Attention!

Full Opto-Key installation instructions are currently available at:

http://www.thisoldsynth.com/OptoKey

This package includes Opto-Key at H/W version 1.1b. H/W 1.1a incorporated extra MIDI interface reliability changes to the hardware. H/W 1.1b replaces the MIDI-In opto-coupler with the more industry standard 6N138 which is the same chip as deployed in the SMD version. H/W 1.1a has been working nicely so this is not a desperately needed update.

F/W **version 2.9** resolved software issues that affected MIDI stability.

Version 3.0 introduced options for reset to default (MIDI-Out CH10, In CH9), or select MIDI Channel 1 to 15 with MIDI-In and MIDI-Out having the same channel number.

Version 3.0b: The option for High (default) and Low keyboard Priority has been added and applies to both the physical keyboard and the MIDI interface.

- Power on with the second “F” (key 14) down for low priority.
- Power on with the second “F” (key 13) and “F#” (key 14) down for low priority.

Key responsiveness has been further improved in this version, and the threshold pot now goes from minimum with no keys detected. This allows you to gradually increase the threshold setting to find the lowest setting where a note sounds, then finely adjust sensor gaps (non-metallic adjustment, I use my finger nail) to get all notes to trigger. Gradually increase the threshold setting to find the lowest setting where all keys sound and consider this “point A”. Then turn up the sensitivity until it drones. Hold middle C and the B below it to make sure that B sounds and not the lowest F key, nudge the sensitivity if the lowest key (F) is sounding. Consider this “point B”. Correct setting is between these 2 points, typically closer to point B than “point A”. Be careful with background / sunlight during this setting per the install guide. Fit the cable ties and case bottom, and then make sure all is still well.

Version 3.0d: A user with a Kronos controller was suffering hung notes. Investigating this showed it was transmitting MIDI Time Code ($F8). Turning off the transmission of MTC resolved the issue. This release filters message $F8 out in F/W. There is also a Beta release of Pitch Bend on MIDI input.

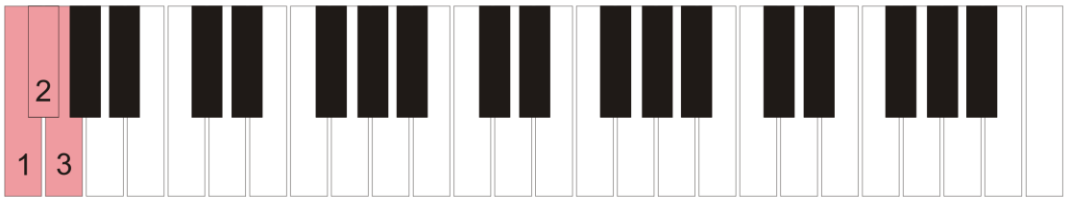
- Power on with High “C” (key 44) and the “B” next to it (key 43) to disable Pitch Bend (default)

- Power on with High “C” (key 44), the “B” next to it (key 43), and “A#” (key 42) to enable Pitch Bend with a 3 semi-tone range
- Power on with High “C” (key 44), the “B” next to it (key 43), and “A” (key 41) to enable Pitch Bend with a 6 semi-tone range

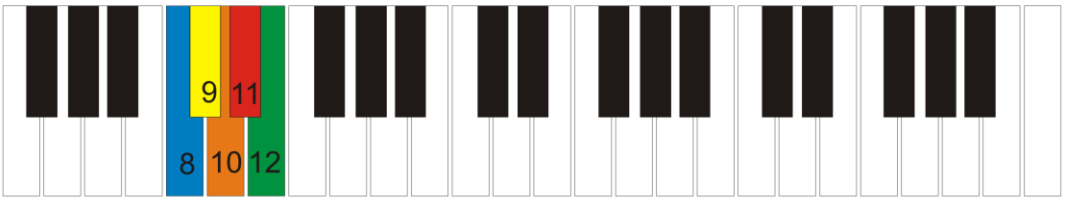
Please try this Beta feature and feedback your experience to chris@thisoldsynth.com

This is **Version 3.0g**: Code tidied. MTC also sends Start/Stop/Continue messages ($FA/$FB/$FC) so these have also been filtered out.

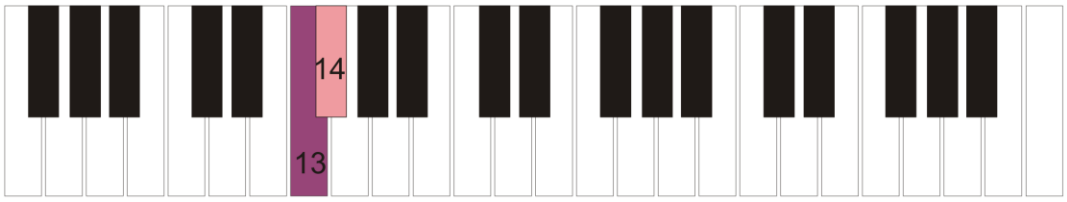
Opto-key MiniMoog Power-on Settings



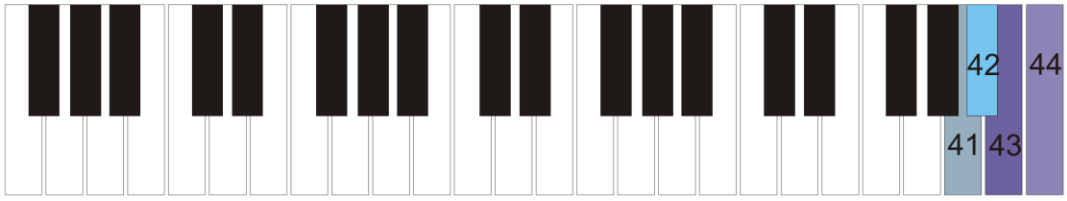
Reset (hold keys 1, 2, and 3 to Reset the configuration at Power On)



MIDI Channel (hold key 8, and then 9 to 12 is the channel in hexadecimal)
Examples: 8+12 = Chan 1, 8+9 = 8, 8+1 = 4, 8+9+10+11+12 = 15, 8+11 = 2



Keyboard Priority (hold key 13 for Low Priority(default), 13+14 = High)



Pitch Bend (hold keys 43 + 44; add 41 and or 42 for amount (semi-tones))
Examples: 44+43 = off(default), 44+43+42 = bend 3 semi-tones, 44+43+41 = 6

Cable Ties

- The 2 tiny cable ties are to go through the two nylon standoffs that hold the Opto-Key to the key-bed. They are locks to avoid the Opto-Key from dislodging in case the synth is dropped.
- The short nylon cable tie is to secure the wiring from the Opto-Key to the key-bed. It's just to hold the wiring out of place from moving parts.
- The long nylon cable tie goes around the two cinch connectors (keyboard connectors) to hold them together.

Add these cable ties last after all testing and adjustment has been performed.

Shipping List

- ☐ Opto-Key Main Board MIDI
- ☐ OR Opto-Key Main Board non-MIDI
- ☐ Left Sensor Card
- ☐ Right Sensor Card
- ☐ Small cable-ties x 2
- ☐ Medium cable-tie
- ☐ Long cable-tie
- ☐ Mounting Pillar x 2
- ☐ MIDI cable (if MIDI version)
- ☐ Opto-Key Inside label
- ☐ These instructions

Enjoy your Opto-Key enhanced MiniMoog!

Chris Hewitt

This Old Synth

www.thisoldsynth.com