



# TMRA Amateur Radio Beacon

December 2016



## The Prez Sez

Again, sadly, we have to announce the death of one of our members; I very recently had a note from MaryLou Mann, N8UPU, that her husband Robert, N8UPT, recently died. After Robert's retirement they moved to N. Michigan, but while they were here they were active TMRA members and were acknowledged in 1998 with the shared award of TMRA Amateur of the Year. I have asked MaryLou to where TMRA can make a donation in Robert's memory.

Again, it's that time of the year where we have to be realists and acknowledge that there is the potential for snowy/icy weather conditions in the upcoming months, resulting in Snow Emergencies. It is TMRA policy that if there is in effect at 5:00 pm on the day of a scheduled TMRA General meeting, TMRA Executive Committee meeting, and TMRA Technical Committee meeting a snow emergency declaration of Level 1, 2, or 3 in Lucas County and/or Wood County, that meeting is cancelled. The meeting cancellation still applies if the snow emergency declaration is cancelled after 5:00pm. This should avoid any confusion as to whether or not a meeting is still on, and who decides, and when, to cancel a meeting. While announcements of cancellations may be made on our 147.20 and 442.85 repeaters, please monitor local TV stations or any other source of information regarding a county sheriff's declaration. For detailed information about Ohio's snow emergencies, go to [www.buckeyetraffic.org](http://www.buckeyetraffic.org) or <http://www.weathersafety.ohio.gov/snowemergencyclassifications.aspx>.

Weather should be OK for the Club's December meeting being our annual party, starting at 6:30pm (note the earlier time from our regular meetings). Same as last year, the Club provides the drinks – pop, coffee, tea, and the table settings, members bring a dish to share.

Congratulations to the Hams who graduated from the recent class by Mike WA8SYD and Steve KC8TVW: those who accepted our offer of a complimentary membership in TMRA for the remainder of the Membership year are very welcome to join us at the December party. And thanks to Mike and Steve for organizing the class.

Those who are interested in Emergency Communications, if you haven't already done so, I'd urge you to join the Lucas County Yahoo group – apply at [areslucascounty@yahoogroups.com](mailto:areslucascounty@yahoogroups.com). We use this to get information out about the activities of LCARES: we also have the ARES in Brief net Sunday evenings at 7:30 – 8:00pm.

Hope to see a good turnout for the party on December 14<sup>th</sup>.

73, Brian

## ARES News

**From Lucas County EC, Brenda, KB8IUP**

A special "thank you" to all the hams that helped out at the Maumee 5K Run and Christmas Parade.

There is no ARES meeting in December. The next meeting is January 28



(fourth Saturday) at 9:00 am at St. Luke's Hospital, 5901 Monclova Road in Maumee, Ohio, in the private dining room in the basement. Arrive early and enjoy breakfast in the basement cafeteria at 7:30 a.m.

Tune into the ARES IN BRIEF Net on Sunday nights at 7:30 pm on 147.270. It is open to all.

## Ham Radio Christmas

The Manor House at Wildwood Metropark in Toledo had a special decoration this year. One room was decorated with a ham radio theme. The Christmas decorations were on display from December 3<sup>rd</sup> through the 11<sup>th</sup>.



## Christmas Party

TMRA will hold its annual Christmas Party on the regular meeting night, December 14, 2016, beginning at 6:30 PM. The club will provide drinks and table service. Bring a dish to pass. Please let Brenda, KB8IUP, know if you will be bringing any children under twelve. There will be no business meeting. See you there!



## Technician License Class

Steve, KC8TVW, reports that he and Mike, WA8SYD, had 14 students in the TMRA Tech Class in November. He thanks Brenda, KB8IUP, and Tim, KD8IZU, for giving presentations on Skywarn & ARES.

A Ham Radio Christmas at the Manor House  
w8muk photos

## New Hams and Upgrades

A report from Steve, KC8TVW

Congratulations to the following new hams and upgrades: Matthew, KE8FQC, Tech; Bryan, KE8FQA, Tech; Tim, KE8FPZ, Tech; Jim, KE8FPY, Tech; Scott KE8FQB General and Tom, KE8CQG, Extra.

## National Parks on the Air

By Glenn, W8MUK

What a fantastic day!

No, not the weather. After 70 degree temperatures the day before, we were greeted Saturday morning at Fallen Timbers National Battlefield Park with 25 degree wind chills and sharp wind gusts of nearly 40 miles per hour. With nearly frozen fingers, we strung N8RLH's antenna in the trees and set up his grab-and-go rig in the ARES trailer.



A big “Thanks” to ARES for letting us use the truck and trailer. In spite of the nasty weather outside, we were warm and dry inside. It easily accommodated the eight to ten hams who operated, logged, observed, and helped to eat the donuts, coffee, Hungarian nut rolls, pizza, and other goodies. We had a steady stream of hams coming and going throughout the morning, and some visitors as well.

And what a busy morning! We began operating on the 40 meter band around 8:45 AM and almost at once became the center of a morning-long pileup. Except for brief periods when the band faded out, we were logging contacts at the rate of two to three per minute. Thankfully, there were many volunteer operators and loggers who could take over when, after 20 to 30 minutes of intense work, the hams at the controls needed a break. Around 1:00 PM we had had enough and quit for the day.



Working the pile-up

w8muk photos

Ron’s, N8RLH, random wire worked great and received excellent signal reports from the east coast states. We noticed, however, it needed frequent retuning. This was likely caused by the constantly swaying trees blown about by the high winds. Once again we observed that, if there is going to be trouble in the field, it likely will be with the antenna.

We made 302 contacts from the New England states to Florida, New Mexico, Colorado, and up to Minnesota. In all, we had over eleven pages of contacts, including a few portable and QRP stations. It was nice when, one after another, they thanked us for deploying and told us that Fallen Timbers was a park they needed to contact.

Congratulations to N8RLH who is tied for number 373 on the national NPOTA activator leader board. Visit the ARRL website at <https://npota.arrl.org/leader-board.php> for more information.

## **DX – The DX QSO.**

**The fourth in a series of articles by Ron, N8RLH**



Well, here we are at the fun part. We talked about all together to make a contact. First let’s talk about what is QSB and what do I say or do if the DX I’m listening to says he has QRM? We call them “Q” signals and they have meaning. I’ve included a list for you to study. They come from the old CW days when a shorthand was invaluable and have survived and crept into our voice contacts.

antennas and radios; now let’s put them terminology: what does QSO mean, what

Before you contact the foreign station you have to find him and hear him. I like to put my headphones on and slowly scan the bands for signals. I start with the higher bands and work my way down. If ten meters is dead then I move to 15 and so on. When I find a band with people talking, that’s where I start. Some days, DX is Australia, some days it’s Europe, and some days it’s Wyoming. The most important thing, the most important “trick” is to listen! Find out what the station is doing, where he is and how he’s working before you do or say anything. By listening you will know if he’s “rag chewing (casually talking about anything)” or seriously making contacts. How you contact him depends on how he’s operating. This is where a list of country prefixes is valuable.

There are two basic ways that DX stations work: simplex and split. Simplex is when he listens on the same frequency he transmits on. Split operation is more complicated and requires more thought. A DX station works



split by listening on a different frequency than where he transmits. You will hear him or others say, he's up 5 or listening up 5 to 15. Now you have to set your radio up to do the reverse of what he's doing.

You have to listen where he's transmitting; that's easy because you're already there. Then you have to put your transmit frequency where he is listening. When you put your radio in split mode, you change your transmitting VFO frequency to another VFO, radio, or VFO B. It's really the same radio; it just seems like a different one. You're still listening on A but transmitting on B. Wow, this can get complicated! Once you get used to it, it becomes second nature.

The first thing you need to do after turning on split operation is to push the button that is labeled A=B. This puts the two "radios" in sync. If you don't do this then B may actually be on a different band all together. Not Good! Then you have to find the button that allows you to momentarily listen on B so you can find out where the DX is listening and how he's operating. If he says he's listening up 5, then you change B to 5 KHz above where he's transmitting. When you let go of the button, you're back to A. So how do you use this? You listen to him call a station, then switch to B to find where that station is. You go back and fourth until you get a feel for how he's working. He may listen on the same frequency the whole time. He may move his listening frequency a little or a lot in between contacts. You need to listen, listen, listen, till you can find the station he's talking to.

That's when the fun starts! You need to know not only where he's working stations, but also HOW he's working them. Is he listening for whole calls only or is he saying things like "who's the station with foxtrot in the suffix" or "XYZ go ahead"? Does he allow tail-ending or does it make him angry. Tail-ending is when another station talks at the same time as the last contact is finishing up, right on top of him. Sometimes it's ok but sometimes it really angers the DXer. If you make him mad, he may work you just to get rid of you and never log the contact, so you never get credit for it. Bummer! Is he picking up stations really quickly or waiting till he hears someone in the clear? You need to work according to how he's working. Work smart.

Ok, I'm all set up, what the heck do I say? The actual contact can be very casual or very, very quick. Be prepared to talk a few minutes if he's a rag chewer. You may make a new friend in a different country. Basically you need to transmit as little as you can to get his attention. I usually just transmit my suffix, RLH. Usually once and then listen! If he allows tail-enders I do that, if he waits for a call in the clear then I count to 2 or 3 after he says QRZ (who's calling me). I work the same way he wants to work.

When he says "RLH go ahead," I say, "N8RLH you are 5 by 9 in Ohio." He says, "N8RLH you are 5 by 9, QRZ." Its over! All that work for 20-30 seconds, holy cow! He may ask for your call again or your prefix or suffix or even how the weather is in Ohio. Who knows, just listen. It a hunt like no other and can be very rewarding or very frustrating. Some stations I never did work after hours of trying, and some I worked on the first call.

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President, Brian, WD8MXR;  
Vice-President, Glenn, W8MUK;  
Secretary, Zack, N8ZAK;  
Treasurer, Rich, KD8WCB.

Board Members: Steve, W8TER;  
Skeet, KD8XKD; Tom, KD8WCD;  
Dan, KE8UE; Dave, KD8EVN.

TMRA Home Page  
[www.tmrahamradio.org](http://www.tmrahamradio.org)  
Webmasters, Zak, N8ZAK &  
Mike, N8ZLW

TMRA W8HHF Repeaters;  
147.270+, 224.140-, 442.850+  
(TMRA 2 meter, 220, and 440  
repeaters operate with a 103.5  
"PL", or a touch-tone access code  
of 1-2-3)  
D-Star Repeater: 442.750  
APRS: 144.390

The TMRA meets at 7:30 PM on  
the second Wednesday of every  
month in  
The Electrical Industry Building,  
Lime City Rd. Rossford, Ohio.

Once you work him, make sure you log all the information. Using a log book will make sure that you don't forget any information like the time or the day. And don't forget that the day changes according to UTC, not local time.

Next month: NOW WHAT? How to get credit for the contact and miscellaneous stuff.

### Common Q signals

QRM man made interference

QRN natural interference i.e. static

QRP lower power

QRO higher power

QRZ who is calling me

QSB signal varying or fading

QSL acknowledge or receipt

QSO a communication

QSY change frequency

QTH location

QRT to quit

(Ron, N8RLH is TMRA's Amateur of the Year for 2016.)

## **Grounding and Ham Shack Electrical Safety**

**The third in a series of articles by Tom, KE8CQG**

Last month I wrote about using stranded wire for the ground conductor. Why stranded wire? What's wrong with solid wire? Let me begin with the idea that static electricity is a surface phenomenon, which it is. #2 stranded wire has more surface area than #4 solid, as well as more than 50% more circular mill area than #4, to conduct current generated by a static "cloud."

Static cloud??? Yes, static cloud. And I have seen clear-weather static cloud damage due to blowing wind. The "cloud" on the earth's surface is negatively charged, while in rain clouds above, or blowing wind, a positive charge develops. The two static clouds move along, one over the other, building up the charge until it is sufficient to bridge the distance between them. It takes about 1000 volts per 1/2" to arc to the clouds above. Ideally, if this ground cloud charge happens to approach your grounding system, it is syphoned off and absorbed into the great static "sponge" of mother earth. You then have averted a possible lightning strike, or a serious static discharge through your equipment.

To the right is a photo of a tower grounding. The picture shows a ground rod off the opposite corners of the concrete base, a third rod is about ten feet away, under a 100 amp utility breaker panel on my side of the meter. The #2 ground conductor is connected from the ground lug inside the utility disconnect switch panel to the ground rod beneath the panel, and from there over to the upper right corner ground rod at the base of the tower. Then the conductor runs to the flat steel of the bottom tower rung, using a bolted ground lug. The wire loops from there, around to the flat steel on the other side of the tower using another bolted ground lug, and then to the second ground rod. This is a tiltable tower, so enough slack is allowed in the ground wire to tilt the tower over without disconnecting the ground wires from



the ground rods. This ground wire terminates in a crawl space under my house where tower coaxes are fed through lightning arrestors which are connected to the ground wire.

The tower is also a 50' crank up. A substantial ground wire is connected to the base of my 2-meter vertical, then to a 3-band beam through a 2" ground clamp on the beam, then to the base of a 5 band Sloper, then the conductor is bolted to the top section of the tower. From the top section, the conductor runs down the tower to one of the base ground rods.

Remember to keep all of your ground connections where you can see them for inspection purposes. The ground wire from the incoming utility panel to the far side of the tower base should be installed in one piece, without cutting the wire. Use a paint suitable for metal or Liquid Tape on the ground joints as weather protection. A good quality lithium grease is also helpful for anticorrosion protection and is very long lasting.

Always leave good slack in the wires so in ten years you can drive a new ground rod next to the old, replace the clamps and lugs, and you have a new ground system. Don't be afraid to replace the wire if it appears as little as 10% corroded. You have a lot of money tied up in equipment; its protection is worth more than that wire.

Just remember that you're not trying to 'catch' a lightning bolt. You're trying to diminish the potential of the static charge rapidly enough to prevent it from reaching that lightning bolt potential. Ground rods in wet soil can drain the charge off the surface of the ground and dissipate it in the wet earth. You are providing a path for the current to flow from the very top surface of the earth, down into the earth. If you have a water well with a steel casing that runs down to the water table, you're in great shape. Use the casing for a ground rod.

Most of us living in the Toledo-Black Swamp area have a high enough water level that ground rod are sufficient for our needs. Those who live in places like West Texas, where you can raise dust at the bottom of a thirty foot deep hole, 8' ground rods don't usually get the job done, but there are ways around that, too.

For example, an oil company was suffering ten thousand dollars a month in static electricity damage (not counting oil production losses). After rebuilding their field of 110, 75hp to 100 hp pump jacks to prevent static electricity damage, the losses due to electrical problems over the following year was only three hundred dollars. The cost of the rebuild project was paid for in 23 months. The savings were in reduced cost of electricity and in the replacement of electrical equipment and motors. This was due to making the field more efficient and eliminating physical damage due to static electricity.

To summarize, protecting your home and equipment from lightning and static electricity discharges is something you can do. By using adequate grounding conductors, ground rods, clamps and proper techniques, you can go a long way to protecting your expensive and hard-to-replace ham radio equipment. But remember, your safety is critical. Be sure you know what you are doing or get experienced help when working with electrical circuits.

I'm usually at the TMRA monthly meetings, so feel free to ask me questions.

(Tom, KE8CQG, is an electrical engineer with extensive experience in the design of oil field electrical equipment and its proper grounding. He was certified to work on electrical equipment up to 25 KV energized or de-energized. At the age of twelve he held a ham radio technician license and built his own 27 MHz transmitters to fly model airplanes.)

## **ARRL Sanctioned Hamfests**

### **From Dale's Tales for December**

Dec 3 - Fulton County Winterfest - Delta, OH  
Dec 4 - Lanse Creuse Hamfest - Madison Hgts, MI -- NEW LOCATION  
Jan 15 - SCARF Hamfest - Nelsonville, OH  
Jan 29 - TUSCO Hamfest - Strausburg, OH  
Feb 4 - HARA Swap - Negaunee, MI  
Feb 11 - Cherryland - Traverse City, MI  
Feb 19 - Mansfield - Mansfield, OH  
Feb 19 - Livonia - Livonia, MI

## **Did You Know?**

- The Lucas County ARES Informational Net is every Sunday at 7:30 pm on 147.270.
- The TMRA Newcomers and Elmers Net is every Sunday at 8:00 pm on 147.270.
- The Tech Committee meets the second Monday of each month at Maumee Fire Station #2 on Dussel Drive (in front of the water tower).
- The TMRA general meeting is the second Wednesday of each month. The December TMRA meeting is the annual Christmas party and begins at 6:30 PM instead of the usual time.
- The Lucas County Siren Net is the first Friday of each month from 10:30 to 11:30 AM on 147.270 + W/103.5 PL and 442.850 + W/103.5 PL.
- The Lucas County Hospital Net is the first Saturday of every other month at 10:00 AM.
- The NORC Net is the first Saturday of each month. This net typically meets at 11:00 AM on or around +/- 7.200 MHz LSB.
- VE testing is each month. Contact Steve, KC8TVW at 419-467-3734 or [kc8tvw@arrl.net](mailto:kc8tvw@arrl.net).
- Due to the Holiday Season there will not be a Lucas County Skywarn meeting till the first Thursday of February.
- The calendar at the TMRA website lists numerous ham radio activities each month.

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