

Next Meeting Wednesday Jun 25, 2014

Central Illinois Radio Club June 2014 Newsletter

**June Meeting,
Wednesday the 25th
7:00 PM at the Red Cross**

The Central Illinois Radio Club has a long history of participation in the ARRL Field Day activity. The September 1933 issue of QST reported the results of the very first ARRL Field Day held in June 1933. High score for the National event went to W4PAW in Indian Rocks Beach, FL. Second place went to (you guessed it) the Central Illinois Radio Club running 40 watts and operating on both 7 and 14 MegaHertz (or megacycles as they were known then). CIRC operated with the call sign W9ZZAL and actually had the highest club score. The W4PAW group was not a club, but simply a group of 6 operators. I hadn't realized that contesting specialists were even around in 1933!

The Second ARRL Field Day report in September 1934 QST reported that CIRC members had endured “scratched arms, torn trousers, skinned ankles, and mosquito bites. Three kittens were found in a box in the cabin (at Lake Bloomington) and were accepted as mascots. ‘We were glad to see the end, but happy to know we had portable equipment that was reliable under trying conditions’ “. In 1934 the CIRC operated using the W9AYO call sign and finished with 51 QSO’s for a third place score. Another Illinois club (The Egyptian Radio Club from Southern Illinois) edged them out for second place.

In 1935 the winning club was W6CSO/6 from Wilmington, California. They operated two transmitters, but “due to mutual QRM the two stations were not operated simultaneously”! Boy, does that sound familiar!

This year the ARRL Field Day is on June 28-29 and our Field Day Committee has been hard at work. As you know we'll be at the Township building again this year for our annual outing and it should be a great time once again. We'll have CW, SSB, and Digital mode stations operating through the 24 hour operating period. Set up will start Saturday morning after we have breakfast at the hall. We're making it a point to include new operators this year. Just show up and let us know you're ready to get on the air

Our meeting this month will be on June 25, 2014 at 7:00 pm at the Red Cross building. It will include a report from the Field Day Committee and you'll have a chance to ask any questions you might have about our Field Day

operation. Tom KJ9P will present a discussion of balun construction and use. See you on Wednesday!

Grant Zehr AA9LC

Agenda

1. Introductions and new members
2. Minutes of May 2014 meeting - KC9PIM
3. Treasurer's report -N9ZKS
4. Wheelers Activity -WB9EDL
5. Field Day Planning - KC9FWL
6. Old Business
7. New business
8. Adjourn
9. Program – Building and Using a 4:1 Balun at Your Station – KJ9P

*Tickets were handed out prior to the meeting for door prizes

1. Grant called the meeting to order at 7PM;
Introductions were made, no guests were present
2. Minutes from last meeting were emailed out.
 - a. Mike KC9FWL motion to accept minutes
 - b. Keith AC9S second
 - c. Motion Carried
3. Treasurers Report: Balance is \$2081.48; no unexpected expenses.
 - a. AB9M Motion to accept treasures report
 - b. Mike KC9FWL Second
 - c. Motion Carried
4. Officers for next year
 - a. Nominating committee chosen last month – Recommendation was to re-nominate existing officers for 1 more year
 - b. Grant asked 3 times to close nominations.
 - i. Gary AB9M Motion to Close
 - ii. Rick (HRU) Second
 - iii. Motion Carried

- c. Keith AC9S Moved that Nomination be accepted as recommended
 - i. Greg KC9WVR Second
 - ii. Motion Carried
- 5. Wheelers Ride
 - a. Jim WB9EDL presented information to the group with regard to the upcoming Wheelers Ride event. The list of those who signed up at the last meeting was submitted. Routes are the same as last year. Setup at the Start will begin around 6:00am and it looks like we have plenty of volunteers
 - b. Jim also sent a card to the Wheelers on behalf of the club due to the unexpected sudden passing of Raydeen Davis.
- 6. Pow Wow – The Pow Wow will not be happening this year
- 7. Miles of Smiles
 - a. Norm presented information with regard to the Miles of Smiles event on July 26 from Downs to Gibson City.
 - b. Norm will find out some more info and report back to the group.
 - c. There was some discussion that repeater access could be a challenge in that area.
- 8. Field Day
 - a. Mike KC9FWL Passed around signup sheets for operator times.
 - b. A field day checklist packet was also handed out to the members present

Below are some brief notes, but most of the content discussed was in the packet that was handed out.

