

Q-FIVER

The Official Newsletter of the OH-KY-IN Amateur Radio Society



OHKYIN to begin hosting Laurel VEC Test Sessions

Beginning on June 14th, the OH-KY-IN Amateur Radio Society will host amateur radio testing sessions using the Laurel VEC. The session will be held at 'My Neighbor's Place' at 3150 Harrison Ave, Cincinnati, OH 45211 at 7PM.

The Laurel Amateur Radio Club (LARC) Volunteer Examiner Coordinator (VEC) also known as the LARC VEC or Laurel VEC, is one of 14 VECs that have entered into an agreement with the Federal Communications Commission (FCC) to serve as a VEC. The Laurel VEC was established in 1984.

The Laurel VEC is managed by a Chairman who is appointed by the Laurel Amateur Radio Club. The Chairman serves as the point of contact with the FCC and is responsible for all aspects of the Laurel VEC. The Chairman is assisted by Regional Coordinators who recruit and manage teams of VEs within an assigned VEC Region. Teams of Volunteer Examiners are accredited by the Laurel VEC and perform all activities related to amateur radio license exams at the direction of and under the supervision of the Team Leader. All Regional Coordinators and Team Leaders are VEs who are accredited by the Laurel VEC.

The Laurel VEC is a member of the [National Conference of Volunteer Examiner Coordinators](#) (NCVEC) but operates as an independent VEC.

The mission of the Laurel VEC is to:

- Coordinate amateur radio license exam sessions scheduled and conducted by teams of Volunteer Examiners (VE) accredited by the Laurel VEC
- Provide policies, procedures, and instructions to ensure that all exam-related activities are conducted in accordance with the applicable rules and regulations of the FCC; and
- Maintain the value and integrity of the Volunteer Examiner program.

Volunteer Examiners provide an invaluable service to the amateur radio community. Since its inception in 1984, the Laurel VEC takes great pride in the fact that it has never charged a fee for its services.

2016 Board of Directors

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Bruce Vanselow N8BV (513) 251-1555 n8bv@juno.com

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OH-KY-IN Repeaters

146.670 (-) Clifton

146.625 (-) Edgewood, KY

146.925 (-) Colerain Twp

443.7625 (+5) Clifton

A CTCSS (PL) tone of 123.0 Hz is required for access to all OH-KY-IN repeaters. All repeaters also transmit a CTCSS (PL) tone of 123.0 Hz

APRS on 144.390 mHz

K8SCH-10 Edgewood WIDEn

K8SCH-9 Clifton WIDEn

Packet on 145.010 mHz

K8SCH-7 Digipeater

For membership information, please contact Nathan Ciufo KA3MTT, 6323 Cinnamon Ridge Dr, Burlington KY 41005, (859) 586-2435 or Email membership@ohkyin.org. Renewals of Club Memberships are due by the end of March. Permission is hereby granted to any amateur radio group to quote or reprint from this publication, if proper source credit is given, unless permission is otherwise reserved.

THE Q-FIVER is now mailed & e-mailed, it's hoped, a week before the club meeting.

Normally copy deadline is the weekend before that. Please send your submissions for THE Q-FIVER (including notice of upgrades & callsign changes) to Brian K4BRI

These may be: snail-mailed to or dropped off at 6901 Backus Drive, Alexandria KY 41001 or telephoned to (859) 635-3095 any time



Oh-Ky-In Life Members

John Phelps N8JTP

Kenneth E Wolf N8WYC

John W Hughes AI4DA

Karl W Kaucher KJ4KWR

Howard Hunt NG8P

2016 Committee Chairs and Appointments

Newcomers/Elmers Net..... Robert Gulley AK3Q
Technical CommitteeBrian DeYoung, K4BRI
ARPSC Representative.....Jerry Shipp W1SCR
Volunteer ExaminersBrian DeYoung K4BRI
QCEN Representative Pat Maley KD8PAT
Membership Nathan Ciufo KA3MTT
Fundraising Bruce Vanselow N8BV
Education Michael Niehaus KD8ZLB
Repeater Control Ops Mgr Bruce Vanselow N8BV
PIOTed Morris NC8V
Librarian Howard Alban KD8WOY

Q-Fiver Editor Brian DeYoung, K4BRI
Field Day..... Eric Neiheisel N8YC
Historian Dale Vanselow KC8HQS
Special Publications Jo Haltermon KD4PYS
Fox Hunters Dick Arnett WB4SUV
Equipment Mgr Brian Fulmer KC8FJN
WebMaster Ryan Williamson W1RYN
Silent KeyBruce Vanselow N8BV
Tech Talk Net MgrBruce Vanselow N8BV
K8SCH QSL MgrGerry Weimer KD8ASL
TV/RFI Dick Arnett WB4SUV

The June Mobile Foxhunt will be back to the standard date of the second Saturday of the month—June 11th—at 10:00 AM starting from Mt Storm Park

June Calendar

Wed Jun 1	9:00 PM	Tech Talk, NCS Robert AK3Q
Sun Jun 5	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: 3-Year Anniversary of the Net —NCS Robert AK3Q
Tue Jun 7	7:30 PM	Club Meeting at St Bernard Recreation Hall, 120 Washington Avenue.
Wed Jun 8	9:00 PM	Tech Talk, NCS Brian K4BRI
Sat Jun 11	10:00 AM 1:00 PM	Mobile Foxhunt, starting at Mt. Storm park in Clifton—talk in on 146.670 Brunch Bunch at Frisch's restaurant in Norwood
Sun Jun 12	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: How Well Do You Listen? —NCS Robert AK3Q
Tue Jun 14	7:00 PM	Laurel VE Session, My Neighbor's Place—3150 Harrison Ave, Cincinnati, OH 45211
Wed Jun 15	9:00 PM	Tech Talk, NCS Dale, KC8HQS
Sun Jun 19	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: Installing/Using a Radio in a Vehicle —NCS Robert AK3Q
Wed Jun 22	9:00 PM	Tech Talk, NCS George N3VQW
Fri Jun 24	2:00 PM	Field Day Setup Begins
Sat Jun 25	2:00 PM 6:00 PM	Field Day Operation Begins Field Day Picnic
Sun Jun 26	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: Fusion and P25 Digital Modes —NCS Robert AK3Q
Tue Jun 28	7:00 PM	Board of Directors meeting
Wed Jun 29	9:00 PM	Tech Talk Net

Minutes of the May, 2016 Regular Meeting

OH-KY-IN AMATEUR RADIO SOCIETY MINUTES OF MAY 3, 2016, REGULAR MEETING

The meeting was **Called to Order** at 7:32 P.M. by President Michael Sien KD8SOH, commencing with the Pledge of Allegiance. Forty-one attendees included five guests and our guest speaker from Z98.

Brag Session: Justin Moore KE8COY upgraded to General Class; Jim Caldwell KE8DZQ and Don Wong KE8DZO are new Technician licensees. Dick Arnett WB4SUV medaled in four categories, including one Gold medal, at the ARDF US Championships in Texas. Marji Garrett KJ4ZKC also medaled. They and Brian DeYoung K4BRI were among five participants from the Greater Cincinnati area. Self-introductions followed.

Program

Michael KD8SOH then moved directly to the evening's program, on "WDTZ, Z98," a community radio station for Delhi Township, introducing our guest speaker, co-founder Taylor Sunderhaus.

Taylor explained how he and a co-worker, Walter Hughes, shared several music-related professional interests, so when the Federal Communications Commission opened a new filing window for low power community radio stations, they decided to apply. However, while Walter was an experienced broadcast engineer in the area, Taylor—a computer specialist—had no broadcasting experience. Taylor then gave us an engaging and entertaining perspective on learning the industry from the ground up.

They first established a new non-profit 501(c)(3) organization, Delhi Public Radio, Inc., under which to file to build a community radio station for Delhi Township. These stations have the lowest priority among other broadcast services and licensees, with output wattage regulations based upon height-above-sea-level. This made it difficult to find a suitable location for their station and tower that would afford the coverage of their target area. Eventually a storefront in a local strip mall was rented—even before they knew if their license application would be approved—and six months later they received their FCC Construction Permit. The corporation was established in 2013 and in October of that year they applied for their low power FM license. The next month they learned they were the sole applicants for 98.1 MHz. By late May 2014 they had assembled transmitter, antenna, audio, emergency alert system, and associated equipment, "and the fun began." They currently have a 5-10 mile range, with 23 watts of effective radiated power (ERP). They are also available online through the "Tune In Radio" app on smartphones and tablets.

The station playlist centers around 1980's music of all genres, including hits or holdovers still going strong in the '80s, or 80s "slow starters" that went big in the 90s. Over time they have added scheduled programming of other era's music, have added local news, and introduced feature shows from area public officials. They want to be the best community hub for Delhi Township information.

Walter's audio engineering background and equipment collection, along with Taylor's own audio gear, got them started building the station. In those early days they also received help from an angel investor in the non-profit corporation. Taylor's slides showed the station interior and exterior, with attention to aspects of station construction that were all new to him as a broadcasting novice. But Taylor remarked on many of the "little details" that make for a professional production that he was previously unfamiliar with—such as installing the computers that run their programming software *outside* the studio, so their cooling fans would not be heard on-air. He noted the extensive amount and complexity of control cabling involved (in addition to the audio cabling) that allow an operator at the main control board to start a program source (installed outside the studio) at the press of a button on the control board, without the audience ever hearing any startup noises from CD players or tape machines.

Even though the two co-founders served as DJs and hosted karaoke sessions before starting the station, Taylor remarked about his relative learning curve for running a control board, controlling audio levels for broadcast, documenting "talk-up time" for song introductions, setting up and using "remote" equipment at live community events, etc. He says his Z98 experience is helping him study for his ham Technician license, though!

Taylor took audience questions after his prepared presentation, and was warmly thanked at the program's conclusion. More information about Z98 and Delhi Public Radio, Inc. can be found at <http://z98fm.com> and <http://delhipublicradio.org>.

Business Meeting

Michael KD8SOH moved directly into the business portion of the meeting.

Minutes: April Regular Meeting minutes were approved as published in the *Q-Fiver*.

(Continued from page 4)

Membership: Michael reported for Chair Nathan Ciufu KA3MTT that as of April 29, we had 124 members.

Treasurer: Treasurer Brian DeYoung K4BRI reported \$188 income and \$14 expenses in the preceding month, and circulated copies of his April Treasurer's Report.

Silent Keys (SK): No silent keys have been reported, but Bruce Vanselow N8BV is in the process of assisting a long-time member liquidate his station holdings. More information will be forthcoming.

Brunch Bunch: Bruce announced the next venue will be Frisch's Norwood, this coming Saturday at 1:00 PM, the usual "second Saturday of the month" time.

Technical: Chair Brian K4BRI reported all of the repeaters are one the air and operating as well as they can for now. He noted he changed the firmware version on the controller for 146.67, in hope of eliminating some of our and squelch problems, but it made no change.

Hamfest: Chair Gary Coffey KB8MYC announced the next Hamfest Committee meeting would be Thursday May 26th at 7:00 PM at Aiken High School.

Education: Chair Mike Niehaus KD8ZLB reported that nine students took our post-classes exams and all passed, yielding 5 new Technician licensees, three General upgrades, one upgrade all the way to Amateur Extra class.

We are planning a one-day Technician license class for September 10th, timed so folks can take their exam the following week at the Hamfest. More details will follow.

Fox Hunting: The latest fox hunting session was April 23, the *fourth* Saturday of the month and a departure from our regular second-Saturday schedule. Fifteen folks, including one from Indiana, participated or observed in four teams.

There will be fox hunting at the Dayton Hamvention, on Saturday, May 21st, at 5:00 PM. Dick Arnett WB4SUV will be hiding several transmitters.

Tech Talk Net: Bruce N8BV reports the Wednesday 9:00 PM Net check-ins continue to do well. Brian K4BRI will be the next Net Control Station at the May 4th session.

Website: Webmaster Ryan Williamson W1RYN reports that our Domain Name is now in the webmaster's name, and we are looking at moving to a new hosting company. At that time we hope to get WordPress running. He has added features for our Library including a Request Form. He has also instituted the @OHKYINARS Twitter account.

Ryan is testing a form structure that will allow us to collect information and responses through the website rather than only by email. He again called for picture and content contributions; Michael KD8SOH said he has pictures from the NVIS Antenna Test to send in, and will also get pictures from the WLW Tour to Ryan shortly.

Digital Group: Jerry Shipp W1SCR reported folks worked on System Fusion, Winlink, and other projects at the April meeting. The next meeting is May 24th at 7:00 PM in the basement meeting room at St. Bernard's City Hall.

QCEN: Pat Maley KD8PAT reported their next meeting will be early this month, on the 13th, to accommodate the Dayton Hamvention. Kitty Hevener W8TDA is the speaker, on "Amateur Radio and Service Dogs—PAWS for Reflection." As more folks begin to need service dogs, so are the dog's capabilities growing. Her talk will include how to help a service dog team get integrated/welcomed into your organization.

ARES/Health Department: Bryan Hoffman KC8EGV reported that the Health Department group doesn't have much going on at the moment. ARES will participate in a Mass Casualty Incident (MCI) drill at Diamond Oaks Career Campus off Kemper Road on Friday, May 20th. They need operators for posts at several area hospitals as well as at the school.

(Continued on page 6)

(Continued from page 5)

Old Business:

Sound System: Michael KD8SOH has been ill and has not had a chance to work on the sound system and wireless microphone issues yet.

New Business:

Events:

Tour of Regional Operations Center: This tour is planned for Thursday, June 9th, at 7:00 PM. This is the emergency operations center for the Emergency Management Agency and area first responders, and located on Radcliffe Dr. Ed Frambes K8EAF is heading this up.

Red, White and Blue Ash: Bruce N8BV announced we will once again be staffing a beer booth at this annual 4th of July festival, and will need volunteers. This is a major income source for our activities.

St. Bernard 3K/5K Run: Jerry W1SCR announced that communicators are needed for this July 2nd event.

Harvest Home Fair: Bruce N8BV announced that the Board of Directors has decided we will assist the Harvest Home Fair organizers with volunteers, probably Friday and Saturday nights, September 9th and 10th, staffing the Entrance booth. Probably four or five volunteers, in shifts, will be enough to cover.

Upcoming Programs:

- June - Field Day Planning led by FD Chairman Eric Neiheisel N8YC
- July - OH-KY-IN Picnic
- Aug - TBA
- Sep - TBA
- Oct - Home Brew Night – share your projects
- Nov - CHIRP Programming

Split the Pot: \$68.50 went to Jerry Shipp W1SCR.

Giveaways: Howie Hunt NG8P again provided several *Survival Magazine* issues. In addition, a K8SCH (club station) flag went to Brent Shields KK4HMR; Fred Schneider K9OHE received a battery recharging station that also handles alkalines; and a Software Defined Radio (SDR) dongle went to Bob Frey WA6EZV.

The meeting **adjourned** at 9:00 P.M.

Respectfully submitted,

Ted Morris NC8V, Secretary



The following excerpts are from an article entitled **Science is Our Secret Weapon**, first appearing in the antennex Online Magazine in their opinion column "From the Shack."

Used by Permission - Robert AK3Q

For more years than I care to count I have been hearing about how we need "to get young people involved" in amateur radio. The image most of us old-timers have is of sitting in a small closet-spaced room with headphones on, a Morse code key on the table, and a paper log book in front of our transmitter and receiver. Radio has changed, at least for those of us who have actually made it into the 21st century. There is nothing wrong with the image we might have of our own past and early days of radio, but this is not an appealing image to today's youth.

But what does it really mean to appeal to today's youth? First off, amateur radio is what it is – it does not change. What I mean by this is amateur radio is about communication, science, mechanics, and exploration. We are primarily communicators (and yes one can have a license and never communicate, but the spirit of amateur radio centers around making communication between two or more people possible radio to radio.)

Science is involved even if, again, those who get their license never choose to explore the science any farther. Science is one of the major "draws" to amateur radio. Let's face it: the ability to communicate is greater than ever, and yes, the Internet can go down, and the cell services can fail, and amateur radio is our last, best line of defense in these situations. All of this is true. But on a typical day-to-day basis Skype and Texting and Twitter and Facebook and a hundred other means of communicating means telling folks they can talk on a radio with a microphone attached hardly seems earth-shattering.

Science is Our Secret Weapon

Of all the various aspects of amateur radio which we can promote, I believe science is our secret weapon. Almost every day advances are being made in RF technology, which is of course directly related to our hobby. We are making connections with Arduino, Raspberry Pi, Mesh Networking, digital modes, software programming and implementations of computer technology in almost every area of the hobby. Not to mention DV, Remote Control, APRS, Balloon launches, CubeSats, propagation and solar/space activity, Radio Astronomy, Digital TV and SSTV, and on and on.

The science behind all of these activities can capture the minds of folks who are interested in science already, as well as become a pathway to the sciences themselves. What we learned by watching our fathers or neighbors or friends as they operated shortwave and amateur radio, is what our kids and grandkids can learn from us as we blend science in with our hobby.

(Continued on page 8)

(Continued from page 7)

I believe kids need to see the wonder of things and to be able to ask “How did you do that?” Such a thing might be as simple as showing them how you can follow a fellow ham on the family vacation by tracking their APRS signal across the country. Or how you can follow a hiker along as they travel the Appalachian Trail.

[Or let them hear a satellite contact or receive images from outer space, or listen to Jupiter when it makes its rounds and we can hear it up near 20-meters, or try some meteor scatter or track a signal around the world with a WSPR beacon network.] - Robert

Concluding Thoughts

The list of possible connections between science and amateur radio could almost be endless. Wave theory as illustrated by radiation patterns from antennas. Microwave and Wireless RF technologies now and in the future can be a back door into the hobby. The common denominator in any link between science and the radio hobby is the mentor. The person who demonstrates directly or indirectly science and amateur radio in action.

Science is intimately connected to amateur radio, and our participation in and guidance through the scientific connection can bring around a whole new generation of hams.

As is often said, many things are caught even more than taught, and if we are actively pursuing interesting aspects of the hobby, the more likely we are to generate interest in the young people. Be “that crazy neighbor with all the antennas” who helps kids see how science and amateur radio are related. Making connections is all about capturing the imagination, and amateur radio has room for plenty of imagination!

Brunch Bunch

The next Brunch Bunch will be held Saturday, June 11th at 1pm. The location for June is My Dad's Place in Saint Bernard, no not 'my dads' place. My Dad's Place is located at 4501 Vine Street, just a short distance from where our club meetings are held. They are at the corner of Vine & Lawrence Streets, across Lawrence from the Dairy Queen. Parking is available on street or in the lot across Vine Street. My Dad's Place is on facebook at:

www.facebook.com/Mydadsplacestbernard/

Remember that the Brunch Bunch always meets the second Saturday of every month at 1pm at a location to be announced each month. If you can't join us this month, maybe you'll be available to join us in the months ahead.

I'm always looking for suggestions on what restaurant you think might be a good place for the Brunch Bunch to visit soon.



73,Bruce, N8BV



The Music of Radio: Sounds of the Arc

By Justin Patrick Moore, KE8COY

The Music of Radio is a history series showcasing the relationships between radio and electronic music. This installment focuses on sounds created by arcs in the days before incandescent lighting cast its long and overshadowing glow.

The first source of electrical lighting was the arc lamp. It was also used as a means for producing an electrical form of singing. Invented by Humphry Davy in the first decade of the 19th century the arc lamp created light from the electricity passing between two carbon electrodes in free air. To ignite a carbon lamp the rods were touched together allowing a low voltage to strike the arc. They were then drawn apart to allow the electric current to flow between the gap. This first means of electrical lighting also became the first commercial use for electricity beginning around 1850 but it didn't really take off until the 1870's when regular supplies of power became available.

Three major advances in the technology occurred during the 1880's that helped to spread the adoption of the arc lamp. The first was a mechanism to automatically adjust the electrodes. The second was the placement of the arcs in an enclosure to cause the carbon to burn at a slower rate. Last salts and tiny amounts of metals were added to the carbon to create flames of greater intensity and different colors. At this time a number of companies became involved with the manufacturing of these lamps and they began to be used for lighting on streets and other public places. Yet there was one feature about the light source that many folks found disagreeable. These were audible power-frequency harmonics caused by the arcs negative resistance. Nikola Tesla was one of the guys who set to work on this problem of noise. In 1891 he received a patent for an alternator that ran at 10,000 cycle per second that was to be used to suppress the undesirable sounds of humming, hissing and howling emitted by the lamp.

Tesla's invention must have been impractical or just never caught on because over in London in 1899 the Victorian electrical engineer William Duddell had been appointed to tackle the problem of the lamps dissonant electrical noise. Duddell was an illuminated man and he took a different angle than Nikola. Instead of suppressing the sounds he transformed them into music. In the course of his experimentation Duddell found that by varying the voltage supplied to the lamps he could control the audible frequencies by connecting a tuned circuit that consisted of an inductor and capacitor across the arc. The negative resistance of the arc was excited by the audio frequency oscillations from the tuned circuit at its resonant frequency. This could be heard as a musical tone. Duddell used another one of his inventions, the oscillograph, to analyze the particular conditions necessary for producing the oscillations. He demonstrated his invention before the London Institution of Electrical Engineers by wiring up a keyboard to make different tones from the arc. Being a patriotic fellow he played a rendition of *God Save the Queen*. His device came to be known as "Singing Arc" and was one of the first electronic oscillators. It was noted that arc lamps on the same circuit in other buildings could also be made to sing. The engineers speculated that music could be delivered over the lighting network, but this never became a reality. Duddell toured his instrument around Britain for a time but his invention was never capitalized on and so remained only a novelty.

Duddell's Singing Arc had been very close to becoming a radio. Marconi's spark-gap transmitter had already been demonstrated in 1895, yet Duddell thought it was impossible to leverage his Singing Arc to produce radio frequencies instead of audio frequencies. The AC current in the condenser was smaller than the supplied

(Continued on page 10)

(Continued from page 9)

DC current so the arc never extinguished during an output cycle, making it impractical to use as an RF transmitter. With this set up it was not possible to reach the high frequencies required for transmission of Radio-telegraphy. If he had managed to increase the frequency range and attached an antenna his invention could have become a CW transmitter.

Enter Danish physicist Valdemar Poulsen. In 1900 at the Paris World Fair this man demonstrated his inventive flair with the world's first magnetic recording device, the Telegraphone. Working with another Dane, P.O. Pederson, he used his skills to improve upon Duddell's Singing Arc. They were able to raise the efficiency of the device up to 200 kilohertz. His method of oscillation made use of an AC current from the condenser that was large enough to extinguish the arc but not so great that it caused the arc to restart in the opposite direction. (A third method of oscillation was used in spark gap transmitters where the arc is extinguished but might reignite when the condenser reversed.)

In 1903 they patented the Poulsen arc wireless transmitter that was the first generate to continuous waves, and one of the first pieces of technology to transmit through amplitude modulation. Poulsen's version was used for radio work around the world up into the 1920's when it became replaced by vacuum tube transmitters.

The method of operating a Poulsen arc transmitter required frequency shift keying. Straight on-off keying could not be used because of the time it took for the arc to strike and re-stabilize. With the arc staying on throughout operation the keying frequency needed to be adjusted anywhere from one to five percent. The signal at the unwanted frequency was deemed a compensation wave. Two keys were used, a "mark" or closed key, and a "space" or open key. This mode took up quite a chunk of bandwidth, as it also transmitted on the harmonics of the frequencies. Since around 1921 the use of the compensation wave method for CW has been prohibited. One way amateurs worked around this was to use a dummy antenna, or back shunt, tuned to the same frequency as the transmitter to absorb the load from the arc while keeping it running.

It as common to use audio frequency shift keying in telephony. Most early Bell modems used FSK at around 1200 baud. FSK is still used for some digital ham modes such as AMTOR, PACTOR, and GTOR.

Thanks for joining me here on the Q-Fiver frequency and tune in again next month for an exploration of the music made from sparks created by a Canadian amateur and early radio broadcaster in 1914. Until then, 73.

P.S. For those interested in creating a high-voltage Plasma Arc Speaker based on Duddell's Singing Arc an article on how to do just that was written for Make Magazine by John Iovine. The core of his project is a 555 timer and an insulated gate bi-polar transistor. Schematics, instructions and a video of it in operation are available at: <http://makezine.com/projects/plasma-arc-speaker/>.

Sources:

https://en.wikipedia.org/wiki/Arc_lamp

<http://120years.net/the-singing-arcwilliam-duddeluk1899/>

https://en.wikipedia.org/wiki/Arc_converter

June 2016 DX Spots de KA3MTT

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 V73HA - Marshall Isl thru 6-7 	3 ZF2MN-Cayman Is Thru 6-17 	4
5 FS - St Martin thru 6-25 	6	7 V63AN-Micronesia Thru 6-9 	8	9 T88AN - Palau Thru 6-14	10	11
12	13	14 V47JA - St Kitts & Nevis thru 7-15 	15 3B8 - Mauritius thru 7-14 	16	17 FJ - St Barthelemy Thru 6-29	18
19	20 8Q7HW - Maldives Thru 6-28 	21	22 J79XE - Dominica Thru 7-11 	23 C6AUX - Bahamas Thru 7-8 	24 ARRL Field Day Weekend 	25 ARRL Field Day Weekend 
26 ARRL Field Day Weekend 	27	28 9H3G - Malta thru 7-4 	29	30		

OH-KY-IN Amateur Radio Society

Regular monthly meetings are held the first Tuesday of each month at 7:30PM local time at the St Bernard Recreation Hall, 120 Washington Avenue (corner Washington & Tower Aves) in St Bernard, just east of Vine St. Please come in the doors at street level, facing the high school. Visitors are ALWAYS welcome!

The next meeting of the Oh-Ky-In Amateur Radio Society will be Tuesday, June 6th at 7:30 PM

The meeting topic will be—Field Day! OhKyIn Field day is held at Mitchell Memorial Forest, 5401 Zion Rd, Cleves, OH 45002



OH-KY-IN Amateur Radio Society

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PLEASE
PLACE
STAMP
HERE

