus the reverb, delay and master effect settings*



Clock Source

`MENU` › `PROJECT` › **Tempo Sync**

> **Options:** Auto, MIDI, USB, INT
>
> Auto follows MIDI clock from MIDI IN or USB. USB takes priority if both are present
>
> INT uses the TR-1000's own tempo

Sync Delay (`MENU` › `PROJECT`): -100 to +100, shifts the start of the pattern. Positive values advance the start

Shuffle

`TEMPO` › shuffle

TR-1000 shuffle %	Cirklon step (%)	SP-1200 setting, swing / delay	TR-909 setting, swing / delay
0	0 (0.00%)	**50** 49.8% / -0.4%	**S1 (straight)** 50.0% / 0.0%
+6	1 (6.25%)		
+12 or +13	2 (12.5%)	**54** 54.0% / 8.0%	**S2** 54.2% / 8.4%
+19	3 (18.75%)		
+25	4 (25.0%)	**58** 58.2% / 16.3%	**S3** 58.4% / 16.7%
+31	5 (31.25%)		
+37 or +38	6 (37.5%)	**63** 62.4% / 24.8%	**S4** 62.5% / 25.1%
+44	7 (43.75%)		
+50	8 (50.0%)	**67** 66.5% / 33.1%	**S5** 66.7% / 33.5%
+56	9 (56.25%)		
+62 or +63	10 (62.5%)	**71** 70.7% / 41.5%	**S6** 70.9% / 41.8%
+69	11 (68.75%)		
+75	12 (75.0%)		**S7** 75.1% / 50.2%
+81	13 (81.25%)		
+87 or +88	14 (87.5%)		
+94	15 (93.75%)		
+100	16 (100.0%)		

Swing is where the off-beat 16th note falls within each 8th note (50% is straight, 66.7% triplet, 75% dotted). Rows follow the TR-1000 shuffle value: straight time is 0 and S7 on the TR-909 (75% swing) is +75, so TR-1000 value = 3 × (swing % − 50). Delay is how late that 16th note is, as a percentage of one 16th step. Shaded rows have SP-1200 or TR-909 settings. Where a shaded row has no Cirklon step, its TR-1000 value is calculated from that rule and rounded to a whole number.

General Data Operations

↑ Contents

Read when you need to save, reload to the saved state, back up to USB or initialize patterns and generators.

Saving

`SHIFT` + `COPY` › `OVERWRITE`

`C6` to select what to save › `ENTER`

`C6` to select the destination › `ENTER`

OK › `ENTER`

Reloading the saved state of a pattern or kit

`SHIFT` + `MENU`

`C6` to select what to reload › `ENTER`

Backing up all TR-1000 data to USB

`MENU` › `FILE` › `BACKUP` › DESTINATION › `USB` EXTERNAL › name the file › `ENTER`

Initialize patterns and generators

`SHIFT` + `EXIT` › `C6` to select › `ENTER`

Menu Settings Worth Knowing

↑ Contents

Read when you want to change project, general, sound or MIDI settings in the menus.

MENU › PROJECT

Ptn Select Mode 1.50

> **Auto:** switches to the pattern currently selected with the `C6` /VALUE knob
>
> **Manual cursor:** move the cursor to the next pattern with `C6` /VALUE, then `ENTER` to switch

Auto Track Select 1.50

> **ON:** the track for the `BD`-`RC` button you play in `INST PLAY` or `INST REC` is selected automatically

Keep Efx and Extln 1.50

> **ON:** GAIN, DELAY, REVERB, MFX, AFX and EXT IN settings carry over when switching kits, so effects and external input do not cut off
>
> With this ON, these settings are copied into the next kit, replacing its own

MENU › PROJECT (more)

Tempo Source: Pattern (each pattern keeps its own tempo) or Project (one tempo for all)

Normal Velocity 61-127 and Weak Velocity 1-60: the velocities used when you enter steps in `TR-REC`

Kit Select: Kit (switching patterns keeps the kit) or Pattern (switching patterns loads the pattern's kit)

Fill In Trigger: Momentary (fill plays only while held) or Latch (only if pressed in the first half of the pattern)

Start Pattern, Start Kit, Start Song: what is selected at startup (`LAST` or a number)

`TR-REC` **Mode:** Normal (weak steps with `SHIFT` + step key) or Classic (each press of a step key cycles strong, weak, off)

Start Key: Start or Start&Stop. Stop Key: Stop&Cont, Stop or None

Track Sync: All Tracks (tightest sync, some latency) or Layered Gens (less latency when externally synced)

Morph Edit Mode: All Knobs or C-Knobs

Trig Out: Trig, Head or End. Sync Out Clock: 1, 2, 3, 4, 6, 8, 12 or 24 per beat

Filter CV In Level: 0 to 100%. Filter CV In Inv.: ON inverts the polarity. The `FILTER` CV IN jack takes up to ±2.5 V and controls the cutoff of the `ANALOG FX` filter

MENU › PROJECT › SOUND

Ext In Gain: -INF, -60.0 to 6.0 dB. Ext In Att.: ON when the external device has a high output level. Ext In Mode: Stereo or Mono

Mono1 Level and Mono2 Level: 0 to 100%, the level of each channel when Ext In Mode is Mono

USB Level: 0 to 100%, the input level of the USB EXT IN channel

Trig In (the TRG IN jack): Sync uses the trigger as the clock, Start starts and stops the sequencer, Head returns to the start of the pattern, Clock advances the sequencer one step per trigger

Trig In Sync Clock: 1, 2, 3, 4, 6, 8, 12 or 24 sync clocks per beat of the trigger input

MENU › PROJECT › PEDAL

Connect an expression pedal (EV-5) or a pedal switch (FS-5U, FS-6) to the PEDAL jack. Use only the specified pedals

