

A QUICK TRAINER AND FIELD RESOURCE GUIDE FOR THE EMERGENCY COMMUNICATOR

Santa Clara County ARES / RACES

Santa Clara County Resource Net
146.115 + PL 100.0 Hz
AA6BT



Last revised : 11/5/08 SKM

This manual is intended to serve as a reference for amateurs deployed in the field for emergency services work, primarily through Amateur Radio Emergency Service ARES/RACES. It provides basic emergency communications procedural information, frequencies, officials throughout Santa Clara County and contained cities, equipment lists, operating guides and examples, and regulations. A Closing appendix serves as a quick trainer of how to speak on controlled radio nets. There is no substitute for actual training, live, with your own radio.

WHAT TO DO *FIRST* IN CASE OF AN EMERGENCY

1. CHECK THAT YOU AND YOUR FAMILY ARE SAFE AND SECURE BEFORE YOU RESPOND AS AN ARES/ RACES VOLUNTEER.
2. CHECK THAT YOUR PROPERTY IS SAFE AND SECURE BEFORE YOU RESPOND AS AN ARES VOLUNTEER.
3. MONITOR _____
(PUT YOUR ASSIGNED LOCAL ARES/RACES EMERGENCY NET FREQUENCY HERE). See Appendix A
4. FOLLOW THE INSTRUCTIONS YOU RECEIVE FROM THE ARES/RACES/ACS OFFICIALS IN CHARGE ON THE ABOVE FREQUENCY.
5. CONTACT YOUR LOCAL EMERGENCY COORDINATOR, OR HIS/HER DESIGNEE, FOR FURTHER INSTRUCTIONS.

INITIAL ACTION CHECKLIST

The net control station and/or ARES/RACES officials on the designated emergency net will provide additional instructions, including information on frequencies used for other resource and tactical nets. Normally, a resource net will enroll volunteers and provide information on how you can assist.

- ☉ Be prepared to operate. Check all equipment and connections.
- ☉ Check-in with your assigned contact. Deploy to assignment with “GO” kit.
- ☉ Obtain tactical call sign for your location/assignment.
- ☉ Initiate personal event log
- ☉ Enter assigned frequency(s) on log sheet and on emergency/frequency plan.
- ☉ Use log form to record messages handled.
- ☉ Use a formal message form when a precise record is required. (Example in back of this manual)
- ☉ Use tactical call sign for your location, while observing FCC’s ten-minute ID rule.
- ☉ Monitor your assigned frequency AT ALL TIMES. Notify Net Control if you have to leave or change location

BASIC DEPLOYMENT EQUIPMENT CHECKLIST

When responding to an emergency event, or even a training exercise, there is a minimum set of equipment and personal gear you should bring with you to get the job done. Basic items include:

Minimum Equipment List

1. A 2m HT.	7. An ear/head-phone.
2. A DSW ID card.	8. An ARES / RACES hardhat.
3. Radio license.	9. Appropriate clothing including closed toe shoes or boots
4. Message forms, log books, etc.	10. Paper and pencil.
5. A 2m magnetic-mount antenna.	11. County street map. (The Thomas Guide® recommended; assignments may be given in Thomas map coordinates.)
6. Spare batteries.	

The majority of these items should be kept in a “GO Kit” so that all you need to do is pick up the box and you will be ready to go. You might also consider the items on the following list for inclusion in this ready box. This list is designed to allow you to stay in the field for up to 72 hours.

ABOUT YOUR “GO” KIT

Power -- Your radio 72-hour kit should have several sources of power in it, with extra battery packs and an alkaline battery pack for your HT. For mobile VHF and UHF radios, larger batteries are needed. Gel-cell or deep cycle marine batteries would be good sources of battery power, and you must keep them charged and ready to go. It is also wise to have alternate means available to charge your batteries during the emergency. You can charge smaller batteries from other larger batteries. You can build a solar charging device. If you're lucky, you may have access to a power generator that can be used in place of the normal electrical lines. Have more battery capacity than you think you might need. Have several methods available to connect your radios to different power sources.

Gain Antennas -- You can expect to need some kind of gain antenna for your HT, as well as an additional gain antenna that can be used on either your HT or your mobile rig. The extra antenna might be needed by someone else, or your first antenna might break. For VHF and UHF, you can build a J-pole from a TV twin lead, for an inexpensive and very compact antenna. Have several lengths of coax in your kit, totaling at least 50 feet and with barrel connectors to connect them together.

EXTENDED (72-HOUR) DEPLOYMENT EQUIPMENT CHECKLIST

Extended Equipment List

<p>1. Toolbox (72 hours)</p> <ul style="list-style-type: none"> a) pliers b) screwdrivers c) socket wrenches d) electricians tape e) soldering iron and solder f) VOM g) Power cord connectors (Anderson Power pole 30 amp) 	<p>2. Radio gear</p> <ul style="list-style-type: none"> a) Rigs, i.e., other than 2m HT b) microphones for the above radios c) headphones d) power supply e) power extension cords (110V and 12V) f) sealed lead-acid or gel-cell high cap. batteries (charged) g) antennas with mounts h) antenna feed lines i) SWR bridge(VHF and HF) j) extra coax k) antenna connection adapters (include Mag Mt to HT)
<p>3. Personal gear (short duration)</p> <ul style="list-style-type: none"> a. snacks b. liquid refreshment c. throat lozenges d. personal medicine e. aspirin f. extra pair of prescription glasses g. sunglasses 	<p>4. Personal gear (long duration)</p> <ul style="list-style-type: none"> a. foul weather gear b. 3 day supply of drinking water c. 3 day supply of food d. mess kit with cleaning kit e. first aid kit f. sleeping bag g. toilet articles h. alarm clock i. flashlight with batteries j. candles k. 3 day change of clothes l. waterproof matches

ARES and RACES

Although RACES and ARES are separate entities, the ARRL advocates dual membership and cooperative efforts between both groups whenever possible. An ARES group whose members are all enrolled in and certified by RACES operate in an emergency with great flexibility. Using the same operators and the same frequencies, an ARES group also enrolled as RACES can "switch hats" from ARES to RACES and RACES to ARES to meet the requirements of the situation as it develops. For example, during a "non declared emergency," ARES can operate under ARES, but when an emergency or disaster is officially declared by government emergency management authority, the operation can become RACES with no change in personnel or frequencies.

AMATEUR RADIO EMERGENCY SERVICE (ARES)

The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public interest when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization, is eligible for membership in ARES/RACES/ACS. The only qualification, other than possession of an Amateur Radio license, is a sincere desire to serve. Because ARES is an amateur service, only amateurs are eligible for membership. The possession of emergency-powered equipment is desirable, but is not a requirement for membership.

RADIO AMATEUR CIVIL EMERGENCY SERVICE (RACES)

RACES, administered by local/county/state Emergency Management agencies, with guidance from the Federal Emergency Management Agency (FEMA), is a part of the Amateur Radio Service that provides radio communications for civil-preparedness purposes only, during periods of local, regional or national civil emergencies. These emergencies are not limited to war-related activities, but can include natural disasters such as fires, floods and earthquakes.

NATIONAL TRAFFIC SYSTEM (NTS)

The National Traffic System is designed to meet two principal objectives: rapid movement of traffic from origin to destination, and training amateur operators to handle written traffic and participate in directed nets. NTS operates daily, and consists of four different net levels--Area, Region, Section, and Local--which operate in an orderly time sequence to effect a definite flow pattern for traffic from origin to destination.

TYPES OF EMERGENCY NETS

Open vs Directed Nets -- A net may operate as an Open or "free form" net, or as a Directed net where a net control station is used to control the flow of transmissions on the channel. Typically, when the amount of traffic is low or sporadic a net control isn't required, and an Open net is used. Stations merely listen before they transmit. When a net is declared a "Directed" net, then all transmissions must be directed by the Net Control Station (NCS).

The following are all closed or directed NETS unless you are specifically told otherwise.

Message Net

This countywide net's function is to carry traffic between cities and other jurisdictions to the County EOC.

Command Net

This Net's function is to provide an intercom for County ARES/RACES Staff, Santa Clara Valley Section Staff, City ECs, and Shift Supervisors. No formal traffic is to be passed on this net. This net also serves Staff, ECs, and Shift Supervisors when enroute from one location to another. (Normally not a directed NET)

Packet Data Net

This net's function is to handle damage assessment traffic from cities and other jurisdictions to the County EOC, and logistics traffic between cities and other jurisdictions to the County EOC. This net utilizes the Emergency BBS operating system.

