



auto power off (a.p.o.)

the unit auto powers off when no buttons are pressed for a while, only powering the display to show time. press sound + bpm to show battery status. press sound + write to manually power off. this ensures that recent modifications to pattern data will survive a loss of power.

sound key 16 is a micro drum machine

sound 1-16

- | | |
|-------------------|--------------------|
| 1. LFO pulse wave | 9. LFO pulse wave |
| 2. pulse wave | 10. pulse wave |
| 3. mixed wave | 11. mixed wave |
| 4. triangle wave | 12. triangle wave |
| 5. echo | 13. echo |
| 6. arpeggio | 14. arpeggio |
| 7. vibrato | 15. vibrato |
| 8. 4-bit triangle | 16. micro drum kit |

effect 1-16

- | | |
|-----------------------|----------------------|
| 1. distorted filter | 9. fill-in |
| 2. distorted sweep | 10. fill-in (fast) |
| 3. repeat 4 | 11. retrigger |
| 4. repeat 2 | 12. retrigger (fast) |
| 5. lowpass slow sweep | 13. glitch |
| 6. lowpass fast sweep | 14. glitch (fast) |
| 7. hipass filter | 15. blinds |
| 8. hipass sweep | 16. noise effect |

1. getting started

power-up

insert two fresh AAA batteries. pay attention to plus and minus terminals.

set clock

set time by turning knob A for hours and knob B for minutes. press any key to confirm and exit.

alarm clock

press sound + pattern. set alarm clock by turning A for hours and B for minutes. (disable by turning knob A all the way down.) press any key 1-16 to set pattern for the alarm. to stop alarm press any key.

reset clock

reset the clock by removing the batteries and start over.

2. live play

select sound

hold sound and press any key 1-8 to select a sound in the high-octave range. hold sound and press any key 9-15 to select a sound in the low-octave range.

play melodies

press keys 1-16 to play notes from a fixed scale.

tweak the sound

knob A controls the timbre of the current sound. knob B controls the release rate.

auto vibrato

hold glide and tweak knobs to control automatic vibrato. vibrato is applied a short while after the onset of every live note. knob A controls vibrato depth, and knob B controls the rate. to turn off this feature, turn knob A all the way to the left.

add expression

hold glide and press any key 1-16 to glide up to a note.

hold glide while releasing a note key to activate a falling chromatic scale effect.

micro drum kit

hold sound and press 16 to select the micro drum kit.

press keys 1-16 to trigger an assortment of 8-bit drum sounds.

3. sequencer

the device is equipped with a 16-step, 2-channel sequencer. the first sequencer channel is for melodies, and the second is for drums.

playback

hold pattern and press any key 1-16 to select pattern. blinking led indicates active pattern. press play to start and stop playback.

making a beat

press write (rec symbol appears) to edit the contents of a pattern. enter notes/sounds in the grid. active steps will be lit. press play to listen to your pattern. when

sound 16 is selected, the grid represents the drum channel. when any other sound is selected, the grid represents the melody channel.

select sound

while write mode is active, hold sound and press any key 1-8 (or 9-15) to select a sound for the melody channel.

parameter locking

during play, hold write while turning knobs to write sound parameter changes over time.

set note / drum

while write mode is active, hold a lit step and turn knob A to set note value or to select drum sound.

fine-tuning the pattern

while write mode is active, hold a lit step and turn knob B to modify the release rate on that step. hold a lit step and press glide to toggle the glide-up effect on that step. hold an unlit step and press glide to toggle the glide-down effect on that step.

4. effects

while playing, hold FX and press any key 1-16 to punch in effects. hold FX without pressing any key to clear effects. see reference on opposite page. the filter effects also work in live mode when the sequencer is stopped. hold FX and press the corresponding key to activate the effect. press FX briefly to deactivate it.

5. tempo and swing

press bpm to switch tempo. the bpm will be displayed in the upper right corner of the screen. HIP HOP (80 bpm)
DISCO (120 bpm)
TECHNO (140 bpm)
hold bpm and turn A to adjust the swing. hold bpm and turn B to fine-tune tempo from 60 to 240 bpm.

6. volume

hold bpm and press any key 1-16 to adjust master volume.

7. live record

while playing, except in write mode, hold write and press any key 1-16 to punch in notes. notes will be quantized according to the current swing setting.

8. step multiplier

in write mode, ensure that the micro drum kit (sound 16) is selected, so that the grid represents the drum channel. hold a lit step, and press bpm to insert a re-trig on that step. press bpm multiple times to switch between 2, 3, 4, 6 or 8 multiplier.

9. making a song

copy pattern

hold write + pattern and press

1-16 to paste the active pattern to the corresponding new slot.

clear pattern

hold glide and press pattern to clear the active pattern.

chain pattern

hold pattern and press a sequence of keys 1-16 to create a chain of up to 128 patterns. one pattern can be selected multiple times. example: 1, 1, 1, 4 plays pattern 1 three times then moves on to pattern 4. the entire sequence then repeats.

11. sync multiple units

connect a standard stereo audio cable between the units. the master unit will control the tempo of the slave unit. hold glide and press bpm on master unit to toggle sync modes. press repeatedly to toggle between different modes displayed in the upper right corner of the screen. press play on slave unit to wait for master clock sync. press play on master to start.

sync modes

there are 5 sync modes. default mode is SY0. when sync is used the signal will be split between audio (right) and sync (left).

sync scenarios

example A

chain: PO-28 → PO-20 → PO-12
setting: SY1 SY5 SY4

example B

chain: external → PO-28
setting: volca SY2
iphone
computer
syncncontrol

example C

chain: ext. → PO-28 → PO-14
setting: SY3 SY4

example D

chain: PO-28 → ext. (split cable)
setting: SY1vv v

disclaimer

although teenage engineering will use all reasonable endeavours to ensure the accuracy and reliability of this product, neither teenage engineering nor any third party supplier will be liable for any loss or damage in connection with the sale or use of the product except for: a) personal injury caused by our negligence or that of our employees or agents when acting in the course of their employment with ourselves and; b) any other direct loss or damage caused by our gross negligence or willful misconduct.

ALL EXPRESS OR IMPLIED CONDITIONS, WARRANTIES OR UNDERTAKINGS (OTHER THAN CONDITIONS, WARRANTIES OR UNDERTAKINGS EXPRESSLY STATED, OR IMPLIED BY STATUTE AND WHICH CANNOT BE EXCLUDED), WHETHER ORAL OR IN WRITING, INCLUDING WARRANTIES AS TO SATISFACTORY QUALITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED.