

Coast Unit – Sonoma County

Auxiliary Communications Service

INSTANT TRAINER

Oct. 2008 DRAFT

NOTE:

THIS A DRAFT THAT IS IN PROGRESS.

**NOT ALL THE APPENDICES ARE DEVELOPED YET ... BUT THERE IS A LOT OF
HANDY INFORMATION INCLUDED. COMMENTS ARE WELCOME.**

73

FRED W6WTI

To the Sonoma County Coastal Amateur Radio Operator:

Emergency communications is a specialty within Amateur Radio. Success depends on becoming acquainted with new skills, techniques, equipment, and your fellow operators. Success absolutely requires practice. This “Instant Trainer” has been prepared to provide a ready reference for commonly needed information when you are in the field. It provides general orientation materials about the challenge of operating well during an emergency response. It doesn’t answer every question, nor does it provide everything you will need to know. But time reviewing it is time well spent, as are meetings, Simulated Emergency Tests, our nets, and supporting the exercises sponsored by the Sonoma and Mendocino County Auxiliary Communications Service/Office of Emergency Services. With thought and practice, you can become an effective emergency communicator.

Fred Leif, W6WTI Coast Unit Leader

Sonoma Coast Unit ACS EDITION

This version of the **Instant Trainer** is adapted from the original Alameda County text for the use of the **Sonoma and Mendocino County ACS Coast Unit**. Not all portions of the original version are included. Many portions have been extensively edited. Locally important information such as Rosters, maps and diagrams have been added. Thanks to Syd Furman W6QWK and Dave Hunt KB6JAW for their original efforts as well as to Malcolm Raff WA2UNP and others for their review and input in creating the Alameda County edition from which much was borrowed..

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What is a Communications Emergency?

There are 'self announcing' emergencies, for example: major storms, and regional earthquakes.

There are emergencies which may not be obvious to you depending on where they occur: major fires, hazardous materials releases, roadway collapses, accidents that interrupt traffic on major transportation facilities, e.g. Highway 1.

There are emergencies which limit the capability of public safety personnel to respond, or for the public to request assistance: regional telephone outage, local or regional failure of the 911 system.

Depending on where you are, the emergency may or may not appear to have regional implications.

Certainly a communications emergency exists **whenever** a public safety officer determines that he/she needs communications assistance in order to protect life or property.

Amateur Radio Operators have a long and proud tradition of assisting local government and communities in responding to emergencies. By registering for ACS, RACES, ARES, VIP, and other programs, you continue that volunteer emergency communications tradition.

Are you ready to meet the challenge?

When in doubt, turn on your radio, so that you can respond when called upon.

WHAT TO DO IN CASE OF AN EMERGENCY

NORTH COASTAL SONOMA COUNTY and, SOUTH COASTAL MENDOCINO COUNTY

PRIMARY

North of Salt Point Park through Manchester:

LISTEN TO -and then CHECK IN on

147.825 (-) PL 103.5 W6ABR Repeater - in Gualala

146.610 (-) PL 88.5 W6ABR Repeater in Point Arena

If Repeater is down, use its output frequency (147.825) in simplex mode

SECONDARY

Fort Ross through Salt Point Park:

LISTEN TO -and then CHECK IN on 145.17 (-) PL 88.5

KF6CLH Repeater at Pt. Reyes (links to 147.945 -The Sea Ranch)

Salt Point Park to the Gualala River:

LISTEN TO -and then CHECK in on 147.945 (-) PL 88.5

KI6HHA Repeater - The Sea Ranch (links to 145.17)

If Repeater is down, use its output frequency (147.945) in simplex mode

ADDITIONAL SIMPLEX CHANNELS

147.57 –Gualala area

147.585 – Sea Ranch, North Sonoma Coast

146.52 – National Calling Frequency

OTHER SONOMA COUNTY AREAS

Santa Rosa/ Sonoma County ACS	146.73 (-) 88.5
Sonoma County EOC Resource (Links to Bodega Head Repeater)	145.35 (-) 88.5
Santa Rosa Plain	146.79 (-) 88.5
Bodega Head (Links to 145.35)	146.67 (-) 88.5
Point Reyes (Links to 146.91 and 147.945)	145.17 (-) 88.5
Cloverdale	146.620 (simplex)
Healdsburg	146.460 (simplex)
Petaluma Valley	146.91 (-) 88.5
Rohnert Park / Cotati	146.955 (-) 88.5
Russian River area	145.19 (-) 88.5
VIP	145.19 (-) 88.5
	146.955 (-) 88.5
	440.200 (+) 88.5

OTHER MENDOCINO COUNTY AREAS

Fort Bragg	147.03 (+) 103.5
Fort Bragg	146.82 (-) 114.8
Ukiah*	145.13 (-) 103.5
Hopland	145.47 (-) 103.5

(* Note, it is reported that this repeater can be reached from the top of the Gualala ridge.)

If a repeater appears to be down, use the repeater output in simplex mode.

(All frequencies in MHz and pl tone noted in Hz unless otherwise noted)

*(Offsets marked (+) and (-) are **standard** for the band e.g. 144 MHz offsets are +/- 600 kHz)*

WHAT WILL BE EXPECTED OF YOU AND HOW TO GO ABOUT IT

Sonoma ACS Operators:

Registered Sonoma County ACS operators report to the Coast Unit Leader or Assistant Unit Leader using identified VHF frequencies. Assignments for locations to be served, duty scheduling and tactical calls will be assigned by the Unit Leader or the Net Control Station in consultation with the Unit Leader/Assistant Unit Leader. If you listen on Coast ACS's primary frequency but do not hear any net activity, query and **then you should start the Coast ACS Net**. Gather status information and maintain a list of operators for potential assignment.

Mutual Aid:

*Note that ACS registered operators are issued **County Specific** Identification Cards. Since the southern Mendocino County and northern Sonoma County areas are in close proximity, it is recommended that operators register in both ACS Organizations so that assignments can be made across the county line (Gualala River Bridge on Highway 1) with minimum administrative delay.*

(See Appendix G: Until The Unit Leader Arrives - Guidance from the Unit Leader)

If you are OUTSIDE the Coast ACS area:

If an emergency occurs, follow the instructions given on Page 2, depending on your location. For other areas, listen to repeaters in the area and/or request help in finding the local **resource** net. The net control station will provide additional instructions. These may identify frequencies being used for resource and tactical nets. Usually a resource net will enroll volunteers and provide information on how you can assist.

The key is to **listen** first; avoid joining a tactical net unless the resource net station has so directed you.

ON-SITE CHECK LIST

When you are assigned to provide communications to an ACS Client, upon arrival at your assigned position you should:

1. Check-in with the assigned contact
Introduce yourself and keep the contact informed of your status.
(Under The Standardized Emergency Management System or SEMS - see the discussion under Organization and Cautions - 'communications' is located under Logistics, for other organizations see the Communications Unit Leader or equivalent).
2. Get ready to operate.
Connect your equipment or locate and connect client equipment. Organize your operating position, have paper, pencil/pen, message form, site/message logs ready to use.
3. Check in with Net Control.
Report status, check signal, and request assignment of tactical call sign for your location.
4. Initiate a site log
(Note operator changes, informal and formal traffic handled, equipment changes, on-site contact names/changes, etc. Maintain site log for the duration of the event.)
5. Use log to record informal message traffic - include a short subject title.
6. Use formal ACS message form when a precise record is required.

(Be sure to record sender's name and title and recipients title and name - functional titles are essential. See Page # 15 for correct address for traffic to and from an EOC.)
7. Use tactical call sign for your location - **Minimally ID** with your FCC call sign;
Your tactical call sign is most important! Callsign no more than once per ten minutes.
8. Remember: your primary function is message handling.
9. Refer press or other media inquiries to those in charge.
Queries about the role of amateur radio should be referred to the UL or AUL.
10. Monitor your assigned frequency at all times .
Use a second radio or scanner to monitor other frequencies.
In EOC positions also monitor the VHF - County EOC channel.
11. **DO NOT** leave the frequency without net control's permission.

