



Printed Circuit



– July 2011 –

Published by the Southwest Iowa Amateur Radio Club Inc.

SWIARC meets the 4th Thursday of every month at the Loess Hills Red Cross Chapter

Charles E. Lakin Human Services Campus

705 N. 16th Street Council Bluffs, IA 51501

<http://www.swiarc.org>

Meeting Location – July

We're meeting at ISD again, in the child care facility provided by Dennis WA0VJL's XYL. It's a large lower level facility in the building directly in back of the imposing main structure at:

Iowa School for the Deaf
1600 Hwy 275
Council Bluffs IA, 51503

Specifically, from I-80 take I-29 South toward Kansas City and get off immediately at **exit 47** labeled '**Hwy 92 – Manawa.**'

Take 2 or 3 right turns until you're headed South on **Hwy 275** and turn Left immediately into the ISD grounds. Follow the arc in back of the main building and look for a ramp to a below grade entrance to the large building on the outside of the circle drive. Be there before **7:30 PM** on Thursday **07/28.**

The picture below shows how the Red Cross is actively utilizing our regular meeting room. (The tables are not normally full of stuff except during a disaster as our current flood.)



Saturday 07/23

The Action – 2011

- Jul 28 SWIARC Meeting @ ISD
Thur Hwys 92 & 275, So.Co/Blfs
7:30 pgm on OSCILLATORS & QRP
- Jul 30 NORTH BEND NE Flea Market
Sat \$2 admission, \$5 tables
9-1 Door Prizes & good food
VE tests @ 9:30 - \$15
- Aug 12 AK-SAR-BEN ARC meeting
Fri 7PM @ Red Cross
7PM 80th & Spring St. OMAHA
pgm is TAILGATE Swap Fest
- Aug 13 Homebrew & QRP mtg
Sat Ashland NE, Breadeaux Pizza
11-2 1427 Silver Street
- Aug 13 GLENWOOD IA Hamfest
Sat Wrestling Club, 501 Tyson
8-1 talk-in 145.29 R- \$3 adm
- Aug 25 SWIARC Meeting @ ISD
Thur Hwys 92 & 275, So.Co/Blfs
7:30
- Sep 10 Homebrew & QRP meeting
Sat 11-2 in Ashland NE

Want Ads

WANTED: PLL board for KENWOOD 440.
Any help/suggest'ns appreciated.
Call Jim KB0UKM, 402) 991.0571

FOR SALE: 50 ft serial cable w/12
wires. (600 total ft #24) \$9
I used one twisted pair (100 ft)
to make a 33 ft dipole on F/Day.
Worked great! (Twist radiates gud)
Call Rich WA0ZQG, 712) 256.7774

Meeting Minutes 06/23

Due to the Missouri River Flood of 2011 and Red Cross officials needing our space, we accepted Dennis WA0VJL's generous offer to use his XYL's business location behind ISD on the South side of town. **Note:** We'll probably be there the next couple of months also because this flood has unusual aspects. Former member Rob N0SNW showed up having heard about it on the air, and although he had to leave early, rejoined.

| | | | |
|--------|--------|--------|--------|
| Rick | KE4YQD | | |
| Jim | W0ATU | George | KD0NME |
| Mike | KD0HZF | Rob | N0SNW |
| Norm | WA0JYD | Art | KB0UWR |
| Russ | K0LUW | Dennis | WA0VJL |
| Jeff | WB0M | Rich | WA0ZQG |
| Robert | KC0MUX | | (12) |

First item on the agenda was thanks and round of applause for Dennis VJL & XYL Maggie for the space to meet. Printed Minutes were also approved without modification. Jim ATU said we had the same amount in the bank as last month, \$5,241.

In place of Secretary, Rich ZQG read an E/M from Brian KM0Y who sent 2 postcards from the Dayton Hamfest last month. (The one he sent to Norm JYD was a picture QSL from Qatar they gave out at a booth at Dayton.) Brian said he was accompanied by XYL N0GWX, a great advantage because if you bring her along you don't have to explain the purchases afterward, and Dayton has non-Ham related vendors. Best display was a German **Enigma** machine dug out of a lake by Tom W1TP.

Russ LUW said the .82 repeater works, but has a hum or buzz every so often from interference. Rich ZQG said he was up middle-of-the-night last Friday and heard snatches of Sheriff reports about a drunk in a Ford F-150 on our .82. (One Sheriff antenna is adjacent to ours on the tower.)

Membership reported returning members Carl KG0SY and Rob N0SNW. Newsletter had a printer malfunction so distributed quite a few via E-Mail rather than 44c snail mail.