Other Tactical Nets

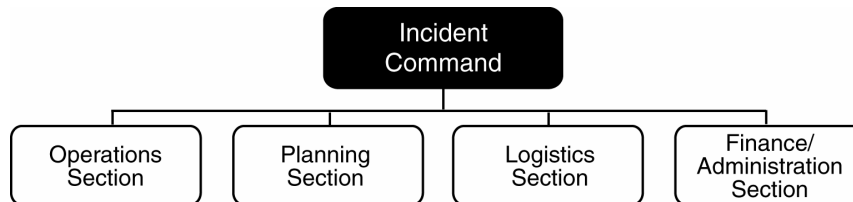
These other nets are created on an as-required basis to handle ARES/RACES operations within a city or other jurisdictions. They may also be created by other agencies, such as the Red Cross, Hospitals, etc; to handle specific kinds of traffic. Tactical Net names are given by the creating jurisdictions or agency. Tactical Net Control from the jurisdiction's or agency's EOC. Tactical Nets will not normally be monitored by the County EOC.

INCIDENT COMMAND SYSTEM (ICS)

The Incident Command System (ICS) is a management tool that has been adopted by professional emergency responders throughout the country. ICS provides a coordinated system of command, communications, organization, and accountability in managing emergency events. Due to the wide spread use of ICS, Amateur Radio operators should be familiar with the system, as well as how they will interface with agencies employing ICS. Integral to the ICS is the concept of *Unified Command*. There is only one boss, the Incident Commander, who is responsible for the overall operation. For any incident, there are a number of functions that must be performed ranging from planning and logistics to handling the press. The functional requirements of planning, logistics, operations, and finance are always present despite the size of the incident. They may be handled by a single individual for a small incident, or a "Command Staff" in a large incident. Another characteristic of ICS is "span of control." In simple terms, any manager should only directly manage a small number of people. ICS uses the number of five for organizational purposes. The number five isn't hard and fast, but provides a useful organizational guide line.

How does the Amateur Radio volunteer fit into the Incident Command System? We are expected to be communicators, and within the ICS, this would place us in the Logistics Section in the Service Branch as part of the Communications Unit. The communications unit provides all communications services for the operation.

There are five major management functions that are the foundation upon which the ICS organization develops. These functions apply whether you are handling a routine emergency, organizing for a major non-emergency event, or managing a response to a major disaster. The five major management functions are shown in the table below.



Below is a brief description of each ICS function:

- **Incident Command:** Sets the incident objectives, strategies, and priorities and has overall responsibility at the incident or event.
- **Operations:** Conducts tactical operations to carry out the plan. Develops the tactical objectives and organization, and directs all tactical resources.
- **Planning:** Prepares and documents the Incident Action Plan to accomplish the objectives, collects and evaluates information, maintains resource status, and maintains documentation for incident records.
- **Logistics:** Provides support, resources, and all other services needed to meet the operational objectives.
- **Finance/Administration:** Monitors costs related to the incident. Provides accounting, procurement, time recording, and cost analyses.

RULES AND PROCEDURES
ARES/RACES MUTUAL AID RESPONSE
SANTA CLARA COUNTY OES
This version dated 3-02-05, prepared by L.W. Carr

GENERAL RULES:

All responders must be registered as Disaster Service Workers by the Santa Clara County Office of Emergency Services before they are eligible to respond to emergency events in any location except for their city of residence. If you have not yet been registered by Santa Clara County OES, then you must arrange to meet with the Chief Radio Officer, or his designee to sign the DSW registration. At that time, you will be given a copy of the registration, as well as an Emergency Responder Identification Card that you will use to access the areas associated with your assignment.

All DSWs must be aware that the only type of job for which the DSW regulations will cover liability is that area for which the responder is registered. As ARES/RACES responders, you are registered only as Communicators. Thus, you are NOT authorized to climb antenna towers, climb trees to install antennas, or work on roofs to fix broken antennas.

You will be dispatched as mutual aid to an agency or jurisdiction not familiar to you. While you are there, we expect you to perform to the best of your abilities, and to show the professional competence that caused your home unit to choose you as a mutual aid responder. NOTE: If you have volunteered to serve during an emergency, but have not had experience in emergency operations in the past, be sure to advise your supervisor – we will make sure that your assignment is such that you will be able to serve without exceeding your capabilities.

You are not required to do any job that is outside your field of registration as a DSW, and if you do such a job, you are NOT covered in the case of accident or injury. You are directed to tell the requesting official that you the task is outside your DSW coverage. NOTE: If a policeman directs you to do a task, you should perform that task. You should tell him or her that you are already on an emergency assignment under ARES/RACES, and ask that you be permitted to do your RACES assignment. However, if the policeman still tells you to do the task that he/she as assigned, do so – direction by a policeman automatically covers you for DSW in the task that he or she assigns you, and direct instructions by a policeman who is aware of your assignment will take higher priority than your ARES/RACES task. You MUST immediately notify the ARES/RACES net control that you have been directed to do a new task by a policeman; do so as soon as it is safe to contact your supervisor.

As a DSW, you are not required to do anything that in your opinion is dangerous or unreasonable. Remember, your safety is the first thing to consider. If you think you are getting into an unsafe area, condition, or task, stop and think about backing out. For instance, if a person that you are shadowing is entering an area that you consider dangerous, you should simply say: "I consider the danger level to be too high for me to continue into this area. I will wait for you here."

This includes action that in your opinion may violate your sense of morality or religion.

ONCE YOU HAVE ACCEPTED AN ASSIGNMENT:

The net control station and/or ARES/RACES officials on the designated emergency net will provide additional instructions, including information on frequencies used at the location that you will be assigned, as well as the travel frequency to be used while you travel to and from the assigned location. You should program the travel frequency, and the frequency associated with the assignment into your radio, AND TEST THESE contacts BEFORE YOU LEAVE HOME.

While you are en route to your assignment, you are under the control of Santa Clara County RACES. When you depart, call the resource Net and let us know that you are under way. When you get to your assignment, call the Resource Net again and let us know that you have reported to your assigned agency. If your travel time is more than 15 minutes, advise Net control of your status in 15-minute intervals. NOTE: If at any time you attempt to reach the Resource Net control without success, you should quickly attempt to contact your assignment frequency. If you are not able to reach either of these frequencies, you MUST TURN BACK, and check until you can again talk to the Resource Net.

WE MUST BE ABLE TO KEEP TRACK OF YOU – IF YOU DISAPPEAR FROM OUR NET WITHOUT ESTABLISHING CONTACT WITH YOUR ASSIGNMENT, WE WILL HAVE TO ASSUME THAT YOU ARE IN TROUBLE, AND WE WILL HAVE TO BEGIN RESCUE PROCEDURES. SO, DO NOT BECOME PART OF THE PROBLEM – MAKE SURE THAT YOU ARE ALWAYS IN CONTACT WITH US OR YOUR ASSIGNMENT!!

ONCE YOU HAVE REACHED YOUR ASSIGNED CITY OR JURISDICTION:

1. Be prepared to operate. Check alternate equipment and connections.
- 2a. Check in with your assigned contact. Check out of the Travel Net.
- 2b. Deploy to assignment with "Ready" kit.
3. Obtain tactical call sign for your location/assignment.
4. Initiate personal event log (use form at end of this booklet).
5. Enter assigned frequency(s) on log sheet and on emergency/frequency plan.
6. Use log form to record messages handled.
7. Use a formal message form when a precise record is required.
8. Use tactical call sign for your location, while observing FCC's ten-minute i-d rule.
9. Monitor your assigned frequency AT ALL TIMES. Notify NCS if you have to leave.

PRINCIPLES OF REPEATER OPERATION

1. **Use minimum power.** Otherwise, especially in heavily populated areas, you may run the risk of keying more than one repeater, thus causing unnecessary interference. Low power also conserves batteries.
2. **Observe the "pause" procedure between exchanges.** When it is your turn to transmit, after the transmitting station stands by, count to two or three before pressing your transmit switch.
3. **Listen much, transmit little.** Announce your presence on a repeater when you are certain of being able to assist in an emergency, and don't tie it up with idle chatter.
4. **Monitor local ARES net frequency,** when otherwise not busy.
5. **Think before you talk.** Anyone with an inexpensive public-service-band receiver can monitor. Stick to facts, control your emotions. Remember, during an emergency is the time when you are most apt to act and speak rashly.
6. **Articulate, don't slur.** Speak close to your mike, but talk across it, not into it. Keep your voice down. In an emergency situation one often gets excited and tends to shout. Talk slowly, calmly--this is the mark of an experienced communicator.

