



The Minuteman Repeater Association

The Minuteman

Volume 33, Number 1

September 2003



President's Corner by Kevin Paetzold, K1KWP

I hope that everyone had a good summer even though it seemed short, cool, and rainy. A new membership year is now upon us. Thank you to those members who have already renewed and to those who have recently joined.

As I have indicated in previous newsletters it is important for additional and/or new people to become more actively involved in the MMRA by attending board meetings and by potentially stepping up to serve in the various elected and appointed offices of the organization. Nonetheless, I once again find myself elected as President and most of the other office holders remain the same as well. I would like to thank Steve Telsey, N1BDA, for agreeing to serve as our new Vice President. The results of the May elections are contained elsewhere in this newsletter.

Last Year's Activities: In retrospect, the MMRA had a great deal of activity in the 2002-2003 membership year. There were multiple work parties at the site that houses the 53.81 transmitter and the 146.61 repeater. The "temporary" guy cables on the 53.81 antenna that had been in place for too long were replaced with more permanent steel cables. The shelter was painted. The coax damage from various rodents was repaired.

The 147.27 repeater in Marlborough was acquired and its potentially dangerous antenna structure was repaired. The 147.27 repeater is now one of flagship repeaters that the MMRA operates due to the great coverage that it provides and the regular usage that it receives during the commuting hours. The link that this repeater provides to the W1OJ 29.62 MHz repeater has also been very active as well.

In 2002-2003 the MMRA really enhanced its online presence. MMRA Secretary and Web Page Editor K1IW revamped the web pages and added the ability for members to join, renew, and pay dues online.

During summer a Red Cross community first aid and CPR course was made available and taught by KB1IYK.

The MMRA repeaters were used to support various public service events last year including the Boston Marathon and the Walk-for-Hunger. I believe that supporting events like this is one of the primary purposes of the MMRA and that all members should be proud that the MMRA repeaters were able to be

put to this use. Special thanks to all of those members, especially W1BRI, whose tireless efforts keep our repeaters reliably on the air so that they can be used for events such as this.

Membership and Finances: The MMRA is funded totally by membership dues. As of this writing I believe that we have 169 members. Because almost all memberships expired this month this number assumes that everyone that was a member in 2002-2003 will be renewing for 2003-2004 year. This still indicates a steady gradual decline in memberships year over year.

For several years I have indicated that the MMRA is treading water financially. I believe that the overall results for 2002-2003 is that we ended the year about \$5 in the black and that the overall balance in the MMRA accounts remained about the same. Given the declining membership our operation in the black is only possible due to various actions that the officers have taken in the last several years to reduce the operating costs of the organization. In 2002-2003 the greatest cost reduction was made possible at the initiative of our newsletter editor, N1BE. Bob was able to find a way to significantly reduce the printing costs, while maintaining or improving quality of the newsletter.

As a reminder one way that members can help the MMRA to make their membership dues go farther is to elect to receive the newsletter via electronic means. This saves the printing and postage costs and results in more than \$5 saving for each member that elects to do so.

Meeting Venue: The largest expense for the MMRA at this time is the cost for meeting space. The issue of high cost for meeting space is compounded by the very low level of meeting attendance. Generally less than 10% of the membership attends a meeting. (Continued on page 3)

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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 n1be@arrl.net. 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 web site is: <http://www.mmra.org/>

An email distribution list for club members has been established on: <http://www.yahogroups.com/>

— the name of the group is "MMRA".

Repeater and Frequency Information

Location	MHz	PL	Call	Note
Marlboro	53.810	71.9	W1BRI	PTL
Marlboro	146.610	146.2	N1BHI	FTL
Quincy	146.670	146.2	W1BRI	PTL
Stoneham	146.715	146.2	N1NVL	PTL
Weston	146.820	146.2	WZ0C	PTL
Brookline	146.985	88.5	W1FCC	Affiliated, 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	N1HBR	FTL
Stoneham	446.725	88.5	N1NVK	NA
Brookline	447.875	88.5	K1IW	Affiliated, PTL
Shrewsbury	449.575	88.5	W1BRI	FTL
Marlboro	449.925	88.5	W1MRA	Network Hub
Marlboro	144.390	none	N1QPR-2	APRS Digipeater
Marlboro	145.030	none	W1MRA-3	KA-node Digipeater
?	145.630	146.2	W1MRA	Fox Box

Notes: FTL = Full Time Linked to the Hub.
PTL = Part Time Linked (on demand).
NA = linking is Not Available.

PL: PL is now required on 2 meters to prevent interference.
The code **750** will temporarily disable the 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.

MMRA Leaders

President	Kevin Paetzold	K1KWP
Vice President	Steve Telsey	N1BDA
Secretary	Bob DeMattia	K1IW
Treasurer	Bill Northup	N1QPR
Clerk	Jon Titus	KZ1G
Technical Officer	Bryan Cerqua	W1BRI
Director	Larry Banks	W1DYJ

Director	Shelley Northup	N1VJE
Director	Steve Schwarm	W3EVE
Director	Bill Thorpe	WA1NLR
Emergency Coordinator	Bill Northup	N1QPR
Public Service Coordinator	Kevin Paetzold	K1KWP
Newsletter Editor	Bob Evans	N1BE
VEC Liaison	Bill Wade	K1IJ
Web Page Editor	Bob DeMattia	K1IW

President's Corner (cont.)

(Continued from page 1)

As a result, the MMRA is looking into alternate places for the meetings.

Because of the success of the wintertime and summertime get-togethers that we held at the Southborough House of Pizza, at the August board meeting it was decided to plan the September and January meetings for this year at restaurant venues. The Wednesday September 17 meeting will be held at the Pizzeria Uno in Waltham at 7PM; directions are elsewhere in this newsletter. I hope to see you there.

The membership of the MMRA is essentially regional and not focused on a specific city or town. As a result, it is difficult to make everyone happy with a meeting location. In general, my goal is to continue have the meetings somewhere near the intersection of Rte 128 and the Mass Pike as this seems to be the best compromise location. Another solution would be to have meetings in rotating locations near the various repeater communities (Marlboro, Quincy, Stoneham). Soon we will announce an MMRA member survey where the board will attempt to get input and guidance from the membership on issues such as this.

At this time the November meeting is scheduled to take place at the MEMA bunker in Framingham. This depends on the homeland security situation being not be more elevated at that time. Further details on this meeting will be in the November newsletter.

A Potential Challenge for 2003-2004: Anyone who has had the opportunity to take a close look at the shelter on Slygo Hill should be aware that after many years of service this structure has just about reached the end of its life and will **soon** need to be replaced. This shelter is the home of the 449.925 and 147.270 repeaters and the two digipeaters. In addition it also contains the receivers for the 53.81 repeater. This shelter is on land which is owned by the City of Marlborough at Stevens park.

The MMRA may be able to get some space in a new structure that the city plans to build for the park. If this occurs it would allow us to remove the existing shelter after relocating the repeaters. If the current plans that the city has fall through the MMRA will still have to do something to acquire a new shelter to replace the existing shelter.

No matter what course this takes it will mean some work and cost for the MMRA. It is highly likely that this project will consume a significant amount of the funds that the MMRA has. Since we are only adding funds to the accounts at about \$5 a year this is a big deal. Hopefully the upcoming winter will not be six months long like the last winter. Nonetheless there will probably be timing windows related to the seasons that require our moving quickly to make all this happen and to keep any potential downtime for the repeaters, particularly the hub of the system, as short as possible.

I ask all members of the MMRA to monitor this situation and if possible to be prepared to help with any work parties that may be required. Updates will be provided via the email lists, the newsletter, and the Tuesday night nets.

CEMARC Youth Net: For most of the year the MMRA supported the CEMARC (Council of Eastern Massachusetts Amateur Radio Clubs) Youth net. This net was intended to provide an on the air forum for students and other young hams. It was considered important by those who initially organized this net, N1DHW, KA1PON, and myself, that it be restricted to youths and that adults would be discouraged from checking into the net. This net had many check-ins during most of the year but by summer the net was suspended due to inactivity. I believe that a requirement for the continuation of this net is that one or more of the youths involved agree to serve as net control (otherwise some adult would have to be net control, contrary to the primary purpose of the net). Stay tuned for further developments in this space. I would like to thank W1DYJ and N1NOM for agreeing to be the control operators for many of the sessions of the net.

Election Results

On Wednesday, May 21, 2003, at the regular membership meeting, the Minuteman Repeater Association held its annual election of officers and board members. The results are as follows.

Officers (1-year term):

President: Kevin Paetzold... K1KWP
 Vice President: Steve Telsey..... N1BDA
 Treasurer: Bill Northup N1QPR
 Secretary: Bob DeMattia K1IW
 Clerk: Jon Titus KZ1G

Directors (2-year term):

Bill Thorpe WA1NLR
 Larry Banks W1DYJ
 Shelley Northup N1VJE *
 Steve Schwarm W3EVE *

* Existing term has not ended, up for election May 2004.

Board Meeting Notes by Jon Titus, KZ1G

The MMRA plans to experiment with an Echolink trial. Bryan, W1BRI, has been considering various ways to connect to our network and how we would control the link to the Internet. Bill, N1QPR, offered to host the Internet connection from his QTH.

The board discussed the repeater shelter at Slygo. Kevin mentioned he had met with a Marlborough town official who said the new shelter, including a snack bar, was still in the works. The exact placement of space for our radios remains undecided. Kevin mentioned the town has not asked for any payment, but that we should expect some sort of "payment in kind." This may mean purchasing an access door or helping in some other way with the facility. Exact arrangements remain unclear.

The board also considered changing the dues structure to a more rational policy, originally proposed by K1KWP with ideas from K1IW:

- Dues paid from May 1st through December 31st: full rate (\$25/\$35) membership will be good through August 31st of the following year.
- Dues paid January 1st through April 30th: 80% rate (\$20/\$28) membership will be good through August 31st of the current year.
- Memberships will be effective on the 1st of the month following the month in which we receive payment, so folks joining in May will not be members until after the annual meeting (i.e. they can't vote). People joining in May through July will get a few "free" months, but the club is fairly inactive during this period anyways.
- There was a suggestion for replacing the Novice membership, as that license class no longer exists. We could replace it with a promotional rate, the rate and conditions to be determined by the board. As an example, it might be in the form of a coupon sent to newly licensed hams for 50% discount or something like that. This gives the board the ability to create some sort of promotion without having to change by-laws.

The board members thought this proposal sounded good, but did not take a formal vote on it.

The MMRA board addressed the issue of reducing the number of regular meetings as well as reducing the number of newsletter issues each year. The board felt we should not change the meeting or newsletter frequency, but should change the meeting format and location. As a result of discussions, the board decided to change the format of the September and January meetings to a social occasion and to continue the November, March, and May meetings in their present form, with a guest speaker.

The board discussed moving some of the meetings to locations closer to Route 128, and locations in Waltham and Newton were proposed. Several members will look into meetings in local restaurants that have meeting areas separate from their dining room. Uno's Pizzeria in Newton Corner was mentioned as an example. The facility offers good parking, has a separate meeting room, and is right off the Mass. Pike at Exit 17. The board members felt we needed to cut back on the expense of meeting space at the Campion Center and also take the meeting place closer to members we never draw out for meetings.

Newsletter frequency will remain the same, although the September newsletter might run as a shortened edition, with fewer pages, if we lack materials due to "attenuated" ham activities during the summer.

Kevin proposed the MMRA run a brief member survey to better determine the needs and interests of our members. Knowing this information might help us retain members and better address their interests. Board members should forward their ideas for questions to Kevin who will assemble them and route a draft questionnaire to board members for their comments.

Kevin's slide on the MMRA Omnibus Rationalization Act included a great photo! It shows why you don't use a torch to cut holes in the metal tower for a cell site. Apparently welding sparks set cable insulation on fire within the tower, which was open at the base. The entire cable run went up in flames, like a giant chimney fire.

Repeater Report

There was no repeater report filed for this newsletter. The following is from the incomplete recollections of your newsletter editor.

There is now some automatic linking of 53.81 to the hub during commuting hours but I am not sure of the details.

During the summer, Bryan, W1BRI, did some work on the 449.925 transmitter which was not producing its usual output power. He took the Quintron transmitter offline and it was returned a week later, having been retuned and with an added cooling fan.

Minuteman Repeater Association Quick Membership Renewal

(Please use reverse side for new memberships)

Name: _____

Callsign: _____

Email: _____

Dues paid (please check one):

☐ Individual Membership (Dues: \$25 per year)

☐ Family Membership (Dues: \$35 per year)

Do you want to receive the newsletter via email? If so, you'll receive more content earlier.

☐ Check box for Electronic Newsletter: You must supply an email address.

Any other info changed since your last application was filed?

☐ If yes, please check here and please fill in new info on the reverse side.

Please submit completed application forms with your dues
at the MMRA meeting
or mail to:

MMRA
P.O. Box 669
Stow MA 01775-0669

Minuteman Repeater Association, Inc.
P.O. Box 669
Stow MA 01775-0669

A Non-Profit Communications Organization Serving the Public in Time of Emergency.

— Membership Form —

☐ New or ☐ Renewal

☐ Individual Membership (Dues: \$25 per year) or ☐ Family Membership (Dues: \$35 per year)
or ☐ Novice Membership (1st year Dues: \$10)

I hereby apply for membership in the **MINUTEMAN REPEATER ASSOCIATION, INC.** I agree to abide by the rules and regulations of the Association as stated in the bylaws., and understand that acceptance of this application entitles me to all rights and privileges of membership as provided under the bylaws.

☐ Check box for Electronic Newsletter: Receive more content earlier. Must supply email address.

Name: _____ Callsign: _____ Class of License: _____

Address: _____ Home Phone: _____

Town, State, Zip: _____ Work Phone: _____

Email Address: _____

Occupation: _____ Employer: _____

Member of the ARRL? _____ Other Clubs? _____

Bands and Modes you operate. Please check all that apply:

	Fixed	Mobile	Portable	FM	DTMF	CW	RTTY	PSK31	APRS	Packet	SSB
HF											
VHF											
UHF											
Satellite											

I can and am willing to assist/serve the Association and/or help maintain the Repeaters in the following ways:

- | | | |
|---|---|--|
| <input type="checkbox"/> Antennas | <input type="checkbox"/> Meeting Setup | <input type="checkbox"/> Speaking at a meeting |
| <input type="checkbox"/> Association Officer | <input type="checkbox"/> Net Control | <input type="checkbox"/> Special Projects |
| <input type="checkbox"/> Board of Directors | <input type="checkbox"/> Newsletter | <input type="checkbox"/> Technical Library |
| <input type="checkbox"/> Education | <input type="checkbox"/> Public Service | <input type="checkbox"/> Web Site |
| <input type="checkbox"/> Emergency Communications | <input type="checkbox"/> Publicity | Other—Please specify: |
| <input type="checkbox"/> Equipment Construction | <input type="checkbox"/> Radio Shelters | _____ |
| <input type="checkbox"/> Equipment Transportation | <input type="checkbox"/> Refreshments | _____ |
| <input type="checkbox"/> Grant Writing | <input type="checkbox"/> Repeater Control Operator | _____ |
| <input type="checkbox"/> Legal Aid | <input type="checkbox"/> Repeater Technical Committee | _____ |
| <input type="checkbox"/> Medical Aid | <input type="checkbox"/> Social Events | _____ |

Other family members:

Name: _____ Callsign: _____ Class of License: _____

Name: _____ Callsign: _____ Class of License: _____

Name: _____ Callsign: _____ Class of License: _____

Name: _____ Callsign: _____ Class of License: _____

The Start of Amateur Repeaters by Rick Zach, K1RJZ

In the mid-late 1960's the concept of channelized ham repeater operation was considered by some hams as too radical. Many considered the use of crystal-controlled receivers as "not ham radio". This new mode of operation was certainly not endorsed by the conservative ARRL and even the FCC wasn't certain as to the legality of ham radio repeaters. How times change!

Typically, hams converted surplus commercial band radios into amateur use about ten years after each product dominated the commercial scene. Due to FCC commercial modulation bandwidth rule changes, surplus equipment prices were very low and the performance was very high. Hams also gathered to swap whatever parts and knowledge they had to share. In fact, this was downright FUN!

In the 1960's, long before GE's demise in the 90's, GE's proud tube-type workhorse was known as the Progress Line. This included the front-mounted MI-33 but most radios were installed into the trunk with only a control head showing under the dashboard. The Progress Line was very popular as a 2-meter ham radio from 1968 into the late 70's. Obtaining this surplus crystal controlled radio with the optional "four freq deck" was a matter of on-air discussion and peer envy!

In the mid-60's Motorola came out with what many consider to be the best transistorized two-way radio introduction in history, the MOTRAC. The MOTRAC family was seen on Adam-12 and many other cop shows. Obtaining and converting these great radios became a personal goal for many hams.

To compete with the MOTRAC, GE came out with what many consider to be the greatest flop in two-way radio history, the GE Transistorized Progress Line or TPL. GE actually repurchased many dysfunctional TPL's and gave customers the older tube-type Progress Lines that actually worked.

Thankfully, the MASTR-Pro and MASTR-II replaced the notorious TPL. The GE MASTR-II series was a smashing success. Thanks to some vibrant third party aftermarket support, hundreds of MASTR-II ham repeaters are still on the air 30-years later! The Motorola MICOR repeater also enjoys a similar stature among hams.

At one time, converting these older commercial radios presented a very compelling value proposition to the MMRA. However as more repeaters proliferated, the need to buy additional crystals for many new repeaters became cost prohibitive. Except for the hard core enthusiast, commercial mobile radio conversions became the exception rather than the rule. Of course the off-shore ham equipment manufacturers eventually dominated the end-user mobile market. That dominance continues to this day but some new and highly relevant exceptions are beginning to appear at hamfests and via eBay.

2003 and beyond Recent FCC rule changes have again mandated that all new commercial radio systems be capable of "narrow band modulation" and many heretofore high-end radios are now entering ham service as surplus. Many well known name brands are showing up as surplus the the list now includes Motorola, Midland, GE, Kenwood Commercial Land

Mobile and others. The events of the 1960's may be repeating.

One cost-effective ham conversion is an inexpensive 110-Watt GE Delta. This fifth generation family of GE radios are starting to surface about ten years after their dominant commercial years. This is a favorite radio for high-performance mobile use on six-meters for many reasons:

- very low cost when acquired as surplus equipment
- easy to convert to ham use
- great audio and a great receiver
- high transmit power in most units (and adjustable)
- excellent propagation on 50 MHz, particularly in hilly areas

Business-band repeaters on low-band (below 6M) are not permitted by FCC rules. Most low-band commercial radios operated in simplex mode and due to that limitation, most mobile radios were manufactured with 110-Watt transmitters. If an enterprising ham can combine the excellent natural propagation of 50 MHz with high mobile transmit power and the utility of ham repeaters, the resulting performance can be without peer.

On the fly, a 99 channel, GE S950 / S990 Delta control head can download sub-groups of frequency/scan data into the synthesized Delta radio below. The Delta radios change their option packages by simply changing control heads. The radio RF drawer remains the same because the brains and personality are in the control head. Much like traditional ham gear, many radios can be programmed with a PC although these radios may require a few extra steps. This deluxe version control head goes for about \$35 on eBay.

A resurrected 32ch, 110-Watt GE Delta can be reprogrammed for use on 6-meters but variants are also available for the 2m and 440 ham bands. The operational performance of these commercial radios often far exceeds that of the typical off-the-shelf multi-use, multi-band ham radio. These high-power, synthesized workhorse radios originally sold for between \$1500 and \$3500. GE Deltas can be obtained on eBay as surplus for approximately \$35-\$75 and often come complete with cables and a standard control head. Depending upon what is available at the time, you may also need to acquire the radio RF drawer, cables and control head separately. To some hams, if you know what to look for, "the hunt" is simply part of the fun but this is also where sharing knowledge through clubs can play a key role.

In a strange twist of fate, the commercial land-mobile market would no longer support these very expensive high-end radios and GE finally decided to exit from the land-mobile business. Under the M/A Com name, Tyco now owns what remains of the former GE Land Mobile empire but the legacy is now only a shadow of what once was a dynasty.

In 2003, many hams who enjoy deploying this gear tend to join together to swap manuals, expertise and parts. Hmm... this sounds more like "classic" ham radio, doesn't it?

[See the full text of this article with pictures on the <http://www.bostonusergroups.com/gemoto/FM.htm> web page. — Ed.]

Directions to the MMRA Meeting by Bob DeMattia, K1IW

From Route 128 (I-95) Southbound:

1. Take the Totten Pond Road/Winter Street Exit, at the top of the ramp, turn left at the light. As you go over the bridge, get in the left lane. Go straight through the first light after the bridge.
2. You will now be approaching a light where there are three ways you can go: U-turn, left, or straight. From the left most lane, take the U-Turn.
3. After the U-Turn, work your way over to the right lane and turn right onto Second Avenue.
4. Follow Second Avenue, which will become Bear Hill Road. Uno's will be on your left.
5. If you come to a traffic light with a Mobil station on the corner, you've gone too far.

From Route 128 (I-95) Northbound:

1. Take the Route 20 exit, head eastbound. As you go up the hill, get in the left lane. Go straight through the first light at the top of the hill.
2. At the next flashing light, turn left.
3. Just past the Compass Bank on your left, take a right turn (so you don't end up on Rt. 20 again).
4. Follow the road to the bottom of the hill, then turn left at the light.
5. As you cross over the bridge, get in the right lane. Turn right just after the bridge and before the Mobil station. You will now be on Bear Hill Road.
6. Follow Bear Hill Road, Uno's is on your right.
7. If you come to a Costco, you've gone too far.



New RACES Plan by Tom Kinahan, N1CPE, MA RACES Radio Officer

We've updated procedures for the Massachusetts RACES program, including defining the Massachusetts Emergency Frequency Plan or MEFP, updating net operation activities requiring the usage of and defining the terms "Over", "Out" and "Break" in the course of a controlled net to indicate what the NCS requests, a list of available VHF Simplex frequencies to pass traffic or other coordination, updated contact information on RACES, ARES, SKYWARN and MARS leadership, updated sample RACES appointment forms and updated club contact information courtesy of the ARRL. Please download a copy and keep it with your station records.

This document is dated July 1, 2003 and approved by myself, Steve Finks, W1SBF the State Communications Officer, and Stephen McGrail the Director of the Massachusetts Emergency Management Agency. Accept no substitutes or previous versions at this time. Get your copy at:

<http://www.qsl.net/n1cpe/racesplan.pdf> or

<http://n1cpe.dnsalias.net:81/racesplan.pdf>

Please forward this message as needed for the widest distribution among Amateur Radio Operators in Massachusetts.

Interesting Freeware

AA2T has indicated that there is some interesting software available at the Dazy Web site,
<http://www.dazyweblabs.com/shannonsoft/page3.html>

There are programs for using your PC as an AF instrument like an Oscilloscope, Spectrum Analyzer, Function Generator, etc. There are also programs useful for circuit design and analysis.

Public Service Volunteer Opportunities in the New England Division

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	Tel/Email
Sep 12	Provincetown MA	MS Challenge walk to Dennis MA	John N1PYN	508-588-3250 n1pyn@arrl.net
Sep 13	Dennis MA	MS Challenge walk to Truro MA	John N1PYN	508-588-3250 n1pyn@arrl.net
Sep 14	Dennis MA	MS Challenge walk to Brewster MA	John N1PYN	508-588-3250 n1pyn@arrl.net
Sep 14	Natick MA	Ride for Hunger to Grafton to Stow MA	Bruce KC1US	781-275-3740 rfh2003@amateur-radio.net
Sep 19	Plymouth MA	ALA Autumn Escape to Sandwich MA	Bruce KC1US	781-275-3740 kc1us03@amateur-radio.net
Sep 20	Sandwich MA	ALA Autumn Escape to Brewster MA	Bruce KC1US	781-275-3740 kc1us03@amateur-radio.net
Sep 21	Brewster MA	ALA Autumn Escape to Provincetown MA	Bruce KC1US	781-275-3740 kc1us03@amateur-radio.net
Sep 21	Boston MA	Jimmy Fund walk	Steve W3EVE	508-384-7697 w3eve@arrl.net
Sep 21	Madison CT	Bike Tour for MS to Moodus CT	Scott AA1WM	203-676-1016 aa1wm@arrl.net
Sep 22	Moodus CT	Bike Tour for MS to Madison CT	Scott AA1WM	203-676-1016 aa1wm@arrl.net
Oct 11 to 13	Pepperell MA	Fall Classic Soccer	John KB1HDO	978-772-5406 kb1hdo@hotmail.com
Oct 12	Boston MA	BAA Half Marathon	Bob WA1IDA	508-650-9440 walida@arrl.net
Oct 17 to 19	Boston MA	Head of the Charles Regatta	Jeff N1FWV	978-536-2842 rwjeffa@attbi.com

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 (see URL above). 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.

License Class, Volunteer Examiners Needed by Steve Telsey, N1BDA

The Colonial Wireless club in Concord is looking for VEs to administer exams on Friday, November 14. If you might be available, please put it on your calendar and let me know.

The exam will be the last night of a 4-night Technician class offered through Community Education. I don't know how many students there may be yet as registration just

opened up.

If you know of any interested folks, the classes will run November 4, 6, 12 and 14. All classes will be 7-10pm. The class fee is \$30 and covers registration and course materials only - the exam fee is additional. Interested students should call 978-318-1540 to register. The course number is 125.

Next Meeting — Wednesday September 17, 2003 Social Hour at Waltham Pizzeria Uno

Join fellow MMRA members for a social gathering at the Waltham Pizzeria Uno Chicago Grill, 155 Bear Hill Road, Waltham, MA 02154, Tele: 781-487-7177.

Directions are given on page 8. (Bear Hill Road runs North from Rte 117 just west of Rte 128.)

The meeting will start at 7PM. We plan to meet in Uno's back room, although we may not have it all for the MMRA. **Talk-in is on 146.820.**

Calendar of Ham Radio Events

Sept 14: SEMARA flea, S.Dartmouth MA

Sept 17: MMRA social meeting

Sept 21: Flea at MIT, Cambridge MA

Oct 3-4: Hosstraders flea, Hopkinton, NH

Oct 15: MMRA board meeting

Oct 31: MMRA Newsletter Deadline

Nov 15: WARA+1200 auction, Newtonville

Nov 19: MMRA meeting at MEMA

Dec 17: MMRA board meeting

Dec 26: MMRA Newsletter Deadline

Jan 21: MMRA social meeting

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



MMRA VE Sessions

3rd Saturday of each Month

9 AM at the Marlboro Public Library

Contact: Bill Wade, K1IJ

781-891-9079 Evenings 6 to 10 PM,

Weekends 8 AM to 10 PM.

Accredited by the ARRL VEC

THE MINUTEMAN REPEATER ASSOCIATION

MMRA

P.O. Box 669

Stow, MA. 01775-0669

Email: mmra@mmra.org



WE'RE ON THE WEB!
[HTTP://WWW.MMRA.ORG/](http://www.mmra.org/)
