



HARMONICS

1916

South Jersey Radio Association

2018



2018 Field Day Results are in and SJRA Comes in 1st Place in Category 7A and 6th Place Overall!

Award Nominations Please!

Rick – W2JAZ

Each year SJRA recognizes significant accomplishments of its members by presenting three prestigious awards—Miles Brown Award for Technical Merit, Harry Densham Amateur of the Year Award and the Gordon Kressel Long Term Service Award. These awards bring distinction and recognition to deserving amateur radio operators for their activities, accomplishments, and exceptional contributions to the hobby and the SJRA. The SJRA website has more information about these awards and past recipients.

A “Nominate Button” on the Awards section of the SJRA website is designed to allow members to easily submit nominations online. Online nominations are sent directly to Rick Lawn, W2JAZ. Alternately, you can submit your written nominations to any board member. Your nominations need not be lengthy and can also be emailed to Rick at [rjlawn at gmail dot com](mailto:rjlawn@gmail.com) or “snail mailed” to his home address: 1021 Owl Lane, Cherry Hill, NJ 08003. The deadline to submit nominations this year is November 21st.

President’s Message

Ken – K2WB

Our Holiday Party is December 19th. The meeting and meal will be held at the Gibson house. After dinner there will be a presentation of the club awards. Take note that the meeting will start at 7:00 PM. Contact Dennis, AC2FO if you are planning on attending.

Please contact Rick, W2JAZ regarding nominations for Awards, the sooner the better. When doing so give a reason for your nomination and for which award that you recommend. Award information can be found on the SJRA web page at

(Continued on page 9)



SJRA Membership Drive

Attention SJRA Members: Sign up two new members by December 31, 2018 and get your 2019 Membership free.

For additional information please contact Art, N2CPR or email:

Membership at [sjra dot org](http://sjra.org)

SOUTH JERSEY RADIO ASSOCIATION

HARMONICS is published monthly and is the official news letter of the South Jersey Radio Association. The SJRA was established on June 16, 1916 and has been meeting continuously since its inception. The club has been affiliated with the American Radio Relay League since 1920.

The SJRA meets each month on the fourth Wednesday, January through September; and usually the third Wednesday, October, November and December; in one of the Meeting Rooms of the Gibson House at 525 East Main Street, Marlton, NJ 08053. Visitors are always welcome at our general meetings. **“Our Meetings are Smoke Free”**

SJRA operates the K2AA Repeater (145.290 - PL 91.5) located in Medford, NJ and the K2UK Repeaters (146.865 and 442.350 - PL 131.8) located in Pine Hill, NJ. The repeaters are open for use without restriction to all licensed amateur operators.

There are currently over 100 SJRA members active in most all aspects of amateur radio. Membership is by application and is subject to the approval of the Board of Directors. Club dues are currently \$30/yr. for memberships, \$22.50/yr. for retired-person membership (62 plus 1 yr. membership), and \$15/yr. for additional family members and student membership. Membership information is available on the SJRA website: www.sjra.org or from Alan Handley, K3WWT, 610-532-5407 Email: sjra@sjra.org SJRA's web page: www.sjra.org

SJRA VE Team: ve@sjra.org is the SJRA/ARRL VUCC card checker

Joe Fisher, KC2TN, is the SJRA/ARRL WAS card checker

Officers

President: Ken Botterbrodt, K2WB
Vice Pres.: Jon MacMillan, W2MC
Treasurer: Roy Herman, WB2EOD
Rec. Sec: Lou Priestley, N2HQL
Cor. Sec: Dennis Cioffi, AC2FO

Directors:

Art Arnold, N2CPR
Matt Grohgans, N2IDW
Rick Lawn, W2JAZ
John Doran, W2FDJ
Tony Canuso, N2ATB
Burton Sampley, NJ2IT
Al Witner, N3AVT

Committees:

Historian: Mark Walter, KD2JPW
Membership: Art Arnold, N2CPR and Alan Handley, K3WWT
Field Day: Ken Botterbrodt, K2WB
Contests: John Doran, W2FDJ
Repeater: Joe Fisher, KC2TN
Programs: Rick Lawn, W2JAZ
H&W: Roy Herman, WB2EOD; and Dara Herman, KC2THQ
Awards: Rick Lawn, W2JAZ
Hospitality: Jean Priestley, KA2YKN
Nets: Matt Grohgans, N2IDW
Publicity: Vacant (Please Volunteer)
Picnic: Vacant (Please Volunteer)
Ways & Means: Roy Herman, WB2EOD
Property: Jon MacMillan, W2MC
Web Site: Ira Weinstein, W2IRA

Harmonics Staff:

Publisher/Editor: Al Ziegler, KD2ST
Alternate Editors: Ted Groke, W2TAG and Jon MacMillan, W2MC
Circulation: Jim Vecchiola, KR2T

★ **Harmonics** is now available for SJRA members on the WEB in pdf ★
★ format at: <http://www.sjra.org> ★
★ **South Jersey ARRL Section News** is available on the WEB at: ★
★ <http://www.arrl.org/Groups/view/southern-new-jersey> ★
★

LOCAL WEEKLY NETS

Mondays FM Net; Swap Net every 4th Monday	K2AA Repeater, PL: 91.5	145.290 @ 8PM
Fusion on 2 ND & 4 TH Thurs.	K2AA Repeater, DN mode	145.290 @ 8PM, Fusion
6M SSB on 1 ST Thurs.		50.150 MHz USB @ 8PM
2M SSB on 3 RD Thurs.		144.260 MHz USB @ 8PM

Harmonics Deadline

Articles submitted for the next Harmonics will be accepted until Monday, December 10, 2018. Email: harmonics@sjra.org

SWAP SHOP - For Sale/Wanted ads are free of charge and are accepted for Amateur Radio related items only. While ads are not restricted to SJRA members, there is only limited space available and members have priority for listings. No items will be accepted for inclusion in the Swap Shop from commercial vendors or traders. All ads must be submitted at least three weeks prior to the scheduled SJRA general meeting date.

GENERAL ADVERTISING - Limited commercial advertising is accepted on a space available basis. Annual advertising rates range from \$25/yr (Min 1/8 page) to \$200/yr (Full Page). Information is available from Ken Botterbrodt, K2WB.

Meeting Minutes

Membership Meeting of October 24, 2018

The meeting, held at the Gibson House, was opened at 1930 by Ken, K2WB, with a flag salute. The question of the night was, "Please give your name and callsign and did you participate in the club QSO party?"

Minutes of the September meeting were approved as printed in Harmonics, motion by N2HQL/W2JAZ. Roy, WB2EOD gave the Treasurer's report, member total being 119 paid and awaiting payment by three additional. Motion to accept by W2HJG/NJ2IT, motion passed.

Art, N2CPR as membership representative, reminded everyone about the membership drive. Two members submitted by 31 December gets you free dues for 2019. He presented a badge to new member Lorraine Thome, KD2QHZ.

Health & Welfare by Roy, WB2EOD: nothing new.

Contests by John, W2FDJ; Oct 26-28 CQWDX Phone; Nov 3-5 ARRL sweepstakes (CW); Nov 17-19 ARRL Sweepstakes (SSB); Nov 23-25 CQWDX CW.

Programs by W2JAZ: Oct- Contesting by John, W2FDJ. November- Group discussions. December- Holiday party.

Awards- nominations needed.

Repeaters- Medford ok, Pine Hill awaiting move.

Club stuff, by Joe KC2TN; no open orders; Joe is taking orders for hoodies & sweatshirts with the club logo. Joe an-

nounced that equipment from WA2DUE has been donated to the club.

Historian: Mark has a copy of the 1962 Harmonics to display.

VE team: 252 tests so far, no one appeared for testing this month.

Nets: Matt reviewed the different nights for nets. He stated that a net control would be needed if a swap net was to be added.

Old business.:

New business.: Ken checked for interest of operation of T3 during the Nov SS.

Break: Followed by John's presentation on Contesting.

Minutes of October 3, 2018 BOD Meeting

The meeting, held at the Gibson House, opened at 1930 By Ken, K2WB (via telephone, in Japan).

Minutes of the September Board meeting were approved as sent to the board members. N2HQL/WB2EOD. A note will be added to the minutes declaring a change in the October meeting to contesting by John, W2FDJ instead of the scheduled program on SDR.

Treasurer by Roy, WB2EOD- 119 members, including 3 not yet paid. Approval on motion made by N2CPR/W2JAZ.

Membership by Art, N2CPR- 1 new re-applicant, N2UNI, Ken Weber. He was accepted, motion by WB2EOD/N2CPR. The membership drive is to be mentioned

(Continued on page 4)

(Meeting Minutes from page 3)

in Harmonics (larger typeface). We requested that all net controls mention the drive during each net. Roy, WB2EOD suggested "themes" for nets, i.e. swap, Elmer & add note to Harmonics and at general meetings.

Harmonics by AI, KD2ST: he may have to go to a smaller font to get everything in the next issue, i.e. update to Elmer program, awards, membership drive, mention of new members.

Repeater- installation at Pine Hill MUA tower appears approved, need to move equipment from old site.

Contests by John, W2FDJ: Oct 26-28 CQWW DX SSB; Nov 3-5 ARRL CW Sweeps; Nov 17-19 SSB; Nov 23-25 CQWDX CW. Ken will add ARRL Sweepstakes to his column. John will send a reminder to clubs who need to register for SJRA QSO Party.

Health & Welfare- October cards out, November birthdays to AI. An Obituary on Don, WA2DUE was sent for publication in Harmonics.

Awards by Rick, W2JAZ- Scheduling makes things difficult this year, as the November meeting falls on Thanksgiving eve this year. He has rescheduled the SDR presentation for March 2019.

VE by AI, N3AVT- 252 tests administered so far.

Field Day 2018- still awaiting results. (Ken)

Old business- November meeting will be Thanksgiving eve this year. We will hold as scheduled and see who shows up.

New business; Nominating committee will need to be assembled for December.

Art, N2CPR suggested meeting with

new members at a lunch, paid for with 50/50 proceeds.

Adjournment at 2035.

Submitted by Lou Priestley, N2HQL



SJRA Saturday Breakfast

The SJRA held their first Saturday Breakfast on November 10th at the Bob Evans Restaurant on Fellowship Rd in Mt. Laurel. 15 members and 1 XYL attended. From the photos, it looks like a great time was had by all.

This will be a regularly scheduled event on the second Saturday of each month (9:30am). All members are invited to attend and enjoy some great conversation about our favorite hobby!



New SJRA Swap Net

We will be starting a new swap net on the fourth Monday of every month (Except for December) beginning on November 26th.

The swap net will be part of the regular Monday night 2-meter FM net (analog) on the K2AA repeater (145.290 MHz, PL- 91.5) starting at 8pm.

Jon, W2MC; and Roy, WB2EOD will alternate as net controllers.

Please call in if you are interested in buying or selling any amateur radio related equipment.

SJRA Sweatshirts (Hoodies)

The SJRA sweatshirts will be available for pick up at the next general meeting (November 21st). Please bring cash or check (payable to the South Jersey Radio Association) to purchase your pre-ordered sweatshirt.



SJRA Net News
Matt - N2IDW

WORLDWIDE DISTRIBUTION

HAM RADIO OUTLET

Ken Hartley
Manager
N2OHD

1509 N. Dupont Hwy. #7
New Castle, DE 19720
(302) 322-7092 • 800-644-4476
(302) 322-8808 Fax
newcastle@hamradio.com

ANAHEIM, CA • ATLANTA, GA • BURBANK, CA • DENVER, CO
NEW CASTLE, DE • OAKLAND, CA • PHOENIX, AZ • PLANO, TX • PORTLAND, OR
SALEM, NH • SAN DIEGO, CA • SUNNYVALE, CA • WOODBRIDGE, VA

SJRA NET RUNNING AVERAGES	
Net Type	Avg. No. of Participants
2 Meter FM Repeater	10
2 Meter Fusion Repeater	9
2 Meter SSB	6
6 Meter SSB	7

FILM OUTPUT • OFFSET PRINTING • DIGITAL PRINTING • WIDE FORMAT OUTPUT • LAMINATION • MOUNTING • EMBROIDERY • SILK SCREENING • PROMOTIONAL PRODUCTS • COMPLETE GRAPHIC DESIGN • HI-RES

PRINTING

SANDOVAL Graphics & Printing L.L.P.

(856) 435-7320

Congratulations to South Jersey Radio on your Centennial

9 Minnetonka Road • Hi-Nella, NJ 08083
printing@sandovalgraphics.com

Introduction to The Inner Limits

Copyright Scott Holland, NK2N 2018

Every article I write is intended to teach the reader something about electronics, or software or something to do with Ham radio. On some occasions, I will present a Swiss Navy* project for any of you so inclined to attempt to build it. Because our club has a wide range of skill sets, I intend for my articles to be understandable to all club members. I apologize in advance for providing details that are intuitively obvious to many of the club members. If I fail in clearly describing things in my article, I would like to point out that you may email me your questions and I will attempt to clarify. My goal is to increase the skill level of club members to some degree.

My email for this series of articles is:

amazing.inner.limits at gmail dot com

I have named this series of articles (hopefully) the Inner Limits after the television show the Outer Limits. At this time and for the next 10 to 30 minutes it takes you to read this article, I will attempt to take control of all the pathways to your mind. I will control the volume of things you hear, I will control the light level of things you see. All pathways to your mind will be in some way controlled so you may absorb as much of this article as possible.

Hams occasionally run into a situation where some of their equipment does not work. Having the right toolset to find the problem can be important in resolving the problem. There are a variety of tools that might be helpful. These include a digital multimeter (\$15 at Walmart, probably less on Amazon). For computers and digital logic, a device that lets you look at lots of individual digital signals or that lets you look at the ad-

dress and the data in a computer - this is generally called a logic analyzer. For analog circuitry, an oscilloscope is frequently useful. There are other tools an engineer might find useful, for example, my third time co-oping at Rockwell Collins, I was trying to get a radio working through coaxial cable that went to an antenna on the roof of the building I was in. One of the old timers told me to order a time domain reflectometer from the test equipment pool. When I hooked it up to the coax that went to the antenna on the roof, I found that I could locate nearly exactly by distance where the problem was in the coax. After I got permission to go on the roof, I got out there and found the flaw in the coax at what appeared to be the distance from the source the time domain reflectometer had predicted. It appeared to be a lightning strike that had fried the coax. With the help of another technician, we cut out the bad part and repaired the coax. The radio worked like a charm and I could then pick up that station in Colorado that broadcasts the time on a continual basis. The HF receiver also let me listen to other stuff as well. By the way, many of the engineers and technicians I worked with at Rockwell Collins were hams. I also found that being a ham gave an engineer a distinct advantage over other engineers. Hams tend to know a lot of stuff about electronics and other things that an electrical engineer would never get a chance to learn.

I am considering a number of topics for future articles including:

1. How to build a digital oscilloscope.
2. How to do voice recognition.
3. Building simple digital circuits.
4. Building analog circuits.

(Continued on page 7)

(Introduction to the Inner Limits continued from page 6)

- a. Working with op amps
- b. Working with transistors
- c. Building filters

I might even consider the topic on how to build a computer.

I now return control of your mind to your brain until the next article of "The Inner Limits."

* As some of you may know Switzerland is landlocked and therefore has no navy, Swiss Navy is a term used by the engineers at Rockwell Collins (one of my former employers) to denote a home project. At Rockwell Collins home projects were encouraged to the point that an employee could use the company's equipment as well as purchase parts from employee sales to be used in such home projects. I was aware of a technician who built a Collins S line HF receiver and transmitter.

** The term debug was first used by the developers of the second electronic computer, the ENIAC. This computer was developed at the University of Pennsylvania around 1945 by two men with names of John Mauchly and J. Presper Eckert. I heard this story from the grandson of John Mauchly.

One day the ENIAC computer wasn't working. They got out their tweezers and began removing the cockroaches and moths that had gotten stuck in their computer. They knew from prior experience that this "debugging" would most likely solve the problem with their computer not working. The term debugging stuck with both electronic hardware as well as with software. The term is nearly universally used whenever someone has a problem with either computer hardware or with computer software. It is actually applied to electronics in general.

SJRA Membership Renewal Begins January 1, 2019

This is just a brief reminder that DoozRdo on January 1, 2019. We've tried our best to make it convenient for you by going to the Club's website and following the instructions on the renewal form: <https://sjra.org/sites/default/files/2018%20RENEWAL%20AND%20NEW%20MEMBER%20FORM%20updated%203%2014%202018.pdf>

Several members have renewed so far so beat the rush and renew your membership today.

Thanks, Happy New Year and 73,



Roy Herman,
WB2EOD
Treasurer, SJRA
19 Bryce Road
Voorhees, NJ 08043

Items for Sale

Kenwood TS-870 with Kantronics KAM-II TNC for RTTY.

Original Kenwood Box, Cables, Power Cord etc. Clean Non-Smoking environment. Contact: **ken at k2wb dot com**

Icom 746 (working condition) with Cushcraft Model A-3WS, 12 & 17 meter, 3-element beam antenna; \$300 (firm). Contact: Riz, KH7JO - **remalo1230 at gmail dot com**

Radio Sport aka Contests

John, W2FDJ, johnd152 at Verizon dot net

Member's Activities:

Please send your thoughts and ideas to me at **johnd152 at Verizon dot net** for publication.

At the last meeting we discussed how members might get started with contesting. There was a sign-up sheet for members who were willing to help others and those needing assistance. Please let me or any of the board members know if you need or can give help. Thanks.

Club QSO Party (was Oct 13-14)

As I write this the deadline for summaries to be filed was Nov 14th, so we don't yet have any numerical results to report. Even if you didn't make the deadline send me your summary.

During my operating time I did run into eight members and I am aware of a few more who were on the air, so I'll have more to report, hopefully in December Harmonics.

CQ WW SSB (was Oct 26-28). These members have filed logs with CQ WW by their deadline and listed SJRA as their club:

Name	Points
John, W2FDJ	39,120
Frank, AA2AW	36,125
Jon, W2MC	26,136
Joe, K2WJL	Score not known

Please send me your summary sheet so I will be able to list your claimed score next time. John/W2FDJ; **contests at sjra dot org**

Upcoming Contests – see arrl.org or contestcalendar.com for rules and more details.

Every Tuesday only

Phone Frey 10:30PM-11PM. (yes 30 min.)
(ten weeks -4 times a year)

Every Wednesday only

CWops Mini-CWT test 9 -10AM, 3-4PM,
11-12PM (three one hr sprints)

Every Thursday only

NCCC Sprint 10:30PM-11PM. (yes 30 min)

Every Thursday only

NCCC RTTY Sprint 9:45-10:15PM. (30 min)

ARRL Sweepstakes SSB

11/17-19 Sat 4PM EST (24 of 30 hrs) to Sun 10PM EST. HF; Phone

CQ WW DX Contest CW

11/23-25 Fri 7 PM EST (48 hrs). HF; CW

ARRL 160-Meter Contest

11/30 & 12/1 Fri 5 PM EST to Sun 11AM.
160 mtr; CW

ARRL 10-Meter Contest

12/7-9 Fri 7 PM EST to Sun 7PM. 10 mtrs:
CW, Phone

ARRL Rookie Roundup CW

12/16 Sat 1PM EST to 7PM EST HF-6 mtrs;
CW

ARRL RTTY Roundup

1/5-6 Sat 1PM EST to Sun 7PM. HF –
RTTY; Digital

North American QSO Party CW

(Continued on page 9)

(Radio Sport aka Contests from page 8)

1/12-13 Sat 1PM EST to Sun 1AM. HF;
CW

North American QSO Party Phone

1/19-20 Sat 1PM EST to Sun 1AM. HF;
Phone

ARRL January VHF Contest

1/19-20 Sat 2PM EST to Sun 11PM. 50
Mhz & up, Any mode

ARRL Int DX Contest - CW

2/16-17 Fri 7PM EST to Sun 7PM. HF; CW

CQ 160 Meter Contest – SSB

2/21-22 Fri 5PM EST to Sun 5PM. 160 mtr.
SSB

North American QSO Party – RTTY

2/23-24 Sat 1PM EST to Sun 1AM. HF;
RTTY

ARRL International DX Contest

3/1-3 Fri 7PM EST to Sun 7PM. HF; SSB

New Members

The SJRA would like to welcome the following new member to our Club:

- Jason Green, KC3MIL

(President's Message from page 1)

www.sjra.org.

By the time Harmonics comes out the November Sweepstakes CW portion of the contest will be completed. There is still a chance for you to sign up to operate the Single Side Band part of the contest with the K2AA station, contact me if you are interested in getting on the K2AA operating schedule. If you operated either or both contests send a copy of your summary sheet to John, W2FDJ. Don't forget to list the South Jersey Radio Assn. as your affiliated club.

Congratulations to the SJRA and all that helped with the 2018 Field Day Operation. Our efforts paid off again. We captured 1st place in the 7A category and 6th overall high score. Field Day 2019 planning is already started. Think of what you can do to help. There is also a plan underway to work on the club trailer. Contact me if you are interested.

Don't forget that the meeting is on the 3rd Wednesday (November 21st) this month. The meeting plan is to have breakout sessions covering various subjects including setting up N1MM for radio interface and other subjects.

73's

de Ken K2WB

Test Session Report for October 17, 2018

There were no applicants at this month's session.

The totals for October 17th are the same as they were for September.

Total New or Upgrades to Date

	Tech	General	Extra	Total
To Date	150	66	36	252

SJRA Elmer Team

The SJRA has set up an Elmer Team to assist all members with any questions or assistance they may need related to amateur radio practice. Please email your questions to the appropriate team member. The Elmer Team is comprised of the following volunteers:

Art Arnold, N2CPR - **artarnold at yahoo dot com**. Setting up your first station; HF radio selection/operation; Antennas; Programming the big 3 Japanese HTs.

Tony Canuso, N2ATB - **f_canuso at yahoo dot com**. Tony can provide assistance with CW operation and Digital Voice modes and equipment.

John Fogleboch, WY2J - **WY2J at arrl dot net**. John is on call to help with: Antenna theory, modeling & design; RF circuit design & analysis; Practical transceivers, tuners, transmission lines & other hardware; HF, VHF & UHF propagation; Radio communication system design.

Ray Golley, N3RG - **rgolley at comcast dot net**. Ray can help with VHF/UHF/microwave operations including EME; CW and WSJT modes.

Bob Applegate, K2UT- **bob at applegate dot org**; cell (856) 220-6609. Bob can provide assistance with Arduino design.

Rick Lawn, W2JAZ - **rjlawn at gmail dot com**. Rick can help with Satellite stations as well as HF digital modes. Rick can also help with DX Labs, Ham Radio Deluxe, Amateur Contact Log and Log4OM software and is familiar with Macs and Windows PCs for ham radio application.

All SJRA Members

The South Jersey Radio Association cordially invites all members and their families to attend the SJRA Christmas Party on December 19th at 7 pm at the Gibson House. The regular business meeting and awards ceremony will follow. Come join our end of year party for dinner, desserts and SJRA Awards.

The menu for the dinner (Buffett style) includes the following:

- * Chicken picatta, carved roast beef and lasagna.
- * Sides: Herb potato, broccoli & cheese.
- * Tossed house salad, rolls & butter.

The Board of Directors have donated a cheese and pepperoni tray.

In addition SJRA will provide an SJRA cake, coffee and soft drinks.

Cost is \$15 per person payable at the door (cash or checks payable to SJRA). Please confirm attendance by December 10th. No money is needed at this time, If you do confirm and can't make it please let us know by Dec 10th.

The Club does pick up a portion of the bill, we already have about two dozen people, If you are thinking of attending just send an email back to me at **ac2fo at comcast dot net** all we would like is a confirmation that you are coming and how many plan to attend.

SJRA Jackets, Shirts, Hats

Order NOW - Next order going in soon!



Spring Jacket is \$51 (S,M,L,XL), Fall Jacket is \$58 (S,M,L,XL),
 Shirts are \$28 (S,M,L,XL), Hats are \$25 (one size fits all)
 Name and Call Sign embroidery included....Larger sizes slightly more!
 Email Joe, KC2TN, with orders or additional info: kc2tn at comcast dot net

Amateur Radio FCC License Testing

The SJRA sponsors *FREE* Amateur Radio FCC License testing on the third Wednesday of each month, except Nov & Dec. The location is: New Brooklyn United Methodist Church; 1336 E. Malaga Rd. Williamstown, NJ 08094. Registration is at 7:00 PM and testing begins at 7:30 PM. Walk-ins are accepted. **The next test session is January 16, 2019.**

VE team members can be reached at **VE at SJRA dot org**. A calendar and more information can be found on the SJRA web site.

November Meeting:**Is the **Third** Wednesday, November 21, 2018**

The meeting commences promptly at 7:30 PM in the first floor Meeting Room of the Gibson House on Main Street, Marlton, NJ 08053. Guests are always welcome.

Program For November:

Break-out sessions on various topics.

SJRA Member December Birthdays

December Birthdays are: Edward Fletcher, N2ZPR; Tom Forner, KD2PPA; Ray Golley, N3RG; Dara Herman, KC2THQ; Rizal Malong, KH7JO; and Davis Soll, KC2YJI

Health and Welfare Co-chairpersons: Roy, WB2EOD and Dara, KC2THQ

December Meeting:**Is the **Third** Wednesday, December 19, 2018.****First Class Mail**

South Jersey Radio Association
15 Pelham Road
Marlton, NJ 08053

