



# The Spark Gap

Newsletter of the Wellesley Amateur Radio Society



Founded in 1950

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## President's Message

Is it spring yet? With the recent snowstorms, methinks not! Many thanks to Charlie WA3ITR who gave us an excellent talk on the FT8 mode at our last meeting. Our next meeting will be a dinner event at the Villa restaurant, 124 East Plain Street (route 30 West) in Wayland (<http://www.villarestaurantwayland.com>). 508-653-8750.

## Join our WARS Google Group!

Gary N1ZCE wants to get our Google group going. Created by Dave KC1GES, I made Gary as well as Greg W1KIN and Bruce KC1FSZ managers. Feel free to email myself or one of these fine gents to request to join. This is a private group where you can ask questions, post your achievements and in general be social online with us.

## Agostinos water damage

The January cold snap caused a sprinkler pipe to burst at Agostinos restaurant in Natick. They plan to re-open in the spring. In the meantime, we will need to have our bi-annual dinner at The Villa in Wayland. Lets hope Agostinos returns in full force!

## Zola Center Workshop

Another workshop session was held at the Middlesex/Zola radio club meeting on Saturday, February 17.

Frank, N1FMV, assembled kits with which to build a continuity tester. The kit consisted of a buzzer and a battery holder plus a pair of alligator clips and the necessary wires to connect the components.

Five visually challenged hams were doing the building: Matt, N1IBB, Frank, N1FMV, Nina, N1NGK, Tim, N1ZRW, and Howie., KB1QVY.

There were six hams assisting: Dan, W1DAN, who also, once again, ran the workshop, Tony, K1CEI, Dave, W8JVY, Don, KB1OTQ leandra, AF1R. and Bob, WA1UIY.

The results were a perfect 5 for 5 as each builder finished their kit with a perfectly working continuity tester.

There were connections to be made and wires to be soldered and each builder, with a little help and a lot of encouragement from a helper was able to make the connections and solder the wires.

Next on the agenda is more practice, slated for Saturday March 31.

Bob, WA1UIY

## W1LJO Newton Repeater Moves!

The Newton repeater installation was done on January 3rd, 2018. The new antenna, which is a Diamond F23H monobander is located atop City Hall.

Not sure of the actual height of our antenna but we are told that the top of the chimney is about 65' above ground. We think that the top of the antenna clears the chimney by at least 10' possibly more.

Please join us every Thursday evening at 7PM EST for our weekly net. We can be found at 147.360 MHz with no PL tone, or on Echolink at call sign W1LJO-R node number 462341.

### **Inside This Month's Spark Gap!**

**Page 2 – New EMA ARRL web site, Lost Satellite Found!**

**Page 3 – WW2 Radarman, Meeting Minutes**

## **New Eastern Mass ARRL Website!**

Edited from K9HI posting

Visit the new Eastern Massachusetts ARRL Section website at <https://ema.arrl.org>. We have completely replaced the old website which served our section for more than a decade.

The new website offers many advantages including improved organization and a consistent look-and-feel across all section activities. There is now just a single URL for the section as we have integrated our separate ARES, NTS, and State Government pages into one unified site.

We have improved graphics and added tags to facilitate searches for specific topics such as #arrl or #public-service. Try it out!

Want to see "ALL" the latest news posts? Look at "Posts by Date" on the right side, or select "Posts by Category" followed by "ALL" if you prefer to see the latest news on a page by itself.

Interested in events happening near you? Then check out the Events Calendar! Nets, club meetings, and other events are displayed in Agenda, Week, and Month formats. To request listing of an activity, send an email with date, time, and event name to [emaarrl@gmail.com](mailto:emaarrl@gmail.com).

This site is a major improvement to the section. Phil K9HI, with support from Jesse W1DEA, invested significant time and effort to create the new web presence. They had additional help from Phil, N1XTB. The transition was finished around the middle of February and the new site is now live.

My sincere thanks to everyone involved for their hard work, and to the many other hams who provided feedback and guidance along the way.

## **VE7TIL Finds Lost Satellite!!**

(Thanks to Leandra AF1R for the news. Edited from <https://www.nasa.gov/feature/goddard/2018/a-detailed-timeline-of-the-image-mission-recovery>)

The Imager for Magnetopause-to-Aurora Global Exploration, or IMAGE, spacecraft was re-discovered in January 2018 after more than twelve years of silence. A powerhouse of magnetosphere and aurora research, the IMAGE mission was a key driver of studies of the Sun-Earth connection from its launch on March 25, 2000, until its last contact on Dec. 18,

2005.

Scott Tilley VE7TIL of Roberts Creek, British Columbia, NASA, and a team of IMAGE scientists and engineers detected and received data from the spacecraft.

Saturday, Jan. 20, Scott, using his home satellite detection rig, begins his nightly sky scan then goes to bed. Sometime in the afternoon – Reviewing the previous night's data manually – 4 MHz at a time – Tilley detects an unexpected radio frequency signal. Analyzing the specifics of its Doppler Curve – the way the frequency modulates as it crosses the sky, like the siren of a passing ambulance – and comparing it to the orbital elements logged in the space-track catalog, it came back as NASA spacecraft 26113, corresponding to the IMAGE mission.

He took a closer look. Suddenly a portion of the spectrum just below the data he'd read jumped out. The (relatively weak) signal he'd originally detected had been a harmonic of the spacecraft's fundamental frequency, which was much stronger – one of the strongest he'd seen.

No one else had detected this satellite in recent years. "The realization came over me . . . that what I was observing was the fact that the spacecraft had rebooted," Tilley remarked. "But who's going to listen to some guy in his basement with a coil of copper wire on his roof?"

Sunday, Tilley publishes his findings in a blog post, then spends the next two days at work.

On Tuesday, ruminating on his findings with his wife over dinner (who, according to Tilley, admonished him that "someone who's smart enough to find a lost satellite surely can find the guy who built the thing"), Tilley gets up from the table to do some more research. He discovers the contact information for Dr. James Burch, the IMAGE principal investigator at the Southwest Research Institute in San Antonio, Texas, and emails him about his findings.

After having 5 antennae track the satellite, they eventually were able to communicate with the satellite. VE7TIL enjoys searching for satellite signals on the S-band spectrum. Hams who enjoy space radio and other scientific investigation can be found at <http://www.hamsci.org> and <http://spaceweather.com>

## WW2 Radarman Pinged!

Dan W1DAN

One weekday morning I came across a Natick Gem. As I was enjoying my breakfast at my nearby Dunlin Donuts, an old man with a baseball cap sat next to me. As his hat had "U.S.S Baltimore CA68" on it. I asked him "were you in the war?" he said "yes" and handed me a piece of paper that had a list of events the ship was in between 1943, and 1946.

His is Radarman 2<sup>nd</sup> class Edward S. Radock and he spent his entire military career on the Baltimore, which was built in Boston.



Ed told me he was a Radarman on that fast ship. He recalled the positioning computers they used then and how the 6-inch guns could be ailed within 1 yard of a flying airplane-and track it. We spoke of klystrons and Doppler, and I mentioned the improvements that Radar has enjoyed due to solid-state switching and digital signal processing. To this day, as I study WW2 electronics, I am deeply impressed at how good and reliable it was.

Entering the service in 1942 at age 17, Ed told me he met Franklin Delano Roosevelt, Winston Churchill, Generals Macarthur and Nimitz, and even a very young George HW Bush.

After his service, Ed became a pharmacist and worked at the Natick Police station.

Today, Ed speaks about his war experience to school groups and retired folks. He has given talks at the Natick Library and the Natick WW2 museum. One of his talks is online.

Speaking with Ed was an honor, as there is a radio/radar connection and that there are fewer WW2 survivors every day. One of our *Greatest Generation!*

<http://www.metrowestdailynews.com/article/20140120/NEWS/140129980>

## WARS Events:

March 20: WARS dinner, The Villa, 6:30PM  
April 17: Digital Mobile Radio Dan W1DAN  
May 15: Ham Radio from EMA list or Don KB1OTQ  
June 19: Field Day planning and elections

## Minutes of WARS meeting February 20, 2018

### Attendees:

Larry WB1T, Gary N1ZCE, Ellen KB1NIP, Victor K1VEA, Leandra AF1R, Greg W1KIN, mauri AG1LE, Odette, Bon KB1OTQ, Barb N1ICQ, Elaine KB1IBF, Chris K1JTO, David KB1LVS

Bank balance: \$4,548.58

Old business: none

### New business:

Elaine paid our insurance  
Gary wants to promote our Gmail discussion group.  
Lowell has cancer and will visit as he can.  
Zola club had a soldering workshop last weekend.  
Thanks to Don and Leandra!  
Agostinos is closed, we may need another restaurant in March.  
QSL cards from the W1-QSL bureau came in. We may need new cards printed.  
Don bought some radios. Hammo kit, Asian 10 watt and 25 watt mobile rigs.  
New EMA website launched

### Speaker:

Charlie spoke about the FT8 digital mode, a derivation of JT65, and Logbook of The World.

Respectfully Submitted,  
Dan W1DAN

## New Yaesu FT818 announced

The replacement to the long-popular FT817 promises 6 watts output, higher frequency stability and a larger battery was just announced. List price will be \$849. It will be available in March and I suspect it will be a hot seller at the Dayton Hamvention.

**The Wellesley Amateur Radio Society**  
**P.O. Box 812223**  
**Wellesley, MA 02482-0015**

**First Class Mail**

### **The Wellesley Amateur Radio Society (WARS)**

WARS is a non-profit organization dedicated to the promotion of Amateur Radio through instruction, fellowship, public service and encouragement of participation. Annual membership in the Society is: Individual - \$25.00; Family - \$30.00; Legally blind - \$5.00. The Club year runs from September through August. For more information about the Society, please write to:

The Wellesley Amateur Radio Society  
P.O. Box 812223  
Wellesley, MA 02482-0015

Visit the WARS web site at <http://wars.krl.com/>

### **WARS Weekly Net - JOIN US!**

All hams are welcome to check into the Wellesley Amateur Radio Society Net on Wednesday evenings at 8 pm on the W1TKZ repeater 147.030 MHz +600 kHz (PL tone 123 Hz). WARS also operates the W1TKZ repeater on 444.600 MHz +5 MHz (PL tone 88.5 Hz). It is linked to the two meter 147.030 +600 kHz W1TKZ repeater.