Destination, sound: `MORPH`, TUNE and CTRL 1 to 3 of any instrument from `BD` to `RC`, RVB LEVEL, RVB TIME, DLY LEVEL to DLY FBK, MFX CTRL 1 to 3, AFX `FILTER`, AFX DRIVE

Destination, control: `START` /STOP, STOP/CONT, `SHIFT`, TAP `TEMPO`, TAP PAD, DEC PTN, INC PTN, `FILL IN TRIG`

DEC PTN and INC PTN: pressing the pedal while a pattern is stopped goes backward or forward one pattern. While a pattern plays, it moves only once, however often you press

Polarity: Normal or Inverse

MENU › SYSTEM › GENERAL

Auto Off: OFF, 20 min or 240 min

Saver: timer for the screen saver

Sample Level Adjust 1.50

> **Auto:** the volume of an imported sample is matched to its preset category

MENU › SYSTEM › SOUND

Mix Out Gain: -14, 0, +6, +12 or +18 dB (+18 is new) 1.20

Idv Out Att. (`BD-RC`): ON lowers that individual output by 14 dB

AFX Out Att.: OFF or ON

Phones Bst.: OFF, +6 dB or +12 dB 1.20

USB Out Bst.: OFF, +6, +12 or +18 dB (+18 is new)

MENU › SYSTEM › MIDI

See the MIDI section below

Transport and Tempo

↑ Contents

Read when you need to play and stop, set or tap the tempo, or link patterns, kits and tempo.

Playing and stopping

`START` plays the pattern from the beginning

STOP/CONT stops, and a second press resumes from where it stopped

`SHIFT` + `START` restarts the pattern immediately (good for syncing to external gear)

`SHIFT` + STOP/CONT ends long samples immediately

Selecting another pattern during playback: its step key blinks and it starts when the current pattern finishes

Tempo screen

`TEMPO` › `C1` SHUFFLE (-100 to +100)

`C2` `TEMPO` (40 to 300)

`C3` fine tempo (0.00 to 0.99)

`ENTER` switches Tempo Source between PATTERN and PROJECT

The screen shows a larger BPM display and nudge indicators 1.50

Left / right arrow buttons: NUDGE (-100 to +100), shifts the playback timing of the whole pattern

To keep a nudge, set Sync Delay in the project settings

Tap tempo

Press `SHIFT` + `TEMPO` three or more times. The tempo is set to the average of your taps

Pattern, kit and tempo links

Patterns always reference a kit, so the kit changes every time the pattern changes. When the kit changes, the sound of all sound sources stops

To keep one kit across patterns, set `KIT` Ref SW to OFF (pattern settings)

To keep one tempo across patterns, set Tempo Source to Project

Files, Backup and Utilities

↑ Contents

Read when you need to export or import, back up, factory reset, calibrate or check the firmware.

Export a project

Put a USB drive in the USB EXTERNAL DEVICE port

`MENU` › `FILE` › `EXPORT` › mark projects with `ENTER`, then right arrow › destination › name › OK

Saved in ROLAND\TR-1000\EXPORT

Patterns and kits still being edited (asterisk) and unsaved system settings are not exported

Import a project, pattern or kit

`MENU` › `FILE` › `IMPORT` › INTERNAL or `USB` EXTERNAL › file

PROJECT: pick the destination project › OK

PATTERN or `KIT`: mark the items, right arrow, mark the destinations, right arrow › OK

Backup and restore

Backup files are stored in ROLAND\TR-1000\BACKUP

`MENU` › `FILE` › `RESTORE` › INTERNAL or `USB` EXTERNAL › file › OK

Edited (asterisk) patterns and kits and unsaved system settings are not backed up

Never power off or pull the USB drive while the screen says Executing

Factory reset

`MENU` › `UTILITY` › `FACTORY` › ALL, `PROJECT` or `SYSTEM` › OK, then restart

ALL also erases user samples

Calibrate the analog engine and effects

`MENU` › `UTILITY` › `CALIB` › OK

Unsaved edits are discarded, so save first

Check the firmware version

`MENU` › `UTILITY` › `INFO`

Format a USB flash drive

`MENU` › `UTILITY` › FORMAT › `ENTER` › OK. Use a drive of 64 GB or less

Export files made with TR-1000 app 1.01 and later can be sent and received

Computer connection

Install the Roland driver before connecting the USB cable

The TR-1000 APP is available through Roland Cloud Manager

Shortcut Keys

↑ Contents

Read when you want the shortcut keys for reloading, initializing, copying, clearing and editing.

Reload to saved state

`MENU` + `PTN SELECT`, A-H, `KIT`, `SONG`, `BD-RC` (track with instrument) or `INST`

`MENU` + a knob reloads that knob's saved position, `MENU` + `C1`-`C6` reloads the assigned parameters

Initialize

`EXIT` + `GEN`, `FILTER`, `AMP` or `FX` (instrument `FX`)

`EXIT` + `C1`-`C6` initializes the assigned parameters

Copy

COPY + PTN SELECT (pattern), KIT (kit), BD-RC (track with instrument), A-H (variation)

When you copy a layer track to a single track, only Layer A is copied. With analog instruments, only the track information is copied

Hold SHIFT while choosing the source to swap source and destination

COPY + 1-16 copies a step's settings, including motion

COPY + 1-16 copies a morph slot (in Morph edit) or a snapshot (in Snapshot play mode)

KNOB ASSIGN + 1-16 (Snapshot play mode) saves the current knob values to that snapshot

Clear

CLEAR **+ 1-16:** pattern (in PTN SELECT), snapshot (Snapshot play mode) or morph slot (Morph edit)

CLEAR + A-H (variation), BD-RC (track), KNOB ASSIGN (knob assignments of the selected track)

CLEAR + MOTION (ON) clears all motion in the pattern, CLEAR **+ a knob** clears that knob's motion

CLEAR + MUTE unmutes everything, SHIFT + CLEAR clears notes in real time

Editing

BD-RC + REVERB (LEVEL) or DELAY (LEVEL): send levels

1-16 + ACCENT (LEVEL) in TR-REC: step velocity

MORPH **+ 1-16:** select a morph slot

Sequencer Quick Pick

↑ Contents

Read when you know the result you want and need to find the right sequencer feature.

