



Short CIRCuits

April 2019

SERVING CENTRAL ILLINOIS AMATEUR RADIO SINCE 1921

IN THIS ISSUE

From The President

by Jim Baker WB9EDL

Summer events are drawing near. A reminder that the McLean Co. Wheelers Spring Metric is Sat. June 15, 2019. The C.I.R.C. will again be providing radio support for the ride with fixed, mobile and bicycle mobile members.

Field Day is on again this June. I goofed with the date announcement before. The correct date for the contest is June 22-23, 2019. Keith AC9S has made the correction with the OldTown Township for our operating site.

The club holds election of officers in May and the new term begins in September. The nominations so far are;

President, Rick Suhadolc NgCKL

Vice President, John Payne AC9TN

Secretary, Keith Hanson AC9S

Treasure, Greg Kellerman KC9WVR

Open nominations from the floor are welcome as well.

Fritz Bock WD9FMB will talk with us about ARES, WinLink and the upcoming ARES Simulated Emergency Test.

73, Jim WB9ED

124745	-10	0.2	442	-	NOLWF	JA7QVI	R-13
124800	Tx		738	-	JA7QVI	AA9LC	EN50
124815	-10	0.2	441	-	AA9LC	JA7QVI	-16
124830	Tx		738	-	JA7QVI	AA9LC	R-10
124845	-11	0.2	442	-	AA9LC	JA7QVI	-16
124900	Tx		738	-	JA7QVI	AA9LC	R-11
124915	-12	0.2	441	-	CQ DX	JA7QVI	QM08
124930	Tx		738	-	JA7QVI	AA9LC	R-11
124945	-12	0.2	441	-	CQ DX	JA7QVI	QM08
125000	Tx		738	-	JA7QVI	AA9LC	R-11
125015	-15	0.2	442	-	AA9LC	JA7QVI	RRR
125030	Tx		738	-	JA7QVI	AA9LC	73
125045	-14	0.2	442	-	AA9LC	JA7QVI	73
125100	Tx		738	-	JA7QVI	AA9LC	73
125115	-11	0.2	442	-	HOAV	JA7QVI	-14
125145	-8	0.2	441	-	HOAV	JA7QVI	8874

What I Did Last Summer

Article by Grant Zehr AA9LC

Automotive Radar?

Submitted by Rick Suhadolc NgCKL

N1SF-2 Back On The Air

Submitted by Gary Huber AB9M

What I Did Last Summer

Article by Grant Zehr AA9LC

When I was a kid, I always hated that first back-to-school writing assignment. We all had to get out a clean sheet of paper and write a couple paragraphs about "What I Did Last Summer". It seemed to me that all the other kids had gone on vacation to the Ocean, or California, or the Black Hills while my summer was pretty much a work assignment on the family Dairy Farm. Gardens to hoe, bean fields to walk, hay to be put up and always, always, cows to be milked. It's hard to get very creative when that's the list you've got to work with. Fortunately, I no longer have those chores on my daily list, so summers go a lot easier. As a matter of fact, I had a lot of fun last summer. I decided to put my 6 meter antenna up in the early summer and chase grid squares. My previous experience operating on 6 meters was pretty much limited to the CIRC Field Day operation once a year, where we usually made a lot of contacts, mostly on SSB. But I have operated very little from the home QTH, so 2018 was the year to give it a try.

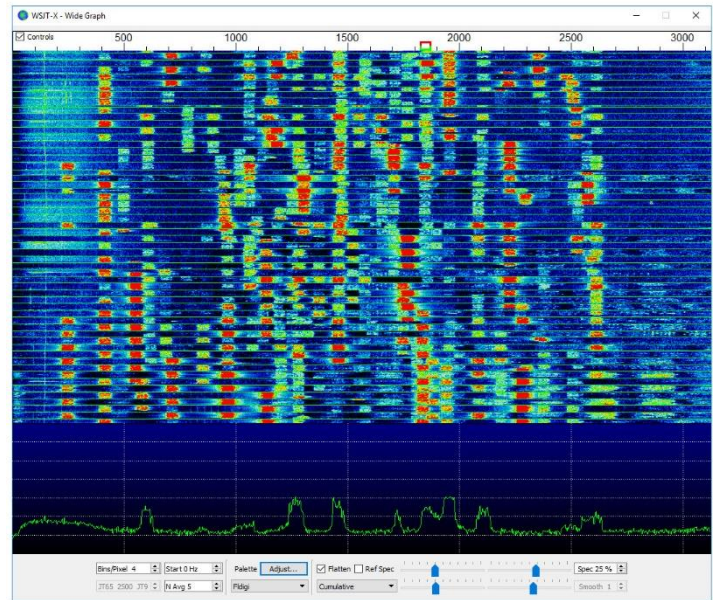
Back in the 'olden days' getting on Six meant buying (or building) a separate radio to cover the band. But for many years now, most HF transceivers cover 6 meters as well. My Icom IC-756 Pro II includes 6 meters, so that part of the problem was solved already. For my antenna I re-installed my Comet A502-HB beam. It's a Japanese manufactured antenna and is very light and easy to install. It's based on the HB9CV type of 2-element beam, and it's probably equivalent in performance to most of the standard 3 element beams on the market. The only way I could mount the antenna was to tuck it up under my Mosley Tri-bander on my (only) tower. See figure 1. That's certainly not an ideal arrangement but was about my only choice. I figured it should work better there than it would hanging on the wall in the garage!



