



Squelch Tales



Newsletter Published by the Merrymeeting Amateur Radio Association for March 1999

Winterfest A Success

If you were one of the many hams that attended the first Ham Radio event of 1999 in Chelsea, this report will not be news to you. The weather was accommodating (no blizzards or ice storms). Several MARA members such as Bob (KQ1A), Loren (W1LHD), Mike (KB1DCU), Doug (WB1CIW) and Bruce (W1ZE) were seen inspecting goodies on the tables, hocking their wares and eyeballing with fellow hams. The Augusta Amateur Radio Club did a great job providing all of us a winter diversion. Well done capitol gang. Hope to see all of you at the Andy Hamfest and Maine State Convention.

Were you a Ham before

March of 1974?

If you were and would like to join the Quarter Century Wireless Association (QCWA) contact Bruce, W1ZE for further information about QCWA activities here in Maine.

ARRL MAINE STATE CONVENTION THIS MONTH

The Androscoggin Amateur Radio Club will present their 20th annual Hamfest and computer fair and ARRL Maine State Convention at the Ramada Conference Center, in Lewiston on March 19th and 20th.

Friday Night March 19th have the following Talks and forums starting at 7:00pm.

ARRL, What's happening in Amateur Radio? Restructure Enforcement, etc.

CMP, Y2K deregulation

AA1KF, Taking the fear out of CW.

N1XRK, What is PRB-1 & what does it do for ham radio?

KD1OW, Buying a ham radio.

K1TOL, 6 Meters, the magic band.

Saturday March 20th will have the doors opening at 8:00am for the Hamfest & Computer Fair. Registration for ham exams will start at 10:00am with testing at noon. The following talks and forums at 9, 10 and 11am:

ARRL, What's happening in ham radio)

W9WBA, Emergency comm. equipment, what you need.

N1XRK, What is PRB-1 and what does it do for ham radio?

KD1OW, short-wave listening SWLing.

For the Saturday hamfest, tables, including admission \$12. Each additional table \$6. General admission 8am is \$5. See you there.

N1NFK Holds ARRL VE Session in Bath

Robin Walls N1NFK and a team of volunteer examiners held amateur radio license testing at the Bath Salvation Army building on Saturday February the 20th. Three people took the exams and all were successful with their intended exams. Keep up the good work VE Team.

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SWR PARANOYA By W1ZE

Many of us radio types can exhibit what some clinical psychologists call excessive-compulsive behavior when it comes to Voltage Standing Wave Ratio (VSWR) in our antenna systems. VSWR has been blown way out of proportion. As far back as I can remember the ARRL Handbooks and Antenna Handbooks give a very good explanation of what it is and what does. But it does appear that many of us haven't read it and digested its information. My 1994 issue of the ARRL handbook, Chapter 16, section 16-14 titled, "Effects of SWR," states. *"If the VSWR at the load (antenna input) is no greater than 2, the additional loss caused by the standing waves, as compared with the loss when the line is perfectly matched, does not amount to more than about 1/2 dB even on very long lines. Since a 1/2 dB is an undetectable change in signal strength, a VSWR of 2 or less is every bit as good as a perfect match as far as loss is concerned..."*

Kirt Sterba (antenna engineer) writing in the September 96 Worldradio said: *"Some hams have SWR meters that do not visually explain about the actual watts situation. Others have Watt- meters, which do not read out in SWR. So, here we are adding the two things together. In addition is the dB loss that would occur if it were not the case that the reflected power is sent (cont.) back up the feedline. The situation is a 100-watt output transmitter.*

<u>SWR</u>	<u>Power Reflected</u>	<u>dB</u>
<u>loss</u>		
1.0	0.00w	0.00
1.2	0.80w	-0.034
1.3	1.70w	-0.074
1.5	4.00w	-0.177
1.6	5.30w	-0.236
1.8	8.10w	-0.366
2.0	11.10w	-0.510
2.2	14.00w	-0.655
2.4	17.00w	-0.809
2.6	19.80w	-0.958
2.8	22.50w	-1.107
3.0	25.00w	-1.249

You can see by the above SWR vs. Loss chart that even a 3:1 SWR is only 1.25dB a 25% loss of power. Where very low SWR is important is with today's new solid state transceivers. These transceivers do not like to see SWR much in excess of 1.5:1. This is because the reflected power can cause excessive heat to build up in the final transistors resulting in their damage. With tube finals the heat is not much of a problem and the final tank circuit tuning could compensate for VSWRs as high as 3:1. Most VHF/UHF solid state rigs in the 10 to 25 watt class can work fine into a 2:1 SWR without a problem because most of them have pretty good heat dissipation and SWR protection circuits. So take a Prozac, and don't worry about that 1.4 to 1 SWR. 73