 - c. Chuck has a UPS that we will use at field day (see item #9 below)
 - d. No GOTA Station this year – Allow guest operators to work from any station
 - e. AB9M to copy bulletins Friday before field day. Many of us will also try as backup
 - f. Radiogram to Section Manager (WB9EDL)
 - g. AB9M (Gary) to submit our Field Day Site to the ARRL station locator
- 9. 1350 APC UPS + Warranty = \$140
 - a. Chuck informed the group that he had purchased a UPS + warranty on sale at SAMS club and had it available for the club to purchase if we chose to.
 - b. Mike (KC9FWL) moved that we purchase this UPS to use initially for field day and move to the repeater site when we are ready for it there.
 - i. Gary (KD9F) Second
 - ii. Motion Carried

- 10. Grant reported on VU2MY visit Last Week
 - a. Pictures were posted and a link was emailed out
 - b. Gary (AB9M) asked permission to send photos to N4AA & List Names (Hari gave permission)
 - c. Hari reported that Suri was very excited and happy after his time visiting our club.
- 11. Insurance for club equipment
 - a. Duane reported that we still need to value the list of all equipment (Replacement Cost Value)
 - b. Also need a second list for State Farm Info
 - c. Earl and Chuck will work on estimate for the repeater
- 12. Norm(N9ZKS) has Superfest Tickets available for sale.
- 13. Keith's (AC9S) Tower project is underway. He brought a piece of Phyllistran to pass around the group.
- 14. Chuck gave a Report on the internet availability at the Water Tower site.
 - a. No Comcast
 - b. Cirben \$1500-\$3000 to install + \$200/month for 50mb
 - c. Wireless in town 5mb/440 No install cost
- 15. Gary (AB9M) Made a motion to Adjourn.
 - a. Josh (KC9UJS) Second
 - b. Motion Carried
- 16. Door Prize Drawing was conducted and the minute taker neglected to write down the winners.

taken by Josh Golladay KC9UJS

Amateur Radio Operators Train National Guardsmen on HF Communications

Eight Prattville (Alabama) Army National Guard members from the 231st Military Police Battalion armory traveled to Fort McClellan (Anniston, Alabama) for specialized training in [Amateur Radio] earlier this month. The military is trying to bring back the use of HF communications in the service rather than having sole dependence on satellite communication.

With today's email and cellphone communication, radios now are used primarily during natural disasters and emergency situations such as 9/11, Hurricane Katrina and Hurricane Sandy when high cellphone use can overload the satellite system. Special radio frequencies can [be used to] communicate with emergency management agencies during such times.

Joel Black, a member the Region 4 Army Military Auxiliary Radio Service, or Army MARS, said [HF] radio is much more efficient than satellite communications. "Today's military has started to depend more on satellite

communication. However, HF communications is a more rapidly deployable communication system," Black explained. "You can set up an antenna, tune into the right frequency and start talking within minutes. It takes much longer to set up a satellite system."

Trying to set up a satellite communication unit in the field can be cumbersome for military members, Black said. Oftentimes, two men are needed to set up a 20-foot or 8-foot satellite dish, transponder and other equipment. The whole process can take up to two hours. Three ham radio operators at McClellan taught the soldiers from Prattville how easy it could be.

The licensed Army MARS trainers shared their expertise in proper use and selection of radio frequencies, how radio waves work, communications technology, safety and techniques of antenna installation.

Those in charge of the three-day course included Alabama Army MARS State Director Wade Brock, Alabama Army MARS Training Officer John Briscoe and Georgia Army MARS State Director Jerry Lofstead.

Army MARS, which began in 1925, is a Defense Department organization of Amateur Radio operators that train on a daily basis for providing incident communication for both military and government agencies.

Ham radio operators are most associated for their contributions as part of the U.S. Army Signal Corps sending messages between troops during the Korean and Vietnam Wars with HF radio-telephone. -- *Rebecca Burylo, McClatchy News on May 12, 2014, ©2014 the Montgomery Advertiser (Montgomery, Ala.) You may use or reference this story with attribution and a link to:*

<http://www.emergencymgmt.com/safety/Ham-Radio-Operators-Train-National-Guardsmen.html>

[Thanks to Mike Harla, N2MHO, EC, Cumberland County, New Jersey, for forwarding this story - ed.]

Letters: New Focus on the "Served Community"

A somewhat different look at local emergency response. Certainly makes sense to those of us with families.

I appreciate the focus you have been bringing in recent QST articles. I was active in leadership in Palm Beach County (Florida) ARES during our calamitous 2004-2005

hurricane seasons when we activated for four different storms. Based on that experience, we encountered challenges under the then-current ARES model, which focused on served agencies. Staffing was a major issue for us. Based on this experience, I came to the conclusion, further reinforced in the years that followed, that the ham community needed to turn its focus toward their own individual neighborhoods and communities.

