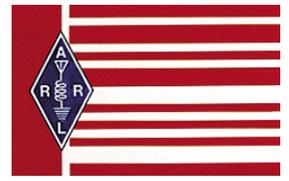




Squelch Tales



Newsletter from the Merrymeeting Amateur radio Association for September 2003

N1JIM-L to Change Frequencies

The N1JIM-L Echo-Link connection on the 147.21 KS1R repeater has moved to the national Echo-Link simplex frequency of 147.42 MHz. The N1JIM Echo-Link station will reside at Mark Rideout's QTH in Bowdoinham, almost on the Richmond town line. The N1JIM-Link, as of this writing, is operating as a low-level system. But as soon as the 50+ foot crank-up tower (donated by Woody, W1WEW) goes up in the air with a 2-meter Ringo antenna (donated by Bill, K1MNW) you Echo-Link connection to the world will put out a big signal. For more information on the move and to lend support to the Echo-Link project contact Mark Rideout at: N1JIM@gwi.net.

Tech Committee Talk

By W1ZE

147.21 Repeater: As reported at last months MARA meeting, the 2-meter repeater's GE transmitter has fallen on hard times. It appears that one or more of the final four transistors in the amplifier portion of the unit have failed. GE designed their transmitters to compensate (somewhat) for just such a failure by increasing the drive to the remaining final transistors to keep the transmitter power up. Well, we think several devices failed because we are (were) getting less than 20 watts of output and drawing so much current that the isolation diode coming from the power supply and battery bank

fried. The transmitter is drawing in excess of 20-amps.

Again, Bill Messier has come to the rescue. Bill had commercial transceiver taken out of service years ago that has a 70-watt PA and as of this writing getting it tweaked-up to replace the terminal GE transmitter. When the replacement happens (hopefully by the time you read this) transmit power will be up to about 50-watts. In the replacement process we will re-adjust the controller audio upward so autopatch and ID audio will be about the same as voice audio.

444.4 Repeater: The little repeater keeps plodding along. Time permitting we hope to do a little PM (preventative maintenance) on it to make sure it is hearing as well as it can. Your tech committee has discussed the possibility of increasing the power output to help insure solid coverage in the local area.

1284.0 Repeater: It is up and running with 10-watts out of the transmitter. Bill, K1MNW is in the process of converting some old 800 MHz cavities into a duplexer for the 1.2 GHz band. Coverage tests have been better than expected. The plan is to merry or links the 444.4 machine together with the 1.2 GHz machine so that folks without 1,2 GHz equipment can access the band via the UHF repeater. If you want any additional information about the repeaters or other ham radio technical issues contact K1MNW, K1MJP or W1ZE.
73, *Bruce*

Ham Radio loses an enthusiastic spokesman

ARRL Bulletin issued August 18th

Retired NBC News science correspondent, producer and executive Roy Neal, K6DUE, of High Point, North Carolina, died August 15, after undergoing major heart surgery three days earlier. He was 82.

Recognized as a leading news expert in spaceflight and science, Neal--born Roy N. Hinkel--covered the early days of NASA's human space flight program, including the Mercury, Gemini and Apollo missions and the early shuttle flights. Neal's space news experience, led him to become involved with the Space Amateur Radio EXperiment (SAREX)--and Amateur Radio on the International Space Station (ARISS) programs. A joint project of ARRL, AMSAT and NASA, ARISS put Amateur Radio aboard space shuttles and developed the first permanent ham station in space aboard the ISS. Neal chaired the SAREX/ARISS Working Group and moderated ARISS international team gatherings and, quite often, school group contact teleconferences.

Roy was the voice on several ARRL amateur promotional videos and education materials. Earlier this year, he was inducted into the CQ Amateur Radio Hall of Fame for his role in persuading NASA officials to allow Amateur Radio operation from space in the 1980s.

A Pennsylvania native, Neal began his broadcasting career at WIBG radio in Philadelphia. He served as a combat infantry officer during World War II and later became a program manager for the Armed Forces Radio Network in Europe. After the war, he was a television pioneer at WPTZ-TV in Philadelphia. He

subsequently set up NBC's West Coast news bureau.

Neal was an ARRL member and active amateur operator throughout his adult life. Survivors include his wife Pat and sons David and Mark.

Editor's Footnote: I have had many QSO's with Roy over the years. You could find him every weekday morning on 20 meters in QSO with another friend, Barry Ives, K6QJ in LaHabra, CA and others around the country. I will miss those QSOs with him.....Bruce, W1ZE

My shunt-fed Screen door has more gain than your super rubber ducky!

By W1ZE

One of the most talked about subjects in our great hobby is antennas and their gain figures. You hear hams on the air say they have a new Trombone Tuned super matched Wicked Good Stick that has 11.2 db gain. What is he talking about? First the average ham can not tell you what a dB is, let alone determine gain. I'm not going to fill up these pages with the math on dBs, but I will tell you that gain is the amount of difference between two signals measured to show loss or gain.

You see antenna manufacturers offer all kinds of claims on their antenna gain figures. What does that tell you? In fact, not much, unless they give you a lot of information on how they measured their antenna. You need to know, is the gain (or loss) measured against a dipole at the same elevation, or measured against a theoretical isotropic source antenna, the elevation of the antenna, and at what angle the measurements were taken.

Many manufacturers spec-sheets on antennas give their gain figures in dBi (isotropic) because that adds 2.1db more than dBd (dipole). Sounds good but doesn't

give you anything except a marketing gimmick.

The following is an antenna gain truth table that gives you what the gain (difference) of most popular types of antennas that are measured slightly above the horizon with antenna a half-wave above ground.

	DB(I)	DB(gp)	DB(d)
isotropic	0	-.3	-2.1
Ground plane or ¼-wave	+3.3	0	-1.7
Dipole or ½-wave	+2.1	+1.7	0
5/8-wave	+3.3	+3.0	+1.6
Quad loop	+4.1	+3.8	+2.1
2 element Yagi	+7.1	+6.8	+5.1
2 element Quad	+9.1	+8.8	+7.1
3 element Yagi	+10.1	+9.8	+8.1
4 element yagi	+12.1	+11.7	+10.0
3 element Quad	+12.1	+11.7	+10.0
4 element Quad	+14.1	+13.7	+12.0

The above should be a good idea what the gain difference between the various types of antenna really is, and keep the confusion out of what the real gain of the common types of antennas are. The actual figures will vary a bit for reasons like element spacing, nearby objects, etc. but not enough to make the above table inaccurate.

Another good thing to remember is that it takes +3 dB gain to double your ERP or double the received signal. 73, Bruce

HAM TOYS FOR SALE

- **ALINCO, DJ-195 2-meter HT** with 5 watt battery pack, charger like new, with Radio Shack 5/8-wave mag. mount antenna, Asking **\$100**



- **RADIO SHACK, HTX-252 2-meter mobile** (new in the box) with Radio Shack mag. mount 5/8-wave antenna. Asking **\$100**,



- **TRIPP-LITE, regulated power supply** (new) 10-amp. Asking **\$20**



For all the above items call Bob at 725-6541.

- **CHEROKEE AH-50, 6-meter 5-watt HT** Asking **\$75.00**
An inexpensive way to get on 6M.
Contact Mark Rideout at:
N1JIM@gwi.net





ARE YOU
TRAINED AND
PREPARED TO HELP
WHEN THE TIME
COMES?