WEST PARK RADIOPS LOG

FOUNDED 1947

Web: http://members.core.com/~af8c/westpark/
Email: w8vm-<at>-arrl.net

OCT. – NOV. 2004
VOL. XXXIX - NO. 6

2004 CLUB OFFICERS

President
Dick Naumann **K8AB**
(440) 884-2929
Vice President
Egon Fordos **AB8HY**
(440) 333-9344
Secretary
Glenn Williams **AF8C**
(440) 835-4897
Treasurer
Kevin Brandstetter **K8VUS**
(440) 734-5532
Trustee
Bill Squires **N8WS**
(216) 676-0461

COMMITTEES

FIELD EVENTS
W8IDM, K8AB, N8WS

PUBLIC SERVICE
KA8YQL

WAS & VUCC CHECKERS
K8ME, N8CX

ARRL VE'S
AF8C, N8CX, K8TTL

ARTICLES
K8AB, W8IDM

ANTENNAS
W8PN, W8IDM, W8IMF

CLUB AWARDS
W8IDM

CONTESTS
W8IDM

DX
W8IMF

EDITOR, WEBMASTER
AF8C

LABELS & ROSTER
N8CX

WEST PARK EVENTS *

*Subject to Change

Oct. 1 - FIRST FRIDAY BUSINESS/ FIXIT NIGHT
Meet in the usual place. Bring your questions or answers to the radio problems of the day/week/month.

Oct. 15 - Program Night -- Radio Frequency Interference and Cures
Radio Frequency Interference, the bane of amateur radio, a topic of West Park Radiops in meetings in 1948, will be discussed again tonight.

Oct. 16 - Jamboree on the Air
At Firelands Campgrounds in Lorain County, we plan for a new vertical antenna configuration test.

Nov. 5 - FIRST FRIDAY BUSINESS/ FIXIT NIGHT
We will be heading into deep fall. Get off to a good start by coming to the meeting. This is also the start of the West Park 2005 officers nominations.

Nov. 19 - Program Night – ARRL Video(s)
In our beginning-of-the-year board meeting, West Park members volunteered that we should preview the latest in ARRL videos promoting amateur radio. Tonight we will do just that.

IN THIS ISSUE

Page 2:
The President's Forum
Public Service Activities
Recent 10M Net Chat
Great Lakes Director

Page 3:
JPEG VIrus
VOIP, Bandwidth
6 Meter Record
FCC Promotes Ham

Page 4:
Hollywood's Demise
Good Lead, Bad Lead

Page 5:
Wiring Small
Connectors

CONTESTS AND EVENTS

De WA7BNM Contest List

Oct-2	TARA PSK Rumble Contest
Oct 2-3	Oceania DX Contest, SSB
Oct 9-10	Pennsylvania QSO Party
Oct 9-10	Oceania DX Contest, CW
Oct 23-24	50 MHz Fall Sprint
Oct 30-31	CQ WWDX Contest, SSB
Nov 6-8	ARRL Sweepstakes, CW
Nov 13-14	WAE DX Contest, RTTY
Nov 20-21	ARRL Sweepstakes SSB
Nov 27-28	CQ WW DX Contest, CW
Dec.	ARRL 10 & 160

SOAPBOX

The fall 2004 Contest Season will be getting underway in another month. After our great advances in this year's Field Day operation, due mainly to CW operation, we should collectively consider operating more CW in other contests in order to sharpen our skills.

Therefore, related to our club project activity, you too can have fun building a TICK keyer . There are several types of kits, each with a different set of capabilities but all are low cost and may spur CW interest.

THE PRESIDENTS FORUM

Hello again faithful readers. Looking back at previous "Forum" columns and topics, we asked members to discuss likes and dislikes of club activities, to try a new mode or band, and to join in more of the club activities. Some members built projects such as QRP rigs, portable antennas, QRP wattmeters etc., and brought them to meetings to show and discuss their operation. Thanks to several members who invited new people to join us. We welcome our new members and visitors to our group.

. I purposely hadn't written about our great Field Day since Glenn, AF8C, was preparing a newsletter article and Hal, W8PN, later gave a great presentation with a multitude of charts and graphs to explain how well we did on Field Day. Those attending Field Day did a fine job and enjoyed another great Field Day operation. Kudos to all who helped and a heartfelt THANK YOU to our Field Day hostess Virginia Landis. We are presently awaiting the ARRL Web Page posting so we can discuss West Park's standings.at a future meeting.

