



# The Feedline

## The Extra Class Question of the Day

by Dan Romanchik, KB6NU

As many of you already know, I have written study guides for the Tech and General Class license exams ([www.kb6nu.com/tech-manual](http://www.kb6nu.com/tech-manual)). Until now, however, I've shied away from writing an Extra Class study guide. The two main reasons for this is that the material is much more complicated and there's a lot more of it.

This year, however, the NCVEC is updating the Extra Class question pool, and I've decided to bite the bullet and do it. So, I'm now in the process of writing a No-Nonsense Extra Class Study Guide.

After I got started on this, I had a D'oh! moment. It occurred to me that instead of just publishing this material in the study guide, I could also post some of it to my blog ([www.kb6nu.com](http://www.kb6nu.com)). So, now I have the "Extra Class question of the Day" feature on KB6NU.Com.

In reality, it's usually more than just a single question because many of the questions are on the same topic. That's OK, though, because in reality, I don't post these every day. So, it all works out. Having said all that, here's an example. The correct answer to the question is in bold.

Extra Class question of the day: meteor scatter

Amateur radio operators use many different ways to get signals from one spot to another. Perhaps one of the most interesting is meteor scatter propagation.

Meteor scatter propagation is possible because when a meteor strikes the Earth's atmosphere, a cylindrical region of free electrons is formed at the **E layer** of the ionosphere. (E3A08) **28 - 148 MHz** is the frequency range that is well suited for meteor-scatter communications. (E3A09)

Unfortunately, these ionization trails are relatively short-lived, so to communicate via meteor scatter, you need

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### D-Star Program

The March meeting of the Northern Kentucky Amateur Radio Club will feature a video and photographic tour of our new D-Star repeater by Robert Kluck, N4IJS.

Join us at 7:30 p.m., Monday, March 12 at the Hilltop Church of Christ in Taylor Mill.

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#### Dates to Remember:

Mar 12 – NKARC membership meeting  
Mar 31 – Deadline for Feedline submissions  
Apr 9 – NKARC membership meeting  
May 18-20 – Dayton [Hamvention](#)  
June 23,24 – [Field Day](#)

# NKARC Directory

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**Repeaters (K4CO):** 147.255+ and 444.350+ Edgewood (PL 123.0), 147.375+ Walton, 146.895+ Highland Heights. The 147.255 repeater is a linked Echolink node, accessible via N4IJS-R.

**NKARC Net:** Tuesdays, 8:30 PM on the 147.255 repeater

**VE Testing:** Testing sessions are held by appointment only on the 2nd Monday of each month, prior to the NKARC membership meeting. Testing begins at 6:00 pm. To make an appointment, contact Lyle Hamilton at [VETesting@k4co.org](mailto:VETesting@k4co.org) or tel. 513-315-4032

**NKARC Web Site:** <http://www.k4co.org>

**NKARC Membership Meetings:** 2nd Monday of each month at 7:30 pm at the [Hilltop Church of Christ](#), 5300 Taylor Mill Rd (Ky. 16), Taylor Mill, KY. Visitors are always welcome!

The Feedline is published monthly by and for the members of the Northern Kentucky Amateur Radio Club. It is distributed via direct email to current NKARC members. **If you are a member in good standing but are not receiving your copy, please notify the Feedline editor.** Permission is hereby granted to any non-profit amateur radio group to quote or reprint from this publication provided appropriate source credit is given. Submissions, ad-

dress or call changes and circulation problems may be sent to the Feedline editor:

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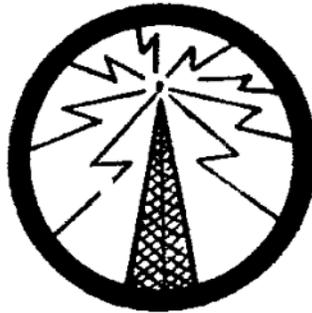
# Top of the Tower

## Wild, Wild WX

I am writing this Top of the Tower shortly after the devastating weather that rolled through our community on the second day of March. What a way to bring in March! I hope this finds all of you and your family doing well and that you fared well during the storm.

