

# The SPARK GAP

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## PRESIDENTS CORNER

by Gale, WD9HFT

## CVARC MEETING MINUTES

by Ron, W9RJW

The July 22 meeting was a club picnic held at John – W9SWL QTH (house). Members enjoyed cool dry weather, good food (brought their own), and pleasant conversation. The event started at 1800 and ended at 2020 when the cool temperatures began to take their toll on the group.

## NEXT CLUB MEETING

The next club meeting will be Aug 19, 2004. This club meeting is being planned as an antenna-building venture at KB9VCO's location (same place we had the Mobile Antenna clinic).

## CLUB HAPPENINGS

The CVARC now has 34 members. Please welcome Richard Kelly, W0ZUP. The club Application for Membership and Interest Sheet are both posted on the web for download.

Are you interested in going to **Grayslake, IL Hamfest on Sept 17-18**? This is an overnight event and will cost about \$100-150 for shared travel, lodging, and your meals. Buying anything at the event is extra ☺. If you are interested in going, and/or driving please contact Gale or me and let us know. We need to get this information in ASAP to reserve hotel rooms.

The next Fox Hunt is on the board for October 16. It will be on 440 MHz. (More information to follow).

Anyone interested in submitting news line for the paper, please send it to the club email address for inclusion. What you know can also benefit others – lets share the knowledge. If you would like to author one of the major newsletter topics, they are also available.

## AMATEUR RELATED NEWS BITES

by John, W9SWL

### ARRL News

AMSAT asks patience as Echo AO-51 checkout continues: AMSAT-NA says "much more work and testing is yet to be done" before it can open the Echo AO-51 Amateur Radio satellite for general use by the amateur community. Commissioning continues for AO-51, with ground controllers checking out the satellite's software on the ground and reloading and testing software on the satellite, an AMSAT bulletin reported. When Echo is in the sun, telemetry data also are being collected to work on attitude determination. AMSAT says the command team also must ensure that the satellite's hardware is working properly before making it available for use. At some point in the AO-51 proveout, the satellite will become available for experimental operation. "At the present time it is anticipated that Echo will be opened initially in 9k6 digital mode, via the BBS system," AMSAT said. "After running a few days in that mode, the FM repeater may be enabled."

AMSAT says all modes will start at low power and gather data while looking at the overall health of the satellite—specifically the power consumption in each configuration. Power will gradually be increased as ground controllers monitor the data. "The command team asks at the present time, that you continue to not transmit to Echo," AMSAT said. "Please continue to show restraint, and you will be making your first contacts through Echo soon." AMSAT-NA will issue a bulletin when AO-51 becomes available for use.—AMSAT News Service via Mike Kingery, KE4AZN

## AREA HAMFEST ACTIVITIES

by John, W9SWL

### Aug

7 - Delta County ARS, Escanaba, MI

7 - Brainard, MN 9AM 147.225

8 - Amana, IA

8 - Cedar Valley ARC, Cedar Rapids, IA

14 - Baraboo, WI - 7-12, Sauk Cty Fairgrounds, I90/94 Exit 92 (Hwy 12) E on Hwy 33 \$5

28 - St. Cloud Armory 9-2, St. Cloud, MN

### Sep

9-11 Dakota Division Convention

11 - Rush City, MN

18-19 - Chicago FM Club; Lake County Fairgrounds; Grayslake, IL

### Oct

3 - West Liberty, IA  
23 - St. Paul, MN TwinCity FM Club

SCC RTTY Championship 1200Z, Aug 28 to  
1159Z, Aug 29  
Ohio QSO Party 1600Z, Aug 28 to  
0400Z, Aug 29  
SARL HF CW Contest 1230Z-1630Z, Aug 29

### **CONTEST BUZZ**

by John, W9SWL

ARRL Contest Calendar can be found here:

<http://www.arri.org/contests/calendar.html> a more complete list follows.

|   |   |
|---|---|
| RSGB RoPoCo 2                           | 0700Z-0900Z, Aug 1  |
| SARL HF Phone Contest                   | 1230Z-1630Z, Aug 1  |
| ARS Spartan Sprint                      | 0100Z-0300Z, Aug 3  |
| TARA Grid Dip Contest                   | 0000Z-2400Z, Aug 7  |
| 10-10 Int. Summer Contest, SSB          | 0001Z, Aug 7 to 2359Z, Aug 8  |
| National Lighthouse Weekend QSO Contest | 0001Z, Aug 7 to 2359Z, Aug 8  |
| European HF Championship                | 1200Z-2359Z, Aug 7  |
| North American QSO Party, CW            | 1800Z, Aug 7 to 0600Z, Aug 8  |
| ARRL UHF Contest                        | 1800Z, Aug 7 to 1800Z, Aug 8  |
| WAE DX Contest, CW                      | 0000Z, Aug 14 to 2359Z, Aug 15                                      |
| Maryland-DC QSO Party                   | 1600Z, Aug 14 to 0400Z, Aug 15 and 1600Z-2359Z, Aug 15              |
| SARTG WW RTTY Contest                   | 0000Z-0800Z, Aug 21 and 1600Z-2400Z, Aug 21 and 0800Z-1600Z, Aug 22 |
| ARRL 10 GHZ and Up Contest              | 0600 local -2400 local , Aug 21 and 0600 local -2400 local , Aug 22 |
| Keyman's Club of Japan Contest          | 1200Z, Aug 21 to 1200Z, Aug 22                                      |
| SEANET Contest                          | 1200Z, Aug 21 to 1200Z, Aug 22                                      |
| North American QSO Party, SSB           | 1800Z, Aug 21 to 0600Z, Aug 22                                      |
| New Jersey QSO Party                    | 2000Z, Aug 21 to 0700Z, Aug 22 and 1300Z, Aug 22 to 0200Z, Aug 23   |
| CQC Summer VHF/UHF QSO Party            | 1600Z-2200Z, Aug 22   |
| ALARA Contest                           | 0600Z, Aug 28 to 1159Z, Aug 29                                      |
| Hawaii QSO Party                        | 0700Z-2200Z, Aug 28   |
| TOEC WW Grid Contest, CW                | 1200Z, Aug 28 to 1200Z, Aug 29                                      |
| YO DX HF Contest                        | 1200Z, Aug 28 to 1200Z, Aug 29                                      |

