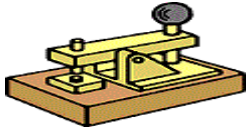




# Squelch Tales



Newsletter from the Merrymeeting Amateur Radio Assoc. for January 2007



## MORSE CODE TEST, SK

**Washington DC:** In the late afternoon on Friday, December 15 the FCC surprised the Amateur Radio community by announcing their long awaited ruling on the elimination of the Morse code proficiency requirement to obtain a license that permits operation in the HF spectrum. Within thirty days of the announcement, Element-1 will be eliminated from the examination pool.

This ruling does not eliminate the A1 mode of operation, just the requirement to demonstrate that you can send and receive international Morse Code at a minimum speed of five words per minute.

As soon as the elimination of Element-1 goes into effect, the VE community anticipates an increase of Technician Class holders taking the General written exam (Element-2) to obtain HF phone and other privileges.

For those of you that have been awaiting this change with great anticipation, now is the time to crack open your license study manual, spend a few hours memorizing the answers and get yourself to a VE session near you.

You can now sell several of your extra 2-meter FM radios and call your favorite 1-800 Ham Radio dealer and get a shiny new HF transceiver, a roll of coax and an HF antenna or two. **CQ DX!**

**VA#** -----

## MARA Ham Exam Sessions For 2007

**Date: February 17, 2007**

Time: 10:00 AM

Location: American Red Cross,  
16 Community Way, Topsham,

**Date: April 14, 2007**

Time: 10:00 AM

Location: American Red Cross  
16 Community Way, Topsham,

**Date: June 16, 2007**

Time: 10:00 AM

Location: American Red Cross  
16 Community Way, Topsham.

**Date: August 04, 2007**

Time: 10:00 AM

Location: American Red Cross, 16 Community  
Way, Topsham

**Date: October 20, 2007**

Time: 10:00 AM

Location: Midcoast Chapter American Red Cross,  
16 Community Way, Topsham

**Date: December 15, 2007**

Time: 10:00 AM

Location: American Red Cross,  
16 Community Way  
Topsham, ME.

All the previous listed sessions allow walk-in participants.

Contact: Bryce Rumery, K1GAX (207) 799-1116  
E-Mail: [k1gax@juno.com](mailto:k1gax@juno.com)

In conjunction with these test sessions, ARRL Emergency Communications Certification Exams will be given with advanced registration (at least one week in advance) with K1GAX



## HF Digital modes, a lot of fun

By W1ZE

With the HF band soon to be open to those of you that will be upgrading to General or Extra class, there is a lot more to do than just SSB phone. Oh yes, there is still CW but there is a growing throng of hams using the so-called sound-card digital modes. CW is the original digital mode but there are RTTY, PSK31, PSK63, MFSK, AMTOR,

PACTOR, PACKET, and MFSK, digital FAX, SSTV and others. Almost all these modes can be done with your spiffy new HF transceiver and a PC with the aid of a little device called a sound-card interface unit between your PC sound-card and the microphone and speaker connection on your transceiver.

