

# Cooling Fan for the MY ANTENNAS EFHW-8010-1K Antenna

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The End Fed Half Wave antenna has been around for years but recently it has become increasingly popular with those of us who have to deal with HOA (Homeowners Association) restrictions. I live in such a community and purchased a commercial unit from MYAntennas.com. It has worked surprisingly well for me even though the geometry of my camouflage landscaping results in an installation where no part of the 134 foot long antenna is more than 7 feet above the ground. To compensate somewhat for the low antenna height, I run 600 watts when necessary and to accomplish this I specifically bought the EFHW-8010-1K for it's 1 kilowatt power rating. Therein lies the problem. The power handling capabilities of many antennas these days are expressed as **XXX watts I.C.A.S.**

I.C.A.S. or Intermittent Commercial and Amateur Service is vague term that seemingly has been utilized by the Marketing departments of antenna producers to allow them to enhance the power rating of their products. After much digging I found an article that indicated an antenna rated for 100 watts ICAS will handle 100 watts peak envelope power (think SSB) for 5 minutes transmitting time followed by 5 minutes down time, presumably to allow certain antenna components to cool down.

There is no mention of digital modes or CW in this definition of ICAS. As I very often operate CW I was experiencing a significant rise in SWR after a minute or two of high speed CW at QRO power. Unfortunately, the 'cooling down' needs of my antenna didn't always coincide with the length of receiving time during rag chews or high speed contesting. The idea to provide fan cooling actually came from a QSO with Steve Ellington N4LQ who referred me to his YouTube presentation on this subject. Starting with Steve's design I decided to build a totally enclosed cooling case for my antenna.

## List of Supplies:

Enclosure: CableTec MSE D-Mark Box 9"x6"x3"	\$ 6.49	CableTec website
Fan: Wathai 9225 92mm x 25mm 12v	10.99	Amazon
Power Cord for Fan: GearIT Pro 16 awg Speaker wire	!5.98	Amazon
Screen: Screenmend 2" x 80"		Lowes
Spacer Standoffs:		Lowes
Rubber grommet:		Lowes
Wire Spade Lugs:		Lowes/Auto Zone

## Assembly

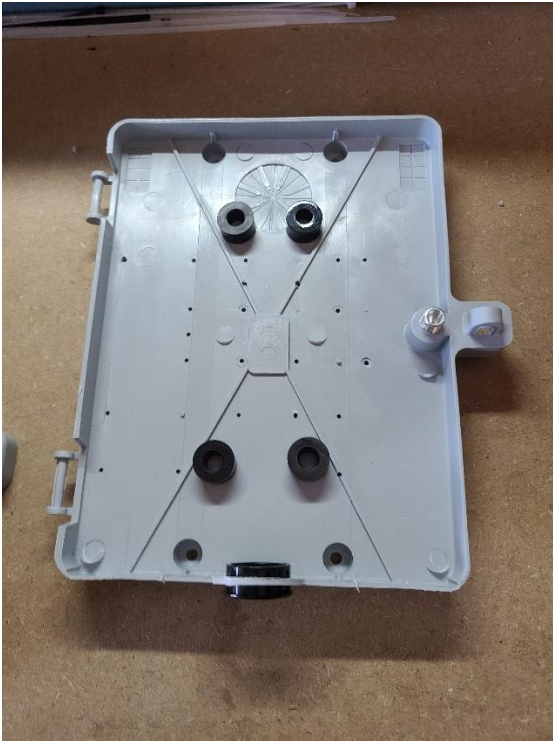
Remove the outer cover from the MyAntennas case. This was a bit difficult as the cover is glued to the case before the mounting screws are installed. Use a sharp knife to gently pry off the cover after removing the 4 screws.



Carefully drill some holes in the back of the MyAntennas case.



Mark the back of the CableTec enclosure to mount the MyAntennas Case on standoff spaceers

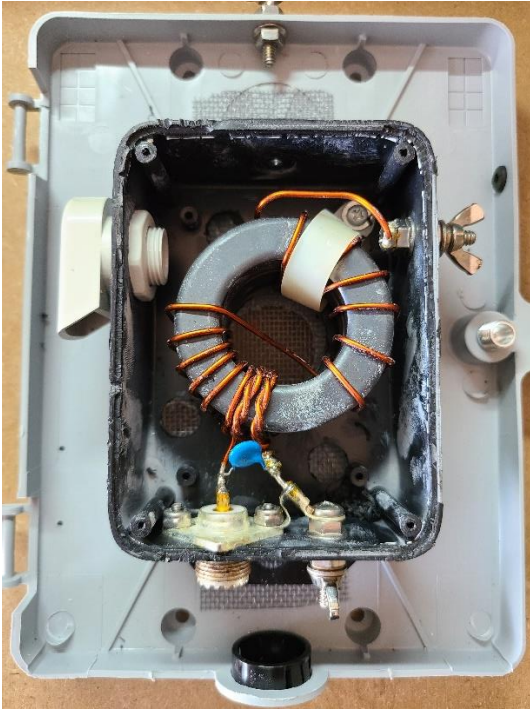


Drill some holes thru the back of the CableTec enclosure. Try to align the holes with those drilled in the rear of the MyAntennas case. Cover the holes with the heat-setting screen. Note I hand't finished the screening step in the photo below.



Mount the MyAntennas case to the CableTec enclosure back. Don't forget to raise it off the back using the standoffs.

Drill a hole in the right side of the CableTec enclosure back near the antenna wire wing nut on the MyAntennas case. Install a small rubber grommet into this hole. Remove the antenna wire eyebolt from the MyAntennas case. Drill a hole in the top side of the CableTec enclosure back and reinstall the antenna wire eyebolt.



Mark the fan drill holes on the CableTec enclosure cover using the Fan grill as a template. Drill 4 holes for the mounting hole and a 3 inch hole for the fan.



Mount the fan and grill to the CableTec enclosure front. Install Spade connectors to the fan power cord.



Install spade connectors on the end of the power cord speaker wires. Mount the unit to your outdoor location of choice. Feed the antenna wire through the Eyebolt and rubber grommet and reconnect to the antenna wing nut on the MyAntennas case. Connect the Coax and Ground wires. Supply 12 volts and check for fan rotation to assure it is pulling air from the rear of the unit and expelling it out the front. This is important to assure the matching transformer components do not get wet during rain. I have my power cord connected to a multiple outlet switched DC power strip located in my shack so the fan comes on as soon as I power up my radios and antenna tuner.



With this setup I have been able to transmit for extended time at 600 Watts on CW with absolutely no change in SWR. I believe this is a relatively inexpensive way to get the true power rating out of your end fed matching transformers.

# Appendix

Home > Categories > Installation Supplies >



HOVER TO ENLARGE - CLICK TO ZOOM

LARGER PHOTO

## CableTek MSE D-Mark Box 9in x 6in x 3in

★★★★★ 4 Reviews

TTS PRICE: \$6.49

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