



# ❖ The Minuteman ❖

Volume 28 Issue 1

September 1998



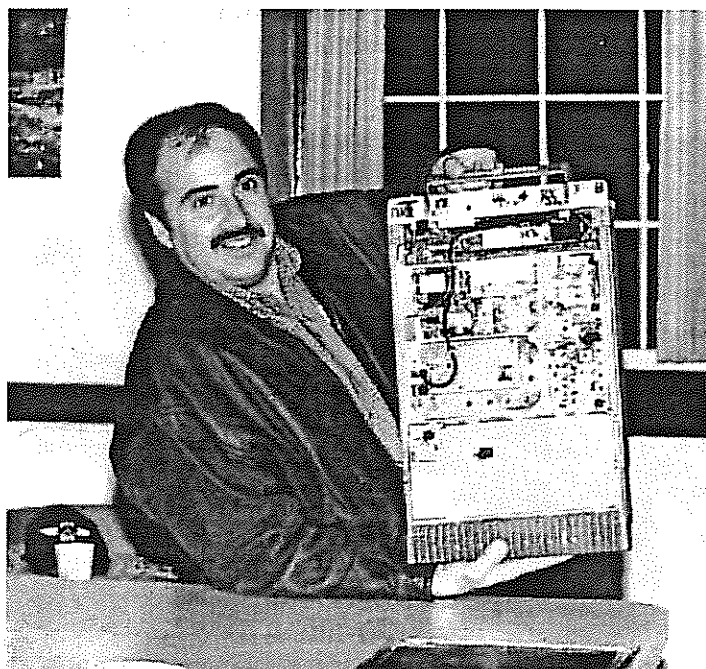
## President's Corner

It's that time of the year again...our first meeting should be interesting. You may remember Mark's last presentation on miniature machines. This one will address stuff that you need to know about electrostatics as a ham.

We'll also be voting on this year's budget. We underspent last year, and are hoping to do the things that we did not do, like putting a new dual-band antenna in Stoneham. We are adding an antenna for '61.

Take a look at the article on Slygo. We are going to be faced with the need to do something there, and it's going to take time and money. Once we know what's going to happen, we'll have to marshal significant resources. We know that MMRA members have always come forward when really needed, and hope that we'll all live up to that tradition.

You'll see in that article that once again we owe thanks to Bryan, W1BRI, Paul, N1ZCB, Ed, N1NOM and Wayne, N1XXI. They hung in there when a routine work party turned into a pain in the keester, taking their whole day to do work that kept us in good standing with the City of Marlborough.



Bryan Cerqua (W1BRI) is the guy responsible for all the conversions to GE equipment. We thought this was a good picture of him; here he holds up the guts of the new remote receiver for 53.81, now located in Berlin. Since this picture was taken, he has put in the new '82 GE system, based on another GE base station acquired by N1BHI. And soon, the GE machine for Quincy will be ready!

N1NOM Photo

## A Real Hunt

By Dave Croll, KT1X

Many MMRA members who have listened to the Saturday morning and summertime Tuesday evening foxhunts have let those of us who are regular members of the "fox hunting crew" know how much they have enjoyed our "fun and games", and with time many of them have even joined us. Others however, may scratch their heads and question our sanity or the wisdom of investing time and our personal budgets in the activity.

Well, there is a method and a purpose to our madness, and in this article I want to describe a useful "real" foxhunt in which the MMRA hunters were called upon to "help out" a neighboring repeater group. This is a story which illustrates one of our "adventures" and demonstrates the cooperation that fox hunting requires. It also illustrates that while we mostly hunt for fun, our skills are useful.

The names and details of some of the principle people and places have been omitted or left vague. We are not interested in "playing police", only in finding signal sources and, if they are causing problems, having them turned off. Most of our real hunts are not for malicious signals, but for those caused by malfunctioning equipment or "stuck microphones".

Last winter on a Saturday evening around 6:00 PM, I was sitting in my shack checking out the action on 160 meter CW. The phone rang and when I answered a long-time ham radio friend Tony, WA1ENO, was on the line. Seems there was a problem with a local repeater, as it had been timing out all day, as

(Continued on page 2)

## SEPTEMBER MEMBERSHIP MEETING

WEDNESDAY, SEPT 16, 1998 - 1930 HRS

CAMPION CENTER, WESTON MA

PROGRAM:

Electrostatics and Ham Radio

Mark Horenstein, WA1GIO

HT Clinic

Budget

Raffle

Other Stuff

(Continued from page 1)

## A Real Hunt.....

occasionally happened when the band was open.

