

## Communications, SOG 1.02

### RADIO PROCEDURES

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1. Scope

This standard establishes guidelines for the use of two-way radio communications equipment. It was promulgated to promote the most efficient and effective use of the radio communications systems.

2. General

- a. Fire departments in Union County utilize two radio communication systems. A VHF high-band simplex radio system is used for dispatching and fireground communications, while Ohio's Multi-Agency Radio Communication System (MARCS) is used for dispatch and operational communication

3. VHF Radio System

- a. The Union County 9-1-1 communication center, located at 221 West 5<sup>th</sup> Street in Marysville controls a transmitter located on the radio tower at State Route 4 & Kaiser Road. The Marysville 9-1-1 communication center located at the Marysville Police Department, 125 East 6<sup>th</sup> Street controls a VHF transmitter located at Station 271, 209 South Main Street in Marysville.
- b. Several Union County fire stations are equipped with base VHF transmitters that may be utilized for emergency dispatching purposes, if necessary.
- c. Most of the VHF radios used by Union County fire departments contain at least eight channels or frequencies, which have been designated as follows:

Channel	Frequency	CTCSS	Use
1	154.250	162.2	Dispatch/Primary
2	154.325	127.3	Fireground 2
3	154.175	127.3	Fireground 3
4	154.235	162.2	Fireground 4
5	154.280	CSQ	Fireground 5 (Statewide Mutual Aid)
6	153.830	CSQ	Fireground 6
7	154.265	CSQ	Fireground 7
8	155.805	CSQ	State EMA

- d. Additional frequencies may be programmed to suit the specific needs of each individual fire department.
- e. Some fire departments may use channels 7 & 8 for mutual aid frequencies with departments from outside Union County.

4. Multi-Agency Radio Communication System (MARCS)

- a. MARCS is a statewide 800-megahertz digital trunked radio system operated by the State of Ohio.

- b. The MARCS radios used by Union County fire departments are programmed with the following talk-groups:

Zone	Talk-Group	Use
1	1	Dispatch 1
1	2	Operations (Ops) 2
1	3	Operations (Ops) 3
1	4	Operations (Ops) 4
1	5	Admin 5
1	6	Admin 6
1	7	Admin 7
1	8	Emergency Management Agency (EMA)
1	9	Union Fire & Police (F&P)
1	10	Sheriff
1	11	Sheriff 2
1	12	Marysville Police Department (MPD)
1	13	MPD 2
1	14	Richwood Police Department (RPD)
1	15	Plain City Police Department (PCPD)
1	16	Investigations

- c. MARCS radios are equipped with additional “Zones” that are programmed with various statewide multi-agency talk groups. These talk groups may be utilized for interagency communication in the event of a large-scale emergency or disaster operation.

5. Channel/Talk Group Assignments

- a. “Dispatch” traffic is defined as one-way communication that is broadcast by a 9-1-1 center to alert responders of an emergency call. “Fireground” traffic is two-way communication that occurs between an Incident Commander and personnel that are operating in a hazardous environment such as a structure fire, hazardous material incident hot-zone, confined space, etc. All other incident-related communication is normally considered to be “Operations” traffic. Examples include communication between the dispatcher, responding units, the incident commander, or any other personnel not operating in a hazardous area.
- b. Dispatch 1 is designated as the countywide dispatch channel & talk group. The VHF frequencies can be electronically “simulcast” with corresponding MARCS talk group, in order to facilitate cross-system communication & dispatching. As a general rule, all departments & personnel in the county will monitor Dispatch 1 when not tied up and available for emergency response
- c. MARCS Talk Groups 2, 3 & 4 are utilized for Operations traffic between MARCS-equipped companies, agencies and personnel.
- d. VHF Channels 2 - 7 are utilized for Fireground traffic. The Incident Commander assigns Fireground channels as needed and as available.
- e. MARCS Talk Groups 5, 6 & 7 are designated as “Admin” and may be utilized to supplement communication between ICS functions at large-scale incidents, support training operations, or facilitate routine intra-agency communication. Admin talk groups are not monitored or utilized by 9-1-1 dispatchers.

- f. VHF channel and MARCS talk group 8 are designated for use by the Union County Emergency Management agency. These may also be used to facilitate inter-agency communication and coordination at large-scale incidents, at the discretion of the EMA Director.
  - g. MARCS talk group 9 is designated Union Fire & Police (F&P), and is designed to facilitate communication between fire department companies and law enforcement units that are responding to the same incident.
  - h. MARCS talk groups 10 & above are designated for use by Union County law enforcement agencies. Fire Department personnel should not utilize these talk-groups unless requested or authorized to do so by an appropriate law enforcement officer.
6. Emergency/Distress
- a. MARCS radios are equipped with an emergency distress alarm. Depressing the emergency button, followed by the PTT button, activates this feature and alerts the dispatcher.
  - b. When a distress alarm is received, the dispatcher will attempt to contact the company and advise them to “Check your display.” If the activation of the distress alarm was inadvertent, the unit will advise that it was a false alarm and reset the radio. If the dispatcher receives no reply or an inappropriate response, the closest law enforcement unit, engine company, medic, and chief officer will be dispatched to the distressed company’s last known location on emergency.
  - c. Fire/EMS companies will stage a safe distance from this location until the scene is secured by law enforcement.
7. Terminology
- a. Use plain speech or clear text when transmitting over a two-way radio. Union County fire departments do not use any system of 10 codes or CB lingo. Although the department does not use numerical codes, a distinctive vocabulary of words, phrases, and terms has been developed for use in radio conversations. These terms simplify and clarify radio conversation as well as contribute to brevity. (See Part 9 – Clear Text, below.)
  - b. County fire departments also use the 24-hour clock rather than the traditional 12-hour clock. The 24-hour clock is often referred to as the military clock. All references to time used in two-way radio communications will be expressed in the 24-hour time format. For example, 9:00 A.M. is expressed as 0900 hours (pronounced “zero nine hundred hours”). 9:00 P.M. is expressed as 2100 hours (twenty-one hundred hours).

- c. Use the accepted law enforcement phonetic alphabet to clearly identify each letter of the alphabet:

A – Adam	H – Henry	O – Ocean	V- Victor
B – Boy	I – Ida	P – Paul	W – William
C – Charlie	J - John	Q – Queen	X – X-ray
D – David	K – King	R – Robert	Y – Young
E – Edward	L – Lincoln	S – Sam	Z – Zebra
F – Frank	M – Mary	T – Tom	
G – George	N – Nora	U – Union	

8. Sending and Receiving Messages

- a. Message format:

- i. Identify yourself , and direct the addressee by utilizing the language “calling”. .Example: “Engine 4 calling Command.”
- ii. Wait for the unit being called to acknowledge, and then keep the message brief and to the point.  
Example: “Engine 4, Command”  
“Command, go ahead Engine 4.”  
“Engine 4, Command the primary search is complete.”
- iii. Use procedural words and phrases whenever possible.
- iv. Use phonetic spelling when using words or terms that might be difficult to understand or may be spelled in a variety of ways.

- b. Eliminating most common errors:

- i. The most common error committed by a user of a two-way radio is short keying. This is caused when a radio operator attempts to transmit a message before the radio has time to engage. This practice chops off the first part of the message.
- ii. To correct the problem, the user should press the transmit button on the microphone and delay his message for two to three seconds. This allows the transmitter time to engage. Once the transmitter engages, the entire message can be successfully transmitted and received.
- iii. An error similar to short keying results when the radio operator fails to transmit the prefix or suffix of his assigned radio identifier when reporting en route or on location when responding to an assignment.
- iv. The error is magnified when more than one unit operates out of the same station. For example, Engine 3, Ladder 3, and Medic 3 are all housed at Station 3. Failure to transmit the entire radio identifier not only causes confusion, it can also result in a costly error by someone thinking he has heard a particular unit report en route or on scene.

9. Clear Text

Words or Phrases:

Application:

Affirmative

Yes

Call by phone

Self-explanatory

Clear

Understood

Disregard

Cancel present assignment and return to service

Emergency

Term used to gain control of radio channel to report a possible emergency. All other radio users will refrain

	from using that channel until cleared by the dispatcher. Radio users will confine all radio transmissions to a possible emergency in progress or a new incident. Radio traffic that includes status information (e.g., response, conditions, location, availability) will be authorized during this period
Mayday	Term used to gain control of radio channel to report an emergency. Radio users will confine all radio transmissions to an emergency in progress or a new incident. Radio traffic that includes status information (e.g., response, conditions, location, availability) will be authorized during this period
En route	Responding to a destination without lights and siren
In quarters	Indicates that a unit is in a station
In service	On the radio, available for a call
Negative	No
On scene	Has arrived at the scene of an incident
Out of service	Indicates a unit is unavailable to respond to a call.
Repeat	Self-explanatory
Report	Provide a status update on the progress of an incident
Resume normal traffic	Radio channel is cleared for normal use
Return to	Self-explanatory
Respond, responding	Indicates a unit should proceed to/is proceeding to an incident with lights and siren
Stand by	Stop transmitting
Unreadable	Radio signal is unclear. In most cases, try to add the specific trouble. Example: "Unreadable, background noise."