



The Minuteman Repeater Association

A non-profit organization providing communications infrastructure and volunteers for community and emergency events.



The Minuteman

Volume 45, Number 2

November 2015

Membership Meeting ~ Wednesday, November 18 ~ 7 PM

New Approaches to VHF/UHF Frequency Sharing

Lee Lemoine N3LEE

Meeting Co-sponsored by New England Spectrum Management

Lee will be presenting on a number of spectrally efficient communications methodologies. Topics include simulcast/voting technologies, commercial 6.25kHz technology and their advantages for Amateur communications. Commercial hardware will be available to demonstrate simulcast and NXDN/IDAS technology.

Location: Holiday Inn Boxborough , Boxborough, MA

Just off I-495 at Exit 28, Route 111.

(Home of the ARRL New England Convention)

Talk-in 147.27

There will be a membership vote at this meeting to spend \$6000 for our Hopkinton Buildout at this meeting. See page 5.

MMRA Public Service Activity Summary Member/Repeater Participation

- ★ Sutton Chain of lights, 06 Dec 14
- ★ BAA 2015 Boston Marathon, 20 April 15
- ★ Westford Apple Blossom Parade, 16 May 15
- ★ Bike MS: Minuteman Ride, 18 July 15
- ★ CF Cycle for Life, 05 Sep 15
- ★ Ride to Defeat ALS, 27 Sep 15
- ★ Jimmy Fund Walk 27 Sep 15
- ★ BAA Half Marathon, 11 Oct 15
- ★ Head Of the Charles Regatta, 16-18 Oct 15
- ★ Metrowest YMCA / Ashland Half Marathon & 5K & 1 mile Walk/Run, 31 Oct 15



**Thanks to
David Wolfe, KG1H**

Have you renewed your membership yet?

All 2014 memberships expired on August 31st! Time to renew either on the Member's login link at www.mmra.org or by U.S. Mail with a check to MMRA, PO Box 669, Stow, MA 01665.

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Notes: FTL = Full Time Linked (or default state)
PTL = Part Time Linked (on schedule or demand)

Ashland Half Marathon to use CCMCC

David Wolfe ~ KG1H

The Ashland Half Marathon (31 October) net control personnel are using the CCMCC that is being lent by the Clay Center. The race officials are very enthusiastic about us using it. Several young hams are helping out at the marathon with adult supervision from Bob Phinney, K5TEC

The Clay Center Mobile Command Center (CCMCC)

A Mobile Laboratory and Communications Van!

Clay Center Observatory at the Dexter Southfield School, Brookline, MA



The CCMCC, owned and operated by the Clay Center Observatory at Dexter Southfield School, is equipped with an integrated shock-absorbing server rack with 4 Mac Minis running Windows 7 and OS X. Thirteen articulating touch screen displays are permanently mounted and can be used for such things as operation of telescopes, displaying weather maps, data logging, radio operations, and accessing the Internet.



The CCMCC is equipped with GPS for position (APRS) and time, 2m/70cm FM amateur radio station, NOAA weather radio with alert, a 2kW generator, 2kW inverter, networking, amplified cellular Internet. The 2" trailer hitch and large flat roof are ideal for mounting extra communications antennas for additional stations. In large events, 10x10 pop-up tents can be positioned at the side door and rear door to provide a sheltered place for spectators to gather and for information tables with literature.



The CCMCC can be used as a mobile amateur radio communications center.



Four work stations with dual displays in the back and two in the front provide versatility for most events.

Ashland Half Marathon, 31 October 2015

David Wolfe ~ KG1H

The following hams participated in this event: David K. Wolfe KG1H, Tim Miranda KC1AJJ, Kellin Bickar KB1PSC, Edward Curley KC1CLA, Marek Kozubal KB1NCG*, Tom Turner KB1OQA, David Gilman KC1DDH, Nicholas J Mollo KC1DKY, Glenn Skinner KC1BGR, Mark Richards K1MGY, Robert Phinney K5TEC*, Marty Sullaway KC1CWF*, Jeremy Breef-Pilz KB1REQ*, Henry Bonchek KC1DBA* (* = Clay Center)



Here are a few photos from the Half-Marathon.



Hopkinton Buildout ~ Bob DeMattia ~ K1IW

Last year, MMRA needed to vacate from the EMC tower in Southboro. The board chose to relocate the 449.575 repeater to our Hopkinton location. MMRA has occupied the Hopkinton site since the 1980's with its 223.94 repeater. The site is at 370 feet, and our antennas will be located at the 160 foot point on the tower.

It has taken sometime to secure permission from the Hopkinton building's owner, but this is now done.

