



# Dixie Amateur Radio Club Newsletter

*"Amateur Radio.....*

*...When all else Fails!"*

Dixie Amateur Radio Club, Inc.

May 2009 Edition

## ***Attention all you Tech's:***

A class for upgrading to General will commence on the 15<sup>th</sup> of May.

The class will be 8 weeks in duration and will be taught on a first come, first served, basis.

The price will be \$25.00 per person.

Each individual who wants to take the class needs to contact Hal Whiting, KI2U at the following e-mail: [ki2u.ares@gmail.com](mailto:ki2u.ares@gmail.com) A.S.A.P.

**Built by Jack Roblin, WN6KYO, June 1976**

The Tuna Tin Two, a QRP 40M Transmitter by Doug DeMaw. QST, May 1976

This classic Tuna Tin Two was built as a project while attending the Amateur Radio Summer school class at Santa Monica High School in California. I was 15 years old when I built this classic little rig. In fact, it was one of the first electronic projects I ever built! What a GREAT project it was too! It helped inspire several others within the class to get their novice licenses. This unique little transmitter, even with its very modest 250 milliwatts output, provided hours of fun and plenty of great contacts during that time.

## **A Vintage Tuna Tin Two!**



**Vintage 1976 Tuna Tin Two**

If you would like to know more about Tuna Tin Two projects, you can go here:

<http://www.njgrp.org/tuna/tuna.html>

This could keep you interested and occupied for a loooonnnnggg time!



Thomas Smith K7AHD

When I was eleven I lived in Brigham City, Utah. My father introduced me to a co-worker, Robert Jensen, W7MOV. My father had a Howard, general coverage communications radio. I spent my time after school listening to Bob checking into the old Farm Net on 3935 kc at 7:00 p.m. every evening. Bob had a home build 500 watt AM transmitter. He lived within bike riding distance so quite frequently I would bike over to his house and sit and listen to him talk on his radio. He would often let me talk to his fellow hams. During that time I considered myself an SWL.

Fast forward a couple of years to 1958. I was studying to get my First Class Boy Scout Badge. One of the requirements was to learn the Morse Code. Once I learned it so I could pass my First Class badge test it was just another bit of effort to pass the five word a minute code test. I peddled my bike over to Bob's house and he gave me a five minute code test and I passed. In those days one would pass the code test and the examiner would send certification of the code test to the FCC and they would send the written test. So I studied real hard and when the written test came I peddled over to Bob's house and he administered the written test. He looked it over and told me he thought I passed. He sent it in and I waited.

During this waiting time my father obtained thirty foot utility pole. We dug a hole in our back yard and buried it. He obtained two power insulators and 40 feet of electrical conduit. I didn't know about how to build an antenna. We connected the four sections of 1" conduit together and bolted them to the pole via the insulators. I took a piece of 300 ohm twin lead up the pole and drilled a hole about two thirds up the conduit. The other side of the twin lead I run a wire down the pole to a series of ground radials we had buried. The pole is gone but, I think the radials are still there. I obtained an old BC459 surplus transmitter. Two 1655 finals and an oscillator and a Hillcrafters S-40A receiver. We built a power supply and set it up for CW. I connected it to the twin lead and it tuned up on 40 meters and it worked. On or about the 23rd of May 1958 I arrived home from school and my mother handed me a letter from the FCC addressed to me. I opened it and pulled out my first FCC license with the call K7AHD.

I remember that one evening I got a call from my neighbor. He read back to me a communication I had just had. I asked him how he knew. He said he copied off his TV. He said he was a radio operator in the Navy. I found out that every time I closed the key I blocked every bodies tv for a 6 block radius, so I did my hamming in the morning before school. No early morning TV shows in 1958.

I have been an active ham ever since. I remember when I was in the 8th grade I entered my ham station in the science fair. The fair was held in a Quonset hut on the USU campus. It is still there. I strung a 40 meter dipole on the inside of the roof of the building. It was not until years later that I finally figured out that the reason I could not hear anything was because my antenna was inside a metal building. I was 14, just getting started and nobody suggested that my antenna would work better on the outside.

When I was in junior high and High school I had a whole wall plastered with QSL cards. When I moved out of the house I took them all down. I don't know what happened to them because I have not seen them since.

At age sixteen I found out that I could take my ham rig with me. It's called goin' mobile. In those days everything was vacuum tubes. My mobile rig was a good nylon stocking snagger. However, the girls just had to put up with it when we dated. Finally I found a girl that was willing to tolerate both me and my ham radio. We had six children together. She never did become a ham and neither did any of my children.

I found that I really enjoyed working and being involved in emergency communications. I participated in almost every emergency simulated test that was run in Box Elder County.

I studied electronics technology at Weber State. Several of the instructors were also hams. This enabled me to continue to be active by using the club station.

After I was married I moved back to Brigham City and set up a ham station in my basement. As I have moved from place to place my ham station was one of the first things I set up. When I moved into my current address the first question I asked was "are there and convents that would prevent me from stringing wires?" There were none so I rented the house. I have been here for three years. I sold a piece of property and used some of the money to build my present emergency comm trailer.

Well there you have it, my story about ham radio as I recall it.

Thomas Smith

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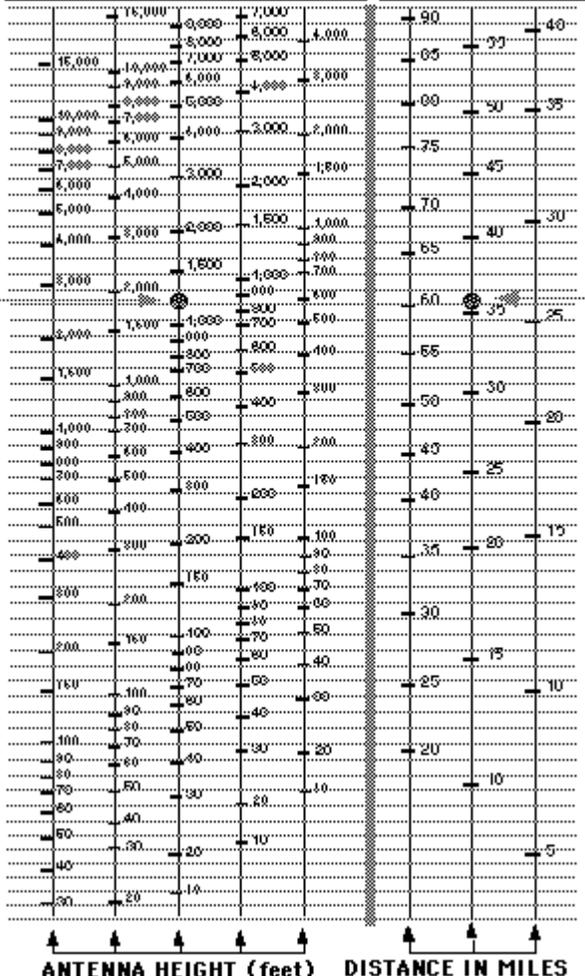
**Why do ships and aircraft in trouble use "mayday" as their call for help? This comes from the French word m'aidez - meaning "help me" - and is pronounced "mayday." (Note: not exactly.... it's pronounced "med-ay", but close enough)**

# Transmitter Range Estimator

**TRANSMITTER POWER**  
5 10 25 50 100

**FREQ. / BAND**  
50 150 450

Example  
1,000 Ft Elevation plus 1 line for 1 db gain  
antenna, using 25 Watts of power



Estimated Transmitter Distance (35 miles) using 150 MHz

Using this estimator table you should be able to calculate the range of your signal. This table can be used not only for mobile or base operation, repeater owners can also estimate the range of their mountain top repeaters! Follow the six steps listed here and you should have a fair estimate of your signal range.

THE RANGE YOUR SIGNAL WILL TRAVEL CAN BE CALCULATED USING THE ATTACHED CHART. (@ 1 micro-volt RX)

1. Locate the height of your antenna on the proper transmitter power column.
2. Find the line closest to that point.
3. Move up one line for every dB gain of your antenna system.
4. Move across the line to the proper vertical frequency band.
5. The closest number to the line is the distance in miles your signal will travel with a 1 micro-volt receive signal.
6. Move up six lines to calculate the .5 micro volt range.

How far away can my signal be heard? That is perhaps the most often asked question in amateur radio. Unfortunately like most questions in this exciting hobby, the answer requires a little work. We will focus on line of sight propagation on the VHF & UHF bands. These are the most common bands used by both mobile and base operations. To properly estimate a signals range, you must have a few important figures:

- Frequency / Band
- Transmitter power (in watts)
- Antenna height (from sea level)
- Antenna gain (net after coax loss)

These instructions assume a receive signal in the 1 microvolt range. One microvolt is considered a strong signal strength. Most modern radios have a .15 microvolt sensitivity. If you wish to estimate the maximum distance your signal can be heard, you can move up the distance table six lines every time you divide the receive signal by one half. For a .5 micro volt signal, move up six lines. For a .25 microvolt signal, move up 12 lines. While these figures are just an estimate, you'll find that they are usually reliable. 73 and remember to have fun. Look for "Simpletons Ham Dictionary" in 1996.

**Kudos Nomination Form**

Note: The KUDOS is a Dixie Amateur Radio recognition given to those members who go behind what is normally expected of them. Please do your part by catching your fellow members doing so and then nominate them on this form.

Nominee Name: \_\_\_\_\_

Tell us what happened: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Referred by: \_\_\_\_\_

Phone #: \_\_\_\_\_

Please Return to HAM-E