Apple *II*c Replacement Keyboard Kit

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It is recommended that you follow the provided instructions carefully and ensure proper handling and safety procedures are followed during assembly. By proceeding with the assembly, you assume full responsibility for any outcomes. MatzElectronics, Matthew Matz, HMB Creative, and/or any affiliates will not be held responsible for any outcomes or damages resulting from the use or misuse of this product.

Fully Built Version vs. Kit Version

If you purchased the fully built Apple *II*c Replacement Keyboard Kit, read Step 4 and begin at Step 5. Additionally, the only tool you may need is a #1 Phillips Screwdriver.

Assembly Instructions

Tools and Materials required:

- Soldering Iron
- Solder
- Side Cutters/Wire Clippers
- Phillips Screwdriver (#1)
- ¼” Wrench or Pliers

Optional Tools and Materials:

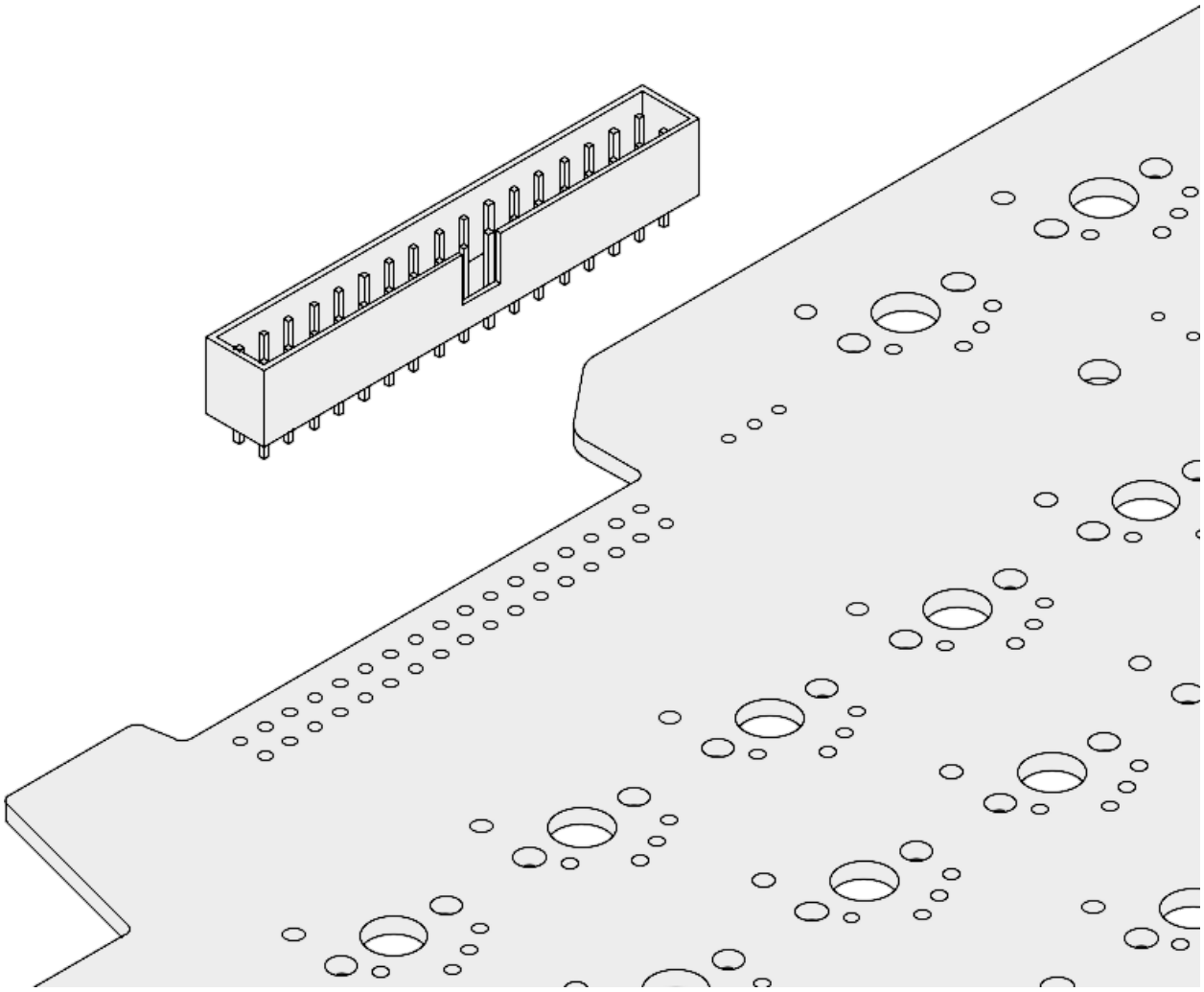
- Masking Tape (optional)
- Brush (optional)
- Isopropyl Alcohol (optional)

Step 1:

If the 34-pin connector is not already soldered on, flip the PCB to the bottom side and fit the 34-pin connector on.