Invitet a Ham to

Join the MARA



Word From Headquarters Wireless Privacy Bill Reintroduced

The Wireless Privacy Enhancement Act of 1999, HR514, has been introduced by Rep Heather Wilson of New Mexico. The measure is aimed at amending the Communications Act of 1934 "to strengthen and Clarify prohibitions on electronic eavesdropping, and for other purposes." "HR514 is identical to the amended version of HR2369 that passed the House on a 414-to-1 vote during the last session," said League Legislative and Public Affairs Manager Steve Mansfield, N1MZA. The Senate did not act on that measure.

The original bill, HR2369, would have banned most types of scanners and scanner listening, however, the bill's sponsor, Rep Billy Tauzin worked with the ARRL and representatives of manufacturers, public service organizations, and scanner enthusiasts to redraft the bill top to bottom. HR514 forbids manufacturing or modifying scanners to receive cellular, PCS, or "protected" paging service frequencies.

The bill also forbids receiving, divulging, publicizing, or utilizing such communication. The measure is part of a package of legislation introduced early in the session in the expectation that it will pass quickly and help restore Congressional momentum.

Mansfield says, however, that the Senate prospects for HR514 remain murky.

While Amateur Radio appears to be unaffected by the new bill, the League is on record as opposing the expansion of prohibitions on radio monitoring beyond those that now exist to protect the privacy of services that interface with wireline networks.

HR514 has been referred to the House Commerce Committee. The bipartisan list of co-sponsors of HR514 includes Reps Tauzin of Louisiana, Markey of Massachusetts, Oxley of Ohio, Eshoo and Rogan of California, Deal of Georgia, Wynn of Maryland, Cubin of Wyoming, Luther of Minnesota, Sawyer and Gillmor of Ohio, and of the bill is available on the Web Pickering of Mississippi.

PSK31 GETS RAVE REVIEW

Getting tired of the "same ol' same ol'" on HF? From the father of AMTOR, Peter Martinez, G3PLX, comes PSK31, a "live QSO" keyboard-to-keyboard mode that occupies a sliver of bandwidth and offers terrific performance even under weak-signal conditions.

PSK31 isn't new; it's been around for a few years, but no one really took much notice until Martinez developed free software that works with a PC sound card. Suddenly, PSK31 has become the latest HF fad. Unlike TOR modes, PSK31 does not use a synchronized linking—or handshaking-protocol to exchange (cont.) error-checked data packets. Operationally, it's much like

traditional 45-baud RTTY. PSK31 has shown itself to be a real trouper in weak-signal situations. Some hams experimenting with PSK31 claim that it outperforms all other amateur modes for weak-signal work—including CW. Indeed, PSK31 signals are easy to overlook on the bands. Most PSK31 activity is concentrated on 14.070.15 and at 3.580.15 MHz. You'll also find it on 40 meters at 7.035.15 MHz. On 15 meters, look for activity around 21.070 MHz.

To run PSK31, you need a PC that runs Windows and equipped with a sound card. PSK31 software is available via the Web). Your HF SSB transceiver should be very stable and tune in 1-Hz increments. The connections between the radio and the sound card are very straightforward.

Several versions of PSK31 software are available as zipped files. The latest PSK31 software includes a couple of tuning aids that make finding and tuning signals much simpler. The "official" PSK31 Web site is <http://aintel.bi.ehu.es/psk31.html> operated by Eduardo Jacob, EA2BAJ. The site also contains lots of information and links to other PSK31 and DSP-related sites, plus wave files of PSK31 signals, so you'll know what to listen for.

W1AW Station Manager Joe Garcia, NJ1Q, has experimented with the new operating mode, PSK31, at the Maxim Memorial Station. While it took a bit of effort to get the equipment to function properly, he says initial results were quite good. Plans are in the works to add this mode to the complement of modes available for W1AW visiting operators.

Some have questioned whether the FCC permits hams to use PSK31. The answer is a definite "yes," although some confusion is understandable given the wording of Section

97.309(a) of the rules. Responding to an ARRL inquiry, the FCC amended the section in 1995 (Order DA 95-2106) "to clarify that amateur stations may use any digital code that has its technical characteristics publicly documented." PSK31 is publicly documented and widely available, but the ARRL in late January took the additional step of specifically documenting the technical characteristics of both PACTOR II and PSK31 in a letter to the FCC.

