

Boone County ARES SIMULATED EMERGENCY TEST PLAYER HANDBOOK



Version 1.4
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BCARES – EC

Participants Handbook

Purpose

This handbook provides the participants with information required to participate effectively in the Simulated Emergency Test (SET) exercise. The participants are encouraged to ask questions concerning their roles and responsibilities and the rules of exercise.

Quoting from the American Radio Relay League (ARRL) *The Amateur Radio Emergency Service Manual*:
web link:

<http://www.arrl.org/files/file/Public%20Service/ARES/ARESmanual2015.pdf>

6.1 Purpose of SET

- *To determine strengths and weaknesses, in an exercise environment, of ARES groups at local and section levels.*
- *To provide a public demonstration of Amateur Radio Service capabilities to partner organizations and agencies during times of emergency or disaster.*
- *To help radio amateurs gain experience in communications using standard procedures and a variety of modes under simulated emergency conditions.*

SCOPE

The exercise is intended to test and demonstrate communications capabilities of BCARES in support of our served agencies in their operations in an emergency situation.

The exercise will be on 6 November, 2021 beginning at 10:00 AM and ending by 12:00 as determined by the exercise leader. The exercise may end early if the exercise leader determines that all objectives and performance criteria (anticipated actions) have been sufficiently addressed. The exercise will primarily take place in, but not be limited to, Boone County, Missouri.

Concept of Exercise

The exercise will require activation of the Boone County EOC/Joint Communications Amateur Radio Station, WX0BC, located in the Emergency Communications Center (ECC) at the time of the start of the exercise. Some BCARES members will be required at Joint Communications Center

Scenario Narrative

The exercise scenario will be an Earthquake from the New Madrid Seismic Zone. The USGS and State of Missouri have partnered to create the attached **Geologic Hazards Map of Region F**. This map is a projection of potential impacts of a large earthquake to our area. Boone County Office of Emergency Management (OEM) has extrapolated potential damage points across Boone County to be used in the exercise. At each point you will be asked to acquire communication packages containing instructions for frequencies and specific damage information for reporting. Formal message handling is required. (ICS213)

The exercise scenario will request participants to deploy to various locations throughout the county as specified by the OEM and retrieve the communications packet that will have been placed there by OEM on the Friday before SET. Participants should be prepared to engage in mobile operations that test their ability to meet the Exercise Deliverables stated below. You should anticipate the requirement

of emergency power and interactions with the Joint Communications Center (JCC) or designated Net Control Stations (NCS) on VHF/UHF simplex and local repeaters. Some participants will also be asked to utilize APRS tracking capabilities, and others will be asked to send and/or receive Winlink email and P2P messages to WX0BC. Finally, some participants will be asked to use HTs for communications in and around designated points at the MU Campus.

Exercise Objectives

In addition to the SET purposes outlined on the ARRL website we will establish the following specific BCARES Exercise Objectives:

1. Assess coverage and operation of the 146.610 MHz repeater with respect to OEM specified points across the county.
2. Assess fill-in coverage of the county using 444.175 MHz (Airport) repeater (or other repeaters as necessary).
3. Assess Winlink application email by RF from mobile/portable operations.
 - a. Utilizing ICS213 Forms in Winlink Express
 - b. Attaching files for delivery via Winlink
4. Assess sending formal traffic via voice utilizing message formats from ICC213 forms, when Winlink is not in the players capabilities.
5. Track mobiles at ECC utilizing APRS.
6. Exercise the WX0BC radio capacity in the Boone County Emergency Communications Center (ECC).
7. Experiment with sending images via RF using VARA FM simplex and Winlink P2P.
8. Assess UM Campus coverage utilizing Hand-Held VHF/UHF radios from assigned points of interest, via repeaters and simplex frequencies (see ICS205-Appendix B).

Exercise Artificialities

It is recognized that certain artificialities and constraints detract from exercise realism. However, exercise participants are to accept the following artificialities as a means of facilitating the accomplishment of the exercise objectives and performance criteria.

The exercise will be playing in real-time with the exception of the ECC being activated and staffed before the start of the exercise.

Many of the alert, notification, and initial activation activities will be a part of the exercise.

You will be operating from the parking spaces and campus positions. Take proper cautions.