Diamond 502HB antenna mounted below HF tri-bander

With the radio and antenna installed, I was ready to get on the air. I started out by listening on the SSB calling frequency (50.125 MHz), and occasionally scanning up the band. I programmed frequencies into the memory of my transceiver so I could quickly check every 5 KHz for activity. I started at 50.125 and then 50.130, 50.135 etc. on up to 50.155 MHz. It was simple to scan those frequencies manually and I made a few contacts that way. But only a few. It seemed like the band was dead, even though the sporadic-E season was starting up and it seemed there should be more stations on the air.

Then, on a tip from AC9S, I listened on 50.313 using FT-8. Aha! It seemed that everyone had congregated on the 3 KHz slice of VHF spectrum allotted to the new mode. I could hear lots of stations (see fig. 2) and quickly began working stations in new grid squares. As the summer went on, I watched the level of sporadic-E propagation on the "DX-Maps" web-site and tried to operate when activity was high. It turns out that contacts into Florida and Texas are easy when there is some Sporadic E activity. Also, it's not too hard to make contacts into the Caribbean and Central America. So, I was able to add a few countries to my DXCC total, which was kind of a surprise.



FT-8 Activity on 6 meter band, June 6, 2018

On a few days, there were multi-hop sporadic-E openings into Europe. The highlight of my "Six-meter Summer" was a QSO with JA7QVI in Japan during a brief opening on July 10, 2018 (See fig. 3).

224730	Tx	738	~	JA7QVI	AA9LC	EN50
224745	-10	0.2	442	~	N0LWF	JA7QVI R-13
224800	Tx	738	~	JA7QVI	AA9LC	EN50
224815	-10	0.2	441	~	AA9LC	JA7QVI -16
224830	Tx	738	~	JA7QVI	AA9LC	R-10
224845	-11	0.2	442	~	AA9LC	JA7QVI -16
224900	Tx	738	~	JA7QVI	AA9LC	R-11
224915	-12	0.2	441	~	CQ DX	JA7QVI QM08
224930	Tx	738	~	JA7QVI	AA9LC	R-11
224945	-12	0.2	441	~	CQ DX	JA7QVI QM08
225000	Tx	738	~	JA7QVI	AA9LC	R-11
225015	-15	0.2	442	~	AA9LC	JA7QVI RRR
225030	Tx	738	~	JA7QVI	AA9LC	73
225045	-14	0.2	442	~	AA9LC	JA7QVI 73
225100	Tx	738	~	JA7QVI	AA9LC	73
225115	-11	0.2	442	~	N0AV	JA7QVI -14
225145	-8	0.2	441	~	N0AV	JA7QVI RR73

I found that it was easy to start collecting grid squares and to get them confirmed on LOTW. Most FT-8 operators are comfortable with computers and LOTW and are happy to confirm contacts on-line. By mid-summer I had already reached my original goal of 100 grid squares (needed to qualify for the ARRL VUCC award). I kept going and wound up with just over 300 grid squares for the 2018 six meter "season". By September the Sporadic-E activity had tapered off, as it does every year. I took down my six-meter antenna, since it interferes with 10-

meter operation on my TA-33 tri-bander. Then I put up a doublet antenna and discovered it 'accidentally' tuned up on 160 meters! But that's another story.

