EC NOTES
Kevin O'Harra, KD8IIB
ARRL EC—Franklin County

May is here already, can you believe it? April sure seemed to go by fast. The month of May involves COARES in a couple of our larger events which depend heavily on the support of our many volunteers. TOSRV, of course, is May 9th and 10th this year. At the time of this writing, that is just slightly over a week away. Assuming of course that the bulletin is published in time for our May in person meeting, (May 6th) TOSRV will be in a few days. As I have said (and pleaded) in the past, to adequately cover all the assignments along the course and other support positions, approximately 80 people are needed each day. Please consider volunteering some of your time to help us support the 53rd year of TOSRV.

Contact Kal Dworkin KA8RLC (callsign@columbus.rr.com), or Kevin O'Harra KD8IIB (callsign@columbus.rr.com) for more info or to sign up.

Any time you can spare is greatly appreciated.

The following weekend (Saturday, May 16th) brings us Race For The Cure. It always amazes me to look out over the crowd waiting to start the run, and see a sea of pink that seems to stretch for miles. Many volunteers are also needed to support this event which raises money to help find the cure for cancer. Contact Jim Birk KD8HVX (birkj@columbus.rr.com) to sign up for this one.

Several events happened in April. Several of our members supported the Westerville Bunny Hop on April 4th. Then the All Ohio ARES Conference on April 11th, which presented those attending with a lot of good information. Gretchen held a Technician class in mid April, along

COARES Mission
To provide emergency communications to central Ohio, public safety, emergency, health, government and relief agencies in times of disaster.

To keep our skills sharp, we provide communication support for many public service events.

Next Meeting

Wednesday May 6th at 7:30pm

Franklin County Emergency Management and Homeland Security

5300 Strawberry Farms Blvd Columbus, OH 43230

Don't forget! Renew your membership in Kroger Community Rewards! Just visit www.krogercommunityrewards.com and click on "Columbus" and "Enroll".

The code for COARES is "84947". You must re-enroll each year during the month of April.

Bulletin Contents:

Ohio Section Website:
http://www.arrl-ohio.org

COARES Repeaters

Primary: K8DDG/R
147.060 +.600
444.800 +5.00
94.8 Hz CTCSS

Secondary: AA8EY/R
147.090 +.600
94.8 Hz CTCSS

UHF: WB8INY/R
444.275 +5.00
94.8 Hz CTCSS

Weekly Nets & Meetings
The COARES net meets Wednesday evenings at 8:00pm local time on the 147.06+ repeater, except for the third Wednesday of each month which is reserved for our General Meeting, held at the office of Franklin County Emergency Management and Homeland Security.

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COARES retains the right to refuse or edit any article for any reason without prior notice.

Publishing Schedule
The Bulletin is published the second week of each month. All items for the bulletin must be submitted by the end of the first week of each month.

A Reminder
Always check the COARES primary repeater (147.060 MHz) whenever a situation arises that might result in an emergency activation of COARES. This includes, but is not limited to, tornado, flood, blizzard, hazardous materials spill, terrorist attack, fire, search and rescue (missing person), aircraft/mass casualty, setting up emergency shelters, or a declared state of emergency.

L o c a l   N e t s

Net	Day	Time (local)	Frequency
Central Ohio ARES	Wednesday	8:00 pm	147.060 (+) (94.8 PL)
Central Ohio Severe Weather Net	Tuesday (Mar ~ Oct)	7:30 pm	146.760 (-) (123.0 PL)
Central Ohio Traffic Net	Daily	7:15 pm	146.970(-) (94.8 PL)
Southwest Columbus Ham Radio Club Net	Friday	8:30 pm	145.23 (-)
Amateur Radio Club at Ohio State University	Sunday	8:00 pm	442.6(+) (114.8PL)
CRES ARC Sunday Night Net	Sunday	9—10 pm	146.67(-) (131.8 PL)
Delaware County Net	Monday	8:00 pm	145.170 (-)
Hocking Valley ARC Net	Wednesday	9:00 pm	147.345 (+)
Lancaster / Fairfield County ARC Net	Monday	9:00 pm	147.030 (+)
Madison County "Get Together" Net	Tuesday	8:00 pm	147.285 (+)
Newark ARA Net	Tuesday	9:00 pm	146.880 (-)

