

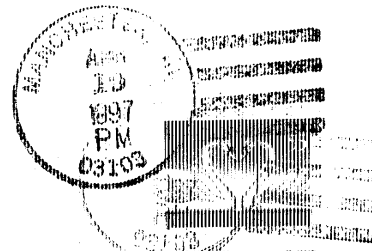
April 1997

72

THE NEW ENGLAND QRP CLUB NEWSLETTER



NE-QRP Club
RR 1 Box 221
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First Class Mail

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72 - THE OFFICIAL
NEW ENGLAND QRP NEWSLETTER

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THE DEADLINE FOR THE NEXT ISSUE OF **72** WILL BE MAY 24, 1997.

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CW NETS - open

CONTESTS AND SPECIAL EVENTS - open

MEMBERSHIP NEWS - open

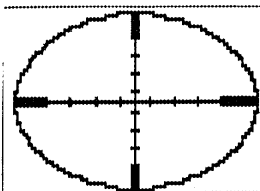
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**QRP IS A
DEVINE
HOBBY!
THE
EXCITEMENT
IS BUILDING!**

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A QRPer's Guide to Measuring Micro Power

Paul Stroud - AA4XX
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During the course of the previous few decades, a number of QRPers have been involved with ultra low power transmissions on the HF bands. One of the most frequent questions that has been posed is how one can accurately measure power in the low milliwatt (0.0001 watt) output areas for the Oak Hills WM-1 wattmeter needle does not give the slightest hint of movement, even when it is switched to its most sensitive range¹. Clearly, one has to resort to a different method than the typical QRP wattmeter to measure really low power levels.

Most QRPers will probably find an *attenuator* to be the most satisfactory solution to their quest for a milliwatt or microwatt level power source. An attenuator uses one or more resistive divider networks, designed to present the desired load impedance of 52 ohms, while also presenting a predictable level of attenuation. Table #1 may be used as a reference to determine how much attenuation (expressed in dB) is needed to reduce power from a *known* level to a *desired* level. Note that this table is normalized to five watts. Let's say we wish to reduce power from five watts down to 250 microwatts, the table shows that this is a reduction of 43 dB, or just over seven S units. The ARRL Handbook provides a table of resistive network values for various levels of attenuation². (An attenuation of 43 dB could be realized by cascading a 40 dB network with a 3 dB network.) This table may also be used to determine needed attenuator values between *any* two power levels on the chart. Let's say we want to set our transmitter's output at 100 mW (a convenient measuring level for WM-1 owners) and attenuate the power level down to 200 microwatts. The table shows we need an attenuation of 27 dB. Before we leave the subject of attenuators, it should be noted that proper shielding is required in order to ensure that there are no *leakage* paths for the RF within the attenuator itself. We want to be certain that our power output is precisely what we predicted it would be. It is recommended that those who wish to seriously pursue microwatt level work have a ham friend with a calibrated 50-100 MHz oscilloscope to verify that your attenuator settings are indeed producing the anticipated power reductions.

The method that is employed by AA4XX for measuring power uses a combination of attenuation and *direct* power measurement. First the WM-1 was calibrated using the instruction which came with the WM-1 manual. The WM-1 thus serves as a secondary standard, while a factory calibrated 100 MHz Tektronix oscilloscope serves as a primary standard. The output of my transmitter (Wilderness *Sierra*) was set to 100 mW using the WM-1 wattmeter. An attenuator is then used to reduce the power level down to the predicted value. I used a homebrew attenuator from the ARRL Handbook. The oscilloscope was connected to the output of the attenuator,

along with a 52 ohm dummy load, to enable direct readings of the attenuator's output power.

Table #1 shows the actual peak-to-peak values that correspond to specific QRP power levels. Here's a real-life example: the desired level was 100 microwatts for a New Year's Beacon session. First, the *Sierra* was adjusted for 100 milliwatts output, and this was verified both with the WM-1 wattmeter and by direct reading of 6.4 volts peak-to-peak on the oscilloscope—(see Table #1)—across the dummy load. It is important that the oscilloscope and wattmeter readings be in agreement. If not, your measurements are not tied to a credible standard. Secondly, an attenuation of 30 dB was inserted between the *Sierra* and the dummy load, and the oscilloscope was again used to measure the voltage level at the output of the attenuator. The value was confirmed as 0.200 volts peak-to-peak, which the chart indicates is indeed 100 µW.

You may wonder how the peak-to-peak values are calculated. The basic formula for measuring power is given by Ohm's Law. The formula shows that power (P), expressed in watts, is equal to the square of the voltage (E), divided by the resistance (R). For RF measurements, it is understood that the voltage is expressed as *root mean square*—RMS. This is important to note, as readings with an oscilloscope are in the peak-to-peak format—not RMS. Throughout this discussion, a resistance value of 52 ohms will be assumed.

Thus, the basic formula for determining power is (formula #1):

$$P_{\text{power}} = E_{(\text{RMS})}^2 \div R$$

By substitution, solving for E, the formula becomes (formula #2):

$$E_{(\text{RMS})} = \sqrt{P \times R}$$

We're almost there, but remember that the oscilloscope reads voltage in peak-to-peak format—not RMS. By multiplying the right side of this equation by a factor of 2.828, we convert from RMS values to peak-to-peak values. Thus, the formula becomes (formula #3):

$$E_{(\text{peak-to-peak})} = \sqrt{P \times R} \times 2.828$$

Let's face it, some of us are not exactly geniuses when it comes to math; however, a little time spent studying the formulas listed above could prove valuable. These formulas enable us to understand the relationship between power, resistance and voltage. If we know the values of any two of these terms, then we have enough information to figure out what the third term should be!

Let's say we want to try a QSO with our QRP buddy with ten milliwatts. Our rig is designed to work into an output impedance of 52 ohms. We can now compute what the corresponding peak-to-peak voltage should be. Using formula #3 listed above, simply multiply P (0.010 W) times R (52 ohms). Take the square-root of this value and multiply it by 2.828. The resultant answer is 2.04 volts peak-to-peak.

Now let's turn the formula around in order to present another relevant concept. This time, you have built your attenuator and wish to determine what power level corresponds to the peak-to-peak voltage display on your oscilloscope. This can be done using formula #1. First, however, the measured peak-to-peak voltage must be converted to volts RMS. This is easily done by *dividing* the oscilloscope's peak-to-peak value to its corresponding RMS value simply by dividing the peak-to-peak by 2.828. Now we can readily

use formula #1. Let's say we use an oscilloscope to measure 0.300 volts peak-to-peak at the output of our attenuator. What power does this represent? First, we divide 0.300 volts peak-to-peak by 2.828, which gives us 0.106 volts RMS, and then we square 0.106 volts and divide the result by 52 ohms giving a result of 0.000216 watts, or 216 microwatts. By referring to the E (peak-to-peak) values in Table #1, one can readily verify the accuracy of his wattmeter against an oscilloscope.

Often the question arises, "Can I use an RF probe in conjunction with a DC voltmeter in order to determine the RMS voltage value?" This is certainly an option (within certain limits) for those who do not have access to an oscilloscope. The ARRL Handbook provides details on a simple RF probe with an accuracy of $\pm 10\%$ from 50 kHz to 250 MHz.³ The probe's function is to rectify the RF and then to scale the resulting DC peak voltage to 71% of its actual value. Depending on the characteristics of the probe's diode, one should be able to measure power levels down to 100 mW, or so, with reasonable accuracy. Remember that when using an RF probe/voltmeter setup, one should use the E (rms) values listed in Table #1 instead of the E (peak-to-peak) values.

A thoughtful observation of the peak-to-peak versus RMS values in Table #1 shows the futility of attempting direct measurement of microwatt power levels using a simple RF probe/voltmeter arrangement. At power levels from the low milliwatt through the microwatt range, the signal voltage might not be high enough to forward bias the probe's diode. Non-linearity would also be a problem, again due to the low voltage levels presented to the diode. It is strongly advised that one check the RF probe/voltmeter setup against a friend's calibrated oscilloscope or wattmeter in order to verify the accuracy of the probe. By using an oscilloscope, voltage levels down to 0.200 volts peak-to-peak (i.e. 100 μ W) can be readily discerned.

Table #1 also lists various dB and S unit values, normalized to 5 watts. The decibel is used to express the relationship between any two power levels. (formula #4):

$$\text{dB} = 10 \log (P_1 \div P_2)$$

Let's say we want to use this formula to determine the difference in dB between 2 watts and 20 mW. First, we divide 2 watts by .02 watts to get 100. Now we find the log of 100 using a calculator and the answer is two. The log value is now multiplied by 10 and presto—the result is 20 dB. Table #1 may be used as a shortcut to determine the difference in dB between any two power levels that appear on the chart. The table indicates that 2 watts is -4dB and 20 mW is -24dB. The difference is 20 dB—the same value obtained with the calculator.

There is a direct relationship between decibels and S units. Most S meters are calibrated so that one S unit equals 6 dB, two S units equals 12 dB, etc. Table #1 demonstrates this idea by reducing the output power from 5 watts to 300 mW and you have effectively reduced the signal strength by 12.2 dB, or just over 2 S units. Assuming the signal strength was S8 while running 5 watts, a decrease in output to 20 mW would lower the signal strength to S4 (still quite readable), as is again demonstrated by the table.

Hopefully, this article helps to shed some light on the fact that expressions for power can take several forms. Just remember that if you're using a voltmeter to measure RF

(with the aid of an RF probe) you're dealing with RMS values. RMS values can be directly plugged into formula #1 for power calculations. If you're using an oscilloscope, you're dealing with peak-to-peak values. Peak-to-peak values must first be converted to their RMS equivalents (divide peak-to-peak by 2.828) before plugging them into formula #1.

Recently, WA3NNA in Newtown Square, PA ran a 40 meter attended beacon at several power levels, including 100 μ W (0.0001 watts!) Several stations within a radius of 350-400 miles of Newtown Square copied the beacon transmission at this power level. It is hoped that the information presented in this critique may provide sufficient information so others might be enticed to explore the interesting world of "milli/microwatting." By using a calibrated attenuator and reasonable care in measuring, most amateurs should be able to accurately determine the output power down to at least 100 microwatts.

For those of you who might want to consider home brewing a sensitive milliwatt meter, you may refer to KA3BLO's excellent article in QST⁴.

Paul Stroud - AA4XX

COMPARING POWER, E (PK-PK), E (RMS), AND S UNITS
(Assuming 52 ohm non-reactive load)

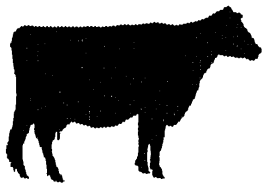
Table #1

Power	E (pk-pk)	E (rms)	dB	S Units
5W	45.6	16.1	0	0
4W	40.8	14.4	-1	
3W	35.3	12.5	-2.2	
2W	28.8	10.2	-4	
1.25W	22.8	8.1	-6	-1
1W	20.4	7.2	-7	
750mW	17.7	6.2	-8.2	
500mW	14.4	5.1	-10	
300mW	11.1	3.9	-12.2	-2
250mW	10.2	3.6	-13	
100mW	6.4	2.3	-17	
75mW	5.6	2.0	-18.2	-3
50mW	4.6	1.6	-20	
25mW	3.2	1.1	-23	
20mW	2.9	1.0	-24	-4
10mW	2.0	0.72	-27	
5mW	1.4	0.51	-30	-5
2.5mW	1.0	0.36	-33	
1.25mW	0.72	0.25	-36	-6
1mW	0.65	0.23	-37	
750 μ W	0.56	0.20	-38.2	
500 μ W	0.46	0.16	-40	
300 μ W	0.35	0.12	-42.2	-7
250 μ W	0.32	0.11	-43	
200 μ W	0.29	0.10	-44	
150 μ W	0.25	0.09	-45.2	
100 μ W	0.20	0.07	-47	
75 μ W	0.17	0.06	-48.2	-8
50 μ W	0.14	0.05	-50	
25 μ W	0.10	0.04	-53	
20 μ W	0.09	0.03	-54	-9

(Chart compiled by Paul Stroud - AA4XX)

REFERENCES

- 1 Oak Hills Research, 20879 Madison Street, Big Rapids, MI 49307. As checked against my calibrated oscilloscope, the WM-1 showed an accuracy of $\pm 5\%$ on all points from 10 watts through 5 milliwatts.
- 2 A Little Power Step Attenuator, The 1988 ARRL Handbook, chapter 25, page 43.
- 3 An RF Probe for Electronic Voltmeters, The 1988 ARRL Handbook, chapter 25, page 13.
- 4 John Grebenkemper - KA3BLO, The Tandem Match—An Accurate directional Wattmeter, QST, January 1987, page 18. (Thanks to Zach Lau - W1VT for his reference.)



