The Minuteman Repeater Association

The Minuteman

Volume 35, Number 3 January 2006

MMRA Board Minutes - by Bob Evans, N1BE

The MMRA Board met at 7:00 PM in Chin's Restaurant, Marlboro MA on December 14th, 2005. Present were K1IW, KC0OXY, K1KWP, N1BDA, W1DYJ, W1BRI and N1BE. The following summarizes the items discussed.

Kevin, K1KWP presented a Treasurer's report which highlighted the current balance and anticipated revenue and expenses for the remainder of the fiscal year. In short, we are about $500 down from where we were at this time last year. Kevin's report also included a new diagram of the entire MMRA system and affiliated repeaters.

Discussion turned to recent members who have not renewed and heavy users of the MMRA system who are not members. The consensus was to encourage conspicuous non-members to help support the repeaters they use by joining the club.

The Heavy Hitters Traffic Net requested use of the MMRA system for their nightly 10PM NTS net. The board approved this request, specifically for automatic linking of 2-meter repeaters in Quincy, Stoneham, Mendon, Brookline, and Marlboro, and the hub on 449.925. The Weston 2-meter repeater will not be linked. (At this writing, repeaters have been reprogrammed and an email with more details was sent to all club members who supplied an email address to the MMRA)

Bryan, W1BRI discussed progress on the new repeater site in Mendon MA. The 146.61 repeater was moved to his home for a tune-up. We're awaiting action by that town, but Bryan expects to have it installed in Mendon very soon.

K1IW presented the opportunity for the MMRA to purchase a package of repeater controllers, (1) SCOM 7K, (1) SCOM 6K, a spare telephone module and a spare speech module for $488.60. These are already in K1IW's possession. After some discussion, three motions related to this were voted with K1IW abstaining:

- Buy the package of repeater controllers. Motion Passed.
- Sell the 6K controller on eBay. Motion Passed.
- Ask the Clay Center to allow us to replace their ARCOM controller with a 7K. If they approve, sell the ARCOM on eBay. This is expected to help the stability of the MMRA system. Motion Passed.

The Marlborough East site now has an unused 2-meter Stationmaster antenna. One possible use is to establish a frequency agile link radio at that site. This could be used for on-demand linking of MMRA to other repeater networks. We have a controller, but would need to add a radio. This is a complicated issue. The exact proposal and whether it met FCC rules was not clear. Discussion of this item is postponed to the next meeting.

K1KWP reminded us of the Boxboro convention in August. In return for the function room we use, the MMRA will probably need to help similarly to our directing parking at the last convention. Kevin suggested we consider offering 2-year MMRA memberships at a small discount from our booth. We also can consider whether to raffle a small item like an HT. No action was taken, but the convention will be discussed in more detail as the date approaches.

Adam, KC0OXY, expressed interest in MMRA Newsletter editing. Adam will do this beginning with the January 2006 newsletter.

Finally, K1IW mentioned the January meeting at the Clay Center in Brookline is an opportunity for hams living in the immediate Boston area to attend an MMRA meeting. K1IW encouraged us to "talk-up" the meeting on nets and to invite other hams to this meeting.

Inside this issue:

About the Minuteman Repeater Association

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA has built a large system of repeaters in Eastern Massachusetts.

The Minuteman newsletter is mailed one week before each meeting. Members are encouraged to submit articles. Articles may be sent to the editor via email to newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

The MMRA meets on the 3rd Wednesday of September, November, January, March, and May. Meeting time, locations and talk-in frequency vary. These are announced in the newsletter and on weekly nets. Meetings are open to all interested parties.

Each Tuesday evening at 8PM the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Feel free to join us.

Membership in the MMRA is open to all radio amateurs. Annual dues are $25 per individual or $35 per family. See our website for details.

Email to the club leadership should be sent to mmra@mmra.org. The MMRA maintains a web site at: http://www.mmra.org/

An email distribution list for club members named "MMRA" has been established on: http://www.yahoogroups.com/

MMRA requests that no part of this newsletter be copied or posted elsewhere without prior approval from the club. Your cooperation in this matter is greatly appreciated.

Repeater and Frequency Information

Location	MHz	PL	Call	Note
Bolton	29.620	131.8	W1OJ	Affiliated, FTL
Marlboro	53.810	71.9	W1BRI	PTL
Norwell	145.250	77.0	AC1M	Affiliated, PTL
Belmont	145.430	67.0	WA1RTT	Affiliated, PTL
Mendon	146.610	146.2	N1BHI	*Coming Soon!*
Brookline	146.820	146.2	K5TEC	FTL
Quincy	146.670	146.2	W1BRI	PTL
Stoneham	146.715	146.2	N1NVL	PTL
Weston	146.790	146.2	N1BE	PTL
Marlboro	147.270	146.2	W1MRA	PTL (to 10 Meters)
Hopkinton	223.940	103.5	N1BHI	FTL
Quincy	224.400	103.5	N1KUG	FTL
Weston	224.700	103.5	N1NOM	FTL
Marlboro	224.880	103.5	W1MRA	FTL (to 10 Meters)
Weston	442.700	88.5	N1NOM	FTL (Coming soon)
Norwell	443.600	88.5	NS1N	Affiliated, PTL
Brookline	446.325	146.2	W1CLA	Affiliated, PTL
Stoneham	446.725	88.5	N1NVK	FTL
Milford	446.825	100.0	WA1QGU	Affiliated, PTL
Brookline	447.875	136.5	K1IW	Affiliated, FTL
Shrewsbury	449.575	88.5	W1BRI	FTL
Belmont	449.650	67.0	WA1RTT	Affiliated, FTL
Marlboro	449.925	88.5	W1MRA	Network Hub

Marlboro	144.390	none	N1QPR-2	APRS Digipeater
???	145.630	146.2	W1MRA	Fox Box

Internet	Echolink node 94940 connects to the Network Hub

Notes: FTL = Full Time Linked (usually to the Hub).
PTL = Part Time Linked (on schedule or demand).
Most repeaters link to the MMRA hub. Several can link to an alternate destination.
Additional repeater information is on the MMRA web site.

PL: PL is required to prevent interference. The code **750** will temporarily disable the MMRA PL requirement.

Using the Autopatch: Only the hub has a telephone line.
(1) Link to the hub if necessary.
(2) Then bring up the patch using the 449.925 autopatch codes.

Control codes are sent to members upon receipt of dues.

President's Corner - by Bob DeMattia, K1IW

This new year brings changes both near and far for our hobby.

In the near category, the last stage of the MMRA's repeater relocations is close to fruition. All of the equipment for our new Mendon site is ready to go and awaiting coordination with the bucket truck needed to install the antennas. The new site will give MMRA coverage to the Southwest of Boston, along the I-495 corridor.

In the far category, the FCC and ARRL continue to meddle with the amateur licensing structure. The latest proposal is to allow Technician class licensees entry-level privileges on the HF bands. For those people who entered our hobby with the codeless technician license, this is an unprecedented gain. Overall, the proposal seems reasonable – the main difference between technician (those without HF privileges) and technician plus (those who do have them) is that the latter passed a 5 WPM Morse Code test – something which the FCC has now eliminated anyways. While some may say we are "giving away the store" by doing this, I would say that this is something that was already done when the code requirement was removed. It is a better thing for our hobby to modify the entry-license license class because that class needs some sort of experience with HF. There is a hole is our current structure in that we create a whole pool of new amateurs every month who may never experience a major facet of our hobby. The proposal limits these licensees to certain sub-bands similar to the Novice sub bands of years past (those these new sub bands are larger). It also limits output power to 100W on 160-12m, and 50W on 10m. For those who have checked, the novice sub bands in particular are very under used at present. Let's get our newest licensees fully involved with the hobby and bring some life back to the less used portions of our allocations!

