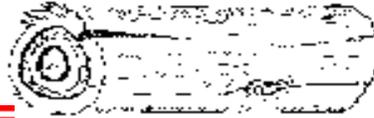




FOUNDED 1947

# WEST PARK RADIOPS



# LOG



Web: <http://www.westparkradiops.org>

Email: [w8vm-<at>-arrrl.net](mailto:w8vm-<at>-arrrl.net)

Feb. – Mar. 2010  
VOL. XLV - No. 2

**Our 10m Net 28450 kHz Mondays 9 p.m. local**

## 2010 CLUB OFFICERS

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## COMMITTEES

FIELD EVENTS  
W8IDM, W8PN

PUBLIC SERVICE  
K8YQL

WAS & VUCC CHECKERS  
K8ME, N8CX

ARRL VE'S  
AF8C, N8CX, K8TTL

ARTICLES THIS TIME  
AB8HY

ANTENNAS  
W8PN, W8IDM

CLUB AWARDS  
W8IDM

CONTESTS, SATELLITES  
W8IDM

DX  
N8WS

8TH AREA BUREAU LETTER MGRS.  
N8WS (T) & (W), AF8C (V)

EDITOR, WEBMASTER  
AF8C

LABELS & ROSTERS  
N8CX

## WEST PARK EVENTS \*

\*Subject to Change

### **Feb. 5 - FIRST FRIDAY BUSINESS/ FIXIT NIGHT**

Bring your questions or answers to the radio problems of the day/week/month.

### **Feb. 19 - PROGRAM\***

Kevin, K8VUS, will speak on the topic "GAIA Hypothesis", which is an ecological hypothesis, NOT a religion, (proposed by James Lovelock when at NASA's JPL) saying that life on earth, and all the parts of the earth itself, are closely integrated to form a complex system that maintains the stable conditions on Earth that we are so dependent on.

### **Mar. 5 - FIRST FRIDAY BUSINESS/ FIXIT NIGHT**

Bring your questions or answers to the radio problems of the day/week/month.

### **Mar. 19 - PROGRAM\***

Let's combine "Show and Tell" with Safety, and let's have members bring in or otherwise present information (videos?) on what they use as safety equipment, whether climbing, or soldering, or lifting, or wiring the shack, or you name it.

<u>IN THIS ISSUE</u>			
<b>Page 2:</b> - Prez Says  - Public Service - 10M Net topics  - News	<b>Page 3:</b> Contest Score Database Leader W8IDM  MARS Gets New Name	<b>Page 4:</b> Conductor Inductances  Asteriod PHAs Live Earthquake Map  Defining SDRs	<b>Page 5:</b> SID Project  Paradigm Shift at CQ SO and SOA  ARRL Rig Reports

## CONTESTS AND EVENTS

- de WA7BNM & ARRL

Feb 6-7 10-10 WINTER TEST SSB  
 Feb 13-14 CQ WW RTTY WPX  
 Feb 20-21 ARRL INT'NAT'NAL DX CW  
 Feb 27-28 NA QSO RTTY  
 Mar 6-7 ARRL INT'NAT'NAL DX SSB  
 Mar 13-14 EA PSK31 CONTEST  
 Mar 14 NA SPRINT RTTY  
 Mar 20-21 BARTG HF RTTY  
 Mar 22 RUN FOR THE BACON QRP  
 Mar 27-28 CQ WW WPX SSB

## SOAPBOX

**We only have five months until Field Day 2010. Time sure does fly. But there is plenty of time for other amateur radio events during the winter and then into the warm months.**

**As said before, we have many fine programs lined up for 2010. Tell us more about what you want to see at the meetings!!**

This document was created using Open Office 3.0, and a PDF creator. Usage of Microsoft products was limited to as little as possible.

## Prez Sezs...

Fellow Club Members,

This time of year there are generally two things I look forward to, one is that it is almost February, and March is just around the corner meaning that warmer weather will soon be upon us. The second is the tax refund check from Uncle. All kidding aside, February is a good month for contesting; there are plenty of opportunities to enter contests to keep us busy while we are stuck inside the house.