Black Bull

Walter S. Yatsook
N1CJB
NEQRP #282

This is the story of that winning combination that makes a championship contest team. This is the story of WINRG-QRP AFIELD, the Meriden ARC, CT. Here are all the secrets and dirty dark details of how we really did it.

It was Saturday morning and I was laying on the couch. Finally, I read a book that I had been putting off for months. Yeah, this is great, the XYL is off to work and I'm home hanging out. It just doesn't get any better than this. I got a couple of chapters down, then the clock seemed to stare me in the face. Well, why does ten to ten stare me in the face? I don't know, nothing is going to ruin this day. Who in their right mind would even be looking at a clock on a... "AHHH it's ten to ten, and I was supposed to be at the Field Day site in ten minutes!"

After tripping over the dog, and banging my toe on the end table, I'm off to the Field Day site. Where are my car keys? I can't find my keys! While I'm looking for my keys, I'll see if anybody else is on the .360 machine. I no sooner turned on the HT when I heard, "Rich, have you heard from Walt, he said he'd be here?"

"No, Bill, I don't know where he is but I could sure use some help here loading the truck. [WIKKF, W1TRY from N1CJB.] There he is. Hey Walt, where are you? You're supposed to be here at the club house."

"Ah Gee Rich, I'm running a little late, and I can't find my keys anywhere." [N1CJB WIKKF]

"Oh Jeez, well can you meet us up at the Field Day site? We're behind schedule already."

"OK Bill. See you there." [WIKKF N1CJB]. I don't believe I forgot all about this contest. I should have known the peace and quiet was too good to be true.

I still remember the first "QRP Afield," and I had my home brew "ugly transceiver". Done in the true *ugly bug* fashion, I had just finished it straight from the ARRL Handbook. It was a beautiful afternoon in Northford, CT. with just me and "Ahhh look at the time!". I got have to hustle! Where are those keys? I finally found my truck keys under a pile of papers—under a lousy piece of paper. I was suppose to bring something too, now what was it? A GMT clock, scrap paper, pencils yeah, that's it, I'm off.

The great thing about the field day site is that it's only a three minute drive from my house! And what a beautiful site it is—up high and in the clear. Mr. Godek has been letting the Meriden ARC use this site for ages. You couldn't buy a better site than this. And, it finally paid off. We won Field Day 1-A this time around. Mr. Godek is one of the last farmers with a heart of gold left around. Last year I spent Field Day with the "QRP of New England" guys, and it was great (thanks Dave - NN1G for the super dinner). I had to decide, two hour drive to MASS. or three minutes to Godek's. A two hour drive to Massa-

chusetts or a three minutes to Godek's farm. You don't have to be a rocket scientist to figure out which choice I made.

Here I am, sitting in my truck at the FD site. Boy, this is great, what a perfect day, nothing can go wrong on a day like this! Nobody is here yet, and maybe they forgot about the whole thing and I can go..., but here comes Bill (WIKKF president of the Meriden ARC) and he doesn't look like a happy camper."

Good you're here for we're already a half hour behind schedule. Grab this stuff and give me a hand getting the ropes up into the trees." Well, like this should be a piece of cake. Bill has done this a thousand times before with his bow and arrow. Two lines on this end and another two on the other end for the "MONSTER V BEAM". The killer antenna that won us Field Day for '96. The only problem with the trees on this end of the field are the power lines. The trees border a road (big monster trees are perfect for antennas) and the power lines sometimes get in the way. To make a long story short, we had a hard time getting the ropes up in the perfect spots. During the process, as Robin Hood shot his merry arrows into the air, the rest of the gang showed up.

The gang WIKKF, W1TRY, W1FD, KE1AV, N1WES, K1ITMN and N1CJB. Now its time to put up the end legs of the "MONSTER V BEAM". The legs are 450 feet. long and 200feet. apart at the ends, and up 60 feet. This baby is a killer. There isn't a signal this antenna can't crush with five watts—Hee Hee.

We unrolled the monster sized spool of wire. "Hey guys, like shouldn't we have a truck to carry this thing?" I feel like I've been walking and lugging this thing all afternoon. Finally at the edge of the first field, Bill instructs me to cross the barbed wire fence and grab the spool.

"And Walt, watch out for the high tension wire over there."

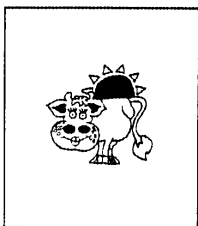
"Yeah, OK Bill, high tension wire, yeah right." What's he think...I was born yester... "EEEEEEYOW" what the heck was that!

"Gee I guess you found the electric fence (ha, ha, ha)."

"Bill you can stop rolling around on the grass anytime now." Jeez, one little mistake and they won't let you live it down. I hope he gets a stomach cramp from laughing. "Why in the world would there be an electric fence out in the middle of no where?" Bill explains to me that, Mr. Godek raises bulls and this field is where he keeps them. Bulls! You mean to tell me that there's real live snorting, head stomping, bulls roaming around out here?" I suddenly get a funny feeling, !

I wonder if I've done anything lately to make Bill mad? Bill shoots his arrow over the tree and the first leg of "The Monster V Beam" is up. Dave KE1AV pulls the antenna up over the top and ties it down. Dave is now standing in a funny spot behind the tree pointing with a lot of arm movement. Is this guy like really hyped up on caffeine or something? Wow! now he's jumping up and down and pointing, ha ha I've never seen Dave totally freak out like this before. This is really getting to be funny. It finally sinks in that Dave is trying to tell me something. When I finally look in the direction that Dave is pointing, all I can see is a giant dust cloud and a big black mass of angus bull heading my way. I cleared the high voltage wire, and the barbed wire in record time. Ha, I wasn't even scared.

The next antenna leg is the same ordeal. Drag a couple tons of copper to the other side of the field, but on this end of the field, it's a little bit easier to get over the barbed wire. Somebody left one of those pool ladders over the wire. This side is going to be a piece of cake. Bill yells out, "Hey watch out for the high voltage wire, you know like the last one". "Ha ha, very funny!" Yes I do remember as I get down on all fours to crawl under the wire. Hey this isn't so bad. Before you know it, Bill has the next arrow over the tree and the last leg of the "Monster V Beam" is up.



After what seemed like a mile hike back to the feed point, Rich(WA1TRY) has the operating table and the gear laid out. Just a few minor hook-ups here and there and we're ready to party. First the ladder line goes to this monster 2KW antenna tuner. The legs on the card table look a lot smaller for some reason. Then the rig, a Kenwood TS-850SAT at 5 watts with a

set of paddles. The battery is just a regular car battery. Everything is ready to go and in its place. Bill takes the operating chair for the first shift and looks at me. "Where's the log book you brought? You did say that you were gonna bring a log book. Where is it?" Ops, I was suppose to bring the log book?

"Sorry, I forgot, we can use this notebook." It was a picture perfect day, what could possibly go wrong on a day like this?

I jumped into the pickup for a quick ride back home. Grabbed the cooler, ice, and a bunch of sodas. Boy that ice sure feels good on my newly fried hand. I hope the swelling goes down in time for my shift on the paddles. And I don't want to forget about the 807s for the celebration after the contest. I'll hide them down at the bottom. When I got back to the field day site the team is humming away making contacts. Frank W1FD is logging, and everything seems to have quieted down a bit.

"Hey guys how's it going?" Bill is nodding his head and smiling (this is the first time I've ever seen Bill smile!) "I called CQ and get a pile up. Wow this antenna is a killer!" Everybody's happy. The shifts change and the logbook, er...the notebook got filled with Qs. Before you knew it, the contest was over and it's time to wind down and go home.

Bill sent Mark N1WES and lucky me to drop the ends of the "Monster V Beam". Bill sent me back to the spot where I almost got stampeded. Now I was born at night but not last night. "Hey Bill, Mark said he'd get that side, I'll get the other leg." I'm gonna have to pick out a high spot so I can watch Mark run for his life. Ha, ha this is gonna be good. Finally, somebody else is gonna get it. Well, I watched and I waited but no yelling or screaming. And I could see Mark in the distance. He looked fine, no torn clothes, nothing, rats. He made it out alive. Boy it just keeps getting harder and harder to have any fun now a days.

Well, there just isn't anything else to go wrong for me today. I seem to have used up a week's worth of bad luck all in one day. Up the pool ladder and crawl under the high-voltage line. All that's left is to drop the antenna leg and it's party time. Those guys will have everything else done by the time I get back. Yes I can hear the sound of a 807s way off in the distance

calling me. "Moo!" Moo, what the heck is moo? As I looked over my shoulder, I saw twenty to thirty, big, mean, and in a very bad mood black bulls, at about 20 feet away from me and moving briskly in my direction! Now, I'm also moving very briskly in the direction of the antenna tree. I haven't climbed a tree since I was 15 but that didn't seem to matter. The scrapes and pulled muscle's didn't hurt till I reached the top.

The view of the field day site was fantastic. I could see the guys winding up the antenna. I could see the guys opening my cooler and almost hear the sound of the 807s being opened. I could see the guys waving to me (they better not be laughing!). I'd wave back but I don't dare let go!

It was a beautiful sunset. A nice red and orange color mixed in with a few clouds. The calming sound of an occasional moo and the sunset. What could possibly go wrong?

Walter S. Yatzook - N1CJB #282
WINRG/Meriden ARC

<http://pages.prodigy.com/marc/marc.htm>



The Code: It Doesn't Mean That Much

Joel Denison - WA5CVM

A No-Code ham is not inferior, just different. I think those that hold animosity for those who choose No-Code license, need to get themselves a "HOW TO" book and work out their anger. Why? Because the No-Code operator is missing a wonderful experience and will never realize it. The same could be said about those of us who have never used other modes such as SSTV, RTTY, ATV, Satellite and EME operation and many others.

What is there to dislike? This is just a wonderful hobby with a niche for the voice only operator. No-Code is just different from what most of us grew up with, and that, too, will change with time, as we older fellows sail into the Silent Key Kingdom.

Some of us will settle for no less than the Extra class license and some of us are purely satisfied with the General, Advanced, Novice license. So, why get on a ham's case because s/he, settles for a No-Code license? Get on the air and work them and who knows, you just might get a chance to be an "Elmer", especially if they decide to operate QRP. The code: doesn't mean that much...except to those of us who use it!

The Author of this is unknown.

Hectic rebel
A thing to flout
He drew a circle
That shut me out!

But love and I
Had the wit to win
We drew a circle
That took him in!

Now is the time to start "your" circle!

72 / 73 Joel Denison - WA5CVM

⌘ Homebrew QSLs ⌘

Paul Stroud - AA4XX

Several months ago I received a truly unique QSL card from Dennis Marandos - K1LGO. It's the kind of card that can't help but make you smile. I laughed out loud when I first saw it! Dennis managed to come up with a card that is "humble" and inexpensive, yet absolutely original and attention getting.