OPERATIONAL DO'S AND DON'T'S

DO:

- Listen for your **tactical** call sign.
- Answer promptly when called.
- Keep the channel available for others wanting to break in.
- Call the station you wish to talk to **FIRST**, then identify yourself
e.g. "Control, this is Gualala EOC"
- Allow time for the repeater and link to engage before talking ... about ½ second
- **THINK ... then PUSH transmit button ... then TALK**
- Keep all transmissions short. Use plain language. Use standard phonetics.
- Use simplex for local contacts - avoid using a high-level repeater for long periods.
- Know how to interrupt the net. (Callsign suffix for routine, 'Break !' for emergency or priority traffic)
- Establish contact before sending messages. (i.e. don't blurt it all out. Make contact **and** be sure the receiving station is prepared to copy.)
- Acknowledge all transmissions to you.
- Answer questions as directly as possible; do not explain unless asked for a clarification.
- Be clear on the sender and intended recipient of all traffic.
- Let third parties speak over your radios.
- Use earphone unless someone else has to hear.
- Send traffic slowly - at pencil speed ...the receiving station is writing down every word.
- If Net Control requests information, provide **ONLY** that information unless requested.

DO NOT...

- Use VOX or a locking PTT switch on VHF radios
- Set up a cross band repeater on a ACS primary or alternate frequency without checking with the Unit Leader or Assistant Unit Leader.
- Leave a net without Net Control permission.
- Make unnecessary transmissions or 'kerchunk' the repeater.
- Use CW shorthand jargon, e.g. Q signals or 10-signals;
- Acknowledge the existence of a jammer in your transmissions.

IMPORTANT THINGS TO DO BEFORE YOU GO TO YOUR ASSIGNMENT

The very first and most important thing is to make sure that your family and others that are dependent on you are safe and in a secure location. No one is expected to perform well in an emergency if they are concerned about the well being of others. Sometimes you may assist temporarily before knowing the status of your family. Make sure net control knows this so that you can be relieved as soon as possible. Everyone understands this, so don't be reluctant to leave after you are released. Please check back to help out when you are confident of the safety of your family.

Workman's Compensation. As a registered ACS Operator you have been issued a Disaster Service Worker identification card and are covered by this insurance for any personal harm or injury you may suffer from the time you are officially assigned by the UL or AUL to leave your home and return. For local and mutual aid assignments you may be issued an assignment number. For Mutual Aid assignments, see below. See the ACS Handbook for more detail.

Mutual Aid: Registered "**Disaster Service Workers**" (DSW), may be activated to respond in their local community. The official call-out or activation is the mechanism to begin insurance coverage (through Workers' Compensation) of registered workers. It's the **ONLY** way insurance can be started. However, a given emergency may overwhelm local resources, resulting in a request for more help, or "mutual aid," from adjacent cities or counties. A valid mutual aid request **MUST** be made on an official basis: from one city to another, or to the city from the county. If that occurs, ACS will be activated by one of our clients and told to report to the city or area that needs help. Workers' Compensation is extended to the registered worker by the activating agency.

ACS Registered Disaster Service Workers are issued photo DSW ID Cards by Sonoma and Mendocino Counties. The cards are recognized by other ACS organizations. (These cards have an expiration date, **it is the individual operator's responsibility** to contact the issuing County Office of Emergency Services for necessary renewal. Local opportunities to renew will be announced on the weekly Coast ACS Net.)

ACS and the Amateur Radio Emergency Service cooperate. For details, see the Sonoma County ACS - ARRL Memorandum of Understanding in the appendix.

ACS and the California Department of Forestry's Volunteers in Prevention (VIP) program cooperate. See Appendix Q. See the note on VIP at the beginning of this Instant Trainer.

WHAT TO HAVE READY TO BRING

EQUIPMENT

- Transceiver(s) - VHF. UHF and/or HF, if specifically requested (adjust following items accordingly).
- Scanner - optional
- Headphones or earphone with tip adapters
- Extra battery packs (charged) or external battery
- Cigarette lighter power adaptor
- AC power supply & cord with ARRL standard power plug for VHF radios
- Battery charger
- Bring a higher gain antenna for your HT (something other than a rubber duck).
- 50 ' coax with connectors (including various adaptors) (Good Quality RG-8 or better)
- Coax Adapters of various configurations - BNC/VHF/'N'/others
- Flashlight, batteries and spare bulbs
- Special adapters for your rig (Including a ACS/RACES/ARRL standard power plug.
- Soldering iron, solder, miscellaneous small tools, wire, plugs.
- Steno pad or notebook, pencils, pens.
- ACS "INSTANT TRAINER"
- Message forms (current version)
- 50' of 1/8" inch nylon cord
- Spare fuses for your equipment
- Repeater directory
- Duct, plastic electrician's, and friction tape
- Coax-Seal - to waterproof coax connections in inclement weather.
- Portable lamp for operating position (12V?)

Identify your equipment with callsign labels.

READY KIT

This 'Ready Kit' list was devised so that Emergency workers can be ready to report to their emergency assignment with a minimum of lost time. The items in the kit help assure a degree of personal comfort, should you be 'held over' for more than a few days.

Just about everything on the list, except your sleeping bag and cot, and operating equipment, can be packed in a small suitcase, or a canvas athletic bag. The total weight will be about 20 pounds, less the gallon of water.

Keeping the kit packed and up-to-date is important. First, it enables you to move quickly, and second, your own comfort will be substantially improved if you know the kit contains everything you might need for a couple of days.

ADDITIONAL ITEMS

- FCC License (copy)
- Disaster Service Worker / ACS ID
- Credit cards, or cash
- Pay telephone change or phone credit card number
- Pens and pencils*
- Steno or spiral notebook
- ACS Handbook and Instant Trainer
- Message forms*
- Maps (Thomas Brothers) and State highway maps;

FOOD AND SHELTER

On most RACES and ARES assignments, food may be provided. HOWEVER, the wise person never takes a chance as the food cart may miss the turnoff. The following are suggested.

- A 3 Day Supply of food and snacks
- One Gallon of Water per day - (small bottles are convenient for rotating your supply)
- Knife, fork and spoon, Sierra type cup, pan/pot
- Basic condiments - salt/pepper/etc
- Portable stove - warm food and beverages make life easier (don't forget matches).
- Sleeping bag, air mattress or cot, Pillow
- Tent (visqueen tube tents are suitable for a short period of time.)

NOTE: If your ACS assignment is a long way from home, it is likely that you may be "holding over" for more than 24 hours. Be prepared to : 1. Get a motel at YOUR expense, 2. Camp using YOUR gear. 3. Stay in a care shelter (Red Cross or others). Shelters set up by the Red Cross or others are usually crowded and noisy and are NOT conducive to the rest you will need to be effective as a communicator. Shelters DO provide meals. However, you MAY NOT always be able to get to one.

CLOTHING

Recommended:

- Several changes of clothing
- Layers to accommodate varying climate/weather conditions.
- You may spend time outdoors/indoors: hat, rain gear, boots, warm jacket, etc.

PERSONAL ITEMS

- | | |
|--|--|
| • Toiletry Kit | • Flashlight and spare batteries and bulb |
| • Medicines you require or may need | • Roll of toilet paper in a ziplock bag |
| • Glasses - an extra pair | • First Aid kit, personal size |
| • Small bag, or box, 'cold water' laundry soap | • Ear plugs, to help you to sleep in a shelter |
| • Towel and washcloth | • Eye covering mask, to help you to sleep in a shelter |
| • Travel alarm | • Compass, Matches |
| • Pocket knife | |

POWER CONNECTOR STANDARD - VHF/UHF EQUIPMENT

ANDERSON POWERPOLE CONNECTORS are the standard for VHF Transceiver use.

Either the 15-ampere or 30-ampere sizes may be used, and both sizes mate with each other. The plastic parts are the same for both sizes. The barrel area (which holds the wire) of the 15-ampere silver-plated contact is smaller than that of the 30-ampere contact, but the contact area is the same. The connectors dovetail together as a compact unit.



Housings should be mated according to the diagram above, viewing from the contact side (opposite the wire side), tongue down, hood up, RED on the LEFT, BLACK on the RIGHT. Use a 3/32-inch-diameter roll pin, 1/4 inch long, or a drop of super-glue, to keep the housings from sliding apart.

