



# TMRA Amateur Radio Beacon

May 2019



## News from the President

From Rob, KV8P

News from the President – April, 2019

First and foremost, four of our very active members both lost close loved ones recently. To Skeet (KD8KXD), Rich (KE8IJV), Brenda (KB8IUP) and Mike (N8GBU), our heart-felt condolences to both of you and your families. On behalf of all of your TMRA friends, our collective hearts and minds are with you both through these tough times.

On a much more positive note, I'm thrilled to announce that TMRA was selected to host the 2020 Great Lakes ARRL convention in conjunction with our Hamfest next year! We're starting to dig into the planning for the 2 day event which is expected to include a Saturday full of forums, an ARRL Dinner Banquet, a Wouff Hong, and the standard Sunday hamfest activities. Now the work begins so be sure to get involved with the planning.

For our members, we do have a lot of things to look forward to here very soon this spring. Don't forget to reserve June 2<sup>nd</sup> and 3<sup>rd</sup> for the Museum Ships on the Air setup and operations on-board the Col. James M. Schoonmaker ship. If you've never operated during this event, you don't want to miss it. Pile-ups and a whole lot of fun are both guaranteed for this one. We'll be signing people up to operate during both during the May general meeting as well as during the prep meeting on May 13<sup>th</sup> (6pm). See Glenn (W8MUK) for more info!

Field day is June 22<sup>nd</sup> and 23<sup>rd</sup>! We'll be needing "all hands on deck" for that one, as always. We'll have a lot of antennas to assemble and we always need more operators! Join us. The May TMRA General Meeting will also do a recap of our logging software for the upcoming events with N3FJP software, so be sure to join us!

Also upcoming are many spring and summer ARES events like Marathons, parades and the air show. Watch for information from LCARES on them and please join in and help out if you can.

I'd like to pass on a personal thanks to Rich (KQ6EF) for his personal efforts on our club repeaters recently! Rich has put in a tremendous amount of his time and is solely responsible for the addition of PL on the 53.110 repeater receive as well as battery backup on 147.27 recently. Huge thanks from all of us Rich!

We do have another antenna build coming up soon. Please see Dave (KD8EVN) and Rich (KD8WCB) for information on the rather unique antenna build coming soon based on the recent article in QST magazine.

Lastly, another session of spring Tech Classes is newly wrapped up, and licenses should arrive before this is posted. Congrats to all those that are new to the Amateur Radio ranks and another big thank you to Steve (KC8TVW) and Mike (WA8SYD) and all others that helped with the class and the

VE Session. Nice job as always! We are looking forward to hearing the new callsigns on the air! For all of you, please don't be shy, as we are all really looking forward to talking to you on the air.

73,

Rob, KV8P

[kv8p@kv8p.com](mailto:kv8p@kv8p.com)

## **ARES News**

**From Tim, KD8IU**

[boxcar@toast.net](mailto:boxcar@toast.net).

The next Lucas County ARES board and general meeting will be held Saturday May 25th. The meeting location is at St Luke's Hospital in the basement Private Dining Room near the cafeteria. The meeting starts at 9:00am.

Please tune into the Lucas County ARES in Brief Net, Sunday nights on the 147.270 repeater at 7:30pm for the latest information.

Tim was also like some help with the welcoming committee.

District 1 ARES is still looking for up to 10 volunteers to help assist in SAG Wagons during the Bike to the Bay Event on June 22nd and 23rd (This event raises funds for the Multiple Sclerosis Society.) This event starts at Owens Community College in Perrysburg and ends in Port Clinton. The ride starts at 7am and covers 2 days, returning to Owens Community College in Perrysburg on Day 2. Please contact Brent Stover (WD8PNZ) at [WD8PNZ@arrl.net](mailto:WD8PNZ@arrl.net) if you can assist!



## **TMRA Bus to Hamvention®**

TMRA will once again have a bus going to Hamvention® at the Greene County Ohio Fairgrounds and Expo Center. The bus will leave Toledo early on Saturday, May 18, and return the same day. The bus will stop for dinner after the hamfest. Dinner is not included in the price of the bus fare. For more information or to register for the TMRA bus, contact **Mike, WA8SYD**.

Hamvention® tickets, good for May 17-19, may be purchased in advance online for \$22.00 at <https://hamvention.org/purchase-tickets/>, or for \$27.00 at the gate.

## **TMRA Technical Committee**

**Rob, KV8P**

### TECH COMMITTEE UPDATES

It has been a busy month for the tech committee. This time of the year we do a great deal of the budget work and planning for the upcoming year. Prioritizing the list of priorities (without

driving each other crazy along the way (haha) can take some work, but we're up for it. ☺ Anything you'd like to see done in 2019/2020?

As mentioned above in the president notes, Rich (KQ6EF) recently did some work to get the 53.110 repeater on Receive PL. (103.5) It is working well, so give it a try. It should help quell some occasional noise that the machine hears this summer.

Also mentioned above, Rich (KQ6EF) recently completed the battery backup for the 147.270 repeater which appears to be working very well. This should allow us to weather up to a 13 hour power outage with the repeater which in turn would buy us enough time to implement further power options if/as needed. (hopefully never needed, right?)

Also, lastly, the Technical Committee did approve some additional equipment for use with our club HF equipment which we will be purchasing soon. Look for it to be ready and available for our upcoming events which includes a power supply, head-sets, portable antennas and more.

Rob – KV8P

## **Mobile Fox Hunts**

**From Ron, N8RLH**

Mobile Fox Hunts are cancelled until Spring. For more information, contact **Ron, N8RLH** at [rlhornbeck@att.net](mailto:rlhornbeck@att.net).

## **Newly Licensed Technicians and General Class from April 6<sup>th</sup> VE Testing**

### **New Techs:**

**KE8LZI Doug**

**KE8LZJ Adrick**

**KE8LZK Josh**

**KE8LZL Tim**

**KE8LZM Jay**

**KE8LZN Robin**

**KE8LZO William**

**KE8LZP Robert**

**KE8LZQ Jesse**

**KE8LZR Patrick**

### **New Generals**

**KE8LZS Bruce**

**KE8LUM John**

**Congratulations to all!**

## **Next CW Practice Session**

**Saturday May 11, #2 Fire Station 450 W. Dussel Maumee, OH**

**1:00 p.m. after TRMA antenna build which is after May VE session**

## **Field Day from Steve, W8TER**

Field Day this year is going to be quite different from previous Field Days. Our object this year is to be more contest oriented and more educational. We have newly licensed hams who are looking to learn and experience more and there are those of us who have not experienced some different modes within a contesting atmosphere. I invite and encourage you to get involved by first volunteering to log for an operating station, and then, when you are ready, operate and make contacts.

During Field Day this year, we will be focused on working together as a team. We want to help the team to understand the importance of our communications. There will be an effort to setup and operate at least six stations on the 20, 40, and 80 Meter Bands. They will be operating in two separate modes: voice and digital. This will involve learning about interaction between stations on the same band and avoiding interference between the stations. This process will not be an easy task and will require some experimentation and physical effort. I will need many volunteers to setup and move/reconfigure antennas if necessary. Your help is needed. There will be a special time set apart for setup and experimentation regarding the antenna configurations. Look for more information in the near future regarding this process.

I have also created a "To Do List." This list is intended to give us additional points for the contest portion of Field Day. I will be asking you to volunteer to undertake and accomplish these simple tasks. You can help earn the club an extra 100 points toward the contest portion of Field Day. Each one of these tasks on the "To Do" list would be something that might be done during an actual emergency. I or any of the other Elmers will be glad to guide you to help simplify and execute any of the "To Do" tasks. The "To Do" list is very important and not difficult to perform with a little guidance. These tasks do not require much effort but perform a vital function and I will need your help with these tasks. There are many to be done but none are difficult.

One of the best features of Field Day is the FOOD! Rich, KD8WCB has again volunteered to be in charge feeding the group. We encourage you to bring a dish to pass. Please contact Rich, KD8WCB at [kd8wcb@arrl.net](mailto:kd8wcb@arrl.net) to let him know what you would like to bring.

Field Day is the weekend of June 22nd and 23<sup>rd</sup>. Next to the TMRA Hamfest, this is the second most important event we have in TMRA. It is a very fun time. Come out and experience it!

POINTS	BONUS	TASK DESCRIPTION	IN CHARGE
100 points	7.3.1	Generator (Emergency Power)	
100 points	7.3.2	Media Publicity	
100 points	7.3.3	Public Location	
100 points	7.3.4	Public Information Table	
100 points	7.3.5	Message to Section Manager	
100 points	7.3.6	Message Handling	
100 points	7.3.7	Satellite QSO	
100 points	7.3.8	Alternate Power	
100 points	7.3.9	W1AW Message Bulletin	
100 points	7.3.10	Educational Activity Bonus	
100 points	7.3.11	Site Visitation by an Elected Government Official	
100 points	7.3.12	Site Visitation by a Representative of an Agency	
100 points	7.3.13	GOTA Bonus	
100 points	7.3.14	Web Submission	
100 points	7.3.15	Youth Participation	
100 points	7.3.16	Social Media	
100 points	7.3.17	Safety Officer Bonus	
		WIFI Setup Logging	

**7.3. Bonus Points:** All stations are eligible for certain bonus points, depending on their entry class. The following bonus points will be added to the score, after the multiplier is applied, to determine the final Field Day score. Bonus points will be applied only when the claim is made on the summary sheet and any proof required accompanies the entry or is received via email or normal mail delivery.

**7.3.1. 100% Emergency Power:** 100 points per transmitter classification if all contacts are made only using an emergency power source up to a total of 20 transmitters (**maximum 2,000 points.**) **GOTA station and free VHF Station for Class A and F entries do not qualify for bonus point credit and should not be included in the club's transmitter total.** All transmitting equipment at the site must operate from a power source completely independent of the commercial power mains to qualify. (Example: a club operating 3 transmitters plus a GOTA station and using 100% emergency power receives 300 bonus points.) **Available to Classes A, B, C, E, and F.**

**7.3.2. Media Publicity:** 100 bonus points may be earned for attempting to obtain publicity from the local media. A copy of the press release, or a copy of the actual media publicity received (newspaper article, etc.) must be submitted to claim the points. **Available to all Classes.**

**7.3.3. Public Location:** 100 bonus points for physically locating the Field Day operation in a public place (i.e. shopping center, park, school campus, etc). The intent is for amateur radio to be on display to the public. **Available to Classes A, B and F.**

**7.3.4. Public Information Table:** 100 bonus points for a Public Information Table at the Field Day site. The purpose is to make appropriate handouts and information available to the visiting public at the site. A copy of a visitor's log, copies of club handouts or photos is sufficient evidence for claiming this bonus. **Available to Classes A, B and F.**

**7.3.5. Message Origination to Section Manager:** 100 bonus points for origination of a formal message to the ARRL Section Manager or Section Emergency Coordinator by your group from its site. You should include the club name, number of participants, Field Day location, and number of ARES operators involved with your station. **The message must be transmitted during the Field Day period and a copy of it must be included in your submission in standard ARRL radiogram or no credit will be given. The message must leave or enter the Field Day operation via amateur radio RF.**

The Section Manager message is separate from the messages handled in Rule 7.3.6. and may not be claimed for bonus points under that rule. **Available to all Classes.**

**7.3.6. Message Handling: 10 points for each formal message originated, relayed or received and delivered during the Field Day period, up to a maximum of 100 points (ten messages). Copies of each message must be included with the Field Day report. The message to the ARRL SM or SEC under Rule 7.3.5. does not count towards the total of 10 for this bonus. Available to all Classes. All messages claimed for bonus points must leave or enter the Field Day operation via amateur radio RF.**

**7.3.7. Satellite QSO:** 100 bonus points for successfully completing at least one QSO via an amateur radio satellite during the Field Day period. "General Rules for All ARRL Contests" (Rule 3.7.2.), (the no-repeater QSO stipulation) is waived for satellite QSOs. Groups are allowed one dedicated satellite transmitter station without increasing their entry category. Satellite QSOs also count for regular QSO credit. Show them listed separately on the summary sheet as a separate "band." You do not receive an additional bonus for contacting different satellites, though the additional QSOs may be counted for QSO credit unless prohibited under Rule 7.3.7.1. The QSO must be between two Earth stations through a satellite. **Available to Classes A, B, and F.**

7.3.7.1 Stations are limited to one (1) completed QSO on any single channel FM satellite.

**7.3.8. Alternate Power:** 100 bonus points for Field Day groups making a minimum of five QSOs without using power from commercial mains or petroleum driven generator. This means an "alternate" energy source of power, such as solar, wind, methane or water. This includes batteries charged by natural means (not dry cells). The natural power transmitter counts as an additional transmitter. If you do not wish to increase your operating category, you should take one of your other transmitters off the air while the natural power transmitter is in operation. A separate list of natural power QSOs should be submitted with your entry. **Available to Classes A, B, E, and F.**

**7.3.9. W1AW Bulletin:** 100 bonus points for copying the special Field Day bulletin transmitted by W1AW (or K6KPH) during its operating schedule during the Field Day weekend (listed in this rules announcement). An accurate copy of the message is required to be included in your Field Day submission. (Note: The Field Day

bulletin must be copied via amateur radio. It will not be included in Internet bulletins sent out from Headquarters and will not be posted to Internet BBS sites.) **Available to all Classes.**

**7.3.10. Educational activity bonus:** One (1) 100-point bonus may be claimed if your Field Day operation includes a specific educational-related activity. The activity can be diverse and must be related to amateur radio. It must be some type of formal activity. It can be repeated during the Field Day period but only one bonus is earned. For more information consult the FAQ in the complete Field Day packet. **Available to Classes A & F entries and available clubs or groups operating from a club station in class D and E with 3 or more participants.**

**7.3.11. Site Visitation by an elected governmental official:** One (1) 100-point bonus may be claimed if your Field Day site is visited by an elected government official as the result of an invitation issued by your group. **Available to all Classes.**

**7.3.12. Site Visitation by a representative of an agency:** One (1) 100-point bonus may be claimed if your Field Day site is visited by a representative of an agency served by ARES in your local community (American Red Cross, Salvation Army, local Emergency Management, law enforcement, etc.) as the result of an invitation issued by your group. ARRL officials (SM, SEC, DEC, EC, etc) do not qualify for this bonus. **Available to all Classes.**

**7.3.13. GOTA Bonus.** Class A and F stations operating a GOTA station may earn the following bonus points:

7.3.13.1. When a GOTA operator successfully completes 20 QSOs, they receive 20 bonus points. Upon reaching an additional 20 QSOs the same operator receives a second 20 bonus points, up to a maximum of 100 Bonus points per GOTA operator. An operator may make more than 100 QSOs but the QSOs over 100 do not qualify for an additional bonus.

7.3.13.1.1. Additional GOTA operators may earn the GOTA bonus points under this rule, up to the maximum of 500 bonus points. (Remember that there is a 500-QSO limit for the GOTA station. But no single GOTA operator may earn more than 100 of the GOTA bonus points except as provided in 7.3.13.2.)

7.3.13.1.2. A single GOTA operator must complete all 20 QSOs required before the bonus is earned. There is no "partial credit" for making only a portion of the 20 QSOs or "pooling" QSOs between operators.

7.3.13.2. If a GOTA station is supervised full-time by a GOTA Coach, the bonus points earned for each 20 QSOs completed under Rule 7.3.13.1. will be doubled.

7.3.13.2.1. The GOTA Coach supervises the operator of the station, doing such things as answering questions and talking them through contacts, but may not make QSOs or perform logging functions.

7.3.13.2.2. To qualify for this bonus, there must be a designated GOTA Coach present and supervising the GOTA station at all times it is being operated.

**7.3.14. Web submission:** A 50-point bonus may be claimed by a group submitting their Field Day entry via the **[field-day.arrl.org](http://field-day.arrl.org)** web site. **Available to all Classes.**

**7.3.15. Field Day Youth Participation:**

7.3.15.1. A 20-point bonus (maximum of 100) may be earned by any Class A, C, D, E, or F group for each participant age 18 or younger at your Field Day operation that completes at least one QSO.

7.3.15.2. For a 1-person Class B station, a 20-point bonus is earned if the operator is age 18 or younger. For a 2-person Class B station, a 20-point bonus is earned for each operator age 18 or younger (maximum of 40 points.) Keep in mind that Class B is only a 1 or 2 person operation. This bonus does not allow the total number of participants in Class B to exceed 1 or 2.

**7.3.16 Social Media: 100 points for promoting your Field Day activation to the general public via an active, recognized and utilized social media platform (Facebook, Twitter, Instagram, etc). This bonus is available to bona fide Amateur Radio clubs and Field Day groups that welcome visitors to their operation. Individual participants do not qualify for this bonus. Club websites do not qualify for this bonus. Available to all classes.**

**7.3.17 Safety Officer Bonus: A 100-point bonus may be earned by having a person serving as a Safety Officer for those groups setting up Class A stations. This person must verify that all safety concerns on the Safety Check List (found in the ARRL Field Day Packet) have been adequately met. This is an active bonus – simply designating someone as Safety Officer does not automatically earn this bonus. A statement verifying the completion of the Safety Check. List must be included in the supporting documentation sent to ARRL HQ in order to claim this bonus.**

73,

Steve, W8TER

## AREDN Mesh Network Project

**Bradley Ruberg ,WB8RG, Michael Lacumsky, W8MAL, and Rob Hall, KV8P**

Lately, there has been a lot of discussion on the topic of Mesh Networks. The TMRA has had two separate presentations on the topic. These presentations have been informative but they seemed to leave out one very important thing: what can/should/could WE do with it? This article will attempt to answer that question.

The first part of any discussion on Mesh Networking must be about equipment. What does the average user need to get onto the network? The answer to that question is actually very simple, and it does not involve a large investment of Money. You will need the following suggested equipment:

A Ubiquity NanoStation M2 wireless access point. The unit must be in the 2.4ghz range. At the time that I'm writing this (May 2019), these units sell on Amazon for \$80.00. I will include a link to the Amazon listing at the end of this article. You will also need to purchase a CAT 5e (or better) Ethernet Cable, in a length that will allow you to plug a Computer into the unit. I suggest a length of no less than 20 feet for flexibility of use. For outdoor use, outdoor cable is recommended. Finally, you will need a computer with a LAN plug (RG-45) to connect to the NanoStation. A quick note here, if your Computer does not have a LAN Plug then you will also need a wireless router for the System to work. Any router that you use on your home internet will work for this application. This home router should be completely separate from your home system and cable or DSL modem. I have purchased the equipment listed above and have about \$120.00 Dollars invested.

So, now that we have talked about equipment, let me tell you about the things that are going on in Lucas County right now, involving Mesh Networking:

#1 - Several members of the TMRA have purchased the equipment (listed above) and have created a portable or "Ad Hock" Mesh system. We have been testing and using it for some time. The first use was in 2018 at the Glass City Marathon. At that Event, Mike, W8MAL used two Ubiquity NanoStations to establish a mesh Link between Unified Command (located in the press box of the UT Glass Bowl) and The ARES trailer (located in Lot 10 at UT Savage Arena). We used the AREDN (Amateur Radio Emergency Data Network) Chat program. This program facilitated a direct terminal to terminal link between the two locations. That Link allowed for Messages to be passed between the two without interrupting the Radio Net. This was our first use of the System in a real world Operation.

#2 - The system was used again at TMRA Winter Field Day (2019). During the event we set up a single NanoStation and connected it to a wireless router. We again used AREDN Software to connect several users to the system with their cell phones. We then practiced using group messaging over the network throughout the Day.

#3 - The system was deployed again at TMRA Hamfest (2019). At the Event we connected two NanoStations. One Station was located at the club table area, the other at the Main Hall entrance near the turnstile. We then used two VOIP capable Phones to create a direct Connection between the two locations. We used the System several times throughout the day to pass messages. (One of these messages was rather sensitive in nature from a security point of view). The mesh phones allowed us to handle that issue without having to compromise security over the open airwaves.

4 - Finally, and most recently, we combined the things that we had learned at the 2019 running of the Glass City Marathon. Using two NanoStations (one in the Press Box, and one in the ARES trailer) we were able to connect with both the computers as well as the phones. This allowed for many contacts between the Net Control Station and Unified Command to be handled off the repeater, freeing up valuable space on the repeaters during the net (consider it a valuable ham radio "back-channel") The addition of a Third Net Controller allowed for one person to handle individual issues, one to handle direct communication with Unified Command and one to run the regular traffic on the Net. In addition to the Direct Chat and phone link we were able to utilize the AREDN Software to pass two ICS Forms, an ICS 205 as well as an ICS 214. Both of these Forms would be used in an actual Emergency to communicate with the Incident Command Staff. It can be stated with no reservation that the Mesh Network was invaluable to this year's Glass City Marathon Net.

#5 -There has been one other deployment of an "Ad Hock" mesh network in the recent past. At the last Toledo Air Show, Steve, N8XSF and Brent, WD8PNZ deployed mesh equipment and connected it with two IP Cameras. These Cameras were used to monitor the entrances and the info was passed directly to law enforcement if there were any issues. This allowed for less manpower to be required at those locations.

So, what does the future hold for Mesh Networking and the TMRA? Right now our Tech committee is considering Mesh networking and discussing potential TMRA involvement with the needed back-bone architecture for our region. There is much to discuss and much to learn. The next planned deployment of the Mesh Network will most likely be aboard the Schoonmaker during Museum Ships weekend. We are planning a chat, phone and camera link between the dog house and the galley and hope to have a monitoring Station set up inside the Museum itself, further showing that its implementation potential goes way beyond ARES Events. (who knows where it could go...?)

We invite you to join in on the project. If your interested, we will help you get the NanoStation purchased, set up and running. For more info please feel free to contact either Mike, W8MAL or myself. Keep an eye out for this system at all Future TMRA Events.

Brad, WB8RG

NanoStation M2 Link            But, preferably, use the smile.amazon.com method to benefit the club

Ubiquiti NanoStation M2 -... [https://www.amazon.com/dp/B00HXT8K4O?ref=ppx\\_pop\\_mob\\_ap\\_share](https://www.amazon.com/dp/B00HXT8K4O?ref=ppx_pop_mob_ap_share)

## **Museum Ships on the Air 2019**

**By Glenn, W8MUK**

TMRA will be participating in **Museum Ships Weekend, June 1 & 2, 2019**, thanks to the kind invitation from the National Museum of the Great Lakes in Toledo, Ohio. We will set up and operate HF and VHF stations aboard the Col. James M. Schoonmaker, a retired lake freighter berthed on the Maumee River in downtown Toledo.

Museum Ships Weekend (MSW) is an international event hosted by the Battleship New Jersey Amateur Radio Club in Camden, NJ. Each year ham radio clubs in the United States and other countries set up stations aboard museum ships, such as the Schoonmaker. For two days in early June, these ships become the centers of “pile-ups” caused by hams eager to make contacts. Last year over 23 TMRA members made 1811 contacts in 15 hours in 47 states, 5 Canadian provinces, and 8 DX stations. During the event our QRZ.com listing had over 4000 hits!

All TMRA members are welcome to come and participate in the event, even if you are not able to come to the organizational meeting. New hams are welcome as well; and since there will be general and extra class licensee supervision, technician level members will be able to operate on the HF bands. This is not a contest, it is a fun event, so come aboard and have some fun and hang out with other hams.

We will again be using call sign “K8E” for this special event. TMRA will set up and operate 40 and 20-meter phone stations; club members may set up stations on 2-meters, 6-meters, and other frequencies using phone, digital or other modes. Please note, however, that space is strictly limited and all stations **must** be approved in advance.

If you plan on operating, please sign up for logging as well. There will be an operating and logging sign-up schedule available at the May TMRA general meeting and at the organizational meeting. Please sign up for only one hour at a time. You may sign up for other operating and logging times, if available.

There will be an **organization meeting on Monday, May 13, at 6:00 PM** at Maumee Fire Station #2 on Dussel Drive in Maumee, Ohio. We will discuss many topics including station set-up, antenna placement, operating and logging. The meeting will last only one hour as the Tech Committee meeting will begin at 7:00.

As in prior years, we will operate from the ship’s galley and from the “doghouse”, an area in the upper stern of the ship that served as crew’s quarters. The galley (crew dining area) is open to the general public and provides an excellent opportunity for us to showcase amateur radio and explain our hobby to those visiting the ship. However, the doghouse is off-limits to the general public because of its location. Access is by narrow, steep staircases, called ladders. Needless to say, the doghouse and the upper deck where it is located are not handicapped accessible!

**Due to insurance reasons, all participants in MSW 2019 must be members of TMRA and registered with Team K8E. No one will be admitted to the upper deck and the doghouse unless they are TMRA members with dues that are currently paid.**

On **Friday, May 24**, there will be a work party aboard the Schoonmaker to set up radios and antennas, and for testing. We will announce the time for this work party at the May 13 organizational meeting.

If you are interested in participating or just want more information, please email Glenn, W8MUK, at [w8muk@arrl.net](mailto:w8muk@arrl.net).

## Technician Class of April 6, 2019



Courtesy of KV8P

## From April 10th, 2019 TMRA meeting---Tuscon Area Packet Radio Presentation



W8MAL

Courtesy of W8MAL

## From "What's Next, Now That I Have My License" Presentation on April 13, 2019



Courtesy W8MAL

## April 2019 ARES meeting St. Luke's Hospital



Courtesy AA8HS

### Understanding Logbook of the World – Part 3

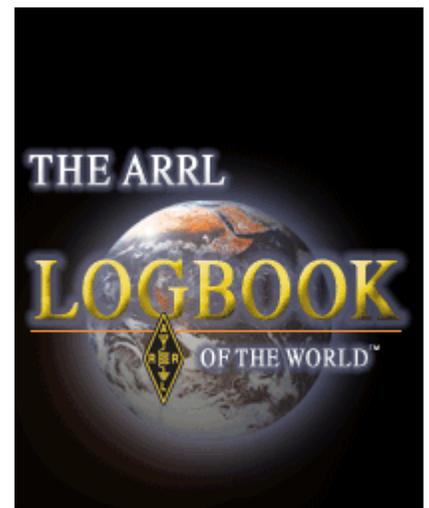
N8JDM [First published] October 12, 2017 - 6:26 pm

*Editor's Note: This is the third of a series of five articles written by Jason D. McCormick, N8JDM, and reprinted with permission. The Beacon is grateful for his generosity in sharing his articles with us.*

This article is the third part of a series of article on using Logbook of the World. Part one addressed key concepts for LoTW while part two went through how to setup LoTW. Part 3 will discuss basic use of LoTW through TrustedQSL directly or what this author likes to call “the hard way.”

As shown in part 2, TrustedQSL is the interface by which Callsign Certificates are obtained and Station Locations configured for loading QSOs into LoTW. Now we'll look at the other main function of TrustedQSL (TQSL) – actually uploading the logs.

As mentioned before, one of LoTW's main design goals is integrity of the QSO/QSL process. TQSL accomplishes that by using the Callsign Certificate to cryptographically authenticate log entries to LoTW. It does this through a process that is called “signing”. The Callsign Certificate is a “secret”



portion of a secure process to a “public” portion stored on the LoTW servers. When QSOs are prepared in TQSL for upload to LoTW, one of the preparations is using the secret stored in the Callsign Certificate to sign the log entries. When the log entries are processed by the LoTW server, the public portion of the process is able to cryptographically validate the signature on the logs to ensure their integrity. The QSOs are then loaded into the LoTW database and matched with other QSOs to form a QSL.

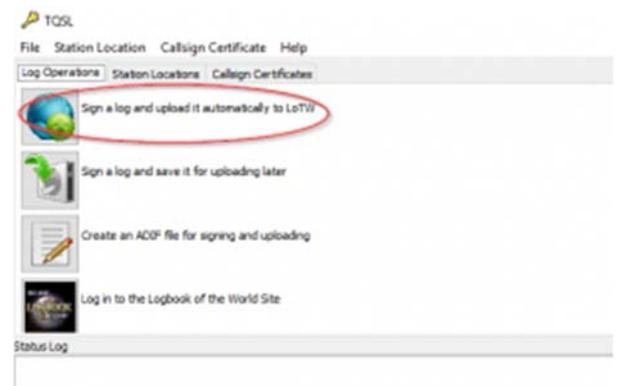
Returning to TQSL, the “hard” way to use LoTW is by using the TQSL client manually to load logs, sign them, and upload them to LoTW. It is important to note that TQSL is not logging software and does not replace electronic logging software. TQSL works exclusively on ADIF files. It does have a rudimentary interface to enter QSOs directly, but that is simply to package them as a ADIF for uploading.

Using TSQL to upload an ADIF file is straightforward. Using logging software, export the QSOs to upload into an ADIF export. If the software asks which fields to export, export all the fields LoTW records:

- Callsign (the other party of the QSO)
- UTC Date
- UTC Time
- Mode (must be listed in one of the modes supported by LoTW)
- Band
- Rx Band (if split operating)
- Frequency
- RX Frequency (if split operating)

In general, most full-featured logging software will export the necessary fields and many extras by default. The extra fields will be ignored by TQSL.

If the intent for using TQSL is manual, either because that’s desired or because the logging software in use doesn’t support TQSL/LoTW integration, create a folder where all ADIF files can be stored. This will help determine if certain logs have already been uploaded to LoTW. The LoTW upload process flags duplicate uploads, but having the files stored is a nice backup. Export the ADIF file to the preferred location.





## Review of the TYT-8600 Mini Mobile 2M/440

**Bruce Hammond AA8HS Assistant Editor**

Mini mobile amateur radios can be used in go-kits, on motorcycles, in backpacks, or in other situations where space is at a premium such as in a car which already has several radios. There are a number of small, Chinese mini mobiles out there and some only have a 10-watt maximum power. If I had wanted 220 band coverage as well, the BTEch tri-band UV-25X4 would have made a good choice, although a three-foot triband mobile antenna on the roof did not seem to be a good idea in parking garages. This Chinese radio will not have the same receiver quality as a Kenwood, Yaesu, or Icom and is not intended to be your primary base radio. It is, however, portable and can be used in the mobile by running the power leads to the battery using Anderson Powerpoles and for safety, with fuses close to the car battery. It also works with a cigarette lighter plug as long as the inline plug fuse is rated at 5 amps. You may need some DC power filtration if there is alternator noise. The TYT-8600 is analog only. It is less than the size of two Whoppers piled on top of each other measuring only 125mm (4.9 inch) (W) × 45mm (1.8 inch) (H) × 107mm (4.2 inch) (D). The back panel only has space for an SO-239, a tiny fan, and a compartment for an external speaker and the mini USB socket. Some of these radios are IP67, that is waterproof, but, mine was labeled IP54 which means it provides protection from dust and other materials such as dirt, oils and non-corrosives. Like any other radio, this one should be secured in the vehicle since it can become a projectile in a quick stop or accident.

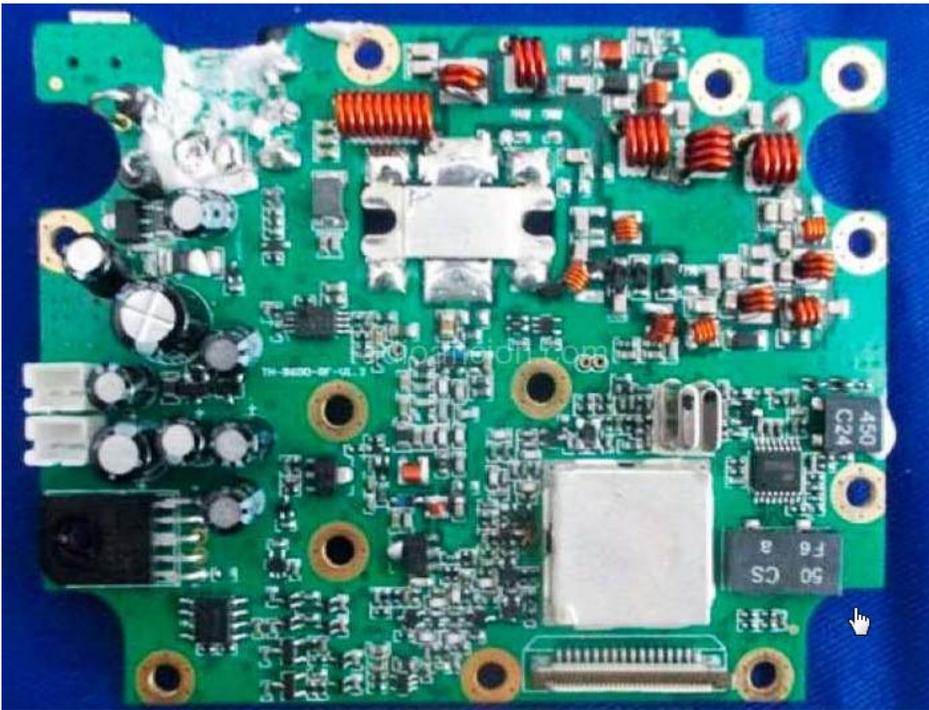
The audio amplifier is the BTL, bridged transformerless type. This arrangement is popular in car audio systems and produces more audio volume than a one chip audio amp with a large capacitor. The speaker is connected between the outputs of two large op amp type chips. When one chip goes positive, the other is negative. You cannot, however, ground either lead by connecting it into a car's audio system since this would destroy the amp. I found no need for an external speaker since volume was more than adequate from the top mounted speaker. This radio must be popular since I have seen prices from \$108 all the way to \$185 and this may not include the programming cable. The cable can be found for \$20 to \$40 but mine was included with the purchase price. You would expect a radio with so much miniaturization to be more expensive. Although Amazon wanted \$145 plus tax, I took the risk and bought on EBAY for \$124. The radio arrived in two weeks and the box was in perfect shape. It contained everything that you would need including extra fuses. There are positive and negative lead fuses between the 12 volt line and power plug and a positive lead fuse between the adapter and the radio. I soldered a cigarette lighter plug to the leads and the radio starts up when the vehicle is started.

The radio is simple to program with the included software, but the software is very basic and cannot be used to change the settings. It is also certainly possible to program the TYT-8600 from the front panel controls with some patience. The manual was not written by a native English speaker but, after using the radio for a while, it can be very helpful. Basically, every setting that you might want to change can be accomplished through the microphone. The menu button on the mike is also the enter button so that menu>down arrow> menu>menu starts scanning. Holding the transmit button does not cause scanning to stop; pressing the FUN (function) and then the 3 key does that. The up and down arrows control volume unless you press the \* key and then they control the channel. The numerous beeps can be turned off with FUN then 0. Other operations are similar.) The upper "A" screen monitors one VHF or UHF frequency while the lower "B" screen can be used for scanning or fixed VFO or memory operation. The reverse is also possible. YouTube videos show that the power ratings of 5, 10, and 25 watts are accurate for VHF and 5, 10, and 20 watts for UHF. My reports of audio quality when I transmit have also been excellent.

Another advantage of this radio is its wide transmission and reception range. It can be used for GMRS and for listening to the few remaining analog FM narrow band sources such as Monroe 911 (159.09 Mhz), Perrysburg Fire (154.1750), and Wood County Sheriff (151.1150). When in various parts of the world, inexpensive radios

such as these may also be enough for public safety or commercial purposes since both CTCSS and DCS are supported.





The radio contains only two circuit boards with lots of solder on the fins of the power transistor. Screws hold the power transistor to the heat sink. The output pi filters for the two bands are obvious. During long QSO's, the fan rarely turned on and the radio never gets hot to the touch. The only intermod problems that I have had were downtown on the 462.55 GMRS channel from a DMR transmitter. To conclude, the greatest advantage of a basic radio like this is portability without much of an investment. It won't take up much space in a go kit. Speaking of go-kits, Quaker Oats also offers a breakfast go-kit! Now, that I have my SDS-100 scanner back from Uniden Repair, part 2 of the scanner article series will resume in the future.

<https://www.youtube.com/watch?v=-lvatRsd9Hs>  
<https://www.eham.net/reviews/detail/13396>  
<https://itstillworks.com/filter-dc-noise-7712710.html>

## **Dales Tales**

**Dale Williams, WA8EFK, Director, Great Lakes Division**

Greetings, welcome to "Dale's Tales" for May, 2019.

'Twas brillig, and the slithy toves  
Did gyre and gimble in the wabe;  
All mimsy were the borogoves,  
And the mome raths outgrabe.

It sounds like Jabberwocky, and it is, written by Lewis Carroll ca 1871.  
And I often wonder if that is how we sound to newcomers to our hobby.

In fact, I am sure it is. I remember my entry to Novice-land and how little I understood about the ongoing discussions at radio club meetings. It took a while to pick up the slang, and a little while longer to actually begin to understand it. But thanks to a couple of mentors who were able to ease the pain, I got by. Were it not for these heroes of mine, I might have given up.

Mentoring was the key and Mentoring is the theme of the upcoming Dayton Hamvention and National ARRL Convention. We will all learn how we can be better mentors and assist interested newcomers into our hobby. We need to step away for a few moments from our own form of "inside conversation" and invite the new folks in to the conversation, remembering that they probably don't yet have a firm grasp of the nuances of ham lingo. Attending a few of the Hamvention Forums will certainly provide some guidelines for us all.

Remember, Hamvention and the ARRL National Convention are set for May 17, 18 & 19 at the Greene County Fairgrounds in Xenia, OH. Full details can be found at <https://www.Hamvention.org>.

Of special note, National and State ARRL conventions are authorized to host meetings of the Royal Order of the Wouff Hong (ROWH). This is a fun event, convening at 9:00 PM Saturday May 18 at the University of Dayton Marriott, 1414 S. Patterson Blvd. in Dayton. As the history is chronicled, "The Old Man", Hiram Percy Maxim W1AW, wrote in 1919 the Wouff Hong was conceived as an instrument of potential punishment for wayward hams, those who strayed from good operating etiquette. The actual Wouff Hong currently hangs in a place of honor in the office of the Secretary of the ARRL. This meeting provides the opportunity for those who do not yet belong to the "ROWH" to join and share in its ideals. This is always a fun event with a rather unique lesson in League history attached. You can register in advance at <http://arrrl-ohio.org/wouff-hong.html>. A certificate of membership and special memento will be provided to all inductees.

TOM'S COMMENTS: Looking at many of the club newsletters that come my way, I can see that Spring is here just by all the listings of ham radio classes. Good job, everyone! It's so important for ham radio to keep offering these opportunities. And it's great to be able to share such a fun hobby.

The challenge for us all is follow-up. It's great to have someone get their first license. Who helps them get on the air? Who will show them how to make the first contact? Who will advise them on antennas?

Whatever you do, it has to be tailored to circumstances that fit the mentor and those who wish to learn. Some clubs go all-out to organize activities for new hams. If your spring classes end in May or early June, make sure your newly licensed people get an invitation to Field

Day. In fact, don't just invite—make it as easy as possible for them to get there, and stress how important it is for them to get on the air. Offer them a step-by-step tour so they understand which antenna does what, and how all the equipment works together.

If you're going to the Hamvention in a few weeks, remember that the theme this year is "Mentoring the Next Generation." The ARRL website indicates: "A track of presentations will be organized to build on the convention theme, encouraging more individuals and radio clubs to serve in mentoring roles, leading new and inexperienced radio amateurs to become more active, involved, and engaged."

Whether or not you can get to Hamvention, please do your part at home, and find a new ham to help –whether it's just encouragement on the air, or sharing some knowledge that you would like to pass along.

--73, Tom W8WTD Vice Director, Great Lakes Division

HAMFESTING: Here is the current Great Lakes Division ARRL Sanctioned Hamfest Schedule covering the next few months. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

If you plan to request ARRL Sanctioning, please be sure to do it well in advance of your Hamfest date, as this allows adequate time for QST Listings. Be sure to invite your ARRL Officials as soon as your date is set. With 52 weeks and 70+ hamfests, things do double up a little. Plan ahead for requesting your ARRL Officials to attend.

5/4/19	Cadillac	Cadillac, MI
5/5/18	Flying Beers Trunkswap	Ferndale, MI
5/17 to 19	Hamvention	Xenia, OH
6/1/19	Luce County	Newberry, MI
6/1/19	Princeton	Princeton, KY
6/1/19	IRA	Hudsonville, MI
6/1/19	Fulton County	Wauseon, OH
6/2/19	Chelsea	Chelsea, MI
6/8/19	Union County	Marysville, OH
6/15/19	Milford/SWODXA Conv	Milford, OH
6/15/19	Midland Hamfest	Midland, MI
6/16/19	Monroe	Monroe, MI

OUR GREAT LAKES DIVISION web page does carry news from some of the recent events in the Division, useful links and information as well as some neat photos supplied from around the Division. Check it out: <http://arrl-greatlakes.org/>

Be sure to check your Section's news pages for the latest local happenings, club and net information.

73, Let's go light up the bands!

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## 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 **FLDigi Net** meets every Tuesday night at 7:30 PM at 147.27 MHz
- The **TMRA general meeting** is the second Wednesday of each month at the Electrical Industry Building, Lime City Rd., Rossford, Ohio. **New meeting time is 7:00 PM.** Doors open at 6:00 PM.
- **Six Meter Nets** meet every Wednesday and Thursday at 9:00 PM (EST). The Thursday night Net is on 50.255 USB. For more information contact Dan, KE8UE, at [dlcunn@sbcglobal.net](mailto:dlcunn@sbcglobal.net).
- 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 the even numbered months 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.
- **ARES** meets the fourth Saturday of each month.
- **VE testing** is each month. Contact Steve, KC8TVW at 419-467-3734 or [kc8tvw@arrl.net](mailto:kc8tvw@arrl.net).
- Register for **CW classes** by contacting Steve, KC8TVW at 419-467-3734 or [kc8tvw@arrl.net](mailto:kc8tvw@arrl.net).
- **Ron, N8RLH**, has ham gear from the estates of silent keys. Contact: 419-345-6382 or [rlhornbeck@att.net](mailto:rlhornbeck@att.net).
- The **TMRA Hamfest** is March 17, 2019. Set-up is Saturday, March 16.
- The **TMRA bus goes to Hamvention** on May 18. Contact Mike, WA8SYD for information.
- June 1 & 2, 2019 is **Museum Ships Weekend**. Contact Glenn at [w8muk@arrl.net](mailto:w8muk@arrl.net) for information.
- **Field Day** is June 22 & 23, 2019. Contact Steve, W8TER for information.
- The **TMRA apparel store** is now open. Contact Gold Medal Ideas at <http://www.goldmedalideas.com/tmra>.
- The calendar at the **TMRA website**, [www.tmrahamradio.org](http://www.tmrahamradio.org), lists numerous ham radio activities each month.
- Contact **Brad, WB8RG, TMRA Information Officer** at [tmrainformation@gmail.com](mailto:tmrainformation@gmail.com) to receive weekly emails about club news and activities.
- TMRA has a **Facebook** page and an **Instagram** page, which can be accessed from an icon on the TMRA website or at <https://www.instagram.com/tmrahamradio/>.
- Don't forget to select TMRA as your Organization of choice for **Kroger Cares** and **Amazon Smile**. This results in a donation to the club as a portion of your purchase.

- The April 2019 issue of CQ reports that the number of licensed amateurs increased by about 1% from 2017 to 2018.

*Editor's Note: Beginning with the February 2019 issue, The Beacon will no longer produce a print version for mailing. The Beacon understands this change may inconvenience some club members and regrets that it is necessary.*

You may contact the Editor of *The Beacon* by emailing to: [w8muk@arrl.net](mailto:w8muk@arrl.net), or writing to:

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