In this case, a few of the locals had been able to get a beam heading from various positions on the South Shore, and all agreed that a strong signal on the repeater input frequency was coming from out along Rte. 128/95 to the WNW of the repeater. "Can you get some Doppler direction finding units out that way?" Tony wanted to know. "Well of course" was my answer, "but I'll have to make some phone calls."

A few minutes and a phone call later, Eddie, N1NOM, joined Tony and me on the Weston 146.82 repeater. Bill, N1QPR, who with his wife Shelley, N1VJE, was coming back from the Rhode Island shore, joined in as well. I had made a "detour" over to the 146.61 side of the MMRA linked repeaters and raised them, as I knew they were likely listening on their way home. Luckily, they had their foxhunting gear on the truck and so would provide a valuable addition to our growing team.

After a quick conference, we hatched a plan. Bill and Shelley would detour to Rte. 24 and head north to Rte. 128/95. Tony, with no specialized equipment, but several decades of radio experience, would "hunt signal strength" while moving northwest from the South Shore along Rte. 128. Eddie and I would rendezvous in Sudbury and then proceed out toward 128 where we would work our way south.

Before leaving, Eddie and I had another land line conversation and agreed that with our beams we could hear a signal on the input of the effected repeater coming from the SE. I rushed out and threw the antenna system of the DF Jr. Doppler on top of my Jeep and then spent about 5 minutes hooking up the various cables. I had been hunting earlier that day but had disconnected the Doppler as I was getting some erratic readings and wanted to check the unit out later that weekend.

A few minutes later Eddie and I met on 446.000 simplex and agreed to rendezvous at the Sudbury United Methodist Church parking lot, an open expanse ideal for a quick Doppler calibration. Within 10 minutes, we were positive my Doppler was OK and were headed down Rte. 20 toward 128. Tony was by this time coming north along 128 and Bill and Shelley were nearing the junction of 24 and 128.

Tony was reporting the signal was strong in the Rte. 1 area and so Bill and Shelley headed up 128 to verify the strong signal and get a definitive direction. Eddie and I were now near the Needham radio towers and saturated with RF, making our Dopplers less than trustworthy for the next mile or so. I picked

up the mike and put out a call on 146.82 for W1JDO.

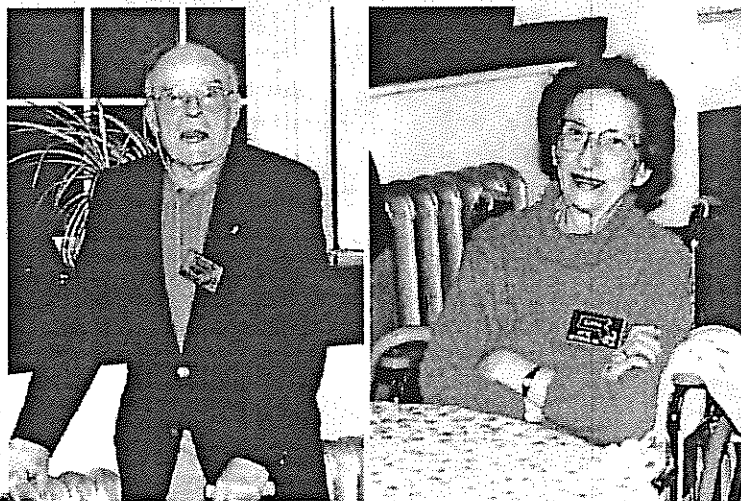
Frank, who was just leaving the supper table, answered immediately. I filled him in on the details. He swung his beam and verified our suspicions that the "mystery signal" was at a beam heading that pointed through several nearby towns which were on our "list of "guesstimates" for the signal source location. Frank is our long-time "king of the beam heading" for our "fun hunts" and his corroboration of our "guesstimate" gave us confidence.

Like many of the other hunters, I have Frank's home latitude and longitude stored in my GPS receiver, and I activated a bearing to his location. It would be useful later to tell if we were in the neighborhood of his beam heading to the signal source.

By this time, Bill and Shelley were verifying strong signal near one of the exits from Rte. 128, and a few minutes later Tony, Eddie and I joined them. All of our Dopplers pointed toward the same direction. At this point, we thought we were "on top" of the signal, but we were only beginning our "fun". We were about 40 minutes into the hunt.


Forming a caravan, with Bill and Shelley in the lead, we tried to drive a straight line to the signal source that our Dopplers were indicating. Easier said than done. It was dark and we were definitely unfamiliar with the side streets. For the next 30 minutes, we were frustrated time and time again as we came up against "dead ends" in a variety of industrial parks and side streets.

Tony, who was probably the most familiar with the area, suggested that we get on several of the main cross streets and



Frank (W1JDO) and Dottie (N1BHA) Heilbrunner were able to come to a meeting after a few months of absence due to illness. We were glad to see them both. We figure that Dottie had been anxious to be with Frank to make sure he behaves. Frank and Dottie reside at the W1JDO/MMRA Master Control Station in Westwood. We hope to see them at this year's meetings...it just isn't the same when they are not there.

N1NOM Photos



## MMRA VE Sessions

2nd Saturday of Each Month  
Marlboro Public Library, 9AM  
Contact: Bill Wade, K1IJZ  
617-891-9079 Evenings 6 to 10 PM,  
Weekends 8 AM to 10 PM.  
Accredited - ARRL VE Program

## Items of Interest....From the ARRL Letter

### FLORIDA HAMS RESPOND TO HURRICANE EARL

Hams in Northern Florida responded this week as Hurricane Earl paid a visit to the Florida Panhandle. Northern Florida District Emergency Coordinator Nils Millergrén, WA4NDA, reports that hams served as weather spotters and provided communication support at shelters and emergency operation centers in several counties. As the storm approached, the Northern Florida Emergency Net on 3.950 MHz was activated.

Hurricane Earl was downgraded to a tropical storm September 3 after lashing the Florida Panhandle with high winds and torrential rains. The storm dumped nearly two feet of rain. Two fishermen were reported missing in Florida. Trees were downed, some street and residential flooding has occurred, and some areas were reported without electricity.

In Florida's Capital District, a VHF emergency net was active, and weather spotters were posted along coastal Highway 98. EOCs and shelters in Jackson, Walton, and Washington counties also had Amateur Radio support, and a VHF net was active in Jackson County. In Bay County, the Sheriff's Office and a medical center also used Amateur Radio Support after the telephone system became overloaded.

### AAA SAYS LMCC "BACKING OFF" 70 CM REQUEST

An official of the American Automobile Association says the Land Mobile Communications Council is backing away from its request that the FCC reallocate 420 to 430 MHz and 440 to 450 MHz from the federal government to the Private Mobile Radio Service (PMRS). And the AAA's Gary Ruark says he doubts the FCC will ever agree to the request in the face of strong support for continued Amateur Radio presence on the band. Amateur Radio has a secondary allocation on the band. The AAA is an LMCC member.

In an August 31 letter to San Diego SEC David Doan, KC6YSO, Ruark, said that strong support for ham radio from the Association of Public Safety Communications Officials-International (APCO) and the National Telecommunications & Information Administration caused the LMCC to back off its demand to reallocate the 70 cm subbands it had requested last spring. Because of that, Ruark said, "it is doubtful that the FCC would ever agree to that portion of the LMCC petition addressing sharing with amateur radio operators."

In June, AAA asked the LMCC to file supplemental comments with the FCC to withdraw the request to share the 70 cm band with Amateur Radio. The LMCC declined. "The decision was based on the perception that to change the language now could undermine the rest of the petition," Ruark explained. Ruark, the AAA's emergency road service technical communications specialist, said the AAA would be unable to get the LMCC to reverse its position "because there is not enough support to win a vote on the matter."

But Ruark said it was his understanding that the LMCC "would not continue to actively seek access to the amateur radio spectrum, and would forfeit that language during FCC

negotiations in exchange for more important spectrum allocations."

A copy of Ruark's letter to Doan is available on the *ARRLWeb* page,

<http://www.arrl.org/news/bandthreat/RM-9267/aaa0831.html>.

### QUESTION POOL CHANGES PUT ON HOLD

Citing "almost certain and imminent restructuring of licensing," the Question Pool Committee--the group that formulates the questions that show up on Amateur Radio examinations--has put further changes to the question pool on hold until restructuring issues are settled.

ARRL/VEC Manager Bart Jahnke, W9JJ, says the decision includes postponing the Advanced class question pool update, scheduled for revision and release this year for implementation next July 1.

The Committee says restructuring could cause anything from making a few rules questions unusable to "total deletion of one or more question pools or even combination of two or more of the present question pools into a differently configured question pool."

