

THE Propagator

Garden State Amateur Radio Association



8 Donner St.,
Holmdel, NJ 07733
Editor: Bob Buus, W2OD
Design: Cy Stanway, K2CYS

December 2017



From the Editor

Bob Buus W2OD

Cy, K2CYS and I wanted to get this edition of the Propagator out before the Thanksgiving Holiday so I have been in a frantic rush to get all of the material ready in timely fashion. I don't know if we'll make it but

all of you readers should know by noting when it arrives at your QTH. Unfortunately, there is no way the mailed paper copies will be out until after Thanksgiving since I will not be available to work on it Wednesday through Friday.

This is the last issue of the Propagator that will be mailed to those members who paid an extra \$5 for this service in 2017. A special arrangement has been made to continue to mail paper copies to the two members who do not have e-mail accounts. The rest will have to print them themselves if they still want a paper copy. If this is intolerable, please get in touch with me and I will see what other arrangements can be made.

Note that the Field Day 2017 final results are in the December 2017 QST starting on page 76. W2GSA is the 30th entry on page 76 for the 1A category. Not bad! Better yet, we



MEETINGS

The next GSARA meeting will be on December 6 at 7:30 PM at the Red Cross. Officers for 2018 will be installed and then the program will consist of Art Olson, N2AJO talking about oscilloscopes. This intimidating piece of test equipment is very useful for observing electrical waveforms and has many important functions in your shack. Art will make it less intimidating. Guests are welcome.

The second meeting in December will be held on December 20 at 7:30 PM at the Red Cross. This will be a business meeting with reports from the various committees. Don't miss it! Guests are welcome.

VE TESTING

The GSARA monthly test session will be held at the Red Cross on Saturday, December 23 at 11 am. The fee is \$15 and you should bring the original and a copy of any amateur license presently held and the original and one copy of any credit (CSCE) forms that you have (copies will be sent in with your test results). Also bring 2 forms of ID with one being a photo ID. For more information, contact Rich Bilon, N3RB at 732-972-1397 or n3rb@arrl.net

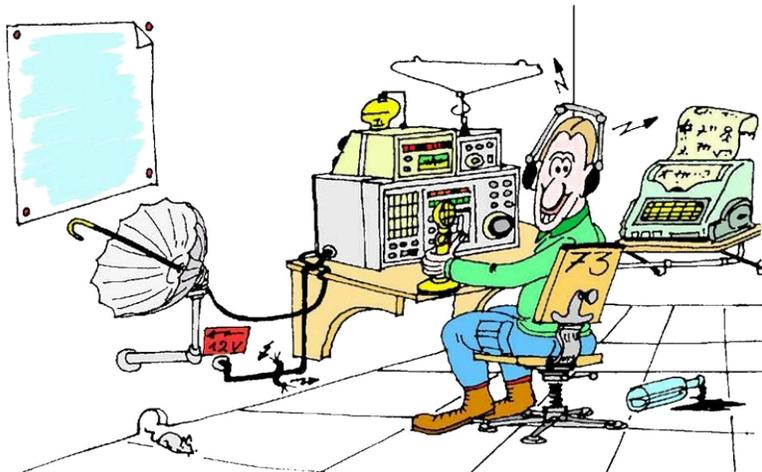
led the NNJ section with the highest score in 1A for the section. Nice job to all who participated! It really pays to keep the station(s) on the air continuously.

I was pleased to see that Paul, AD7I made the generous offer to furnish a semi-kit of parts at nominal cost to anyone interested in building one of his digital interface designs. To encourage you to actually build the device, he will refund your money after it is built so it is essentially free except for what you might have to pay for a cabinet and an interface cable to your rig. Better yet, he will help you debug your creation if it doesn't work after you build it. It doesn't get much better than that! Thanks Paul.

The GSARA net attendance on Tuesday nights and the Friday lunches at the Blue Swan are both doing well with 8 to 10 attendees at each. Also, we set a record with 30 members attending the November 15 meeting. Keep up the participation.

As always, I appreciate feedback or material for The Propagator. The deadline for the January issue is December 15.

73 de Bob, w2od@arrl.net



GSARA OFFICERS

President W2HTS, Howard Suffill 732-460-1885
w2hts@arrl.net

Vice Pres. K2REM, Rem Hunnewell 732-889-6692
rh@thetraindoctor.com

Secretary W2OD, Bob Buus 732-946-8615
w2od@arrl.net

Treasurer KC2YWL, John Chunga, 732-693-7648
huesca1968@aol.com

Engineer K2KP, Arek Tarniowy 201-370-2537
tarniowy@yahoo.com

Trustees

W2KQ Joe Dreifuss 732-493-4236
jdreifuss@optimum.net

W2OD Bob Buus, 732-946-8615
w2od@arrl.net

W2HAM Lou Russo, 732-842-6431
russo62@verizon.net

Richard Bilon, N3RB, VE Coordinator 732-972-1397
4332lee@gmail.com

Propagator Editor: Bob Buus w2od@aol.com
Webmaster & Propagator Publisher K2CYS, Cy Stanway 732-768-7773
k2cys@arrl.net

Radio Room Phone, 732-493-9100, X1252

www.gsara.club
www.w2gsa.org



We have GSARA patches available at all meetings and they are \$3. Show your GSARA pride!

FREE DIGITAL INTERFACE

By Bob Buus, W2OD

At his talk at the November 15 GSARA meeting, Paul Newland, AD7I made a most generous offer to encourage members to build the digital interface he described. For \$20, he offered to provide a semi-kit of most parts (no cabinet, PC board or cables), a schematic, parts list, circuit description, and some recommendations about how to build and test the unit. But it doesn't stop there. The neat part of this offer is that your \$20 will be refunded after you have built the circuit. Furthermore, if your circuit doesn't work, Paul has offered to help debugging it to make sure it works. It doesn't get much better than that.

In the case of the "skinny" circuit, which uses the radio VOX to control information flow direction, the cost is only \$10 because fewer parts are involved (just the two attenuators, the pot, the DB9 (M&F)). The \$10 is then refunded when you build the "skinny".

The \$20 "slim" circuit uses a single CMOS IC to derive the PTT through a MOSFET. This is for use at VHF or with digital modes in which PTT timing is not critical.

The \$20 "full" circuit uses two DIP ICs to derive the PTT through a relay and is needed when PTT timing is critical (such as RTTY and CW).

There is a caveat. There is no printed circuit board for mounting and wiring the components so it must be built using a perf board or a prototyping board with holes on 0.1 inch centers. If you have no experience with this, the project might be a bit too much for you.

Paul's goal is to encourage people to build some device that meets their needs and interests and then get on the air with it.

If anyone has questions about specifics they are welcome to email Paul at ad7i@ad7i.net.



A number of local radio amateurs meet each Friday at the Blue Swan Diner on Highway 35 south in Ocean Township at noon. Anyone interested in amateur radio is welcome to join us in the back left corner of the diner.

JACK KRAMER, W2SNR, SK

John E. "Jack" Kramer, ex W2SNR of Middletown, NJ, passed away peacefully at home surrounded by his loving family on November 15, 2017. He was 91. He worked for many years as a technician for Bell Laboratories in Manhattan and Holmdel retiring in 1986 after 35 years. Jack was a Ham Radio enthusiast with the call letters W2SNR. He was a faithful communicant of St. Mary's Church and active parishioner, also serving as Eucharistic Minister.



QSL BUREAU

If any GSARA members wish to combine their QSL cards that are going through the outgoing ARRL Bureau, please bring them to the next GSARA meeting along with the label from a recent QST Magazine (you must be an ARRL member to participate in this program). Either John, KA2F or Len, WA1PCY will then send them on to ARRL at no charge to GSARA members. It couldn't be much easier than that to QSL. You are registered at the W2 incoming bureau, aren't you?

GSARA NET

The GSARA weekly net meets each Tuesday evening at 8:30 on the GSARA repeater. Everyone is welcome to hear news of upcoming club events and activities, reports of the latest club news and everyone can share what they have been up to. Please join us. The more participation, the more fun!

In the 4 sessions from October 31 to November 21 we had 47 check-ins for an average of 11.75 per session. The following 20 members checked into this net (number of check-ins in parenthesis):

N2HGI (4), K2NPT (4), KD2OBV (4), W2OD (4), N2BMK (3), AD7I (3), AC2MB (3), KC2YNL (3), KD2EJW (2), KA2F (2), N2JFL (2), N2JNG (2), W2LAF (2), KD2NYL (2), W2ZIM (2), KB2FSH (1), KD2KOA (1), W2MJP (1), N2UG (1) and KC2YWL (1).



**GSARA WANTS YOU -
TO JOIN THE NET!**



Minutes of November 1

Bob Buus W2OD

President Howard Suffill, W2HTS, called the meeting to order at 7:31 pm. There were 20 members and one guest present. The guest was George Wilner, K2ONP from Wall. After the pledge to the flag, all present introduced themselves. John, KA2F announced that he added two new rare countries to his ever expanding list - Annobon Island and Equatorial Guinea.

Health and Welfare

Bob, W2OD sadly reported a silent key. Longtime OMARC member Russ Brahn, AE2X from Spring Lake died on October 28 at Jersey Shore Medical Center. He is survived by his second wife, Elizabeth, 4 sons, 11 grandchildren and 4 great-grandchildren. The funeral was on November 2 and burial at Atlantic View Cemetery in Manasquan.

A moment of silence was observed for Russ.

Treasurer's Report

John, KA2F gave the Treasurer's report. A motion was made and seconded to accept the report and it was ac-

cepted unanimously.

Art, N2AJ0 reminded us that per the Constitution, the outgoing Treasurer must give an annual report at the last meeting in November of all receipts and expenses for the previous year.

Secretary's Report

Although the minutes were published in the November Propagator, President Howard, W2HTS asked Secretary Bob, W2OD to read the part of the minutes pertaining to the Constitutional change that was passed by a majority vote but subsequently not passed because there was not a 2/3 majority. This was done as well as the Treasurer's report details which were not published in the Propagator but are part of the official minutes. After reading the appropriate sections a motion was made by Hunter and seconded by Ralph, KC2YNL to accept these minutes. The motion passed unanimously.

Old Business

Mike, K1MH reported that at the VE Test session on October 28, we had one new Technician pass and two candidates who upgraded to Extra.

A round of applause was extended to John, KA2F for coordinating the Ham of the Year Luncheon for Jim, K2EI on October 28. By all counts, it was a great success.

Elections

Howard, W2HTS announced the slate of candidates to serve GSARA for 2018. They are Howard Suffill, W2HTS for President; Rem Hunnewell, K2REM for Vice President; Bob Buus, W2OD for Secretary; John Chunga, KC2YWL for Treasurer; and Arek Tarniowy, K2KP for Engineer. A motion was made by Art, N2AJO and seconded by Marty, N2BMK to open the floor for any additional nominations for any of these offices. No nominations were presented so a motion was made by Marty, N2BMK and seconded by Chris, W2NQB to close nominations. There being only one nomination for each office, the Secretary was empowered to cast the electing ballot officially electing the proposed slate to the offices stated. The installation of the new officers will take place at the December 6 meeting.

New Business

Marty, N2BMK read in QST about a California club that set up an Elmering course. He was asked to look into something GSARA might do to promote Elmering.

Art, N2AJO pointed out that our tower is not secured to keep anyone from climbing it and risking injury. A motion was made by Art, N2AJO and seconded by Rem, K2REM to have Chris, W2NQB look into this problem and make a report at a further meeting.

Mike, K1MH observed that the Technician Question pool is quite large and suggested we might reduce it to only the questions that appear on the 5 different Technician Exams. It appears that such simplification is legal but there was discussion as to if it was really

needed since we are observing a good pass rate for those taking the Technician exam.

In a similar note, it was brought up that we might conduct a one-day Technician class with a test session at the end. Art, N2AJO agreed to look into the feasibility of such a class.

Announcements

Paul, AD7I gave a brief introduction of the digital interface he has designed and will present at the next GSARA meeting.

Marty, N2BMK reported that he got his telescoping mast fixed by Chris, W2NQB. The bottom pipe had been slightly crushed which didn't allow the full telescoping but Chris, W2NQB fixed it.

Howard, W2HTS is looking into forming a committee to review and possible revise our Constitution and By-Laws. Anyone interested in serving on this committee should contact him.

Art, W2NAZ asked about the status of GSARA shirts and badges. Rem, K2REM will look into it and report at a later meeting.

Close

The door prize of \$18 was won by Chris, W2NQB. There being no further business, a motion was made by Marty, N2BMK to adjourn the meeting which was closed at 8:30 pm.



Minutes of November 15

By Bob Buus, W2OD

The meeting was called to order by President Howard Suffill, W2HTS at 7:36 pm. There were 30 members and three guests present. The guests were George Wilner, K2ONP from Wall, Thomas Denehy, KD2ONV from Eatontown and Ron Gasiorowski, the grandfather of Jake, KD2MGE. After the pledge to the flag, all present introduced themselves.

Health and Welfare

Bob, W2OD reported that Alan Sherman, W2NIR is home recovering from hernia surgery and is expected to be up and about later this week. Cy, K2CYS offered to send him a get well card.

Secretary's Report

Secretary Bob, W2OD read the minutes of the last meeting which were approved as read.

Treasurer's Report

Treasurer John, KA2F gave the Treasurer's report for the past year. Our income exceeded our expenses by \$761.94 which looks very good. However, if we had not sold donated surplus used gear, we would have ended the year with a loss. John made several suggestions for increasing income and reducing expenses. They were to increase the annual dues from \$15 to \$20; hold our hamfest at the Red Cross to save the site rental fee and to hold Field Day at the Red Cross. None of these suggestions were acted upon at the meeting. The report was not approved because there was a discrepancy in the numbers. This will be corrected at the next meeting.

Elmer Committee

Marty, N2BMK reported that he has found a lot of good material from a California club on running an Elmer program to help new or prospective radio amateurs. A spreadsheet will be e-mailed to members for comments. Cy, K2CYS suggested that a brochure be produced professionally for hand out. Jay, KD2NYL is a professional printer and offered to do the job.

ID Card Committee

Rem, K2REM can get GSARA ID cards printed for \$5 each. It was proposed that such cards be issued to members who attend the meetings. A motion was made by Art, W2NAZ and seconded by Mike, W2MJP for GSARA to pay the \$5 fee for those members who sign up at the meetings. The motion passed unanimously.

GSARA Shirts Committee

Howard, W2HTS said that yellow shirts without a pocket are available for \$25.95 each. A motion was made by John, KC2YWL and seconded by Phil, N2EDX to have GSARA pick up the \$.95 per shirt and charge members only \$25 for their yellow shirt. Howard is also looking into a lower-cost blue shirt but does not yet have a price.

Youth Committee

Jake, KD2MGE reported on ways to reach out to young people to get them interested in amateur radio. He suggested we use social media such as YouTube and Instagram. He recommended that GSARA create an Instagram account. Other recommendations included participating in JOTA with the Boy Scouts, participate in various town activities such as National Night Out, etc., and sponsor a kit building day similar to what we did for the BitX40 build earlier this year.

Program

The program, presented by Paul Newland, AD7I was about a digital interface that goes between a USB port on your computer and your rig – similar to the Signalink except cheaper. He presented three different versions of his circuit. A skinny version simply attenuates the audio signals between the computer and rig and uses the rig's VOX circuit to switch between send and receive. A slim version uses a simple low-power CMOS circuit to derive the PTT signal and is suitable when the PTT timing isn't critical. The full version uses two ICs to provide precisely timed PTT for high-speed CW or TTY.

These circuits will be described in a QST article scheduled for publication later in 2018.

Paul offered to supply anyone interested in building the circuit a semi-kit of parts (except cabinet, PC board or cables) for \$20. When the circuit is built, he will refund the \$20 whether it works or not. If it does not work, he will help with the debugging to get it to work.

Paul is also looking for people willing to test the circuit with various modes of operation e.g. Winmor, FL-digi, or WSJX. If interested, contact Paul at ad7i@ad7i.net.

Announcements

Chris, KD2OBV received information from KD2CBV about amateur radio events on Long Island looking for amateur radio volunteers. One is the NOAA SKYWARN recognition weekend on Dec. 1-3 at the NOAA location in Upton, NY (near Brookhaven Laboratory). The other is Operation Santa at JFK airport on December 6 whereby Santa arrives on a commercial jet with gifts for kids with special needs. For more information, see Chris.

Bob, W2OD announced that the book about Arthur Collins is again available for loan from the GSARA library.

Close

The door prize of \$29.50 was won by Chris, W2NQB. There being no further business, a motion was made by Marty, N2BMK and seconded by Chris, W2NQB to adjourn the meeting which was closed at 9:03 pm.

Keep up with GSARA news at the GSARA website:
www.gsara.club

**Garden State
Amateur Radio Association
W2GSA**



Two new
GSARA
initiatives

Elmer Committee



There are some very exciting projects at GSARA. We are happy to introduce our new Elmer committee which will be a resource for all the club members to get the help they need in just about any aspect of ham radio. We have a diverse club with members of all ages and backgrounds.

Youth Outreach



How do we engage youth in ham radio? That is the question and the GSARA Youth Outreach committee is beginning to tackle that very question.

NOW YOU KNOW



MARCONI IN ENGLAND

By Bob Buus, W2OD



Upon arriving in England in February, 1896, Marconi and his mother were met by Marconi's older cousin, Henry Jameson Davis who helped them get settled. Davis was a well-connected Engineer who had experience in both finances and patents. He advised Marconi to patent his invention as soon as possible. Marconi filed a provisional specification for a patent on March 5, 1896.

Marconi and his mother wanted to be sure that the Italian government was not interested in Marconi's work so a meeting with the Italian Ambassador, Annibale Ferrero, was arranged on February 29 whereby the Ambassador assured Marconi that the Italian government was too busy with its war with Ethiopia to have an interest in wireless communication.

Davis secured a letter of introduction written by London's most prominent electrical engineer, A. A. Campbell Swinton, to introduce Marconi to the chief engineer of the British Post Office, William Preece. Marconi met Mr. Preece on April 1, 1896 and demonstrated his wireless apparatus by ringing a bell on an adjacent table when closing a telegraph key. Preece was very impressed and allowed Marconi to use the staff and facilities at the Post Office for further experiments. On July 27, 1896, Marconi publicly demonstrated wireless communication from the roof of the General Post Office to the Post Office on Queen Victoria Street. The next demonstration was 6 weeks later on Salisbury Plain for a distance of 1.75 miles.

Preece gave a summary of Marconi's work at the British Association for the Advancement of Science in Liverpool on September 22, 1896. On December 12, Preece gave a lecture at Toynbee Hall in London and had Marconi assist him with the demonstration. By the end of 1896, Marconi's wireless experiments had been well-publicized and were well known in England, Europe and the United States.

During 1897, Marconi continued to demonstrate ever increasing distances for his wireless apparatus. He demonstrated 6.8 miles in March, increased it to 8.7 miles in May and showed an astounding 34 miles by October.

Italy's war with Ethiopia ended (Ethiopia gained independence) so Marconi again contacted Ambassador Fer-

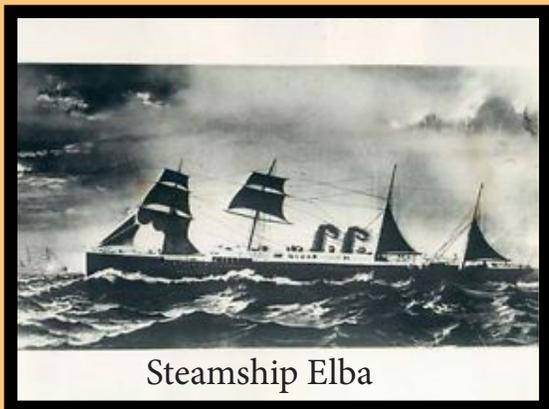
fero to point out the military significance of his work. This time, the Italian Royal Navy invited Marconi to Italy to conduct experiments with them. Marconi spent most of the month of July, 1897 in Italy conducting successful tests with the Navy and demonstrating his system to the King and Queen of Italy. A problem came up. Marconi's original passport was only good for a year, after which he was expected to serve in the Italian military for three years. Ambassador Ferrero arranged to have Marconi enrolled in the Italian Royal Navy and immediately detached to serve with the naval attache of the Italian embassy in London for three years.



Marconi as a young man. Looks like he is waiting for the bands to open!

While Marconi was in Italy, Davis formed the Wireless Telegraph and Signal Co. Ltd. in London with Marconi granted a 60% share of the company and payment of 15,000 pounds for his patent which had been issued on July 2, 1897. Preece was not happy with this business arrangement and to add insult to injury, Marconi hired George Kemp, the assistant Preece had assigned to Marconi, away from the Post Office to work for Marconi's company.

Much of 1898 was spent with Marconi and his company installing wireless stations along the south coast of England with preference to lighthouses and lightships. On July 20, Marconi reported the Kingston Regatta involving sailboat races off the coast of Ireland. This was successful and well publicized.



Steamship Elba

1899 found Marconi delivering a paper on March 2 to the IEE in London which was so popular that crowds had to be turned away. On March 17, the East Godwin Lightship reported by wireless that the steamer Elbe had run aground. This was the first time wireless had been used to save life and property. Ten days later, Marconi successfully transmitted wireless signals across the English Channel from Wimereux, France to Dover, England. Needless to say, these activities generated a lot of publicity for Marconi. This publicity even reached to the United States where McClure's magazine ran a long, detailed article about Marconi's activities. Although Marconi's company was not selling much wireless equipment, Marconi himself was loved by everyone.

So Now You Know!

ELMER COMMITTEE

Marty Torbert, N2BMQ

The goals and objectives of the committee are:

Create and publicize a resource booklet for beginning or current hams to refer to that can link them to GSARA members and other available resources to answer any and all amateur radio questions under the "THERE ARE NO DUMB QUESTIONS" principle.

Objectives:

- 1- Obtain a ham radio license or upgrade a current license.*
- 2- Choose an effective HF station and antenna system.*
- 3- Teach and improve operation skills.*
- 4- Support the "Membership youth outreach committee".*
- 5- Be ready to help the community in case of emergency or natural disasters*
- 6- Recruit new GSARA members.*



YOUTH COMMITTEE

Jake Downie, KD2MGE

The objective of the youth outreach committee is to reach more young people and introduce them to Ham Radio and invite them to join the GSARA. At the meeting last Wednesday we were discussing several possible ways to reach out to these people.



Our first idea was contacting a local Boy Scout troop to arrange a Jamboree on the Air (JOTA). There are Boy Scout troops in Tinton Falls, Fair Haven, and Long Branch. GSARA could offer to help a local scout troop to participate in the next JOTA. We are currently looking for members who may have a connection with these local troops. We have already made good contact in this regard and expect good results for next year.

Furthermore, last meeting I proposed the creation of a GSARA social media account and using it to advertise the hobby and the GSARA. There are now various accounts to advertise GSARA.

Lastly there are a handful of town-run events where we could set up a booth or workshop to advertise the club, such as Fair Haven Day, National Night Out, and the Tinton Falls Festival. We could set up an HF transceiver and arrange some QSOs in maybe Europe to demonstrate the power of Ham Radio. GSARA members should look at their town's calendar to find suitable events.

FROM *the Archives*

FIVE YEARS AGO

From the December 2012 Propagator: Mike Lisenco, N2YBB became the new Hudson Division Director. Silent keys included Sam Marino, KC2HAW from GSARA and Rod Newkirk, W9BRD from the ARRL. There were no GSARA meetings in November due to hurricane Sandy. There was an article and picture regarding Hedy Lamar and her invention of frequency hopping.

TEN YEARS AGO

From the December 2007 Propagator: New officers for 2008 were Jeff Harshman, N2LXM, President; Kevin Wagner, W2FA, Vice President; Bob Buus, W2OD, Secretary; Frank Wroblewski, W2XYZ, Treasurer; and Howard Suffill, W2HTS, Chief Engineer. The AARP website had a plug for amateur radio as an activity to keep the mind active and functional. 2007 Field Day results were published in QST and W2GSA was the top 1A station in NNJ with a score of 3380.

FIFTEEN YEARS AGO

From the December 2002 Propagator: New officers of GSARA for 2003 were Herb Holzberg, W2HH, President and Rich Ardolino, K2CPE, Vice President. Frank, W2XYZ; Bob, W2OD; and Frank, K2TVY agreed to continue to serve as Treasurer, Secretary and Chief Engineer respectively. Guest speaker at the November meeting was Bob Roman, N2DR talking about safely climbing towers. The VE exam fee went from \$10 to \$12 (it's \$15 now - Ed.)

TWENTY YEARS AGO

From the December 1997 Propagator: New Officers for 1998 are Rich Rohloff, KG2CN, President; Bob Roman, N2DR, VP, Jack Petro, KB2GJU-SK, Secretary; Lou Russo, W2HAM, Treasurer and Bob Curci, N2XWK, Chief Engineer. Tom Cosgrove, N2VFK was given a special award for his communication assistance he provided during July's wild fires in Ocean County. We had a holiday party at Bicentennial Hall on December 3. The FCC is implementing RF Safety requirements for amateur stations starting January 1, 1998.

TWENTY FIVE YEARS AGO

From the December 1992 Propagator: New GSARA officers for 1993 are Don Venberg, W2GEZ-SK, President; Bob Roman, N2DR, VP; Bob Buus, W2OD, Secretary, Rich Cardwell, AA2BY, Treasurer and Bill Zeisler, W2DLP, Chief Engineer. An updated roster was published which included 128 members. New members included Rich Evans, KB2MUN-SK; and Rich Krohn, N2SMV.

THIRTY YEARS AGO

From the December 1987 Propagator: John Magliacane, KD2BD had another 2-page article about the amateur radio satellites. New officers for 1988 are Jon Lowing, N2DPC, President, Sandy Varnick, KD2BV, VP; John Magliacane, KD2BD, Secretary; Clarence Kastner, KA2OZA-SK, Treasurer; and Bob Ewing, WA4GWG, Chief Engineer.

NOTES ON CALENDAR (see next page)

Large Call letters denote birthdays e.g. **N3RB** December 1. All times are EST. Contests are listed in the December QST, p. 73.

December 1 and every Friday – **Lunch at the Blue Swan Diner** in Ocean at noon. Table at back left.

Dec. 1-3 – **ARRL 160 Meter Contest, CW** from 5 pm Friday to 11 am Sunday. See <http://www.arrl.org/160-meter>

December 4 - **Monmouth County ARES/RACES Net** meets on 147.045 +600, PL=67.0 at 8:00 pm

December 5 – **Old Barney VE Test Session** at 6:30 pm in Manahawkin. Contact Urb Le Jeune, WIUL at 609-296-5856 or urb@w2dec.com

December 5 – **Old Barney ARC Meeting** at 7:30 pm in Manahawkin, NJ. See <http://www.obarc.org>

December 5 and every following Tuesday – **GSARA Net** on 147.045 PL=67 at 8:30 pm.

December 5 and every following Tuesday – **QCWA News Net** on 147.045 PL=67 at 9:00 pm.

December 6 – **GSARA Program Meeting** at 7:30 pm at the Red Cross. This will include the installation of the officers for 2018 followed by a talk by Art Olson, N2AJ0 about oscilloscopes. Refreshments will be served.

December 7 - **HCARC Meeting** 7 pm at Holiday City South Clubhouse in Toms River.

Dec. 8-10 – **ARRL 10-Meter Contest, CW & Ph** from 7 pm Fri. to 6:59 pm Sun. See <http://www.arrl.org/10-meter>

December 8 - **WIAW Qualifying Run** at 10 pm (10-40 wpm). See December 2017 QST page 105 and www.arrl.org/qualifying-run-schedule

December 9 – **OMARC Meeting** at 9:00 am at the Firehouse on 600 Sixth Ave. in Spring Lake Heights. Guests are always welcome.

December 13– **Holiday City VE Session** at 7 pm in Toms River. Contact is Larry Puccio, K2QDY at 732-349-2950 or e-mail at lpuccio1@comcast.net

December 14 – **JSARS meeting** in Riverwood Park Rec. Building, Rt. 527 and Riverwood Drive at 7:30 pm.

December 17 – **Rookie Roundup, CW** from 1 pm to 6:59 pm. See <http://www.arrl.org/rookie-roundup>

December 18 - **Monmouth County ARES/RACES Net** meets on 147.045 +600, PL=67.0 at 8:00 pm

December 19 - **WIAW Qualifying Run** at 9 am (10-40 wpm). See December 2017 QST page 105 and <http://www.arrl.org/qualifying-run-schedule>

December 20 – **GSARA Business Meeting** at 7:30 pm at the Red Cross in Tinton Falls. The. Refreshments will be served and guests are welcome.

December 21 – **JSARS VE Test Session** at 7:00 pm Riverview Park Recreation Bldg., Rt. 527 and Riverwood Drive in Toms River. Contact Ed Genoino, WA2NDA at 609-971-2792 or wa2nda@comcast.net.

December 23 – **GSARA VE Test Session** at 11 am at the Red Cross in Tinton Falls. See page 1.

December 25 – Christmas **Holiday – Enjoy!**

Dec. 29-30 – **RAC Winter Contest, CW & Ph** from 7 pm Fri. to 6:59 pm Sat. See <http://wp.rac.ca/rac-canada-winter-contest-rules-2017>

Dec. 31-Jan. 1 – **Straight Key Night, CW** from 7 pm Sunday to 6:59 pm Monday using straight keys or bugs. See Dec. QST, page 95 or <http://www.arrl.org/straight-key-night>.

DECEMBER 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					N2RB 1 160 CW Contest Blue Swan lunch	2 160 CW Contest
3 160 CW Contest	4 ARES/RACES 8 pm	5 N2SMV Old Barney ARC GSARA Net 8:30 QCWA News 9 PM	6 GSARA Mtg	7 HCARC Mtg	8 Blue Swan lunch 10 Mtr CW & Ph CW Qual. Run	9 OMARC Mtg 10 Mtr CW & Ph
10 10 Mtr CW & Ph	11	12 GSARA Net 8:30 QCWA News 9 PM	13 AC2A Hol. City VE	14 JSARS Mtg.	15 Blue Swan lunch	16 KD2MGE
17 Rookie Roundup	18 KC2YNL ARES/RACES 8 pm	KD2GPO 19 CW Qual. Run GSARA Net 8:30 QCWA News 9 PM	20 GSARA Mtg	21 JSARS VE	22 Blue Swan lunch	23 GSARA VE
24	25 Christmas	26 GSARA Net 8:30 QCWA News 9 PM	27	28	29 Blue Swan lunch RAC Winter	30 RAC Winter
AA2SA 31 SKN	1 SKN					



G.S.A.R.A.
8 DONNER STREET
HOLMDEL, NJ 07733

First Class