RSGB 80m Club Championship, SSB 2000Z-2130Z, Feb 1  
 ARS Spartan Sprint 0200Z-0400Z, Feb 2  
 NCCC Sprint Ladder 0230Z-0300Z, Feb 5  
 Vermont QSO Party 0000Z, Feb 6 to 2400Z, Feb 7  
 YL-ISSB QSO Party, CW 0000Z, Feb 6 to 2359Z, Feb 7  
 10-10 Int. Winter Contest, SSB 0001Z, Feb 6 to 2359Z, Feb 7  
 Minnesota QSO Party 1400Z-2400Z, Feb 6  
 British Columbia QSO Party 1600Z, Feb 6 to 0759Z, Feb 7  
 Delaware QSO Party 1700Z, Feb 6 to 2359Z, Feb 7  
 North American Sprint, CW 0000Z-0400Z, Feb 7  
 New Mexico QSO Party 1500Z, Feb 7 to 0300Z, Feb 8  
 ARRL School Club Roundup 1300Z, Feb 8 to 2400Z, Feb 12

I look forward to the upcoming club events such as Field Day, All Scout weekend etc. and the camaraderie that the club enjoys during these events. One final thought: let's try to think of ways to make the club more interesting with different club programs and other outside activities the club can be doing, whether public service or any other radio related activity.

73 de,

Egon Fordos President

## WEST PARK PUBLIC SERVICE...

Al, N8CX; Kevin K8VUS; and Glenn, AF8C recently (12/18) supported the annual pre-Christmas Saturday delivery of holiday food supplies to the disadvantaged and elderly in Lakewood, Ohio. This event is sponsored by the Lakewood Charitable Assistance Corporation. We will again be looking for volunteers in the spring for the spring cleaning supplies delivery for LCAC.

## RECENT DISCUSSIONS ON THE 10M NET...

On the Club's net, 28450 kHz +/-, recently moved to 9 p.m. local time, we have seen an expansion of activity and topics. Logbook of the World is getting attention. 160m has been great. Gutter ice jams, antenna projects, fishing, how to buy a new computer, logging programs, fixing contest logs, care of pets, DXCC and WAS and other awards are all getting attention.

## 2M NET PLANNING...

West Park is still in the planning stage for this net. Send suggestions to the club officers.

## What's the ARRL Doing For You Lately?...

(abridged, from the ARRL Web site)

January 04, 2010

**Senate Bill S 1755** -- The Amateur Radio Emergency Communications Enhancement Act of 2009 -- passed the Senate by unanimous consent; the bill now goes to the House for consideration.

**David Sumner, K1ZZ**, and General Counsel Chris Imlay, W3KD, went to Washington, DC to speak with advisors of the FCC's five commissioners to acquaint them with the ARRL's position on the regulation of interference from Broadband over Power Lines (BPL) systems.

**The magazine *Linux Journal*** devoted a major portion of their January issue to Amateur Radio, thanks in part to ARRL EC (Prince William County, Virginia) David Lane, KG4GIY.

**ARRL's Logbook of The World (LoTW)** announced that in 2009, more than 7000 hams have registered for the online log repository system, bringing the total number of users to more than 30,000. These 30,000 hams have made upwards of 250 million QSOs - making more than 58 million QSOs in 2009 alone.

**Users of Amazon.com's Kindle**, as well as Apple's iPhone and iPod touch, can now download ARRL's Tech Q&A directly from the online book seller. Versions of the General and Extra class books will be available soon.

**All certificates** and endorsements have been processed for the Hiram Percy Maxim 140 Birthday Celebration this past September.

**The ARRL OO Desk** forwarded reports to volunteer monitors of an unidentified signal on 30 meters, as well as a "bubble jammer" on 20 meters. The FCC has asked OOs to monitor and document possible commercial uses of Amateur Radio.

## LEADERS IN CONTEST SCORE DATABASE...

( updated often in [www.kkn.net](http://www.kkn.net) )

There's a database of operators that lists various contest records. The database is assembled by a group of operators with well known names. The contents of the one of interest for West Park Radiops lists the 20 operators recorded as having completed and published the largest number of contest scores, not the largest scores.

