



Squelch Tales



Newsletter from the Merrymeeting Amateur Radio Assoc. for February 2006

ABC/1-2 RF Coax Relay for HF

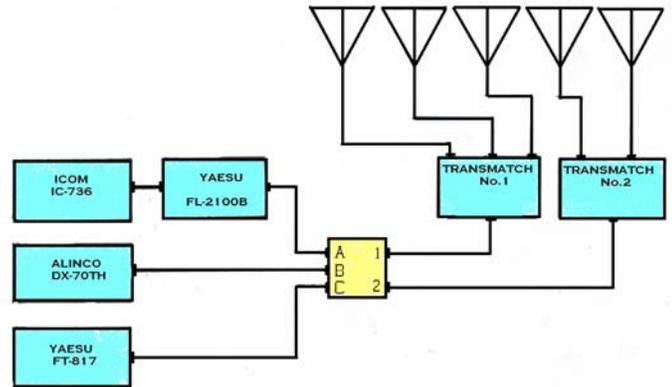
By Bruce Randall, W1ZE

Like some of you out there, I have several HF transceivers that I use on the air on a regular basis. My main Transceiver is an ICOM IC-736 160 to 6 meter rig. I also have an Alinco DX-70th as the backup transceiver plus I use it in digital modes. The third HF rig is my Yaesu FT-817 transceiver, a QRP fun rig that I use on HF, VHF and UHF for and digital activities.

I have been known to have one rig on the 20-meter packet or PSK31 frequencies and the another rig I could be handling traffic on the Maine Seagull Net on 75-meters. You guessed it that indicates I have more than one antenna up in the air too. I run a 5-band HF beam, 160/75/40-meter slooper, 132-foot doublet with tuned feeders, Butternut HF6V ground mounted vertical and others when the mood to string wire hits me.

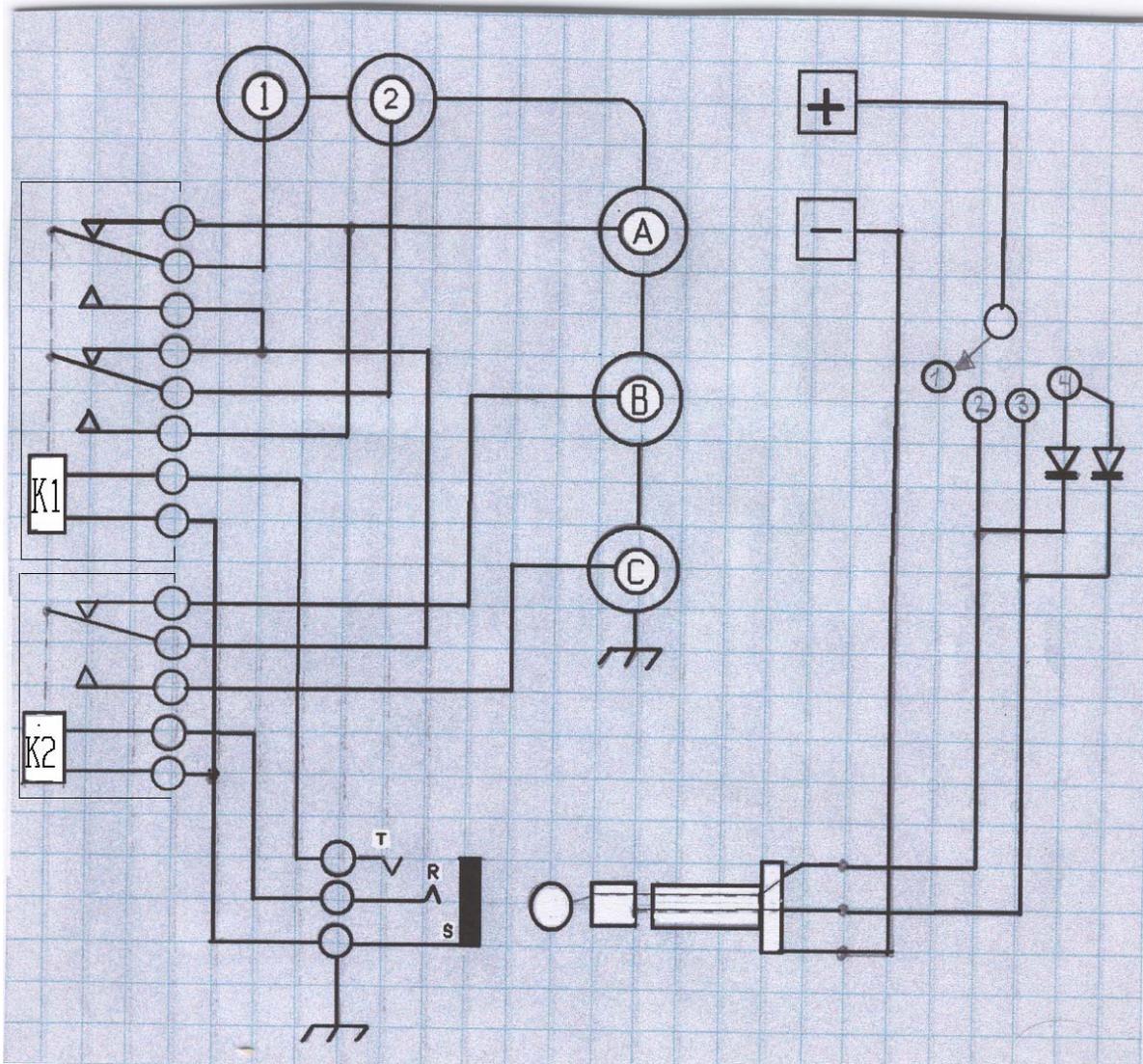
To switch back and forth between the various radios and antenna matching and feed system would take a lot of manual coax switches and the cost of good ones could be a bit costly. Since I have a modest electronics parts supply I have collected over the years I was able to gather enough components together to build a remotely switched ABC-12 coax transfer relay box that would facilitate switching all the HF

rigs to various antenna systems at my disposal. The switch does not allow that all transceivers have an antenna all the time but two at a time is achieved with the use of just two DPDT relays.



The heart of the relay box are two Potter-Broomfield 12 VDC 10-amp relays. These are available at Radio Shack (#275-218). I was able to find a supply of them at the Hosstraders Hamfest for a couple bucks each. All the parts needed to build the relay box are available at Radio Shack, but I recommend you try the flea markets first to save some money. If you can purchase the relays and SO-239 connectors from a flea-market vendor you will be money ahead. My relay will switch 3 inputs to two outputs and vice-versa but you could build it as an AB-12 crossover switch for two rigs and two antenna systems. The following is a schematic of the box I assembled:

(cont)



The remote control in the above diagram is a SP4P rotary switch, but Radio Shack sells a 2P6P rotary switch (275-1386) for fewer than 4 bucks that will work just fine. Again, this is another item to look for at the fleas.

For the internal RF wiring I used #14 solid copper, scrapped out of some leftover house wiring. I used a mini stereo plug and jack to connect the control head wiring to the relay box. I had some 2-conductor shield wire in my junk box that works well and keeps the RF off the control wires. I did ground the relay box to the station ground bus and that is recommended for your installation too. The two diodes on the control switch are 1N2001 silicone type

but any of the 1N200x that will handle a half-amp or more will work.

If you keep the internal RF wiring between the relays and SO-239 receptacles as short as possible you should not experience a big impedance bump in your transmission lines. On the HF bands, I found that the SWR did not change or was very small from 1.8 to 30 MHz. Even on 50 MHz the SWR change was so small as not to make much of a difference in performance. (1.15:1 vs. 1:1).

If you want to build one of these relay boxes and want some help with it, let me know and I will help you assemble one.

