

# Blue Input Wafer Replacement

March 22,2026 w8ji rev0

This instruction set assumes the amplifier is apart enough to change the blue input switch. The job is easier if you only removed the shaft screw on the flat front drive and left the rounded shaft setscrew tight. Loosening or removing only the frontmost flat screw will retain indexing, making alignment easier.

**Warning! The blue wafer can be broken by excessive sideways movement of the switch drive shaft. Forcing the shaft against switch contacts or the switch rotor will also damage the switch. Work carefully.**

If the rear coupling screw is removed the wafer system will need re-indexed. Work with the amplifier resting bottom down on a flat surface. **Do not excessively angle the drive shaft while the shaft is inside the blue rear wafer.** Work carefully and watch shaft and blue switch angles.

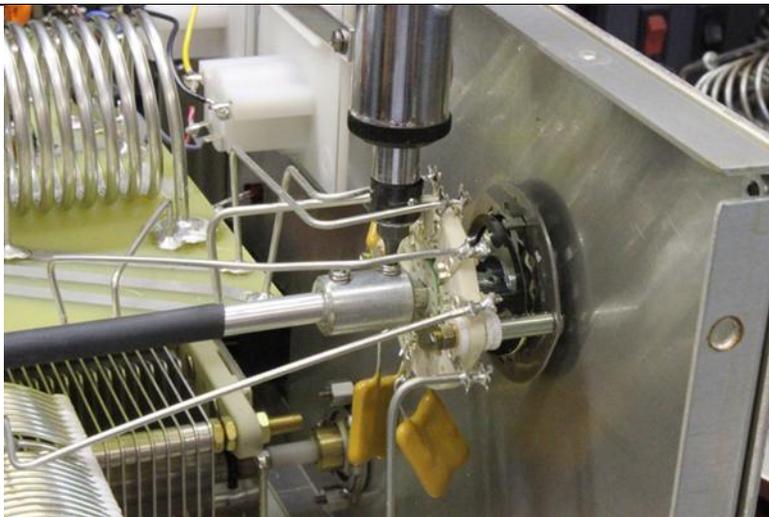


Figure 1 example switch shaft

## Old Wafer Removal

Recommended tools and supplies:

Solder Wick	Ohmmeter
Vacuum Desoldering Tool	Clip leads
Good solder pencil	Hand tools
63/37 rosin core solder	Flat file or flat belt sander

