St. Charles County ARES Field Guide Prepared By

Emergency Communications Association

Issue 9
April 2025

Table of Contents

Communications

The Amateur Radio Emergency Service (ARES) for St. Charles County in association with the St. Charles County Regional Emergency Management (SCC REM) maintains an amateur repeater with an input frequency of 144.890 MHz and a transmit frequency of 145.490 MHz. The repeater has an input/output CTCSS frequency of 141.3 Hz. The repeater has two tone sequential paging capability for member alerting. DTMF commands will send tones for alerting the members using tone alert receivers.

St. Charles County ARES also maintains an amateur repeater on UHF with an input frequency of 449.475 MHz and a transmit frequency of 444.475 MHz. The repeater has an input/output CTCSS frequency of 141.3 Hz.

Communications

The technical committee responsible for maintenance and upgrades to the repeater system consists of the following:

Bill Grimsbo (N0PNP)
Jeff Young (KB3HF)

This technical committee should be informed immediately of any problems with or abuse of the system.

NOTE: Improper or inappropriate use of this repeater system will not be tolerated and may result in prosecution and loss of amateur licenses and/or monetary forfeiture as deemed appropriate by the Federal Communications Commission.

Weekly Training Net Times

- **St. Charles County Regional Emergency Management Net**
  - **7:30pm** on the **DEM-VHF-1** Repeater
  - Narrow-Band Type Accepted Equipment Only
  - By Permission of St. Charles County Regional Emergency Management only
- **St. Charles County ARES® Net**
  - **8:00 pm** on the **145.490(-) CTCSS 141.3** Repeater

Weekly Training Nets
RESPONSIBILITIES OF NET CONTROL

- PAGING VOLUNTEERS - Net control is responsible for activating the volunteer pagers at least 5 minutes prior to the net. If net control is unable to activate the paging system, he/she should make arrangements with staff to activate the pagers.
- NET SCRIPTS AND LOG SHEETS - Net control is responsible for running the net according to the net control scripts and logging all check-ins.
- EXERCISES - Net control is responsible for arranging for or providing exercises and/or training for the net
- NET SCRIPTS AND LOG SHEETS - A copy of net scripts and log sheets are provided as part of this package (see following sheets) for Public Safety and ARES Nets.

Handling Radio Traffic

TACTICAL TRAFFIC:

Use of tactical call-signs followed by amateur call signs as required by the FCC is encouraged. This is an efficient method of maintaining control of the net. All traffic should be concise and to the point. Long conversations are discouraged since it may hinder higher priority Traffic. No station should leave the net or the proximity of a radio without informing net control. Standard traffic prioritization is used in passing tactical traffic.

Standard Traffic Prioritization

EMERGENCY - A message having life or death urgency to any person or group of persons. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to the relief of stricken populace in emergency areas.
PRIORITY - Important messages that have a time limit. This includes official messages not covered in the emergency category and notification of injuries in a disaster area.
WELFARE - A message that is either an inquiry as to the health and welfare of an individual in the disaster area or an advisory or reply from the disaster area that indicates all is well.
ROUTINE - In normal times, most traffic will have this designation. In times of emergency, routine traffic will be handled last.

Net Protocol

Directed Nets

- Never check in to state your unavailability to participate in the net
- All traffic on a directed net is controlled by the Net Control Operator
- There should be no station-to-station traffic on a directed net
- Any change of status should be requested of net control
  - Units should not change location without direction from NCO
  - Units should inform the NCO if away from the radio
  - Units should inform the NCO if they need to leave the net for any reason.
- There should be no “channel hopping” to talk to another unit unless permission is granted by the NCO
- Keep all transmissions concise and to-the-point

Incident Command System

- **COMMAND** - Controls the incident and response effort
- **SAFETY** - Advisor to command - can override command if danger to lives is possible.
- **LOGISTICS** - Controls personnel and materials required to provide response.
- **COMMUNICATIONS** - Provides communications at command's order to dispatch center or EOC.
- **PUBLIC INFORMATION** - Handles releases to press and general communication with public.

These officers are selected by the Incident Commander and report directly to incident command.

Incident Command System

The ICS structure may be deployed, as the incident requires. The ICS system may be scaled to fit the “size” or scope of the incident. A large-scale incident may require resource managers in the Logistics Sector as well as a planning officer and financial managers in the Planning Sector. A small-scale incident may only require the structure shown on the previous page. The primary advantage to the ICS system is the ability to scale the system, as the incident requires.

NOAA Weather Radio

County coverage areas by frequency		NOAA Weather Radio Frequencies						
County	**SAME**	162.4	162.425	162.45	162.475	162.5	162.525	162.55
St. Charles	029183		x					x
St. Louis	029189							x
St. Louis (city)	029510							x
Lincoln	029113		x					x
Warren	029219		x					x
Franklin	029071		x				x	x
Jefferson	029099							x

https://www.weather.gov/nwr/county_coverage?State=MO

Severe Weather Response

- **Severe Weather Warning**
  - Greater than **58 mph** winds
  - Greater than **1 inch** hail

- **Rules of Spotting**
  - Never spot from inside the path of the storm
  - Always ensure that there is an escape path in the event of danger
  - Always stay on ground that will not be affected by flash flooding
  - Never drive through water running over a road.
  - Never leave your location without informing the net control operator

Severe Weather Response

- **Rules of Spotting** (continued)
  - Report sightings by compass bearing (N, NNE, NE, ENE, E, etc.)
  - Report hail size by inches diameter
  - Use “best guess” on wind speed based on swaying trees, etc.
  - Stay clear of overhead power lines

- **Things to Look for at Night**
  - Arcing power lines may be a sign of a tornado, especially if there is a defined pattern to the locations
  - Lightening strikes may light the sky enough to see a tornado
  - Take extra precautions at night - rain and poor visibility due to darkness may be a dangerous combination

Severe Weather Response

Beaufort Scale for Wind Speed Estimation

Force	Strength	Speed	Observations
Force 0	Calm	< 1 mph < 2 kph	Tree leaves don't move, smoke rises vertically, sea is calm
Force 1	Light Air	1-3 mph 2-6 kph	Tree leaves don't move, smoke drifts slowly, sea is lightly rippled
Force 2	Slight Breeze	4-7 mph 7-11 kph	Tree leaves rustle, flags wave slightly, small wavelets or scale waves
Force 3	Gentle Breeze	8-12 mph 12-19 kph	Leaves and twigs in constant motion, small flags extended, long un-breaking waves
Force 4	Moderate Breeze	3-18 mph 20-29 kph	Small branches move, flags flap, waves with some whitecaps
Force 5	Fresh Breeze	19-24 mph 30-39 kph	Small trees sway, flags flap and ripple, moderate waves with many whitecaps
Force 6	Strong Breeze	25-31 mph 40-50 kph	Large branches sway, flags beat and pop, larger waves with regular whitecaps

Severe Weather Response

Force	Strength	Speed	Observations
Force 7	Moderate Gale	32-38 mph 51-61 kph	Whole trees sway, large waves ("heaping sea")
Force 8	Fresh Gale	39-46 mph 62-74 kph	Twigs break off trees, moderately high sea with blowing foam
Force 9	Strong Gale	47-54 mph 75-87 kph	Branches break off trees, shingles blown from roofs, high crested waves
Force 10	Whole Gale	55-63 mph 88-101 kph	Some trees blown down, damage to buildings, high churning white sea
Force 11	Storm	64-74 mph 101-119 kph	Widespread damage to trees and buildings, mountainous waves
Force 12	**Hurricane**	75+ mph 120+ kph	Severe and extensive damage

Potentially Damaging Severe

SKYWARN Spotter Deployment

- SkyWarn spotters shall deploy as directed by net control
- Spotters should always notify net control upon arrival at their spotting location.
- Spotters should not leave their assigned spotting location without permission from net control.
- Spotters should always identify an escape path from their spotting location in the event of an immediate threat.
- Spotters should notify net control when they arrive safely at home.

Note: If for personal safety reasons, spotters must relocate, they should relocate immediately and notify net control upon reaching a safe location.

Wind Chill Chart

		Actual Temperature °F													
Wind Speed (MPH)		**40**	**35**	**30**	**25**	**20**	**15**	**10**	**5**	**0**	**-5**	**-10**	**-15**	**-20**	**-25**
		Wind Chill Temperature °F													
	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25
	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65

HAZMAT Response

- ECA is not chartered to “respond” to a HAZMAT incident.
- Hazmat reporting should consist of the following:
  - Placard Type
  - Placard Number
  - Location of spill or incident
- Pointers
  - Stay **uphill** and **upwind** of the incident
  - Do not approach the incident
  - Do not cross through plumes or smoke from the incident

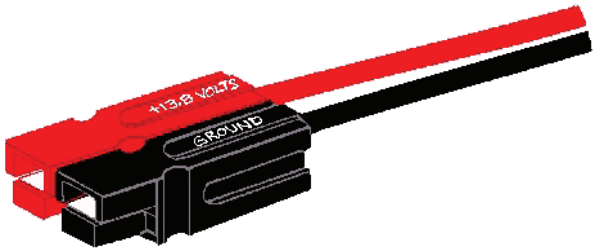
Cardio-Pulmonary Resuscitation

- **Pre-resuscitation checks**
  - Attempt to get verbal response from the victim
  - Check for breathing. **DO NOT** apply CPR if the victim is conscious or breathing.
  - Have someone contact EMS
- **Application of CPR**
  - Breathe twice and check pulse
    - The 2015 guidelines still recommend traditional CPR cycles of **30 chest compressions to two rescue breaths for one-rescuer CPR in all age groups** and for two-rescuer CPR in adults**. The 15:2 ratio of compressions to breaths remains in the 2015 guidelines for two-rescuer CPR for children. and infants**.1.5 to 2.0 inch compression (adult)
    - 60 compressions per minute
  - Check for pulse or consciousness
  - Continue for two cycles and check for pulse. If no pulse, continue CPR

Grab-N-Go Kits

- Radio(s) as needed
- Radio Accessory kit including microphone, key, etc.
- Feed-line for connecting the radio to the antenna.
- Power supply for the radio(s) if needed.
- VSWR meter
- Folding table
- Notebook
- Flashlight and batteries
- Push-up pole with guy wires
- Toilet paper
- Antenna analyzer
- Tool kit (including needle-nose and diagonal cutters, Philips and slot screwdrivers)
- Refer to Survival Kit pages for personal items
- Feed-line jumpers (3-4 foot)
- Antenna tuner
- Desk lamp
- Outlet strip
- Pencils
- Antenna(s)
- Extra guy anchors and rope
- Maps
- VOM

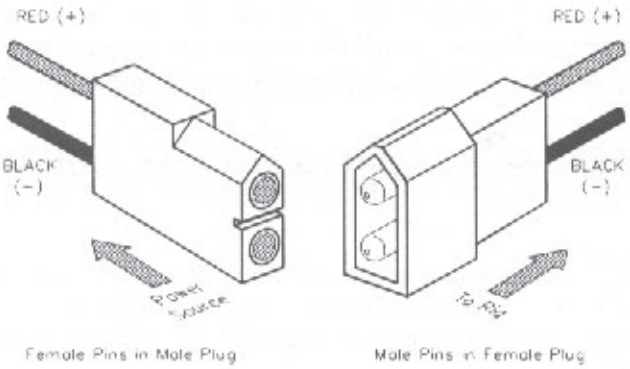
ARES Connector



Anderson Powerpole Connector

Powerpoles® are both polarized and genderless, so you never have to worry about male vs. female or positive vs. negative. Connections can be quickly made and remade in the dark without any hassles and the 30 amp connector can easily handle 100 watt radios. Housings should be mated according to the diagram above, viewing from the contact side (opposite the wire side), tongue down, hood up, RED on the LEFT, BLACK on the RIGHT. Use a 3/32-inch-diameter roll pin, 1/4 inch long, to keep the housings from sliding apart.

ARES Connector



MOLEX Series 1545 connector for use in promoting compatibility and interchangeability among personal VHF/UHF radio equipment at disaster sites. Polarity should always be verified prior to connecting to radios and power supplies.

