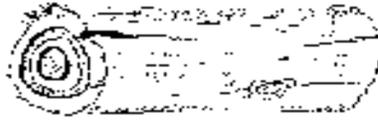




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WEST PARK RADIOPS



Web: <http://www.westparkradiops.org>
Email: w8vm-<at>arrl.net

LOG



April - May 2008
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WEST PARK EVENTS *

*Subject to Change

Apr. 4 - FIRST FRIDAY BUSINESS/ FIXIT NIGHT
Bring your questions or answers to the radio problems of the day/week/month.

Apr. 18 - FIELD DAY PLANNING
There are only three possible program nights for planning Field Day before FD starts, and only two if you count out Dayton weekend's Friday. So let's start talking around what we want to do this year and get those plans rolling. We need a site, antennas, radios, logging programs, planning, etc.

May 2 - FIRST FRIDAY BUSINESS/ FIXIT NIGHT
Bring your questions or answers to the radio problems of the day/week/month.

May 16 - SPECIAL PROGRAM
Owners of newer radios will describe both the best features as well as the "useless" features of their radios, based on experience with using them.

<p>IN THIS ISSUE</p> <p>Page 2: - Pres Says - Public Service</p> <p>-10M Net Topics</p> <p>- Weaver's Words on the ARRL Board Mtg.</p>	<p>Page 3: - Ten Tips for PSK31 Operators</p> <p>- Telegraph</p>	<p>Page 4: - Linux Distributions</p>	<p>Page 5: - Digital Modes</p>
<p>CONTESTS AND EVENTS - de WA7BMN & ARRL</p> <p>Apr 5-6 EA RTTY CONTEST</p> <p>Apr 12-13 RADIO MARITIME DAY</p> <p>Apr 19-20 MICH QSO PARTY</p> <p>Apr 21 RUN FOR THE BACON</p> <p>May 3-4 10-10 TEST CW</p> <p>May 10 FISTS SPRING SPRINT</p> <p>May 16-18 DAYTON HAMVENTION</p> <p>May 19 RUN FOR THE BACON</p> <p>May 24-25 CQ WW WPX CW</p> <p>Jun 7 ALL SCOUTS N. OLMSTED</p>		<p>SOAPBOX</p> <p>Ah, the weather should be warming up. Amateur radio operator's thoughts turn to sitting out in the lawn chair, having a cold one, and turning the VFO. We will begin planning our summer events and so we need any new ideas for club activities.</p> <div data-bbox="1084 1829 1446 1934" style="border: 1px solid black; padding: 5px;"> <p>This document was created using Open Office 2.2, and a PDF creator. Usage of Microsoft products was limited to as little as possible.</p> </div>	

Prez Says

Hi everyone. Well, it seems that maybe spring has sprung. Longer hours of daylight, slightly warmer temperatures, March Madness is down to the final four and the baseball season is underway; can summer be far behind? The nice weather signals the beginning of many outdoor activities for West Park. For those that go, Dayton is just around the corner. All-Scouts should be the second weekend in June, June 7, with Field Day very close behind on June 28th and 29th. The club picnic will be held on Friday, July 18th. In August or early September I hope we can have a 'QRP-to-the-Field' Saturday including lunch in the park. Looking ahead to fall, we hopefully will have a Saturday at the Firelands Scout Reservation. If anyone has any suggestions at all concerning possible activities, please let someone know.

We can have many good-time activities while the nice weather is here. Some ideas for summer contesting and operating events include a number of lighthouse / lightship operating activities and QRP contests and sprints. If you're interested in U.S. and foreign lighthouses and lightships, here are two sites you will want to visit: The Amateur Radio Lighthouse Society (ARLHS), < www.arlhs.com >. From there, take the link to the top 25 lighthouse websites. The URL is < www.lighthousesites.com >. Well, that's it for this issue. Please come out to the meetings and enjoy the friendship of the other members.

As always, the very best 73s to you all,
Al, N8CX President

PUBLIC SERVICE...

There will be several opportunities for public service this year, including two times to support scouting and three times to assist with deliveries of food and cleaning supplies to the elderly and disadvantaged in Lakewood, Ohio.

RECENT DISCUSSIONS ON THE 10M NET...

On the Club's net, 28450 kHz, we have recently discussed the price of gasoline, snow shoveling, when is the bottom of Cycle 23, recent DX happenings, contest experiences, the spring that comes and goes, hamfest trips, how to deal with computer problems, cards received and bureau cycles.