73, Bruce

MAINE VE TEST SESSIONS FOR 2006,

JANUARY

Jan 21 Sat 9:00a South Portland, Stewart Morrill American Legion Post #35, 413 Broadway W1UJR/ARRL Bruce Howes (207) 749-0111 wlujr@arrl.net May also call Bryce Rumery K1GAX (207) 799-1116 klgax@juno.com. ARRL CCE Emergency Communications Course Cert. exams given with advanced registration with K1GAX
Jan 18 Wed 5:30p Augusta, 125 State St. Use south side entrance nearest rotary. AE1Q/ARRL Don Smith 207-495-3891

FEBRUARY

Feb 18 Sat 10:00a Topsham, MidCoast Chapter, Am. Red Cross.16 Community Way K1GAX/ARRL Bryce Rumery (207) 799-1116 klgax@juno.com ARRL CCE Emergency Comm. Course certification exams given with advanced registration with K1GAX Feb 18 Sat 9:00a Bangor, Me. Communications Facility, 4 Bomarc Rd., Bangor, ME. KD1XU/ARRL Don Tarbet 207-327-1453 info@nhest.org

MARCH

Mar.15 Wed 5:30p Augusta, 125 State St, Use south side entrance nearest rotary. AE1Q/ARRL Don Smith 207-495-3891 Mar 18 Sat 9:00a South Portland, Maine, Stewart Morrill Am. Legion Post #35, 413 Broadway W1UJR/ARRL Bruce Howes (207) 749-0111 wlujr@arrl.net May also call Bryce Rumery K1GAX (207) 799-1116 klgax@juno.com ARRL CCE Emergency Communications Course Cert. exams given with advanced registration with K1GAX
Mar 25 Sat Noon Lewiston, Ramada Inn (ME Section ARRL Convention) K1GAX/ARRL Bryce Rumery (207) 799-1116 klgax@juno.com ARRL CCE Emergency Communications Course cert. exams given with advanced registration with K1GAX

APRIL

Apr 1 Sat 9:00a Bangor, Emergency Communications Facility, 4 Bomarc Rd., Bangor, ME KD1XU/ARRL Don Tarbet 207-327-1453 info@nhest.org
Apr 8 Sat 10:00a Winslow, Winslow Junior High school on Danielson St. AE1Q/ARRL Don Smith 207-495-3891
Apr 15 Sat 10:00a South Portland, Stewart Morrill Am. Legion Post #35, 413 Broadway W1UJR/ARRL Bruce Howes (207) 749-0111 wlujr@arrl.net May also call Bryce Rumery K1GAX (207) 799-1116

klgax@juno.com ARRL CCE Emergency Communications Course certification exams given with advanced registration with K1GAX Apr 18 Tue 6:30p Presque Isle, NMCC Augusta Christie Building Room 113 W1YNZ/ARRL Wilburn Scott (207)455-8333
Apr.22 Sat 10:00a Topsham, MidCoast Chapter, Am. Red Cross 16 Community Way K1GAX/ARRL Bryce Rumery (207) 799-1116 klgax@juno.com ARRL CCE Emergency Communications Course certification exams given with advanced registration with K1GAX Apr 29 Sat 9:00a Rockland, Knox County Courthouse NY1B/ARRL Norm Smith (207)354-6853

MAY

May 17 Wed 5:30p Augusta, 125 State St, Use south side entrance nearest rotary. AE1Q/ARRL Don Smith 207-495-3891 May 27 Sat 9:00a South Portland, Maine, Stewart Morrill Am. Legion Post #35, 413 Broadway W1UJR/ARRL Bruce Howes (207) 749-0111 wlujr@arrl.net May also call Bryce Rumery K1GAX (207) 799-1116 klgax@juno.com ARRL CCE Emergency Communications Course Cert. exams given with advanced registration with K1GAX

