



PROSPECT HILL INTERMOD

THE OFFICIAL NEWSLETTER OF THE WALTHAM AMATEUR RADIO ASSOCIATION
& THE HEAVY HITTERS

www.wara64.org

FALL 2010

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MOTORCYCLE MOBILE

Dennis Ditto, N1DIZ

For those of you who know me, you probably know I ride a motorcycle. You may also know that during my two-wheeled commute I can usually be found working the 449.075 repeater. Having the ability to "read the mail" while commuting on two wheels is definitely nice... especially when there's traffic (which there always is) and I can get real-time traffic updates.

On some of today's motorcycles, such as the Honda Gold Wing, CB radios are an option. Others may have the option of interfacing a two-way radio into the onboard audio system. My ride, a 2007 BMW K1200GT, doesn't have any of these options.



Thankfully, there are a number of third-party products that make interfacing audio sources and two-way radios pretty easy. One such product is the Autocom (www.autocom.co.uk). The basic product is a "black box" (literally) that has several

audio inputs, a two-way radio input, a microphone input and output to helmet-mounted speakers. Most units also have a rider-to-passenger intercom system.



Hookup is fairly simple. The first step is to mount the provided speakers and microphone in the helmet. Most helmets have a recess where your ears go that will easily accommodate the thin speakers without pressing on your ears. The flexible microphone boom is mounted between the helmet shell and protective padding, placing the mic in front of the rider's mouth. The helmet interfaces to the Autocom unit via a waterproof DIN connector/cable assembly.

Next, you connect the radio to the Autocom. My Yaesu VX-7R dual-band HT connects via a custom cable (provided by Autocom)... this takes care of audio in & out of the radio. While the Autocom supports VOX, I have opted to use a PTT button which is mounted on the left handlebar and operated by my thumb. The VOX is disabled. The radio is clipped to the top of my tank bag, allowing easy access to controls. Because the VX-7R is waterproof, I'm not concerned about it getting wet if it starts to rain.



Power to the Autocom (which is buried deep in the tank bag) and VX-7R come direct from the motorcycle battery. This eliminates the need for having to keep the HT charged or having an endless supply of 9-volt batteries for the Autocom. This also gives me 5 watts out from the HT. The 12vdc from the battery is switched with the ignition via a 35-amp relay.

In addition to the HT, I can have other audio sources if I so desire. These might include GPS voice prompts, a music source, radar detector output, and even a cell phone.

Riding a motorcycle takes serious concentration, especially on today's overcrowded roads with distracted drivers. While you might think having one or more audio sources on a motorcycle is distracting, it can actually keep you awake and alert. And having two-way radio capability is definitely helpful when riding in a group... no need for hand signals if someone needs gas or is having a problem. If you do decide to add audio to your ride, just be careful and put safe operation of the motorcycle as your first priority.

73 and ride safe!

The last bit is the antenna. I used to use a rubber duck antenna connected to the radio. This works fine if you're not far from the repeater, or working simplex with other bikers. To get a bit more signal in the air I decided to mount a dual-band mobile whip on the rear of the bike. The passenger grab rail provided the perfect place to mount a luggage rack clamp and Comet dual-band antenna. The coax runs under the seat, up the tank (under the tank bag) to the HT.

CLUB REPEATER UPDATE

Eliot Mayer, W1MJ

In September, Brendan W1LPG offered to help me on a 64 "crunchies hunt", then WA1PBU, N1PXA, and K1REM joined us to work on the "crunchies" and other repeater issues. N1YAN and K1BOS helped by providing weak signals until Kim arrived with a service monitor that could do this.



64 "Crunchies"

Wiggling the pigtail cables at both ends of the hardline caused noise on weak signals. The "upstairs" cable was only noisy at the antenna end, but the pigtail end of the cable came out of its connector while Kim was disassembling it, so apparently it wasn't crimped properly and was at least a potential problem. N1PXA made up 2 custom replacement cables for us, brought them to the site.