L o c a l   N e t s

with an open test session on April 19th. If I remember correctly, 12 folks took the tests, and 9 people left as Technicians, and 1 with a General Class. The following week, John Chapman taught a EC-001 class with 2 people, and both took the test and passed, including our own Ed Wiest, N8UTI. Total man hours reported in my monthly report for April is 130.6. Enough babbling for this month. Hope to see you all at TOSRV and Race For The Cure.

73

Kevin O'Harra
KD8IIB

TOSRV 2015 will be on Saturday and Sunday May 9 & 10. As of this time the course remains the same as last year, with 66 assignment locations possible. Net control will operate from 6:00AM to 6:00PM each day. Once again they will be offering the one day ride to Chillicothe and return to Columbus on Saturday, so we will need to staff that part of the route the entire day.

Those wishing to sign-up to help this year should email me and let me know the times you are available for each day.

Kal – KA8RLC
ka8rlc@columbus.rr.com

2015 Ham Of The Year Leaderboard

This year we have a new points system that recognizes members for time and activities put towards the COARES club.

Rank	Points	Call	Name
1	40	KD8ION	Patrick Gibson
2	34	KD8PHG	Richard Wynkoop
3=	29	KD8OAE	Chris Huyette
3=	29	KD8IIB	Kevin O'Harra
5	28	KD8RTP	John Buck
6	26	KD8WQY	Denny Waltermire
7=	25	K6HRU	Bruce Lent
7=	25	W8RWR	Bob Rector
9	24	KA8CEJ	Wayne Walls
10	22	KD8HVX	Jim Birk

2015 Westerville Bunny Hop Event Report
Submitted by Bill Carpenter, AA8EY

This years 5k Bunny Hop run was held in Westerville at The Alum Creek Park North near the Otterbein Campus on Saturday morning, April 4th. There were over 700 participants this year which is about the same number of runners as last year. Many of the runners were in Easter costumes to set an Easter mood. Our amateur radio operators were on the course to insure safety and provide course information to the race coordinators. The weather was cold but very good and there were no problems during the event. We ran the net on 146.46 simplex. My thanks to the following Ham operators, most of whom are COARES members.

Jack—John Arthurs, KC8VWS	Curtis Smith, KD8SMY
Taly—Eamon Goode, KE8AMO	Wayne Walls, KA8CEJ
Jim Clark, KC8TJX	Bill Carpenter, AA8EY

2015 Ohio Duathlon Event Report
### Submitted by Ed Wiest, N8UTI

On April 26th the following operators met for the Ohio Duathalon sponsored by Greenswell: W1YAU-Reuben Yau; KD8RTP-John Buck; KD8WQY-Dennis Waltermine; KD8YLV-Jae Himes; KD8BQI-Steve Edgington; KD8IIB-Kevin O'Harra; K8UB-Hugh Czerwonky. First of all I wanted to give a big thanks to these volunteers because at the beginning of the week we were concerned we wouldn't have enough and obviously volunteers are the key to any event. Jeff Pearson from Greenswell was very good about working with us and providing the information needed for the event in a timely manner.

As far as the event itself, it was a very beautiful day as far as the sun shine but it was cold for the time of year, about 45 degrees, but I 'm sure the participants loved it. One of the biggest issues for the participants actually was a result of a substantial rain fall we got on April 25th. The grassy area where they put the bikes was very wet with puddles of water and it got very muddy. It gave the bicyclist fits going from the transition area to where they mounted the bicycles for the bike ride, to make things worse the riders that were using pedal cleats found that the mud got into the cleats making it tricky for some to get their shoes engaged into the pedals. The bicyclists that were quickest had pedals using straps for their shoes and they carried their bikes from the transition area to the bicycle mounting area. As far as issues, the biggest one was getting a few volunteers to the correct entrance, which in all was a minor issue and the event was a good training exercise. Thanks again to all the volunteers for helping to make this a successful event.