JUNE

Jun 9 Sat 9:00a Hermon Hamfest, Hermon HS, Hermon, ME KD1XU/ARRL Don Tarbet 207-327-1453 info@nhest.org

JULY

Jul 8 Sat 9:00a Union, Union Hamfest NY1B/ARRL Norm Smith (207)354-6853
Jul 19 Wed 5:30p Augusta, 125 State St, Use south side entrance nearest rotary. AE1Q/ARRL Don Smith 207-495-3891
Jul 22 Sat 9:00a South Portland, Stewart Morrill Am. Legion Post #35, 413 Broadway K1GAX/ARRL Bryce Rumery (207) 799-1116 klgax@juno.com ARRL CCE Emergency Communications Course Cert. exams given with advanced registration with K1GAX

AUGUST

Aug 12 Sat 9:00a St. Albans Hamfest, Snow Devils Snowmobile Club St. Albans, ME. KD1XU/ARRL Don Tarbet 207-327-1453 info@nhest.org

SEPTEMBER

Sep 16 Sat 9:00a South Portland, Stewart Morrill Am. Legion Post #35, 413 Broadway W1UJR/ARRL Bruce Howes (207) 749-0111 wlujr@arrl.net May also call Bryce Rumery K1GAX (207) 799-1116

klgax@juno.com ARRL CCE Emergency
Communications Course
Cert. exams given with advanced
registration with K1GAX

Sep 23 Sat 9:00a Rockland, Knox County
Courthouse NY1B/ARRL Norm Smith (207)354-
6853

OCTOBER

Oct 14 Sat 9:00a Bangor area
(Location to be announced)
KD1XU/ARRL Don Tarbet 207-327-1453
info@nhest.org

Oct 17 Tue 6:30p Presque Isle, Red
Cross, 141 State St.

W1YNYZ/ARRL Wilburn Scott (207)455-8333
Oct 21 Sat 10:00a Topsham, MidCoast
Chapter, American Red Cross
16 Community Way K1GAX/ARRL Bryce Rumery
(207) 799-1116 klgax@juno.com

ARRL CCE Emergency Communications Course
Certification exams given with advanced
registration with K1GAX Oct 21 Sat 10:00a
Winslow, Winslow Junior High school on
Danielson St. AE1Q/ARRL Don Smith 207-
495-3891

NOVEMBER

Nov 15 Wed 5:30p Augusta, 125 State St,
Use south side entrance nearest
rotary. AE1Q/ARRL Don Smith 207-495-3891

Nov 18 Sat 9:00a South Portland, Maine,
Stewart Morrill Am. Legion Post #35, 413
Broadway W1UJR/ARRL Bruce Howes (207)
749-0111 wlujr@arrl.net May also call
Bryce Rumery K1GAX (207) 799-1116

klgax@juno.com ARRL CCE Emergency
Communications Course Cert. exams given
with advanced registration with K1GAX

DECEMBER

Dec 9 Sat 10:00a Topsham, MidCoast
Chapter, Am. Red Cross 16 Community Way
K1GAX/ARRL Bryce Rumery (207) 799-1116
klgax@juno.com ARRL CCE Emergency
Communications Course certification exams
given with advanced registration with
K1GAX Dec 9 Sat 9:00a Bangor area
(Location to be announced) KD1XU/ARRL
Don Tarbet 207-327-1453 info@nhest.org

**PLEASE NOTE THAT THESE ARE TENTATIVE
DATES ONLY.**

Send updates and cancellations to:

**John M. Goran, K1JJS
Maine Bulletin Manager
74 Webster Rd.
Freeport ME 04032-6228
207.865.0554**

johnmgoran1@suscom-maine.net

SOME HAM EVENTS FOR 2006

Mar 24-25 Maine State Convention

("Andy" Hamfest & Computer Fair)
Ramada Inn - 490 Pleasant Street,
Lewiston, ME Androscoggin ARC
<http://www.mainearrl.org/convent.htm>
Contact: Rick James, N1WFO, 7 Judkins
Ave., Lewiston, ME 04240
Phone: 207-740-1266 - Email:
n1wfo@adelphia.net

