

DRUM

INTRODUCTION

3 voice polyphonic lo-fi sample player. Pressing one of the `BIG_BUTTONs` will trigger one of 3 sounds and doing it while holding down a `SHIFT_BUTTON` will trigger another 3 sounds. All these 6 sounds compose one preset. By pressing `PAGE_BUTTON` will change between green and blue `PAGE`.

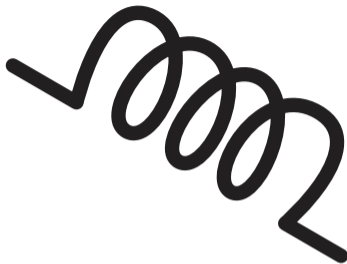
FREEZING

Changing to different sound or page always deactivates = freezes the knobs to avoid overwriting the original values. To unfreeze the knob you have to hit the original value with the knob. This is indicated by short flash of white on the RGB led (or black while the RGB led is white already). With the knobs you are always editing the last triggered sound.

Sounds are based on small audio drum samples and for each sample you can adjust various parameters. On the `GREEN` page you can adjust `SAMPLE_RATE` - speed of playback (`TOP_KNOB`), `STRETCH` - time stretching function will make the long drone or short compressed character of the sound (`LEFT_KNOB`) and `CUT` - the end position of the sample playback (`RIGHT_KNOB`).

On the `BLUE` page you can select which sample is played back by adjusting sample (`TOP_KNOB`), you can add distortion with crush (`LEFT_KNOB`) and adjust volume (`RIGHT_KNOB`).

For MIDI implementation and more details see www.bastlinstruments.com



B



Trinity is hackable digital synthesizer compatible to Arduino IDE and Mozzi Library for Arduino. To hack your instruments connect FTDi USB connector breakout to the "hack-port".

NOTE: the words written in big letters and underscore such as `SHIFT_BUTTON` refer to their names in the source code.

POWER UP

There are \$\$\$ options of powering **TRINITY**
\$) Battery: plug the 9V battery to the battery clip and put the slide switch to BATT position

\$\$) Adapter: plug in the power adapter 9V DC positive polarity (+ in the centre of the connector) and put the slide switch to PLUG position

\$\$\$) Via another instrument: side pins are used to share power, audio and communication among several instruments with the same pinout (Bastl Instruments, NovaDrone). Connect two or more devices, power one of the instruments from an adaptor and put the slide switch to PLUG position.

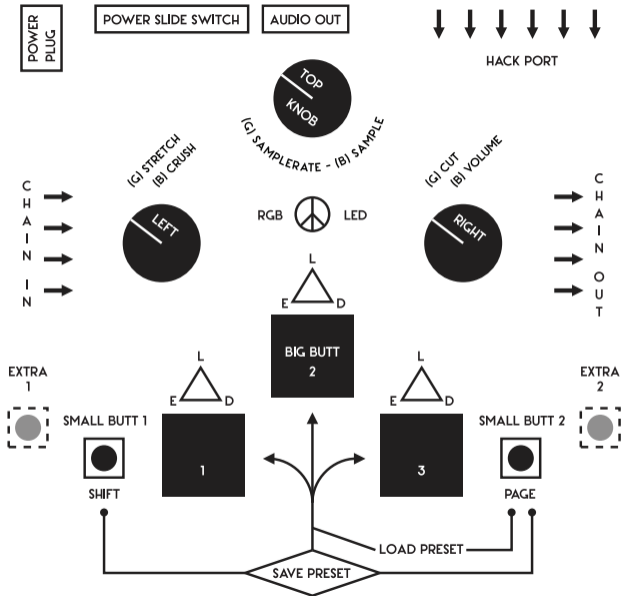
Note: to avoid charging 9V batteries inside the instrument the instruments are not able to share the power from built-in battery connector to the chain connectors. To pass this limitation you can use your 9V battery to the power jack connector adaptor cable and connect via the power plug.

However the chips can take a bit of energy from the communication line so as far as there is no MIDI data on the data line some non-powered instruments might appear turned ON but are not fully functional.

