

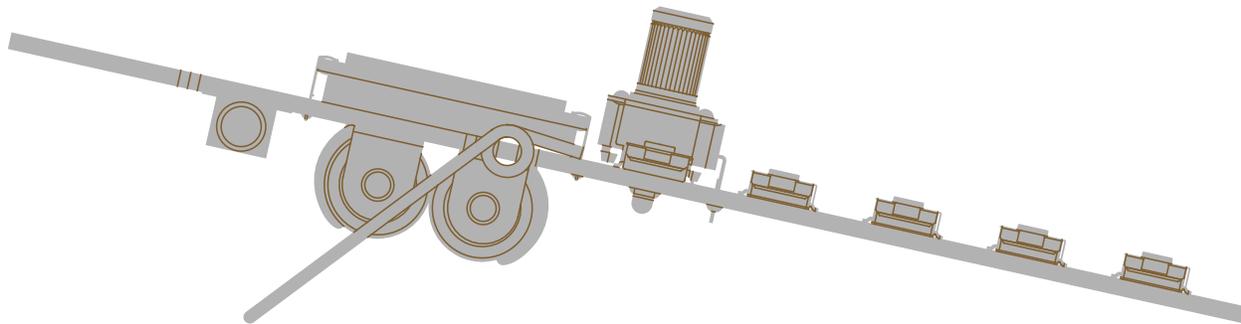
PO-32

programmable
drum and percussion
synthesizer

user guide

ガイド

tonic



download as PDF

notice. read this first.

the product is esd sensitive and is sold without casing.

battery information:

1. install only new batteries of the same type.
2. failure to insert batteries in the correct polarity, as indicated in the battery compartment, may shorten the life of the batteries or cause batteries to leak.
3. do not mix old and new batteries.
4. do not mix alkaline, standard (carbon-zinc) or rechargeable (nickel cadmium) or (nickel metal hydride) batteries.
5. do not dispose of batteries in fire.
6. batteries should be recycled or disposed of as per state and local guidelines.

fcc statement:

note: this equipment has been tested and found to comply with the limits for a class b digital device, pursuant to part 15 of the fcc rules. these limits are designed to provide reasonable protection against harmful interference in a residential installation. this equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications; however, there is no guarantee that interference will not occur in a particular installation.

if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures;

- reorient or relocate the receiving antenna
- increase the separation between the equipment and receiver
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- consult the dealer or an experienced radio/tv technician for help.

this device complies with part 15 of the fcc rules. operation is subject to the following conditions;

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

caution: changes or modifications not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

ices statement
can ices-003 (b) / nmb-3 (b)

teenage engineering warrants that this product will be free from defects in material or workmanship for a period of 12 months from the date of teenage engineering's shipment of the product to you, the customer. in the event of a defect covered by this limited warranty, teenage engineering will, at its option and free of charge to customer, repair, replace or refund the purchase price paid.

TEENAGE ENGINEERING MAKES NO OTHER EXPRESS WARRANTIES EXCEPT AS PROVIDED HEREIN, AND ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE SHALL ONLY BE IN EFFECT DURING THE 12 MONTH WARRANTY PERIOD PROVIDED HEREUNDER. TEENAGE ENGINEERING'S LIABILITY ON ANY WARRANTY CLAIM SHALL BE LIMITED TO THE ACTUAL PURCHASE PRICE PAID. TEENAGE ENGINEERING SHALL NOT BE RESPONSIBLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF DATA, REVENUES, SALES, BUSINESS, GOODWILL OR USE.

what does this limited warranty not cover?

teenage engineering has no obligation to repair, replace, or provide refunds in the following instances:

- if the alleged defect arises because customer has altered or repaired the product without the prior written consent or authorization of teenage engineering;
- if customer did not follow any applicable instructions for proper storage, usage, or maintenance of this product;
- if customer has failed to notify teenage engineering of any defect where the defect should have been reasonably apparent on inspection; or
- if customer fails to notify teenage engineering of the defect within 12 months of teenage engineering's shipment of this product to customer. this limited warranty does not cover the cost of shipping the defective product to teenage engineering for repair, or the cost of shipping the repaired or replacement product to you. how do customers receive warranty service? please call your teenage engineering customer service representative for details on how to raise an issue in relation to your product.



