

Pizza FM & WAVE-SHAPING OSCILLATOR

Release Notes

pizza 1.12 (O light at startup)

fix: index mod attenuator noise reduced by digital filtering,
bug on normalization of fm index cv in in vca and env mode fixed
pwm fader bug fixed

pizza 1.11 (RING light at startup)

fix: envelope reset after switching mode, fm index offset fix, other small bug fixes

pizza 1.1 (FOLD light at startup) - see the updated [manual](#) for more info.

New features:

- integrated envelope as a new CTRL destination (WAVE+FOLD+RING LEDs)
- second (independent) FM Index as a new CTRL destination (C/D+O LEDs)
- Coarse Pitch mode (hold PITCH for 6 seconds to turn ON, 2 sec. to turn OFF)
- RATIO oscillator output via PULSE output (hold RATIO+OCT at power up)
- Please note that the PULSE output is a lower-quality audio converter and may produce audible noise in some settings.

Improvements:

- code optimization to avoid underruns
- better knob behavior for the PITCH knob,
- low-pass filter for FM modulators to reduce crackle with extreme SHAPE settings
- semitone, fine-tune and detune are reset after external V/OCT calibration

pizza 1.02 (WAVE light at startup)

fix: better filtering on the v/oct input, less slew limiting

improvement: less noise on CTRL - VCA destination

pizza 1.01 (C/D light at startup)

fix: power down at initial sequence could cause corrupted memory

improvements: more robust (strengthened memory management and avoiding edge cases)

pizza 1.00 (G/H light at startup)
release version

HOW TO UPDATE:

1. Connect a micro USB cable to Pizza
2. Hold the PITCH button and plug the USB into your computer
3. Pizza shows up as an external disk on your computer
4. Copy the pizza*version*.uf2 file to this drive and wait for Pizza to update and boot to normal operation
5. Disconnect the USB and install Pizza in your rack

Pizza shows the firmware version by a static light of the LEDs at startup:

- The first beta firmware has the TUNE light ON.
- V1.0 has G/H light ON at startup.
- V1.01 has C/D light ON at startup.
- V1.02 has WAVE light ON at startup.
- V1.1 has FOLD light ON at startup.
- V1.11 has RING light at startup
- V1.12 has 0 light at startup