If the Molex connector is chosen, adapters to the Anderson Powerpole connectors is recommended

Non-Emergency Phone Numbers

State Police Troop C	314-340-4000
St. Charles City Police	636-949-3300
St. Peters City Police	636-278-2222
St. Charles County Police	636-949-3000
Regional Emergency Management	636-949-3023
National Weather Service	636-441-8467
US Coast Guard MSO	314-539-3091
County Dispatch & Alarm	636-949-3042
SEMA Duty Officer	573-751-2748
SCCAD Offices	636-344-7600

Emergency Phone Numbers

ARES MO Section Emergency Coord.	Jeff Young	314-609-1053
ARES MO ASEC	Cecil Higgins	417-399-5027
ARES District C Emergency Coordinator	Bill Grimsbo	636-219-9594
ARES District C ADEC – Digital Ops	Ken Humbertson	314-504-0757
ARES District C ADEC-HARN	Steve Wooten	314-623-8649
ARES SCC Emergency Coordinator	Bill Grimsbo	636-219-9594
ARES SCC AEC	Zack Bush	636-734-9908

Emergency Repeater Directory

Agency/Club Name (Callsign)	Frequency (Offset) / CTCSS
St. Charles County ARES (W0ECA)	145.490(-) / 141.3 Hz
St. Charles County ARES Backup	145.410(-) / 100.0 Hz
ECA/ARES Tactical (W0ECA)	444.475(+) / 141.3 Hz
St. Charles ARC (KO0A)	145.330(-) / 141.3 Hz
St. Charles ARC (WB0HSI)	146.670(-)
St. Louis County ARES	146.850(-) / 141.3 Hz
St. Louis County ARES Backup	146.910(-) / 141.3 Hz
Franklin County ARES	147.240(+) / 141.3 Hz
Jefferson County ARES	147.075(+) / 141.3 Hz
Warren County ARES	147.330(+) / 123.0 Hz

Emergency Interoperability

Interoperability refers to the ability of ARES groups and individuals involved in a coordinated response to communicate with each other.

In the event of an emergency or exercise, an interoperability plan can address connectivity issues and increase the effectiveness and speed of response.

The idea is that if these frequencies are programmed into radios, flexibility exists to work as a communicator anywhere in the state. The plan is intended to augment existing communications structures, not completely replace them. Operational repeaters and local simplex frequencies should be used, however, HVCALL and HUCALL should be monitored.

Emergency VHF Interoperability

Mnemonic	TX CTCSS	Frequency
HVCALL	CSQ	146.550 Statewide
HVTAC0	100.0	147.495 Primary
HVTAC1	100.0	145.600 Alpha
HVTAC2	100.0	145.650 Bravo
HVTAC3	100.0	145.700 Charlie
HVTAC4	100.0	146.400 Delta
HVTAC5	100.0	146.445 Echo
HVTAC6	100.0	146.505 Foxtrot
HVTAC7	100.0	146.595 Golf
HVTAC8	100.0	147.405 Hotel
HVTAC9	100.0	147.450 India
HVSTAGE	CSQ	147.555 Statewide

Mnemonic	TX CTCSS	Frequency
HVPACKET	CSQ	144.950 Statewide
HVAPRS	CSQ	144.990 Statewide
HVDATA	CSQ	144.910 Statewide
County	**Primary**	**Secondary**
Franklin	HVTAC8	HVTAC3
Jefferson	HVTAC9	HVTAC4
Lincoln	HVTAC4	HVTAC8
St. Charles	HVTAC7	HVTAC6
St. Louis Metro	HVTAC5	HVTAC2
	CSQ/100.0	147.51 - HVTAC10
	CSQ/100.0	146.415 - HVTAC11
	CSQ/100.0	147.435 - HVTAC12
	CSQ/100.0	146.535 - HVTAC13
	CSQ/100.0	147.585 - HVTAC14
Warren	HVTAC2	HVTAC5

Emergency UHF Interoperability

Mnemonic	TX CTCSS	Frequency	Primary	Secondary
HUCALL	CSQ	446.000 Statewide		
HUTAC1	100.0	445.900	Warren Co.	
HUTAC2	100.0	445.925		Warren Co.
HUTAC3	100.0	445.950	St. Louis Co.	
HUTAC4	100.0	445.975	Franklin Co.	St. Louis Co.
HUTAC5	100.0	446.025	Lincoln Co.	Franklin Co.
HUTAC6	100.0	446.050	Jefferson Co.	Lincoln Co.
HUTAC7	100.0	446.075	St. Charles Co.	Jefferson Co.
HUTAC8	100.0	446.100		St. Charles Co.
HUAPRS	CSQ	446.150		
HUDATA	CSQ	446.200		