After replacing the pigtails, N1PXA measured high SWR using the Motorola repeater's built-in metering. It appeared to be a problem with the duplexer, but Kim found a loose interconnecting cable in the duplexer, and everything seemed OK after he tightened it. The day after the visit, a

couple people said that the repeater seemed to be working better, but I still heard noise that might be classified as crunchies. Let's listen for a while to see if we have to go after the "next layer of the onion".

64 Control

N1PXA found something in the repeater's error log that probably correlates to the occasional TX dropouts. They are not time-outs. It seems like a "bug". He tried to make a change via his laptop to work around the problem, but that change disabled the knock-down (on/off control) feature, so he had to put the repeater back the way it was. He will look into this issue further.

440 MHz False Touch-Tone Decoding

Kim did something in an attempt to reduce the occasional audio dropouts on 440 when the repeater thinks that someone's voice is a touch-tone. This may require further work in the future.

Site Access

Nothing much has changed, and I had no trouble making an appointment for a Saturday work party.



Site Map

Per WA1PBU's suggestion, I started a "map" of the repeaters inside the building to go along with my antenna map. As part of this, I added or modified colored electrical tape patterns on some of our lines to make them match up top and down below. I hope I find time soon to make a legible map from my scribbling. I will then contact the officer in charge of the site to see if we can coordinate with other site users to complete and share the site map.

TO ALL WARA REPEATER USERS

Kim Peck, WA1PBU, Trustee, 449.075

We have a problem on Waltham UHF. An official complaint has been lodged with the WARA. Specifically: the offensive and vulgar nature of conversations heard recently on the channel. While I do NOT wish to be involved with any form of censorship, as I am the trustee of the repeater, I am asked (by people who have responsibilities to the city), to resolve this. This is an unpleasant task to say the least.

As often happens, when one individual speaks up, several others find their voice as well. I am now considering complaints from several individuals. Several hams have related occurrences which required that they turn the radio off, rather than offend family members or others within hearing. The WARA repeaters (all of them) enjoy one of the best sites in the metro area. This is due ONLY to the continued good will of the City of Waltham. It is complaints from that direction that I must consider first. While this is mostly about the UHF machine, this request applies to all WARA machines.

I will NOT be responsible for deciding what is and is not acceptable. You must make that choice yourself. There are however, 1) some FCC rules, which we have "skated" close to the edge of, and 2) common civility. Most of you are adults, and know the limits of civil public discussion. You certainly don't need advice from me. I am confident when you realize that your words reach a much wider audience than you may have first realized, that you will act accordingly. Please do not conduct any conversation on the repeater which you would not feel comfortable conducting in the presence of your wife, mother, daughter or other family member.

I have asked the complainants to keep this in perspective. This is about mere vulgarity, and not malicious behavior. The City takes it quite seriously however. The repeater is a public channel, and not a private clubhouse. Our use of the Waltham site (and so the very existence of the WARA repeaters) is based on the repeaters (and WARA members) having some "public service" value to the city, and is officially enabled through the Emergency Management Department. With changes in technology and the general "post 911" atmosphere, this relationship is tenuous and becomes more difficult to justify. Make no mistake, that this is

exactly the type of issue which could end that relationship, and in effect, all of the WARA repeaters.

Thanks for your help in solving this problem.

REPEATER CONDUCT

Richard Amirault, N1JDU, W.A.R.A. President

Recently there has come to our attention that the language on some of our repeaters has been running "close to the edge". Yes, I understand, what is objectionable to one person is fine for someone else. However we need to remember that we are "guests" at the (city owned) repeater site. Also, on occasion, city officials do listen to us.

When you are on the repeater, talking to your friends, remember that there are likely twice as many folks "just listening" to the conversation, either hams or folks with scanners. Those people may very well include young children. We do not want "locker room" talk on any of our machines however funny or smart you may think it is.

KB1NYQ, FIELD DAY CHAIRMAN 2011

Eliot Mayer, W1MJ

At the CC-ARC annual meeting in Boxboro this past August, Eliot, KB1NYQ was appointed Chairman for the 2011 Clay Center-ARC/WARA Field Day.



W.A.R.A. DECEMBER ELECTION

Richard Amirault, N1JDU

Do you want to get more involved with our club? Do you think you can do things better than they are now done? Would you rather see things done differently? Do you have a management skill you can offer?

