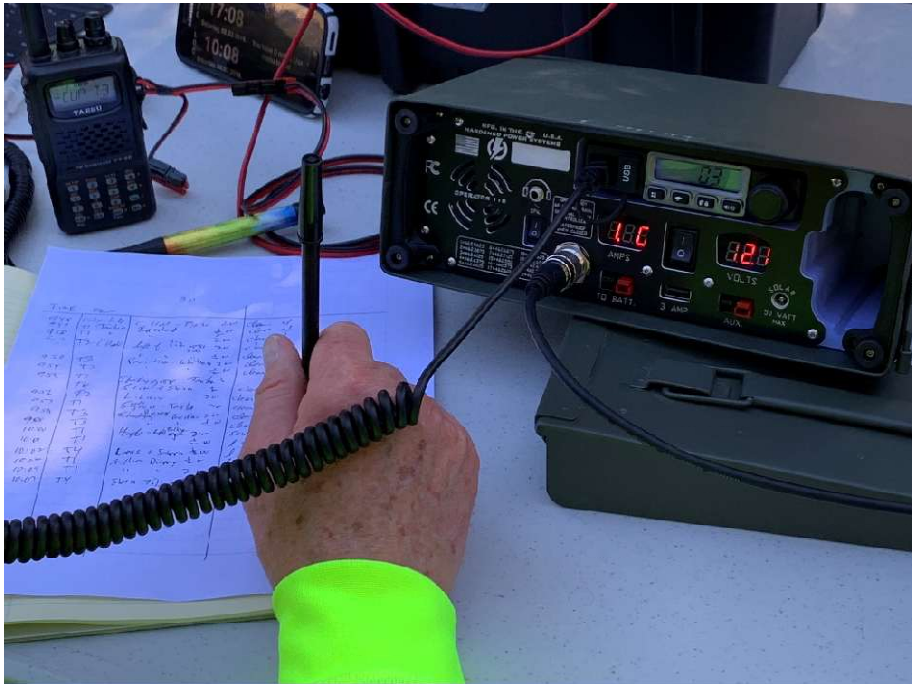
GMRS Net Control Station Handbook

Cupertino Citizen Corps

May 2026



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Rev: 260501

1 Contact Information

Telephone Numbers

Fire, Ambulance, other Emergency	9-1-1, or 408-299-3233
Cupertino City Office	408-777-3200
Emergency Manager	408-777-1310
Citizens Corp Coordinator / DOC	408-777-3176
CARES Emergency Coordinator	408-839-8798
MRC Emergency Coordinator	
Cupertino Public Works (After Hours)	408-299-2507
Union Pacific Railroad, Gate Crossing	800-848-8715

2 Channels and Frequencies

Function	Ch/Tone	Notes
Monta Vista ARK	1 / 21	2w, Zone 1 CERT Net
Regnart ARK	2 / 22	2w, Zone 2 CERT Net
Garden Gate ARK	3 / 23	2w, Zone 3 CERT Net
Lawson ARK	4 / 24	2w, Zone 4 CERT Net
DeAnza ARK	5 / 25	2w, Zone 5 CERT Net
Creekside ARK	6 / 26	2w, Zone 6 CERT Net
EOC Trailer	7 / 27	2w, Trailer
CERT TAC 1	8 / 0	0.5w
CERT TAC 2	9 / 0	0.5w
CERT TAC 3	10 / 0	0.5w
CERT TAC 4	11 / 0	0.5w
CERT TAC 5	12 / 0	0.5w
CERT TAC 6	13 / 0	0.5w
CERT TAC 7	14 / 0	0.5w
Comm 469	15 / 35	50w, ICP, EOC
CUP CERT/GMRS	20R / 31	50w, Tone=192.8Hz
SJ CERT/GMRS	22R / 16	50w, Tone=114.8Hz

3 Emergency Alert System, stations of interest

KCBS	740 KHz	LP1, National Primary EAS Station
KFBK	1530 KHz	CA State Primary EAS Station
KLIV	1590 KHz	Public AM Station, a CNN affiliate
WQGH344	1670 KHz	Cupertino Community Radio

Community Information

For Cupertino-specific instructions on an emergency, check this station first:

Cupertino Community Radio	WQGH344	1670 AM

4 Net Control Operator refresher

4.1 Why Do We Conduct a Net?

A CCC GMRS/FRS Net provides structure, coordination, and situational awareness when normal communications may be limited or unavailable.