selected
tempo
play / rec mode
indicates write
mode is active

lock tab



break away
hanger

built-in
microphone

time / note /
additional info

sound

hold to **pattern** and press 1-16
 to set **pattern 1-16**
 effects 1-16

and press 1-16
 parameters A / B

sound 1-16

- | | |
|------------------------|------------------------|
| 1. kick 1 | 9. low tom / kick 3 |
| 2. snare 1 | 10. rimshot |
| 3. shaker / zap | 11. tambourine / crash |
| 4. lfo effect | 12. hand clap |
| 5. kick 2 | 13. bass |
| 6. snare 3 | 14. fm snare |
| 7. close / open hi-hat | 15. cymbal |
| 8. claves / cowbell | 16. high tom |

effect 1-16

- | | |
|------------------|------------------------|
| 1. half rate | 9. punch |
| 2. distortion | 10. 6/8 quantize |
| 3. squash | 11. beat-repeat |
| 4. echo fade | 12. beat-repeat faster |
| 5. pitch lfo | 13. fm |
| 6. eq sweep | 14. granular |
| 7. mega morph | 15. reverse |
| 8. pitch bend up | 16. bouncing ball |

auto power off (a.p.o)

the unit auto powers off after 5 minutes of inactivity. in this state all patterns and settings will be saved, leaving only the LCD lit. this state draws very little power so there is no need to remove batteries. if there is a cable connected in the line in, the unit will auto power off after 60 minutes of inactivity. press any key to wake the unit after sleep. press sound + bpm to show battery status.

factory reset

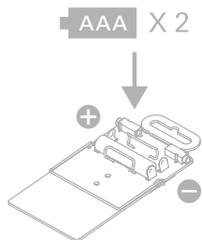
hold pattern + write while inserting batteries to restore the unit to factory default.

lock tab

break off the lock tab to permanently write protect all patterns. restore to locked settings by removing the batteries. to reverse, solder the two pads by the lock tab together.

1 – getting started

power up



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

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 alarm by turning

reset clock

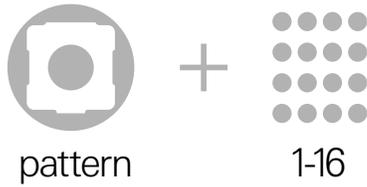


reset the clock by removing the batteries and start over.

knob A all the way down.)
press any key 1-16 to set
pattern for the alarm.

2 – play

select pattern



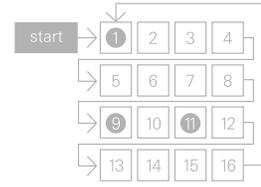
hold pattern and press any key from 1-16 to select pattern.
blinking led indicates active pattern.

play



press play to start playing.
press play again to stop.

sequencer



a pattern consists of 16
steps.

3 – making a beat

select sound



hold sound and press any key from 1-16 to select sound.

create



press write to toggle rec
mode. ensure rec symbol is
lit on screen.



press 1-16 to enter sound /
notes in grid. active steps
will be lit. press play to
listen to your pattern.

4 – tweak the sound

add effects



1. half rate
2. distortion
3. squash
4. echo fade
5. pitch lfo
6. eq sweep
7. mega morph
8. pitch bend up
9. punch
10. 6/8 quantise
11. beat-repeat
12. beat-repeat faster
13. fm
14. granular
15. reverse
16. bouncing ball

parameter locking



while playing, hold FX and press any key 1-16 to add effects. to record effects, first enter rec mode with write button (ensure rec symbol is lit). to clear effects, hold FX in rec mode without pressing any other key.

hold write while turning knobs to write sound parameter changes over time. when in rec mode, hold a step and turn knobs to adjust parameters for that step.