The Waltham Amateur Radio Association is holding elections for new officers at the December meeting. Candidates must be willing to attend most meetings (the last Tuesday of the month).

For the current term all the offices are filled, with the exception of the recording secretary. I, Richard N1JDU President, have been doing "double duty" as recording secretary. If someone would like to run for this office it would require them to attend as many meetings as possible.

Of course anyone can run for any of the offices. No one is assured re-election.

Hope to see you at the December meeting.

CLUB MEETINGS

Richard Amirault, N1JDU

For the longest time the W.A.R.A. meetings were always held on the last Wednesday of the month. Over a year ago, to accommodate one of our chief technical persons, we changed it to the last Tuesday of the month.

At a recent meeting there was some discussion about changing it back to the last Wednesday. On the WARA e-Mail list I posted the question in the form of a poll. However, after the poll was created I received notification that the room we had (on the last Wednesday) at the library has been taken by another group. Not only that, but every other meeting room at the library on the last Wednesday of the month is also taken.

So that means, unless you can find another meeting place, we will continue to meet, as we do now, on the last Tuesday of the month.



Bill, KB1QMY maintains the grounds at our repeater site. Pausing to wind new string on the trimmer and gearing up for round two.

W.A.R.A. WEBSITE HAS FACEBOOK LINK



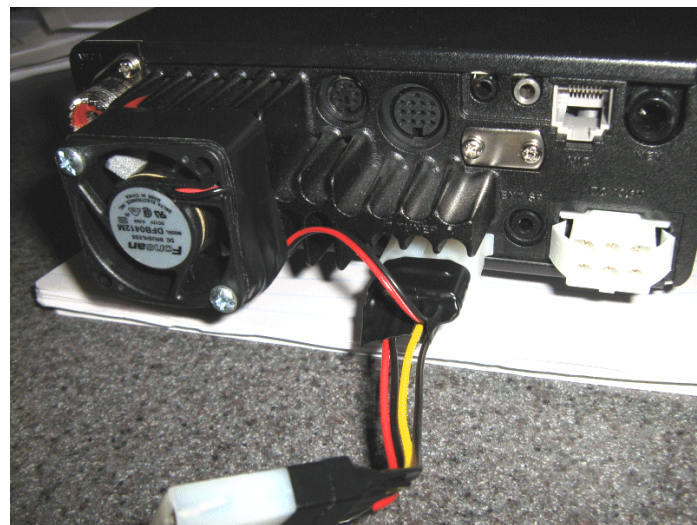
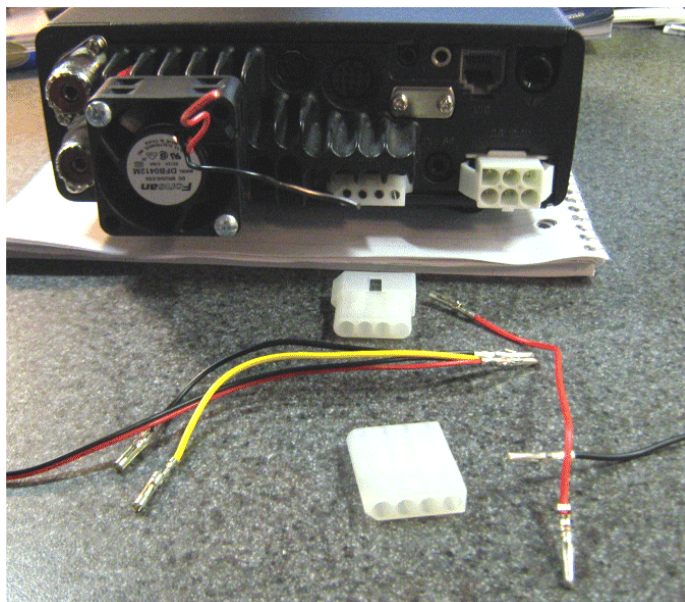
Bill, KB1QMY created and manages the club's new facebook profile. It can be accessed from our home page at www.wara64.org Here you can connect with club members and other hams who have linked up with our facebook page. Thanks to Bill for his time and effort in creating our presence on facebook.

ICOM 706 MOD

Mark Bolls, K1KGG

Here is a very simple fan mod you can do to add an external fan to the icom 706 mkIIg. This fan mod will add additional cooling to the rig and will run constantly as soon as the rig is powered up. I found this to be useful especially during the summer months when additional cooling is necessary.

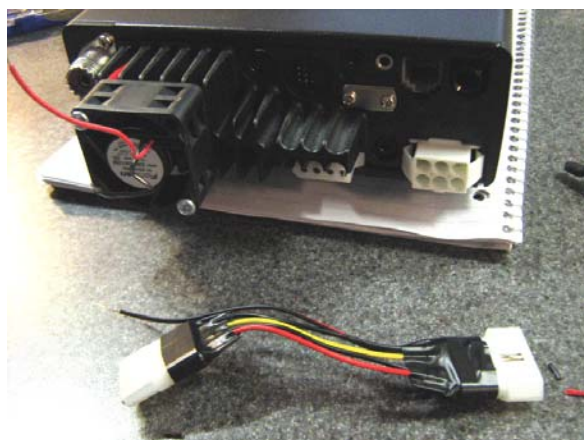




The above photo shows some simple prep where I already installed the fan to the heat sink. For parts I used a 12VDC 40mm fan (very common and easy to find) secured to the heat sink with small plastic wall anchors. This holds the fan very snug and without drilling any holes.

Molex power connectors, (Digi-key part numbers, WM1326-ND, plug and WM1333-ND, receptacle). The wire crimp connectors, (WM1102-ND, male and WM1103-ND, female).

Total cost about 12.00.



After I inserted the wires into the molex connectors, I secured them with electrical tape. Since I plan on plugging and unplugging as needed, I figured this would add to the durability and keep the wires more stable. The last two pinouts from left to right are 12v and Ground, the fan connection goes here. Ideally, one could do one up on this mod and add a switch!

Here is the completed mod. A piece of electrical tape wrapped around the fan keeps the wires neatly in place. The tuner or other accessory can still be used while the fan is plugged in.

This mod would be best if you're able to keep the rig away from your microphone. It runs a bit loud but not too objectionable really. However for those long hot summer qso's, it's a great addition to the existing built in automatic fan of the icom 706 mkIIIG.

Input	Output	PL in	PL out	Call
52.25	53.25	71.9	none	WA1HUD
**146.04	146.64	none	136.5*	W1MHL
223.34	224.94	none	103.5	W1MHL
444.075	449.075	none	none	WA1PBU
902.1375	927.1375	131.8	100	W1MHL

*Use PL to mute P25 transmissions.

**2 Meter EchoLink Node 490278

W.A.R.A. OFFICER WANTED

If you would be interested in taking the position of Clerk, aka Club Secretary, please step forward.

W.A.R.A. OFFICERS

PRESIDENT - Richard Amirault **N1JDU**
VICE PRESIDENT - John Flood **KB1FQG**
TREASURER - Bob Martinson **K1REM**
ASSISTANT TREASURER - Eliot Mayer **W1MJ**
SECRETARY - Open



GUESS WHO PHOTO SECTION



(Photo 1) Can you name the ham in this photo? Can you name the radio? Hint, he can frequently be found on Waltham 440. The radio? Well that's tough. (see answer below)



(Photo 2) Large coffee 2.68, Gas for ride up to Near-fest, 18.76, Port-A-Potty at your destination..... Priceless. How about these guys?

Do you have any "guess who" photos you would like to share for the next issue of PHI? Be sure to submit them to the PHI staff today! A special thank you goes out to John, KB1FQG for his contribution to this section.



(Photo 3) More 440 regulars, Can you guess?



PHI NEWSLETTER STAFF

EDITOR - Mark Bolls **K1KGG**

Submit all articles to k1kgg@yahoo.com

Thank you to all who have contributed to this issue of PHI. We greatly appreciate the time you took in sharing your knowledge! We are always looking for articles and new material to publish. Please send in your photos, announcements, story or short article (Technical or Non Technical) at any time, for the next issue of PHI !