June 9 Bangor Hamfest at Hermon,
Hermon High School

Aug 12 St. Albans Hamfest, Snow-
Devil's Field, St. Albans (details later)

Aug 25-27 N.E. Division Convention -
FEMARA - <http://www.boxboro.org>
Holiday Inn Boxboro Woods, 242 Adams
Place, Boxboro MA

Contact: Mike Reinbeck, K1TWF, 85 High
Street, Chelmsford, MA 01824

Phone: 978-250-1236, Fax: 978-250-0432,
Email: k1twf@arrl.org

WINTERFEST Saturday February 11th.

You say you have a bad case of cabin
fever and you aren't into snowmobiling.
Then mark Saturday, February 11th in your
day planner and make arrangements to head
up to Chelsea and attend the Augusta Club's
Winterfest at the Crystal Springs Hall on
Route 17 just a mile east of the Togas VA
facility.

Here is a good chance to get out of the
house, see some of your fellow hams and
maybe find something you just can't live
without. You could clean out the closet and
bring the old boat anchor up, rent a table and
put a few bucks in your pocket. There will
be a door prize drawing and refreshments
stand to keep you fortified in coffee donuts
and hot dogs. If you want more info on
Winterfest, contact Bill Crowley, K1NIT at:
chilebilly@verizon.net

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MEB #002

(Maine Bulletin #002)

January 16, 2006

K1JJS Bulletin Manager, Maine Section

Subj: Public Information Officers Wanted

To: All Station/All Nets/All Clubs.

The Maine Section is seeking Public Information Officers to work with K1JJS, the Public Information Coordinator for the Section. Additionally, we are also looking to identify all who are currently PIO's.

A description of the role of the PIO can be found at:

<http://www.arrl.org/FandES/field/org/pio.html>

All clubs are urged to bring this up at the next club meeting, as well as being urged to either identify the current PIO or appoint a PIO. Volunteers with or without club affiliation are welcome.

Please submit all current PIO's and potential appointees to John K1JJS (k1jjs@arrl.net) for submission to the Section Manager.

John M. Goran, NCE

74 Webster Rd.

Freeport ME 04032-6228

207.865.0554 207.232.4892 cell

ARS K1JJS

DA PREZ SEZ

By AA1WI

The Icy roads on the morning of Saturday, January 7th didn't keep a contingency of Maine hams from attending the ARRL New England Division Winter cabinet meeting in Springfield, MA.

I was invited by W1ZE, who usually attends the cabinet meeting for the MARA, to fill in for him. Bill Woodhead, N1KAT

offered a ride and we were joined by Maine ASM, KB1AQE and POC and fellow MARA member, K1JJS.

At the meeting, Host Tom Frenaye, ARRL New England Division Director reviewed current ham issues, to numerous to list and provide feedback. H did report on the status and numbers of New England hams and reviewed league division and section activities.

Some of the issues discussed were: an entry level (no code) license with HF privileges aimed to attract new hams; BPL; reframing of the Novice bands; Bandwidth proposal, Mode vs. bandwidth and Morse Code requirement. I sensed that the hams at the meeting were comfortable with the proposed elimination of the Morse Code requirement.

Gust speaker at the meeting was Allen G. Pitts, W1AGP, ARRL Media and public relations manager, briefing the cabinet about his new project "Hello Radio." This project aims to put a trusting and friendly face on Amateur Radio. Also noted was the number of hams in New England are down. Maine licensed 85 new hams in 2005.

The cabinet meeting was attended by 40 hams from all over New England. Tom noted that this meeting had the highest attendance that he has hosted. Six or seven section managers were able to attend.