accent



to accentuate beats, press acc + 1-16 when in play mode. to program accentuated steps, press acc + 1-16 when in rec mode.

swing



hold bpm and turn A to adjust the swing.

tempo



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)
TENCHO (140 bpm)



hold bpm and turn B to fine-tune tempo (from 60 to 240 bpm).

volume

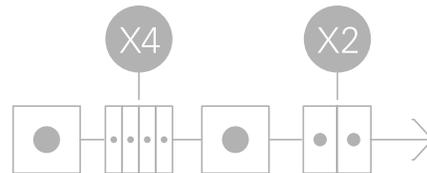


hold bpm and press any key 1-16 to adjust master volume. note: be careful with the volume setting when using headphones. only exceed volume setting 5 with caution.

live record



while playing, hold write and press any key 1-16 to punch in notes. notes will be quantized along with current swing setting. release write when finished.



solo



mute channel



while holding sound, press and hold any key 1-16 to solo corresponding sound.

the unit has four channels, represented by columns 1-4. while playing, except in write mode, hold any key 1-16 to mute corresponding channel. multiple channels can be muted at the same time.

5 – making a song

copy pattern



hold write + pattern and press 1-16 to paste the active pattern to the corresponding new slot.

clear pattern



press acc + pattern to clear the active pattern.

chain pattern



hold pattern and select which patterns 1-16 to chain by pressing corresponding keys 1-16. up to 64 patterns can be chained.

one pattern can be selected multiple times. example 1,1,1,4 plays pattern 1 three times then moves on to pattern 4. after last pattern is played the sequence will start over again.

6 – data

direct transfer



transfer data



receive data



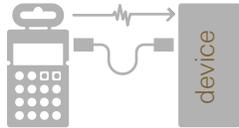
it is possible to transfer sound and pattern data directly between units, using the built-in speaker and microphone, or using the line in/out connectors.

on the transmitting unit: press write + sound to transmit data to receiving unit. before transmitting make sure the receiving unit is in receive mode.

to receive via microphone: press acc + sound to enter receive mode. place mic on receiving unit close to speaker on transmitting unit. send data from transmitting unit.

to receive via line in: connect a 3.5mm stereo cable from transmitting unit to receiving unit. press acc + sound to enter receive mode. send data from transmitting unit.

backup data



sound and pattern data can be exported and stored to any recording device for saving and sharing. you can backup the data via built-in speaker or line out.

backup using built-in speaker: first make sure recording device is close to pocket operator speaker. then start recording and press write + sound to transmit data.

backup using line out: first connect a cable from pocket operator line out to recording device. then start recording and press write + sound to transmit data.

restore using microphone: press acc + sound to enter receive mode. place pocket operator mic close to recording device and start playback.

restore using line in: connect a cable from recording device to receiving pocket operator unit. press acc + sound to enter receive mode. send data from recording device.

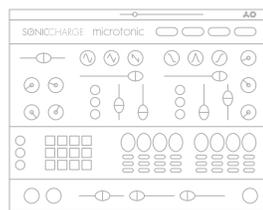
7 – microtonic transfer

sound transfer

prepare sound

receive data

microtonic
vst/au



to replace a sound 1-16 on PO-32 tonic use microtonic standalone version, or the vst/au plugin in any daw of choice.

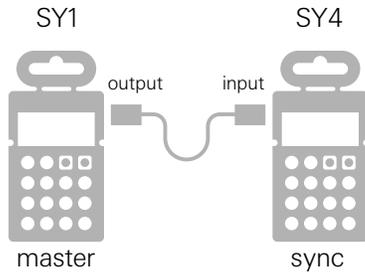
tweak a sound in microtonic (knob A on PO-32 tonic represents pitch, knob B represents morph) and press [the TE logo] on the interface to prepare for transfer.

to receive via microphone: press acc + sound to enter receive mode. place mic on receiving unit close to computer speaker. press destination button in microtonic and the transfer will start.

to receive via line in: connect a 3.5mm audio cable from computer to receiving unit. press acc + sound to enter receive mode. press destination button in microtonic to start the transfer.