CONFIRMING QSD WITH	DATE			UTC	MHz	P-RST
	DAY	MONTH	YEAR			
AA4XX/QRP	3	AUG	96	0105	7.040	579

This card was designed by one of Dennis' students. Dennis made me promise to point out that the character on the card doesn't look ANYTHING like him!

Many QRPers pride themselves on their home brewing prowess; It's a logical step for some to consider home brewing their QSL cards as well. After looking at my old batch of "ho-hum" QSL cards, I decided to come up with a more interesting design, hopefully with input from other QRPers. A request for original QSL cards via the Internet QRP List (QRP-L) netted a number of neat cards. I'd like to share several of them with you in hopes it may help you in your quest for that special QSL card. I regret that space does not permit all of the submitted cards to be shown in this article; However, all submissions have been uploaded to the following URL for those of you who have access to the Internet: <http://www.ipass.net/~aa4xx/qsls.htm>. This Web site address will allow you to view the QSL cards in full color. These cards were submitted for the Portable category. This allows the QTH and other details to be filled in as the situation changes:

It's always fun to see actual pictures of the operators. This photo shows Glenn during last Fall's ARCI Contest in Wyoming. Glenn used Paintshop Pro 3.12 for the layout. The photo was scanned into a file by a friend and then pasted into the appropriate place on the card. The card was scaled to allow four QSL cards per 8.5x11 page. The page was then copied to a floppy file and taken to Kinko's, where Glenn used Corel Draw to print out the master. Glenn printed out 120 cards for \$7.50 total!

Fig TS-450s/AT- For 5 IN
Ant 66 ft vertical in tree

AEØQ

Portable Location:
 State WYOMING
 County Albany
 Altitude (QSL) 8200 ft

CONFIRMING QSD WITH	BY	MO	YR	GMT	MHz	REPORT	2-WAY
AA4XX/QRP	20	OCT	96	0513	7	339	CW

KT3A									
CAMERON C. R. BAILEY									
FIXED <input type="checkbox"/> PORTABLE <input type="checkbox"/> MOBILE <input type="checkbox"/>									
LOCATION:		COUNTRY:		STATE:		GRID:			
FREQ:		ANT:		PWR:					
Confirmed QSL With:		ARC# #7053		<input type="checkbox"/> Pse QSL Trx <input type="checkbox"/>					
STATION	DAY	MO	YR	UTC	FM/TO	REPORT	MODE		
							TWO WAY		

These cards were submitted for the Portable category. This allows the QTH and other details to be filled in as the situation changes:

This card was designed by Cameron, who then sent it to Rusprint for the final layout. Cameron says that this card will work "whether I move my QTH, operate on the edge of a volcano, or do a DXpedition."

Photo QSLs

A number of very attractive photo cards were received. Like the previous cards, these QSLs permit a great deal of self expression.

Dean and his family enjoy boating from Barnegut Bay. Imagine how much fun it must be to putter around in *Ham It Up!*

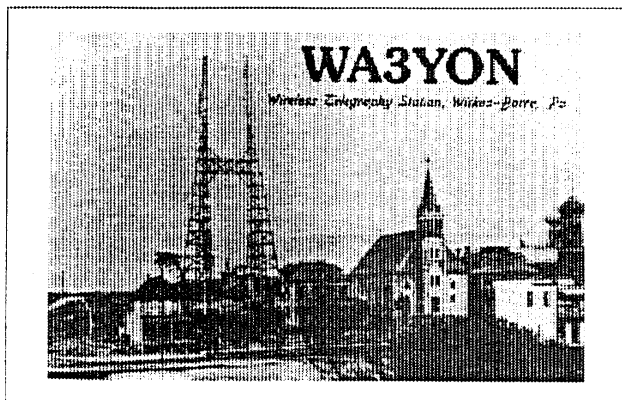


Photo QSLs

A number of very attractive photo cards were received. Like the previous cards, these QSLs permit a great deal of self expression.

KF2PH									
Kos-Franco 2 Radio Hamlets									
Nicholas Franco 18 Weidner Lane Patchogue, N.Y. 11772 U.S.A. Long Island Suffolk County									
K1-ORNL-19 QRP-LAB K1-ORNL-19 QRP-LAB									
AA+XX/GRP	4-X-96	0410	3.710	279					
KL Net - A Little Too Late	<input checked="" type="checkbox"/>	Pat	<input type="checkbox"/> Pse QSL Trx <input type="checkbox"/>						

KF2PH created this card using Windows Paint Brush as a .BMP file and then converted it with Graphics Wokshop into the more widely acceptable .GIF format. Nick uses a Tektronix wax film printer, which gives the card a most professional appearance.



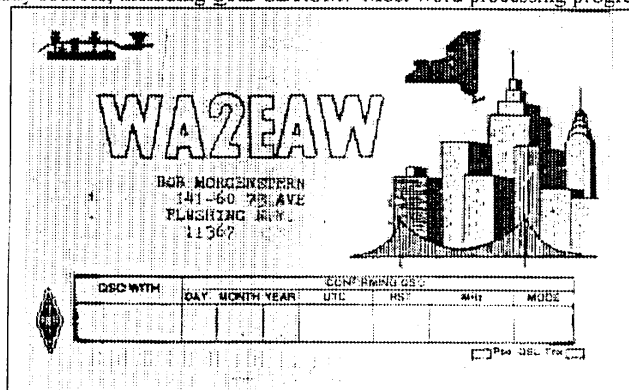
The Murgas ARC in PA uses this historical card, which shows the twin towers used by early radio experimenter Rev. Joseph Murgas. This picture dates back to around 1906. By overprinting the card with his call sign, WA3YON has come up with an eye-appealing card that gives us interesting information about his area of the state.

This card by W1PA (ex-KC1GS) leaves no doubt that Bill is a serious QRPer. Notice the NorCal40 and the NEQRP patch.



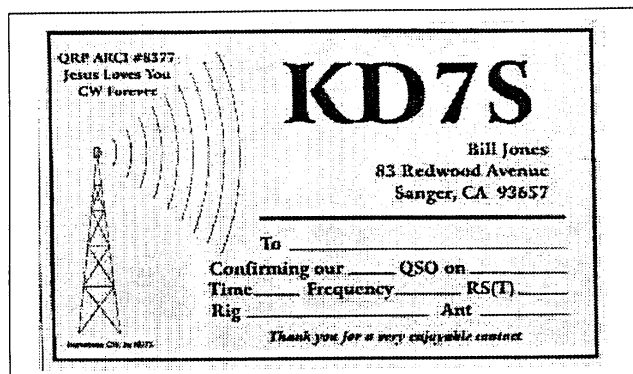
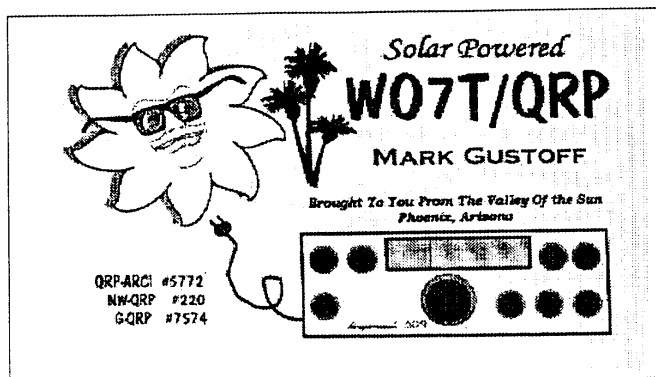
Line Art, Clip Art, and Miscellaneous QSLs

By far, the largest category of cards received used clip art. This type of artwork is available through many sources, including *QRZ CDROM*. Most word processing programs also include clip art files.



WA2EAW sketched the NYC skyline with pen and ink. Bob then cut and pasted the remaining clip art from other QSL cards. The final step was to photocopy the final version onto index cards.

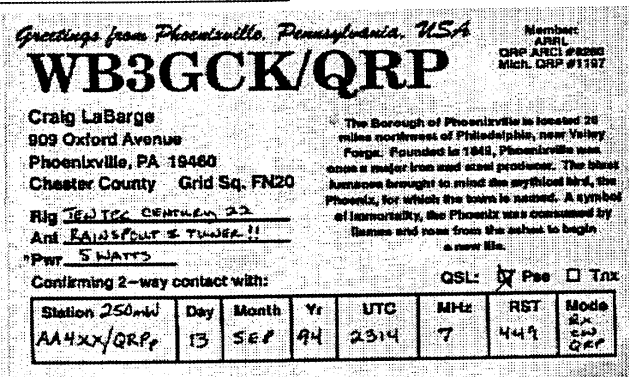
This clever card from WO7T certainly tells a great deal about Mark's interest in *plugging into* solar power—QRP style!



In this design by KD7S, Bill placed all the pertinent information on the front of the card. This leaves the reverse side free for the mailing address and notes.

I have always especially liked cards which relate information about the area. With this card, WB3GCK gives the reader an interesting story on how his town was named after the mythical *Phoenix*. This card demonstrates that a little creativity can result in a simple, yet appealing QSL. Craig uses Microsoft Publisher to lay out his cards. He lays out three cards per page, and then takes them to Kinko's to have them duplicated on card stock and cut into individual cards.

This was a fun article to prepare because it allowed me to see what other creative QRPers were dreaming up in the way of QSL cards. Feel free to contact any of the QRPers above for more information on how they designed their cards. After seeing what these folks did, I even gave it a try. Here's wishing you a fun time designing that special QSL card!



72 – Paul Stroud – AA4XX
aa4xx@amsat.org



Tuning With a Rainbow

Joe Everhart, N2CX
214 New Jersey Rd
Brooklawn, NJ 08030
e-mail: n2cx@voicenet.com

A recent design competition sponsored by NorCal, the Northern California QRP Club, has resulted in two simple, inexpensive projects for the home brewing QRP'er. The ground rule for the competition was that the project had to be a useful QRP-related project that could be built for no more than 25 dollars for the basic project including a printed circuit board and all board mounted components. There were two winning entries in the contest, a 30 meter transceiver, dubbed the 38 Special and a combination antenna tuner/SWR bridge, the Rainbow Tuner. Both were described in articles in the December 1996 issue of the NorCal journal *QRPp* and the QRP ARCI organ, the *QRP Quarterly*. This article describes the *Rainbow Tuner*.

What it Is

The Rainbow Tuner is a printed circuit board that measures 2¼ by 3¼ inches with a component height of ½ inch. The tuner was designed to be small enough to fit directly into a small QRP transceiver or into one of the popular British Altoids mint tins. There are two operator "controls": a board-mounted tuning capacitor and a jumper strip for tuner adjustment. The SWR bridge operation is automatic, which requires no adjustment or "tweaking."

What it Does

The Rainbow Tuner is a small, light-weight combination LED bar graph display SWR bridge and elementary antenna tuner. It is intended for low power transmitters on 30 or 40 meters in portable operation. The bridge portion is connected between a low power transmitter and an antenna or antenna tuner. When the transmitter is keyed, the RF energy energizes the bridge which automatically calibrates itself and displays the antenna's SWR. When the transmitter signal stops, the bridge turns off.

The tuner portion of the Rainbow is a simple circuit intended for use with an end-fed half-wave wire antenna. It allows matching the antenna wire to 50 ohms coaxial cable for use with QRP transmitters. Use of a simple end-fed wire is ideal for portable hamming since it is nonessential to erect and easy to tuck away in a small container for transport.

How it Works

Figure 1 shows the Rainbow Tuner block diagram. There are two independent functions provided which are the SWR bridge and the tuner. In fact, either can be used separately.

