



### It isn't a Heathkit but it is fun to build and it works

By Bruce Randall, W1ZE

Many folks these days are bemoaning the fact that hams don't build anything anymore. To some extent that is true. In recent years with miniaturization and surface mount technology, it is more difficult to build major equipment items for the shack. With the old point to point wiring used in the days of the vacuum tube building things did not take a microscope and a steady hand to build ham equipment. However, even then the majority of hams did not build all their equipment; it was plug and play then two. There were big kit companies like Heathkit, Knight-kit, Eico and even Hallicrafters that produced equipment kits for the hams to build and I miss those folks.

The challenge these days for us old geezers is to encourage new hams not just to be appliance operators, but to try their hand at building things and making them work. Hams can still build antennas, antenna tuners and a host of things to keep technology in the hobby. To this end, I recommend a simple very inexpensive kit for the ham shack that is easy to build, requires only a low wattage soldering iron and simple hand tools.

The kit is a nifty little CW memory keyer module called the K12 designed and marketed by Steven Elliott, K1EL of Bedford, NH.

The keyer can operate on a 9-volt battery (or coin battery), can be mounted into a small

project enclosure and with the addition of a phone-jack and a few push-button switches you have a solid state keyer that works as well as plug-n-play keyers that sell for over a hundred bucks and you will have the



satisfaction that knowing that you built it and you can use it. The nice part of this kit is that it is well within the capability of a person that has never built a kit before and assembly



time takes less than an hour to assemble the circuit board. Last but not least is the cost, less than twenty

dollars (+ shipping).

Some of the features of the K12 keyer are:

- Keyer speed 5 to 59 WPM.
- 6 memory slots with up to 240 letters each.
- Paddle swap command for you left handers.
- Keying Modes: Bug, ultimatic, iambic A or B
- Serial number generator for you contesters.

- Sidetone with adjustable tone
- Automatic letter spacing
- Beacon: programmable interval; 1 to 99 seconds
- Speed control by optional potentiometer or key commands
- Plus many more features, all on an 8-pin IC chip.

I have two of Steve's keyers and they work very well. I have one of his old K10 keyer that I use in the shack, mobile/portable and at Field Day. I am building a K12 to replace an old CMOS memory keyer I build in the mid 80s, plus I wanted more message memory.

If you want more information about the K12 and other keyer kits, go to Steve's web site at <http://www.k1el.com>. You can download the K12 keyer manual there for free. **73, W1ZE**



## Winterfest has good turnout

By **W1ZE**

**Chelsea:** Upon arriving at the parking lot at the Crystal Falls Dance Hall on the morning of Saturday February 25th we find the parking lot full of cars and trucks with antennas stuck out all over them. That was a strong indication that there must be a gathering of radio enthusiasts going on inside.

Upon entering the hall we found the place filled with ham radio folks from all over the central and southern Maine. Almost every display table was occupied by folks offering everything from coax plugs to high-end multi-band/multi-mode transceivers.

After putting my raffle ticket into the bin I had a short chat with Bill, K1NIT. I then elbowed my way down the first isle trying to look over solders at all the goodies. Upon arriving at the end table I noted a dusty and dirty old Clegg 99er six meter AM transceiver. I had one back in the mid 70s and remember the little TVI generator with fond memories. There was a sticker on it saying "Offer." I asked the chap behind the table how much he wanted for it. He said, "Make me an offer." I said I didn't want to insult him. He

replies, "try me." I said, ten bucks. Without hesitation he said, "SOLD!" He followed with, "It works too."

I had not been in the hall for longer than 5 minutes and already I had acquired a boat-anchor. I started to head back down the isle to put my acquisition in the vehicle and ran back into Bill Messier, K1MNW who accompanied me to the Hamfest, and he had a boat-anchor under his arm. He said, "Look what I found, an Eico VFO so I can complete my 1KW AM transmitter." Bill walked out with me to the truck then back into the hall. We both spent the rest of the morning eye-balling all our friends.



The MARA had a large contingency in attendance. I did see and chat with K1JJS, N1IPA, KC6TVF, KC7LIF, AA1WI, AA4AK and his XYL, N1DOI and WA1YIH. There may have been others but I didn't see everyone. The grand prize was a shiny new Icom HF transceiver and I would have liked to have been the lucky guy, but Maine Section Manager and MARA member Bill Woodhead, N1KAT was the lucky stiff. Bill said he is in hopes his granddaughter in Ohio will get her ham ticket this summer and he will make it a gift to her if she does.