Exercise Simulation

Simulation during this functional exercise is required to compensate for non-participating organizations, individuals, and field units that would actually be deployed in a real-world response. Although simulations may detract from exercise realism, the simulated incidents, (messages from and to simulated entities) provide the means to facilitate exercise and provide for the testing of exercise objectives and performance criteria.

Data for participants to use in their respective assignments will be provided for simulation of events and needs consistent with such emergency responses of our exercise. Office of Emergency Management

will have placed Information packets at each point for participants to retrieve and follow instructions contained therein.

Participants Procedures and Responsibilities

Primary participants in this exercise will be licensed amateur radio operators providing emergency communications support in accordance with the protocols, procedures, frequency plans, and other guidance as detailed in the ARES® Manual.

All voice exchanges (not transmissions) should begin and end with the phrase “**This is a test.**” Written messages should contain the word “**Test**” as part of the precedence, e.g., Test Priority, in the message preamble or subject line. Written messages should also include the phrase “**This is a test**” as the first and last words in the text (or body) of the message.

Should an actual emergency occur at any time during the exercise that dictates that the exercise should stop, the phrase “**Real World Emergency**” (preferably repeated three times) shall be used to indicate that exercise is suspended until further notice or until the emergency is resolved. See Appendix D for a review of on-air procedures

Deployment: See ICS 205A, Appendix A

Radio operators will be deployed as net check-in occurs beginning at 10:00 AM and will generally follow the plan outlined in ICS 205A, Appendix A, visiting their assigned points and sending the ICS-213s as appropriate. NCS will use a roll-call check-in procedure beginning at 10:00 AM on the BCARES Repeater, 146.610. Participants who are being deployed need not leave their homes until checked in by NCS.

Safety and Security

Participants should observe reasonable personal safety procedures and refrain from anything close to dangerous operations in the exercise situations. After all, **THIS IS A TEST.**

Communications

The BCARES SET Net will be called on the 146.610 MHz repeater starting at 10:00 AM. Participants should monitor this repeater for the **duration** of the exercise. In the case of failure of this repeater, the 444.175 repeater and/or the 146.760 repeater will be used for net control/traffic. Simplex frequencies taken from the MO-Interoperability Plan, such as HVTac-6F, 146.505 MHz will also be used. Each participant should be ready to communicate on frequencies outlined in the ICS 205 Communications Plan (Appendix B). Program your radios before the event!

When checking-in stations will indicate if they have emergency power and if they can be deployed with mobile/portable radios, and if they have APRS capabilities in the mobile for the exercise.

Tactical call signs will be **assigned** at check-in and when you move to a new location. These are used to facilitate message handling.

Digital message handling will use Winlink Express to send and receive exercise traffic between stations (P2P) and via VHF/HF to Winlink nodes for email delivery. Use the ICS-213 template in Winlink Express for message creation.

Stations deployed **must** maintain communications with NCS, or designee, throughout the exercise and including a **final contact** as they arrive at their off-exercise destination following all exercise activities, to insure their safety. See **Appendix D** for operating procedures for directed nets, and specific tasks for this SET.

Reporting

Stations participating should keep written logs of activity including evaluations and observations that will be valuable in improving BCARES performance in future drills or real exercises. These data will be collected and discussed in following BCARES monthly meetings.

ICS 214 (logging) is supplied with this package, Appendix C.

Acknowledgements

This SET 2021 Player's Handbook was produced using the Participants Handbook template provided as part of the FEMA IS-139 Exercise Design course, and the Connecticut Section 2011 SET Participants Handbook.

NOTES:

