

MERT

Marion County Emergency Radio Team



Marion County Sheriff's Office
Div. of Emergency Management

COMMUNICATIONS UPDATE

October 2022

MERT's primary role is to support all open Evacuation Shelters throughout Marion County during declared Emergency events. We also support EOC and emergency personnel along with Community Emergency Response Teams (CERT) with voice, image and data communications resources. *"Call MERT.... When all else fails!"*

Mark your calendars!

MERT Monthly Meeting

The next Meeting will be on
October 15th @ 10:00 am at
the MCSO EOC (692 NW 30th
Ave, Ocala, FL 34475).

See you there!

MERT Wednesday Check-In's

As more Members are participating in the Wednesday Morning "Check-In's" (0900 to 1200 Hrs.), here's a summary on the many topics and activities last month.

- ✓ **September 7th Meeting** – Harlan Cook (KN4VRM) and Bill Gillespie (KW5BG) shared MCSO has 4 satellite phones available for emergencies. Starting this month, MERT will be testing those units as part of the FDEM Region 3 & 5 Monthly Net on the last Wednesday of the month. Additional tests include 2-, 20- and 40-Meter voice along with SHARES and digital comm's using Winlink (Telnet and VARA).
- ✓ Harlan reviewed MERT's participation in the Statewide Amateur Radio Network (SARnet) each month. This is a FDOT supported network of linked UHF (70 cm band) voice repeaters throughout the State of Florida is unique in the U.S. A map detailing locations and 70 cm frequencies is at: sarnetfl.com.
- ✓ Leon Jurcyszyn (K8ZAG) informed the group that the FCC has a new system of license documentation called "CORES" which all will be required to use when renewing their licenses. He encourages all to register now.



"The broadest, and maybe the most meaningful definition of volunteering:
Doing more than you have to because you want to, in a cause you consider good." ~Ivan Scheier

- ✓ Leon is coaching (teaching) Harlan and Bill on the new CORES system to secure Administrator rights to all MERT repeater license FRNs. Thanks Leon!
- ✓ Bill Sobel (K1WLS) informed members of the Virtual Ham Expo on 9/17-18 for \$10.00 and the many different topics available.
- ✓ Gary Neron (KS4TSX) agreed to develop a Satellite phone guide for MERT members. Thanks Gary!
- ✓ Bill Gillespie shared an update on the Hurricane Watch Net at HWN.org which is activated as hurricanes approach and is located on 40- & 20-Meter bands. (See article on last page.)
- ✓ Mike Condon (W9MNC) recommended that ARRL insurance on radio equipment be purchased by everyone after his own experiences. He has it and he is getting over \$4,000 worth of radios replaced after a lightning strike. Cost is \$1.40/\$100 annually.
- ✓ **September 14th Meeting** – Congratulations to Gary Neron for getting his General license.
- ✓ Bill Sobel and Harlan talked about Members getting fresh training on the ICOM IC-880 radio and SHREK kits. Bill will be developing training programs for them both.
- ✓ Bruce Twiss (KI4NFA) recommended practicing filling out ICS-214 forms using 2 people at each shelter – one person needs to be the scribe and one operates the radio.
- ✓ Harlan shared a summary about the upcoming Monthly Meeting agenda, and Bill Gillespie showed photos of the Mobile Command Center (MCC) being built. He also passed around a rugged “Toughbook” laptop for all to see and become familiar with as MERT operations in the MCC may require their use.
- ✓ Harlan distributed a handout on testing and modifying a 2 Meter mobile antenna for better operation (article included at the end of this newsletter).
- ✓ Hayden Kaufman (N2HAY) talked about the October 1st “Service Denied” emergency drill preparations. We are awaiting the FL State Plan to finalize MERT’s test plans.
- ✓ Paul Blystone (WB4QQN) stated that 42 Winlink practice messages had been sent out by members. He recommended using Florida Net, Ohio Net, and Hospital Net for further practice. Please contact Paul if you want more information on these HF Net’s.
- ✓ Hayden explained Excel fillable forms for convenience.



- ✓ Leon reminded attendee's that all MERT members are required to complete IS-100, 200, 700, and 800 classes per MCSO SOP rules. These classes prepare MERT Members to understand and follow Incident Command practices in all activities supporting the Div. of Emergency Management.
- ✓ Leon trained Gary Neron and Pat Davis (KQ4BRW) on connecting a sound card to a PC and the radio for Winlink communications directly to a Digipeater. This allows digital messaging whenever the Internet is not available.
- ✓ Harlan Cook provided a tour to Pat Davis of the MERT warehouse where the SHREK kits, spare supplies and the MCSO Motorola XLT 2500s are stored. (Note: These radios are provided to MERT for use during emergencies in support of County Deputies and Fire Dept. personnel.)



- ✓ **September 21st Meeting** –Today, many “work” events were undertaken with programming Gary Nerons’ new IC-5100 radio, troubleshooting MERT’s IC-7100 radio for HF operation (lights but no receive or transmit), showing Gary the satellite phones to assist him in developing the MERT operating guide for next weeks FDEM Region 3 & 5 Monthly Net (1100 – 1315 hours).
- ✓ **MERT welcomes new Member Jonathan Reyes (WP3JJ)** who was approved for membership by the MCSO. Clint Stockton (AG0K) contacted Jonathan to share the good news who shared he was looking forward to participating. Mr. Reyes got his license while living in Puerto Rico so we look forward to learning about his HAM experiences there.
- ✓ Harlan Cook also Welcomed him to MERT and shared weekly and Monthly meeting details along with a map of finding MERT on the MCSO campus. We look forward to meeting Jonathan at next week’s “Check In” on Wednesday, Sept. 28th.
- ✓ **September 28th Meeting –**

Meeting cancelled resulting from Hurricane Ian activation.

Next months Communications Update will detail MERT activities and events during the Level 1 Activation.

MERT Member Spotlight

Sharing more information about one member of our amazing team!

Leon Jurczyszyn, K8ZAG

I volunteered for MERT to give back to the community that may be in need of emergency communications. I like the challenges that are presented by being a member of MERT.

My goal at present is to pass on the knowledge and experience to the leadership and members of the MERT organization. I will assist anyone having difficulty learning or using the MERT equipment and their own personal Amateur Radio systems.



Ham radio is an awesome hobby. From when I started back in the late '50s and the short time I was involved with the hobby is amazing. I began Ham Radio again about 2011 and found that many modes being used today were not available. I have used, CW, SSB voice, RTTY, PSK, D-STAR, VHF, UHF and HF voice and digital. My latest mode is using the DMR digital mode. I am finding this mode most challenging from the standpoint of programming CODE PLUGS.

Music is another interest in my life. I learned to play the clarinet and saxophones at an early age and enjoyed playing in combos and big band music in and around the Villages until just recently.

My full-time job was with Michigan Bell Telco which became Ameritech and is now known as AT&T. I started in the mail room and I retired after 35 years at the age 53 as a 2nd level Manager. I got bored and did some contracting work for several Telco companies. The last contract job was involved about a year of living and working in Hawaii for AT&T Hits.

I have a Flagpole antenna made by Force 12 (regretfully is no longer in business). The antenna is mostly used for 20 meters without a tuner. With a tuner I can transmit on 40M through 12M digitally. I also have a Diamond X50 on the roof of the garage. It is just left of the



furnace pipe and may not be visible. I also have a ground plane antenna in the attic above my shack room for 2M and 70cm.

The flagpole antenna has a ground rod at the base. I also have a ground rod and lightning arresters before it enters the shack. The ground from inside is connected to that ground rod and all are connected to the lightning rod system.



In closing, I am surely blessed by the Lord God Almighty for giving me my wife of 61 years and the wonderful life we have.

Leon

*MERT is extremely fortunate to have such a knowledgeable and skilled Member like Leon who is always available for any question and is passionate about our **Mission!***

Meet our new MERT Editor – Pat Davis



Pat Davis (KQ4BRW) MERT Member and new Editor of MERT's newsletter, "Communications Update".

I am very pleased to announce Pat Davis (KQ4BRW) has Volunteered to be Editor of the "Communications Update". Pat brings a wealth of experience and knowledge to the position which she shares below in her own words. MERT is extremely fortunate to have her on our team...and, as our Editor. **Pat, Welcome and Thank You for supporting MERT!**

"I never thought I would be a ham radio operator, but the storms of July 2015 left our far NW part of Marion County for more than a week with no electricity, cell phone service, landline phones, and Internet. Plus, we were all trapped on our properties because of downed oaks and power lines. This left us cut off from family and any medical help. Neighbors rallied every day at a group of mailboxes and tried to take care of each other with tractors and chainsaws and shared gasoline, showers, and food, because no outside help was coming. The worst part was our not knowing how our extended families were doing.