DID YOU KNOW?...

"A central paradox of education is most things worth knowing cannot be taught." (- author not known at time of this publication)

WEAVER'S WORDS...

(extracts taken by this editor, from the writing of Jim Weaver, K8JE, ARRL GL Div. Director)
The ARRL Board Meeting Date: Mon, 28 Jan 2008 09:20:50 -0500 (EST)

Another Annual Meeting of the ARRL Board of Directors has come and gone.

- Effective January 1, 2009, the \$3.00 dues discount for senior citizens will be eliminated. Taken collectively, this change will permit us to keep the ARRL budget in the black. I realize that some of you may greatly dislike losing this discount; however, \$3.00 over an entire year for an individual should not be a financial burden. If this \$3 proves to be a true burden for anyone in our Division, please let me know. I may be able to help.

- The representative to VUAC for the Great Lakes Division is Mark Dabish, K8MD of Howell, MI. To round the picture, the GLD representative to the DX Advisory Committee (DXAC) is Kirk Swallow, W8QID of suburban Cincinnati. I thank each of these men for the time and effort they have devoted to ARRL and Amateur Radio during recent years.

- The long-standing support of ARRL for double sideband AM (AM) was re-enforced by a resolution that restated our support. The resolution was passed unanimously.

- Similarly, the current 160 M band plan adopted by the Board in 2001 was reaffirmed unanimously without change. AM, of course, is included in the 160 M band plan.

- A new award will soon be available on 6 M. This will be the Fred Fish, W5FF (SK) award and will be available to anyone who confirms 6m QSOs with all 488 grid squares in the 48 contiguous US states. Fred Fish, W5FF Award No. 1 will be issued posthumously to Fred Fish and presented to his wife, Lee Fish, K2FF.

10 TIPS FOR PSK31 OPS...

(By Frank Ravenswood, K2NCC
evokefrank@gmail.com, in ARRL Web pages)
 (Editorial comments are from ARRL.)

March 11, 2008

There's more to going over the waterfall than just having a good barrel.

* Use the center of your waterfall display. Testing will show that your transmit (TX) and receive (RX) will be strongest there. Don't blindly use a 1000 Hz tone or strictly follow the VFO "set it and forget it" concept. You can easily lose 20% or more of your power on each edge of your passband. Passband centering of the signal will give the best results of both RX and TX.

* There's no need to have the waterfall streaking bright red. Set your rig's volume to a low level (less than 25% of maximum) and adjust your waterfall and sound card levels for good contrast. Do not overdrive your sound card! Get the background noise and the transmit trace well defined and separate. Keep in mind that how your waterfall looks does not impact decoding, but it is harder to work it if you can't see it.

* Use UPPER CASE characters sparingly. Lower case text in PSK31 varicode transmits fewer bits of data. You'll increase transmit speed and improve the likelihood of proper decoding on the other end by using lower case text as much as possible. (For example, the difference between a lowercase "e" (11) and an uppercase "E" (111011) is three times more bits.)

* Enable your RF attenuation and increase the volume. This can help keep a strong signal from wiping out the weaker ones. Attenuation will probably be around 20 dB, but by dropping the noise level, the signal readability may improve. AGC (Automatic Gain Control) does nothing for a weak signal; it only levels the louder ones.

* Use your digital mode's software, or a program like Spectrogram, to see what your noise level is with the radio off. This will give you an idea of how "clean" your sound card is. Typically, onboard (built-in) sound hardware (as found in most "mainstream" computers like Dell or HP) does not have a signal-to-noise ratio as good as an inexpensive (less than \$50) separate sound card. When purchasing a sound card, look for one with a signal-to-noise ratio over 100 dBA. [A-weighted decibels; a scale of sound "loudness" used in acoustics that simulates the response of human hearing. — Ed.]

[Many onboard sound interfaces, while not optimum for high fidelity stereo sound, perform well for many amateur applications. For a technical review of various sound cards see J. Taylor, K1RFD, "Computer Sound Cards for Amateur Radio," QST, May 2007, pp 63 — 70. — Ed.]

* Consider dual monitors (most modern video cards have two jacks). This allows you to have the waterfall or spectrum display on one screen and your logger, text window, etc on the other. It makes a huge difference in speed and ease-of-use when you don't have to swap between screens or use smaller windows for your contact.