TIOS Net Information and Recap

The MMRA holds its "Technical Information and Other Stuff Net" each Tuesday at 8PM. This is where to get a first peek at club and amateur radio news. All MMRA repeaters are linked for the net. The net control schedule is as follows:

Week 1 - **W1NAU** - Tim Week 2 - **W1EUJ** - Dave Week 3 - **KB1KZI** - Jimmy
Week 4 - **K1KWP** - Kevin Week 5 - **W1DYJ** - Larry (also alternate for other weeks, and net manager)

Participation for 2005Q4:

11/01/2005: 14 11/08/2005: 7 11/15/2005: no report 11/22/2005: no report
11/29/2005: 9 12/6/2005: 8 12/13/2005: 6 12/20/2005: 7
12/27/2005: no report 1/3/2006: 16

Average check-ins: 9.57

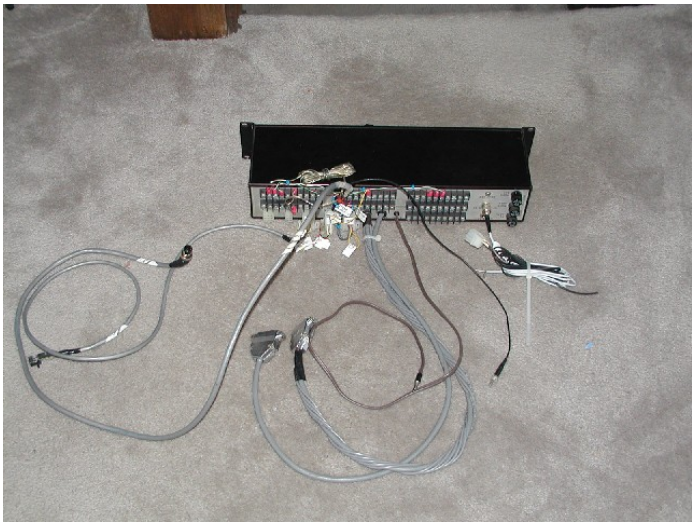
MMRA Leaders

President	Bob DeMattia	K1IW
Vice President	Steve Telsey	N1BDA
Secretary	John McGovern	W1JMC
Treasurer	Kevin Paetzold	K1KWP
Clerk	Bob Evans	N1BE
Technical Officer	Bryan Cerqua	W1BRI
Director	Larry Banks	W1DYJ
Director	Tom Muise	W1CDA
Director	Steve Schwarm	W3EVE
Director	Bill Thorpe	WA1NLR
Emergency Coordinator	Bill Northup	N1QPR
Net Manager	Tim Nau	W1NAU
Newsletter Editor	Adam Korab	KC0OXY
Public Service Coordinator	Kevin Paetzold	K1KWP
VEC Liaison	Bill Wade	K1IJ
Web Page Editor	Bob DeMattia	K1IW

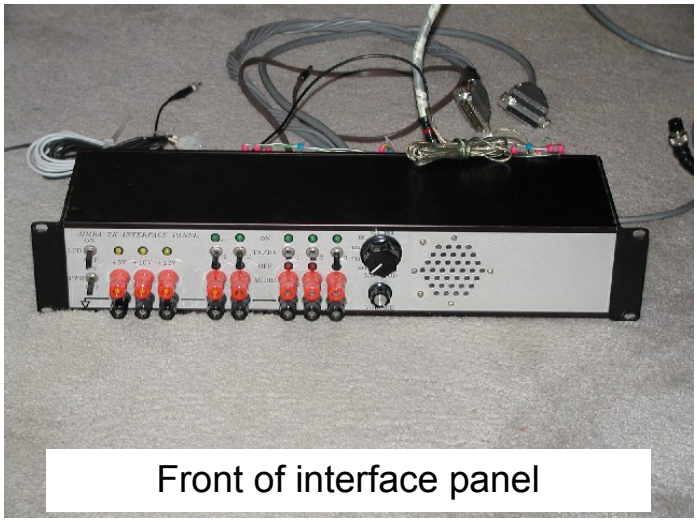
Repeater Report — by Bryan Cerqua, W1BRI

146.61 Repeater upgrade for new Mendon location:

The repeater was pulled out of the Marlboro east site in late November. Since then I have been re-doing the wiring using the interface panel that was built by Walter, N1HBR, It had been used on the old 449.925 repeater. This interface panel is very convenient because it has all the inputs and outputs brought out to Molex connectors on the rear panel (below).



The box also has a built in audio amplifier and selector knob for listening to the audio in and out for all ports. Using this interface panel really made the job much easier since all the connections for the Scom controller had already been done. To fit this interface panel into the repeater cabinet all the guts had to be removed and re-installed in a lower position in the cabinet. This also made room for a rack shelf to support the two link radios. The system uses two link radios, one for linking to 449.925 and the other for linking to Milford 446.825. The 2 meter side can be linked to either repeater one at a time or both. Also the Milford repeater can be linked to 146.61 without the HUB.



Front of interface panel

The duplexers were measured using a network analyzer and found to be perfect. The duplexer for 146.61 was purchased from Wacom and factory tuned. The duplexer is a very nice 6 cavity duplexer with 8" cans, much better than most duplexers I have seen.

New cables are currently being made up for connecting the repeater to the duplexer. The old cables were constructed from semi-rigid hardline that I think had some loose connectors for a suspected source of crunchies. The new RG214 cables are custom made with the correct connectors to avoid using adapters.

Bob, K1IW had updated obtained a Scom 7K controller with an LED display that he programmed up to support 3 radio ports just like what is used at the other repeater sites. The older controller had no LED display and is now used a backup or possibly for a remote base setup for the Marlboro east site. This would allow the 6 meter repeater to go back on a 7K controller along with the 449.925 link radio and 2 meter remote base. This project is planned for sometime early this year.

Since the Mendon is also the police and fire site it requires us to install the repeater using the correct grounding and lightning protection. I had two polyphaser protectors that I was not using and they will be used for this new site. I would like to thank Clark, N1NVK for providing us with a nice copper grounding bar and accessories to install it. This saved the club $100.

The repeater is battery backed up using a large gel cell battery donated by Roger, WA1NVC. A battery backup box containing some relays had to be built for this. The box also has a float charge circuit for maintaining the battery. Further, The repeater drops from 90W to 25W to save the battery upon loss of AC power.

The antenna will be mounted to the pole at the Mendon site using a super heavy duty mount that we got from Andy, N1BHI sometime ago that I had been sitting on in my garage. This mount will be fastened to a 6 foot mast that will be lag bolted into the pole, see photo of mount for more details. The antenna will be connected to the repeater using Andrew LDF2-50 3/8" hardline. The run is only about 60 feet and the loss should be about 0.65dB. The 3/8" hardline is much easier to work with than the 7/8" stuff that is normally used.

(Continues on page 5)

Repeater Report - (cont.)

(Continued from page 4)

I have been running the repeater in my garage now for a few days on a dummy load to make sure the controller is doing what it is suppose to. I've tried linking it up to Milford and it sounds pretty good. The M120 link radio for Milford runs on a rubber duck mounted to the top of the repeater cabinet at about 2 watts since the line of site distance between the Mendon and Milford sites is about 5 miles. The Mendon site already has a UHF omni-directional antenna that we can use for the 449.925 link radio. While at the Mendon site I could hit 449.925 using my HT on lower power so this antenna should work out just fine.

The installation of the repeater will take place early this year, we are waiting on a bucket truck and some AC wiring. I will have all items ready to go so we can do the entire job in about half a day.

I would like to thank Bob, K1IW for providing me with the Scom code updates for the Mendon repeater. Also thanks to my brother David and his son Mathew for helping remove the 146.61 repeater from the Marlboro site and loading it into his truck to take back to my place for re-building.

Antenna mount for Mendon

Marlboro, 53.81:
This repeater is now back on the Hamtronics controller and is not linked up automatically for the Tuesday night nets. It can be linked up manually for now.

Quincy 224.400
This repeater may have some problems with the Mirage power amp. It has been acting up some lately and plans are to get to the site some weekend to look at what is going on with it. Currently is seems to be OK.

Quincy 146.67
Bob, K1IW had gone to the Slygo site to allow him to reach the repeater for spending a few hours updating the 7K controller code, now 67 should be fully up to date like all the other repeaters.

Stoneham 446.725 and 146.715 repeaters:
Bob, K1IW drove to the site last week to install a new memory module with the latest updates into the 7K controller. This should also take care of the fast running clock that has been a problem in the past when it comes time to link up for the nets.

The 446.725 when linked to 449.925 is causing the repeater and network to key up once in a while. Plans are to visit the site to fix this problem, for now the 446.725 repeater is running in stand alone mode.

Brookline 146.82 and 446.325 repeaters.
Plans are to replace the Arcom controller with an SCOM 7K controller for better reliability and control.

Shrewsbury 449.575:
The Diamond X500 antenna was replaced with an Antennex 5dB stick, the repeater is now working very well. Plans are to re-visit the site soon to modify the fan control circuit so it comes on when the Hub repeater is active in addition to the normal repeater operation.

New England Division Public Service Opportunities

Listing public events at which Amateur Radio communications is providing a public service and for which additional volunteers from the Amateur Community are needed and welcome. Please contact the person listed to identify how you may serve and what equipment you may need to bring.

The most up-to-date copy of this list is maintained as http://purl.org/hamradio/publicservice/nediv.

Every event listed is looking for communications volunteers

DATE	LOCATION	EVENT	CONTACT	TELEPHONE	EMAIL
Feb 10	Laconia, NH	Sled Dog Derby	Dave, KA1VJU	603-398-3667	ka1vju@cnharc.org
Feb 11	Laconia, NH	Sled Dog Derby	Dave, KA1VJU	603-398-3667	ka1vju@cnharc.org
Feb 12	Laconia, NH	Sled Dog Derby	Dave, KA1VJU	603-398-3667	ka1vju@cnharc.org
Feb 18	Sandwich, NH	Sandwich Notch 60	Dave, KA1VJU	603-398-3667	ka1vju@cnharc.org
Feb 25	Meredith, NH	NH Dog Race	Dave, KA1VJU	603-398-3667	ka1vju@cnharc.org
Feb 26	Meredith, NH	NH Dog Race	Dave, KA1VJU	603-398-3667	ka1vju@cnharc.org

This list is published periodically as demand warrants by Stan KD1LE and Ralph KD1SM. Our usual distribution is via packet to NEBBS, via Internet mail to the arrl-nediv-list and ema-arrl distribution lists, and on the World Wide Web. If other mailing list owners wish us to distribute via their lists we will be happy to oblige. Permission is herewith granted to republish this list in its entirety provided credit is given to the authors and the URL below is included. Send comments, corrections, and updates to:

(via packet) KD1SM@K1UGM.#EMA.MA.USA,
(via Internet) KD1SM@ARRL.NET.

We make an attempt to confirm entries with the coordinator unless the information is from another published source. We very much appreciate the assistance we have been receiving from our 'scouts'; everyone is welcome to send us postings.

Refer to http://purl.org/hamradio/publicservice/nediv for the most recent version of the PSLIST.

Ham Aid Fight Against Texas Grass Fires

Amateur Radio Emergency Service and other Amateur Radio operators from the West Texas Section, and especially the Abilene vicinity, were called to assist with communications during the last week of 2005 when the wildfires struck Cross Plains, Texas, in the southeastern portion of neighboring Callahan County.

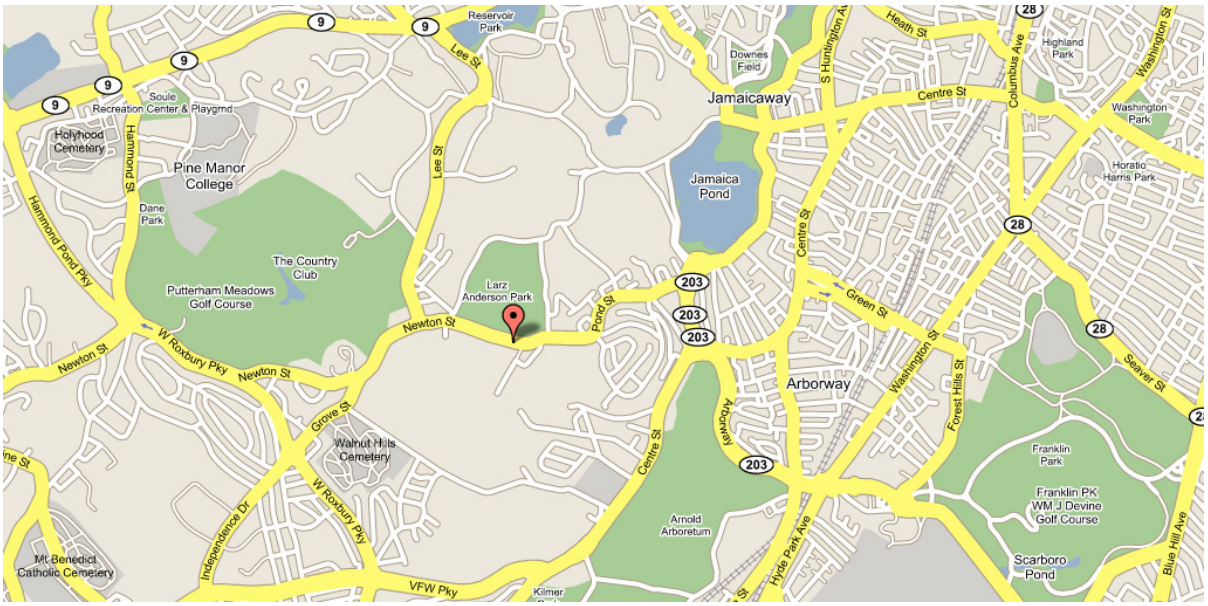
"There was no cell service because the connection to the cell tower was burned," said Bill Shaw, KJ5DX, the ARRL Emergency Coordinator in nearby Taylor County. "There was one landline phone working at the church where the Cross Plains Red Cross shelter was set up."

Amateur Radio operators established communication via UHF and VHF radios between the Cross Plains Shelter, Brownwood Red Cross Shelter, and Abilene Red Cross headquarters. A team of 14 radio amateurs was on hand during this emergency.
"We kept up 24 hour communications for Wednesday, Thursday, and Friday until noon via ham radio," Shaw explained. "The fire started as a grass fire about noontime on December 27, and quickly escalated into a raging wildfire that was fed by 45 mph winds."

Unfortunately, the fire quickly spread toward town about 3 miles away, and it burned the area that is about 4 to 6 miles east-west and 2 to 3 miles north-south in size.

"About 31 fire departments fought fires until about 5:00 the next morning," Shaw said. As a result of this fire, almost 8,000 acres burned, 152 homes were damaged, and that represents 25 to 30 per cent of the homes in Cross Plains. Over a hundred of those homes were completely destroyed. *(Source: The ARRL Letter Vol. 25, No. 01 January 6, 2006)*

Directions to the MMRA Meeting



We will be meeting at **The Clay Center Observatory**, 20 Newton Street, Brookline, MA 02445. The Clay Center information phone number is 617-454-2718 **Please monitor the talk-in on 146.820 in case we must make a last-minute change of plans.**

From the West:

Follow Route 9 into Brookline. At the intersection with Chestnut Hill Ave near the Brookline Reservoir turn south onto Lee Street, keeping right at merge with Clyde Street. Continue to the end at the traffic lights and get in left lane. Turn left onto Newton Street, stay in right lane, and look for red tile and stucco buildings on your right. Turn right onto St. Paul's Avenue (some maps call it Mt. Walley Ave.) (Private Way) For the Clay Center: Take 2nd right through main gate, travel up the hill, bear LEFT, over top of hill, and park on Athletic Center roof deck.