My term is coming to a close in a couple months and I would like to see someone step up and take club offices willingly, putting some new ideas and effort into making West Park more dynamic and a leader among Cleveland clubs. We already, for a small group, are big in the contest scene, public service events,. and helping with food distribution for the needy. New officers would bring in fresh ideas and could keep moving our club forward so we don't languish in past accomplishments.

Attendance has been pretty good considering summer vacations and family obligations. Please make a point to attend meetings, and also join our Monday night 10 M. net at 10 PM (EST) on 28.450 MHz. We could use some new voices and opinions.

I leave you with this thought: " Wouldn't it be nice if whenever we messed up our life we could simply press 'Ctrl - Alt - Delete' and start all over?"

73 Dick K8AB

GREAT LAKES DIVISION SPEAK OUT…

(CLEVELAND HAMFEST ARRL FORUM)
Sunday September 26—Berea, Ohio

Jim Weaver, K8JE, and Joe Phillips, K8QOE, spoke on several topics at the ARRL Forum. Of course the first and biggest topic this year was, of course, Broadband Over Powerline (BPL). The general impression is that the FCC will go ahead with making BPL regulations, but they will also tell the industry that under no circumstances will interference to other services on the bands be tolerated. Interference issues affect more than just amateur radio, even though it's really important to the users of HF in amateur radio. Director Weaver pointed out that the ARRL position is not really to "hate BPL". Rather, we merely are scared of the interference effects that BPL could cause if the providers don't take care to prevent interference.

On the good side, however, it appears that no rural power provider has taken up the BPL cause for one reason or another, and there is a message there. Meanwhile, the "wireless networking" modes (called WiFi and Bluetooth) are competing the marketplace where higher population densities are attracting providers there.

We were told that the FCC actions on Rule Making for BPL should start up soon. Also, there was the prediction (no guarantee here) that the Wall Street Journal will soon be coming out with an article discussing the issue of profitability for any would-be power-line BPL operators. The rumor is that the article will be positive on the issue of providers being successful with BPL with amateur band filtering (all bands except 60m which is a band that came out too recently to be considered). That is, the article could say that providers may find it possible to make money with BPL without bothering the radio amateurs. (This sounds like the providers will ignore for now the issue of whether they will interfere with other licensed HF services, such as military, the Red Cross, and so forth.)

(More of their discussion will be a topic in the next West Park LOG newsletter.)

- de AF8C

PUBLIC SERVICE…

Saturday, October 16, is Jamboree on the Air. West Park Radiops can help the Scouts again this year at Firelands Campgrounds in Lorain County. We will be discussing this at the October meetings, Oct. 1 and 15, including the site location and the timing of our operation.

In November, just before Thanksgiving, should be an opportunity for assisting in food basket deliveries in Lakewood, Ohio. More information on this will be announced as time passes.

RECENT DISCUSSIONS ON THE 10M NET…

The Club's 10 Meter Net topics have included cataract operations, drug store reading glasses, operating the Maxim/135 stations and the Route 66 stations, the Ohio QSO Party, tree problems, the deer and rodent populations, and elder care. You just never know what we might talk about. It's also an excellent chance to make sure your radio and antennas are operational. We talk at 10 p.m. Eastern Local Time on 28450 kHz, or up 1.5 kHz if there is DX on the band.

JPEG VIRUS…

Microsoft just this week announced that cleverly constructed JPEG images could represent a hazard all by themselves. Though such images (as files are part of Web or email download) may not yet exist, Microsoft has warned us about the threat, thereby also throwing down the gauntlet for hackers to invent them. The problem is that most of Microsoft's operating systems and applications were not aware of this threat -- found to be a special way to get a violation of memory space outside the image space, thus allowing possible hacker code to be constructed in memory and somehow executed there. Microsoft has patches available for downloading, although some "2003" products are already clean.

So the new lesson is: don't open images emailed to you by strangers, and don't view Web images in your browser on sites you don't know are trustworthy, unless you have installed Microsoft's patches. Since the world is full of Web sites and spyware and popups, it's going to be difficult to skip opening unsolicited images. But you can in theory, in some browsers, go to "text only" mode and skip all kinds of image viewing that way.