I think every year the turnout gets better. The clear and warmer weather helped out too. I want to thank Bill, K1NIT and the rest of the Augusta club for doing a great job and hope it continues to be a success. **WELL DONE!**



## Ernie's Good Deal

Ernie Parsons, W1RXH in Bowdoin has the following tower and antenna system for sale: **45-foot Roan-25G** all galvanized with hinged base with side building adaptor, sleeved top section with rotor plate.

**Cushcraft A-3** Tri-Band 3-element Yagi, same as A4S.



**2-Meter 13-element Long John Yagi**, including the complete mast assembly



**Yaesu G-800DX Rotor**,



All items are in very good working and mechanical condition. It must all go at once, If you help take it down it can be had for an asking price of \$500 (it originally cost \$2100). If you are interested contact me, **Ernie Parsons W1RXH** at (207)666-3336 most any evening. My address is 397 Litchfield Road Bowdoin, Me. 04287

-Above photos are not the actual sale items-



## An Active Antenna, a nice thing to have around the shack

By W1ZE

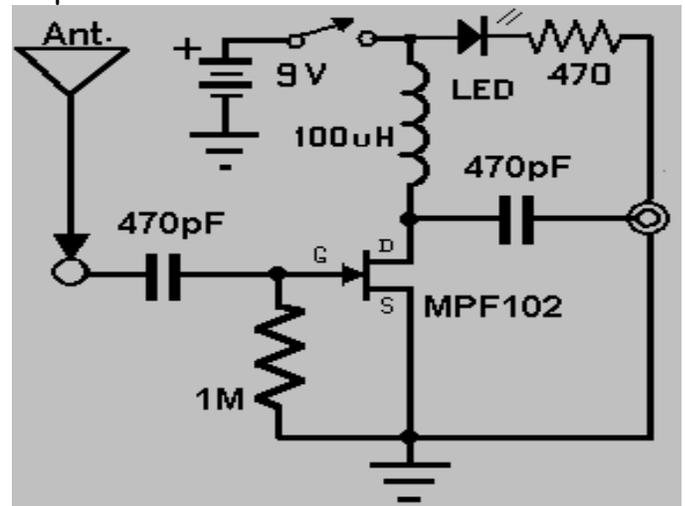
Have you ever had a radio that you wanted to check the receiver out but did not, or could not string out a long wire antenna? Why not use an "Active Antenna." If you are new to this hobby, you may not be familiar with an active antenna. It is a short amplified receiving whip (or wire). An active antenna can take the place of a 20 to 30 foot long wire antenna. There are commercial active

antennas on the market you can purchase for real US greenbacks, or you can build one for a few bucks from parts available at Radio Shack or from your electronics junk box.

Ten years ago I had a nice world-band portable radio that covered the AM, FM and shortwave bands. It had a 20-inch telescopic whip, but for good shortwave listening and AM band DXing it needed an external antenna for easy listening. The radio had an external antenna RCA jack on the back. I liked to take it with me when I was on business trips and vacations but stringing up a 20-foot length of wire around the hotel room was not something I wanted to do. During that time period I found an article in Popular Electronics on how to build a simple single stage MPF-102 FET active antenna amplifier with just a few parts and powered by a 9-volt battery.

I took that basic circuit, collected a few parts and wired it up on a terminal strip, stuck it in a small plastic box and connected it to a 3-foot length of wire. When I fired it up the little puppy worked slick.

I made a few changes in the circuit to meet my needs. The original circuit design had different choke coils for the different bands. A 470uH choke for the AM band and a 20uH for the SW and FM bands. I settled on a 100uH RF choke (avail. At Radio Shack) and it amplified well from .5 MHz to 108 MHz.



I use a 3-footlength of insulated wire with an alligator clip on the end as the sense antenna, but a telescopic whip would work well too.

This is a nice little Saturday afternoon project that will give you some assembly practice and when you are finished a useful little device.