From the East:

Follow the Jamaicaway into Jamaica Plain. Follow the Jamaicaway south, keeping Jamaica Pond on your right. (Ignore the Pond Street that goes east at the pond.) When the road is split by a tree-lined park, get in the right lane and turn right at the traffic lights onto the Pond Street that heads west, up hill, and around many sharp curves. When the road straightens out look for Hopkins Road on your left. Take your next left onto St. Paul's Avenue (some maps call it Mt. Walley Ave.) (Private Way). For the Clay Center: Take 2nd right through main gate, travel up the hill, bear LEFT, over top of hill, and park on Athletic Center roof deck.

From the South:

Follow the VFW Parkway into West Roxbury. After Corey Street get in left lane. Look for signs for "Village at Chestnut Hill" and Bertucci's. Turn left onto Independence Drive, follow through lights, then straight through rotary onto Grove Street. Stay in right lane, and go straight ahead at lights by Exxon Station. You are now on Newton Street. Follow Newton Street through traffic lights at Clyde Street. Stay in right lane, and look for red tile and stucco buildings on your right. Turn right onto St. Paul's Avenue (some maps call it Mt. Walley Ave.) (Private Way). For the Clay Center: Take 2nd right through main gate, travel up the hill, bear LEFT, over top of hill, and park on Athletic Center roof deck.

Ham Call to Action: Sago Mine Survivor

Dear Radio Friends.....For those of you that may not know, the only survivor of the recent West Virginia coal mine disaster is an amateur radio operator (KC8VKZ). While he remains in ICU in critical condition and in need of our prayers, let's show him and his family how much the radio community cares about our brother by sending our well wishes on our QSL card.

If you don't have a QSL card, write a small "Get Well" note on a post card with your call sign, to let him know hams do care. You will find his name and mailing address below.

KC8VKZ
Randal L. McCloy, Jr.
P. O. Box 223
Philippi, WV 26435

Next Meeting — Wednesday January 18, 2006
K5TEC: Clay Center Field Trip

Club member Bob Phinney, K5TEC, is our host for the next MMRA meeting. We will tour the Clay Center for Science and Technology where Bob works. In addition to an impressive telescope, computer labs and solar power, the 146.82 MMRA repeater is at this site. Bob will provide an overview of the research going on at this facility. Also on tap is a tour of the observatory's telescope.

We will meet at The Clay Center, 20 Newton Street, Brookline, MA. Directions and map are on the previous page and available on the club website—http://www.mmra.org. The meeting will start at 7:30PM. Talk-in will be on 146.820.

Calendar of Ham Radio Events

(Flea market info from W1GSL list. http://mit.edu/w1gsl/Public/ne-fleas)

Jan 18:	**MMRA meeting**
Jan 21:	NE Antique RC Flea, Nashua NH
Feb 12:	Radio 37 Antique Westford MA
Feb 18:	AARC Flea, Marlboro MA
Feb 25:	RANV Flea, Milton VT
Feb 26:	LIMARC Flea, Hicksville NY
Mar 18:	ECARA Flea, Pomfret CT
Mar 25:	GBRA Flea, Rochester NH
Mar 26:	FARA Flea, Framingham MA

MMRA VE Sessions
3rd Saturday of each Month
9 AM at the Marlboro Public Library
Contact: Bill Wade, K1IJ
617-699-3670 Evenings 6 to 10 PM,
Weekends 8 AM to 10 PM.
Accredited by the ARRL VEC

THE MINUTEMAN REPEATER ASSOCIATION

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WE'RE ON THE WEB!
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