IMPORTANT: Match the connector’s notch to the markings on the PCB. The connector’s notch should face toward the spacebar key of the PCB.

Then, flip the PCB back over and solder on the connector. It may be helpful to temporarily tape components down when soldering them to hold them in place.



Step 2:

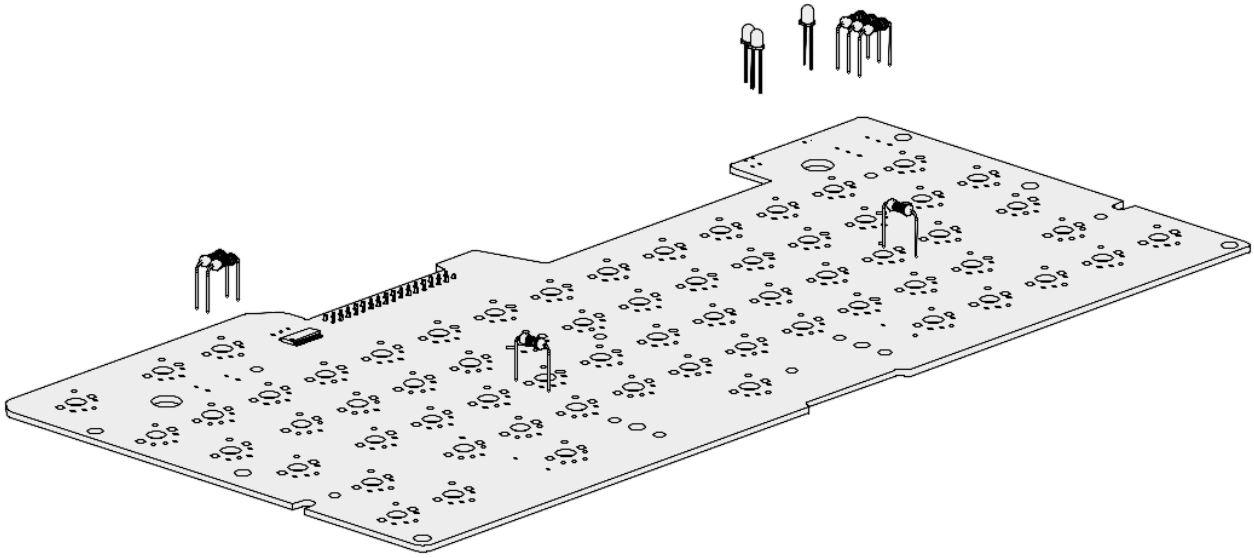
Fit the resistors and LEDs to the board from the front side (key side).
The colors of the LEDs should match the labels on the PCBA.

The longer leads of the LEDs must be placed in the holes marked with a “+” (all 3 LEDs are oriented the same way).

The three resistors closest to the LEDs are 4.7kΩ (yellow-violet-red).

- Note: These 3 resistors control the brightness of the LEDs. 4.7kΩ best approximates the brightness of the LEDs on the original Apple *II*c. Using your own 1kΩ resistors here instead will brighten the LEDs.

The two resistors near the spacebar key are 1kΩ (brown-black-red).
The two resistors near the 34-pin connector are 470Ω (yellow-violet-brown).



Optionally, tape the parts down to hold them in place while soldering them onto the PCB.

Flip the board over and solder the components on. Then, use a side cutter or wire clipper to clip the leads off.

Double-check your soldered joints to ensure there are no bridges or broken solder joints.

When you are finished soldering, you can optionally clean off any rosin/flux with 90% or higher isopropyl alcohol (IPA) and a brush. Use plenty of IPA for both washing and rinsing. Then, let your assembly dry completely before proceeding.

Step 3:

Fit the key switches to the PCB.

