

THE ARCLITE

August, 2008



Clay Orchard
KC5MXN
Enjoys a GTG
at the ECC.

Photo by
W5RRY

The Presidents Pen K5DHY Bill Engel

I joined the Garland Amateur Radio Club as a new ham at the February, 2005, meeting a few days before I passed the General Class exam. The guest speaker that night was Phil Salas AD5X with his pieces of brass tubing and fittings and various other pieces of hardware. I don't think I understood all he was talking about, but it stimulated my interest in experimenting with antennas.

When the July, 2005, QST came in the mail there was an article about a "Portable Travel Antenna" by AD5X. So I figured I should give it a try. It might work better than the random

wire which I had fastened to the brick and siding of my house. And I could hide all but the whip above the fence, pretty much out of view of the HOA. I built it and it worked very well, but was not sturdy enough for a permanent installation. So I made a few modifications and transformed it into a fixed antenna which I still use today for 20 meters and higher bands. I then made another portable antenna which I still use on an occasional road trip and at Field Day.

We have the good fortune to have Phil back as a speaker at this month's GARC meeting. His topic is "Easy

to Build Ham Radio Gadgets." I'm sure Phil will be an inspiration to hams new and old as he was to me starting out. Phil is a regular contributor to CQ magazine and you can find all kinds of things on his website <http://www.ad5x.com/>.

We had a handful of hams show up for the first Saturday get-on-the-air open house at the ECC. We tested a transceiver owned by N5BLV which had not been used for over 20 years. We made contacts with it on the major ham bands. CONT ON PAGE 2

Upcoming Public Service Events

K5DHY Bill Engel

Public service events are an excellent way to hone your communicating skills so you can be a valuable resource in an emergency situation. If you are a first timer let the coordinator know and you will be assigned accordingly. Here's what's coming up:

Sunday, September 14 is a new event called "TX Tough" in support of Children's Hospital of Dallas. The event is a triathlon and radio support will be needed for the bicycle portion. To volunteer e-mail John Riley at johnriley@putershop.com. For more information about the event visit http://www.txtough.org/TX_TOUGH.htm.

Friday, Saturday, and Sunday September 19, 20, and 21 D/FW area operators are invited to volunteer to work communications support for the Plano Balloon Festival. The event runs all day long for three days. Each day will have two balloon flights (weather permitting). Volunteers will be needed in shifts for the duration of the event. Visit <http://www.planoballoonfest.org/> for Festival Information.

Saturday, September 27 is the Juvenile Diabetes Research Foundation Walk in the vicinity of American Airlines Center. This is an excellent event for first-time communicators to get their feet wet. Contact John Will, W5EJ, at w5ej@arrl.net. For more info about the event see <http://www.jdrfdallas.org/walktocurediabetes.php>.

Sunday, December 14 is the Dallas White Rock Marathon Presented by NexBank. Mark your calendar and look for more info in the future. Contact is Bob Jones, W5BJ, w5bj@arrl.net. Event information at <http://www.runtherock.com/>.

The first Wednesday of each month are the emergency warning siren tests in Garland and Rowlett. Ham operators are needed to visually inspect the sirens and report on their operation. You need not be affiliated with RACES to perform these tests and you can do either the Garland test at noon or the Rowlett test at 1 pm or both. Siren locations and signup are on the Rowlett RACES web site <http://www.rowlettaces.us/> or you can e-mail Ian DiFranco KE5FOM at ian.difranco@verizon.net.

As always, public service event information can be found on the web at <http://www.qsl.net/n5tim/uplist.html>.



President's Pen CONT:

We'll have the ECC open again on September 6 from 9 am to noon for getting on the air. Of course this is in addition to our regular third Saturday open houses.

Hopefully the 100+ degree days are behind us and the cooler weather will continue so we can all get back to our outdoor projects.

73,
Bill K5DHY

CAN YOU HELP?

The sign on the door of the ECC is getting rather worn and the website address is out of date. Is there someone that can get a new sign made for us at minimal cost to the club? Please email president@k5qhd.org if you can help.



Bob Jones W5BJ

K5QHD

News and more for the Garland Amateur Radio Club. The GARC Currently has two repeaters on 146.660 and 442.700 Both PL Tone 110.9

THE GARC is a 501(C)3 non profit organization established to promote amateur radio and also provide disaster and emergency communications.

August meeting date is the 25th at the Garland Women's Activity Center 713 W. Austin Street. Garland TX. 75040
Doors open at 7:00 PM
Meeting at 7:30



**Don Reznicek KE5FWK and Grady Belt W5TGF
Ham it up at the ECC**

Hmmm... antenna design ... for everything you gain, you lose something else.

RACES NETS*

Every Thursday Night at 9:00 PM local time on either the 146.660 or 147.240. In addition there is also a 1st and 3rd Sunday net on 146.880 at 8:00 pm

ARES NET

Unlike the Races nets you do not have to have an Races Appointment to participate. ARES NETS are the 4th Thursday on Either 146.660 or 147.240 at 9:00 pm

SIREN TEST

Garland's Early Warning Sirens are tested by the city on the first wednesday of each month at noon, weather permitting

RACES NET PARTICIPATION REQUIRES AUTHORIZATION BY RACES Authority or FCC

REPEATER NEWS**BY Bill Engel K5DHY**

The club operates two open repeaters for use by any licensed amateur radio operator. One is on 146.660 MHz with a negative 600 KHz offset and the other is on 442.700 MHz with a positive 5 MHz offset. Both repeaters require a PL tone of 110.9 Hz. Additionally the 146.660 repeater transmits a tone of 110.9 Hz to enable use of tone squelch found on most receivers. The backup two meter repeater that is occasionally put into service does not have this feature.

A major communications problem with the new repeater controller has been fixed and it will be put into service after some programming is finished.

If you are not familiar with the Club's guidelines for usage of our repeaters please take a few minutes to look them over. They are accessible on our web site under "Club Information" then "Repeater Use Guidelines."

Project: APRS Tracker by David Kaun, KD5LGU

APRS or Automatic Positional Reporting System has been around for quite a while with the ham radio community but it has just been in the last year or so that the components have become "Plug-N-Play". Although you can use APRS to tell the world where your house is located or where you have driven, this is not the real value of APRS. The APRS

really shines during public service events to track locations of specific vehicles or "assets" used in the event such as the lead or tail vehicle, resupply trucks and sag vehicles. You can use a laptop computer and a simple 2m receiver and antenna to track these "assets" on a map and make logistical decisions based on the locations. This technology has been a request of the Rotary Club of Mesquite for the Rodeo Bike Ride for 2009 and beyond.

In the past, you required a hand-held GPS with a power and serial cable, a small TNC and a 2 meter radio with power and microphone input and audio output interface cables. This setup could be a permanent mobile or base installation but it was not very easy to transport this from vehicle to vehicle. There had to be a way to simplify this so that this technology could be used to track "items" and remain a portable solution.

A company called Byonics simplified the process (www.byonics.com). With a few simple low-cost pieces and a 2m HT and mag mount antenna, you can put one of these together and start tracking in 30 minutes or less. The key to the success is to understand exactly how you will get the audio to and from your radio and how to get 12v of power to both your radio and the tracking hardware. For short term tracking, you could run it all on a 12v gel cell (4-7ah) but it may be easier to have it all plug into a cigarette lighter port or Anderson Power Poles (the RACES/ARES

standard power connector). The easiest way to do this is with an HT that runs directly off of 12v, have a standard speaker-microphone jack and a BNC antenna connector.



For my installation, I had a Yaesu VX-170 HT (2 meter & 5 watts power output). Because the VX-170 runs directly off of 12V power, I purchased the DC power cable for it (Yaesu EDC-6 cable \$10.00). The Yaesu VX-170 uses the new water-resistant screw-in 4-pin speaker-microphone plug, I had to order the adapter (Yaesu CT-91 \$10.00) to connect a standard speaker-microphone to the radio. The Yaesu VX-170 also has a standard SMA antenna so I purchased a SMA-to-BNC adapter (Texas Towers approx \$10.00). I now had a HT with a 12V power input from a red and black wire, standard speaker-microphone connections and an antenna connector that is BNC standard. I purchased the MFJ 1724B 2m/70cm mag mount antenna as my APRS antenna (\$25.00). Continued on page 5



APRS Tracker A Tiny Solution for all of us

By David Kaun KD5LGU

Cont from page 4: I found that trying to use the rubber duck antenna did not provide a reliable solution and the portable “Hershey’s Kiss” antennas had excessive loss in the cable and fed back into the audio portion of the radio (not a good thing). I also wanted the ability to run all power off of a single 12V plug or Anderson power pole so I purchased a Radio Shack 12V cigarette cord with a switch on the plug and bare wires on the end (Radio Shack 270-1557 \$9.19). It was now time to visit the Byonics website and place my order.

After reading most of the Byonics website, downloading the manual and speaking with local “experts”, I went with the Tiny Track 3plus TNC and the Byonics GPS2 (\$112.00) pre-built and tested. This will provide all the necessary equipment to track an “asset”. The last thing I needed was the proper radio interface cable. Byonics has a special page for the cables and this is where knowing your radio connections is a must. If you are unsure of what you are to order, please ask someone to help you. Since I had the most common connection for a HT, I ordered the HT1P (Anderson

Power Poles). A few days later and a valid credit card, a small padded envelope arrived in the mail. The GPS is self-contained in one mag-mount piece and has a serial port on the 6' cable. This will connect into the GPS/Computer side of the Tiny Trac 3plus and will only go in that side. The other side is for the Radio/Power cable. This will connect into the speaker-microphone jack on the HT. The last step is to give the unit 12v of power and the Tiny Track 3plus will power the GPS unit. This is where the Anderson Power Poles make it easy. Tim Lewis (KD6FWD) combined the cable for the TNC and the cable for the Radio into one cable with a single Anderson Power Pole on the end. For a RACES/ARES standard vehicle, I am good to go. With a vehicle with only a cigarette lighter port, I have my Radio Shack switched power cord with an Anderson Power Pole installed by Tim Lewis. At this point, make sure everything is working by applying power but you are not ready to start tracking. There is a simple programming step to tell the Tiny Track 3plus who you are and how it should behave. Now that you have a properly interfaced GPS, Tiny Track 3plus and 2m radio, you need to program your Tiny Track 3plus via your computer. You will either need a custom-built serial cable or a DB-9 gender changer and null-modem cable. You can get all this at Tanner Electronics or you might bribe someone that has a working cable to program your unit for you or lend you

their cable. You will only have to program your unit once or just a few times over the course of its lifetime (i.e. call sign change, tactical identity for public service event, etc.). The software is free from the Byonics website and you will need a serial port on your computer or a USB to Serial adapter and know the Com Port on the computer. Apply power to the Tiny Trac 3plus device without connection to the radio. The software runs under all versions of Windows and will only require a few items to input. You will need to input your call sign and a dashX identifier (i.e. KD5LGU-9). The dash9 indicates a mobile device and pick your icon designator (i.e. car, truck, space shuttle, etc.). The "Digi Path" may already be set properly but make sure it is set as "Wide1-1, Wide2-1". Check the send altitude box, check the MIC-E enable box, MIC-E message should be "In Service" and the path is "Conventional". Check the "Smart Beaconing" box. Your "Text" box should have a description of your choice such as "KD5LGU Pac Tracker" or "Monitoring 145.310". During public service events, this may have a description of the "asset" this is tracking. Save the config file with your call sign.tt3 and write the configuration to the Tiny Trac 3plus device. The program will confirm the write process and you are ready to install the unit.

WAYS TO HELP



Good Neighbor #
11636

As previously announced Kroger has a new Neighbor to Neighbor program. This program will pay out \$1 million to organizations in Texas and Louisiana proportionately based on purchases between May 1, 2008, and April 30, 2009. In order to get us in on the action you will need to print the customer letter which can be found at: <http://www.krogerneighbortoneighbor.com/pdf/10000081152.pdf>

Then take the letter to the Kroger store and have the cashier scan it after he/she scans your KrogerPlus card. You only need to do this once. We will then receive credit for your purchases during the duration of the program. Payout to the organizations will be after April 30, 2009.

Thanks for your support of the GARC.

73,
Bill Engel K5DHY

Minutes of the July Meeting

By

Sorry, the minutes of the meeting were not available at press time.

around for a while and take a few turns. If you can reach someone on the repeater to watch you beaconing on the aprs.fi website, that is for the better. They can give you real-time locations to make sure your system is working. Otherwise, come back home and go the aprs.fi webpage (yes type in aprs.fi in your browser – no http or www) and enter your callsign-9 into the homepage and see what you get. If it is working properly, you should see your designator and call sign on a Google map and a blue trace of the approximate path you took. If everything works great, you can choose to do a more permanent install in your vehicle or put it all in a bag or box for the next APRS public service event.

Now you have a working solution, you will wonder why your tracker is not more accurate with your traveling path. The key reason is that you are sharing a frequency with hundreds of other APRS users that need to get their packet delivered and everybody must wait their turn to beacon. Some public service events use a different frequency for APRS users for the event and they can beacon more frequently and provide more accurate tracking. You are also using a 5 watt HT rather than a 50 watt mobile (you can use a 50 watt mobile for your tracker) and your range may not be great enough for the beacon to get to the internet gateway. Many clubs install Digital Repeaters for APRS or “Digipeaters” to extend the range of portable tracking units and the send the information to the internet.

Although there are commercial “asset” tracking solutions available, APRS tracking devices are only available for the licensed ham radio operator. You hold the technology in your hand for under \$300 and this technology is exclusive to you at this price and we can provide this amazing technology for the public service events we work. Happy Tracking!!!

A Tiny Solution

With everything working, programmed and powered up, temporarily install the unit in your vehicle. Put the mag mount antenna on the top of your vehicle, put the GPS on the roof away from the antenna and power everything up. The GPS has a small LED on the unit to confirm power and the Tiny Trac 3plus has 4 LED lights on it. The first confirms power, the second confirms audio from the radio, and the third confirms data from the GPS (solid light when working) and the fourth lights when keying the radio and “beaconing”. It is time to go for a drive and test your system. Make sure you are not getting RF into the Tiny Trac 3plus audio (rapid burst of transmit). Drive

GARC GENERAL INFO

Repeaters:

The GARC operates two open repeaters for its members and guest amateur radio operators on 146.66 (-) and 442.7 (+) Both with PL Tone 110.9 Trustee: Bob Jones W5BJ

trustee@k5qhd.org

INTERNET:

See us at <http://www.k5qhd.org> also on Yahoo groups

Newsletter:

The Arclite is published monthly for the members of the Garland Amateur Radio Club. The contents of this newsletter are copyrighted the date of publication, but may be reprinted without permission in any Amateur Radio Publication provided proper credit is given and the motive is the advancement of amateur radio. The deadline for Arclite materials is the 2nd monday of each month.

MEMBERSHIP:

Membership forms are available at the GARC monthly meetings or the GARC website. Members can be voted in at each meeting. Club Rosters for non commercial uses can be obtained by club members by contacting a board member.

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[For More Info call \(972\) 272-4499](tel:972-272-4499)

GARLAND AMATEUR RADIO CLUB

Emergency Communications Center (ECC)

1027-B. West Austin Street.

Garland, TX. 75040

Where Ham Radio is Fun Again!

K5QHD is the Bill Folsdtadt Memorial Station



PLEASE RUSH!!!

Donate your excess goods to the GARC. Don't forget the club is a 501(C)(3) organization and that all your donations can be tax deductible.