



The SKYHOOK



HOLIDAY CITY AMATEUR RADIO CLUB

www.hcarc.us

April 2018

Toms River, NJ

Presentation For April Meeting



Tom Preiser N2XW will talk about ARES in the Southern NJ section and some of the changes coming and will also talk about the Ocean County ARES organization.

Tom will also talk about his time as a County Skywarn Coordinator.

Happy Birthday To:

George Icenhower WB2BNB

Bernie Klocko KC3GDY

Debra Klocko

Donna Perry

Grace Puccio

Marjorie Stafiej

Nancy Roberts



Happy Anniversary To:

Paul & Julie Dobrolovich

Mike & Susan Graber



CHINESE LUNCHEON April 11



Yes, April 11th at noon, we'll be gathering at the Fortune Buffet again for another one of our Chinese Luncheons.

It's also a good time to take our "wives and sweethearts" out to lunch, and meet our friends and their W's & S's.

What do we talk about over Oriental style food? That's just up to you.

We plan to get there by noon, and we'll have a section reserved for us.

The cost is only \$10 per person, and that includes all you can eat from soup to dessert, tea, tip, and maybe a little money left over for the Club.

JSARS Hamfest

The Jersey Shore Amateur Radio Society has announced that their Spring Hamfest will be Sunday from 6am to noon on April 22 at Riverwood Park, Toms River. The park is at the West end of Riverwood Drive, off county Route 537 between Route 571 and Route 70.

OUR NEXT REGULAR MEETING:
Thursday April 5 at 7:00 PM
Bldg A, Meeting Rm. #1
Holiday City South Clubhouse
Santiago Drive at Mule Road
Toms River, NJ

The President's Message

As I sit here writing this on the first day of Spring we are expecting more snow. I have been thinking antennas and what I want to try this spring. I had been hoping to be able to start taking measurements outside to see what would fit on my small lot. I hope you have been thinking about what you can do this spring to improve your station.

This month's meeting we will have Tom Preiser, N2XW the Southern New Jersey Section Emergency Coordinator to talk about ARES, Skywarn and SCERN.

I hope to see you there.

73,

Carl W2PTZ

Ocean County ARES® News



April, 2018

Happy spring, 2018! You would never know it by the weather. Four Nor'easters in the last month makes for a busy Skywarn season. We escaped serious snow on the first three, but it looks as I'm writing this that March 21st is going to leave a significant snowfall on Ocean County.

The next meeting of Ocean County ARES will be on April 18th at 7:00 PM, Ocean County EOC, Robert J. Miller Airpark. There will be no ARES training net that evening due to the meeting. Refreshments will be served. Please try and make this meeting since the last was in December 2017.

I've been working on the construction of two C4FM Go-Kits for the county EOC. See pictures below. I found an interesting design error in several Astron battery backup modules, Model # BB-30M. They were all back-feeding voltage to the power supply and caused most of the Astron switching power supplies to shut down.

This resulted in backup batteries to deplete due to no charging voltage.



C4FM Ocean County EOC Go Kit

I was in direct contact with Astron Engineering and they took back all four modules for evaluation/repair/replacement. If you have such a device and your power supply has a DC voltmeter on the output, ensure the voltmeter drops to zero when the power supply AC is turned off. All defective modules caused the power supply to read battery voltage. Construction of the Go-Kits continued after procuring Low Level Power Gate (LLPG) modules from KI0BK as a replacement for the Astron modules.

License Exams



Our VE team gives exams for Technician, General and Extra Class licenses at 7:00pm on the 2nd Wednesday of each month, unless there are no applicants.

Call Larry Puccio at 732-349-2950 for an appointment.

A \$4 Antenna For Working Satellites

Here's a link to a website that shows how to make a dual band Yagi antenna (2-meters and 70 cm) suitable for working amateur satellites, at a cost of only \$4.00 :

http://www.amateurradio.bz/4_dollar_satellite_antenna.html

Samuel F. B. Morse

By Bob Buus, W2OD

Samuel F. B. Morse was an American artist who was painting in Europe when he received a job offer to become Professor of Art at the College of New York (now New York University). He set sail to New York in 1832 on the SS Sully. While on board, he made the acquaintance of Dr. Charles Jackson who informed Morse of a new invention called the electromagnet which converted electricity to a magnetic force. After many lengthy discussions during the crossing, Morse came up with the idea of communicating by sending electricity along a wire to energize an electromagnet at the far end. Unknown to Morse, Joseph Henry had accomplished the same thing with his remote bell he had wired in his house two years earlier.

