



Squelch Tales



Newsletter from the Merrymeeting Amateur Radio Association for September 2010



K1MNW/Aeronotical Mobile

Bill “on the hill” Messier, K1MNW had the bug for years. He has held a pilot’s license since 1974. He always wanted his own Airplane. Saturday August 14th was the day he went and did it, by going out and buying his own PIPER TURBO ARROW III. That aircraft will do 200 MPH, has a service ceiling of 20,000 feet, will carry three people plus pilot and 200 pounds of luggage, or ham radio equipment. The spiffy bird has a supercharged six-cylinder engine with fuel injection!



Now Bill can get his antennas up to 20,000 feet. We wonder how far he will be able to work on 1.2 Gig now?



Finely it's fixed

A Technical Committee Report by W1ZE

After weeks and months of poor performance on the KS1R/R 444.4 and 147.21 repeaters both repeaters are up and running and performing very well.

History: Several months ago it was noted that the performance of the 444.4 repeater was being degraded and several weeks ago we were getting IMD problems that we thought were spur-mixes getting into the 444.4 repeater. The interference was numbing up the receiver on a periodic basis. At that time Bill "on the hill" Messier, K1MNW took one of his UHF commercial circulators and installed it into the system and that seemed to eliminate the interference somewhat but repeater coverage was not great.

Last week, Bill took the 444.4 repeater out of the repeater equipment rack and took it over to his shop where he ran it through its paces with his diagnostic test equipment. He peaked and tweaked for a bit then noted that one of the helical tuned circuits at the mixer stage was breaking into oscillation. The oscillation was numbing up the IF strip and in turn making the old GE MVP receiver about as effective as an amplified crystal set. No wonder folks were having problems. After finding a spot where the mixer stage would not break into oscillation, Bill tuned the front-end and IF for maximum sensitivity. The result was a receiver that had .15uV at 12db SINAD with the aid of the outboard pre-amp, one hot receiver.



K1MNW's IFR-1200 service monitor and Telwave 30-1000 MHz wattmeter used to do diagnostics

The saga continues. On August 10th while Bruce, WIZE was driving from South Portland to Bath he noted that the 147.21 repeater was off the air, or so he thought. On high ground in Portland he thought he could hear a faint signal return when he keying up the repeater. As he approached the Brunswick-Freeport line he could here the 147.21 repeater but it was about S-3 when it should be 60db over S-9. He contacted Bill on the 440 machine and reported the problem. Later that day Bill went over to the repeater building with wattmeter in hand and started checking SWR on the 2-meter antenna. He read almost 12 watts of reflected power...NOT GOOD!

The next day, Wednesday, Donnie, WD1F took half a day off work and joined Bill and Bruce on the hill where they started checking all the antennas and transmission lines. The hard-line feeding the 2-meter antenna was tested by replacing the antenna with a dummy load. The SWR was still very high. Next the pigtail coax jumper was removed, but when Donnie cut away the weather sealing and tape and removed the N-connector he noted that the hard-line connector was full of water. It appears that over time with hot and cold weather and rain and high winds the weather seal had allowed moisture to penetrate and wick into the connector. Donnie dried it out as best he could and the SWR improved a bit but the connector needed to totally dry out. To get the system back up and running the new dual-band antenna was put back into service being fed with a spare 1-5/8" hard-line run. SWR readings were now excellent. and performance on the 2 meter repeater was restored to normal operation. It appears the coverage is as good or almost as good as the older Station Master. If fact, close in coverage seemed to improve slightly.

The new early Christmas gift is that the 444.4 repeater has never worked so well. Hot receiver, good antenna and signal coverage reports are the best we have experienced. John, K2LOT in Edgecome reported 5-9+ full quieting signal, Don KA1WAL mobile in the Portland reported a full quieting signal. WD1F/M on his way to work reported solid coverage from Phippsburg to Westbrook with his less than 5-watts of power. Bill, K1MNW with just a HT in his SUV was

solid into the 444.4 machine from the parking lot of Mid Coast Hospital, which everyone knows to be a RF dead zone.

