

Northeast HamXposition

**September 10, 11, & 12
2021**



***ARRL New England Division
Convention***

Our 37th Convention



**Best Western Royal Plaza Hotel & Trade Center
Marlborough, Massachusetts**



Helping a School to contact the ISS using Amateur Radio

Fred Kemmerer, AB1OC Creating a Strong Future for Amateur Radio as ARRL New England Division Director

There is much that needs to be done to create a strong future for Amateur Radio and the ARRL. The following are major areas that I plan to focus on as Director:

- Bring new people into Amateur Radio by collaborating with clubs across New England and the ARRL
- Create opportunities for STEM learning in schools and colleges through Amateur Radio
- Create positive public and agency support for Amateur Radio to protect our spectrum and our rights
- Ensure effective, open, 2-way communications between the ARRL and its members
- Establish the New England Division as a leader in providing world-class Amateur Radio programs
- Promote and protect on-air activities such as DXing and Contesting that so many Hams (including this one) enjoy

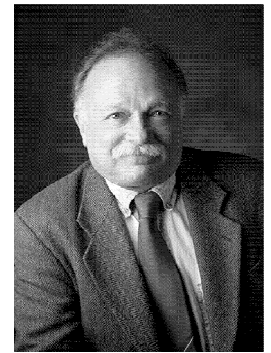
We need a Director who is **Collaborative, Innovative, and Action-Oriented** to accomplish these goals. I hope that you will support me as your choice to fulfill this important mission.

“One Director Can Make a Difference”

Learn more at elect.ab1oc.org



Welcome to Northeast HamXposition 2021



It's been one heck of a year! Back in 2019, the last time we had the Convention, our biggest worry was how do we grow Ham Radio. We all know what happened next ...

So here we are in 2021. The pandemic is subsiding, though aspects of it will be with us for a long time to come. But we do have some time now to turn our attention back to the Convention and the Hobby.

A lot has changed. After many years at Boxboro, we have moved to a new venue a few miles down the road. There were several reasons, but one big one is that we wanted a place where the Convention could grow in attendance. The Best Western Marlborough has, among other things, lots of parking, and a large convention center. We aren't using the full convention center this year, but we have our sights on it for the future. Maybe even a National Convention some day? You never know.

Our new brand, the Northeast HamXposition, is gaining traction as well. I'll reiterate what I said in 2019: HamXposition is regional in scope, officially covering New England as the Division Convention, but also drawing lots of people from the Hudson Division, from Eastern Canada, and from farther afield.

As for growing the Hobby, the Convention Committee is working on that as well. The program introduced in 2019 by the Nashua ARC was a huge hit. It has been upgraded and expanded this year. It's something for both the seasoned ham and the newcomer. In fact, our entire program, one of the best in the hamfest world, is even bigger and better this year, and likewise has something to offer for the seasoned ham, the newcomer, and the merely curious alike.

So, now you know some of the things the Committee is doing. You can help, too. Spread the word. Let your friends know about HamXposition, especially your non ham friends who might “catch the bug.” There should be plenty to keep them enthralled. And remind everyone that we're now in Marlborough. We have our spot reserved many years out.

And above all, enjoy HamXposition 2021. And when the weekend is over, start thinking about HamXposition 2022, and 2023, and 2024,

73 — Mike, K1TWF, President



NESMC

New England Spectrum Management Council

*is a proud sponsor of the
Northeast HamXposition 2021*

WE INVITE YOU TO ATTEND OUR ANNUAL MEETING

SATURDAY SEPTEMBER 11th
2:00PM
in the Salon B

NESMC provides frequency coordination for amateur repeaters in
New Hampshire, Maine, Massachusetts and Rhode Island.

Our Meeting is Open to All
You do not need to be a member to attend our meeting.

www.nesmc.org



The New England FEMARA Scholarships

This is why we hold the convention.

Your donations and all proceeds from the convention go to the FEMARA scholarship fund, which helps students attend a college or trade school of their choice. The ARRL Foundation administers the perpetual fund. Each year the foundation scholarship committee meets to carefully review hundreds of applications received from remarkably talented young men and women. The foundation receives cash and stock donations from hams and their families worldwide which include bequests from living wills and trusts. Please consider helping this great undertaking. When you donate to the foundation, please specify the FEMARA New England Fund!

The wonderful hams listed below are recent recipients of the FEMARA scholarships. If you know a worthy student, or are one yourself, you can apply online at <http://www.arrl.org/scholarship-application>.

2021 Winners (\$2000 each)

- Michael Cullen, K6MAC, Newbury, RI, tech
- Samuel Gerhard, KC1NWR, North Providence, RI, tech
- Sarah Hull, W1SJH, Hancock, NH, tech
- Simon Page, KC1FJD, York, ME, tech

2020 Winners (\$2000 each)

- Yettive S. Crestohl, K1YTV, Marblehead, MA
- Joseph F. Murray, KC1EGK, Braintree, MA
- Edward G. Rifolfi, KC1CMF, Kittery, ME
- Bahnou Hazel Upton, KB1OIS, Mont Vernon, NH

2019 Winners (\$2000 each)

- Yettive S. Crestohl, K1YTV, Marblehead, MA
- Brent Field, KB1VNC, Lancaster, NH
- Theodore Parker, N1HW, Ripley, ME
- Bahnou Upton, KB1OIS, Mont Vernon, NH

See the full list at: < <http://hamxposition.org/scholarships> >

Radio station WBZ in Boston is celebrating its 100th anniversary! Work the special event stations commemorating WBZ.

Event starts at 9:00 AM EDT September 17 and ends at 11:59 PM EDT on September 19.

Details at <https://nediv.arrl.org/wbz100/>

W1W W1B W1Z WB1Z

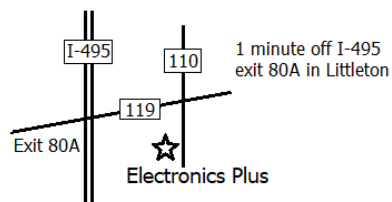


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HamXposition 2021 ~ Schedule

Friday, September 10

Flea Market **12 noon — 5 pm** (setup at 9 am)

Skywarn Training: **1 pm — 4 pm**

DX/Contest Dinner: **Cocktails 6, Dinner 7 — 9:30 pm**

Adrian Ciuperca, KO8SCA: a recap of his recent DXPedition and IARU Contest activities/activations from the Market Reef and Aland Islands.

Door Prizes!

Movie: **starts at 9:30 pm**

Saturday, September 11

Flea Market and Exhibit Hall: **9 am — 5 pm**

Forums: **9 am — 5 pm**

Convention Banquet: **Cocktails 6, Dinner 7 — 10 pm**

Phil Erikson, W1PJE HamSCI and Haystack

Door Prizes!

Movie, Storytelling, Jam Session: **all start at 9:30 pm**

Sunday, September 12

Flea Market and Exhibit Hall: **9 am — 1 pm**

Forums: **9 am — 1 pm**

Grand Prize Drawing: **1 pm**

W1A Special Event Station: Corporate Room

Friday: 6 pm — midnight

Saturday: 9 am — midnight

Sunday: 9 am — noon

Three operating positions (two remote)

DXCC Card Checking

Available in the hallway outside Exhibit hall.

Please use the application and fee process found on the ARRL DXCC web site prior to submitting your cards.



New England Amateur Radio

Public Service • Education • Radio Communications

www.ne1ar.org

New England Amateur Radio is a non-profit 501(c)3 organization to promote education and growth of amateur radio as a STEM activity, as a communications hobby, and as support for emergency preparedness and public service.



NEAR provides educational assistance, exam services, and license classes to clubs, scouts, public service, and schools.

Are you a teacher or have had teaching experience?
Would you be interested in learning to teach
amateur radio classes and activities?
Consider joining the NEAR Educational Team.

You can also help by making a tax-deductible donation to help our mission. Send PayPal donation to: info@ne1ar.org



Scan me with your smart phone to go to
www.ne1ar.org



Friday 10 September			
Room:	Salon A	Salon B	Seminar
9:00			
10:00			
11:00			
12:00			
12:30			
13:00			SKYWARN Training
14:00			
15:00			
15:30			
16:00			
17:00			
18:00			
18:30	Cocktails		
19:00	Contest/DX Dinner		
20:00			
21:00			
21:30			Movie Night
22:00			
23:00			

FEMARA thanks the following individuals for their support:

Moonbounce Donations (≥ \$50)

- | | |
|---|-----------------------------|
| <i>AA3HD Anthony Baker</i> | <i>KC1LNQ Yuri Botnar</i> |
| <i>AB1OC Fred, and AB1QB Anita Kemmerer</i> | <i>KC1OXG Robert Bosaz</i> |
| <i>AF1R Leandra MacLennan</i> | <i>N1JEO Joel Curneal</i> |
| <i>K0HNL Daniel E Busse</i> | <i>W1DYJ Larry Banks</i> |
| <i>K1DP Domenic Padula</i> | <i>W1FDR Bob Ravenstein</i> |
| <i>K1UAF John Gotthardt</i> | <i>W2JIG Tim Schmoyer</i> |
| <i>KB1OIQ Andy Stewart</i> | |
| <i>KC1KGS Barbara Irby</i> | |

Our apologies if we missed listing your name.



NEW ENGLAND SCI-TECH



Ham Radio Education for All Ages!

Non-Profit STEM Education Center, Amateur Radio Training Center, and Maker Space.

Two fully-equipped radio rooms, meeting rooms, science labs, kitchennette.

Hosting the radio club Sci-Tech Amateur Radio Society (STARS).

Courses, workshops, maker space, public telescope nights, rocketry.

Conveniently located at 16 Tech Circle, Natick, near rt. 9, 30, and 27.



www.NESciTech.org

Saturday 11 September AM												
Room:	Salon A	Salon B	Seminar	Duchess	Princess	Marlborough	Sudbury	Southborough	Sterling	Westborough	Wayland	Boxborough
9:00	9/11 Moment Keynote address: "Growing Amateur Radio"											
10:00	An ISS Crew Contact: Planning, Execution & Learnings Along the Way	Fox Hunting		High Altitude Balloons	AMSAT			C1) Introduction to ARES	C2) TBD		W1) Getting Started with Winlink RMS Express	W2) New England ARES Academy SKYWARN Refresher
11:00	Growing Your Club Through Elmering & New Ham Development	DMR Without Code Plugs and Hotspots	DXing w/ DXLab	Youth Forum, NE Sci-Tech	Getting Started with Amateur Satellites			C3) HF Propagation for Emcomm	C4) Right- Sizing ARES	VE Session I		
12:00	ARRL Forum	Can You Hear Me Now? Update		Practical Portable Radio Operation	Intro to the NanoVNA	New England QRP Forum	Tech in a Day	Lunch	Lunch		Lunch	
13:00	Section Manager, ACC Forum	A brief history of amateur radio and the women who contributed	YCCC Forum	Ten Meters for Techs	FCC RF Exposure Rules and Compliance			C5) Tactical Message Handling	C6) Lessons from the Big Ones	VE Session II	W3) New England ARES Academy: Intro to NBEMS	



Scan me with your smart phone camera for more about the STARS radio club

An educational amateur radio club for all ages. Join today!

Headquartered at New England Sci-Tech
16 Tech Circle, Natick MA

Mission: to encourage people to pursue interests in amateur radio, electronics, astronomy, and other STEM activities.

Meetings in person and online, two radio rooms, linked repeaters, educational activities and speakers, weekly radio shop talk, license classes and exams.

www.STARS.radio



		Saturday 11 September PM									
Room:	Salon A	Salon B	Seminar	Duchess	Princess	Marlborough	Sudbury	Southborough	Sterling	Westborough	Wayland
14:00	The History and Current Values of Telegraph Keys	New England Spectrum Mgmt Council Meeting		NTS Meet and Greet	CW Academy	New England QRP Forum Continued	Tech in a Day continued	C7) Go Kit Strategies	C8) ARESMAT - An Essential ARES Tool		W3) NEARES Academy: Intro to NEBMS continued
15:00			YCCC Forum Continues	YL Gathering sponsored by YLRL and WRONE	Intro to Spy Radios			W4) New England ARES SEC		VE Session II continued	
16:00					Amplitude Modulation			Presentations and Panel Discussion			
17:00			ARRL Director Election Canadate Debate								
18:00											
18:30											
19:00	Grand Banquet "HamSci and Haystack"			Open Mic Story Telling	Music Jam Session	NE QRP Meet & Greet, Vendors					
20:00											
21:00											
21:30			Movie Night			Night & Build-A-Thon					
22:00											
23:00											
0:00											



NEW ENGLAND SCI-TECH



Scan me with your
smart phone camera
for courses web page

Upcoming Ham Radio License Classes!

Tech in 4 days or a weekend – ONLINE – tell your friends!

General in 4 days or a weekend – ONLINE – time to upgrade?

Amateur Extra in 8 classes – Sundays, 7-10 pm, ONLINE – you always wanted to get AE.

Morse Code in 6 classes – Mondays, 7:30-8:30 pm, ONLINE, FREE with other course.

Become a Volunteer Examiner (VE) – 6:30-8:30 pm, pick a date - 9/26, 10/24, 11/14.

We also offer exams in person or online – nescitech.org/exam/.

Conveniently located at 16 Tech Circle, Natick, near Routes 9, 30, and 27.

www.NESciTech.org

Sunday 12 September						
Room:	Salon A	Salon B	Seminar	Duchess	Princess	Westborough
9:00	The World's Greatest Coastal Station		Around the world with Pico Balloons			
10:00	Cybersecurity for the Radio Amateur	Communications support for the DoD; how you can make a difference	Modeling with TLW, YW, & HFTA	Adventures in Home-Brew SDR Design	Kite launched antennas for field operations	
11:00		MARS member meeting (closed)	Eyesight & the Aging Ham or Tinkerer	JS8Call for EMCOM and QSOs	Giant Antennas of the Navy	VE Session III
12:00	APRS Golden Packet	Intro to the Minuteman Repeater Association	History of the Vacuum Radio	Software Defined Radio	EDUCOMM, Education Through Communication	
13:00	Prize Drawings					
14:00						

Northeast HamXposition Through the Years

Prior to becoming an official convention, FEMARA held a picnic and hamfest. In 1958 it was held at Norumbega Park in Newton and in 1959 at the New Ocean House hotel in Swampscott. In 1960, the hamfest became the official ARRL New England Convention.

The 1969 event was interesting: Two weeks before the convention, the New Ocean House hotel burned to the ground. The convention staff went into overdrive and managed to move to the Park Plaza hotel in Boston, retaining the original convention dates.



Friday, October 15th & Saturday October 16th 2021

DEERFIELD NH Fairgrounds.

www.near-fest.com www.forum.near-fest.com

GRAND PRIZE – ICOM 7300 – Drawing Saturday 2 PM

Winner does NOT need to be present to win.

[Spring 2022 dates: May 6th & 7th 2022]

NEDECN

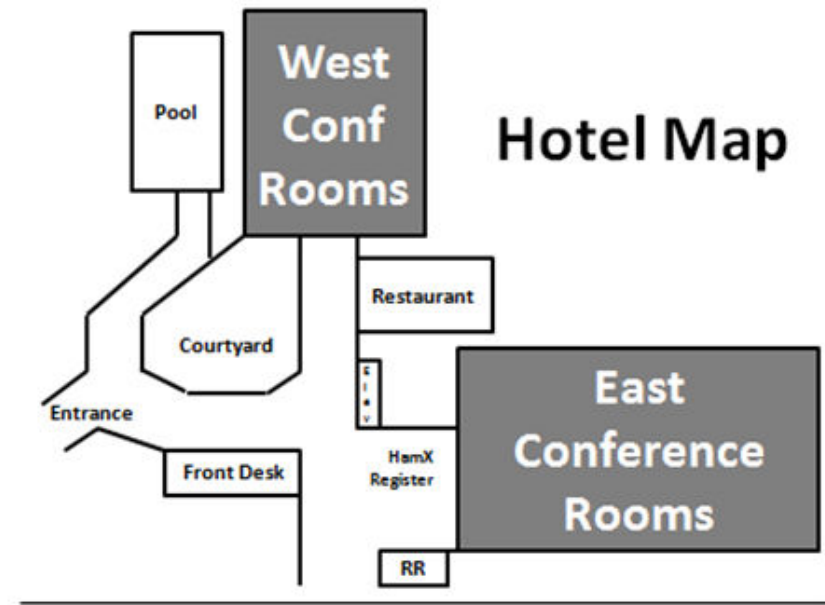
New England Digital Emergency Communications Network

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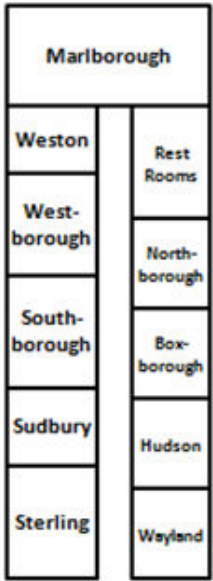
The New England-Wide, Dual Channel Network
providing communications for routine and special events

www.nedecdn.org

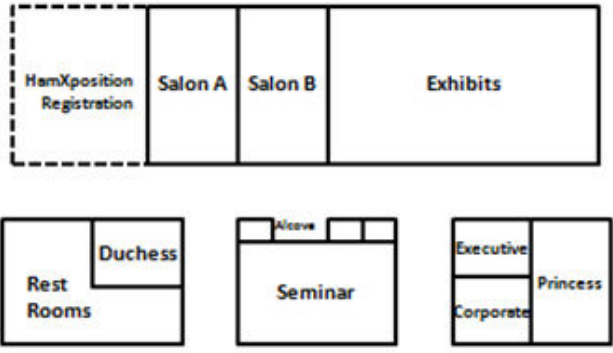
#	Year	Dates	Location	Admission	
1	1960	May 1	New Ocean House, Swampscott	\$3 adv / \$4	
2	1961	Apr 8,9			
3	1962	Apr 7,8			
4	1963	Apr 27,28			
5	1964	May 9,10			
6	1965	Apr 24,25			
7	1966	Apr 22,23,24	Prudential Center, Boston <i>ARRL National Convention</i>		
8	1967	Apr 22,23	New Ocean House, Swampscott		
9	1968	Jun 1,2,3			
10	1969	May 24,25	Park Plaza Hotel, Boston	\$3.50/\$4.50	
11	1970	Sep 25,26,27	Statler Hilton, Boston <i>ARRL National Convention</i>	\$3 / \$4	
12	1973	Sep 29,30	Dunphy's Resort, Hyannis		
13	1976	Sep 10,11,12	Statler Hilton, Boston		
14	1978	Oct 14,15	Sheraton, Boxborough		
15	1980	Oct 3,5		\$4 / \$5	
16	1982	Oct 2,3			
17	1984	Sep 29,30		\$6	
18	1986	Oct 18,19		\$6 / \$7	
19	1988	Oct 1,2		\$7 / \$8	
20	1990	Oct 13,14			
21	1992	Oct 3,4		Host Hotel. Boxborough	\$7
22	1994	Oct 1,2			\$7 / \$8
23	1996	Oct 4,5,6		Boxboro Woods Holiday Hotel	
24	1998	Aug 29,30	Holiday Inn, Boxboro	\$6 / \$8	
25	2000	Aug 25,26,27		\$8 / \$10	
26	2002	Aug 23,24,25		\$10 / \$12	
27	2004	Aug 13,14,15			
28	2006	Aug 25,26,27			
29	2008	Aug 22,23,24			
30	2010	Aug 27,28,29			
31	2012	Aug 24,25,26			
32	2015	Aug 21,22,23		\$15	
33	2016	Sep 9,10,11			
34	2017	Sep 8, 9, 10	Boxboro Regency Hotel and Conference Center		
35	2018	Sep 7, 8, 9			
36	2019	Sep 6, 7, 8		\$18	
37	2020	Nov 6, 7	Virtual Banquet	Free	
38	2021	Sept 10, 11, 12	YOU ARE HERE!	\$18	



West Rooms



East Rooms



DC Power Distribution



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Digital Mode Equipment



A RIGblaster is the easiest way to properly connect your radio to a computer to operate using over 100 existing and future ham radio sound card software programs. You will be able to operate any sound-card based digital mode that your radio could not otherwise operate.

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Minuteman Repeater Association

Extends a welcome to all convention attendees!

Come visit us in the Executive Room (down the aisle from the exhibit hall) where you can meet some of our members, join our club, and enter a chance to win one of our great door prizes. Membership not required to win, and you don't have to be present to win. Details on our website:

MMRA.ORG

Winners drawn Sunday at noon

First Prize: SDRplay RSPdx

Second Prize: Mobilinkd TNC3

Third Prize: Powerwerx Powerpole Kit



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147.270

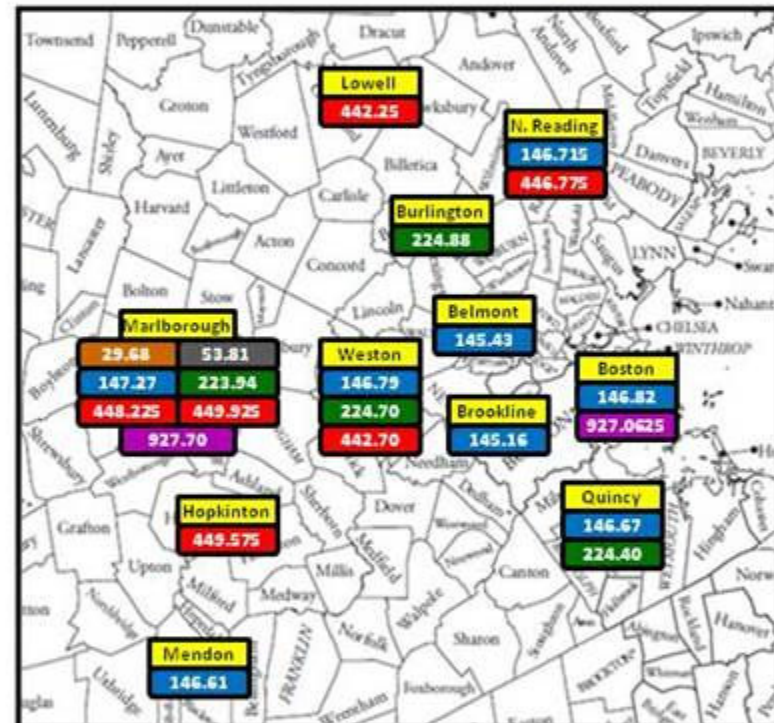
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5/32" 100' \$7

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3/16" 1000" \$70

COME SIT WITH US !

LOOK FOR THE TWO

WITH TENTS

& BANNERS!

Friday September 10 AFTERNOON (1:00 PM-4:00 PM) Salon B

SKYWARN Training ~ Rob Macedo, KD1CY

SKYWARN is a volunteer program with between 350,000 and 400,000 trained severe weather spotters. These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to the National Weather Service. Learn the basics of thunderstorm development; fundamentals of storm structure; identifying potential severe weather features; information to report; how to report it; basic severe weather safety.

EVENING (6:30 PM- ~9:30 PM) Salon A/B

DX / Contest Dinner — Special Guest Adrian Ciuperca

Join your fellow hams for a delicious DXCC/Contest dinner on the first night of the convention! Accompanying us will be Adrian Ciuperca, KO8SCA, who will recap his recent DXPedition and IARU Contest activities/activations from the Market Reef and Aland Islands.

Adrian is a keen DXer with DXCC 317, 9BDXCC, IOTA and a passionate contester who competed in WRTC 2018 in Wittenberg, Germany. He usually operates in the contests as a guest operator from various superstations such as K1LZ, LZ5R, K2LE, K1TTT or NR4M.

EVENING (9:30 PM start) Seminar Room

Movie Night — CONTACT (1997)

Dr. Ellie Arroway, after years of searching, finds conclusive radio proof of extraterrestrial intelligence, sending plans for a mysterious machine.

Stars: Jodie Foster Matthew McConaughey Tom Skerritt

Director: Robert Zemeckis

Based on the novel by Carl Sagan

RFinder

POINT AND CLICK RADIO

DMR WITHOUT CODE PLUGS

THAT
WORKS...

...ANYWHERE
ON EARTH



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and at RFINDER.NET

SATURDAY September 11

KEYNOTE ADDRESS (9:00 AM-9:50 AM) Salon A

Amateur Radio ~ Bob Inderbitzen, NQ1R

There will be a moment of silence for the events of 9/11/2001 before the presentation.

There is no shortage of new ham radio licensees each year-- about 30,000. But only a few ever become active. Bob will share stories, perspective, and ARRL initiatives intended to develop more active, involved, and engaged radio amateurs.

Bob Inderbitzen, NQ1R, is the Product Development Manager for ARRL, The National Association for Amateur Radio®, and has been on the ARRL HQ staff for 30 years. He advances, with his staff colleagues, ideas that lead to new and improved ARRL membership programs, services, and products.

ALL DAY (10:00 AM-5:00 PM) MARLBOROUGH ROOM

New England QRP Forum

Schedule T.B.D.

ALL DAY (10:00 AM-5:00 PM) SUDBURY ROOM

Tech In A Day ~ Bill Poulin, WZ1L

Bill Poulin, WZ1L, and members of the Cape Ann ARA will once again offer "Tech in a Day" at HamXposition. This program has served the local community in getting newly excited people to become licensed amateurs. The program will conclude with a dedicated Volunteer Exam session.

ALL DAY (10:00 AM-5:00 PM) WESTBOROUGH ROOM

VE Testing ~ Bruce Anderson, W1LUS

(No appointment necessary)

Session I	10 am — 1 pm
Session II	1 pm — 5 pm
Session III	Sunday: 10 am — 1 pm

Saturday 10 AM Sessions

10:00 AM — 10:50 AM Salon A

An ISS Crew Contact: Planning, Execution & Learnings Along the Way ~ Fred Kemmerer, AB10C

Prepare to blast off for an Amateur Radio experience of a lifetime! The ARISS program provides a way that Amateur Radio operators can work with schools and youth groups to talk to an astronaut on the International Space Station (ISS) using Amateur Radio. Fred will share all



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Congratulations, Marty Sullaway, NN1C!
Yankee Clipper Contest Club
2021 Youth Scholarship Recipient



The YCCC scholarship is managed by the ARRL Foundation.
For application information for this and other ARRL scholarships
see www.arrl.org/scholarship-descriptions

the steps needed to secure, prepare for and perform an ISS contact along with a school or youth group. Topics covered include proposal development to secure a contact, education planning around Amateur Radio and other STEM activities, and preparing and testing an Amateur Radio Ground Station to communicate with the ISS. The talk includes video from actual ISS contacts made between schools and astronauts on the ISS.

10:00 AM — 10:50 AM Salon B

Fox Hunting ~ Alan Hicks, KD1D

Alan will present on locating hidden transmitters for hams. He'll discuss "fox" transmitters and radiolocation methods for fun, radiosport and practical applications. RF fox hunting is fun, provides us with physical and mental exercise, and teaches us how to locate sources of interference like repeater trolls, stuck transmitters and unlicensed operation on our ham bands.

10:00 AM — 10:50 AM Duchess

High Altitude Ballooning: Going to the Edge of Space

Max Kendall, WOMXX

Max will introduce high altitude balloons and then describe his experiences in building, launching, and recovering them. (Max is a youth member of the New England Sci-Tech Amateur Radio Society.)

10:00 AM — 10:50 AM Princess

AMSAT and Satellite Status ~ Burns Fisher, WB1FJ

Burns' presentation will talk about what is currently going on with AMSAT, including the new on-line membership portal and on-line distribution of The AMSAT Journal, as well as the current state of AMSAT satellites and new satellites that they are working on.

10:00 AM — 10:50 AM Southborough

ARES Track: Bootcamp ~ Peter Stohrer, K1PJS

Pete will give you all the essential information you need to get started in the Amateur Radio Emergency Service® (ARES®). Pete is a broadcast engineer, NH Section Manager and ASEC, and a former EC.

10:00 AM — 10:50 AM Sterling

ARES Track: Emergency Field Power~ Alan Bradford, AE1H

Alan will help you make good decisions about how to power your station in the field, or without access to mains power. He will cover batteries, generators, distribution, safety, and more.

10:00 AM — 11:50 AM Wayland**ARES Track: Getting Started with Winlink RMS Express:**

Marcia Forde, KW1U Winlink Express is a versatile digital messaging tool in most ARES member's "toolboxes." It allows email to be sent and received via HF and VHF radio, but also for digital text messages to be sent between stations directly, and much more.

10:00 AM — 11:50 AM Boxborough**ARES Track: SKYWARN Refresher ~ Rob Macedo, KD1CY**

For those with Skywarn training, but in need of an update and refresher, Rob will present an overview of the SKYWARN program including a severe weather recap video. He will also discuss the Voice-Over-IP Hurricane Net and its role with WX4NHC, the Amateur Radio station at the National Hurricane Center

Saturday 11 AM Sessions11:00 AM — 11:50 AM Salon A**Growing Your Club Through Elmering & New Ham Development**

Fred Kemmerer, AB10C Fred will share some success stories showing how a focus on Elmering and skills development for experience and new hams can bring new energy and new members to your club. He'll share programs that have proven successful and use this forum as a place to exchange ideas on Elmering and ham development projects and activities that are working.

11:00 AM — 11:50 AM Salon B**DMR Without Code Plugs and Hotspots**

Bob Greenberg, W2CYK Bob will share the latest developments from RFinder labs.

11:00—12:50 Seminar**DXing with DXLab ~ Dave Bernstein, AA6YQ**

Dave will describe the freeware DXLab Suite and its support for DXing.

11:00—11:50 Duchess**Youth Forum ~ New England Sci-Tech ARS**

What do today's amateur radio youth care about? Come and find out what's on the minds of nine youths in this captivating panel discussion.

11:00—11:50 Princess**Getting Started With Amateur Satellites**

Robert Hayes, KB1SWZ Bob will share tips for the beginner to get started with the "easy" FM satellites.

11:00—11:50 Southborough**ARES Track: HF Propagation for EmComm**

Anita Kemmerer, AB1QB Anita will present a simplified, non-technical approach to HF propagation for Emcomm, as well as discussing some practical antennas.

11:00—11:50 Sterling**ARES Track: Right-Sizing ARES: Dave Colter WA1ZCN**

Dave, former NH SEC and original editor for ARRL's ARES training courses will talk about significant challenges ARES faces in providing communications for our served agencies, and present some ideas on how we can improve.

Saturday 12 Noon Sessions12:00—12:50 Salon A**ARRL Forum ~ Fred Hopengarten, K1VR, and Phil Temples, K9HI**

New England Division Director Fred Hopengarten and Vice Director Phil Temples will discuss current affairs at the League's board followed by a Q&A session. Bring your questions!

12:00—12:50 Salon B**Can You Hear Me Now? Update ~ Joe Reisert, W1JR**

Joe will describe how hearing affects ham radio communication, how our hearing works and how to fix it if it needs repair.

12:00—12:50 Duchess**Practical Portable Radio Operation ~ Mindy Hull, KM1NDY**

With the availability of lightweight lithium batteries, portable operations is an increasingly mainstream and accessible pursuit of the amateur radio hobbyist. The excitement of radio field operations no longer needs to be relegated to official Field Days, with structured "On-the-Air" programs such as the Summits On The Air (SOTA) and Parks On The Air (POTA) providing endless and timeless remote communication opportunities. Portable radio is also where the outdoorist meets the amateur operator, requiring a complementary but different skill set from its participants than that acquired in the home station. Mindy will provide you with the information you need to enjoy this aspect of the hobby.

12:00—12:50 Princess**Introduction to NanoVNA ~ Greg Algieri, WA1JXR**

Greg will explain how the NanoVNA works, what's inside, and how to use it for Amateur Radio applications.

Saturday 1 PM Sessions1:00—1:50 Salon A**ARRL Section Manager & Affiliated Club Coordinator Forum****Mike Walters, W8ZY**

Mike, W8ZY invites SMs and ACCs to brainstorm on ideas. Mike is the new Manager of Field Services at ARRL Hq.

1:00—1:50 Salon B**A Brief History of Amateur Radio and the Women Who****Contributed ~ Jules Hojnowski, KD2FOU**

Though fewer in number than the men, women have contributed a great deal to Amateur Radio since the beginning. In this talk, Jules will highlight some of the notable women who found their place in the hobby.

1:00—5:00 Seminar**YCCC Forum****Ken Caruso, WO1N, and Charlie Morrison, N1RR, Moderators**

Yankee Clipper Contest Club meeting and mini-presentations

1:00 Greetings and Business Meeting**1:30** Contesting Activities for Young People, Helping to Create the Next Generation of Contesters ~ **Fred Kemmerer, AB1OC** Fred will share some contesting activities he has employed that have helped to get young people to begin participating in Amateur Radio Contests. He will share activities that have proven successful and use this forum and panel discussion as a place to exchange ideas to encourage young hams to try contesting, have fun, build their skills and beat the old timers at their game. The panel of youth contesters will be available for questions and answers and offer their opinions on what has worked for them to improve their contesting skill and the future of contesting as they see it.**Youth Contesters Panel**Moderator: **Marty Sullaway, NN1C**Contesters: **Abby Finchum, AB1BY, Brayden Ebare, KC1KUG****3:00** Building an entry level, multi radio contest station **Jeff Demers, N1SNB** Jeff describes his quest to build a HF contesting station that is stealthy and capable. Jeff's station goals included SO2R capability, mode flexibility, high power capable and covering all HF bands. Join Jeff's talk to hear of some of the lessons from his journey and how this effort enhanced his enjoyment of the hobby.**4:00** Why Join the YCCC? **Ken Caruso, WO1N**

Ken will talk to the YCCC value proposition. What does joining the YCCC have to offer? Ken will review its community presence, activities and history. Membership applications will be entertained during the entire meeting. Stop by and join up!

1:00—1:50 Duchess**Ten Meters for Technicians ~ James Surprenant, AB1DQ**

With Solar Cycle 25 starting to pick up, the 10 meter band is expected to become a hotspot of DX activity over the next few years. Technicians may be surprised to learn how easy and affordable it is to construct a 10 meter-only HF station to take advantage of their 28.3-28.5 MHz allocation and take part in the DX fun!

1:00—1:50 Princess**FCC RF Exposure Rules & Compliance ~ Dan Brown, W1DAN**

Dan will discuss the FCC's RF exposure rules and how you check and achieve compliance painlessly.

1:00—1:50 Southborough**ARES Track: Tactical Message Handling ~ Dave Colter WA1ZCN**

Dave will show you how to be an effective verbal communicator. Surveys have shown that nearly all disaster traffic on ham radio is verbal, not written, so it pays to be as proficient as possible.

1:00—1:50 Sterling**ARES Track: Lessons From the Big Ones****Paul Silverzweig, W1PJS**

Paul has responded to a number of national-scale deployments, including Katrina and Puerto Rico. He has some useful stories and ideas to share that everyone can benefit from, whether you plan to deploy afar or in your back yard.

1:00—2:50 Wayland**ARES Track: Introduction to NBEMS ~ Don Rolph, AB1PH**

Don will present the basics you need to get started with the Narrow Band Emergency Messaging System--a staple in many ARES member's "toolbox."

Saturday 2 PM Sessions2:00—2:50 Salon A**The History and Current Values of Telegraph Keys****Tom Perera, W1TP**

The invention of the Electric Telegraph revolutionized communication and led to the development of all forms of digital technology and the internet. Messages that would have taken days or months to deliver could be sent in a fraction of a second. As with all revolutionary technological advances, controversies arose about who was the first to invent this technology. Manufacturing companies competed with each other for the lucrative telegraph key market and military customers demanded specialized technology.

2:00—2:50 Salon B**New England Spectrum Management Council Meeting****Bob Demattia, K1IW**

New England Spectrum Management is the VHF-UHF frequency coordinator for Maine, Massachusetts, New Hampshire, and Rhode Island. Members and non-members are welcome to attend this annual meeting.

2:00—2:50 Duchess**NTS Meet & Greet ~ Marcia Forde, KW1U**

Marcia, KW1U, hosts this forum providing an opportunity for NTS folks and anyone interested in message handling to get together, meet face-to-face and exchange information on activities, thoughts and ideas regarding traffic nets and message handling in general

2:00—2:50 Princess**CW Academy ~ Bruce Blain, K1BG**

CW Academy has trained an estimated 5,000 students in the past few years in the art of CW and telegraphy. If you want to learn Morse code, or improving your Morse skills is of interest, this talk is for you!

2:00—2:50 Southborough**ARES Track: Go Kit Strategies ~ Steve Davidson, NA1T**

Steve Davidson, NA1T will get you started an effective kitting philosophy that gives you the ability to respond with exactly what you need for any given deployment - and not forget any key items! Steve has deep experience and knows the gear (he's a former HRO store manager!)

2:00—2:50 Sterling**ARES Track: ARESMAT -- An Essential ARES Tool****Dave Colter, WA1ZCN**

Dave Colter, WA1ZCN will talk about ARESMAT, ARRL's basic tool for mutual aid responses. In an era with increasing storm hazards and a shrinking and aging ARES membership, ARESMAT will become more than an option. Learn how to make it work for your group, and for all the other groups around you.

Saturday 3 PM Sessions3:00—4:50 Duchess**YL Gathering Sponsored by YLRL & WRONE****Anne Manna, WB1ARU and Barb Irby, KC1KGS**

This presentation will be an opportunity for women who are hams, interested in becoming hams, or curious about what women hams do, to learn more and meet one another.

3:00—3:50 Princess**Introduction to Spy Radios ~ Mike Crestohl, W1RC****& Tom Perera, W1TP**

Join Tom and "Mister Mike" as they present some of the covert "spy radio" equipment used during the Second World War. Actual equipment from their collections will be demonstrated and on display.

3:00—4:50 Southborough**New England ARES Update Forum**

ARES leadership from around the New England Division will talk about what's going on in their areas, challenges they face, and solutions they're implementing. The new two-hour format will allow everyone plenty of time for meaningful discussion.

Saturday 4 PM Sessions4:00—4:50 Princess**Amplitude Modulation ~ Tim Smith, WA1HLR**

A traditional forum at Boxborough/HamXposition for 23 years, Tim will discuss using the AM mode in the hobby today. A lively and entertaining presentation by the dean of AM operation.

Saturday 5 PM Sessions5:00—6:00 Seminar**ARRL Director Candidate Debate**

Join us for a lively presidential-style debate between the three candidates vying for the job of ARRL New England Division Director. The debate will be moderated by Don Arthur, K1DCA.

Saturday Evening Sessions**6:30 PM- ~9:30 PM Salon A/B****GRAND BANQUET ~ Special Guest Speaker: Phil Erickson, W1PJE**

Dr. Erickson will discuss HamSCI's latest ionospheric science investigations and will also highlight research in his group at MIT's Haystack Observatory.

7:00—11:30 Marlborough**New England QRP Meet & Greet, Vendor's Night & Build-a-thon**

9:30—11:30 Duchess**Open Mic Storytelling ~ Phil Temples, K9HI, MC**9:30—11:30 Princess**Informal Music Jam Session ~ Mindy Hull, KM1NDY host**9:30—11:30 Seminar**Movie Night — CONTACT (1997)** see last night

SUNDAY September 12

09:00—9:50 Salon A**The World's Greatest Coastal Station ~ Ed Moxon, K1GGI**

A century ago, the early 1920s were a pivotal era in radio as the technology that pioneered wireless communication prior to WW1 gave way to a wave of American inventiveness. Riding the crest of developments, in 1921 the Radio Corporation of America launched ship-to-shore station WCC in Chatham Massachusetts, on Cape Cod. This program recaps the early advances that led RCA to boast that WCC was "The World's Greatest Coastal Station."

09:00—9:50 Seminar**Around the World with Pico Balloons ~ Mike Hojnowski, KD2EAT**

Pico balloons are designed to reach float altitude in the jet stream, and ideally circumnavigate the globe. They can be aloft for months at a time and can be tracked with either APRS or WSPR. Mike will talk about Pico balloons--how to build and track them.

Sunday 10 AM Sessions

10:00—10:50 Salon A**Cybersecurity for the Radio Amateur ~ John Tarbox, WA1KLI**

With many hams now setting their stations up for remote operation via the internet it is important to take measures to ensure that they are not accessed by unauthorized users or otherwise hacked. John will explore security steps that hams can take.

10:00—10:50 Salon B**Communications Support for the Department of Defense: How You Can Make a Difference ~ Tom Kinahan, N1CPE**

Tom will introduce the Army and Air Force Military Auxiliary Radio Service (MARS) programs. He'll explain how they are different from the past, and focus on what MARS is today.

10:00—10:50 Seminar**Modeling with TLW, YW & HFTA ~ Larry Banks, W1DYJ**

Larry has always been interested in understanding antennas. He'll cover the use of three applications: TLW, YW, and HFTA, from the ARRL Antenna Book. Larry will help you to start modeling your own antenna systems.

10:00—10:50 Duchess**Adventures in Home-Brew SDR Design ~ Derek Rowell, AK1WI**

Derek will describe his multi-year project to develop the hardware and software for a stand-alone SDR system using the "Teensy" family of microcontrollers from PJRC. In particular, it uses the Teensy Audio Library structure, hence its name "AudioSDR." The software is now freely available from GitHub.

10:00—10:50 Princess**Kite-Launched Antennas for Field Operations**

Mike Pittaro, KJ6VCP Kites are excellent portable antenna supports when paired with the right antenna. Mike will talk about kites, antennas, and how to put them together for QRP and field operations, including practical guidelines for real world situations.

10:00—1:00 Westborough**VE Testing III ~ Bruce Anderson, W1LUS**

Sunday 11 AM Sessions

11:00—11:50 Salon B**MARS Members Meeting (closed) ~ Tom Kinahan, N1CPE**

Military Auxiliary Radio System meeting for Army and Air Force MARS members only.

11:00—11:50 Seminar**Eyesight and the Aging Ham or Tinkerer ~ Adrian Zeffert, AB2IX**

As we age our eyesight changes. But there's no need to think you are ready for the rubbish heap, or cannot build an electronics kit, or continue stamp collecting, work on model trains, or see the dials on your HF rig. Adrian will address the natural aging of our eyes and how to correct them with glasses, lenses, magnifiers, eye drops, corrective surgery and lighting.

11:00—11:50 Duchess**JS8Call for EMCOM and QSOs ~ Aaron Addison, KF1G**

Aaron will introduce you to JS8Call--a weak signal mode that leverages the power of FT8 to pull data from below the noise floor and combines it with the ability to have keyboard to keyboard QSOs, powerful directed and stored messages.

11:00—11:50 Princess

Giant Antennas of the Navy ~ George Allison, K1IG

George will introduce us to the U.S. Navy's specialized communications systems requiring enormous antennas for receiving and transmitting. The dimensions of these antennas are measured in miles, not meters, and transmitter power is measured in megawatts. Although these antennas are huge, hams will recognize their designs. If you have a few thousand acres of available land, maybe you'd like to build one.

Sunday Noon Sessions

12:00—12:50 Salon A

APRS Golden Packet ~ Tim D'Apice, KA1YBS

Tim describes a group of dedicated amateurs who meet up every third Saturday of July along the Appalachian Trail for some ad-hoc portable repeater fun, as they demonstrate the ability of data traveling thousands of miles without the aid of cell phones or even a power grid. Hang on for the ride!

The 2022 Big E, will have a ham radio booth in 'The Better Living Center!'

We're looking for support from the New England clubs and hams. Have you ever thought of the possibility of demonstrating ham radio at a state fair that attracts over 80,000 people per day? 1.6 million people in 2019!

The fair has "State" days which will bring in a lot of people from each state for that day. We want clubs/hams from each state to man the booth on those days

The booth will need to be manned from 10 am through 10 pm September 16 through October 2, 2022

This has the possibility of being HUGE for New England Clubs. The Question is: "Will you be part of it?"

Join the group we have specifically for this event: <https://groups.io/g/ProjectBigE>

12:00—12:50 Salon B

Minuteman Repeater Association ~ Jason Peardon, W1HFP

Jason will introduce one of New England's largest linked repeater networks, followed by a raffle drawing.

12:00—12:50 Seminar

History of the Vacuum Radio ~ Louis Tramontozzi, KA1HH

Louis will talk about radio development in the early part of the century. An antique radio buff, Louis will also talk about restoring antique radios.

12:00—12:50 Duchess

Software Defined Radio ~ Charles Miller, KC1JUO

Ham radio and Software Defined Radios are fundamentally similar and complementary. Charles will present an overview of his ham radio "journey" and include a demonstration using software defined hardware.

12:00—12:50 Princess

**EDUCOMM: Education Through Communication
Joe Fairclough, WB2JKJ**

Joe has been involved with the JHC "22 Crew" for forty-one years. He describes how you use Amateur Radio as a teaching tool at a school near you.

1:00—2:00 Salon A

Prize Drawing & Convention Wrap-up

Thank you for attending

Northeast
HamXposition

FEMARA Incorporated

FEMARA Inc. is a Massachusetts non-profit corporation that sponsors and runs the ARRL New England Division Convention. The group, which has been in existence for over 36 years, began as a consortium of area radio clubs. FEMARA is qualified under IRS 501(c)(3). Donations to FEMARA are deductible as allowed by IRS regulations.

Our goals are twofold; to offer the richest and most diverse ARRL Convention in the country, and to support the ARRL Foundation's scholarship program.

73,
Bob DeMattia - K1IW
President, FEMARA, Inc.

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