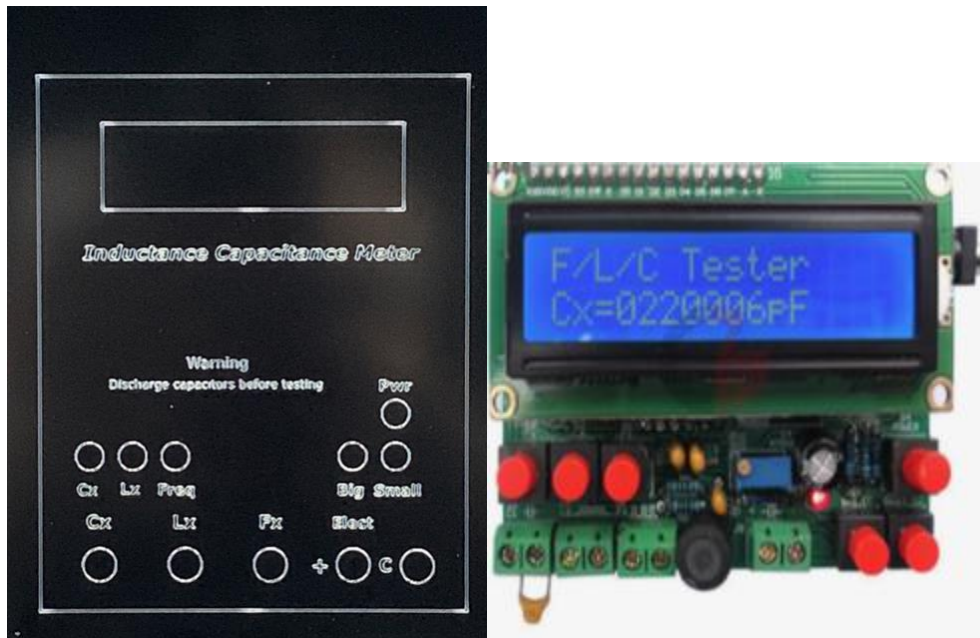


Building an Inductance, Capacitance Meter:

This week I decided to build one of the kits that I have been keeping on the back burner for awhile. It is an Inductance, Capacitance and Frequency meter. I decided to start off creating a new front panel for it in Inkscape and then converting it to GRBL laser G-Code. Now understand that I have a cheap Chinese Laser and regular engraver. I bought it about a year ago and fiddles around with it and made some panels but then business got busy and Covid 19 happened, and it all got put away till last Saturday. It had taken a fairly steep learning curve to learn how to use it and in the meantime, I had forgotten more than I knew so I had to re learn how to use the darn thing. The first thing I tried to cut on a piece of wood just as a test just burst into flames and I had to put that out and fan the smoke detector to stop it from scaring the dog and cats. When I did some tests, I discovered that S700 as a strength on the laser was a bit much, so I turned it down to S60 and everything started to work ok. Then I had to actually create the image and I did that in Inkscape which isn't them most intuitive program in the world, but I got it and it worked great. Oh, the other thing is this is all being done on an old laptop and I had to load all the drivers and stuff to make it talk to the CNC machine. It only took me a few hours to get it all working and I cut my first one using the laser and it turned out pretty good. See below...

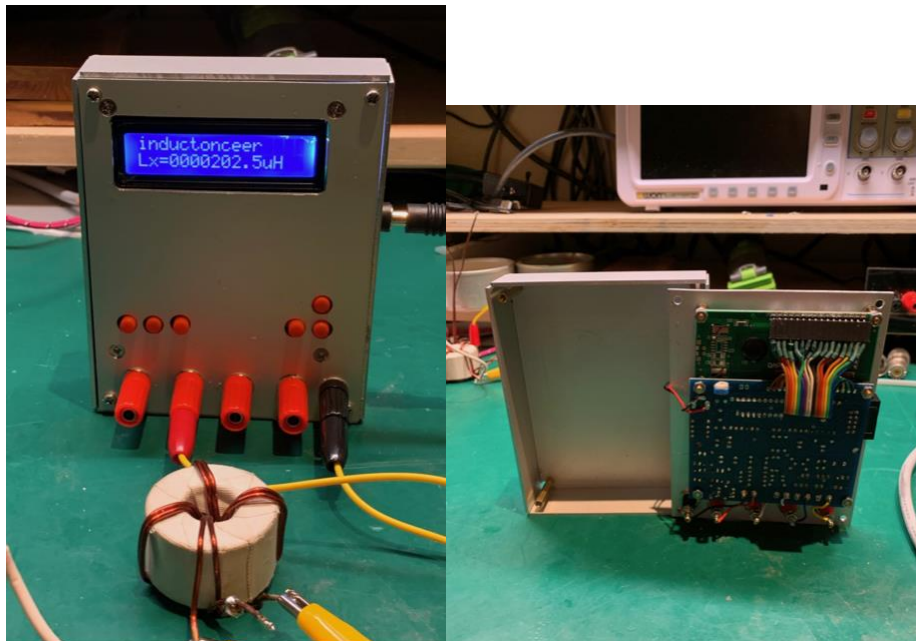


So what is this thing that I have started working on? It is available on Aliexpress for about \$7.50 Can. It covers both Inductance and Capacitance and has a little frequency counter on it too. It can read inductance from 0.1 micro henrys to 1 Henry. Capacitance covers 1pF to 2.2 uF in non polarized capacitors and from 0.5 uF to 12000 uF electrolytic. Not bad eh. By the way there is another one out there on Ebay and other places for about \$20 and it has even higher resolution. I put a picture of it up too.

So what can you do with these things you ask? Well, the best way to check out those junk box inductors and variable capacitors that you just had to have at the last flea market is a one thing you can do. The little things are pretty accurate and just work right out of the box. Oh yeah you can buy one of those really expensive multimeters that have capacitive ranges on them, and they work too but not down to the ranges that you see on this little thing. For inductors it is ideal because otherwise you are trying to figure the inductance out using a graph or perish the thought, MATH. So, treat yourself to a neat little tool to put on the workbench and have some fun determining what those weird looking coils and capacitors are at last. The nice part about it is that it is entirely in keeping with the Ham's number one rule..."If you can get it for nothing or for under 20 bucks it's a keeper and you're a winner."

Building an Inductance, Capacitance Meter: part II

So, I completed the Inductance, Capacitance Meter last weekend. Here's a picture of it without the front panel on it. I'm exploring other methods to use my laser engraver to print directly on the anodized aluminum so that will have to wait for awhile.



As you can see, I just bent up a nice little aluminum box to put it in and then milled out an opening on the front for the display. It worked out ok and works perfectly. A nice little project for last weekend.

If you are interested in learning how to do things like this and add some pretty nifty items to your shack, just ask. There are lots of people that do stuff like this, and home brewing is a wonderful part of this hobby of ours. Whether it is simple stuff like this or even more complicated things like building from scratch a complete station, don't hesitate to ask me. I've done them all in the past. In fact, we used to run, through

the SAARC, a Build it Club out of my home in Lethbridge back in the early 80's. There are still lots of guys still around that used to belong to our group and we had a lot of fun working in my basement creating some cool stuff and learning skills from each other back in those days. IF you want to learn how to do it, just send me a note. I'm always ready to encourage anyone to try new things rather than sitting for endless hours in front of an appliance just listening to stuff.

73

Tom B. VE6ARG