That's when I started thinking about getting radios. It turns out only ham radios would reach that far. It took a while, but I finally decided to get my FCC license. My husband Bill (my best friend and most decent guy ever) and I joined CERT so we would know what to do to help neighbors in an emergency. I joined MERT so our area would have a way to communicate even though I have no background in radios or electronics.

Working for MCPS, I taught high school and middle school English, computer applications, writing, etc. then became one of three Technology Resource Teachers who taught all the teachers and staff, usually via internal TV. The websites I had been building and maintaining at home for the county and schools finally became my real job for my last 10 years. I learned ColdFusion programming and SQL Server databases so teachers could update their own classroom resources and individual school sites.

I also traveled to other school districts sharing code so they could make their own applications to track their inventories, teacher recertification classes, finances, personnel, bus routes, etc. After I retired in 2011, I continued teaching database design for a while in a couple local junior colleges and built websites for charities and horse clubs.

We have a small horse farm because horses have always been the BEST thing for me ... besides dogs. We have two grown sons, two amazing grandboys, and an awesome daughter-in-law. Now I make costumes and accessories for equines and sell them in my online store and work more hours than ever!

I was very doubtful about joining MERT because I didn't think I would fit in. But I have been warmly welcomed by everyone; no one has ever once been unkind, and the guys are amazingly intelligent, have lively and inquiring minds, and have strange and wonderful backgrounds. Best of all... they are trying hard to help everyone in their community!

They remind me of what Diane Keaton said, "A life well lived may be the most beautiful thing of all."

Pat Davis



SHREK Kit

SHREK Kit Update

This month, Members completed restocking the School Radio Emergency Kits (SHREK) with new parts replacing old/faulty cables and repairing the Anderson Power pole connectors on several radios & power supplies. We thank Director Preston Bowlin for his purchase approval and Erin Miller, Deputy Director of Emergency Management for her work to process the equipment order.

Harlan Cook, MERT Coordinator, wants to thank all who participated in the audit and the replenishment activities. A special thanks to Leon Jurcyszyn, MERT Technical Advisor, for building some new connector cables for the batteries. MERT now has a battery for every SHREK kit supporting more reliable communications should AC power fail at the Shelters.



(L-R) Member Pat Davis inspects the new batteries for use at the Shelters for backup 12 vDC power. Bill Sobel restocks parts in a SHREK kit.

Testing your Mobile Antenna

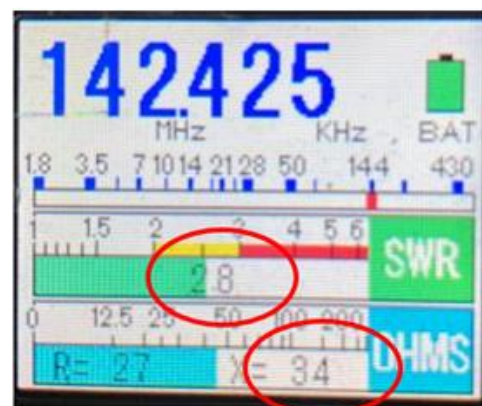
Don't ASSUME your new or existing Antenna is tuned correctly. Things can and do change.

What an education. I was working with the Stone Creek CERT radio team testing their comm's around the community and was using my new mobile antenna and found it was much worse transmitting over a short distance (approx. 2 miles) than an older antenna I had. What I found was my "new" antenna had major problems.

Many (most?) HAM products (especially antennas) are manufactured overseas and are reported as being "tested"...but are they? Often, only the first unit is tested...with later units randomly tested. This can often lead to reduced performance on some units, as I found out recently when searching for reasons of reduced transmit signal quality.

Here's my test setup. My SWR meter is a Comet CAA-500 Standing Wave Analyzer with a working range of 1.8 to 500 MHz.

The antenna was found to be "tuned" to 142.425 MHz...well below 2 Meters (144-148 MHz).

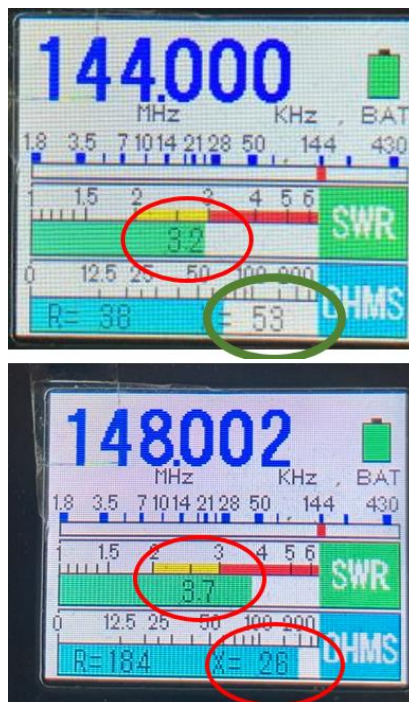


What did I find?