In order to ready the site for the repeater, some tower work is needed. The board is proposing to add some additional functionality as well so that we don't need to have additional tower work done later:

- (1) Replace existing 30-year-old 223.94 antenna
- (2) Install a new triband 2m/222/440 antenna : this will be the main antenna for 440, a backup for '94, and allow us to install a 2m remote receiver at the site.
- (3) Install a PD83 antenna: this will be for a 6m remote receiver
- (4) Replace the 30-year old link antenna
- (5) Add an additional link antenna for #2 and #3 above.

The 2m component will improve '27 coverage in the Ashland area. Alternatively, we could install a temporary 2m repeater at the site when it is warranted for public service events.

The additional antennas could also be used as a backup site for 449.925 and/or 147.27.



The total cost of equipment, cable, and labor for this proposed operation is \$6000. There will be a membership vote for this expense at our November meeting.

Mike Neilsen, W1MPN, to lead budget process.

Mike, W1MPN, is heading up a process that would be used to develop a budget for the next fiscal year. He is looking for volunteers to form a committee to develop this budget in time for review and approval at the annual meeting in May. If you are interested, please contact him at w1mpn@mmra.org or w1mpn@comcast.net

October Business Meeting

Bob Evans, Clerk, N1BE

The MMRA board of directors held a business meeting at the headquarters of Stratus Technologies in Maynard on October 21 at 7 PM. In attendance were K1KWP, K1IW, N1BE, W3EVE, N1BDA, W1MPN, N1DDK, W1BRI, WA1NVC, N1NVK and KG1H.

Kevin, K1KWP gave a treasurer's report covering balances, income and spending. A review of membership numbers shows that last year had the highest number of members in the last ten years. Dues are still arriving for the year that began on Sept 1 so we do not have a final count for this year.

Bob, K1IW discussed the Boston Marathon. The director of the marathon will be organizing and recruiting communicators in the next marathon. We expect the organizers to decide which repeater assets they want to use and request them from the MMRA public service coordinator. Bob has given them guidance on what historically been used.

Mike, W1MPN, discussed an outline of the process that could be used to develop a budget for the next fiscal year in time for the annual meeting in May. Mike also made suggestions for Risk Management to assure the long term viability of the MMRA. The board informally discussed these suggestions. Based on the sense of the board, Mike will look for volunteers to form a committee to develop a budget for the annual meeting in May. The board was interested in Risk Management, but needed more information to consider before taking action. Mike suggested that he might get someone to provide pro-bono legal advice on this matter at a future business meeting.

Bob, K1IW discussed antenna work at Hopkinton. This was a refined proposal based upon discussing Hopkinton at a recent busi-

ness meeting. This includes antennas, feed lines, a tower climber and miscellaneous items. The board agreed to an expenditure not to exceed \$6000 for this project. Bob will ask the membership to approve this expenditure at the November meeting.

Bob next discussed the Boxboro convention. This is now an annual event. We needed a better antenna or a better location for the talk-in radio. To address this issue, Bob is seeking access to another location at the hotel.

The meeting adjourned at 8:20 PM.

**Next MMRA Business Meeting:
Wednesday 16 December, 7PM**

Stratus, Maynard

The Amateur's Code

The Radio Amateur is:

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC...station and skill always ready for service to country and community.

Paul M. Segal, W9EEA, 1928

Upcoming MMRA Meetings

Wed, 23 Sept ~ Membership Meeting
The Greatest Hobby in the World ~ Rick Roderick, K5UR
Northborough Public Library

Wed, 21 Oct ~ Business Meeting
Stratus, Maynard

Wed, 18 Nov ~ Membership Meeting
New Approaches to VHF/UHF Frequency Sharing ~ Lee Lemoine, N3LEE
Holiday Inn, Boxborough

Wed, 16 Dec ~ Business Meeting
Stratus, Maynard

Wed, 20 Jan ~ Membership Meeting
Microcontrollers for Radio and Other Applications
(Raspberry Pi, Arduino and Si5351)~ Bob Evans, N1BE
Clay Center, Brookline

Wed, 17 Feb ~ Business Meeting
Stratus, Maynard

Wed, 16 Mar ~ Membership Meeting
Antenna Modeling, It's Easier than Building Them ~ Larry Banks, W1DYJ
TBD

Wed, 20 Apr ~ Business Meeting
Stratus, Maynard

Wed, 18 May ~ Membership Meeting
Programming Your Radio with CHIRP ~ James Lee N1DDK
and Annual Meeting: Officers Report and General Elections
Campion Center, Weston

Wed, 15 June ~ Business Meeting
Stratus, Maynard

Saturday, 27 Aug ~ Mid-summer Get Together
Boxboro ARRL Convention
Holiday Inn, Boxborough

Don't Forget! Join Us.