Which feature for which job

A normal hit: step key in TR-REC

A quieter hit: weak step, SHIFT + step key (TR-REC Mode Normal) or press the step key again (TR-REC Mode Classic)

A louder hit: ACCENT (STEP) and the ACCENT (LEVEL) knob

A roll or a flam inside one step: SUB, or SUBSTEP in step edit

A hit that only sometimes plays: PROB in step edit, or MASTER PROBABILITY for the whole pattern

A hit that plays only on some cycles: CYCLE in step edit

A hit slightly early or late: START in step edit, or START in the track settings for the whole track

A different sound on one hit: layer A or B steps, alternate sounds (ALT INST), or a slice step

A melody on one track: NOTE per step or KEYBOARD play mode 1.50

A knob move on one step: motion on that step. A knob move over the whole pattern: MOTION (REC)

A shorter track against a longer pattern: LAST for one track

A longer pattern: variation chain

A break or change on demand: FILL IN TRIG. At regular intervals: automatic fill

Swing: shuffle in the tempo screen, the track settings or the pattern settings

A whole song: Song Mode

Patterns

↑ Contents

Read when you want to select, copy or clear patterns.

Operations

Selecting a pattern

- **Hold PTN SELECT + step keys 1-8**
  - Selects the bank. Then choose the pattern
- PTN SELECT
  - Step keys
  - Value knob
  - Arrow keys

Playing multiple patterns

- PTN SELECT
  - Hold one STEP and press a later STEP
  - The patterns in that range play back in sequence

Erase a pattern

- PTN SELECT › CLEAR + STEP

Erase a track

- CLEAR + a track button BD to RC
- NOTE and MOTION data are erased, while track settings are kept

Copy a pattern

- COPY › PATTERN › source › destination › OK
- Press the right arrow in the copy screen to pick data from another project (pattern with kit, pattern or kit)

Track Settings

- SHIFT + a track button, or long-press a track button
  - **Direction (C1)**
    - FWD, BWD, P-P (forwards then backwards)
    - **R-L (alternating steps forwards:** 2 1 4 3 ...), L-R (alternating steps backwards)
    - RND (random), DNK (random, adjacent steps only), DNK2 (like DNK without repeats)
  - **Rotate (C4)**
    - Shifts the pattern forward or backward, -8 to +8
  - **Start (C5)**
    - Adjusts the step timing in small increments, -50 to +50
  - **Shuffle (C6)**
    - Adjusts the shuffle for each track, scaled by Master Shuffle in TEMPO, -100 to +100

Pattern Settings

- SHIFT + PTN SELECT
  - **Pattern Gain**
    - Output level, to match this pattern to others
  - **Scale**
    - **Note resolution:** 8th(T), 16th(T), 16th, 32nd
    - After switching to a triplet scale, adjust LAST STEP as well
  - **Shuffle**
    - Pattern level
  - Accent Volume
  - Accent Depth
  - **Master Probability**
    - Applies to all steps in the pattern
  - **Flam Space**
    - *sets the speed between flam hits, 0 to 8*
  - KIT **Ref SW**
    - When ON, a pattern loads its own kit

Variations

↑ Contents

Read when you want to select, copy, erase or chain variations, or set last steps.

Selecting a variation

A-H VARIATION buttons

Erase a variation

CLEAR + VARIATION

Copy a variation

COPY › VARIATION › source › destination › OK

Changing the length of a variation

LAST *sets how long a variation or a single track is*

`LAST` › `VARIATION` › `STEP`

`SHIFT` + `STEP` sets the first step instead

Hold several `VARIATION` buttons to change them together

A variation has 16 steps at most. Longer patterns use a variation chain

Changing track length

`LAST` › `TRACK` › `STEP`

With no track selected it applies to the tracks shown as OFF (MULTI)

To clear a track's last step setting: `LAST` › `CLEAR` + a track button

Variation Chain

`VARI CHAIN` *plays several variations one after another*

Creating

- Press the `VARIATION` buttons together
- The selected variations play back as a chain

Cancelling

- `VARI CHAIN`
- Cancelling while it plays leaves one variation looping and erases the stored chain

While a chain plays

- `TR-REC` + a variation in the chain edits that variation live
- Pressing a variation outside the chain plays that one. Press a variation in the chain to go back

Each pattern can store one chain (WRITE)

Programming an unplayed variation

`TR-REC` + `VARIATION`: the target lights red, the playing one stays white

One pattern: 8 variations of up to 16 steps



VARI CHAIN: up to 8 × 16 = 128 steps, 8 bars at 16th notes

One chain can be stored per pattern (WRITE)

Shorter variations: FIRST STEP and LAST STEP



Plus 4 fill-ins

`FILL 1` `FILL 2` `FILL 3` `FILL 4` played on demand with FILL IN TRIG, or automatically

Longer than 8 bars

Chain up to 16 patterns in a row, or build a Song



Fills

↑ Contents

Read when you want automatic or manual fills, or to step record a fill.

