

# Squelch Tales



Newsletter from the Merrymeeting Amateur Radio Association for November 2001

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## **HOSSTRADERS,**

### **a little damp but lots of fun**

By Bruce Randall W1ZE

It was a quarter to six in the morning on October 9<sup>th</sup> when Pete Russell (K1MJP) and I joined up at Bowdoin College to start our tract to Hosstraders. Before we traveled very far we stopped at the Copper Kettle in Topsham to wolf down a couple eggs and some coffee to get us to the Granite State.

The heavy overcast followed us all the way to the fairgrounds in Hopkinton, New Hampshire. As we approached the recommended off-ramp on the interstate we followed two ham vehicles with antennas on them. A good thing too, because there were no road signs providing directions to the hamfest or fairgrounds. I guess the promoters figured we all knew where to go.

When we got to the fairground about 9 AM we found it in a pretty wooded spot and with the fall colors in full displays the surroundings provided a good first impression. There was ample parking on the grass and numerous fairground buildings for the commercial vendors. As we entered the event Pete and I split up to do our own thing and established a couple of check-in times to see how each other were doing.

About 9:50 in the morning a drop or two of rain started to fall from that overcast that had followed us to the event. Fortunately I had stopped to say hello to Maine Section Manager, Bill Woodhead (N1KAT) and found myself under a sellers tarp when the sky let go and dumped a quarter to half inch of rain in about 10 minutes. There were a lot of folks bust putting their goods under cover and by the time they got it covered up the rain stopped. About 30 minutes later there were blue holes in the clouds.

Again I was smart enough to take just enough cash to have fun but not enough to get into serious trouble. I managed to find a few small one-dollar items I needed at a parts dealer and picked up a Ni-MH battery pack for my Yaesu FT-817 at a good hamfest discount from the Battery pack dealer out of New York.

Pete managed to get a spiffy new 50-watt Yeasu 2-meter rig and some GE radio equipment he needed for

parts and sub-assemblies. By noon we had done and seen what we wanted to see and headed home. We did manage to stop at Chili's restraint near Portsmouth for lunch and a bottle of wine to top off a good day.

# News from Newington

## Council Calls for End to Morse Requirement: IARU Administrative

Saying that it was "setting aside any previous relevant decisions," the International Amateur Radio Union Administrative Council this week resolved that IARU policy supports "the removal of Morse code testing as an ITU requirement for an amateur license to operate on frequencies below 30 MHz." The Council further resolved to urge member societies, as an interim measure, to seek Morse code testing speeds "not exceeding five words per minute."

The resolution was adopted during the IARU Administrative Council meeting October 6-8 in Guatemala City, Guatemala, which followed the 14th General Assembly of IARU Region 2.

The Council's Morse resolution took into consideration the approval, without opposition, of ITU-R Recommendation M.1544. That document sets out the minimum qualifications of radio amateurs. The Council also said it recognizes that Morse code "continues to be an effective and efficient mode of communication used by many thousands of radio amateurs" but that Morse code proficiency as requirement for an HF amateur license "is no longer relevant to the healthy future of Amateur Radio."

The principal business at the Administrative Council session was to review the status of IARU preparations for WRC-2003. Agenda items of concern to amateurs include, among others, the harmonization of amateur and broadcasting allocations near 7 MHz, the adequacy of HF broadcasting allocations below 10 MHz, and possible revisions to Article S25 of the international Radio Regulations.

Among other things, Article S25 spells out Amateur Radio operator qualifications. It now provides that Amateur Radio license applicants demonstrate the ability "to send correctly by hand and to receive correctly by ear, texts in Morse code signals" for operation below 30 MHz. The IARU Administrative Council supports the revision of Article S25 and the incorporation by reference of Recommendation M.1544.

The IARU Council selected the theme of the next World Amateur Radio Day, April 18, 2002, as "Amateur Radio: Continuing Innovation in Communication Technology."

## BATTLE LOOMS OVER PART 15 ACCESS TO 425-435 MHz

The FCC has proposed changes to its Part 15 rules governing unlicensed devices that would allow operation of advanced RF identification devices between 425 and 435 MHz. By going along with a request made earlier this year by SAVI Technology Inc. and fiercely opposed by ARRL, the FCC has set the stage for another battle between amateur and commercial interests.

"The FCC hasn't thought this through," said ARRL Executive Vice President David Sumner, K1ZZ. He contends that the Part 15 RFID proposal--included

this week as part of a larger Notice of Proposed Rule Making and Order--is "contrary to the whole philosophy of the Part 15 rules." Sumner said the RFID devices SAVI proposes more properly belong on frequencies that are also authorized for use by devices regulated by FCC's Part 18 Industrial, Scientific and Medical (ISM) rules.

The FCC said this week's NPRM&O would modify the rules for RFID systems "to harmonize our rules with those in other parts of the world and to allow for improved operation." Sumner said that 433.9 MHz is allocated for ISM devices in 10 European countries but not in the rest of the world, including ITU Region 2 (North and South America).

Last March, the ARRL urged the FCC to deny or dismiss SAVI Technology's petition. The League argued that the field

strengths and duty cycles SAVI proposed for its RFID tags were unreasonable "and would undoubtedly seriously disrupt amateur communications in one of the most popular of the Amateur Service allocations."

SAVI, which markets radiolocation and wireless inventory control products, told the FCC it needed the rules changes to satisfy customer demand for increased RFID system capabilities. The FCC this week said it agreed with SAVI that changes to its Part 15 rules to allow more advanced RFID systems in the 433 MHz band "would serve the public interest." It proposed to create a new section to Part 15 that would allow operation of RFIDs in the 425-435 MHz band and transmissions of up to two minutes at maximum field strengths now only permitted for extremely short-duration, intermittent control signals.

In an apparent about face, the FCC said it believes the proposed levels would offer only minimal interference potential for licensed users. The FCC in the past has acknowledged serious interference potential and has

prohibited data transmission, among other things, at the proposed field strengths for that very reason.

As proposed, transmissions of 120 seconds would be permitted with just a 10-second silent period between transmissions. Under Section 15.231(e) periodic radiators are permitted field strengths of less than 5000 uV/m at 433 MHz measured at three meters, with duty cycles of less than one second and a silent period between transmissions that's at least 30 times the duration of the transmission.

The League pointed out in its earlier comments that the Communications Act of 1934 lacks authority to allow unlicensed devices with substantial interference potential. "Such devices must be licensed," the ARRL concluded. Unlicensed Part 15 devices must not interfere with licensed services and must tolerate interference received from licensed radio services in the same band.

Another portion of the proceeding involves the 13.56 MHz ISM frequency. Sumner said that proposal "at first glance" might permit increased emissions in the bottom 10 kHz of the 20-meter amateur band. Sumner said the ARRL would take a closer look at this section of the overall proposal before assessing its interference potential.

Sumner said the League plans to file a strong opposition to the FCC's NPRM&O. The entire Notice of Proposed Rule Making and Order in ET Docket 01-278 (which incorporates RM-9375 and RM-10051) is available on the ARRL Web site.

## **FCC says CORES for amateur a must**

From ARRL October 25th

The FCC's Wireless Telecommunications Bureau has clarified several issues regarding Amateur Service implementation of the Commission Registration System or CORES. Starting December 3, everyone doing business with the FCC, including amateur licensees must obtain and use a 10-digit FCC Registration Number (FRN) when filing.

Amateur licensees now registered in the Universal Licensing System (ULS) already have been cross-registered in CORES and issued an FRN by mail. The FCC said it planned another cross-registration by November 28. Amateurs can check to see if they have an FRN via a ULS license search. Many Internet call sign servers, including ARRL's, also can provide this information.

Once CORES becomes mandatory, the FCC will "auto-register" all amateurs who seek to register in ULS and will issue them an FRN. Amateurs then should use their FRN in place of their Taxpayer Identification Number (TIN --typically an individual's Social Security Number) when filing applications with the FCC. New or

upgrade license applicants not previously registered in ULS will be registered automatically in both CORES and ULS when they provide a TIN on a license application filed through a Volunteer Examiner Coordinator. Although both ULS and CORES will contain a licensee's FRN, updating information in one system will not update the other. For amateurs, CORES registration will replace ULS "TIN/Call Sign" registration, but the ULS will remain the Amateur Service licensing database

within WTB, and only ULS will associate an individual with a particular call sign and FRN. Once CORES/FRN becomes mandatory, those registering in ULS will be redirected to CORES registration.

Going away December 3 will be the so-called Assigned Taxpayer Identification Number, or ATIN, which the FCC has been issuing to applicants ineligible to obtain a Social Security Number, such as foreign applicants and club station licensees. An FCC Public Notice this week said applicants that have been using ATINs "must now register in CORES." The FCC said it will accept ATINs only "during a short transitional period" after December 3.

CORES will offer exemptions to amateur clubs and to foreign entities not holding a TIN/SSN. Club station applicants also may use a trustee's TIN/SSN or a tax-exempt club's IRS-assigned EIN.

The WTB says that starting December 3, "all passwords will be maintained in the CORES database." Amateurs also may use FCC Form 160 to register in CORES, and those doing so will be mailed a CORES password for on-line access.

The FCC continues to work out the details of how amateurs, CORES and ULS will coexist. Amateur Service testing with CORES is planned for early November.

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## **MARA BREAKFAST AND MEETING**

**Saturday, November 24<sup>th</sup> at 9:00 AM**

**At the Cook's Corner Denny's Restraint**

**Hope to see you there!**

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## **Membership in the MARA**

For over a year now the MARA has not pressed anyone to pay his or her dues. We have a treasury that is solvent and our only real expense during this period was paying the monthly phone bill and mailing out a few newsletters. For this reason we have not harped on anyone to pay his or her dues.

The time has come to advise everyone to pay his or her dues. We want to keep enough money in the kitty to pay for maintenance, upgrades to the repeaters and other Association projects. We would like to enhance the performance of the 444.4 machine with a commercial Station Master antenna and maybe do some linking projects in the not too distant future.

If you can not remember the last time you paid your dues, you now need to pay them. The dues in the MARA are cheap. \$10 a year per member or \$12 a year for a family membership. Please send your dues to the club address:

**M.A.R.A. KS1R**

**177 Sabino Road**

**West Bath, ME 04530-9503**

Include your *name, call sign, current address, e-mail address (if applicable) and autodial number (if you can remember it)*. Better yet come to the Breakfast-Meeting and take care of it there.

**73, Bruce Randall, WIZE** (KS1R Trustee)

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# HAM RADIO & ELECTRONICS AUCTION

**The Waltham ARA and the 1200 Radio Club will have an auction on Saturday, November 17 running from 11 AM to 4 PM at the Newton Masonic Hall located at 460 Newtonville Avenue, Newtonville, MA. Admission is \$2 each. Free parking in municipal lot across Walnut Street or metered parking on the street. Snack bar will be available.**

**For auction rules and other info about the event, visit:**

**<http://www.wara64.org/wara/auction.htm> or contact Eliot Mayer, W1MJ, [wlmj@amsat.org](mailto:wlmj@amsat.org), Tel 617-484-1089.**

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## VHF TVI/RFI Trap

By Bruce Randall, W1ZE

You are sitting in the shack with you hot cup of hot chocolate and tune your new rice-rocket 2-meter transceiver to your favorite repeater. You hear a ham friend announce that he is listening, so you pick up the microphone and give him a call. He tells you your new rig sounds great. No sooner than you start the QSO your lovely wife sticks her head in the shack door and says, "listen up dummy, you are wiping out the picture on the living room TV right in the middle of Regis asking the \$500,000 question."

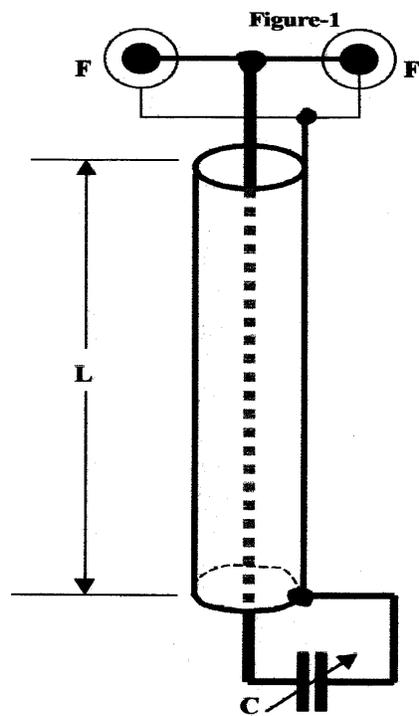
That is strange because you have the rig grounded properly and you haven't had a problem before. Well Bunky, there may be nothing wrong with your rig, but what is happening is that new 50-watt rig is putting out a big signal and your 2-meter antenna is in close proximity to the TV's antenna or the TV itself.

You could increase the separation between the antennas but that may not be practical. What you need to do is keep the 2-meter signal from entering the TV set. Don't run over to the Radio Shack store and buy a TV/FM high-pass filter because they are designed to keep out frequencies below 30 MHz from getting into the set. VHF signals will pass through it like it isn't there. What you need is a frequency trap that will notch out the 2-meter signal and let the other frequencies pass to your set. You can't buy a frequency trap at Radio Shack either, but you can get most of the parts there you need to make one.

I used 2-meters in the previous example but a trap for 6-meter TVI can be built the same way.

A trap for 6 or 2 meters consists of some TV F-connectors, coax cable and a trimmer capacitor. All these parts are available at your neighborhood Radio Shack, or out of your well supplied junk box. The heart of the trap is coax cable and almost any

impedance (50 to 90 ohms) coax will do. A hint: the better quality the coax (% of shielding) the higher the Q and the deeper the attenuation notch. In Figure -1, L represents the coax tuned line, C is the tuning capacitor and F indicates the connectors. The velocity factor of the coax does effect the required length; so make sure you know the difference between standard and foam dielectric coax. RG-8, 58, 213 and 214 are standard dielectric 50-ohm coax with a VF of 0.66. 9913 and foam filled coax have a VF of 0.80. Scrap foam filled hard-line will also has a VF of 0.80. If you can find some scrap hard-line it makes the best trap because it is 100% shield with high surface conductivity and a high Q.



**Parts List:** C = (2 Meters) 1.4 to 30 pF trimmer cap. RS# 900-5849

(6 Meters) 5 to 40 pF trimmer cap. RS# 900-5847

L = (2 Meters) 7 inches of coax with a VF of 0.66

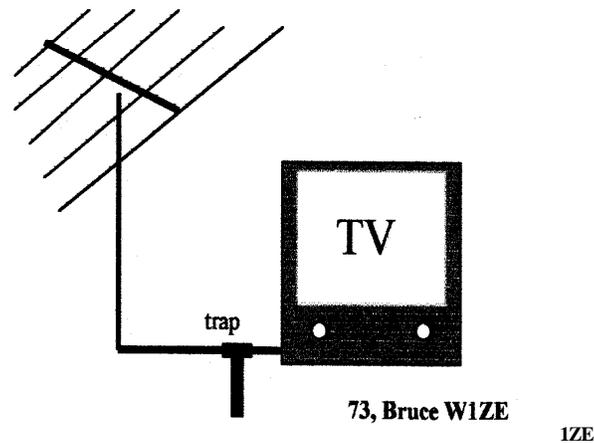
8 inches of coax with a VF of 0.80

(6 Meters) 26 inches of coax with a VF of 0.66

29 inches of coax with a VF of 0.80

F = 2 each F-61 panel-mount F jacks RS# 278-212

Install the trap in the TV lead-in just ahead of the TV set. Key up (transmit) on offending transceiver and tune C until RFI is attenuated.



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# HAVE A GREAT THANKSGIVING HOLIDAY

**Merrymeeting Amateur Radio Assoc.**

**KS1R**

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**West Bath, ME 04530-9503**