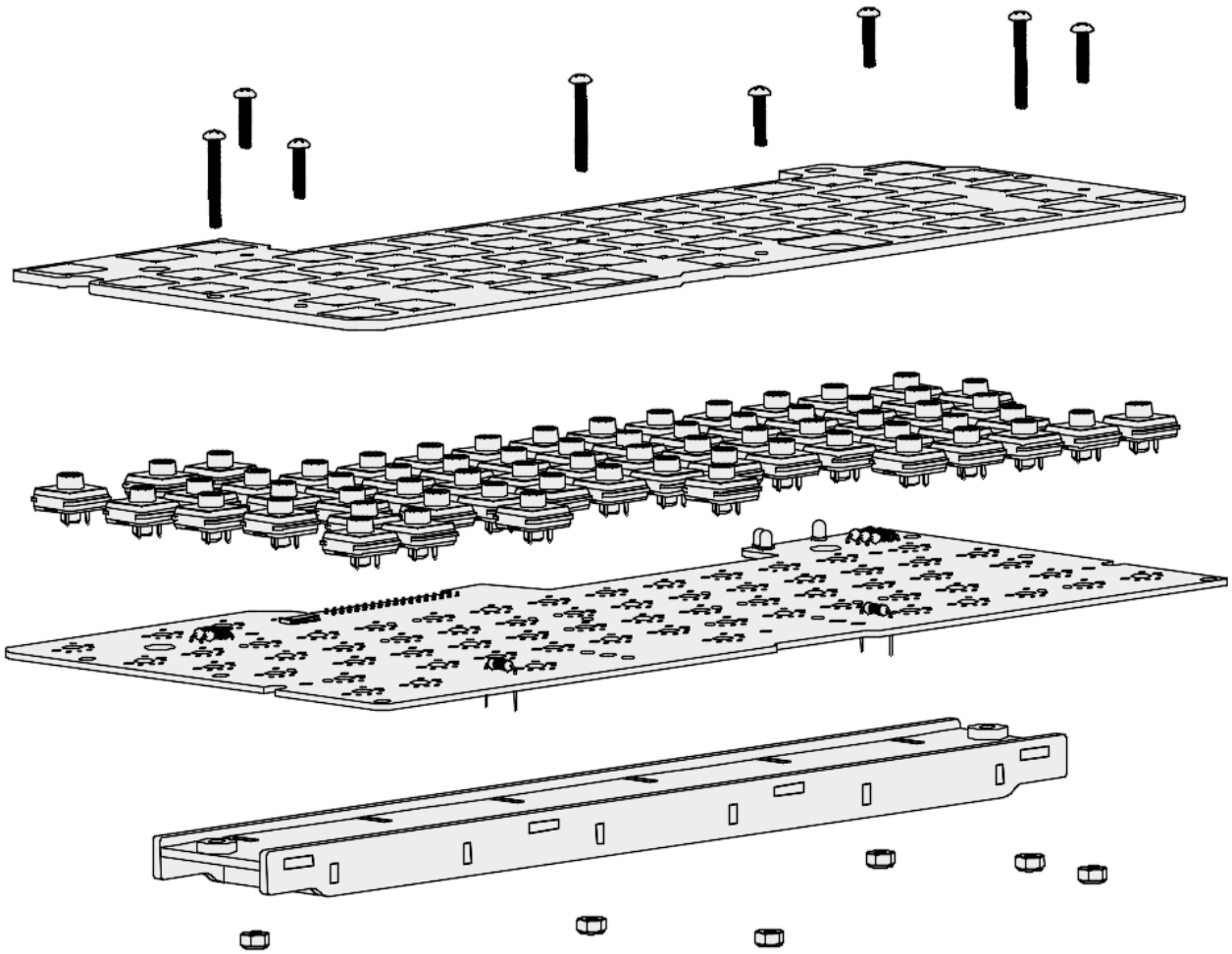
Then, fit the acrylic overlay onto the key switches. If you have clamps or rubber bands, use them to hold everything together.

The medium length (½”) screws hold the overlay to the PCB. Install those using the lock nuts to fasten everything together.

IMPORTANT: DO NOT OVERTIGHTEN the lock nuts. If you secure the screws and nuts too tightly, it will flex and stress the PCB and acrylic pieces.

Flip the assembly over and solder the key switches to the PCB.

Next, fit the bridge/stiffener (either the one that came with the kit or the original bridge/stiffener) to the underside of the PCB. Use the longest (¾”) screws and lock nuts to attach it.