Top 20 operators with the most line scores in the DB:

Operator	Number of Line Scores
K4BAI	244
K8MR	241
N4MM	229
K5ZD	222
K3WW	220
K3ZO	204
JA1AAT	197
JK2VOC	194
W9RE	180
VE5SF	169
<b>W8IDM</b>	<b>165</b>
DJ2YE	161
N4BP	161
N6ZZ	158
WA6FGV	155
YU7SF	151
KC1F	150
OK1KZ	149
N2BJ	147
K6XX	146

## MARS GETS NEW NAME...

(from the ARRL Web site, 12/24/09 )

On Wednesday, December 23, 2009, the Department of Defense (DoD) issued an Instruction concerning MARS, effective immediately. This Instruction gives the three MARS services, Army, Air Force and Navy/Marine Corps, a new focus on homeland security and a new name: Military Auxiliary Radio System. The Instruction is the first major revision to MARS since January 26, 1988 -- as such, the first revision since the 9/11 attacks and Hurricane Katrina, two major events that changed the way Amateur Radio dealt with emergency communications.

The DoD defines a "military auxiliary" as "an organized body of volunteers prepared to supplement the uniformed services or any designated civilian authorities by provision of specialized autonomous services when called upon or when situations warrant," and gives the Civil Air Patrol and Coast Guard Auxiliary as examples of auxiliaries.

In the past, MARS had focused primarily on emergency communications and health and welfare support. The DoD's Instruction now directs the three MARS services to provide "contingency radio communications" to support US government operations, DoD components and "civil authorities at all levels," providing for national security and emergency preparedness events. MARS units will still continue to provide health and welfare communications support "to military members, civilian employees and contractors of DoD Components, and civil agency employees and contractors, when in remote or isolated areas, in contingencies or whenever appropriate." MARS must also be capable of operation in "radio only" modes -- without landlines or the Internet -- and sustainable on emergency power (when public utility power has failed); some MARS stations must be transportable for timely deployment.

The Secretaries of the Army, Air Force and Navy are to encourage participation in MARS, the Instruction states, saying this may be accomplished "by establishing and funding an active MARS program within each Military Department, which shall then assign a MARS- licensed staff representative to manage operations, readiness, planning, procedural and technical development, documentation, standards, training, equipment, program and membership administration, and other matters necessary for mission accomplishment."

The Secretaries are also tasked with bringing new personnel into their MARS services. The Instruction calls on them to establish programs "to promote civilian interest, recruit qualified volunteers, sponsor them for basic background checks and furnish them suitable training in contingency support communications."

This revision -- which was years in the making -- keeps the Navy/Marine Corps MARS intact; until now, members of this MARS service were concerned that their part of MARS might be terminated by Navy commanders.

The Instruction also gives some new perks to MARS members. Active duty military personnel who are affiliated with MARS may be able to earn Reserve points based on service in MARS and, in cases of permanent change of station, qualify for weight exemption for transportation of MARS communications equipment. All members may be considered for benefits associated with DoD civilian service, such as access to DoD morale, welfare and recreation Category C recreational facilities and access to DoD credit unions.

Membership in any of the three MARS services is open to qualified active duty, Guard and Reserve personnel, as well as those in civilian agencies who report to civil authorities or their supporting organizations (including nongovernmental organizations) and private US citizens who meet age, education and other criteria -- such as an FCC-issued Amateur Radio license -- imposed by a DoD Component MARS office.

## INDUCTANCE OF ROUND & FLAT METAL CONDUCTORS...

The inductance of a Long Straight Round Wire or round (circular) metal conductor is calculated in Excel(TM) from:

$$L = 0.2 * L_g * [ 2.3 * \log_{10} ( 4 * L_g / d ) - 0.75 ] \quad \text{nH}$$

where  $L_g$  is the wire length in millimeters, and  $d$  is the diameter in mm. The length  $L_g$  must be much greater than  $d$  (on page 1287 in Radiotron Designers Handbook, F. Langford Smith, RCA reprint, 1953; but different on the Web).

Similarly, the inductance of a flat metal strap is

$$L = 0.2 * L_g * ( 0.5 + 2.3 * \log_{10} ( 2 * L_g / (w+h) ) + 0.11 * ( w + h ) / L_g ) \quad \text{nH}$$

where  $L_g$  is the strip length in mm,  $w$  the width and  $h$  the height. The length  $L_g$  of the strip must be much larger than its width and height. [Formula found on the Web is assumed to be correct. - Ed.]

