



# PROSPECT HILL INTERMOD

THE OFFICIAL NEWSLETTER OF THE WALTHAM AMATEUR RADIO ASSOCIATION  
& THE HEAVY HITTERS

[www.wara64.org](http://www.wara64.org)

SPRING 2017

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## CLUB ELECTIONS

*Eliot Mayer, W1MJ*

A year ago, our hard-working president John Flood, then KB1FQG and now N1JAF, announced that he would be stepping down at the end of 2016. He has extended his term as president a bit, but now he really is stepping down. Elections will be held at the September 27 club meeting. Besides needing a new president, it is very likely that WARA also needs a new vice president, as VP Richard Amirault, N1JDU, has not been able to participate in club activities recently. Please consider taking a turn at one of these positions, or at least talking one of your friends into considering it. The workload is not heavy, and it will look good on your resume.

## NEW WARA WEBSITE

We are currently in the process of designing our new club website. The reason for the change is for easier and faster updates as well as better responsiveness for multiple viewing devices such as smart phones and tablets. If you would be interested in working on the new design and content, please contact Mark, K1kgg for more information. Feel free to have a peak at what we have so far <https://wara64.wordpress.com/>

## FIELD DAY - PICNIC ON PROSPECT HILL

*Eliot Mayer, W1MJ and Ron Senykoff, KG1T*

The Waltham ARA will be participating in the ARRL Field Day [www.arrl.org/field-day](http://www.arrl.org/field-day) from the Sunset Shelter in Prospect Hill Park, Waltham. This is the covered picnic area at the top of Prospect Hill, behind the twin water towers, and close to the club repeater site. The event includes a cookout and on-the-air operations.

So please be sure to join the Waltham Amateur Radio Association for Field Day 2017 and Summer Cookout!

**When:** Saturday, June 24th: 2:00 PM - 6:00 PM. Early arrivers and setup will start around 10:00 AM.

**Location:** The park at the top of Prospect Hill in Waltham, MA. The entrance to the park is here: <https://goo.gl/maps/7pU2eKXR4F22> Proceed to the top pavilion where we will set up.

**Address:** 314 Totten Pond Rd, Waltham, MA  
**Sign up:** to help with something, potluck-style: <https://goo.gl/forms/qXl0XxbKdjOR814g1>  
We look forward to seeing you there!

## Field Day Details for Waltham ARA

The [EMA-ARRL Field Day Directory database](#) has the following information regarding the for Waltham ARA .

To update club info, send email to [n1vux](mailto:n1vux).

## Club Details

WARA64 Waltham ARA W1MHL

ARRL Affiliation

Club contact information is kept up-to-date on ARRL HQ website, so no longer duplicated here for Affiliated clubs.

- Affiliation: **Affiliated**
- Club url: [ARRL HQ Club](#)  
[Page:waltham-ara](#)

## Field Day Sites

Click "MoreSiteDetails" below for maps and site-specific links.

- SiteKey: [ProspHillW](#)
- Active: **Confirmed**
- Lat: **42.388699**
- Lon: **-71.253700**
- Site: **Prospect Hill Park Waltham**
- Address: **Sunset Shelter, Prospect Hill Park, Waltham**
- [MoreSiteDetails](#)
- As\_Listed\_On\_National\_ARRL\_Locator: **not listed**
- Special\_Notes: **Sat cookout, Sat. 2-6PM only, no Sun (2017)**

## EASTER ISLAND "HOLIDAY-STYLE" DXPEDITION

*Eliot Mayer, CE0Y/W1MJ*

Last fall, my adventuresome wife Irina announced that we would be taking a trip to Santiago, Chile and Easter Island in April. Having gained wisdom over the years, I replied "Yes Dear" with no further questions. And then immediately looked up how to get an operating permit for this trip; the info on [www.arrl.org/reciprocal-permit](http://www.arrl.org/reciprocal-permit) was very helpful, as was Radio Club de Chile. Operating from the not-rare Chile mainland didn't excite me too much, which is good, as I made no contacts from Santiago as

CE3/W1MJ. But Easter Island is rare enough that I have never contacted it myself (or even heard it). The island, locally called Rapa Nui, is at the southeastern-most point of the Polynesian Triangle in the Pacific Ocean. It is one of the most remote inhabited islands in the world.

Since this was a family vacation first and a DXpedition second, I decided to keep the hamming low-key. I brought a QRP station that added little weight to my luggage, but I still managed to make about 150 contacts from the island as CE0Y/W1MJ. I learned a lot in preparing for this operation, and would like to share some highlights that might prove useful for your vacation operation.

**Equipment** – I used my Elecraft KX3 transceiver, which I ran at 5 watts in the QRP tradition, even though it can do 15 watts. The rig's excellent RX filtering was a big help when the pileups came. For a portable antenna, I have typically relied upon finding trees to support wire antennas, but I didn't expect to find any on the shore. So I used an MFJ-2286, which is very light, yet is a full quarter-wavelength vertical on 20M and higher frequencies. Jeff, AB1VF, lent me a camera tripod to support it. I powered the rig with LiFePO4 (lithium iron phosphate) batteries, and brought along a Goal Zero Nomad 13 solar charger. According to the FAA and TSA web sites, lithium-based batteries can only be brought onto airplanes in carry-on bags, not in checked baggage (which makes me wonder about recent talk of requiring laptops to go into checked baggage).

**Propagation Prediction** – I have never been one for studying shortwave propagation. My attitude has always been, "It's a hobby – I'll work whatever I work". But I realized that working friends back home with 5 watts from over 5,000 miles away would be fun, but could be challenging. It might be nice to have an idea what bands and what time of day would give me the best chances. To this day, I still don't



know how to interpret A Index or K Index. However, several recent QST articles have mentioned an online tool for propagation prediction, [www.voacap.com](http://www.voacap.com). According to this web site's point-to-point predictions for the dates of my trip, limiting my power to 5 watts would indeed make it challenging, but I would have roughly a 60% chance of contacting the northeast US in the late afternoon on 15 meter CW. I was very suspicious of this prediction, as 15 meters has been dead most of the time during the present sunspot minimum. But with VOACAP's science and a bit of luck, the prediction was great. I also made 20 meter CW contacts back home.

**Antenna Modeling** – As with propagation prediction, my attitude about antenna modeling has always been “It's a hobby, no need to get so fancy”. I just try to get wire dipoles up as high as possible. But for this trip, I broke down and purchased EZNEC ([www.ez nec.com](http://www.ez nec.com)) to model my MFJ-2286 portable vertical antenna. Here are a couple of important things it told me:

1. Operating from the seashore, facing home, would be very advantageous. And indeed, nobody heard my puny signal from the inland lodging, yet I had pileups of US and Canadian stations from the north shore of the island.
2. Contrary to advice from one friend, there was no real advantage to using only one radial, facing home. So I used the 4 radials that came with the antenna, as directed.



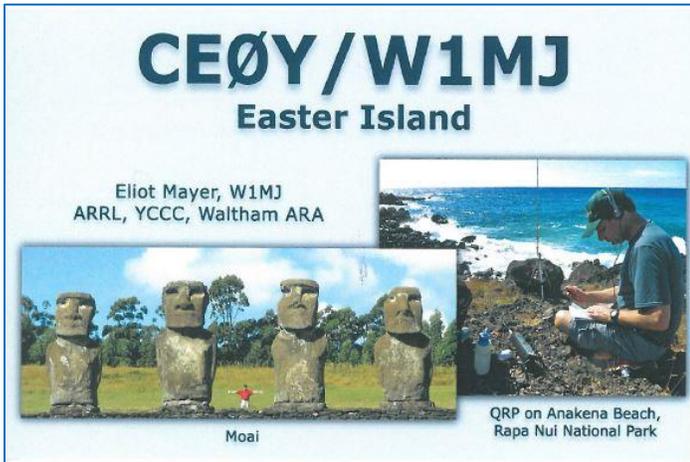
**Getting the Word Out** – Before the trip, I spoke with old '64 friend Dick, W1KSZ, on '64 via Echolink. Dick now lives in Arizona, and is a serious DXer. I asked if it was appropriate to list my trip on the web sites that list DXpeditions, considering that my operating times would be limited and somewhat unpredictable. He said yes, but to describe the operation as “Holiday Style”, the term DXers use for such operations. I didn't expect to have Internet access on Easter Island, but we ended up having low-bandwidth access, for text only. So using only email, I got Phil K9HI to post some updates on my Facebook and qrz.com pages when I knew more about my operating time. This helped, and I worked several friends back home.

**New and Old Style QSLing** – I paper-logged, but wanted to confirm my contacts electronically via Logbook of the World (LoTW), for people who use that service. Joe, KE1U, once sent me a Microsoft Excel spreadsheet that would convert a simple typed-

in log to the ADIF format needed for LoTW uploads. I tweaked it a bit for this operation, and successfully uploaded the contacts. I also got inspired to create a traditional QSL card for this operation, and found a wonderful QSL printer - photoqs.com.

## EQUIPMENT LOAN TO MEMBERS

WARA owns a couple HF and 2 meter transceivers for field day use and is not for sale, however will make available to loan members if needed on a temporary basis. Please contact John, N1JAF for details.



CEØY/W1MJ QSL Card:



## PHASED ARRAY WARNING SYSTEM, PAVE PAWS

Mark Bolls, K1KGG

**Conclusion** – The main reason people visit Easter Island is to see the ancient moai (statues), and they were indeed fascinating. But to a geeky ham like me, the CW pileups on my two trips to the seashore were thrilling, and added a lot to this vacation. For more details, photos, a video sample of the pileup, and the ADIF-converter spreadsheet, go to [w1mj.com/ce0y](http://w1mj.com/ce0y).

The things I learned and the equipment I gathered for this trip will certainly be used for future vacations. Indeed, in May I did a one-hour contesting session with the same setup from the shore in Narragansett, RI. To prove the point about operating next to salt water, it was much easier to contact Russia from this location than to contact US stations.



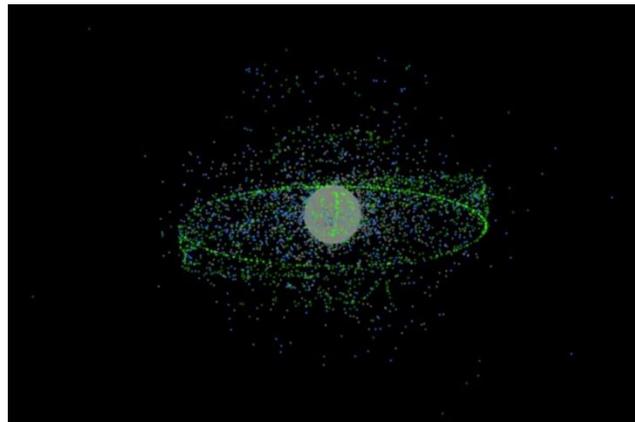
On Tuesday March 28, U.S. Air Force officers Kruczek and Prinz from the 6<sup>th</sup> Space Warning Squadron from Cape Cod Air Force Station gave a very informative presentation at the Clay Center Observatory in Brookline. In attendance were several amateur radio operators from the local area as well as students from the Dexter Southfield School.

The presentation was on the U.S. Air Force Phased Array Warning System, also known as "Pave Paws".



1,792 of these elements are used to make up just one of the two arrays on site.

Pave paws is only one part of a larger network designed to track potential incoming threats, primarily ballistic missile attacks. In addition to tracking potential missile threats, the radar system constantly monitors and predicts trajectory paths of space debris and satellites in orbit. Almost on a daily basis they are alerted to potential collisions to satellites in Earth's orbit. Not only do they monitor U.S. satellites but when a foreign satellite or spacecraft are predicted to be in harm's way, the 21<sup>st</sup> Space Wing will make the appropriate phone call to pass along the information to those affected by a collision.



Space debris orbiting Earth tracked by Pave Paws. Courtesy of [www.keeptrack.space](http://www.keeptrack.space)

They do not give advice on what evasive maneuver to take to avoid a collision but only pass on when and where it will take place. What's interesting is the Air Force makes this information public by means of a website coded by one of the speakers, Lt. Theodore Kruczek. (This can be found at [www.keeptrack.space](http://www.keeptrack.space)) If you would like to learn more about Pave Paws, information can be searched on the U.S. Air Force website [www.af.mil](http://www.af.mil)



Questions and answer session after the presentation.



**WARA OFFICERS**

**PRESIDENT – OPEN**  
**VICE PRESIDENT – Richard Amirault N1JDU**  
**TREASURER – Rich Comer K1RBC**  
**ASSISTANT TREASURER - Eliot Mayer W1MJ**  
**SECRETARY- Ron Senykoff KG1T**

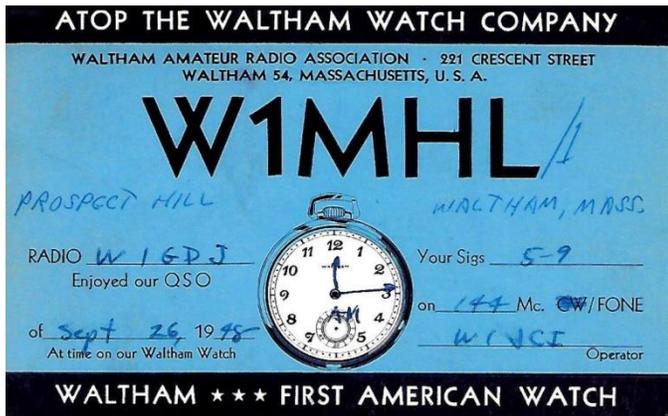
**W.A.R.A. REPEATERS**

Input	Output	PL in	PL out	Call
6m off	6m off	6m off	6m off	off
**146.04	146.64	136.5	136.5	W1MHL
223.34	224.94	none	none	W1MHL
444.075	449.075	88.5	none	W1MHL
902.1375	927.1375	131.8	100	W1MHL

\*\*2 Meter EchoLink Node 490278  
 2 Meter Apco25 NAC is 293

**QSL**

Eliot Mayer, W1MJ



I received a QSL card recently from a ham I had contacted (WA3OFR) from CE0Y/W1MJ. But there was a second card in the envelope. It

was a big surprise - a Waltham ARA QSL card from a contact made in 1948. The card was from our club station at the Waltham Watch Company, though this card was marked up to say W1MHL/1 Prospect Hill. The card came with a note that said, "Here is a donation to your Waltham [Amateur] Radio Association 'Museum'. Noted the operator W1JCI was one of the founders. Had it in my 'collection' but hopefully more useful at your club. 73, Mark WA3OFR."



John, N1JAF claims to have been the very last customer at his local Radio Shack store during their going out of business sale. The last item to go was this banner.

Thank you to all who have contributed to this issue of PHI. We greatly appreciate the time you took in sharing your knowledge! We are always looking for articles and new material to publish. Please send in your photos, announcements, story or short article (technical or not) at any time, for the next issue of PHI!

**PHI NEWSLETTER STAFF**

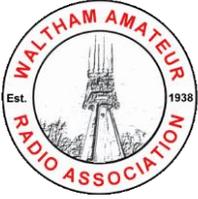
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The Waltham Amateur Radio Association is affiliated with the A.R.R.L



# WALTHAM AMATEUR RADIO ASSOCIATION

[www.wara64.org](http://www.wara64.org)



## MEMBERSHIP AND CHANGE OF ADDRESS FORM

The Waltham Amateur Radio Association operates repeaters on 6 Meters, 2 Meters, 220 MHz, 440 MHz, and 900 MHz. The repeaters are free and open for everyone to use. But repeaters have bills to pay, just as you do. Your membership dues help support these repeater expenses, as well as help to keep you informed about club activities and other aspects of ham radio. Individual membership is \$20 annually. Family membership (members all in same household) is \$30.00 annually. If you cannot afford the annual dues, please send what you can. If you are inclined to donate more, we will put it to good use. If you are over 64 years of age, membership is FREE! However, you must still submit your application.

You can join or renew at [www.wara64.org/membership.htm](http://www.wara64.org/membership.htm) or complete this form legibly, and return it to:

**Waltham Amateur Radio Association, PO Box 411, Waltham, MA 02454**

### Member 1:

Name \_\_\_\_\_ Call Sign \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone # \_(\_\_\_\_\_) \_\_\_\_\_ Are you an ARRL member? \_\_\_\_\_

Email (for newsletter) \_\_\_\_\_

### Member 2:

Name \_\_\_\_\_ Call Sign \_\_\_\_\_

Telephone # \_(\_\_\_\_\_) \_\_\_\_\_ Are you an ARRL member? \_\_\_\_\_

Relationship to Member 1: \_\_\_\_\_

Email (for newsletter) \_\_\_\_\_

*For additional family members please attach their information to this form*

### Payment Enclosed:

Individual Membership for \_\_\_\_\_ year(s) @ \$20/year nominal: \$ \_\_\_\_\_

Family membership for \_\_\_\_\_ year(s) @ \$30/year nominal: \$ \_\_\_\_\_

Over Age 64 Membership for \_\_\_\_\_ year(s) @ FREE \$ **NO CHARGE** \*See note below

*\*Please remember to keep your membership up to date by renewing and don't forget to notify us if you have moved. Thank you for joining WARA*