



COMMUNICATIONS UPDATE

June 2025

MERT's primary role is to support all open Evacuation
Shelters throughout Marion County (FL) during declared
Emergency events. We also support the Emergency
Operations Center Incident Commander, staff and other
EMCOMM groups (CERT, HEC, ARES) with voice, image &
data communications locally, statewide and across the
United States.

"Call MERT... When all else fails!"

Next Bimonthly Meeting

July 19th, 10:00 am at the EOC

All Amateur Radio Operators are Welcomed!

Meetings conducted in Jan, March, May, July, Sept. and Nov.

Wow. It's June Already!



Harlan Cook (KN4VRM)
MERT Coordinator

As we reach the halfway mark of the year, it's a great time to reflect on our accomplishments so far - along with our goals for the next 6-months. As Steve Jobs was quoted... "The only way to do great work is to love what you do." So... to that motivating quote, it's also important to remind ourselves of the power of TEAMWORK. When many can come together in doing GOOD along with enjoying the activity with friends, our efforts become more than just some "volunteer" time. It truly becomes a source of *fulfillment and happiness*.

Now that we find ourselves halfway through the year, it can be tempting to slow down and wait for a fresh start. However, successful people and organizations know that consistency is a key to success. That's why MERT events continue focusing on the skills we need during any activation, along with increasing our knowledge on the details of amateur radio and the EMCOMM procedures we follow. Our focus on HF communications this year is one example.

We all are keenly aware that making progress on any activity takes time, and sometimes it may feel like you're not moving fast enough. For me, I often have to remind myself... as long as I keep going, I'm making progress. As the MERT Coordinator, I am deeply indebted to each members participation and owe you a debt of gratitude for your support. I am also extremely thankful for your assistance in helping lead MERT as the responsibilities can be overwhelming at times. To all, I am very grateful for your help and offer my heartfelt thanks.

More Great News - Repeater KG4NXO has been Upgraded!



Phil Lewis (WB4EVV)
D-Star Repeater
Manager

In the last newsletter, we shared news the KK4DFC repeater had been upgraded after a major effort and much time. In this newsletter, we have more great news from Phil Lewis (D-Star Repeater Manager) sharing his success in upgrading our second D-Star repeater for <u>KG4NXO</u>. While a few "tweaks" are still necessary, all members are encouraged to share a personal "Thank You!" to Phil when you see him on these major accomplishments.

As background, MERT has been using the first generation Icom D-Star repeaters for nearly 20-years. In addition, these units have used 10-year old PCs as the operating software program machines. Needless to say,

MERT was very pleased on their quality for all these years but it was time to replace them

with new <u>third</u> generation models. The new repeaters have improved specifications, features and options available making them even more valuable for MERT's future support to the Division of Emergency Management. We know they will be more reliable too!

The KK4DFC repeater (146.790 MHz) is the <u>primary</u> **MERT** radio dedicated to supporting <u>all shelter operations throughout Marion</u> <u>County</u> and is located at the Baseline Transfer Station with the antenna at 300 feet AGL. The KG4NXO repeater (145.170 MHz) is the backup unit and is located on the Marion County Sheriff's property with the antenna at 170 feet AGL. Completing these replacements are major reliability upgrades for MERT's EMCOMM



New KK4DFC repeater and PC installed at Baseline.

operations. (Note: Thanks to Jim Lowe (AC4JL) for his help racking/cabling the new units.)



New hurricane-rated Tower supporting OCF type HF antenna

New EOC Tower Update

The new 30 ft high, hurricane rated lift tower supporting the Off-Center Fed (OCF) antenna at the EOC replaces a telescoping pole which had seen "better days". The new tower uses a pulley system allowing access to the antenna balun should maintenance or replacements be required. It also has the ability for MERT to add additional HF antennas in the future. The tower/antenna/ paracord system will be completed soon when the



Buckmaster OCF antenna for HF radio operations on bands 80/75-40-20-17-12-10 & 6 Meters

additional "flagpole rings" holding the cables in place are delivered.

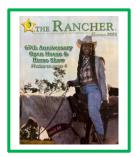
MERT Preparations - Sheriff's Laptops

During a recent Wednesday "Check In" meeting, members took on several projects preparing for the start of this year's hurricane season. One new resource was the ability to check out new Division of Emergency Management laptops for every event. MERT is very thankful for this ability as it is a major tool in supporting our Winlink digital communications capabilities over our radios as part of our EMCOMM resources at the shelters. This year, the preparations included charging and completing Microsoft OS updates... which lasted nearly 4-hours on some units. Thanks to Cindy and Ray for the great teamwork!



(L-R) Cindy Sheffield, MERT
Documentation Manager (K9LRX) and
Ray Sherwood (WA9MID) show their
teamwork completing numerous
software and firmware updates on
the new laptops.

Sheriff's Ranch



A few years ago, I joined the Florida Sheriff's Association to learn more about all of the activities occurring across our state which includes emergency management events. One benefit I especially enjoy are the updates and articles on the Sheriffs Youth Ranches who are credited with helping more than 186,000 children and families in Florida find a better life. I will share my copy and place it near the "reading area" next to the roster for all to enjoy.

MERT Preparations – SHREK Equipment Audits



Another annual event preparing for the hurricane season is the Shelter Radio Emergency Kit (SHREK) audit. This activity is another key step in verifying each kit has all equipment available and has been fully tested for operations. This year, MERT added two adapters making the kit capable of performing backup EMCOMM using the assigned HT radio should the primary radio (Icom ID-880H) fail.



Training included a class on "Resolving MERT Communications Failures at Shelters" identifying multiple steps in testing and restoring shelter communications useful for the shelter operators.

(Top - Ray Woody, Shelter Manager (WB6FKJ) and Gary Neron (KS4TSX) move the SHREK containers into the classroom for audits.

MERT Preparations – West Marion County Field Exercise

Another part of our annual preparations includes conducting field exercises testing our equipment along with getting on the air! Our latest exercise was from the far western portion of Marion County (21 miles West of the EOC and ¾ mile from the County line) in the Rainbow Lakes Estates community.

Member Royce Hagerman (KD7SNN) hosted our Field Day event where members used MERT hardware, SHREK radio kits along with their personal systems testing communications over multiple bands. A Field Exercise report detailed the results along with documenting procedural and system improvements for future exercises. It was a fun event for all. Our thanks to Royce for hosting MERT at his home!

	bearing tak	-					
				Quality To	est Rep	ort April 9,	2025
Channel	th-880 Display	AGENCY	Repeater Call Sign	frequency	Made	COMMENTS	Signal Quality
	REALITIC	6661	MIDPOV.	18(10)	200	FRINGETT CALL	Contact Made
1	MEANOUS !	1897	molenno-	100.175	297	CALL IS FREQUENCY	Consuct Made
2	MEMBERSON	14091	HORRAD U	46.4%	DV .	TERCHARY CALL IN FREQ	Contact Made
2	KHOLISS	MERTCENT	NAUL	146,000	FW	CERT PRODUCT	No Commis Rosettie
	KH08094	MIES	69050	140,010	rw	APRIL PRINCETY CALL IN	Contact Made
163						-	
	ANTHONIN	ARES	15415/4	146,070	rei	ARCS BACKUP REPEATER	Contact Made but mode state
7	101,1027	MEST STATE	GETTE	145.000	FW	WALRE PRODUCT	Winley not tested
8	1006,58/20	MENT	CHITTON	166,000	PIE	MACINE RECONDURY	Window not tested
	WW.14/20	MENT MANAGEMENT	CATTON	186,079	PM	WN.mi	Whitelet not toxed
10	1000,347,10	MENT	OFFE	160,770	rw .	WALNE	Winlink not truted
.11	INIOPCH	5567.EX	RESPOX	188.790	ov	MACES CALL	Contact Made
12	HEMBO0312	MONT DON'T CH	HISEBID.	146.00	. av	SMPLECOUS	No Comm's Possible
11	WEMBOOD11	SIEST SHIPLEY	HOMBIO.	40.65	DV	OAL BITTED	No Corner's Resolute
54	KACLIM	CONT.	KINCLE &	145.000	rw	CERT SMITLES	Contact Made with son background static
35	NACORES 19	W55	N4590 K	3600	PW	AFES SMIPLOS CALLIN	Contact Made with son background static
34	DVDCC16	10/17	DOM:	188.600	9V	SMPLEX DOCTOR VINCE	No Comerc's Possible
17	DVDCE17	M091	proce.	746.400	DV	DEVACABLE	Contact Made
38	AVENCE 16	10011	Artica	146,400	rw	ANNUOUNCE	No Correr's Possible
22	AMDICEDS	MOT	AVDICE	265.580	PM	ANALOG FORE	Na Cover's Fession
20		10/13	AVOCE	SCHOOL.		2 Cass Flores	Se Cerent's Possible
31		465	MOST	SI Meses	ALC:	# Oes Firm	No Corerr's Proceive
22		End Feel	MOCE	80 Meters	-	#-DesiFlores	Se Oversi Passible