COARES One Call Now

Please remember to notify our One Call Now Administrator (KD8IIB - Kevin O'Harra) for any changes to your phone numbers or email addresses that would affect how you are notified in the event of an emergency callout. Also, any new members that would like to be included in an emergency callout, please contact Kevin with your info.

Please see the article in the April 2015 bulletin that explains this system in greater depth.
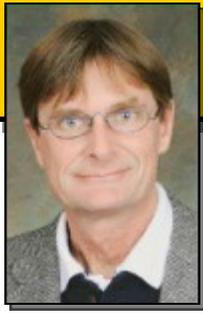
Into the Field

Rick Palm, K1CE, k1ce@arrl.org

It's May and the season for public events and hurricanes is starting – are you ready?

As we shake off the winter slumber, it's time to prepare yourself and your club/ARES® group members for activations and deployments into the field for the parade of marathons, bike-athons, road races, rallies, and other events to come. This month, continuing this column's recent theme of offering practical tips, let's look at a few more items that you should consider in your planning for operations this summer.

Mount Radios for Back Panel/Cable Access

Radios are typically mounted at the back of the operating desk, with cables jammed against the wall and access to ports limited. The thinking behind such placement is to maximize the area in front of the radio for operating freedom and writing down messages and other traffic into notebooks or laptops, etc. The problems start when antenna or other cables must be switched or new bands, new batteries, power supplies, monitors, and so forth. It is difficult to do so with the back panel of the radio so close to the wall, and with a tangle of wires and cables to sort out. Once the cables are removed, it can also be difficult to relocate and determine which socket serves which cable/function. It's often almost impossible to read the socket labels. Some solutions:

- Mount your radios in the center of the table. Leave room off to the sides of the radio for your notes, logs, and message forms. Move the table out from the wall, too, if possible. This will give operators efficient access to the back panel switches, connectors, and cables, which are likely to be switched out or manipulated repeatedly in a hectic disaster field station operation. Tape to the desk a photocopied page from the radio's manual, showing the various back panel cable sockets for ease of change-outs.

- Mount the radio to the table in a mobile radio bracket so that the radio does no move and get bumped off the table.

- Use the upper bracket of a multiple fishing rod holder to keep your unused cables sorted, handy for access and use, and out of the way of trampling feet.

Quick Deployment of Wire Antennas

Speaking of fishing rods, I recently compared the use of a fishing rod to a commercially manufactured heavy-duty slingshot for shooting lines into trees for the deployment of dipole antennas. In many field stations, operators will need to get a wire antenna up quickly and reliably. A tall tree in the open should be selected for supporting the center of the dipole antenna, with ideally two other trees at an appropriate distance from the center tree for the ends. The closer to the horizontal the operator can deploy the wire antenna (as opposed to an inverted V configuration), the better the performance should be, at least in theory.

I first tried the slingshot with 80-lb-test fishing line tied to a small lead weight, but after many frustrating attempts to shot the weight and line over the branch failed, I gave up. I then tried the fishing pole to cast the line over the branch. Again, 80-lb-test line was employed with the same small lead weight. Two casts were all it took to get the line over the branch, up about 45 feet. The lead weight was light enough to cast the line over the high branch, yet heavy enough to pull the line back to the ground. Once on the ground, I tied a heavier nylon line to the fishing line, covering the knot (a single fisherman's knot or improved clinch knot) with slippery electrical tape to prevent snags.

I then reeled in the fishing line, pulling the antenna line up, over the branch and back down to the ground, where I tied the end to the balun of my single-band, 40 meter wire dipole antenna. Finally, I used RG-8X coaxial cable for its smaller

diameter and lower loss than RG-58.

Flexible Antennas: Leave Them at Home
Although they have seen almost ubiquitous use in amateur and professional land mobile public safety applications for eons, so-called rubber duck antennas are inefficient and mainly ineffective unless the operator is very close to the repeater or another simplex operator. There are much better choices for the operator of a VHF/UHF handheld transceiver.

A simple, telescoping whip antenna is a good bet. For example, the MFJ-1818 whip is $25. MFJ claims "the Long-John H-T antenna gives great gain on 2 meters, 2.15 dBi gain in ½ wavelength. It is 9 inches when fully collapsed and 38.5 inches extended." A flex spring base prevents your connector from breaking. It has a BNC connector and a 10 W limit.

A note about connectors: a BNC connector is a good choice, as it's sturdy and readily adaptable to cables fitted with other types of connectors, such as UHF connectors (PL259, SO239), which are often used in the field.

Many field operators connect their handheld transceivers to 5/8-wave whips mounted on vehicle hoods, trunks and roofs with magnetic mounts, which make efficient ground planes. Again, these are much more efficient radiators and sit higher on top of vehicles, thus enhancing performance. The downside is less portability. However, note that many vehicles are being built with fiberglass or plastic body panels. These will not provide a magnetic surface for mechanical support or a conductive surface for a ground plane. If you're depending on magmount antennas, be prepared with an alternate mounting arrangement.

Many handheld transceivers cover two bands – usually 2 meters and 70 centimeters – and there are dual-band whip antennas to go with them. For a disaster or public event operator, it is good to have dual-band capability as more and more field stations systems are employing the 70 centimeter band.

There are numerous other antennas choices for portable and mobile operation. The ease of constriction and low cost of a ¼-wave ground-plan antenna make it an ideal choice. See www.arrl.org/files/file/Technology/tis/info/pdf/ab18-16.pdf for construction details.

The above are all *omnidirectional* antennas, meaning that they radiate in all directions equally. In the demanding and difficult operating environments of disasters and wilderness road and bike races, the terrain can pose barriers to radio signals. In such conditions, using more power and/or *directional* antennas such as Yagis to concentrate RF toward the repeater or operator can help. Often in the field, however, power limitations limit using RF amplifiers. The use of a directional antenna having gain is a more practical option. While countless Yagis are available commercially, simple antennas are easy to construct yourself. Designs can be found in almost every ARRL antenna publication.

Hide Your Radios
A disaster area is not benign. Public safety and security are sometimes severely undermined. We have all seen the videos and reports of the looting and other crimes that occur when power and lights are out, and law enforcement resources are not readily available. Your valuable radios are vulnerable to theft if left in the open of your vehicle. This holds true even in non-disaster "peacetime" settings these days, unfortunately.

To hide my new Icom ID-5100 transceiver (a considerable investment of over $800), I mounted the main unit to the back wall of my pickup truck's cab directly behind the driver's seat, completely out of sight. I place the controller, and main unit connecting cable, under the seat. I purchased the Bluetooth microphone/controller and keep it in the glove compartment. If you were to look through the window into the cab, you would see nothing that suggests the presence of an expensive radio. Even when I am using the radio, thanks to the wireless microphone, no one would see it. I can also use my Android device to control the radio, so the controller can remain hidden under the seat. The microphone is so small; it appears that I'm texting and speaking into my thumb!

I have a Motorola-style antennas screw mount on the roof of my truck and can unscrew and hide my 5/8-wave antenna when no in use. I replace it with a small black cap that is hardly noticeable.

Dealing with a "Stuck Mic"
The following tips on dealing with a stuck microphone are courtesy of the K-LINK Repeater Network of Kansas, and Justin Reed, NV8Q.

Situation 1: A user has a stuck PTT that is solidly on (not intermittent) and this the user can't receive on whatever frequency they are transmitting on. Do *not* key up to them "you have a stuck mic." They won't hear you. Doing this also risks resetting the time-out timers on the links and repeaters, which will defeat their purpose.

Make sure that the repeater owner/trustees are aware of the problem immediately. Check the input frequency of the repeater to see if you hear the user's signal on the input. If you have direction-finding capability, you can pinpoint the direction the signal is coming from.

Listen closely and see if you can identify voices in the background. If you recognize somebody's voice, try to contact them via telephone or e-mail and inform them of the problem. If necessary/possible, have somebody go to their residence/location and inform them.