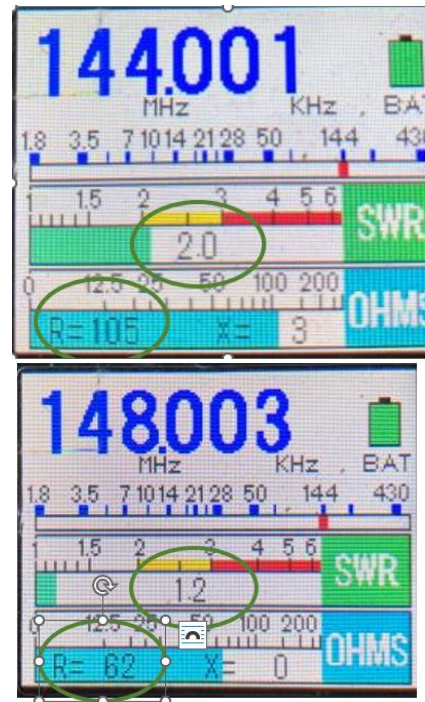
- A) Two sections of the antenna shaft had paint on the ends and weren't cleaned to bare metal. One section I had installed and one section the factory installed under the coupler.
- B) The major problem was the antenna was too long. Approx. 5/8 inch was removed which shifted the "tuned" freq. up to 144 – 148 MHz.

Antenna Tests BEFORE



SWR was 3.2 and 3.7!

Antenna Tests AFTER



SWR is now 2.0 and under.

SWR	LOSS	ERP
1.0:1	0.0%	100.0%
1.1:1	0.2%	99.8%
1.2:1	0.8%	99.2%
1.3:1	1.7%	98.3%
1.4:1	2.8%	97.2%
1.5:1	4.0%	96.0%
1.6:1	5.3%	94.7%
1.7:1	6.7%	93.3%
1.8:1	8.2%	91.8%
2.0:1	11.1%	88.9%
2.2:1	14.1%	85.9%
2.4:1	17.0%	83.0%
2.6:1	19.8%	80.2%
3.0:1	25.0%	75.0%
4.0:1	36.0%	64.0%
5.0:1	44.4%	55.6%

If your antenna has a SWR ratio of 3.0..... 25 % of your radiated power will be lost before it is transmitted. Even "New" antennas can have serious SWR problems if they weren't tested by the manufacturer.

IMPORTANT NOTE: SWR above 3.0 to 3.5 has the potential to cause excessive reflected power and heat in the transceiver output... that can cause a failure. I was lucky to not have my damaged my Icom IC-706MKIIG. Be careful – and test your antennas regularly as it may save your radio!

Harlan Cook – KN4VRM

MERT ARES HEC CERT MONTHLY MEETING

AGENDA

September 17, 2022

10:00 am

- **Welcome!** Harlan Cook (KN4VRM) MERT Coordinator
- **Pledge of Allegiance**
- **Attendee Introductions** (Name, Call Sign and Organization)
- **Silent Key Acknowledgements**
 - A moment of silence for all our friends who are infirmed or departed.
- **MERT Coordinator Update** Harlan Cook (KN4VRM)
MERT Coordinator
 - New MERT Repeater Update
 - Clay Electric response requires frequency coordination report costing \$3,800
 - Cost will have to be budgeted for next year
 - MERT needs to analyze if results are worth the total cost
 - Monthly Region 3 & 5 Net will now include Satellite phone tests
 - MERT added SHARES monitoring software to track traffic and alerts
 - While the Tropics have been quiet...Thanks to All for your Net & Winlink participation! Please join HEC and ARES Net's too.
- **Mobile Command Center Update** Bill Gillespie (KW5BG)
MERT Asst. Coordinator
 - Report on MCSO inspection visit on September 9th
 - Future considerations and thoughts of MCC impacting MERT



Bill Gillespie (KW5BG) showing the internal layout of the new MCC along with construction progress photos

- **New Editor for the “Communications Update” Newsletter**

- Pat Davis is the new Editor
- Introduction and Welcome
- MERT is very fortunate she accepted this responsibility



- **New Member Administrator – Clint Stockton (AG0K)**

- New Member Update
- New Member Introductions



- **Hospital Emergency Communications Team Update** Dave Welker (W2SRP)
HEC Coordinator

- ALERT - Microsoft Updates affecting Winlink and Winlink Forms updates.
 - How we found these affected our Hospital HAM Exercise Friday.
 - How they will affect our operations if deployed at Hospitals.
 - Need to check individual, MERT and ARES computers as well may be affected if they will be using Winlink and Winlink Forms.



