2105 December PARTicles
The newsletter of PART of Westford, MA – WB1GOF
Celebrating 40 years of public service 1975-2015

President's Column

- *Andy Stewart (KB1OIQ)*

It is 6 days before the PART Christmas and Holiday Party, and I still have no idea what to bring for a gift. Then again, I still have 6 days to figure it out.

Our work at W1OG Old Gus' estate is complete. 99% of the ham radio items have found new homes. His house has been sold, and his daughter Lisa will be heading back to Alaska to her home. I will be bringing his historic QRP 20m transistorized CW rig to the ARRL headquarters sometime between Christmas and New Year's Day. The curator, Bob Allison, has agreed to accept the donation of these items and to put them on display, to tell the story of Gus and his buddies and the historic CW contact to Denmark. Once these items are on display, I'll let you know.

I think our work with W1UC is also complete, or nearly so. Many thanks to Steve (N1BDA) for leading this effort, and to those who helped him.

I am in the process of renovating a basement room in my house, which will become my new ham shack. It is a slow process, but the outcome will be well worth it. The demolition work is complete. Wall painting and repairs are in progress.

I recently acquired a Kenwood TR-7400A 2m transceiver, which seems to work quite well. This appears to be a late 1970s piece of gear which lacked a tone board. That makes the radio useful for simplex but not for using the repeater. However, I discovered that acquiring a tone board and installing it was no big deal, so I did it. The tone board is fixed on one tone, so I picked 74.4Hz via the DIP switches. I thought I'd use it for a backup rig. One Sunday night, I tried checking into the net with this rig, and all anybody heard was lots of static. The amplitude of the 74.4Hz sine wave was much too high. A simple adjustment fixed that problem, and now I can access the 2m WB1GOF repeater. It was a fun little project.

I apologize for not moving forward on the elmering assignments. I plan to address that in earnest in January. I haven't forgotten about you! I am also following up with Bill (NG1N) regarding the technical class manuals for his students at Nashoba Valley Tech.

George (K1IG) has written and submitted an article to QST magazine regarding his work on the Wordsworth project, about which he spoke at the November PART meeting. They acknowledged receipt of the submission, but as of this writing, there's been no word on whether or not they are interested in publishing the article.

If you don't have an SSD drive for your computer, you should get one immediately! For activities which are disk I/O intensive, they can speed up tasks dramatically. Case in point: when I build those 2 GB ISO files for "Andy's Ham Radio Linux", it was taking 10-15 minutes per ISO file with a normal, rotating hard drive. With an SSD drive, that time is now down to 2 minutes (yes, 2 minutes!).

A friend at work just gave me three 12Vdc linear power supplies. I believe the current capacities are 2A, 4A, and unknown. Once I check to see if they work well under load, I'll be looking for new homes for them. If you are interested, please let me know via email at kb1oiq@wb1gof.org. These small power supplies come in handy for many different things. Hmmmm....should I wrap one for the upcoming party?

Finally, I'd like to thank Hugh (N1QGE) for doing the necessary work to secure the Cameron Senior Center for our meetings in 2016.

Have a lot of fun!

73 de Andy KB1OIQ

No Meeting in December, Holiday Dinner
Next Meeting January 19, 2016 @ Cameron Senior Center

Treasurer's Report

PART Treasury between 20- October '15 & 16-November '15 (As of 17-November '15)

	General Fund	Repeater Fund	Checking Total
Old Balance	$ 2,950.22	$ 3,712.29	$ 6,662.51
Income	$ 75.00	$ 111.43	$ 186.43
Expenses	$ (100.23)	$ 0.00	$ (100.23)
Net	$ (25.23)	$ 111.43	$ 86.20
New Balance	$ 2,924.99	$ 3,823.72	$ 6,748.71

PART 2015 Membership as of 12-December '15

	Individuals (= New for 2015 + Renew for 2015)		Households (= New for 2015 + Renew for 2015)	
Full ($25)*	47	(=11 + 36)	47	(=11+ 36)
Senior ($15)	44	(= 6 + 38)	43	(= 6 + 38)
Family ($30)	23	(= 4 + 19)	11	(= 2 + 9)
Student ($15)	0	(= 0 + 0)	0	(= 0 + 0)
Associate ($10)	0	(= 0 + 0)	0	(= 0 + 0)
Grand Total*	***114***	**(= 21 + 92)**	**102**	**(= 19 + 83)**

ARRL members:* 102 / 89.5%
(Including ARRL Life members: 9)
NOTE: * Starred lines changed since 15-Nov '15

Latest new PART members:

Tom/KC1ELF (Haverhill)
Nick/KC1DKY (Wilmington)
Mike/N2NHK (Kingston, NH)

##To pay dues##
PART, P.O. Box 503, Westford, MA 01886-0015

-or-
Club Meeting, Cameron Senior Ctr., 7:30PM, 3rd Tuesday

Renew online by PayPal at: http://www.wb1gof.org/F_join/part_dues.html

Upcoming PART Meetings/Events

December 15th 2015
- NO PART Meeting. – Holiday Dinner @ Yangtze River-Littleton. 6 PM

January 2nd 2016
- PART monthly breakfast. Westford Regency. 8-10 AM ($15/$9; kids: $8 – see note below)

January 19th 2016
- PART Meeting. 7:30 -9 p.m. LOCATION: Cameron Senior Center, 20 Pleasant St.

February 6th 2016
- PART monthly breakfast. Westford Regency. 8-10 AM ($15/$9; kids: $8 – see note below)

February 16th 2016
- PART Meeting. 7:30 -9 p.m. LOCATION: Cameron Senior Center, 20 Pleasant St.

March 5th 2016
- PART monthly breakfast. Westford Regency. 8-10 AM ($15/$9; kids: $8 – see note below)

March 15th 2016
- PART Meeting. 7:30 -9 p.m. LOCATION: Cameron Senior Center, 20 Pleasant St.