Appendix A - ICS 205A

1. Incident Name: 2021 SET - BCARES		2. Operational Period: Date From: Nov 6, 2021 Date To: SAME Time From: 10:00 AM Time To: 12:00 PM	
3. Basic Local Communications Information:			
Incident Assigned Position	Call - Name (Alphabetized)	Method(s) of Contact (VOICE VHF/UHF, pager, cell, etc.)	
TACTICAL CALL		MODE & phone	
Road B	AC0MP – Richard	VOICE VHF/UHF 573-823-1052	
Road VV	AD0UK – Brian	VOICE VHF/UHF, WINLINK, APRS 573-808-1193	
BCFPD	AD0UK – Brian	VOICE VHF/UHF, WINLINK, APRS 573-808-1193	
MU-NCS	AD0ZE – Jon	VOICE VHF/UHF, WINLINK, APRS 573-514-5773 Monitor provide voice > WL relay	
OEM	KC9UJC - Mat	BCOEM	
Road EE	K0MIZ – Jim	VOICE VHF/UHF, WINLINK, APRS, DMR 856-649-8319 Transfer Picture via P2P VARA FM	
240	K0MIZ – Jim	VOICE VHF/UHF, WINLINK, APRS, DMR 856-649-8319 Transfer Picture via P2P VARA FM	
NCS-1/Simplex Monitor HVTAC6	K0PHP – Chris	VOICE VHF/UHF, HF, WINLINK, MESH, APRS, DMR, 573-228-0240 provide voice > WL relay, Transfer Picture via P2P VARA FM	
Road M	KC0EZE – Ernest	VOICE VHF/UHF, WINLINK, APRS, DMR, DStar 573-864-5515 Transfer Picture via P2P VARA FM	
Callaway Co Relay-3	KC0LYA - Dave	VOICE VHF/UHF RELAY	
MU-Hospital	KD0VTM - Jane	HT VOICE VHF/UHF 573-864-9637.	
MU-Vet	KE0BTC - Ben	HT VOICE VHF/UHF 573-999-5920	
RELAY-1/VHF	KE0IKG - Paul	QTH VHF/UHF – RELAY 417-499-8703	
Road AB	KE0OUF - Lee	VOICE VHF/UHF 573-673-8260	
MU-Arena	KE0TVT- John	HT Voice VHF/UHF, DMR, 573-864-3959	
RELAY-2/UHF	KE0ZYL - Herb	VOICE VHF/UHF WINLINK, 573.355.1166	
MU-Reactor	KF0FZV – Charlie	HT VOICE VHF/UHF, 573-874-2612	
NCS/ECC	N0AXZ – Bill	VOICE VHF/UHF, WINLINK, APRS, DMR 573-424-5959	
Road D	N0OFJ - John	VOICE VHF/UHF, WINLINK, APRS, DMR	
MU-Columns	N1OJG - Damon	HT Winlink, APRS 919-208-6110	
Road O	N6VZO - Bob	VOICE VHF/UHF, 573-514-1425	
Road TT	W0VE - Jim	VOICE VHF/UHF, APRS 573-999-6744	
Road DD	W0ZH – Myron W0TES - Tim	VOICE VHF/UHF, WINLINK 314 973-2484	
Road 151	WD6BGN - Ralph KA9MNZ – Cathy	VOICE VHF/UHF, WINLINK, APRS, 573-442-7007; Cell-573-682-7806	
4. Prepared by: Name: N0AXZ _____ Position/Title: BCARES/ EC _____ Signature: WDM _____			
ICS 205A	IAP Page _____	Date/Time: 10/27/2021 3:00 PM L _____	

