



HAM RADIO COMMUNICATOR

May 2017



NOT YOUR FATHER'S AMATEUR RADIO ANY MORE!!!

**Valerie Hotzfeld NV9L
Hosts DX Segment on Ham Nation
Meet Val at Dayton Hamvention**



DOUGLAS COUNTY AMATEUR RADIO CLUB NEWSLETTER
Lawrence, Kansas

Table of Contents

PRESIDENT'S CORNER.....	3
MEETING MINUTES	6
MICRO-CONTROLLERS	7
Arduino Projects	7
ROBOTICS	8
PUBLIC SERVICE.....	9
Dayton Hamvention	9
Ensor Park and Museum.....	10
Calendar of Events	11
Public Service Event YouTube Videos	12
ANTENNAS.....	13
20 Meter Length Beverage Antenna	13
SATELLITE COMMUNICATIONS.....	16
Satellite Orbit	16
Satellite Frequency.....	16
SHACK ACCESSORIES	17
Relative S Meter.....	17
AMATEUR RADIO INTERVIEW: Jim Cessna AC0KN	18
RADIO-SPORT	20
W0UK/Portable.....	20
Contests Calendar.....	29
ARRL Contests	29
WA7BNM Contest Calendar	29
EDUCATION/TRAINING	30
Ham Classes.....	30
Schedule.....	30
Samuel F.B. Morse.....	31
TECHNICAL DEMOS	32
K1-4 QRP CW Kit	32
CONTACTS	33
REPEATERS & NETS	34
ARES	34

Club	34
MEETINGS	35
Tuesdays	35
Saturdays	35
2 nd Wednesday	35
MEMBERSHIP APPLICATION	36
COPYRIGHT	37

PRESIDENT'S CORNER

By Jim Eckler – KC0IDF



We had a good group attending the club meeting. A little sparse, but not bad. I'd like to welcome some of the new faces not seen for a while.

I am concerned about the longevity of the club. We really need to have an infusion of younger Hams. And, well, more Hams in general.

During the meeting I tossed out some ideas to help increase attendance and encourage some of the younger hams. I think if we have more "hands-on training", it will entice more to attend, so here are some of my ideas.

The first idea I would like to see happen would be to have an Elmer supervise some hands-on training like, soldering a PL-259 onto each end of a piece of coax making up a feed line. A lot of new Hams have never seen this done. It's not hard, but it does require a little supervision sometimes.

The second idea I would like to see happen, possibly in another corner the room, an Elmer instructing how to install Power Pole connectors onto a set of black-red wires making up a power-to-rig jumper. A lot of new Hams, and old Hams alike, have never seen this done either.

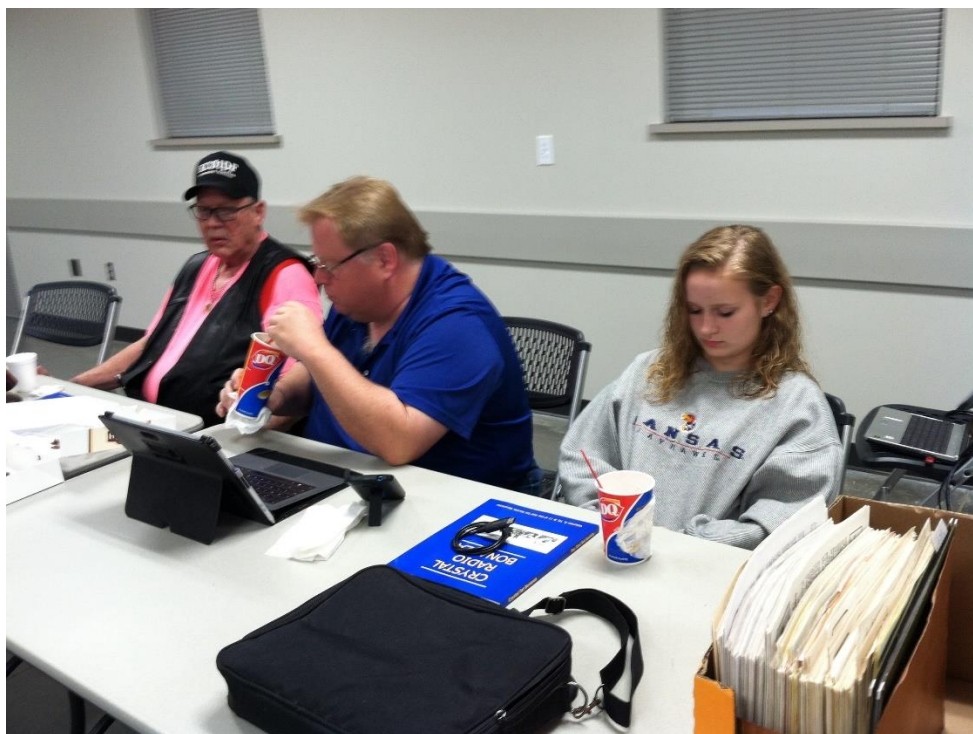
The third idea I would like to see happen, is how to build a fox hunting antenna. In conjunction with a fox hunting antenna, make up an attenuator box, so you can get close to the transmitter, and still have some selectivity in its direction finding capabilities.

Another area that could increase attendance would be to bring an elderly Ham to and from the meetings. Offer this Ham a ride to Field Day and possibly to other events the club has to offer. It maybe they're "inactive" because of their physical situation and not because of a "lack of interest".

Every club has lots of things to do. Remember the phrase, "Many hands makes light work.", so figure out what you're going to contribute to the club this year and pitch-in. Every little bit helps.

Tnx,
Jim





MEETING MINUTES

By Kevin Oneslager KS0EGL



April 12, 2017

DCARC Monthly Meeting

7:08pm Meeting Opened

President Message: Welcome, introductions of all present

Minutes approved

Treasurers Report

General Fund	\$1,025.57
Repeater Fund	\$1,717.62
Total Fund	\$2,743.19

ARES Report

ARES Nets - Sunday evenings 8:00pm on 146.76+88.5 w0uk repeater & following on DMR KS system

4/15 Ararat Hambash

6/11 Lone Star Bike Ride, Brian Short kc0bs, kcshorty@gmail.com

6/24-25 Field Day

7/23 Cider Mil Century Ride, Brian Short kc0bs, kcshorty@gmail.com

8/20 ARRL Convention, Webster Conference Center, Salina, KS

9/9-10 Hawk 100 Run, Bill Gery ka2fnk, ka2fnk@gmail.com

9/16-17 MS Ride KC, Olathe to Lawrence and back, Herb Fiddick nz0f, [hfiddick@gmail.com](mailto:hfidick@gmail.com)

9/17 Bikers for Babies Motorcycle Ride, Matt May kc4wgc, kc4wgc@twc.com

VP Report: mini-field day went well. Interest in doing it again but warmer weather. Tuesday night net is going well.