MIDI

Input MIDI channel can be set up manually by holding down one of the BIG BUTTONS while turning the device ON. This sets the input channel to 1,2 or 3 (being indicated by blinking one of the LEDs 3 times after intro animation). By holding down the SHIFT BUTTON and one of the BIG BUTTONS the input channels sets to 10,11 or 12 (being indicated by blinking one of the LEDs 3 times while the other 2 LEDs are ON).

For more information about your instrument and about hacking it visit www.bastl-instruments.com



D**INTRODUCTION**

In version 1.1 of the DRUM

there is an embedded sequencer and few new functions.

There are 6 presets altogether (loaded or saved as described in the manual for 1.0, presets 3-6 load by long press of the big button in the combination). In each preset there is free memory for 5 patterns - each 32 steps (8 beats). There are two new buttons: PATTERN (EXTRA 1) and ERASE (EXTRA_2).

R**COMBOS**

Some functions of the DRUM are called by pressing the buttons in combinations. These combinations are indicated by simple diagrams. Usually you have to hold down one or two buttons (button1 + button2) and then hit another button (->button3) to get the function (=function).

When the sequencer is not running you can use this combination to randomly generate sound settings: ERASE → BIG BUTT = RANDOMIZE

SEQUENCER

To PLAY/STOP the sequencer hit this combination:

PAGE → ERASE = PLAY/STOP

When sequencer is running the RGB led is blinking.

To turn on/off RECORDing:

ERASE → PAGE = RECORD

While recording the RGB led will be blinking in RED light. Knobs will set sequencer parameters marked with (R): TEMPO [TOP_KNOB], PATTERN LENGTH [LEFT_KNOB], GROOVE [RIGHT_KNOB].

While the DRUM is recording you can hit the big buttons (with or without shift) to record your sequence. To ERASE sound from sequence hold down ERASE button and the appropriate BIG BUTTOn.

M

SHIFT → ERASE = METRONOME (this turns on/off the METRONOME)

SHIFT → PAGE = TAP (this sets TEMPO by tapping - hit at least 3 times)

U

PATTERNS

PATTERN → **BIG BUTT** = **CHANGE PATTERN**

Hold down **PATTERN** button and press one of the **BIG BUTT**ons to load preset 1–3.

While doing that with **SHIFT** button it will load patterns 3–6.

Note: There are 5 patterns saving into the memory for each **PRESET**. Loading **PATTERN 6** generates a random **PATTERN**. To save the random **PATTERN** you can **COPY–PASTE** it into another **PATTERN**.

PATTERN → **ERASE** = **PATTERN CLEAR** (this clears the whole **PATTERN**)

PATTERN + **SHIFT** → **ERASE** = **COPY PATTERN** (this copies the **PATTERN** you have selected)

PATTERN + **SHIFT** → **PAGE** = **PASTE PATTERN** (this pastes **PATTERN** you have copied into a **PATTERN** you have had selected)

GLOBAL MODE

PATTERN → **PAGE** = **GLOBAL MODE**

This combination allows you to turn on or off the **GLOBAL MODE** where the knobs change parameters for all the sounds at the same time. This is indicated by continuous light of appropriate page and red flashing with tempo. **GLOBAL MODE** works only when sequencer is playing and is not **RECORDing**.

Note: [TOP KNOB] on BLUE page is not changing the samples for all sounds but adjusts amount of MYSTERY SHUFFLE function which randomly changes setting of played sounds but keeps the rhythm. The sound settings are reseted back to their original state when you change PAGE or turn off the GLOBAL MODE.

When in **GLOBAL MODE** on the **GREEN** page the **BIG BUTT**ons change **PATTERNS** without the necessity of holding down the **PATTERN** button. On the **BLUE** page the **BIG BUTT**ons work as **JUMP** function. They repeat step 1–3 from the sequence or 5–7 when you hold down the **SHIFT** button.

SYNC

DRUM can act as a master device and sends **MIDI clock/start/stop** messages or will turn into a slave once it hears the **MIDI clock** message on its **MIDI** input.