Automatic fill-ins (at regular intervals)

`FILL IN TRIG` *plays a fill variation on demand, or automatically at set intervals*

`SHIFT` + `FILL IN TRIG`

- `C1` to select the fill-in (FILL1-4 or variations A-H)
- `C2` to turn AUTO FILL IN on
- `C3` to set the measures between fill-ins (2, 4, 8, 12, 16 or 32)

Manual fills

Select the fill-in as for automatic fill-ins

`FILL IN TRIG` to play the fill-in on demand

Step recording a fill

`SHIFT` + `FILL IN TRIG`

- `C4` to set the first step
- `C5` to set the last step
- `C6` to select the fill-in to edit

Looping a fill during editing (PREVIEW MODE)

`SHIFT` + `FILL IN TRIG` › `ENTER`

`ENTER` to exit preview mode

Step Recording (TR-REC)

↑ Contents

Read when you want to enter and edit steps one by one, including velocity, sample slices and notes.

Inputting steps

Standard velocity steps

- Select `VARIATION`
- `TRACK` › `STEPS`

Layer A or B steps (tracks 1-4), or alternate sounds (tracks 5-10)

- A or B + `STEPS`
- After `AMP`, the arrow buttons show the level and balance between the layers

Weak steps

- `SHIFT` + `STEPS`
- Velocities come from Normal Velocity and Weak Velocity in the project settings

Sub-steps

- `SUB` *divides a step into sub-steps, such as duplets, triplets, quadruplets and flams*
- `SUB` + `C6` to select the number of divisions
- `STEP` to add a sub-step

Accent steps

- *ACCENT marks steps for a volume boost, and the LEVEL knob sets how strong it is*
- `ACCENT (STEP)` › `STEPS`
- `ACCENT (LEVEL)` knob to set the accent volume

Editing steps

Hold a `STEP` and turn `C1`-`C6`

- Velocity
- Start (shifts timing)
- Substep (rolls)
- **Probability**
  - *lower values make the step play less often*
- **Cycle:** sets the cycles the step plays on (see below)
- `C6` sets NOTE `1.50` (see Melodic Playing below)

How CYCLE works

CYCLE does not add or remove steps. It decides automatically in which repeats of the pattern an existing step plays.

Example: a one-bar pattern with a snare on step 13. The pattern loops bar after bar:

- **1/1 (default):** the snare plays in every bar
- **2/2:** bars 2, 4, 6, 8 and so on
- **1/3:** bars 1, 4, 7 and so on
- **5/8:** bar 5 only, then bar 13, 21 and so on
- **1st Only:** only the first bar after START

A/B: the step plays on repeat A out of every B repeats. All other steps play as normal. To set it, hold the step key and turn `C5`.

Erase a track

- `CLEAR` + a track button `BD` to `RC`

Erase individual steps

- `TRACK` › `SHIFT` + `CLEAR` while the track plays

Editing a sample slice step

Play a chopped-up break on one track, with a different slice on each step

- Works only when the `GEN` is `SAMPLE` and SLICE MODE is ON

`STEP` + `C6` to select slice

Editing NOTE values 1.50

TR-REC › long-press a STEP › hold the STEP + C6 to set NOTE

- -24 to +24 semitones, with the GEN's TUNE and COARSE pitch as NOTE = 0
- "---" carries over the previous step's NOTE
- If NOTE plus COARSE goes past the generator's range, the pitch moves down or up an octave

Some generators, and SAMPLE generators with SLICE on, do not support NOTE

On layered tracks NOTE can be switched on or off per layer, but both layers get the same NOTE value

Erase all NOTE data in a track

- CLEAR + INST PLAY + TRACK
- With a variation chain playing, NOTE data in all variations of the chain is erased

---

Real-time Playing and Recording (INST PLAY / INST REC)

↑ Contents

Read when you want to play the tracks live, record in real time, quantize or record rolls.

Play tracks in real time

INST PLAY

Recording tracks in real time

INST REC › VARIATION to select › START › STEPS to play notes

Quantize

SHIFT + INST REC toggles quantize on and off during recording

Recording sub-steps, weak beats, separate layer sounds

Same as for TR-REC

Recording alternate sounds

Hold LAYER B or a track button RS to RC and press step keys 5-10

Recording a roll

ROLL X1 gives 16th note rolls, ROLL X2 gives 32nd, and both together give 64th

In Play Mode INST, hold ROLL X1 or ROLL X2 (both for 64th) and press step keys 1-10

Holding a roll

- Hold INST PLAY and press STEP 1-10 or ROLL X1 / X2 to latch it
- Press ROLL X1 or X2 again to stop

ROLL X1 + ROLL X2 together give 64th notes. Roll X4 Speed in the Play Mode settings sets Normal or Triplet

Roll 1st Note 1.20

- SHIFT + INST PLAY › C3 to select Roll 1st Note (shown when PlayMode = INST)
- **Immediate:** notes trigger the moment a step key is pressed
- **Quantized:** notes are quantized to the roll sub-steps

Play Mode

SHIFT + INST PLAY › C3 for all settings

INST PLAY + STEPS 13-16 to select a mode quickly

Modes

- **Instrument**
  - STEPS 1-10 play BD-RC
  - **Play Velocity:** 1-127, MORPH (the slider sets it) or TR-REC DEF
- **16 velocity**
  - One instrument on STEPS 1-16, one velocity per key
  - SHIFT + INST PLAY: Curve (-64 to +64) and Order (L>H or H>L)
- **Slice**
  - STEPS 1-16 play the slices (SAMPLE generators only)
- **Snapshot**
  - *saves and recalls knob positions for a track, up to 16 per track*
  - Each stores up to 6 knob positions on layered tracks or 3 on single tracks
  - Save snapshots to the pattern with SHIFT + COPY › PATTERN
  - **Create a snapshot**
    - Hold a STEP and turn the knobs in the instrument controlling section, then release
  - **Trigger a snapshot**
    - Press a brightly lit STEP
  - **Recording a snapshot performance**
    - INST REC › MOTION (ON) › a brightly lit STEP records the snapshot to the sequencer as motion data, replacing any earlier motion
  - **Delete a snapshot**
    - CLEAR + a brightly lit STEP
- **Keyboard** 1.50
  - Melodic playing and recording, see Melodic Playing below 1.50

Melodic Playing (KEYBOARD)

↑ Contents

Read when you want to play and record melodies on one generator with the step keys.