PRINCIPLES OF DISASTER COMMUNICATION

1. **Keep the interference level down.** In a disaster, crucial stations may be weak. All other stations should remain silent unless they are called upon. If you're not sure you should transmit, don't.
2. **Monitor established disaster frequencies.** Many ARES localities and some geographical areas have established disaster frequencies where someone is always (or nearly always) monitoring for possible calls.
3. **Avoid spreading rumors.** During and after a disaster situation, especially on the phone bands, you may hear almost anything. Unfortunately, much misinformation is transmitted. Rumors are started by expansion, deletion, amplification or modification of words, exaggeration or interpretation. All addressed transmissions should be officially authenticated as to their source. These transmissions should be repeated word for word, if at all, and only when specifically authorized.
4. **Authenticate all messages.** Every message which purports to be of an official nature should be written and signed. Whenever possible, amateurs should avoid initiating disaster or emergency traffic themselves. We do the communicating; the agency officials we serve supply the content of the communications.
5. **Strive for efficiency.** Whatever happens in an emergency, you will find hysteria and some amateurs who are activated by the thought that they must be sleepless heroes. Instead of operating your own station full time at the expense of your health and efficiency, it is much better to serve a shift at one of the best-located and best equipped stations, suitable for the work at hand, manned by relief shifts of the best-qualified operators. This reduces interference and secures well-operated stations.
6. **Select the mode and band to suit the need.** It is a characteristic of all amateurs to believe that their favorite mode and band is superior to all others. However, the merits of a particular band or mode in a communications emergency should be evaluated impartially with a view to the appropriate use of bands and modes. There is, of course, no alternative to using what happens to be available, but there are ways to optimize available communications.

7. Use all communications channels intelligently. While the prime object of emergency communications is to save lives and property (anything else is incidental), Amateur Radio is a secondary communications means; normal channels are primary and should be used if available. Emergency channels other than amateur which are available in the absence of amateur channels should be utilized without fear of favoritism in the interest of getting the message through.

8. Don't "broadcast." Some stations in an emergency situation have a tendency to emulate "broadcast" techniques. While it is true that the general public may be listening, our transmissions are not and should not be made for that purpose.

9. DO NOT EVER use the names of people who are injured or deceased on the air.

Santa Clara County - MESSAGE PRECEDENCES

(Situation Severity)

EMERGENCY--Any message having life and death urgency to any person or group of persons.

URGENT— Any Message involving a threat to property only

OTHER – All other message not involving a threat to life or property

(Message Handling)

IMMEDIATE—This type of message must be handled as soon as possible without delays

PRIORITY—This type of message should be handled in less than one hour.

ROUTINE—This type of message is handled as the time and situation allow

A message marked as EMERGENCY and IMMEDIATE should never be put down until after it has been delivered.

Appendix A

***Santa Clara County, California
ARES/RACES Emergency Coordinators (EC) by City***

<i>Campbell</i>	<i>Barton Smith, N6HDN</i>	radiocampbell-svecs @ yahoo.com	<i>(408) 379-2875</i>
<i>Cupertino</i>	<i>Jim Oberhofer, KN6PE</i>	kn6pe @ arrl.net	<i>(408) 839-8798</i>
<i>Gilroy, ACS</i>	<i>Pat Moore, KG6RLR</i>	pqm@ix.netcom.com	<i>(408) 842-7873</i>
<i><u>Los Altos</u></i>	<i>Tom Smith, KD6SOJ</i>	kd6soj @ arrl.net	<i>(650) 967-9548</i>
<i>Los Altos Hills</i>	<i>Edwin Jones, W7WPO</i>	ed_jones @ pacbell.net	<i>(650) 941-2991</i>
<i>Los Gatos</i>	<i>Tom Campbell, K6KMT</i>	K6KMT @ AOL.com	<i>(408) 377-1845</i>
<i><u>Milpitas</u></i>	<i>Bob Armstrong, K6TBN</i>	bob @ jfcl.com	<i>(408) 956-9387</i>
<i>Morgan Hill</i>	<i>Woody Salyer, K6WWS</i>	k6wws @ arrl.net	<i>(408) 828-4429</i>
<i><u>Mountain View</u></i>	<i>Jerry Haag, KF6GAC</i>	KF6GAC @ arrl.net	<i>(650) 949-3827</i>
<i><u>NASA-Ames</u></i>	<i>Mark Allard, KD6CWM</i>	mallard @ mail.arc.nasa.gov	<i>(408) 267-3688</i>
<i>Palo Alto</i>	<i>Rich Hyde, KD6WYK</i>	KD6WYK @ ARRL.NET	<i>(650) 858-2829</i>
<i><u>San Jose</u></i>	<i>David Pratt, W6DSP</i>	w6dsp @ arrl.net	<i>(408) 281-2482</i>
<i>Santa Clara</i>	<i>Howard Califf, W6HOC</i>	w6hoc @ arrl.net	<i>(408) 247-3465</i>
<i>Saratoga</i>	<i>Robert Vance, N6ROB</i>	n6rob @ arrl.net	<i>(408) 872-0815</i>
<i><u>Stanford</u></i>	<i>Kenneth Dueker, KB6BPM</i>	kdueker @ post.harvard.edu	<i>(650) 208-2580</i>
<i><u>Sunnyvale</u></i>	<i>Bob Gundrum, KG6MOL</i>	pafidt@rawbw.com	<i>(408) 734-0169</i>

Appendix B

Santa Clara County, California ARES/RACES

The County ARES/RACES Staff

<p>Larry Carr KE6AGJ KE6AGJ @ pacbell.net ARES District Emergency Coordinator RACES Chief Radio Officer Phone: (650) 941-2567 Cell: (650) 269-9638</p>	<p>John Amos, KC6TVM QAwhiz @ aol.net ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer, Hospital Emergency Communications Coordinator Phone: (408) 259-2409</p>
<p>Scott Morse KC6SKM KC6SKM@gmail.com ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer Phone (408) 985-5971 Cell (408) 799-4597</p>	<p>Scott Hensley KB6UOO fshensley @ sjcnet.com ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer, Technology Phone: (408) 218-4777 Pager: (408) 218-4777</p>
<p>Al Whaley, KV6U awscco @ sunnyside.com ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer Phone (H) (650) 947-6542</p>	<p>Andreas Ott, K6OTT k6ott @ arrl.net ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer, Cell: (408) 431-8727</p>
<p>Karrie Allen, KF6TCF KF6TCF @ yahoo.com ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Office Training Phone (H) (650) 207-9440</p>	<p>David Chamberlin, N6DWC dwc @ n6dwc.com ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer Phone (H) (650) 224-0989 Phone (W) (408) 519-9219</p>
<p>Steve Gore, KI6HFU KI6HFU @ arrl.net ARES Assistant District Emergency Coordinator RACES Deputy Chief Radio Officer Phone (H) (408) 260-8677</p>	

Appendix C

Silicon Valley Emergency Communications System Santa Clara County ARES/RACES Frequency List

This list is courtesy of Jim Oberhofer, KN6PE of Cupertino ARES Items in red have been added or changed since 03/26/08								
COUNTY								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
County	Message Net	W6TI	R	147.360	+	110.9		1-May-05
County	Message Net Alt 1	WB6OQS	R	146.760	-	151.4	A	1-May-05
County	Message Net Alt 2	K6FB	R	145.45	-	100.0		1-May-05
County	Link	WB6OQS	R	224.260	-	100.0		9-Sep-05
County	Command	WB6ZVW	R	442.500	+	100.0		1-May-05
County	Command Alt	WB6RNH	R	444.300	+	162.2	C	1-May-05
County	Command Net Alt. Resource Net Alt.	K6SNY	R	443.275	+	107.2		Jul-08
County	Resource, Primary	AA6BT	R	146.115	+	100.0	D	1-May-05
County	Resource, North	W6ASH	R	145.270	-	100.0	E	1-May-05
County	Resource, South	N6NAC	R	444.625	+	110.9		1-May-05
County	Resource, South Sanction Pending	KD6YYJ	R	145.210	-	123.0		1-May-05
County	Packet 220	Simplex	S	223.660				1-May-05
County	Packet 2M	Simplex	S	144.910				1-May-05
County	Packet 440	Simplex	S	433.530				Mar-06
County	Hospital Net	N6NFI	R	145.230	-	100.0	F	Jul-08
County	Hospital Net Packet	simplex	S	144.950				Jul-08

County	NTS	WR6ABD	R	146.640	-	162.2		1-May-05
RED CROSS SJ								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Red Cross SJ	Command	WB6OQS	R	146.760	-	151.4	A	1-May-05
Red Cross SJ	link	WB6OQS	R	224.260	-			1-May-05
Red Cross SJ	Command Alt	WB6OQS	R	444.600	+	141.3		1-May-05
Red Cross SJ	Talk Around	WB6RNH	R	444.300	+	162.2	C	1-May-05
CAMPBELL								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Campbell	Tactical	Simplex	S	146.565			U	Jul-08
Campbell	Packet 220	Simplex	S	223.660				Jul-08
Campbell	Packet 440	Simplex	S	433.530				Jul-08
CUPERTINO								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Cupertino	Tactical-1	Simplex	S	147.570		151.4	2	Jul-08
Cupertino	Tactical-2	Simplex	S	146.460		151.4		Jul-08
Cupertino	Tactical-3	W6TDM	R	440.150	+	100.0		Jul-08
Cupertino	ATV EOC Feed	Simplex	S	427.250				Jul-08
Cupertino	Packet 220	Simplex	S	223.660				Jul-08
GILROY								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Gilroy	Tactical	Simplex	S	144.450				Jul-08