Appendix B - ICS 205

ICS-205 INCIDENT RADIO COMMUNICATIONS PLAN			Incident Name 2021 SET BCARES			Date/Time Prepared 12/2/21 8:00 AM		Operational Period Date/Time 11/6/21 10:00 - 12:00 CST	
Ch #	Function	Channel Name/Trunked	Assignment	RX Freq MHz	RX Tone/N	TX Freq MHz	Tx Tone/N	Mode A, D	Remarks
	Primary Net	NET	All	146.610	127.3	146.010	127.3	A	SET- NET
	Secondary Net	Airport	All	444.175	107.2	449.175	107.2	A	UHF coverage
	Primary Simplex	HVTac-6F	ALL	146.505		146.505		A	Region F Simplex
	Primary Data	HV-Data	RMSE Packet	144.910		144.910		D	WL2K P-P/ VARA FM
	WINLINK VHF - PACKET	KOSI-10	WINLINK Packet	145.070		145.070		D	Winlink e-mail
	WINLINK VHF – PACKET/ VARA FM	KOPHP-10	WINLINK PACKET/ VARA FM	144.970		144.970		D	Winlink e-mail
	WINLINK HF - ARDOP	KOSI	WINLINK HF	3.585 USB		3.585 USB		D	Winlink e-mail
	WINLINK HF - ARDOP	KOSI	WINLINK HF	7.102 USB		7.102 USB		D	Winlink e-mail
	WINLINK HF – VARA HF	KOSI	WINLINK HF	7.102 USB		7.102 USB		D	Winlink e-mail
	WINLINK HF – VARA HF	KOSI	WINLINK HF	7.102 USB		7.102 USB		D	Winlink e-mail
	CLWY Liaison	Fulton R	KCOLYA	147.315	127.3	147.915	127.3	A	Contact KCOLYA
	HVTac0	HVTac0	MU Campus	144.495		144.495		A	SIMPLEX
	HVCall	HVCall		146.550		146.550		A	SIMPLEX
	HVTac1	HVTac1		145.600		145.600		A	SIMPLEX
	HVTac2	HVTac2		145.650		145.650		A	SIMPLEX
	HVTac3	HVTac3		146.700		146.700		A	SIMPLEX
	HVTac4	HVTac4		146.400		146.400		A	SIMPLEX
	HVTac5	HVTac5		146.445		146.445		A	SIMPLEX
	HVTac7	HVTac7		146.595		146.595		A	SIMPLEX
	HVTac8	HVTac8		147.405		147.405		A	SIMPLEX
	HVData	HVData		144.910		144.910		D	SIMPLEX
	APRS	APRS	Tracking	144.390		144.390		D	Tracking units
	Secondary VHF R	COL - 76	ALL	146.760	127.3	146.160	127.3	A	COL 76 - R if needed
	UHF Simplex	HUTAC - 1	ALL	445.900		445.900		A	MSG TRAFFIC
	Portable Repeater	SNP/R	ALL	442.125	127.3	447.125	127.3	A	Portable repeater as needed
	DMR	DMR	TG 31290	444.425		449.425	Cc:3	D	DMR Repeater
	D-Star	D-Star	D-Star users	442.325		447.325		D	D-Star Repeater
Prepared By (Communications Unit)			BCARES-EC	Incident Location					
ICS 205				County BOONE		State MO		Latitude Longitude	

During this exercise, we will make extensive use of tactical call signs for all stations (assigned at check-in). These calls will make it easier to communicate, allowing operators to clearly communicate from a position or assignment.

REMINDER: You must still follow the FCC rules for using your assigned call sign: Once every ten minutes and/or at the end of your conversation (which is most likely, since no one should be talking for 10 minutes straight in this exercise!): most of the time signing off with your tactical call immediately followed by your FCC assigned call sign will take care of this:

Such as: “Rover1, N0AXZ” at the end on your last transmission.