Monthly PART Meetings and Social Events

- Every Sunday, 8 PM – PART Net on 146.955 repeater
- Every 3rd Tuesday, 7:30 PM – PART Meetings at Cameron Senior Center
- Every 1st Saturday, 8 AM, Regency Inn Westford – PART Monthly Breakfast
- Every Wednesday, 6 AM, Owl Diner Lowell – Breakfast

Ham Fleas/Events

Links to hamfest websites (partial)

Cambridge MA Flea at MIT http://www.swapfest.us
Boxborough MA NE ARRL Conv http://www.boxboro.org
Adams MA N BerkshireARC http://www.nobarc.org/hamfest.htm
Dartmouth MA SEMARA http://www.semara.org/flea.htm
Falmouth MA FARA http://www.falara.org
FeedingHills MA MTARA http://www.mtara.org
Framingham MA FARA http://www.fara.org & http://www.n1em.org
Marlboro MA AARC http://www.qsl.net/n1em
Newton MA Waltham ARA Auction http://www.wara64.org/auction
Rockport MA CAARA http://www.caara.net
S Dartmouth MA SEMARA http://www.semara.org
Wakefield MA Photographica http://www.phsne.org
Westford MA NEAntiqueRC http://www.nearc.net
Whately MA FranklinCARC http://www.fcarc.org/news.htm
Worcester MA WPI ACM http://acm.wpi.edu/swapmeet/

New England Area Ham/Electronic Fleas:

http://web.mit.edu/w1gsl/Public/ne-fleas

2016

6 Feb Springfield VT CVFMA.org @VFW @8-12 Steve N1QDT 802 885 8110
13 Feb Marlboro MA AARC $5@9A @MS Tim KA1OS 508 916 6136 F+
27 Feb S Burlington VT RANV @HI x14 I89 Mitch W1SJ 802 879 6589 W
28 Feb Hicksville NY LIMARC @LevitHall Richard K2KNB 516 694 4937 A+
5 Mar Chicopee MA MtTomARA @MooseLodge @8:30 S@6:30 Mary KB1ME 413 222 1990
6 Mar Westford MA Radio @Regency Antique Bruce 603 772 7516
19 Mar Dayville CT ECARA @StJosephCh $3@8A $10/T Peter K1LNX 401 603 1485 +
20 Mar Southington CT @HS $5@8 $20/T John WA1JKR 860 621 8791
25,26 Mar Lewiston ME AARC ME Conv @Ramada @8 Ivan N1OXA 207 784 0350
10 April Framingham MA FARA @KeefeTech @9 $25/T Eric KB1PJN 508 310 5913 +
16 April Gails Ferry CT RASON Auction $5@9 S@8 Stan KT1SS 860 376 3770 +
17 Apr Cambridge MA Flea at MIT Mitch 617 253 3776 +
29,30 Apr Deerfield NH NEARfest XIX @FG Mike K1TWF 978 250 1235
14 May E Greenbush NY EGARA @FireCo $6@8 $6/T@6 Tom KC2FCP 518 272 1494
15 May Cambridge MA Flea at MIT Mitch 617 253 3776 +
4 June Hermon ME PSARA @8 @HS TG@6:30 Jerry K1GUP 207 848 3400
19 June Cambridge MA Flea at MIT Mitch 617 253 3776 +
17 July Cambridge MA Flea at MIT Mitch 617 253 3776 +
13 Aug St Albans VT STARC @VFW $5@8 Arn N1ARN 802 309 0666
21 Aug Cambridge MA Flea at MIT Mitch 617 253 3776 +
26,28 Aug Boxboro MA FEMARA NE Conv Mike K1TWF 978 250 1235
28 Aug Adams MA NoBARC @BoweFld 6:30sell 7:30buy Eric KA1SUN 413 743 9975
17 Sept Forestdale RI RIAFMRS @VFW $5/Sp@8 Pete AA1PL 401 639 4484 +
18 Sep Cambridge MA Flea at MIT Mitch 617 253 3776 +
14,15 Oct Deerfield NH NEARfest XX @FG Mike K1TWF 978 250 1235
16 Oct Cambridge MA Flea at MIT Mitch 617 253 3776 T+
12 Nov Bourne MA FARA @UpperCC VoTech $5@9 $10/S@7 Ralph N1YHS 508 548 0422 +

Near-term local fleas

Algonquin ARC Flea Market
Saturday, 13-Feb'15
Buyers $5.00, 9:00AM-1:00PM
(<http://www.qsl.net/n1em/2016flier.pdf>)
Marlboro 1st Lt. Charles W. Whitcomb (ex-Middle) School
25 Union St. (Thresher Dr.)
http://goo.gl/maps/kfLd9

Member Contribution

First look: Sainsonic AP510 APRS

- *Tim Miranda, KC1AJJ*

As someone who works a fair amount of public service events as a bike mobile or SAG vehicle, I've always wanted to have an APRS-capable transceiver so that I could, if net control had the ability, be tracked in a real time. My experience at the recent Ashland half-marathon proved that having APRS on every SAG vehicle was extremely beneficial, both for situational awareness of NCS and each operator as well as reduced voice traffic on the net so that only important requests and status updates were transmitted. But at the time, I didn't have an APRS-enabled radio, so I was falling back to using the APRSDroid app (https://aprsdroid.org/) on my mobile phone and transmitting packets directly through my data connection to the internet, where they would be repeated back out (hopefully) by the nearest digirepeater.

Recently I saw some write-ups about a standalone device from Sainsonic, the AP510 APRS (http://www.sainsonic.com/ap510-aprs-tracker-vhf-with-gps-bluetooth-thermometer-tf-card-support-aprsdroid.html) and became immediately interested in the possibilities. This was, according to reviews on amazon, a legitimate 1 watt APRS over VHF transceiver, with GPS and thermometer (!) that was configurable and chargeable over USB, and potentially controllable over bluetooth from APRSDroid. I put it on my wish list immediately.

