

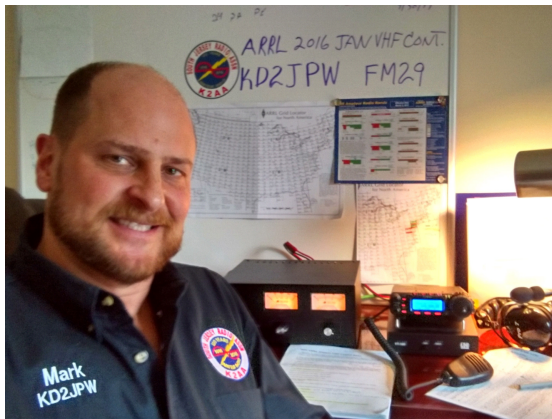


# HARMONICS

1916

South Jersey Radio Association

2016



## My First VHF Contest

By Mark, KD2JPW

I'm a newly licensed Ham radio operator with only four months of on the air experience. However, I wet my appetite for contesting when I made a contact or two during the November Sweepstakes with K2AA. That experience got my mind itching to jump into the 2016 ARRL January VHF Contest. I suppose some would call it *Baptism-By-Fire*. I had a few operators during the contest look me up and seeing how new I was and actually called it *Gutsy*. In any event, it was time to get on the air and try operating in simplex mode and see how many contacts I could make as a Three Band Single Operator contestant. I also wanted to see how far I could reach.

Because my only radio is a mobile rig in my truck, I figured I wouldn't last long in

a vehicle during a 33 hour winter contest. So I hastily converted my mobile to a temporary base station. Also temporary was a new UHF/VHF base station antenna and a new portable HF antenna mounted on separate camera tripods in my back yard. Next, I draped two coax lines out my second story office/temporary Ham shack down to the antennas and the rest is history. *This is where all that text book knowledge, charts, and information became radio wave reality.*

I had a great deal of fun and fun is what it's all about! In addition fun, I learned a great deal about the sport, my equipment, my abilities, and the methods and madness of other operators. By the end of the contest I managed to make a total of 42 contacts in the 50/144/432 MHz bands in 4 grids for a grid multiplier of 8. My total score, which was submitted for myself and for SJRA was 392. While this is not an impressive score, it is my first contest score and serves as a personal best benchmark for me from which I hope to move forward and improve my radio skills.

Now that the contest is over, I thought I would take a few moments to reflect on my personal lessons learned in the hope that they help other new operators get a sense of what to expect. Similarly, for those operators who are old pro's and *have been there-done that*, perhaps this article will rekindle some fond memories of yesteryear and pro-

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## 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 Room 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 K2AA Repeater or from Mary Von Lintig, KV2M, 856-772-6475

EMAIL: [sjra@sjra.org](mailto:sjra@sjra.org) SJRA's web page: [www.sjra.org](http://www.sjra.org)

SJRA VE Team: [ve@sjra.org](mailto:ve@sjra.org) is the SJRA/ARRL VUCC card checker

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

\*\*\*\*\*  
 ★ **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/sections/?sect=SNJ> ★  
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### Officers

**President:** Ken Botterbrodt, K2WB  
**Vice Pres.:** Jon Mac Millan, W2MC  
**Treasurer:** Ray Golley, N3RG  
**Rec. Sec:** Lou Priestley, N2HQL  
**Cor. .Sec:** Dennis Cioffi, AC2FO

### Directors:

Roy Herman, WB2EOD  
 Rich VonLintig, KV2R  
 Rick Lawn, W2JAZ  
 Ira Weinstein, W2IRA  
 Tony Canuso, N2ATB  
 Ted Dean, KD2ARD  
 Al Witner, N3AVT

### Committees:

**Historian:** Mary VonLintig, KV2M  
**Membership:** Mary VonLintig, KV2M  
**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 Stoneking, W2RDS  
**Hospitality:** Jean Priestley, KA2YKN  
**Nets:** John Fogleboch, WY2J  
**Publicity:** Vacant (Please Volunteer)  
**Picnic:** Vacant (Please Volunteer)  
**Ways & Means:** Ray Golley, N3RG  
**Property:** Jon Mac Millan, W2MC  
**Web Site:** Ira Weinstein, W2IRA

### Harmonics Staff:

**Publisher/Editor:** Ted Groke, W2TAG  
**Alternate Editor:** Rick Stoneking, W2RDS  
**Circulation:** Mary VonLintig, KV2M; Jim Vecchiola, KR2T

### LOCAL WEEKLY NETS

Monday	K2AA, Medford	145.290 @ 8PM
Alternating Thursday	Various Locations	28.405 @ 8PM

### Harmonics Deadline

Articles submitted for the next Harmonics will be accepted until Monday, March 7, 2016. Email: [ted.w2tag@gmail.com](mailto:ted.w2tag@gmail.com)

**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

### Minutes of Meeting January 27, 2016

The meeting held at the Gibson House began at 1935 led by Ken, K2WB. The meeting was opened with introductions around the question of the month was how many used the/100 as a call.

The Treasurer Ray, N3RG, gave his report, it was approved on a motion by K2WJL/KR2T.

The minutes were approved as printed in Harmonics, motion by N2HQL/WA2HJG.

Ken stated we needed a chairperson for Membership and a Historian.

Health and Welfare: Roy, WB2EOD, sent a sympathy card to Ray, N3RG.

Programs: January, Estate Auction; February, White Elephant Auction; March, Presentation by Web Team.

VE Team: 155 test elements given so far; 94T, 39G, 22X.

Nets by John, WY2J: repeater is working well.

Contests: by John, W2FDJ: January VHF Contest, January 30 and 31; ARRL International DX/CW, February 19-21; ARRL International DX/SSB March 4 through 6.

Fusion repeaters have been delivered. Club stuff; orders caught up, hundredth anniversary patches are still available. Report by Joe, KC2TN.

Hundredth anniversary: There are 17 Centennial Members covering three continents and eight states.

Old business: Remaining youth plaques were dispensed.

No new business.

Centennial brunch will be July 30, 2016 at the Trump golf course. The meeting was adjourned at 2124 in preparation for the estate sale.

### Board of Directors Meeting February 3, 2016

The meeting opened at 1935 by Ken, K2WB, at the Gibson House. The minutes of the January board meeting were approved as printed in Harmonics. Motion by N2HQL/N3AVT.

There was no treasurers report due to illness of the Treasurer.

New members: Gerald Blachniak, no call. Motion by W2MC/WB2EOD member accepted.

Ken, K2WB, stated that we need and operating manual to describe the duties of officers and committee chairs.

Corresponding Sec. report: Dennis, AC2FO, stated he has received no correspondence from the ARRL club liaison to SJRA.

Fusion repeaters are currently in Joe, KC2TN's, garage he will try to get one installed in the next few weeks. He also made a motion/AC2FO to send \$50 to the ARRCC. Motion passed.

Contests summary sheets from the VHF contest should be sent to W2FDJ.

*(Continued on page 10)*

## HAM TECH

Vol 7 No. 2 by John - WY2J

wy2j at arrl dot net

### Low Bands Receiving Antennas

#### Part 2 of 2: The Small Loop Antenna

**Introduction** - The Beverage antenna discussed in Part 1 of this two part series on QRN noise reducing receiving antennas for 80 and 160 meters has one major problem, the large amount of required real estate. A twin full size ( $2\lambda$ , i.e., two wave lengths) Beverage for 360 degrees azimuth coverage requires a minimum of 27.8 acres in a square configuration. A minimum size ( $1\lambda$ ) 160 Beverage or full size 80 meter antenna requires 7.2 acres. While very little of the land is used by the twin antennas, land is not sold in long narrow strips orthogonal to each other. For the suburban ham who lives on 1/3 to 1 acre the Beverage is not practical. This part of the series discusses a less effective but significantly smaller antenna, the rotatable small shielded loop. This antenna is mounted vertically and will have square sides that are a maximum of 11.6 feet at 160 meters and half the size on 80 meters, quite practical to put on a rooftop rotator.

**Characteristics of the Small Loop** - By keeping the loop less than  $0.085\lambda$  in total length the current flowing on it will be nearly constant. Square, triangle or circular configurations will all work but a square is chosen for the analysis in this article since it is easier to build than a circle. The basic unshielded and un-tuned square loop is shown in Figure 1. The free space azimuth radiation pattern for this  $0.085\lambda$  loop is shown in Figure 2.

The double null centered on 90 and 270 degrees is the useful QRN reduction property of this antenna. The nulls are effective against low elevation angle vertically polar-

ized ground wave signals. Atmospheric QRN resulting primarily from cloud to ground lightning strikes meet the criteria. A three dimensional pattern plot of this antenna is a donut with the null into the hole. Thus skywave signals arriving from higher elevation angles are received with minimum attenuation. Mechanical rotation keeps the nulls centered on the QRN or other spot QRM interference.

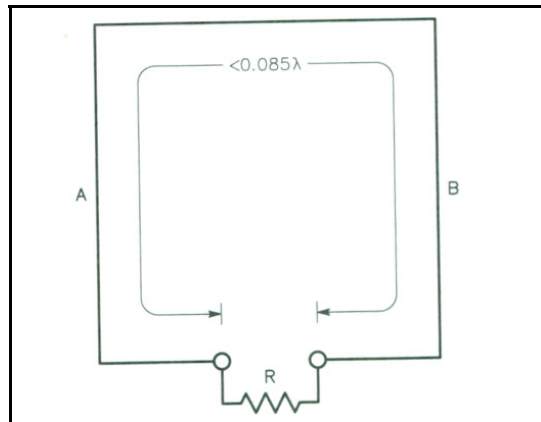


Figure 1, Basic Unshielded and Untuned Loop.

**Shielding and Tuning** - The environment causes unsymmetrical capacitive coupling between the loop, the ground and grounded structures. This causes the loop to behave like a grounded vertical antenna that destroys the loop's null. This problem is fixed by shielding the loop with a non-magnetic conducting shield around the loop. This forces equal capacitance from all parts of the loop to ground. To keep the shield from acting like a shorted turn the shield is opened for a small distance at the top of the loop side opposite the feed point. The equivalent circuit of the loop is an inductor in series

*(Continued on page 5)*

(Ham Tech from page 4)

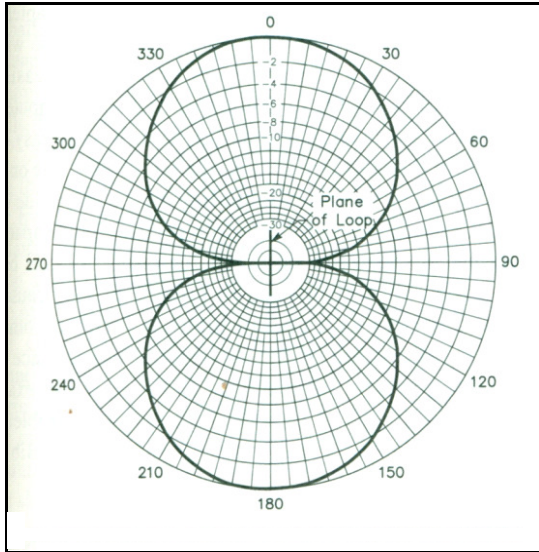


Figure 2, Azimuth Pattern of a Small Loop Antenna in Free Space.

with a tiny radiation resistance, a much larger copper skin effect loss resistance and the capacitance of the coax cable.

**Loop Parameters** - The inductance of a small square loop is:

Square:

$$L (\mu H) = 0.008N^2 s$$

$$\left[ \ln \left( \frac{1.4142sN}{(N+1)\ell} \right) + 0.37942 + \frac{0.3333(N+1)\ell}{sN} \right]$$

L= Inductance in  $\mu H$

N= No. of Turns

S= Side Length in Centimeters

$\ell$ = Wire Diameter in Centimeters (N=1)

For a balanced feed loop constructed of one turn of RG6/U (Belden 1694A) 75 ohm coax with a No. 18 center conductor, 82 percent velocity factor, and 16.2 pF/foot capacitance, the inductance of a square loop with

sides of  $46.4/4=11.6$  feet will be  $22.15 \mu H$ . The shunt capacitance of each feed terminal to ground will be  $16.2(23.2)=375.8$  pF. The resonant frequency will be 2.47 MHz, above the desired 1.9 MHz center of 160 meters. This will require adding 129.8 pF of capacitance across the feed terminals to achieve 1.9 MHz resonance.

The loss resistance of copper wire is:

$$R_s = 0.996(10^{-6})(F_{Hz})^{0.5}/d_{(inches)} \text{ ohms}$$

For the 46.4 foot RG6/U loop:

$$F=1.9(10)^6 \text{ and } d=40.3(10)^{-3}$$

$R_s=0.034$  ohms/foot and 1.58 ohms for 46.4 feet. (This is the series resistance of the loop.)

The series reactance of the loop is:

$$X_s=2\pi \cdot F_o \cdot L=2\pi \cdot 1.9(10)^6 \cdot 22.15(10^{-6})=+j264.4 \text{ ohms.}$$

The unloaded  $Q_u$  is:

$$X_s/R_s=264.4/1.58=167.4.$$

With a very high impedance load on the feed port the loop bandwidth could approach:

$$BW_U=F_o/Q_u=1900/167.4=11.3 \text{ KHz.}$$

This is too narrow to be operationally useful so the loop must work into lower load impedance at the feed point. With a 450 ohm load the loaded Q is:

$$Q_L=450+1.6/254.4=1.78.$$

The loop bandwidth is:

$BW_L=1900/1.78=1.07$  MHz, which more than covers the 1.8 to 2.0 MHz 160 meter band without retuning. A 9:1 impedance ratio wideband balanced transformer is convenient to use with a 50 ohm coax and receiver load.

**Antenna Gain** - The power extracted from a radiating field is proportional to the effective area of the antenna. The ratio of the loop area and the area of a dipole gives a fair ap-

(Continued on page 10)

*(My First VHF Contest from page 1)*

vide some humorous recollections of having learned the same hard lessons. These are my lessons learned:

1. Get copies of the contest rules and read/know them before the contest.

2. Set your equipment up well before the contest and debug any problems.

3. Know how to operate all of your equipment.

4. Have all equipment manuals on hand for quick reference.

5. Know your *Grid Square* to six characters so others can swing their Yagi antennas directly at you for an otherwise impossible contact. *Yes, I had a few contacts ask me this and they did swing their beam at me, which greatly improved the transmission quality to complete the contact.*

6. Have a copy of the *ARRL Grid Locator for North America* map available to note where your contacts are being made relative to your station to be able to understand geographically the ability of your equipment. Two grid squares was the furthest for confirmed contacts for my setup. *This is approximately 60 to 100 miles and approximately equal to the line of sight for the curvature of the earth. I could occasionally hear a station three grid squares away but I could not complete those contacts.*

7. Paper contact logs will suffice for the first time but a computer with contest logging software will give you a much better experience. Checking each contact manually against your paper logs for duplicates is time consuming and difficult. Also, if you are not familiar with how to calculate your scores according to the contest rules, have an Elmer assist you until your understand the rules and calculations. Failure to do so may result in point penalties from your total

score and in extreme cases, even being prevented from participating in the same contest in the next calendar year according to the rules. Most importantly, handwriting your logs requires great penmanship, which I do not have, and despite my best handwriting efforts, I even began to doubt my own letters (i.e., was that a number zero or a letter O?). *I hope the ARRL score checking folks can read what I wrote. I will surely be using software for the next contest.*

8. Have a chart of the Q-Signals and RST system nearby for reference and use. Q-Signals will be used by others and should be used by you as well. In this contest, terms like: QSL (I acknowledge receipt/can you acknowledge receipt?), QSO (can you understand? or completed contact), QSY (change to frequency X) and QRZ (who is calling me?). *These terms were rattled off continuously as commonplace language during the contest.*

9. Understand the Universal Coordinated Time system (UTC), how to use it, and be able to convert between local time and UTC, (especially when you're using paper/manual logging). *Presently, people located in the Eastern Standard Time zone are 5 hours behind UTC. For example, 1900 UTC Saturday was the starting time of the contest. 1900 UTC means 19 hours and 00 minutes in a 24 hour time format. So, 1900 minus 500 equals 1400 EST, which is 2 PM local time.*

10. Know the ITU Phonetic Alphabet system and be prepared to use it. *In my call sign, i.e., KD2JPW, the K and D, sound like each other. These letters also sound like T, C, G, E, V. I had every one of those letters repeated back to me during many of my contacts. The only way for me to avoid confu-*

*(Continued on page 7)*

*(My First VHF Contest from page 6)*

*sion and confirm a two way QSO was to clearly use the phonetic call sign of Kilo Delta 2 Juliet Papa Whiskey.*

11, Have a copy of the ARRL US Amateur Radio Band Plan available and refer to it as needed to make sure you are staying within the contest band limits and your license limits. *In this contest, as a single operator using three bands, I operated on 6M, 2M, and 70cm.*

12, For 6M and above, make sure your transmission system is tuned for each band. A tuned transmission system with a low SWR transmits more power and reaches further. *I used an external auto tuner and so tuning was as simple as pushing a tune button and observing the LED feedback status.*

13, Have a detailed copy of the recommended sub-band plan ready and stay within relevant sub bands for your contacts. *For example, don't be scanning or transmitting on frequencies used for OSCAR satellite work because you won't find contesters operating there during the VHF contest.*

14, your set-up. If you sense a change in performance, it's a good idea to troubleshoot your set-up before things go really bad. *The wind had a funny way of blowing over my antenna due to loose bolts on the swivel that connected my antenna to the tripod. Even new equipment, right out of the box, can have problems. I had a new coax feedline with a blob of solder on the PL-239 plug tip, which prevented it from being inserted into the antenna SO-239 socket of my transceiver. I needed tools to remove the obstruction.*

15, Listen and learn from the actions and techniques of other operators and note what they are doing. *If it works and is legal, you might try doing it yourself. You could be surprised at the results.*

16, Have a comfortable chair, surroundings, and equipment positioning. Contesting is fun but can be tiring. *It is not very physical but it is endurance driven. You should plan short breaks for eating, for using the restroom, and for sleeping during the contest. If you are comfortable, you are more likely to operate at the contest longer and have more fun.*

17, The post-contest tear down and clean-up of your temporary base station setup is just as time consuming and critical as the pre-contest installation and setup. *I think it's important to take the time to properly stow your equipment so you are ready to go the next time you need it.*



My Temporary Antenna Setup with the 6M Vertical on the Left and the 2M/70cm Vertical on the Right.

## 100<sup>th</sup> Anniversary Happenings

Ken – K2WB/100

Things are starting to happen. The use of the /100 after the call sign by members is starting. Several members have been heard on the repeater.

So far the 100th anniversary committee has had 16 meetings (more to come). So everyone is up to date, here is where we are:

Over 80 coffee cups have been sold. There are plenty more to go. Mugs may be acquired to SJRA members by a minimum donation of \$10.00. There will be coffee mugs available at the General Membership Meeting on February 24th.

We now have 18 centennial members, The SJRA is now represented on 2 continents, 4 countries (including the USA) and 11 states. Our goal would be to have at least 2 members in each of the States. At least 1 member in each of the ARRL sections and at least 1 member in 100 countries. This will make some of radio sport events planned very exciting. Pass the word around, we need to get more members before 2016 so that our activities will be well represented.

All certificates and coffee cups have been sent to all of our centennial members and friends. Centennial member badges are being made and should be mailed out shortly.

Starting January 1st 2016, SJRA members are encouraged to add /100 to their call signs to commemorate the 100th Anniversary.

Our 100th Anniversary banquet will be held at the Trump Country Club in Pine Hill, NJ on Saturday July 30th, 2016. So mark your calendar and save the date.

Work has begun with the SJRA QSO Party, help is needed to administrate and operate. Also, discussions of the SJRA large area special event. The SJRA QSO Party will run for the entire month of June.

We still need a lot of money to achieve our goals and objectives. Our anniversary is only 180 days away.

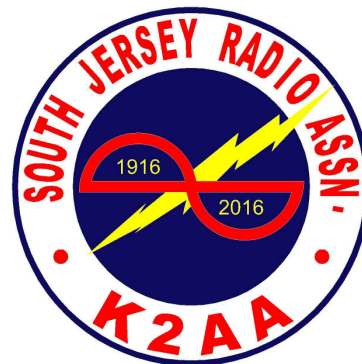
With that said, Joe, KC2TN, is selling 100th Anniversary clothing and hats, in addition he has patches. Contact Joe should you want to have the *new* SJRA Look.

The Board of Directors approved getting all SJRA members new badges with the new logo.

The Web Team needs help with content for our history time line. Please contact Rich, KV2R, if you would like to help.

There is still a lot to do and we need your help. Please contact me if you are interested in helping with the 100th. If you like to help out in the last minute now is a good time to help!

Please email me your picture showing your SJRA!! Email them directly to me: ken *at* k2wb *dot* com. Also, we are looking for old SJRA photographs. We would love to scan them to include them on our website for all to share.



## President's Message

Ken – K2WB

If the snow or freezing rain damages your antennas, wait for better weather to repair. No reason to be a hero, there are no awards or prizes in getting hurt. Please be careful and think safety at all times.

Check on neighbors, friends and the elderly during inclement and cold weather.

This month is our annual White Elephant sale; this is a good time to donate some of the treasure that has been sitting around not being used for years. The meeting is one of the most entertaining ones to see. Bring some stuff, some money and have fun. We promise not to tell your spouse on what treasures that may follow you home (your secret is safe with us). All proceeds are donations to the SJRA.

At the same time we will Auction off members equipment. If you are trying to sell something bring it to the meeting. Please mark it clearly with you name and call. Also indicated if there is reserve and if you are willing to accept checks.

We are looking for help with some of the aspects of the operation of the club, Membership, History and Harmonics Editorial Staff to be specific. I urge you to share your talents with the club. If you are interested in helping contact me or any Board Member. Also, if you can bring an elderly member to a meeting let me know.

Field Day will be here 131 days, now is a good time to start planning. Contact me if you have any questions or would like to help.

Stay warm!

## Monthly Puzzle

Don – WA2DUE, *wa2due at arrl dot net*

**First let us review last months puzzles:**

In a mechanical system there are two meshed gears, the first consist of 32 teeth and the second of 50 teeth. If the first gear is turning 1250 rpm, how fast is the second gear turning?

Answer: The speed of the second gear is 32/50 times the speed of the first gear or 800 rpm.

Company A is valued at 22 times the assets of Company B. The difference between the value of the two companies is 126 million dollars. If these two companies were to merge, and assuming their asset values remains the same, what would be the new company's total value?

Answer: We can set up these two equations;  $A = 22B$  and  $A - B = 126$ . Substituting  $B + 126$  for  $A$  we get  $21B = 126$  and dividing both sides by 21 we find that  $B$  is valued a 6 million and therefore  $A$  is valued at 132 million and the combined 138 million.

Art, N2CPR, and Roy, WB2EOD, submitted solutions to these puzzles again this month. Thank you both and great going! It is gratifying that these puzzles are being read and worked on.

**For this month, consider the following:**

Given these three equations:  $x + y = 37$ ;  $x + z = 31$ ;  $y + z = 36$  solve for  $x$ ,  $y$  and  $z$ .

In a circuit a 10 microhenries inductor and a 156 picofarad capacitor are connected in parallel. What is the resonant frequency of this circuit?

Please submit solutions and/or comments to **wa2due at arrl dot net**.

*(Ham Tech from page 5)*

proximation of the loops gain relative to the dipole. Our 46.4 foot loop has sides of 11.6 feet or 3.54 meters and an area of 12.5 m<sup>2</sup>. A dipole on 1.9 MHz has an effective area of:

$A_{DP}=1.64\lambda^2/4\pi=1.64\cdot(158)^2/4\pi=3258$  m<sup>2</sup>  
and a loop antenna gain relative to a dipole of:

$G_{Loop}=10\cdot\log(5.23/3258)=-24.2$  dBd.

This may seem like a very low gain antenna but consider that it is equal to just a 4S unit loss on an S9 noise level, common with high QRN on 80 and 160 meters with a dipole.

**Next Month** - In one issue we look at the long evolution of one of our most popular HF, VHF and UHF antennas, the Yagi.

## **SJRA Membership Renewal Begins January 1st, 2016.**

This is just a brief reminder that DoozRdo on January 1, 2016. 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.

<http://www.sjra.org/sites/default/files/2015%20Renewal.pdf>

More than 25 members have renewed so far... so beat the rush and renew your membership today.

Thanks, Happy New Year and 73,  
Ray Golley - N3RG  
Treasurer, SJRA  
552 Newport Rd  
Millville, NJ 08332-7821

*(Meeting Minutes from page 3)*

Al, N3AVT, stated the copying of historical documents would cost about \$275 per box.

Ken, K2WB, showed a sample of the hundredth anniversary QSL card.

As for club stuff there are no outstanding orders, about a half-dozen of the large patch are left. Health and Welfare: Roy, WB2EOD, stated birthday cards have been mailed.

Programs; Rick, W2JAZ, stated he received an e-mail that a Yaesu team may be available to schedule a demonstration of the fusion repeaters. Program schedule may need to be modified to allow for this demo.

VE Team: One test administered in January. Al, N3AVT will start keeping a log of VE's attendance.

Web Team: Ira, W2IRA, is trying and on line form for membership applications. Handwriting has been an issue on the forms.

Hundredth anniversary: /100 was used during the January VHF contest. It may be used when appropriate but not at Field Day. Two members were proposed; Tony Scandura, call not reported and Robert Ray, K3BS. They were accepted on a motion by KV2R/W2IRA. The next Hundredth anniversary committee meeting will be the third Thursday of February.

No old or new business was conducted.

Field Day is 142 days away.

Submitted by Lou, N2HQL, Rec. Sec.

## SJRA Jackets, Shirts, Hats

Order NOW - Next order going in soon!



### List Your "For Sale" Ham Stuff in the SJRA Harmonics

Email Ted, W2TAG, with your listing, [ted.w2tag at gmail dot com](mailto:ted.w2tag@gmail.com)

Get your *No Nonsense Amateur Radio License Study Guides* by Dan, KB6NU at:

[www.kb6nu.com/study-guides](http://www.kb6nu.com/study-guides)

Email Dan at: [cwgeek at kb6nu dot com.](mailto:cwgeek@kb6nu.com)

### Test Session Report for: February 10, 16, 2016

The SJRA would like to congratulate the following on their recent achievements:

Gary Triplo, KD2EBX  
1425 Bittersweet Dr.  
Blackwood, NJ 08012  
Earned his General

Gerald Blachniak  
25 Chen Lane  
Sewell, NJ 08080  
Earned his Tech

	Tech	General	Extra	Total
To Date	95	40	22	157

## February Meeting:

**Is the Fourth Wednesday, February 24, 2016**

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

### Program For February:

White Elephant Auction and Members Consignment Auction

### SJRA Member March Birthdays

Howard Bates, KC2SNK; Chris Cannatella, KC2GNQ; Francis Canuso, N2ATB; Albert B Kaiser, W3LEQ; David Staiman, KD2DVV, Gary Triplo, KD2EBX; Philip Webber, KA2SZV; and Ira Weinstein, W2IRA.

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

## Amateur Radio FCC License Testing

The SJRA sponsors *FREE* Amateur Radio FCC License testing on the second Wednesday of each month. The location is: 443 Commerce Lane, Suite 5, West Berlin, NJ 08091. Registration is at 7:00 PM and testing begins at 7:30PM. Walk-ins are accepted.

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.

**First Class Mail**

South Jersey Radio Association  
PO Box 1026  
Haddonfield, NJ 08033