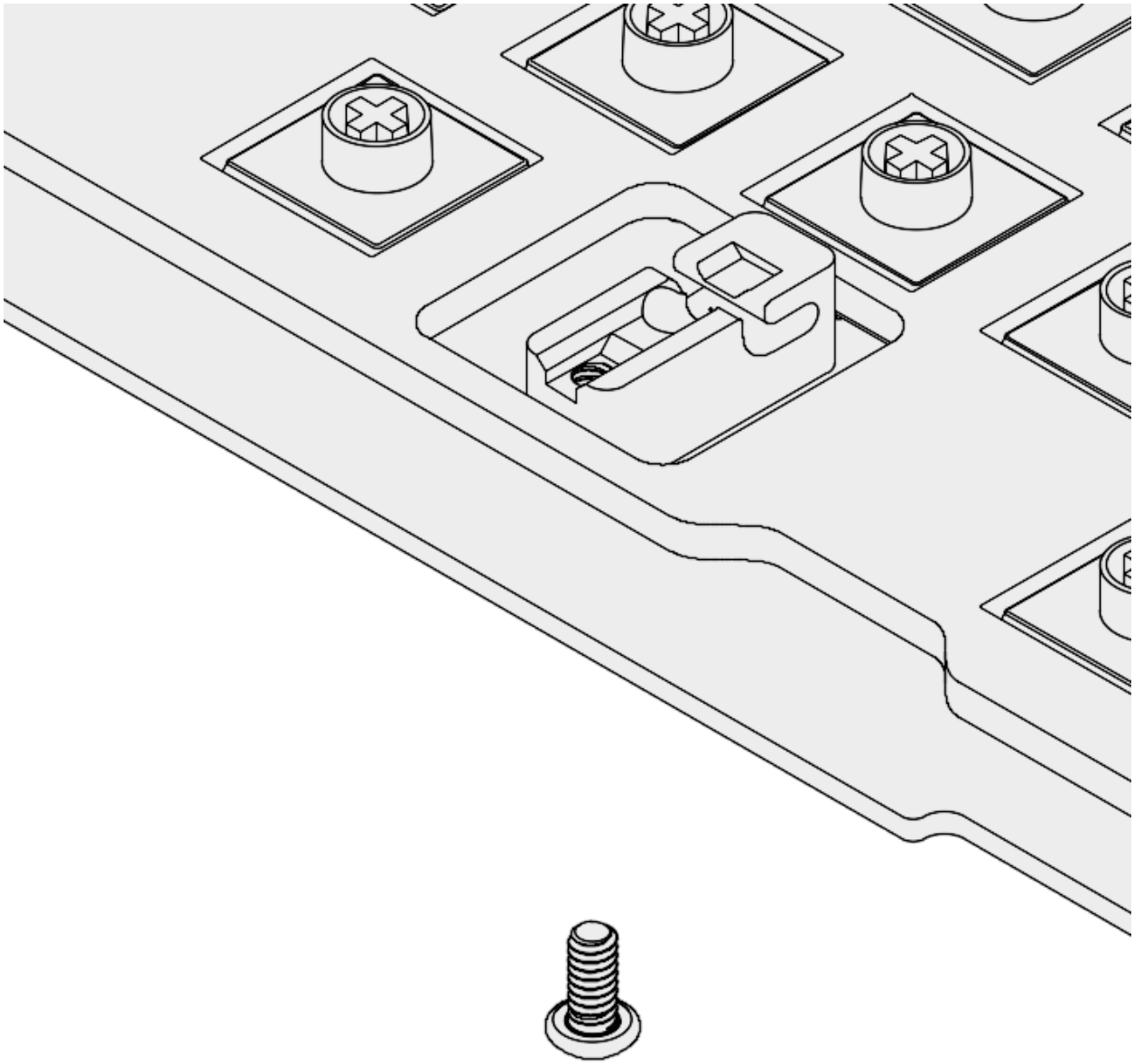


Step 4:

Use the ¼” screws to install the spacebar stabilizer bases. The screw should go in the bottom-most hole.

DO NOT overtighten the screws!

Leave the screws slightly loose to help fit the spacebar at the end of the assembly, and tighten them once the spacebar moves freely.

