Calibration

Your 880 was factory calibrated and should sound great right out of the box. However, slight differences between your Eurorack power supply voltage and our reference supply may affect the level of the noise source that is used by the snare, tom reverb and clap/maracas. There is a noise level adjustment trimmer labelled 'TM4' on the back of the 880 that may be adjusted to increase or decrease the noise level. There are also trimmers for cowbell tuning and clap offest (loudness).

Warning! The 880's calibration trimmers are meant to be adjusted using a professional electronics trimmer tool. The trimmers are not designed to be adjusted with a screwdriver and can be damaged if excessive force is applied. Unless you have a proper trimmer tool specifically designed for electronics, do not attempt to make any adjustments to your 880's calibration trimmers.

Damage to the trimmers is not covered by the warranty!

Noise Level Calibration

If you find that there isn't enough snappy in your snare drum you can attempt to increase the noise level using the 'TM4' trimmer. The noise level is best calibrated using a true RMS voltmeter, but you can also calibrate by ear.

Remove the 880 from your case while leaving the power cable connected. Carefully power up the 880. If using a voltmeter, adjust TM4 for a 130 to 140 mV AC (RMS) reading on the 'NOISE' test point. If adjusting by ear, turn the snare level and snappy controls to maximum, program a sequence with just the snare sounding and connect the master out to an amplifier so that you can hear the snare drum. Adjust TM4 until you are satisfied with the snappy component of the snare drum. Adjusting TM4 will also affect the loudness of the clap/maracas as well as the pink noise reverb on the toms. If the level is too high you will hear white noise bleeding through the individual instrument outputs and the master out.

Clap Offset Calibration

The clap volume can be adjusted using the trimmer 'TM3 CP OFFSET'. Adjusting TM3 will affect the perceived 'punch' or attack of the clap relative to its reverb tail, from muted to loud and splashy. Turn the clap level control to maximum and program a sequence with just the clap sounding. Connect the master out to an amplifier so that you can hear the clap. Adjust TM3 until you are satisfied with the balance between the clap's attack and its reverb tail. At extreme settings the clap's noise component will bleed through the output without triggering.

Cowbell Tuning

Trimmers 'TM1' and 'TM2' are used to tune the cowbell. TM1 is used to adjust for a 1.85 ms period square wave and TM2 is used to adjust for a 1.25 ms period square wave. As the cowbell uses an internal voltage reference for its tuning it should rarely require adjustment except in cases where you require alternative cowbell tuning.

Warranty

Do not hesitate to contact System80 with any questions or concerns about your 880. The 880 began as a passion project with the aim of making a small recreation of the TR-808 in Eurorack with as few compromises as possible. It was a lot of fun to design, prototype, and test. We hope that it will inspire you for many years.

Warranty

Your 880 is guaranteed to be free from manufacturing defects for 1 YEAR from the date of purchase. At *our sole discretion* we will replace or repair your unit if we find it to be defective (transport charges may apply).

Contact

Please contact us by email:
info@system80.net

We endeavor to respond to email inquiries within 48 hours of receiving them.

Open Source

The 880 is open source hardware and the firmware is open source software. This means the complete design is available for non-commercial use. If your 880 ever requires an out-of-warranty repair, the design files should allow a local qualified technician to perform any repair or modification.

www.github.com/minisystem/880

Specifications

Rhythm Memory

RHYTHM PATTERNS
16 × 12 banks (192)
1-32 steps per measure × 2 Basic Variations

RHYTHM TRACKS
64 measures × 12 tracks (768 measures)

Sequencer

INTERNAL CLOCK
~30 - 250 beats per minute (BPM)

CLOCK RESOLUTION
96 PPQN (INTERNAL)
24 PPQN (MIDI)
24 PPQN (DIN SYNC 24)
2 PPQN (CLOCK SYNC)

PRE-SCALE MULTIPLIER
1: × 3/4
2: × 3/2
3: × 1 (default)
4: × 2

Output Levels

MASTER OUT
6 V_{PP}/1 kΩ
MULTI OUT
~2 - 4 V_{PP}/1kΩ

TRIGGER 1 OUT
+5 V, 20 ms pulse
TRIGGER 2 OUT
+5 V or +12 V (selectable), 20 ms pulse

Power Consumption

+12 V: 110 mA (max)
–12 V: 70 mA

Dimensions

304.3 mm (W) × 128.5 mm (H) × 32 mm* (D)

3U × 60 HP

*Depth includes connected power, DIN expander and Trigger Expander headers

Net Weight

535 g

System80 modules are manufactured using local labour for panel fabrication, robotic circuit board assembly, and final hand assembly and testing

SYSTEM80
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