Now, I am more convinced than ever that the future utility of Amateur Radio in public service lies in the individual ham's immediate community - the "served community" as opposed to the traditional served agency model. The public still has little recourse when cell phones stop working. A ham can organize a communications system in his neighborhood, make it known that his is the door to knock on to get a message out, and when an incident happens, he can do what he is most likely to do anyway: hunker down with his family and protect them and his property, instead of being asked to make accommodations to leave all that is precious to him behind to drive through potentially hazardous conditions to a distant service point like an EOC or shelter to serve somebody else's needs.

Of course, there will always be a need/opportunity for well-equipped, well-trained, well-organized self-sufficient teams of communicators to travel to areas affected by worst-case scenarios, and that should be part of planning efforts, but they should come from operators with personal situations that have been unaffected by the disaster effects. Asking a ham to leave his family and property who are clearly out of harm's way to go help others is much more reasonable and rational than asking him while he and his family are personally affected by the incident. -- *John Sheats, WD4V, Loxahatchee, Florida*

DDS Signal Generator With Buffered Output

by Jeff Lovell KC9QQM

In getting back to the builder side of the hobby, I had picked up an old dual trace O-scope that I had fixed and a Heathkit frequency counter, neither of which I knew how accurate they were. What I needed was a decent signal generator that had a good range. After doing some searching on E-Bay, I ran across a number of signal generator based on the Texas Instrument AD9851 Direct Digital Synthesis chip. Basically it has stored in it all the mathematics to create a sine wave of any frequency from 1 hertz to the reference oscillator running it.

There seems to be a ton of these available from ones like the mine that had a microcontroller built in to others that didn't, allowing it to be run from an Arduino or Rasberry Pi. The cost are fairly cheap, around \$40-60.

Mine was advertised to run from 0-20MHZ and had a sine and square wave output. Well it did what they said but with a few issues...first the square wave is created from the sine wave



being fed back into a comparator in the chip and being referenced against a DC voltage. Problem with this is the sine wave output drops in level as you go up in frequency and you finally get to a point where the level is not enough to 'trigger' the reference level on the comparator and you get nothing. Also both outputs were riding on a rather high DC offset level with no coupling provided. Lastly after some digging I found that this particular board was for experimenting with the TI chip and really wasn't laid out well to put in an enclosure. Here is the one I bought;

So to make this into a nice bench ready generator, I needed to do the following;

1. Remove the display so it could be mounted
2. Extend the 4 push buttons that control it
3. Extend the power input jack
4. Buffer/amplify the output to make the level useable at higher frequencies and add coupling

The display was on an inline socket of pins so I used an old ATA ribbon cable from a computer and made an extension cable about 8" long. I did something similar for the 4 control push buttons, soldering ribbon cable to each of the terminals and ultimately to the back of 4 push buttons on the front of the enclosure I put it all in.

I removed the BNC output jack and the switch right behind it that allowed you to switch the output between sine and square wave. I wanted to be able to have both available at the same time. I wired these individual outputs to separate BNC connectors on the front.

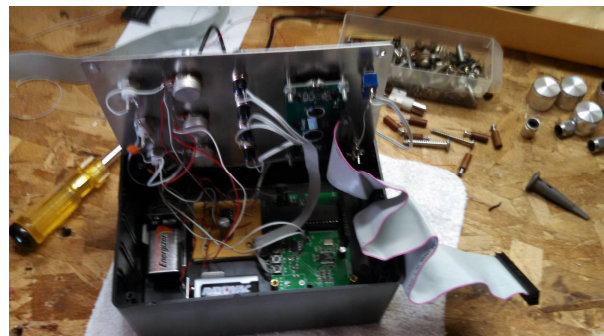
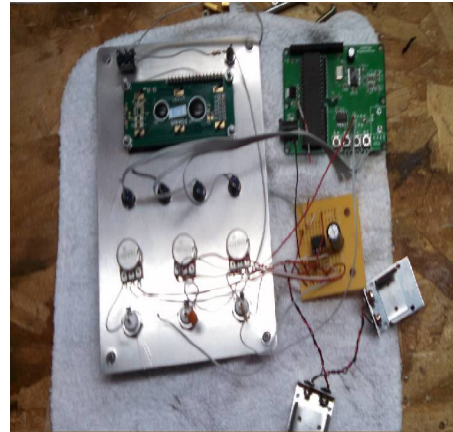
The very cheap 9v dc adapter that came with the unit was very noisy with lots of high frequency coming through from the unshielded switch mode power supply. I opted on battery power so I would not have a problem with ground loops or the noise I was getting. I added a power switch which the original board didn't have and also jumpered power from the DDS board to the buffer board I describe below.

