

The Minuteman, Volume 54, Number 3, January 2025



The Minuteman Repeater Association

The Minuteman



The Minuteman Repeater Association is a non-profit organization providing communications infrastructure and volunteers for community and emergency events.

Notices

MMRA Elmer Forum

- New or prospective hams: Join us to ask questions about ham radio!
- Experienced hams: join us to provide answers.

The 2nd Wednesday of the month: 1/8, 2/12 , 3/12

ZOOM: [876 8326 0138](https://mmra.org)

Passcode: elmer

Membership Meeting: Wednesday, 15 January 2025 ~7:30 - 9:30 pm

Andy's Ham Radio Linux
Andy Stewart - KB1OIQ

This is a Hybrid meeting: Marlborough Central Fire Station + ZOOM Members: log into your account on <https://mmra.org> to obtain the ZOOM info. Non-members: send an email to contact@mmra.org to request the ZOOM info.

Andy Stewart (KB1OIQ) will give a talk about a popular software collection called "Andy's Ham Radio Linux" (AHRL). In its latest version, AHRL has been tested on several flavors of Debian, Ubuntu, and Raspberry Pi OS. AHRL is installed on top of whatever Linux you're already running. It provides over 80 ham radio programs which are all Free Software, Open Source Software, or equivalently licensed. Andy will discuss the changes to the most recent version, and will also give a high level overview of the available programs.

Andy has been licensed since 2007, and now holds an Amateur Extra license. Andy is a retired computer engineer, having retired in August 2024.

President's Corner ~ David Hornbaker, N1DCH

Happy New Year!

Have you made any Ham related New Year's Resolutions? Mine are to complete my first CW QSO and to do more POTA activations (maybe even a CW one).

The January Elmer forum will be held on Wednesday, January 8 at 7:30 PM. Please see the Elmer section below for Zoom meeting information

Join us for the January 15, 2025, membership meeting at Marlborough Central Fire Station. Andy Stewart ~ KB1OIQ will be discussing: "Andy's Ham Radio Linux (AHRL)". AHRL is a collection of amateur radio Linux tools. If you cannot make it to Marlborough, this is a hybrid meeting, and the Zoom meeting information is available on the website (www.mmra.org). You must be logged into the website to view the information.

The Minuteman Repeater Association will have a table at the Algonquin Flea on February 15. Please stop by and say hi. The Flea market is held at the [1Lt. Charles W. Whitcomb School, 25 Union St, Marlborough, MA](#).

Join us Tuesday nights at 8:00 PM for our weekly Technical Information and Other Stuff (TlaOS) net. There will be a lively discussion on all sorts of HAM issues, including equipment, antennas, software, repeaters, and other stuff. The main purpose is to test our ability to link up the repeaters in case of an emergency, or to support some event like a marathon. You can also join via EchoLink if your radio is a little under the weather (or in my case, too lazy to walk down to the shack). See below for more information.

You can find out more information about how and when the repeaters are linked on the website (https://www.mmra.org/repeaters/repeater_linking.html).

Please remember to keep your profile up to date (<https://www.mmra.org>) especially if your email changes. Note that if your callsign changes, send email to contact@mmra.org and we will update your callsign in the database.

Renewals may be done on the website, or you can mail your renewal to:

Minuteman Repeater Association
PO Box 669
Stow, MA 01775-0669

Please allow 7 days for us to process your renewal. Please allow 14 days for renewals that are mailed.

The MMRA VE team is looking for additional volunteers. Information on becoming an ARRL-VEC accredited VE is available on the ARRL website <https://www.arrl.org/volunteer-examiners>. There is an open book test for certification. You do not need to hold an Amateur Extra license to volunteer. For more information contact Ron Rothman WO1E wo1e@mmra.org or ve@mmra.org.

Upcoming MMRA VE sessions:

- The January VE Session will be held on Saturday, January 18th at 9:15 AM, at the [Marlborough Public Library, Meeting Room 2, Marlborough, MA](#)
- The February VE session will be at the Algonquin Flea Market, Saturday, February 15th at 9:00 AM. The Flea market is held at the [1Lt. Charles W. Whitcomb School, 25 Union St, Marlborough, MA](#)

Walk-ins are welcome.

Please remember to bring a State ID, your FRN, and if upgrading, a copy of your current license (from FCC website) or proof of license from ARRL or QRZ website. For more information, contact Ron ~ WO1E at ve@mmra.org or wo1e@mmra.org.

Net Control Operators wanted! Interested in becoming a control operator for the TlaOS net? Larry is looking for a back-up operator. Contact Larry Banks ~ W1DYJ w1dyj@mmra.org.

Do you know someone that has passed the Technician test (element 2) in the last year? They are eligible for free membership in MMRA. Have them send email to contact@mmra.org requesting membership. The club secretary will contact them with details on how to qualify.

73 ~ Dave ~ N1DCH

MMRA Elmer(ing) ~ Kevin Paetzold, K1KWP

In the November newsletter it was announced that the MMRA will be hosting an Elmering/Mentoring session. The intention is to give new or prospective hams a place to get questions answered, how to use their ham radio license, getting on the air, getting their license, info about local ham resources, and programming their radio. This is purposely being held on zoom so that unlicensed people can participate as well as the multimedia aspect of zoom vs. just a repeater contact.

I have heard members state that they do not think they are qualified to be an Elmer. That is completely wrong. If you have a license and have been on the air then you are certainly able to mentor other hams. The experience of new hams is just as important as people who have been licensed for decades. For example I bought most of my radios >20 years ago and I am not the best person to give advice on new equipment.



The first official session was held on Dec 11. There were 14 attendees and the session lasted a good 90 minutes. I want to thank all those who have supported this effort and made themselves available to staff the sessions.

I encourage all members to seriously consider supporting and attending the Elmer Forum. A website with a "flyer" giving info on this is available at <https://mmra.org/elmerforum/elmerforum.pdf>. The plan is the 2nd Wednesday of each month at 7:30 PM. The next one is Wednesday Jan 8 at 730PM which may happen before this newsletter issue was published. Additional sessions are February 12, March 12, and April 9. To join the meeting:

ZOOM: [876 8326 0138](https://mmra.org/elmerforum/elmerforum.pdf)

Passcode: elmer

73, K1KWP

Treasurer's Report ~ Kevin Paetzold, K1KWP

The MMRA receives donations each year. On behalf of the club I would like to acknowledge and thank the following members who have donated since my list in the November newsletter: KC1POR and KC1VNA.

So far 236 members have either renewed or recently joined since September 1, 2024 when the new membership year (2024-2025) started. This is the same number as the 2023-2024 year. However as of this writing 60 members who entered grace period on September 1 have not yet renewed and will have expired on January 1. This also means that 60 members are new either paid or free new hams.

We have three repeaters (Quincy, Belmont, Billerica) which we will need to relocate before very long. We will likely have significant costs associated with each these repeater re-locations if/when they actually happen:

- Quincy will likely require new shelter, antennas?, quantum unit of commercial antenna climber
- Belmont likely requires antenna(s), quantum unit of commercial antenna climber
- Billerica quantum unit of commercial antenna climber

I previously forecast that I could easily see this being \$10000 of spending. Because the membership approved \$3000 spending for Billerica at the November meeting I can now see this being \$13000 in spending for the three sites. It may not all happen in the same year but we need to prepare for this.

In addition as of this writing the 146.82 repeater is essentially off the air with a new problem which is not yet completely diagnosed. If this requires antenna system repair that is likely another quantum unit of commercial antenna climber (\$3000).

73, K1KWP

Directions to Marlborough Central Fire Station

Marlborough Central Fire Station
215 Maple St (RT 85), Marlborough, MA

Enter through the side classroom door.



20 November 2024 Membership Meeting ~ Minutes

MMRA Membership Meeting ~ November 20, 2024-Called to order @ 7: 53 PM)

Repeater Status Report: Bob DeMattia, K1IW

- Quincy 2m .67 Repeater: No further progress to report.
- (Formally) the Belmont Repeater 145.43: No further progress to report.
- Billerica 147.12: Awaiting confirmation for a new site.
- Weston 2m -Visting site on November 26th to hopefully resolve issues with 2m antenna.
- Burlington: Link radio is not functional.
- All other Repeaters: Functioning normally.



Vote to Approve Billerica Moving Expenses

Before a motion was made, the new location is near the water tower with 3 coax cables not in use that are available for the MMRA to use. The site appears clean from the outside. There are 3 iterations of repeaters along with cabinets, desks and other things that we will need a work party to gather up for disposal. A 6m repeater was taken down at that location. Also, according to Roger, this site has a generator and electricity is provided without cost to the MMRA. Bob adds that we have used this same climber in the past and must have 2 months' lead time before scheduling his part.

The expense breakdown is as follows:

- Climber \$2,100
- Second Antenna \$ 600
- U-Haul & Misc Parts \$ 300

Dave made a motion to approve up to a \$3,000 to move the Billerica Repeater to this new site. Seconded by Larry and the motion passed with a unanimous vote.

MMRA Elmer Forum: Kevin, K1KWP – Zoom Sessions

The official start for these monthly coaching sessions starts on Wednesday, December 11, 2024 at 7:30 PM and will continue on the 2nd Wednesday of each month thereafter.

We had an unofficial Elmer Forum start on November 13th with 2 new Hams participating along with 4-5 of us acting as Elmers. For this practice Elmer Forum session, many questions were asked and answered. We expect these coaching sessions will grow with more participants.

This is an opportunity to learn about the most suitable equipment to buy without breaking your budget, how to program your radios, where and when you can get on the air and so much more.

Exam Session

- Saturday, December 21, 2024, at 9:15 AM
- Marlborough Public Library, David Meeting Room, 18 Witherbee Street, Marlborough, MA 01752

- Please tell your friends, who are interested in taking tests, that they must have photo IDs and FRNs
- Copy of license required if upgrading (or proof from the ARRL or QRZ)
- Note: SS#s, are no longer accepted by the FCC. Everyone must have an FRN

Upcoming Meetings

- December 11, 2024, 7:30 PM – Elmer Forum Zoom Only
- December 18, 2024, 7:30 PM – Business Meeting Zoom Only
- January 8, 2025 – Elmer Forum Zoom Only
- January 15, 2025 – Membership Meeting (speaker TBD)
 - Location [Marlborough Central Fire Station](#) Training Room
- Tuesday night 8:00 PM (year-round) – Technical, information and Other Stuff Net
 - MMRA Linked Repeaters
 - The meeting ended informally at 8:15 PM.

Presentation by Dave Hornbaker: N1DCH - “Programming Your Radio with CHIRP”

David's interest in radio began as a youngster when he hung around his Uncle Myron Hornbaker's shack ~ W0GFU (SK) in Fowler, Kansas. In 1975 he earned a First-Class Radiotelephone Operator License (now General Radiotelephone Operator License). At a local telephone company David installed IMTS Telephones in automobiles. Later he worked for Wichita, KS television station ~ KAKE-TV as a master control operator. David has worked in the Computer Industry for over 40 years. He owns and is President of DCH Consulting Services, an Information Technology Company, has a Master of Science, Information Technology Degree from the University of Massachusetts and is President of the MMRA.

CHIRP is free, open-source software for programming many radios from various manufacturers. This software is available on Windows, MacOS and Linux. There are two versions of CHIRP: Next and Legacy. Next is the newest version and Legacy is the older version. To download CHIRP go to <https://chirpmyradio.com/projects/chirp/wiki/>.

Dave described the installation process on the three operating systems. Once installed and the unique cable that connects to a specific radio is in place, the first task is download the contents of what is on the radio to a computer file. The file received is either a clone file or a live file. The difference between these two types of files is the clone file is a static copy of the contents of the radio that can be edited and uploaded later back to the radio versus a live clone file that can be edited on the fly instantaneously to the radio. One other thing to note on the cable that connects from the computer to the radio is using a high-quality cable that has the 2303 or fa1 chipset for data transfers.

Check <https://chirpmyradio.com/projects/chirp/wiki/CableGuide>. Reliable sites for locating Repeaters are as follows: <https://www.nerepeaters.com/> and <https://amateur-radio.net/chirp/>.

Meeting Attendees

At Central Marlborough Fire Station Training Room:

David Hornbaker, N1DCH; Larry Banks, W1DYJ; Ken Horton, KA1GFN; Deb Horton, N1NVJ; Stephen Babbitt, KC1LPZ; Kevin Paetzold, K1KWP; Tom Sullivan, KC1VHD; Glenn Ghidaleson, WA2KRS; Michael J Burnell, KC1RSV; Eric Williams, KV1J

On the Zoom Meeting:

Roger Coulson, WA1NVC; Ken Peluso, KC1PFS; Joe Fratto K1UN; John Lemone, KC1T; Francisco Oliveira, KC1EV; Jonathan Traum, K1BTZ; James Mullally, AC1TB; Jennifer Lockfort, KC1VQV

Meeting Adjourned at 9:20 PM

Respectfully Submitted by Stephen M Babbitt, KC1LPZ, Clerk

18 December 2024 Business Meeting ~ Minutes

MMRA Business Meeting - December 18, 2024-Called to order @ 7: 31 PM

Repeater Status Report: Bob DeMattia, K1IW

- Belmont 145.43: Ed, KC1CLA, has contacted them during the last month and they have not responded. The plan is to move 145.43 to Burlington.
- Billerica 147.12: Bob has been in contact with the Town Manager, currently awaiting an approval.
 - If Billerica site becomes available, move 147.12 and 224.88 to the new Billerica site.
 - If the Billerica site is not available, the repeater will move 147.12 to Burlington.
- Boston 146.82: Power output has dropped – K1BOS is investigating. He has tightened all connections with no improvement. He will return with a Wattmeter.
- Boston 927.0625: The new Boston 900 Repeater has been built by WA1NVC. It is in burn-in testing.
- Burlington 224.88: The Burlington (link radio needs repair. (TX no power) Bob will fix it once we figure out the Billerica situation.
- Lowell 442.250: The Lowell link radio needs repair (TX low power). The link still works through North Reading, so there is no immediate need to make the trip to repair it.
- Marlborough 449.925: Hub1 link radio needs repair (TX low power and TX audio needs PL filter). The link radio is in Bob's garage for repairs.
- Marlborough 927.700: WA1NVC discussing upgrade.
- Marlborough West — While many may not have noticed, the anemometer at Marlborough West is fixed.
- Quincy 146.67: With no word – letter or phone call – from the Mayor's Office - the current plan looks likely to move 146.67 to Marlborough East.
- All other Repeaters: Functioning normally.

Allowing Members to Look Up Members: Kevin, K1KWP

- Should members be allowed to look up members on the MMRA Website?

- Should members be able to determine the membership status of another member (Active, Grace, Expired or Non-Member)?

The discussion varied. Roger suggested we keep it simple to name and callsign. Membership status ranged from member to non-member all the way from member to membership in the grace period (September 1st to December 31st) to recently expired membership from January 1st onward to one year or longer. No decision on this subject was made at tonight's meeting other than investigating it further before any formal motion is made.

MMRA Elmer Forum: Kevin, K1KWP

These Elmering sessions are on Zoom to both licensed and unlicensed Hams on the 2nd Wednesday of each month. November 13, 2024, was our initial informal Elmer Meeting Event, which was attended by a few people. On December 11, 2024, our first formal Elmer Session, was attended by 14 people, with one who was not licensed yet. We had several questions asked from recent new Hams. Many questions about licensing and upgrading, several questions on VHF/UHF and even more HF related questions.

One comment Kevin saw in the zoom chat section said, "I have learned more about ham radio from the MMRA than from the ARRL." We had some attendees that found round zero (from November) interesting enough that they came to this December forum and plan to come to the next in January.

Social media: Dave, N1DCH

- We have 915 followers on Facebook
- Should we have regular posts:
 - Announcements
 - Meetings
 - Elmer Forum
 - TlaOS Net
 - VE Sessions
 - Other events, e.g. Ham Exposition, Algonquin Flea Market
- Should we add other Social Media? Return to X (Twitter) other Social Media Sites?

Tonight's discussion includes putting some of our presentations on YouTube to draw attention to the MMRA and Amateur Radio. Other social media sites where younger people are active received discussion. Updating our events was discussed with K8ZBE offering to assist in some of the updating.

Algonquin Flea: Saturday, February 15, 2025

- Place: [Charles W Whitcomb School \(Marlborough Middle School\)](#)
- Doors open at 9:00 AM
- Setup available 6:30 AM
- MMRA VE Team providing VE testing
 - At tonight's meeting we discussed staffing our table(s) and what items we will be selling.

- Exam Session
 - Saturday, January 18, 2025, at 9:15 AM
 - Marlborough Public Library, David Meeting Room, 18 Witherbee Street, Marlborough, MA 01752
- Please tell your friends, who are interested in taking tests, that they must have photo IDs and FRNs (and please obtain your FRN # from the FCC Website prior to arrival).
- Copy of license required if upgrading (or proof from the ARRL or QRZ)
- Note: SS#s, are no longer accepted by the FCC. Everyone must have an FRN.

Upcoming Meetings

- January 8, 2025 7:30 PM
 - Elmer Forum – Zoom Only (Open to all)
 - Meeting Id: 876 8326 0138
 - Passcode: “elmer”
- January 15, 2025, 7:30 PM Membership Meeting
 - Andy’s Ham Radio Linux
 - Speaker: Andy Stewart -KB1OIQ
 - [Marlborough Central Fire Station](#) + ZOOM
- February 12, 2025 7:30 PM
 - Elmer Forum – Zoom Only (Open to all)
 - Meeting Id: 876 8326 0138
 - Passcode: “elmer”
- February 19, 2025 7:30 PM
 - Business Meeting Zoom
- Tuesday night 8:00 PM (year-round)
 - Technical, information and Other Stuff Net
 - MMRA Linked Repeaters

Newsletter

- Information to Larry, W1DYJ Email W1DYJ@mmra.org
- January Edition Deadline: Friday, December 27, 2024

Meeting Attendees:

David Hornbaker, N1DCH; Larry Banks, W1DYJ; Kevin W Paetzold, K1KWP; Stephen Babbitt, KC1LPZ; Ken Horton, KA1GFN; Joe Weisse, W1HAI; Roger Coulson, WA1NVC; John Spencer, WA1MDD; Bob DeMattia, K1IW; Steve Umans, K8ZBE; Joe Fratto, K1UN; John Mullaney, K1BOS; Bill Dunn, N1DDK, Mike Rioux, W1USN; Stephen Contrado, KC1VJH; Larry Vidoli W1LSV; Tom Sullivan, KC1VHD

Meeting Adjourned at 8:46 PM Respectfully Submitted by Stephen M Babbitt, KC1LPZ, Clerk

Repeater Updates

Billerica Antenna Repaired

Thanks to the efforts of

- Bruce KC1US
- John W1NI
- Kevin KB1KTR
- Kevin K1KWP
- Kimberly KB1KYS
- Mike W1USN

The Billerica antenna is now vertical again. The old and unused 6m antenna was also taken down. Getting people to help on a workday can be a challenge, so many thanks to these volunteers for taking time out of their day to help out!

73, Bob, K1IW

Boston 900 MHz Quantar

Here (included photo) is the Boston 900 MHz Quantar. It has been completely aligned, programmed, tested on the test pair, and will be burned in for a week or two. You will notice a red circle. I have added a V.24 interface board and cover plate with cutouts for the jacks. This will allow us to do P25 networking, if we want to, at some time in the future.

73 – Roger Coulson, WA1NVC



Upcoming MMRA Meetings

- Meetings usually start at 7:30 PM
- Meeting locations and times are subject to change.
- Consult the MMRA website for the most up-to-date information.
- ZOOM Teleconference login info is available once you log into your account on MMRA.ORG
- Non-members: if you wish to attend, email contact@mmra.org.

Meetings

- Elmer Forums - ZOOM only – 1/8, 2/12, 3/12
- January 20, 2025: Membership Meeting
 - Andy's Ham Radio Linux
 - Speaker: Andy Stewart ~ KB1OIQ

- [Marlborough Central Fire Station](#)
- February 18, 2025: Business Meeting - Zoom
- March 19, 2025: Membership Meeting
 - Speaker: TBD
 - Location: TBD
- April 16, 2025: Business Meeting - Zoom
- May 21, 2025: Annual Meeting & Elections
 - Speaker: TBD
 - Location: TBD
- June 18, 2025: Business Meeting - Zoom

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 W1DYJ Larry Banks
- Week 2 KB1OQA Jonathan Traum
- Week 3 KC1CLA Ed Curley
- Week 4 K1KWP Kevin Paetzold
- Week 5 K1BTZ Tom Turner

To connect using Echolink during the Net: Echolink Conference *NEW-ENG2*

NOTE: we need another NC to be available as a substitute. If you are interested, email W1DYJ@mmra.org.

MMRA Leaders

Executive Board - Officers

President	Dave Hornbaker	N1DCH
Vice President	John Spencer	WA1MDD
Secretary	Ken Horton	KA1GFN
Treasurer	Kevin Paetzold	K1KWP
Clerk	Stephen Babbitt	KC1LPZ

Executive Board - Directors

Director >2025 Bob DeMattia K1IW
Director >2025 Roger Coulson WA1NVC
Director >2026 Rob Evans N1BE
Director >2026 James Lee N1DDK

Appointed

Technical Officer Bob DeMattia K1IW

Repeater Trustees

Belmont 145.43	Ed Curley	KC1CLA
Billerica 147.12	Mike Rioux	W1USN
Boston 146.82	John Mullaney	K1BOS
Boston 927.0625	Rick Zach	KK1RZ
Brookline 145.16	Joyce DeMattia	K1MRA
Burlington 224.88	Bruce Pigott	KC1US
Hopkinton 448.885	Bryan Cerqua	W1BRI
Lowell 442.25	Bob Phinney	K5TEC
Marlborough 53.81	Bryan Cerqua	W1BRI
Marlborough (everything else)	Bill Northup	N1QPR
Mendon 146.61	Kevin Paetzold	K1KWP
N. Reading 146.715	Bruce Pigott	KC1US
N. Reading 446.775	Larry Banks	W1DYJ
Quincy 224.40	Bill Dunn	N1KUG
Quincy 146.67	Bryan Cerqua	W1BRI
Weston 146.79	Joe Weisse	W1HAI
Weston 224.70	Eddie Mulhern	N1NOM
Weston 442.70	Dave Hornbaker	N1DCH

Additional, non-Voting

Newsletter Editor	Larry Banks	W1DYJ
Emerg. Coord.	Kevin Paetzold	K1KWP
Pub. Serv. Coord.	Bruce Pigott	KC1US
VEC Liaison	Ron Rothman	WO1E
Net Manager	Larry Banks	W1DYJ
Web Page Editor	Bob DeMattia	K1IW
Social Media Coord.	Steve Umans	K8ZBE
President Emeritus	Bob DeMattia	K1IW
Technical Officer Emeritus	Bryan Cerqua	W1BRI

MMRA Control Operators Responsibilities: <https://www.mmra.org/MMRACOPolicy-March2019.pdf>

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

The MMRA meets each month from September to June. Meeting times, locations, and talk-in frequency vary and are announced in this newsletter and on weekly nets. Meetings are open to all interested parties. Guest speakers and programs of general interest occur in September, November, January, March, and May. The intervening meetings are also open to all members and are for general business.

The Minuteman newsletter is emailed one week before each general interest meeting. Members are encouraged to submit articles: send to the editor at newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8pm the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". 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.

Contact information is listed on the top of the last page of this newsletter. No part of this newsletter can be copied or posted elsewhere without prior approval from the club.

MMRA QRM Policy

MMRA members and all other operators are strongly encouraged to report repeater activity that does not abide by Part 97 rules or accepted amateur radio practice to the board of directors at contact@mmra.org or via other means.

The most effective way (and probably the only effective way) to deal with an individual causing QRM is to NOT engage with that individual on the air. Please include the time and date of any incident.

Contacting the MMRA

- Members: join mmra@groups.io to receive member emails. You must be approved by the moderator.
- Officers: contact@mmra.org
- Control Ops: control-ops@mmra.org
- Internet: <http://www.mmra.org/>
- Facebook: <https://www.facebook.com/mmraham>

MMRA VE SESSIONS

Check out <https://www.mmra.org/exam.html> or email ve@mmra.org.

Ask your friends to become a member Just let them know that it is not fully automated. Although they can log into the MMRA website immediately, they need to be manually processed. This could take up to week.

If you haven't updated your MMRA profile in a while, now is the time! Go to <https://mmra.org> and log in to do so.

Previous issues of the MMRA Newsletter are available at the [newsletter archive](#) on <https://mmra.org/>. They are also available at [DLARC](#).

Nets, etc., on the MMRA System

MMRA Technical Information and Other Stuff Net

Our weekly club net on most of the MMRA repeaters, Tuesday night at 8:00 pm local.

Heavy Hitters Traffic Net

This ARRL NTS net is active on our repeaters Sunday to Friday evenings from 9:45-11 PM and Saturday from 10-11.

Coast Guard Net

Sundays at 11:00 AM local.

ARES Net

First Monday at 8:30 PM local.

ARRL Audio News

Sundays at 7 PM local

https://www.mmra.org/repeaters/repeater_linking.html

New England Sci Tech



NEW ENGLAND SCI-TECH

New England Sci-Tech Inc is a new 501(c)(3) STEM education center, amateur radio training center, and maker space located at 16 Tech Circle, Natick. It is home to New England Amateur Radio Inc (NE1AR) and the youth radio club Sci-Tech Amateur Radio Society (STARS). NE Sci-Tech welcomes memberships and donations via <https://www.NESciTech.org> or <https://www.NE1AR.org>.

Get connected on the MMRA Repeater System ~ Dave Hornbaker N1DCH

What is the best way to get connected on the MMRA repeater system? Try announcing yourself! Just say your call sign followed by “listening”. If you want, you can include the last 3 digits of the repeater frequency. For example, “N1DCH listening” or maybe “N1DCH listening on 925”, you may very well get a response. Try to connect by announcing yourself several times.

Most of the time, Marlborough Hub1 (449.495) is linked to the following repeaters, Boston (146.820), North Reading (446.775 and 146.715), Mendon (146.610), Lowell (442.250), Hopkinton (448.225) and Quincy (146.67.) Remember that when the repeaters are linked, you need to wait two or three seconds after you key up and before you speak. This is especially important on the TlaOS net on Tuesday when most of the repeaters are linked.

You can also link (and delink) the repeaters yourself. See the information you received when you became a member, or check the User Control Codes once you log into the MMRA web.

Try one of the non-linked repeaters too. There are Hams monitoring them as well. For more information on the repeater network and how it is linked at various times, check out https://mmra.org/repeaters/repeater_linking.html.

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END OF NEWSLETTER