



# HARMONICS

1916

South Jersey Radio Association

2014



## 100th Anniversary Happenings

So far the 100th anniversary committee has had two meetings (many more to come). Just to keep everyone up to date here is where we are.

SJRA 100th logo has been approved. Rich KV2R is writing an Article about the logos and some of the history behind them.

We are looking at running several raffles to raise funds for the banquet, and other activities. There will be an offering for promotional items also to help raise funds.

In addition the committee is looking to create a special membership class. It will be known as an affiliate membership. This will only be available for until the end of 2016, this will give members the right to say that they belong to the oldest continuously meet-

ing radio club in North America (try to say that twice quickly). More importantly these members can participate in the SJRA QSO party as members. Hopefully we will be able to activate all 50 states and maybe 100 countries. Details will be coming out in the future.

Let me know if you are interest in joining the committee. 73, Ken, K2WB/100.

## SJRA Christmas Party 2014

All SJRA members and families are invited to attend the SJRA Christmas Party on December 17 at 7 pm at the Gibson House. The regular business meeting and awards ceremony will follow.

The menu for the dinner (provided this year by Villa Catering) includes the following:

- ◆ Hot Roast Beef
- ◆ Macaroni Salad
- ◆ Chicken Marcela
- ◆ Pasta/Spinach Salad
- ◆ Tossed Salad and Rolls
- ◆ Potatoes au Gratin
- ◆ Glazed Carrots
- ◆ Stuffed Shells

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

While the \$15.00 price per person will be collected at the door, interested persons must sign up at the November meeting or

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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 at sjra dot 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

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 ★ **Harmonics** is now available 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  
 Mary VonLintig, KV2M  
 Jim Vecchiola, KR2T  
 Al Witner, N3AVT

### Committees:

**Historian:** Mary VonLintig, KV2M  
**Membership:** Mary VonLintig, KV2M  
**Field Day:** Ken Botterbrodt, K2WB  
**Contests:** Jon Mac Millan, W2MC  
**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:** **Vacant (Please Volunteer)**  
**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, December 8, 2014. Email: [ted.w2tag at gmail dot 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

### Membership Meeting Minutes of 10/22/2014

The meeting was held at the Gibson House in Marlton, NJ. Opened at 1932 by Ken, K2WB. He had all members introduce themselves. Visitors were KC6AOH and KC2AZI. Minutes of the September meeting were approved as printed in Harmonics, motion by N2HQL/WA2HJG.

Ray, N3RG, gave the treasurers report and listed 108 paid members.

100th Anniversary committee (Ken, representing) showed the 100th Anniversary planned logo.

New Members, by Rich, KV2R: Mark Muncie. For the historian report, he showed a copy of the 1945 South Jersey Radio Assn. News. It was hand drawn, with some typed and duplicated portions.

Programs, by Rich, WA2JAZ: October is by Mario, N2AK, with an introduction of the new frequency counter project. November is by Joel Noblock of RF Connections. Rich also reviewed his survey results.

Health & Welfare by Roy, WB2EOD: Cards to go out. Joe LeMaris is receiving treatments for a tumor.

VE team by Al, N3AVT: We tested 107 so far, which includes two this month.

Repeater by Joe, KC2TN: The new antenna is up. The old antenna and the painted one are up for sale, minimum bid is \$30.00. Joe is still investigating new sites for the K2UK repeaters. There is still *Club Stuff* for sale. Remember, Christmas is coming.

Website: The transfer of all domains to the new host is ongoing.

Contests: NJ QSO Party, SJRA members operated from every county in SNJ section; During the CQWW contest, VP5T is again running from Turks and Caicos. SJRA member WA2VYA will be there.

No old or new business to discuss-recessed at 2020.

### Board of Directors Meeting Minutes of 11/5/2014

Opened at 1930 by Ken, K2WB. All officers were present except Ira, W2IRA, and Jim, KR2T who had shoulder surgery today.

Minutes as printed in Harmonics for the October meeting were approved, motion N2HQL/WB2EOD.

Treasurer by Ray, N3RG: 108 members for 2014. There are three new members so far for 2015.

No new member applications.

Historian: A news article reporting the incorporation of South Jersey Radio Corp.

Health & Welfare: November birthday cards sent out. Jim, KR2T, had shoulder surgery this morning.

Programs: November (11/19), Joel Noblock of RF Connectors. Motion by W2JAZ/N3RG to pay up to \$15 for dinner of November speaker. Motion Passed.

Correspondence: No report.

Web: Still moving the last domain.

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**HAM TECH**

Vol 5 No. 11 by John - WY2J

wy2j at arrl dot net

**Morse and the CW Mode**

**Part 1 of 2, History, Technology and Mythology**

Introduction - Morse code disappeared from Ham Radio almost eight years ago as far as the FCC was concerned when they dropped it as a licensing requirement. But tune across the lower end of the 10, 15, 20 or 40 meter bands on the weekend of most CW contests and every kilohertz of the band has one or more CW stations fighting for contacts. CW is far from dead, it was just deleted from the education of new hams minted since 2007. And there are a lot of new hams who have no idea what Morse or the CW mode is all about because they were never forced to touch it and try it. The first of this two part series is a history lesson on over 100 years of our oldest mode while the second part focuses on the signal processing by the human brain needed to use the CW mode.

The Wired Telegraph and Morse Code - In the mid 1840's Samuel Morse combined the electro-chemical and electro-magnetism technologies of Volta and Faraday with an on/off keyed varicode he had developed to bring communication at the speed of light by electricity. Within 15 years most of the eastern US was wired for the telegraph with the government, railroads and Wall Street stock exchange as major users. His code is not the Morse used today. By 1912 there were three codes in common use as listed in Figure 1 below. The Morse code was used for wired telegraphy with an electromagnetic sounder similar to today's relays without contacts. It could also drive a pen against a moving paper tape printing out the dot and dash sym-

bols for visual decoding or record keeping. The Continental or International code which we use today became the radio code. The Navy code was derived from the old flag semaphore codes but died out early as the Navy recognized that becoming proficient in more than one or two codes was a near impossibility for most operators.

WIRELESS CODES

LETTERS	MORSE	CONTINENTAL	NAVY
A	•••••	•••••	•••••
B	•••••	•••••	•••••
C	•••••	•••••	•••••
D	•••••	•••••	•••••
E	•••••	•••••	•••••
F	•••••	•••••	•••••
G	•••••	•••••	•••••
H	•••••	•••••	•••••
I	•••••	•••••	•••••
J	•••••	•••••	•••••
K	•••••	•••••	•••••
L	•••••	•••••	•••••
M	•••••	•••••	•••••
N	•••••	•••••	•••••
O	•••••	•••••	•••••
P	•••••	•••••	•••••
Q	•••••	•••••	•••••
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8	•••••	•••••	•••••
9	•••••	•••••	•••••
0	•••••	•••••	•••••
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!	•••••	•••••	•••••
?	•••••	•••••	•••••

ABBREVIATED NUMERALS USED BY CONTINENTAL OPERATORS.

1	•••••	2	•••••	3	•••••	4	•••••	5	•••••
6	•••••	7	•••••	8	•••••	9	•••••	10	•••••

WIRELESS ABBREVIATIONS.

G. E. - GOOD EVENING	4 - PLEASE START ME, WHERE
G. N. - " NIGHT	13 - UNDERSTAND
G. M. - " MORNING	25 - AM BUSY NOW
G. A. - GO AHEAD	30 - NO MORE
O. S. - SHIP REPORT	73 - BEST REGARDS
D. H. - FREE MESSAGE	77 - MESSAGE FOR YOU
M. S. G. - MESSAGE	92 - DELIVERED
O. P. R. - OPERATOR	99 - KEEP OUT

-DISTRESS SIGNALS-

S. O. S. MORSE	C. Q. D. CONTINENTAL
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Figure 1, Three codes published in 1913.

(Continued on page 5)

(Ham Tech from page 4)

### Wireless Technology 1900 to 1924 -

The first two decades of the 20th century was the era of spark transmitters and crystal diode receivers. The simplest ham transmitter consisted of the induction coil ignition system from a Ford Model T car coupled to a top loaded vertical wire Marconi antenna. The antenna bandwidth, perhaps 50 KHz at 200 meters (1.5 MHz) set the transmit center frequency for this broad spectrum signal. The receiver was passive using a galena crystal diode to demodulate the received RF signal like was later done with AM voice. Sensitivity was no better than - 50 dBm, about 75 to 80 dB poorer than today's CW receivers. Typical range was 1 to 5 miles. A high power rotary spark (500 to 1,000 watts) could extend the range to perhaps 100 miles. In all cases the modulation was on/off keyed Morse as all attempts to voice modulate spark failed.

Ham radio went silent from 1917 to 1919 due to WW-1 and many hams entered the military because of their Morse and radio skills. By the early 1920's Edwin Armstrong had invented his oscillating regenerative detector using early vacuum tubes and the modern CW mode was born. Transmitter spectrums were under a Kilohertz and receiver sensitivity was up by 60 or more dB. Range increased by leaps and bounds as hams explored the higher frequencies of 80 and 40 meters and finally made it across the Atlantic in 1923. And these new DX contacts were made with Morse keyed CW. AM phone existed but as low power experiments and besides it didn't have the punch of Morse CW. The Morse mythology starts here.

Morse Timing - The Morse code has no inherent timing information built into it. With a straight key the operator controls all

timing. The Vibroplex Bug which was invented before the radio days for the wired telegraph operators automated the timing of the dots with a mechanical pendulum but nothing else. It was not widely used by hams even up to the 1950's due to its high price. So the mythology of the good fist bad fist came into existence. Figure 2 below outlines proper timing of Morse but not all operators agree or follow it. This makes computer decoding very difficult.

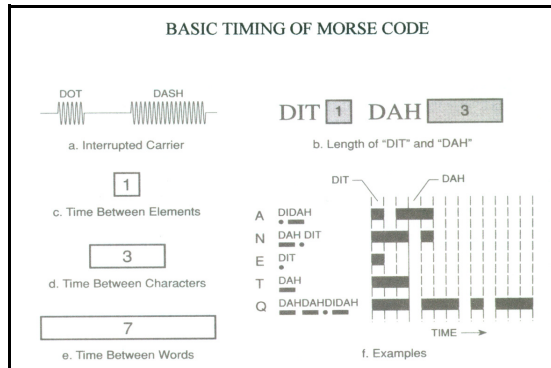


Figure 2, Basic Timing of Morse Keyed CW.

**Technology Improvement 1924 to 2014** - Great electronic technology improvements have been made in the last 90 years since the birth of Morse keyed CW on at least four of the bands we still have, 160, 80, 40 and 20 meters. We solved the frequency stability problems with crystal control when the government almost shut down ham radio in the early 1930's. We can build 300 Hz bandwidth filters that match the CW spectrum and greatly reduce QRM. We replaced AM phone with SSB and gained a 6 to 9 dB of sensitivity. But Morse CW still has a 9 to 10 dB advantage over SSB due to its lower bandwidth. And you can put about 8 times as many CW signals in the same bandwidth as SSB voice a real spectrum use advantage.

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## Harmonics – Send it By Mail

Jim, KR2T, and yours truly, Mary, KV2M, are currently the circulation department for Harmonics. We are the end process in making sure that you get your monthly copy of our newsletter.

I am going to fast-backward some 60 plus years or so into our past and just give you a quick look at the end process of getting the monthly Harmonics to the QTH of the SJRA members.

Collating, stapling, and stuffing the 250 copies of Harmonics (Yes, back in the Fabulous Fifties there were 250 members who received Harmonics – no email back then) was nail biting, like banging your head into a brick wall, and much more. The dead line for getting those precious pages to the members was always immediately or if not sooner. The average number of pages in each edition was 20 or so. I counted 23 pages for the April 1957 edition. Do the math. That comes to 5000 – give or take – pages of print. It took about three hours to collate all these pages.

These steps take place only after the mimeograph machine and the typewriter have done their things. Some strange thing called the Address-o-graph speeded up the addressing of the envelopes. Coincidence – Way back in 1968 I had a temporary job at a company called Address-o-Graph, Multi-Graph. Boy, was that place ever noisy. Wonder if that contributed to my hearing loss? (What?)

Back to the collating, stapling, and stuffing part. The next step was to staple the cover to the issues and then stuff the whole mess into envelopes. Remember, time is flying by. These 1950 stuffers were playing 'Beat the Clock.' Sometimes, it was way after

3:30 AM when the envelopes were stuffed with their precious cargo. Of course, nothing is free, therefore, all those 250 envelopes have to have stamps on them and way back then self-stick stamps were not invented so human spit was used or in some cases a sponge.

Now it is the mailing department's turn. Rise and shine early Saturday morning and head to the Camden Post Office and trust that the mail will go through.

Things sure have improved in 60 plus years. Now, Harmonics is delivered right to the QTH of KV2R and KV2M. They are already stapled, folded, and sealed. Ray, N3RG, has labels all printed up and ready to go. Upon delivery of Harmonics, a quick call is made to Jim (KR2T) and the two of us (sometimes three if Rich, KV2R, assists) have at it. We peel off the labels, attach them to the *ready to go* Harmonics and then put a stamp on them, i.e., no spit involved. Jim then loads them into his car and heads three miles to the Voorhees Post Office where he puts them in the outgoing slot. End of story. From start to finish, including mailing, about 40 minutes.

Well, we didn't always have it that easy. When we first volunteered to be circulation, we had to fold, use a stapler, and those white circular sticky things to hold Harmonics together. I even suffered a few paper cuts in the line of duty (*ouch* W2TAG).

73 to all and I am History.

Mary, KV2M

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

Email Ted, W2TAG, with your listing,  
ted.w2tag at gmail dot com

## Monthly Puzzle

Don – WA2DUE, wa2due at arrl dot net

### Reviewing last months puzzles:

A 6.0 Volt battery and a 240 Ohm resistor and a LED are connected in series. The LED is dimly glowing. The voltage drop across the LED is measured as 1.2 Volts. To raise the current by 50% to make the LED glow brighter, what value of resistor would be required to replace the 240 Ohm one? Assume that the LED forward resistance is constant.

Answer: First we must determine the present amount of current in the circuit. We do this by noting that the voltage across the LED is 1.2 Volts therefore the voltage across the resistor is 4.8 Volts. By applying Ohms law (divide 4.8 by 240) we get a current of 20 milliamperes. This means we want to raise the current to 30 mA. Next, we find that the resistance of the LED when turned ON is 1.2 divided by 0.02 or 60 Ohms. The voltage drop across the LED with a current of 30 mA would then be 1.8 Volts. By Ohms law the required value of the resistor would have to be 4.2 divided by 0.03 or 140 Ohms.

A rectangular plot of land has a perimeter of 156 km and an area of 1505 km<sup>2</sup>. Calculate the length and width of this plot. This is essentially a quadratic equation problem. The general formula for solving a quadratic equation is  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ .

Answer: Given  $2l + 2w = 156$  meters and  $lw = 1505$  meters<sup>2</sup> Let  $l = (156 - 2w)/2$  Multiplying by  $w$  we get the quadratic equation  $w^2 - 78w + 1505 = 0$  where  $a = 1$ ;  $b = -78$ ;  $c = 1505$ . Applying  $a$ ,  $b$ , and  $c$  to

(Continued on page 9)

## President's Message

Ken – K2WB

Our Holiday Party (December 17th) there will be a new format this year. The entire meeting and meal will be held at the Gibson house. After dinner there will be presentation of the club awards. Contact Rich KV2R and let him know if you plan on attending. Check out the web site for more detailed information.

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

By the time Harmonics comes out the November Sweepstakes contests are completed. If you participated please send you log to the ARRL and a copy of your summary sheet to John, W2MC.

Field Day Results are in and guess what we took 1st place in 6A. This could not have happened without that everyone that helped. Field Day 2015 planning as already started. Think of what you can do to help

I still am looking for someone for the History and membership chairperson. If you are interested please contact me for more information. We really need your help.





## The RF Connection

www.therfc.com

Since 1979 The RF Connection has achieved a reputation for quality craftsmanship, quality materials and the skill of their experienced staff to research and engineer the exact solutions to meet your expectations. What is not well known is The RF Connection's technician training on site programs.

We serve the US military, Homeland Security, United States Government Agencies, Aerospace Industry, Fortune 500 Electronic Corporations and the Amateur Radio Community, The RF Connection was established in 1979, specifically to address the needs of industries requiring a broad range of products; ranging from cabling, cable accessories, cable connectors and custom cable fabrication.

Our knowledgeable and friendly staff is available on a daily basis, to assist you in every possible way to satisfy your cable interface requirements. Besides offering a full range of in stock cabling, connectors and cable accessories we have the ability to integrate and/or modify your cable requirements quickly.

Through the years our company has achieved a well-deserved reputation for quality craftsmanship and quality materials.

Open from Monday through Friday,  
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The R.F. Connection  
213 N. Frederick Ave. Suite 11-W  
Gaithersburg, MD 20877

Tech Support (301) 840-5477

Orders (800) 783-2666

24 hour Fax (301) 869-3680

or email rfc@therfc.com

(Monthly Puzzle from page 7)

the quadratic formula we get  $w = (78 \pm \sqrt{6084 - 6020})/2$  which resolves into two roots 35 and 43. Therefore the dimensions are length 43 and width 35 feet.

**For November consider these problems:**

In major league baseball the pitchers mound is 60.5 feet from the center of home plate. If a pitcher throws the ball at 95 miles per hours how many seconds does it take to reach the plate?

A 6 Volt battery delivers an half Ampere to an electric motor. What power and energy are consumed by the motor in a 5 minute period? Provide the answer in kilowatt hours and Joules.

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

## Items For Sale

- ◆ MFJ 949 E Tuner with manual, \$100 or B/O
- ◆ Ten-Tec Century 21 with manual \$275.00 or B/O
- ◆ Kenwood TS 820S with manual, needs finals, \$150.00 or B/O
- ◆ ICOM 02AT 2 Meter HT with manual, extra battery, charger, external speaker/mic with manual, two antennas and leather case \$100.00 or B/O
- ◆ Low Pass Filter, full power, \$25.00 or B/O
- ◆ FT7 QRP with manual, needs work, \$75.00 or B/O

Kenwood SWR SW2100 meter, \$75.00

John Mulvey, N2ADE, 609-953-0888  
jhm1938 at yahoo dot com

*(SJRA Christmas Party from page 1)*

by calling or emailing Rich, KV2R, (856-772-6475 or kv2rrich@gmail.com). Unfortunately we generally will not be able to accommodate for the dinner persons who do not sign up in advance. The deadline for signups is December 8. We are looking forward to a wonderful dinner with good conversation, followed by the traditional ceremony.

*(Meeting Minutes from page 3)*

Repeaters: K2AA working very well with new antenna. K2UK still working.

Contests: ARRL November Sweepstakes, Phone, at End of month

Awards: Rich, W2JAZ, reports receiving some nominations.

Property: Ken, K2WB, has loaned a cart to hold the projector and podium.

100th Anniversary: Attempting to get a raffles license.

Old Business: Christmas Party menu discussed.

New Business: We need to push the *Ride to Meetings* program.

A net survey will be made up and distributed. A test survey to board members had some results and indicated some changes or realignment may be needed.

Adjourn at 2120.

Minutes by Lou, N2HQL  
Recording Secretary

### Note

The N2AK Frequency Counter Kit will be available at the December SJRA Membership Meeting. The price is: \$20. See Mario or email: N2AK at arrl dot net

*(Ham Tech from page 5)*

**Back to the Mythology** - So after 90 years of technology improvements is Morse CW still the best ham mode as many CW operators claim? The answer is yes and no. If you look at its ability to "punch through" compared to AM and SSB, it wins. But newer text modes like PSK-31, MFSK-16, DominoEX and JT-65HF beat it by a mile in sensitivity and error rates. CW does do well in a disturbed ionosphere like over the poles where PSK-31 gets in trouble. And today's electronic keying has solved most of the timing problems. If we could just get hams to throw away the straight keys and bugs we would have good CW on the bands that could be copied by machine and the good fist bad fist issue would go away. And using CW wouldn't require a long and sometimes futile investment in programming the human brain to copy sloppy code. After all not all of us are cut-out to be good drummers.

**Next Month** - In the final part of this series on the CW mode I'll explore the signal processing that must be programmed into the human brain to become an effective CW operator including analogies to other human skills. Hopefully this will give you some insight into what you are up against in the code learning task.

The SJRA congratulates the following on their recent achievements:

James Mollica, N2NRD  
22 Wright Loop  
Williamstown, NJ 08094

***Earned General***

Mark R Muncie, KD2HIE  
605A Country Club Parkway

*(Continued on page 11)*

## SJRA Jackets, Shirts, Hats

Order NOW - Next order going in soon!



Spring Jacket is \$44 (S,M,L,XL), Fall Jacket is \$55 (S,M,L,XL),  
 Shirts are \$27 (S,M,L,XL), Hats are \$20 (*New Lower Price*, 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*

<p><i>(Congratulations from page 10)</i>                  Mount Laurel, NJ 08054  <b>Earned General</b>                  Alan Reinhart, W2AVR                  101 E. Gibbsboro Rd. #2411                  Lindenwald, NJ 08021  <b>Earned Extra</b></p>	<p>Charles S. Yurek                  3494 New Jersey Ave.                  Pennsauken, NJ 08109  <b>Earned Technician</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 20%;"></th> <th style="width: 15%;">Tech</th> <th style="width: 15%;">General</th> <th style="width: 15%;">Extra</th> <th style="width: 15%;">Total</th> </tr> </thead> <tbody> <tr> <td><b>To Date</b></td> <td style="text-align: center;">70</td> <td style="text-align: center;">28</td> <td style="text-align: center;">13</td> <td style="text-align: center;">111</td> </tr> </tbody> </table>		Tech	General	Extra	Total	<b>To Date</b>	70	28	13	111
	Tech	General	Extra	Total							
<b>To Date</b>	70	28	13	111							

**November Meeting:  
Third Wednesday, November 19, 2014**

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 November:**

**Joel Noblock of The RF Connection in Gaithersburg, MD**

See page 9 for more information or visit their web site at: [www.therfc.com](http://www.therfc.com)

**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