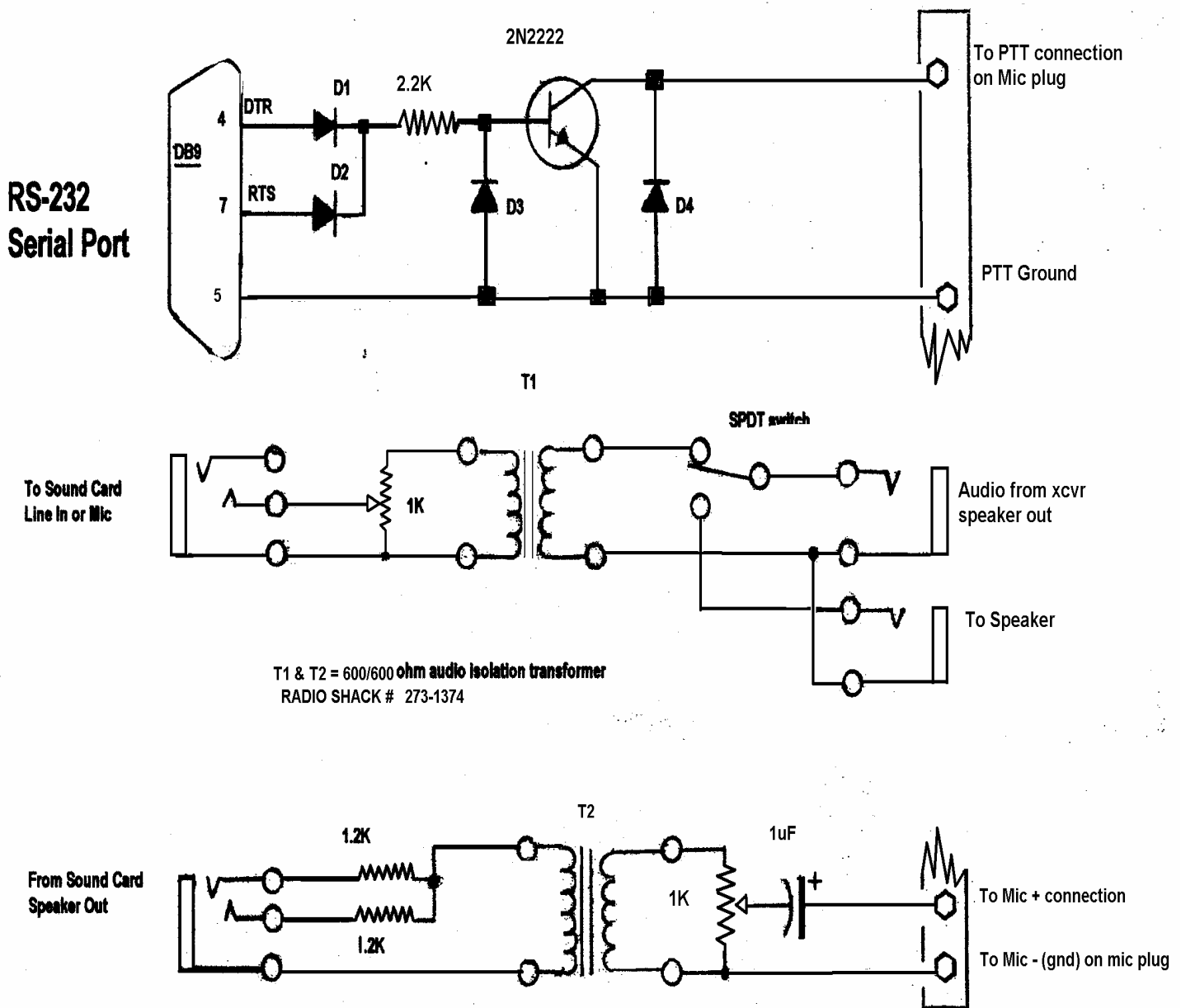
Now you can go out and spend another hundred dollars plus for one from RigBlaster, MFJ or other suppliers for an interface with fancy silkscreen lettering, but you can build a simple interface unit with parts from your local Radio Shack store. I have to admit, it is starting to get more difficult to find just the right parts there but all the parts for the following device are available at the blister-pack store.

The heart of the interface consists of two 600 to 600 ohm audio isolation transformers, 4 diodes, one transistor a toggle switch, two variable resistors, handful of resistors and capacitors, and a few connectors. Many of the parts may already exist in your junk box. The entire unit can be housed in a small aluminum chassis box and assembled on a small printed circuit project board. No external power or battery supply is necessary. All the power necessary to run the unit comes from the signal voltages from your sound-card and the voltage that is present on your transceivers PTT line.

Parts List:

- 2 ea. 600/600 isolation transformers RS# 273-1374
- 1 ea. 2N2222 transistor
- RS# 276-1617

D1 to D4 = 1N4148 or 1N914



- 2ea 1K ohm trim-pot
- RS# 271-280
- 4 ea. 1N914 diodes RS# 276-1620
- 1 ea. 1uF Cap. RS# 272-996
- 1 ea. 2.2K res. RS# 271-1121
- 2 ea 1.2K res. RS# 271-1120
- 1 ea. Aluminum. Box RS# 276-1620
- 1 ea. RS232 DIN-9 (Female) receptacle
- 4 ea mini phone jack
- 1ea DPST switch

If you have a couple of old junk computer sound-cards in your stash of computer parts, you can salvage the coupling transformer off the board and use it in place of the Radio Shack transformer.

After you build the interface unit you need to download the various soundcard terminal programs for the various modes. Many are freeware, but some are shareware to try out for a period of time to see if you want to buy them. These tend to be the multi-mode programs that process several modes in one program like MixW 7.0. To get you rolling there is a freeware program that works well with lots of features for PSK modes called DigiPan. Just go to your search engine and look it up and download the Zip Exe. File.

Modes like PSK and MFSK do not require a lot of power for successful communications. In fact, it is recommended that you use 50 watts or less so that your signal is very linear with very low IMD (-25db or greater). You will be amazed how well the program copies very weak signals. For over a year I used my Yeasu FT-817 5-watt QRP transceiver in digital modes and I managed to work an amazing amount of solid copy DX.

