

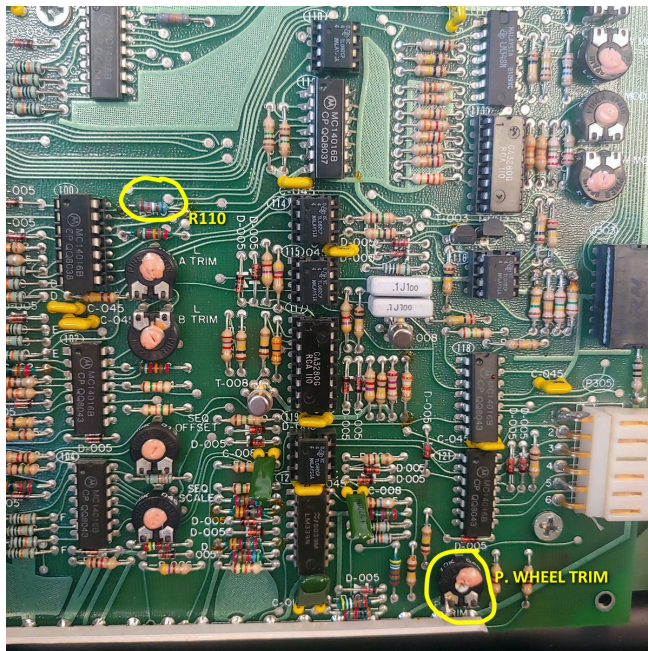
Bell Tone Synth Works “Bender Perfecter” Installation - Prophet 10

The Bell Tone Synth Works “Bender Perfecter” bender symmetry mod allows you to trim the haphazard, asymmetrical intervals yielded by your Prophet’s pitch bend wheel to instead be a perfect fifth up and down. You can also trim it to a smaller interval (e.g. a major second/whole step, major third, etc) if you prefer.

Installation Steps

1. DISASSEMBLY

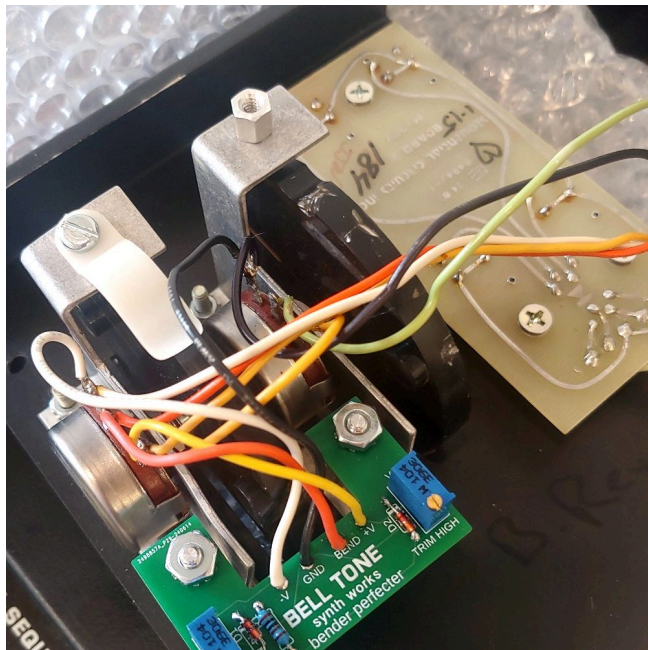
With the main panel of the Prophet 10 lifted open, unscrew the bender panel by removing the four screws at each of its four corners. Tilt the left side of the bender block up while slowly sliding it forward at the same time to lift it clear of its mounting frame, and you can then rest it on its mounting frame panel-side down while you work. You might want to put something like a towel or bubble wrap underneath to protect it from being scratched.



2. RESISTOR CHANGE

Replace R110 on the CPU board (100K) with 62k. Before doing this, most Prophet 10s’ bender range will be less than a perfect 5th up and down.

If you want to make your bender range an interval smaller than a perfect fifth up and down **and/or** its original range is already wider than your “target” range, you can skip this step.

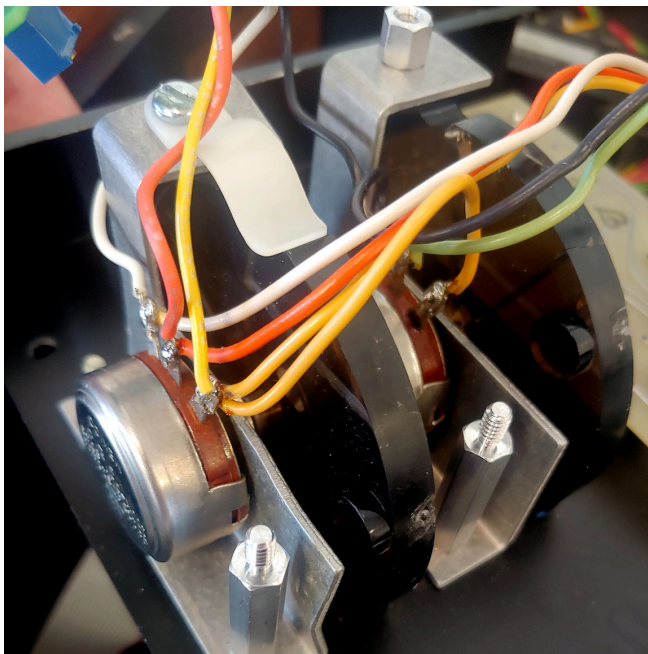


3. WIRING

Add wire connections between the pads on the “Bender Perfecter” board and the lugs of the bender and modulation potentiometers as follows:

- a) “BEND” pad - connect to wiper of bender pot (middle lug of bender pot, orange wire in photo)
- b) “-V” pad - connect to lug 1 of bender pot (white wire)
- c) “+V” pad - connect to lug 3 of bender pot (yellow wire)
- d) “GND” pad - connect to lug 1 of modulation pot (black wire)

These are the typical wire colors used for the connections to these pots in Prophet 10s, but some units may be different, so ensure that you are connecting the wires from the “Bender Perfecter” board to the correct pot *locations* as seen in the photo above.



4. MOUNTING

Two standoffs must be installed to mount the “Bender Perfecter” board. Remove the nut and lock washer that is farther from the bender box’s front edge from each of the wheels’ mounting brackets, and save them. Install the provided male/female standoffs in their place (photo at left). Place the “Bender Perfecter” board on the standoffs and secure with the original nuts and washers that were previously removed (see step 3 photo).

5. TUNING

Connect a multimeter to the wiper of the pitch wheel pot and adjust the Pitch Wheel trim (labeled "P WHEEL TRIM", see Step 2 photo) in the lower right of the CPU board so that the pitch wheel pot outputs 0V when it is at the center (detent) position.

Set up a patch without any modulation and with only one oscillator. Hold down any key and using a tuner confirm your starting pitch is in tune; if not, autotune the synthesizer and adjust the master tuning control for concert pitch. Turn the wheel all the way to its fully upward bend position and adjust the "TRIM HIGH" trimmer on the "Bender Perfecter" board for a perfect 5th above the starting pitch. Now turn the wheel all the way to its fully downward bend position and adjust the "TRIM LOW" trimmer for a perfect 5th below the starting pitch. You can also choose to tune it for plus and minus a different, smaller interval if you prefer.

That's it!