AT-180 Tuner Not Matching on 60 Meters

Category: HF Operation
November 27, 2021
The tuner really doesn’t care much about the frequency. It really cares a lot about the impedance! You want to avoid antenna lengths where they can present a high impedance to the tuner at a desired operating frequency. 23′ is a “magic” number as it avoids resonating on any of the ham bands. (If it resonates on 40, you’re screwed on 20.)

Next point: The AT-180 is designed to match to ALMOST 50 ohms. It is not designed to be a universal tuner. It will take a resonant antenna that might have higher SWR at the band edges and flatten that out so the transmitter is happier.

The AT-180 (and all internal tuners) will not improve an antenna’s performance. It will simply make the transmitter happy. Why? Because you are tuning the transmission line. A tuner placed at the antenna, like the AH-4, tunes the antenna and can therefore improve the antenna performance. My universal antenna is a 46′ dipole, fed by 39′ of 450 ohm ladder line into an AH-4. That combo will tune EVERYTHING from 80 to 6 meters.

For more information, see the HF tab on HamOperator.com.

It may be difficult for the tuner to match 50 to 50 ohms at certain frequencies. It is almost always matching a non-resistive load that is likely not 50 ohms. I suggest playing with the antenna and feed line lengths. I really recommend investing in the AH-4. Probably one of the best remote tuners ever made!

73,

Chris, K9EQ