- Local Gateways, how they affect our Winlink Training
- CHIRP Update for Baofeng Radio models UV5R & UV82 Squelch fix

- **ARES Coordinator Update** Hayden Kaufman (N2HAY)

- ARES October SET (Simulated Emergency Test) Update –
 - “Service DENIED” Exercise details and plans
 - State has not yet provided State Plan for review
- Update on additional training courses that are available via the FEMA IS program, the ARRL, and other resources.





Hurricane Watch Net – HAM Net

Another resource tracking the development and progress of hurricanes can be monitored on the 20 Meter band at 14.325.000 MHz or on 40-meters at 7.268 MHz (propagation and time dependent).

Net activation information can be found on the Internet at: hwn.net

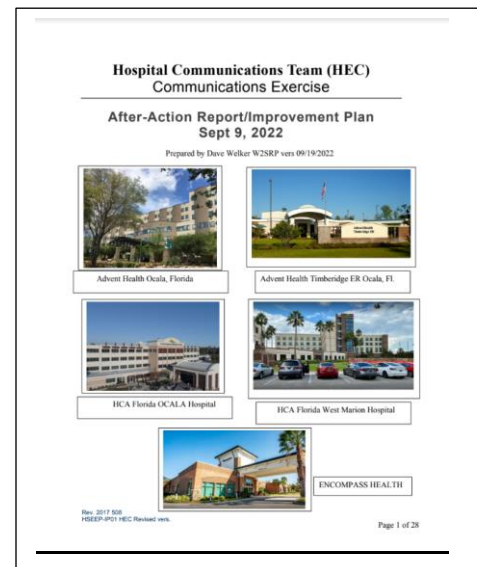
Hospital Emergency Communications Team (HEC) Update

MERT thanks Dave Welker (W2SRP) HEC Coordinator for the following update on HEC activities.

The Hospital Emergency Communications Team (HEC) conducted the Exercise “ALL HOSPITAL STATION TESTING” on Sept. 9th from 16:00 to 18:00 L.

The Exercise focused on testing all HAM EQUIPMENT to complete these skills:

1. Complete CORE Capabilities.
2. Determine if the HAM station equipment is working correctly.
3. Test the communications using VHF Voice and Winlink e-mail (if available).



The Exercise was evaluated successful as all HEC stations and radio equipment was working with all issues corrected on site or notated in the ICS-214 Log.

The HEC team are emergency communicator volunteers for Advent Health Ocala, Advent Health Timberidge Emergency Center, HCA Florida Ocala Hospital & HCA Florida West Marion Hospital. Encompass Health, Ocala.

Please contact Dave Welker if you would like a copy of his Exercise Report at:

w2srp@gmail.com

HAM's Helping Others

During a crowded event in On Top Of the World's (OTOW) Ballroom, Allen Abbott (KB1QCE) and Bruce Twiss (KI4NFA) responded to a medical emergency by one attendee. The subject received assessment, Ambulance EMT's were escorted to the facility and crowds controlled. The patient was moved to an ambulance and transported to hospital without incident.

Allen is a MCSO CERT Certified Trainer who also presented fire extinguisher training and reviewed CERT's Field Operating Guide at the OTOW CERT meeting.

MERT salutes Allan and Bruce for their actions at OTOW!

Stone Creek Radio Training

Harlan Cook (KN4VRM) presented information on becoming licensed amateur radio Operators at the Stone Creek CERT meeting in September. 37 attendees learned more about the process of licensing, the benefits of getting the 1st level Technician class authorization, the low cost on purchasing a handheld radio and the many practical and enjoyable aspects of the hobby.

MERT Members who are also CERT, your reports on helping your local group are invited.

Invitation to Attend

MERT meetings are open to all interested Amateur Radio enthusiast, CERT, ARES, HEC, Skywarn and the General Public who are interested in learning more about participating in this important volunteer amateur radio organization supporting emergency communications at the MCSO Division of Emergency Management. Questions? Contact Harlan Cook, MERT Coordinator at 210.331.3240.

[Interested in learning more about MERT..... Visit https://kg4nxo.com/](https://kg4nxo.com/)