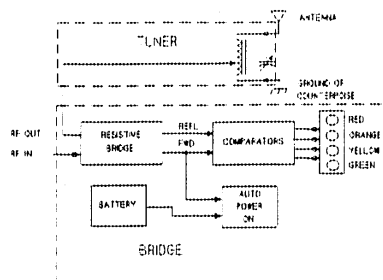


FIGURE 1 - RAINBOW BRIDGE AND TUNER BLOCK DIAGRAM

The SWR bridge begins with a bridge circuit made of 51 ohm (close enough to 50) resistors that use the antenna as the "unknown" arm of the bridge. It uses two diode detectors which provide DC Forward and Reflected outputs. The Forward DC voltage is applied to an FET switch circuit that automatically powers up the electronics when RF is applied. A comparator circuit uses a precision resistive divider and an LM339 comparator IC to calculate SWR. This circuit is self-calibrating since it compares the ratio of forward and reflected voltages to calculate SWR independent of the actual power level.

The tuner is a simple parallel-tuned resonant circuit. Since a half-wave, end-fed wire has a resonant impedance in the range of a thousand to several thousand ohms, it can be connected directly to the tuned circuit. The tuned circuit is adjustable to allow it to be used on either 30 or 40 meters and to compensate for slight inaccuracy in antenna length. The inductor in the circuit is tapped to transform the antenna's high impedance to 50 ohms for use with a coax cable feed line.

Features

As mentioned, the SWR bridge used in the Rainbow is resistive. This has an inherent 6 dB loss while switched in line, which may seem to be a disadvantage, however, this is a positive feature for several reasons. First, it attenuates the transmitted signal during tune up so there is less QRM than with a more conventional bridge. Another advantage is that the loss reduces the SWR as seen by the transmitter to no more than 2:1. Many simple QRP rigs do strange things when they see SWR much above that number. For one, they may shut down totally, they may oscillate off frequency, or they may even self-destruct. This complicates the adjustment of an antenna tuner since high SWR often results. But, the Rainbow bridge isolates the transmitter, making tuning more smoothly. However, the bridge must be bypassed by a switch after tune up to eliminate the power loss.

The Rainbow display uses a multi-colored LED bar graph configuration. Four small LEDs are placed in a row: red at the top, followed by orange, yellow and green. Operation of the display is shown in Figure 2.

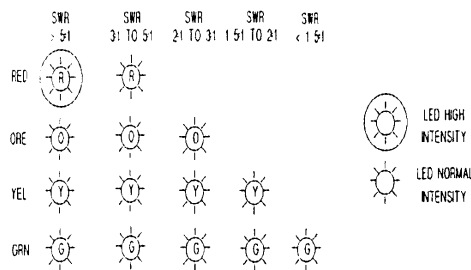


FIGURE 2 - RAINBOW DISPLAY OPERATION

For SWR below 1.5:1, only the green LED is ignited. With a higher value between 1.5:1 and 2:1, the green and yellow LEDs are on. For 2:1 to 3:1, the green, yellow and orange ones illuminate. Between 3:1 and 5:1, all four LEDs green, yellow, orange and red light. And, for SWR above 5:1, all four LEDs are also lighted, but the red LED has a higher intensity. This display has the advantage of providing both a relative indication, useful during tuner adjustment and precise SWR readings by virtue of the calibrated SWR steps. Operation with a tuner is almost intuitive. You simply adjust for "green" as in "GO!"

Specifications

Tuner

Circuit Type: Tunable parallel resonant circuit with tapped inductor.

Antenna Impedance Range: Approximately 500 to 5000 ohms with low reactance ($N \times \frac{1}{2}$ wavelength end-fed antenna)

Output Impedance: 50 ohms with less than 1.5:1 SWR

Power Rating: At least 5W

Frequency Range: 7 to 10.15 MHz

Bridge

A VISIT TO THE HOME STATION - ~W1AW~

March 9th was a pretty special day for all the New England QRP Club members who visited the ARRL Headquarters in Newington, CT for the annual winter meeting. Approximately two dozen members drove great distances to meet, talk and interact with fellow friends who had nothing but QRP on their minds. The following people attended the NEQRP meeting:

Member	Home QTH
Michael Tracy - KC1SX	Newington, CT
Scott Thomas - N1ST	East Windsor, CT

Circuit Type: Resistive Bridge

Power Rating: 200 mW to 4W continuous. At least 5 watts, low duty cycle

Insertion Loss: Approximately 6 dB

Source SWR: Maximum 2:1 SWR reflected back to transmitter regardless of load SWR

Display Type: Multicolor LED bar graph.

Display steps:

>than	1.5: 1	SWR
	1.5:1 to 2: 1	SWR
	2:1 to 3: 1	SWR
	3:1 to 5: 1	SWR
< than	5:1	SWR

Controls: None - auto switching and calibrating over specified RF power range

DC Power Requirements: 9 VDC for up to 2 W RF and 12 VDC for up to 5 watts RF

Current Drain: approx. 50 mA DC. max.

Supply Voltage: 15 VDC max

Physical

Construction: Printed Circuit board

Dimensions: Approximately 2.25" x 3.25" x .6"

Weight: Less than 4 oz.

For More Information:

Article published in December 1996 QRPp and January 1997

QRP Quarterly

Technical questions:

Joe Everhart, N2CX

214 New Jersey Rd

Brooklawn, NJ 08030

e-mail: n2cx@voicenet.com

Contact NJQRP for kit availability:

James Bennett KA5DVS/2

309 Morrison Ave

Hightstown, NJ 08520

The New England QRP Club The Excitement is Building

Seab Lyon - AA1WY	Bethel, CT
Paul Young - KC2AHB	Paterson, NJ
'Butch' Bacon - WY1W	Gales Ferry, CT
Joe Everhart - N2CX	Brooklawn, NJ
Clark Fishman - WA2UNN	Andover, NJ
Bill Creekmore - W2DP	Delran, NJ
Howard Weinstein - K3HW	Marlton, NJ
Bill McNally - AE1D	Windham, NH
Dave Benson - NN1G	Newington, CT
George Heron - N2APB	Sparta, NJ
Dennis Marandos - K1LGQ	Nashua, NH
Bob Moezler - KA1PXF	Bennington, VT
Zack Lau - W1VT	Newington, CT
Walt Yatzook - N1CJB	Meridan, CT
Jim Fitton - W1FMR	Salem, NH
Douglas Quagliana - KA2UPW	Edison, NJ
Bill Keane - N1NIK	Ridgefield, CT
Bill Northup - N1QPR	Acton, MA



No Excuses!

Nick Franco-KF2PH
18 Weidner Lane
Patchogue, NY 11772

I am a relative new comer to this hobby—amateur radio, and I received my Novice ticket in May 1991. Since the day I received my call in the mail, I have never stopped working CW on the HF bands. I made myself a promise to get on the air and work even one station each day so I could improve my CW skills and eventually upgrade my ticket. As I followed through with this plan, my code speed increased painlessly, and I was ready for the 13 WPM test before I finished preparing for the Technician written examination. The same relentless approach yielded my passing the 20 WPM exam well in advance of being ready for the Extra written examination, and, in fact, it was because I had already passed the code test that I really bit the bullet and crammed for the written exams for each upgrade. I always hear about code being the barrier but for me, theory was a killer. I guess there's really no excuses for *not* improving our CW skills.

The above paragraph is only to establish an approach and show that commitment is required for us to improve in any area. As the old question is posed, "How do I get to Carnegie Hall...?" Okay, so it worked for CW, but what about this electronics stuff? I always thought you needed a conical hat and magic wand to understand the theory and build something that actually worked. I've looked at schematics and made a few lame attempts at building a small item here and there, and I thought it must be by accident if it really worked in the end. How would I even get started? I'd need someone to hold my hand every step of the way; someone to talk with about my results, questions, problems, etc....

ENTER QRP-L! I know most of us have heard of this E-mail QRP club before, and I've been a subscriber for over two years. This great group of Hams is constantly promoting building projects and getting on the air to use our projects and QRP skills. Sound familiar? Sounds like the NE-QRP club, doesn't it? The difference here is that the entire group is available instantly via computer e-mail on the Internet. There are members from several countries and a variety of backgrounds and experience levels. The designers of many of the popular QRP kits are available to answer questions and bail out us "newbies" along the way. For any question asked, there could be hundreds of responses to choose from or have a consensus from to resolve any possible problem. So, wait a minute here, now I don't have an excuse for why I can't build a transceiver or tuner or test equipment or keyers or.... Now I can participate in all the NE-QRP activities such as the Colorburst Sprints and QRP AFIELD?

If you have a computer and modem, you can get onto the Internet and participate or just monitor all the mistakes people, such as I, ask about on this e-mail reflector. You can even send for a program called Juno, which is a mailer program to use the Internet. Juno offers FREE e-mail services. You load the mailer program on to your computer and it dials an 800 number where you complete a dialog script, plus your account is established free. You can even use your call sign as your e-mail address and then subscribe to the QRP-L list. You select a local phone number as

your dial-in point so it only costs a local phone call. If no local phone number is listed, you can choose "none" and Juno will automatically dial the 800 number so it doesn't cost you for the phone call either. To obtain a copy of Juno, send an e-mail message to signup@juno.com and include your postal mailing address in the body of the message. Eventually you will receive the diskette in the mail. Listen to these words...it's free, FREE. JUNO makes their money by selling advertising services to companies who want to advertise via the Internet. The mailer has a banner display area for these advertisements to show up on your screen. My new Juno e-mail address is kf2ph@juno.com, and my primary work e-mail address is still valid. To subscribe to the QRP-L mail list, simply send e-mail to listserv@lehigh.edu and in the first line of your message type: `subscribe qrp-l <yourcallsign>`. Remember, that's QRP-L in lower case. Some people accidentally type a number one instead of L in the subscribe line. Now there's no excuse for getting on to the Internet and obtaining a personal e-mail account either. Who would have thought that a computer would be a piece of troubleshooting equipment? ☺ Now, this is where the Excitement is Building!

72 Nick Franco - KF2PH

Phone Problem - CW Solution?

Joel Denison - W4SCVM

I find it just amazing to hear all the talk about the supposed demise of Ham Radio. Take this latest villain, CW. Good operators won't join the ham fraternity because of CW requirements. It sure seems to me that the good operators are the ones using CW! Think about this a minute. The phone bands sound awful lately, some say. Not enough discipline, some say. Better operators are needed, some say. As an example: I was net control for a SSB WAS net one night when one guy came on and QRMed the net so badly, I had to close the net! (This took place within the last 2 years.) I asked the fellow what was it that had him so mad and he replied that he didn't like one of the net members and was going to shut us down. He kept his word!

I have not found any of this on CW in the past thirty years. You still with me? The solution is to drop CW, some say. The CW requirement scares too many potential hams away, some say. CW is out dated, some say. (Have you listened to the AM stations on the bands...isn't it outdated? But it's still exciting to make an AM contact, especially at QRP power) Now the point I am trying to make!

How is it that CW is the "fault" the phone bands are in chaos? How is it that CW is the "fault" the phone operators are not disciplined? (If that truly is the case) How does one solve problems in phone operation by taking away or eliminating CW? This is perverted logic! The CW bands are not in chaos, the phone bands are!

It seems to me that the "problem is not even being addressed." If anything, a case to drop or reduce voice operation has been made to the point of overkill! It's not difficult to tune across the voice frequencies and hear a bunch of garbage—I've heard it. But have you heard any garbage on CW? The DX pile ups can be funny, but are CW QSOs plagued with deliberate interference? I haven't heard any.

Before getting all worked up about the demise of Ham Radio or CW, you might want to recall that the ham community has gone through this type of nonsense before and in a short time the same death cries will come up again and another villain will be blamed. 72 & 73

God Bless

Joel Denison - W4SCVM

81 High street
Farmington, Maine
NEW ENGLAND QRP 476
jdenison@aisp.net



Another Satisfied Customer!

George Heron, N2APB
NE QRP #527

Biography

g.heron@dialogic.com

Hi Bill AE1D,

Thank you very much for the welcoming e-mail, as well as for my first issue of 72 I received Saturday! I'm very impressed with the publication quality, the material and the whole spirit of the thing.

