

# THE Propagator

Garden State Amateur Radio Association

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

March 2018



## From the Editor

Bob Buus W2OD

Another long Marconi article tells about the interesting activities that occurred after

Marconi's successful trans-Atlantic tests of December, 1901. To this day, there are detractors who insist that Marconi faked the results to get publicity. I think that would have been a very foolish move since Marconi risked a lot of his company's money to establish powerful trans-Atlantic stations on both sides of the ocean in the early 20<sup>th</sup> century.

I don't know how I missed the death of former GSARA member Rusty Schmid, K2LL three years ago. John, KA2F and I visited him about 4 years ago and he seemed in excellent health for a 104-year old. Anyway, I shared some of his stories in my attempt at a belated obituary.

I'm looking forward to the program at the March 7 meeting where our own Blair Hearth, KD2EPA will report on the recent HamSCI workshop held at NJIT in Newark. I find it amazing that scientists can monitor a crowded amateur band and measure particular scientific phenomena. Don't miss this important meeting!

Finally, I would like to remind you that the dues for

## VE TESTING

The GSARA monthly test session will be held at the Red Cross on Saturday, March 24 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 732-567-4396 or [n3rb@arrl.net](mailto:n3rb@arrl.net).

## MEETING INFO

The next GSARA meeting will be on Wednesday, March 7 at 7:30 PM at the Red Cross. This will be a program meeting and the program will be a presentation by Blair, KD2EPA about the alliance of Amateur Radio and Science called HamSCI. Come hear about the HamSCI workshop recently held in Newark! Guests are welcome and refreshments will be served.

The second meeting in March will be held on Wednesday, March 21 at 7:30 PM at the Red Cross. This will be a business meeting with reports from the various committees. Don't miss it! Light refreshments will be served and guests are welcome.

2018 are now past due and can be paid at any meeting. See page 5 of this issue for mailing address. So far, about 80 of our members have renewed for 2018.

Hopefully, many more of you will renew by the March 7 deadline. Otherwise, our Roster will take a significant hit in March.

As always, I appreciate feedback or material for The Propagator. The deadline for the April issue is March 15. 73 de Bob [w2od@arrl.net](mailto:w2od@arrl.net)

## A Note from Cy, K2CYS Propagator and Website Guy

I hope that you are enjoying the Propagator. It is a monthly collaborative effort with Bob and me and he deserves so many kudos for his work. As you may have noticed, thanks to Harry, KD2EJW, we have added the element of pictures of club goings-on. Thank you, Harry!

You will also notice that, by and large, we are not including ARRL notices. This saves us space in the Propagator and most of us go online in any event to catch up with ham radio news.

The website continues to evolve beautifully. There are now links to GSARA social media and the site is kept current. But there is something missing: is YOUR picture on the Members page? If not, we would love to put it up. Send a .jpg along with your call to [k2cys@arrl.net](mailto:k2cys@arrl.net) and he will put your picture online so everyone knows who you are!

## GSARA Officers

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[www.w2gsa.org](http://www.w2gsa.org)

# Scenes from our February Meeting



Top left, counterclockwise:

Diane doing the 50/50, Denis showing off his homemade project that is almost certainly a work of precision, John counting the club's pennies and keeping us in the black (we are), and Howard showing visitors our well-equipped club station. Everyone is welcome to join us for any meeting at GSARA. Check the club website for times and dates!



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

## Silent Keys



### RUSSELL "RUSTY" SCHMID, K2LL - SK

Russell "Rusty" F. Schmid, K2LL died three years ago on February 15, 2015. He was 105 years old.

Rusty was born on June 27, 1909 in Lamberton, Minnesota. He was first licensed as W9BKK in 1931 and subsequently obtained the prestigious Extra First Class license when it was offered in the 1930s. The Morse code came easy for him and shortly after receiving his license, he was copying 40 wpm.

During the depression, Rusty became active in the Army Amateur Radio Service (AARS, the predecessor to MARS). He was eventually the Director of the 7<sup>th</sup> Corps Area District covering several states with headquarters in Omaha, Nebraska.

Just before World War II, Rusty had moved to Sioux Falls, South Dakota and was in the radio repair business. He noticed an ad in QST for a job at Fort Monmouth. Since his wife had a sister living in Boston, the New Jersey location looked attractive so he applied for the job. In a few days, a telegram arrived from Fort Monmouth that told him to "come right away." Although he knew nothing about the job or what it would pay, he packed everything in his Nash, including his wife and two kids, and drove east.

After arriving in New Jersey, Rusty got a room in Highlands, put his wife and kids on the train to Boston to visit his wife's sister and reported for work at Fort Hancock (Sandy Hook). He was escorted into a shielded room with a large workbench stocked with various resistors and capacitors. A Lieutenant came into the room carrying a steel box which he plopped on the bench and told Rusty to "fix it" and left the room. Rusty opened the box and deduced that it was some kind of superhet radio receiver with acorn tubes for the VHF front end. He recognized the power supply and saw that the power was distributed to the various tubes along a power bus. Tracing the power to each tube, he found a broken resistor that didn't let power get to one of the tubes. He read the color code of the resistor, found a replacement among the parts on the bench and replaced the damaged resistor. The Lieutenant came back into the room and asked how he was doing. Rusty said that it was fixed and this impressed the Lt. Rusty suspects that the resistor was deliberately broken and this served as a test to see how good he was at troubleshooting radio circuits.

Rusty was a member of GSARA in the 1970s when his call was W2TAZ. He also belonged to the Marconi Chapter 138 of the QCWA in the 1990s. His mind remained sharp to the very end. May this remarkable person rest in peace.

## BRENDAN TRINKAUS, N2DXQ - SK

Brendan Trinkaus, N2DXQ, longtime resident of Neptune, New Jersey, passed away on Thursday, February 22, 2018, at the age of 94.

A veteran of the US Army and a graduate of NYU, he worked for 30 years as an engineer/radar specialist for the government, contributing to the national defense effort. Brendan was a member of the American Legion in Neptune, he also served as a Boy Scout leader and a coach for Neptune minor league baseball and Neptune recreational soccer. He has many friends as a longtime member of the Neptune Amateur Radio Club and the GSARA.



**Keep up with GSARA news at the GSARA website:**

**[www.gsara.club](http://www.gsara.club)**

**[w2gsa.org](http://w2gsa.org)**



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.

## Are You Up to Date?

Dues of \$15 are now being collected by our new Treasurer, John Chunga, KC2YWL. You may make payment at any meeting or mail your payment to:

John Chunga, KC2YWL  
109 S. Station Ave.  
Avon, NJ 07717



About 30 members have not yet paid for 2018. Note that per our Constitution, dues must be paid by the first meeting in March or you will be dropped from our roster. Please don't let that happen!

# Welcome to GSARA

Please welcome Jesse Sincoskie, KD2PCC from Keyport to the GSARA. Jesse is an engineer who recently obtained his Technician license and should soon be on the air.

Jesse Sincoskie, KD2PCC  
37 Saint Peter Place  
Keyport, NJ 07735  
732-986-7602 Jesse.sincoskie@outlook.com



Please also welcome Steve Brunner, KD2OYJ from Freehold to the GSARA. Steve is in retail sales and recently obtained his General class license. He has an Icom IC-765 for HF and an HT for 2 meters and is on the air. Other interests include hiking and backpacking.

Steve Brunner, KD2OYJ  
59 Bunker Hill Road  
Freehold, NJ 07728  
732-616-3443 kayakdog@yahoo.com

Please also welcome Steve's daughter Shannon Brunner, KD2OJI from Freehold. Shannon obtained her Technician license in 2017 while a student at TCNJ. When home, she will use her father's equipment.

Shannon Brunner, KD2OJI  
59 Bunker Hill Road  
Freehold, NJ 07728  
732-863-0340 Brunnes2@tcnj.edu

Please also welcome Sal Bernardo, KD2OXR from Freehold to the GSARA. Sal is a physician who obtained his Technician license in 2017. He is active on 2 M, 6 M and 70 cm and interested in antennas. An ARRL member, other interests include beekeeping and woodworking.

Sal Bernardo, KD2OXR  
131 Pin Oak Road  
Freehold, NJ 07728  
732-804-2851 Salbernardo12@gmail.com



## 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!

## W2GSA.CLUB W2GSA.ORG

Have you seen the GSARA website lately? Check it out often for updates, news, announcements and general club information. If you have not yet done so, send us a picture of your shack and a selfie for the Members; Shacks and Our Members page. There is also a new feature: there is a Members Only Page which will contain important links viewable by GSARA members only including the most current roster and, in the coming months, the previous month's minutes from the meeting. Send your selfies to Cy, K2CYS at [k2cys@arrl.org](mailto:k2cys@arrl.org). Do you have any other great ideas for the site? Let Cy know.

## 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?

## HAMSCI - The New Alliance Between Science and Ham Radio

By Blair Hearth, KD2EPA

The first meeting of HAMSCI, an alliance between science and Ham radio, was held at New Jersey Institute of Technology February 23 and 24, 2018. Approximately 100 scientists (many of whom are active Hams) and Hams (many of whom are citizen scientists) exchanged ideas and listened to 34 presentations, some of which were quite amusing. The brainchild of Dr. Nathaniel Frissell, W2NAF of NJIT, HAMSCI will initially focus on ways that Hams and scientists can work together to better understand how space weather (which happens between the Sun and the Earth) affects the Ionosphere and thus, radio propagation. Blair Hearth, KD2EPA, attended the sessions and will present to us his notes as, for example, Hams helped scientists make corrections in their antenna arrays, scientists helped Hams interpret results from last summer's eclipse that showed a sharp drop off of propagation on 20 meters during totality, and both groups were amazed to learn that CW contesting provides the best data for satellite studies - especially during Field Day. Don't miss this interesting talk.



Denis, N2NPT, giving the presentation on the Yaesu Fusion system, a digital communication mode becoming more popular in the US. The club is considering whether or not to buy the Fusion repeater for the W2GSA repeater system.

## GSARA Net Report

GSARA members meet on the Asbury Park repeater every Tuesday at 8:30 pm. In the 5 sessions from January 30 through February 27, we had 72 check-ins for an average of 14.4 per session. The following 25 members checked into this net (number of check-ins in parenthesis):

KD2EJW (5), N2HGI (5), K2NPT (5), W2OD (5), WB2RPW (5), KA2F (4), KB2MAB (4), W2MJP (4), N2BMK (3), KD2EPA (3), N2JFL (3), W2NAZ (3), KD2NYL (3), KD2OYJ (3), AD7I (2), WA2JOE (2), W2LAF (2), AC2MB (2), W2NQB (2), KD2OBV (2), KG2CM (1), KD-2KIO (1), KD2KOA (1), KD2MGE (1) and KC2YNL (1).

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

# Now You Know



## TRANS-ATLANTIC RADIO – PART 2

By Bob Buus, W2OD

On December 16, 1901, Marconi and his assistants visited Cape Spear in Newfoundland to see if it was suitable for a permanent wireless station to link Newfoundland with England. On their return, they were met at the entrance to their hotel by a lawyer representing the Anglo-American Telegraph Company who threatened them with court action if they proceeded to set up a wireless station in the colony of Newfoundland (at that time, Newfoundland was a British colony and not part of Canada). The Anglo-American Company had a monopoly on the landing of telegraph cables and the reception of telegraph messages in Newfoundland. Rather than face a costly and time-consuming legal battle, Marconi decided to abandon all plans for a permanent station in Newfoundland. On December 24, Marconi left for England on the Sardinian with the wireless apparatus and Marconi and Kemp departed for Nova Scotia (which was part of Canada).



his western terminus for a transatlantic wireless telegraph system. Marconi signed a draft agreement to establish a station at Glace Bay, Nova Scotia. The Canadian government offered him the land as well as \$80,000 in financial assistance.

Marconi and Kemp then proceeded to New York where Marconi was honored with a banquet on January 13, 1902, sponsored by the AIEE and attended by some of America's top scientists.

On January 22, Marconi sailed back to England on the Philadelphia. Upon returning, Marconi was dismayed to find that the European scientific community did not believe that Marconi's wireless had spanned the Atlantic Ocean. Marconi had unsuccessfully sought recognition from the European scientific community which looked down upon him due to Marconi's lack of formal college degrees. Now the scientific community implied that Marconi was a liar since it was well known that electromagnetic waves traveled in straight lines and could never reach across the vast Atlantic Ocean.

To prove his point, Marconi equipped the Philadelphia with his best receiving apparatus and proceeded to conduct long-range tests between Pol-du and the Philadelphia as the ship left England on February 22 bound for New York. Transmis-

Marconi had been invited by the Canadian government to inspect locations in Nova Scotia for

sions from Poldhu were recorded on paper strips with the ships position noted and witnessed by the ship's Captain. When the Philadelphia arrived in New York on March 1, Marconi had proved that full messages from Poldhu could be received when the Philadelphia was 1551.5 miles away. Individual letters from incomplete messages were received as far as 2099 miles. This was certainly much greater than line of sight would permit and served to quiet much of the criticism from the European scientists.

Marconi also discovered but kept secret that daytime transmissions from Poldhu were limited to 700 miles. He attributed this to "sun poisoning" (we now know that it is caused by D-layer absorption during the day). These disappointing daytime results could not explain how Poldhu was heard in Newfoundland during the day on December 12-14. So how did the signal get across?

We now know that 820 kHz is about the worst possible frequency for long-distance daytime propagation. If the frequency were much lower by a factor of 20 or so, it would propagate during the day. In fact, years later, Marconi tried to explain the success by speculating that the Poldhu station was on a lower frequency than they thought. It is hard to imagine that the frequency could be in error by more than about 20% which would leave the frequency still too high for daytime propagation.

A more likely explanation is that the Poldhu station emitted a spurious signal in the short wave band that skipped across the Atlantic by bouncing off the ionosphere. Spark transmitters do not produce harmonics but the frequency of the radiated signal is solely determined by the resonant frequency of the tuned circuit.

Recall that a capacitor is only a capacitor for a

limited frequency range. At some high frequency, the capacitance will series resonate with the series inductance and above that frequency, the capacitor will look like an inductor. Similarly, an inductor will parallel resonate with its stray capacitance across the coil and above that frequency, will look like a capacitor. Thus the coil and capacitor that resonate at 820 kHz in the Poldhu transmitter will have a much higher resonant frequency with the lead inductance of the capacitor resonating with the stray capacitance across the inductor. Although this higher resonance will depend on the construction of the coil and capacitor in the Poldhu transmitter, the frequency would typically be about 10 to 20 times the design frequency – this puts it in the short wave band subject to propagation via the ionosphere.

In light of the fact that the receiver used in Newfoundland was untuned, it would pick up the spurious short wave signal as easily as it would the 820 kHz signal. Marconi would have no way to know the difference.

So Now You Know!

## Where are the meeting minutes?

Please go to this link to access the minutes at : <http://www.gsara.club/meeting-minutes/>



# The Archives

## **FIVE YEARS AGO**

From the March 2013 Propagator: The GSARA Net on Tuesday nights at 8:30 was started on February 12, 2013. Past GSARA President Walt Werner, W2TT became a silent key at age 98. A cabinet meeting was called by new Hudson Division Director Mike Lisenco, N2YBB was summarized. The ITU adopted PSK31 as an approved digital varicode.

## **TEN YEARS AGO**

From the March 2008 Propagator: Randy Kulzer, N2CUG joined GSARA. Les Hill, W2QHS became a silent key 12 days after his wife died. Frank, W2XYZ and Mike, KC2Q made a DX-expedition to Anguilla and Frank will tell about it at the March 5 GSARA meeting.

## **FIFTEEN YEARS AGO**

From the March 2003 Propagator: The ARRL has changed the Field Day rules to allow a new class "F" for operation from an EOC. President Jack, WA2FVL (SK) hailed this change which will make participation in Field Day much easier for some groups. OMARC is starting a Tech class every Tuesday for 10 weeks. There will also be optional Morse code classes. WRC-03 has an agenda item to allocate 7.0 to 7.3 MHz worldwide for amateur service. Larry, KB2RIS (SK) and Donna, KC2GKQ Wilkins have moved to Neptune.

## **TWENTY YEARS AGO**

From the March 1998 Propagator: From the March 1998 Propagator: Rich, N2SMV will talk about lightening and station protection at the March 4 meeting. Marty Szumera, WN2DX joined GSARA. The APRS frequency for 2-meters has been changed to 144.390. To save money, the Propagator is being sent by e-mail to those members with e-mail addresses.

## **TWENTY-FIVE YEARS AGO**

From the March 1993 Propagator: A proposal to amend the Constitution to allow Family membership for \$10 over the regular dues will be voted upon at the March 3 meeting. GSARA members can join OMARC for only \$10 as an associate member. Gerry Silverman, WB2GYS (SK) is running Technician classes at Fort Monmouth for 12 weeks starting March 16. The "Getting to Know You" article featured Joe, WA2GSY (now W2KQ) and Fran, WB2SZB Dreifuss.

## **THIRTY YEARS AGO**

From the March 1988 Propagator: Total GSARA members on the Roster were 126. The Tuesday night News net was at 10:00 pm and run by Phil Petersen, W2DME-SK who called it the "Home Brew News" net.

## NOTES ON CALENDAR (see next page)

Large Call letters denote birthdays e.g. N2EDX March 5. All times prior to March 11 are EST, after March 10 in EDT. Contests are listed in the March QST, p. 85.

March 1 - **HCARC Meeting** 7 pm at Holiday City South Clubhouse in Toms River.

March 2 and every Friday – **Lunch at the Blue Swan Diner** in Ocean at noon. Table at back left.

March 2-4 – **ARRL International DX Contest, SSB**, all HF bands from 7 pm Friday to 6:59 pm Sunday. See <http://www.arrl.org/arrl-dx>

March 2 - **W1AW Qualifying Run** at 10 pm (10-35 wpm). See March 2018 QST page 96 and [www.arrl.org/qualifying-run-schedule](http://www.arrl.org/qualifying-run-schedule)

March 5 - **Monmouth County ARES/RACES Net** meets on 147.045 +600, PL=67.0 at 8:00 pm

March 6 – **Old Barney VE Test Session** at 6:30 pm in Manahawkin. Contact Urb Le Jeune, W1UL at 609-296-5856 or [urb@w2dec.com](mailto:urb@w2dec.com)

March 6 – **Old Barney ARC Meeting** at 7:30 pm in Manahawkin, NJ. See <http://www.obarc.org>

March 6 and every following Tuesday – **GSARA Net** on 147.045 PL=67 at 8:30 pm.

March 6 and every following Tuesday – **QCWA News Net** on 147.045 PL=67 at 9:00 pm.

March 7 – **GSARA Program Meeting** at 7:30 pm at the Red Cross. The program features our own Blair Hearth, KD2EPA who will report on the HamSCI workshop he attended. Refreshments will be served.

March 8 – **JSARS meeting** in Riverwood Park Rec. Building, Rt. 527 and Riverwood Drive at 7:30 pm.

March 10 – **OMARC Meeting** at 9:00 am at the Firehouse on 600 Sixth Ave. in Spring Lake Heights. Guests are always welcome.

March 10-11 – **QCWA QSO Party**, all modes from 1 pm Saturday to 2 pm Sunday. See <http://www.qcwa.org>

March 10 – **Change Clocks for Daylight Savings Time**. Before going to bed Saturday night, advance all of your clocks one hour to reflect Daylight Savings Time which takes effect at 2 am Sunday.

March 14 – **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](mailto:lpuccio1@comcast.net)

March 15– **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](mailto:wa2nda@comcast.net).

March 19 - **Monmouth County ARES/RACES Net** meets on 147.045 +600, PL=67.0 at 8:00 pm

March 21 – **GSARA Business Meeting** at 7:30 pm at the Red Cross in Tinton Falls. The. Refreshments will be served and guests are welcome.

March 22 - **W1AW Qualifying Run** at 4 pm (10-35 wpm). See March 2018 QST page 98 and <http://www.arrl.org/qualifying-run-schedule>

March 23-25 – **CQ WW SSB WPX Contest**, all HF bands from 7 pm Friday to 6:59 pm Sunday. See <http://www.cqwpw.com>

March 24 – **GSARA VE Test Session** at 11 am at the Red Cross in Tinton Falls. See page 1.

# MARCH 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				<b>1</b>	<b>2</b>	<b>3</b>
				HCARC Mtg	Blue Swan lunch ARRL SSB DX CW Qual. Run	ARRL SSB DX
<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
ARRL SSB DX	<b>N2EDX</b> ARES/RACES 8 pm	Old Barney ARC GSARA Net 8:30 QCWA News 9 PM	GSARA Mtg	JSARS Mtg.	Blue Swan lunch	OMARC Mtg QCWA QSO NA RTTY Sprint Spring Ahead Clk
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
QCWA QSO		GSARA Net 8:30 QCWA News 9 PM	CW Qual. Run Hol. City VE	JSARS VE	Blue Swan lunch	
<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
	<b>KD2PCC</b> ARES/RACES 8 pm	GSARA Net 8:30 QCWA News 9 PM	GSARA Mtg		Blue Swan lunch CQWW WPX	<b>AC2PD</b> GSARA VE CQWW WPX
<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>
CQWW WPX SSB	<b>W2MJP</b> <b>AB2N</b>	<b>N2VEH</b> GSARA Net 8:30 QCWA News 9 PM				



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First Class