1. **Situation Roll-Up** - Collect real-time reports from residents and field operators to understand conditions across neighborhoods (damage, hazards, needs).
2. **Information Roll-Down** - Distribute official information from the City, EOC, or Emergency Manager so the public receives consistent, accurate updates.
3. **Resource Coordination** - Enable requests for help and offers of assistance to be matched efficiently, especially when normal communication systems are unavailable.
4. **Common Operating Picture** - Combine individual reports into a shared understanding of what is happening across the area, helping identify patterns and emerging issues.
5. **Accountability & Personnel Status** - Track who is on the air, operational, and available. This ensures Net Control knows who can respond and confirms operator well-being.
6. **Communications Contact Point** - Provide a known, reliable place for residents and CERT members to check in, report issues, or request assistance during an emergency.
7. **Interoperability Bridge** - Link FRS/GMRS users with Amateur Radio operators and the EOC, ensuring information flows between community members and city response.
8. **Training & Readiness** - Regular nets build operator skill, confidence, and familiarity with procedures so performance is effective during real incidents.
9. **Net Participant Coaching** – Net Control is ideally the first line to coach users during an actual net on proper radio procedures and operations.
10. **Public Confidence** - Demonstrate organization and control, reassuring the community that information is being managed and help is available to the neighborhoods.

4.2 Terms

FRS – Family Radio Service, a private, two-way, short-distance voice and data communication service authorized in the U.S. for individuals and groups. It uses 22 channels in the 462 and 467 MHz range, often with handheld "walkie-talkie" radios, and is licensed-by-rule[1], requiring no individual license to operate.

GMRS – General Mobile Radio Service, a licensed (no test), land-mobile UHF radio service in the US, designed for short-distance, two-way voice communication, often used by families or groups for outdoor activities. It provides higher power and longer range than FRS radios, allowing up to 50 watts of power on 30 channels.

Net Control Station (NCS) - the designated GMRS station (place) responsible for managing the net. It requires reliable communication equipment capable of maintaining consistent signal strength; Includes high-power mobile/base transceivers (>15W minimum), high-gain external antennas, independent backup power (batteries/generator), and logging tools (paper or digital).

Net Control Operator (NCO) -- the designated leader (person) of a GMRS radio net, operates at the NCS, is responsible for organizing communication flow and maintaining order on a specific frequency. Acting as a "traffic cop," the NCO manages check-ins, tracks station status, and directs the orderly exchange of information.

Open Net -- an informal, relaxed gathering of operators on a specific frequency and time, where a Net Control Station (NCS) is either absent or not strictly directing traffic. Participants can chat freely, discuss topics, and converse directly with each other, rather than routing all communications through the control station.

Directed Net -- a highly organized, formal on-air gathering where a designated Net Control Station (NCS) manages all traffic to ensure efficient, orderly communication. Participants must obtain permission from the NCS before transmitting, typically used for emergencies, safety checks, or busy traffic, preventing channel congestion.

[1] https://www.fcc.gov/wireless/bureau-divisions/mobility-division/family-radio-service-frs#licensing

4.3 Background

4.3.1 Guidelines[2]

1. The net control station maintains total responsibility and authority in providing a smooth-running net.
2. You are in charge. Your tone of voice is the most powerful part of your on-air presence.
3. During a critical emergency or a period of high traffic load, you can request or appoint a backup net control station or scribe to help properly record all information.
4. All your transmissions must be in a controlled and clear voice.
5. Identify your station by GMRS callsign every fifteen (15) minutes if you are involved in constant communications or using tactical call signs.
6. Keep records and logs of all transmissions taking place during the net.
7. State the time frequently.

4.3.2 Before starting the net

Be Prepared – All NCOs should be ready to assume the net at any time. In preparation for taking the net, do the following:

1. Familiarize yourself with this handbook.
2. Have the following forms available:
    - ICS214 log (Unit Log)
    - ICS 211B Check in Sheet or other paper
    - Notebook or pad of paper for recording messages
    - Other organizational forms that are used.
3. Familiarize yourself with these forms for managing the net.

4.3.3 During the net

A commonsense list of things to do:

1. **Listen** – The best NCOs know that communications is 50% listening.
2. **Think before you speak** – use specific words to ensure that your precise meaning is conveyed.
3. **Speak** – Hold the mic 3-4 inches from your face and just off the side of your mouth. Talk across, rather than into, the microphone.
4. **Keep your transmissions brief** – Unnecessary chatter wastes time and slows down the net. Keep your transmissions brief.

[2] Excerpt from the *ARRL NCS Standard Operating Guidelines*.

5. **Clarity** –Your communication should consist of only the information necessary to get the message across clearly and accurately.
6. **Plain Language** – All messages are passed in plain English, no codes.
7. **Phonetics** – when in doubt, spell it out using standard phonetics (Section 7). Avoid non-standard phonetics; they cause additional mental effort to translate.
8. **Using the Radio** – Keying up your radio: **press PTT**, **PAUSE**, then **TALK**. This makes sure that the other stations can hear your entire transmission.
9. **Identify every 15 minutes** – be sure to say your FCC GMRS callsign on the air at least every 15 minutes while you are operating. If you have not handled any traffic over a 15-minute interval, just announce your callsign and "*net control for <event>*" or something similar to indicate that the frequency is under net control.
10. **Set the Pace** – If it's going too fast for you, slow it down. Do not respond until you're ready (including keeping up with your logging).

4.4 General Net Operations

4.4.1 Basic Template for the Net Control Script

Start / Introduction

- Check for a clear frequency.
- Identify yourself, including the tactical call sign of net control.
- Identify the purpose of the net, and whether it will be operated as open or directed.
- State whether or not you have the ability to dispatch resources.
- State what to do if immediate help is needed (e.g., call 911).
- Ask if there is any emergency traffic.
- Ask if there is any traffic for net control.
- Say your FCC GMRS callsign on the air at least every 15 minutes.

Reports/Check-ins

- Describe how people should make reports or check-in.
- Include how to use Tactical callsigns (their neighborhood or street name)

Update

- Remember to ID with FCC GMRS callsign every 15 minutes.
- Perform health and Welfare checks with net participants.
- Regularly state the purpose of net and operating mode (directed/open) as appropriate.

Close

- Announce that the repeater/frequency is returned to normal use.

5 Procedure: Emergency Net Operations

5.1 Introduction

This section covers the three different types of net control startup activities that CCC GMRS NCOs may encounter. These are:

1. ***General Net Startup:*** A public service event that requires CCC to open the CCC GMRS net. It would be at the request of the city who needs communications support.
2. ***Planned Net Startup:*** A plan is previously developed on what CCC needs to do and how we should do it. This approach may be used after the net was previously shut down and planned to be re-activated during a later Operational Period. An ***Incident Action Plan*** is the document that will lay out our course of action.
3. ***Ongoing Net Operations:*** Once the net is established, CARES will continue net operations for the duration of the event or as directed.

5.2 General Net Start (new event)

A *General Net Start* is for public service, exercise or emergency events where there is time to pre-plan tasks such as identifying staff, make staffing assignments, and identify field assignments.

Types of events that can be managed by a General Net Start including 4th of July Public Service, communications outage exercise, or earthquake.

Opening the Net

The following is a sample script of the general information and actions taken by the NCO. While the NCO is encouraged to adjust (personalize) the content based on the situation, they must keep the basic elements in place.

_____ 1. **Start your ICS 214 Unit Log**.

_____ 2. **Start the net** on the designated GMRS Channel / Tone.

"This is < your name >, < your call >. Attention all stations. Please stand by for [drill | emergency] traffic."

"This is < your name >, < your call >, net control for the Cupertino ARK <zone or name> Net. This is [a drill | an actual emergency]. This is a directed net. All stations not connected with the emergency are asked to stand by.

"I am NOT able to dispatch help for any reported situations."

"All CERT member stations are asked to stay on frequency until the close of the net. Please give your current availability when you are asked."

_____ *3.* **NCO call for members check-ins.** Describe how to make check-ins.
"We will take check-ins by the first letter of your name. Say only your Name, location (street or neighborhood), and ARK zone.
(i) FRS Users, Alpha through Golf, check in now.
(ii) FRS Users, Hotel through Oscar, check in now.
(iii) FRS Users, Papa through Zulu, check in now."

Be sure to call for more check ins until you get no more responses.

Log all check-ins on the ICS 211B Check in Sheet or other paper.

_____ 4. **NCO calls for check-ins by RELAY.**
"FRS members who tried to check in but were not acknowledged, please announce your call and say RELAY. I would appreciate other users to listen for relay check-ins. Please go now." <pause>
"Are there any relays?" Log all check-ins by RELAY.

5.3 Emergency Net Start

1. For an earthquake, it is likely that the CCC Emergency Net will start from a home location with the initial response being managed remotely.
2. Each activation is different and the NCO should use their best judgement on how to run the net.

This is not a script, but a general sequence of actions that the NCO should perform. The following describes the things that the Remote Net NCO should do during the Remote Net Start.

Opening the Net

_____ 1. **Start your ICS 214 Unit Log and ICS 211B Check-in Sheet**.

_____ 2. **Start the net**. Start the net on your designated channel / Tone

_____ 3. **FOR EARTHQUAKE: NCO calls for check-ins.** Refer to the CERT Communications Handbook for a description of the Mike-Mike settings. NCO should state the format for net participants to pass the Mike-Mike Report:
"<Street>, *<ARK Name / Zone>, Mike-Mike ###,* < Street >."

Securing the Net

If the decision is to secure, then NCO should do the following:

_____ 4. **NCO secures the net** when all are confirmed back home.

Net Transfer

IF you started the net from home, you may want to move it to the ARK.

_____ 1. While still on the net, NCO makes preparations to move to the ARK.

_____ 2. **NCO** performs a *Health &Welfare* check to check who is still present.

_____ 3. **NCO** announces their plan to move the net to the ARK and that you will be off the air for "##" minutes. Request all members on the net stay on the net until the move is complete..

_____ 4. Once at the ARK, the **NCO** announces they are back on frequency and performs another *Health &Welfare* to confirm net participants.

5.4 On-going Net Operations

5.4.1 General Message Handling

_____ 1. **NCO answers calls for traffic**.
   a. When ready tells the field station to pass the message.
   b. **NCO** records the traffic on your message tracking log.

_____ 2. During periods of high traffic volume, call for traffic in priority order: EMERGENCY, then Priority.
   a. EMERGENCY – Life Threatening
   b. URGENT – Property Threatening
   c. Routine – routine resource requests, shift planning, etc.
   d. Health and Welfare

_____ 3. Give your FCC GMRS callsign every 15 minutes.

5.4.2 Every 30 minutes

_____ 4. Make this announcement:

"This is Net Control for the Cupertino ARES Emergency Net. This is a directed net. Permission to pass traffic is required from Net Control. All stations not participating in this activation are asked to stand by. The time is <hh:mm>. This is <your_call>."

NOTE: If the Net is being interfered with by non-CCC members,
- Request the other party stand by for this emergency,
- Identify the net more often, such as when you ID yourself every 15 minutes.

_____ 5. Perform periodic health and welfare checks of all checked in FRS members, time and traffic permitting.

"Starting a Health and Welfare Check. Please acknowledge with your name and location."

- Call each checked in station and wait for an acknowledgement.
- Call for any other new check-ins.

5.4.3 Shift Change

_____ 6. IF you are contacted by the next shift GMRS NCO operator, review all relevant information and status (see topics below).

7. Check on battery levels or generator/gas levels during the hand off.

_____ 8. Make the appropriate shift change entry on your Unit Log.

Review the following information during a shift change.

- The radio channel and tone in use.
- Any other radio, power, or antenna details.
- List of checked in members; names, tactical call signs, and location.
- Review Logs – ICS214, ICS 211B
- What is going on in general; what changes are expected.
- Any pending activity: messages, replies, and action items.

6 Sample Scripts

The Net Control procedures listed above reflect ideal net operations in terms of how the net should be run. However, it is very difficult to apply a single approach to the unanticipated situations that the NCO may encounter.

To this end, the following are sample net control scripts contributed by GMRS NCOs. They are minimalist versions of the above and, in certain situations, may be adequate. These scripts can be used as is or modified to meet a specific situation that you may encounter.

6.1 Opening a Net Examples

Opening a Public Service Net, Example 1

This < name, your call sign >. Is this frequency in use? I'm now opening the Cupertino Citizen Corp Emergency Service Net. This will be a directed net.

I do not have the ability to dispatch emergency resources.

Is there any emergency or priority traffic for this net? <break>

Is there any traffic for net control? <break>

I'll take check-ins now for FRS Neighborhood users. Please give your name, your street or neighborhood, and ARK zone.

Opening an Exercise Net, Example 2

This is the Cupertino ARK <name> Net for the City of Cupertino Communications Drill.

This net is a directed net, please pass all traffic through net control

I request all drill participants to check in by first giving their call sign and street only. Only those stations ready to check in, please come now. <call sign>.

Identifying the net - every 10 minutes

This is < call sign >, Net Control for the Cupertino ARK <name> Net. This is a directed net and permission to pass traffic should be obtained from Net Control. <call sign>

Closing the net

This is < call sign >, Net Control for the Cupertino ARK <name> Net. The net is closing at this time. <your call sign>

6.2 Message Net Examples

Opening the Net, Example 1

This < your call sign >. Is this frequency in use? I'm now opening the Cupertino ARK <name> Net. This will be a directed net.
I do not have the ability to dispatch emergency resources.

Is there any emergency or priority traffic for this net? <break>

Is there any traffic for net control? <break>

Stations wishing to check in, come now.

Opening the Net, Example 2

This is the Cupertino ARK <name> Net for a City of Cupertino Communications [activation | drill]. This is a directed net, please pass all traffic thru net control, <your name, call sign>.

I also wish to remind all GMRS users to conclude their message traffic with their GMRS call sign for FCC compliance. This net will yield to emergency traffic, is there any emergency traffic? Come now.

Stations needing to pass traffic, please identify now with your tactical call <street name>.

Identifying the net - every 10 minutes, Example 1

This is <call sign>, Net Control for the Cupertino ARK <name> Net. This is a directed net and permission to pass traffic should be obtained from Net Control. <call sign>

Identifying the net - every 10 minutes w/ H&W, Example 2

This is the Cupertino ARK <name> Net for a City of Cupertino Communications [activation | drill]. This is a directed net, please pass all traffic thru net control.

I will now perform a roll call of all stations. Please respond with your call sign and location.

Closing the net, Example 1

This is < call sign >, Net Control for the Cupertino ARK <name> Net. The net is closing. <your call sign>

Closing the net, Example 2

This is the Cupertino ARK <name> Net for the City of Cupertino Communications [activation | drill]. I wish to thank all participants in the Drill for their support.

This is <your name, call sign> closing the net and returning the frequency to regular amateur use.

7 Phonetic Alphabet & Numbers

A	Alpha	N	November
B	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Whiskey
K	Kilo	X	X-Ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu

0	zero (ZEE-row)	5	five (Fife)
1	one (Wun)	6	six (Sicks)
2	two (Too)	7	seven (SEV-vin)
3	three (Tree)	8	eight (Ate)
4	four (FOH-wer)	9	nine (NINE-er)

8 Modified Mercalli Intensity Scale (MMI)

I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved or overturned. Dishes, glassware, knickknacks, and books fall off shelves. Weak plaster, adobe buildings, and some poorly built masonry buildings cracked. Damage slight.
VII	Very Strong	Negligible damage in buildings of good design and construction. Slight to moderate damage in well-built ordinary structures. Considerable damage in poorly built or badly designed structures. Some chimneys broken. Fall of plaster, loose bricks, stones, tiles, cornices, unbraced parapets and porches. Some cracks in better masonry buildings.
VIII	Severe	Considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Wood-frame houses moved on foundations if not bolted; loose partition walls thrown out. Tree branches broken.

Ref: https://pubs.usgs.gov/gip/earthq4/severitygip.html

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