LOMA PRIETA								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Loma Prieta	Tactical	AB6VS	R	440.550	+	94.8		Jul-08
Loma Prieta	Tactical	AE6KE	R	146.835	-	94.8		Jul-08
Loma Prieta	Packet 2M	Simplex	S	144.910				Jul-08
LOS ALTOS								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Los Altos	Command	W6ASH	R	145.270	-	100.0	E	Jul-08
Los Altos	Command Alt	W6ASH	R	440.800	+	100.0		Jul-08
Los Altos	Tactical 1	Simplex	S	146.595				Jul-08
Los Altos	Tactical Alt	KH6N	R	440.875	+	100.0		Jul-08
Los Altos	Tactical 2	Simplex	S	146.570				Jul-08
Los Altos	Packet 220	Simplex	S	223.660				Jul-08
LOS ALTOS HILLS								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Los Altos Hills	LAH Simplex	Simplex	S	147.435				Jul-08
Los Altos Hills	LAH Repeater	W6LAH	R	146.745	-	110.9		Jul-08
Los Altos Hills	Resource, North	W6ASH	R	145.270	-	100.0	E	Jul-08
Los Altos Hills	Packet 2M	Simplex	S	144.910				Jul-08
Los Altos Hills	Packet 220	Simplex	S	223.660				Jul-08
Los Altos Hills	Packet 440	Simplex	S	433.530				Jul-08

LOS GATOS								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Los Gatos	Command	W6PIY	R	147.390	+	151.4		Jul-08
Los Gatos	Tactical	Simplex	S	147.480				Jul-08
MILPITAS								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Milpitas	Primary	W6MLP	R	224.720	-	100.0	S	Jul-08
Milpitas	Primary	W6MLP	R	145.430	-	85.4	S	Jul-08
Milpitas	Secondary	Simplex	S	147.525				Jul-08
MORGAN HILL								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Morgan Hill	Tactical	Simplex	S	144.345				Jul-08
Morgan Hill	Packet 2M	Simplex	S	144.910				Jul-08
MOUNTAIN VIEW								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Mountain View	Resource North	W6ASH	R	145.270	-	100.0	E	Jul-08
Mountain View	Command	W6ASH	R	440.800	+	100.0		Jul-08
Mountain View	Tactical	Simplex	S	146.535				Jul-08
Mountain View	Tactical Alt	Simplex	S	146.415				Jul-08
Mountain View	Packet 220	Simplex	S	223.660				Jul-08

NASA-AMES								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
NASA-Ames	Tactical	Simplex	S	145.585				Jul-08
NASA-Ames	Tactical Alt 1	Simplex	S	145.710				Jul-08
NASA-Ames	Tactical Alt 2	Simplex	S	147.585			J	Jul-08
NASA-Ames	Event 1	Simplex	S	146.185				Jul-08
NASA-Ames	Event 2	Simplex	S	144.985				Jul-08
NASA-Ames	Command	NA6MF	R	145.250	-	123.0		Jul-08
NASA-Ames	Packet 220, Primary	Simplex	S	223.660				Jul-08
NASA-Ames	Packet 2M, Secondary	Simplex	S	144.910				Jul-08
PALO ALTO								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Palo Alto	Command	W6ASH	R	145.270	-	100.0	E	Jul-08
Palo Alto	Command Alt	N6NFI	R	145.230	-	100.0	F	Jul-08
Palo Alto	Tactical	Simplex	S	147.540			R	Jul-08
Palo Alto	Tactical	Simplex	S	147.480			1	Jul-08
Palo Alto	Tactical	Simplex	S	147.555			1	Jul-08
Palo Alto	Packet 220	Simplex	S	223.660				Jul-08
SAN JOSE								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
San Jose	Command	W6UU	R	146.985	-	114.8		Jul-08
San Jose	Tactical-1	Simplex	S	146.475		100.0		Jul-08
San Jose	Tactical-2	Simplex	S	146.430		100.0		Jul-08
San Jose	Tactical-3	Simplex	S	145.650		100.0		Jul-08
San Jose	Tactical-4	Simplex	S	147.540		100.0		Jul-08
San Jose	Packet 220	Simplex	S	223.660				Jul-08

SANTA CLARA								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Santa Clara	Tactical	Simplex	S	147.510				Jul-08
Santa Clara	Tactical Alt 1	Simplex	S	147.470				Jul-08
Santa Clara	Tactical Alt 2	Simplex	S	145.555				Jul-08
Santa Clara	ATV Broadcast	ATV	S	434.000				Jul-08
Santa Clara	Packet 220	Simplex	S	223.660				Jul-08
SARATOGA								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Saratoga	Command	K6SA	R	146.655	-	114.8		Jul-08
Saratoga	Tactical Alt	Simplex	S	146.505				Jul-08
Saratoga	Tactical Alt 2	Simplex	S	145.585				Jul-08
Saratoga	Tactical HF	USB	S	28.400				Jul-08
Saratoga	Packet 220	Simplex	S	223.660				Jul-08
SOUTH COUNTY								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
South County	SoCo InterCity	W6GGF	R	147.825	-	100.0		Jul-08
South County	Packet 2M	Simplex	S	144.910				Jul-08
TANFORD U								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Stanford U	Primary	N6BDE	R	440.200	+	123.0		Jul-08
Stanford U	Tactical-1	Simplex	S	146.490		123.0		Jul-08
Stanford U	Tactical-2	Simplex	S	144.325		123.0		Jul-08
Stanford U	Tactical	W6YX	R	1282.500	-	88.5	O	Jul-08
Stanford U	Tactical	WA6ITV	R	1292.550	-	88.5	P	Jul-08
Stanford U	Packet tcp/ip 1200	W6YX-9	S	145.750				Jul-08
Stanford U	Packet tcp/ip 9600	W6YX-10	S	433.430				Jul-08
Stanford U	Packet 220	Simplex	S	223.660				Jul-08

SUNNYVALE								
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL	Notes	Reviewed
Sunnyvale	Primary	K6GL	R	145.170	-	94.8		Jul-08
Sunnyvale	Tactical	Simplex	S	147.405				Jul-08
Sunnyvale	Tactical 2	Simplex	S	147.495				Jul-07
Sunnyvale	Tactical 3	Simplex	S	147.585			T	Jul-07
Sunnyvale	County Command Net Alt. Resource Net Alt.	K6SNY	R	443.275	+	107.2		Mar-08
Sunnyvale	Packet 2M	Simplex	S	144.910				Jul-08

APPENDIX D

FCC Rules: Subpart E—Providing Emergency Communications

§97.401

Operation during a disaster.

(a) When normal communication systems are overloaded, damaged or disrupted because a disaster has occurred, or is likely to occur, in an area where the amateur service is regulated by the FCC, an amateur station may make transmissions necessary to meet essential communication needs and facilitate relief actions.

(b) When normal communication systems are overloaded, damaged or disrupted because a natural disaster has occurred, or is likely to occur, in an area where the amateur service is not regulated by the FCC, a station assisting in meeting essential communication needs and facilitating relief actions may do so only in accord with ITU Resolution No. 640 (Geneva, 1979). The 80 m, 75 m, 40 m, 30 m, 20 m, 17 m, 15 m, 12 m, and 2 m bands may be used for these purposes.

(c) When a disaster disrupts normal communication systems in a particular area, the FCC may declare a temporary state of communication emergency. The declaration will set forth any special conditions and special rules to be observed by stations during the communication emergency. A request for a declaration of a temporary state of emergency should be directed to the EIC in the area concerned.

(d) A station in, or within 92.6 km of, Alaska may transmit emissions J3E and R3E on the channel at 5.1675 MHz for emergency communications. The channel must be shared with stations licensed in the Alaska-private fixed service. The transmitter power must not exceed 150 W.

§97.403 Safety of life and protection of property.

No provision of these rules prevents the use by an amateur station of any means of radio communication at its disposal to provide essential communication needs in connection with the immediate safety of human life and immediate protection of property when normal communication systems are not available.

§97.405 Station in distress.

(a) No provision of these rules prevents the use by an amateur station in distress of any means at its disposal to attract attention, make known its condition and location, and obtain assistance.

(b) No provision of these rules prevents the use by a station, in the exceptional circumstances described in paragraph (a), of any means of radio communications at its disposal to assist a station in distress.

§97.407 Radio amateur civil emergency service.

(a) No station may transmit in RACES unless it is an FCC-licensed primary, club, or military recreation station and it is certified by a civil defense organization as registered with that organization, or it is an FCC-licensed RACES station. No person may be the control operator of a RACES station, or may be the control operator of an amateur station transmitting in RACES unless that person holds a FCC-issued amateur operator license and is certified by a civil defense organization as enrolled in that organization.