There was NO Field Day committee; NO old business, and NO new business. Field Day starts in 2 days, Saturday morning, and operations begin at 1PM in our time zone.

Meeting adjourned 7:52PM, only 22 min.
Minutes by Sec'y's Assistant, WA0ZQG

Pgm. Review - Galaxy Receiver

Rich ZQG was going to bring the Galaxy 530 receiver bought from Dave N0PHW's estate, but was feeling puny and brought a picture instead.

Leo Meyerson's World Radio Labs made Globe and Galaxy brand radios in the 50s & 60s. The Galaxy V Mark II, a five band HF SSB TxRx, was a reasonably priced alternative to what every Ham dreamt of, a Collins KWM-2. It was all tubes except the plug-in VOX card.

In the late sixties, the Coast Guard asked for an HF receiver that would work over a wide range of temperatures. Galaxy built it, but had to put in extra transistors in each stage to meet specs at the low temp range. That was the model 1530 and the 530 was an Amateur version. Both looked like phase-lock loop rigs, 60 ranges of 500kc each, but back then they didn't have ICs. The solution was something called a Wadley Loop circuit. The 530 sold for \$695 - \$895 new, about the same as a Galaxy V transceiver which explains its rarity used. 500kc to 30 Mc; dual conversion, and did I mention all transistor. The expensive Coast Guard 1530 is all black while the 530 has an aluminum stripe bottom of front panel. Tuning is similar to a Drake SSR-1 with a Megacycle knob that 'locks in' the 'Wadley loop' at every half Meg. The SSR-1 didn't come out until 1975 and only cost \$299.



Homebrew & QRP'rs

They meet 2nd Saturdays at Bredeaux Pizza, 1427 Silver St. out in Ashland NE. Careful using your GPS to get there. Mine took me off I-80 at the Nebraska Crossing strip mall. Instead, go on past the Platte River and take **exit 426**. You'll see the Mahoney Park and SAC Museum entrance.

Dar W9HZC handles formalities at the meetings, but Joe K0NEB is probably the most famous member writing a monthly column for CQ magazine. Present in July were:

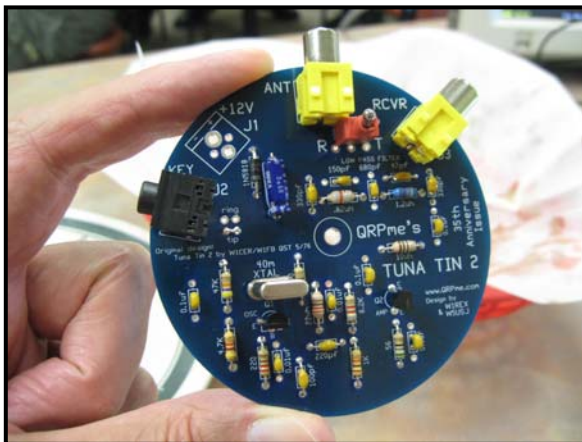
| | | | |
|---------|--------|-------|--------|
| Dar | W9HZC | | |
| Darrel | K0AMD | Chris | N0RIS |
| & JoAnn | W0WAC | Ray | N5SEZ |
| Mike | W8MZ | Corby | K0SKW |
| Arn | KA0NCR | Bill | KA0VXK |
| Joe | K0NEB | Brian | KM0Y |
| Charlie | K0NG | Gordy | NW0Y |
| Steve | WB0QQT | Rich | WA0ZQG |
| Jim | KG0RD | (16) | |

Joe NEB had the latest version of the **Tuna Tin Two**, a QRP transmitter made on a circular board to be mounted on an emptied tuna fish can. Like the original it uses just two NPN transistors, both of them type **2N2222**. Joe pretty much made it while at the meeting, inserting and soldering all devices in about an hour. (All parts with leads, not surface mount.) The circuit board includes a reference to the original -

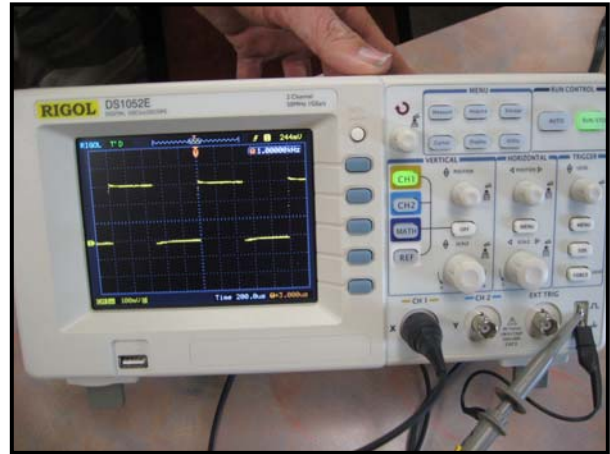
W1CER/W1FB QST 5/76

and is available for \$25 from:

QRPme
 P. O. Box 160
 Limerick ME 04048
 www dot QRPme dot com



Arn KA0NCR brought along a portable RIGOL digital oscilloscope with a 5" LCD display. He also had the Elecraft portable signal generator, both of them handy items after building a kit. (They don't always work the first time.)