The decision to put further revisions to the question pool on hold had majority support of the National Conference of VECs. The QPC will postpone its current question pool review schedule "until the direction of such restructuring is more certain," QPC Chairman Ray Adams, W4CPA, said in a statement.

Adams said the QPC would announce when it's decided to resume alterations to the question pools. "The action required by that decision could range from a simple resumption of rewriting of the question pools much in the same manner as we have in the past to issuing any necessary supplements containing the changes to each of the question pools in use to combining certain pools in whatever manner may be dictated by the Commission," he said.

### ARRL TO DEBUT WEB MAGAZINE SEPTEMBER 1

*The ARRLWeb Extra*, the new *ARRLWeb* publication, debuts September 1 on the League's new Members Only Web Site, <http://www.arrl.org/members/>. *The ARRLWeb Extra* will offer news and features, photos and sounds from the world of Amateur Radio and the ever-changing communication scene.

A totally new online publication, *The ARRLWeb Extra*, will publish Amateur Radio news and features--including insider news, technical and how-to topics, additional information on Product Review items, "First Looks" at upcoming products that will be reviewed in *QST*, and occasional offbeat items, a "Foto Gallery," and information about--and links to--interesting Web sites. From time to time, *The ARRLWeb Extra* will explore subjects only indirectly related to Amateur Radio.

Web publication also will make it possible for Product Review and New Products items to include sound and more pictures that we might not have room for in *QST*.

Members now get a chance to actually *hear* what a new

## Items of Interest....From the ARRL Letter

transceiver sounds like, for example. The first edition of *The ARRLWeb Extra* takes a closer look at the new SGC SG-2020 transceiver, providing sound clips of CW and SSB reception (in *RealAudio* format) plus interior photographs not included in *QST*. The full-blown SG-2020 Product Review will appear elsewhere on the Members Only Web Site as well as in October's *QST*.

The Members Only Web Site will make current and past *QST* Product Review columns available in a searchable archive as *Adobe Portable Document Format* (PDF) files. The *QST* Product Review Columns page lists all Product Reviews from 1990 to the present.

The premier edition of *The ARRLWeb Extra* will feature several general-interest articles. There's an exciting narrative by Ed Petzolt, K1LNC, of how he used ham radio to help save the lives of a missionary family, caught up in a hostage situation in a remote section of Guatemala. Sound clips of actual transmissions are included. Ralph Katz, KB8ZOY, tells the uplifting tale of how "Two Honest Hams"--who also happened to be pretty good detectives--retrieved his H-T, lost at the Dayton Hamvention.

News items for the *Extra* will be updated as soon as possible, which means that breaking stories sometimes will be available before they're published in *The ARRL Letter* or issued as WIAW bulletins. Whenever available, pictures and sound cuts will augment our news coverage. *The ARRLWeb Extra* is free of advertising and other "commercial clutter." News and article submittals are welcome via e-mail to [awextra@arrrl.org](mailto:awextra@arrrl.org).

In a related move, *The ARRL Letter* now will become more available to League members. ARRL members may subscribe to *The ARRL Letter* and receive it via e-mail directly from ARRL Headquarters free-of-charge and without having to go through the third-party listserver. Members can choose to receive *The ARRL Letter* via e-mail when they register to use the Members Only Web Site. They'll also be able to start or stop their *Letter* subscription at any time from the Membership Data page on the Members Only site.

Current and back issues of *The ARRL Letter* will continue to be available on the public *ARRLWeb* as well. In addition, *ARRL Audio News*, the weekly *RealAudio* news broadcast that's compiled and edited from *The ARRL Letter*, will continue to be available via the public *ARRLWeb* site. *ARRL Audio News* also is available by telephone at 860-594-0384.

ARRL Senior Assistant Technical Editor Rick Lindquist, N1RL, will edit *The ARRLWeb Extra*. He will continue to edit *The ARRL Letter* and edit and voice *ARRL Audio News*.

To access the ARRL Members Only Web Site welcome page, League members need only point their browsers to <http://www.arrrl.org/members/>. Register by providing your call sign and your ARRL membership number--found on your *QST* mailing label. You'll also be prompted to select a password. If you're not a member, you can join the ARRL online via the ARRLWeb site at <http://www.arrrl.org>.

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## A Real Fox Hunt....

keep in touch on 446.000 simplex. Systematically we leapfrogged through several adjacent towns.. Bill and Shelley were especially effective as one could drive and operate the Doppler and the other read maps and plot bearings. We all kept in touch, as we checked out side streets. Once, we thought we had the source in sight, as a large commercial radio tower loomed ahead, but as we approached it was clear that it was only in the area and was not the source.

By this time, Eddie was reporting "whiff of signal" with no antenna on his talkie, a sure sign we were closing in. He took the lead, and soon he and Bill and Shelly had converged in a residential neighborhood. I was sure we were near, as my GPS indicated that I was right on Frank's beam heading to the signal source.

At this point, we split up and started leapfrogging streets. Eddie reported seeing some ham antennas on the next street over. We converged and parked our vehicles in front of the ham household. It was now about an hour and a half after receiving Tony's initial call for help.

Now, if you have never seen our "manly" hunt vehicles, SUVs bristling with antennas, you can't imagine how intimidating and "official" we look. "Electronic velociraptors" is how we like to think (humorously of course) of ourselves. We conferred for a moment and agreed to send Bill and Shelley to knock on the door. As a husband and wife, they were the least intimidating of our crew.

A few seconds later the door opened. The wife of the ham who lived there chatted with Bill and Shelley and then called her husband, who went upstairs to his shack. Seems his VHF transceiver had inadvertently gotten locked into the on position. It had been that way for several hours, and needless to say was pretty warm to the touch. We put our heads together and figured that when he had finished talking on the repeater earlier, he had hurriedly hit what he thought was the off switch and had run downstairs.

(Continued on page 5)

**Give the MMRA World Wide Web Home Page a try..... let us know what you think.... any ideas are welcome. We are looking into things like an MMRA list server. We now have our own domain name - mmra.org. The Web Page keeps getting better.....**

**WWW Address:**

**<http://www.mmra.org/~mmra/mmrainfo.html>**

## MMRA Information - Repeaters, Officers and Board Members

### MMRA Repeaters:

Marlboro	146.61	N1BHI/R	FTL	P	
Marlboro	449.925	N1HBR/RFTL	P		PL - 88.5 in and out
Quincy	146.67	KA1HKP/R	PTL	P	
Quincy	224.40	NIKUG/R	FTL	L	PL - 103.5 in, none out
Weston	146.82	KA1AL/RPTL	P		PL - 146.2 out, none in
Weston	224.70	N1HBR/RFTL	L		
Hopkinton	223.94	N1BHI/R	FTL	L	PL - 103.5 in and out
Stoneham	146.715	N1NVL/RPTL	P		PL - 146.2 out, none in.
Stoneham	446.725	N1NVK/R	PTL	L	PL - 88.5 in, none out
Taunton	449.575	N1NVL/RFTL	L		PL - 88.5 in, none out
Marlboro	53.81	W1BRI/R	PTL	L	PL - 71.9 in, none out

[FTL = Full Time Linked PTL = Part Time Linked]

[L = Patch available via link] P = Local Autopatch]

### MMRA Officers:

President:	Andy Morrison, N1BHI	To Contact Officers or Board Members
Vice President:	Clark Conti, N1NVK	
Secretary:	David Croll, KT1X	
	Lynne Ausman, KA1NLD	Call MMRA Voice Mail Line:
Treasurer:	Ian MacLennan, AF1R	
Clerk:	Ed Mulhern, N1NOM	
Directors:	Tom Qualtieri, WB1GMA	508 - 489 - 2282
	Al Kunian, KA1AL	Toll Free from
	Chris Conti, N1NVL	508 and 617 Areas
	Bob Feltmate, WA1ZJE	
Newsletter Editor:	Andy Morrison, N1BHI	MMRA E-Mail
		mmra@mmra.org

## Minuteman Articles — Solicitation

If you have ever built anything, fixed something, or have an experience that you want to share, then you should submit an article to the MMRA Minuteman. Contact Andy Morrison, N1BHI, if you want to talk about it. We can scan artwork and schematics to make an article more interesting and useful. Give it a try!

### Important MMRA Club Information:

**Membership Meetings:** 3rd Wed of Sept, Nov, Jan, Mar, May at Campion Center, Weston at 7:30 PM  
Meeting Dates for 1996-97 Season: September 16, November 18, January 20, March 10, & May 12.

**Board Meetings:** 3rd Wed of Oct, Dec, Feb, Apr. Meetings are open and members are welcome.  
If a visiting member wants to be on the agenda, please contact Andy Morrison beforehand.  
(508) 489-2282. -- This is a local call from any 508 exchange phone, and is a free call from both 617 and 508 areas.

### MMRA Voice Mailbox

### Newsletter Information

### Mailing Date

### Submission Deadline

<u>September issue</u>	<u>November issue</u>	<u>January Issue</u>	<u>March Issue</u>	<u>May issue</u>
Sept 11, 1996	Nov 13, 1996	Jan 8, 1997	Mar 12, 1997	May 14, 1997
Sept 1, 1996	Oct 26, 1996	Dec 28, 1996	Feb 22, 1997	Apr 26, 1997

The MMRA is dedicated to Amateur Radio and the public service. The MMRA is a registered non-profit Massachusetts corporation. Membership is open to all



## Mea Maxima Culpa

We always like to give credit when credit is due...but once in a while we screw up. When we reported that 70 feet of tower had come into our possession, we forgot to mention that Dave Greenwood, N1ZOX, had given the tower to Paul, N1ZCB, and when he could not use it, both of them agreed that the MMRA should have a crack at using it. We apologize to Dave for not including him before, and hope that he will forgive our sloppiness.

To the left is Dave, KT1X, author of the Real Fox Hunt article. If he doesn't look too enthused in this photo, you should realize that the "manly" (= 4 wheel SUV) vehicle he is sitting in was purchased solely so Dave could hunt in inclement conditions. N1NOM Photo

(Continued from page 4)

**A Real Fox Hunt.....**No harm done. The interference was definitely not malicious and the ham and his wife apologized for any inconvenience and were quite friendly. We chatted for about half an hour and then left to get a bite of a late supper. Mission accomplished .....it was kind of fun.

Why do we hunt? Well, IT IS FUN, but we do something useful. Over the years, we have been involved in a few situations like the above, essentially what we call "stuck microphone" situations. They can and do happen to anybody. It's nice to be able to deal with them effectively.



## Slygo Hill - Shelter News

High atop Slygo Hill rests the shelter that houses 449.925, 223.94, the packet node, APRS, 53.81 receive, and the 147.27 repeater. We acquired the shelter from Tony Yousca (W1QLF)...he had used it for years for commercial radio equipment, and graciously allowed the MMRA to put the first 440 machine there. When Tony retired, he offered us the shelter, and we jumped at it.

It has served us well; the 449.925 repeater is the hub of our network. The shelter is an old milk truck body resting on the ground, and does not offer much room. We've got everything shoehorned in there with a little room left over for workspace. Walter, N1HBR, has arranged it efficiently.

The exterior of the shelter is a bit scruffy...and that is part of what may become a problem for the MMRA. The City of Marlborough has begun a renovation program for the hill. A new park on one side of the tank will be supplemented by a baseball diamond on the same side of the tank as our shelter. Don Cusson, who is in charge of Emergency Management for Marlborough, is also responsible for all the radio equipment in the city, and the sites that house it. He informed us that the City may not want to have our shelter, in all its scruffy glory, bringing down the appearance of the work that is being done to make the hilltop a showplace.

This summer Don told us that he wanted to clean up all the unused coaxial cable on the tower. He met us up there on a Saturday and showed us what was going to be done, then asked that we clean up the coax that used to go into our shelter. Luckily, Bryan (W1BRI), Paul (N1ZCB) and Ed (N1NOM) were already up there working at the shelter. Bryan, in his typical no-nonsense way, suggested that we could do the coax cleanup that morning..."Let's get it done." Also fortunate was the arrival of Wayne (N1XXI). He volunteered to help also.

It took a few hours and a lot of sweat...Bryan and Wayne did the climbing, with Paul and Ed providing ground support. It was not a fun job...but the crew stuck with it and finished in by the late

Below Bryan is shown on top of the Slygo shelter. Above him are the supporting stanchions of the tank. You can see the cable on the left at mid-photo. More pictures on the page 9....

N1NOM Photo



afternoon.

The key issue here is that something *is* going to happen up at Slygo. The City wants to beautify the site, and make it more accessible for use by residents. This is going to require us to take some kind of action.

There are three major alternatives:

- We leave the shelter where it is, but put some form of structure around it that makes it look nice - sort of like a movie set false front.
- We move the existing shelter over between the two



Paul stands in front of the shelter, and you can get a good idea of its size. You can also see that it is not very pretty, and there's the rub for the city.

N1NOM Photo

tanks. Don Cusson thinks that location would be acceptable if we combined this alternative with improving the appearance.

- We put a new shelter in the new location.
- We move into a brick block building located on the opposite side of the tank.