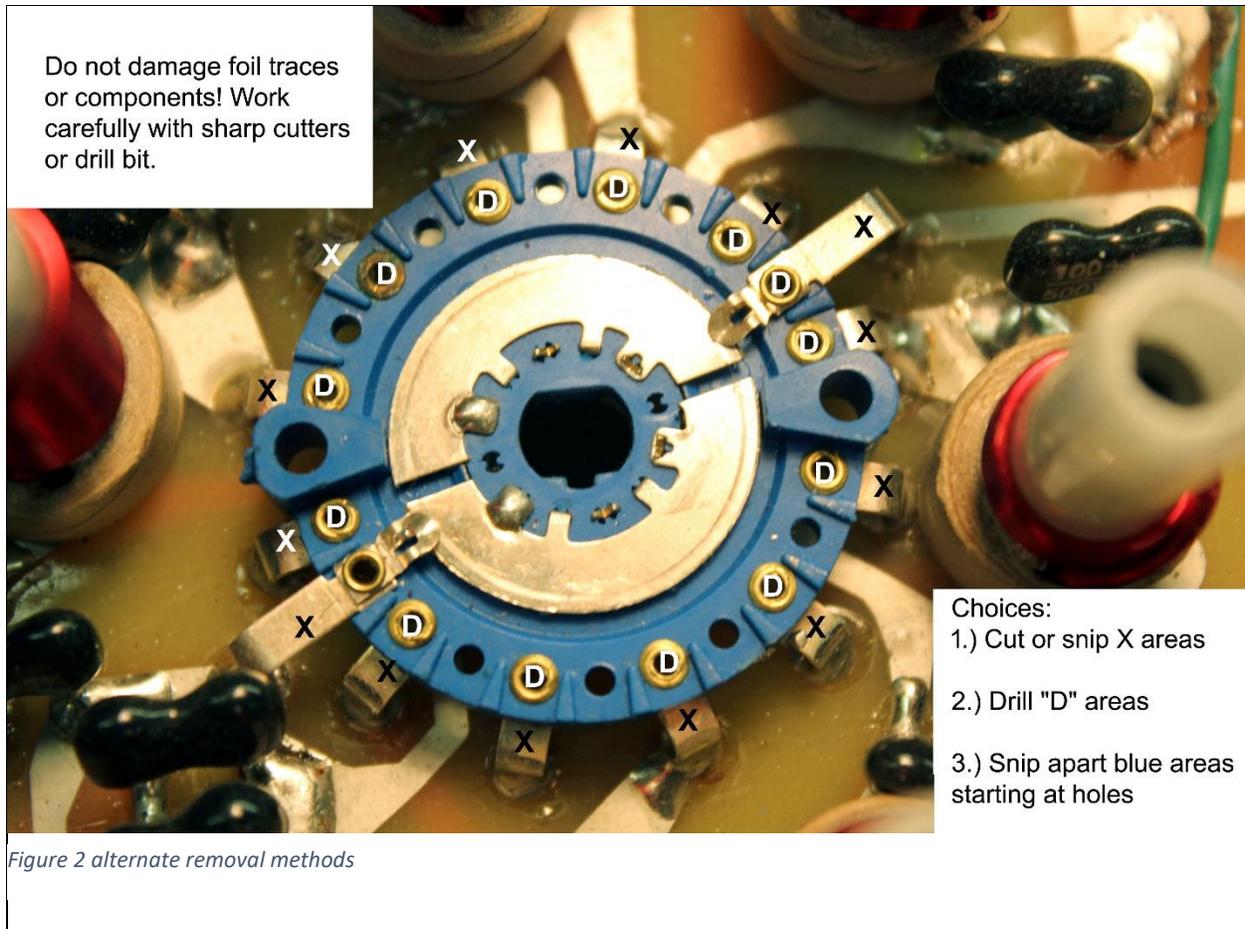
Regardless of the unit, replacement is the same. Replacement requires accessing the board rear soldering side and completely desoldering wafer terminals.

Vacuum desoldering is the most effective method. At times MFJ used some lousy solder that refuses to change into a liquid state. I strongly recommend flowing fresh 63/37 lead-tin solder (361 F) into the joints before

desoldering. There are also special alloys like 281 Alloy (Sn/Bi) that melt at even lower temperatures.

**Do not overheat the circuit board foils! You do not want to ruin a plate through or lift a pad!**

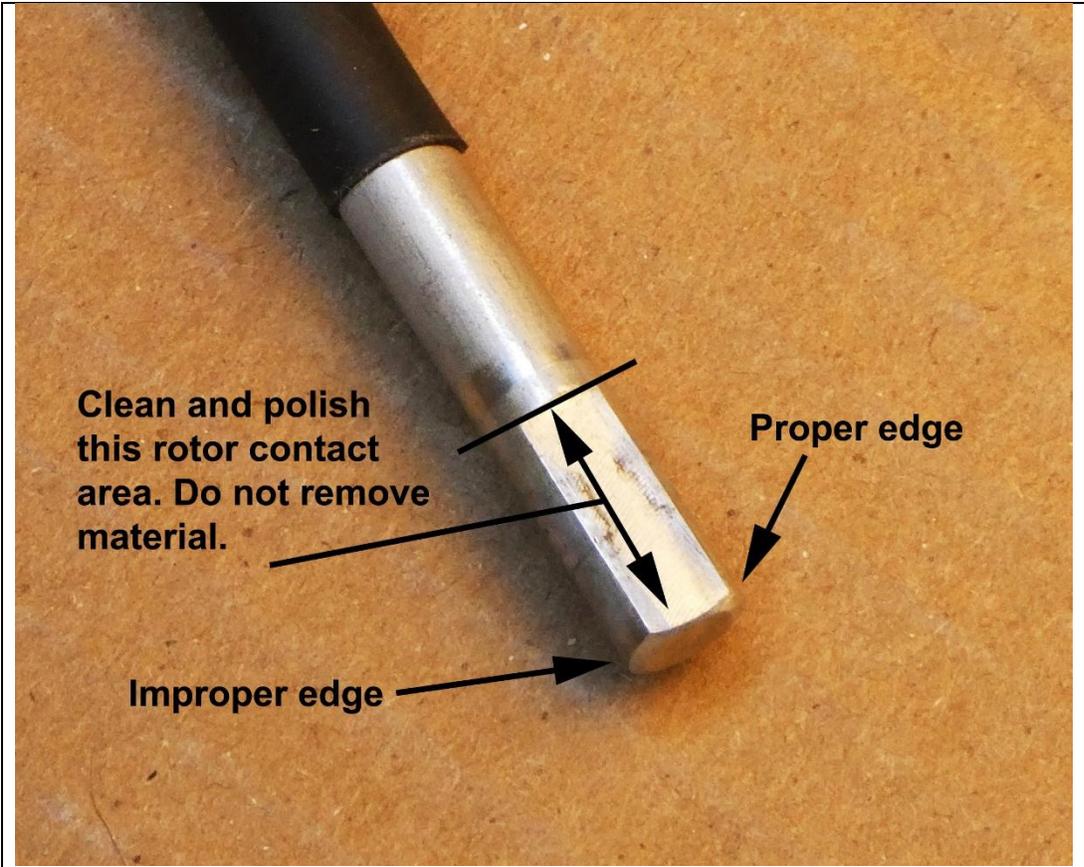
The old bad wafer comes apart rather easy. Snipping the old wafer body apart with small sharp diagonal cutters, snipping the lugs where they enter the switch, or drilling the eyelets out with a sharp 1/8<sup>th</sup> inch bit allows removal of the switch body. With the switch body out of the way, lugs can be desoldered and removed one lug at a time. Removing the switch body allows topside heating of each lug while pulling each lug out.