In some cases, you might hear audio from the second receiver of a dual-band radio that is stuck in transmit. If you can identify what frequency the stuck ham's second receiver is tuned to, you can try contacting them on that frequency or at least make a statement advising that somebody has a stuck microphone.

In a linked system, at some point the affected repeater/link will time out and 10 seconds later the unaffected repeaters will bounce back into service. The affected repeater will remain off the air. This gives you an opportunity to check if any of the repeaters in your area are down.

If you can determine which repeater is directly affected by the culprit, you can begin direction-finding to locate them and use e-mail or telephone to start a call-out tree to get the word out to as many of the local users as you can.

Try to involve enough people so that the problem can be resolved quickly. Hams usually want to go on a "foxhunt" to practice direction-finding skills. Well, here is your chance.

Situation 2: A user has an intermittently stuck PTT. This is the most common occurrence and is almost always the result of the operator of a mobile station placing a microphone or handheld on the seat next to him. Troubleshooting steps are similar to above, except that the intermittent nature of these transmissions allows an opportunity for people listening to quickly jump in and ask everybody to check their microphones. If the problem persists, then continue working the problem as outlined above.

If you are familiar with the repeater courtesy tones, and if the transmissions are intermittent, you can tell by the courtesy tone whether the signal is coming in on your local repeater or from the link. Lower tones are the local repeater; higher tones are from the link.

Intermittent transmissions will likely not time-out the repeater since the timers reset during the courtesy tone. Try to get assistance locating the problem by contacting other hams and the repeater control operator(s).

Another important point is that nearly all modern amateur and commercial radios have a built-in time-out timer (Carrier Control Timer, etc.) You can do everybody a huge favor and make sure the time-out timer on your radios is enabled for no more than 3 minutes (shorter would be preferred). Most of these radios emit a tone from the speaker to alert you that the timer has expired. You should also mount the microphone hanger in a place that keeps the PTT from being keyed – *and use it*. Never place your microphone on the seat, the floor, or any place it can be accidentally keyed. Laying a microphone in the seat of a car is the cause of 99.9% of all stuck microphones. You may think it will never happen to you. Well, it can and it will, so take necessary precautions against it.

COARES ACTIVITIES FOR 2015

May	Date	Time	Location	Coordinator/Net Control
5-06-15	In-person Meeting	7:30 pm	Franklin Co. EM & Homeland Security	Kevin O'Harra, KD8IIB
5-09-15	TOSRV	6:00 am	Columbus to Portsmouth	Kal Dworkin, KA8RLC
5-10-15	TOSRV	6:00 am	Portsmouth to Columbus	Kal Dworkin, KA8RLC
5-13-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Kal Dworkin, KA8RLC
5-15-15 to 5-17-15	Hamvention	8:00 am	Hara Arena, Trotwood	Dayton Amateur Radio Association
5-16-15	Race for the Cure	8:00 am—11:00 am	Downtown Columbus	Jim Birk, KD8HVX
5-20-12	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	John Buck, KD8RPT
5-27-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
June	**Date**	**Time**	**Location**	**Coordinator/Net Control**
6-03-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
6-10-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
6-17-15	In-person Meeting	7:30 pm	Franklin Co. EM & Homeland Security	Kevin O'Harra, KD8IIB
6-24-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
July	**Date**	**Time**	**Location**	**Coordinator/Net Control**
7-1-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
7-8-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
7-15-15	In-person Meeting	7:30 pm	Franklin Co. EM & Homeland Security	Kevin O'Harra, KD8IIB
7-22-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open
7-26-15	Ross Tri Fit Challenge Triathlon	TBA	Antrim Park / OSU Stadium	TBA
7-29-15	Wednesday Night Net	8:00 pm	147.060(+) (94.8 Hz PL)	Open

While this schedule is correct at the time of publishing, please visit the COARES website (www.coares.org) and click on the Events link for the most up to date information.

Newsletter Contributions
This bulletin cannot happen without members contributing photos, stories, tips or articles. If you have something you'd like to contribute, or for corrections, please send them to the bulletin editor: Reuben Yau, W1YAU pittbug@gmail.com