(b) The frequency bands and segments and emissions authorized to the control operator are available to stations transmitting communications in RACES on a shared basis with the amateur service. In the event of an emergency which necessitates the invoking of the President's War Emergency Powers under the provisions of

§706 of the Communications Act of 1934, as amended, 47 U.S.C. §606, RACES stations and amateur stations participating in RACES may only transmit on the following frequencies:

(1) The 1800-1825 kHz, 1975-2000 kHz, 3.50-3.55 MHz, 3.93-3.98 MHz, 3.984-4.000 MHz, 7.079-7.125 MHz, 7.245-7.255 MHz, 10.10-10.15 MHz, 14.047-14.053 MHz, 14.22-14.23 MHz, 14.331-14.350 MHz, 21.047-21.053 MHz, 21.228-21.267 MHz, 28.55-28.75 MHz, 29.237-29.273 MHz, 29.45-29.65 MHz, 50.35-50.75 MHz, 52-54 MHz, 144.50-145.71 MHz, 146-148 MHz, 2390-2450 MHz segments;

(2) The 1.25 m, 70 cm and 23 cm bands; and

(3) The channels at 3.997 MHz and 53.30 MHz may be used in emergency areas when required to make initial contact with a military unit and for communications with military stations on matters requiring coordination.

(c) A RACES station may only communicate with:

(1) Another RACES station;

(2) An amateur station registered with a civil defense organization;

(3) A United States Government station authorized by the responsible agency to communicate with RACES stations;

(4) A station in a service regulated by the FCC whenever such communication is authorized by the FCC.

(d) An amateur station registered with a civil defense organization may only communicate with:

(1) A RACES station licensed to the civil defense organization with which the amateur station is registered;

(2) The following stations upon authorization of the responsible civil defense official for the organization with which the amateur station is registered:

(i) A RACES station licensed to another civil defense organization;

(ii) An amateur station registered with the same or another civil defense organization;

(iii) A United States Government station authorized by the responsible agency to communicate with RACES stations; and

(iv) A station in a service regulated by the FCC whenever such communication is authorized by the FCC.

(e) All communications transmitted in RACES must be specifically authorized by the civil defense organization for the area served. Only civil defense communications of the following types may be transmitted:

(1) Messages concerning impending or actual conditions jeopardizing the public safety, or affecting the national defense or security during periods of local, regional, or national civil emergencies;

(2) Messages directly concerning the immediate safety of life of individuals, the immediate protection of property, maintenance of law and order, alleviation of human suffering and need, and the combating of armed attack or sabotage;

(3) Messages directly concerning the accumulation and dissemination of public information or instructions to the civilian population essential to the activities of the civil defense organization or other authorized governmental or relief agencies; and

(4) Communications for RACES training drills and tests necessary to ensure the establishment and maintenance of orderly and efficient operation of the RACES as ordered by the responsible civil defense organizations served. Such drills and tests may not exceed a total time of 1 hour per week. With the approval of the chief officer for emergency planning in the applicable State, Commonwealth, District or territory, however, such tests and drills may be conducted for a period not to exceed 72 hours no more than twice in any calendar year.

Appendix E

SOME POSSIBLE TYPES OF ASSIGNMENTS

Shadow Duty

A Shadow is an amateur radio operator that is providing a communications channel between the person he or she is “shadowing” and other stations on the net. You have two duties here — one is to stick like glue to the person you’re shadowing without getting in their way. The second duty is to be prepared to communicate successfully from any place that your assignment might travel. You need to ensure that you have the proper equipment to communicate on behalf of your shadow. As you take the assignment make sure that you ask Resource NCS about any special equipment you might need. Quite often a shadow will have to talk from a moving vehicle as well as be able to move around in the field with the VIP. If this is the case then appropriate equipment would include a several watt HT with alkaline batteries, as well as a mag-mount that can be placed on the exterior of the vehicle. If the official is expected to travel into very remote areas then a mobile 2m rig with 10- 25 watts is also appropriate. Powering the larger 2m mobile rig can be tricky so you might also have to provide a 12 to 24 Amp-hour gel-cell if the vehicle doesn’t have a cigarette lighter where you might obtain power. The last consideration and perhaps the most substantial is whether you have the appropriate training for the shadow assignment. Inquire with the Resource NCS as you take the assignment about such special circumstances. You should also make the VIP you are shadowing aware of your level of training so that you aren’t exposed to dangerous situations. An example might be shadowing the Incident Commander of a wildlands fire into the field. You should take this type of assignment only if you have had a formal fire line safety class.

Duties of the Net Control Station (NCS)

The main duty of the NCS is to insure the ARES/RACES nets are ran in an orderly fashion, to help eliminate confusion on communication networks, provide information regarding the disaster to ARES/RACES member stations and to coordinate the flow of traffic as required. All traffic shall be written in a message format as deemed fitting by the served agency or department. See Appendix ___ for a sample of this message format. All messages must carry the name of the person originating the message and their ICS Position or office. (Example: John Smith, Logistics manager)
Message precedence as defined by Santa Clara County will be used.

SITUATION SEVERITY

EMERGENCY (E) - Any message dealing with life and/or death urgency

URGENT (U) - Any message dealing with a treat of property only

OTHER (O) – all other messages

ROUTINE (R) - Any message not meeting the above criteria or any message of a routine (day to day) type nature.

MESSAGE HANDLING ORDER

IMMEDIATE- Handle this as soon as possible – without delay

PRIORITY—Handle this message in less than one hour

ROUTINE-- Handle this after the others

The NCS is responsible for taking check-ins as needed to meet the needs of the disaster operation and/or ARES/RACES activation requirements. Traffic listed shall be categorized by precedence and moved as soon as possible, with Emergency and Urgent traffic taking top precedence.

Participating stations should be instructed by the Net Control Station NOT TO TRANSMIT unless asked or if they have information that is of urgent importance for the net (emergency or urgent traffic from other nets or agencies, urgent announcements, etc.).

The phrase "BREAK" will only be used in an emergency. NCS will recognize emergency traffic immediately and handle the emergency traffic.

The NCS shall keep a log of the net and member check-ins. This log will be provided to the supervisor as soon as possible following the emergency closure.

Before starting an ARES/RACES net, make sure someone records a list of participating ARES/RACES member stations who are available for deployment and/or assignment. Preferably, this should be performed by the Shift Supervisor.

Net Control Stations (NCS) may use any preamble and net procedure(s) that appropriately meet the needs of the emergency.

If you are going to be the Net Control Station you will need

1. A 10 Watt (min) base radio.
2. A portable antenna such as a 2m J-pole with mount.
3. A battery with enough capacity to last your shift.
4. Table, chair, and writing implements.
5. Minimum ARES/RACES Equipment List items.

If you are on foot

1. An HT with at least a 1 Watt output level.
2. A hot-rod style gain antenna for the HT.
3. Minimum ARES Equipment list items.

If you are mobile in a car

1. An HT with at least a 3 Watt output level or a mobile rig.
2. A mag-mount or other antenna mounted on the exterior of the vehicle.
3. Minimum ARES Equipment list items.

PRINCIPLES OF AMATEUR RADIO NET CONTROL

By Jerry Haag, KF6GAC, EC Mountain View

Types of Net

<u>Open Net</u>	Stations call each other directly to pass traffic
<u>Directed Net</u>	Stations call only net control directly, go direct only with net control permission

Net Control...

- must have a commanding signal
- is in charge of the net
- activates and assigns resources
- must keep track of resources
- assigns tactical calls
- keeps a good log
- has a clear speaking voice
- controls his or her tone of voice
- has good command of the English language
- can handle physical and mental stress for long periods
- can listen and respond in a noisy/chaotic environment
- has good hearing
- writes legibly
- enforces net discipline
- uses tactical calls
- uses plain English - no "10" codes or "Q" signals
- uses standard phonetics
- performs welfare checks
- thinks before keying
- is as concise as possible
- knows how to operate the radio
- frequently identifies name and reason for the net
- transmits only facts, not conjecture
- takes frequent breaks
- when transmitting, key up, take a breath, then talk

Red Cross Operations

Amateurs have a long tradition of helping the Red Cross with their communications needs. In keeping with that tradition the ARRL formalized the relationship between the two organizations by signing a Memorandum of Understanding with Red Cross. In providing communications for Red Cross you are most likely to operate either at a shelter, or at the Red Cross chapter headquarters. There is a different set of considerations for each of these assignments. When operating at a shelter site be aware of what are appropriate communications for amateur frequencies. Any message dealing with logistical or Health and Welfare is appropriate for amateur channels. Keep in mind that amateur frequencies are often monitored by news agencies. Traffic of a sensitive nature should be handled by a more secure communications medium such as the telephone. Equipment requirements for shelter duty may vary depending on whether the net is operating on a repeater or a simplex frequency. You should be prepared to bring:

Red Cross Net on a Repeater

1. ARES Minimum Equipment List.
2. Hot-rod style gain antenna for the handheld.
3. Lots of blank message forms.

Red Cross Net on Simplex

1. ARES minimum equipment list.
2. Base or mobile radio with a 10 to 25 watt output.
3. Portable antenna, such as a J-pole.
4. Lots of blank message forms.