Emergency Survival Kits

Cold Weather Kit	Warm Weather Kit
Flares (self lighting)	Water (at least two gallons)
Blanket (wool or good insulating material)	Food bars
Dry Socks (wool or good insulating material)	Light colored clothing
Gloves (mittens preferred)	Flashlight with extra batteries
Candles or other sources of heat	Radio with extra batteries
Tarpaulin (shelter from snow and wind)	Waterproof matches
Food bars	Tarpaulin (shelter from rain)
Water (at least two gallons)	Flares (self lighting)
Extra dry clothes	Insect repellant
Boots (insulated)	Sun Screen (SPF 15 minimum)
Radio with extra batteries	
Flashlight with extra batteries	

ARES Net Activation

- **Standard Net Activation**
  - The ARES Net is activated for training every Monday night at 2000 hours.
- **Emergency Net Activation**
  - Emergency nets are activated in support of the County SkyWarn program or in support of County agencies as directed by the ARES Emergency Coordinator or Assistant Coordinator.
- **SkyWarn Spotter Deployment**
  - SkyWarn spotters are deployed in support of the County SkyWarn program at the direction of the ARES Emergency Coordinator or Assistant Coordinator.

Standard Net Activation

ECA/ARES 145.49 Repeater pages automatically for Nets on Monday Nights.
Use the following text for net activation:

Calling the St. Charles County ARES Net. This is net control (Give your call sign). This net is open to all amateur radio operators and is a directed net. Stations checking in are requested to give their call sign, location, paging equipment status, and type of traffic if you have traffic for the net. Give your information slowly to aid net control in logging. Check ins are taken by callsign prefix. Check in now for callsigns beginning with A.

Recognizing the following stations: (read back log) Callsigns beginning with K - KB

Repeat for groups KC - KD, KE – KF, KG – KZ, N, W – WB, all other callsigns

Any additional check ins?

No other check ins have been heard. (Call sign), go with your traffic. (if any)

Since there are no further check ins or traffic, this net is now closed. Thank you for your participation. This is (give call sign) returning the repeater to normal use. 73.

Emergency Net Activation

Page all units on ECA/ARES 145.49 Repeater. DTMF paging codes are: A*111 for Wx Net; A*222 for ARES Emergency Net; and A*333 for Special Net, Announce net purpose.

Page all units on DEM-VHF-1 repeater (Page Code 530)

Use the following text for net activation: "Calling the St. Charles County Amateur Radio Emergency Service Net. This is Net Control *(your FCC Call-sign)*. This net is being activated to support *(State nature of emergency or Skywarn activity)*. All operators checking into the net are requested to give their call-sign, name, geographic location, and availability for deployment. If an operator must leave the net before it is closed, notify net control before leaving. All ARES personnel please check in now."

When all check-ins are complete, state the nature of the emergency and give assignments to each operator, as directed by the ARES Emergency Coordinator or EOC Incident Commander.

Operators should not relocate or leave the net without direction from net control. Protocol requires that operators notify net control if they must leave the air before the net is closed.

St. Charles County Regional Emergency Management Net Activation

Calling the St. Charles County Regional Emergency Management Net. This is net control (give DSN). This net is called every Monday evening for the purpose of testing the communication system. All units check in now, giving your DSN and location. Advise if you received the alerting page and if you have any traffic for the net. Check ins will be by DSN groups, beginning with any DSN less than 900.

Recognizing the following units: (read backlog), then repeat for DSN groups 900 - 909, 910 - 919, 920 - 929, 930 – 939, 940 – 949. Then any DSN not recognized.

(DSN, go with your traffic. (if any)

Since there are no further check ins or traffic, this net is now closed. Thank you for your participation. This is (DSN) clear.

Wunnenberg Map Reading

Each of the inner lines is 1/10th of a grid square area. The Wunnenberg map is laid out in the larger squares.

The proper method of reading the map is:

Page 33, B,1 to describe the “X” location on the map.