Each has cost associated with it. The lowest cost is probably associated with the first alternative. Putting some sort of framework around the shelter that looks good would probably cost a few hundred dollars in materials and some sweat. The second alternative would require more sweat, and a few more dollars for a footing of some sort for the shelter. The third alternative is pretty expensive; perhaps we could find another military surplus shelter for short money. The last alternative would require nearly doubling the feedline lengths, and put us in someone else's building - the City's.

All the variations and factors are not known as yet. We are waiting for a meeting with City officials. That should clarify just what is going to happen. What we ask of the membership is simple...think about the alternatives above; if you have ideas about how to get a new shelter cheaply, let us know. If you can help in work parties, we can sure use it when the time comes to do something.

We'll keep the membership informed as things develop. The officers and board are working toward a good solution for both the City and the MMRA.

Income:	1997 Budget	1997 Actual	1997 Variance	1998 Budget	<b>MMRA 1997 Budget</b> This budget sheet shows 1997 Budget versus Actual. The 1998 Budget will be voted on at the September 16 Meeting.
Dues	7850.00	6376.50	(1473.50)	7850.00	
Misc.	0.00	0.00	0.00		
Total	7850.00	6376.50	(1473.50)	7850.00	

All Expenses:	Budget	Actual			
Administration	4054.00	3562.15	491.85	4054.00	
N1BHI-146.61	600.00	330.00	270.00	1200.00	Normal Expenses+ antenna
KA1HKP-146.67	500.00	377.60	122.40	500.00	Normal Expenses
N1NVL-146.715	750.00	180.00	570.00	750.00	New Antenna Included
KA1AL-146.82	500.00	387.60	112.40	500.00	Normal Expenses
N1BHI-223.94	50.00	0.00	50.00	50.00	Normal Expenses
N1KUG-224.40	50.00	0.00	50.00	50.00	Normal Expenses
N1HBR-224.70	50.00	0.00	50.00	50.00	Normal Expenses
N1NVK-446.725	500.00	0.00	500.00	500.00	New Antenna Included
N1NVL-449.575	50.00	0.00	50.00	50.00	Normal Expenses
N1HBR-449.925	600.00	730.00	(130.00)	600.00	Normal Expenses
KA1OUI-145.03	50.00	0.00	50.00	50.00	Normal Expenses
W1BRI - 53.81	150.00	104.65	45.35	150.00	Normal Expenses
R&D/Contingency	500.00	0.00	500.00	500.00	
Field Day	200.00	0	200.00	200.00	
Total	8604.00	5672.00	2932.00	9,204.00	See Note 1.

<b>1995-96 Administration</b>					
Newsletter	1500.00	767.00	733.00	1500.00	
Meetings	600.00	595.00	5.00	600.00	
President's Account	50.00	0.00	50.00	50.00	
Secretary's Account	500.00	901.00	(401.00)	500.00	
Treasurer's Account	100.00	103.15	(3.15)	100.00	
Insurance	850.00	915.00	(65.00)	850.00	
P.O. Box	104.00	104.00	0	104.00	
Voice Mail/Pager	150.00	127.00	23.00	150.00	
Miscellaneous	200.00	50.00	150.00	200.00	
Total	4054.00	3562.15	491.85	4,054.00	

Test Equipment Fund- remaining from money raised by raffles	1045.99				
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Note 1: As we did not spend the money on antennas and some other capital areas, we had a large budget surplus. Combined with the income shortfall of \$1473 this resulted in a net gain in total funds of about \$1500. We plan to make the same improvements planned for last year, and are using the same budget figures for this year. The one exception is the addition of an antenna for '61.

### Hurricane Frequencies Submitted by Marty, N1QIR

Check out this latest list of hurricane frequencies for those with HF or Shortwave receivers, The web site and author of this listing is listed below:

Bill Synder's Original Hurricane Frequency List:

Homepage: <http://members.ecom.net/~snyder/index.htm>

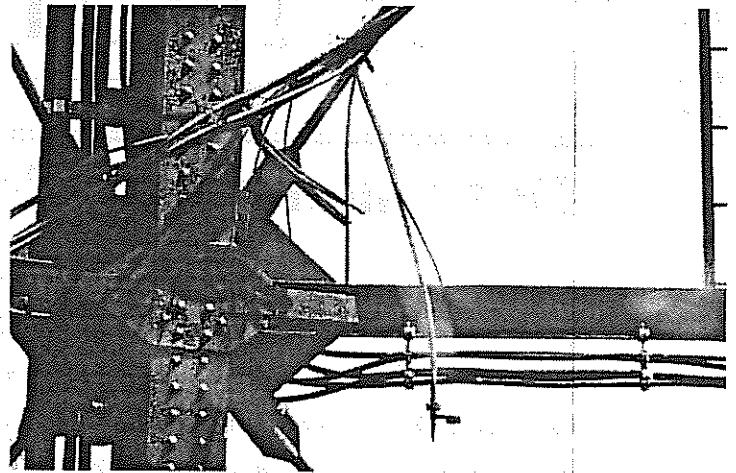
Email Address: [snyder@ecom.net](mailto:snyder@ecom.net)

#### Hurricane Frequencies

(Unless otherwise noted, times are UTC, freq in kHz)

Revised August 1, 1998

The high-frequency hurricane season intercepts have been gleaned from numerous sources. Times and frequencies are subject to frequent change, and are listed for reference only. Check frequently during hurricane season for updates. This is the original Hurricane



Here's an example of what they were up against. There was unused cable that probably has been there since the shelter was first in place, during the '60's.

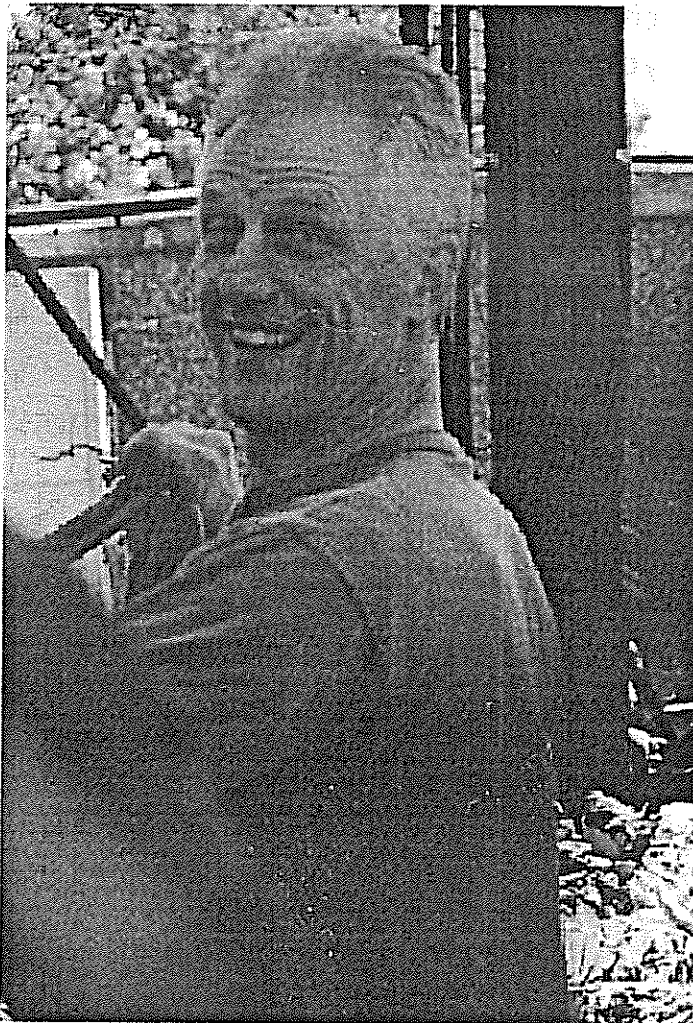
N1NOM Photo

Frequencies list, published during every hurricane season since 1991. Copies of this list are scattered across the Web. Virtually all of them are now obsolete.

By bookmarking the aforementioned page, you will be able to access the latest copy of Hurricane Frequencies when you need it. If you copy this list, credit the author. Do not remove update request and

e-mail address. This is the only way we can keep the list updated. If you spot an error or omission, please send a correction immediately. Thank you all who have so generously contributed information. Enjoy!

**Editor's Note:** Marty gave us the list, but space did not permit us to print it. Go to the Web Page for the actual list, or send me an email and I'll send a copy in a reply.



Paul smiles while they work. He's an energetic, athletic guy. You should have seen him leap up on the shelter.

N1NOM Photo



Ever since we had one of these that had a sign announcing "Andy House" - "Handy House" without its H...Ed and the guys have a fixation with outhouses. And when they see one with my initials, they naturally have to photograph it.

N1NOM Photo