While teaching at the College of New York, Morse proceeded to build a model of his telegraph. He hung a pendulum from an artist's easel and placed an electromagnet that, when energized, would deflect the pendulum. He placed a pencil at the end of the pendulum and moved a strip of paper under the pencil such that as the pendulum moved, a wavy line would be produced on the paper. This comprised his receiver. For transmitting, he drew a notched stick across a spring contact in series with a voltaic pile (battery) to send pulses of electricity to the far end receiver. By varying the number of pulses, he could send the digits 1 through 9 with 10 pulses being a zero. Then with an associated dictionary, he could assign each message a unique number which could be decoded at the far end with an inverse dictionary to recreate the desired message (similar to ARL numbered radiograms still used today).

Morse demonstrated his system at the College of New York in 1837. Although the demonstration did not work well, a student named Alfred Vail attending the demonstration was intrigued by the idea and asked to work with Morse on perfecting the idea. Vail's father owned an iron works in Morristown, NJ and would help finance further work.

Knowing the difficulties Morse was experiencing with the electromagnet, a fellow Professor Gale recommended that Morse consult with Professor

Henry at Princeton. This Morse did and Joseph Henry showed him how to make an intensity magnet to operate over a long wire. He also showed Morse how to use a relay to successfully operate over longer distances. With this information and some clever innovations made by Alfred Vail, Morse then developed a working telegraph system. By giving a crooked congressman a piece of his telegraph company

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
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

President	Carl Lee	W2PTZ	732-575-7558
Vice President	Billy Locke	KD2MHA	732 281-0151
Treasurer	Larry Puccio	K2QDY	732-349-2950
Secretary	Marge Penn	KD2LNT	732-736-0115
Executive Board	Doug Poray	KC2TZC	732-928-2316
Executive Board	John Roberts	KQ4WR	732-966 4665
W2HC Trustee	Larry Puccio	K2QDY	732-349-2950

Membership is open to all interested persons. Ham license is not required. Dues are \$25.00 per year, payable Jan 1st. 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.

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and with a letter of recommendation from Joseph Henry attesting to the good design of Morse's system, congress approved a \$30,000 grant in 1843 for Morse to construct an experimental telegraph line from Washington, DC to Baltimore. This was successfully completed in 1844 with the famous "What hath God wrought" message sent on May 24, 1844.

Henry had repeatedly told Morse that the electromagnet and relay were in the public domain and could not be patented. When he found that Morse had applied for a patent including Henry's contributions, he was sure that it would not be granted but it eventually was. This irritated Henry.

When Vail published a book on the history of the telegraph in 1845, no mention was made of Henry's contributions. Henry expressed his anger at this oversight to Morse who said he was unaware of the content in Vail's book (highly unlikely) and that the book would be revised in subsequent printings to give Henry proper credit. But this didn't happen in the next edition of Vail's book and this caused a permanent rift between the two men.

Why did Morse deliberately ignore the significant contributions that Henry made to his telegraph? I think he feared it would weaken his patent claims which were challenged by many other inventors. As always, greed trumps integrity. But now you know who really invented the telegraph.

VE News

At our March 14th Ve session, Steve Russell, KB2GGD of Toms River, who held a Technician grade license passed the General Class test.

He has also shown an interest in joining our club and said he would attend the April meeting.

We wish Steve the best of luck with his new privilege.

[In an e-mail to the Editor, Steve wrote:

"I came to the Holiday City Amateur Radio Club to upgrade my Ham license. It was nice to meet all the guys. They ran the test very professionally. Just wanted to say hello and thank all VE's who help with the test. Looking forward to joining the club. Looking forward to reading Skyhook. "]

Russ Young's DX Report

"I finally worked Z60A on 40M CW. That's 300 on Mixed DXCC !"

From the log of WA2VQV:

CALLSIGN	DATE	TIME	MODE	BAND
ENTITY		SPLIT	QSL	RCD
Z60A	10-Mar-18	0154Z	CW	40M
KOSOVO		UP1	LoTW	
PJ5/SP2GCI	15-Mar-18	0025Z	CW	30M
ST.EUSTATIUS		UP2		
3C0W	15-Mar-18	2124Z	CW	30M
ANNOBON		UP7		
3B8XF	17-Mar-18	0159Z	CW	40M
MAURITIUS		UP1	LoTW	
3C0W	19-Mar-18	1429Z	CW	17M
ANNOBON		UP1		
3C0W	21-Mar-18	2034Z	CW	15M
ANNOBON		UP1		
3C0W	21-Mar-18	2205Z	CW	20M
ANNOBON		UP1		

Editor's notes:

Z6 is in grid KN02, PJ5 in FK87, 3C0 in JJ21, 3B8 in LG89.

To convert 'Z' date & time to EDT, subtract 4 hours.

"UP2" means that the DX station was listening 2kHz higher than his transmit frequency.

LoTW is the ARRL's "Logbook of The World" contact verification database.

PJ5/SP2GCI means the St. Eustatius (PJ5) station was operated by Polish (SP) operator SP2GCI.

Russ uses an MFJ Ultra Hi Q compact loop antenna in his attic. His advice for working DX is "Listen, Listen Listen."

Alphabet Soup For Ham Radio

By Urb LeJeune W1UL © 2018 All rights reserved.

The amateur radio question pools contain many acronyms and pseudo acronyms without defining their expanded meaning. The VE exams assumes a level of techno-speak many candidates don't possess and the question pools abound with undefined acronyms.

This tutorial gives the VE candidate, as well as regular hams, a contextual view of question pool undefined acronyms. If you are relatively new to the hobby spend significant time with this tutorial. Become familiar with these acronyms and you'll do fine preparing for the VE tests.

AC - Alternating Current - Voltage goes to positive peak, then to negative peak 60 times a second in US homes.

AGC - Automatic Gain Control - It reduces the receiver's amplification of strong signals in order to prevent overload and to keep the output at a normal level.

AM - Amplitude Modulation - A form of modulation where amplitude changes at an audio rate. It's used in AM radios, which contain entertainment in what is called the broadcast band.

AND - A digital logic gate giving a true output when all inputs are true.

APRS - Automatic Packet Reporting System - A radio-based system for real time digital communications.

ARES - Amateur Radio Emergency Service- Licensed amateurs who have voluntarily registered their qualifications and equipment.

ASCII - American Standard Code for Information Interchange - A character encoding standard.

BiCMOS - A semiconductor technology integrating two formerly separate semiconductor technologies.

CCD - Charged Coupled Device – Is a light-sensitive integrated circuit. It's what makes a digital camera work.

CEPT - European Conference of Postal and Telecommunications Administrations - Allows US hams operating privileges in most European countries.

CMOS - Complementary Metal Oxide Semiconductor An advanced semiconductor manufacturing technology.

CQ - A general call by an amateur indicating they are willing to talk to anyone. Can also be a specialized call such as CQ DX or CQ Wyoming.

CRT - Cathode Ray Tube –An obsolete picture tube replaced by LED (Light emitting diode) technology. The cathode ray tubes were used in television sets before LCD /LED flat screen TVs.

CW - Continuous Wave typically refers to a mode many of us love. Morse code is slang for CW.

dB - Not an absolute value but a ratio of power level of a signal compared with a specified level on a logarithmic scale.

dBm - The power ratio in decibels (dB) of the measured power referenced to one milliwatt (mW).

DC - Direct Current – The flow of electrons from negative to positive. This is the output from batteries and power supplies to power radios and most electronic circuits.

DDS - Direct Digital Synthesizer - A type of electronic device used for creating various waveforms.

DRM - Distributed Resource Manager - A software application in charge of unattended background executions.

DSP - Digital Signal Processing – It helps reduce noise in the audio portion of the receiver. This makes it easier for the amateur operator to hear the other operator better. DSP is a very important addition to modern radios.

DX – Originally stood for distant stations. Today DX is the quest for working as many countries (entities) as possible.

EME - Earth Moon Earth - Bouncing signals off the moon allowing other stations to receive reflected signals.

FCC - Federal Communications Commission - The US Governing body controlling all radio matters.

FET - Field Effect Transistor – A transistor using an electric field to control the electrical characteristics of this type of device.

FM - Frequency Modulation - A form of modulation producing frequency changes at an audio rate. FM is used in car and home radio because it has better audio

quality and better noise suppression.

FSK - Frequency Shift Keying - A frequency modulation mode which transmits information through frequency changes of a carrier signal.

FSK441 - Frequency Shift Keying - FSK441 employs multi-frequency shift keying using four tones, at a data rate of 441 baud.

FT8 – FT8 is a weak signal digital mode has become the most used weak signal digital protocol. Its popularity as a weak signal mode is due to a shorter transmit-receive cycle four times faster than JT65 completing a QSO in a little over a minute. FT8 was jointly developed by Joe Taylor, K1JT and Steve Franke, K9AN.

GPS - Global Positioning System - A space-based radio navigation system owned by the US government operated by the US Air Force. Also used in many cars and trucks for driving directions to a user-specified location.

HF - High Frequency - The portions of the radio spectrum between 3 and 30 megahertz.

Hz - Hertz – One cycle of a sine wave. The unit of frequency, in cycles (waves) per second.

IARP - International Amateur Radio Permit - Allows US amateurs a special license to enter and operate from foreign countries.

ITU - International Telecommunication Union - The international body controlling radio regulations.

JK - Jump Kick Flip Flop – A two stable electronic device used in computers and control systems.

JT65 - JT are the initials of Joe Taylor, K1JT, a Nobel Prize winner who invented digital modes capable of copying signals well below the noise level.

kHz - One thousand cycles of AC voltage.

km - Kilo Meters - One thousand meters.

LCD - Liquid Crystal Display - A flat-panel display modulated optical device using the properties of liquid crystals. Used in computer monitors and televisions.

LSB - Lower Side Band - The part that is left over after removing the carrier and upper side band from an AM signal.

MDS - Minimum Detectable Signal - A measure of

receiver sensitivity.

MF - Medium Frequencies - Radio frequencies in the range between 300 kilohertz (kHz) to 3 megahertz (MHz), 1,000 to 100 meters.

MFSK - Multiple Frequency-shift Keying - A variation of frequency-shift keying (FSK) using more than two frequencies.

MHz - Mega Hertz - One million cycles of AC current per second

MMIC - Monolithic Microwave Integrated Circuit - A type of integrated circuit device operating at microwave frequencies (300 MHz to 300 GHz).

MOS - Metal Oxide Semiconductor - It's a type of field effect transistor often used to form logic gates in integrated circuits.

MOSFET - Metal Oxide Semiconductor Field Effect Transistor - A type of field-effect transistor (FET).

MPE - Maximum Permissible Exposure - The highest level of RF power considered safe for human

NAND - NOT AND gates are the same as AND gates except output is false instead of true.

NOR - A digital logic gate giving a true output only if all inputs are false. It's an OR gate with inverted output.

MT63 - A electronic device constructed around a high speed DSP (digital signal processor) typically a dedicated external DSP unit like the Motorola EVM.

NASA - National Aeronautical and Space Administration - An independent agency of the executive branch of the US government.

NCVEC - National Conference of Volunteer Examiner Coordinators - Creates the various levels of question pools and selects question for VE tests.

NPN - One of the two types of bipolar transistors.

NTIA - National Telecommunications and Information Administration

NTSC - National Television System Committee - An analog television system used in many countries.

OR - A digital logic gate giving a true output when at least one input is true.

FACTOR - A combination of two earlier digital modes,

packet radio and Amateur Teleprinting Over Radio (AMTOR).

FACTOR III - A software upgrade for existing FACTOR-II modems providing a new data transmission mode for improved speed and robustness.

PCB - Printed Circuit Board - A copper plated board used to mount electronic components.

PCB - Poly Chlorinated Biphenyls – an environmentally hazardous synthetic oil formerly used in some high voltage capacitors and transformers.

PEP - Peak Envelope Power - Power measured at the peak of a signal as opposed to average power.

PHP – Originally, Personal Home Page, it now stands for the recursive acronym PHP: Hypertext Preprocessor - A programming language created by Rasmus Lerdorf in 1994.

PIC - A family of microcontrollers made by Microchip Technology.

PLL - Phase Locked Loop - A control system generating an output signal whose phase is related to the phase of an input signal.

PNP - One of the two types of bipolar transistors.

PPM - Parts Per Million - A measure of impurities in a product.

PSK31 - A digital communications mode which is intended for live keyboard-to-keyboard conversations.

QSO - A ham radio Q code meaning a contact between two hams.

RACES - Radio Amateur Civil Emergency Service - An emergency standby radio service.

RC - Resistor Capacitor - An electric circuit composed of resistors and capacitors.

RF - Radio Frequency - Any frequency capable of being transmitted by an antenna.

RL - Resistor Inductor - An electric circuit composed of resistors and inductors driven by a voltage.

RLC - Resistor Inductor Capacitor - An electrical circuit containing resistors, inductors and capacitors connected in series or in parallel.

RS - A specific type of semiconductor flip flop having

two discrete states, reset and set.

RTTY - Radio teletype - A telecommunications system consisting originally containing two or more electromechanical teleprinters in different locations.

SCR - Silicon Controlled Rectifier - A SCR remains on until the end of current flow, (near the end of the half cycle,) regardless of input signal. It is turned on by applying a voltage to a trconduct igger.

SS Spread Spectrum - A technique that is the backbone of cell phone communications. Invented by actress Hedy Lamarr, who was also proclaimed, “the most beautiful woman in the world.”

SSTV Slow Scan TeleVision - Television scan rates slowed down so they may be transmitted in the amateur bands. Normally just a single frame is transmitted.

STA Special Temporary Authority - Temporary authorization temporarily allows a radio station to operate outside its normal parameters.

SWR - Standing Wave Ratio - A measure of the mismatch between an antenna and a transmitter.

TTL Transistor Transistor Logic - A class of digital circuits built from bipolar junction transistors and resistors.

UHF - Ultra High Frequency - ITU designation for radio frequencies in the range between 300 megahertz (MHz) and 3 gigahertz (GHz)

VE - Volunteer Examiner - Administer FCC amateur radio licensing exams on a volunteer basis.

VEC - Volunteer Examiner Coordinators - Organization approved by the FCC to conduct VE activities.

VFO - Variable Frequency Oscillator - An electronic circuit capable of changing frequency.

VHF - Very High Frequencies - Radio frequencies in the range between 30 MHz to 300 MHz.

WSPR - Weak Signal Propagation Reporter - A computer program used for weak-signal radio communication between amateur radio operators.

XOR Exclusive OR - - A digital logic gate that gives a true output when the number of true inputs is odd.

April

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 <i>HAPPY EASTER</i>	2 Noon lunch at Lisa's	3 HCARC Net 146.655 7:00pm	4	5 HCARC MEETING 7:00PM	6	7
8	9 9:00 AM Breakfast at HC Diner	10 HCARC Net 146.655 7:00pm	11 CHINESE LUNCHEON; &Lic.Exams	12	13	14
15	16 Noon lunch at HC Diner	17 HCARC Net 146.655 7:00pm	18 ARES Meeting 7:00PM at OC EOC	19	20	21
22 JSARS Hamfest 6am-Noon at Riverwood Park	23 9:00 AM Breakfast at HC Diner	24 HCARC Net 146.655 7:00pm	25	26	27	28
29	30 Noon lunch at Lisa's					

Website Of The Month

Tony KD2GSO wrote that this is an interesting site:

"OVER 600 AMATEUR RADIO WEB SITES

All ham radio links! Nothing but amateur radio web sites!"

<http://ksarrl.org/deeplink/>

[The links on this site have not been tested for viruses, malware, etc., so use extreme caution.]

Dog For Sale

Large French pit bull. Will eat anything. Very fond of children. For information, contact: April at F00L.

Shave & A Haircut?

by John Roberts KQ4WR

Jazz bands would sometimes end a song with a "Shave and a Haircut Shampoo" (or "Shave and a Haircut Two Bits"). Some CW hams likewise end contacts with something like "Dit-ditty-dah-dit", and usually get "Dit, dit" as a reply. But how did it all start?

My guess that it had something to do with sending telegrams and newspaper articles by telegraph, using the older American Morse code. That's how news normally got to publishers. News articles used to end with "30", which in American Morse was "Dididitdahdit daaaah" but sounds like "Tiky-tiky-tiky-tih-kit-tiky, tih---kit" on a telegraph sounder.