And as for the bio information you requested, especially with respect to the web activities, I'll give it a shot here. "I was first licensed as WN2WVZ (and then WB2WVZ) back in the mid 70s during my college days at Rochester Institute of Technology in upstate NY. I got received my Extra class ticket as N2APB in 1980 and worked many years as an electrical engineer (and then in software development) with Kodak before moving up to Derry, New Hampshire. I worked a number of years with a startup company in the New England area before moving to NJ to work with Dialogic in the area of computer telephony, where I've been for the last 5 years.

"During the last 12-18 months, I've become re-infatuated with home brewing my station equipment (as I have always been active in the electronics workshop), and also have become totally enthralled with the elements of QRP operation. I connected into QRP-L on the Internet and followed it religiously for many months without contributing too much at all, although joining in on the sideline in building a Sierra kit, a NorCal 40A, a 38 Special, repairing my HW-8, and getting my HW-100 operational as a tube-based QRP rig (removed the finals). And then I made the plunge to connect up with the NJ-QRP gang for some of their activities...what a great bunch of guys, and so much to share and learn from them all!

"An area in which I felt I could most easily and quickly contribute was in our website. Our existing webmaster (Mike Marmor) had become very busy with a new job, we were losing our host server (Mike's ex-employer was pulling the plug), and the NJ-QRP was after a new look to its 'net presence. Although I am far from an experienced person with website creation, I do software development in Windows systems during the daytime so I felt I could maybe lead this project for the club.

"So with the new server contributed by Bob Applegate K2UT (Water Wheel Systems), I transferred the existing club web pages and began a systematic overhaul of the content and "look and feel" of everything up there. The pages at <http://www.njqrp.org> are now somewhat representative of what the club had in mind for this project: an on-line Journal of rapidly updated technical project information, QRP field activities, good links, fun articles, and of course all sorts of member information. Ultimately, when the overhaul is complete, it's our goal to have each "section" of the Journal maintained by its own author...thus allowing for a multi-faceted character to our online publication.

"And as I said before, I'm no expert in website creation and I'm still feeling my way as I go. I mentioned the opportunities for QRP club presence on the web to Bruce

Muscolino (coordinator of presentations at FDI...and lo' and behold, I'm signed up to do a paper and presentation on this at Dayton this year! (Like Joe N2CX says: 'round here, he who asks becomes it!') I'm actually looking forward to doing this, as it's really quite straightforward to get a club page going on the Internet, and there is SO much benefit that can arise with an active membership. We have some ideas yet to implement that should really astound even the veterans here in our field."

Anyway Bill, this is probably much more than you wanted, but you can feel to use what you need. Thanks again for the chance to be part of the NE-QRP, and I'll be happy to help out wherever I can.

72/73 George - N2APB



Hi Dennis K1LQG-

I wanted to thank you, Jim W1FMR and the NE-QRP gang for the wonderful day at ARRL Headquarters today. Besides the interesting club talk regarding events and equipment, I was personally thrilled at being able to operate W1AW and to see their lab.

Additionally, I'd like to offer you and the NE-QRP a guest page within our NJ-QRP web site until you guys get your own home page squared away. What this would be is an "NE-QRP Guest Page" item on our home page "contents" listing as a link to a perhaps a couple of pages devoted for NE-QRP information...I could recommend several things that would greatly aid in the communication and coordination for all your members: - membership roster and email addresses - announcements of upcoming events (including QRP AFIELD, Field Day, Dayton mtings., etc.) - availability of various club offers (patches, kits, etc.) - application for membership and renewal - others?

So again, thanks for being a great host today and please let me know if I can assist in the areas mentioned. I think the benefit can be outstanding, especially leading up to Dayton.

72/73,

George - N2APB

g.heron@dialogic.com

Home of the NJ-QRP Club! <http://www.njqrp.org>

PS: I paid AE1D my \$10 and became a member today...