This means the inductance of the following conductors is as shown (all conductors are 1 meter long):

	nH
#16 AWG wire 1m long	1263
#14 AWG wire 1m long	1216
#12 AWG wire 1m long	1170
one-quarter inch OD water line 1m long	944
half-inch OD water line 1m long	805
three-quarter OD water line 1m long	724
copper strap 1" wide, 1/16 inch thick 1m long	962
copper foil 1" wide, 0.01 inch thick, 1m long	972

## ASTEROID (PHAs)...

(from NASA)

Potentially Hazardous Asteroids (PHAs) are currently defined based on parameters that measure the asteroid's potential to make threatening close approaches to the Earth. Specifically, all asteroids with an Earth Minimum Orbit Intersection Distance (MOID) of 0.05 AU or less and an absolute magnitude (H) of 22.0 or less are considered PHAs. In other words, asteroids that can't get any closer to the Earth (i.e. MOID) than 0.05 AU (roughly 7,480,000 km or 4,650,000 mi) or are smaller than about 150 m (500 ft) in diameter.

### There are currently 1093 known PHAs.

This "potential" to make close Earth approaches does not mean a PHA will impact the Earth. It only means there is a

possibility for such a threat. By monitoring these PHAs and updating their orbits as new observations become available, we can better predict the close-approach statistics and thus their Earth-impact threat.

By the way, the current knowledge of the orbit of the asteroid APOPHIS which at one time was predicted to be hazardous to the entire population of the earth on April 13, 2029, is now predicted to be NO COLLISION until at least the year 2070.

## LIVE EARTHQUAKE MAP...

I regularly check the following website for live information on strong earthquakes around the world. The default list and map is for the last 30 days. You can see on this website that the earth is anything but quiet.

< <http://www.iris.edu/seismon/> >

## DEFINING SOFTWARE DEFINED RADIO...

Before Software Defined Radios (SDR) the way a receiver was built was to design a high-quality "front end" and follow that with regenerative or superheterodyne amplification, down-mixing, filtering, and audio detection circuitry. Now with SDR, the front end feeds directly into an analog-to-digital converter (ADC). The ADC output is a string of binary numbers, known as samples. The binary numbers are sent into a computing device (Digital Signal Processor, DSP) and the remainder of the receiver down-conversion and detection is done in software. For many of the software algorithms of detection and mixing, the Discrete Fourier Transform is used to perform the "magic" of bringing the received signal down to analog voice frequency baseband. Of course a digital signal is not analog in the usual sense here, so a Digital-to-Analog Converter (DAC) is used to convert the receiver's final product to something that can be amplified for speaker or headphone drive, again with transistor amplifier rather than software.

Now, therefore, merely changing the DSP algorithms in the software portion results in new detection modes, such as detecting FM rather than AM signal intelligence, or in CW or Sideband form. Industry manufacturers may use specially built "embedded" computers for the software portion. We amateur radio operators generally would use fast PCs to do the number crunching.

## SID PROJECT:...

With solar activity on the rise, sudden ionospheric disturbances will become more common. Interested? Stanford University tells you how to build your own SID monitor.

<http://solar-center.stanford.edu/SID/sidmonitor/>

## PARADIGM SHIFT AT CQ?...

[Note: a personal email from Bob Cox, K3EST, denies that "CW SKIMMER" was ever on the list to be considered as cheating. – Ed.]

*(CQ WW Rules Out Combining Single Operator Assisted and Un-Assisted Into One Category By Jamie Dupree NS3T radio-sport.net Posted January 18, 2010)*

A day after a radio-sport.net story and hours after a stinging public rebuke by a six time CQ WW contest winner, the CQ WW Contest Committee announced it would not combine the Single Operator and Single Operator Assisted categories because of concerns over cheating.

"The CQ WW CC has indeed been discussing the impact of packet on the SO category," wrote contest director Bob Cox K3EST on the CQ-Contest reflector. "This should not be surprising to anyone."