Meals are usually provided at Red Cross shelter sites, so bringing your own food is usually not necessary. When reporting for duty at the shelter, inform the shelter manager or amateur radio site supervisor of your level of training. This is to prevent being assigned a task for which you may not be qualified. If you encounter any medical situations make sure that you notify the appropriate personnel instead of trying to deal with it yourself. Again, your primary responsibility is communications.

Red Cross Shadow, or other VIP shadow

Shadow duty for the Red Cross will usually involve either providing communications for a Red Cross official, or acting as a radio operator for a Red Cross mobile unit such as a mass feeding station. You will probably need both a mobile AND a handheld radio when shadowing a Red Cross official. If you are providing radio capability for a mobile unit a mobile radio system should be adequate. When using a mobile amateur radio in a Red Cross vehicle remember that a 12 Volt source may not be available, and you may need to supply your own power source such as a gel-cell battery. Mobile unit duty is also likely to be a longer than average shift since you will be operating on the vehicle's shift assignment. It is conceivable to work as long as eight to ten hours on one of these assignments

Duty at an Emergency Operating Center (EOC)

The government operates from an Emergency Operations Center (EOC) during an emergency, staffing the EOC with senior government officials to help administrate the event from one location. EOC's operate according to Incident Command System Guidelines and Procedures (National defined). In simplest form, messages to titles at identified positions, with date, time and degree of urgency notes. Other details about ICS are available from every city manager.

The EOC may be in a governmental building, at a police or fire department or other location. Amateur radio resources may also be operated from this location, and an Emergency Coordinator or other ARES/RACES official may operate from here. As an emergency responder you may be asked to be a Net Control Station, a messenger, or a channel monitor. The Net Control Station may be handling one of the nets originating from the EOC. Messengers move traffic between Red Cross or other officials and the EOC, or as spare hands as needed during the shift. The channel monitor position listens to public service frequencies to keep officials informed on the status of the incident. The Net Control Station should utilize a fairly experienced operator. Special training should be taken before attempting this position during a major event. The best background for someone filling a Messenger's position is a good knowledge of traffic handling. You can expect to take messages that are destined to go out via radio, and to deliver messages that have arrived from the radio circuit. It is also your responsibility to put any originating messages into proper format before they are sent. For more information, review the section on traffic handling earlier in this handbook. A channel monitor listens to a public service frequency on behalf of the DEC/Shift Supervisor. You can expect to be briefed on the type of information to monitor as you start your shift. Generally anything that will help officials keep abreast of the event as it develops is of interest.

Equipment at the EOC

There generally isn't any required equipment other than perhaps a handheld that might be used on a local intercom frequency. The EOC will normally be equipped fairly early in the event and the equipment can be expected to stay in place for the duration of the event.

MCIP Operations (Santa Clara County)

The Multiple Casualty Incident Plan (MCIP) has been developed in Santa Clara County to deal with medical emergencies where there are many casualties. Management of such an event is expected to require multiple jurisdictions and mutual aid operations. Amateur Radio is a method used within the plan to allow responding agencies to communicate with each other. There are three primary nets that will be used during an MCIP event. These are our standard Resource net, a Hospital Tactical Net, and an on-scene Tactical Net.

A Resource Net is established to begin the process of gathering amateur operators and equipment for response to the MCIP staging area. Under the MCIP plan the Resource net automatically has a set of amateur radio positions to be staffed. This will include sending two amateur radio operators to each of the area hospitals and a number of well equipped operators to respond to the MCIP staging area. A NCS will also be required for the Hospital Net. This position can be staffed by any qualified amateur and operated from any convenient location. The Hospital Nets will coordinate information flow between the incident and the area hospitals. As stated previously the MCIP calls for two member teams to staff each of the area hospitals. The first member of the team will operate a radio on the Hospital net while the second member of the team should position themselves near the emergency room. Locate the

hospital net radio wherever the antenna drop is located. The second team member should notify the head of the Emergency Room that he is present and to what services can be provided, and ask where he may be located to provide communications in a place out of traffic. Both members of this team should choose a convenient intercom frequency that they can use within the hospital. It is suggested that 220, or 440 MHz is a good choice for this intercom channel.

Safety as an ARES/RACES Emergency Responder

Within this manual we've stressed the importance of taking your safety as your own responsibility. There are several aspects to conducting yourself in a safe manner. The first step you can take is to be adequately trained. One way to extend your training is to take classes offered by other agencies. The Red Cross and others offers classes in First Aid, CPR, etc. throughout most of the year. Any of these classes will enhance your own safety because you'll be more aware of how to take care of yourself. CDF, through the VIP program offers an extensive training program in basic fire line safety. This training includes basic first aid, familiarity with how to equip yourself, what situations to watch out for during a fire, etc. This helps to improve your situational awareness as well as to be knowledgeable about what constitutes a dangerous situation. With all this training it is still important to remember that you should only wear one hat during an ARES/RACES operation. You are there as a communicator, not a first aid provider, or a firefighter. This will help avoid confusion about your role, and will prevent you from putting yourself into unsafe situations.

Safety is just as important at home. You should ensure that all is well at home before responding to an emergency. This allows you to keep your mind on the situation instead of worrying. As you're working an emergency, you need to keep yourself aware of what is occurring around you. This is the only way you can expect to see a dangerous situation before it surrounds you! Keep your eyes open and your brain on full alert! Stay situationally aware.

Appendix F

General phraseology training and examples.

What to say and how to say it on a controlled net. “TALKING ON A NET”

PLEASE REMEMBER THAT WHEN YOU ARE PASSING MESSAGE TRAFFIC SOME ONE ON THE OTHER END MUST WRITE IT DOWN EXACTLY AS YOU GIVE IT. SPEAK SLOWLY AND PAUSE ABOUT EVERY 5 WORDS TO INSURE THE RECEIVING STATION IS COPYING YOUR MESSAGE EXACTLY. WHEN YOU ARE FINISHED WITH THE MESSAGE SAY END OF MESSAGE AND THEN BE QUIET. THE RECEIVING STATION WILL FINISH WRITING THE MESSAGE DOWN AND THEN WILL READ IT BACK TO YOU TO INSURE IT WAS COPIED EXACTLY AS SENT.

Identifiers and conversation

Use your tactical call sign during conversation to conserve air time and to make things easier. Please remember to keep call signs and other qualifiers out from your identifiers. Net control will be known simply as “Control”. A shelter may be known by their one-word name, for example “Meyer Shelter” rather than “Fred J. Meyer Junior High School shelter”

Always call by saying the identifier of the station you are calling first, then your identifier. So, for example, if you are Meyer Shelter calling control you would say simply “Control, Meyer Shelter”. If you are Net Control and you want to call Meyer Shelter you would say “Meyer Shelter, Control”.

Answering: For all of you in the field, you should answer calls with just your tactical call sign. For example, if Control calls Meyer Shelter, Meyer Shelter should answer by saying simply “Meyer Shelter”. Note that excess baggage like “this is”, or “go ahead” are not really needed (although these two examples are short enough that they are not really a problem). But please try to avoid long strings like: “This is Meyer Shelter, go ahead Net Control” (11 syllables!). Short and sweet should be the rule!

Control answers calls the opposite way. Control always answers with the other station’s identifier. For example, if Meyer Shelter calls Control, Control, answers by saying “Meyer Shelter”, *not* “Control”. Why? Because there is only *one* Control running the net, so answering with the identifier “Control” does not add much useful information. More importantly, Control needs to specify which mobile is being acknowledged. There may be more than one mobile unit trying to call Control at the same time, so if Control were to answer with just “Control” or “Go ahead” then all the stations who were trying to call would think that Net Control is talking to them. So Control answers with the *mobile’s* identifier, which indicates clearly which mobile is being invited to talk. This is common practice these days in public safety nets, and it is becoming more common in ham nets as well.

Acknowledging The plain text radio acknowledgement to indicate that you have heard and understood is the word “copy”. For example if you are Meyer Shelter and you are

acknowledging that you have heard and understood, you should say simply “*Meyer Shelter copies*”. If you didn’t understand, just say “*Meyer Shelter repeat*”. You don’t need to give a long explanation like “Net Control this is Meyer Shelter, I’m sorry, I wasn’t able to get your last transmission, I’m getting a lot of background noise here, could you repeat please?” (36 syllables)

Location If Control asks for your ‘location’, you are probably being asked just to provide your general whereabouts so that Control can decide whether you are in position to be dispatched to an event. So you should give your general whereabouts without taking time to try to pinpoint your exact location. For example you might answer, “Metcalf Canyon” or “Uvas Lake area” or perhaps “Monterey near Bailey”. Your answer should make reference to major roads or landmarks that are likely to be recognized by Control. If you answer giving an intersection of two tiny streets, then Control will probably not recognize them and will probably have to follow up with “Okay, and approximately where is that on the route?” If Control asks for your “exact location”, then Control is probably trying to help someone meet up with you. In this case go ahead and describe your location as precisely as you can.