Setup

Turn NOTE SW on in the GEN settings first

Not available for ANALOG generators or SAMPLE generators with SLICE on

Entering the mode

Long-press INST PLAY, then hold INST PLAY + a track button BD-RC

Only tracks that support KEYBOARD light up white

Playing

STEPS 1-13 play the scale notes

NOTE range is -24 to +24 around the GEN's TUNE and COARSE pitch (NOTE = 0)

Notes that would go past the generator's range move down or up an octave and light yellow

STEP **14:** raises the pitch one octave while held

STEP **15 / 16:** lower / raise the pitch one octave (up to two octaves)

SHIFT + STEP **15 / 16:** moves the root step left / right

Recording

INST REC as usual

The scale notes you play are recorded as a NOTE on each step

Keyboard settings

While in KEYBOARD, SHIFT + INST PLAY

- **Scale**
  - Chromatic, Major, Minor, modes, pentatonics, blues, bebop, and many more
  - **Chromatic:** brightly lit steps are the white keys, dimly lit steps are the black keys
- **Root Step**
  - 1-12, sets where NOTE = 0 sits on the step keys
- **Octave**
  - -2 to +2, wraps to 0 and lights yellow if the range is exceeded

Motion

↑ Contents

Read when you want to record, edit or erase knob movements per pattern or step.

Recording and playing motion

`MOTION (REC)` while the pattern plays to record
`MOTION (ON)` to play back

Erasing motion

`CLEAR` + a knob erases the MOTION data of that controller only
`SHIFT` + `MOTION (ON)` › `A`-`H` to erase all motion data on that variation

Adding / editing per-step motion

`STEP` + `RIGHT ARROW` › `C1`-`C6` to change motion values
While holding the `STEP`, press a track button to pick the track, or `ACCENT (STEP)` for the effects

What gets recorded

`BD`-`HT`: TUNE, DECAY, MIX, CTRL 1-3
`RS`-`RC`: TUNE, DECAY, CTRL
REVERB LEVEL and TIME, DELAY LEVEL, TIME and FEEDBACK
`MASTER FX` ON and CTRL 1-3, `ANALOG FX` ON, `FILTER` and DRIVE

Song Mode

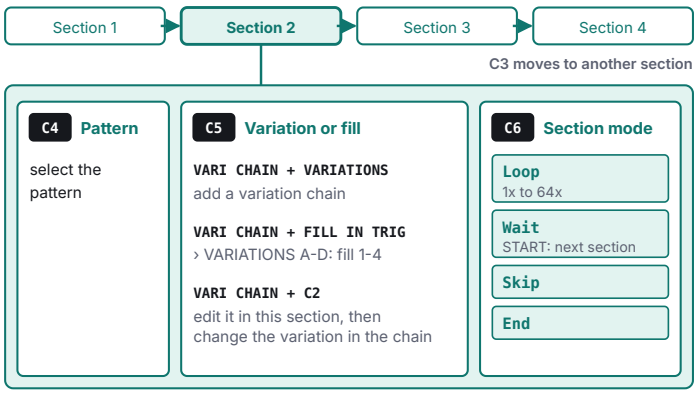
↑ Contents

Read when you want to chain patterns into a song and edit its sections.

Create a song

`SONG` › `STEP` **to select a song**
- `CLEAR` + `SONG` to delete a song

`SHIFT` + `SONG` to edit the song



Up to 16 variations / fills per section through a variation chain

Song settings

`SHIFT` + `SONG`, select a section, then right arrow
NAME EDIT, Project Tempo (40.00 to 300.00), Tempo Source (PATTERN or PROJECT)
Save the song with WRITE
The Song Mode screen shows clearer labels for the encoder functions 1.50

Edit functions

Insert section
- `SHIFT` + `CLEAR` inserts a section before the selected section

Delete section
- `CLEAR`

Other edits
- `ENTER` › `C6` to select › `ENTER`
  - Copy
  - Paste
  - Double
  - Move
  - Insert
  - Clear

Kit Edit

↑ Contents

Read when you want to select a kit, edit kit settings, set kit effects or assign knobs.

Select kit

`KIT` › `C6` › `EXIT`
All 128 kits can be edited at once. Kits that are being edited are marked with an asterisk

Edit kit settings

`SHIFT` + `KIT`

Effects

Reverb and Delay
- Set them with the reverb and delay knobs on the top row
- **Reverb types:** AMBI, ROOM, HALL1, HALL2, PLATE, MOD
- **Delay types:** DELAY, PAN, ECHO, PITCH
- **Sends for individual instruments**
  - `TRACK` + `REVERB (LEVEL)` and `DELAY (LEVEL)` to set each

Routing each instrument to effects
- `TRACK` › `SHIFT` + `(FX) button` › `C4` **to set the routing**
  - ANALOG
  - MASTER
  - THROUGH

Routing external audio input to effects
- `SHIFT` + `KIT` › `ARROWS` to EXT IN page › `C4` to set the routing
- EXT IN can also be sampled, side chained, and sent to reverb and delay

