



Special Program Activities

What's New!

Ordering deadlines for the Banquets! We are sorry to report that Ray Minichiello will not be able to attend affecting both the Marconi Museum Forum and Exhibit display. The talks "Geiger Counter Mods for Ham Radio Use" and "A History of Antenna Measuring Equipment" have swapped time slots. Bob, W1GWU indicates he is bringing "8 – 10 cases of display equipment" so we moved him to a bigger room and gave him more time! Should be interesting! Note also several abstracts have been added.

Wouff Hong – Sunday, August 24th (Gathering Midnight Saturday!) – Colonial Room

Wouff Hong is back and we are glad they are! If you've never been to a Wouff Hong, this is the event not to miss! For you OF's that have been to more than you care to remember, you will not believe who has been tapped to perform the Old Man....sssshhh, it's a secret!



DX Dinner – Friday Evening August 22nd, 6:30 PM Cocktails, 7:00 PM Dinner– Colonial Room

The Patriots DX Association is lining up another great session for us again this year. Al Rousseau, W1FJ, will be the emcee and the man in charge of the door prizes. The featured speaker is Eric Scace, K3NA. Eric will be describing in detail the planning that went into the Ducie Island DXpedition. Seating is limited, you must pre-order your banquet tickets by noon Tuesday, 8/19 on-line choosing at the time of your order between Chicken Cordon-Bleu or New England Scrod so that we provide an accurate head count for the catering services.

Women Radio Operators of New England /Young Ladies Radio League – YL's at Noon – Board Room



WRONE and YLRL invite all interested YLs to join us in the Board Room at noon on Saturday, August 23rd. This relaxed setting features table seating, so bring your lunch along, enjoy the company



and take the opportunity to relax and learn what other YLs are doing in ham radio. Please contact Anne Manna, WB1ARU if you have any questions.

JAM Session – Saturday Evening, August 23rd ~7:00 – Midnight – Cotillion Room

They tell me hams actually have musical abilities. I don't believe them. OK, prove me wrong! We will set aside a room Saturday evening to allow the hard-cores to pass the time away until Wouff Hong kicks off at midnight. Any volunteers out there to step forward and orchestrate this epic jam session? If so, contact Ken, WO1N (wo1n@arrl.net)

ICS-100 Training – Friday, August 22nd 9:00 AM – 4:30 PM – Seminar Room

This 8 hour training session was organized by Tom Kinahan, N1CPE, and this will be taught by Graham Campbell of MEMA. Preregistration is required. Open to all. See <https://training.mema.state.ma.us/Mema/courseDesc.do?cofld=20147> for registration details.

W1A – All Weekend....

W1A coordinator Mike Bernock, N1IW will again assemble a world class station in another attempt to break the all time W1A QSO record set at the 1996 Boxboro Convention of 1131 Q's. He is going to need help for the best operators out there to do it. Sign up early, Sign up often. Keep the station on the air!

Convention Banquet – Saturday Evening, August 23rd , 7 – 10 PM – Federal Room

Please join Kay Craigie, N3KN and the convention staff for a relaxing evening where we recognize some of New England's best and brightest Hams for their achievements and accomplishments. The buffet style dinner features Chicken Picatta, Beef Bourguignon and New England Haddock along with all of the usual fixings. Mike Crestohl, W1RC our convention prize chairman assures us there will be a nice door prize for this event. Note, you must pre-order your banquet tickets by noon Wednesday, 8/20, on-line so that we may provide an accurate headcount for the hotel food service folks.

Online Contest Real Time Score Reporting BoF* Session – Saturday Evening, August 23rd 6 – 8 PM - Board Room

Moderator Matt Attwood, WE1H stirs the pot to educate and challenge the contesting community to incorporate and improve the adoption of Real Time online resources such as Score Reporting, during the major contests. Do you agree? Can you contribute ideas and ways to improve the adoption or experience? Do you disagree? Come debate the issues! (* = Birds of a Feather, i.e. folks with common interests).

Friday, August 22 nd							
Room	Parade	Federal	Colonial	Seminar	Cotillion	Directors	
09:00	Vendor Exhibit Setup (Closed to Public)			ICS-100 Training Tom Kinahan – N1CPE Graham Campbell - MEMA (Confirmed) (Pre-Registration Required)			
10:00							
11:00							
12:00							
13:00						Hurricanes – In Depth	
14:00						Rob Macedo – KD1CY Dennis Dura – K2DCD	
15:00							
16:00							
Seating		350	125	72	60	40	

Saturday, August 23rd

Room	Parade	Federal	Colonial	Seminar	Cotillion	Directors	Board	
09:00	Vendor Exhibits Open	Committee Use	NE QRP Forum A Look at Making a QRP Receiver Dennis Marandos – K1LGQ Antenna Designs for QRP Operation Rick Littlefield – K1BQT	Latest Developments in WinLink2000 T. Kinahan - N1CPE	Committee Use	Northeast Forest Rally Com Support John & Michele Briggs - KC6TVF & KC7LIF	Committee Use	
10:00		It All Starts With The Microphone Bob Heil – K9EID	Camping and QRP DXing in Africa Using QRP / Battery Ops Bruce Beford – N1RX John Grow – VE2EQL	Army MARS: How it works, What it does Bob Mims – WA10EZ Grant Hayes – AAA9O Jim Griffin – AAA9B	AMSAT Update & AMSAT Satellite Operations and ARISS	NESMC Forum Bob DeMattia - K1IW		
11:00		Elecraft K3 Eric Swartz - WA6HHQ	Six Meters and VHF Propagation Ken Neubeck - WB2AMU	SKYWARN Rob Macedo - KD1CY	Barry Baines - WD4ASW			
12:00			Crystal Clear R. J. Thompson Jr. Ph.D	SEC Forum Rob Macedo - KD1CY	7 ½ Persistent Antenna Myths Dave Allred – N1VU	The Amazing Half Square S. Kerchel - AA4AK	YL's At Noon Anne Manna – WB1ARU	
13:00			YCCC Meeting Open to all Spratly Island DXpedition Ed & Christine Sawyer - N1UR & KB1PQN Low Power/Wire Antenna Contesting John Vogel – N1PGA	ARRL Forum I Kay Craigie – N3KN Tom Frenaye - K1KI M. Raisbeck - K1TWF	EM Management Training Requirements Tom Kinahan – N1CPE Graham Campbell - MEMA	10-10 International Gerry Gross - WA6POZ	Geiger Counter Mods for Ham Use C. Kitchin – N1TEV	
14:00			Receiver Design Rob Sherwood - NC0B YCCC General Meeting K1RX	Common Covenants and Restraints for Hams Fred Hopengarten – K1VR	Flex Radio 5000 The Big Picture: Software Defined Radio Defined Gerald Youngblood - K5SDR	900 MHz Repeater Group Rick Zach - K1RJZ John Frye - N1OTY	All About the QCWA John Johnston - W3BE Pres. QCWA	Young Amateur's Forum Bill Barber – NE1B
15:00				Class E AM Developments Steve Cloutier – WA1QIX	The Brains of SDR Dr. Robert McGwier – N4HY	A History of Antenna Measuring Equip. Bob Tiffany – W1GWU	Growing Your Local Club B. Budinger - WA1QYM	
16:00			6V7 DXpedition Multimedia presentation Paul Young & Charlotte Richardson – K1XM & KQ1F	AM Forum Tim Smith - WA1HLR	NE QRP Business Meeting Dennis Marandos – K1LGQ (open to all)		Power Pole Workshop John Kalotai - N1OLO	
Seating		350	125	72	60	40	15	

Sunday August 24 th						
Room	Parade	Federal	Colonial	Seminar	Cotillion	Directors
09:00						
10:00	Vendor Exhibits Open	VHF/UHF/ Microwave Rover Operation in VHF Contests Sigurd Kimpel - KJ1K	10-10 International Gerry Gross WA6POZ	Climate Change and its Impact on EMComms Ray Sirois – N1RY	Army, Air-Force, Navy, Marines MARS Joint Meeting Bob Veth - K1RJV / NNN0FCC	100Lb DXpedition Scott Andersen – NE1RD
11:00		Getting Started in Microwaves Paul Wade - W1GHZ	Coaxial Wave Traps Steve Kerchel - AA4AK	The Evolution and Current Values of Telegraph Keys	(Open to all HAMS)	A Solar Powered Field Day Station
12:00		Oscillators Byron Blanchard - N1EKV 10 MHz GPS-locked Oscillator Mike Seguin - N1JEZ	ARRL Forum II Kay Craigie – N3KN Tom Frenaye - K1KI M. Raisbeck - K1TWF	Prof. Tom Perera - W1TP		Al Corderman – WB1EFN
13:00		Hotel Setup Prize Program Setup Ticket Exchange/Seating				
14:00		Convention Prize Program and Wrap Up				
Seating		350	125	72	60	40

Abstracts

It All Starts at the Microphone!

Federal Room, Saturday Aug. 23 10 - 11

Bob Heil, K9EID

Rock and Roll Hall of Fame inductee, Bob Heil goes through how to get more from your transmitter just by selecting the correct microphone and properly adjusting the audio settings in your transmitter. Actually get to hear these changes, live at show. The workshop also gets into proper cables, ground loops and simple ways to monitor your station.

SKYWARN

Seminar Room, Saturday Aug. 23, 11 – 12

Rob Macedo, KD1CY

This presentation will feature the NWS Taunton SKYWARN program and how operations at NWS Taunton unfold, what is expected from the Amateur Radio community during SKYWARN activations, when SKYWARN training is offered to Amateur Radio Operators and the public and an overview of past significant events across the NWS Taunton County Warning Area since the last Boxboro New England Division Convention. In the presentation, we will also briefly cover how the SKYWARN program will support operations during hurricane net activations if required. This will be a great presentation for those who are very experienced in SKYWARN right down through those that are new to SKYWARN and would like to learn more about the program.

SEC Forum

Seminar Room, Saturday Aug. 23, 12 – 1

Rob Macedo, KD1CY

This will be an opportunity for ARES Section Emergency Coordinator's from across New England to be able to give a high-level overview of their program and what has been accomplished in their program since the last Boxboro New England Division Convention. This may include an overview of all the work done since the last hamfest or may be a specific aspect of their section's program that they are working to complete or have completed. It will also be an opportunity for ARES SEC's to share their experiences with those that attend and to answer any questions concerning the ARES program for their perspective area. The forum is slated to be helpful to all Amateurs with varying amount of experience in the ARES program.

Latest Developments in Winlink2000

Seminar Room, Saturday Aug 23, 9 – 10
Tom Kinahan, N1CPE

Winlink2000 is the latest in reliable Digital HF and VHF Communications, and is recommended by the ARRL. It provides a radio "Last Mile" extending from VHF range to HF worldwide distances for Email messages. You will gain a basic understanding of how the system works, and specific actions to take to take part in this exciting new system.

All About the QCWA

Directors Room, Saturday Aug. 23, 2 - 3
John Johnston - W3BE

Quarter Century Wireless President John B. Johnston, W3BE, QCWA JOURNAL, WorldRadio and AutoCall columnist, will present ALL ABOUT QCWA. It will tell about the great hams who make up our 225 chapters around the World and about our many activities, including our Caribbean and Alaska cruises. All QCWA members and others who were first licensed before 1985 are especially invited to attend.

Climate Change and Its Impacts on Emergency Communications

Seminar Room, Sunday August 24, 10 - 11
Ray Sirois - N1RY

This interesting talk was first presented at the Maine ARRL Convention last year. It was very well received. Ray is one of 1000 persons trained to give live presentations of the slide show which former VP Al Gore gave in the Oscar winning documentary An Inconvenient Truth. Ray's presentations are tailored for different audiences, updated since the film, and is NON-partisan.

For the ARRL Convention in Boxboro, Ray will cover the fundamental science of climate change, the New England Climate Impacts Assessment, and how Emergency Communications specifically Amateur Radio have already started to be impacted, and how it will become more impacted in the years ahead. e.g. Increased Wildfires due to drier conditions and longer growing seasons, increased flooding events due to increased hydrologic cycle and gradual sea level rise.

The Evolution and Current Values of Telegraph Keys.

Seminar Room, Sunday August 24, 11 - 1
Prof. Tom Perera - W1TP

Telegraph keys have been manufactured for over 160 years. Some rare ones still show up at hamfests and have sold for over

\$20,000. We will trace the evolution of the different kinds of keys and demonstrate how to identify the valuable ones. W1TP will also provide appraisals of the values of any telegraph keys you may want to bring just like the "Antiques Roadshow".

YCCC Forums

Federal Room, Saturday Aug. 23 1 - 5
Mark Pride - K1RX

Lower Power / Wire Antenna Contesting

John Vogel, N1PGA and Ed Sawyer, N1UR

Do you want get into Contesting as the HF conditions continue to improve, but think you can't because...you lack experience & not sure where to start?, you don't have a lot of \$\$'s, you don't have a tower, you don't own an amplifier, you don't have a packet connection, you only have a single radio, you don't own a dream QTH and you can't muster a ground crew if your life depended on it (it does). No Problem! John Vogel, N1PGA has grabbed a handful of Top-10 scores in recent years in the Low Power category using only antennas supported by trees. This session will provide an overview of HF Contesting, covering the basics, and show how you can be competitive without towers or commercial antennas and highlight some of his homebrew antennas that can be easily built, put up in the air using only trees and maintained single handedly. John will be joined by Ed Sawyer N1UR the reigning US Low Power contesting champ for some color commentary and share his perspective from the top of the contesting food chain. Ed will add pictures and descriptions of his station and the concepts behind the antenna and station design. John and Ed will end with a Q & A with answers from both stations perspective.

Spratly Island DXpedition

Ed and Christine Sawyer, N1UR and KB1PQN

Ed (N1UR) and Christine (KB1PQN) Sawyer will discuss their DXpedition to Spratly Islands (Layang Layang) which took place in March 2008 as 9M6/N1UR. Ed will discuss preparation details including deciding where to go, licensing, political risks, needs, expenses, time and facilities.

Radio Preparation and antenna decisions will be reviewed. A typical Website design to promote your DXpedition will be displayed. Pre-DXpedition training and expectation setting will be discussed. Finally pictures and commentary of the actual DXpedition, conditions encountered, band choices will be discussed.

Receiver Design

Rob Sherwood, NC0B

Rob will describe what dynamic range means, and why the dynamic range requirements for a CW contest are significantly higher than for an SSB contest. Rob will also lead a discussion of why a K3, for instance, has some advantages over a radio with one roofing filter, like the 756 Pro III. In addition, there will be examples of problem areas in top-of-the-line contest rigs.

Young Amateur's Forum

Board Room, Saturday August 23, 2 - 4
Bill Barber – NE1B

This kick-off gathering of some of the active local young hams. The forum provides an environment for those interested in Communications, Contesting and Experimentation to share their experiences in Amateur Radio. Details on the Contesting in Young Amateurs net based out of Michigan will be available (147.105 on Sunday nights at 7 PM). The local gathering is connected to the main group in Michigan via Echolink.

A History of Antenna Measuring Equipment (or Life Before the Auto Tuner)

Directors Room, Saturday August 23, 1 - 2
Bob Tiffany – W1GWU

Bob's talk is on the history of antenna measurements, and the instruments developed over the years for that purpose. It is not how to do it, rather how it evolved, and a lot of show-and-tell of vintage measurement gear. I start with using a light bulb as an RF indicator, and progress to Return Loss Bridge, Spectrum Analyzer with tracking generator, and a TDR. Questions are encouraged, and, if time allows, some hands on experience with the gear.

Crystal Clear: The Struggle for Reliable Communications Technology in World War II

Colonial Room, Saturday August 23, 12 – 1
Richard J. Thompson, Jr., Ph.D.
Dean of Mathematics and Sciences
The College of Saint Rose, Albany, NY
Ph.D. 1994, Penn State University

Some of the defining leaps in technology in the twentieth century occurred during the Second World War, from radar to nuclear energy. Often left out of historical discussions are quartz crystal oscillators, which proved to be just as pivotal to the Allied victory—and to post-war development—as other technologies. Quartz crystals provided the U.S. military, for the first time, with reliable communications on the front lines then went on to become the core of some of the most basic devices of the post-war era, from watches, clocks, and color televisions, to cell phones and computers.

In ***Crystal Clear***, Richard Thompson relates the story of the quartz crystal in World War II, from its early days as a curiosity for amateur radio enthusiasts, to its use by the United States Armed Forces. It follows the intrepid group of scientists and engineers from the Office

of the Chief Signal Officer of the U.S. Army as they raced to create an effective quartz crystal unit. They had to find a reliable supply of radio-quality quartz; devise methods to reach, mine, and transport the quartz; find a way to manufacture quartz oscillators rapidly; and then solve the puzzling "aging problem" that plagued the early units. Ultimately, the development of quartz oscillators became the second largest scientific undertaking in World War II after the Manhattan Project.

Copies of the book will be available for purchase (and author signing) throughout the day on Saturday.

A Portable Solar Powered Field Day Station

Directors Room, Sunday August 24, 11 – 12

Al Corderman – WB1EFN

Al will describe and demonstrate his home built portable solar power system for use on field day, emergencies and camping. The station features an 80 watt solar panel, 55 amp hr. gel cell battery, controller, and 12VDC - 120VAC inverter all packaged into a small toolbox designed for ease in carrying (the panel is separate with a 20 ft. cable so it can be placed outside and the tool box next to your rig). The panel / battery can supply enough power for a 100 watt rig, a light, and a laptop computer.

100 Pound DXpedition

Directors Room, Sunday August 24, 10 - 11

Scott Andersen, NE1RD

Packing up and traveling with your radio can be great fun. It is especially enjoyable to “be the DX” once in a while, operating from an exotic place on a personal DXpedition. Recent airline baggage weight limitations, however, have made this activity more challenging. In *The 100 Pound DXpedition* you’ll learn enough about how best to travel with a lightweight station to make your first personal DXpedition a success. The session includes a definition for the various types of DXpeditions, how to plan your own personal DXpedition, and equipment options for such an adventure. Three DXpeditions by the speaker will highlight the presentation and show concrete examples of what can be done with a little equipment and a little ingenuity.

Flex-Radio 5000

Seminar Room, Saturday August 23, 2 – 4

First Hour:

The Big Picture: Software Defined Radio (SDR) defined, how it works, and what makes SDR different from traditional radios.
Presented by: Gerald Youngblood

Gerald has been a ham since 1967 as WA5RXV, KE5OH, AC5OG, and now holds an Extra Class license as K5SDR. In April of 2003 he founded FlexRadio Systems to market the first Software Defined Radio products to the Amateur Radio market. Gerald previously founded and ran five technology companies spanning hardware, software, and electronic manufacturing, one of which he took public in 1996. Gerald holds a BSEE degree from [Mississippi State University](#). He is a member of the ARRL Software Defined Radio Working Group and is the recipient of the ARRL 2002 Doug DeMaw, W1FB, Technical Excellence Award and the Central States VHF Society 2004 John T. Chambers Award

Second Hour:

The Brains of SDR- Open-source DSP Software that allows continuous evolution of unmatched radio performance and functionality.
Presented by: Dr. Robert McGwier

Dr. Robert "Cowboy Bob" McGwier has a Ph.D. in Applied Mathematics from [Brown University](#). His thesis, "Regular Perturbations and Nonlinear Filtering", sprang from his interest in phase-locked loops and range-rate orbit determination. Well known as N4HY, he has been an amateur radio operator since 1964. Bob was the co-founder of the AMSAT-TAPR DSP project with Tom Clark, K3IO (previously W3IWI).

Bob is author of the DSP code in the old AEA DSP1232 and DSP2232 multimode controllers. [Timewave](#) offered these units for sale. He was a designer and builder on the AMSAT Microsat's and participated in the Amsat-Oscar 13 and Amsat-Oscar 40 projects. For his work on the AMSAT and TAPR projects, he was awarded the Dayton Hamvention Technical Excellence award in 1990 and the Central States VHF Society John T. Chambers Award in 2007.

He is currently working on the [AMSAT Eagle project](#) on several software-defined radio transponders, the AMSAT-DL Phase 3 Express Project where he is bringing up [IPS](#) for the on-board computer and will author the software-defined radio for low speed telecommand on the upcoming projects [AMSAT-DL](#). Bob is currently the AMSAT Vice President for Engineering. He is also the chairman of the ARRL Software-Defined Radio Working Group and a member of the High Speed Multimedia working group.

In addition to his many endeavors Bob finds time to be an active member of [ARRL](#), [AMSAT](#), [AMSAT-DL](#), [TAPR](#), [PACKRATS](#), and the [Frankford Radio Club](#). Bob is happy to be a volunteer software contributor to this exciting radio project. Shann McGwier, Bob's wife, is N2HPE and they have three children. He is currently employed by the [Center for Communications Research](#) in Princeton, N.J.

The Amazing Half Square

Directors Room, Saturday August 23, 12-1
Steve Kerchel, PhD, PE – AA4AK

Steve will discuss his experience designing, building and operating half-square antennas on 20 and 40 meters. Half squares take up no more space than a dipole, but are cheap and effective DX antennas for the lower frequency bands. If an 80 meter Yagi on a 120 foot tower is out of your price range, you might want to take a look at the half square.

Steve has been an electrical engineer for 39 years, was a Development Engineer in the Electromagnetic Compatibility Group at Oak Ridge National Laboratory, and has over 100 technical publications. He was first licensed as a ham in 1964.

Coaxial Wave Traps

Directors Room, Sunday August 24, 11-12
Steve Kerchel, PhD, PE – AA4AK

Steve will discuss his experience designing, and building coaxial wave traps. This is a “show and tell” presentation, and will include an exhibit of a completed and tested 17/12 meter coaxial trap dipole, a demonstration of the measurement of the resonant frequency of a coaxial wave trap, and a discussion of how to avoid various pitfalls in designing and building your own custom wave traps.

Steve has been an electrical engineer for 39 years, was a Development Engineer in the Electromagnetic Compatibility Group at Oak Ridge National Laboratory, and has over 100 technical publications. He was first licensed as a ham in 1964.

GEMOTO 900 MHz Repeater Group

Cotillion Room, Saturday August 23, 2 – 3

Between the internet and cell phones, we have all seen a lot of mainstream repeater operation become stagnated. However, 900 MHz repeater operation has seen dramatic sustained growth in 2008. One reason has been due to availability of "the new surplus" of very inexpensive, high quality 900 MHz commercial gear. Find out what all the talk is about.

- Rick Zach, K1RJZ will give a quick introduction to "the new surplus".
 - Depending on audience desires, Randy Krenz, N3HFK has several end-user topics prepared ranging from "what radios should I use" all the way to "how to link repeaters". The audience will determine the direction.
 - John Frye, N1OTY will have a presentation on the high-end Motorola MSF5000 repeater. In 2008, approximately fifty of these surplus repeaters have inexpensively landed in the hands of New England hams with many becoming IRLP-linked repeaters.
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Hams at the New England Forest Rally

Directors Room, Saturday August 23, 9 – 10
John and Michele Briggs, KC6TVF & KC7LIF

Cars.....Communications.....Speed..... what more could you want in a weekend. For two days in July over 30 hams from all over New England meet at the Sunday River Resort to handle communications for the New England Forest Rally, the final preliminary race before

the "X Games". What do they do? What technological challenges do they face? What are the rewards? Come discover one of the best kept training secrets for those interested in ARES communications activities.

7 ½ Persistent Antenna Myths

Cotillion Room, Saturday August 23, 12 – 1

Dave Allred, N1VU

Feedline radiation and baluns, SWR and power loss, offset feed and radiation resistance, antenna tuners at the feedpoint and at the radio: it's easy to find plenty of information about antennas and antenna systems. But, why does a book say one thing, and an article says something different? And then, the experts on the Internet claim that both are wrong.

We'll examine 7 1/2 antenna myths that just won't die. We will look at likely sources for the misunderstandings, apply some tests, and discover what's really happening. As part of this process, you'll learn how to recognize and test suspicious information that may really be an antenna myth. Our high quality RF is too good to waste - learn how to find and kill Antenna Myths.

Growing Your Club

Directors Room Saturday 3:00 PM to 4:00PM

Bo Budinger WA1QYM

Bo will focus on ways to improve the operation of your local ham radio club. He will draw from his years of experience as President of PART, the Police Amateur Radio Team of Westford, Massachusetts. The question as to what hams really want from a local club will be addressed. Suggestions will be made as to how to have better monthly meetings. A significantly new approach to Field Day will be presented where the emphasis is more on learning and less on operating. Insights will be given on how to recruit new members and how to address the social aspects of a ham radio club.