* When transmitting, keep your ALC reading as close to zero as possible. This will help keep your signal clean and your IMD at an acceptable level (-20 dB or better is ideal). Your power output will drop, but there's no need to overload the transmit level. PSK31 uses an 80% duty cycle. Even with a full duty cycle rig, it still needs to dissipate heat! Besides, 20 W more makes little difference. Output of around 50 W is enough to work the world, and your fellow operators will appreciate the courtesy. Also be sure your voice processor is not enabled when using digital modes.

* Ask for an RSQ (readability, strength, quality) report. When in a contact, send just a tone and ask for your IMD and a report on how your trace looks. This will give you a better idea of what adjustments may be needed.

* There are hundreds of digital modes. To get started or to learn more about the most common ones, refer to the list of digital mode references at the end of this article.

Bonus Tip:

* Try 30 meters PSK31. It's a robust band, offering the best of 20 meters and 40 meters. Only digital modes and CW are permitted and contesting is not allowed. Be sure to operate within your privileges. PSK31 can typically be found around 10.140 MHz.

TELEGRAPH...

"You see, wire telegraph is a kind of a very, very long cat. You pull his tail in New York and his head is meowing in Los Angeles. Do you understand this? And radio operates exactly the same way: you send signals here, they receive them there. The only difference is that there is no cat." -- Albert Einstein (1879 - 1955)

LINUX DISTROS...

(abridged from various web sites)

Both DELL and HP have announced Linux PCs although Walmart has discontinued selling their low-cost **Linspire** PCs.

While there is only the one expensive source for Windows[™], there are multiple sources for Linux, and you can get any one of the them for only the cost of burning the CDs and mailing. Or you can go to one of the major bookstores and find one or more pricey Linux user guides with the CD in the back. Now, if you are new to Linux, you WILL need some guidance, so buying a fancy book or a “Dummies” book would be a good idea.

The following is a description of some of the most widely-used Linux “distributions”.

Ubuntu is a rising star in the Linux world and easy for new users to get into. Also in this group are **PCLinuxOS** and **MEPIS Linux**.

openSUSE, **RedHat Fedora**, **Debian GNU/Linux** and **Mandriva Linux** are good middle-of-road distributions.

KNOPPIX is a live CD (or live DVD); originally very popular as a testing and demonstration tool, although nowadays most major distributions offer a live CD/DVD edition of their products as well.

On the other end of the spectrum, **Slackware Linux**, **Gentoo Linux** and **FreeBSD** are more advanced distributions that require plenty of learning before they can be used effectively.

Other well-known Linux distributions include:

CentOS is a distribution derived from the same sources used by Red Hat.

Gentoo is a distribution targeted at power users, known for its FreeBSD-like system for compiling applications from source code. That's probably over the head of most of us users who not familiar with rolling our own programming code.

Arch Linux is another independently developed, highly customizable distribution targeted at competent users.

West Park Radiops members looking at or testing Linux include:

Dave, K8YQL, has been emailing about **Ubuntu**.

Glenn, AF8C, has his main PC double booting **Fedora** and Windows XP. There is a test load of **Ubuntu** on a PC behind him and two months ago **openSuse** was loaded on an old laptop computer. Now a project on the back burner is to double boot Windows 98 and **openSUSE** on that same laptop. **PuppyLinux** is also available to test sometime.

Don, W8IDM, knowledgeable about UNIX at the former Ma Bell, is warming up **DSL**. **DSL** is D... Small Linux, a very versatile 50MB mini-desktop distribution. **DSL** is small enough and smart enough to do the following things:

- Boot from a business card CD as a live Linux distribution (LiveCD)
- Boot from a USB pen drive
- Boot from within a host operating system (that's right, it can run in Windows)
- Run from an IDE Compact Flash drive via a method called "frugal install"
- Transform into a **Debian** OS with a traditional hard drive installation
- Run light enough to power a 486DX with 16MB of RAM, or run fully in RAM with as little as 128MB (be amazed at how fast that computer can be!)

DSL has a nearly complete desktop, and many command line tools for word and text processing. All applications are chosen with attention to functionality, size and speed. There is **XMMS** (MP3, CD Music, and MPEG), **FTP** client, **Dillo** web browser, **Netrik** web browser, **FireFox**, spreadsheet, **Sylpheed** email, **spellcheck** (US English), a word-processor (**Ted**), three editors, graphics editing and viewing (**Xpaint**, and **xzgv**), **Xpdf** (PDF Viewer), **emelfM** (file manager), calculator, games, system monitoring apps, a host of techie commands, USB support and PCMCIA card support.

DIGITAL MODES...