West Marion County Field Exercise report 2025 04 09



Mark Weible setting up



Dee Seagraves and Mark Weible on air testing



Building the NVIS
HF antenna



NVIS antenna built for HF comm. tests



Phil Lewis and Royce Hagerman tuning the MERT HF Kit radio



HF Kit radio and DC battery used with the NVIS antenna tests



Harlan's End Fed antenna HF tests



Royce Hagerman and Nick Kiddey conducting HT tests with the MERT radio room at the EOC



Harlan Cook conducting HT tests with a tiger-tail antenna adapter



Ray Sherwood using his cross-band repeater



A group photo with Mark Weible, Dee Seagraves, Harlan Cook, Phil Lewis, Nick Kiddey and Cindy Sheffield

MERT Preparations - Shelter Activity Update



Shelter Manager, Ray Woody (WB6FKJ) extends his thanks to everyone for their support in completing the major updates and revisions to the multiple Shelter Operator documents in addition to input on the new Shelter Reference Manual he created.



Ray Woody (WB6FKJ), Shelter Manager

Both resources now provide updated and detailed information for the Shelter Operators (Manual 1) as well as a MERT Leaders information resource (Manual 2) documenting each shelters specific details.

RADIO TEST PLAN: PART ONE: PN VOICE TEST												
Test Frequency (MHz)	Channel	Mode	High Provinc		Lon	Cover	Comments					
			Good Signal? Circle YES or MO		Good Signal?	Circle 185 or NO						
KRIDEC SHE290	0	Duples	163	NO	165	NO						
KHOFC 546.750	- 11	Simples	YES	MO	YES	NO						
654000 145.170	1	Duplex	153	MO	105	NO						
854000 145.170	12	Simplex	YSS	NO	YES	NO						
104OLL 545.338	3	Duplex	YES	MO	YES	NO						
NG4011 545.338	14	Simples	168	NO.	165	NO						
854000 443.875	2	Duglies	YES	MO	YES	NO						
85400 441875	13	Simples	YES	MO	YES	NO						
SHELTER NAME:												
SHELTER RAZIO OPE	MITOR & CO	ALL SHOW:										
DOC AND/O GPERM	TOP & CALL	S/DR:										
TEST DATE & TIME												

Additionally, Ray created a thorough Annual Testing Guide leading members on the step-by-step operational testing process confirming the condition and readiness of every Shelter before the start of the hurricane season.

Please thank Ray for his significant time and skill in tackling this project in updating our overall Shelter Operations!

<u>MERT Preparations – SHREK Equipment Tests</u>

Another annual activity is testing every SHREK radio confirming their operational readiness. Thanks to all who joined in and completed the testing.



Ray Woody, Shelter Mgr. providing



Emergency Management Planner Nathan Hime & Hayden Kauffman (ARES)



Bruce Twiss and Royce Hagerman setting up a SHREK radio test



Doug Bowser and Nick Kiddey



Jim Lowe and Phil Lewis on the air conducting tests



Jerry Landrum and Shelter Mgr. Ray Woody



Test antenna with unique ground plane

MERT Preparations – Radio Quality

MERT's Mission is to provide the Division of Emergency Management a *last line of emergency communications* (EMCOMM) locally, regionally and nationally via its licensed and trained volunteers using radio transmissions.

Local communications are supported by transmissions at 70 cm and 2 Meter bands (VHF and UHF frequencies). These are referred to as "line of sight" radio communications and are limited to County operations. Long-distance communications are generally supported by High Frequency (HF) radio operations using "ground wave" propagation on frequency bands from 6 Meters to 80 Meters supporting national and international communication distances. Both systems are critical elements of MERT's overall capabilities in maintaining reliable emergency contacts with other County EOC's, the State EOC in Tallahassee and with multiple Federal government agencies via our SHARES license.

Part of MERT's annual preparations includes verifying all our radio and antenna operations are working at peak quality (what we can control). Additionally, reviewing the Space Weather Solar Cycle for hints on what we might experience (what we can't control) is also informative to learn. Combined together, both elements affect our radio communications capabilities when needed.

<u>2025 Forecast</u> – NOAA reports the earth will be at the "Solar Max" level with sporadic events likely occurring with **reduced quality or even complete radio blackouts at times**.



This graph details the current high solar activity levels from the sun which can reduce radio transmission quality and distance. (NOAA Space Weather Prediction



A Special "Thank You"

A sincere thanks to Bill Gillespie for leading MERT during Harlan Cook's absence. MERT is extremely fortunate to have such an experienced leader and very knowledgeable AUXCOMM trained amateur radio operator as its Deputy Coordinator.

Thank you, Bill!

Communications Update 2025 06 01