In the old days Heathkit manuals were written so a nontechnical person could assemble kits with just a few moments soldering practice. If you are real new, you need to get your own soldering iron and maybe a little help from one of these guys to build your first kit. Identifying parts etc.

It's really a blast making a contact with a rig you built yourself, and especially so with low power. (That's the QRP part.) You can also buy these things, either used at a Hamfest or new from MFJ as this 20M CW rig below that runs 4W, has a VFO from 14.0 – 14.075, and a decent receiver.



Extra Credit Q.
 What is "sidetone" and why is it useful on HF rigs?
 Also, why is it often not implemented on QRP rigs?

Morse Practice

by Dirk KG6QNK on June 12, 2011

Morse Code is Dead you say? I fell asleep to it last night...one of those Cuban Morse Numbers Transmissions known as M8a.

Although Number Station Transmissions are not often found on the Amateur Bands, Morse transmissions such as M8a do provide an excellent source of copying practice for the Morse enthusiast.

M8a transmits about 36 minutes of Tone Modulated AM Morse Code at about 20-22 wpm. Since a variation of a technique invented by Western Union known as "**Cut Numbers**" is used, only 10 letters need to be recognized. Simply put the following Morse Letters are used for the sake of economy to represent the corresponding Numbers: A=1 N=2 D=3 U=4 W=5 R=6 I=7 G=8 M=9 T=0 ... That's it. Ten Letters to Copy.

Typical format for M8a is: Call-up Header consisting of 3 groups of 5 Letters repeated several times such as: RRTWU MNRAG GWNIRT ... (these are the three "alleged" recipients) followed by say for instance: RRTWU (recipient #1) repeated several times then several BT's Repeated then Message Body of 150 Five letter groups which ends with several AR's then MNRAG is next up for 150 Letter Message Body and finally GWNIRT is the final recipient of 150 letter Message Body all patterned as above with recipient #1.

Try: 5900 kHz 05:00 utc 5800 kHz 06:00utc 5810 kHz 06:00 utc Frequencies are approximate as I use Cheap Compact Portable with stepped incremental tuning.

According to lore, the first thing Marconi heard when he put his 'wireless' set together were the numbers stations, sending out the grid coordinates of the locations of the machine parts necessary to establish contact. So the code was here before we were.

Dependency

Recently in another large city using my GPS to get around town in a timely manner, the thing failed due to an "Eye dee Ten T" error. (Spell it out, Aye, dee, one, zero, tee. Now read.)

As it turned out, the error corrected itself when I put it on charge, but it set me to thinking, how independent am I as an Amateur Radio op who is supposed to help others when everything else fails?

Could you operate if the AC power fails? And what would we all do if, heaven's to Murgatroyd, the Internet went down? Permanently. Packet? Can you read a map? Have a Victory Garden?

Satellite Receiver

John KB0QKH who works at Ch.6 and deals with satellites on a daily basis, tried to pick up a data signal from one using his ICOM R-20 hand held receiver in the 1.5 Gc band. Didn't work. Reading the manual, the R-20 receiver sensitivity decreases to 5 uV at that point in its AM to 3.3 Gc range from under a microvolt DC to 1.3 Gc.

So he added a 15dB pre-amp. Still didn't work very well. Swapping in a 33dB pre-amp (and using a log-periodic antenna) John was able to hear data tones clearly and see an S-9 meter.

Note: A log-periodic antenna for this range comes easily to hand and looks like an artist's impression of a red clay flower pot using circuit traces on a fibre-glas **Printed Circuit** board.

de Thursday Panera Group

Printed Circuit

newsletter is published monthly by SWIARC Inc. of Council Bluffs IA.

Club officers for 2011 are:

PRESIDENT KE4YQD

Rick KE4YQD @ Hotmail.com

VICE PRESIDENT KB0QKH

John kb0qkh @ yahoo.com

SECRETARY KD0HVY

Steve Steve.A.Thomas @ HP.com

TREASURER W0ATU

Jim W0ATU @ YAHOO.com

STATION TRUSTEE K0LUW

Russ K0LUW @ Cox.net

Membership is open to anyone with an interest in radio. Dues are \$15 / calendar year.