Giving information Think before keying the mike, then say the fewest number of syllables that will get the information across. The biggest problem with many ham operational nets is verbosity of transmission. Verbosity is great on ragchew nets, because that is what you are there for. But on an operations net it should be pruned as much as possible. . For example, if you want to take a restroom break, just say “I’ll be off the air for 5 minutes”. This is better than giving a lengthy discourse about how long it’s been since you had been to a restroom and so on. Another good example would be for a rest stop operator to say “The Meyers Shelter is asking for more cots if they are available” rather than a long explanation about how many cots they have now and how there has just been a flood of new arrivals in the past few minutes. Always make it short, and transfer only the information that the other station needs to be able to fulfill the request.

Ham Radio Jargon Let’s leave as much of this as possible out altogether. Q signals such as QSL, QSY, etc, are bad news for operational nets. Say “copy”, “switching to tactical”, “location”, “clear”, “off the air” and so on. The same restriction applies to use of 10 codes, but I probably don’t have to mention that, because most hams stay away from these anyway.

Amateur Call Signs

We are all proud of our calls, and when we are working the bands we let our call signs announce to the world who we are. However, for net communications your call sign serves no purpose other than to meet your legal requirement to identify. So please don’t clutter the net with 10 or 15 syllables of call sign as part of your identifier or at the end of every transmission. If you are pretty sure that you are finished talking for a while, then give your call sign at the end. But if you think from the context of the conversation that you will likely be talking again in just a few minutes, then leave your call out for now, and give it later when you are done. It doesn’t matter if you miss your opportunity to identify and Control starts talking with someone else. You can just wait for a lull in traffic and just say “K6AAA ID”. Everyone will know that you are just IDing because you didn’t get an opportunity to do so before.

Breaking in to a conversation vs. the term “Break”

“Break” when said by Control during a transmission means “I’m still continuing to talk, but I am switching the station that I am talking to, so everyone please listen up to hear if I am now calling you.” If you want to break into a conversation just interject during the repeater pause with your identifier, “Maybury Rd IC”. For an emergency break, “Emergency Traffic” is the shortest way to get the point across.

Being conversational? I hope we haven’t scared you into agonizing all day about whether you might utter a non-critical syllable. That’s not our intention, and we don’t want you to worry much about it. We are perfectly fine with the net being conversational and occasionally wordy because there will be things we have to say and explain to each other. So have fun and say whatever you need to say, and no one is going to be counting the syllables. I just wanted to make some suggestions for things we can all consider before we talk so that we will make a reasonable effort to standardize some of the things and not blab a great deal more than needed.

Hypothetical Example

So to conclude, here is a hypothetical few minutes on the air using these principles. I know, it never turns out to be as clean as we would like it. Let’s try to get into a nice rhythm of short transmissions without clutter.

Control: Meyer Shelter, Control, new message

Meyer Shelter: Meyer Shelter, ready to copy (he adds ready to copy because it’s for a new message)

Control: New message, It’s a request to find out if the Red Cross ERV has been there yet?

Meyer Shelter: Meyer Shelter copies message, I’ll research and advise (He doesn’t ID because he knows that he will be talking again in a couple minutes.)

(some silence)

Los Gatos Mobile one: Control, Los Gatos Mobile one

Control Los Gatos Mobile one

Los Gatos Mobile one: We’re transporting a male from the community center to Meyers Shelter. He’s not injured just needs transportation.

Control: Copy, transporting one to Meyers shelter, advise when clear.

Los Gatos Mobile one: Los Gatos Mobile one copies will advise when KF6AAA (Los Gatos Mobile one IDs because he knows that he is finished talking).

Control: Red Cross one, Control, your location?

Red Cross one: Red Cross one, I’m in Metcalf canyon.

Control: Red Cross one Disregard. Break. Gilroy Mobil, your location? (Notice that Red Cross one did not get a chance to ID, no problem, he just waits.)

Gilroy Mobil: Gilroy mobile on Monterey, at about, um, Cochran. (He may not know the exact tiny cross street, but he was at Cochran a few minutes ago)

Control: Okay, Gilroy mobile, Can you pick up w6you at Santa Teresa and Bailey. I think he needs a ride to the Gilroy EOC

Gilroy Mobile: Gilroy Mobile copies, enroute to Santa Teresa and Bailey, N6YYY.

(a bit of silence)

RedCross one: KA6YYY, ID. (He's just IDing now because he didn't get a chance to ID earlier. Notice that he added "ID" so Control doesn't think he is trying to call in with something.)

Meyer Shelter: Control, Meyer Shelter

Control: Meyer Shelter

Meyer Shelter: Red Cross ERV just arrived here at Meyer Shelter.

Control: Copy, thank you, I'll close the message . N6DRB, Resource Net Control.
(Control IDs because it has been about 10 minutes since Control's last ID.

Meyer Shelter: Meyer Shelter, WB6UUU

Appendix G



Appendix H

**CITY HALL LOCATIONS FOR ALL CITIES IN
SANTA CLARA COUNTY (version dated 51005, 1010 hrs)
PLUS REFERENCE LOCATIONS FOR OTHER JURISDICTIONS**

SANTA CLARA COUNTY ARES/RACES

Note: lower case map locations are a-upper left, b-upper right, c-lower left, d-lower right

CITY	ADDRESS	Thomas Bros Map Page
Campbell	70 N. First St, Campbell, CA 37 17 18.31 N 121 56 38.60 W	853E6a
Cupertino	10300 Torre Ave, Cupertino, CA 37 19 08.14 N 122 01 43.55 W	852E1c
Gilroy	7351 Rosanna St, Gilroy, CA 37 00 14.40 N 121 34 16.73 W	978A3c
Los Altos	1 N. San Antonio Rd, Los Altos, CA 37 22 57.26 N 122 06 48.83 W	811E6c
Los Altos Hills	26379 Fremont Rd, Los Altos Hills, CA 37 23 00.62 N 122 08 21.01	811B6a
Los Gatos	18041 Saratoga Ave, Los Gatos, CA 37 13 57.40 N 121 09 59.46 W	872J6d
Milpitas	455 E. Calaveras Blvd, Milpitas, CA 37 25 58.38 N 121 53 56.61 W	794B7a
Morgan Hill	17555 Peak Ave, Morgan Hill, CA 37 07 28.60 N 121 39 42.40 W	936J1a
Mountain View	500 Castro Street, Mountain View, CA 37 23 23.50 N 122 04 56.55 W	811H5d
NASA Ames		812A3b
Palo Alto	250 Hamilton Ave, Palo Alto, CA 37 26 39.76 N 122 09 35.54 W	790J4c
Palo Alto Red Cross	Mitchell Lane, Palo Alto, CA 37 26 36.42 N 122 09 58.63 W	790H5b
San Jose	801 N. First St, San Jose, CA 37 21 04.15 N 121 54 11.01 W	834A4a
San Jose Red Cross	2731 N. First, San Jose, CA 37 23 24.98 N 121 55 55.67 W	813G5c
Santa Clara	1500 Warburton Ave, Santa Clara, CA 37 21 18.52 N 121 57 17.05 W	833D3d
Saratoga	13777 Fruitvale Ave, Saratoga, CA 37 16 02.56 N 122 00 53.57 W	872F1d
SCCo OES	55 W. Younger, San Jose, CA 834A3c 37 21 18.34 N 121 54 21.38 W	
SCV Water District,	5750 Almaden Expressway, San Jose, CA	874D4b
Stanford University	711 Serra, Stanford, CA 37 25 39.24 N 122 09 29.72 W	790J7b
Sunnyvale	456 W. Olive St, Sunnyvale, CA 37 22 12.60 N 122 02 19.48	832D1b

ICS 214 SCCo RACES UNIT LOG / Net Control Log		1. INCIDENT NAME	2. ACTIVATION NUM	3. DATE/TIME PREPARED
4. UNIT NAME/RADIO NET NAME		5. PREPARED BY (Name, Call sign, and Position)		6. pg ____ of ____ Version Date 1/20/07

ACTIVITY LOG

7. TIME	8. SOURCE/DESTINATION	9. MSG NUM	10. MAJOR EVENTS (If Message, record SCCo Message Number)

ICS 214 SCCo Races Unit Log / Net Control Log

Item #	Item Title	Instructions
1	Incident Name	Enter the name assigned to the incident
2	Activation Number	Enter the Activation Number
3	Date/Time Prepared	Enter the date and time prepared (24 hour clock)
4	Unit Name/Radio Net Name	Enter the unit name and Radio Net Name
5	Prepared By	Enter name, Call Sign, of the person completing the log
6	Page _____ of _____	Enter page number when done
7	Time	Enter time message is sent or received
8	Source/Destination	Enter the Source of the message (who sent it) or the destination (where it was sent)
9	Major Events	Comments or Notes

Turn in to your Supervisor at the end of shift.