Last May, I wrote in this column about being prepared. Here is an excerpt from that piece:

Amateur Radio is a unique hobby in that you can combine it with our hobbies you may enjoy. And WX is no exception. There are many ways to help the community when severe WX strikes. Are you a member of WARN? Are you a trained weather spotter? Are you part of the CoCoRaHS collaborative? (Which have all been previous NKARC Monthly Meeting presentations.) These are all ways to become involved with WX and to help out. But, when the really severe WX strikes, are you ready? Are you trained for Emergency Nets – their protocols, the proper phonetics, message handling, FEMA training, etc.? Are your batteries for your handhelds ready to go? Do you have simplex frequencies programmed into your radios? Do you have your “To



Go” kit ready? Do you know how to use your radio outside of the programmed memories? When the disasters such as what happen here recently occur, Amateur Radio operators will be asked to step in and help. Are you ready? If not, there is never a time like now! Charge up the batteries, learn your radio(s), prepare your “To Go” kit, sit in on the KY7ET nets, brush up on the Emergency Net operations, take the on-line Emergency Management training, etc. I am a firm believer that we may have lucked out this time, but there will be a next time....

While that is all true, but I found out it takes more than that. My uncle, aunt, and other parts of my family live in West Liberty, KY., which was “wiped out” by the tornados. We attempted to reach them to see if everything was OK with them, but seemingly all lines of commercial communication was gone. So, turn to Ham Radio, right? Right! But, where do you turn? As it turns out, I had all of my equipment ready to go, but I lacked the knowledge of where to turn to. Since this was outside the range of our 375 repeater, what do you do? Fortunately, all of our resources here at the house were intact, so I decided to jump on the

*(Continued on page 5)*

## February NKARC Net Report

By Robert Kluck, N4IJS

DATE	NCS	CHECKINS	TIME (MINS)	TRAFFIC
February 7	AI4IP (Tony)	11	19	0
February 14	KB4VKS (Mike)	12	34	0
February 21	W4TSA (Greg)	7	20	0
February 28	KJ4VKV (Tyson)	9	26	0
<b>TOTALS:</b>		<b>39</b>	<b>99</b>	<b>0</b>

# February Meeting Minutes

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MINUTES OF THE FEBRUARY 13, 2012  
MEETING OF THE NORTHERN KENTUCKY  
AMATEUR RADIO CLUB

Vice President Lyle Hamilton, AB8SH, opened the meeting at 7:36 PM with the pledge, followed by introductions of attendees.

Treasurer's report not available.

Motion by Dave, KI4QH, to accept Minutes of January meeting as published. Seconded by Tony, AI4IP. Approved

## Old Business:

AI4IP reported that the the D-Star repeater is in place. It is running at 10 watts to reduce rf feedback. We need to replace some cables in order to run at full output. There is a video available describing setting up your radio for D-Star. This may be presented at a future meeting. Sara paperwork has been sent.

## New

AB8SH reported that three candidates were present for testing. One upgraded to General and one to Extra.

Field Day Chairman, W4TSA, called for operators for this event. June will be here before we realize it.

W4TSA and WD8JAW discussed the possibility of having the KD7ARET trailer available for the DX contest on March 3rd. Lynn is trying to get a location at the fire training facility in Burlington. This would give us the opportunity to learn the trailer setup and to operate HF, as training for

FD.

Dave, K8WDA, presented Mark, AI4BJ, with an award for his much appreciated work as Feedline editor. He in now a life member of the FARTS.

Mark has held the position of Feedline editor for a number of years and is requesting a replacement. He is offering to train someone and help to get them started. If you can take this position, please let Mark know (if you do as good of a job as Mark, you too might get inducted into the FARTS).

AI4IP presented split-the-pot (finally, after all the years, AJ4DK won).

Business meeting adjourned at 8:01 PM.

Following the break, Dave, K8WDA, gave an informative presentation on station grounding.

Meeting closed at 9:15 PM.

Respectfully submitted by:  
Don, AJ4DK

## **Wanted: Feedline Editor**

After wearing my editor's hat for more than 5 years, I would like to pass the reins to someone who can bring some fresh ideas to the table. No previous experience is necessary — I will provide training if necessary. All you need is a PC and an internet connection. If interested, please contact either myself or Robert Kluck, N4IJS.

— Mark Volstad, AI4BJ

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to either be able to detect when these paths are available or be transmitting when the paths are available. **All of these choices are correct** when talking about good techniques for making meteor-scatter contacts (E3A10):

- 15 second timed transmission sequences with stations alternating based on location
- Use of high speed CW or digital modes
- Short transmission with rapidly repeated call signs and signal reports

For more information on meteor scatter, go to:

- G3WZT's Meteor Scatter page ([www.qsl.net/g3wzt/g3wzt\\_ms.html](http://www.qsl.net/g3wzt/g3wzt_ms.html))

- RSGB's Meteor Scatter page ([www.rsgb.org/psc/meteor-scatter.php](http://www.rsgb.org/psc/meteor-scatter.php))

For more Extra Class questions of the day, go to [www.kb6nu.com](http://www.kb6nu.com).

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When he's not trying to figure out how he'll be able to finish writing the No-Nonsense Extra Class License Study Guide, Dan, KB6NU is station manager at WA2HOM ([www.wa2hom.org](http://www.wa2hom.org)), the ham radio station at the Hands-On Museum in Ann Arbor, MI. If you have a particular question that you'd like him to make a "question of the day," e-mail him at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com)

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(Continued from page 3)

repeater and attempt to get the information and I sent an email with the same intentions. Many Hams jumped to help us (it was truly amazing how many people stepped up to help) and, from there, I learned the proper HF frequencies to use, etc.

As things turned out, my family was fine and I learned a really good lesson (at an exceptionally good time). It is more than equipment that makes Ham Radio work when all else fails – it is people and knowledge that make it work! Ham Radio, once again, was the single avenue of communications in the area at least for health and welfare information exchange. I am going to make a concerted effort to document and prepare for the next time (hopefully many, many years in the future) something like this happens. I hope that you do as well. And thank you to everyone who gave me a hand with this effort!

### ***Other items***

If you haven't had a chance yet, check out this month's QST. Our own Greg May, W2ORO, has written a piece for the magazine. Congrats Greg!!

### ***We need you!***

We are in need of someone to take the reins of the Feedline. Mark, AI4BJ, has been doing a fantastic job as Editor of the Feedline for several years, but he is looking to try some other things at this time. This is where you come in – become the new Feedline Editor! We will make sure the transition is as smooth as possible, so why not give it a try? If you are interested, please contact me at the information below.

### ***In closing...***

I would like to hear from you as well. How are we doing? Is the Club meeting your needs? Do you have some ideas to improve the Club? Please let me know your thoughts and how we could make our Club the premier Amateur Radio club in the Cincinnati area.

73 for now,

Robert Kluck – N4IJS

[n4ijs@k4co.org](mailto:n4ijs@k4co.org)  
(513) 919-6672 (cell)

# Mark's Mutterings

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## A New Old Tape Measure Beam

I've been wanting to build a tape-measure beam antenna for my HT for some time now, and when the January QST landed in my mailbox with [an article](#) describing a new design for one, I decided to stop procrastinating and start building!

The author, John Portune, W6NBC, managed to eliminate the PVC Tee and Cross fittings that are part of the traditional design, by drilling holes in the main PVC beam and passing the tape-measure antenna elements direct through the holes, reinforcing them with wooden dowels. It sounded like a clever way of simplifying the design. I bought all the material that I needed (less the coax and connector, which I already had in my junk box) for about six dollars at Home Depot.

I quickly discovered three problems with this design. First, drilling holes in PVC tubing is not easy. My first attempt was with a hand drill. The bit "bit" and before I could react, the PVC had cracked! Fortunately, I had a leftover piece of tubing that was long enough for a second attempt. This time I used a drill press and carefully worked my way up from a small pilot hole to the size I needed. The second problem is that the required 7/16" hole is not a standard bit size. Even Home Depot does not carry it, unless you buy a large and expensive set of bits. Fortunately we had one at work that I could borrow. The third problem is that it is not easy to drill three *parallel* holes in PVC pipe. I got around this by clamping the PVC between two pieces of scrap lumber so that it would "lay flat" under the drill press.

Once I had my holes drilled, the rest of the construction proceeded easily. I was only interested in 2 Meters, so I did not build the 70 cm part of the beam.

From where I live in Burlington I can only hit the .255 repeater with my HT if I stand by my second floor bedroom window and transmit on full (5W) power. With the new beam antenna, I can easily hit the repeater from anywhere inside the house using just 1 watt of power. I was never able to reach the

Walton repeater at all before; with the beam I now have no trouble at all, and I was able to monitor all the storm-related traffic during last week's tornado outbreak. This is one antenna project that turned out even more successfully than I had hoped!

## Strange Email, Out of the Blue!

I came home from work a few weeks ago and found the following email in my inbox (I've redacted the personal details):

Hello,

I'm a producer for a show that airs on the Syfy Channel. We're filming in Elizabethtown this week and I'm seeking someone for an on-camera appearance to talk about Morse Code.

Please contact me ASAP at XXX-XXX-XXXX.

Much Appreciation,

Jen \_\_\_\_\_

Jen must have found my email address (and the email addresses of the club officers) from our club web site. Brian DeYoung, K4BRI, responded to Jen's request and drove to Elizabethtown. He had to sign non-disclosure agreements, so he can't say a lot about what happened. He did tell me that it "involved a form of Morse Code" and that the episode would air in late summer. He has promised to reveal more at the next club meeting.

## Greg's QST Article

As Robert mentions in his Top of the Tower, Greg May (W2ORO) had an article published in the March QST. Greg provided a comparison of rotary encoders, and his article can be found under Technical Correspondence on pages 55 and 56. By my count, this makes *four* NKARC members who have been published in QST in recent years. Well done Greg!

73,

Mark Volstad, AI4BJ

# Weaver's Words

## Is that Spring I see just around the corner?

**Jim Weaver, K8JE**  
**Great Lakes Division Director, ARRL**  
**E-mail: [k8je@arrl.org](mailto:k8je@arrl.org); Tel.: 513-459-0142**

### **NEW FCC Rules for the 60 Meter Ham Band**

In summarizing the new rules, the FCC explained that they are intended to facilitate more efficient and effective use by the Amateur Radio Service of five channels in the 5330.5-5406.4 kHz band (the 60 meter band). The Commission stated, "Specifically, and consistent with our proposals in the Notice of Proposed Rulemaking in this proceeding, the Commission replaces one of the channels with a less encumbered one, increases the maximum authorized power amateur stations may transmit in this band and authorizes amateur stations to transmit three additional emission designators. The Commission also adopts an additional operational rule that prohibits the use of automatically controlled digital stations and makes editorial revisions to the relevant portions of the Table of Frequency Allocations and our service rules."

The Amateur Radio Service in the United States has a secondary allocation on 60 meters. Only amateurs who hold General, Advanced or Amateur Extra class licenses may operate on this band. Amateur stations must not cause harmful interference to — and must accept interference from — stations authorized by any administration in the fixed service, as well as mobile (except aeronautical mobile) stations authorized by the administrations of other countries.

The new rules expand the operating privileges previously available to amateurs. The band and the broadening of rules are the result of considerable hard work by ARRL. In obtaining the new rules as well as the

60M band, itself, League representatives to the US government needed to convince both the National Telecommunications Information Agency (NTIA) and the FCC to allow the band, and the expanded operating privileges. The NTIA, which manages the radiofrequency spectrum assigned to the Federal government, initially opposed assigning secondary use of 60M frequencies to amateurs.