Many thanks go out to Bill Messier for his 2-way radio skills, the tower climbing skills of Donnie, WD1F and all those that provided signal reports from around the mid coast for turning the MARA's two repeaters into quality performers again. **WELL DONE!** *73, Bruce, WIZE*



What in the heck is SINAD?

By, K1MNW & WIZE

In the previous column you may have noted the reference to the acronym SINAD when the 449.4 MHz repeater receiver was tested. You may have also noted that it is referenced to in receiver performance in ham equipment ads and technical manuals. Here is a brief explanation:

SINAD is a measurement that can be used for any radio communication device to look at the degradation of the signal by unwanted or extraneous signals including noise and distortion. However the SINAD measurement is most widely used for measuring and specifying the sensitivity of a radio receiver.

The actual definition of SINAD is quite straightforward. It can be summarized as the ratio of the total signal power level (Signal + Noise + Distortion) to unwanted signal power (Noise + Distortion). Accordingly, the higher the figure for SINAD, the better the quality of the audio signal. The SINAD figure is expressed in decibels (dB) and can be determined from the simple formula:

$$\text{SINAD} = 10\text{Log} (\text{SND} / \text{ND})$$

where:

SND = combined Signal + Noise + Distortion power level

ND = combined Noise + Distortion power level

For more information on SINAD go to:

<http://www.radio-electronics.com/info/receivers/sensitivity/sinad.php>



Tour de Merrymeeting Bay, another success story

Topsham: In the early morning of August 14th a group of MARA volunteers arrived at the recreational field to get briefed and receive assignments to this years Rotary Club sponsored Tour de Merrymeeting Bay 50-mile bike tour.

As in past years the event net used the MARA callsign of KS1R and Net Control was John Goran, K1JJS operating from the start-finish location. The event utilized both the Associations 147.21 and 444.4 repeaters that covered the area around the Merrymeeting Bay in Sagadahoc and Lincoln counties.

Participating in this years event were:

W3ZD, Al Corderman	K1JJS, John Goran
W1ZE, Bruce Randall	KX1I, Marjorie Turner
KA1WAL, Don Wakeman	N1IPA, Jim McIrvin
N1OIG, John Munton	WD1F, Donnie Dauphin
AA4AK, Steve Kerchel	N1TTT, Harry McNelley

These bike, run and walking events help the MARA hams keep their emergency comm. skills sharp with the use of tactical call signs, plain language, short descriptive transmissions and the protocol of a directed net situation when their ARES or CERT participation is needed.

The Tour event organizers were very pleased with the MARA volunteer communications skills and professionalism. **Well Done!**



ARRL Amends *Petition to Deny* to Include 16 Additional Recon Scout Applications

On August 16, ReconRobotics -- in response to the ARRL's *Petition to Deny Applications*, filed with the FCC on August 4 -- filed an Opposition to *Petition to Deny* with the FCC, arguing that the ARRL's *Petition* is "frivolous." The ARRL's *Petition* asked the FCC to deny 68 pending Public Safety Pool license applications associated with the ReconRobotics Video and Audio Surveillance System, specifically the Recon Scout device.

Calling the "frivolous" contention "somewhat amusing, given what the FCC had done three days earlier," ARRL Chief Executive Officer David Sumner, K1ZZ, pointed out that on

August 13, the FCC returned the first application -- submitted by the City of Salina, Kansas. The Salina Police Department had asked the FCC for a waiver to operate the Recon Scout in the band 433-445 MHz. The FCC returned the waiver request to Salina, noting that the frequency band requested was not consistent with the waiver Order (Docket 08-63/DA-291) which requires that the first unit licensed to an eligible entity operate in the band 436-442 MHz. "We expect that the application will be corrected and resubmitted," Sumner said, "but it is encouraging to see that the FCC agrees with us that the applications -- this and all of the subsequent ones filed -- are defective in this respect."

