

# LushOne Synth Base Module Version 2 Software Guide

# Intro

- Guidance on using the version 2 software
- If you have any problems please provide comments to:

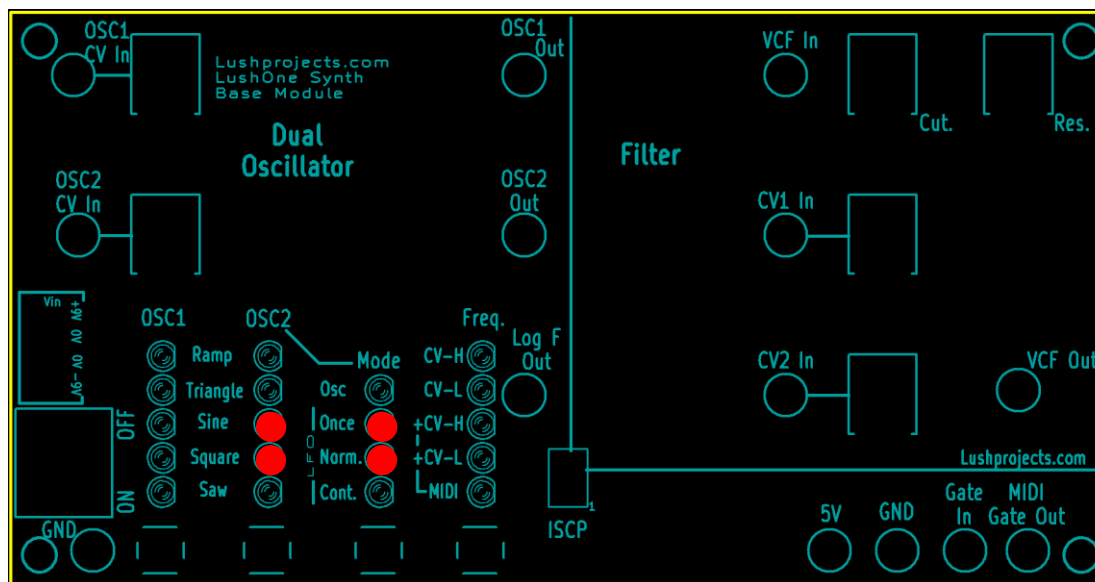
<http://lushprojects.com/contact/>

- By default the version 2 software runs in version 1 emulation mode
  - To enable version 2 features you must select the version 2 mode (see below)

# What's new

- New waveforms for OSC1 and OSC2
- OSC2 can track OSC1 +/- one Octave
- Last settings are memorized on power-off
- Ability to select MIDI channel
- Ability to change the function of the “Log F” output to show MIDI velocity instead of frequency
- Ability to use OSC2 LFO only with CV while still running OSC1 on MIDI

# Power On – Identification of version 2



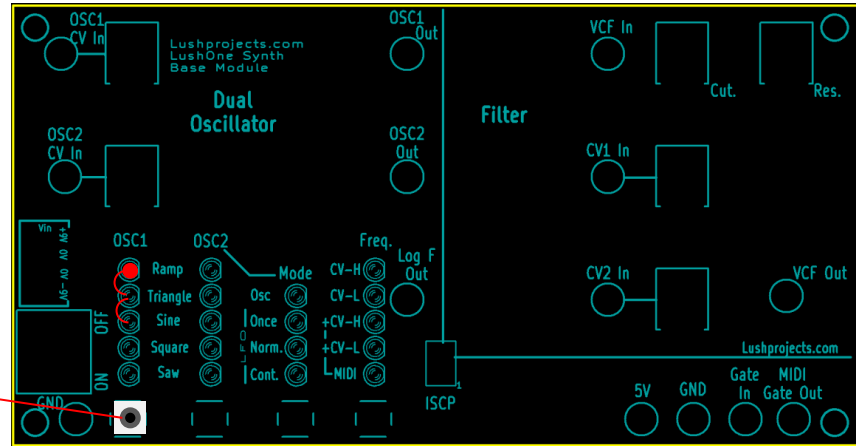
- Power on **without holding any buttons**
  - The four LEDs indicated will flash twice to indicate version 2 software
- To obtain settings for version 2 you may hold some buttons down at power on. Hold the button down **before** turning-on the power switch.

