CAARA Newsletter

AN ARRL AFFILIATED CLUB

APRIL ISSUE- 2012

President's Corner

by Stan-W4HIX

I don't know about you, but this early change to daylight savings time seems odd to me. Oh well, it gives us more time to get out after work and work on things like antennas depending on the weather—which could be temperatures in the 80's or snow.

I'm getting back on track after a week in the Caribbean. Sorry we had to delay the Field Day meeting, but we still have plenty of time. Most of the bulky FD gear is now located in the trailer thanks to Jon K1TP and Jake K1LDL. This has opened up the clubhouse tremendously. CAARA no longer feel like some of the surplus places I haunted as a college student. We still have work to do in clearing and organizing, but tremendous progress has been made.

I don't know the current status of the trailer lettering, but when that's done, we should see the trailer at CAARA. We can then start in earnest the customization of the back for storage and the office as an operating station.

April is shaping up to be another busy month—hopefully we can get to the MIT Flea with a bunch of stuff (and come back with less than we started with). I'll be working the Boston Marathon and that is always an interesting experience. And don't forget Skywarn and Tech in a Day.

I wanted to pass along my thanks to Ruth WW1N for her organization of the Thacher Island expedition. She has put a tremendous amount of skill and effort into this endeavor, and the club appreciates it. The work she's done will provide a great base for the next person who takes over the organization of the activity.

See you around the clubhouse.

Clerk's Corner

As one of the Eastern Massachusetts ARRL Public Information Officers I thought I would for this month I would cover all the benefits of a Amateur Radio Relay league yearly membership.So lets take a look at what you get for $39.00. Granted most of us don't take advantage of all the benefits available to us and we probably don't think twice about all that the ARRL does for the amateur radio hobby. The first obvious benefit is the yearly subscipton to QST which includes 12 magazines,but members also get access to all the archived ARRL magazines online and and the ARRL is going to start a digital online version of QST. ARRL members also get the opportunity to purchase equipment insurance for their amateur radios. In fact CAARA has this insurance for the gear at the clubhouse.ARRL members also get access to an outgoing QSL service, a Technical Information service and a ARRL e-mail address. ARRL members also have the opportunity to get a ARRL Visa Signature card where all purchases made on that card help financially support ARRL programs. Speaking of programs, the ARRL has an endless array of education progarms, from books to help with amateur radio license testing to Emergency Communications. The ARRL also has a Volunteer Examiner program which assists hams on educating them for thier licenses as well as the testing portion of it.. Your yearly membership dues not only benefits you but it also benefits the amateur radio hobby at large. Your dues help support the ARRL as an amateur radio advocate in Washington DC. The ARRL lobby's Federal, State, and local legistlatures to help protect our portion of the radio spectrum that we use. In fact CAARA has its own ARRL Local Government Liasion with Hank McCarl W4RIG at the helm. The ARRL also has the Amateur Radio Emergency Services which provide emergency and public service communications for the safety of the general public.Your yearly ARRL membership dues also play a huge part in the promotion of the amateur radio hobby to the general public. As a ARRL Public

(continued on page 15)

CAARA Newsletter
Cape Ann Amateur Radio Association
6 Stanwood Street
Gloucester, MA 01930

CAARA Newsletter is a monthly publication of the Cape Ann Amateur Radio Association (CAARA). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to CAARA members, and space is available. Material is accepted on a first come, first serve basis. Articles and other materials may be submitted by internet to Jon at k1tp@arrl.net. If possible, material should be in Word format.Material may also be submitted as hard copy to Jon-K1TP or any Club Officer.
All material published in the CAARA Newsletter may be reproduced for noncommericial use provided such use credits both the CAARA and the author of the article. Copyrighted material will not be accepted without accompanying written permission to publish.
The opinions expressed in the CAARA Newsletter are solely those of the editor or other contributors and do not necessarily reflect the opions of either the Board of Directors or membership of CAARA.

Jon Cunningham- K1TP Editor
Dean Burgess- KB1PGH Cub Reporter

Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the Cingular tower in the Blackburn Industrial Complex in Gloucester Massachusetts. It has an average effective radius of 60 miles, and serves Eastern Massachusetts, Cape Cod, Rhode Island, Southern New Hampshire, and maritime mobile stations. CAARA also operates the W1GLO repeater on 224.900. The former W1RK 443.700 repeater with antennas located in Magnolia is now located at the CAARA clubhouse and has a very limited range.

The Association is one of the few amateur radio clubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, it includes a permanent HF station with rotating beam and vertical antenna along with a 2 meter packet station and 2 meter voice and 220 MHz transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00AM at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. There is no pre-registration necessary. Contact the head of our VE team Bob Quinn if you have any questions about monthly testing.

Monthly member meetings are held on the first wednesday of each month at 7:30 PM except for July and August.

Each Sunday evening at 9:00pm, the club operates a 2 meter net on 145.130. This is an open and informal net which disseminates club news and prepares operators for emergency communications work. All are invited to check into the net as club membership is not a requirement.

Power Supplies used with Motorola repoeaters which were donated to the club. They are commercial continuous duty power supplies pushing out 16 volts at over 30 amps. With a little modification, we should be able to use them at the club house and in the new Emergency trailer for Field Day and emergency operations. Thanks to Jake-K1LDL for grabbing them before they were dumped for scrap metal.

MARCH MEMBERS MEETING WRAP UP - Dean- KB1PGH

CAARA held its monthly members meeting on Wednesday, March 7th at the clubhouse. For this months meeting we had a guest speaker. Mr Stevv Schwarm W3EVE gave a great talk on how he and 2 others coordinate amateur radio communications during the Boston Marathon. Steve talked a great length at how his responsibilities include controlling all amateur radio communications traffic for 200 hams using 20 repeaters over a 26.2 mile straight line course. His presentation incuded a powerpoint slide show which showed how each part of the marathon course was broken up into radio communication sections and how amateur radio operators were assigned to different tasks such as providing communications for transportation, First Aid and supply logistics for the thousands of runners. His presentation made the great impression on how amatuer radio operators volunteer so much of their time and volunteer so much of their own person radio gear for free all in the name of public service and more importantly public safety! For example back in 2004, amateur radio operators were responsible for calling 200 ambulances to assist exhausted and hurt runners during that years Boston Marathon!

THE POWER OF BACON AND EGGS!

The CAARA Scholarship Committee would like to thank the membership for eating a lot of bacon and eggs during the past year! Due to your dedication to attending the benefit breakfasts each month the club will be able to award 4 Scholarships in the amount of $250.00 each coming up this June to deserving high school students around Cape Ann! There will be 2 Scholarships awarded in Gloucester High and 1 each in Manchester and Rockport High.

APRIL CAARA CLUBHOUSE EVENT DATES

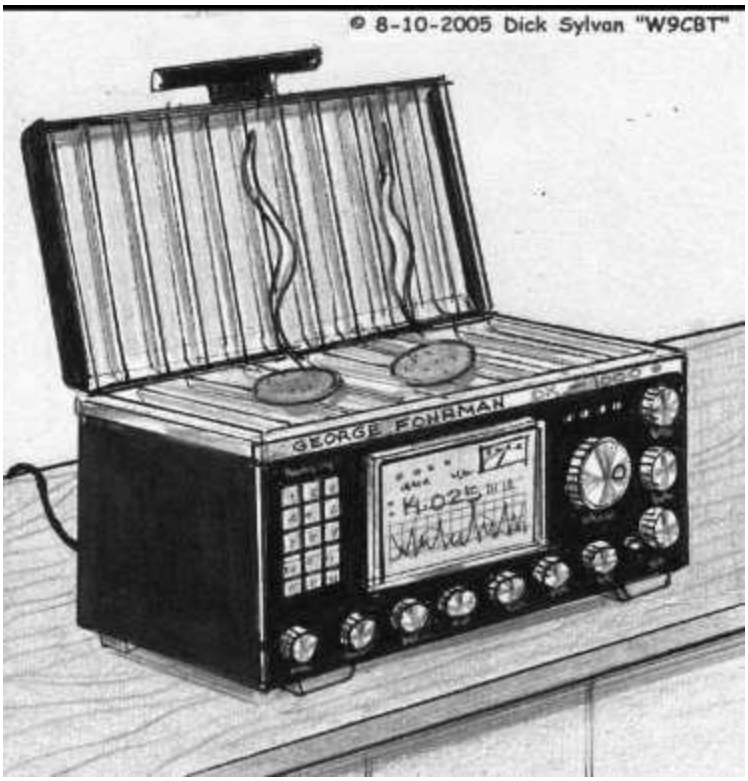
Sunday April 1st, Monthly Scholarship Benefit 8:30 AM
Sunday April 1st, ARRL Field Day Planning meeting 10:00 AM
Wednesday April 4th, Monthly Members meeting 7:30 PM Rob Macedo KD1CY Guest Speaker
Sunday April 8th, Monthly Amateur Radio License/VE Test Session 10:00 AM
Wednesday April 11th, Monthly Emergency Communications meeting 7:00 PM
Wednesday April 11th, Monthly Board of Directors meeting 7:30 PM
Every Sunday at 9:00 AM,Caara Clubhouse open house,donuts and coffee
Evey Sunday Night at 9:00 PM Weekly CAARANET on 145.130 MHZ with no PL tone. .

MARCH CAARA VE TEST SESSION RESULTS

CAARAheld its monthly FCC Amateur radio License / ARRL VE Test Session on Sunday, March 11 at the clubhouse and here are the results.

Picture on left: CAARA VE Team leader Bob Quinn- WV1A presents Matt Allred- KB1WGC with his FCC General Class Amateur Radio License.

Picture on right: CAARA VE Team leader Bob Quinn -WV1A presents Dave Macculloch- KB1VZR with his General Class Amateur radio License.



This looks like a great Field Day Invention...

Jon-K1TP showing a circuit he built with a 555 chip used as a morse code practice oscillator. This circuit uses one chip, two resistors, and two capacitors and is powered by a 9 volt battery. If anyone is interested in building this circuit, let me know. Most of the parts, if not all, can be found in the second floor parts collection.

Sunday, March 11 Thatcher Island Activation Planning Meeting

A look at the Nifty Mini Manual from Dean Burgess KB1PGH

Most of you know what Cliff Notes are. Those quick reference booklets that quickly skipped over the boring parts of a book and gave you the basic details to save yourself from a test. Well the Nifty Mini Manuals remind me of Cliff Notes for the manuals of HF rigs and VHF/UHF handheld radios.Since I operate HF portable I didn‘t want to drag my big Icom 7000 manual around with me so I had heard about the Nifty Mini Manuals so I decided to give them a try. The Nifty Mini Manual is made for a wide variety of HF rigs and VHF/UHV handhelds. The basis of these manuals is obviously to save space but there are other features as well.The Mini Manual has a coil binder so all the pages lay flat which is a huge help instead of having to fight paper pages folding back on you.Plus all of the pages are made of a heavy duty backing and have a clear coat on them so they are completely weatherproof instead of being paronoid about getting your manual soaked in a rainstorm. All of the Mini Manuals are about 15 to 20 pages long and they basically translate the original manual instructions into a bullet point type system for easy operation.I‘ll say the print is small but is easy to see behind a very white background.These manuals are a big problem solver when,lets admit it,we all forget how to operate our radios from time to time. Especially when we don‘t get the chance to operate them everyday. These manuals are great memory joggers for your HF radio or HT. I highly recommend these manuals to anyone who operates HF portable or for those who bring their radios to use for public service or emergency communications. These manuals are about 7 inches tall and 4 inches wide and are very thin when closed. Perfect to put in your go-kit. They also make a couple of HF Reference mini manuals which cover all the basic HF frequency bands calling frequencies and beacon freguencies. All of the manuals are from the $12-18 range. So I say take a look at these manuals at www.niftyaccessories.com

Club Member Shack of the Month: Hank- W4RIG Gloucester, MA

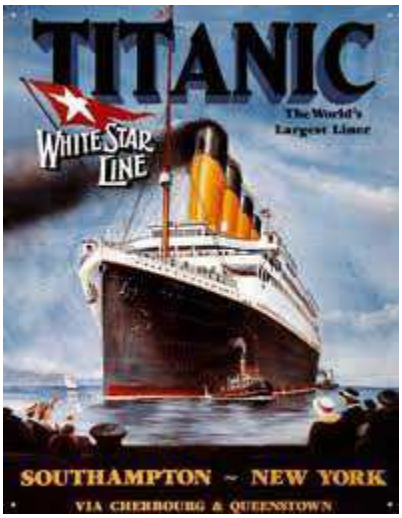
Two antenna shots - one with my 43 foot DX engineering vertical that Ruth WW1N helped me install with 63 radials now covered by the grass - and the TH3 MK4 tri-band antenna with 6M and 2M stack above and just visible is my dipole from Cobra (a modified G5RV) - when we work both positions (FT-2000 and FT-950 we use both the tri-band beam and vertical antenna concurrently without cross band interference - esp. with the K2H special event over the July 4th weekend - My thanks to the W1GLO Club members who helped to install the stack of beams one January back in 2009 - Dick KR1G brought the bucket truck and we put up all three in one afternoon - I use the dipole for 17 and 30 meters and the vertical can be tuned for all of the HF bands - Since I work mostly on 15 and 20 meters with PSK 31 - the tri band beam is the main work horse pointed to Europe and the vertical provides back up when I'm trying to work in different directions quickly or to detect when the bands are open. I rarely use more than 40 W transmitting with digital operations and only go to 100 W with SSB - I also have a 2M mobile antenna for local FM connections via the CAARA repeater.

In addition to the fixed location at 112 Eastern Avenue I have portable ops from the condo at 28 Old Nugent Farm with my FT-857 and deck mounted verticals - and mobile rigs for my car. Hank

Hank- W4RIG at the main operating position with his FT-2000 and wide screen monitor.

Hank with his Yaesu 950 station and lots of QSL cards and PSK31 Awards from around the world.

Titanic QRP Event (CW ONLY)



To kick-off the 100th anniversary commemoration of the sinking of the Titanic.
From Special Event Station **WØS** operating from the Titanic Museum in Branson, Missouri
April 13, 2012
7:00 p m to 10:00 p m CDT
Frequencies
40 Meters 7.055 to 7.060 MHz
80 Meter 3.555 to 3.560 MHZ
Remember this is “QRP” 5watts or less-
Please check our website (www.w0s.org) for QSL instructions
This is not a contest, this is a commemoration of the operators who stayed with the ship on that fateful cold night to send the CQD/SOS distress signal. We honor respect their commitment to saves lives.
WØS will make every effort to answer any and all calls made to us. Please be patient and space out your calls.
If you have any questions, please communicate to erecom@hotmail.com or K9ZTV@socket.net
Thank you.
Kent Trimble, K9ZTV & ***Al Gallo, WØERE***

CAARA hosts National Weather Service Spotter course !!

The Cape Ann Amateur Radio Association will host a National Weather Service Severe Weather Spotter course at the Lanesville Community Center on 8 Vulcan Street in Gloucester Mass on Saturday April 21st.The doors will open at 9 AM and the course will be from 10:00 AM to 1 PM. This course will be given by Rob Macedo KD1CY.This course is open to all amateur radio operators and to the general public.This course is free of charge.There is no sign up for this course,just show up the day of.To find out more about Skywarn please go to www.skywarn.org .

60 Meters Update

On March 5 amateurs were granted new privileges on the 60 meter band. The effective radiated power level was increased from 50 to 100 W, along with the ability to use CW and the digital modes PACTOR III and PSK31. The response thus far has been enthusiastic with all five 60 meter channels buzzing with activity. Sideband operators in particular have welcomed the 3 dB power boost. Many have reported substantially improved range, especially in noisy conditions. Sideband DX activity on 5403.5 (Channel 5) has increased significantly.

CW and PSK31 operators are making good use of the new privileges as well, but are reminded that their transmissions must take place on the *channel center* frequencies as specified by the FCC:

Channel 1: 5332.0 kHz
Channel 2: 5348.0 kHz
Channel 3: 5358.5 kHz
Channel 4: 5373.0 kHz
Channel 5: 5405.0 kHz

"CW operators seem to have little problem figuring how where they need to transmit, but some PSK31 operators are reading the text of the **FCC Report and Order** and coming away a bit confused," said Dan Henderson, N1ND, ARRL Regulatory Information Manager. "The R&O states, 'We adopt a modified instruction for PSK31 channel use to correct an error introduced in the *NPRM*. To have a PSK31 signal transmitted on the center frequency, the control operator should not set the carrier frequency to the center frequency but should instead set the carrier frequency 1.5 kHz below the center frequency (i.e., the same as for phone and data emissions).'

"The word *'carrier'* in this context means the suppressed carrier frequency of a transceiver when operated in the USB mode, but some have taken it to mean the PSK31 signal itself. They read this text and come to the conclusion that the PSK31 signal should be 1.5 kHz below the channel center. They are mistaken. The PSK31 signal *must be in the center of the channel*."

Hams are advised to carefully check not only their PSK31 software, but also their transceivers to make sure the radios are not shifting PSK31 signal frequencies during digital operation. The same is true for CW operators who may be using transceivers that have an automatic CW offset when operating in that mode.

Henderson notes that a few PSK31 operators appear to have missed the injunction to transmit only one signal per channel. "We've seen some guys deliberately starting conversations above or below the center frequency when the center frequency is already occupied with another PSK31 QSO or a CW transmission," Henderson said. "Not only is this in violation of the requirement to be at the channel center frequency, it also violates the restriction that mandates only one signal per channel. If you want to operate but you hear someone already using the channel, you have to try a different channel or check back later. Remember, we have only one operating frequency on each channel. This is not a situation where you can squeeze multiple signals within the channel based on the belief that it is okay because a PSK signal is so narrow."

Some ARRL Official Observers have reported the use of Minimum-Shift Keying RTTY, Contestia and other digital modes on 60 meters. "By a strict reading of the R&O some of these transmissions may not be in technical violation of FCC rules, but they not in line with the National Telecommunications and Information Administration (NTIA) request," Henderson said. "The NTIA administers these frequencies, not the FCC, so their request that digital enthusiasts restrict themselves to PSK31 and PACTOR III is a prevailing guideline."

"The confusion arises because many amateurs mistakenly believe that the FCC controls all of the radio spectrum in the US. That is incorrect. The NTIA controls frequencies that are allocated to governmental users, including FEMA, DHS, and the military. The five channels on the 60-meter band are under the direction of the NTIA. The FCC has worked with the NTIA to, in essence, 'negotiate' a secondary allocation for amateurs on that band. Amateurs need to keep in mind that the NTIA is the body that will either support the expansion of our privileges at some future date, or request that the FCC pull the plug on 60 meter Amateur Radio activity entirely. The NTIA is most definitely listening and non-compliant behavior puts our use of the band in jeopardy. Fortunately, instances of non-compliance appear to be isolated."

To date there have been no reports of PACTOR III activity on 60 meters. PACTOR III is restricted to live keyboard-to-keyboard use only.

Some 60 Meter Tips

How can I modify my transceiver to operate on these channels?-

Different radios that were not originally designed to transmit at 5 MHz will require different modifications. If you're the owner of some of a late-model Ten-Tec transceiver, you are fortunate indeed. Ten-Tec announced in June 2003 that it would have 5-MHz firmware upgrades in place for its Pegasus, Jupiter, Orion and Argonaut V Amateur Radio transceivers via its Firmware Update Web site prior to the band's opening date to allow these rigs to be used on 60 meters. These upgrades are now available for downloading. Ten-Tec says it plans no hardware modifications to provide 5 MHz capability for older Ten-Tec transceivers at this time. SGC has published a Web page on 60-meter operation with SGC equipment. The page includes information on modifying the SGC SG-2020 to allow transmission from 1.8 to 29.7 MHz, as well as notes regarding the use of the SG-2000 and STEALTH kit antenna on 5 MHz frequencies. Elecraft is developing a new optional board, part K60XV, which provides 60-meter operation for their K2 model transceiver. However, they have also published an experimental modification to allow transceivers without the option to operate on 60 meters. For complete details, refer to their Web page, Putting the K2 on 60 Meters. ICOM America's Technical Support Department issued a statement by email: "At this time, there are no modifications or upgrades to any ICOM radio to allow operation on 60 meters." Kenwood Communications Technical Support department was contacted via telephone, and they similarly stated, "There are no modifications available for existing radios to enable coverage of the 60-meter amateur band." Likewise, Alinco's US distributor, ATOC Amateur Distributing, told the ARRL Lab, "Alinco has not released any modification information to enable 60-meter operation on their HF transceivers." Vertex Standard (Yaesu) has told ARRL that it wants guidance from the FCC on whether it has concerns over the notion of "frequency agile" transmitters in the band and the expected degree of frequency tolerance [the rules are silent on the topic of frequency tolerance.—Ed]. "When these and other questions are answered by FCC and NTIA, Vertex Standard will be pleased to assist the amateur community in the most expeditious way possible in enabling transmit coverage of this new band," a Vertex Standard spokesperson said. Yaesu's current policies regarding 60-meter modifications include the following: # No modification kits or modification information will be available for very old sets, such as the FT-101, FT-301, FT-901, FT-757, FT-767 and FT-980. Yaesu notes that the FT-101, FT-101ZD and FT-901 service manuals do contain "some information," but notes that some transceivers of that vintage use a 5.0-5.5 MHz VFO. "So, this really is not a good situation," the spokesperson advised. # Vertex Standard will not release "general coverage" information to help Yaesu transceiver owners modify their sets for 5 MHz operation. # Vertex Standard is awaiting word regarding current production models. # The company cautions users of the FT-1000MP, Mark-V and Field not to set the EDSP modulation up for 100-3100 Hz operation on 5 MHz, since the bandwidth is restricted to a maximum of 2.8 kHz. Most modifications will "open up" your transceiver and permit it to transmit throughout the HF spectrum, so caution is in order. Some modifications involve nothing more complicated than clipping a diode or wire. There is no certainty, however, that a modified rig will meet FCC requirements for harmonics and other spurious emissions on all frequencies, so hams must either thoroughly check the post-modification performance of their equipment or wait for modification information that the manufacturer has validated. To provide some insight on the issues that hams need to be aware of, the ARRL Lab has performed some transmitter performance testing on a selection of modified transceivers. The report of the results of this testing can be found on the ARRL Technical Information Service 60-Meter Mods Web page. A listing of modification resources available via the Internet may be found on the AC6V Radio Modifications Web site. ARRL neither endorses nor warrants these or any similar modifications in any way. All licensees have the obligation to determine whether their equipment is operating properly on 5 MHz and all other amateur allocations).

How can I be sure I don't exceed the power limit? -

The FCC has said hams may run 100 W effective radiated power (ERP) on the five 60-meter channels. The new rules say, "For the purpose of computing ERP, the transmitter PEP (peak envelope power) will be multiplied by the antenna gain relative to a dipole or the equivalent calculation in decibels. A half-wave dipole antenna will be presumed to have a gain of 0 dBd." This means if you use a half-wave dipole (about 87 feet 3 inches for the "middle" channel according to the formula), set your transmitter's power output power for 100 W PEP (many

transceivers' meters can be set to indicate peaks), and you should be in compliance. The FCC asks licensees using antennas other than half-wave dipoles to "maintain in their station records either manufacturer data on the antenna gain or calculations of the antenna gain." This is a new record-keeping requirement for amateurs. The "best" antenna configurations are those with a proven track record on the lower bands, keeping in mind that using a loop or an array of some kind will require you to "do the math" to ensure you are not radiating more than 100 W ERP in any direction. The math is fairly straightforward. You must reduce your power by the number of decibels your antenna gain exceeds 0 dBd (0 dB relative to a half-wave dipole). Conversely, you can increase your transmitter power if your antenna exhibits loss compared to a dipole. Be prepared to document these situations in your station records, however.

What modes may I use on 60-meters?-

Effective March 5, 2012 the FCC has permitted CW, USB, and certain digital modes on these frequencies. The NTIA has specifically requested that amateurs restrict digital operations on 60 meters to PSK31 and PACTOR III *only*.

What is a domestic, secondary allocation?-

Whether or not you consider the five channels a "band" or not, the FCC has stipulated that our 5 MHz channels constitute a domestic allocation; it is not available worldwide (that would have to be determined at a World Radiocommunication Conference, and 5 MHz was not on the agenda for WRC-03). We're considered secondary because other users—primarily federal government stations—are primary. The most important thing is that, as secondary users, amateurs must yield to—and refrain from interfering with—primary users at all times. Giving us specific channels was one way to minimize the probability that hams might run afoul of critical government users . Internationally, the band 5250 to 5400 is allocated on a primary basis to the Fixed Service and on a secondary basis to the Mobile Service, except aeronautical mobile stations. In the US, the band's occupants include FCC Part 80 (Maritime) Part 87 (Aviation) and Part 90 (Private Land Mobile). Many specific government allocations are confidential.

But isn't it illegal to modify my ham gear?-

In a word, no. While you might void the warranty on a newer piece of gear if you decide to modify it for 60 meters—and this may be true even if the manufacturer provides the modification information—it's legal to modify, then use, your radio in the Amateur Service, since FCC certification is not required. In general, however, it is illegal to use a modified radio outside Amateur Service allocations without the require license and FCC-certificated equipment.

All speakers and organizations wanting to participate in the 2012 ARRL New England Division Convention program, please contact us at your earliest opportunity. Note the dates for the convention this year: August 24 – 26, 2012.

While there has been good response to date, open program hours remain available. Contact us if you wish to present a talk; include a subject title and, if you are so prepared, include a brief abstract.

If you represent a regional club or organization (e.g. NESMC, CEMARC, MARS, NEWS etc.) we can help facilitate open forums or closed meetings by providing you a meeting room. We do ask that organizations like this to please consider Sunday morning time slots for their closed meetings.

Groups looking to set up information booths should get your request in early. While the information booths are offered without charge, we ask for some volunteer time in return to assist us with ticket sales and other logistics during the convention operation.

Note, if you require a hotel room, make your reservations ASAP per the instructions contained on the web site to get the special convention rate.

Keep an eye on the convention web site, http://www.boxboro.org, for the latest information.

We look forward to meeting you at the convention,

Ken Caruso, WO1N
Boxboro Program Chairman
Wo1n@arrl.net 508-572-3347

WINTER CAMPING TRIP
by Jon-K1TP
The first camping trip of the year was scheduled for March 20-22 rain, snow or shine to the White Mountains in NH! What a surprise it was to have the temperatures rise to nearly 80 during the daytime and dip tp only 40 at night. Last year this time we encountered a snow and sleet storm as we were breaking down the camp.
We setup a Cobra multiband antenna and an inverted L with an Icom AH4 tuner. I brought along an Icom 718 to complement the Icom 7000 and Kenwood 570 the other guys brought. We used a Honda 2000i generator for charging the 12 volt batteries and running lights, etc. at night. We made over a hundred contacts or so on 75, 20 and 17 meters on SSB and sent out a QSL card to a few dozen who requested them.

Food was superb as usual, deer venison burgers, a corn beef dinner, homemade bread, etc. I think I gained a few pounds!
We stayed at the Hancock Camping Area on the Kancamagus Highway near Lincoln, NH and believe it or not, there were probably another 5 camping sites being used by other winter campers (some in tents!).
We plan on going again in the middle of April and play a little more radio!

The Honda Generator in a snow bank...it acted as a great sound barrier.

Boxboro!

The ARRL New England Convention

At the Holiday Inn, Boxborough, Massachusetts

August 24-25-26, 2012

VINTAGE CAARA PHOTOGRAPHS BY JOE-WB1CHJ

Above photograph includes Nick-KA1LKY, Jack-W1PSG, Larry- W1EGJ. This was probably taken at the CAARA Xmas Party at St. John's Church in the 80's.

Photo to the right is my most memorable ham, Ralph-W1RK. On top of being a superb CW op, Ralph is a wealth of radio/electronic knowledge and has "Elmered" many hams in the club over the years.

If you don't have a repeater within range of the beach, you may find that your hand units are very helpful in keeping track of the licensed members of your family while shopping. By using the hand units on a simplex frequency you can keep in contact with the car, the boat, the plane – or whatever.

Photo's from Wayne Green's book on how to use FM repeaters courtesy of Dick-WB1W

Lin on Skis

In many ski areas you can talk over a nearby repeater while spending those long hours on the lift line. More and more ski areas are inviting amateurs to set up a repeater on their mountain for the PR involved. Not a bad deal, considering the free season ski passes involved. Here we see Lin Green, high up on Mt. Snow in Vermont, checking with the baby sitter at home in New Hampshire some 70 miles away.

New 2 Meter Simplex net !!!

If your looking for something new to do in 2 meters, on Sunday April 15 at 7 PM there will be a simplex net.The net will start at 7 PM on the NSRA Danvers repeater of 145.470 MHZ with a PL of 136.5 .Then the net will move to a simplex frequency of 147.42 MHZ with no pl tone. So if you want to see how far you can hear and transmit on 2 meters FM simplex here's your chance! The information of this net came courtesy of Brian, WO1VES from the Sunday March 25th CAARANET.

DON'T FORGET TO CHECK INTO CAARANET !!!!

EVERY SUNDAY 9 PM 145.130 MHZ with no PL tone

HAMS NEEDED FOR ESSEX YOUTH TRIATHALON !!!!

I am putting the call out for amateur radio operators to provide public safety and logistical communications for the upcoming Essex Youth Triathalon which will be held on Saturday August 11th from 8 AM to Noon. CAARA has provided comms for this event for the past two years and the Essex Board of Health has asked for our help again.I'm looking for 10 hams for this event.So if you want to play some radio and volunteer a few hours of your time please e-mail me at dburg101@aol.com .

VE'S NEEDED FOR TECH IN A DAY !!!

We are looking for ARRL Volunteer Examiners to help out scoring exams at Stan's upcoming Tech in a day course on Saturday April 28th at the Lanesville Community Center,8 Vulcan Street Gloucester Mass.If you can spare 2 hours in the late afternoon please e-mail course leader Stan Stone W4HIX at techinaday@caara.net .

CELEBRATING THE US ISLANDS AWARD PROGRAM

On the air listen out for KL7JR and XYL WL7MY who will be active from the Big Island of Hawaii between April 1st to the 15th. This venture is in celebrating the 18th anniversary of the U.S. Islands Awards program. Operation will be on 80 through 10 meters using the callsign NH7DX. QSL via KL7JR

CLERKS CORNER

(continued from page 1)

Information Officer I work year round to promote ham radio especially with the ARRL‘s Field day exercise coming up in June. As we know Field Day is the big ham radio promotion event to the general public for the year. The ARRL has a great field organization which puts in countless hours of promoting amateur radio to the public as well assisiting ARRL Affiliated clubs such as CAARA. The ARRL also holds Hamventions which includes the upcoming 2012 New England Division Convention in Boxboro this August. These hamventions include educational programs as well as a showcase for ham radio vendors and a fleamarket. The ARRL also holds year round Radiosport contests as well as operating awards.So if you have a ARRL membership I recommend taking a few moments on the ARRL website at www.arrl.org and go over all your benefits and make sure you take advantage of them. This is also a reminder to renew your mebership if you haven‘t already done so. If you are new to ham radio I would highly recommend joining the Amateur Radio Relay League. There is a wealth of information and endless help at your fingertips for only $39.00 a year. As of March 2012 there are over 700,000 licensed amateur radio operators in the United States and over 150,000 of them are ARRL members. .

W1T is a special event callsign being used for a 4 day activation in 2012 on Thacher Island (Friday August 3rd thru Monday August 6th). Thacher Island is IOTA # NA-148: USI: MA001S. This event is being organized by the Cape Ann Amateur Radio Association (www.caara.net), W1GLO. Transportation provided by the Thacher Island Association.

Operation will be from the South Tower (Lighthouse # USA-105) and the North Tower (Lighthouse # USA-1027).

Grid Square: FN42rp.

QSL via W1GLO.

Cape Ann Amateur Radio Association

6 Stanwood Street

Gloucester, MA 01930 USA

Domestic please include SASE

International please include SAE plus (1) IRC

eQSL available for all contacts

We plan be right around these frequencies throughout the event:

CW : 15M (21.040 - 21.065), 20M (14.030 - 14.035), 40M (7.040 - 7.065)

PSK: 10M (28.400), 20M (14.070), 40M (7.035)

SSB: 20M (14.250), 40M (7.185)

JAPAN TO LAUNCH AMATEUR RADIO SATELLITES

Big news on the ham radio space scene. This with word that the Japan Aerospace Exploration Agency has announced the upcoming launch of five amateur radio satellites. This, on two launches taking place this spring and summer. Amateur Radio Newsline’s Stephen Kinford, N8WB, is here with more: — The first launch is the H2A that takes place on May 17th. It will carry the amateur radio satellite HORYU-2. This will be followed on July 21st when the HTV3 mission. It will deliver the JEM-Small Satellite Orbital Deployer or J-SSOD to the International Space Station. That unit will enable small satellites to be deployed from the ISS using the Japanese Experiment Module robot arm. The Japanese amateur radio satellites WE-WISH and FITSAT-1, along with San Jose State University’s TechEdSat and Vietnam’s F-1 will also be delivered to the I-S-S on this mission. Plans are for them to be deployed to orbit on September 20th.

ON-LINE DXCC

A new DXCC tool that brings the program partially on-line is to debut on April 2nd. Bill Pasternak, WA6ITF, is in the newsroom with more: — Actually, initial word of the DXCC going on-line came not from the ARRL but rather from the Ohio-Penn DX newsletter and was later confirmed by the ARRL DXCC desk. And in a nutshell, here’s how it’s going to work. Using an Online DXCC Application, the candidate can select the cards that he or she would like to have checked by a card checker at his or her

convenience. The person then types that data into a form which can be saved and retrieved at any time until submitted and make an application for DXCC. When completed, the applicant will be able to print the list of cards and take the list — and the cards — in the same order that they are entered into the form — to a card checker. He or she will check the cards, note any changes and send the form to ARRL HQ. For the most part, the card checker's job is exactly the same as before, except he or she does not need to collect a payment. This is because the applicant can pay the DXCC fee on-line. Once submitted, DXCC staff will have access a given file, make any changes noted by the card checker and process the application. And oh yes, the good news: The Online DXCC Application will have rates that are half those of a traditional paper QSL application that is sent to ARRL HQ. More detailed information is on-line at tinyurl.com/dxcc-online The bottom line: Submitting a DXCC application on-line should be easier than making a paper application, saving both time and money. (DXCC, OPDX)

STRANGE MORSE FROM SPACE

And finally this week, it appears as if radio astronomers have discovered mysterious sources of extremely high-powered radiation across the universe. Amateur Radio Newsline's Newsline's space-faring, roving reporter Pierre Pullinmyleg, says that hams are helping to unravel the mystery. — Scientists at NASA say the Fermi space telescope has discovered hundreds of super-high-energy gamma ray sources at the very top end of the electromagnetic spectrum, and that more than a third of them are complete mysteries. Adding to the mystery is the pattern of these gamma rays on spectrograms, showing short bursts of energy that resemble dots and longer ones that look like dashes. Several radio astronomers who are also radio amateurs noticed these patterns and performed two sets of calculations with amazing results. The frequencies on which the gamma ray sources were discovered correspond with the two-billionth harmonic of 20 meters, and distance calculations show that, had the signals originated on Earth and been re-radiated back toward us, the dates of origin always seem to match up with the dates of major CW contests here on Earth. One spectrogram currently making the rounds in ham radio astronomy circles clearly shows a pattern which, in Morse code, would read: "Di-dah, di-dah-dah-dit, di-dah-dit, di-dit, di-dah-di-dit," followed by a space and "di-di-dah-dit, dah-dah-dah, dah-dah-dah, di-dah-di-dit." Another reason, they say, to know code.

"The History & Development of Microphones" by Jesse Klapholz

By definition, the microphone has two meanings: it is an instrument for intensifying weak sounds. And it is a device for transforming sound waves into electrical impulses. While the first definition might seem to have no bearing here, it was Sir Charles Wheatstone, in 1927, who used it to describe an all-mechnical vibration stethoscope - the origin of the word *microphone* to describe the transducer.

From that time on the word microphone has been used to describe many inventions. During the early days of radio, broadcast studios were started all over the country. It was mainly the great need for many varied microphones for these studios that has provided us with condenser, dynamic, lavaliere, and directional microphones.

In The Beginning

Prior to the introduction of the microphone, the telephone was developed. Many great inventors worked in the area of telecommunications including Emile Berliner, Amos Dolbear, Thomas Edison, Elisha Grey, Henry Hunnings, and, of course, Alexander Graham Bell. In 1887, the U. S. Supreme Court decided, through a series of appeals, that Bell invented the telephone. Berliner and Edison filed for patents on carbon microphones within two weeks of each other in April 1878. And law suits emerged which were all settled out of court through patent rights acquisitions. Soon the carbon microphone became the standard transducer in telephony and later in the early years of radio.

By the mid-1920 the development of the condenser microphone and the electronic vacuum tube amplifier paved the way for sound on film recording, The first high quality, wide range condenser microphone was developed by E. E. Wente at Bell Labs as a measurement standard in the late 1910s. In order to satisfy the high-quality microphone requirements of the rapidly growing radio broadcast and recording industries, Western Electric introduced the 394 condenser microphone; subsequently RCA came out with the 4AA condenser mic. With the introduction of condenser microphones, the problems of signal-to-noise ratio and frequency response associated with the

carbon microphones, then in general use, were overcome.

The omnidirectional dynamic microphone was developed by Wente and Thuras in the late 1920s, and introduced as the Western Electric 618-A. Actually, the original dynamic or moving coil techniques were patented by Ernst Siemens in 1874. He even specified the diaphragm to be the frustrum of a cone, which was used in many other inventions. Nonetheless, the 618-A was the first practical *dynamic* microphone. Because of the simplicity of the 618-A as compared to the condenser microphone and amplifier, the omni-dynamic mic proved to be more practical for many applications, Although the 618-A was considered to an omni mic, the microphone becomes very directional in high-frequency range. Western Electric developed a dynamic mic in the late 1930s that was omnidirectional to 15 kHz. Called the 630A, it was better known as the Eight-Ball mic, because it resembled an eight-ball right off a pool table.

The Early Movie Years

In the early 1930s, the movie industry was making strides in developing recording techniques for film scores. Yet, at that time only a small selection of microphones was available. So when MGM Studios in Culver City, CA, heard that the Siemens Co. of Germany had developed a cardioid microphone, a sample was immediately requested. The Siemens cardioid mic was first used on “Naughty Marietta” with Jeanette McDonald and Nelson Eddy.

The Siemens mic was much larger than the dynamic or condenser mics the studios had at the time. Since McDonald had a weaker voice than Eddy, the Siemens mic was first placed in front of McDonald in an attempt to achieve a better balance. Naturally, Eddy was in a quandary over why McDonald got the new mic and he insisted on one too — refusing to record until he got a Siemens mic. The next morning when recording resumed, Eddy was provided with a Siemens mic replica built by the studio’s prop shop and which contained a small omni mic inside — thus marking the beginning of audio sugar-pills.

During this time, the equipment used was very heavy and bulky; every attempt was made to reduce size and weight. One area of such attempt was in microphone and camera connectors. James Cannon of Cannon Electric Co. in Los Angeles, CA, supplied connectors for the auditorium/projection room communications systems. Cannon, known as an ingenious person, was asked to develop a microphone connector. He came up with a six-pin connector which was the prototype of his famous P-type connector. It became an immediate success. Later, the small, three-conductor, camera motor cable connector was developed, and from 1929 on, the Cannon plug was history.

Even though there were several advancements in microphone technology the early models had not proved themselves reliable enough for broadcast work. But, in 1929 and 1930, at NBC’s installation of new audio facilities for its Chicago Civic Opera House broadcasts, the 18 carbon microphones were replaced by three parabolic sound reflectors used in conjunction with a condenser microphone. This was the first application of highly-directional microphone techniques. NBC subsequently used these parabolic dishes in both the Philadelphia and New York Metropolitan Opera Houses and in its Time Square studios. In 1939, Mason and Marshall of Bell Labs reported on a design of a tubular microphone which used a single element and acoustical tubes of varying lengths to achieve a highly directional pickup pattern. This tubular design paved the way for the shotgun mics we are familiar with today.

The Olson/RCA Legacy

Perhaps the two most famous microphones to be commercialized were developed by Harry F. Olson at RCA. They were the 44A, B, BX velocity ribbon microphone series (1930-1940), and the 77A, B, C, D, and DX unidirectional ribbon microphone series (1931-1937). These vintage microphones are still in great demand; the 44BX could be found in many NBC studios, and the 77DX is currently used on NBC’s “Tonight show” and on “Late Night with David Letterman.”

When Olson developed the velocity mic it was a large step forward in microphone technology; it was the first high quality directional microphone. The effective solid angle of sound reproduction for the figure-eight velocity mic is one-third that of the omnidirectional mic. This means a reduction of 5 dB on the effective sound pickup of reverberation and other unwanted sounds. The directional properties of the velocity microphone were found to be useful in reducing effects of reverberation and increasing the intelligibility of reproduced speech.

The next logical step was the development of the unidirectional or cardioid pattern. Olson’s 77A, which

was introduced in 1933, consists of mini- and bidirectional capsules whose outputs are combined so that they yield the cardioid pattern. The cardioid pattern also affords the same effective angle of sound reception as the figure-eight, and hence the same advantages with the addition of a front-to-back rejection characteristic.

Sound Reinforcement

While RCA's microphone developments efforts were concentrated more towards broadcasting/recording applications, Western Electric, in 1939, introduced the 639A unidirectional microphone with sound reinforcement applications in mind. The 639A consists of a ribbon velocity element and a dynamic pressure element, whose outputs are combined so that they yield a cardioid pattern. Marshall and Harry of Bell Labs reported in 1941 that due to the reproducing characteristics of monaural sound systems in use, directivity needed to be supplied by the microphone in order to produce a more natural balance of direct-to-reverberant sound. They further stated, "This [feedback in a reinforcement system] is merely a special case of extraneous noise, and its effect can generally be reduced by directivity in the microphone."

Marshall and Harry implemented two field tests on the 639A mic, one of a broadcast of a 30-piece orchestra and another of a sound reinforcement system. In the studio, the 639A allowed for an ideal acoustical location of the mic and it was commented that the bass reproduction was much clearer than with other mics. Marshall and Harry attributed the clarity of bass to the suppression of reverberant bass energy pickup, where the studio's acoustical treatment was deficient. The 639A was installed at the House of Representatives, in Washington, D.C., where feedback conditions were so severe that other types of microphones had proven inadequate in providing sufficient reinforcement. The 639B has a six-position switch that yields omni, cardioid, several types of hypercardioid, and figure-eight patterns. In the House of Representatives, the hypercardioid afforded an increase of 5 dB in the system gain — wherein was the difference between success and failure of the entire installation.

In the late 1930s, Benjamin Bauer of Shure Brothers developed a new cardioid dynamic microphone that used a single element and acoustic means to achieve its directional pattern. The Shure Unidyne made it debut in 1941 and was a turning point for microphone design, manufacture, and reinforcement applications.

Crystal Microphones

In 1880, Jacques and Pierre Curie discovered the piezoelectric effect. Piezoelectric crystals were first used by Langevin in 1917, in connection with his research efforts in underwater acoustics using ultrasonic transducers. In 1919, using Rochelle Salt, Alexander Nicolson first demonstrated a variety of piezoelectric devices, including loudspeakers, phonograph pickups, and microphones. Problems of manufacturing crystals with uniformity and the necessary shapes prevented the commercial production of any of these devices. Almost 10 years later, C.B. Sawyer and C.H. Tower developed processes to manufacturer uniform complex-shaped piezo crystals. This led the way for many piezoelectric or crystal transducers, as they were first called.

Electrets

Work on the electret condenser microphones dates back to as early as 1928. These microphones used permanently polarized wax plates. Eventually, microphones with wax electrets were offered commercially by Bogen (1938 to 1940) under the name No-Voltage Velotron. The first large-scale application of electric transducers was during WWII, when wax-electret microphones were used in Japanese field equipment. The wax-electrets, however, did not catch on due to their instability and very small capacitance which complicates the mic-preamp design. From 1948 through the early 1960s, work continued in electret microphone technology, turning up materials such as acrylics, ethyl cellulose, polystyrene, vinyl polymers, and ceramic electrets. In 1962 and 1965 electret microphones in which the diaphragm was composed of a metalized thin foil of Mylar or Teflon, respectively, which has been converted into an electret were proposed. Finally, in 1968, Sony brought out the finest electret condenser microphone. Later, around 1971, Primo Company Ltd. introduced an electret mic with a monolithic IC preamp. Foil-electrets are manufactured in countless numbers; the Japanese production of electrets alone is estimated to exceed 20 million units per year.

The Future

Once the past has been clearly laid out before us, the future is easy to imagine. Many inventions of the future will be stolen from early predecessors. Those

who worked in the labs in the 1800s and early 1900s left us with a long list of inventions to be implemented with modern materials, and new electronic and manufacturing technologies. These *new* devices can be categorized into mechanical and non-mechanical transducer systems. Diaphragms made of materials yet to be patented will use various modulation and sampling techniques to convert their motion into data. Optical A/D microphones are currently being developed. On the horizon we see the technologies of fiber optics, lasers, and interferometers applied to the electrical and digital transduction of acoustical phenomena.

"There is room for improvement in even the best microphones....Possibly an understanding of the limitations can be had by considering that, for perfection, a microphone should possess no inertia, and should produce an output directly proportional to the air pressure applied." Although this quote is from the book, *Public Address Systems*, by James R. Cameron published in 1935, it still holds true today.

RESCUE RADIO: CONNECTICUT ARES FRONT AND CENTER ON EMCOMM PREPAREDNESS

The role of amateur radio in emergency communications continues to grow and will become even more vital in the future. That was the message from Connecticut Section Emergency Coordinator, Wayne Gronlund, N1CLV, at the annual meeting of that states ARES groups over the weekend of March 17th and 18th. According to Gronlund, a series of natural disasters in 2011 showcased the importance of amateur radio in emergency situations. These included tropic storm Irene, a pre-season nor'easter in October, and the tornadoes that swept western Massachusetts last summer. Illustrating his remarks with a Power Point presentation, N1CLV noted that the snowstorm in particular strained the system because phone and electrical service were disrupted for up to two weeks. Especially in the Farmington area. These two disasters led to formation of Governor Deniel Malloy's two-storm study inquiry. Among the panel's recommendations is holding a real time training exercise this year. One that would involve municipalities, the Red Cross and ARES to determine what assets are available and what improvement is needed. Such a state-wide exercise is now scheduled for July 28th to the 30th and will involve amateur radio resources. More is on the web at tinyurl.com/ct-rescue-radio. (Hartford Examiner)

FCC SEEKS INPUT ON EMERGENCY SHUTOFF OF CELLULAR SERVICE

The FCC wants to know how you feel about the government or private enterprises using its ability to order a shutdown of broadband communications systems in times of emergencies or perceived emergencies. Amateur Radio Newsline's Cheryl Lasek, K9BIK, reports: — The Federal Communications Commission's Public Safety and Homeland Security Bureau and Wireless Telecommunications Bureau are jointly seeking comment on issues related to intentional interruptions of Commercial Mobile Radio Service by government authorities for matters deemed in the interest of public safety. The issue stems from Bay Area Rapid Transit's shut-down of cellular telephone service on August 11th of last year in the face of political and social protests taking place in the San Francisco area. According to General Docket Number 12-52, any intentional interruption of wireless service, no matter how brief or localized, raises significant concerns and implicates substantial legal and policy questions. The service interruption last summer drew sharp criticism, and state and local governments have recently grappled with how to address possible future events. The FCC says that it is concerned that there has been insufficient discussion, analysis, and consideration of the questions raised by intentional interruptions of wireless service by government authorities. As a result, Docket 12- 52 seeks comment on the legal constraints and policy considerations that bear on an intentional interruption of wireless service by government agencies for the purpose of ensuring public safety.

CELEBRATING THE MORSE CODE

New York's QSY Society Amateur Radio Club will be hosting a special event station at the Samuel F. B. Morse Estate at Locust Grove in the city of Poughkeepsie. This in celebration of his creation of the Morse Code in 1832. The operation will run from 8:30 a.m. to 1:30 p.m. Eastern Daylight Time on Saturday April 14th using the special event callsign K2QS. Transmissions will be centered on 7.034 on 40 meters and 14.034 MHz on 20. Hams making contact with K2QS will be eligible for a special commutative QSL card. QSL requests go to David Ruth at 48 Hoof Print Road, Millbrook, New York, 12545. ((KB2VJP)

– –...

...– –

Joe Walsh, WB6ACU, Is an Analog Man

Grammy Award-winning rock-and-roll legend Joe Walsh, WB6ACU, returns with *Analog Man*, set to be released June 5. This is Walsh's first solo album since 1992's *Songs for a Dying Planet*. According to Walsh's website, *Analog Man* is both modern and timelessly soulful, packed with Walsh's wit, charm and chops; it delivers an incredibly raw and intimate sound. "It's been 20 years and I have a lot to say," Walsh explained. "These songs [on *Analog Man*] come from the heart."

Walsh — best known for his powerful guitar licks — joined the Eagles in 1976 and is credited for bringing a harder rock sound to the band with the acclaimed ***Hotel California***, ***The Long Run*** and ***Eagles Live***. A singer-songwriter and Rock and Roll Hall of Fame inductee, Walsh has been performing for more than four decades, not only as a solo artist, but as part of admired bands such as **The James Gang** and **Barnstorm**.

No stranger to the analog way of life, Walsh — an ARRL Life Member — enjoys operating on 75 meters AM. AM — or amplitude modulation — has been around the amateur bands since the 1930s. AM offers a warm, rich audio quality that provides for more personal interaction. The simplicity of AM circuit design encourages hands-on restoration, modification and homebrew construction to an extent no longer found among contemporary radios. Many hams who operate AM say they enjoy the simple, roomy electrical and mechanical designs of the older radios, claiming that they can more easily be modified and tinkered with than their modern counterparts. Other enthusiasts claim that these vintage radios sound better than their silicon descendants, saying that the tube audio from vintage gear is "warmer" and more aesthetically pleasing than the audio produced by the typical modern transceiver.

A self-proclaimed analog man, Walsh refers playfully to the new digital age in the album's title track. He notes that he has adapted to the digital age, but says "I am what I am — I'm an analog man." Walsh developed the album over the last 10 years, drawing on personal experiences to breathe life into each track. "I just really feel like it's all come together and finally I feel like a complete person and a complete musician," he said. "I think there is some confidence in there that I never had. That's what I was hiding." Walsh credits his wife of four years, Marjorie, for encouraging him to be the man and artist he is today and fondly dedicates this album to her.

"I have tried to write about the world as I see it," Walsh said at a **February concert**, explaining the logic behind the album title. "There are two worlds now — digital and the old world, analog. For a lot of us, we've had to make adjustment. I'm concerned that there's no time in digital. It's frozen. When you come out of a digital experience, it's three days later and you have a beard. Every kid under 12 can land the space shuttle, but nobody can read."

The 10-track album was produced by Walsh and Jeff Lynne, with Tommy Lee James co-writing some of the tracks. *Lucky That Way* — one of Walsh's favorite songs off the album — speaks to the extraordinary life he's lived, even through the hurdles, and features Ringo Starr (his real life brother-in-law) on drums. The song serves as a mature sequel to Walsh's famed ***Life's Been Good***, a tongue-in-cheek portrait of his rock star lifestyle at the time of its release in 1978.

After expressing his thoughts about the future at the February concert, Walsh turned to his past and talked about the most common questions he gets asked, all of which are about *Life's Been Good*. According to ***Billboard***, Walsh explained the construction of each musical segment and how they came together — basically scraps of several unfinished songs glued together — before going through the tune line by line, saying that essentially said every line in the song is true, except he's not the guy who wrecked the cars and he didn't have his driver's license revoked. "Actually, I lost my wallet," he said.

NEXT MIT FLEAMARKET IS ON APRIL 15, 2012.