Master `FX`
- **Configuring**
  - `SHIFT` + `MASTER FX (ON)` › `ENTER` › `C6` to select `FX` type › `ARROWS` to select pages and `C1`-`C6` to set values › `EXIT`
- **Applying**
  - `MASTER FX (ON)` › CTRL 1-3 knobs to set how much of the effect is applied
- **Types**
  - BYPASS, CRUSHER, `FILTER` +DRIVE, DJFX LOOPER, ISOLATOR, SCATTER, FLANGER, PHASER, SIDE BAND `FILTER`, COMPRESSOR, FET COMP 76, SDD-320, TRANSIENT, TRANSIENT 2, NOISE
- **Newer** `FX` **types**
  - ROLL, ROLL2, REV PAN DELAY, SBF-325 1.50
  - 303 VINYL SIM, 404 VINYL SIM, CASSETTE SIM, DJFX DELAY 1.20

Analog `FX`
- **Configuring**
  - `SHIFT` + `ANALOG FX (ON)` › `ARROWS` to select pages and `C1`-`C6` to set values › `EXIT`
- **Routing**
  - `SHIFT` + `ANALOG FX (ON)` › `ENTER` opens the ROUTING popup › `C6` to select `FILTER` DRIVE, `FILTER` or DRIVE › `EXIT`
  - `FX` **ROUTE:** MIX+ANA or ANALOG. ANALOG sends the analog effect sound only to the AFX OUT jacks 1.50

Side Chain
- `SHIFT` + `KIT` › `ARROWS` to SIDE CHAIN page › `C1`-`C6` to set values › `SHIFT` + `FX` › `ARROWS` to get to MIXER page › `C5` to set SC DEPTH › `EXIT`

Keeping effects running between kits 1.50
- `MENU` › `PROJECT` › Keep Efx and ExtIn ON

Reverb and delay send levels per instrument

Hold a track button `BD` to `RC` and turn `REVERB (LEVEL)` or `DELAY (LEVEL)`

Knob Assign

`KNOB ASSIGN`, then turn the knob you want to edit › `ARROWS` to choose the assignment › `C1`-`C6` to set the parameters, how much they change, and their minimum and maximum values › `EXIT`

Each knob can control up to four parameters

IFX Delay TIME can be assigned to a knob 1.50

Instrument Edit

↑ Contents

Read when you want to shape a sound: generator, filter, amp, compressor, effects, LFO, mixer and saving.

Selecting an instrument (INST BANK)

`TRACK` › `INST` › `C4` to select category › `C5` to select folder › `C6` to select instrument › `INST` or `EXIT`

Selecting a sound generator (SELECT GEN)

`TRACK` › `SHIFT` + `GEN` › `C4` to select category › `C5` to select folder › `C6` to select generator › `GEN` or `EXIT`

Configuring a sound generator

`TRACK` › `GEN` › `ARROWS` › `C1`-`C6` to set values

Some percussion generators, for example the 808 open hi-hat, have `MUTE` TRG (OFF to `RC`), which selects the instrument to mute. `MUTE` DCY (808 open hi-hat) adjusts the intensity of the mute effect

8X Bass Drum and 8X Snare Drum have a Mute parameter. Mute Trigger was added to 8X Crash Cymbal and 8X Hand Clap 1.20

New instruments: 909 Bass Line and 808 Bass Line 1.20, and 50 FM instruments from the TR-8S library 1.50

COARSE on all FM generators 1.50

TUNE and DECAY offsets show on the `GEN` parameter as an inverted bar 1.50

Applying the filter

`TRACK` › `FILTER` › `C1`-`C6` to set values

The equalizer filter has an SW parameter

The filter type is shown as a graphic 1.50

Applying the amp

`TRACK` › `AMP` › `C1`-`C6` to set values

GAIN goes up to 24.0 dB 1.20

Applying the compressor

`TRACK` › `SHIFT` + `AMP` › `C1`-`C6` to set values

Applying effects

`TRACK` › `FX` › `ENTER` › `C6` to select EFFECT › `ENTER` › `C1`-`C6` to set values

Types: BYPASS, DRIVE, CRUSHER, `FILTER`, BOOST, ISOLATOR, SATURATOR, EQUALIZER, FREQ `SHIFT`, RING MOD, SPREAD, CHORUS, PITCH DELAY, FLANGER, PHASER, DELAY, SDD-320, FATTENER, SBF-325 1.50

Using the LFO to change parameters

`TRACK` › `SHIFT` + `FILTER` › `C1`-`C6` to set values

MODE 1.20

> **PATTERN:** LFO restarts at its PHASE when the pattern starts
>
> **TRIGGER:** LFO restarts at its PHASE on every triggered note
>
> **TRIG 1X / TRIG 1/2X:** restarts on trigger and ends after one cycle / half a cycle
>
> **FREE:** free-running

S&H 1.20

> OFF, 1/64 to 3/4 (stair-stepped LFO), or TRIGGER (holds the peak value when a note is triggered)

New destinations: LAYER A and B PAN, and IFX DELAY TIME 1.50

Saving an instrument

`SHIFT` + `COPY` › `C6` to select "`INST`" › `C6` and `ENTER` to edit category and name

Configuring the mixer

`TRACK` › `SHIFT` + `FX` › `C1`-`C6` to set values

REFLECT to GAIN

> `SHIFT` + `FX` › right arrow to the last page › `ENTER`
>
> Set levels with the faders (or `C3` to pick a track and `C6` for volume) › `ENTER` › OK
>
> When asked, raise all faders to maximum

INDV OUT options

> PARA, INDIV, TRIG A&B, TRIG A, TRIG B, DIR ANA8, DIR ANA9, MIX ONLY
>
> **MIX ONLY** 1.50**:** the track plays from MIX OUT only, not from INDV/TRIG OUT