# Version 1 emulation mode

- By default the version 2 software runs a version 1 emulation mode
  - All tutorials and documents written for version 1 will still work as before
  - User interface is simpler in version 1 as the new features had to be force-fitted to the existing hardware
  - Visible differences to “real” version 1:
    - Power on indication of version 2 on LEDs
    - Last selected options are retained over power-off (force reset to version 1 to clear settings)
  - Select version 2 mode to access new features (see below)

# Select Version 1 emulation mode

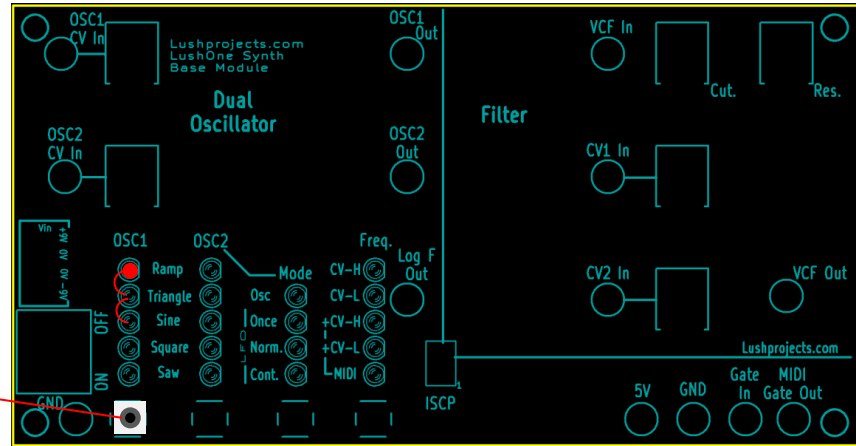
Hold during power-on  
Release before end of countdown



- Version 1 emulation mode is set by default.
- To (re)select version 1 emulation mode:
  - Power off
  - Hold down the left-most button under the OSC1 LEDs
  - Power on while still holding the button
  - A count-down will start in the OSC1 LED column
  - Release the button before the count-down reaches the bottom of the column
  - The LushOne base will now run in version 1 emulation mode and no version 2 features will be available until you reset it to version 2 mode.

# Select Version 2 mode

Hold during power-on and keep held until end of count-down

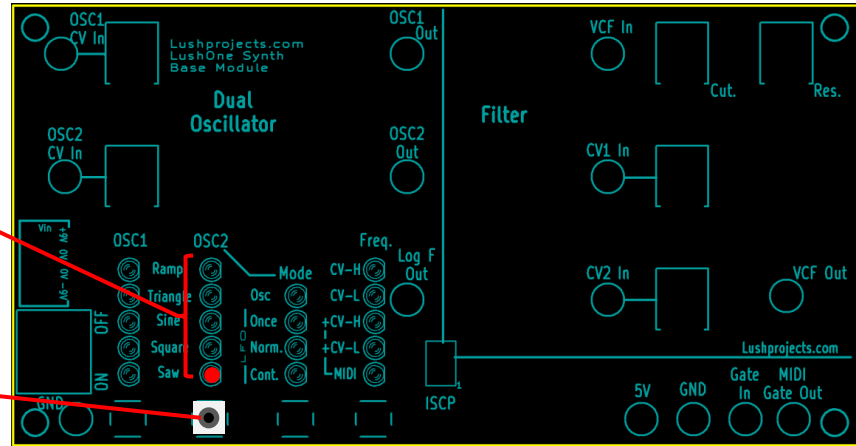


- To (re)set version 2 mode:
  - Power off
  - Hold down the left-most button under the OSC1 LEDs
  - Power on while still holding the button
  - A count-down will start in the OSC1 LED column
  - Keep the button held until the count-down completes and LEDs in other columns light up
  - The LushOne base will now run in version 2 mode.

# Set MIDI Channel (Version 2 mode only)

MIDI channel number in binary  
(bottom is least significant bit).  
All LEDs on means LushOne  
responds to any MIDI channel.

Hold during power-on to set  
MIDI Channel



- Once in version 2 mode the MIDI channel the LushOne base responds to may be set during power-up
- To set the MIDI channel:
  - Power off
  - Hold down the 2<sup>nd</sup> button under the OSC2 LEDs
  - Power on while still holding the button
  - The OSC2 LEDs will show the MIDI channel (see diagram)
  - Release the OSC2 button and press again to increment the MIDI channel number
  - Press any other button to accept the MIDI channel being displayed and enter normal operation



# Set Other Options (Version 2 mode only)

## MIDI control of OSC2 LFO

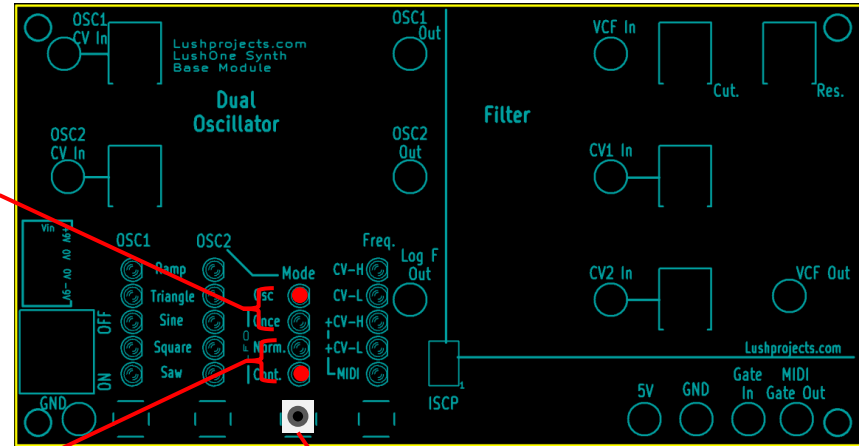
**Lower LED On:** OSC2 LFO responds as configured by settings under “freq” (as version 1)

**Upper LED On:** OSC2 LFO only responds to CV input even if “freq” is set to MIDI. Freq settings still control OSC1 and OSC2 when in OSC mode.

## Function of “Log F” Output

**Lower LED On:** MIDI Frequency (as version 1)

**Upper LED On:** “Log F” Output responds to MIDI “velocity” signal, not frequency

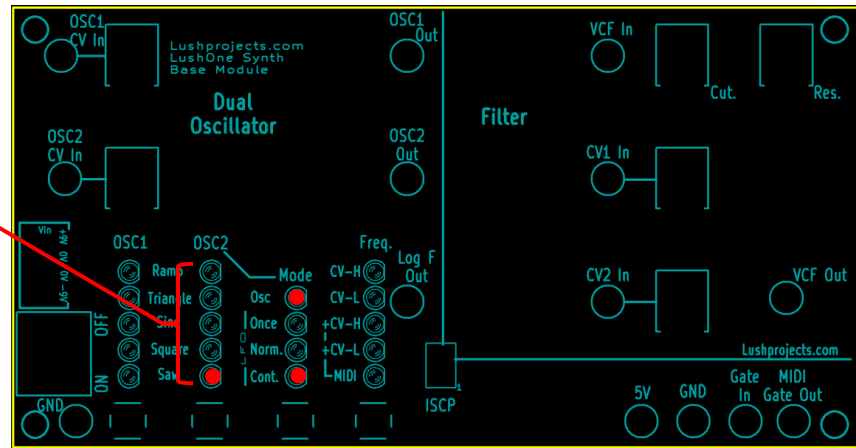


Hold during power-on to set additional settings

- Once in version 2 mode the two other options may be set as follows:
  - Power off
  - Hold down the 3rd button under the Mode LEDs
  - Power on while still holding the button
  - The Mode LEDs will show the settings (see diagram)
  - Release the Mode button and press again to increment the settings state (four presses cycles back to current state)
  - Press any other button to accept the settings being displayed and enter normal operation
- These settings are particularly useful in systems with two base modules to allow, in conjunction with the MIDI channel setting, maximum freedom to use all the system capabilities.

# Settings Confirmation (Version 2 mode only)

Settings confirmation during power-on



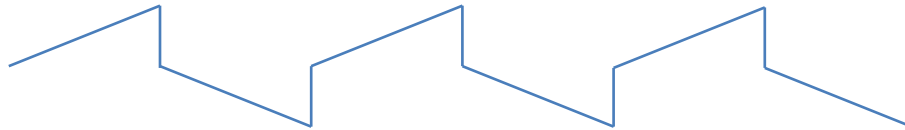
- In version 2 mode, if no buttons are held during power-on, then:
  - There will be a double flash of the centre LEDs as described
  - The LEDs in the OSC2 and Mode columns will briefly display the settings currently configured (using the same code as described in the previous slides)
  - The LushOne base will then enter normal operation
  - In version 2 mode the module will remember its settings in normal operation

# New Waveforms (Version 2 mode only)

- New waveforms are supported for OSC1 and OSC2.
- These are inspired by the original MiniMoog oscillator shapes
- In addition to the waveforms supported in version 1, the following are available:

On: Normal Triangle Wave

Fast Flash: Triangle/Square Combo Wave

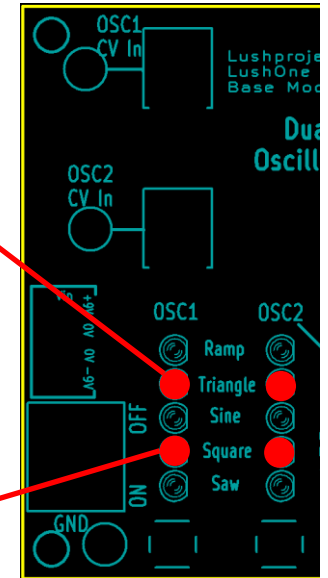


On: Normal Square Wave

Slow Flash: Medium mark/space ratio wave



Fast Flash: High mark/space ratio wave



# New OSC2 Modes (Version 2 mode only)

- OSC2 can now be set as a drone one octave higher or lower than OSC1
- Note that when OSC2 is in any “OSC” mode it is controlled according to the “freq” setting even if the OSC2 LFO is set in the version 2 options to be CV-only.

## OSC Modes

On: OSC2 tracks OSC1 frequency

Slow Flash: OSC2 tracks OSC1 frequency, one octave below

Fast Flash: OSC2 tracks OSC1 frequency, one octave above