The ARRL's *Petition* noted these and other incorrect technical parameters in each filed application, stemming from errors in the grant of equipment authorization for the ReconRobotics device, as well as inconsistencies between the applications and the FCC waiver grant for the device in Docket 08-63. Since the August 4 filing, the ARRL has noted another 16 applications have been filed with the FCC, requesting a waiver to be able to use the Recon Scout in the incorrect frequency band. On August 17 the ARRL amended its original *Petition to Deny Applications* to include these 16 additional applications.



Pine State RC to Celebrate 35 Years

Bangor: On October 9th the Pine State Amateur Radio Club will celebrate 35 years of ham radio service. Squelch Tales readers are invited to join them for dinner to mark the occasion. The dinner will begin at 6:00pm.

Come and share with them 35 years of experiences. They have a verity of things planned. If you plan to attend they must know by September 17th. The menu will be Lobster Steak or Chicken Cordon Bleu. Meals must be paid for in advance. Send check to: **Carroll Spencer, N1OJD, 467 Main St., Old Town, ME 04468**

Name _____ Call _____

E-Mail _____

Address _____

Lobster = \$22.00 per person
Sirloin Steak = \$17.00 per person
Chicken Cordon Blue = \$17.00
Meals come with corn on the cob, salad && all the fixings

LOCATION: **Wellman Commons
294 Union St. Bangor**



Note from the editor

There is a chance that there will not be an October newsletter. I am taking a road trip to the West Coast to attend a wedding, do a little sightseeing and visit friends along the way.

There is a remote chance I may get a small newsletter out before the September 23rd but don't count on it.

If anyone would like to try his or her hand at putting out the October issue, it would be welcomed by me.

73, Bruce WIZE



THEN & NOW

Old photos of WIZE's Ham Shacks throughout the years.



Huntington Beach, CA 1975. (WA6MUP then)
First new HF transceiver, Kenwood TS-511



Same location, two years later 1977
A Kenwood TS-520 HF station



WIZE shack today, more stuff. Life is good.
We would like to have photos of your shack to put in this newsletter. Send them to Bruce at:
WIZE@arrl.net





Tour Des Farm says, “We couldn’t have done it without you folks.”

Wiscasset: At 7:00am on August 22nd the MARA volunteers started arriving at the Morris Farm for this year's 20, 50 and 100-mile bike tour through the back roads of Lincoln County, from Whitefield to the sea. This year's MARA volunteers consisted of:

Dwight, KA1PTT	Harry N1TTT
Marjorie, KX1I	Jim, N1IPA
John, N1OIG	Donnie, WD1F
Al, W3ZD	Steve, AA4AK
Bruce, W1ZE	John K1JJS

Harry McNelley was this year's net control operating from the Morris Farm.

The 100-mile bikers started first peddled off at about 7:30, followed by the 50-milers at 8:30 and the 20-mile folks at 9:30 in the morning. The event was problem free except for two ladies that missed a turn and went about eight miles out of the way and had to go back and correct their error. There were a total of 47 bikers participating.



The last biker, a 100-miler, took is slow but made it back to the Morris Farm about 5:25 in the afternoon.

As usual the BBQ at the end of the day topped of a very successful event that raised funds for the Morris Farm Trust.

Needless to say the event organizers were tickled pink that MARA hams can run a professional and safe event. They issued a “WELL DONE, SEE’YA NEXT YEAR and THANKS!” to all the MARA volunteers.



EDITORS NOTE No.2

I NEED HELP! Now that I am retired I tend to enjoy slapping a monthly newsletter together, especially when the previous month was full of Association activities to report on and other things going on in the Ham Radio community here in Maine. But, there are months when it becomes difficult for me to find things to put in the newsletter that I think the readers would like to read or need to be informed about. This is why I need your help.

If you have taken a trip where ham radio was involved; made a new antenna that works; built something that you think folks would like to know about; purchased a new rig and want to tell us about it, etc. I would love to put it in this newsletter. You say you are not good at writing, that is OK. We can take your information and make it fit the newsletter format for you.

Many thanks go to Bill (K1MNW), Pete (K1MJP) and Steve (AA4AK) for their contributions to Squelch Tales in the past. We want more.