73, Bruce



# El-Cheap-O Headset revisited

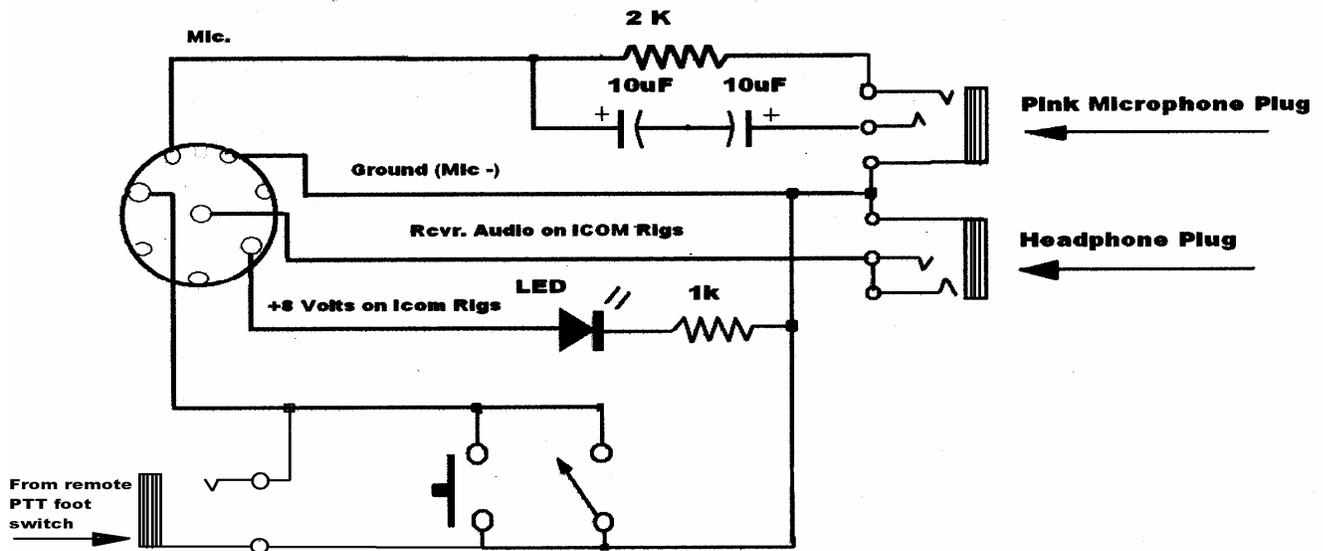
By W1ZE

In the February 2006 issue of this newsletter, yours truly has an article on how to use a cheap computer headset with your HF transceiver (or your VHF/UHF xcvr). Since then I needed to revise the interface circuit and thought I would share it with you.

My main HF rig in the shack is an ICOM IC-736 HF + 6 meter transceiver. ICOM transceivers of the area are lacking in

ICOM folks provide +8 volts on the microphone receptacles in addition to +8 volts on the Microphone (+) pin-1. Most other HF transceivers have 5 to 8 volts on the Microphone (+) pins so the following circuit will work with other rigs in addition to ICOM.

The circuit shown in following sketch is very simple and was built to connect my PC headset to my ICOM IC-736. If you have a different transceiver, the 8-pin microphone arrangement may be different but the basic circuit will be the same. On pin 5 of the ICOM microphone jack there is +8 volts. I used it to supply voltage to the LED. The LED allows me to know that the interface circuit is connected to the transceiver. However, it is not a required item. You will note that the voltage that drives the microphone element in the headset comes in on the microphone line through a 2K resistor. The audio from the electret element is passed through two 10uF capacitors installed back to back. This is because there are positive voltages on both



microphone pre-amplification, so ICOM puts a Pre-amp in most all their microphones. Their hand-held microphones use little amplified condenser "Electret" microphones, the same type of microphone elements in the computer headsets. Electret elements need 5 to 8 volts to operate their internal amplifier. The

sides of the capacitor array. Since ICOM provides receive audio on pin-8 of the mic receptacle, I routed that audio through the interface box. If your transceiver does not provide audio this way, you can route audio to the headset via the external speaker jack on your transceiver. I added an input jack on

the interface box to plug in a PTT foot switch for hands off operation when I did not want to use VOX.

As mentioned in the 2006 article, you can get PC headsets with one or two earphones and at various prices, all cheap from Wal Mart, Staples or your favorite computer outlet store.

73, Bruce



## Mid Coast ARES CERT now formed and ready

**Windom:** On Sunday, March 11 twelve members of the MARA/Mid Coast ARES assembled at the Cumberland County Communications center to do a practical search and rescue exercise to see if what they have been studying over the previous weeks had sunk in. To no ones amazement, the dedicated group performed as a team and managed to succeed. All the students were equipped with 2-meter HTs that became an instrumental part of the exercise.

After the practical exercise the instructors presented the new Mid Coast AREA/MARA CERT Number 3 with official Cumberland/Sagadahoc County ID cards and were outfitted with CERT hard-hats, back-packs filled with first-aid kits, tools, gloves and CERT vests.

On April 4<sup>th</sup>, CERT No.3 will be presented to the Brunswick Town Council, who facilitated the funding and promoted the

formation of the team via Chief Labby of the Brunswick Fire Department.