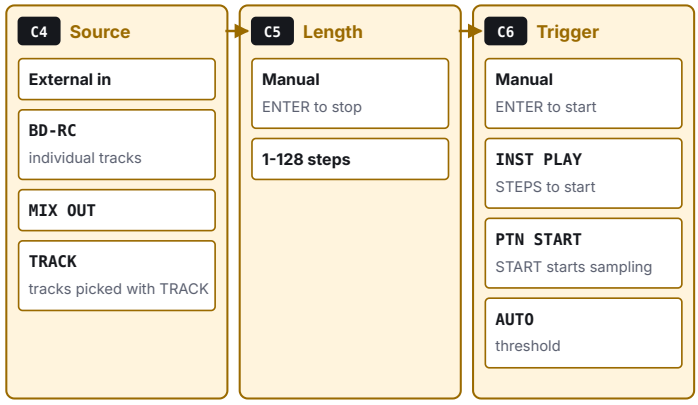
Sampling

↑ Contents

Read when you want to record audio into the TR-1000, step by step.

Sampling process

`SAMPLE`



> `ENTER` to arm the sampling trigger

Sampling extras

↑ Contents

Read when you want to resample internal sounds, import audio from USB or manage sample slots.

Resample internal sounds

`SAMPLE` › `C4` `BD-RC` or MIX OUT

Import audio from USB

Format the USB drive on the TR-1000 first (64 GB or less)

`MENU` › `FILE` › `IMPORT` › USER `SAMPLE` › file or folder › `ENTER` › pick the destination category

A folder imports all its files at once

Sample slots

A sample slot is used every time a slice or sample is saved to a kit. Importing does not use one

Up to 500 sample slots are available in a project that uses no samples. Project 1 starts with 154 free

Up to 14 stereo samples play at once. Beyond that, only Layer A generators sound

Assigning a sample to a track

↑ Contents

Read when a recording is finished and you want to put it on a track.

When recording is complete, the sample editor appears

`ENTER` › `C3` to set WRITE & ASSIGN › `ENTER` › track button to select the track › `C3` to select EXECUTE › `ENTER`

Sample editing

↑ Contents

Read when you want to set a sample start and end, loop or gain.

SHIFT + SAMPLE

`C1` sample start
`C3` sample end
`C5` zoom
`C6` **additional edit functions**
- Save as
- Normalize
- Emphasis / exciter
- Zero snap

Optimizing sample slots (SMP SLOT)

↑ Contents

Read when you need to free sample slots taken by unused slices.

Frees all slots occupied by unused slices

`MENU` › `UTILITY` › `SMP SLOT` › `ENTER` shows the slot information › `ENTER` optimizes and overwrites the project › `EXIT`

Configuring the SAMPLE GEN

↑ Contents

Read when you want to tune, pitch, loop or set up a sample generator.

`GEN` › `ARROWS` to navigate pages
`C1` TUNE (fine / smooth)
`C2` SLICE NUM sets the slice to edit (slice mode on only)
`C3` SPEED sets playback speed independent of pitch (needs STRETCH on and BPM SYNC off)
`C4` COARSE tuning in semitones
`C5` BPM SYNC plays sample in sync with master tempo
`C6` STRETCH sets stretch mode

Slicing

↑ Contents

Read when you want to divide a sample into slices and set the slice settings.

`GEN` › `ARROWS` to the WAVE screen › `C4` to turn on slice mode
Slice mode starts with 16 equal time slices

Settings

`C1` slice `START`
`C2` SELECT slice
`C3` slice LENGTH
`C4` SLICE ON / OFF
`C5` **CURSOR**
- `SHIFT` + `C5` to turn loop playback on / off

`C6` ZOOM
`ENTER` **for additional edit functions**
- ADD SLICE
- DELETE SLICE (`CLEAR` is a shortcut)
- DELETE ALL slices
- **AUTO SLICE settings**
  - Time division
  - Level
  - Transient

Performance Features

↑ Contents

Read when you want the morph slider, mutes, step loops or cue while playing.

Morph slider settings

the `MORPH` slider moves several saved knob settings at once

`SHIFT` + `MORPH` › `STEP` to select morph slot › `FX` and instrument control knobs to set values › `EXIT`
16 morph slots, saved in the kit
`ACCENT (STEP)` then the arrows to reach REVERB, DELAY, MFX and AFX parameters
If the `MORPH` button blinks, press it to turn morphing on

Mute tracks

`MUTE` + TRACKS to mute / unmute individual tracks
`MUTE` + `CLEAR` to unmute all tracks

Loop steps

`STEP LOOP` *repeats the step or steps you hold while the pattern plays*

`START` › `STEP LOOP` › `STEPS` makes the selected step or steps play back in a loop
Several steps loop in the order you pressed them. Press `STEP LOOP` again to stop

Cue

CUE sends the selected tracks to the headphones only

`SHIFT` + `MUTE` › TRACKS: only the selected tracks are output from the headphones
`MUTE` to turn CUE off

Syncing and External Audio

↑ Contents

Read when you want to sync the TR-1000 with other gear or run external audio through it.