Jim Eckler is concerned that we don't have enough members to survive long term. May have to ask for donations if we go into the red to cover any expenses. Would like to have a how to solder PL-259, maybe fox hunting antennas sessions.

Brandon – 1st Saturday of each month in the mornings to do demo/hands on learning events, possible Bluetooth digital connection instead of using a Signalink.

Phil – pc board schematic creation, WWB/V receiver,

New Business:

1st Saturday events – many are interested. Next plan to meet at Filardo's home 9:30am. Antenna's, Bluetooth interface

Sunday April 16, 2017 is the Rookie Round-up HF information is on ARRL website.

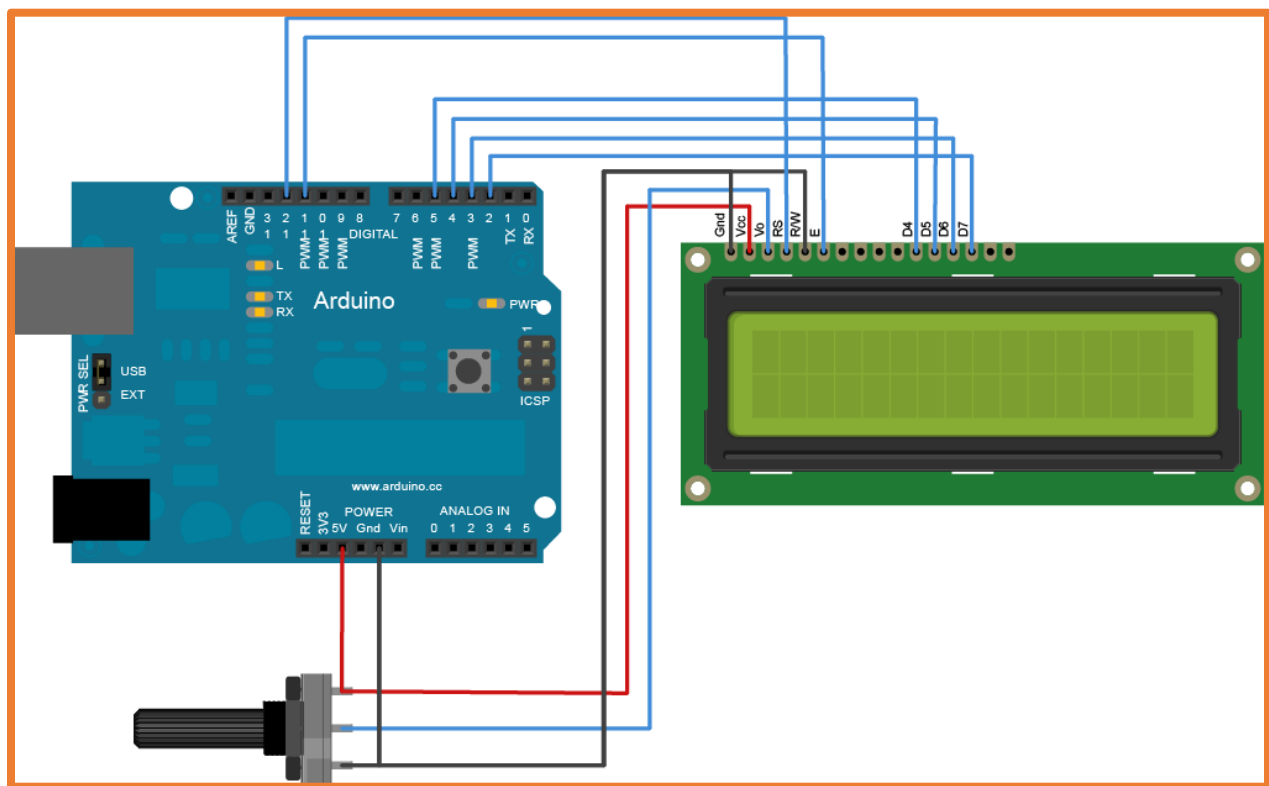
7:30pm Adjourned.

MICRO-CONTROLLERS

Arduino Projects

From “Arduino for Ham Radio” by Glen Popiel, KW5GP

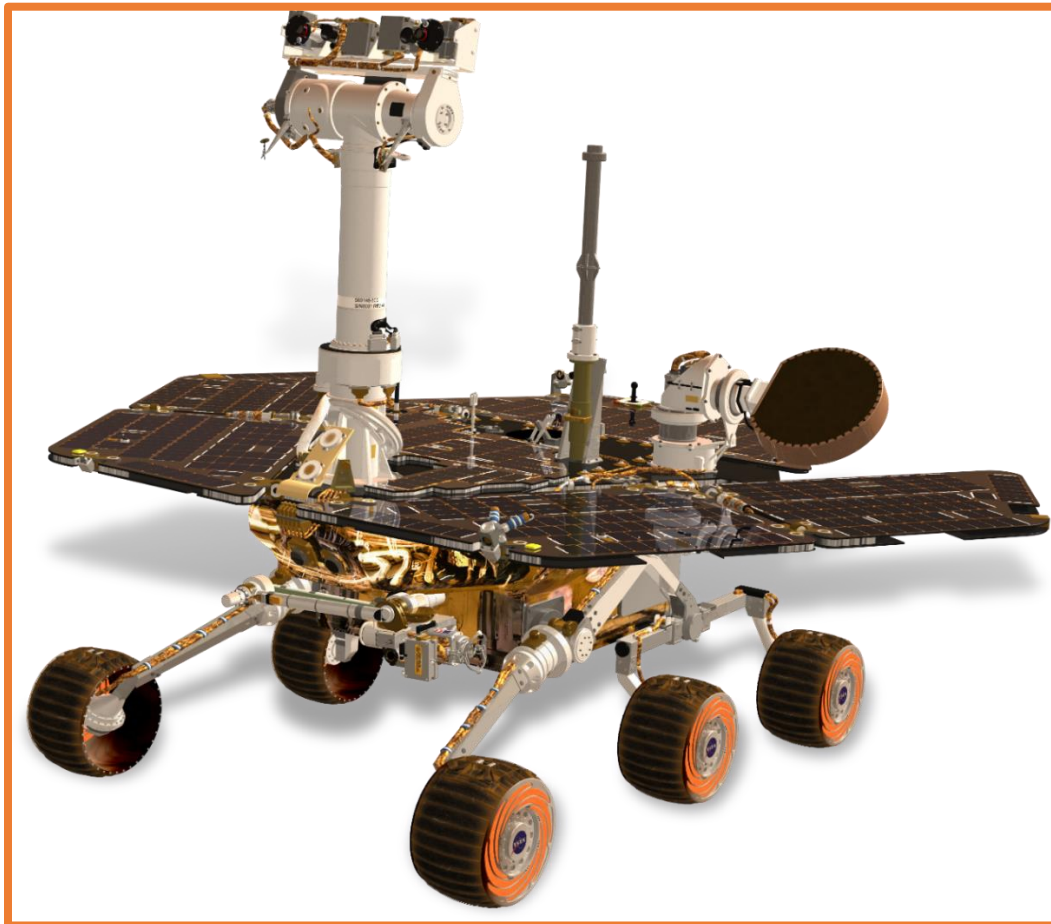
Code Practice Generator	Fan Speed Controller
CW Beacon & Foxhunt Keyer	Digital Compass
WX Station	Talking SWR Meter
RF Probe w/ LED Bar Graph	Talking GPS/UTC Time/Grid
Solar Bat Charge Monitor	Iambic Keyer
On-Air Indicator	Waveform Generator
FD Satellite Tracker	Scripts
AZ/EL Rotator Controller	Schematics
Lightning Detector	
CW Decoder	www.arduino.org



The newsletter intends following the development of each of the Arduino projects listed in the table showing pictures and schematics. If you'd like to have a group development session, please let ac0kn@arrl.net know and we'll make further arrangements.

ROBOTICS

Remote Sensing	Remote Data Gathering
Wireless Technology	Artificial Intelligence (AI)
Logic	Source Parts
LED/LCD Displays	Transistors
Intergraded Circuits (ICs)	Transformers
Motors and gears	Micro-controller(s)
PCBs	Batteries
Servo motors	Solar Panels
http://www.arrl.org/ham-radio-spirit-lives-in-robots	https://www.makershed.com/collections/robot-kits
www.nationalroboticsweek.org	



The newsletter intends following the development of robotic projects listed in the table showing pictures and schematics. If you'd like to have a group development session, please let ac0kn@arrl.net know and we'll make further arrangements.

PUBLIC SERVICE

Dayton Hamvention



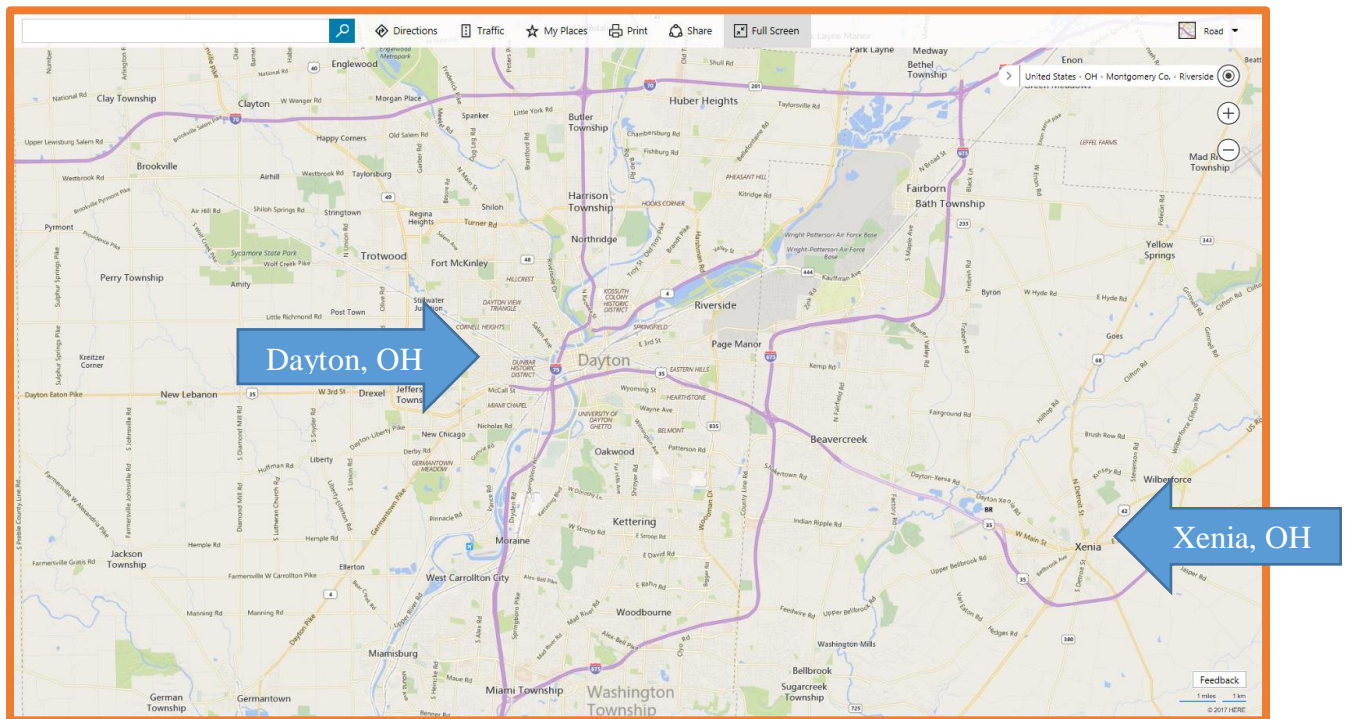
Web Site: <http://hamvention.org/about/hamvention/>

PLACE: Greene County Fairgrounds
120 Fairground Road
Xenia, OH 45385
937-372-8621

DATE: May 19, 2017 Time: 7:30 am – 6 pm
May 20, 2017 Time: 7:30 am – 5 pm
May 21, 2017 Time: 8:00 am – 1 pm

Advance Tickets: \$22

Day of the event: \$27



Ensor Park and Museum
By Jim Cessna – AC0KN



If you haven't been through the Ensor Park and Museum it's well worth the trip. The 1890's farmstead has Ham radio roots and has been preserved to showcase life on the farm.



Marshall Ensor received the William S. Paley award, presented by William S. Paley, to amateur operators for exceptional service to our country.

The museum is open 4 months of the year – May, June, September, and October. Tours are given Saturday and Sundays from 1pm to 5pm.

For more information, please see
<http://www.ensorparkandmuseum.org/visit-the-ensor-museum/>.

Calendar of Events

DATE	TIME	EVENT
1/27/2018	10:00-15:00	KS DAY: KS joined union 1/29/1861
1/27/2018 1/28/2018		Winter Field Day https://www.winterfieldday.com/
4/22/2017	0000-2359Z	International Marconi Day (K2M, GB4IMD, EI6YXQ) http://gx4crc.com/gb4imd/
4/27/2017		Morse Code Day https://www.daysoftheyear.com/days/morse-code-day/
4/29/2017 4/30/2017	s-time: 10:00 e-time: 17:00	WW1USA – U.S. enters War http://www.signupgenius.com/go/10C044DAEAB2DA2F49-ww1usa9
05/19/2017 05/20/2017 05/21/2017	07:30-18:00 07:30-17:00 08:00-13:00	Dayton http://hamvention.org/
6/11/2017		Lone Star Bike Ride Brian Short KC0BS kcshorty@gmail.com http://www.kansascyclist.com/events/Calendar.html
06/24/2017 06/25/2017	s-time: 13:00 e-time: 13:00	Field Day http://www.arrl.org/field-day
7/19/2017- 7/28/2017		Boy Scouts Jamboree On The Air (JOTA) http://www.summitbsa.org/events/jamboree/overview/
7/22/2017 7/23/2017	s-time: 10:00 e-time: 17:00	WW1USA – Battle of Passchendaele https://www.theworldwar.org/amateurradio
7/23/2017		Cider Mil Century Ride Brian Short KC0BS kcshorty@gmail.com
8/20/2017		ARRL Convention Webster Conference Center, Salina, Ks.
08/26/2017 08/27/2017	09:00-21:00 09:00-15:00	KS QSO Party www.ksqsoparty.org
9/09/2017- 9/10/2017	06:00 08:00	Hawk 100 Run (100, 50) Hawk 26.2 Contact: Bill Gery KA2FNK at 913-575-3763 ka2fnk@gmail.com
9/16/2017 9/17/2017		MS-Ride KC Olathe to Lawrence and back. Herb Feddick NZ0F hfiddick@gmail.com
9/16/2017		Bikers 4 Babies Motor-cycle ride Matt May KC4WCG kc4wcg@twc.com
10/07/2017		ARRL Simulated Emer. Test
10/09/2017	13:00	Lawrence Crop Hunger Walk http://www.crophungerwalk.org/lawrenceks
10/21/2017 10/22/2017		BSA-JOTA http://www.scouting.org/jota.aspx
10/14/2017	s-time: 10:00	WW1USA – U.S. Troops begin combat ops.

10/15/2017	e-time: 17:00	https://www.theworldwar.org/amateurradio
12/31/2017	s-time: 18:00	Straight Key Night
01/01/2018	e-time: 18:00	http://www.arrl.org/straight-key-night

Each month volunteer a few hours to support the PUBLIC SERVICE part of Ham radio. Take a new Ham with you! It's fun!



Public Service Event YouTube Videos

By Herb Fiddick (NZ0F), Brian Short (KC0BS), and Steve Rainey (WD0DBP)

Public Service Events 101: <https://youtu.be/Wetp0sKAwy8>

Emergency Communications 101: <https://youtu.be/opbnZYa1r9o>

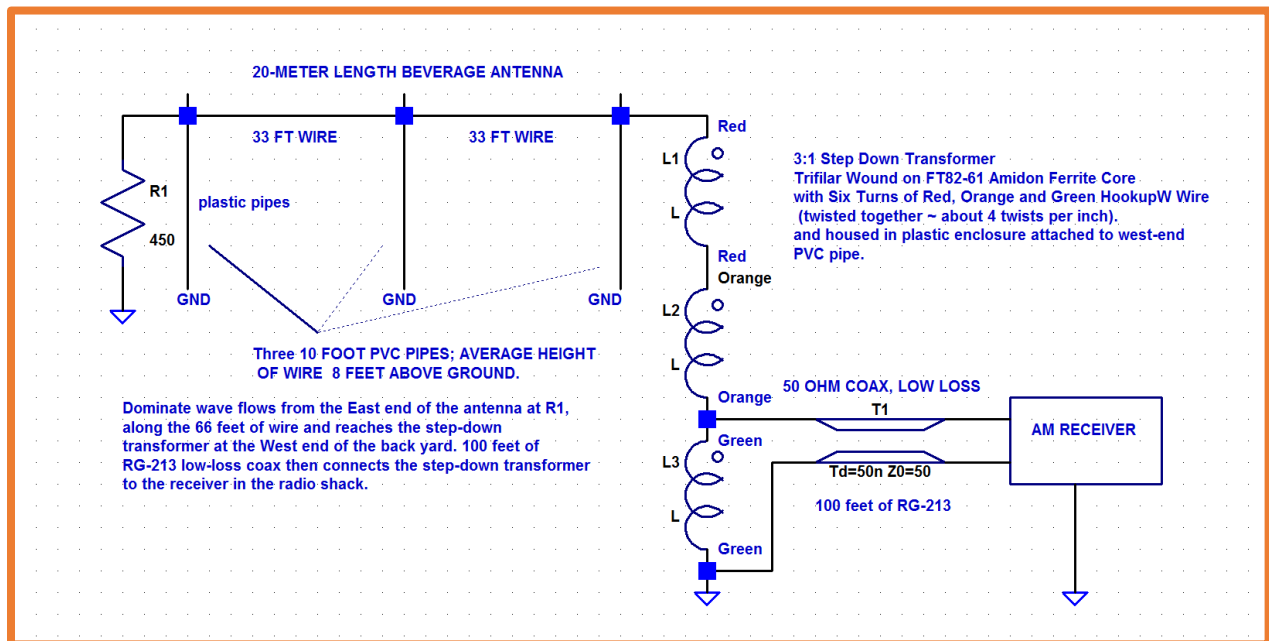
More information contact: Herb Fiddick (NZ0F) hfiddick@gmail.com www.kchamlink.org

What is Amateur Radio is all about? <https://youtu.be/ivUMIADFSDw> de, Pete Varounis, NL7XM

ANTENNAS

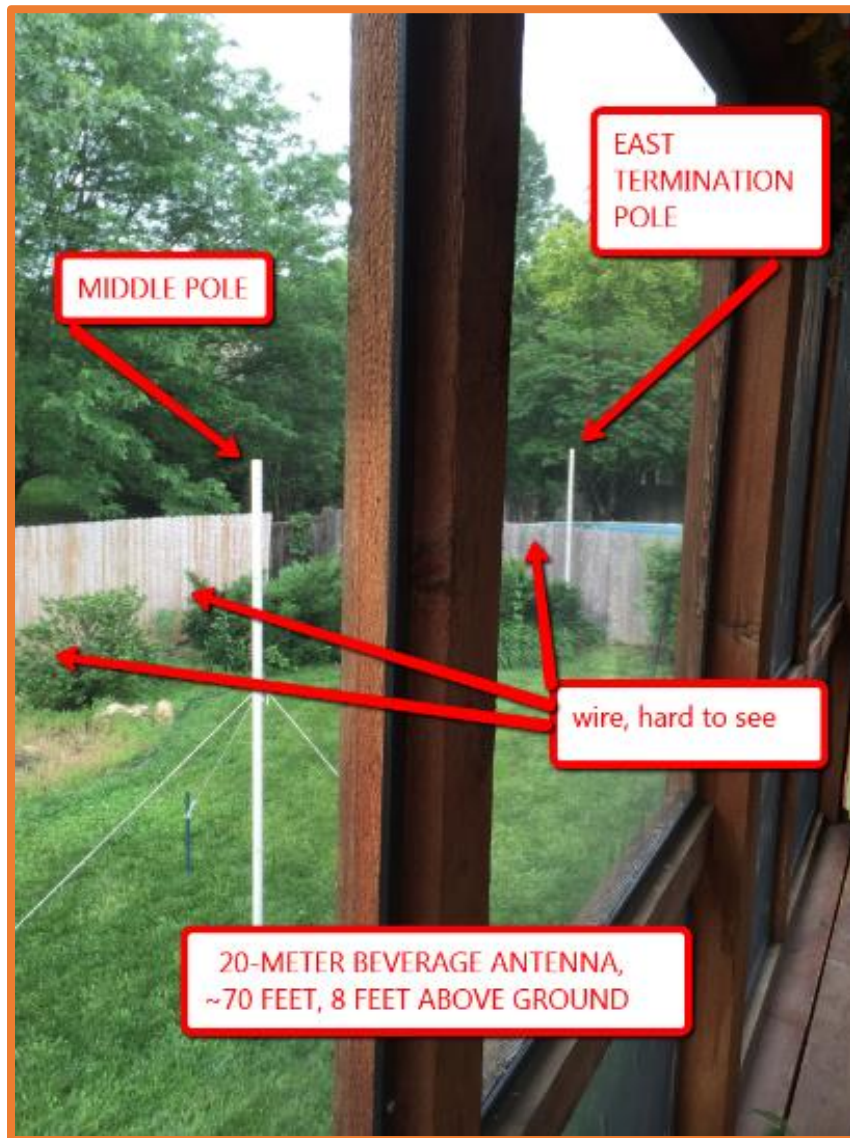
20 Meter Length Beverage Antenna

By Phil Anderson

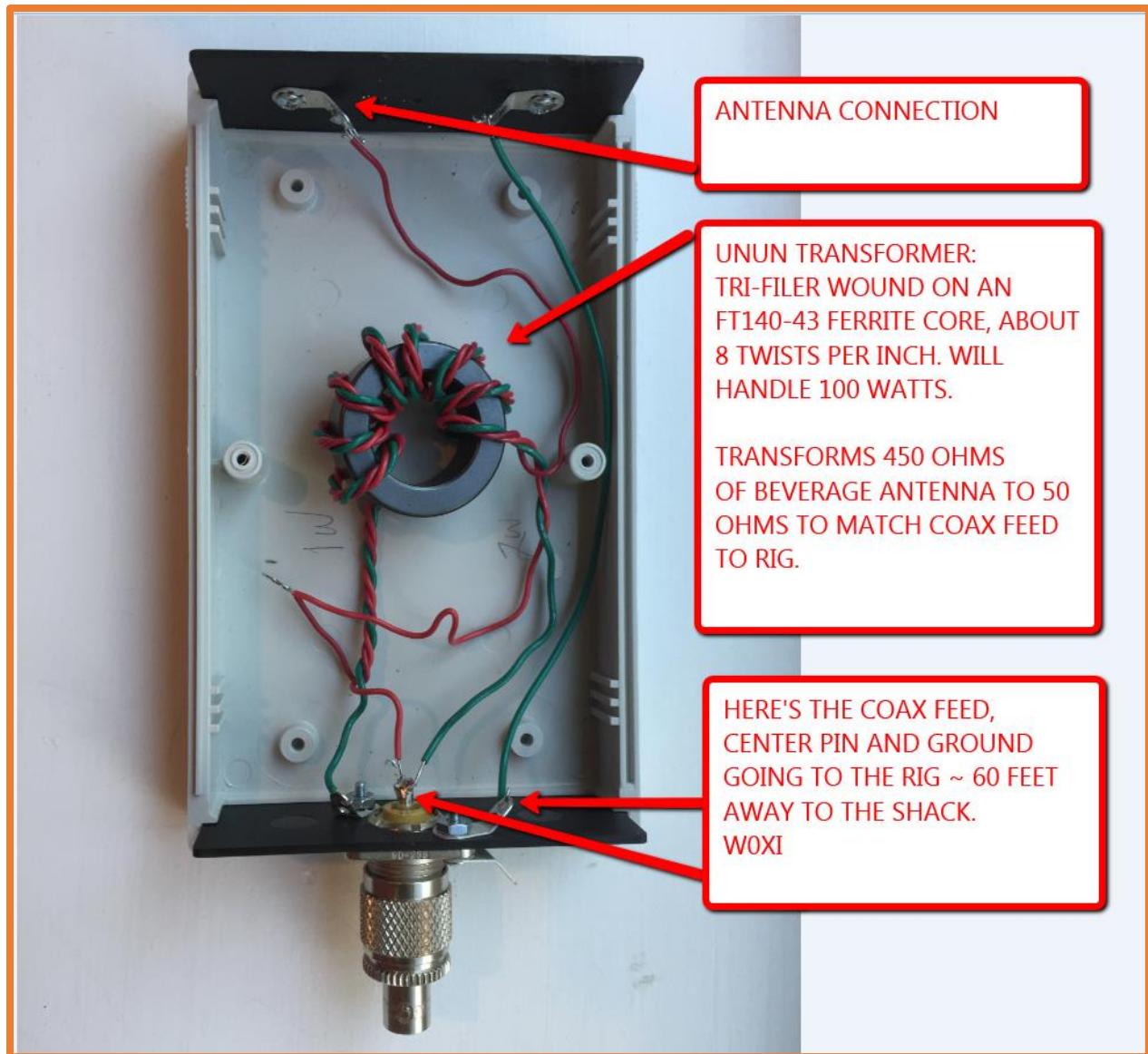


The Beverage has the reputation of pulling out the weaker signals. While the signal produced/received is reduced compared to a vertical or beam, the noise is reduced even more, thus increasing the S/N achieved. Most beverages hung are several wavelengths at the given frequency.

My one-wavelength beverage for a small backyard did the same. I could hear a given signal on the Beverage better than the same received on my SteppIR vertical.



66 Foot Beverage
3 poles,
8 feet above ground
450 ohm termination
UnUn coupler to 50
Ohm coax.



Unun Transformer Construction

I originally started with an FT82-61 core and that worked fine. I later changed the core to an FT140-43 to accommodate 100 watt experiments through the transformer as shown in the picture at right. For receive-only one can use the smaller and cheaper FT82-61 or a bi-conical ferrite core using 73 type material (Mouser # 623-2873-000202). The bi-conical will be UNBAL wound and not twisted.

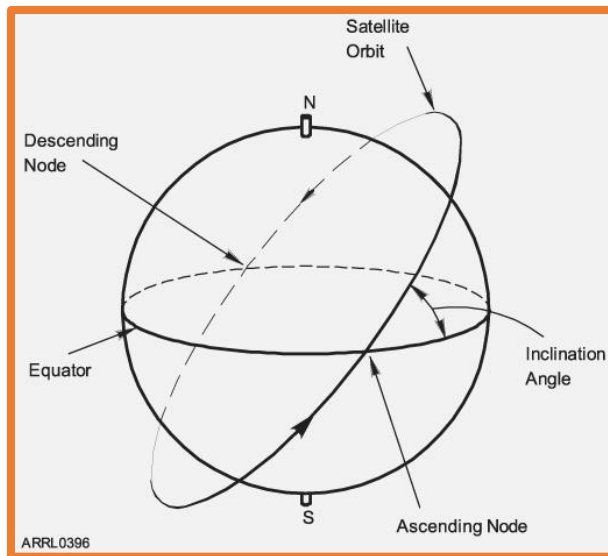
Most Beverage users are now using the OY type resistor for the antenna load at the far end. For example, Mouser # 588-OY-470-E. For power tests, I used 16 [resistors valued at] 6.7K ohm in parallel to absorb 30+ watts.

I have some of the ferrite cores on hand and I would be willing to barter.

SATELLITE COMMUNICATIONS

www.amsat.org	ISS
Tracking	Software
JT65 and JT9	Solar Arrays
AZ-EL Rotors	Radio(s)
Frequencies	Pre-amps
Circular Polarized Antennas	

Satellite Orbit



Fox-1D will now ride to orbit on an Indian PSLV vehicle scheduled to launch from Satish Dhawan Space Centre in Sriharikota, India in late 2017.

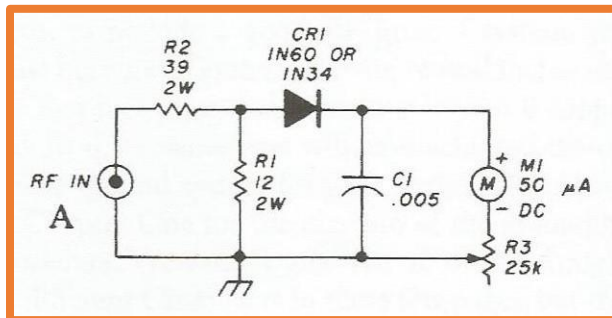
Fox-1Cliff will launch on Spaceflight's SSO-A dedicated rideshare mission aboard a SpaceX Falcon 9 scheduled to launch from Vandenberg Air Force Base in California in late 2017 or early 2018.

Satellite Frequency

	BAND	FREQUENCY	MODE	U/V	V/U	L/U	V/H	H/S	L/S	L/X	C/X
HF	15-10 METERS	21-30 MHz	H				TX	RX			
VHF	2 METERS	144-146 MHz	V	TX	RX		RX				
UHF	70 cm	435-438 MHz	U	RX	TX	TX					
UHF	23 cm	1.26-1.27 GHz	L			RX			RX	RX	
UHF	13 cm	2.4-2.45 GHz	S					TX	TX		
UHF	5 cm	5.8 GHz	C								RX
UHF	3 cm	10.45 GHz	X							TX	TX
UHF	1.5 cm	24 GHz	K								

The newsletter intends following the development of satellite communications projects furthering the interest and the knowledge base surrounding satellite communications. If you'd like to have a group development session, please let ac0kn@arrl.net know and we'll make further arrangements. I look forward to discussing ARISS contacts earlier at the Lawrence Library.

SHACK ACCESSORIES



Relative S Meter

By Bob Heil

[Reprinted with permission of Bob Heil – K9EID]

Got a rig without an S meter or need a relative signal strength meter for a variety of uses?

This circuit attaches to the emitter load resistor

of the FM detector or can be tied to a one foot piece of wire or small antenna at point A to drive a small 50 or 100 UA meter. The circuit really makes tuning a mobile antenna much easier by placing its pick up antenna a car length away from the mobile antenna and tuning your mobile for maximum field strength. Tri it!

If you have something that you'd like to share with the DCARC, please send it to ac0kn@arrl.net, and we'll put it in the newsletter.



AMATEUR RADIO INTERVIEW: Jim Cessna AC0KN

By Jim Cessna (AC0KN)

Point of explanation: I will be interviewing the members of the DCARC club asking the following interview questions. I thought I'd begin with myself, interviewing myself.



Q: When did your interest in Amateur Radio begin?

A: I was about ten years old when my dad brought home a Hellicrafter SX-71 receiver. It was the size of a small suitcase. We spent several hours trying to build and erect a dipole. The dipole spanned a distance of about a hundred feet between a tree limb in the front yard, and a pole and pulley on the garage peak.

The feed-line was a 300 ohm twin-lead.

Q: Who was your mentor in Amateur Radio?

A: My dad introduced me to the world of Amateur Radio, but I'd have to say it was several members of The Santa Fe Trail Amateur Radio Club (SFTARC) in Olathe, Kansas, energized me into getting my first ticket – Technician Plus. Special thanks to Tom Rose KOMZ-SK, Rob Maberry KE5BR, and John Rodgers KG0UA.

Q: Did you build or buy your first rig? What was it?

A: Well, that's sort of hard to answer. My first encounter with building "a radio" was in high school electrical shop. The class sent off for five-tube AM radio kits. We paired up to actually build the radios, but I have to say mine was the "neatest" (square corners) in wiring and soldering. After several days of "tuning the IF's," it came alive.



My first Amateur rig was a Ramsey 80 meter transmitter kit (L-RX, R-TX). I phoned Tom Rose to see if he would listen for me on his rig, to see if my kit was transmitting. The kit used my home-brewed dipole strung in my attic. The Ramsey 80 meter transmitter kit worked!

My first commercial rig was an ICOM IC-740, I bought from another ham; Hawaii was my first contact on 10 meters. Wow! I definitely caught the Ham bug!

Q: Any RFI stories you'd like to share? RFI resolution?

A: Every Tuesday night was the SFTARC 2m net at 8:00 p.m. Every Tuesday night, my wife's favorite TV show, *Dallas*, was destroyed by RFI at some point. Every Tuesday night, my wife would yell at me for creating interference. One Tuesday, I gave up getting on the net and decided to watch *Dallas* with her. Sure enough. Whamo! The TV was overloaded by RFI, and I was nowhere near a transmitter! She apologized. I put chokes on everything in sight; cable, TV, phones, radios, and I even installed ".01 uf" capacitors across the stereo speakers. The chokes eliminated the RFI from my Ham neighbor down the street.

Q: What was your most exciting DX contact?

A: I'd have to say it was my first contact with Tom Rose using my Ramsey Kit – DX distance – 3 miles! Oh, yeah, and the Hawaii contact using my IC-740 and 100 watts. That was cool too!

Q: What advice would you give to someone thinking of entering Amateur Radio today?

A: The same advice I was given. "It's fun! It's a hobby! Enjoy it!" Like any other hobby, you can spend just a little bit, or a whole lot, but the main thing is just to get on the air, and to have fun with it. Find an Elmer who will mentor you. Every ham will give you words of encouragement; it's a brotherhood/sisterhood like no other!

Q: Any final words?

A: If you don't know something - ask! We've all been where you are at some point in our ham-life.

Thank you for this interview!

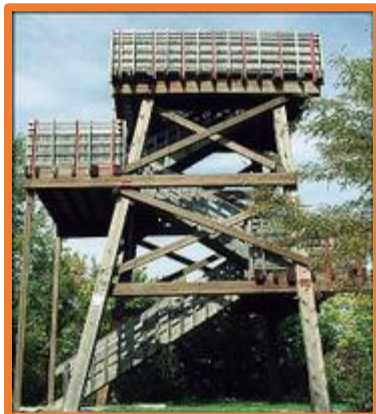
73, Jim – AC0KN

Okay, now it's your turn to be interviewed. Please send in a picture of your shack, with you in the picture, and a brief answer to the same questions I asked myself above. I'll put your picture and your responses into the newsletter (one each month); it might take a while to run the entire membership, but we'll all get to know one another better. Thanks...

RADIO-SPORT

W0UK/Portable

By Jim Cessna – AC0KN



On April 1, 2017, DCARC operated at Wells Overlook state park.

On this particular special event, we had about 10 brave souls show-up, in spite of the wind and cold. I wore a parka and was toasty-warm except for my toes, fingers, and nose.

Brandon's antenna (pictured below) worked well into Canada and Mexico. Antennas work best when you carry a large hammer and threaten to do "impact adjustments" to their coils. Hi! Hi!

Phil sent Morse code between shivers. I'm not sure if anybody recognized his "fist" with gloves on, but it was fun anyway. We encountered several contests going on. My 10 wpm brain tried to copy their 20 wpm sending with little success. I managed to pick out a few characters, but I keep trying.

The event only lasted about 3 hours. It was serendipitous when we decided to quit, the generator ran out of gas and quit. With a box of donuts (thanks Ken) providing a pre-lunch needed energy pick-me-up, we began packing up. In spite of the cold and wind, the social gathering, was great! And, a good time was had by all. Check out the pictures below to see the fun everyone was having.

Let's do this again the last week-end in June!



Brandon Graham W0GPR helped to mate a raw-wire connection to a mini switching power supply's binding posts. I think I heard him say, "Now where did I put that big hammer?"



Phil Anderson W0XI managed to send Morse code (20 wpm) in spite of wearing gloves which disguised his “fist”.

The antenna tuner and Yaesu FT-740 sits atop of a home-brewed plywood support shelf allowing an eye-level view at the rig’s controls and display. Great idea!

It appears that Phil is pondering the spelling of “burrrrr”, in Morse code.



Ken Filardo KA0THK, Chris (last name unknown), and Bill Musick KC0NFL, fielded lots of questions about feedlines and antennas.

Ken carefully approaches the rare and voracious black python-coaxial snake. Its venom, known for its almost fatal SWR, will kill the weak and unsuspecting rig if not protected and tamed by the powerful antenna tuner's anti-venom.



George Akob KE0MNV and his wife are excited to discuss the finer techniques of antennas with Phil. Phil explains, “You should hold on to the antenna with one hand like this, and a good ground with the other, when you transmit. You’ll be able to hear DX for sure, and maybe even talk to the DXing angles.” (Or, maybe not!)



Keivn Oneslager KS0EGL watches in total amazement, and learns something new about DXing from Phil.



Brandon Graham W0GPR explains that if you hit the coils right here with a big hammer, the coils will automatically retune to be half-wave on 20 meters.

“Look out Brandon! You’re standing way too close to that voracious black python-coaxial snake!”



Chris seems to be asking, “Is this REALLY the station used in the movie, ‘Independence Day’ to save the world?” According to Phil, it really was.



And the music goes round and round, and it comes out back here. What you say? You don't hear music? Then you haven't heard Morse code and its melody. It's music to the ears! Ah... dah dit dah dit, dah dah dit dah.

Contests Calendar

Each month challenge yourself to enter into a contest. You don't have to work the entire length of time, but just get on the air and have some fun.

ARRL Contests

January 2017 1 <u>Straight Key Night</u> 7 <u>Kids Day</u> 7-8 <u>RTTY Roundup</u> 21-23 <u>January VHF</u>	February 2017 13-17 <u>School Club Roundup</u> 18-19 <u>International DX – CW</u>
March 2017 4-5 <u>International DX– Phone</u>	April 2017 16 <u>Rookie Roundup – Phone</u>
May 2017	June 2017 10-12 <u>June VHF</u> 18 <u>Kids Day</u> 24-25 <u>Field Day</u>
July 2017 8-9 <u>IARU HF World Championship</u>	August 2017 5-6 <u>222 MHz and Up Distance Contest</u> 19-20 <u>10 GHz & Up – Round 1</u> 20 <u>Rookie Roundup – RTTY</u>
September 2017 9-10 <u>EME - 2.3 GHz & Up</u> 9-11 <u>September VHF</u> 16-17 <u>10 GHz & Up - Round 2</u>	October 2017 7-8 <u>EME - 50 to 1296 MHz</u> 16-20 <u>School Club Roundup</u>
November 2017 4-5 <u>EME - 50 to 1296 MHz</u> 4-6 <u>Nov. Sweepstakes – CW</u> 18-20 <u>Nov. Sweepstakes – Phone</u>	December 2017 1-3 <u>160 Meter</u> 9-10 <u>10 Meter</u> 17 <u>Rookie Roundup–CW</u>

WA7BNM Contest Calendar

<http://www.hornucopia.com/contestcal/>

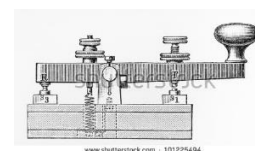
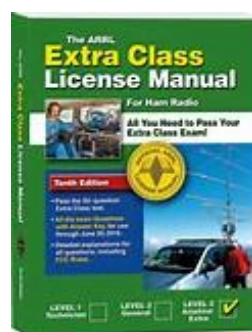
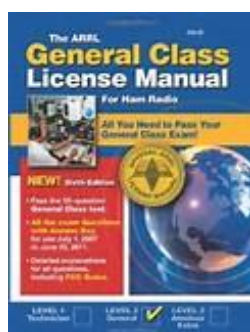
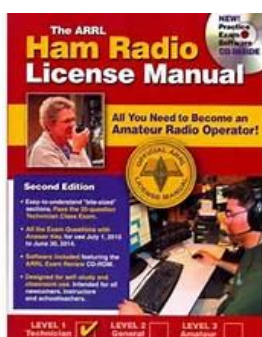
EDUCATION/TRAINING

Ham Classes

Class Offered:	GENERAL CLASS	
Contact:	Norman Mast NQ0C	norman.mast@gmail.com
PLACE:	TBD	
SDATE:	Jan. 6, 2018	
EDATE:	Feb. 24, 2018	
TIME:	08:30-12:00	

Schedule

	2018	2019	2020	2021	2022	2023
CW			CW			CW
Ham Class (Jan-Feb)	Gen	Extra	Tech	Gen	Extra	Tech
Pool Chg. July 31	Extra	Tech	Gen	Extra	Tech	Gen



CW Not required for license, but lots of fun.

CALL:	
NAME:	
ADDR:	
CITY:	
STATE:	
ZIP:	
PHONE:	
EMAIL:	
COST:	
CHECK/MAIL TO:	DCARC 3916 Bob Billings Pkwy, Lawrence, KS 66049

Samuel F.B. Morse

By Jim Cessna – AC0KN



“An impressive demonstration occurred on May 1, 1844, when news of the Whig Party's nomination of Henry Clay for U.S. President was telegraphed from the party's convention in Baltimore to the Capitol Building in Washington. On May 24, 1844, the line was officially opened as Morse sent the famous words "What hath God wrought" from the B&O's Mount Clare Station in Baltimore to the Capitol Building along the wire. These words were taken from the Bible (Numbers 23:23) and were selected by Annie Ellsworth, the daughter of U.S. Patent Commissioner Henry Leavitt Ellsworth, who had championed Morse's invention and secured early funding for it.” - Wikipedia

Samuel F.B. Morse

Picture on the left shows Samuel Morse's original code key. The hard wired signal energized coils in the receiving unit duplicating, in pencil, marks on the paper tape of the code entered by the sender.

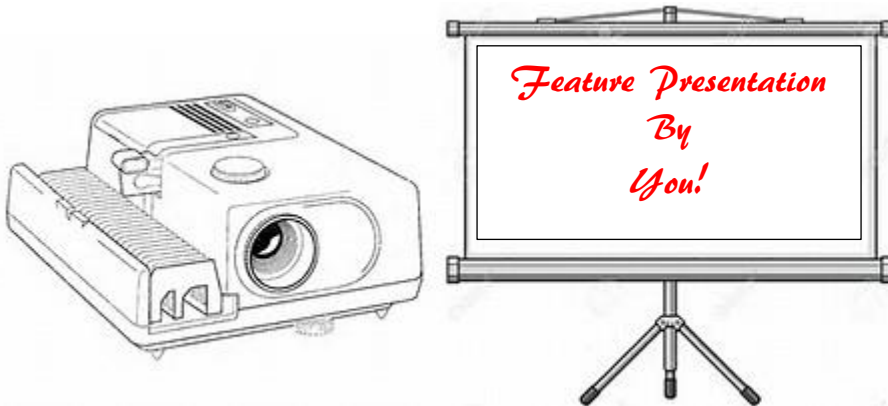


Figure 1 Morse code Key



Figure 2 Morse code Machine

TECHNICAL DEMOS



2017			
DATE	SUBJECT	PRESENTER	EMAIL
1/11/17			
2/08/17			
3/08/17			
4/12/17	Ensor Park and Museum	Jim Cessna	ac0kn@arrl.net
5/10/17	K1-4 QRP CW Kit	Phil Anderson	w0xiphil@gmail.com
6/14/17	Field Day Planning	Ken, Virginia, and Phil	
7/12/17			
8/09/17			
9/13/17			
10/11/17			
11/08/17			
12/13/17	Christmas Party		

Please volunteer to give a club meeting presentation.
 Let Phil and I know in time to put it in the club's newsletter.
 Thanks for supporting our club.

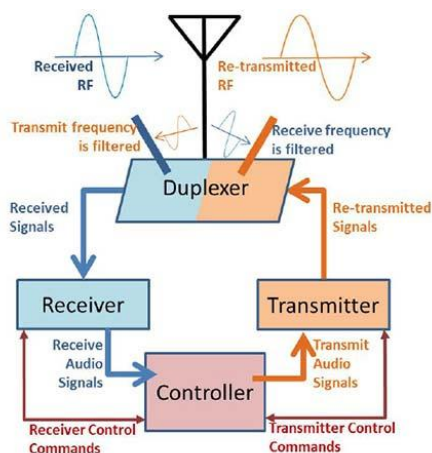
CONTACTS



PRESIDENT	Jim Eckler KC0IDF	kc0idf@arrl.net
VICE PRESIDENT	Brandon Graham W0GPR	kb3igc@arrl.net
SECRETARY	Kevin Oneslager KS0EGL	kevin@prometheusinc.net
TREASURER	Bill Musick KC0NFL	blackcat@sunflower.com
EMER MGMT CORD	Bill Musick KC0NFL	blackcat@sunflower.com
TRAINING MGR	Norman Mast NQ0C	norman.mast@gmail.com
WEB SITE	David Klamet KE0EFY	info@w0uk.com
PROGRAM MGR	Phil Anderson W0XI	w0xiphil@gmail.com
FIELD DAY	Ken Filardo KA0THK	ka0thk@arrl.net
HAM RADIO CLASSES	Norman Mast NQ0C	norman.mast@gmail.com
ARES	Bill Musick KC0NFL	blackcat@sunflower.com
REPEATER	Bill Musick KC0NFL	blackcat@sunflower.com
NEWSLETTER	Jim Cessna AC0KN	jimrcessna@aol.com

REPEATERS & NETS

REPEATER	FREQUENCY	TONE	LOC	MODE	DAY	TIME	NET
W0UK	146.760 MHz	88.5	DCARC	Analog	Sunday Tuesday	20:00 20:00	ARES Club
N0APJ	147.030 MHz	88.5	Douglas Co				
N0RC	442.000 MHz		Basehor				
K0USY	444.750 MHz	88.5	Lawrence				
K0USY	444.800 MHz	88.5	Lecompton Lawrence				
K0USY	444.825 MHz	88.5	Lecompton	DMR P25 Fusion D-Star			
K0HAM	444.900 MHz	88.5	Linked KS				
W0OQW	147.390 MHz	151.4	Ottawa				



KA0FMZ repeater in Olathe, KS
147.240/151.4 MHz Repeater in red cabinet.
Large 4 gray Duplexers for 2m.

MEETINGS

DAY OF WEEK	PLACE	TIME	EVENT
Tuesdays	Dairy Queen 1835 Mass St. Lawrence, Ks. 66044	11:30 am	Lunch
Saturdays	Hy-Vee 4000 W 6 th St. Lawrence, Ks. 66049	8:00 am	Breakfast
2 nd Wednesday	Douglas Co. Fairgrounds 2130 Harper Lawrence, Ks. 66046	7:00-9:00 pm	Club Meeting at Flory Meeting Hall



MEMBERSHIP APPLICATION

Make Check/Mail to:

Douglas County Amateur Radio Club
3916 Bob Billings Pkwy.
Lawrence, KS 66049

DATE: _____ **NEW MEMBER:** ____ **RENEWAL:** ____

CATEGORY	AMT
Regular	\$20
Regular Family	\$30
Senior	\$20
Senior Family	\$25
Student	\$20
Associate	\$15

CALL:	
NAME:	
ADDR:	
CITY:	
STATE:	
ZIP:	
PHONE:	
EMAIL:	



WE WANT YOU! To Join Our Ham Radio Club!

COPYRIGHT

This Newsletter is published monthly by the Douglas County Amateur Radio Club (DCARC). Reprint permission is granted to other Amateur Radio orientated publications for non-copyright material provided that credit is given to the author and source. Copyright articles require permission to use from the holder of the copyright. Opinions expressed herein are not necessarily those of the Club or its officers.

Get Involved ... we help others ... through Ham Radio.