Clean all solder from the mounting holes, either with a vacuum desoldering tool or fresh solder wick. The board should look clean, and the new switch should fit with a gentle push. The two wide-spaced outer tabs are the common terminals. These tabs index the switch every 180°. It does not matter which way you pick, either position will work. **Do not solder until you are sure of the fitment and the wafer is fully seated.**

**Inspect and prep the input drive shaft switch wafer end. This step is critical!**

Bevel or radius the very shaft end. This is also called “breaking” the shaft end edges. Do not do extend this end radius or end sharp-edge breaking into the working contact area. The radius should only be in the lead-in area.



*Figure 3 break insertion end edge*



*Figure 4 drag on fine file to radius*



*Figure 5 spinning shaft with end edge on fine belt to radius*

A proper radius shaft looks like this:

Lubricate all sides with light film of silicon oil or grease, electronic grease, or Vaseline. Must slide in and out free.



Lubricate all sides with light film of silicon oil or grease, electronic grease, or Vaseline. Use nothing else!

Lightly lubricate double D shaft area. DO NOT use graphite, metallic based pastes, or powders.

Clean board holes should look almost like new. The switch should easily seat. Position will not matter so long as all terminals match pads.

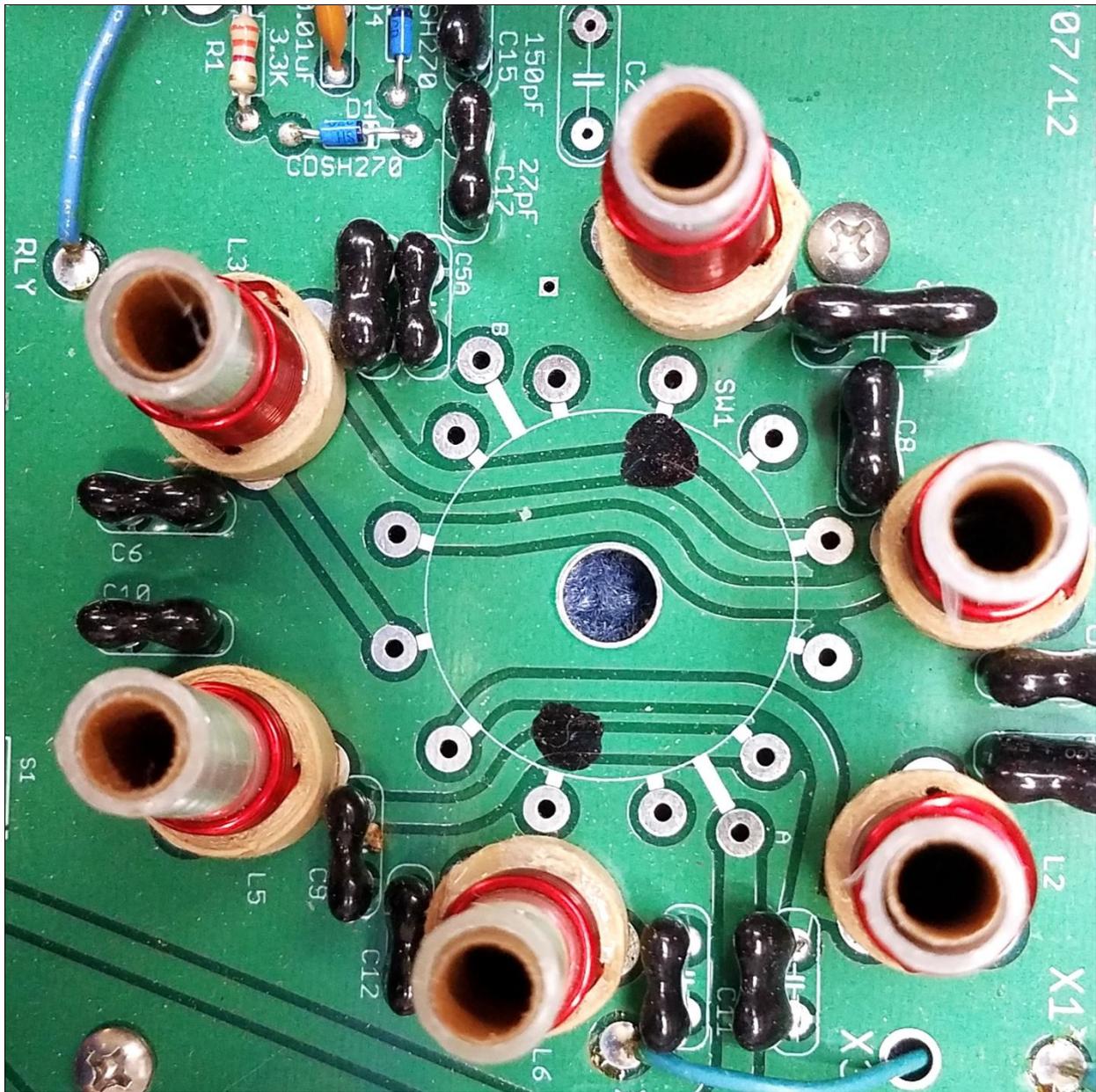
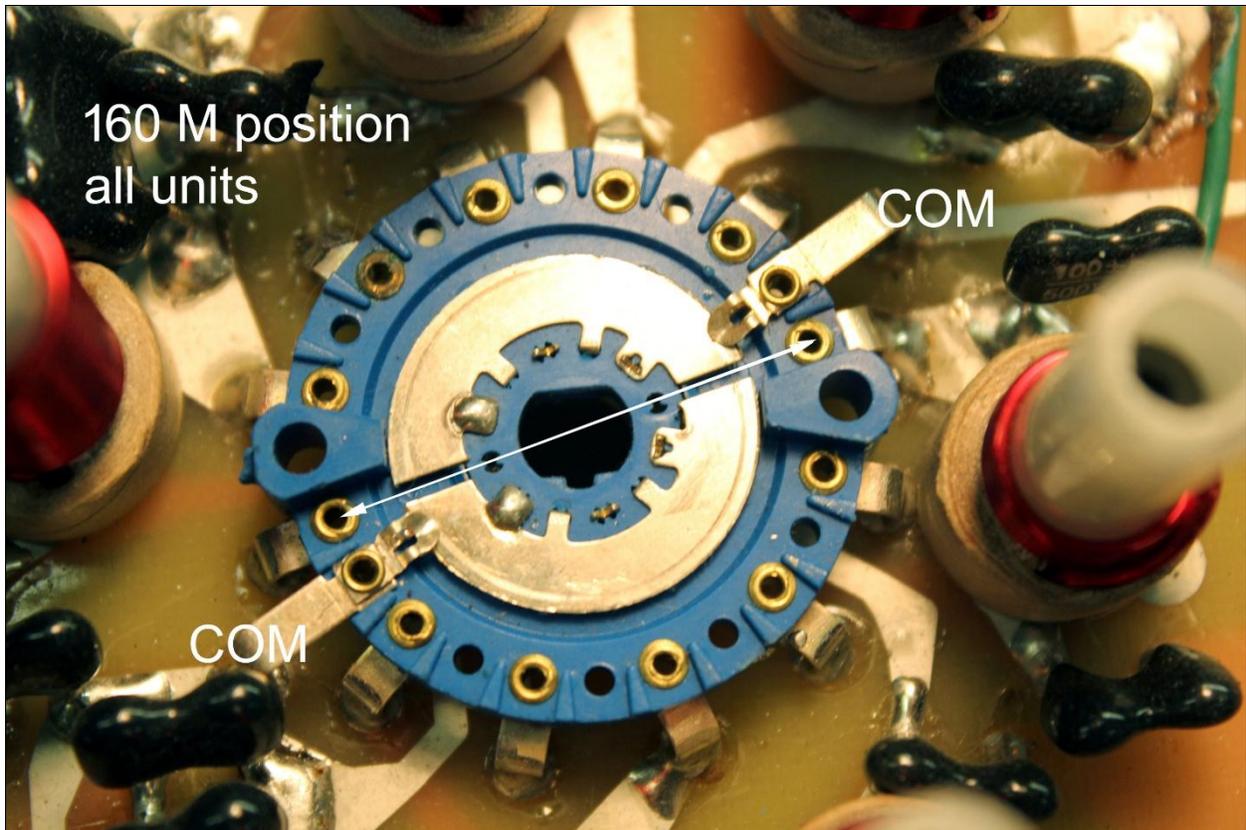


Figure 6 holes clean and solder free

160M always lines the rotor gaps to the brass lug eyelets just clockwise of the common terminals. It will ohm zero to the 160M coil, the largest input coil. 10M aligns with CCW lug eyelet from common terminals.



160 M position  
all units

COM

COM

Figure 7 160-meter position Rotor gap aligns on CW terminals from COM

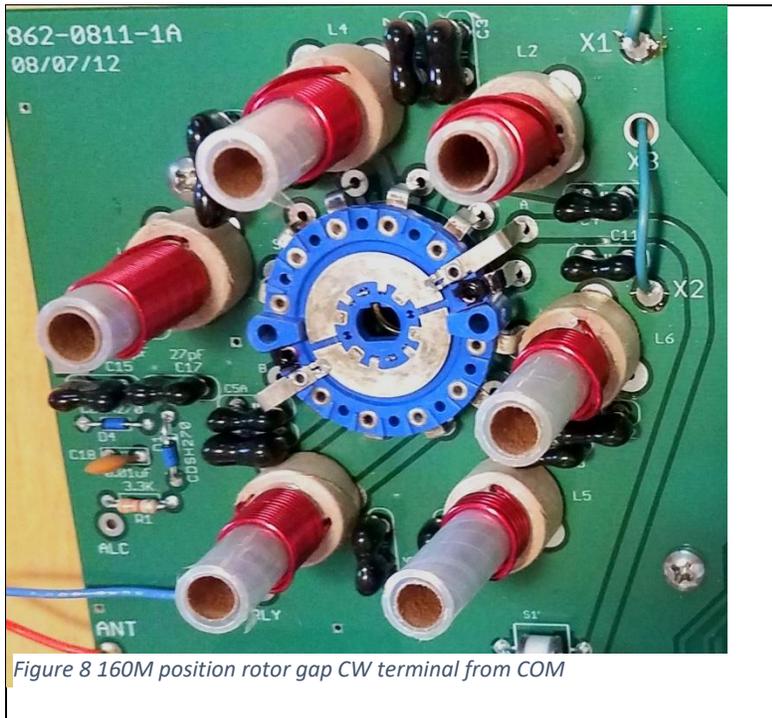


Figure 8 160M position rotor gap CW terminal from COM

10 meters always aligns gaps to the lug eyelets just counterclockwise of the two commons. It will ohm out to the ten-meter green wire or ten-meter coil.



Insert the shaft last. Be careful to slide the shaft as straight in as possible without cocking or moving the inserted shaft at significant angles. A properly prepped shaft will slide in without force or binding. The wafer is aligned by leaving the rear coupler screw loose, securing the front coupler screw, then with the rotor in position on 160M or 10M locking down the rear coupler screw.

Check both ends of travel. The gap should never travel past the common. The common can be continuity tested from both commons to individual band coils with a cold amplifier. The switch rotor gap should always align with a band terminal, the gap should never cross or reach the commons.