What happens is that "good guy" gurus are always looking for over-flow faults in programs that were not imagined by the original program developers. Programmers are usually thinking about what should happen when so-and-so keys are clicked, and they are not imagining all the ways that "Murphy" or a million chimpanzees on a million keyboards would type something. So the gurus go hunting for faults. They might as well find the faults before the hackers do. And then when they find a fault in the code that is worth telling the program's vendor about, they do. And then the program's vendor needs to let the world know to watch out for it because eventually the bad guys will also find the problem. That's why Microsoft would appear to be telling the world how to do something bad while telling everyone else how to protect against it. Bizarre.

ARRL LOOKING FOR REGULATION BY BANDWIDTH…

The ARRL is currently pressing the FCC to consider making new rules which let us operate in our bands by how much bandwidth we consume, not whether we are phone or CW.

VOIP LAWS…

The FCC wants telephone calls via Voice Over Internet Protocol (VOIP) to be covered by the same wiretap laws as regular "line" and "cell" telephone calls. The FCC has filed an NPRM (Notice of Proposed Rulemaking) on this subject. You can read about it on the FCC Web site.

6 METER RECORD…

(from The ARRL Letter, 8/20/04)

The First YA-North America 6-meter contact has been reported: Well-known EME enthusiast Lance Collister, W7GJ, of Frenchtown, Montana, recently worked Bob Sutton, YA1RS, in Kabul, Afghanistan. It marked the first 6-meter contact between North America and YA. The two stations used JT65A mode via EME. For Collister, it was DXCC entity number 88 on "The Magic Band." Sutton logged the first-ever EME contact between North America and Afghanistan in December when he worked Dave Blaschke, W5UN, on 2-meters.

FCC PROMOTES ARRL MEMBER…

(from The ARRL Letter, 8/20/04)

The FCC has named Michael J. Wilhelm, WS6BR, of Washington, DC, as Chief of the Wireless Telecommunications Bureau's Public Safety and Critical Infrastructure Division. The division deals with Amateur Radio Service issues, and the appointment makes Wilhelm--a League member--the first amateur licensee in several years to hold such a position within the FCC. Wilhelm replaces D'wana Terry, whom WTB Chief John Muleta named to be his chief of staff and associate bureau chief. Terry headed the Public Safety and Critical Infrastructure Division and its predecessor, the Public Safety and Private Wireless Division, for six years.

Wilhelm most recently served as the division's Deputy Chief (legal). In his new post, he will oversee all policy, regulatory and licensing matters related to public safety entities, critical infrastructure industries and private wireless radio services. Among Wilhelm's staffers is Bill Cross, W3TN, an ARRL member and FCC figure well-known within the amateur community.

NO MORE WC, WR, WK, AND WT CALLS…

(from The ARRL Letter, 8/6/04)

The FCC is no longer issuing certain 2x3-format vanity call signs: They have ceased issuing 2x3-format Amateur Radio vanity call signs that begin with the prefixes WC, WR, WK and WT (eg, WR1AAA, WC4ZZZ). The Commission erroneously granted more than 150 WR and WC-prefix 2x3 vanity call signs from 1997 through September 2003, after which it began rejecting such call sign requests. When the Universal Licensing System came along in August 1999, the FCC encountered some licensing system programming shortcomings, including the anomalous assignments of reserved WC and WR-prefix 2x3 call signs as acceptable formats. [That problem is now fixed.]

IT'S ALL OVER, HOLLYWOOD...

So we all know there are cell phones and DVD recorders and digital cameras and yadda yadda. But based on what I have been hearing and reading lately, the following truths are becoming self-evident. (Warning: editorialization follows!)

- Government agencies are too slow to realize the implications of all the legalities in the trends of everything going digital. See the items below.

- Hollywood is concerned about their movies and digital recordings being stolen, duplicated, and available for download on the Internet. So they are trying to dream up ways to prevent copying of media files. Too bad, but the copying by "hackers" will bypass the protection schemes eventually.

--Older documents will continue to be digitized until there are no more old documents that haven't already been put on the Web. This includes books, sheet music, and photographs.