**Cox said a "very thoughtful and detailed discussion" had taken place, which resulted in a decision for no change in the Single Operator categories. In other words, not only do we continue to totally support SO and SOA being separate, we intend to move towards strengthening the SO category," said Cox.**

### Here's the background according to:

*( Could CQ WW Combine Single Operator Assisted and Un-Assisted Into One Category? By Jamie Dupree NS3T radio-sport.net Posted January 17, 2010) [abridged]*

The CQ WW Contest Committee is now having an internal debate on the future of the Assisted category, and whether all single operators should just compete against each other, even if they are using cluster spots or CW Skimmer.

"As far as I know intensely veiled discussions have taken place on cancelling SO category in CQ WW contests," reports Alexander Teimurazov 4L5A on his contesting blog, as he denounced the idea of one category for single ops.

"If the CQ WW CC is not able to judge the CQ WW contest, they should not start changing the rules," 4L5A said. "Why cancel the SO category?" he added.

"Please do not make this the death of my contesting career," said Jim Neiger N6TJ in an open letter on the CQ-Contest reflector, arguing against any combined Single-op category.

This isn't the first major CQ Magazine contest to take a look at the issue, as the director of the CQ WPX Contests, Randy Thompson K5ZD, recently sampled opinions on the idea, which he detailed on his WPX blog. "Those in favor seem to feel that cheating is pervasive and the only way to stop it is by putting everyone into one category," wrote

Thompson on his WPX blog. "It is up to the contest community to apply peer pressure against those who use the Cluster and then enter in the SO category," he added. "The results were relatively consistent across all competitive levels. Opinion is narrowly in favor of keeping SO and SOA as separate categories," wrote Thompson.

Some contests like Russian DX and Worked All Europe moved in recent years to allow the use of CW Skimmer and DX Cluster resources for single operators, meaning the contest organizers and log checkers do not have to spend excessive amounts of time checking for cheaters.

The family of CQ contests is by no means in unison on this subject, as the CQ WPX RTTY has no Assisted category, while CQ WW RTTY does separate those single op entries.

The same is true over at the ARRL, where using cluster-type resources puts you into the Multi-op category in contests like IARU, ARRL 10 and NAQP.

For years, that was also the setup in the CQ 160 contest, but that changed in 2009 with the addition of an Assisted category, and was very well received in its first year.

"Of the over 1000 logs submitted, 200 were in the new Assisted category," wrote contest director Andy Blank N2NT in the CQ 160 writeup in CQ Magazine.

When it comes to reviewing un-assisted single op entries, one of the first checks is looking at the possible use of spots for top claimed scores in contests like CQ WW.

"They have algorithms to automatically check the proportion of QSOs that are made within n minutes of a cluster spot appearing," wrote CQ WW Contest Committee advisor Roger Western G3SXW on the UK-Contest reflector.

What is your opinion? Should there be a separate category for Single Op Assisted? What about combining them to eliminate worries about checking logs for cluster use? Email radio-sport.net with your opinions!

## ARRL's EQUIPMENT REPORTS ON YOUR RIGS...

I was looking to compare the receiver sensitivity numbers on the Kenwood TS-2000 and the Yaesu FT1000MP, just in case somehow it is possible that owning the wrong radio could be a "hearing" liability during HF contests.

I learned several things this way. First, many of the finest transceivers have birdies somewhere in their mixer chain. TS-2000 owners have a problem with certain satellites on 70 cm, for example, due to a birdie up there.

But for most of us, a useful read can be found by finding the ARRL "extended" lab report on the model of transceiver that you run on your operating table. Go to the ARRL web site and login as a member. Then enter in the search box "xxxx extended report" where xxxx is your rig model. Oh, if you are not an ARRL member, you might find the report with Google(TM). Or ask a ham who is a member!

# WEST PARK RADIOPS

# LOG

PUBLISHED BI-MONTHLY BY WEST PARK RADIOPS AMATEUR RADIO CLUB, INC. ----  
A NON-PROFIT SCIENTIFIC AND EDUCATIONAL CORPORATION, FAIRVIEW PARK, OHIO.  
MEETINGS: WEST PARK RADIOPS ARC meets the FIRST and THIRD Friday evenings each month at  
Ascension Lutheran Church, 28081 Lorain Road, North Olmsted, OH (across from North Olmsted Park) at 8 PM sharp.  
Dues \$12/yr. We welcome anyone interested in amateur radio to our meetings.  
We operate a 10m net on 28450 kHz Monday at 9:00 p.m. local time.

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# W8VM

