

## **OLD BARNEY**

## AMATEUR RADIO CLUB N<sub>2</sub>O<sub>B</sub>

E-Mail: N2OB@arrl.net







NEXT MEETING: Tuesday, April 3<sup>rd</sup>, 2018 at 7:30pm

**APRIL 2018** 

**Ocean Acres Community Center** 

**489 Nautilus Drive** 

Manahawkin, NJ

#### President's Corner

Steve Molo, KI4KWR

Another great month for ham radio has passed....well for the FT-8 digital mode chasers for sure. Thought the bands have not been what we all would desire there has been countries/zones and entities that many of us have worked that I honestly was not expecting to hear for sure. Maybe April with warmer weather; yes I am asking for warmer weather "Mother Nature" we will see more band openings and some members on the air.

As of the time I write this...51 days till HAMVENTION in Xenia, O the largest Hamfest in the US for sure. This year I foresee attendance very high with the lack of Hotel space right now unless there is something else that same weekend in the region which I highly doubt so just maybe the Dayton Amateur Radio Association "DARA" has something in store for us all who are attending.

Lastly, Field Day is in June and as in every year we will take over Wells Mills Park starting Friday the 22<sup>nd</sup> for setup and ready for the Saturday start of 24 hours or so of fun...yes fun is what we all have. This year I am offering a MFJ DIY 300w tuner for the "NEW" licensed operator that makes the most contacts during the weekend from the Park. This is open to any newly licensed operator in the last two years...want to see some competition while making the contacts and points all at the same time. So...mark your calendars for this fun weekend.

73,

Steve KI4KWR **OBARC President** Go OBARC!!



FIELD DAY 2018

June 23-24

WELLS MILLS PARK, WARETOWN NJ

**OPEN TO ALL OBARC MEMBERS AND THE PUBLIC** 

COME HAVE SOME FUN ON THE AIR AND BRING A FRIEND OR FAMILY MEMBER TO GIVE IT A TRY.

## **April Presentation**



## Workings on a Project or just finished one...bring it and show it off!!

## **EQUIPMENT FOR SALE**

ICOM IC-765 Good condition HF 160-10. Refurbished and aligned recently. Includes an SM-8 Desk Microphone (built in power supply). Manual on CD. Original box. \$695.00

ICOM IC-7000 Just back from Icom. They replaced the driver board and checked the radio out. All good. Been in my truck so a little scuffed up, but not bad 160-2 plus 440mhz. Includes hand microphone, new power cord, manual, remote head extension cable and mobile mount for head. \$575.00

OM-2000HF Legal Limit Amplifier. Manual tune. GU84b Ceramic Tetrode final. 160-10 meters. Will send manual (PDF) if you would like to see the details. Includes factory tune up chart. Very clean. Used little. Was on FT5ZM DXpedition, and then used minimally here at my house. 220/230 v only. Includes original box and wooden crate. Originally sold for \$6995.00 Sell for \$4995.00 FIRM. No shipping. Pick up only.

Contact N2OO if interested on above listings

ICOM IC-7300 New in the Box \$1100

ICOM IC-706 orig with Signalink Digital Interface for FT8, JT65, PSK, RTTY etc \$550

Connect Systems CS-700 DMR/Analog UHF HT Excellent \$125

Connect Systems CS-580 DMR/Analog UHF HT Mint \$100

Connect Systems CS-800 DMR/Analog UHF Mobile Radio Excellent \$225

TYT MD-9600 DMR/Analog VHF/UHF Mobile Radio Basically new. \$229

Steppir 3 element yagi with 2 controllers with radio interface \$875

Mosely TA33M 3 element yagi \$200

US Tower MA550 Tubular tower 55' with motor crank up and pull dowm

MARB Base and tiltover on ground and ready to transport. I have someone who can flatbed it for you for a few bucks ...\$1400

Please call to discuss and come see! Ross W2TT 609-467-4670

**OBARC** Members,

If you know of any member who is not subscribed to the OBARC discussion list, please pass this link along to them. This will get them subscribed. Just fill in the appropriate info.

Note: to post to the list, the email must originate from the same email account that you subscribe.

http://mailman.gth.net/mailman/listinfo/obarc





#### **March Report**

Two candidates successfully passed Technician Exam

Jeff Dalton KD2PHL

Woddy Nelson

VE's Urb W1UL/Steve KI4KWR/Tim NJ2N/Ira N2WAA and Norm W2NRS



#### **2018 Dayton HAMVENTION**

May 18-20<sup>th</sup> Xenia, OH <a href="http://hamvention.org/">http://hamvention.org/</a>

#### **Antenna Making Calculator**

Here is a cool antenna calculator that gives you the length for a dipole versus an inverted v.

Of course, what's nice about an inverted v is that trimming the ends are much easier than with a dipole since they are relatively closer to the ground. So always make it longer first and always trim exact same amount from each end as you tune it.

http://w3pie.org/antenna.htm

#### **Alphabet Soup for Ham Radio**

By Urb LeJeune W1UL

#### A big thanks to John Roberts, KQ4WR, who corrected many mistakes and clarified many definitions

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 cto 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 - An 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.

PACTOR - A combination of two earlier digital modes, packet radio and Amateur Teleprinting Over Radio (AMTOR).

PACTOR III - A software upgrade for existing PACTOR-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 – 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 trigger.

SS Spread Spectrum - A technique that is the backbone of cell phone communications. Invented by actress Hedy Lamar, 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.

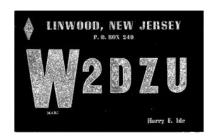
XOR Exclusive OR - - A digital logic gate that gives a true output when the number of true inputs is odd.

When Urb is not writing articles for newsletter he is usually working on his ham-cram.com website The site has three distinguishing characteristics.

- 1. We don't study incorrect answers
- 2. We only study the questions most likely on the VE test
- 3. It's totally FREE

### Harry E Ide - W2DZU

By John Dilks, K2TQN



Harry was a mentor to me before I became a ham in 1956.

I joined the local ham club which met on the second floor of the Pleasantville, NJ, city hall building once a month. I was 15 and in high school then and lived about 10 miles from the meeting location. My dad took me the first couple of months. Harry lived, nearby to me, in Linwood and offered to pick me up and bring me home the next month.

Harry was the Vice President and Manager of the local Lenox factory. He owned a new Cadillac. After the meetings most club members went to Giberson Diner in Pleasantville. Harry and I joined the group and it was coffee and pie time. Harry would not allow me to pay for anything, even though my dad gave me an extra couple of dollars and told me to treat him. Harry continued to transport me to the meetings for many months.

Shortly after I received my Novice license Harry invited me to his home to see his station. I rode over on my bike one Saturday. And what a station it was.



Harry had a beautiful home in a nice section of Linwood, called the "Gold Coast". I first noticed his tower and 20 meter beam next to his home as I approached. His ham station was in a large room on the second floor. Harry took me up there right away and we started to make contacts in Europe and Africa that morning.

He had a dream station of the National Desk Kilowatt, driven by a Johnson Ranger transmitter. His receiver was the top of the line National HRO 60. His beam control had a world map and he could rotate the antenna to any direction. During different QSOs he would touch up to

directional control, the needle would move accordingly. I was so impressed. My home brew station was meager by comparison. (My transmitter was a 5-watt single 6V6 tube and receiver was a used National NC 80X.) I mentioned I was having trouble sending because I couldn't hear my own signal. He gifted me a Johnson Signal Sentry he wasn't using, which picked up the transmitted signal and produced a tone similar to a code practice oscillator. This made a big difference for me as I became more apt in sending and receiving.

Harry would later retire to Florida and I lost track of him for several years. Later I received a nice letter from him. Still later he became a Silent Key.

Visit K2TQNs web page where he has a collection of early Atlantic City area QSL cards with additional history about the early hams of the area, including a series of 1915 Newsletters from the Atlantic City club. Read about what they were doing back then. <a href="https://www.k2tqn.com">www.k2tqn.com</a>

#### 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 21<sup>st</sup> is going to leave a significant snowfall on Ocean County.

The next meeting of Ocean County ARES will be on April 18<sup>th</sup> 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. 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 KIOBK as a replacement for the Astron modules.



C4FM Ocean County EOC Go-Kit - Front View



C4FM Ocean County EOC Go-Kit – Rear View

73 de WX2NJ Bob Murdock Ocean County Amateur Radio Emergency Service® EC

## **OBARC 2018 Contest Status**

INTERNATIONAL GRID CHASE	WAS	WAZ	WAC	DXCC
	IKWR - 50	N2OO - 34	KZ2I - 6	KZ2I - 127
NAZN -1331 KI	+KVVK - 30	14200 - 34	KZZI - U	1/21 - 12/
KI4KWR - 1291 N	A2R - 50	KZ2I - 33	KI4KWR -6	N2OO - 118
K2RET - 1044	(Z2I - 50	NA2R - 30	N2XW - 6	KI4KWR - 88
N2OO - 651 N	200 - 50 I	KI4KWR - 26	N2OO - 6	N2XW - 52
N1IBM - 523 N	2XW - 42	N2XW - 21		
KZ2I - 398				
W2TT - 343				
KE2NN - 261				
N2XW - 250				
NJ2N - 126				
N2DSW - 94				
N2CW - 26				



# Old Barney Amateur Radio Club P.O. Box 117 Manahawkin, NJ 08050

Club President: Club Vice President: Club Secretary: Club Treasurer:

Steve Molo KI4KWR Ira Hosid N2WAA Bob Wick N2HM Mike Libonati WA2ACV

Normal membership meeting is held on the first Tuesday of the month at 7:30PM at:

Ocean Acres Community Center 489 Nautilus Drive Manahawkin, NJ 08050

Refreshments served / Visitors welcome and Handicap accessible.

Dues (Good for Year) \$20 Full Membership / \$15 - 65 years old and older



