



THE MICHIGAN MIGHTY MITE REVIVAL

The Michigan QRP Club is holding a REVIVAL!

During the ARRL 2025 Hamvention and as part of the QRP-ARCI "Four Days in May" event, The Michigan Mighty Mite will have a REVIVAL. It is open to all. The FDIM has a Club night on Friday 16 May 2025 at the Holiday Inn in Fairborn, OH

<https://www.ihg.com/holidayinn/hotels/us/en/fairborn/>

The Michigan QRP Club will have a table at Club night. Bring your old, new, whatever MMM to Club night. We will have a set up that includes 12vdc power and a dummy load. You bring your MMM and a way to key it (could be a pair of wires). If your MMM can be heard on our receiver, you will get a very special award. Not sure what it will be yet because we are still working on the budget. But it will be special. I promise. The receiver will probably be my old K2 with a hunk of wire antenna. There are no other criteria other we can hear it. If it puts out a ton of power, we don't care. If is cute, we don't care, if it is ugly, we don't care. If it is in an Altoids tin, we don't care.

Amateur radio license required to operate on the air!

500mW CW TRANSMITTER

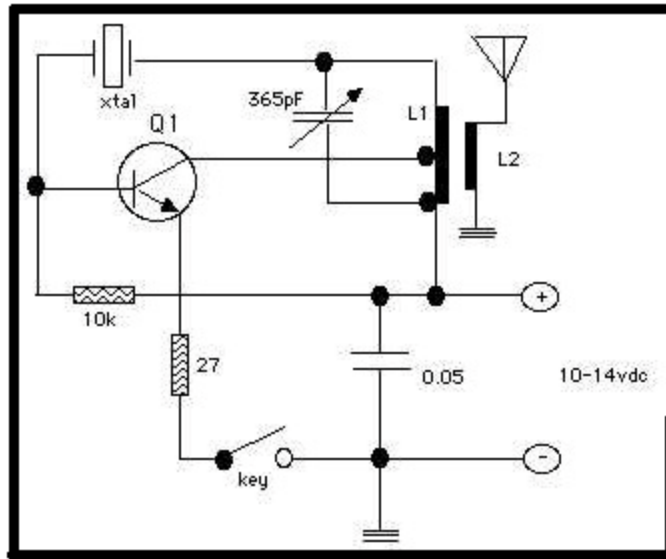
Author and technical wizard, Dave Ingram - K4TWJ. (SK), once wrote:

A very quick and easy way to get on the air is to build a "Michigan Mighty Mite" CW transmitter for 160, 80, 40 or 30 meters originated by Ed Knoll, W3FQJ and developed by Tom Jurgens, KY8I. KY8I was one of the MIQRP's founding members. It can't get simpler than this! I made my very first QSOs with a 40-meter version. It has very few parts, costs almost nothing, and it works!

Output power is about 500 milliwatts with a 12-volt power supply. To operate, attach a 50-ohm dummy load or appropriate 50-ohm antenna (do yourself a favor and use a half-wave dipole antenna to avoid tuners and assure good results) and ground, insert crystal and close the key. Adjust the variable capacitor for the cleanest signal that has the most power and that's it! You're on the air and can confirm that it's working with a field strength meter.

Power output can be configured with a common multimeter by using a very simple RF probe circuit. See the homebrew RF probe designed by N5ESE Monty Northrup at:

<https://www.n5ese.com/rfprobel1.htm>



Q1:
 2N3053, 2N2222, SK3265 or similar inexpensive general-purpose NPN transistor. I use a plastic-case transistor that came in a bargain-pack from Radio Shack - works fine. Use heat sink - try an alligator clip if you don't have a heat sink handy. HINT: Use a transistor socket here so you can experiment and find the best NPN for RF output.

TANK COIL:
 Use a 1.25" diameter form (35mm film canister, pill bottle, etc.) and #20 - #22 AWG enameled ("magnet") wire. To make tap, wind L1 to the "tapped at" number of turns (see table below). Make a loop about 1 inch long, twist it a few times and finish winding. Sand the insulation off the end of the loop. This is your tap. After winding L1, wrap it with a thin layer of masking tape and wind L2 on top of the tape in the same direction as L1. Secure L2 with more tape and finish by sanding insulation off remaining leads.

L1	L2
Primary/Collector Windings	Secondary/Antenna Windings
160m-60 Turns, Tapped at 20	160m - 8 Turns
80m-45 Turns, Tapped at 15	80m - 6 Turns
40m-21 Turns, Tapped at 7	40m - 4 Turns
30m-15 Turns, Tapped at 6	30m - 4 Turns

XTAL: fundamental-mode crystal for desired frequency.

About that variable capacitor - Salvage one from an old transistor AM Radio or try a trimmer capacitor. Of course, a full-size variable will work - but it will also be bigger than the rest of the transmitter! Tracking down variable capacitors at a good price is a noble challenge and part of the game.

The .05 Disc Cap is .05 uF as in Micro Farads.

Source: Ingram, Dave, K4TJW, "World of Ideas: QRP Fun - Part II"
 (CQ, Vol.48, No.3, March 1992, pp.107-108)

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