<h1 style="margin: 0;">MESSAGE FORM</h1> <p style="margin: 0;">▶ Use Ballpoint Pen—Press Hard; Print Clearly (See back for instructions)</p>		When Receiving ² Msg.: Sender's msg. #	Msg. #	When Sending Msg. ³ Receiver's msg. #
Date: (MM/DD/YY) ¹ ____/____/____	Situation Severity (✓one) ⁴ <input type="checkbox"/> EMERGENCY (e.g., Life Threat) <input type="checkbox"/> URGENT (e.g., Property Threat) <input type="checkbox"/> OTHER (All others)	Msg. Handling Order (✓one) ⁵ <input type="checkbox"/> IMMEDIATE (As Soon as Possible) <input type="checkbox"/> PRIORITY (Less Than One Hour) <input type="checkbox"/> ROUTINE (More Than One Hour)	Message Requests You To: ⁶ TAKE ACTION (✓one) <input type="checkbox"/> Yes <input type="checkbox"/> No REPLY (✓one) <input type="checkbox"/> Yes, by _____ <input type="checkbox"/> No <input type="checkbox"/> FOR YOUR INFO. (no action required)	
Time: (24 hour clock) _____ <small>0001 to 2400 2:00 PM = (12+2) = 1400 Hrs</small>				
To:	ICS Position: (required) ⁷ _____ Location: (required) ⁹ _____ Name: (optional) _____ Telephone #: (optional) _____	From:	ICS Position: (required) ⁸ _____ Location: (required) ⁹ _____ Name: (optional) _____ Telephone #: (optional) _____	
SUBJECT: ¹⁰ _____ REFERENCE (e.g., Number of earlier msg.): ¹¹ _____ Message: ¹² (what, when, where needed; how long; contact name and phone number) KEEP MSG BRIEF _____ _____ _____ _____ _____ _____				
ACTION TAKEN: ¹³ (For use by Originator / Recipient) ▶ USE SEPARATE MESSAGE FORM IF SENDING REPLY!				
CC: <input type="checkbox"/> Management <input type="checkbox"/> Operations <input type="checkbox"/> Planning <input type="checkbox"/> Logistics <input type="checkbox"/> Finance				
Operator Use Only: ¹⁴				
How Received <input type="checkbox"/> or Sent <input type="checkbox"/> (✓one)		Operator Call Sign:		
<input type="checkbox"/> Telephone <input type="checkbox"/> Dispatch Center		Operator Name:		
<input type="checkbox"/> EOC Radio <input type="checkbox"/> FAX <input type="checkbox"/> Courier		Date:		
<input type="checkbox"/> Amateur Radio <input type="checkbox"/> Other _____		Time:		

INSTRUCTIONS FOR USING THE MESSAGE FORM

1. **Date and Time:** When receiving or sending any message, complete the date and time (in the format shown) in the top upper left of the form.
2. **When Receiving Message:** note the sending organization's message number in the box labeled "When Receiving Msg.", located to the left of the Msg. # at the top right of the message form. (*Normally entered by radio operator*)
3. **When Sending Message:** obtain the receiving organization's message number, and record this in the "When Sending Msg." box located to the right of the Msg. # at the top right of the message form. (*Normally entered by radio operator*)
4. **Situation Severity:** indicate the Severity of the message - For example, is it a life threat, a property threat, or just information?
5. **Message Handling Order:** indicate the handling order of the message, (Immediate: As Soon As Possible; Priority: Less than an Hour; Routine: More Than an Hour).
6. **Message Requests You To:** state what the message type is - for example: is the sender expecting the county OES to "Take Action", to "Reply", or "For Your Information".
7. **TO: ICS Position:** state the ICS position to which the message is to be delivered. This will generally be *Command*, or one of the Section Chiefs (e.g., *Operations, Planning, Logistics, Finance/Admin.*). If unsure, address the message to *Planning*.
8. **From: ICS Position:** indicate what ICS position is sending the message - you also can note a name, but an ICS position is needed since the person staffing the position may change.
9. **Locations:** enter the location of the addressee in the "To" box and the location of the sender in the "From" box (for example, To: Mountain View EOC, From: Santa Clara County EOC).
10. **Subject:** Note the subject of the message (e.g., Request for Type 5 Engine Strike Team).
11. **Reference:** If the message is a response to an earlier message, indicate the original message number if available.
12. **Message:** If the message is a request for support, supply detailed instructions about what, when, how long needed and where the support is to be delivered, contact person and phone number. Be as brief as possible.
13. **Action Taken:** This section is for use of the message originator or recipient to record pertinent information regarding action taken in response to the message. (e.g., "Request for Type 5 Engine Strike Team passed to Region on OASIS Net."). Space is also provided to indicate copy to other ICS positions that may need the information.
14. **Operator Use:** The person who handled the message is to record the net used in the area at the bottom of the message form and records the name and call sign in the appropriate box. If the message is being sent, the date and time that the message actually was sent is to be noted in the relevant box.
15. **Forms Disposition:** Once the message is complete, copies of the message are distributed according to the script shown. If the message is an **EMERGENCY** message, it should be placed in the hands of the shift supervisor. For other messages, it is permissible to place the message in the appropriate message box slot.

Conclusion

In this manual we have attempted to cover the basic requirements of being an emergency responder and how to go about that task. Just like any other endeavor the basic skills you need to develop require time and practice. Hopefully, the data presented here will help you in that

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This work is based on the *Amateur Radio Emergency Communications Manual* and the input and assistance of many Many HAMS in the Santa Clara Valley, Thank you all for you input and efforts.

**Santa Clara County ARES/RACES/ACS  
Spontaneous Volunteer Questionnaire (version 62205)**

This questionnaire is to find out your level of skills and experience. There is no "pass/fail" grade, only an attempt to get to know you so we can use your skills in the most effective way.

Name (print) \_\_\_\_\_ Call \_\_\_\_\_

Address \_\_\_\_\_

City/ZIP \_\_\_\_\_

**Phone** \_\_\_\_\_ **Cell** \_\_\_\_\_ **Pager** \_\_\_\_\_

Do you have transportation to get to a remote assignment? \_\_\_\_\_

Drivers License # \_\_\_\_\_ Expires \_\_\_\_\_

Do you have liability insurance for your vehicle? \_\_\_\_\_

Are you registered as a Disaster Service Worker? If so, what jurisdiction? What function?

\_\_\_\_\_

Amateur radio license level: Tech \_\_\_\_\_ General \_\_\_\_\_ Extra \_\_\_\_\_

How long have you been licensed? \_\_\_\_\_ years. Code speed \_\_\_\_\_ wpm

Have you ever participated in a radio net? Net control experience? \_\_\_\_\_

\_\_\_\_\_

Are you a member of any amateur radio or emergency organizations (RACES,

Volunteers in Policing, etc.)? \_\_\_\_\_

What formal emergency communications training have you had? \_\_\_\_\_

\_\_\_\_\_

Have you ever participated in an emergency drill? In what role? \_\_\_\_\_

\_\_\_\_\_

Have you ever participated in a real disaster incident (fire, earthquake, etc.)? How?

\_\_\_\_\_

**Spontaneous Volunteer Questionnaire (continued)**

Are you familiar with Windows-based computers? If so, what programs?

MS Word \_\_\_ Exel \_\_\_ Power point \_\_\_\_\_ Packet radio \_\_\_ which ones \_\_\_\_\_  
Other \_\_\_\_\_

What radio equipment do you have with you right now (on your person or in your car)? \_\_\_\_\_  
\_\_\_\_\_

What personal protective equipment do you have with you? \_\_\_\_\_  
\_\_\_\_\_

Do you have a change of clothing, toiletries, etc., that would allow you to work for more than one shift without going home? \_\_\_\_\_

If given four hours to prepare, what equipment, etc, will you have available? \_\_\_  
\_\_\_\_\_

Do you have any particular handicap or dislikes that might affect your ability to work in a disaster environment? (fear of heights, fire, sight of blood, Lifting, walking climbing , sitting restrictions, etc.)  
\_\_\_\_\_

What kinds of things would you like to do as an emergency communicator? Mobile field work, \_\_\_ working in a shelter \_\_\_ running a net \_\_\_\_\_ other \_\_\_\_\_ As needed I can do it all \_\_\_\_\_

Do you have any medical or health conditions we should be aware of ? \_\_\_\_\_ if yes please explain \_\_\_\_\_

What is your availability? Which days are you available and during what hours?

| Hours    | Sun | Mon | Tue | Wed | Thur | Fri | Sat |
|----------|-----|-----|-----|-----|------|-----|-----|
| 8a-4p    |     |     |     |     |      |     |     |
| 4p-mid   |     |     |     |     |      |     |     |
| Mid – 8a |     |     |     |     |      |     |     |

Other \_\_\_\_\_

ACKNOWLEDGEMENT: I have read this quick trainer, and have been given an opportunity to review it and ask questions. I agree to the rules and procedures found in this document.

Date:

Signed: