Lunar

User Manual

Thank you for purchasing Lunar!
This guide will cover everything needed to assemble the keyboard properly.

It is a long guide, but we suggest that you read through it thoroughly before beginning construction.

1. Preparation

a. Clean the switches properly if needed, and verify that each one functions properly.

b. Have a safe working space for placing the keyboard upside down when soldering to avoid scratching and denting.

c. Double-check that all required tools and parts are ready:

i. Lunar chassis and PCB, adhesive feet
ii. Screws and screwdriver
iii. Switches, either Alps SKCM/SKCL or compatible clones
iv. Stabilizer components
v. Keycaps
vi. Soldering iron, solder
vii. Type-C USB cable

2. Installing base components

a. Insert the stabilizer inserts into the plate cutouts, then insert the stabilizer wire into the inserts.

b. Install the stabilization pillar below the spacebar, if necessary.

c. Install the switches onto the plate, with the switch legs north-side.
EXCEPTION: The two switches beside the USB connector may be installed upside-down if feeling nervous about soldering legs close to the connector.

d. Install rubber feet into the inset areas of the lid.

3. Installing the PCB

a. Verify that the PCB is functional by plugging it into a computer.

b. Make sure none of the switch legs are bent too far, and insert the PCB onto the underside of the plate.

c. Solder the switch legs to the PCB.

   A suggested temperature is 250-300C; however, this will depend on your iron and solder.

4. Completing the build

   a. Install keycaps, and test-type to verify that all switches are soldered properly.

   b. Screw the lid to the chassis to close the keyboard.

      WARNING: Do not overtighten the screws; it will ruin the typing sound. Tighten only the absolute minimum necessary for the screw to stay in place.

5. Editing the keymap

   a. Install and open the latest VIA configurator, available here.

   b. Connect your Lunar, if not already.

   c. Use the user interface to easily rebind any key.
   If your Lunar is not detected, and your PCB was purchased fairly early (During B/C-stock sales), please see below.

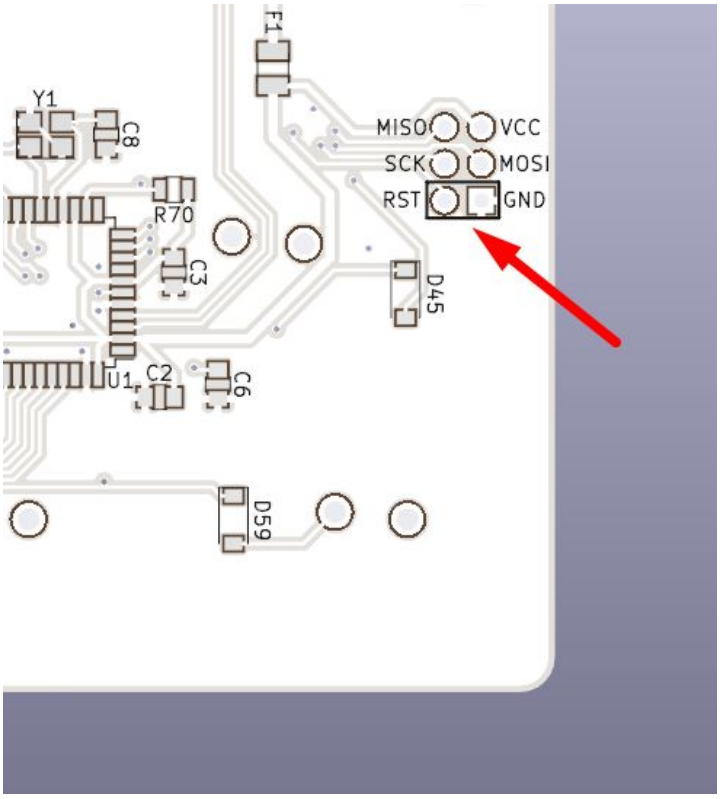
6. Flashing a new HEX file

This is only necessary if your PCB did not ship with VIA compatible firmware.
The VIA compatible HEX file is available here.

a. The stock keymap has reset bound to Fn-Esc. To achieve this, hold caps lock, and press Escape.

   On user-customized keymaps, press the key or combination bound to reset.

   If reset keymap is missing, please short the reset pad to ground on the PCB by placing a jumper wire between these two pads marked RST and GND (The two pads surrounded by the box):



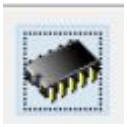
b. Use either Atmel FLIP or QMK Toolbox to flash the firmware.

   For FLIP on Windows,

   i. Download Atmel FLIP from here, and install: http://www.microchip.com/Developmenttools/ProductDetails/FLIP
   ii. If this is the first time using FLIP,
      1. Open device manager (Win key + X to bring up tools dialog in Windows 10)
      2. A device should be showing as “Atmega32u4 DFU” or similar; right click and select “Update driver”.

3. Choose to browse the computer for drivers, and enter
   C:\Program Files (x86)\Atmel\ <FLIP folder with version number>
   \usb
   as the driver location.
4. Driver should install.

iii. Launch FLIP, and click this icon:



Select Atmega32u4 from the list.

iv. Click this icon:

Select USB, then Open.

v. From the File menu in the upper left, select Load HEX file, and browse to the HEX output file from kbfirmware.

vi. In the operations flow section, click the button labeled Run.

vii. Once everything completes, click Start Application.

7. Advanced modding

Note: This section is for advanced builders. Outcome depends heavily on materials used; **we will not take responsibility for damage caused by these modifications. Please proceed at your own risk!**
Not all suggestions will be usable together.

a. Sound modding choices

   i. Insert non-conductive materials such as foam between the PCB and lid to reduce echo.
   ii. Install thin non-conductive anti-vibration material onto the lid.
   iii. Install very thin non-conductive foam or similar (0.5mm thickness or less) between the plate and PCB.

b. Stabilizer damping

   i. Install lube onto the stabilizers to prevent rattle.
   ii. Install soft damping material (0.5mm thickness or less) on the plate in areas where the stabilizer inserts come close to the plate.