



Short CIRCuits

April 2021

SERVING CENTRAL ILLINOIS AMATEUR RADIO SINCE 1921

IN THIS ISSUE

From The President

by Rick Suhadolc NgCKL

Strange weather this spring 2021. Major ice storm in January, winds over 50mph in March, and today April 25th a Coronal Mass Ejection on the sun causing a G2 moderate geomagnetic storm.

I usually watch ABC news program "Full Measure" on Sunday mornings, but today's program was cancelled due to poor ABC network Satellite problems. I did not notice any interference on the 160 meter net this morning, however I did pull the plugs and antennas on all equipment just in case after the net. Its Tornado season again and a storm is predicted for Wednesday April 28th.

Even if using a lightning arrestor or polyphaser I would suggest disconnecting the antennas from your radio equipment and grounding all antennas during a storm.

I believe we will have a CIRC zoom meeting for April 28th. and give everyone a chance to get vaccinated regardless of age during the month of May.

The ARRL has again amended Field Day rules to allow hams to participate from their home radio locations. We will need to determine if a remote field day location is necessary.

Remember the covid vaccination is 95% effective but there is a 5% chance of infection.

I would like to thank Keith AC9S for hosting the radio exams this past month, and all that helped with administering FCC tests to the four applicants that passed on April 17th, and congratulations to our four upgraded amateurs.

Thank You all for your club participation.

Stay warm and healthy Rick
NgCKL

A Quick CW Decoder

Article by Grant Zehr AA9LC

A Quick CW Decoder

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Puttering around the shack in the late winter weeks, I looked for another project to build, preferably using parts on hand. I have been working on Arduino projects lately, so that was a natural starting point. I decided to revisit the CW Decoder designed by Hjalmar Hansen OZ1JHM. Tom Planer KJ9P, built up this project a few years ago and drew up a construction diagram for the unit. I am always trying to improve my CW skills, so a decoder made sense for me.

The circuit is amazingly simple with only 3 resistors, one capacitor and an LED. I used the original Arduino code (sketch) developed by OZ1JHM but changed a few lines of code so I could use a serial adapter for the four by twenty-line LCD display. The small serial interface card used here can be found on-line for a couple of dollars and attaches to the back of a standard LCD display.

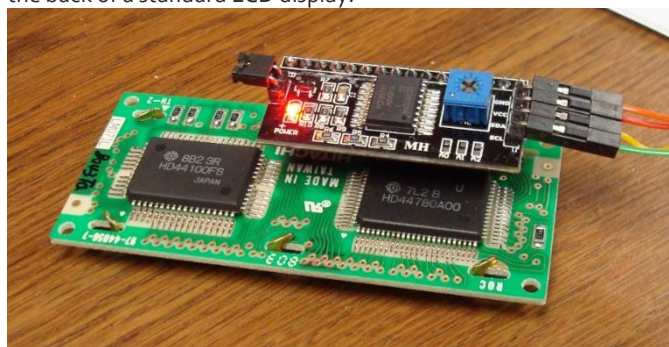


Figure 1.

It allows serial communication which simplifies wiring the LCD to the Arduino Uno controller.

The first step was to wire up a prototype on a breadboard.

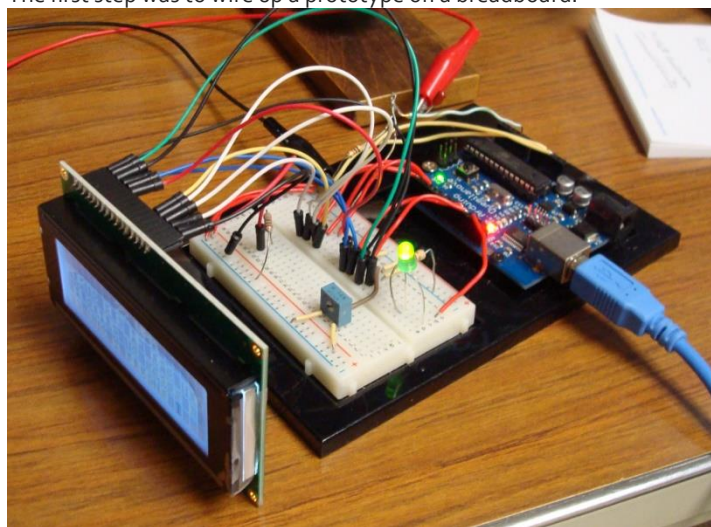


Figure 2.

The breadboard I used has a spot for an Arduino Uno and some free space for components needed for your project. With the breadboard assembled, the decoder was tested, and it performed reasonably well. Next to find a chassis. A metal tea container was located in the back storeroom and pressed into service.

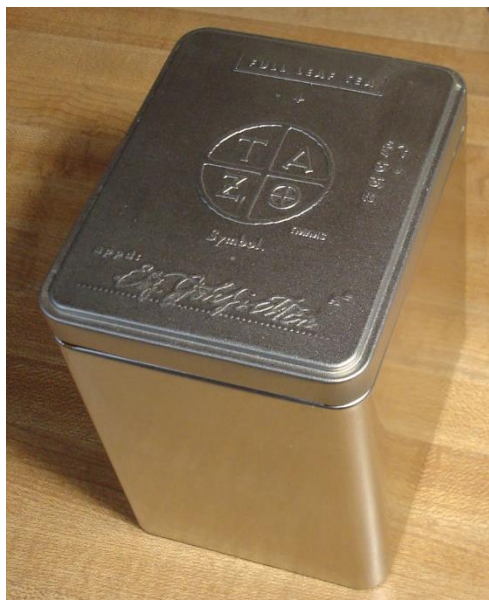


Figure 3.