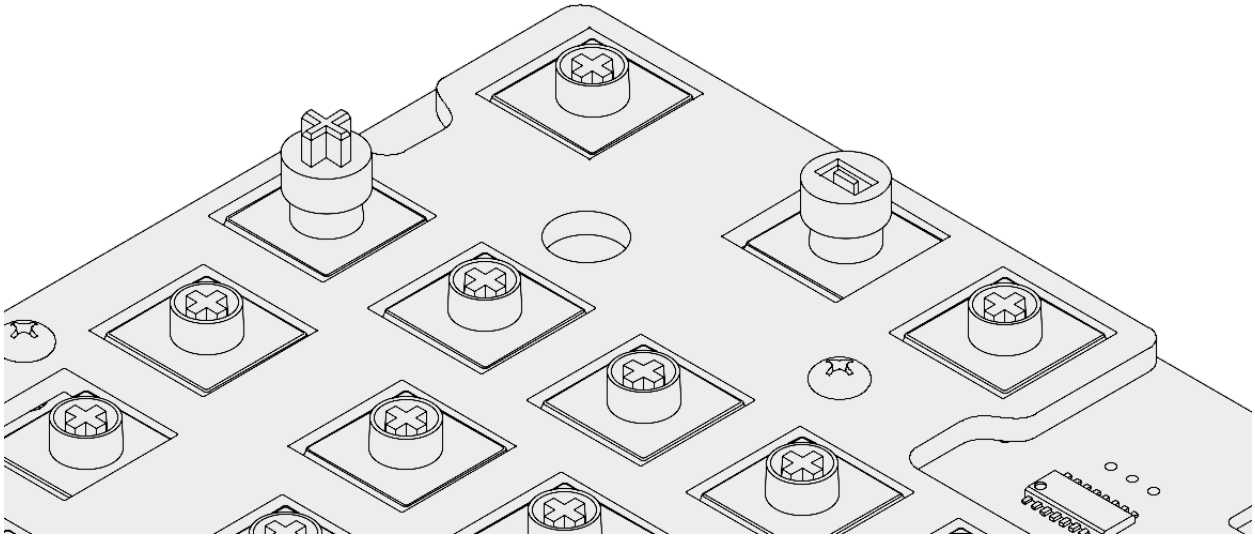


Step 5:

Use a side cutter or wire clippers to separate the keycap adapters (the white resin pieces).

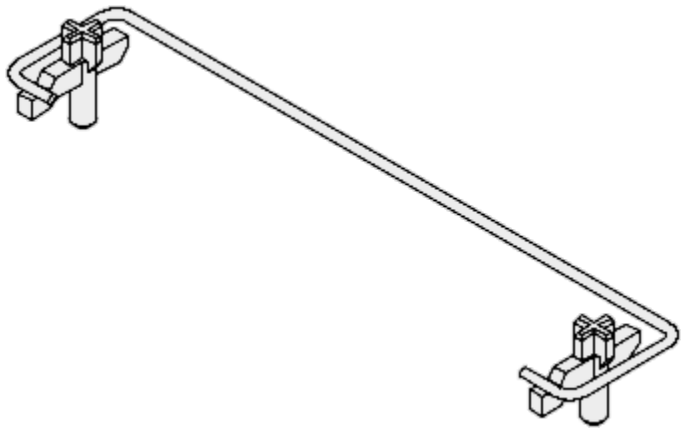
Use the cross-shaped adapters for every key *except* the **Caps Lock**, **80/40**, and **Keyboard** caps. Use the rectangular slot adapters for the **Caps Lock**, **80/40**, and **Keyboard** keys.

Push adapters onto all of the key switches. Push hard enough to ensure they are fully seated.



Step 6:

Install the stabilizer rod holders into the spacebar keycap:



The stabilizer rod holders in the kit replace the original parts and look similar. Simply pull the original ones out and place the new ones into the keycap in the same orientation.

Step 7:

Carefully and fully push the keycaps onto their respective key switches:

Verify that the spacebar is not sticking and travels freely and that the stabilizer bar is engaged in the slots of each stabilizer base. The stabilizer bases may need to be adjusted slightly (loosen the screw slightly to move/adjust them, then re-tighten) to ensure the spacebar key presses and returns freely.

Step 8:

Install the 34-pin cable onto the connector on the back of the keyboard assembly.

Then, plug the other end of the cable into the Apple *II*c motherboard before installing the keyboard into the Apple *II*c.

Thank you, and enjoy!

I sincerely appreciate your patronage - if you have any questions or comments, please don't hesitate to email me at **matt.m.matz@gmail.com**.

Additional Information can be found at **github.com/MatzElectronics/Apple-IIc-Keyboard**

Email:

Information: