

# The SKYHOOK



HOLIDAY CITY AMATEUR RADIO CLUB

[www.hcArc.us](http://www.hcArc.us)

November 2017

Toms River, NJ

## HCARC's New President & VP

Congratulations to our new President Joseph Fiorino, KC2OAN, and our new Vice President Bill Locke, KD2MHA.

Secretary Marge Penn KD2LNT, Treasurer Larry Puccio K2QDY, and Board Members-at-Large Doug Poray KC2TZC and John Roberts KQ4WR, were re-elected.

All candidates ran unopposed and were elected by unanimous acclamation.

The first item on our October meeting's agenda is always election of officers, as the term of office is only one year.

## Ross Lambert Returns Nov 2



Dr. Ross Lambert W2TT is to be the presenter at our meeting on November 2. We enjoyed his talk and digital modes demonstration in May.

**NEXT MEETING:**  
**Thursday November 2 at 7:00 PM**  
**Bldg A, Meeting Rm. #1**  
**Holiday City South Clubhouse A**  
**Santiago Drive at Mule Road**  
**Toms River, NJ**

## The President's Message



**Joseph Fiorino, KC2OAN**

I became a licensed amateur radio operator in 2005, and upgraded to general class 2017. I'm now working on passing extra class.

I married my wife Maria in 1964, and have two children: my daughter Lisa, and my son Christopher. We also now have 3 grand-kids: Peter 21, Jo-Ann 18, Vincenzo 16.

I have been self employed a good part of my life, mainly in transportation as part owner in cab company, and owner of a limousine service, and a few years in the car business. I currently am a Realtor. Being semi retired, I joined the Holiday City Amateur Radio Club.

I have a 2 meter Baofeng HT I used as my base station, also an Alinco DX-SR8 all mode HF Transceiver with which I mainly work digital (JT65, FT8) and Morse code. My military M.O.S. was radio operator. Was at one time able to send and receive 20 words a minute.

That my story. Hope to be a good President and see our club grow.

Thanks for nominating me.

## Happy Birthday To:

Paul Dobrolovich KD2ARV

John Dougherty K2AOW

Morton Levy KD2KXR

Marge Penn KD2LNT

Doug Poray KC2TZC

Sandy Ottenberg



## Ocean County ARES

At the last Ocean County ARES meeting, held on October 18th, WX2NJ distributed ARES shirts to those who ordered them. If you ordered a shirt and have not yet received it, please let WX2NJ know if you still want it or if you want the shirt to go up for general sale. There is no problem holding the shirts until the next ARES meeting on December 20th, which is also the annual holiday party.



Also at the meeting, everyone was bought up to date on the Harvey Cedars and Berkeley repeater progress. The D-Star repeater electronics is now at Berkeley and we are waiting for installation cost quotes to install a 70 cm antenna and new feedline on the tower. We thought we could use an existing location and feedline for the D-Star antenna, but a close inspection showed that the 70 cm antenna would be in the operating plane of existing municipality antennas. It also looks very hopeful that an Internet connection will also be available to enable a link from the D-Star repeater to an OpenSPOT, which will be connected to a D-Star Reflector.

Ocean County ARES would like to thank the Bayville Fire Company for providing the use of the Station 17 ladder truck to inspect the Berkeley Tower.

The new D-Star antenna would have its base at about 90 feet above ground level with the antenna tip at about 110 feet above ground level. It would be mounted on the south tower leg off an extension arm.



Jack Haughwout of Bayville Fire Co. (Left) and WX2NJ (Right)

This is short notice, but there is a good possibility of an Ocean County ARES Simulated Emergency Test (SET) on Saturday, October 28th. I'm trying to work on final details of locations. The SET would run from about 10:00 AM until 2:00 PM (probably shorter). Two teams would assemble at different locations and exchange voice ARRL radiograms and FLDIGI messages.

Please keep the date open. Once again, short notice, but that's what emergency drills are about.

73 de Bob Murdock WX2NJ

Ocean County Amateur Radio Emergency Service® EC

## Holiday Luncheon

Our holiday luncheon is scheduled for Thursday, **December 7<sup>th</sup>** at the **Italy's Best** restaurant located at 652 Route 70 in Lakehurst. The start time is **2:00 PM** and the menu consists of Veal Parmigiana, Chicken Francese or Spaghetti with meat balls. Bread, salad, soda, water, coffee and desert are also included. A cash bar is available. **Larry will need your order at our November meeting.** The cost is \$10.00 per person which he will be collecting at the November meeting. The restaurant is located in the Lakehurst Circle Center off route 70.

Take the first exit from the circle, onto Myrtle St., and right again into the shopping mall. If you get as far as the Dollar General store, you passed the restaurant.

## Breakfast Schedule Changed

### Club Breakfasts and Lunches

One of the long ongoing activities of the club is the bi-monthly Monday noon lunches at the Holiday City Diner. Recently, bi-monthly 9:00 AM breakfasts were started, with a regular group attending each one. Lately, the lunches have not been attended, only the breakfasts being attended. Starting in November, an email reminder will be sent out in the hope of restarting the club lunches. Also starting in November, the breakfasts will go back to Monday.

Hope to see you there.

Monday Nov 6 Noon Lunch at Lisa's Restaurant  
 Monday Nov 13 9am Breakfast at Holiday City Diner  
 Monday Nov 20 Noon Lunch at Holiday City Diner  
 Monday Nov 27 9am Breakfast at Holiday City Diner

## License Exam Session Details

The Holiday City ARC holds VE testing (FCC license exams) at Holiday City South club house located at 139 Santiago Drive (at Mule Rd), Toms River, NJ on the second Wednesday of each month at 6:30 PM in room 1 of building A. The testing is done on a scheduled basis only (no walk-ins). Two pieces of identification are required and one must be a picture ID such as a

driver's license. The fee is \$15.00 by check payable to the American Radio Relay League; cash will also be accepted. If you currently have an amateur radio license, bring the original and a copy. If you have a CSCE from a previous testing session please bring that also. For registration and to confirm a seat please contact Larry Puccio, K2QDY, at 732 349-2950.

### Our VE Crew

Larry [K2QDY](#) (Liaison) 732-349-2950,  
 Urb [W1UL](#), John [KQ4WR](#), Stan [KB2PD](#), Steve [N2WLH](#),  
 Murray [KD2IN](#), Paul [N2QXB](#), Larry [WA2VLR](#), Tony [KD2GSO](#).  
*License exams are given by appointment at 6:30pm on the second Wednesday of each month at Holiday City South Clubhouse, Bldg A, which is at the corner of Mule Rd. and Santiago Dr. Call Larry Puccio, K2QDY, at 732-349-2950 for an appointment.*  
*Directions: From either Route 37 W or Davenport Road, take Mule Road to Santiago Drive. Clubhouse A is the building nearest the street corner.*

### CLUB COMMITTEES

*Refreshments:* Tony [KD2GSO](#) 732-930-5779  
*Webmaster:* Steve [N2WLH](#) N2WLH@yahoo.com  
*Publicity:* Paul [N2QXB](#) 732-279-3911  
*Programs:* Tony [KD2GSO](#) 732-930-5779  
*Sunshine:* Dave [WA2DJN](#) WA2DJN3@verizon.net  
*Field Day:* Larry [K2QDY](#) 732-349-2950  
*VE Sessions:* Larry [K2QDY](#) 732-349-2950  
*Membership:* Doug [KC2TZC](#) 732-928-2316

### Holiday City Amateur Radio Club

Toms River, New Jersey

Web Site [www.hcarc.us](http://www.hcarc.us)

<b>President</b>	<b>Joe Fiorino</b>	<a href="#">KC2OAN</a> 732 512-4296
<b>Vice President</b>	<b>Billy Locke</b>	<a href="#">KD2MHA</a> 973 835-1651
<b>Treasurer</b>	<b>Larry Puccio</b>	<a href="#">K2QDY</a> 732-349-2950
<b>Secretary</b>	<b>Marge Penn</b>	<a href="#">KD2LNT</a> 732-736-0115
<b>Executive Board</b>	<b>Doug Poray</b>	<a href="#">KC2TZC</a> 732-928-2316
<b>Executive Board</b>	<b>John Roberts</b>	<a href="#">KQ4WR</a> 732-966 4665
<b>W2HC Trustee</b>	<b>Larry Puccio</b>	<a href="#">K2QDY</a> 732-349-2950

Membership is open to all interested persons. Ham license is not required. Dues are \$25.00 per year, payable Jan 1<sup>st</sup>. Members joining during the year will have the dues prorated. Family membership \$30.00 per family.

Meetings are held on the first Thursday of every month, at 7:00 pm, except December.

Location: Meeting Room #1 in the Holiday City South Clubhouse A.

Directions: From either Route 37 W or Davenport Road, take Mule Road to Santiago Drive. Turn into the parking lot from Santiago Drive and park near the pool. Enter the building nearest the street corner.-

The SKYHOOK is published monthly as the HCARC's official newsletter.  
 Editor and Publisher:

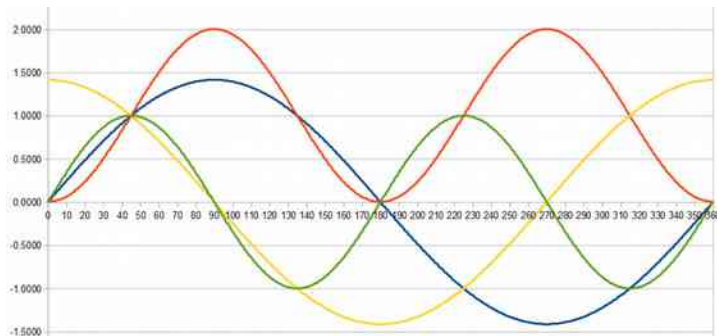
John Roberts [KQ4WR](#) 7 Lincoln Ct. Whiting, NJ 08759-1505  
 e-mail [KQ4WR@arrl.net](mailto:KQ4WR@arrl.net) 732 966 4665



## Understanding The Sine Wave

by John Roberts KQ4WR

If you think of a spot on a spinning wheel, the height of the spot, as compared to the height of the center of the wheel, forms a sine wave. One revolution of the wheel is one cycle. Let's plot one cycle of a sine wave versus degrees of rotation.



In the above chart, the blue line represents one cycle of one-volt AC.

Note that the instantaneous voltage goes as far positive as about 1.414 volts and as far negative as about -1.414 volts (because the square root of 2 is about 1.414).

If we have a one-ohm resistor connected to a one volt AC supply, we get a one-amp sine wave flowing through the resistor. It's the same blue line, because we chose to use a resistor of one-ohm.

If we multiply the amps by the volts, we get the power in watts. Our one amp of AC at our one volt AC equals one watt. The instantaneous power in watts is shown as the red line. That's because although the instantaneous power fluctuates from zero to two watts, the average power is one watt.

Maybe you noticed that the red line (power) waveform is also a sine wave, but at twice the frequency. Whenever you multiply the instantaneous values of a sine wave by the instantaneous values of another sine wave, the product is the sum and difference frequencies. (That's how frequency converters work and why we have sidebands.) In this special case, the difference frequency happens to be zero, which causes the one watt offset.

Now, let's look at the rate of change of the

instantaneous values of our blue line. That's the cosine wave shown as the yellow line.

If we replace the resistor with a capacitor, current will flow into and out of the capacitor as shown by the yellow line. (For simplicity, I've chosen a capacitor value in farads equal to 1 divided by the frequency of the sine wave in hertz.) The charging (and discharging) current flow depends on the rate of voltage change (yellow line), so it's a quarter cycle ahead of the voltage.

Here, multiplying the voltage (the blue line) by the current (yellow line) results in the green line, (instantaneous power) which has an average power of zero. So the capacitor doesn't get hot like the resistor would have.

Note that increasing the frequency does not affect the resistor, but the increased rate of voltage change would cause a corresponding increase of current in the capacitor.

Sine waves are fundamental. Using a math routine called a "Fourier transform", any waveform can be analyzed as the sums of sine waves of various frequency, amplitude and phase. But that's another subject.

### NOTICE TO ALL SKYHOOK READERS

I'm about to take about 20 e-mail addresses off the SKYHOOK Mailing List.

If you're currently an HCARC member, or have sent me a "Keep me on the list" e-mail, then you're still on our revised mailing list.

If not, but would like to receive (or continue receiving) SKYHOOK by e-mail, just send an e-mail to me at KQ4WR@arrl.net or KQ4WR@aol.com saying something like "Put me back on the list" and I'll be happy to have you on the list.

I also send a very limited number of hard copies by first class mail, but it costs me nearly \$1.00 a copy for ink and postage.

By the way, we consider the SKYHOOK mailing list private information, never allowed to be used for any other purpose.

## Meet Doug Poray KC2TZC



I had always wanted to become involved in amateur radio but never was able to find the time until I was retired. Raising a family and pursuing a career occupied all of my spare moments. Finally, in 2008 I obtained my license.

After graduating from RCA Institutes in New York, I had various positions in the electronic industry. Most of my experience was as a hardware maintenance engineer on computer systems. In addition, I worked in the medical electronics field and held a position in vocational education.

My call sign is KC2TZC and I hold an Extra Class License. I decided to upgrade to the Extra Class License as quickly as possible. This was mainly because my study habits had been formed while studying for the Technician License.

I have a Kenwood TS-590S Transceiver and a MFJ Antenna Tuner. These are connected to one of two antennas. Either an Alpha Delta Multiband Antenna fed with coax transmission line or a long dipole (approx.. 100ft.) fed with window line. I enjoy operating on all bands whenever they are open. With current conditions being what they are, the modes WSJT supports look interesting.

My true love in electronics is home brewing. I have assembled many Heathkit and Eico products dating back to my early childhood. This interest extends to

amateur radio where there are many QRP kits available for the home builder.

Even though my code proficiency is improving, a very memorable experience occurred when I made a QSO using CW during a FIST contest. That QSL card sits right above my rig.

In addition to amateur radio, I enjoy woodworking and restoring antique radios. I belong to clubs specializing in these activities.

In conclusion, I enjoy speaking to the members at the monthly meetings and am proud to serve on the Executive Board as well as being the Membership Chairman.

## From Frog Legs To Batteries

By Bob Buus, W2OD

Our story begins with an Italian Medical Doctor and Surgeon named Luigi Galvani (b. 1737 – d. 1798) who lectured at the University of Bologna. In 1780, Galvani noticed that a dead frog would twitch as if alive when “zapped” with a static discharge. He hypothesized that electricity might be what causes life and movement and called it “animal electricity”.

For the rest of his life, he conducted many experiments to learn more about animal electricity. By 1790, he published results of experiments conducted on a pair of dead frogs legs suspended on a brass hook with an iron wire connected to the brass hook. He found that if he touched the other end of the iron wire to the other extremity of the frog’s leg, the leg muscle would contract and the leg move upward.

Alessandro Volta (b. 1745 – d. 1827), a contemporary friend (and later rival) of Galvani, taught Physics at the University of Pavia. Volta repeated Galvani’s experiments and got the same results proving the existence of animal electricity. However, as Volta thought about the experiments in more detail, he concluded that the movement was not caused by animal electricity but was instead the result of the dissimilar metals inserted into the frog muscle causing the electric current to flow.

The argument over animal electricity raged for years but in 1799 (a year after Galvani’s death), Volta

demonstrated what he called a Galvanic cell which was a wine glass filled with salt water and containing a copper electrode separated from a zinc electrode. Each electrode had an iron wire attached and the other end of the iron wires went to opposite ends of a frog's leg and caused the muscle to contract just like the animal electricity experiments conducted earlier by Galvani. In this case the electricity came from the Galvanic cell and was not internal to the frog's leg.

In 1800, Volta further improved on the Galvanic cell by making a "dry" version with a copper plate separated from a zinc plate with a blotter paper soaked in brine (or a weak acid). This Galvanic cell (later also called a Voltaic cell) was the first source of continuous (rather than static) electricity.

Volta went on to stack several of these new Galvanic cells in a pile to enhance the "force" (we now call it voltage) of the pile. The Voltaic pile served as a very versatile source of electricity with the available power proportional to the size of the metal plates and the force or voltage determined by the number of plates stacked in the pile. Recalling that Ben Franklin called a collection of Leyden jars a "battery", it wasn't long before a Voltaic pile was referred to as a battery. In fact, we often incorrectly refer AA, C, and D dry cells as "batteries" but technically a battery is a collection of cells. So we have 6, 9, and 12 volt batteries but the 1.5 volt dry cell is a Galvanic or Voltaic cell and not a battery.

After his death, Galvani was honored by having the galvanometer named after him as well as galvanizing of steel. The author Mary Shelley heard a lecture about Galvani's work shortly before she wrote the novel "Frankenstein". The Voltaic pile or battery was used by many experimenters in the 19<sup>th</sup> century to make major discoveries about electricity. Volta is honored for his discoveries by having the unit of electromotive force, the Volt being named after him. So now you know.

### A License Exam Hint

To avoid having to give your Social Security Number, use your FCC FRN number instead. Look on your license. If you don't have an FRN, go to:

<http://wireless.fcc.gov/uls/index.htm?job=home>

## My 68 Years As A Ham

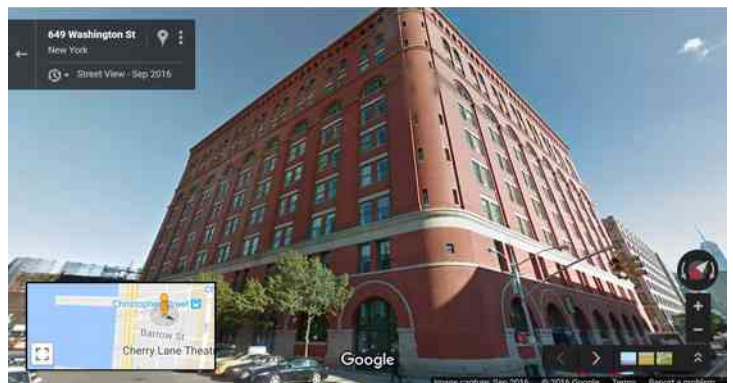
By Urb LeJeune W1UL

November 24th 2017, the day after Thanksgiving, marks my 68th anniversary of passing my first ham radio license. Shortly thereafter, I was issued W2DEC which I held until 2012 when I became W1UL. A friend recently commented, "Urb is licensed so long his first call had a Roman numeral."

In 1949 there were only three classes of ham radio licenses, Class A, B, and C. The Class C was a conditional license for those who lived too far from an FCC examination location. The Class B license was the entry level license and required a 13 WPM (word per minute) code exam as well as an essay type theory exam.

A few of the questions I still remember were:

"draw a block diagram of a superheterodyne receiver", "draw a schematic diagram of a class C amplifier labeling all the parts" and "list the advantages and disadvantages of two different oscillator types".



*The Old Federal Bldg at 641 Washington St NYC (Google Maps)*

I was 16 years old at the time and there were few people younger with a ham license. My Elmer wouldn't let me take the exam until I could copy code at 18 WPM and I shall be forever grateful. The 13 WPM code became easy. In addition, many of my would-be ham friends ran to NYC to take the test as soon as they could copy 13 WPM on W1AW and to a person they all failed.

Oh, I almost forgot, at about 14 years I was almost ready to take the test and I discovered girls. That put ham radio on the back burner for most two years.

Thank goodness it was only two years before coming back to my senses.

All of this was about two years before existence of the Novice class license. There were no HF phone privileges with a Class B license other than 10 meters. When you were licensed for a year you could take the Class A license which allowed phone on 20 and 75 meters. One year to the day I took and passed my Class A license. I was so excited I purchased a microphone at Harrison Radio even though I had no place to plug it in!

As was common in these days, I took the Second Class Commercial Radiotelephone exam on the same day I took the amateur Class B exam and the First Class Commercial Radiotelephone exam on the same day I took the amateur Class A license.

It's been quite a ride. Ward Silver, QST Contributing Editor once said, "The golden age of ham radio starts five years before a person gets their first license, anything before then is a technological wasteland, and it ends five years after they get their first license, after that ham radio was going to hell in a hand-basket."

Stay tuned for the second 68 years.

73 Urb W1UL

### HCARC Badge Ordering



The club's official badge maker is the Capital Engraving Co. in Longview, WA. To order a badge, similar to the one pictured, simply call Al Ross WA7UQE at Capital at 1-800-628-4985 after 1PM M-F.

Say that you want an official Holiday City Amateur Radio Club badge. There is a choice of colors. All that is required is to give your call and first name and your mail address.

Use your credit card to pay. Cost is \$13.25 plus \$4.00 S&H.

### Well, It's About Time

The international definition of a second is exactly 9,192,631,770 cycles of the microwave resonant frequency of Cesium 133.

Likewise, the exact length of a meter is now defined as the distance light travels (in vacuum) in 1/299,792,458 of a second, rather than an international standard meter rod, which is crude by comparison. But now you have a meter equal to 30.663319 wavelengths (better than 1 ppm accurate) of that Cesium resonant frequency.

That's not actually the way it's done, but that's the concept.

So the speed of light is not 300, but 299.792,458 meters per microsecond.

For amateur radio, we round that to 300 meters per microsecond. So when we say the wave length of 10MHz is 30 meters, we're doing only a tiny bit of rounding off.

The length of a year is exactly 60 times 60 times 24 times 365 (366 if leap year) seconds, but every few years, a "leap second" is added to re-synchronize the calendar year to the solar year.

Which reminds us that Daylight time ends 2:00am November 5.

### Our Tuesday Evening Net

The Holiday City ARC hosts a voice net on Tuesday evenings at 7:00 PM on the WA2JWR, 146.655, repeater. No tone is required, however there is a -600 offset.

All are welcomed and the topics are varied.

We have a very congenial group and would like to hear from you.

Usually there is a designated net control, however the net is also free running so why not join us.

The rest of the week, many hams monitor the calling channel 146.52. It's not a repeater, so there's no offset or PL tone, and you don't have a repeater's advantage. If you do make a contact, agree to continue the conversation on another frequency such as 146.55.

## November

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 HCARC MEETING 7:00 pm	3	4 ARRL CW Sw eepstakes
5 DST Ends at 2:00 am	6 Noon lunch at Lisa's Rt 37W @ Mule Rd	7 Election Day	8 License exams by appointment See page 3	9	10	11
12	13 9:00 am Breakfast at HC Diner	14	15	16	17	18 ARRL Phone Sw eepstakes
19	20 Noon lunch at HC Diner	21	22	23 Thanksgiving Day	24	25 CQ Worldw ide CW Contest
26	27 9:00 am Breakfast at HC Diner	28	29	30		