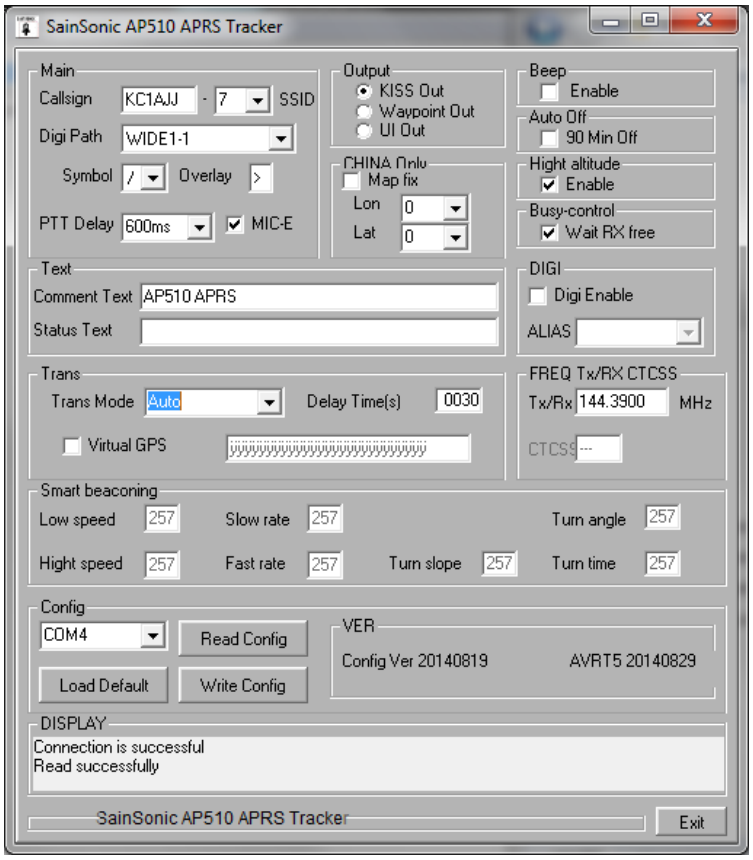
Luckily, Hanukkah Harry was very benevolent, and I was overjoyed to open my new gadget up this weekend.

Unpacking, the box contained the device itself, a rubber ducky SMA antenna, and a mini-USB to USB cable with a chip that looked similiar to the prolific chips my Baofeng came with, along with a small manual in 4 languages that were all translated poorly from Chinese.

Knowing from the amazon reviews that getting up and running may be a challenge due to the "economical chinese manufacturing model" involved, I jumped on google and looked for setup and walkthrough guides.

The first thing I found was that people highly recommended updating the firmware to fix some out of the box bugs, so I followed (successfully) the instructions here: https://oh2fxd.wordpress.com/2014/12/19/into-to-the-wild-with-sainsonic-ap510-aprs-tracker/. Note that to get the software to work on Windows 7, you likely need some supporting drivers, which I was able to get from here (http://www.microsoft.com/downloads/details.aspx?FamilyId=25437D98-51D0-41C1-BB14-64662F5F62FE) and here (http://superuser.com/questions/519841/getting-msstdfmt-dll-missing-when-starting-visual-basic-6-application). Note this step is tricky: you can potentially brick your device if you aren't careful to follow the power-off / power-on instructions.

I next tried to use the latest version of CHIRP (http://chirp.danplanet.com/projects/chirp/wiki/Home) to configure the device, but it failed to work due to a bug, which was disappointing, so I had to fall back to using the manufacturer's configuration software (http://www.sainsonic.com/skin/frontend/default/f003/download/20141215-for-AP150.zip) which was somewhat obtuse but usable:

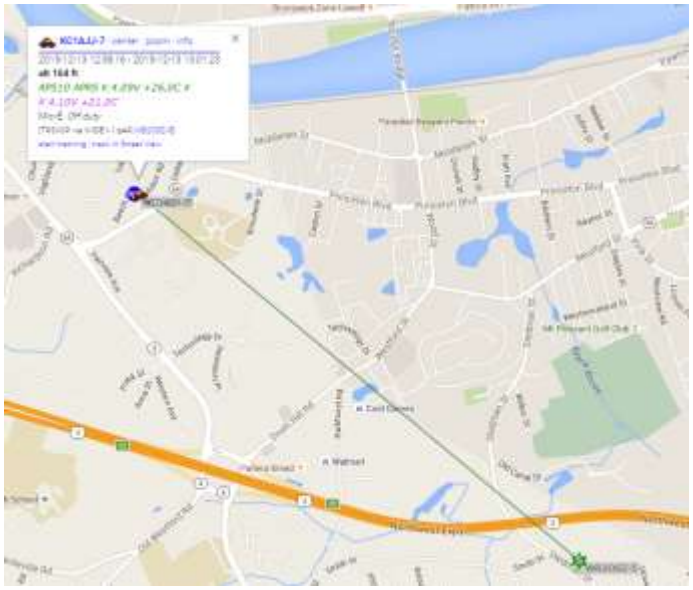


I'm still working on figuring out the problem with CHIRP, because it provides a full "settings" configuration screen for this device as of December 2015 which I was really looking forward to using.

With the device configured to use my callsign and my SSID (my weather station is already using -13), I restarted the device, put it in transmit mode, and crossed my fingers.

Within 30 seconds, aprs.fi showed me on the air from my basement, thanks to John Langner WB2OSZ helpful APRS raspberry-pi-based digipeater a mile away.

This took about 30 minutes of toying around on the internet and reading blogs, but I was very happy to see it working for real. I then wondered how easy the bluetooth interface was, so I fired up APRSDroid on my Samsung S5 phone, configured it to use "bluetooth TNC", and paired my phone with my AP510. It asked for a password, which was not documented anywhere, but the phone suggested one that worked. Once I did that, I found that APRSDroid could fully control the AP510, sending its own packets through as if the AP510 was a simple TNC, and I could use it to send and receive APRS text messages:



This provides a lot more flexibility for the device, as the APRSDroid software on your phone or tablet can be configured to send whatever format APRS packets you wish.

In summary, the Sainsonic AP510 APRS on first look is an extremely capable built-for-purpose APRS device that any ham that relies on position tracking should consider adding to their toolbox. Although it is difficult to configure due to lack of out of the box software and some driver issues on Windows, once it is up and running, and combined with the bluetooth TNC features and battery life potential (over 20 hours and rechargeable via USB), this small tracker box will definitely become part of my SAG and bike mobile gear going forward.

Member Contribution

ARRL Frequency Measuring Test

- *George Allison – K1IG*

The semi-annual ARRL Frequency Measuring Test (FMT) was held on the evening of November 12, 2015, and two PART members participated and did quite well. Three test signals were transmitted from K5CM in Oklahoma; the signals were of two minutes each on the 160, 80, and 40 meter bands, and the object of the exercise was to measure the frequency of each transmission to within one hertz.

The 160 meter transmission wasn't detectable by either of the PART members, but for the other two signals, the results were:

	80 Meters Error	40 Meters Error
Peter, KB1PBA	-0.12 Hz	0.57 Hz
George, K1IG	-0.14 Hz	-0.12 Hz

KB1PBA used an Elecraft KX3, a desktop computer running Windows 10, and SpectrumLab software. K1IG used an Elecraft K3, a MacBook computer running OSX El Capitan, and FLDigi software. Both stations calibrated their stations to WWV and CHU before and after the test. This was KB1PBA's first try at the FMT, and he successfully measured both signals to within one hertz.

Participating in the FMT is easy and is a good way to verify that your rig is properly calibrated. Information about calibration and the FMT is available on the WB1GOF.org website.

The next FMT will be held in April 2016 – can you be ready?

Public Service

Request for Boston Marathon Technical Infrastructure Subcommittee members

- *Mark Richard – K1MGY*

Boston, MA
December 8 2015

Preparations are underway once more for the Boston Athletic Association's Boston Marathon, April 18, 2016. Nearly 300 trained Amateur Radio volunteers staff the event, providing vital communications services across the entirety of the 26 Mile course. Volunteers are recruited, selected, and managed by the BAA's Communications Committee which is entering its second year of service. "A major initiative of the Committee this year is to bolster the technology we use on Marathon Monday," said Communications Committee member Matthew Forman, K6MCF. "To do so, we're forming a Technical Infrastructure Subcommittee (TIS) and seeking Amateurs who can offer current skills in Analog and/or Digital modes (UHF/VHF), repeaters, and infrastructure. We'd like to have the TIS consist of one technically-seasoned member from Amateur Radio clubs in Massachusetts, Southern New Hampshire, and the northern parts of Connecticut and Rhode Island," said Forman.

Another Committee member, Mark Richards, K1MGY, will be assisting in representing the TIS to clubs and other interests. "A diversity of talent, and the involvement from and representation to this work by area clubs is vital to creating volunteer opportunities for everyone and making sure that Amateur Radio is a part of this extraordinary Marathon for years to come," he said.

Richards will be contacting clubs and soliciting their assistance. You may reach him directly at k1mgy@hamradioboston.org.

Current NO1A-Acton talkgroup configuration as of 1 January 2016

New Hampshire EWARN systems use a subset of this. See http://www.ewarn.club/digital-repeaters/dmr/

Talk Group	TG	TS	F/PTT	Source
World Wide Calling	1	2	PTT**	DMR-MARC
North America Calling	3	2	F	DMR-MARC
WW English Calling	13	2	PTT	DMR-MARC
Northeast Regional	8	2	F	DMR-MARC
CT SW	8901	2	F	CT-ARES
CT TAC-1	8909	2	F	CT-ARES
CT TAC-2	8910	2	F	CT-ARES
EWARN	39276	2	F	EWARN
MA State	3125	2	F/PTT*	DMRX (MIT)
NH State	3133	1	F/PTT*	DMR-MARC (CHANGE)
Local9	9	2	F	Local Repeater
Midwest Regional	3169	1	F/PTT*	DMR-MARC
Northeast Regional	3172	1	F/PTT*	DMR-MARC
MidAtlantic Regional	3173	1	F/PTT*	DMR-MARC
Southeast Regional	3174	1	F/PTT*	DMR-MARC
SouthernPlains Regional	3175	1	F/PTT*	DMR-MARC
Southwest Regional	3176	1	F/PTT*	DMR-MARC
Mountain Regional	3177	1	F/PTT*	DMR-MARC
GA State	3113	1	F/PTT*	Georgia DMR
OH State	3139	1	F/PTT*	DMRX (CODIG)
MI State	3126	1	F/PTT*	DMRX
TN State	3147	1	F/PTT*	DMRX (VOLNET)
PA State	3142	1	F/PTT*	DCI
PA-525 State	3185	1	F/PTT*	DCI
TAC1	8951	1	PTT	DMRX (DCI)
TAC310	310	1	PTT**	DMRX (DCI)
TAC311	311	1	PTT	DMRX (DCI)
TAC312	312	1	PTT	DRMX (DCI)
COMM1	3777215	1	PTT	DMRX (DCI)
COMM2	3777216	2	PTT	DMRX (DCI)
Bridge	3100	1	PTT	DMRX (DCI)
USA-1776	1776	1	PTT	MIT
UA English 1	113	1	PTT	DMR-MARC
UA English 2	123	1	PTT	DMR-MARC
UA All_Lang 1	119	1	PTT	DMR-MARC
UA All Lang 2	129	1	PTT	DMR-MARC
Fusion Link	3182	1	PTT	DCI
AllStar Link	3167	1	PTT	DMR-IL
Hytera USA Relector	4639	1	PTT	DMRX
Parrot	9998	1	PTT	DMRX
Audio Test	9999	1	PTT	DMR-MARC (NorCAL)

Note:
F/PTT* indicates the TG is full-time for in-state and in-region repeaters, PTT for everyone else.
PTT** indicates that TG is turned on full-time for scheduled Nets.
World Wide (TG1) – Saturdays 1700 UTC (Saturdays 12:00pm EST)
TAC310 (TG310) – Mondays 0100 UTC (Sundays 8:00pm EST)

Amateur Radio News

From eHam.net News:

Elementary Students Get Safety Tips:

by thewesternnews.com on December 13, 2015

Students of the Libby Elementary School's after school program received a special presentation in the school library Tuesday, Dec. 8. On behalf of the Lincoln County Emergency county Emergency Management Agency, Bill Cunnane told the students, grades two to six, what they should do in emergencies. In his presentation, Cunnane went over important safety rules with the students, telling them what they should do in different kinds of emergencies. He taught them how to handle such situations as fallen power lines, fires, flooding and blackouts. One of the things that Cunnane stressed in his presentation was the importance of a "go bag" or "bug out bag." Cunnane said a go bag should contain anything that might be needed in an emergency and should be ready to go at a moment's notice, so that it can be retrieved immediately in the event that the owner needs to evacuate. When preparing a bag, Cunnane suggested to the students that they pack food, water, money, clothes, flashlights, batteries and things to pass the time until the emergency ends, such as a few toys, or a game or two. As another part of the presentation, Cunnane showed the students how ham radio can be helpful in emergency situations. As a former resident of New Jersey and the former director of ham radio communications in Ocean County, New Jersey, Cunnane said he helped coordinate with authorities over ham radio after the terrorist attacks at the World Trade Center on Sept. 11, 2001. "I was responsible for passing, via ham radio, logistics to the governor's office in New Jersey, and then to McGuire Air Force Base and then back again," said Cunnane. "I did that for 18 hours a day for two weeks." "I lost several friends up in the towers, including a ham radio operator who was on top of one of the towers at the time. I came out here 12 years ago. As soon as I came out here, I saw the need for communications help. After Sept. 11, 2001, it was found that ham radio was a key instrument during Sept. 11, 2001 and the recovery. The FCC recognized that fact and mandated that all counties include ham radio operators in their emergency programs." Cunnane said he is retired and that he gave his presentation on behalf of the Emergency Management Agency on a volunteer basis. He also said he serves as liaison between the agency and the county.

Ellis County Radio Clubs Shares November News:

by waxahachietx.com on December 13, 2015

If October seemed busy, November was by far the busiest the Ellis County Amateur Radio Club has experienced in a few months. On Nov. 3-5, six radio club members including Keith Beck, Dale Lester, Tom Pegues, John Denson, Joe Frizzell and Sharon Wrobel participated in FEMA's ICS 300 class, which is the Intermediate ICS (Incident Command System) for Expanding Incidents. This class was taught by TEEX instructors and offered by Emergency Management at the Ellis County Sheriff's Training Center in Waxahachie. The regular meeting of the Ellis County Amateur Radio Club was held on Nov. 19 at the Ellis County Sheriff's Training Center. James Hasse with the Lone Star Cyclists presented a check for $1,500 to club president Gerald Pomeroy for the clubs participation in Italy's Tour d'Italia bike rally. Each year the club helps the Lone Star Cyclists with radio communications and by providing support and gear (SAG) for cyclists that are fatigued, in need of food, water or bike repair. Then, Chris Overbey and the boy scouts presented an Appreciation plaque to the club for its participation in Jamboree on the Air. Radio club members helped scouts talk on the radio and educated them on how ham radio works Towards the end of the business meeting, seven new members were welcomed into the club after which, Leo Wrobel KW5P gave a terrific presentation on ham radio for newcomers.

Bradley Observatory Hams it Up:

by agnesscott.edu on December 12, 2015

Amateur radio (or "ham" radio) has been called the first "social network," bringing people, electronics and communication together for over 100 years. Ham radio can communicate across town, around the world, or even into space, all without the Internet or cell phones. It's fun, social, educational, and can be a lifeline during times of need. Some ham radio operators (hams) like to build and experiment with electronics. Computer hobbyists enjoy using amateur radio digital communications opportunities. Others compete in "DX contests," where the object is to see how many hams in distant locations they can contact. Mostly ham radio is used to form friendships over the air or for participation in one of more than 2000 amateur radio clubs throughout the country. There are over 700,000 radio amateurs in the United States and over 2,000,000 worldwide. Communication with other hams can be accomplished via voice and a microphone by interfacing a radio with a computer or tablet to send data, text or images, or even Morse code, which remains incredibly popular. There are usually astronauts who are hams aboard the International Space Station, and one can communicate with other hams through one of several satellites in space, or bounce signals off the moon and back to Earth. RadioAgnes Scott College has recently added a new

dimension to further distinguish itself among women's colleges. The college has installed what is believed to be the first amateur radio station on a women's college campus anywhere in the U.S. The station is located at the highest point on campus, Bradley Observatory, and was established with the enthusiastic support of Agnes Scott faculty in the Department of Physics and Astronomy: Nicole Ackerman, Amy J. Lovell and Christopher De Pree, director of the Bradley Observatory. As part of the process, Professors Lovell and Ackerman obtained amateur radio licenses, and Ackerman also attended a Teacher's Institute on Wireless Technology conducted and sponsored by the American Radio Relay League, the national association for amateur radio, to learn more about the technology and get ideas for classroom projects. "Wireless communication technology may be in the pockets of all of our students, but many don't stop to think about how it works and the network that is necessary to support it. Not only does the station provide an opportunity to talk about atmospheric science and the propagation of electromagnetic waves, but we can also tie it to the fundamental techniques of data encoding and transfer," says Ackerman. Equipment, technical assistance, and monetary support for the station came from the Atlanta Radio Club, the Alford Memorial Radio Club and several individual ham operators, with the college providing in-kind support.

Sun-Watching Observatory Celebrates 20 Stellar Years in Space:

by uk.news.yahoo.com on December 12, 2015

A satellite that has revolutionized scientists' understanding of the sun marked 20 years in space last week. The Solar and Heliospheric Observatory (SOHO), a joint effort of NASA and the European Space Agency (ESA), launched into solar orbit on Dec. 2, 1995, to study the sun and its influence throughout the solar system. To celebrate the mission, NASA created an awesome video of SOHO's 20 years of sun images. The spacecraft's mission -- which was originally scheduled for just three years, but has been extended numerous times -- has been a huge success, team members say. [Amazing Sun Photos from Space] "SOHO changed the popular view of the sun from a picture of a static, unchanging object in the sky to the dynamic beast it is," Bernhard Fleck, ESA SOHO project scientist at NASA's Goddard Space Flight Center in Greenbelt, Maryland, said in a statement. SOHO has made a variety of scientific contributions over the years, some of them a bit unexpected; the observatory is the greatest comet hunter of all time, for example, discovering more than 3,000 of the icy objects to date. But SOHO was initially launched to answer three main questions: What is the interior structure of the sun? How fast is the acceleration of the solar wind, the flow of charged particles streaming from the sun? And what causes the extraordinarily high temperatures in the sun's outer atmosphere, known as the corona?

Cuba and US to Restore Postal Service:

by BBC News on December 11, 2015

Cuba and the United States have agreed to restore a direct postal service, suspended 52 years ago at the height of the Cold War. A pilot postal service will be launched shortly, but it is not clear when a full service will be implemented. The move is part of the rapprochement process that was announced by presidents Barack Obama and Raul Castro on 17 December last year. The two countries have since restored diplomatic ties and reopened embassies. Cuba and the US began re-establishing postal links in 2013, before the change of policy was announced. Mail and parcels between Cuba and the US have been re-routed through a third country, usually Mexico or Canada. In March, direct phone connections with the US were restored after more than 15 years. Previously, phone calls also needed to go through a third country. While delays in the postal services have caused frustration for decades, their use in the 21st Century is becoming limited, says the BBC's Will Grant in Havana.

Empty Stocking Fund: Amateur Radio Society Answer Call to Help:

by gastongazette.com on December 11, 2015

When Hurricane Hugo tore apart New Orleans and then flooding brought more havoc, amateur radio operators answered the call. The hurricane's winds blew cell towers to pieces and these men and women provided one of the only means of communication in and out of the ravaged region. Members of the Gaston County Amateur Radio Society like Bill Paczkowski are proud of the assistance they provide in emergencies. They hold an annual field day each June to hone their skills, test equipment and emergency preparedness. Over 24 hours, members send and receive messages from several hundred stations across the world. The Gaston County group also tunes into the need of those around them through an annual donation to The Gazette Empty Stocking Fund. Each year, members take up a collection for the campaign that helps the Salvation Army provide assistance to those who have hit hard times at Christmas. This year, the group made a $200 contribution. "It's a great thing you do here and we appreciate it," said Paczkowski of The Gazette's annual fundraiser.

The Impact of World War I on Ham Radio:

by kcur.org on December 11, 2015

When America declared war on Germany in 1917, most radio stations came under government control, reserved

for war efforts. On this edition of Up To Date, we learn why ham radio operators were prevented from broadcasting during The Great War.

Solar Super-Flare is Possible, but Conditions Required Extremely Unlikely:

by wtexas.com on December 11, 2015

After finding a solar super-flare on a star similar to our sun has led researchers predict that earth's sun is also capable of producing such super-flare that can prove destructing for earth. Researchers at University of Warwick located the super-flare on the star, called KIC9655129, using data gathered by NASA's Kepler space telescope. The researchers noticed that the burst on the star emitted wave patterns that are similar to flares emitted by the sun. Mentioning in the Astrophysical Journal Letters, the researchers have affirmed that the sun is capable of producing a super-flare, which is 1,000 times stronger than its previous record. Normal-sized solar flare is capable of releasing energy equivalent to 100 million megaton bombs. But the energy released from a super-flare is equivalent to 100 billion megaton bombs. "If the Sun were to produce a superflare it would be disastrous for life on Earth; our GPS and radio communication systems could be severely disrupted and there could be large scale power blackouts as a result of strong electrical currents being induced in power grids", affirmed study's lead researcher Chloë Pugh. Along with this, Pugh also affirmed that the condition required for super-flare is highly not possible to happen on the sun. The researchers have based their predictions seeing the previous observations of solar activity. But the researchers said that by studying flares taking place on other stars can help better understand the processes taking place on our solar system.

'Ghost' Satellite from 1967 Is Transmitting Again:

by pddnet.com on December 11, 2015

A satellite built at MIT's Lincoln Laboratory and abandoned in 1967 began transmitting again in 2013, an amateur radio operator found. Vintage News reported via Southgate Amateur Radio News that Phil Williams, an amateur radio astronomer in the United Kingdom, picked up on the satellite's signal in 2013, and confirmed that it was an LES-1, or Lincoln Experimental Satellite built to test how satellites could communicate from orbit.

Amateur Radio Newsline Report 1989, December 11, 2015:

by James Pastorfield (KB7TBT) on December 11, 2015

The following is a QST. Hams in India struggle to help the nation's flooded south. The founder of Ham Radio Outlet becomes a Silent Key. Boston area amateurs are already planning for the city's big marathon. And get ready to do some real DXing with Pluto, the so-called "dwarf planet." All this and more in Amateur Radio Newsline Report 1989 coming your way right now.

IARU Praises WRC-15 Regarding Use of Ham Bands for Non-Amateur Satellites:

by The ARRL Letter on December 10, 2015

The International Amateur Radio Union (IARU) has welcomed the exclusion of all existing Amateur and Amateur-Satellite frequency allocations from bands under possible consideration at World Radiocommunication Conference 2019 (WRC-19) for non-amateur satellite use. WRC-15 last month in Geneva recommended WRC-19 Agenda Item 1.7 regarding spectrum studies for short-mission satellites; it removes from consideration the Amateur-Satellite allocations at 2 meters and 70 centimeters.

MARS-Amateur Radio Exercise an Overall Success:

by The ARRL Letter on December 10, 2015

A 2-day Military Auxiliary Radio System (MARS) communications exercise in early November is being considered an overall success, especially in terms of MARS-ARES cooperation. The November 8-10 exercise was built around a scenario of a simulated massive coronal mass ejection (CME) that disrupts conventional communication systems across the US.

ARRL News

All-Ham ISS Crew Increment Returns to Earth After 141 Days in Space

December 11, 2015 - Three members of the International Space Station crew, all of them radio amateurs, returned safely to Earth on December 11. The trio, Astronauts Kimiya Yui, KG5BPH, and Kjell Lindgren, KO5MOS, and Russian Cosmonaut Oleg Kononenko, RN3DX, landed safely in their *Soyuz* spacecraft in Kazakhstan at 1312 UTC.

NASA noted that it marked the first time a crew has landed after sunset and only the sixth ni...

Kosovo Amateur Radio Association SHRAK Joins International Amateur Radio Union

December 11, 2015 - The International Amateur Radio Union (**IARU**) has announced that the Kosovo Amateur Radio Association, (**SHRAK**) has been accepted into membership as the result of a second vote by member societies. The action has no effect on Kosovo's **DXCC status**.

Kosovo was proposed for IARU membership in 2014, but the proposal failed. Two affirmative votes arrived after the ballot deadline, however, and IARU Re...

The K7RA Solar Update

Friday, December 11, 2015 - Australia's Space Weather Services issued a geomagnetic warning at 0132 UTC on December 9. It said that due to solar wind from a coronal hole, expect increased geomagnetic activity on December 10.

Both average daily solar flux and average daily sunspot numbers were higher over the December 3-9 period than on the previous week.

FCC Launches its New Website

December 10, 2015 - The FCC officially launched its long-awaited new **website** late on December 9. The Commission said its new site "features a more responsive design, a new site navigation structure, and an improved search capability." The site design features a cleaner, brighter, and more modern look and feel, and the display will adjust to various platforms, from mobile devices and tablets to computers.

Florida Ham Agrees to Penalty for Failure to Identify

December 10, 2015 - The FCC Enforcement Bureau has entered into a consent decree with a Florida radio amateur to resolve an investigation into whether the licensee violated Sections 97.113(b) and 97.119(a) of the FCC rules by transmitting one-way communications and failing to identify. As part of the deal, Thomas J. Warren, K3TW, of Lecanto, Florida, will pay a monetary penalty. The FCC issued an ***Order*** incorporati...

GlobalSET 2015 Worldwide Preparedness Exercise to Focus on Organization

December 09, 2015 - The 2015 Global Simulated Emergency Test (**GlobalSET**) this month, organized by IARU Region 1, will gauge the ability of radio amateurs to respond quickly to an emergency. IARU Region 1 Emergency Coordinator Greg Mossop, G0DUB, said GlobalSET 2015 will focus on organization, rather than on how easily groups can set up field stations.

"Following the Nepal Earthquake earlier this year, a new test is...

ARRL International Humanitarian Award Nominations Due by December 31

December 09, 2015 - The deadline to submit nominations for the 2015 ARRL **International Humanitarian Award** is December 31. The award is conferred upon an amateur or group of amateurs who demonstrate devotion to human welfare, peace and international understanding through Amateur Radio. The League established the annual prize to recognize Amateur Radio operators who have used ham radio to provide extraordinary servi...

ARRL 10 Meter Contest is in the Wings

December 08, 2015 - The 2015 **ARRL 10 Meter Contest** is just ahead, December 12-13. This popular event is lots of fun, and you never know what sort of propagation you might encounter on 10 meters.

The ARRL encourages computer loggers to check out the new web-based **log uploading facility**. It offers quick response and instant feedback, and if your log has a problem, you'll be able to fix it on the fly and upload the lo...

IARU Praises Favorable WRC-15 Result Regarding Use of Amateur Bands for Non-Amateur Satellites

December 08, 2015 - The International Amateur Radio Union (**IARU**) has welcomed the exclusion from consideration of all existing Amateur and Amateur-Satellite frequency allocations for potential use by non-amateur satellites. World Radiocommunication Conference 2015 (WRC-15) last month in Geneva recommended an agenda item for the next WRC in 2019 involving spectrum studies for short-mission satellites that removes f...

Polish Radio Amateur Traveling to North Korea in Advance of Proposed Operation

December 08, 2015 - DXpeditioner Dom Grzyb, 3Z9DX, plans to travel to North Korea later this month to discuss his proposed Amateur Radio operation from that country. North Korea (P5), the most-wanted DXCC entity, has not been activated since Ed Giorgadze, 4L4FN, operated for about a year from the capital city of Pyongyang in 2001-2002. Grzyb expects to arrive in North Korea just before Christmas for what are being...

Radio Amateurs of Canada Honors Past ARRL, IARU President Larry Price, W4RA

December 08, 2015 - Larry Price, W4RA, a President Emeritus of the ARRL and of the International Amateur Radio Union (**IARU**), has been appointed as the inaugural honorary member of the Canadian Amateur Radio Hall of Fame. The appointment, announced by the Hall of Fame Board of Trustees, followed his nomination by the Radio Amateurs of Canada (**RAC**) Board of Directors. The RAC said the honor is in recognition of Pric...

The Netherlands Opens 100 kHz Band at 5 MHz

December 08, 201 - Just days after delegates to World Radiocommunication Conference 2015 (WRC-15) reached consensus on a new global 15 kHz-wide allocation at 5 MHz, the Netherlands has opened a 100 kHz band for Amateur Radio use.

Article 4.4 of the ITU ***Radio Regulations*** lets countries authorize frequency assignments that are contrary to the international *Table of Allocations*, only on a non-interference, non-prote...

UK Telecoms Regulator Revokes 500+ Ham Radio Licenses Not Revalidated by Holders

December 07, 2015 - Ofcom, the UK telecommunications regulator, has revoked the **first batch** of Amateur Radio licenses that had not been "revalidated" by their holders. Ham licenses in the UK used to expire annually, but in 2006, Ofcom began issuing lifetime licenses, which remain in effect until the

agency takes specific action to revoke them. Ofcom has canceled some Amateur Radio licenses in the past, when the li...

Latest Amateur Radio News from around the world
URL: http://www.southgatearc.org

VI0ANZAC to try again

VI0ANZAC from Casey Base in the Antarctic will try to hold another activation this month as bad weather caused the event, part of the Wireless Institute of Australia (WIA) ANZAC 100 program, to be postponed in August

YOTA 2016 Austria - Call for applications

Lisa Leenders PA2LS, Chair of the IARU Region 1 Youth Working Group reports the next YOTA event which will take place in Austria

Upcoming ARISS contact with Kiluutaq School

Signal reports requested from IO-86 FM transponder test

The FM transponder aboard IO-86/LAPAN-ORARI was activated for testing, and was available for amateur radio use on 14 November between 01:35 - 03:40 UTC

The Afrikaans Amateur Radio Dictionary

The South African Radio League (SARL) has received excellent feedback from interested radio amateurs following a call to compile an Afrikaans amateur radio dictionary

ARISS contact Tuesday

Please join us in listening to the ISS contact with participants at the Kiluutaq School, Umiujaq, Nunavik Quebec, Canada on Tuesday November 17th. AOS is anticipated 16:47 UTC

Propagation Report from Hannes Coetzee, ZS6BZP

Hannes Coetzee, ZS6BZP, reports that the solar activity is expected to be at low to moderate levels

Repeater Nets

146.955 Nets – There are a number of nets that are regularly scheduled on the 955 repeater.

- Sunday night at 2000/8:00 PM Sunday Night PART Net – every
- Sector 1C Emergency Communications Net – this net occurs the 1st Monday or every month (except when it is a holiday).
  Skywarn and ARES Nets – these nets are spontaneous when local conditions warranted.

NOTE: You can LISTEN ONLY to this repeater audio by linking to this URL:
http://www.radioreference.com/apps/audio/?feedId=10933 (effective 2/2012)

442.450 D-Star Nets – There are a number of nets that are regularly scheduled.

- Sunday 8:00 PM Ozark Mtn D-STAR Net – Reflector 001C
- Tuesday 8:00 PM New England Amateur D-STAR Net – Reflector 010C
- Friday 8:00 PM CanNet D-Star Net – XRF021B

NOTE: The status of the WB1GOF D-Star repeaters can be seen at https://wb1gof.dstargateway.org

Monthly PART Breakfast

Don't forget the monthly PART breakfast the 1st Saturday of each month at the Westford Regency Inn at 8 AM. The full hot & cold buffet breakfast costs about $15 (includes tip) per person, a cheaper, lighter fare is available for adults and children. **NOTE: PLEASE let the folks who are settling the bill with the staff know whether you had a full or continental breakfast!**

Copyright WB1GOF, Robert Schmeichel 2011

Monthly Breakfast Pricing

The adult full breakfast is $11.95 + 18% + 6.25% = $15.00 (rounded up slightly). This price has recently changed. Here is the math for completeness and full disclosure.

Continental breakfast: $9.00 (same price)
Full breakfast: $15.00 (new price)
Kid's breakfast: $9.00(new price effective March 2015)

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Repeater Information

Repeater Interference

The 146.955 repeater periodically has had interference to in-progress conversations as well as at random quiet times throughout the day and night. The repeater interference committee needs your help in collecting data. If you hear any type of interference, please report the following info to "**repeater" at "wb1gof.org**":

- Time: When did the event happen?
- Observing location: Where were you? Were you mobile?
- Frequency: Input only (146.355 MHz)
- What you heard: Voices, tones, kerchunking or whatever.
- Signal strength: Either by ear (noisy, quiet or full quiet) or S meter
- Radio: To get an idea of the reporter's radio situation.

* Most important - what direction: How did you determine direction? This is the most essential piece of information. Even if it's an estimate as in "Roughly east" or "from the Northeast" it's useful. NEVER EVER reply or direct any thing to the sick person causing the interference. Because some of us have answered this person, he knows we are aware of him and that is what keeps him doing it. Also since you are communicating with a non IDing station you are operating just as illegally as he is. YOU ARE BROADCASTING! NEVER TALK ABOUT INTERFERENCE on air. NEVER

If you are interested in assisting in helping us identify the sources of interference, contact Terry-KA8SCP.

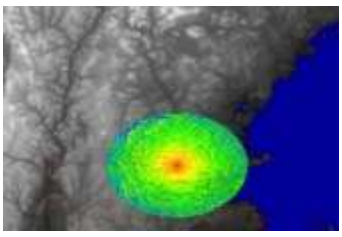
EmComm events and repeater use

Most everyone knows that the 146.955 repeater is used during times of emergency situations, drills and exercises. Skywarn and the monthly EmComm drills are the normal events.

So what does this mean to those that are just looking for regular QSOs with other users? It means that if you are in a regular QSO and there is a significant weather situation that has been getting press/air-time lately, you can expect that if severe weather develops in our area, the folks from Taunton-WX1BOX may interrupt a QSO and ask anyone on frequency what may be happening weather wise. The BOX operator will probably ask for specific information, hail, wind damage, property dame from lightning or wind, etc. Please give him the information he needs or tell him that you've not heard of any such activity. You don't need to tell him it is sunny in Nashua!

There may come a time when an unexpected emergency situation arises. These will significant events that may affect life and property. This is where EmComm activity may step in. Usually an NCS will interrupt a QSO and announce the situation and ask for a QSO to cease or to be "aware" of the possibility of priority calls/traffic. Please make sure you leave breaks between transmissions so stations with traffic can get in between QSOs. If there is enough traffic, it may be necessary for your existing/interrupted QSO QSY to another frequency. You should use your best judgment or check with the NCS on what he feels is best.

If you have any questions, please feel free to correspond with Terry-KA8SCP. All requests for repeater use can be initiated by email to info@wb1gof.org.



Repeater propogation info is available on the PART website. Check out the links to the summit information as well as coverage and plot plans maps for the WB1GOF repeaters. Complete info on the site can be found at this URL.

PART Gear

The PART Quartermaster has lots of great PART-ware for sale including mugs and shirts. You can get information how you can obtain your PART-ware at the monthly club meetings.

Club members are also encouraged to obtain an official PART badge from The Sign Man (http://thesignman.com/clubs/part.html) PLEASE NOTE: Please check with Hugh Maguire-N1QGE, hulin127@verizon.net, if you need a badge.

EmComm

Emergency Communications – The WB1GOF 146.955 repeater is used on the first Monday of every month (except federal/state holidays) for an EmComm Net starting at 1930 local time. If you are interested in being part of the local emergency communications team in your community, feel free to contact any of the following folks:
Terry Stader – KA8SCP, MEMA Region 1 Communications Officer & Town of Westford
Bill Ohm – W1OHM, for the Town of Chelmsford
Darrel Mallory – K1EJ, North Middlesex ARES

- We need radio operators that can pass messages on to the local emergency management directors in several towns in northern Middlesex County.

Skywarn - The WB1GOF 146.955 repeater is also used for reporting significant weather events to the National Weather Service from our local spotters. You can provide valuable information even if you have not attended one of the training sessions. Listen to the Skywarn Net Control Station for reporting criteria, when you have information that qualifies, please advise him with your report.

Situational Awareness – Recently, the Massachusetts Emergency Management Agency has asked the Amateur Radio community to provide situational awareness and disaster intelligence information within your local community via EmComm nets and/or Skywarn stations. Significant events such as widespread power outages can be reported and by agencies such as MEMA to evaluate the scope of a blackout for example. Initially, you should try and contact the EmComm Net Control Stations on the Westford 146.955 repeater to pass this information. More on this new program will be forthcoming.

PART Sunday Night Net – The PART Net each Sunday night is an IMPORTANT part of our regional EmComm function. With each station that checks in from the surrounding communities, we test our ability to communicate vital information to the ham radio community. Sure we announce club info but we can also communicate regional disaster news and serve as a "hub" for news of situations in our communities. The repeater is on a generator, so even if we loose power in the region, an HT with a supply of batteries will reconnect you to other local hams.

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This month's editor: Terry Stader – KA8SCP

PART official mailing address is:
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