



Holmdel, NJ 07733
Editor: Bob Buus, W2OD

THE PROPAGATOR

DECEMBER 2013

UPCOMING GSARA MEETINGS

The next **GSARA meeting** will be on **Wednesday, December 4** at 7:30 PM at the Red Cross on West Park Avenue in Tinton Falls. The program will feature Ray Irwin, WA1FFT who will talk about horizontal loop antennas for amateur radio. As always, light refreshments will be served and guests are always welcome. Plan to attend and bring a friend.

The second GSARA meeting for December will be held on **Wednesday, December 18 at 7:30 PM** at the Red Cross. This will be a regular business meeting with installation of officers for 2014. As usual, light refreshments will be served and guests are always welcome.

GSARA NET 8:30 PM TUESDAYS

Did you know that there is a get-together of GSARA members on the Asbury Park repeater every Tuesday at 8:30 pm? In the four sessions since October 29, we have had 20 check-ins for an average of 5 per session. The following 10 members checked into this net at least once (number of check-ins in parenthesis):

W2OD (4), N2HGI (4), KD2EPA (3), KA2F (2), N2KPS (2), WA1PCY (1), KC2VZV, (1), W2XYZ (1), KC2YNL (1) and KA2ZSI (1).

Mark you calendar so you remember to participate. The more participation, the more fun!

GSARA E-MAIL ADDRESS

Although our old e-mail address still works, we have arranged with the ARRL to forward any mail to w2gsa@arrl.net to us. Many of you will find this easier to remember.

WELCOME NEW MEMBER

Please welcome the newest member of GSARA. He is Syd Lekach, KG2CM from Ocean Township. He is in video production and holds an Advanced class license. A member of ARRL, he is active on VHF and UHF with both FM and Packet. Syd's interests are in ARES/RACES, Satellites and digital. Other hobbies include dog showing and training. Please add to your Roster:

KG2CM, Syd Lekach
172 Larchwood Ave.
Ocean, NJ 07755
732-531-6480
slekach@gmail.com

VE TEST SESSION DECEMBER 14

The GSARA monthly test session will be held on Saturday, December 14 at 11 am at the Red Cross in Tinton Falls. 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@aol.com.

GSARA RADIO ROOM OPEN SATS.

The GSARA radio room in the back of the Red Cross is open most Saturday afternoons. Simply drive all the way around to the back (where the antennas are) and either a, pound on the red door; b, ring the doorbell at the red door; c, call on the Asbury Park repeater on 147.045, PL=67; or d, call on the phone 732-493-9100, ext. 1252. Hopefully, someone will let you in where you can operate or kibitz as you choose.

GSARA OFFICERS

President	W2XYZ	Frank Wroblewski	942-7705
Vice Pres.	W2HTS	Howard Suffill	460-1885
Secretary	W2OD	Bob Buus	946-8615
Treasurer	K2QXW	Bruce McLeod	946-4368
Engineer	N2WLH	Steve Jackson	255-7916
Webmaster	KE2V	Vince Rosati	229-3283
Publicity	NJ2H	Bill Shockley	207-4466
Repeater	N2LXM	Jeff Harshman	922-0816
Radio Room Phone		732-493-9100, X1252	
Trustees	W2KQ	Joe Dreifuss	493-4236
	W2OD	Bob Buus	946-8615
	W2HAM	Lou Russo	842-6431

DX MEETINGS UP IN THE AIR

The DX meetings on the last Monday of each month have become a bit sporadic due to lack of interest. If you would like to meet, please contact Joe, W2KQ to find if the meeting will take place and whether it will be at the Red Cross or at the Blue Swan Diner. The last Monday of December is on the 25th.

PATCHES

We have GSARA patches available at all meetings and they cost \$3.

OUTGOING QSL CARDS

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). Ray, WA1FFT 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?

PROPAGATOR NOW ON THE WEB

The *Propagator* is available as a PDF file at:

<http://www.gardenstateara.org>

Click on "The Propagator" and then select the month you want.

GSARAHOMEPAGE

<http://www.gardenstateara.org>

EDITOR'S NOTES

I am frantically working to get this, the last *Propagator* for 2013, out before the Thanksgiving holiday. Starting the Tuesday before and continuing until the Sunday after, we will have family visiting us and I will have no time to work on the *Propagator*. I'm looking forward to the family get-together (the first time since last Thanksgiving) and hope that all of you have a very happy Thanksgiving holiday.

There is concern that members don't know how to contact the radio room at the Red Cross. Although I have had the information on page 1 for the past few months, it was suggested at the last meeting to put the information on the masthead on the left so you can see that I have done so. If you're thinking of going over to the Red Cross on a Saturday afternoon, please call the number to be sure that someone is there and that the room is open. This is especially important if you are coming after 1:30 pm or so since if no one has shown up by that time, the person opening the room may chose to close it and go home.

The ARRL centennial is coming up in 2014 and there will be about a half dozen conventions throughout the country to celebrate it (including a big one in Hartford, CT). There is also a year-long QSO party starting January 1 (see pages 4-5). It looks like it will be a fun activity.

I had never heard of an arc fault circuit interrupter (AFCI) but it's like a GFCI except it responds to arcing in the ac line. Although early models were susceptible to RF from amateur transmitters, the problem seems to be getting solved (see page 6).

If you are interested in obtaining a [gardenstateara.org](mailto:call_sign@gardenstateara.org) email address which will give you webmail and POP3/SMTP access, please send an email to Josh at kc2tkk@gardenstateara.org with your First Name, Last Name, and Call Sign. Your email address call_sign@gardenstateara.org will be created and the login information sent back to the email address your request came from.

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

MINUTES OF NOVEMBER 6 MEETING

By Bob Buus, W2OD, Secretary

President Frank Wroblewski, W2XYZ was absent so the meeting was called to order by Vice President Howard Suffill, W2HTS at 7:35 PM at the Red Cross Building. There were 17 members and one guest present. The guest was Art Gray, AL2O from Matawan. After the pledge to the flag, all present introduced themselves. Since this was a program meeting, the Secretary's report and Treasurer's report were not entertained.

Correspondence

Bob, W2OD reported that a card was received from our President, W2XYZ in Florida wishing we were there. We also received a letter from the Desmoid Tumor Foundation thanking us for our donation of \$52.50.

VE Session

Rich, N3RB reported that Kevin, W2FA is going to the hospital for serious surgery. We are all asked to pray for him. He also reported that the next test session will be on Saturday, November 9 at 11 am at the Red Cross.

Hudson Division Awards Luncheon

Jeff, N2LXM reported that the Hudson Division Awards Luncheon held on November 2 was a very nice affair. It was easy to drive to, the food was good and the weather was perfect. Over \$5000 was raised and contributed to the ARRL Spectrum Defense Fund. A copy of the Program Booklet (which included a half-page ad by GSARA) was passed around for the members' perusal. Since 2014 is the 100th anniversary year of the ARRL, W2AW will be operating from each of the 50 states next year and there is a special award for working all 50 states. There will be a big ARRL National Convention in Hartford, CT on July 17-19, 2014.

Book Report

Hunter Suffill read "Radio Rescue" and made a book report for school. This book is about some of the adventures of W2AZK back in the 1930s. The book was passed around for examination by the members.

Program

Bob, W2OD gave a presentation introducing us to Microcontrollers which are inexpensive computer systems on a chip. He gave a brief history of the development of these chips and a summary of the bigger manufacturers of them. He pointed out several potential amateur radio applications and provided several sources of additional information on the internet.

Close

The 50-50 door prize of \$17 was won by Don Pingitore, KG2NV. There being no further business, a motion to adjourn was made by Tom, N2VFK and seconded by Don, KG2NV. With unanimous vote, the meeting was adjourned at 8:45 pm.

MINUTES OF NOVEMBER 20 MEETING

By Bob Buus, W2OD, Secretary

President Frank Wroblewski, W2XYZ, was absent so the meeting was called to order at 7:36 PM at the Red Cross by Vice President Howard Suffill, W2HTS. There were 18 members and one guest present. The guest was Syd Lekach, KG2CM from Ocean. After the pledge to the flag, all present introduced themselves.

Health and Welfare

N4LLT, the father-in-law of Jeff, N2LXM is in the hospital recovering from a heart attack. Kevin, W2FA is undergoing serious surgery. Say a prayer for the recovery of these men.

Secretary's Report

A packet of DX QSL cards was received from the W2 bureau and turned over to John, KA2F. A QSL card from a special event station was also received and turned over to John, KA2F. A thank you letter was received from Mike, N2YBB thanking GSARA for its support of the Hudson Division Awards Luncheon. \$5000 was raised for the Spectrum Defense Fund.

A motion was made by Joe, W2KQ and seconded by Jeff, N2LXM to accept the secretary's report from the last meeting as will be published in the December Propagator. The motion passed unanimously.

Treasurer's Report

The treasurer's report was presented by treasurer Bruce, K2QXW. A motion was made by Joe, W2KQ and seconded by Ralph, KC2YNL to accept the Treasurer's report. The motion passed unanimously.

Old Business

The GSARA spring Hamfest on May 4, 2014 has been approved by the ARRL.

There was discussion about keeping the ham shack open on Saturday afternoons. If you plan to visit, check first to be sure someone is there to let you in. This can be on the Asbury Park repeater or calling on the landline. The phone number is in the Propagator but it was suggested that it be placed more prominently on the masthead on page 2 with the officers. The good news is that a number of people are coming in on Saturdays.

The VE session on October 12 went well with Bob, W2OD substituting for Rich, N3RB. Of the two candidates who took the Tech exam, one passed and one failed.

New Business

Howard, W2HTS reported that he tested Winlink by sending a test message to 70 GSARA members. Only 20 responded that they received the test message. More work is needed.

Howard asked for program ideas for our December 4 meeting. Ray, WA1FFT thought he could put together a program about horizontal loop antennas which he has been experimenting with.

Election of Officers for 2014

There being only a single candidate for each office position, a motion was made by Jeff, N2LXM and seconded by Martin, N2BMK to have the Secretary cast a single vote for the entire slate of candidates. The motion passed unanimously. The new officers will be:

President: John King, KA2F
Vice President: Howard Suffill, W2HTS
Secretary: Bob Buus, W2OD
Treasurer: Bruce McLeod, K2QXW
Chief Engineer: George Graulich, W2EPD

Announcements

Bruce, K2QXW announced that he is collecting dues for 2014.

Bob, W2OD asked if anyone had experience with software that would convert Word files to pdf. Several members present offered suggestions.

John, KA2F pointed out the Field Day results which were published in the December issue of QST. Out of 72 stations in the 2F category, GSARA placed 8th. We placed second for the NNJ section. Although a good showing, we can probably do better if we keep the stations on continuously.

Close

The door prize of \$16 was won by Jeff, N2LXM. There being no further business, a motion was made by Jeff, N2LXM and seconded by Martin, N2BMK to close the meeting which was adjourned at 8:10 pm.

AMSTERDAM ISLAND DXPEDITION

If you would like to read about the Amsterdam Island DXpedition, go to www.amsterdamdx.org. While you are there, click on SPONSORS. Then click on the tab for CLUB & ORGANIZATION SPONSORS and see our GSARA logo.

Enjoy the whole site. 73, Bruce, K2QXW

HF TRANSCEIVER FOR SALE

For Sale: Icom IC-718 HF transceiver and matching Icom AH-4 antenna tuner.

Great condition, DSP chip installed. All cables, stock microphone, instructions.

Great first rig or field day rig. \$700 or best offer.

Ned Meyer, KC2HCY
732-918-0464 or ngmeyer@verizon.net

ARRL CENTENNIAL QSO PARTY

In conjunction with the 100th anniversary of the ARRL, the ARRL Centennial QSO Party is set to kick off January 1 for a year-long operating event in which participants can accumulate points and win awards, as well as working new stations and making new friends. During 2014 W1AW

will be on the air from every state (at least twice) and most US territories, and it will be easy to work all states solely by contacting W1AW portable operations. This marks the first ARRL-sponsored operating event where every member is worth at least one point. The event is open to all, although only ARRL members and appointees, elected officials, HQ staff and W1AW are worth points. Working ARRL's president, for example, earns 300 points!



To qualify for points all contacts must be two-way (no cross-band or cross-mode contacts), using CW, phone (FM, SSB, AM, digital voice), digital (any digital mode, such as PSK31, RTTY) on 160, 80, 40, 30, 17, 15, 12, 10, 6, 2 and 1.25 meters, plus 70 centimeters and satellite.

Stations exchange signal report and ARRL abbreviation. Contacts do not have to be contest-style and it isn't necessary to give the ARRL organizational information. A centennial database will assign point values to all logs submitted electronically. Those not submitting electronically, however, will need to obtain the QSO information during the contact. This event is not a contest, so participants may make contacts in any fashion they prefer.

The Centennial QSO Party is scored by totaling the values of all eligible contacts. There are no multipliers or bonus points. Logs submitted via Logbook of the World (LoTW) will be scored automatically.

Awards

Work W1AW operating portable from all 50 states. Working W1AW in Connecticut does not count for Connecticut, however. Participants can earn W1AW Connecticut credit only for working W1AW/1 in Connecticut. A W1AW WAS certificate and plaque will be available (pricing

not yet announced). For an extra challenge, work all 100 W1AW portable operations -- essentially a double WAS with W1AW!

Endorse the W1AW WAS Certificate with the Territorial Stickers for working W1AW/KH2, W1AW/KP4, W1AW/KP2, and any others that may be active, and also endorse with W1AW/3 from the District of Columbia (stickers are \$1 each).

Centennial Points Challenge

To compete in the Centennial Points Challenge, submit logs via Logbook of the World (LoTW). The system will automatically look for points-qualifying contacts from submitted logs and apply them to each participant's Centennial QSO Points table. QSOs do not have to be matched in LoTW for points to be achieved -- this is an honor-based event. No paper forms or information will be accepted for the Centennial Points Challenge, however. Some points worth noting:

Club call signs do not count for points.

Repeater contacts are not valid for credit.

Mobile and portable operations are okay but do not count for points in addition to home operation -- i.e., a contact with KØGW counts for KØGW, whether it is made with KØGW/4, KØGW/m, or PJ4/KØGW.

Stations outside of the US may also count for points. More than 10,000 ARRL members live outside the US, and some of these are also volunteer examiners or DXCC card checkers.

ARRL appointees, staffers, and officers should choose for their contact exchange the appointment or office held that offers the highest point value (this is how the database will work also). For example, KI9XX is an ARRL Life Member (a LM is worth 2 points), a Volunteer Examiner (VE is worth 5 points) and a State Government Liaison (SGL is worth 30 points), so KI9XX should use "SGL," since that offers the highest point value. In any event, the database will give credit for the proper point value.

The top-scoring operator from each ARRL Section, Canadian Province and DXCC entity will receive a First Place certificate. The Top Five overall point scorers will receive awards. There is a charge for award certificates. For complete

information, visit the ARRL Centennial QSO Party web page. Contact us if you have questions.

From *The ARRL Letter*, October 17, 2013

ARC FAULT RFI PROBLEMS

The ARRL Lab has worked with a manufacturer of arc fault circuit interrupter (AFCI) breakers to resolve complaints that Amateur Radio RF was causing certain breaker models to trip unnecessarily. Like the more common ground fault circuit interrupter (GFCI), the AFCI is a safety device. Primarily designed to detect problems that could result in a fire, AFCIs detect potentially hazardous arc faults that result from often unseen damage or poor connections in wiring and in extension cords and cord sets.

"Several months ago we started receiving reports from amateurs that when they transmitted, their AFCI breakers were tripping," said Mike Gruber, W1MG, the ARRL Lab's EMC specialist. He noted that the issue has been a topic of online ham radio discussions as well as on homeowner sites; it seems that stray RF is not the only thing that can cause a "nuisance trip" of an AFCI. Gruber pointed out that the National Electrical Code (NEC) already requires AFCIs in some household circuits, but not all US jurisdictions have adopted the requirement.

Gruber said that as AFCIs became more common in new construction in the US, reports started coming in that AFCIs in the vicinity -- not just in the radio amateur's home -- would trip in the presence of RF from an Amateur Radio transmitter. While each manufacturer's design is proprietary, most AFCIs detect arcs by monitoring the shape of the alternating current waveform, changes in current levels, voltage irregularities, and the presence of high frequency emissions or "noise." The ARRL Lab dug into the problem.

"Last summer we built a test fixture in which we could test any type of circuit breaker," Gruber said. It involved using W1AW as an RF source. Gruber said he bought one of "every AFCI that I could get my hands on," but when the Lab began testing them during W1AW transmissions, none of the devices tripped.

A ham in New Mexico who had reported AFCI problems sent some of his breakers to the ARRL Lab, "and those tripped when we tested them,"

Gruber said. The problematic breakers were certain models made by Eaton Corporation. "We already had an Eaton breaker, an older model, but it did not trip," he noted, adding that the breaker had a yellow button. The newer model, which had a white button, did trip in the presence of RF, however, even at power levels down to about 50 W on 17 meters.

Gruber contacted Eaton, and two of the manufacturer's engineers visited ARRL Headquarters in August. "Eaton was extremely cooperative and eager to resolve this," Gruber recounted. "They spent the day with us, going over our test methods and took some of the problematic breakers back with them, eventually developing a modified version.

"We have just finished testing the new version of the breaker, and it did not trip during W1AW transmissions and in other tests," Gruber reported. He said the new breaker is still in the queue for UL approval.

Eaton Engineering Director Andy Foerster said arc fault detection is challenging, in part because so many common household devices -- such as vacuum cleaners and power tools that use motors with brushes -- create arcing. In information provided to ARRL Eaton engineer Lanson Relyea said that because AFCIs rely on HF emission detection to verify arcing, "any signal that conducts or radiates a signal within the detection band of the AFCI can cause interference and cause the device to trip without the presence of a true arcing condition."

Eaton and ARRL agreed that when the manufacturer comes out with any new models of breakers, it will ask the League to test them at W1AW. "It's a win-win situation," Gruber said. Eaton also has agreed to work with anyone having a problem with RF tripping its AFCIs.

Hams experiencing unwanted tripping problems with their or their neighbors' AFCIs should first contact the manufacturer. In the case of Eaton breakers, contact Bob Handick (412-893-3746) or Joe Fello (412-893-3745). Read more.

From *The ARRL Letter*, November 21, 2013

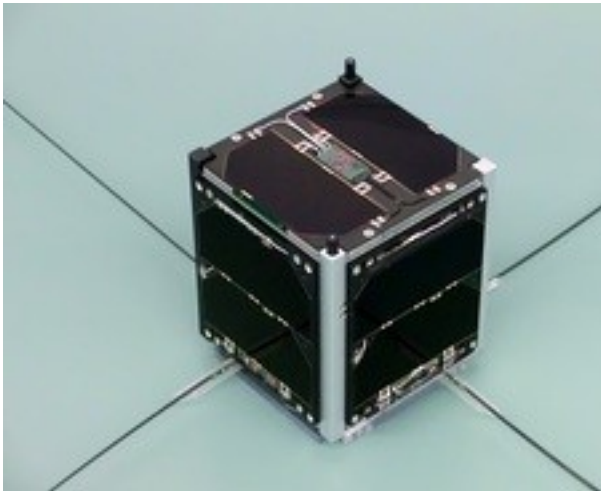
I contend that for a nation to try to tax itself into prosperity is like a man standing in a bucket and trying to lift himself up by the handle.

--Winston Churchill

FUNCUBE-1 SATELLITE IN ORBIT

A Russian Dnepr rocket carried AMSAT-UK's FUNcube-1 -- now known officially as AMSAT-OSCAR 73 -- and 18 other satellites carrying Amateur Radio payloads to orbit at 0710 UTC on Thursday, November 21. Ground stations began receiving telemetry from FUNcube-1 soon after deployment and the satellite appears to be functioning normally.

One of the satellites on the launch, UniSat-5, will deploy a number of additional satellites. Among them should be the CubeSats PUCP-SAT-1, HumSat-D, Icube-1 and the PocketQubes Wren, Eagle-1 (BeakerSat), Eagle-2 (\$50Sat), QB-Scout1. PUCP-SAT-1 intends to subsequently release a further satellite Pocket-PUCP.



As well as UniSat-5 and its associated CubeSats and PocketQubes these Amateur Radio satellites were also on the launch:

- HinCube
- FUNcube-1
- ZAcube-1
- First-MOVE
- UWE-3
- Velox-PII
- CubeBug-2
- Triton-1
- Delfi-n3Xt
- GOMX-1

For a frequency list, see <http://amsat-uk.org/2013/11/13/three-amateur-radio-satellite-deployments-in-november/>.

The latest orbital elements for FUNcube-1 are available at <http://funcube.org.uk/working-documents/latest-two-line-elements/>.

From *The ARRL Letter*, November 21, 2013

FIRST HIGH SCHOOL SATELLITE UP

The first high school satellite, TJ³Sat, which launched this week aboard a Minotaur I rocket from Wallops Island, Virginia, was among several satellites carrying Amateur Radio payloads -- two with ham radio transponders -- scheduled to be put into orbit during November. In addition to the Minotaur I launch, other satellites are set to go into space early November 21 (UTC) aboard a Dnepr rocket from Russia, while still others were scheduled to be deployed from the International Space Station. The Minotaur I carried 29 satellites in all.

The TJ³Sat CubeSat is a joint project between the Thomas Jefferson High School for Science and Technology in Alexandria, Virginia, and industry partners to design and build a CubeSat to inspire interest in aerospace technology as part of NASA's Educational Launch of NanoSatellites (ELaNa) program. The school says the satellite's main mission is "to provide educational resources to other K-12 education institutions to foster interest in aerospace through the successful design and flight of a CubeSat."

Perhaps more to the point for high schoolers, the satellite's Text Speak module will convert text messages into analog voice signals. "Students and other users from around the world can submit text strings to be uploaded to the TJ³Sat website. Approved text strings will be transmitted to the satellite and the resulting voice interpretation will be relayed back to Earth over an Amateur Radio frequency," the TJ³ website explains. The small satellite also will transmit telemetry. Details are on the TJ³Sat website. The school says the November 20 (UTC) launch culminated 7 years of work by more than four dozen students. According to a Washington Post article, the satellite will broadcast its first message to TJ alumni worldwide: "Go Colonials!"

-- Thanks to AMSAT News Service, AMSAT-UK, and NASA From *The ARRL Letter*, November 21, 2013

I'M OHM FOR RESISTANCE

By Jim McEowen, WA2HPD

(Sung to the tune of "I'll Be Home for Christmas.")

1. I'm Ohm for Resistance.
You can measure me.
Divide the voltage by the amps;
My value you will see.

Ceramic, wire-wound, carbon,
Thin film or surface mount:
If you need less Conductance,
It's on us you can count.

2. I'm Ohm for Resistance.
My law has terms - just three.
Multiply R by an I
And yule end up with E.

You will also find me
In dopey silicon.
And if that didn't happen,
All your ICs would be gone.

3. I'm R for Resistance,
And Watt's not far behind.
Multiply me by the square
Of I, and Watts you'll find.

A powerful equation
Emerges on this path.
Now you've gotten just a glimpse
Of useful EE math.

HUDSON DIVISION HOME PAGE

<http://www.hudson.arrl.org>

In my many years I have come to a conclusion that one useless man is a shame, two is a law firm, and three or more is a congress. -- **John Adams**

TEN YEARS AGO

From the December 2003 Propagator: The GSARA Holiday party was held on December 10 at the MARS station with each attendee bringing food. Joan Gudicello, the wife of Frank, K2TVY suffered a stroke and is in rehab. Charlie Puryear, KB2PUI became a silent key on November 5 at the age of 52. Frank Fallon, N2FF was re-elected as Hudson Division Director. Mike DiPersio, KC2Q moved to Florida.

FIFTEEN YEARS AGO

From the December 1998 Propagator: The GSARA Holiday party is December 16 at Bicentennial Hall in Fair Haven. Bring food or a \$10 donation. Exam fees are going up from \$6.35 to \$6.45 in 1999. GSARA officers for 1999 are Mario Sellitti, N2PVP, President; Bob Curci, N2XR, Vice President; Jack Petro, KB2GJU, Secretary; Lou Russo, W2HAM; Treasurer, and Bob Roman, N2DR, Chief Engineer. The program for the November 18 meeting featured Tony Colaguori, W2GUM (SK) showing a replica he built of his first transmitter – a one-tube “TNT” and how he got it on 40 meters. A 4-page roster was included and showed 150 members of GSARA!

TWENTY YEARS AGO

From the December 1993 Propagator: GSARA officers for 1994 are Bob Buus, W2OD, President; Rich DiFiore, KB2NXA (SK), Vice President; Bruce McLeod, K2QXW, Secretary; Rich Cardwell, AA2BY, Treasurer; and Dave Worrall, N2IRO, Chief Engineer. Dick Turrin, W2IMU became a silent key on November 10, 1993. Fred Weiner, WA2RIM ran the New York Marathon. Marv Bernstein, W2PAT gave a talk at the November 17 meeting about the TF digipeater node at the UPS tower.

TWENTY FIVE YEARS AGO

From the December 1988 Propagator: The VE Fee for 1989 is increasing to \$4.75. There was a long article about NiCad batteries. Another article speculated that the lead in our solder might be dangerous to our health but no alternatives were yet available.

NOTES ON CALENDAR (see next page)

Large Call letters denote birthdays e.g. **N3RB** on December 1. All times are EST. Contests are listed in the December QST, p. 66.

December 1 and every Sunday – **InfoAge Marconi Hotel** open from 1 to 5 pm on Marconi Road in Wall.

December 2 - **Monmouth County ARES Net** meets on 147.045 +600, PL=67.0 at 7:30 pm

December 3 – **Old Barney VE Session** at 6:30 pm in Manahawkin. Contact Urb Le Jeune, W1UL at 609-296-5856 or urb@w2dec.com

December 3 – **Old Barney ARC Meeting** at 7:30 pm in Manahawkin, NJ. See <http://www.obarc.org>

December 3 and every following Tuesday – **GSARA Net** on 147.045 PL=67 at 8:30 pm.

December 3 and every following Tuesday – **QCWA News Net** on 147.045 PL=67 at 9:00 pm.

December 4 – **GSARA Meeting** AT 7:30 PM at the Red Cross. Program features Bob, W2OD talking about Microcontrollers.

December 5 - **HCARC meeting** at 7 pm at Holiday City South Clubhouse in Toms River.

Dec. 6-8 – **ARRL 160 Meter Contest, CW** from 5 pm Fri. to 11 am Sun. See <http://www.arrl.org/contests>

December 6 - **WIAW Qualifying Run** at 10 pm (10-35 wpm). See www.arrl.org/qualifying-run-schedule

December 9 - **Monmouth County RACES Net** meets on 147.045 +600, PL=67.0 at 7:30 pm.

December 11 – **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 12 – **JSARS meeting** in Riverwood Park Rec. Building, Rt. 527 and Riverwood Drive at 7:30 pm.

Dec. 13-15 – **ARRL 10 Meter Contest, Phone & CW** from 7 pm Fri. to 6:59 pm Sun. See <http://www.arrl.org/contests>

December 14 – **OMARC Meeting** at 9:00 am at the Diana Site on Marconi Road in Wall. Guests welcome.

December 14 – **VE Test Session** at 11 am at the Red Cross in Tinton Falls. Contact Rich Bilon, N3RB at 732-972-1397 or e-mail at n3rb@aol.com

December 16 - **Monmouth County ARES Net** meets on 147.045 +600, PL=67.0 at 7:30 pm

December 17 – **WIAW Qualifying Run** at 9 am (10-35 wpm). See <http://www.arrl.org/qualifying-run-schedule>

December 18 – **GSARA Meeting** at 7:30 pm at the Red Cross in Tinton Falls. Regular business meeting.

December 19 – **JSARS VE Test Session** at 7:00 pm Riverview Park Recreation Bldg., Rt. 527 and Riverwood Drive in Toms River. Contact Ed Genoio, WA2NDA at 609-971-2792 or wa2nda@comcast.net.

December 22 – **ARRL Rookie Roundup, CW** from 2 pm to 6:59 pm. See <http://www.arrl.org/contests>

December 23 - **Monmouth County ARES Net** meets on 147.045 +600, PL=67.0 at 7:30 pm

December 25 – **Merry Christmas!**

December 30 - **Monmouth County RACES Net** meets on 147.045 +600, PL=67.0 at 7:30 pm.

December 30 – **DX Interest Group**, Check with Joe, W2KQ as to time and place. See page 2.

Dec. 31-Jan. 1 – **ARRL Straight Key Night, CW** from 7 pm Tues. to 7 pm Wed., See <http://www.arrl.org/straight-key-night>

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 N3RB InfoAge	2 ARES/RACES 7:30	3 OBARC GSARA Net 8:30 QCWA News 9 PM	4 GSARA Mtg.	5 Hol. City Mtg.	6 160 Mtr. CW CW Qual. Run	7 160 Mtr. CW
8 160 Mtr. CW InfoAge	9 RACES Net 7:30	10 GSARA Net 8:30 QCWA News 9 PM	11 Hol. City VE	12 JSARS Mtg.	13 10 Mtr. Ph, CW	14 OMARC Mtg 14 GSARA VE 10am 10 Mtr. Ph, CW
15 InfoAge 10 Mtr. Ph, CW	16 ARES/RACES 7:30	17 CW Qual. Run GSARA Net 8:30 QCWA News 9 PM	18 KC2YNL GSARA Mtg.	19 JSARS VE	20	21
22 Rookie Roundup InfoAge	23 ARES/RACES 7:30	24 GSARA Net 8:30 QCWA News 9 PM	25 Christmas	26	27	28
29 K2DST InfoAge	30 DX Mtg. RACES Net 7:30	31 SKN	1 New Year SKN			



G.S.A.R.A.

8 DONNER STREET

HOLMDEL, NJ 07733

FIRST CLASS