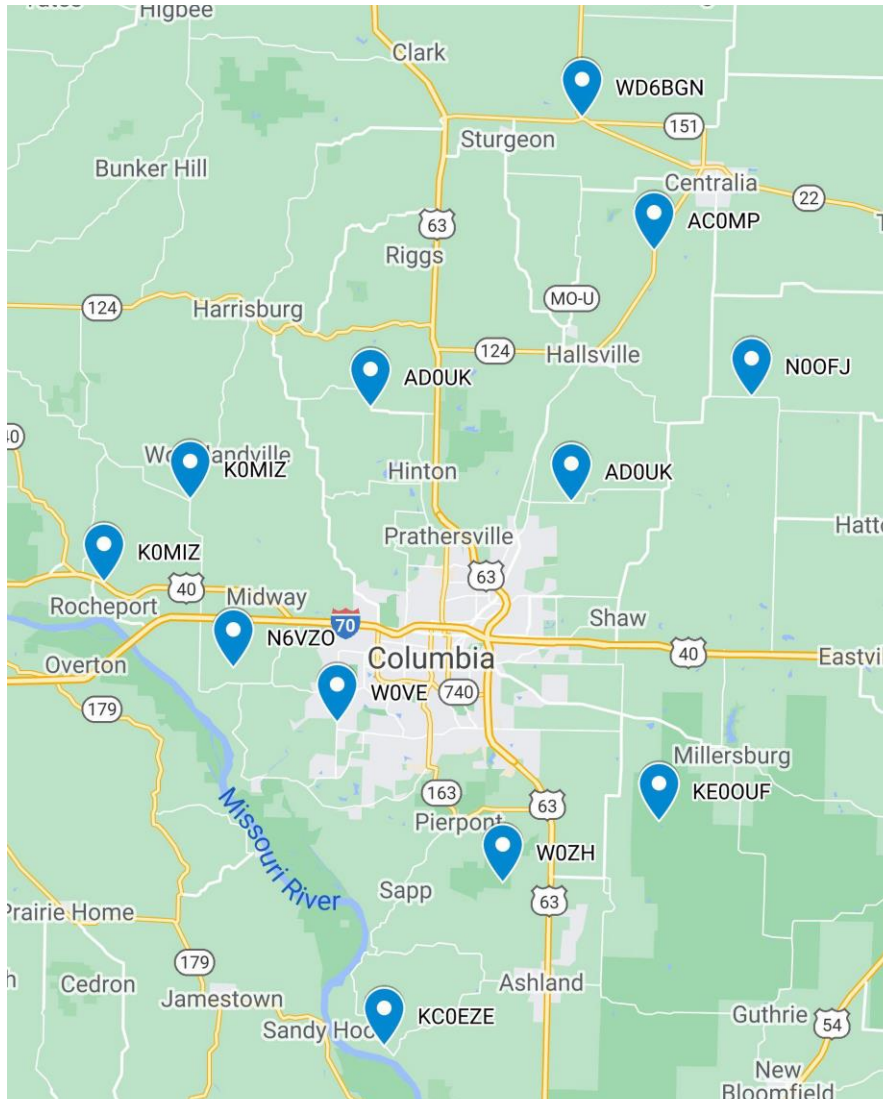
REVIEW: We will operate the net as a Directed Net, which means that you are not free to transmit as you wish. Rather, you should request permission to transmit, and wait until you secure that permission. You request permission to call by saying your call (in this case the tactical call assigned your position), once and once only, and wait. (e.g. “First Baptist Church”). If you have been in communications with NCS before (like when checking in at the beginning) then you can be assured that NCS heard your call. He/she will get to you as soon as possible, if not immediately. He/she acknowledges your request by calling your tactical call back. (e.g. “First Baptist Church”). You should then just say your traffic (don’t say NCS from, etc.) and sign with your tactical call/ham call. (e.g. “I have one message for WA0BCD, First Baptist Church, N0AXZ”).

If your traffic should be handled off the net frequency, due to its length, destination, or mode (digital), NCS will tell you which frequency to use, and which station should initiate the call. When you have finished delivering the traffic off net, return to the net frequency and announce, “Recheck”. NCS will ask for the recheck, and you need only announce your tactical call sign e.g. “SHELTER 3 back on frequency”. If you were not successful delivering the traffic, then after your recheck is acknowledged, say “Shelter3, traffic not passed”. NCS will then have to find another way to pass that traffic.

If your traffic is an emergency(test), like big crash with blood, etc., and someone may need an ambulance, then you should say “PRIORITY Tactical Call” (e.g.” PRIORITY Shelter 3”), once and only once, and wait just a little bit, because NCS should drop everything else and get your traffic, if they heard PRIORITY. None of these are planned in this exercise.

Another exception (which we **REALLY** don’t want to see) is that you have a REAL emergency that needs attention. You would then call “REAL WORLD. REAL WORLD. REAL WORLD, Shelter3” ***ALL SET ACTIVITIES WILL then BE SUSPENDED AND YOUR SITUATION WILL BE HANDLED.***

We will use the tag “**THIS IS A TEST**”, or simply, “**TEST**” at the beginning of message traffic, and at the end of that message to avert any “listener” mistakenly thinking that the sky is falling. In this exercise, as any many real emergency nets, you will be **listening** and **waiting** most of the time.



TAC/ROAD	#	Label	GPS	CALL
M	1	Levee road near MKT trail crossing	38.73883,-092.36674	KC0EZE
DD	2	Three Creeks Park Parking Lot	38.82812,-092.28393	W0ZH
AB	3	Barnes Chapel Parking lot	38.86154,-092.17410	KE00UF
TT	4	MKT Trail Parking Lot	38.915554,-092.39977	W0VE
O	5	Sugar Creek Cemetery	38.94541,-092.47247	N6VZO
B	6	A side road just south of bridge	39.17271,-092.17780	ACOMP
D	7	Powerline easement access road	39.09338,-092.10943	N00FJ
BCFPD	8	BCFPD #16 Parking Lot	39.03609,-092.23563	AD0UK
VV	9	Stone Dr. closed road by bridge	39.08746,-092.37655	AD0UK
151	10	MODOT State driveway south of bridge	39.24498,-092.22822	WD6BGN
240	11	Gas line easement east	38.99230,-092.56310	KOMIZ
EE	12	intersection of J and EE	39.03729,-092.50299	KOMIZ

