

# Bell Tone Synth Works “Bender Perfecter” Installation - Prophet 5

The Bell Tone Synth Works “Bender Perfecter” bender symmetry clamp 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

Open up your Prophet and put it in “Service Position.” All of these steps will be performed in the area of the bender and modulation wheels.

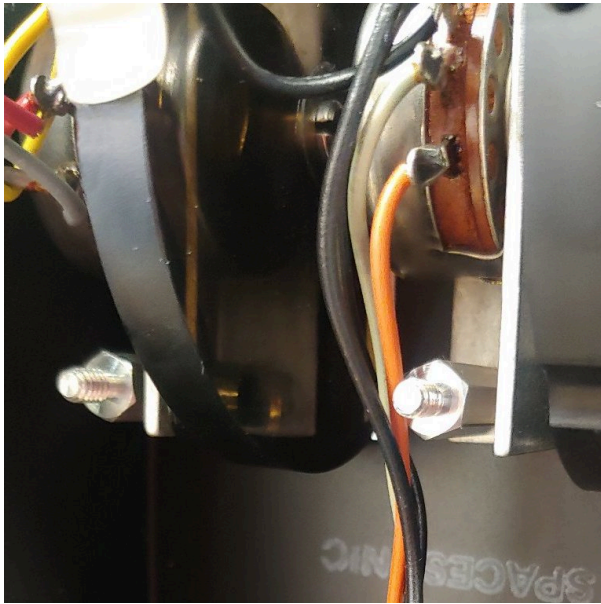


### 2. WIRING

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, red wire in photo)
- b) “-V” pad - connect to lug 1 of bender pot (yellow wire)
- c) “+V” pad - connect to lug 3 of bender pot (grey wire)
- d) “GND” pad - connect to lug 1 of modulation pot (black wire)

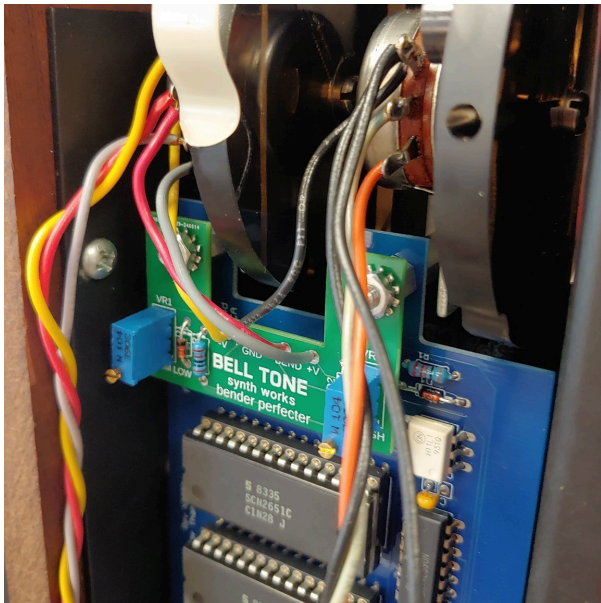
These are the typical wire colors used for the connections to these pots in Prophet 5s, but some units may be different, so ensure that you are connecting the wires from the “Bender Perfecter” board to the correct pot lug *locations* as shown in the photo above.



**3. MOUNTING.** Two standoffs must be installed to mount the “Bender Perfecter” board.

*If your Prophet does not have MIDI or the MIDI board is **not** mounted on the wheel mounting brackets:*

Remove the nut and lock washer that is farther from the bender panel'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 photo on previous page).



*If your Prophet has a MIDI board mounted on the wheel mounting brackets:*

Remove the nuts and lock washers that are securing the MIDI board to the wheel mounting brackets. Leaving the MIDI board where it is, screw the provided short male/female standoff onto the threading of the standoffs the MIDI board was mounted on, instead. Place the “Bender Perfecter” board on the newly-added standoffs and secure with the original nuts and washers that were previously removed.

#### **4. TUNING.**

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!