



# Optional K2 Power Control Mod

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**THIS APPLIES TO ALL K2s.**

## Background

When pressing TUNE, the power displayed typically varies over a range of about +/- 0.5 W at the 5 W level. The actual variance depends on power level, band, load, and supply voltage. The variance is generally wider on 40 and 30 meters.

There are two reasons for the power not staying at exactly the level you specify. First, some heating of the final transistors occurs that may cause power to drift upwards a small amount during TUNE; this is normal. Second, power is controlled by an 8-bit D-to-A converter, which has limited resolution. In other words, each DAC step may translate to as much as a few tenths of a watt on some bands at 5W.

This small variance in TUNE power level is not significant in terms of actual radiated signal. The difference between 4.5 W and 5 W, for example, is less than 0.5 dB. However, it may be possible on a particular K2 to reduce the variance with a simple component change.

## What to do

*NOTE: This change is completely OPTIONAL! It may result in a reduction of the maximum power that you can put out on the highest bands, especially under high-SWR conditions.*

1. Test TUNE at 5 W working into a 50-ohm dummy load on 40 m. If pressing TUNE repeatedly results in a power output reasonably close to 5 W each time, there's no need to do anything.
2. If you have a Field-test K2 (S/N 1-100), the next step is to replace R99 on the RF board with 270 ohms (if you haven't already done so). This resistor was 470 ohms on the field-test units.
3. Temporarily insert a 1K potentiometer at R98 (use leads of 1" or less). Set the pot to mid-range (500 ohms).
4. Switch to 10 meters and set power for 10 W (or your desired maximum power output on 10 meters).
5. Your goal is to find the largest value of R98 (up to 1 K) that allows for the desired maximum power output on 10 meters using TUNE. Try various R98 settings until you find this value.



6. Once you've found the highest usable value for R98, switch back to 40 m and see if this has improved power setting resolution using TUNE at 2 W, 5 W, etc.

7. Replace the pot at R98 with a fixed resistor. Use a standard resistance value that is equal to or lower than your final pot value.