MU Campus Points

Point	TAC	Description	GPS	CALL
1	VET	Veterinary Health Center main entrance -	38.94025, -92.31833	KE0BTC - Ben
3	MU Hospital	MU Hospital Entrance Cross Walk -	38.93804, -92.32808	KD0VTM - Jane
4	Mizzou Arena	Mizzou Arena Walkway at Champions and Mick Deaver -	38.93312, -92.33253	KD0VTM - Jane
5	Reactor Field	Walkway off Parking Lot of Reactor Field -	38.93093, -92.34044	KF0FZV - Charlie
6	Memorial Union	Memorial Union Entrance -	38.94502, -92.32541	KE0TVT - John
7	Mizzou Columns	Historical Columns Check-in -	38.94642, -92.32878	N10JG - Damon
8	Switzler Hall	Switzler Hall Walkway -	38.94659, -92.32944	N10JG - Damon
9	Jesse Hall	Jesse Hall front stairs -	38.94497, -92.32883	KE0BTC - Ben
	GSB-Staging	General Services Building Parking Lot -	38.93440, -92.32726	KC0EZE - Ernest
	NCS-MU	MU Health Emergency Trailer	38.93915, -92.32944	AD0ZE - Jon

Mobile Procedures (Sample):

RAVE notification message.

Net call up – check in on 61, get assignment, GPS coordinates, and head for site.

1. Arrive at site: Call NCS 146.61R using TAC

IF GOOD then send ICS213 to WX0BC WL Packet K0SI-10

IF NOT, try KOPHP-10 Packet, or VARA FM if you have it. (Always send WL ICS213 to WX0BC)

2. If you can't make NCS (61), and you do have WL capabilities, then try KOPHP-10.

3. If you don't have WL, or can't connect to either RMS node, ask NCS for available WL relay.

Send voice ICS213 to relay.

Relays will be -1 via Airport Repeater (UHF)

-2 via 146.76 R

And possibly NCS-1, 146.505 Simplex (HVTac-6)

4. IF NO CONTACT ANYWHERE, CHANGE POSITION (get to higher ground), and start with NCS again xx (GOTO 1).

Note your successful location.

Reporting: (Note your level of connections to the following stations).

If you haven't yet needed to contact one of these stations, then make a call on their frequency for a signal report to each station and fill out this table.

Signal reports from

Site: _____

		Great	Good	Noisy	N/C	Comments
NCS	146.61-R					
NCS-1	146.505-S					
RELAY-1	444.175-R					
RELAY-2	146.76-R					

Take a picture at your site, include your vehicle or something relating to the SET.

If possible send picture to WX0BC via WL P2P VARA FM or HVTAC-Data, 144.910MHz.

If not, send picture attached to WL message, resize to 40KB, to WX0BC via either RMS node.

Return all material including this data to KOPHP Black Ford Pick-up Truck at Cosmo Park – south east corner. First right at the round-about after 11:45 AM.

HT Procedures

RAVE Notification message.

Net call up: check-in NCS via 61, head for General Services Building (GSB).

If HT can't hit 61, head for GSB and check-in with NCS on 61 enroute.

1. Arrive at GSB parking lot.

Get Info Packets from MU-Health liaison (AD0ZE).

2. Proceed to first campus site.

Check-in with MU-Health/AD0ZE on HVTAC-0, 144.495 MHz simplex

Send voice ICS213 to MU-Health.

3. Reporting:

Your HT may not reach all of these stations, but give it a try.

Signal reports from Site: _____						
		Great	Good	Noisy	N/C	Comments
NCS	146.61R					
NCS-1	146.505S					
RELAY-1	444.175R					
RELAY-2	146.76R					

Go to 2nd point (if you have a 2nd assignment) and repeat.

Return all materials to MU Health Trailer, NW corner of Hospital complex.

Hot Wash for MU campus (may occur before Exercise Hot wash)

If time permits:

Join Hot wash on 146.76R from 12:00 – 12:30.