NE #527! Thanks!



~~~~~

**Editor's Note:** We will be working very closely with Bill and hope to have a WEB page soon. Continue to check with the NJ QRP site and see our development as it progresses. Thanks Bill and we are all in this hobby together. It is such fine people, such as you, that make it even better for us to enjoy it. The New England QRP Club salutes you for your fine effort!

## The New England QRP Club The Excitement Is Building



**MY  
NAME IS  
PATRICK**  
by  
**Dennis  
Marandos  
K1LGQ**

The excitement for last year's QRP AFIELD was well worth working and judging from those who experienced the New England rivalry will attest to its goodness. It might have been all lighthouses, or warehouses, but it certainly did have a charm of its own. All year long I had tuned and retuned my QRP transceivers for that September day and the question was what could possibly go wrong? Hey, I am radio-active, nothing can stop me.

I arrived at the city greenery Greeley Park (named after Horace Greeley) in Nashua, NH and scouted for some tall white pines. Here in the northeast, pine trees are like blades of grass...they're everywhere. Mike Cobuccio - WA1EYP, and I spotted a pine tree at the edge of the 150 yard field and took aim with our trusty surgical-rubber sling-shot, bought at the local Wal-Mart emporium, and on the second try landed a nice 95 foot spot into the coniferous tower. With my mighty Gusher, the antenna was placed into combat readiness within fifteen minutes. We mountain men of the northeast don't waste any time in being prepared.

The yellow card table was unfolded, the folding chair was pushed into the ground for stability, and the tools of the day were unraveled. (The NorCal 40A was attached dutifully to the MFJ 971 antenna tuner, which was then gingerly appended to the Gusher, which culminated with a jolt of volts from the 7aH gel-cell.) The log book was strategically placed to the right (I am left handed so all papers need to be in front of the writing hand and to the right. Smudges...you know.) Retractable Cross pen in hand, MFJ-24 hour clock blinking away, Vibroplex Bug (original #2636801) adjusted, antenna swaying in the breeze—what's left?

Contest time and the calls were loud and clear. My first contact was WA4CMI. Great, we're getting out! Second QSO was with CH3Y, a special call for an event I'm still not sure about, dealing with the police department? I wonder if I can get a QSL or acknowledgment from them...? My third contact was N2HMN in New Jersey, followed by KA3P in Pittsburgh, PA. It seems the RF was flowing to the north and south. The vertical long wire (a sloper) was still hanging in the tree pouring out two watts of pure, unadulterated New England power across the country...around the world. (I always like to think big.) Then another contact with K1TJ in Morristown, VA, followed by N2VPK in NY, WA4KAC in MD, W1XH in MA, K3AS in PA, N2YTY in PA, KF2HC in NJ, N1RXT on Mt. Monadnock NH, N2SMH in NJ, AA6UL/4 in VA, W3BNB in MD, AA3LY in PA, WB3GCK in DL, K9UT in IN, KC1GS on Wachusette Mt. MA, K8DSS

in OH, AF3V in PA, W3GES in PA, K3TKS in MD, WK8S in MI, VE3FAO in Ont., VE3LCW in Ont., and K8JJC in MI. It was pretty exciting hearing all these good people on 40 meters and I want to thank all of you...even the dupes!

Now what could have gone wrong during such a brilliant contest such as this? During the Saturday sunshine, while in the public park, were also 35 to 50 fifteen to nineteen-year-old teenagers who were reenacting Dungeons and Dragons. Their crusade was to run, jump, whoop and yell it up. Okay, they were over THERE, and I was over HERE, about 150 yards apart; and we were worlds apart. WRONG! They wanted my space also. They wanted to "play" where I was and to see if I would notice them. Actually, they were the curious ones for many came to my table and asked, "What'cha doin'?" while snapping their gum. Boys and girls who were holding duct-tape swords, mock mallets and hammers in their hands, wanting to know why was I using Morse code. One brave young man, who looked liked he needed a bath, said he had a radio too. My ears perked up and I asked him what his call was? He couldn't remember but he was on channel 19 along with his divorced mother. "Oh", I said and turned back to the contest.

After everyone had seen what they wanted to see, they left. Thank goodness for me, for now it's peace and quiet. Well, not really. Standing in front of me for minutes...not moving, was Patrick, a five year old boy who had no one to play with and deemed me his friend. HE WOULD NOT GO AWAY. He pulled on the long wire which was connected to the MFJ-971. I said, politely, "Please don't touch anything." He said okay, until he saw the cable from my gel-cell and wanted to know why it was red and black. I said, politely, "Please don't touch anything." This appeased him until he saw my Xerox paper box filled with field strength meters, a frequency meter, coax, *et al.* Patrick wanted to see what else was inside and proceeded to empty, one piece at a time, the entire contents of the box. Wow, what are you doing?...ran through my mind, but I looked at him and I said, politely, "Please don't touch anything." I, at this time, mentioned that his father was looking for him, or maybe his mother wanted him. Patrick said his mother wasn't there in the park but that his father wanted him to play with that nice man in the corner of the field...me. My eyes lit open and I nicely said, "Why don't you go play with your friends." He said he wanted to stay and watch me. Patrick then spied the Oreos I had in my Tupperware box. He said that they must taste good because he has had them before. I offered two cookies to him and said make sure your dad gives you permission to eat them. Patrick ran away with smiles on his face.

Patrick ran back ten minutes later, mouth all loaded with black cookie crumbs and said that they were so good he was wondering if there might be more. Again, he got another two cookies and off he went. That was the end of Patrick, until he came back for the third handout. I said, "I am sorry Patrick, you ate them all and now you'll have to leave here and not come back till I have over fifty contacts." He didn't understand what I meant but HE LEFT! Nice kid, but what a time to pick to be an inquisitive five year old!

Did I have a good time? YES! I can't wait for the next QRP AFIELD September 20<sup>th</sup>, and I know a lot of us are waiting for the good times to continue. I have always said that amateur radio has to be instant gratification and that's why I love it! This has got to be the best fraternity I've ever been in! You guys are great. I love you. MAN! (And Patrick, too.)

NEW ENGLAND QRP CLUB \*APPROXIMATE CONVERSION FROM <M>METRIC</M>

| Symbol          | When You Know                     | Multiply by      | To Find       | Symbol           |
|-----------------|-----------------------------------|------------------|---------------|------------------|
| LENGTH          |                                   |                  |               |                  |
| mm              | Millimeters                       | 0.04             | inches        | in               |
| cm              | Centimeters                       | 0.4              | inches        | in               |
| m               | Meters                            | 3.3              | feet          | ft               |
| km              | Kilometers                        | 0.6              | miles         | mi.              |
| AREA            |                                   |                  |               |                  |
| cm <sup>2</sup> | square centimeters                | 0.16             | square inches | in. <sup>2</sup> |
| m <sup>2</sup>  | square meters                     | 1.2              | square yards  | yd <sup>2</sup>  |
| km <sup>2</sup> | square kilometers                 | 0.4              | square miles  | mi. <sup>2</sup> |
| ha              | hectares (10,000 m <sup>2</sup> ) | 2.5              | acres         |                  |
| MASS (weight)   |                                   |                  |               |                  |
| g               | Grams                             | 0.03             | fluid ounces  | fl. oz.          |
| kg              | Kilograms                         | 2.2              | pounds        | lb.              |
| t               | tonnes (1000kg)                   | 1.1              | short tons    |                  |
| VOLUME          |                                   |                  |               |                  |
| ml              | Millimeters                       | 0.03             | fluid ounces  | fl. Oz.          |
| l               | Liters                            | 2.1              | pints         | pt.              |
| l               | Liters                            | 1.06             | quarts        | qt.              |
| l               | Liters                            | 0.26             | gallons       | gal.             |
| m <sup>3</sup>  | cubic meters                      | 35.0             | cubic feet    | ft <sup>3</sup>  |
| m <sup>3</sup>  | cubic meters                      | 1.3              | cubic yards   | yd <sup>3</sup>  |
| TEMPERATURE     |                                   |                  |               |                  |
| °C              | Celsius                           | 9/5 then add 32) | Temperature   | °F               |

NEW ENGLAND QRP CLUB \*MEASURES APPROXIMATE CONVERSION TO <M>METRIC</M> MEASURES

| Symbol          | When You Know         | Multiply by                | To Find             | Symbol          |
|-----------------|-----------------------|----------------------------|---------------------|-----------------|
| LENGTH          |                       |                            |                     |                 |
| in.             | Inches                | 2.5                        | centimeters         | cm              |
| ft              | feet                  | 30.0                       | centimeters         | cm              |
| yd              | yards                 | 00.9                       | meters              | m               |
| mi.             | miles                 | 01.6                       | kilometers          | km              |
| AREA            |                       |                            |                     |                 |
| in <sup>2</sup> | square inches         | 6.5                        | square centimeters  | cm <sup>2</sup> |
| ft <sup>2</sup> | square feet           | 0.09                       | square meters       | m <sup>2</sup>  |
| yd <sup>2</sup> | square yards          | 0.8                        | square meters       | m <sup>2</sup>  |
| mi <sup>2</sup> | square miles          | 2.6                        | square kilometers   | k <sup>2</sup>  |
|                 | acres                 | 0.4                        | hectares            | ha              |
| MASS            |                       |                            |                     |                 |
| oz.             | ounces                | 28                         | grams               | g               |
| lb.             | pounds                | 0.45                       | kilograms           | kg              |
|                 | short tons (2000 lb.) | 0.9                        | tonnes              | t               |
| VOLUME          |                       |                            |                     |                 |
| tsp.            | teaspoons             | 5                          | milliliters         | ml              |
| Tbs.            | tablespoons           | 15                         | milliliters         | ml              |
| fl. oz.         | fluid ounces          | 30                         | milliliters         | ml              |
| c               | cups                  | 0.24                       | liters              | l               |
| pt              | pints                 | 0.47                       | liters              | l               |
| qt              | quarts                | 0.95                       | liters              | l               |
| gal             | gallons               | 3.8                        | liters              | l               |
| ft <sup>3</sup> | cubic feet            | 0.03                       | cubic meters        | m <sup>3</sup>  |
| yd <sup>3</sup> | cubic yards           | 0.76                       | cubic meters        | m <sup>3</sup>  |
| TEMPERATURE     |                       |                            |                     |                 |
| °F              | Fahrenheit            | 5/9 (after subtracting 32) | Celsius Temperature | °C              |





## My March April QRP Field Trip

Joel Denison  
WA5CVM

Let me tell you about my late March, early April QRP field trip into the Maine back country. I started planning for this trip in January and thought I had everything worked out fairly well. Here is my packing list: one- 2 meter hand held, one- QRP PLUS transceiver, one MFJ tuner, one set headphones, one straight key, one iambic key, two fully charged 4 Ah batteries, some extra connectors and two dipoles (one for forty and one for eighty meters). I also brought extra coax and twin lead and one of those butane torches (got it at Radio Shack) for soldering emergencies. I also packed some food and drink. NO ALCOHOL. I had trash bags, had the old truck serviced, and the "sneaux" shoes were inspected. I had a small dome tent, a knife and whatever else I thought I would need. I even brought a medical emergency kit.

On Friday afternoon I jumped into my truck, checked to see that everything was loaded and headed north to Somerset county and into NO WHERE LAND. Toward late afternoon, I pulled off the dirt road and loaded everything into my canoe and paddled about a mile to an island in the middle of a small lake. I set up camp and got something to eat, and then proceeded to make my ham station functional.

I used my sling shot to set up two antennas: dipole for forty meters and an inverted Vee for 80 meters. (Actually all-band use with the twin lead and antenna tuner.) I ran the cables into the tent and set up my hurricane lantern and mounted the radio gear onto a small folding table I brought just for that purpose.

It got dark in the woods with the temperature in the twenties and thirty meters was wide open. I started working all over Europe and later switched to forty where I worked several JAs. Then it started! I could hear him walking in the water. I looked out of the tent and there was a huge bull moose headed for my camp! The moose stopped at the campfire, looked around and left. I was able to stop shaking in an hour or so.

I decided that now would be a good time to set up communication with the eight-OH repeater. I used a 3/4 wave antenna on the hand held and could not bring up the repeater! I could hear it very well but I could not get into it. Ah, tone...that's what it was. So, I entered a 100 Hertz tone and bingo, I was into the repeater. I explained my situation to Hal and requested the "code" for the auto patch. Having the code for the auto patch, I felt safe and shut the two meter rig off and went to sleep.

About two o'clock in the morning, I woke up to the noise of coax sliding on the tent and my ham station jerked off the

bench following the coax and twin lead out of the tent. My Bencher paddle bounced on the ground along with the radio and antenna tuner. I jumped out of my sleeping bag and looked outside the tent. It was that bull moose again, with the antenna cables caught in his antlers and dragging my entire station into the lake.