Brian, AA1WI

The following is an outline summary of the Jan-7 NE Cabinet Meeting

- I. Introduction
 - A. request for topics
 1. how to get more people into ham radio
 2. entry level license
 3. spreading ARRL nonprofit status to affiliated clubs
 4. W6 proposal for ARES management

- B. Goings on
 - 1. BPL
 - a. note Motorola system – much more ham friendly than the other schemes
 - b. problems with access to BPL rollout database
 - c. enforcement a big problem – FCC not acting to protect hams
 - d. Agawam system update – very small (4 subscribers?)
 - e. Getting hams to file complaints is a big problem
 - f. VT – the power company has mostly rejected BPL
 - g. ARRL filings with FCC are pretty pointed (some concern)
 - 2. Reframing (Novice bands)
 - a. not a lot happening – Amateur Radio actions stalled
 - b. proposal is to take some of the old novice bands and use parts for digital
 - 3. Morse code requirements
 - a. FCC NPRM ignored ARRL, calls for complete drop of code
 - b. Proposal seems to be “least work” based
 - C. Bandwidth petition
 - a. NH – a lot of pushback, partly because many people don’t understand it
 - b. If passed, band planning will need to get stronger
 - D. New hams
 - a. NE used to be around 100 new hams per month, now closer to 60
 - b. Individual acts (ex., one day license class) can make noticeable differences in a month
 - c. Is cost of online courses a factor?
 - d. ME – has a 6 tape video course that can be run on public access TV
 - E. Washington lobbying
 - 1. Chwat & Co. is our consultant
 - 2. Always looking for hams with contacts in Congress
 - 3. is our bill co-sponsorship activity really effective?
 - 4. is any of our lobbying effective? Congress hasn’t passed anything on ham radio in some time. How do we evaluate it?
- II. Public Relations at the League - W1AGP – Alan Pitts
 - A. Dayton ARRL event was a great success
 - B. We’re looking for relationships with the public
 - C. PR is not marketing, it is establishing relationships with people and organizations
 - D. Florida toy drive in 2004 a great success
 - E. ARRL website a problem
 - 1. search engine has now been updated !!
 - F. Swiss Army Knife CD a success
 - 1. current version contains stuff for PIO’s
 - 2. consider putting an image of it on the web site?
 - G. Katrina got huge publicity
 - H. Note the importance of big stations OUTSIDE of emergency areas
 - I. BPL – make sure we look friendly and trustworthy to the media
 - J. Planning for a real PR campaign – to be discussed at the board meeting
 - 1. first voice radio communication Christmas Eve 1906 – 100th coming up
 - 2. will pump up “you don’t need Morse code”
 - 3. “Hello” campaign in 2006 – a REALLY big push
 - 4. special unifying publication, 50,000 of them!! – for non-hams
 - 5. MOU’s with a number of groups
 - 6. will require MUCH active participation from all hams
 - III. HQ activities
 - A. headcount down – fat is out – and they are stretched
 - B. membership basically flat
 - C. looking to analyze programs
 - 1. do we need them all?
 - 2. can we get rid of some?
 - D. New VE question pools in the works
 - IV. MA governor anti-ham problems
 - A. Governor made a serious gaff
 - B. State MEMA director covered well for us
 - C. W1MPN/KD1CY did well in major damage control

- D. Meeting has been set up with the governor – may get some positive PR from this
- V. Collections
 - A. Lunch \$525 collected (out of \$1300 actual cost)
 - B. Auction \$195 - to go to Education fund in member of KC1WH
- VI. Division News
 - A. in 2005, all NE sections except RI went down in ham population
 - B. Nationwide about 660,000 hams, peak was about 687,000
 - C. League membership down about 15% from peak
- VII. Board meeting items
 - A. Jim Haynie probably not running
 - B. Technically, all Board officers are up for election
- VIII. IRS status for affiliated clubs
 - A. Can ARRL's 501©(3) status be made to rub off on affiliated clubs?
 - B. We'll bring it up at Board committee meetings
- IX. KC6VJY ARES restructure proposal - K1EIC
 - A. Has a board of SM's to advise on ARES issues
 - B. Adds a number of EC assistant roles
- X. VOIP initiatives
 - A. VOIP hurricane net – could help in situations where no hf propagation
 - B. IRLP/Echolink interlinks