The Waltham Amateur Radio Association is affiliated with the A.R.R.L.

Photo 1: George W1LSB, The rig is a Hallicrafters S20-R
Photo 2: Dave N1DRS on the left and Steve WB1FJH on right. Now do you get the connection with Dave?
Photo 3: Scott W1TOW and Bill KB1QMY





June 29, 2010

Waltham Amateur Radio Association
PO Box 411
Waltham, MA 02454-0411

Dear Friends,

Thank you for your support of amateur radio and the Courage Center Handiham System with your gift of \$2,400.00, representing a donation from the estate sale of Laurie Cote.

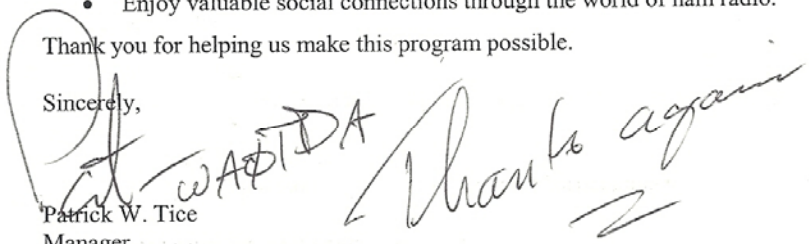
For more than 40 years, people with disabilities have been involved in amateur radio through Handihams. The program currently includes more than 1,000 participants, linking them to the global community of ham radio operators and enabling them to give back to their local communities by broadcasting public service announcements.

Your support of Courage Center's Handihams helps people with disabilities:

- Learn to operate ham radio during our radio camp sessions, held twice yearly in a friendly, accessible environment.
- Obtain specialized equipment that enables participants to operate ham radio equipment with greater independence.
- Interact with knowledgeable Courage Center staff, who offer advice on adaptive technologies.
- Find helpful ham radio study materials, including materials in audio format for those with vision disabilities.
- Enjoy valuable social connections through the world of ham radio.

Thank you for helping us make this program possible.

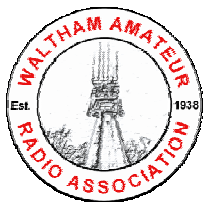
Sincerely,


Patrick W. Tice
Manager

Toll-free donation line: 1-866-426-3442 or 1-866-HANDIHAM
<http://www.handiham.org>
hamradio@courage.org

*Please retain this receipt for your tax records. No tangible benefits were received in exchange for this gift.
Receipt reference number: 468234 138894*

Courage Center - 3915 Golden Valley Road - Minneapolis, Minnesota 55422
Phone 763.520.0542 - Fax 763.520.0577 - TTY 763.520.0245 - CourageCenter.org



WALTHAM AMATEUR RADIO ASSOCIATION

MEMBERSHIP FORM

The Waltham Amateur Radio Association operates repeaters on 6 Meters, 2 Meters, 220 MHz, 440 MHz, and 900 MHz. The repeaters are free and open for everyone to use. But repeaters have bills to pay, just as you do. A \$20 annual membership would help support these repeater expenses, as well as help to keep you informed about club activities and other aspects of ham radio. If you cannot afford \$20, please send what you can. If you are inclined to donate more, we will put it to good use. Please complete this form legibly, and return it to:

**Waltham Amateur Radio Association
Post Office Box 411
Waltham, MA 02454**

Name _____ Call Sign _____

Street _____

City _____ State _____ Zip _____

Telephone # _(_____)_____ Are you an ARRL member? _____

Email _____

This year's donation enclosed (\$20 nominal): \$_____

How would you like to receive our club newsletter?

Email ☐

First Class Mail ☐

Check if you would like to get involved in any of the following Waltham ARA activities:

_____ Repeater Maintenance/ Construction _____ Speaker for Club Meetings

_____ Public Service Activities _____ Public Relations for W.A.R.A.

_____ Newsletter Writing or Production _____ Photographer for W.A.R.A. events

_____ Contribute to the W.A.R.A. web site

You can also join or renew on the WARA web site, www.wara64.org

Waltham Amateur Radio Association
P.O. Box 411
Waltham, MA 02454