Syncing with MIDI devices

The TR-1000 receives MIDI clock, start, stop and continue messages to follow another device. It also sends them

Connect MIDI OUT to the other device's MIDI IN, and its MIDI OUT to the TR-1000 MIDI IN
Tempo Sync in `MENU` › `PROJECT` chooses the clock source: Auto, `MIDI`, `USB` or INT
`MIDI` Out 1 and `MIDI` Out 2 in `MENU` › `SYSTEM` › `MIDI` are `MIDI` or DIN SYNC. Out 2 can also be THRU
THRU (hard through) sends what arrives at MIDI IN straight to the output, without passing through the software. Use Out 2 as THRU to put the TR-1000 in the middle of a chain
DIN sync lets the unit sync with vintage equipment
Track Sync: All Tracks gives the tightest sync, Layered Gens gives less latency when externally synced
Sync Delay offsets the start of the pattern, -100 to +100. Positive values advance the start timing

Syncing with analog gear

TRG IN jack: Trig In sets Sync (trigger as clock), Start (start and stop), Head (back to the start) or Clock (one step per trigger)
Trig In Sync Clock: 1, 2, 3, 4, 6, 8, 12 or 24 sync clocks per beat of the input
TRG OUT jack: the track chosen as TRIGGER OUT sends triggers. Trig Out sets Trig (track timing), Head or End (start or end of the pattern)
CLK OUT jack: sends a sync signal. Sync Out Clock sets 1, 2, 3, 4, 6, 8, 12 or 24 per beat
Use mono mini plug cables for all of these jacks

Pedal

Expression pedal EV-5, or pedal switch FS-5U or FS-6, in the PEDAL jack. See Menu Settings Worth Knowing for destinations

External audio input (EXT IN)

Plug a synth or drum machine into the EXTERNAL IN jacks and treat it like a track

Input mode: one stereo input or two mono inputs (Ext In Mode)

You can sample the input, apply the side chain, send it to reverb and delay, route it to MASTER or ANALOG effects and choose its output (MIX OUT or assignable output)

Level: the EXT IN knob and Ext In Gain, Ext In Att. (ON for loud gear), Mono1 Level, Mono2 Level and USB Level in `MENU` › PROJECT › SOUND

Effect routing: `SHIFT` + `KIT` › `ARROWS` to the EXT IN page › `C4`

With Keep Efx and ExtIn on, the external sound does not cut off when the kits changes 1.50

MIDI

↑ Contents

Read when you need MIDI channels, modes, CC numbers or other messages.

Channels and messages

Pattern Ch default 10, range 1-16: the sequencer's MIDI channel

Kit Ch default 1, range 1-16: program change (0-127) on this channel switches kits

MIDI Mode: Single Ch. uses the Pattern Ch for everything. **Each Track Ch.** 1.20 gives each track its own channel. Use it to sequence individual slices.

Clock, Start, Continue, Stop: sent and received. Song Position: sent and received when Song Mode is selected.

Not supported: SysEx, Song Select, pitch bend, aftertouch, Tune Request, Active Sensing, All Notes Off, Reset All Controllers.

Menu switches: Tx / Rx Program Change, Tx / Rx Edit Data (CC), Tx / Rx Note, Rx Start Stop Cont. MIDI Out 1 / Out 2: MIDI or DIN SYNC (Out 2 also THRU). Soft Through re-sends MIDI IN to MIDI OUT.

Single Ch. note map

INST	Main	Layer A only	Layer B and Alt.
BD	36 (C2)	35 (B1)	99 (D#7)
SD	38 (D2)	40 (E2)	104 (G#7)
LT	43 (G2)	41 (F2)	105 (A7)
HT	50 (D3)	48 (C3)	112 (E8)
RS	37 (C#2)	-	56 (G#3)
HC	39 (D#2)	-	54 (F#3)
CH	42 (F#2)	-	44 (G#2)
OH	46 (A#2)	-	58 (A#3)
CC	49 (C#3)	-	61 (C#4)
RC	51 (D#3)	-	63 (D#4)
TRG	84 (C6)	-	-

All configurable in MENU › SYSTEM › MIDI › Inst Note.

Each Track Ch. notes 1.20 1.50

INST	Ch	Notes with coarse (-24 to +24)			Fixed notes			Slice 1-16		
		Main	Layer A only	Layer B only / Alt.	Main	Layer A only	Layer B only / Alt.	Layer A+B	Layer A only	Layer B only
BD	1	16~64	65~113	-	114	115	116	-	0~15	-
	2	-	-	65~113	-	-	-	16~31	-	0~15
SD	3	16~64	65~113	-	114	115	116	-	0~15	-
	4	-	-	65~113	-	-	-	16~31	-	0~15
LT	5	16~64	65~113	-	114	115	116	-	0~15	-
	6	-	-	65~113	-	-	-	16~31	-	0~15
HT	7	16~64	65~113	-	114	115	116	-	0~15	-
	8	-	-	65~113	-	-	-	16~31	-	0~15
RS	9	16~64	-	65~113	114	-	115	0~15	-	-
HC	10	16~64	-	65~113	114	-	115	0~15	-	-
CH	11	16~64	-	65~113	114	-	115	0~15	-	-
OH	12	16~64	-	65~113	114	-	115	0~15	-	-
CC	13	16~64	-	65~113	114	-	115	0~15	-	-
RC	14	16~64	-	65~113	114	-	115	0~15	-	-
TRG	15	-	-	-	114	-	-	-	-	-

Coarse and fixed note groups are new in 1.50. Slice triggering is new in 1.20. Notes 16~31 on even channels play slices on Layer A+B. TRG has no coarse range.

Control change (send and receive)

CC	Parameter
9	EXT IN
12 / 13 / 14	DELAY LEVEL / TIME / FEEDBACK
15	MASTER FX ON
16 / 17 / 18	MASTER FX CTRL1 / CTRL2 / CTRL3
19	ANALOG FX ON
20 / 21	FILTER / DRIVE
89	MORPH
90 / 91	REVERB TIME / LEVEL

INST	TUNE	DECAY	MIX	CTRL1	CTRL2	CTRL3	LEVEL
BD	22	23	24	25	26	27	28
SD	29	30	31	46	47	48	49
LT	50	51	52	53	54	55	56
HT	57	58	59	60	61	62	63

INST	TUNE	DECAY	CTRL	LEVEL
RS	80	81	82	83
HC	84	85	86	87
CH	102	103	104	105
OH	106	107	108	109
CC	110	111	112	113
RC	114	115	116	117