A Wal-Mart headset for all seasons

By W1ZE

There are times when you need the capability for hands-free radio voice communications in the shack or in the car. In the shack it can be easy if you have a desk microphone and a VOX circuit in your transceiver. In the car while driving down the highway it becomes a little more difficult unless you have an earphone/microphone

headset that is compatible with your rig. Yaesu, Kenwood, Icom, Hiel, and other sell these headsets, but they don't give them away with two boxes from a Corn Checks box.

In my shack I get involved in the occasional contest and chase DX from time to time. I needed the ability for hands free communications so I can type in log entries into the PC and jot things down on my scratch pad, so hands-free operation is a big help.

I did not plunk down long green for the fancy Hiel head-set, even though I would like one. I use a PC microphone/Stereo headset that I originally picked one up to use on Echo-Link and other VoI connections on the Internet. These headsets sell for fewer than twenty bucks at Wal-Mart. I have seen them for half that at Hosstraders by the "under the grandstand" vendor. If you factor in the gas to get you to central New Hampshire, the Wal-Mart price isn't all that bad.

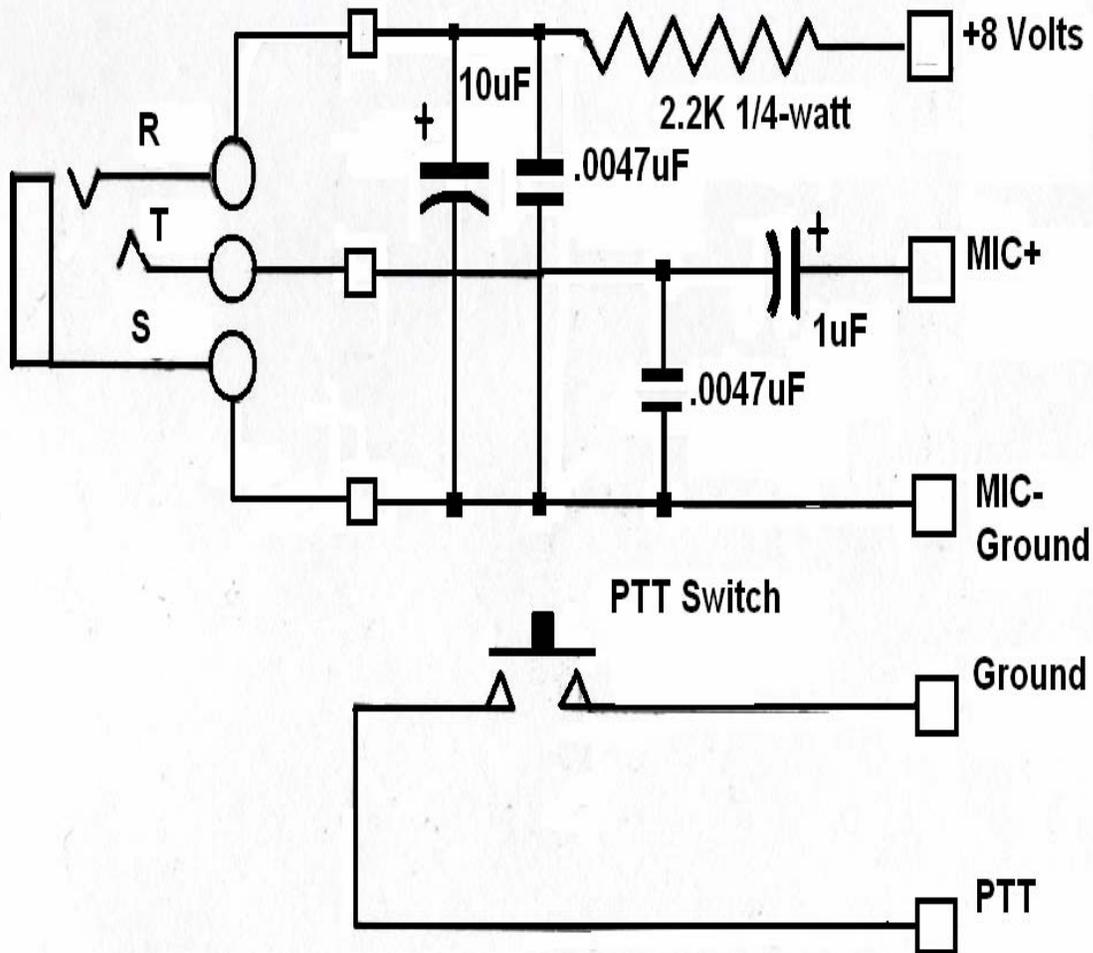
Here is how you can make an El-Cheap-O headsets work on your HF or VHF rig. You didn't have to do anything to the headset itself. You need to make a small interface unit to electrically couple the headset to the rig.