--The technical world likes to have peer-reviewed papers printed up and sold by publishing houses and institutes and associations, etc. For example, the Institute of Electrical and Electronic Engineers (IEEE) sells engineering technical papers by virtue of having their Transactions and Symposiums. Well, the Internet users will eventually make sure that all the good papers are out there to be downloaded for free. And, "self-publishing" is gaining ground, where you write a paper and just put it up on some Web site for free downloading, and without peer review. This will of course result in some false information and bad ideas being turned into papers that look like the real thing. So the readers will have to careful about accepting what they read. Besides, anything "good" will be confirmed by other researchers and so the truth will win out eventually.

--The bottom line seems to be that all information, the essence of all music and photographic imaging, will eventually be out there for viewing by everyone. Unfortunately, since "all" means "all", there will also be your private information, your financial information, your family tree all the way back to the Middle Ages, your MRI photos, your family's digital camera pictures, everything, will be out there.

Back to the government for a minute. Their problem is how to keep a lid on the free release of sensitive or proprietary information. But the nature of computer information is to spread for "free" and the new gadgets and technologies spread faster than the legislators can keep up with their laws. Some commentators argue that it is futile to try to stop the distribution of digital information by enacting legislation. This is a problem the writers of our federal constitution did not have to deal with in the days of semaphores, lanterns, quills, and old slow printing presses. What happens over time will prove interesting.

GOOD LEAD AND BAD LEAD…

Commonly used inside your electronics toys, solder holds a lot of electronics together. Most older solder contains about 40% lead and 60% tin. Besides the fact that the EPA is interested in removing lead from the environment, Europeans have adopted a stronger position: NO lead in electronics starting 1/1/2004. Lead free alloys that have been tested include tin (96.5%)/silver(3.5%), tin(99.3 %)/copper 0.7%), and literally dozens of others including solder with three metals such as tin/silver/copper, and solder with four metals such as tin/silver/bismuth/indium.

But besides lead pollution via chemical means, there is actually an issue with radioactivity. Lead is derived from radioactive decay of uranium(234 and 238) after being disbursed from the exploding cores of supernovae (stars). (Really!) There are three isotopes of lead (three types of lead atom -- each having different numbers of neutrons in the atom's nucleus). Lead(214) is five steps down a chain of decay of Uranium(234) that takes about 750,000 years per half-life (half the remaining material decays in one half-life). Lead 214 decays into bismuth(214) with a 20 minute half-life, followed by polonium(214) in 164 microseconds (!) to lead(210). Lead(210) half-life is 22.3 years, becoming bismuth(210) for 5 days half-life, then polonium(210) for 138 days half-life and finally turns into lead(206) which is not radioactive and lasts a really long time, essentially the rest of the lifetime of the universe. During the decay of polonium, alpha particles (helium atom nuclei) are emitted. It's the alpha particles that worry us. They could and will travel from the slightly radioactive forms of lead, which might be in the solder, into our memory chips or CPUs and cause random computational errors and computer crashes.

Lead(206) as we know it is the most predominant. All lead sources, most of them being galena (lead sulphide) mines, or via a laser isotope separation process operated in Russia, and some antiquity sources. Antiquity sources commonly include old sunken ships, where lead was used centuries ago to prevent barnacle formation in sea water. After several centuries the lead will have decayed and become "cold". Sea salvage companies retrieve the "cold" lead when they can. Also, there can be old "cold" lead pieces in some archeological sites, but then the archeologists don't want to part with their lead pieces just so the lead can be melted into solder.

The electronics industry uses well over several metric tons of lead every year just for solder bump leaded "flip chips"--not counting what goes into making circuit boards. Big companies have acquired good "cold" lead mines. So finding "cold" lead is a "hot" topic these days. Don't throw away your old fishing weights! (Just kidding. But don't. They need to be recycled properly.)

WIRING SMALL CONNECTORS…

The right way to connect small wires into connectors like microphone connectors, DIN connectors, small phone plugs, and so forth involves more steps than some people are used to, and more cost.

First, besides the connector and wires (or cable) you need to obtain some small gauge clear shrink tubing from one of the standard sources of supply (Radio Shack, hamfest, etc.) Make sure the gauge of shrink tubing used is only slightly larger than the outer diameter of the insulation on the wire to be attached. Typically this means 1/8" shrink tubing, but you might need 3/32" size for ground wires, etc.