I neglected to mention that I always carry my pistol with me into the woods and I pulled it out but did not shoot. It wasn't moose season and he was not threatening my life, just my hobby! The moose walked into the lake and pulled my gear with him. I grabbed a pole on the ground by the tent and got into the canoe and followed the moose. About one hundred yards into the lake the antenna cables slipped off the moose's antlers and my radio gear settled down into about ten feet of water. The water was too cold to jump in and it was dark, I grabbed the pole I had and tied some string to it and fastened the other end to my pistol. I threw the pistol into the water and used it to anchor the pole to this spot my rig went into the "drink." I would not have a problem finding the radio gear in the daylight as the water was crystal clear. What I needed was a wet suit or maybe I could snag the gear with my fishing pole.

I went back to camp and tried to call-up the repeater but I could not bring it up. (Found out later that I neglected to save the tone setting) I decided to break camp and head on home. I loaded the gear into the canoe and started back for my truck. There was a full moon out and in spite of my situation, it was a very enjoyable canoe ride back to the truck, except at the landing. At the landing I tipped the canoe and everything got wet and I had to load the soggy mess into the truck.

I got home and woke my wife and asked her to cook something for me while I took a hot bath and changed into dry clothes. My wife cooked a wonderful meal and I decided that I could wait a few hours before going back for my lake-bottom radio gear. I went to bed thinking I could get about three hours sleep and dozed off quickly.

I woke up with a start and looked over toward my ham table. All my gear was there. I ran outside and looked at the truck and it was just as dirty as the day before I went camping! When I got back inside the house, my wife wanted to know what all the noise was last night. She said I must have had one hell of a dream. A dream! That's what it was, a dream.

I looked at my wife, smiled and said; "April Fool," and went back to bed.

Bye now God Bless  
Joel Denison - WA5CVM

## Club Patch On Sale

A lot of the New England QRP Club membership have bought the NE logo patch for their QRP gear using it in a variety of ways. One member has several and placed them on all his QRP "duffel". Another member bought several for his hat, his QRP bag and one for his flea market jacket. He says he never has to say where he is from for the "PATCH" says it all. It's a great ice-breaker as well.

Order your patch for your back-pack, summer jacket and tent door ornament for \$4, or two for \$6 (post paid):

Bob Moeller - KA1PXF

Project Manager

9 Corey Lane

Bennington, Vermont 05201-2116



## Field Day Is Just Around The Corner

Your fingers are just starting to defrost from the FYBO winter contest. You're watching the ice accumulate on the G5RV in the back yard, but it's not too early to think ahead to June. It is time to think about New England QRP Field Day 1997.

### Where else can you...

- try some of the classic QRP rigs, or the new kits?
- try your own rig, or new kit?
- ...an apartment, dweller hang some serious wire antennas?
- drift off to sleep with the sounds of windmills?
- increase your code speed by leaps and bounds in a single weekend?
- work a satellite with a couple of HTs?
- work VHF/QRP mountain-topping?
- talk tech: solar, antennas, tuners, rigs, filters, keys, technique, bug sprays?
- work Hawaii on 20meters with a loop antenna and 3 watts?

Once again, we will be at our excellent site on the side of Mt. Wachusett in Princeton, Massachusetts. Princeton operates eight windmills to subsidize their electric power usage for their town usage. These windmills are located on the south-west slope of Wachusett Mountain; in addition to being a central location for the New England QRP group, the location provides a high, clear set-up, and the mountain is a reflector to the southwest. There is a high tree line running northwest to southeast, adjacent to the clearing, that provides an excellent loop or wire support system.

We have had lots of fun the last few years, and we have had good results getting out. But, we could have easily done better in the standings and had even more fun with the participation of more club members.

Field Day for the New England QRP is a low budget, no pressure event with as much emphasis on fellowship, sharing and learning as on racking up the points. But with limited participation, perhaps too little time is devoted to the social aspects. With more members, we can have even more fun and sharing.

We always meet at the site on Saturday morning to set up antennas and stations. Everyone brings their own food and kitchen gear and trash bags.

There are no facilities, and a car with low ground clearance probably can't make the climb (I have the scars on the bottom of my old Corolla to prove it). It's a short walk from the parking area, and there is plenty of room to set up sleeping tents away from the stations. Nothing is elaborate, but we always have a good time.

You don't need to be a super "contester" or a technical wizard to contribute. We need folks that can set up antennas, secure guy wires, keep logs and dupe sheets, cook, or make hot chocolate late at night, and help take the stations down when the weekend is over. We need relief operators to give the guys who set up the antennas a break. *Everyone has something to contribute.* My entry back into ham radio and QRP was triggered by a Field Day a few years back, and I've learned a lot by participating these last few years and this year I've been asked to coordinate.

We need to have Band Captains who will be responsible for making sure everything is in place for a given band. If you would like to take on this challenge, please contact me. The number of stations which are run is determined by the number of band captains.

I'll put myself down for 40meters. Is there anyone else for 80, 20/15 meters? 10meters? VHF? UHF?

Even if you don't want to be a Band Captain, even if you can't make it all weekend, even if you have a family or local club commitment, even if your car won't climb the hill, I hope you will seriously consider joining the New England QRP gang for Field Day 1997, June 28-29, in Princeton, MA. Call or send E-mail if you have can help in any way or if you need directions to the site. I'm putting together a packet with specific site info and more details.

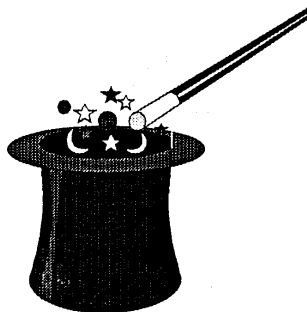
Bill Acito - W1PA

1997 QRP-NE Field Day Coordinator

Work Number: 508/568-6611

e-mail: [acito@asdg.enet.dec.com](mailto:acito@asdg.enet.dec.com)

## There is magic in QRP. Try it – You'll like it!



The New England QRP Club  
Where the Excitement is building!

# Catching the Waves

Paul Stroud - AA4XX  
aa4xx@amsat.org

After Dennis Marandos - K1LGQ asked Fran Slavinski - KA3WTF and me to write about our 40 meter microwatting experiences, it wasn't immediately apparent what we would say. However, we agreed to write a few lines from a personal perspective. Here is our story:

When I was a little boy, my family spent a few days each summer at Carolina Beach. One of the neat things about the coastal beaches of North Carolina is that the water is warm and sometimes the waves are pretty respectable. A group of us would spend several hours a day body surfing or catching the waves with inflatable rafts. After a while, even those of us who were considered *little kids* learned that in order to catch the waves, we had to be in the right place at the right time. We also had to be patient, realizing that sooner or later our time would come. Sometimes the waves were too small—only babies would consider riding those! We also learned to avoid the *killers*—those “big Mama” waves that would pin you to the bottom as they turned you over and over. With a little patience, the right wave would eventually come along. When that happened, we'd howl and scream with delight, trying to see who could ride the wave all the way to shore.

Now that I have two sons of my own (12 and 16 years old), the cycle repeats itself. As we three catch the waves together for a few short hours each summer, we all become kids again. It is as if there is something magical about riding the waves. During those times, we are totally immersed in one of nature's most awesome displays of power and beauty.

On December 28, 1996, a vestige of those wonderful summertime experiences came back to me. This time, I was sitting in the comfort of my radio shack—a small two by three foot closet—listening to my best friend Fran - KA3WTF confirm a four letter code word **LAMP**, which was being sent from my little closet at a power of 96 microwatts (0.00096 watts). This time it was Fran's turn to ride the waves, but that's his story, and we'll let him share it with us in his own words later in this article.

Two years ago, Fran and I, with much encouragement from Rich Arland - K7SZ, were attempting to determine the minimum power we could run between Pennsylvania and North Carolina on 40 meters. Ten milliwatts was a milestone, as neither of us had even thought about running such ridiculously low power. During the next few weeks, Fran copied me at 900  $\mu$ W, breaking the *iron wall* (at least, in our imagination) 1 mW barrier. The week after Christmas, 1994, he copied me at 221  $\mu$ W. This past Christmas week, two full years after our initial trials, Fran somehow managed to ride the waves from NC once again—

copying the code word at 96  $\mu$ W. This time, we were both running wire antennas and *Wilderness Sierra's*—both built by none other than KA3WTF!

For the PA-NC path, the waves start rolling in around 7:30 AM and run until just after noon, with 10 dB waves most prominent around 8:30-11:30 AM. Knowing this, we are able to be in the right place at the right time. We have also established an average *minimum power threshold* for our path, which is 2 mW. This means that we can almost always hear each other when running 2 mW. It has yet to be scientifically determined how big the waves are, but our trials seems to indicate that waves of 10 dB are common, with occasional bigger “MAMAs” rolling in. Thus,

for a few moments, a 200 microwatt signal may equal a 2 mW signal if the surf is really rolling. Fran is a master at listening for the threshold

**During the past few years, we learned a lot how 40 meters behaves during a typical 24 hour period.**

level signals. We'll let him tell us what it's like.

Two years ago, I made a bargain with Fran that if we broke the 300  $\mu$ W, I would deliver his QSL in person. What a thrill it was to fly up to northeast Pennsylvania and meet Fran and Rich, and a whole host of Wyoming Valley QRP Commandos shortly thereafter. We all know that ham radio is a fraternity—but multiply that a hundred times when it comes to QRPers! Since that time, both Fran and Rich have visited with my family in NC, and lasting friendship has been established.

For me, the real significance of QRP is that it allows people to get to know other people. It doesn't matter what we sound like or look like. Fellow QRPers recognize that fact that there is a common thread that binds us together. Thanks to many fine folks out there, I count it a real privilege and honor to say that “I'm a QRPer.”

72. Paul Stroud - AA4XX

## A Phone Call to Mama Joel Denison WA5MCV



Hello mama, this is your loving son, Joel Who. Ha ha, got you that time mama! What do you mean I've been a pain since the beginning? Did you know I was the Maine QRP station this weekend for the FDFS (fifty days, fifty states) event? You say I've been your Maine Pain for fifty years?

Why should I QSY from your house? I was your December QNI! You say I was the result of too much QRN at the house? Be kind mama, you know you don't mean that. Oh, then I guess you do.... (That explains all my brothers and sisters!)

This weekend I'm going to hang a new wire antenna in the back yard. It should work real well. What's that mama? You want me to hang my what...in the back yard? I can't work QRP without a good antenna, you know that mama. No, no mama, if I used more power I wouldn't be QRP. What do you mean I was always the one wanting misery? Bye mama, love you.

God Bless  
Joel Denison - WA5CVM

# A Tribute To One Of Our Own

## Al Libby - KB1FK NEQRP #91!

The G QRP Club

37, Pickerill Road  
Greasby  
Merseyside L49 3ND.  
9 January 1997

Dear Al,

### The G2NJ TROPHY 1997

It is with great pleasure that I am instructed to inform you that the Committee have unanimously decided to award you the G2NJ Trophy for 1997. The award is made in recognition of your long-time work in promoting international friendship via QRP amateur radio, and in particular your outstanding work in contacting European QRP operators and, in many cases, backing up your QSOs by mail contacts.

Owing to the possibility of loss or damage we do not send the actual trophy outside the U.K., but your name and call will be inscribed on it and you will also receive an inscribed plaque which you can keep. As far as I know, you do not attend the Dayton Hamvention, where it could be presented to you, so we can either send it to you by mail or, should you wish, let the President of your local radio club present it. Please let me know which you would prefer.

Please accept my personal congratulations on this award. 72 and 73,

Yours very sincerely  
Gus Taylor, G8PG  
Awards manager, The G QRP Club.

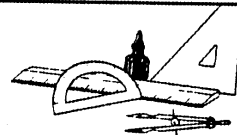
37, Pickerill Road  
Greasby,  
Merseyside L49 3ND.  
17 January 1997

Dear Al,

Just a quick letter to tell you some rather sad news. Alice, wife of George, GM3OXX, died a couple of days ago after a couple of quite unexpected heart attacks. She was still quite young. What will happen now we do not quite know. They had moved to the new QTH to make things easy for George. He has a rear nerve complaint and already finds walking very hard. Eventually he may lose the use of all his limbs. He has a daughter who is married and lives in Portsmouth (England) about 500 miles away. Whether George can stay at his present QTH with deteriorating health is thus a very open question. I have talked to Rev. George, G3RJV, very experienced in these matters, and his advice is to contact (sic) now saying how sorry one is, then contact (sic) again in a much more matter of fact way after about 3 months.

A lot of U.S. QRPers have met George during his visits to Dayton some years ago, so if you contact any of them you can pass the word around. Let us hope that one day we will hear that famous QRP call sign again, even if it is signing a G prefix.

72 es 73  
GUS G8PG



### Hints & Kinks QRP Style

To Put holes in a tin box, use a paper hole punch. I had an expensive paper punch-but I couldn't find it so I went to the local super market and bought a new one for \$1.19. It works great! The longer and deeper the front jaws the better. The multi-hole leather punches don't work well on metal, for the anvil has to be open so the punching will clear.

72 - Bill Keane N1NIK

### A NOTE from the Editor

**Dennis Marandos**

**K 1 L G Q**

K1LGQ@DENNIS.MV.COM

**A lot of work goes into putting together any newsletter, and it's only as good as its contributors. Send your ideas to the address in the front of this newsletter for others to see what's on your mind. If you have comments Of "destruction," send those ideas along as well. I never know what you're thinking or if you even value 72. Don't by shy and get in touch. Dennis M. - K1LGQ**



Is Fear Of A  
Microphone  
Keeping You  
From Becoming  
An Amateur  
Radio Operator?

**Fred Bonavita**  
**W5QJM**

PO Box 2764  
San Antonio, TX  
78299-2764

#### ~Product Review~

Thousands of people are missing the joys of being a license amateur radio operator because they fear talking into a microphone!