### **BOAT ANCHOR DOCK**

by John, W9SWL

This month I am including a computer link to some great information on "Boat Anchors". The site is : <http://www.ominous-valve.com/ba-mfrs.html> This site talks in depth about those manufacturers that got the hobby going and kept it going until the tubes were replaced by the transistor. (The radios have not gone away and enjoy a rather large following today). The major manufacturers that started the hobby, and many of us remember are:

[Barker & Williamson](#)  
[Central Electronics](#)  
[Collins Radio Company](#)  
[E. F. Johnson Company](#)  
[Gonset Company](#)  
[Hallicrafters](#)  
[Hammarlund](#)  
[The Heath Company](#)  
[National Radio Company](#)  
[R. L. Drake](#)

### **TECHNICAL TIDBITS**

by John, W9SWL

**(VK3YE)** A field strength meter is perhaps the simplest piece of RF test equipment that can be built. Used for checking transmitters, antenna experimentation, and testing RF oscillators, field strength meters provide an indication of the presence of RF energy. They are not frequency sensitive and are useful where indication of a change in level is more important than the actual strength of the signal indicated.

Figure One shows a schematic of an RF field strength meter. Like a crystal set, it requires no power source. However, unlike a crystal set, the meter has no tuned circuit. It responds to signals of any frequency.

The meter works by converting any RF signal present at the antenna to a DC voltage. This voltage drives a meter movement to give an indication of relative RF. The meter includes a control to reduce its sensitivity where required.

Because it uses few parts, a printed circuit board is not necessary; components can simply be soldered to one another. However, a box is desirable for operating convenience. The case and aerial from a discarded toy walkie-talkie was used in the prototype (see photograph), though any small plastic case will suffice. The meter movement need not be large; we are only

detecting the presence of RF, and not making precise measurements.

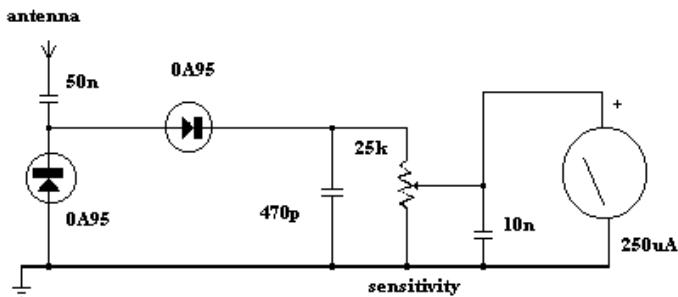
A meter from an old radio or tape recorder should work fine. The diodes can be any germanium type; the actual part number is not important. Germanium diodes can be recognised by their 6mm-long clear glass case with two coloured bands towards the cathode end. None of the component values shown are critical; a 50 percent variation would have little effect on circuit operation.

To test the operation of the meter, a transmitter is required to provide a source of RF. Placing the field strength meter's extended antenna near a handheld VHF rig should produce an indication on the meter, assuming that the sensitivity control has been set to maximum. No indication means that the meter is not working. Common construction errors include connecting the diodes or the meter wrongly and using silicon diodes in place of the germanium diodes specified. In this case, the meter will still work, but with reduced sensitivity. The earth wire is optional; when working with low-powered oscillators, it is useful to clip it to ground (of the circuit under test) to ensure a better indication on the meter.

Those without a transmitter can use an RF signal generator or crystal oscillator (such as that described later) for testing purposes. In this case, place the meter's antenna directly on the output terminal to verify operation. However, only attempt this with transistorised circuitry; component ratings and safety considerations make the meter described here unsuitable for poking around valve equipment.

The field strength meter is a useful instrument in its own right, but it can be made more versatile. Modifications include adding an amplifier (for greater sensitivity), including a tuned circuit (so it only detects signals in a particular band), or converting it into an RF wattmeter and dummy load. Circuits for such instruments are found in the standard handbooks.

### Field Strength Meter



### ASK ELMER ??

by John, W9SWL

**Q: Where can I go to get information on the Sun Spots as well as information on Space Weather?**

**A:** Here is a site that covers most information on Space Weather as well as providing near real time photos of our Sun and the effect it has on radio communications.

<http://www.sec.noaa.gov/SWN/>

### CVARC OFFICERS

President – Gale Sorum (WD9HFT)

Vice President – John Balow (KB9VCO)

Secretary – Ron Krueger (W9JRW)

Treasurer – Ron Anderson (W9RMA)

Past President – John Ingersoll (W9SWL)

### Mailing Address:

Secretary - CVARC

18310 79th Ave

Chippewa Falls WI 54729

**Web:** <http://www.w9cva.org/>

**Email:** [info@w9cva.org](mailto:info@w9cva.org)