The next step toward obtaining still greater privileges on 60M is to continue to demonstrate to the FCC and NTIA that hams are sufficiently skilled and disciplined to conform to the requirements of the new rules.



### **ARRL Recommends New Guidelines for 60M Use**

Anticipating the expansion of amateur use of 60M, the ARRL Board of Directors directed the development of new operating guidelines for it.

The committee that was tasked to develop these was chaired by ARRL Second Vice President Bruce Frahm, K0BJ. The report has been published on the ARRL web site and can be read or downloaded at [www.arrl.org/news/arrl-publishes-new-guidelines-for-60-meters](http://www.arrl.org/news/arrl-publishes-new-guidelines-for-60-meters).

Adherence to these guidelines will ensure operations on 60M comply with FCC rules for the band.

### **Tour of W1AW Viewable Online**

Want to tour W1AW, but can't get to Newington, CT to do this? No problem. You can take a virtual tour of the ARRL flagship station online. A recording of the February 12 live webcast tour of the station can be seen at <http://www.arrl.org/W1AW>. The virtual tour is at

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the bottom of the screen. The Master of Ceremonies for the tour is none other than Harold Kramer, WJ1B, ARRL's Chief Operating Officer.

### **ARISS Activity in Kentucky**

There was a contact by the Academy@Shawnee of Louisville, KY with the International Space Station on February 14. The school is the Aerospace Magnet School for Jefferson County, Kentucky and has an attendance of about 500 students. The audio for this contact was relayed through Echolink (AMSAT Conference) and IRLP Node 9010.

### **World Radio Conference Establishes new Amateur Band**

Amateurs have a new MF (Medium Frequency) allocation as a result of World Radio Conference 2012 (WRC 12). The band is 7 kHz wide and ranges from 472-479 kHz. US hams will have a secondary allocation.

Don't run out to buy surplus broadcast towers just yet, though. The allocation isn't effective until January 1, 2013. In addition, US amateur use cannot begin before the FCC has developed and adopted rules for the new band. US amateurs should be able to use a maximum 5-watt EIRP depending on their location and the rules developed by the FCC.

World Radio Conferences are functions of the International Telecommunications Union (ITU) which is an arm of the United Nations. WRC 12 ended in Geneva, Switzerland on February 17.

Additional observations about WRC 12 can be read at [www.arrl.org/news/wrc-12-comes-to-a-close-in-geneva](http://www.arrl.org/news/wrc-12-comes-to-a-close-in-geneva).

### **New Clubs: My Nickel's Worth**

It is always a thrill for me to receive an application

from a club to become affiliated with the ARRL. Healthy affiliated clubs are a great strength of the League — and of Amateur Radio. They often are the grease that allows ARRL to exert its muscle in fighting for the survival and greater strength of our great avocation. Too often this thrill is dashed when I learn that a new club was formed because of nasty in-fighting among members of an existing club. I don't mean over pure disagreements, but nasty actions that create deep, hard feelings. A problem with such situations is that fighting between club members generally does not stop with the forming of a new club. This fighting often moves from fighting among individuals to fighting between the old and the new club. This is not a healthy situation — not healthy for either club or for the individuals involved.

There is no doubt that whenever two or more people gather together in an effort, there can be — will be — disagreements. These disagreements can be healthy toward promoting energy and focus for the group, but they also can become pathologic if the parties involved allow them to become centered on individual personalities. The disagreement then often becomes one of personal pride involving individual-against-individual. What began as a discussion aimed at strengthening the club deteriorates into one to determine whose pride will win over another's pride.

The fracturing of one club into two becomes inevitable.

I am not talking about situations in which the parent club does not provide activities that meet the needs of groups of members. In such instances, it may be logical to form a separate club with aims that differ from the parent club. Here, the two clubs and their memberships can continue to work together on common interests. The new club merely offers new outlets that the old club could not provide.

What I am getting at is that there is nothing more likely to result in nasty relations between people than when they allow disagreements to become personal instead of viewing them as tools that allow that promote growth. It has been my experience that no single individual has the best answer to a complicated issue. If we allow ourselves to believe we as individuals are the font of all

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knowledge, we are wrong. When we personalize the debate by believing it centers on us as individuals, feelings are bound to be hurt and we begin to believe “it” is all about us when it should be about the club.

I strongly encourage everyone to realize we each are an important cog in the machinery of a club. We each have contributions to make to the success of the club. If we are to fulfill our goal of working to the benefit of the club and Amateur Radio, we must avoid reacting selfishly.

New clubs are great and needed. Founding a new club out of spite is neither great nor needed. Instead of forming a new club to get even with members of an existing club, would it not be best to swallow our pride, focus on the welfare of the group and get back to work to make the existing club better.

### **Back on the Air -- Reprise**

Last month I commented on it being great to be back on the HF bands after having lost my tower in heavy winds a year ago. I'm still thrilled with the experiences I am enjoying once again. I also am still limited to 6, 10, 12, 15, 17 and 20 Meter bands, but a new wire antenna to cover down to 160 M is sitting next to my desk, awaiting my friendly, bow-and-arrow antenna raising friends and good “bow hunting” weather.

Part of the fun of operating is the ease of using Logbook of the World (LOTW). The number of DXpeditions and private stations that now use Logbook to QSL seems to be growing nearly exponentially. The cost of QSLing truly is dropping drastically. Moreover, the best is yet to come — it is scheduled for later this year.

I look forward, once again, to seeing you on the bands.

### **Scheduled Hamfests and Travel**

The following is the current hamfest schedule for the Great Lakes Division as well as current travel plans of Vice Director Dale Williams, WA8EFK and me. Further travel will be added as time goes forward. If you would particularly like to have Dale or me attend your

hamfest of other event, please contact us. Dale is at wa8efk@arrl.org and I am at k8je@arrl.org.

Mar 3 - Cave City Hamfest, Cave City, KY

Mar 10 - MOVARC Hamfest, Gallipolis, OH

Mar 17 - Crossroads Hamfest, Marshall - Dale

Mar 18 - Toledo Mobile Radio Hamfest/Computer Fair, Perrysburg, OH -

Dale, Jim

Apr 7 - Lincoln Trail ARC Hamfest, Elizabethtown, KY

Apr 7 - ARGYL Hamfest & Computer Show, Lowell, MI

Apr 14 - Cuyahoga Falls ARC, Cuyahoga Falls, OH

Apr 14 - Milford Swap & Shop, Milford, MI

Apr 21 - Jackson County ARC Hamfest, Jackson, OH

Apr 29 - Athens Hamfest, Athens, OH - Jim

May 5 - Cadillac AR and Computer Swap, Cadillac, MI

May 12 - Louisa Hamfest, Louisa, KY - Jim

May 18-20 - Dayton Hamvention®, Trotwood, OH - Dale, Jim

Jun 2 - IRA Hamfest, Hudsonville, MI

Jun 2 - Fulton County ARC Hamfest, Tedrow, OH

Jun 3 - Chelsea Hamfest, Chelsea, MI

Jun 7 - Muskegon Area Amateur Radio Council Meeting - Dale

Jun 9 - LARS Hamfest, Newberry, MI

Jun 14 - Mahoning Valley ARC Meeting - Jim

Jun 16 - Midland ARC Hamfest, Midland, MI

Jun 16 - Milford Hamfest, Milford, OH - Jim

Jun 17 - Monroe Hamfest, Monroe, OH - Dale

Jul 19 - Programs & Services Committee Meeting - Jim

Jul 20-21 - ARRL Board of Directors Meeting, ARRL HQ - Dale & Jim

Jul 22 - Van Wert ARC Hamfest, Van Wert, OH

Jul 29 - Portage ARC, Randolph, OH

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