**They suffer the heartbreak of acute MIKE FREIGHT!** Mental blocks about using a microphone to communicate are far more widespread than many admit. Would-be amateurs worry they will become outcasts in the hobby because they resort to CW to work other stations—especially when voice communications utterly fail.

Some have been known to beat their heads against the wall or to cry themselves to sleep at night because they cannot readily grab and gab with a microphone.

Some have quietly asked whether there is a microphone-free ticket available: A No-Voice License.

Do not despair! Help is at hand!

Through a special program designed and offered by a recovering CW operator, "mike freight" can be a thing of the past in your life. You, too, can overcome your fears.

In just 30 short days, you can be right in there with the rest of today's crop of Amateur Radio operators, saying such well-known things as: "What's your personal?" "Ten-4, good buddy." "QSL that." "Five—nine plus 20 dog biscuits." And the ever-popular "I haven't used CW since I took my test, and I don't intend to. I don't know why the FCC keeps that requirement." And many more catchy phrases that quickly and firmly identify you as a voice operator that you never uttered on CW. Think of it!

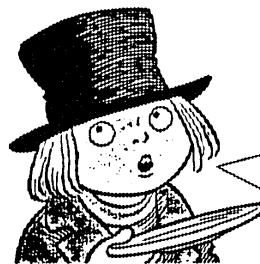
Now—for just \$29.95 (plus \$3 s/h), we will send you a special video tape—more than two hours of simple, easy-to-understand instructions on how to use a microphone, whether it's a hand mike, a desk mike or a state-of-the-art console mike on a goose neck hanging over your transceiver just like you've seen in the radio magazines' cover photos of the Big Guns in action! You'll see and hear real hams talking on the air!

Or, for \$19.95 (plus \$3 s/h), you can get an audio cassette and player with a special speaker for under your pillow so you can hypnotize yourself while sleeping. Imagine waking every morning with a whole new vocabulary of on-the-air phrases you learned subliminally in your sleep. No one will ever suspect you once had a potentially terminal case of mike fright! They will think you've always been like that.

This is a limited-time offer. Order before mid-night tonight so you won't forget. Only orders postmarked and received on April 1 through April 31 will be accepted. Kits will be sent in a plain, brown envelope so nosy neighbors won't know your real identity.

Send your order today to: Fred Bonavita - W5QJM, PO Box 2764, San Antonio, Texas 78299-2764.

Hurry, and you, too, can become a **real** ham radio operator!



**I want to be  
where the  
Excitement  
is building!**

#### Portsmouth Island QRP Expedition

April 4-6, 1997

Paul Stroud - AA4XX  
aa4xx@amsat.org

Eight members of the Knight Lite's QRP Group travelled to Portsmouth Island, NC from April 4-6th, 1997. Portsmouth is in the Hatteras Group, due south of Ocracoke Island, and is accessible only by boat. The operated CW and SSB on all bands, from Friday night through Sunday morning. The team members were:

|        |                  |                 |
|--------|------------------|-----------------|
| K4HQ   | Andrew Lewis     | Chapel Hill, NC |
| WB4OFT | John McKee       | Advance, NC     |
| N4EKP  | Frank Styron     | Cary, NC        |
| AA1BK  | Steve Baranowski | Raleigh, NC     |
| AE4IC  | Bob Kellogg      | Greensboro, NC  |
| WA4NID | Dave Johnson     | Durham, NC      |
| N4NT0  | Tripp Owens      | Tarboro, NC     |
| AA4XX  | Paul Stroud      | Raleigh, NC     |

The group had applied for a vanity call which would hopefully be available before their departure. They will have operated on the standard QRP, IOTA, and County Hunter's frequencies, signing portable NA67. For a follow-up and full information on this expedition, refer to the following URL:

<http://www.ipass.net/~aa4xx/ocra1.htm>

It was a pleasure to work our QRP friends during our brief visit to the Island.

72 - The Portsmouth Team

**Cleveland QRP Club**

CQrp just received it's new call. We will be operating QRP-TTF using K8QR.

News Item: CQrp will be kitting a mini receiver called the MRX-40. It was designed by Steve Bornstein - K8IDN to be a companion to the Micronaut. It is one inch by 2 inches by three-quarters of an inch. Details and photo can be found on our web site. Price is \$18 post/paid and CQrp will begin shipping April 21.

**73 DE K8IDN STEVE - CQRP #1**

## CONTEST: HOW FAST CAN YOU EVACUATE!

**Dennis  
Marandos**  
K1LGQ  
42 Cushing Avenue  
Nashua, NH 03060

This may sound a bit funny now, but when it occurred, it was...well, my story follows.

I had been waiting since QRP AFIELD, last September, to polish up the old gear and get it into running order so I could *freeze my buns off* in New Hampshire. I know that the temperature in the northeast is a lot lower than it is hundreds of miles south, so I *knew* I had a running chance. Man, the multiplier was well worth it!

Saturday was pretty ordinary except for the temperature. It was so mild in New Hampshire, you would have thought it was the middle of June. I grabbed all my gear, which was sitting in a box PATRICK had played with in my last story in the field. I went to the back side of Greeley Park (a nice city park in Nashua, NH) and took my box of QRP gear out for the big FYBO TEST! The sun was shining, the birds were singing and the teenage Dungeons and Dragons were playing "over there" away from me, on the other side of the field.

I set up my yellow card table, shot my only arrow into a 100 foot pine tree and was ready to connect all the wires. The time was about 12:30 local time and I just couldn't wait to get started. Ken Sullivan - W1KZE dropped by to see what I was doing and helped me finish pulling the string through the pine tree so my 100 foot vertical was tight and ready. Man, I was psyched!

All my connections were made, my NorCal 40a was turned on and sweet CW wafted through my headphones as I tuned the band. I made a contact with Greg - WB2PPQ/QRP in Chatham, NJ who said I had a pretty fair signal. Another QSO 15 minutes later with Stan - K4UK in Moneta, VA and the signals just kept pouring through my earphones. Another QSO with our neighbor to the north—Bill VE3MIQ near Niagara Falls, Ontario. This was great...the signals were getting out, and I was hearing GW3s, 9S52s, and even a few W5s were coming through...but then the wind started to pick up a bit. No problem—the sun was warm and the breeze was really strange for February. I love it!

But, the wind really picked up. I mean, the wind picked up so much that it started to shake the pine trees, mine included. My log sheets were blown off my operating table across the field I was sitting in and up the street they flew. My note pad was blown in a hundred directions with paper swirling in front of my eyes like a funnel wind had opened its door. Then the trees were really shaking and shook so hard, it pulled my antenna tuner off the table onto the ground. The tops of the trees were swaying 8 to 12 feet side to side without a moments rest. The roar of the wind was crashing in so loudly that the CW I was listening to was blocked out. I couldn't hear a thing except the roar of thousands of freight cars rolling by my station, scarring the hell out of me. Then the thunder cracked across the sky with a rocket trace of lightning overhead. My operating table was hovering before my eyes and was off the ground. Honest to God, I thought I was in *The Wizard Of Oz*! It was scary and I scrambled to gather all my gear and head for the car.

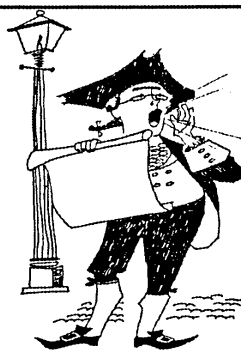
I got the small things into the radio box, ran to the car door and threw it into the back seat. I ran back to the site and folded up my card table and then ran to the car again, only this time I opened the back of the station wagon and threw in my yellow table onto anything it landed. Finally, I went back for the antenna and yanked that sucker off the tree. I rolled it up as fast as I could without "kinking" it, for what reason I don't know.

I ran to the car, jumped in and headed home. Phew, this was a contest? Yes—to see how fast you could tear down a station in case of an emergency. Well, I won!

I went home and was so peeved for having only three QSOs that I went to the gym to worked off my stress—big time! But, now, wouldn't you know the rest of the story gets better. Thirty minutes after all this occurred, the sun came back out, the birds sang and I sat in my car and cried!

See you September 20<sup>th</sup> for QRP AFIELD.

**Dennis Marandos - K1LGQ**  
Nashua, NH



## The New England QRP Club New Membership

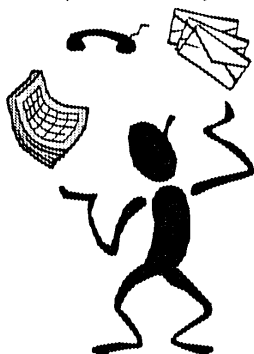
### The Excitement Is Building!

Please welcome the newest members to the New England QRP Club and may they enjoy the full circle of operating privileges and QRP fun. These people know absolutely where the action is and the excitement keeps on growing. Be sure and tell these members you saw their name in 72 when you work them.

|            |                           |            |                           |
|------------|---------------------------|------------|---------------------------|
| NEQRP #507 | John Sielke<br>N4JS       | NEQRP #508 | William Myers<br>KK4KF    |
| NEQRP #509 | Larry Deering<br>W2GL     | NEQRP #510 | Dwain Gibson<br>WA0ZPT    |
| NEQRP #511 | Seabury Lyon<br>W1GCZ     | NEQRP #512 | James Griffin<br>KB4LFA   |
| NEQRP #513 | David Siegrist<br>NT1U    | NEQRP #514 | Richard Egan<br>KA2VCW    |
| NEQRP #515 | Russell Miller<br>W6NK    | NEQRP #516 | David Sarraf<br>N3NDJ     |
| NEQRP #517 | Bud McClure<br>K5IUO      | NEQRP #518 | Howard Bacon<br>WY1W      |
| NEQRP #519 | Gary Nichols<br>WA1GWH    | NEQRP #520 | Tom Meyers<br>WB5OLA      |
| NEQRP #521 | Leigh Walton<br>N1GLU     | NEQRP #522 | Ronald Pfeiffer<br>WB0AFR |
| NEQRP #523 | John Nobbs<br>KC7TES      | NEQRP #524 | Gerald Albertin<br>KG2JF  |
| NEQRP #525 | Mike Drew<br>W1LRZ        | NEQRP #526 | Dave Warner<br>KA7IJK     |
| NEQRP #527 | George Heron<br>N2APB     | NEQRP #528 | Bill Boose<br>N3WST       |
| NEQRP #529 | Steve Toohey<br>N1EBB     | NEQRP #530 | Norman Wessler<br>K2YEW   |
| NEQRP #531 | William Braisted<br>K1HLG | NEQRP #531 | Terence Keon<br>N1IWF     |

# Special Event Station

Cheese Hollow, Maryland  
Cheese Hollow A.R.S. as W3HAM.  
Commemorating the Inaugural Cheese Hollow Cheese  
Festival  
SSB - 3.920, 7.222, 14.250, 21.350, 28.350, 50.150 MHz  
FM - 146.580 MHz  
CW 7.130, 14.060 M  
13:00 zulu May 10<sup>th</sup> - 01:00 May 11<sup>th</sup>, 1997



## Antietam Radio Association

presents the 1997 edition of the  
**Maryland - DC QSO Party**  
August 9 from 16:00 - 04:00  
August 10 from 16:00 - 23:59

Certificates are awarded to all stations with 50 or more QSO points in their entry!

AWARDS: Plaques to the high scoring single operator inside and outside of Maryland/DC and to the high scoring MD-DC Club!

CERTIFICATES: to the best 10 MD/DC single operator, best each, state, DX, Canadian province, MD/CD mobile, MD YL, QRP per State, Novice-Technician entry per state. New Certificate design this year!

### R U L E S

**Phone & CW:** CW QSOs in CW bands only! Stations may be worked once per band using each mode! Only single operator entries from outside MD-DC area.

**Non MD-DC stations work MD-DC.** Maryland-DC stations may work anyone!

**Portables and mobiles that change counties** may be counted as a new station in each new MD county. Sorry, no packet or repeater QSOs allowed. QSOs part of a regular scheduled net are not allowed.

**EXCHANGE:** QTH and major category of entry. QTH is county for MD-DC stations. Use state, province, or country as appropriate for non MD-DC stations. Major categories are *Club*, *QRP*, *mobile*, *novice/Tech*, and *standard*! Stations should send the category that reflects their highest point value.

**Suggested Frequencies:** voice-3.920, 7.230, 14.260, 21.370, 28.380, 50.15+, Simplex frequencies all bands 2 meters and higher.  
**CW** 3.643, 3.701, 7.126, 14.040, 21.115, 28.040, 28.115 plus VHF & UHF CW. Especially try CW on the odd half hours—examples 17:30, 19:30, 1:30, 23:30z

**Scoring:** Add up the QSO points & multiply by sum of the multipliers. QSO points - 10 points per club station QSO, 5 points per mobile QSO, **4 points per QRP** or novice/tech QSO, 3 points for CW or RTTY or ATV QSO, 1 point for any other valid contact. Highest single point values applies.

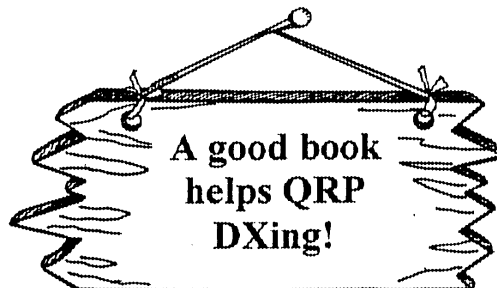
**Multipliers** - Non-MD-DC, each MD county plus Baltimore City plus DC (25 possible) MD-DC stations, the basic 25 above plus 49 other states plus provinces plus DX Countries. Multipliers may be claimed once. They do not repeat on each band!

**Entry deadline:** Send logs with SASE by September 10, 1997 to:

**ANTIETAM RADIO ASSOCIATION (W3CWC)**  
P.O. Box 52  
Hagerstown, Maryland 21741-0052

## ZACK LAU W1VT - BOOK READER!

I participated in the G-QRP Club Winter Sports calling CQ QRP and catching up on my reading—simultaneously. I found I could press the CQ button on my memory keyer and read Tom Clancy's book, *Executive Orders*. And, if the station was really loud, I could continue reading while I sent the exchange. Sort of,



anyway. I caught myself sending my QRP ARCI number, which confused the QRO types a little, making them think I was in a contest or something. By the time I finished the book, I made over 5 dozen 2 way QRP contacts, including 3 dozen with Europeans. At least 18 countries were worked 2 way QRP on 20 meter CW.

Zack Lau - W1VT

Shureeth



**Hey Big Guy—  
The Excitement  
is building with  
the New  
England QRP  
Club!  
Need I say  
more?**

# Application For Membership and Renewal

## The New England QRP Radio Club



For a **NEW** membership, send your application to **Bill McNally-AE1D** Membership chairman, and **RENEWAL** to **Bill Studley-AA1OC**, Renewal Chairman.

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Call Sign: \_\_\_\_\_ NE-QRP Number (renewal only) \_\_\_\_\_

Mailing Address: (Street, City & ZIP) \_\_\_\_\_

Phone number : \_\_\_\_\_ License Class: \_\_\_\_\_ Age: \_\_\_\_\_

Former Amateur call[s]: (Year first licensed) \_\_\_\_\_

Please write a couple of paragraphs about yourself (use another sheet of paper), and we'll pass it along to our Membership News Editor.

The membership is \$10.00 and renewal is per year. Outside USA please add \$5.00. The club year begins in January and renewals are from September to December for the following year. Please make your check or money order payable to: **QRP Club of New England**.

Mail your **new** membership application to:

**Mr. William McNally - AE1D**  
New Membership Chairman  
7 Blueberry Road  
Windham, NH 03087

Mail your **renewal** to (Please put your NE-QRP number on your correspondence.)

**Mr. Bill Studley - AA1OC**  
NE-QRP Renewal Chairman  
133 Baboosic Lake Road  
Merrimack, NH 03054



**Jim K3QIO Delaware**  
Qrp-Lister Internet

We all know that tube QRP is better than any other so a week of clean and fixer-up was put into the ole Johnson and what a sound! I did the required half dozen Qs on 80 meters and 40 meters with crystals plugged into the HA-5 VFO (yes, with a pad) to finish off the station. Nothing else I own sounds as good on the Drake R-4 as that station does. The rig is teamed with the R-4, and for a while now as Net Control Station, duty on the KL net on Sundays, (3.686 kHz) the rig will be married with the HQ-150 and Johnson T/R switch. I'm easy to spot with a bug, since none of my keyers will handle the 110 VDC key up voltage, including the Ten-Tec keyer with the relay (Relay contacts stick above 80-90 v.)

Curious to hear feedback from the Net Control Station operation with the bug. The signature should be easy to catch since most every one else runs a keyer or straight key. I hope to hear everyone on the net at 9:30-10:45 PM EST. To my knowledge this is the first time the net has been run with tube equipment and a bug. Yesteryear all over again.

Love this stuff-72/73, **Jim K3QIO Delaware**