FCC issues 5-MHz Experimental License to ARRL

The FCC has issued an Experimental Radio Service license to the ARRL to permit two-way tests in the vicinity of 5 MHz, the most likely site of the next amateur HF band. The license, bearing the call sign WA2XSY, was issued January 8. A group of 15 current amateurs in various parts of the US and the Caribbean will conduct experimental, two-way RTTY and SSB transmissions within the band 5.100 to 5.450 MHz. To avoid interfering with existing services, the participants will confine their operations to the least-populated 50-KHz segment.

"The idea is to show that an amateur allocation there will improve our emergency communication capabilities by filling the gap between the 3.5 and 7.0 MHz bands," said ARRL Executive VP David Sumner, K1ZZ. Sumner pointed out that several of the participants are phone net members in the Caribbean and Gulf area who frequently handle hurricane related traffics that now alternates between 75 and 40 meters. Other participants are members of a nationwide digital data-forwarding network.

The Experimental license is good for two years. Two studies by the National Telecommunications and

Information Administration (NTIA) include an allocation at 5 MHz among the future spectrum needs for the Amateur Service. The subject is not likely to show up on the agenda of a World Radio Communication Conference for several years, however.

Participants in the WA2XSY experiment may run up to 200 watts effective radiated power. Similar multi-band trap dipoles capable of operation on 80 and 40 meters as well as at 5 MHz will be employed at each station location. Operation by participants will consist of short transmissions to determine propagation.

Participating stations are located in New Hampshire, Tennessee, Utah, Ohio, Florida, Texas, Mississippi, Wisconsin, Indiana, New York, California, the US Virgin Islands, and Maryland.

YCCC Packet Cluster Network, what is it?

By WIZE

If you are on the HF bands or do 6-meter and other UHF/VHF weak signal work, chasing the occasional DX station or rare grid square, and you haven't checked out the DX packet cluster yet, you are missing a very good DX and weak signal-chasing tool.

What is the Packet Cluster? Well, it is a regional packet system that is not part of the normal packet network.

In the normal packet system you send your packet containing your digital information from your packet station to a distant packet station or BBS by connecting direct to, or via a digipeater, to a local node. That node in turn sends your packet via a digital backbone radio link to the node that is connects to the station or BBS you addressed your packet to. (cont..)

In the DX packet cluster network you normally do not send packet data to just one station, even though you can do that, but you make a DX spot or other announcement in the form of a

system-wide broadcast into the cluster network. You do this by logging onto the network. As soon as you log in you will start seeing broadcasts from other hams connected to the system.

For example, you hear VP2MM talking to a W5XYZ and want to let folks know the VP2 is on. At your terminal you type in something like this: **DX VP2MM 28445.5 QSX up 2**. What you have just sent is that you are announcing that VP2MM is on 28445.5 kHz and he is working split, listening up 2 kHz. You could have added other short notes like **QSL v WA6MUP** or other info you think would help others work or QSL the DX station.

The DX Packet Cluster Network uses a few of the normal packet commands like **C** for connect and **B** or **BYE** for disconnect, but it has many others different commands that relate to the unique nature of the YCCC system. Like normal packet YCCC offers keyboard to keyboard exchanges in the TALK mode and there is a system wide BBS where you can leave messages, make announcements; list ham gear for sale, etc., just like a normal BBS. You can even send BBS messages to packet stations not on your network in the same manner you do with a normal packet BBS.

The YCCC/Tri-State Cluster Network consists of 31 nodes and 6 KA nodes covering the states of Maine, New Hampshire, Vermont Eastern and southern New York and New Jersey. The three nodes that service all of us here in central and southern Maine are K1EU in Newburgh/Bangor on 144.91MHz, W1AO in Manchester/Augusta on 144.93MHz and K1EU Scarborough/Portland on 144.91. From my QTH in the Sabino hole I can access both W1AQ and K1EU with ease with a J-pole at 28-feet.