Summer is almost here, and if you're interested in doing something a little different, I'd encourage you to give 6 meters a try. Most of the activity on 6 meters relies on Sporadic E propagation, and Sporadic E is not affected by the solar activity cycle. So, we may have a great 6 meter season, even though HF propagation is generally poor. The antennas are small, and when the band is open you can make lots of contacts. If you like FT-8, then it's even easier to fill up your log. So, consider putting up a halo antenna or a small beam and giving the 'Magic Band' a try!

Are You Ready for Automotive Radar?

Submitted by Rick Suhadolc N9CKL

An Article in Microwaves and RF Magazine By Mark ELO from Tektronix

Recent Regulation Changes have allowed the automotive Radar Market to shift from the 24 GHZ band to the 77Ghz Band, introducing a range of new design and test challenges.

Higher Frequencies facilitate wider bandwidths and increasing resolution, while the shorter wavelengths provide smaller form factors and improved range ENABLED BY A RELAXATION OF THE MAXIMUM POWER SPECIFICATION IN THE 77ghz BAND.

Better resolution, smaller size and longer range mean that radar is rapidly becoming the sensor of choice for advanced driver Assistance Systems (ADAS) and autonomous -vehicle applications.

Ricks Commentary:

Will the new ADAS systems be compatible with Ham Radio?

Who will verify these Radar Transmitters are working at the proper frequency ?

Who relaxed the Maximum Power restrictions? And what testing have they done on Humans?

N1SF-2 APRS Node Back On The Air

Written by Gary Huber AB9M

We were able to get N1SF-2 (APRS Wide2-2) on a Kenwood D-700 installed in the E-Penthouse at #1 State Farm Plaza, last Tuesday (3-26-19). It seems to be working, see <<https://aprs.fi/info/a/N1SF-2>>, but due to the limited TNC functions of the Kenwood built in TNC, not as well as the full KPC-3 Plus, Kantronics function set of N9PE-2.

I will be trying to figure out what is wrong with the N9PE-2 equipment and if I can resolve the problem get it re-installed. But it has become apparent that the State Farm site is more difficult to access and due to the requirement that SF retirees must have a full time SF employee escort them, the time for adjustments and repairs, or replacements, place an undue burden on those who work for a living. I have plenty of time, but others have to take personal time, vacation time, or their lunch hour to accommodate me.

We were wondering if we might be able to utilize the VHF antenna and feedline at the McLane County Law and Justice Center for an APRS Node replacing the one currently at State Farm? At one time we had access there for storm spotting / disaster network control. In addition that site might also be used for the statewide VHF digital backbone with the addition of isolation cavities to prevent de-sense of the digipeaters.

Let me know if your gateway is copying N1SF-2 and if I can help you with APRS and the digital backbone (I am trustee for WX9WX and it is currently not being used).

Have an upcoming event that the club might be interested in attending or supporting?

CONTACT JIM BAKER WB9EDL
Or bring it up at the next club meeting

AREA NETS

Tuesday 8:30 P.M. 28.450
CIRC Open 10 meter Net

Tuesday 9:00 P.M. 146.940 (103.5PL)
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

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If you are wondering where all the nets are, it was brought to my attention that many of these are no longer in operation. I have left the ones the CIRC handles directly.

If you want another net listed, please send me an email directly and please verify it is a current net and I will add it to the list.

Jeff KC9QQm

Kc9qqm@gmail.com

AREA EXAM DATES

Following is the schedule for W5YI-VEC Amateur Radio exams for the year 2018. 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 a Social Security Number. We cannot administer a test without your SSN. You will need a copy of your Current license plus any CSCE you want to apply.

2019 dates;

May 25 3:30-5:00pm

July 20 TBD

Nov. 9 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. Sep 21 (Superfest),

Regular Calendar of Events

Daily Coffee Klatch Monday thru Friday
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 146.940-repeater at 9:00 p.m.

Weekly 6 Meter Net
Every Thursday evening at 50.135 MHz at 7:00 P.M.

Weekly 160 Meter AM Net
Every Sunday morning at 1.915 MHz at 8:15 A.M.

CIRC Meeting
Fourth Wednesdays of the month at 7:00 p.m. at the
American Red Cross
1 Westport Dr.
Bloomington, IL 61704

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 146.94 repeater and to attend club meetings.

*Submissions for the newsletter should be received by the 15th of the month and may be emailed to:
Jeff Lovell
e-mail kc9qqm@gmail.com*

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WEB PAGE

[HTTP://WWW.QSL.NET/W9AML/](http://www.qsl.net/w9aml/)

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Short CIRCUITS

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