That left the buffering and amplifying of the signal. Recently I found and subscribed on YouTube to the videos that W2AEW

made. <https://www.youtube.com/user/w2aew> He is an engineer and has some really great videos on everything from basic transistor amplifiers to how to use a scope and other tutorials. For those like me that have a Softrock Ensemble RX II, he just made this video -> <https://www.youtube.com/watch?v=BG0rmMGpwMc>

Anyway he did a nice tutorial on using an op amp as a buffer with a DC offset so I adapted his work and created a simple amp with an input and output level control and a DC level offset. This was assembled on a separate PC board and all mounted in the enclosure.

All in all it turned out ok, but I probably needed to do a better job of designing the amp but hey it works!



-Nets in the Area

Mon thru Sat	9:00 A.M. CT	14.2475 (HF) Displaced Peorians
Tuesday	9:00 P.M.	146.255 (103.5 PL) Woodford County
Tuesday	7:15 P.M.	146.910 Tazwell County ESDA Net
Tuesday	8:30 P.M.	28.450 CIRC Open 10 meter Net
Tuesday	9:00 P.M.	146.940 (103.5PL) CIRC Open Net
Wednesday	9:00 P.M.	147.060 Open Net Has Newslane
Wednesday	9:00 P.M.	442.250 103.5 PL ARES Open Net
Varies	147.100	103.5 PL <i>Sometimes</i> Trader's Net follows ARES Net held on 442.250
Thursday	7:00 P.M.	50.135 Open 6 meter Net
Thursday	9:00 P.M.	146.760 (162.2 PL) Open Net with Newslane
Thursday	9:00 P.M.	146.850 (103.5 PL) Open Net Peoria
Sunday	08:15 A.M.	1.915 Open 160 meter AM net
Sunday	7:00 P.M.	146.985 Clinton ARC net
Sunday	8:30 P.M.	147.075 Open Net with Newslane
Sunday	8:30 P.M.	146.730 123.0 PL Open Net

(Please help me keep this list correct. I know it may not be up to date at this time. **Recent changes** Norm N9ZKS)

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 NOTE FREQUENCY

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 Red Cross building in Bloomington (Just north of the airport)

Central Illinois Area Repeaters

Freq	Callsign	Location	PL
144.390	N9PE-2	Bloomington APRS	Digipeater
145.390	N9EZJ	Lincoln WX RACES	103.5
146.730	K9HGX	Decatur(Echolink)	123.0
146.790	WD9HRU	McLEAN CO ARES	103.5 Anti PL on 107.2
146.850	K9PEO	PAARC	103.5
146.940	W9AML	CIRC Club - ARES	103.5 CTCSS
146.985	KA9YPK	Clinton	Back Up
147.015	NX9M	Normal ARES Alt.	88.5 (open*)
147.075	W9UVI	Washington	103.5 CTCSS
147.105	WA9RTI	Decatur	103.5
147.150	WD9FTV	Bloomington	103.5
147.345	K9ZM	Lincoln ESDA	103.5
147.390	WB9DUC	Pontiac FARA	127.3
442.250	WA9RTI	Decatur (ARES)	103.5
442.700	WB9UUS	Normal	107.2
443.800	K9HGX	CENOIS ARC	123.0
444.175	K9MCA	Decatur	100.0

* Repeater is currently in open mode with pl for those with QRM

Central Illinois Radio Club

P.O. Box 993

Bloomington, IL 61702-0993

Web Page

<http://www.qsl.net/w9aml/>

President: Grant Zehr (AA9LC)

Vice-President: Earl Shaffer (WB9UWA)

Secretary: Duane Benjamin (KC9PIM)

Treasurer: Norm Huber (N9ZKS)

Newsletter Editor: Norman Huber

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, 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 snail or e-mailed to the editor at:

Norm Huber

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AREA EXAM DATES

Following is the schedule for W5YI-VEC Amateur Radio exams for the year 2014. at the Community Room of the Bloomington Public Library located at the intersection of of E. Olive St. and S. East ST. Entrance off of S. East St.

This is a CHANGE of LOCATION.

Setup is from Noon to 1:00 normally. Exams begin at 1:00 P.M.. Questions may be directed to Keith Hanson via email preferably **ac9s@hotmail.com** or (309) 378-4416

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.

The first test dates for 2014 are the following Saturdays:

1/18 - Done

3/15 - Done (9 participants - All got Tech 2 also got General)

5/03 - Done

7/19 - Unknown - the library if I can get it. Date may change if needed to obtain the library.

11/08 - Unknown - the library if I can get it."

Exams' in Morton are held at the Morton Public Library, 315 West Pershing at 12:00 Noon the third Saturday of even numbered months or as noted. Feb 15, Apr 19, Jun 21, Aug 16, Sep 20(Superfest), Oct 18, and Dec20
Contact Bob Bush at **tigrbob@gmail.com** for more info.