What do you need to get on the cluster? The same things you need for a normal 2-meter packet station. A TNC, PC with terminal

program, or a dumb terminal, and a 2-Meter transceiver and 2-Meter antenna. The following is a list of commands you can use on the YCCC Packet Cluster Network:

ANNOUNCE or **A** msg = announce to Local users only
ANNOUNCE/Node call or **A/call** message = announce to users on node who's call is x.
ANNOUNCE/FULL or **A/F** msg = announce to users on all nodes
BYE or **B** = Log off node
CONFERENCE or **CONFER** = enter conference mode (seldom used)
DELETED or **DE** msg# = delete a mail msg
DIRECTORY or **DI** = list last 5 mail message
DIRECTORY/ALL or **DI/A** = list all active mail messages
DIRECTORY/BULLETIN or **DI/B** = list all TO ALL messages
DIRECTORY/NEW or **DI/N** = list all new mail messages
DIRECTORY/OWN or **DI/O** = list mail to and from you
DX freq call comment = announce a DX station
HELP or **?** = brief command summary
HELP SET = show all user SET commands
HELP SHOW = show all user SHOW commands
READ or **R** = read a mail message to you
READ msg # or **R msg #** = read a specific mail message
REPLY or **REP** = reply to read message to you
REPLY/DELETE or **REP/D** = reply to a read msg & delete
SEND or **S** = send a mail message to all calls
SEND/PRIVATE or **S/P call** = send a private mail message
SET/ANSI or **SET/A** = ANSI escape sequences accepted
SET/HERE or **SET/H** = Specify you're at the keyboard
SET/LOCATION or **SET/L** = set latitude & longitude
SET/NAME or **SET/NA** = set your name
SET/NEED or **SET/NE** = specify your needed countries
SET/NOANSI or **SET/NOA** = ANSI escape sequences not accepted
SET/NOHERE or **SET/NOH** = specify you're away from the keyboard
SET/QTH or **SET/Q** = enter your address/city
SHOW/ANNOUNCEMENT or **SH/AN** = Show last TO ALL announcements
SHOW/ARCHIVES or **SH/AR** = show files in archive file area
SHOW/BULLETINS or **SH/BU** = show file in bulletin file area
SHOW/COMMANDS or **SH/COM** = show additional data base commands
SHOW/CONFIGURATION or **SH/C** = Show nodes & users connected
SHOW/DX or **SH/DX** = list last 5 DX announcements
SHOW/DX or **SH/D band** = show last 5

DX spots on band x
SHOW/DX or **SH/D call x** = show last 5 DX spots for call x
SHOW/MUF or **SH/MU call x** = show MUF for station who's call is x
SHOW/PREFIX or **SH/PR prefix x** = show country assigned and zone
SHOW/WWV or **SH/W** = show last 5 WWV announcements
TALK or **T call x** = enter talk mode to user who's call is x

There are several more commands but the list is too long to put in this newsletter. If you want more information about our regional packet cluster system please contact:

**YCCC Packet Cluster Network
PO Box 3, Rindge, NH 03461-0003**

I have been using the DX Cluster for several years now and I don't know how I lived without it. **73**

WHAT HAPPENED AT THE FEB. MEETING?

The February 25th Board of Directors and general meeting was called to order by Chris, KB2SKP. Attendance was very low due to a snow storm outside in the process of giving all of us about three inches of the lovely white stuff. First topic of business was deliver the new club ball caps to the folks in attendance. (*Bob McQueeney, N1VVF, has custody of the ball caps, so if you want to get yours before the meeting contact Bob*).

Second order of business was a technical repeater project report by Bruce W1ZE. Everything is moving slowly awaiting progress with the broadcast group in Augusta.

The topic turned to the Associations newsletter and what we need to do to make sure it gets out and e-mailed properly. A process team of Chris, Bruce, Mark and Bob McQueeney will put their collective heads together and (cont.)

see what they can do to insure a smooth delivery of Squelch Tales.

Bruce, W1ZE, made the evenings presentation on how to build a 300-ohm TV twin

lead J-pole for 2-meters. After coffee cookies and friendly conversation the meeting was adjourned so everyone could slip and slide home in the snow.

UPCOMING HAM EVENTS IN MAINE

The following is a list of ham related events through July:

February:

13 = Sat. 8:00am **Chelsea Winterfest**, Rt-17, 5mi east of Augusta.

20 = Sat. 10:am **N1NFK/ARRL VE**

26 = Fri 6:30pm **AA1CZ/ARRL VE**, Alfred fire Station. POC: Al Noble 839-3275

March:

17 = Wed. 6:00pm **AE1Q/ARRL VE**, Togus VA hospital. POC: Don Smith 293-2935

19-20 = Fri/Sat **Andy Hamfest ARRL Maine State Convention**, Rtamada Inn Lewiston. W5YI VE exam Sat.20th. POC: Bob Damon 782-4721

27 = Sat. 9:00am, **N1NGM/W5YI VE**, Trenton Am. Legion Post 207. POC: Norm Veillette 565-3634

April:

10 = Sat. 9:00am **W1RU/ARRL VE**, Rockland Red Cross 312 Broadway. POC: Dick Baldwin 529-5781

10 = Sat. 9:00am, **K1AG/ARRL VE**, Bangor Community Center. POC: Bill Sullivan 947-4051

17 = Sat. 9:00am **AD1RV/W5YI VE**, Auburn Red Cross. POC: Bob Damon 782-4721

23 = Fri. 6:30pm **AA1CZ/ARRL VE**, Alfred fire Station. POC: Al Noble 839-2935

24 = Sat. 10:00am **AE1Q/ARRL VE**, Winslow Elementary school. POC: Don Smith 293-2935

27 = Tue. 6:30pm **WA1YNZ/ARRL VE**, Presque Isle NMTC, POC: Wilburn Scott 455-8333

May:

7-8 Fri/Sat. **Hosstraders Hamfest & VE**, Rochester, NH fairground (W5YI testing Saturday)

19 = Wed. 6:00pm **AE1Q/ARRL VE**, Togus VA. POC: Don Smith 293-2935

22 = Sat. 10:00am, **N1NFK/ARRL, June:**

5 = Sat. **Herman Hamfest & VE**, Herman High School (ARRL testing @ 10:00am)

18 = Fri. 6:30pm **AA1CZ/ARRL VE**, Alfred fire station. POC: Al Noble 389-3275

26-27 = **MARA Field Day**, (location to be announced at a later date)

July:

10 = Sat. **Union Hamfest & VE**, Union fairground (VE 9:00am W1RU/ARRL) POC: Dick Baldwin 529-5781

21 = Wed. 6:00pm **AE1Q/ARRL VE**, Togus VA hospital. POC: Don Smith 293-293

NEW OFFICERS SELECTED

At the January 28th Board of Directors meeting, new Association officers were selected for the 1999 term from the board members in attendance. They are:

President =Chris McGraw, KB2SKP

Vice Pres.=Loren Dudley, W1LHD

Secretary =Robin Walls, N1NFK

Treasurer =Mark Rideout, N1JIM

We all should support and help these good people in their new positions. Best wishes to the new



administration.

HARECOM ARES Net meets on KS1R/R

When the 147.270 MHz was removed from the Orr's Island fire station, and relocated to W1ZE's QTH in West Bath, the HARECOM ARES net needed a new home. The MARA invited the HARECOM group to move their Monday evening (7:30pm) net to our 147.21, KS1R/R repeater. We asked the HARECOM folks to include the Cumberland and Sagadahoc counties in their service area. And we asked them to encourage their members to consider joining our Association, and we would encourage our members to participate in the HARECOM ARES net.

This HARECOM net offers the opportunity for all MARA members and repeater users to become familiar with Ham Radio's volunteer efforts to prepare for, and provide their communities

with an additional resource of skilled volunteer communicators in the event of emergencies and natural disasters.

We encourage all of you to take a few minutes on Monday evenings at 7:30 and check into the HARECOM net. The net is also used to inform the participants of what is going on with the MARA and other ham radio events and activities in Maine. We hope to hear you check in.

PL on 147.21 MHz

As you all may know, the 147.21 repeater can be put into PL to help eliminate interference, or when lift conditions occur and unintended access by distant stations using a distant repeater also on 147.21 (western Mass.) The PL tone for the repeater is 88.5 Hz. It is recommended that all of you with transceivers with programmable PL, program in 88.5 on your 147.21 repeater channel.

If you want to be able to turn the PL on or off, here is the user touch-tone codes:

258 11 = PL ON

258 10 = PL OFF

write it down somewhere near your radio.

Remember, if you don't have PL in your radio, you will be able to turn PL decode on, but you will not be able communicate through it or turn PL off.

If you turn on your radio and attempt to access the 147.21 machine and it doesn't respond, it may be in PL mode. That is why it is a good idea to turn on your PL and leave it on.

BECOME AN

ELMER,

HELP SOMEONE



**Merrymeeting Amateur Radio
Association
HC63 Box 81, Bath ME 04530**

MEETING

**7:00 PM Thursday, March
25th**

**At: Salvation Army Bldg.
25 Congress Av., Bath**