The volunteer CERT consists of:

1. John Goran, K1JJS of Freeport
2. DR. Alan Kuong, WA1SCS of Brunswick
3. Lee Trask, W1LWT of Lisbon
4. Bruce Randall, W1ZE, of Phippsburg
5. Jim McIrvin, N1IPA of Brunswick
6. Dan Lindsley, N5AGG of Brunswick
7. Harry McNelly, KB1KJA of Brunswick
8. Marjorie Turner, KB1MRZ of Brunswick
9. DR Steve Kercel, AA4AK of Brunswick
10. Michele Briggs, KC7LIF of Topsham
11. John Briggs, KC6TVF of Topsham
12. Lee Tribou, N1HOC of Bath



## W1AW 2007 Spring/Summer Operating Schedule

Time	Mode	Days
<u>Morning Schedule:</u>		
1300 UTC (9 AM ET)	CWs	Wed, Fri
1300 UTC (9 AM ET)	CWf	Tue, Thu
<u>Afternoon/Evening Schedule:</u>		
2000 UTC (4 PM ET)	CWf	Mon, Wed, Fri
2000 " "	CWs	Tue, Thu
2100 " (5 PM ET)	CWb	Daily
2200 " (6 PM ET)	RTTY	Daily
2300 " (7 PM ET)	CWs	Mon, Wed, Fri
2300 " "	CWf	Tue, Thu
0000 " (8 PM ET)	CWb	Daily
0100 " (9 PM ET)	RTTY	Daily
0145 " (9:45 PM ET)	VOICE	Daily
0200 " (10 PM ET)	CWf	Mon, Wed, Fri
0200 " "	CWs	Tue, Thu
0300 " (11 PM ET)	CWb	Daily

### Frequencies (MHz)

CW: 1.8175 3.5815 7.0475 14.0475 18.0975 21.0675  
28.0675 147.555

RTTY: 3.5975 7.095 14.095 18.1025 21.095 28.095  
147.555

VOICE: 1.855 3.990 7.290 14.290 18.160 21.390  
28.590 147.555

### Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM

CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM

CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

RTTY = Teleprinter Bulletins = BAUDOT (45.45 baud) and AMTOR-FEC (100 Baud). ASCII (110 Baud) is sent only as time allows.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2230 UTC (6:30 PM ET), Keplerian Elements for active amateur satellites are sent on the regular teleprinter frequencies. (cont.)

A DX bulletin replaces or is added to the regular bulletins between 0000 UTC (8 PM ET) Thursdays and 0000 UTC (8 PM ET) Fridays.

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Teleprinter at 15 minutes past the hour, and CW on the half-hour.



## MARA Sponsored VE exams for 2007

At Mid-Coast Chapter,  
American Red Cross

16 Community Way, Topsham, ME

Dates: **April 14, 2007**

**June 09, 2007**

**August 11, 2007**

**October 13, 2007**

**December 08, 2007**

Time: **10:00 AM (walk-ins allowed)**

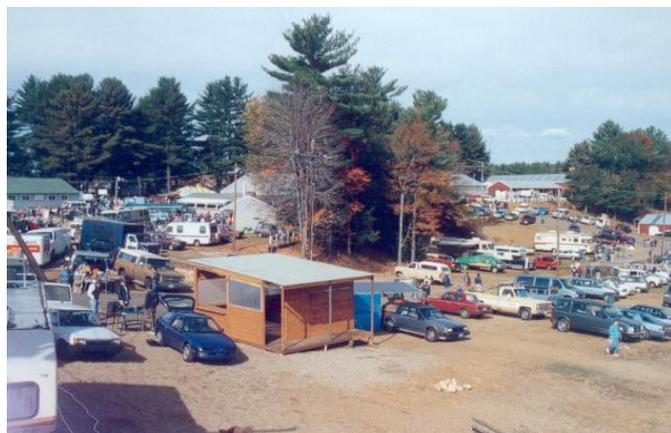
POC: **Bryce Rumery, K1GAX (207) 799-1116.**

E-Mail: **k1gax@juno.com**

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



## BACK BY POPULAN DEMAND, DEERFIELD!



## NEAR-Fest

The demise of the annual Hosstraders flea-market event announced in late February was a shock to the entire ham radio community in New England. Just about the time we were all getting used to that fact, on March 16th an announcement was released that a new group has organized a new hamfest to be held on May 5<sup>th</sup> and 6<sup>th</sup> at the old fairgrounds in Deerfield, New Hampshire.

For those of you that are new to Ham Radio, the Hosstraders group started the big annual hamfest event in the 70s at the Deerfield Fairgrounds. Even though the Rochester and Hopington fairgrounds facilitated the event well, there was always a longing for the "good-old-days" at Deerfield. Maybe the good old days are back. We can only hope.

If you want more information on NEAR-Fest, check out the organizer's web site at [www.near-fest.com](http://www.near-fest.com). Let us all make this event a success!