The bottom of the container became the front panel for the decoder.



Figure 4.

An Arduino proto board matching the footprint of the Arduino Uno was used to amount the few needed components.



Figure 5.

The proto board (sometimes called a "shield") plugs into the Arduino and simplifies construction. After some sheet metal work, the board, LCD, and LED were installed, and the project was complete.



Figure 6 and 7.

Some (many) CW operators look with scorn upon the use of CW decoders, viewing use of a decoder as a sign of moral weakness, laziness, and a general lack of "the right stuff". In my opinion, however, CW readers have their place. A decoder gives the raw beginner a way to monitor the CW bands and learn what is going on. As your CW skills progress you can use the decoder to double check your 'copy'. When you begin copying faster stations it is natural to wonder "How fast is that station sending?".

The decoder does an excellent job of determining the speed another station is sending. Another common question is "Why can't I copy that guy?" If the decoder is struggling at the same time you are, it may be that the station is sending poorly! Just because a station is sending fast, it does not follow that he is always sending good Morse. The best use of CW decoders may be to monitor your sending practice. The decoder will quickly let you know if you are running words together, mixing up your characters or sending "X" instead of "TU". If the decoder can't copy your 'fist' perhaps you need a little 'off-the-air' practice time!

This CW decoder has a few peculiarities which must be considered. Most important is that it relies on the pitch of the tone received being

the correct frequency. Tuning in the signal becomes critical. In practice you will find the decoder can only copy Morse which is sent accurately. It completely fails on stations sending with a 'bug' and struggles with Morse sent by hand key. Conducting a QSO while relying on a decoder is not recommended. The decoder will almost certainly fail to decode properly at some point, resulting in an awkward moment for both stations.

An on-line search reveals that a lot of other amateurs have experimented with the OZ1JHM design, and some of those modifications may help improve the design's performance. I have not yet tried any modifications to the basic design, but I did leave some space inside my small cabinet for another board if needed! I have had a good time building up this little unit and I would recommend it as a great 'first Arduino project'.

March 17, 2021

Grant Zehr AA9LC

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Central Illinois Radio Club

<http://www.qsl.net/wgaml/>

Bloomington, Illinois

AREA NETS

Tuesday 8:30 P.M. 28.450

CIRC Open 10 meter Net

Tuesday 9:00 P.M. 146.640 (156.7PL)

CIRC Open Net

Thursday 8:00 P.M. 28.450

Vertical polarization is encouraged but not required

Sunday 08:15 A.M. 1.915

Open 160 meter AM net

AREA EXAM DATES

Following is the schedule for W5YI-VEC Amateur Radio exams for the year 2020. At the Community Room of the Bloomington Public Library located at the intersection of E. Olive St. and S. East St. Entrance off of S. East St.

Please bring two forms of identification. You must have an FCC issued FCC Registration Number (FRN) or Social Security Number. We cannot administer a test without your FRN or SSN. You will need a copy of your Current license plus any CSCE you want to apply.

PLEASE – Contact Keith AC9S at AC9S@Hotmail.com to sign up.

2021 dates

TBD

Exams' in Morton are held at the Morton Public Library, 315 West Pershing at 12:00 Noon the third Saturday of even numbered months and at the Peoria Superfest.

CIRC Meeting
 Fourth Wednesdays of the month at 7:00 p.m. at the
 American Red Cross
 1 Westport Dr.
 Bloomington, IL 61704
 ** Until further notice the meetings are virtual and only for
 members. We are sorry for any inconvenience. **

Calendar of Events

Daily Coffee Klatch Monday thru Friday

**** The weekly Coffee Klatch has been moved to the 146.64 repeater
 for the time being. Remember the new PL is 156.7hz *****

9:00 a.m. at Dairy Queen Veterans at Cub's
 XYL's Join the OM's Monday and Friday

Weekly 10 Meter Net

Every Tuesday evening at 28.450 MHz- at 8:30 p.m.

Weekly 2 Meter Net

Every Tuesday evening on the 146.640-repeater at 9:00 p.m.

Weekly 6 Meter Net

Every Wednesday evening at 50.135 MHz at 8:00 P.M.

Weekly 160 Meter AM Net

Every Sunday morning at 1.915 MHz at 8:15 A.M.

75 Meter HF Traffic handling nets

NET / TIME	FREQ khz
NORTH CENTRAL PHONE NET	
M-F 7:00 A.M. central time	3912
ILL. PHONE NET	
M-F 4:45 P.M. central time	3857
SUN. 8:00 A.M. central time	3940
ILLINOIS SIDEBAND NET	
M-SAT. 6:00 P.M. central time	3905
75 METER INTERSTATE SIDEBAND NET	
DAILY 0100 UTC	3985
ITN INDIANA TRAFFIC NET	
DAILY 1230 UTC	OR 3910
2200 UTC	3912

CENTRAL ILLINOIS RADIO CLUB
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WEB PAGE

[HTTP://WWW.QLS.NET/W9AML/](http://www.qls.net/W9AML/)

*President: Rick Suhadolc (N9CKL)
Vice-President: John Payne (AC9TN)
Secretary: Rob Cherry (N9TO)
Treasurer: Larry Gibson (W9BJG)
Member at large: Grant Zehr (AA9LC)
Newsletter/Web Editor: Jeff Lovell (KC9QQM)*

The CIRC is a not-for-profit ARRL special service club whose purpose is to advance the service of Amateur Radio. Located in Central Illinois, the CIRC and its members welcome all to use the 146.64 repeater and to attend club meetings.

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Short CIRCUITS

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