Every Tuesday @ 8 PM
Technical, Informational and Other
Stuff Net

The MMRA's repeaters are linked Tuesday nights for the TIOS Net. Keep up with what's happening in the MMRA and ask your ham related questions.

Net Control Operators:

Week 1	WA1JIM	Jimmy Devaire
Week 2	W1DYJ	Larry Banks
Week 3	KC1CLA	Ed Curley
Week 4	K1KWP	Kevin Paetzold
Week 5	KB1OQA	Tom Turner

To connect using Echolink / IRLP during the Net:

- Echolink Conference *NEW-ENG2*
- IRLP node 4133

MMRA Leaders

Officers

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

Board of Directors

Director »2017	Steve Schwarm	W3EVE
Director »2017	Roger Coulson	WA1NVC
Director »2016	Clark Conti	N1NVK
Director »2016	Mike Neilsen	W1MPN

Repeater Trustees

* Belmont 145.430	James Lee	N1DDK
* Boston 927.0625	Rick Zach	K1RJZ
* Boston 146.820	John Mullaney	K1BOS
* Brookline 145.160	Joyce DeMattia	N1QPH
* Brookline 146.820 Rcvr	Bob Phinney	K5TEC
* Burlington 146.715	Bruce Pigott	KC1US
* Burlington 446.775	Larry Banks	W1DYJ
* Hopkinton 223.940	James Cahill	KB1LOY
* Lowell 442.250	Vince De La Flor	K1LVF
* Marlborough 53.810, 449.575; Quincy 146.670;	Bryan Cerqua	W1BRI
* Marlborough: 29.68, 144.390, 147.270, 224.880, 448.225, 449.925, 927.700 — all as W1MRA		
	Bill Northup	N1QPR
* Mendon 146.610	Jim Podsiadlo	AE1C
* Quincy 224.40	Bill Dunn	N1KUG
* Weston 146.790	Bob Evans	N1BE
* Weston 224.700	Eddie Mulhern	N1NOM
* Weston 442.700	David Wolfe	KG1H

Additional, non-Voting

* Newsletter Editor	Larry Banks	W1DYJ
* Emerg. Coord.	Kevin Paetzold	K1KWP
* Pub. Serv. Coord.	David Wolfe	KG1H
* VEC Liaison	Bill Wade	K1IJ
* Net Manager	Larry Banks	W1DYJ
* Web Page Editor	Bob DeMattia	K1IW

* Appointed

Previous issues of the MMRA Newsletter are available at:
www.mmra.org → [Newsletter Archive](#) (on the left)

MMRA VE Sessions

Third Saturday

9 AM at the Marlboro Public Library

Contact: Bill Wade, K1IJ 781-891-9079
Evenings 6 - 10 PM Weekends 8 AM to 10 PM.
Accredited by the ARRL VEC

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New Approaches to VHF/UHF Frequency Sharing

Lee Lemoine N3LEE

Holiday Inn, Boxborough ~ Talk-in 147.27

Calendar of Ham Radio Flea Markets

For more information: <http://mit.edu/w1gsl/Public/ne-fleas>

14 Nov	Bourne MA	FARA @UpperCC VoTech	15 May	Cambridge MA	Flea at MIT
5 Dec	Windsor CT	VR+C Mus 115 Pierson LN	4 Jun	Hermon ME	PSARA @HS
6 Feb	Springfield VT	CVFMA.org @VFW	19 Jun	Cambridge MA	Flea at MIT
13 Feb	Marlboro MA	AARC	17 Jul	Cambridge MA	Flea at MIT
27 Feb	S Burlington VT	RANV @HI	13 Aug	St Albans VT	STARC @VFW
5 Mar	Chicopee MA	MtTomARA @MooseLodge	21 Aug	Cambridge MA	Flea at MIT
6 Mar	Westford MA	Radio @Regency	26,28 Aug	Boxboro MA	FEMARA NE Conv
19 Mar	Dayville CT	ECARA @StJosephCh	28 Aug	Adams MA	NoBARC @BoweFld
20 Mar	Southington CT	@HS	17 Sep	Forestdale RI	RIAFMRS @VFW
25,26 Mar	Lewiston ME	AARC ME Conv @Ramada	18 Sep	Cambridge MA	Flea at MIT
17 Apr	Cambridge MA	Flea at MIT	14,15 Oct	Deerfield NH	NEARfest XX
29,30 Apr	Deerfield NH	NEARfest XIX @FG	16 Oct	Cambridge MA	Flea at MIT
14 May E	Greenbush NY	EGARA @FireCo			

THE MINUTEMAN REPEATER ASSOCIATION

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

Email: contact@mmra.org



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

**Have you renewed your
membership yet?**

All 2014 memberships expired on August 31st!
Time to renew either on the Member's login link
at www.mmra.org or by U.S. Mail with a check