All the cheap PC headsets use a small amplified condenser Microphone element that requires a small positive

voltage to run them (about 8 volts). Most of the standard ham rigs have a +8 volt pin in the microphone receptacle or they have it imposed in the mic+ pin (i.e. Icom equipment). Only a few components are required.

The headset has two gold plate mini stereo plugs on it. The Pink plug goes to the microphone and the black plug

goes to the stereo headphone. As you can see in figure-1, the interface circuit has very few components. Most parts are available at Radio Shack. The 1uF Tantalum capacitor couples the audio from the mic element to the mic+ input on the transceiver and blocks any DC voltage to the mic element. The 10 uF



Tantalum capacitor is used as a filter for the DC voltage. The two .0047uF ceramic disc capacitors are used as RF bypass to aid in keeping RF out of the mic circuit. The resistor can be a 2K or 2.2K $\frac{1}{4}$ -watt, not critical.

Note: If you find the headset mic has too much low speech emphasis, you may want to replace the 1uF capacitor with a .33uF to put more emphasis on the mid speech range.

The circuit can be put into a small plastic project box with pass-through connection for the stereo headsets. The PTT switch is a simple push-button. I added an input jack for a PTT foot-switch so I can key the rig with my foot leaving my hands free for other tasks, like sipping coffee or a fruity Chardonnay.

I assembled the interface circuit on a small Radio Shack project PC board that has a terminal strip on the edge. You will have to check the owner's manual for your rig to determine the microphone jack pin-out so you can connect to the correct tie-point on the interface board. Note: ICOM and other rigs have +8 volts on the MIC+ pin in addition to a 8 volt pin, so on your board put a jumper between the mic+ line and the voltage feed line on the board. For other rigs you will need to provide voltage on one of the microphone cable wires.

I placed the circuit in a small plastic project box and mounted the PTT button switch on top for easy access. You may want to parallel a SPST switch for those long winded QSOs (especially while mobile).

After you get it build you should do an on-air test to make sure you have the proper mic gain. With you headset securely planted over both ears. Position the gooseneck microphone boom to a point near the corner of your mouth. Make sure it does not touch your cheek (if it touches your face, as you talk it will add scratch to your audio. Speaking in a normal voice adjust your rigs microphone gain to a point where your ALC meter just moves up on high voice peaks. ALC is not a modulation meter. It should not look like your power output indication, just the occasional upward bounce. Happy QSOing.
73, Bruce, W1ZE

EMCOMM TRAINING



Together, we can save a life

**SATURDAY, FEB. 4th Topsham
Red Cross HQ facility, At
9:00AM**

Talk-in on the 147.21 repeater

Hope to see you there