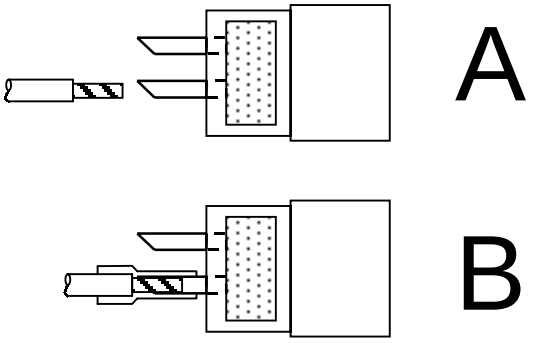
Obtain a small tip soldering iron, about 25 watts, preferably with heat control and tip wiper, and some small gauge electronics-type 60/40 rosin core solder from the "supply source". Have an ohmmeter on hand. Also you will need small diagonal cutters, small needle nose pliers, a solder-sucking device or solder wick, a "no-nick" wire stripper, a very small electronics bench vise ("third hand"), some removable tape ('fourth hand"), possibly a relatively high power magnifying glass, "jewelers" screwdrivers, and small containers to keep small parts in so they don't get knocked on the floor. (The cost adds up for all this stuff, but there is no substitute for the right tools. Do you want your dentist to drill your tooth with his Dremel tool?) Many times you need both the "third" and "fourth hand" devices, since there are both a connector body and a wire to deal with.

First take apart the connector(s) and inspect what you have to do, and locate all the pin numbers and those devious connections to tip, ring, and sleeve, etc. Know how your connector is built, how it comes apart, and how it goes back together after the wires are installed, before you start soldering anything. Don't forget extra washers, rings, o-rings, etc.. Don't forget the backshells, etc.

Next, inspect some exposed wire or cable ends. Are the strand wires clean and free of corrosion? You may want to test solder some extra cuts of the wire ends to make sure the metal is solderable. Also you may want to practice your techniques at solder sucking, heating shrink tubing without overheating the connector next to it, etc. (I use the infrared heat from the soldering iron shaft right next to the terminal, rather than lots of hot air from a heat gun, which heats up too many other parts.)

Starting with the first terminal, and with only a little bit of solder with low heat, fill up a terminal where the wire will be inserted. Immediately suck all the solder back out! Here's where you have to be very careful and not melt the connector's plastic insert(s). These steps are necessary. You need to have new clean solder whetting the inside of the terminal sleeve before going on from here.

Then the target wire end must be stripped to a length just slightly less than the depth of the sleeve it will go into, using



"no-nick"strippers. If you nick the copper wire(s) they will break off in the future. You can bet on that.

Then the target wire end must be pre-tinned with just enough solder, but not enough to increase the wire's diameter. Don't leave any extra solder that increases the wire diameter or leaves a solder blob. You will need the pre-tinned wire to fit smoothly but snugly inside the terminal sleeve when both are cold.

Next cut a length of shrink tubing about 3/8" long, more or less, and slide that shrink tubing over the insulation of the wire and push it down so it will not be heated by the soldering operation. At this point your parts should resemble the positioning of Figure A. Use the third and fourth hands to hold everything, because you will soon be busy with the iron and solder.

Now insert the tinned wire into the terminal until it is almost all the way in, as in Figure B, and then carefully add heat from the iron and some solder, until the terminal just fills up. Don't add too much solder or too much heat. Remove the iron tip and then freeze! Wait about 5 seconds or so for the solder to harden, without wiggling the components.

When everything is finally stable, really inspect your work. This is where the magnifying glass comes in. Oh, you did solder the wire to the terminal having the correct "pin number" right? We wouldn't want to get that wrong! But also inspect that the solder wicked properly under surface tension when it was hot.

Finally, slide the shrink tubing over the terminal and heat the shrink tubing until it necks down neatly over everything, as in Figure B. Clear shrink tubing allows easier inspection!

Your final product will be pull-test strong, will not have cracked copper wire strands, and will have a strain relief over every terminal. Also, with the shrink tubing in place, there can't easily be any pin-to-pin shorts.

Now you can begin on the next terminal! !#^%#. Basically, doing one microphone or DIN connector this way can consume a few hours. You may also have to solder a ground shield braid, put the backshell back on, find and install a setscrew for a ground terminal or shell, etc.

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.

http://members.core.com/~af8c/westpark/
mailto:w8vm@arrl.net

W8VM