8 – sync multiple units

sync



it is possible to sync multiple pocket operators with a click track using line in and out.

warning: sync levels should not exceed 5vpp (volt peak-to-peak).

connect a standard stereo audio cable between the units. the master unit will control the tempo of the synced unit.

sync modes

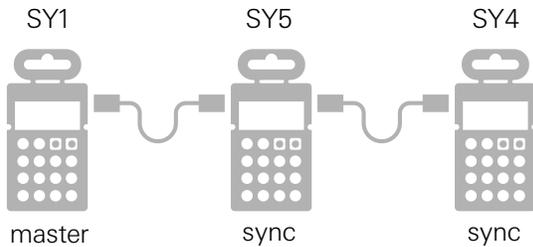


ID	input	output
SY0	stereo	stereo
SY1	stereo	mono/sync
SY2	sync	stereo
SY3	sync	mono/sync
SY4	mono/sync	stereo
SY5	mono/sync	mono/sync

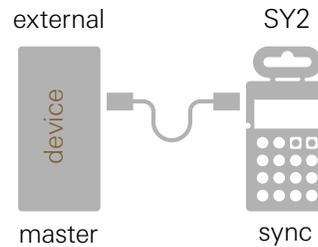
hold acc and press bpm on master unit to toggle sync modes. press repeatedly to toggle between different

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

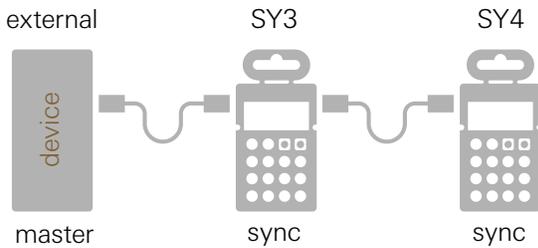
sync scenarios



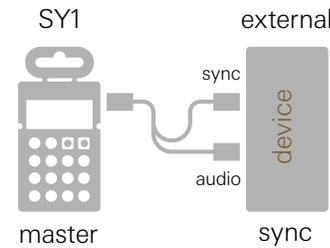
example A: sync three pocket operator units.



example B: sync external device such as volca, iPhone, computer or synckontrol to PO-32.

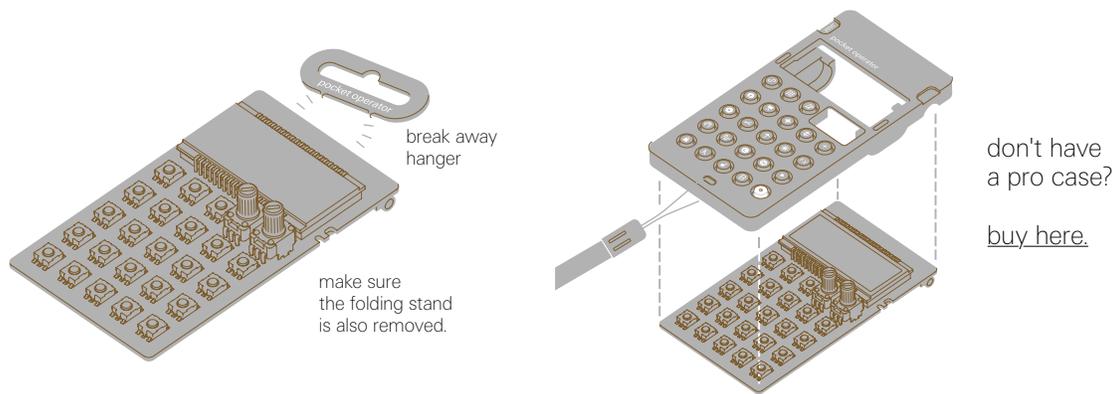


example C: sync an external device to two pocket operator units.



example D: sync PO-32 to an external device.

mount the pro case (optional)



to mount the pro case to a pocket operator, first you need to break away the hanger and remove the folding stand.

wrap the pro case around the edges of the unit. make sure the edges of the case is tightly fit.