Here are some web sites that you can download various operating programs.

JE3HHT freeware:

TTY Program called MMTTY

<http://mmhamsoft.amateur-radio.ca/mmtty/>

SSTV Program called MMSSTV:

<http://mmhamsoft.amateur-radio.ca/mmsstv/>

DigiPan 2.0 (for PSK31 & PSK63)

can be downloaded from:

[www.digipan.net](http://www.digipan.net)

For other sound-card programs checkout

<http://www.dxsoft.com>

For CWget and other programs.

The following is the band plan for HF digital, RTTY and SSTV:

Band	Digital	PSK31	SSTV
160M	1.800-1.810	1.83815	1.840
80M	3.580-3.640	3.58015	3.845
40M	7.060-7.099	7.08015	7.171
30M	10.120-10.150	10.14215	-----
20M	14.060-14.099	14.07015	14.230
17M	18.100-18.110	18.10015	-----
15M	21.060-21.099	21.08015	21.340
12M	24.920-24.930	24.92015	-----
10M	28.070-28.130	28.12015	28.680

Most digital and TTY modes use LSB. SSTV used band SSB protocol

If you have any questions about HF digital modes please feel free to contact me at [W1ZE@arrl.net](mailto:W1ZE@arrl.net).

**Happy New Year & 73,**

**Bruce Randall, W1ZE**



## Teckie-Talk

The tech committee team is in the process of developing a priority to-do list for the four repeaters that should start after the first of the New Year, weather permitting.

One of the first

things to do are get the phone-line reconnected to the 444.4 and 174.21 repeater controllers. This will facilitate remote programming by the assigned control operators and allow making local phone calls especially to area 911 responders.

Some new messages

need to be programmed into both the 147.21 and 444.4 repeaters.

Some audio levels

need to be adjusted on the 444.4 machine so the voice and CW ID messages are not louder than the repeated voice traffic.

K1MNW has the new 447.575 digital

repeater up and running pretty well. New circuits to properly transfer data from the receiver to the transmitter have been built and appear to be working properly.

It is noted that the digital repeater will pass analog (FM) voice but be aware, there is no squelch/unkey hang time. As soon as you let up on the microphone PTT button the repeater stops transmitting. Also, if you try to use it for FM voice, please ID yourself and the repeater's KS1R call sign because there is no CW-ID at this time. Later in the spring, the new digital repeaters antenna will be placed about 100-feet higher than it is now. That should extend area coverage and increase the repeaters digital receiving and transmitting capabilities.

There are still outstanding issues left over on the 2006 to-do list. They are:

1. Install the two 2-meter nodes J-pole antennas up the repeater tower to improve coverage on the two nodes.
2. The BRUNS packet node needs to be reconfigured to the "The Net" protocol.
3. The KS1R-10 APRS Node needs to be gone over and made sure it is working properly and reactivated.

Needless to say we have a lot of things to do this year. Stay tuned.



## ***Year-End dinner honors members***

**Brunswick ME:** On Saturday evening December 9<sup>th</sup> members of the MARA and their guests gathered for the annual dinner at the China Rose restraint. The highlight on the evening was the awards presentations.



MARA President, Bryan Dorval AA4AK presents Ham of the Year Award to Steve Kerchel, AA4AK

This year the annual "Ham of the Year" award was presented to DR Steve Kerchel, AA4AK for his year long efforts in support to the MARA and the Ham community here in Maine. The award sited Steve's teaching fellow hams the CW art, instruction on radio wave propagation, his volunteer efforts to local ARES and Red Cross and last but not least, Steve promoted and coordinated one of the best Field Day events in many years for the Association.



Marjorie Turner, KB1MRZ receiving ARES performance award from DR Alan Kuong, WA1SCS

Following the Ham of the Year presentation, DR Alan Kuong, WA1SCS (Sagadahoc County EC) presented ARRL ARES achievement awards to the following MARA/Mid Coast ARES volunteers:

**Marjorie Turner, KB1MRZ**  
**Donnie Dauphin, WD1F**  
**Louise Dauphin, KB1IEF**  
**Jim McErvin, N1IPA**  
**Brian Dorval, AA1WI**  
**DR Steve Kerchel, AA4AK**  
**Michele Briggs, KC7LIF**  
**John Briggs, KC6TVF**  
**Bruce Randall, W1ZE**  
**John Goran, K1JJS**  
**Lee Tribou, N1HOC**

These folks put in long hours in support of community events, Drills and the Maine SET.

A "well-done" goes to all the award recipients.



**The MARA Board  
of Directors and the  
Newsletter Editor  
want to wish all our  
readers a very  
HAPPY NEW  
YEAR!**