(abridged from web sites)

Wiki

Most amateur digital modes are transmitted by inserting audio into the microphone input of a radio and using an analog scheme, such as amplitude modulation (AM), frequency modulation (FM), or single-sideband modulation (SSB).

- AMateur Teleprinting Over Radio (AMTOR)
- D-Star (requires a whole separate article sometime)
- Echolink
- Hellschreiber, also “Feld-Hell” or “Hell”
- Multi Tone 63 (MT63)
- Multiple Frequency-Shift Keying (MFSK)
- Olivia MFSK
- Packet Radio (AX25)
- PACTOR
- Phase Shift Keying (31 baud) (PSK31)
- Spread spectrum
- Simplex Teletype Over Radio (SITOR)
- Radio Teletype (RTTY)

AMTOR (AMateur Teleprinting Over Radio): FSK mode 5 bits, 100 baud, no binary data capability. The non-ARQ version is error correcting “FEC”, also called SITOR-B.

PACTOR: FSK combination of packet and Amtor Techniques. Popular ARQ digital mode, email, 200 baud inc. data compression with binary data.

G-TOR: (Golay-TOR), FSK with data inter-leaving system fights atmospheric noise, fixes garbled data. 300 baud can drop to 200 or 100 baud when needed.

Proprietary mode developed by Kantronics.

PACTOR-2: robust **proprietary** PSK mode. Uses strong logic, frequency tracking; DSP based, 8 times faster than Pactor. **Both PACTOR and PACTOR-2** use the same protocols making them compatible. As with the original Pactor, rarely used since the development of PC sound cards. modes..

CLOVER: PSK mode, full duplex simulation. Suited for HF ops under good conditions however, there are CLOVER-I and -II modems. Full band-width efficiency with high FEC data rates. Clover adapts to conditions by constantly monitoring the received signal and picking the best modulation scheme to use.

RTTY: oldest FSK mode. 5-bit code for alphabet. At 45 baud (typically) each bit is 1/45.45 seconds long, or 22 ms and corresponds to a typing speed of 60 WPM. No

FEC. Has been implemented with commonly available PC sound card software.

PSK31: first new mode in many years. 31 baud. Combines simple variable length text code with a narrow bandwidth phase-shift keying (PSK) signal using DSP techniques. Most ASCII characters are supported. Second version uses four (quad) phase shifts (QPSK) with FEC Correction at the cost of reduced Signal to Noise ratio.

HF PACKET: 300 baud FSK, adaption of 1200 baud Packet radio used on VHF FM. On HF this mode is unreliable for general HF ham communications and is mainly used to pass routine traffic and data between areas where VHF repeaters are lacking. HF and VHF Packet has enjoyed a resurgence in popularity for use with APRS – Automatic Position Reporting System.

HELLSCHREIBER: text comm uses facsimile technology developed by Germany before World War II! Recent use of PC sound cards as DSP units has increased interest in Hellschreiber and many programs now support old mode. Single-tone version (Feld-Hell) good for HF. On-off keyed system, 122.5 dots/second, (about 35 WPM text rate, 75 Hz bandwidth. Text characters "painted" on screen, can do fonts. PSK HELL version has some advantages for weak signals. Uses "human processor" for error correction; making it the best overall mode for live HF keyboard communications. Feld-Hell has low duty cycle meaning your transmitter will run much cooler.

MT63: for fading paths, using text encoded as 64 tone matrix provides 100 WPM with 1000 Hz bandwidth, not good for crowded HF spectrum. Needs Pentium PC. Rarely used.

THROB: another new DSP sound card mode uses Fast Fourier Transform technology (as used by waterfall displays). Based on tone pairs with several characters represented by single tones. It is defined as a "2 of 8 +1 tone" system, or more simply put, it is based on the decode of tone pairs from a palette of 9 tones.

MFSK16: advanced THROB mode and encodes 16 tones. A new improved Varicode is used to increase the efficiency of sending extended ASCII characters. 42 WPM at 316 Hz bandwidth.

Olivia: MFSK, can perform DX comm. In ionospheric noise conditions where other modes fail. It is possible to communicate worldwide using Olivia with as little as a few watts of transmitter power. Can often be decoded in the poorest S/N even when the human ear cannot discern the presence of the signal, and it cannot be easily seen on the conventional waterfall display. Two most common formats for calling CQ or initiating QSOs are: Olivia 500/16 and Olivia 1000/32. Google it.

WEST PARK RADIOPS

LOG

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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.

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W8VM

