

## CLUB OFFICERS:

President Mike Brannock, KG4IES  
V. President Mark Currens, K14OJG  
Secretary Paul Harrington III, KB4ENQ  
Treasurer Steve McFadden, KA4TJD  
Trustee for KY4WC Jerry Mueller, KC4WZO

## COMMITTEE CHAIRMAN:

Program Steve McFadden, KA4TJD  
Emergency Jerry Mueller, KC4WZO  
Field Day Paul Harrington III, KB4ENQ  
Web Site Jerry Mueller, KC4WZO  
Net Control Paul Harrington III, KB4ENQ  
Repeater Steve McFadden, KA4TJD  
Newsletter Paul Harrington III, KB4ENQ  
Fund Raising Todd Rose, KE4YAH  
Adopt-a-Highway Paul Harrington III, KB4ENQ

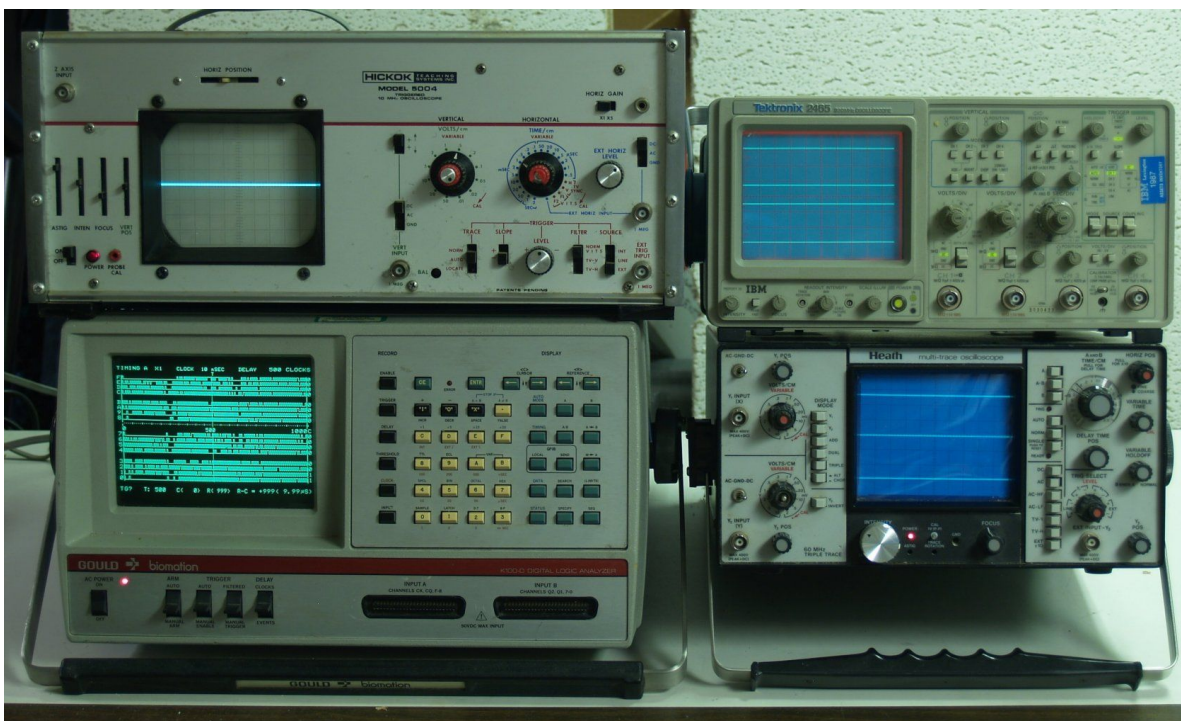
The Woodford County Amateur Radio Club meets on the first Wednesday of each month at 7:00 p.m., in the Versailles Fire Station #2 on Big Sink Pike. Anyone interested in Amateur Radio is cordially invited.

The Woodford County Amateur Radio Club Home Page is located on the internet at <http://www.ky4wc.org>. The Club receives e-mail at [ky4wc@ky4wc.org](mailto:ky4wc@ky4wc.org). E-mail may be sent to the membership by sending a message to [maillist@ky4wc.org](mailto:maillist@ky4wc.org).

The Club holds an ARES practice net Thursday evenings at 8:00 p.m. Nets are held on the 145.330 repeater.

## Program for May Meeting:

# Introduction to Oscilloscopes



Pictured, a collection of oscilloscopes posed in reminiscence of a table at any hamfest. Clockwise from the upper left a Hickok model 5004, a Tektronix 2465, a Heathkit, circa 1986, and a Biomation Logic analyzer. The Hickok was purchased at a hamfest for about \$10 and would serve well for audio work. This unit's capability is limited by a 10 MHz bandwidth and can only display 1 signal. The Tektronix is the star

of the group with a bandwidth of 300MHz and is capable of displaying 4 signals simultaneously. The Heathkit is a rather rare unit. I have never seen another of the same model. The Biomation, a special purpose unit, can only display digital signals, however it can display 16 signals simultaneously. The signals are captured into memory and can be displayed as long as required. Visit the May meeting for an introduction to the use of the oscilloscope. We will discuss the functional units of the instrument, then learn about the various inputs, and how to make voltage and time measurements.

## Minutes of April 4<sup>th</sup>, 2007

The April meeting was called to order at 7:09 p.m. The minutes of the last meeting were reviewed. Dr. Rob Hutchinson, KI4ODT, seconded a motion made by Steve McFadden, KA4TJD, to accept the minutes as published. The motion carried.

**Treasurer's Report:** The treasurer's report indicates an opening balance of \$\$\$\$\$\$. Deposits for the month were \$\$\$\$ in dues. The closing balance is \$\$\$\$\$\$. Dues were received from Rick Stanback, N4WCQ. Two club hats were sold after the meeting, resulting in a collection of \$\$\$\$.

### Committee Reports:

**Newsletter:** The membership is encouraged to submit articles, or ideas for new items to appear in the newsletter.

### Net Report:

4/5/2007	4/11/2007	4/12/2007	4/19/2007	4/26/2007
KB4ENQ	weather	KB4ENQ	KB4ENQ	KB4ENQ
KF4LRK	KB4ENQ	KE400I	KD4UBJ	KF4LRK
KE4OOI	KE4OOI	KI4TLU	AC4YD	KE4OOI
KE4GNX	KI4QQF	KG4VAR	KE4AIE	KA4TJD
KI4QQF	KI4OJG	KF4LRK	KI4LSG	KI4QQF
KI4TFI	WB9TPG	KE4GNX	WA4PCS	KI4OJG
AC4YD		KA4TJD	KG4TND	KE4GNX
WA4PCS		KI4QQF	KG4VAR	AC4YD
KI4OJG		KI4OJG	KF4LRK	KE4STM
KE4AIE		KI4ODT	KE4OOI	KI4RHH
		KE4AIE	KE4GNX	WA4PCS
			KA4TJD	KF4DSS
			KI4QQF	KF4FMZ
			KD4GNX	KE4AIE
			KE4LZP	

The net continues to have a good participation. Information packets are available to anyone who would like a turn at calling the net. First call in column indicates net control for that session. Additional nets are indicated just below the date.

**Repeater:** The 224.22 repeater is currently off the air. The controller for that machine is undergoing some modifications at the hands of the microcomputer class, students.

**Adopt-a-Highway:** The Adopt-a-Highway event scheduled for April 21<sup>st</sup> is rescheduled for April 28<sup>th</sup>. Volunteers are to meet at McDonalds for breakfast at 8:00 a.m. Trash collection should commence around 9:00.

### Attendance:

Don Drury	KD4UBF	Steve McFadden	KA4TJD
Todd Rose	KE4YAH	Steve Peterson	
Paul Harrington III	KB4ENQ	Tristan Wilson	KI4QQF
Mike Brannock	KG4IES	Dr. Rob Hutchinson	KI4ODT

**Program:** The program for the May meeting will be an introduction to the oscilloscope.

**Field Day:** Drew Chandler, KI4TFI, indicated that the Department of Public Health has constructed a communications trailer containing two amateur radio operating positions and support equipment. He suggested that we help them check out the new equipment during our Field Day exercise.

**New Business:** The Triathlon at Falling Springs is to be held on April 21<sup>st</sup>. Due to the late request, we will be unable to assist with this activity this year. We will make a suggestion to the Triathlon planners that we be alerted earlier next year. The Club has helped with this activity over the last several years.

## Local Club Meetings:

*Bluegrass Amateur Radio Society* The regular meeting of the Bluegrass Amateur Radio Society, Inc., will be held every first Monday, 7:30 p.m. at the Red Cross Building, 1450 Newtown Pike, Lexington.

*The University of Kentucky ARC*, contact Jeff Withers, KG4QFY, [jeffchem@yahoo.com](mailto:jeffchem@yahoo.com). Club web page: <http://www.uky.edu/StudentOrgs/UKARC/>. Meetings are once each month ( times/days will be announced as class schedules allow ), in room 553 in Anderson Hall on campus.

*Scott County Amateur Radio and Emergency Service Club (SCARES)*, Meetings are the third Saturday each month, 9:00 a.m. in the EOC ( lower level o Fire Station ), 2200 Cincinnati Pike ( intersection of U.S. 25 N and Delaplain Road ). Check in to their weekly simplex net Tuesdays at 9:00 p.m. on 147.490.

*Central Kentucky ARS ( Richmond-Berea )*, Third Thursday each month in the Madison County EOC, Richmond, Kentucky, at 7:00 p.m.. Talk-in on 146.865 (-600, pl-192.8Hz) and 145.370 (-600, pl-192.8Hz ) repeater for location directions to meeting site, or other information.

*Pioneer ARC ( Winchester )*, Fourth Tuesday each month Golden Corral Restaurant at 7:30 p.m. Talk-in, and info on the 147.120 repeater.

*Jasamine Amateur Wireless Society ( Nicholasville )* Meetings are the second Monday each month at 7:00 p.m. Location is the Corman Building behind City Hall on Main Street. Talk-in, and information on the 145.490 (-600) and 444.975 repeaters.

## Upcoming Exams:

All exams listed are within 100 miles of Woodford County.

05-May-2007

Sponsor: CINCINNATI REPEATER ASSOC INC

Time: 8:30 AM (Walk-ins allowed)

Contact: DALE W PRITCHETT

(513)769-0789

Email: [KC8HJL@ARRL.NET](mailto:KC8HJL@ARRL.NET)

VEC: ARRL/VEC

Location: HARTWELL PRESBYTERIAN CHURCH

210 PARKWAY AVE

CINCINNATI, OH 45216

12-May-2007

Sponsor: BUTLER COUNTY VHF ASSOCIATION

Time: 8:30 AM (Walk-ins allowed)

Contact: THEODORE WILSON

(513)868-7012

VEC: ARRL/VEC

Location: BUTLER TECH VOCATIONAL SCHOOL

3603 HAMILTON MIDDLETOWN RD

BUTLER COUNTY

TALK-IN 146.97 PL 118.8

HAMILTON, OH 45011

12-May-2007

Sponsor: OH- KY- IN ARS

Time: 12 NOON (Walk-ins allowed)

Contact: BRIAN C DEYOUNG

(859)635-3095

Email: [K4BRI@ARRL.NET](mailto:K4BRI@ARRL.NET)

VEC: ARRL/VEC

Location: SALEM PRESBYTERIAN CHURCH

3132 MOZART AVE

CORNER MOZART & HIGBEE

CHEVIOT/WESTERN HILLS AREA

CINCINNATI, OH 45202

12-May-2007

Sponsor: BLUEGRASS AR SOCIETY

Time: 10:00AM (Walk-ins allowed)

Contact: FERNIE D WILLIAMS

(859)245-2140

Email: [KE4MAI@ARRL.NET](mailto:KE4MAI@ARRL.NET)

VEC: ARRL/VEC

Location: RED CROSS BUILDING- CLASSROOM B

1450 NEWTOWN PIKE

AT GRIFFIN GATE BLVD

[HTTP://WWW.BLUEGRASSARS.ORG](http://www.bluegrassars.org)

LEXINGTON, KY 40511

14-May-2007

Sponsor: NKARC

Time: 6:00 PM (No walk-ins)

Contact: LYLE H HAMILTON

(513)315-4032

Email: [AB8SH@ARRL.NET](mailto:AB8SH@ARRL.NET)

VEC: ARRL/VEC

Location: TURKEYFOOT MIDDLE SCHOOL

3230 TURKEYFOOT RD

REGISTRATION REQUIRED

AT LEAST 3 DAYS AHEAD!

COVINGTON (EDGEWOOD), KY 41017

02-Jun-2007

Sponsor: CINCINNATI REPEATER ASSOC INC

Time: 8:30 AM (Walk-ins allowed)

Contact: DALE W PRITCHETT

(513)769-0789

Email: [KC8HJL@ARRL.NET](mailto:KC8HJL@ARRL.NET)

VEC: ARRL/VEC

Location: HARTWELL PRESBYTERIAN CHURCH

210 PARKWAY AVE

CINCINNATI, OH 45216

09-Jun-2007

Sponsor: BLUEGRASS VOLUNTEER EXAMINERS

Time: 10:00AM (Walk-ins allowed)

Contact: HARRY R SPARKS

(859)272-8762

Email: [KN4S@ARRL.NET](mailto:KN4S@ARRL.NET)

VEC: W5YI VEC

Location: RED CROSS BUILDING

1450 NEWTOWN PIKE

CLASS ROOM B

LEXINGTON, KY 40511

11-Jun-2007

Sponsor: NKARC

Time: 6:00 PM (No walk-ins)

Contact: LYLE H HAMILTON

(513)315-4032

Email: [AB8SH@ARRL.NET](mailto:AB8SH@ARRL.NET)

VEC: ARRL/VEC

Location: TURKEYFOOT MIDDLE SCHOOL

3230 TURKEYFOOT RD

REGISTRATION REQUIRED

AT LEAST 3 DAYS AHEAD!

COVINGTON (EDGEWOOD), KY 41017

14-Jun-2007

Sponsor: QUEEN CITY EMERGENCY NET

Time: 7:00 PM (Walk-ins allowed)

Contact: STEVEN A LEWIS

(859)393-6563

Email: [N8TFD@ONE.NET](mailto:N8TFD@ONE.NET)

VEC: ARRL/VEC

Location: RED CROSS NORTHEAST OFFICE

10870 KENWOOD RD

CINCINNATI, OH 45242

19-Jun-2007

Sponsor: GREATER CINCINNATI ARA

Time: 6:30 PM (Walk-ins allowed)

Contact: GARY L OSBORNE

(513)474-0287

Email: [OSBORNE@FUSE.NET](mailto:OSBORNE@FUSE.NET)

VEC: ARRL/VEC

Location: BLUE ASH RECREATION

CENTER

4433 COOPER RD

CINCINNATI, OH 45242

07-Jul-2007

Sponsor: CINCINNATI REPEATER ASSOC INC

Time: 8:30 AM (Walk-ins allowed)

Contact: DALE W PRITCHETT

(513)769-0789

Email: [KC8HJL@ARRL.NET](mailto:KC8HJL@ARRL.NET)

VEC: ARRL/VEC

Location: HARTWELL PRESBYTERIAN

CHURCH

210 PARKWAY AVE

CINCINNATI, OH 45216

Exams are also available at the Dayton Hamvention. Visit [www.hamvention.org/exams.htm](http://www.hamvention.org/exams.htm) for details

## Upcoming Hamfests:

18-20 May 2007  
Dayton Hamvention  
Dayton ARA  
<http://www.hamvention.org/>  
Contact:  
Dayton, OH  
Hara Arena  
1001 Shiloh Spr

## Swap Shop:

There is a limited quantity of WCARC baseball caps available to Club members for \$8.00 each.

## From the ARRL Newsletter:

==>ARRL AIDING EFFORT TO MITIGATE REPEATER INTERFERENCE TO MILITARY RADARS

The ARRL has been working with the US Department of Defense to develop a plan to mitigate alleged interference from 70 cm ham radio repeaters to military radar systems on both coasts. Amateur Radio is secondary to government users from 420 to 450 MHz and must not interfere with primary users. Citing an increasing number of interference complaints, the US Air Force has asked the FCC to order dozens of repeater systems to either mitigate interference to the "PAVE PAWS" radars or shut down. The Commission has not yet responded. The situation affects 15 repeaters in the vicinity of Otis Air Force Base on Cape Cod, Massachusetts, and more than 100 repeaters within some 140 miles of Beale Air Force Base near Sacramento, California. ARRL Regulatory Information Specialist Dan Henderson, N1ND, stresses that the Defense Department acknowledges Amateur Radio's value in disasters and emergencies and is being extremely cooperative and a wholesale shutdown of US 70 cm Amateur Radio activity is not in the offing.

"The ARRL Lab is working up calculations on each repeater system the Air Force has identified to determine where interference-mitigation techniques offer a reasonable chance of keeping the repeater on the air," Henderson says. "In order for the amateur community as a whole to succeed in this venture, it is going to require the cooperation of all affected repeater owners."

A US Air Force contractor identified the problematic repeater systems last summer, but the situation didn't become critical until the Air Force contacted the FCC a month ago. ARRL officials met with Defense Department representatives in late March to discuss alleged interference to the PAVE PAWS radar sites. This week Henderson contacted Amateur Radio frequency coordinating organizations in both affected areas ? the Northern Amateur Relay Council of California (NARCC)

==>NORTHEAST AMATEUR RADIO VOLUNTEERS AID MASSIVE STORM RESPONSE, RECOVERY

Amateur Radio volunteers have been helping the US Northeast to recover from the effects of a huge and punishing nor'easter that generated high winds and caused extensive flooding in many communities -- rural, urban and coastal.

and the New England Spectrum Management Council (NESMC).

PAVE PAWS is a missile and satellite detection and tracking system, and its name is a half-acronym. "PAVE" is simply an Air Force program name. "PAWS" stands for "Phased Array Warning System." Although PAVE PAWS has been in existence since the late 1970s, the Cape Cod and Sacramento sites are the only remaining operational facilities in the US.

PAVE PAWS facilities occupy essentially the entire 70 cm band -- one factor that makes mitigation difficult. Feeding upward of 1800 active antenna elements, the broadband radar transmitters emit an average power output of more than 145 kW.

As a "first step" to mitigate the interference, the ARRL is recommending that all affected repeater owners reduce power -- possibly to as little as 5 W effective radiated power (ERP). "We understand the difficulty this may cause to owners and users," Henderson said, "but the alternative to operating with a smaller coverage area may be not operating at all." Amateur Radio stations already must abide by a maximum 50 W PEP power limitation in the areas around both Air Force facilities.

Henderson says the League is still seeking further information on the problem. "Until the Defense Department accepts a mitigation plan, repeater owners should exercise patience," he cautioned. "Once the ARRL Lab has completed its propagation calculations, we will be in a better position to provide advice for specific repeaters on a case-by-case basis."

Contact Dan Henderson, N1ND <[n1nd@arrl.org](mailto:n1nd@arrl.org)> or 860-594-0236, with specific questions or issues associated with this situation

While sunny weather has returned to the region, some ARES volunteers remain active.

"This was a long-duration event that impacted the region for several days," said ARRL Eastern Massachusetts Section

Emergency Coordinator Rob Macedo, KD1CY, who's also  
ARES SKYWARN coordinator for the Taunton National  
Weather Service office.

==>NORTHEAST AMATEUR RADIO VOLUNTEERS AID MASSIVE STORM RESPONSE, RECOVERY contd.

New Hampshire Amateur Radio Emergency Service (ARES) and Eastern Rockingham County ARES have been backing up landline telephone service, including 911, between Nottingham and the New Hampshire Bureau of Emergency Management. Service was knocked out by flooding at a switching station. Operations could last for several days. Even cell service is affected.

The mountains of northern New England received snow, some of which melted, while most of the rest of the region saw heavy rainfall -- three to six inches on the average with isolated higher amounts in southern and central New England. The result was significant flooding of rivers, streams and urban areas, coupled with mudslides and bridge and road washouts.

Amateur Radio ARES, RACES, SKYWARN and Military Affiliate Radio System (MARS) volunteers monitored river levels for authorities. The Nashua, Farmington, Connecticut, Blackstone, Pawtuxet, Piscataquog, Shawsheen, Souhegan and Merrimack rivers were among those overflowing their banks. Homes and businesses had to be evacuated in some communities. Flooding of smaller rivers and streams added to the problem. Along the coast, Amateur Radio volunteers reported widespread minor to moderate flooding across coastal eastern Massachusetts Sunday through Wednesday.

In Nantucket, the ocean claimed one home during high tide, while numerous cars got stuck in coastal flooding, and motorists had to be rescued. A few families had to evacuate during high water.

Winds gusting between 60 and 75 MPH brought down trees and power lines, leaving some 45,000 customers without power in Massachusetts alone. Trees and tree limbs also fell on cars and houses, in some instances causing significant damage.

Macedo reports SKYWARN operations at the Taunton NWS office's WX1BOX, were active for 40 hours straight -- from 8 AM Sunday through midnight Tuesday. SKYWARN provided some 500 to 600 reports of snowfall, rainfall, flooding, wind damage and wind-speed measurements. More than a dozen repeaters served formal and informal SKYWARN gatherings.

At the Massachusetts State EOC, RACES' WC1MA was active from 6 PM Sunday through 7 PM Monday, monitoring not only the storm but the Boston Marathon. The race went on despite the rough weather. Conditions improved by afternoon. More than 200 Amateur Radio volunteers deployed for the Boston Marathon while operations for the nor'easter were under way. Eastern Massachusetts ARES went on standby to support storm operations.

"This was a test of our ability to have a large amount of resources deployed for the large storm as well as for a large event, and things went very well." Macedo said.

Western Massachusetts SEC John Ruggiero, N2YHK, reported some localized ARES activity as a result of the nor'easter. Mutual-aid ARES teams in Western Mass were on alert but not activated.

Shelters opened in Greenfield and Leominster to house flood victims, and ham radio volunteers were on hand to support communication. The Greenfield EOC was open for a time. In Northampton flooding caused some apartment dwellers to evacuate. Some roadways throughout the region were washed out or flooded over.

In Connecticut, ARES went on alert to support the American Red Cross and the Department of Emergency Services and Homeland Security. A SKYWARN net fired up to gather reports of flooding, high water levels, power outages and rainfall totals, reported Hartford-Tolland Counties SKYWARN Coordinator Roger Jeanfaivre, K1PAI.

Connecticut SEC Brian Fernandez, K1BRF, said ARES volunteers staffed emergency management facilities in two of the state's five regions, "largely along the shoreline where there has been flooding in low-lying areas." Some evacuations occurred. ARES volunteers also staffed selected EOCs and, briefly, shelters in affected areas. The Connecticut River reportedly crested on Wednesday.

In Northern New Jersey, DEC George Sabbi, KC2GLG, in Bergen County reports that Bergen Amateur Radio Association volunteers supported communication for a Red Cross shelter in Lodi, which housed some five dozen clients. At one point, the shelter lost its telephone service and power was out. Radio amateurs on site used handhelds to facilitate communication until backup power arrived. SKYWARN volunteers also provided weather observations, as more than seven inches of rain caused the closing of many roads throughout the county.

New York City-Long Island SEC Mike Lisenco, N2YBB, said all ARES members through the section were put on standby Saturday in anticipation of the storm, due to hit around midnight. In New York City, the Red Cross called upon DEC John Healy, KA2ABV, to staff up to nine shelters. The Salvation Army also asked ARES to remain ready. A staff of 30 ARES volunteers was assembled for the first 24-hour period, "with more to come if needed," Healy said.

More than eight inches of rain caused scattered flooding in New York City, but predicted 50 MPH winds never materialized. The danger was over by the next day, and New York City District ARES was able to stand down and secure. ARES teams on Long Island also were prepared in advance on April 14. Most of Long Island was spared the brunt of the storm, however.