Identical connector halves are genderless—making assembly quick and easy and reducing the number of parts stocked. Molded-in dovetails allow for customized harness in a variety of configurations. When the connectors are disconnected, no metal parts are exposed.

The 15-ampere contacts are designed for 16-20 AWG wire and the 30-ampere contacts are designed for 12-16 AWG wire. The contacts can be soldered or crimped to wires.

Here are the Anderson part numbers:

15 A Black Red	Complete Connector #1395G1 #1395	Housing Only #1327G6 #1327	Contact Only #1332 #1332
30 A Black Red	Complete Connector #1330G4 #1330	Housing Only #1327G6 #1327	Contact Only #1331 #1331

EMERGENCY NETS and NET CONTROL OPERATION

TYPES OF NETS

There are three types of nets which usually are set up during an emergency. These are the TACTICAL NET, RESOURCE NET, and the COMMAND NET. Which net, or whether all three evolve during an event, is strictly a function of the size of the incident.

Nets may be declared "OPEN", if the incident has little traffic volume, or if there is little need to direct individual stations with a Net Control Station or "NCS".

Nets may be declared "CONTROLLED", which directs amateurs to pass traffic through the NCS, or obtain the permission of the NCS before communicating directly with another station. Local ACS/RACES nets most often utilizes this form of net for tactical purposes. Controlled nets discourage casual exchanges which preserves 'open air' space in which an emergency or priority call may be made.

The ability to remain cool, calm and collected is needed by a good NCS. Like anything else, becoming a good NCS requires practice. There are ample opportunities to practice these skills, both in contests and by taking the NCS position during the weekly ACS net. Contact the ACS Net Manager to arrange for training and to join the NCS rotation for weekly nets.

TACTICAL NET

The "Tactical Net" is the "front line" net during an incident. This type of net is usually used by a single city to manage amateur radio operations within that city's boundaries. There may be several TACTICAL NETS for a single operation depending on the volume of traffic. For small incidents, types of traffic on this net may include traffic handling, resource recruiting or interagency communication.

Whether or not your NCS is located on scene, a second operator who is in a position to transcribe incoming traffic is convenient. This keeps NCS's hands free to operate the radio AND take notes as necessary to keep the net moving. An operating position with adequate work space and good access to the radio's controls is essential. If operating in close proximity to other important operations, consider using headphones to prevent distracting/being distracted by others.

When an event expands in area or time, mutual aid is often necessary. The "Resource Net" is necessary to schedule operators and resources. Remember, other agencies such as Red Cross may establish their own TACTICAL NETS.

RESOURCE NET

A "Resource Net" is used to recruit resources (both operators and equipment) in support of operations on the TACTICAL NET. As an incident requires more operators or equipment, the RESOURCE NET evolves as a check-in point for volunteers to register, be oriented, and receive assignments.

COMMAND NET

As the size of an incident increases and more jurisdictions become involved in the incident, a "COMMAND NET" may become necessary. The "Command Net" allows the incident leadership to communicate with each other to resolve inter- or intra-agency problems, particularly between cities, or within larger jurisdictional areas.

Check Local Repeaters - on the coast, there are two common repeaters, W6ABR and KI6HHA, make sure **both** are monitored for Emergency Traffic and for Resource Availability.

NET CONTROL BASICS

One of the most essential parts of an emergency net is the character and skill of the Net Control Station (NCS). The NCS coordinates all net activity and shapes the net operation. Basic duties:

1. CONTROL THE NET. The NCS is in charge of the net while it is in session. The NCS is responsible for controlling who uses the frequency.

2. COORDINATE with Unit Leader. The NCS must coordinate with the Unit Leader and/or Assistant Unit Leader in order to meet the client needs.

3. HAVE A CLEAR SIGNAL. Net Control must have a commanding signal - full quieting into the repeater and adequate audio is a minimum: everyone should be able to hear the NCS. Net operators in mobile operation may have high local ambient noise...weak or noisy NCS signals are not satisfactory.

4. RESOURCE MANAGEMENT. NCS must keep track of which resources are on the net and who has departed.

5. IDENTIFY A BACKUP NCS. Find an alternate NCS to serve as backup. (Always be prepared to step in if NCS asks for an alternate.)

6. KEEP A LOG. Be sure to keep a written record of the incident and a list of traffic for each station in a systematic manner.

7. BE BRIEF. Make instructions clear and concise, using as few words as possible. When sending traffic, dictate the message as fast as you would write it down to set the proper rate. Remind net participants of this requirement.

8. MAINTAIN AN EVEN PACE. This is necessary to eliminate the need for repeats of the message. Break after every five words or so to allow stations time to write the message down. Ask for fills in the text at the end of each paragraph, and confirm receipt at the end of each message. Ask for repeats if you are not sure.

9. TACTICAL CALL SIGNS. Use tactical call signs on the net and enforce this rule with the other members of the net. Use of tactical call signs is essential. 'Drop' your FCC call sign at the end of an exchange, but **no more often** than once every 10 minutes.

10. TRAFFIC MANAGEMENT. Different nets handle different types of traffic. Know which types of nets are operating, and where those nets (resource & command) are (by freq.).

11. KNOW YOUR NET MEMBERS - Through weekly net and exercises get to know your 'core' operators. Recognizing voices and call signs (even from partials) lets the NCS acknowledge check-ins with few repeats.

12. LISTEN. After asking for reports or soliciting traffic, LISTEN!

A. Ask for traffic in priority order: Emergency, Priority and Routine. Take down as many calls for each as you can before acknowledging anyone. This provides a solid basis for clearing the messages.

B. Acknowledge all the stations that you heard for a specific priority level. Then yield the frequency over to a single station with the highest priority traffic. When that station is finished, hand the frequency over to the next station which you heard without soliciting more traffic. Follow this pattern until all of the calling stations you heard have made their calls. After you've completed your list, begin the same procedure once again. Give your directions to the net in a clear and concise manner. Provide pauses for stations to 'break' the net for Emergency or Priority traffic.

FORMAL TRAFFIC - ARRL Form

RADIOGRAM

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date
--------	------------	----	-------------------	-------	-----------------	------------	------

To: _____ Telephone Number: _____ _____ (TEXT) _____	THIS RADIO MESSAGE WAS RECEIVED AT: Amateur Station: _____ Phone: _____ Name: _____ Street Address: _____ City/State/Zip: _____
--	--

From Date Time REC'd	To Date Time SENT
---	--

RADIOGRAM

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date
101	R	HXC	KB6JAW	20	Fremont CA	1405	Jan 10

To: MR. AND MRS. JOHN Q. RELATIVE 123 ANY ST. ANYTOWN, ANystate 00000 _____ Telephone Number: 510-555-1212 _____	THIS RADIO MESSAGE WAS RECEIVED AT: Amateur Station: _____ Phone: _____ Name: _____ Street Address: _____ City/State/Zip: _____
BT ALL IS WELL HERE DESPITE WHAT YOU HEAR ON TV. CALL AUNT HELEN AND LET HER KNOW WE ARE OK. BT DAVID AND CATHY	

From Date Time REC'd	To Date Time SENT
---	--

Formal Traffic ACS Form

(see Appendix for copy of Form)

Sonoma Op Area 1. TO: _____ 4. TIME/DATE: _____
ACS (Name and Position) 5. MESSAGE #: _____ Tx / Rx

Message Form

2. SUBJECT: _____

3. PRECEDENCE: Emergency Priority Welfare Routine 6. OPERATOR'S INITIALS/CALL: _____

M
E
S
S
A
G
E

FROM: 7. NAME/TITLE: _____ 8. LOCATION: _____

R
E
P
L
Y

9. REPLY FROM (Name/Position/Location): _____

10. DATE: _____

Originating Operators:

Messages should be kept brief, no more than 25 words.

Make sure you understand the message before the originator or runner leaves.

Speak slowly and clearly, at 'pencil speed' - the receiving operator is writing every word.

Don't spell out every word, only those that are unusual.

Use standard phonetics.

Receiving Operators

Neatly print your received copy directly on the form.

Try not to have to 'copy over' your text message.

Keep a copy of your message - if NCR or carbon paper is available.

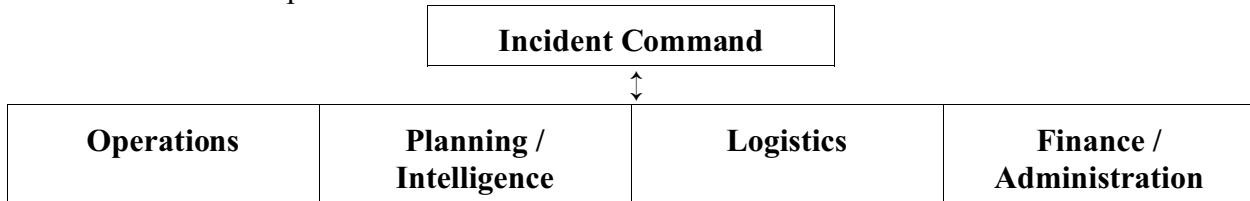
Ideally 3 part forms will be available, one for your file, two to send, one to come back for transmission with a reply.

SENDING TRAFFIC TO THE EOC

When sending traffic to or from an Emergency Operations Center, proper protocol is a **MUST**. All California government agencies must use the Standardized Emergency Management System, (**SEMS**), when responding to multi-jurisdictional or multi-agency emergencies. All local government agencies must use **SEMS** in such emergencies in order to be eligible for state reimbursement of response related personnel/resource costs. **SEMS** is based upon the Incident Command System (ICS) which was originally developed by the fire service for managing emergency response to wildland fires.

The **SEMS** structure provides a guideline for addressing emergency traffic to or from our local community **Emergency Operations Center (EOC)** or higher government agencies in order to ensure rapid delivery by the right people.

The **SEMS** functions present at an EOC are:



Traffic addressed to an EOC should identify which of these areas is the intended receiver.

Traffic from an EOC should identify which of these functional areas is the sender, so that a response will be properly addressed and routed.

ACS Operators should request a **full address** when originating and/or receiving message traffic...when asked to send a message “To THE CITY EOC” ... **ASK** the originator for a more specific address which includes the SEMS Section, if possible.

Example:

To- Planning/Intelligence Section,
Sonoma County EOC

From - Incident Command
Petaluma EOC

If the name of an official is associated with the section function, add them only as a third line in the address. Remember, when operations are 24 hours a day, the individuals may go off shift, but the message still needs to get to the correct SEMS Section.

TACTICAL TRAFFIC

Much of the traffic handled by ACS operators will be local tactical messages from point to point in the community. These may be messages between organizations which do not have common radio channels, other than amateur radio, or between people who haven't used a radio before.

Before putting traffic on the net, check with net control, advise that you have (routine/priority/emergency) traffic for xyz at abc location. Net Control will know whether there is a station available to take your traffic.

If a station is available to take your traffic, **expect Net Control to request you to go to another frequency** to conduct your traffic. Net Control may stand by while you demonstrate that you have simplex communication, before asking you to move off frequency.

If the message is short, Net Control may tell you to go ahead and pass it to the operator who can deliver it, on the net frequency.

If your traffic is a question, and the asking and answering parties are readily available at each end, do not hesitate to put the radios in the principals' hands to talk directly.

Public Works, Police, Fire and other responders will be familiar with push to talk operation. If you are in a 'shadow' assignment, say with an elected official, you may have to provide a quick instruction in the operation of your radio and that it is not 'full duplex' like a telephone...only one person can talk at a time. Make sure that they understand that our radios operate on a PUSH THEN TALK basis...and then to release the PTT switch ! We want the communication to work the first time...repeats waste air time...and give a bad impression of our service.

WEEKLY NETS OPERATING IN SONOMA COUNTY

A good way to get the flavor of a directed net operation is to listen to one in your area; the net control station will be delighted to have you check in.
Caution - listen carefully for the correct prompt to do that, you do not want to disrupt the net.
All times are local.

SONOMA COUNTY ACS

Monday	7:00 P.M.	Sonoma County Operational Area on 146.73 (-) 88.5
	Following	for ACC Unit on 146.79 (-) 88.5
	Following	for Russian River on 145.19 (-) 88.5
	Following	for South County on 146.91 (-) 88.5
	Following	for Central County on 145.35 (-) 88.5
	7:30 P.M.	North County 146.46 (s)
	7:30 P.M.	Sonoma Valley 146.205 (+) 88.5

Coast Unit

Tuesday	7:00 P.M.	147.825 MHz (-) 103.5
		146.610 (-) 88.5

Sonoma/Mendocino County Emergency HF Nets

Tuesday	7:30 P.M.	3925.0 KHz LSB (Evening)
		7245.0 KHz LSB (Daytime)

A ROLE MODEL FOR EMERGENCY COMMUNICATIONS

A good model for effective emergency communication is local fire department dispatch. The County of Sonoma Fire Dispatch (RedCom) is on 154.31 MHz. Listen for 'dead air', short, concise transmissions, clear directions and few requirements for repeats. (This is a busy, fast operation !)

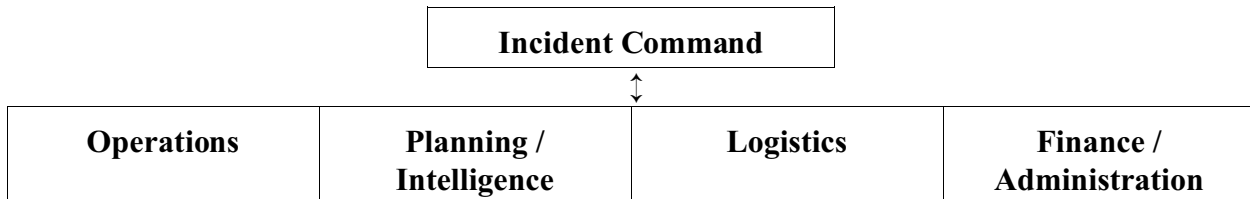
INCIDENT COMMAND SYSTEM & STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

The Incident Command System was developed by the Fire Service. It is built around five major functions that are applied on any incident whether it is large or small: Command, Operations, Planning, Logistics and Finance/Administration.

A major advantage of the ICS organization is the ability to activate only those parts of the organization that are required. For some incidents, and in some applications, only a few of the organization's functional elements may be required. However, if there is a need to expand the organization, additional positions exist within the ICS framework to meet virtually any need, from responding to a fire alarm to an aircraft crash.

Following the 1991 Oakland Hills Fire, the California Legislature passed a bill requiring standardized approaches to response management. The Standardized Emergency Management System or SEMS takes the principles of ICS and expands them to handle the various levels of government from City to County, to Region to State.

Amateur Radio ACS/RACES is frequently placed in the Logistics Section because Communications Services are located there. The messages that ACS/RACES operators pass may be from or to any of these sections and between different levels of government. SEMS ensures that the messages are instantly recognizable.



Manuals prepared to instruct emergency responders in ICS/SEMS are extensive, and training courses can extend several days and still not cover all its features.

For ACS operators responding within the area, if you are assigned to report to a location supporting an Emergency Operations Center, ask directions to Incident Command unless otherwise instructed.

Classes are available on-line at: <http://training.fema.gov/IS/crslist.asp> . IS-00100 is required. IS-00200, and IS-00700 are highly recommended. Send copies of completion certificates to the Unit Leader and to the Radio Officer.

CONFIDENTIALITY CONSIDERATIONS

Emergency communications generate a large volume of communications traffic. Radio traffic, telephone messages and data systems enable information to be distributed to large numbers of users. Much of the traffic is mundane, hardly worth mentioning. Some of the information is of a highly sensitive nature, and must be dealt with in a discrete manner. It is essential that personnel involved with emergency operations be familiar with the types of message traffic that are generated and the need to carefully consider the method of transmission prior to the transmission of the traffic. Particular types of messages are automatically considered sensitive and warrant special handling...and are probably *not* best handled via amateur radio. Examples of these types of messages are:

- Messages concerning the death or injury of victims of the incident.
- Messages concerning the death or injury of emergency responders at the incident.
- Messages that affect the health and well-being of those people in and adjacent to the incident area.
- Messages of such a nature that the disclosure of the information could cause panic or other grievous harm to individuals, public or private.
- Messages of a private nature.
- All message traffic should be evaluated for its sensitivity and transmitted to its destination via the most appropriate method, which *may not* be amateur radio.

ELECTRONIC COMMUNICATIONS INTERCEPTION

The explosion of electronic communication technologies has been somewhat of a mixed blessing as far as confidentiality is concerned. Radios, facsimile machines, cellular telephones and computers have many benefits but also bring with them some inherent weaknesses that can, if understood, be minimized. Among the most obvious is the problem of message content security and confidentiality.

Many of the electronic communications methods that are used in emergency communications allow interception by individuals other than the intended recipient. The widespread availability of equipment capable of receiving electronic information makes it essential that operators involved in emergency communications consider the nature of their traffic and the possible impact that the information could have if released to the public-at-large.

RADIO COMMUNICATIONS

Radio communications are, by their very nature, unsecured. Radios generally transmit over a wide area to allow base, mobile, and portable communications within the system service area. Most normal business communications are conducted 'in-the-clear'; that is, the content of the communication is not encrypted and can be received by any person who has access to radio receiving equipment such as a scanner. Communications of a confidential nature should not be conducted over the radio UNLESS there is a direct and immediate threat to life and/or property that requires immediate attention by Public Safety (police, fire, medical, etc.) agencies.

CELLULAR TELEPHONES

Cellular telephones allow for direct connection to the public telephone system from portable, mobile and fixed locations. They are somewhat more secure than general use business band radio systems, however, they are still susceptible to interception by scanner radio operators. Sensitive information should not be discussed over cellular telephones UNLESS there is a direct and immediate threat to life and/or property that requires immediate attention by Public Safety agencies.

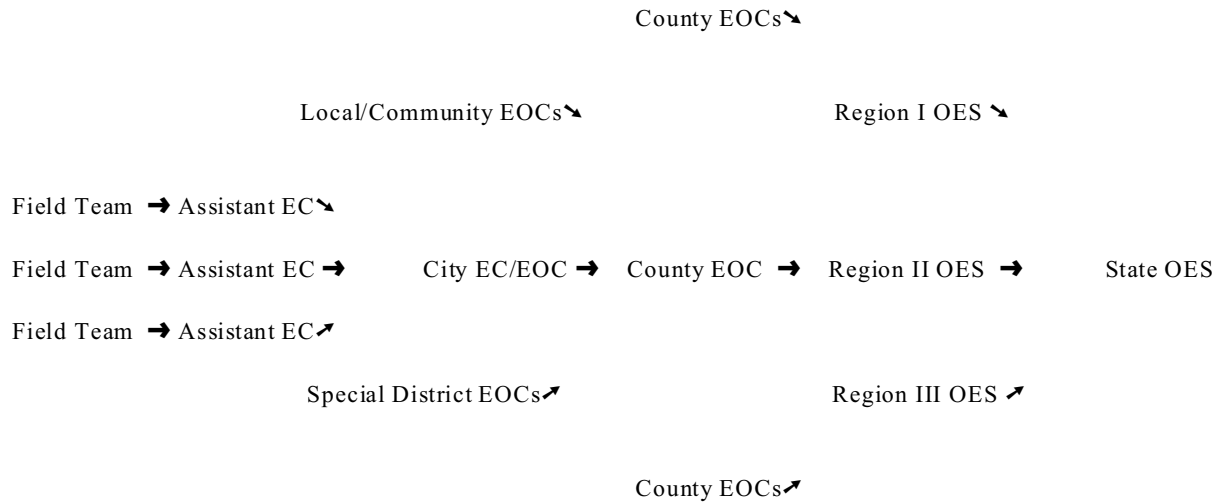
LANDLINE TELEPHONES

Landline telephones, the ones that people are most familiar with, are the most secure type of communications. Direct connections via wire preclude interception by scanner radio operators. Interception is only possible by a technically competent technician and then only by court order. Discussion of confidential information on the telephone should only be done when it can be assured that both parties are able to conduct their conversation in private.

Typical Emergency Communications Flowchart

Whenever possible follow Command Structure

The client or served agency knows where the message needs to go. If you are unsure about the address, ask for clarification. Normally status reports, and requests for mutual aid are routed to the next level up in government. A City advises the County. The County advises OES Region II. OES Region II advises State OES. OES advises the Governor. The Governor determines when a Federal Assistance request is required.



In ACS/RACES practice the operator assigned to the various operating positions will be responsible for providing support communications from those locations. The client representative will advise who is to receive the message when traffic is originated.

APPENDIX A - MAPS AND SUMMARIES OF ACS/RACES RADIO/ANTENNA INSTALLATIONS

Sonoma / Mendocino County Locations:

Sonoma County Locations

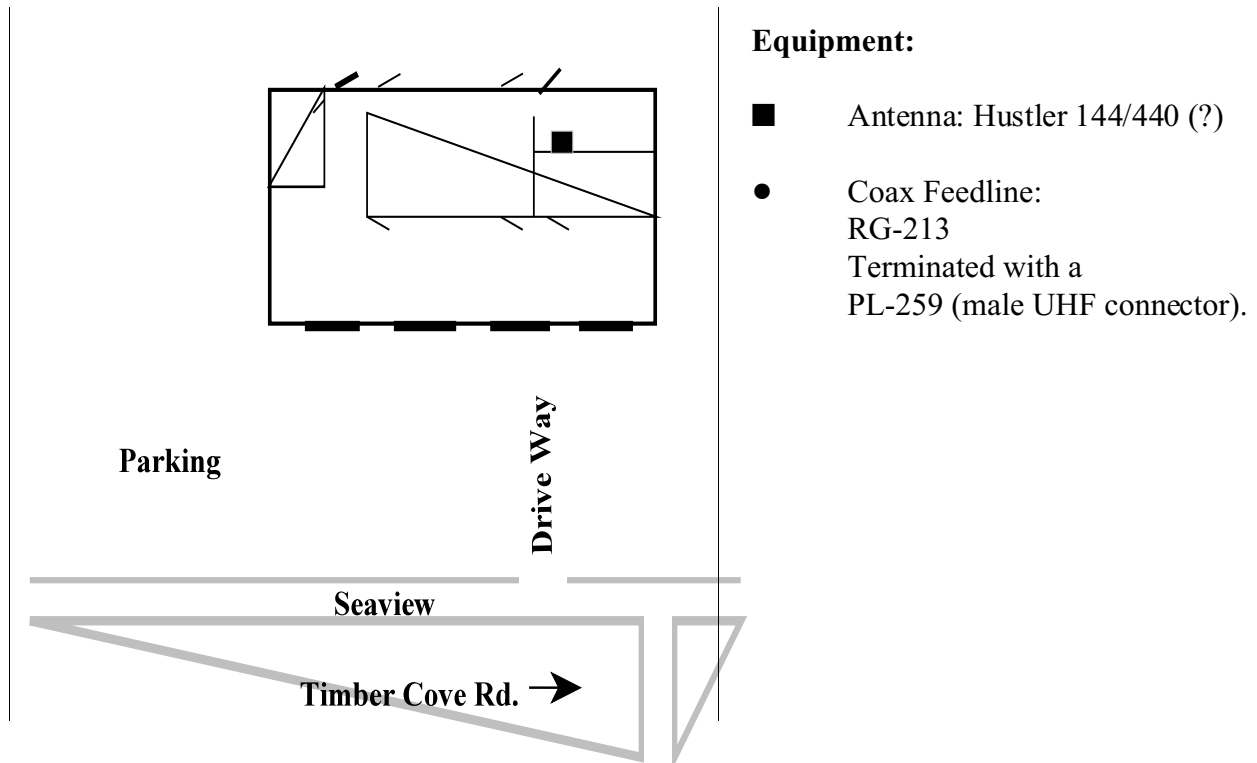
- A-1 CDF - Annapolis Road**
- A-2 The Sea Ranch - TSR Association Office,**
- A-3 The Sea Ranch - Lodge**
- A-4 The Sea Ranch - Del Mar Center**
- A-5 The Sea Ranch - Ohlson Center /White Barn**
- A-6 The Sea Ranch Volunteer Fire Department (North Fire Station)**
- A-7 Timber Cove Volunteer Fire Department**
- A-8 Fort Ross**
- A-9 Fort Ross School**
- A-10 Horicon School**

Mendocino County Locations

- A-11 Coast Life Support District**
- A-12 South Coast Volunteer Fire Department**
- A-13 Redwood Coast Medical Services**
- A-14 Anchor Bay Volunteer Fire Department**

Located at the intersection of Seaview and Timber Cove Road.

From Highway 1 at Timber Cove Rd. - Mile marker: 1SON 35.54 - (Just south of the Timber Cove Inn) go up Timber Cove Rd. 2 miles to Seaview and jog left to the driveway.



Equipment:

- Antenna: Hustler 144/440 (?)
- Coax Feedline:
RG-213
Terminated with a
PL-259 (male UHF connector).

Site Notes:

There is a radio at this location -

Emergency power is available.

Equipment from TCVFD is identified 4500 (Chief) also: (4533, 4534, 4577, 4585,4599)

Access: NW back door with cipherlock.

APPENDIX B: Contact Lists

- B-1 Sonoma County ACS Coast Unit Registration List
Mendocino County ACS Coast Unit Registration List**
- B-2 Sonoma County ACS Coast Unit Leadership List
Mendocino County ACS Coast Unit Leadership List**
- B-4 Local Client Contact list**

APPENDIX C: Sonoma/Mendocino County RADIO ASSETS

Specific descriptions of locations/coax terminations are included in Appendix A - Maps/Summaries

Linked Repeaters

147.825 (-) 103.5	Gualala, W6ABR
146.610 (-) 88.5	Point Arena, W6ABR
147.945 (-) 88.5	The Sea Ranch, KI6HHA
145.17 (-) 88.5	Point Reyes, KF6CLH
146.91 (-) 88.5	Petaluma Valley, WB6TMS
146.67 (-) 88.5	Bodega Head, WA6M
145.35(-) 88.5	Santa Rosa (EOC Resource), WA6YGD

These repeaters operate on deep cycle battery back up.
Linked Repeaters **in bold** may be reachable by operators in the Coast Unit.

APPENDIX D: ACS/RACES CLIENTS

ACS supports the following organizations/locations in Sonoma and Mendocino Counties:

Sonoma County:

- Sonoma County Office of Emergency Services
- Sonoma County Sheriff
- California Highway Patrol & 911 System
- California Department of Forestry - Annapolis Road
- California State Parks and Recreation Dept. - Fort Ross
- Coast Life Support District
- The Sea Ranch Volunteer Fire Department
- Timber Cove Volunteer Fire Department
- Fort Ross School
- Horicon School
- The Sea Ranch Association Office
- The Sea Ranch - Lodge
- The Sea Ranch - Del Mar Center
- The Sea Ranch - White Barn

Mendocino County:

- Mendocino Emergency Services Agency**
- Mendocino County Sheriff**
- South Coast Volunteer Fire Department
- Anchor Bay Volunteer Fire Department
- Redwood Coast Medical Services

ARRL has Memoranda of Understanding with:

- American Red Cross
- Salvation Army
- National Oceanographic and Atmospheric Administration
- National Weather Service
- Associated Public Safety Communications Officers
- The National Communications System

APPENDIX E - Non 911 - Emergency Numbers

Calling public safety agencies using 911 through an amateur radio repeater can cause problems. Agencies frequently depend on the reverse directory for specific location information of the caller. If you were cut off in mid call and had not yet advised that you were an Amateur Radio Operator calling through a repeater, the dispatcher has little choice but to dispatch a response to the address of the telephone...oftentimes a repeater site on the top of a hill, behind locked gates. In order to avoid that mistake, operators should call the direct line to these agencies and not rely on 911.

Agency	Service - Number
Sonoma County Dispatch	Fire/Police/Ambulance 565-2121
CDF (Annapolis Rd.)	FIRE - 785-2335
California Highway Patrol Dispatch	CHP - 467-4000
US. Coast Guard (San Francisco)	Search/Rescue: 415-556-2103
US Coast Guard (Bodega Bay)	Search/Rescue: 875-3596
Poison Control Center	800-222-1222
Mendocino County Sheriff	Police: 463-4411

APPENDIX F - OPERATING YOUR RADIO

In the Coast Unit, a responding operator may face unfamiliar equipment, or simply be requested to employ his/her own radio in a way that is not familiar. The following are some general tips which can help you perform your emergency communications mission.

ALWAYS: Have a copy of your Radio's Operating Manual with you. The original should be kept in a safe place.

IN GENERAL:

1. **Verify connections** to power supply (WATCH POLARITY) and antenna. Double check DIPLEXER connections if applicable. Make sure microphone connections are firmly seated.
2. **Turn radio on** - press 'on' button or rotate gain/volume control.
3. **Volume and Squelch Controls.** Turn clockwise to increase volume or tighten squelch. Starting with the squelch fully counterclockwise, advance the volume until you hear the 'rush' noise at a comfortable level. Then advance the squelch clockwise until the rushing is just quenched.
4. **SELECT FREQUENCY or REPEATER CHANNEL.** The radios should 'power up' in memory mode with pre-set frequencies corresponding to anticipated needs: simplex or repeaters. Rotate main 'tuning' knob on panel and observe memory channel changes on the display.
To leave memory mode select VFO.
If the radio did not start in memory mode, press Memory or Memory Recall button.
5. Remember to include a memory for the repeater's output frequency so that you are prepared if the repeater loses power.
5. Remember that a **repeater frequency requires its appropriate attributes** to be functional (Frequency, transmit offset, sub-audible tone or PL enabled, sub-audible tone or PL selected) make sure ALL these are entered into the memory channel. Channel #1 should be the ACS/RACES Primary Frequency. The Call Channel should be set to ACS/RACES Primary Frequency. IF you don't bring up the repeater, check.
6. Earphone(s) are recommended. If there are two operators assigned, having an audio splitter to enable two pairs of earphones to be used simultaneously is very handy. (Earphones are personal equipment - basic mono headphones with a variety of adapters can serve very well.)
8. A copy of the Instruction Manual should be stored with (or available on site) for each radio permanently placed at a location, along with a listing of frequencies entered into all memory channels. Do not overwrite the ACS/RACES set memory channels.

9. HANDHELD RADIOS:

- Attaching HT type Radios to heavy (RG-8 type) COAX puts a lot of stress on the SMA or BNC Antenna connector. A short length of RG-59 coax with appropriate connectors can relieve this stress, which can break the electrical connection from the radio to antenna.
- A speaker-microphone for the radio brings the audio closer to your ear and is easier to pick up while you are writing and handling other chores.
- HT Batteries run down faster when you use high power and when you run the volume at high levels. Use the minimum power needed to have an adequate signal. Earphones use less power than speakers.
- Have extra batteries, battery packs or external heavy capacity batteries with appropriate connectors.

APPENDIX F

General Radio Operating Procedures

APPENDIX G - Until the Unit Leader Arrives

In the event that the Unit Leader or Assistant Unit Leader is not available when an emergency occurs, the following guidance is offered to assist ACS operators in responding to the kinds of requests that are likely to occur. **This is not a cookbook** or protocol for ‘exactly’ what to do, but is intended as a general orientation so that operators on the scene can exercise their judgement and common sense with an understanding of the mission and expectations between ACS and its clients, or organizations, groups, or locations which require emergency communications support..

SERVED AGENCIES

Sonoma/Mendocino County ACS supports two categories of clients, **local agencies**, and those with which the ARRL has **national agreements**. As Registered Disaster Service Workers, operators are assigned through the Auxiliary Communications Service to support emergency governmental and community assistance functions. The ARRL national client relationship is described in a formal agreement called a Memorandum of Understanding. Copies of these agreements are available, but are not essential to carrying out ACS responsibilities in an emergency.

National agreements are entered into by the American Radio Relay League. Since these are not units of general purpose government, these agreements involve the local ARES, or ARRL Field Organization response.

American Red Cross
Salvation Army
National Weather Service (SKYWARN)
National Communications System
Federal Emergency Management Agency
Associated Public Safety Communications
Officers

The Golden Principle of ACS RACES communications support:

The role of ACS in serving any client is to:

- **UNDERSTAND** the client’s needs, and priorities
- **EVALUATE** ACS available resources,
- **DEPLOY** ACS’s resources, and
- **TELL** the client the level of service we are able to provide, and advise of any changes.

THE EARTHQUAKE

Of all the possible emergencies which may require ACS response to multiple clients simultaneously, a regionally significant earthquake is probably the most dramatic, and destructive to the community.

- It will be the most limiting in our ability to depend on the availability of mutual aide.
- It will be very challenging in terms of the number of registered/trained ACS operators available to respond.
- It will be challenging in terms of the number of untrained, un-registered amateurs who will try to volunteer.
- It will increase our clients’ need for supplemental radio service because telephone communication is likely to be disrupted for some period of time.

A general approach to the response might follow this pattern:

1. Assess available resources. (Set up a resources net on a 2 meter simplex frequency, see #5 below)
2. Assign operators to activate these ACS locations:
3. Expect Red Cross to request ACS to provide shelter communications. (ARES).
4. Resource net should direct unregistered volunteer operators to a location to register for ACS. These operators should be interviewed and assessed. Qualified volunteers should be registered, then assigned to support, shelters. Capable operators with demonstrated skills can be assigned more challenging sites. (See COPING WITH UNKNOWN VOLUNTEER OPERATORS)

APPENDIX G

What To Do Until The Unit Leader Arrives

5. Plan operator shifts to cover locations 24 hours per day if possible. 8 hour shifts are as long as is reasonable to expect from any single operator. Make sure that there is relief assigned for the EC/Radio Officer as well. Remember that communications support will be a long term need.

6. Ensure that the clients know how to contact the Unit Leader during any given shift and that the clients know what locations have ACS support.

7. Keep records which identify total resources, names and calls of operators, shift designations, location assignments, and unique communications needs. (On the spot volunteers need to fill out ACS application forms-see item #5. Eventually, these forms need to be given to the Cities.)

COMMUNICATIONS PATHS

There are several predictable communications paths that will need to be established and maintained to meet our clients' needs. Our clients may also request other kinds of support, which will have to be developed as identified. The following is a suggestion...but should be considered to be flexible. The Coast Unit's primary repeater frequency is 147.825 MHz. (Other two meter repeaters which may have value are 147.945 and 145.17. Simplex channels on the Coast are 147.57, 147.585, and the National Calling frequency: 146.52). If the repeater is not operational the standard response is to call the net on the output of the repeater. Obviously, if the repeater is not working, the VHF simplex link will also not work...monitor both.

The Coast HF nets can be convened on 3915.00 KHz on LSB during the evening hours or on 7245.00 KHz on LSB during the day. HF has the ability to propagate directly from Coast communities to the Sonoma and Mendocino County EOCs in Santa Rosa and Ukiah. General class licensees and above are authorized to participate in the HF net.

SETTING PRIORITIES

When requests exceed resources:

- Advise client and ask ***them*** to set priorities and make choices.
- Balance client needs. Try not to cut a client to zero resources.
- Assess level of restored normal communications assets...if cell-phones are available and reliable, and as hard wired phone

service is restored, sites served may require less ACS support and resources could be redeployed to needier sites.

- Some clients may be reluctant to release resources *even after reliable communications are normalized*...it is the Unit Leader's role to reassign operator/equipment assets based on need and priority.

OTHER REQUESTS

It is highly likely that requests for service will be identified continuously as the response is mobilized. ACS response depends on a continual assessment of available resources, assessment of client needs, and a balanced allocation of operators and equipment.

WHAT IS A COMMUNICATIONS EMERGENCY

It is important to ascertain whether the clients are experiencing a communications emergency before deploying resources. An earthquake of moderate intensity may not present an immediate wide coverage communication emergency. (Local telephone service was established very quickly following Loma Prieta in 1989, but shelter sites were selected which had little or poor telephone service. Radios were critical in coordinating shelter relocation.) It is always important to check with a client to verify their needs. Perhaps it does not appear that a response is obviously warranted based on what you hear on commercial news services. If in doubt, initiate a resource net, and try to establish contact with the various local clients directly. Remember we are not chasing ambulances, we are offering a service. If a client declines service, we accept that decision (but let them know how to contact us, should the situation change).

APPENDIX G

What To Do Until The Unit Leader Arrives

**WHAT IS A COMMUNICATION
REQUIREMENT**

When contacting a client to understand their communications need, it is important to get the information you need to design a response, and to not take any more of their time than is absolutely necessary. The following are general planning questions which might help you identify the client's needs:

1. What is the nature of the emergency ? - if not obvious.
2. Is this now, or is it expected to become, a communications emergency ?
3. What locations or people need service ?
4. What is the relative priority of these locations/people to the client ?
5. How long does the client expect our service to be required ?
6. Special access requirements ?
7. Rendezvous instructions to link operators to locations/people requiring support ?
8. Be sure the client understands how to contact the Unit Leader to adjust needs.
9. Be sure the Unit Leader or ACS leader knows how to contact the appropriate client official to advise on status changes.
10. Advise on changing communications resource availability.

**COPING WITH
UNKNOWN VOLUNTEER OPERATORS**

The 'radio operator' who appears on the net or walks into a location and offers to help can be either a 'help' or a 'hindrance'. Here are some thoughts on how to handle them:

The County ACS position is that only registered ACS operators will participate in official activations. There is no current allowable field registration process in place which would facilitate registering operators who spontaneously respond to an event.

CONTACTING CLIENTS

In situations other than the Earthquake, discussed above, it should be expected that clients will be able to contact us to request service. Clients are provided with an ACS roster and know the present list of officers. The operator contacted under these circumstances should make sure that the requestor is clearly identified as well as a means to contact the client again to advise on our response status and level of service.

APPENDIX G

What To Do Until The Unit Leader Arrives

ACS/RACES Organizations are faced with a wide range of possible reasons to respond, each with unique requirements. Some emergencies announce themselves profoundly as do major earthquakes, others require verification as do smaller seismic events, fires and floods, still others require alert by local officials such as fires, hazardous materials releases and other localized events. In all cases, it is important for the ACS/RACES organization to verify the event, determine need for ACS/RACES emergency communication support, and to respond to requests in a competent and professional manner.

The following generic protocol provides an indication of the steps that will help the local ACS/RACES response to be organized and practical. The goal of the response is to blend into the response pattern of the local Emergency Agencies so that ACS/RACES is part of the response, not a 'problem' that requires resources and explanations beyond the minimum to communicate the communications needs of the agencies.

Major events may appear to jump from 'ground zero' into immediate activation. However, do not ignore the earlier steps which help plan and organize your response. Failure to consider a long term, 24 hour-a-day response, may result in initial over-commitment, operator burn out and a response that satisfies neither you and your organization, nor your client.

Initial Activities

1. Monitor primary ACS/RACES local frequency Is repeater on the air? If not use simplex on Output.
2. Is there a net? If not, start one.
3. Activate phone tree, if appropriate. Check for adjacent or area-wide ACS/RACES nets
4. Monitor local news sources. (Often the lack of news, or absent radio/tv is an indicator)
5. Call/Contact local emergency agencies (**all with whom your ACS/RACES unit has a formal relationship**)
(if phones don't work, send operators to serve as liaison/initial operators)
Police/Fire/Red Cross/ Local OES, etc (as defined in your local agreements)
Different clients may be responding differently
Advise them of ACS/RACES status; be prepared to respond.
6. Determine Action Level (for EACH client):
Stand Down - no ACS/RACES service needed or expected
Stand By - ACS/RACES service needs not

known, but possible

Alert - ACS/RACES service probably needed, but requirement uncertain

Activate - ACS/RACES service needed, initial requirements known

7. Ensure Emergency Agencies know how to contact/activate ACS/RACES

Stand Down

1. Verify that all potential Emergency Agencies have no identifiable potential response needs
2. Advise net that no local ACS/RACES response is expected.
3. Advise to monitor neighboring and area-wide nets for possible mutual aid service
4. Secure net if no response local or mutual aid is expected.
5. Ensure that Emergency Agencies know how to contact ACS/RACES for support if the situation changes.

Stand By

1. Continue Net - advise members of status
2. Activate phone tree
3. Log Resource availability -
4. Establish check-back schedules/roll call to verify resource availability
5. Continue monitoring adjacent area and area-wide nets.
6. Contact all potential clients
7. Start developing your strategy that balances all clients' needs (present/anticipated)
8. Review Plan for orienting mutual aid resources
9. Maintain regular and periodic contact with local emergency agencies
10. Monitor local news sources for area status
11. Plan initial operator schedules

APPENDIX H

Alert

1. Separate Resource and Tactical Response Nets
2. Continue to log resources and continue check back roll call schedule
3. Assign and deploy liaison to Emergency Agencies - EOC or Equivalent (if not done earlier)
4. Advise net of status of response
5. Maintain contact with all potential clients to ensure appropriate planning.

Activate

1. Determine Specific Mission Requirements
 - Sites to be Activated (fixed, mobile, shadow)
 - Expected Duration of Activation
 - Status of radio assets at those sites
 - Mission # Assigned - if RACES
 - Verify line of communication/responsibility
 - If multiple clients are involved, identify all needs before deploying operators.
2. Plan and implement specific ACS/RACES Response
 - Number of Operators and equipment required
 - Nets Required
tactical, resources, mutual aid, shelter, etc
 - Schedule/Assign Operators
 - On going activation requires planning for 24 hour service
 - Deploy Operators
3. Report to Client when response is in place.
4. Maintain regular contact with client to adjust response over time
5. Assess adequacy of ACS/RACES resources, request mutual aid through client if necessary
6. Maintain awareness of ACS/RACES operator performance, adjust schedules if operators fatigue earlier than anticipated
7. As the event evolves, assess changing technical requirements and plan to meet needs as they emerge (e.g. packet, HF)
8. Balance needs of clients to assure that critical, high priority needs are met.

VHF Simplex

145.695	Simplex National Alerting Frequency
146.520	Simplex National Calling Frequency
144.990	Simplex NCPA BBS Emergency Frequency
223.500	Simplex General Calling Frequency
446.000	Simplex General Calling Frequency

Sonoma Operational Area and Local Emergency Repeater Assignments:

146.730 (-) is the primary frequency for all ACS emergency operations in Sonoma County. The tactical call is: "County EOC". This frequency is used for the Monday ACS Net and many public service events.

145.350 (-) is the secondary frequency for all ACS operations in Sonoma County. This frequency is often used for personnel and equipment requests and tracking. The tactical call is "Op Area RESOURCE".

145.190 (-) is the primary VIP frequency and the primary emergency frequency for the Russian River Unit.

146.955 (-) is the secondary VIP frequency and the primary frequency for the Rohnert Park/Cotati Unit.

146.910 (-) is the primary emergency frequency for the Petaluma Valley Unit and is linked to 145.170 (-).

146.205 (+) is the primary emergency frequency for the Sonoma Valley Unit.

147.825(-) is the primary emergency frequency for the Coast Unit / linked to 146.610 (-) 88.5 - Gualala

147.945(-) is the secondary emergency frequency for the Coast Unit / is linked to 145.17(-)

223.760 (-) is the primary Command frequency for communications between county ACS staff and Unit Leaders.

440.200 (+) is the primary UHF back-up frequency and the primary packet coordination frequency.

444.750 (+) is an alternate UHF back-up frequency.

440.775 (+) is a wide coverage UHF back-up for the Russian River Unit, linked to 441.025 (+) in Hopland.

State Emergency Digital Simplex frequencies: (See the Field Operations Guide for Op Area frequencies.)

144.91 Amateur radio packet direct connect: W6SIG-1; maximum of two nodes or digi-peaters.

144.91 Amateur radio packet on-line mailbox: W6SIG-2. Amateur radio digital address by packet is via any WESTNET BBS to: W6SIG @WA6NWE.#NOCAL.USA.

Coast Frequencies:

Location	Freq.	PL	Links to
The Sea Ranch	147.945-	88.5	146.910 via 145.170
Pt. Reyes	145.17-	88.5	146.91
Bodega Head	146.67-	88.5	145.35
Gualala	147.825-	103.5	146.610
Point Arena	146.610 (-)	88.5	147.825
Simplex	147.57	Simplex - Gualala area	
	147.585	"	- North Sonoma Coast
	146.52	"	(National Calling frequency)

Other Repeaters

Mt. Tamalpais	146.700-	179.9
Ukiah	145.13-	103.5
Ft. Bragg	147.03+	103.5
Ft. Bragg	146.82-	103.5
Pacifica	146.925-	114.8

APPENDIX J: Packet SIMPLE PACKET BBS COMMANDS

While on assignment you may be called to operate a packet station. If this is a new experience there is a rule old-timers suggest you follow-"under no conditions panic"; with a little coaching you can quickly learn how to deal with a packet bulletin board. Some of the common commands follow.

BASIC BBS COMMAND LIST:

B BYE Disconnect from the MailBox.
CM COPY MSG Make a copy of a message for another station.
D DOWNLOAD Download files. (Read files that are in the Mail Box.)
E EDIT TFC Edit the message header (TO, FROM, etc.) of an NTS message.
H HELP Help in using the commands available on this Mail Box.
I INFO Information on the computer, software and hardware.
I (with call) Information from the user database for that callsign.
J WHO? Listing of stations recently heard or connected to the MailBox.
K KILL Kill (erase) messages.
L LIST List messages. (Several variations available.)
N NAME Enter your Name, QTH, Zip, Home MailBox into WP database.
R READ Read messages.
S SEND Send messages, and STATUS; Show System Status.
T TALK Talk to the sysop.
U UPLOAD Upload files. (Put files into the MailBox.)
V VERSION Find out what version of the WORLI MailBox program is on line.
W WHAT List file directories and file titles.

Some of the commands require added information after the command letter. For detailed information on a specific command, enter H x, where x is the command letter. Example: H L will give you information for LIST.

Use the command H SERV for information on extended MailBox services.

HELP ON BASIC COMMANDS:

To LIST messages that have been received by the MailBox since you last checked in, enter: L

To LIST recent messages, enter: LL xx (xx = the number of messages you want to list.) Example: LL 15 will list the last 15 messages.

To READ a message, enter: R and the message number. (Enter a space between the R and the number.) Example: to read message 4350, enter: R 4350

(RESERVED SPACE FOR EQUIPMENT AND SOFTWARE STANDARDS)

APPENDIX K: American Red Cross

Location of chapters and service centers in the related area

Western Operations Headquarters
1870 Ogden Dr.
Burlingame, CA 94010
(415) 259-1517
(800) 879-1870

Oakland Main Office
3903 Broadway
Oakland CA
510-595-4400

Marin County Chapter
712 5th Ave.
San Rafael, CA 94901
(415) 454-1550

San Francisco Chapter
1550 Sutter St.
San Francisco, CA 94109
(415) 202-0634

Sonoma County Chapter
5297 Aero Drive
Santa Rosa, CA 95403-8070
707-577-7600

American Red Cross
Northern California Region
6230 Claremont Avenue
Oakland, CA 94618
510-594-5100

Is there a Mendocino County ARC Contact ???

AMERICAN RED CROSS FREQUENCIES

(All Frequencies are Simplex, MHz)

National Frequency = 47.420 CHANNEL CODE: RED

Other Red Cross Frequencies:

Frequency MHz	Ch. Code
47.540	Blue
47.460	Tan
47.500	Black
47.580	Purple
47.620	Green

APPENDIX L: Memorandum of Understanding between the County of Sonoma and the San Francisco Section Amateur Radio Emergency Service

I. Purpose

The purpose of this document is to state the terms of agreement between the County of Sonoma, a political subdivision of the State of California (“County”) and the San Francisco Section Amateur Radio Emergency Service (“ARES”), sponsored by American Radio Relay League (“ARRL”), with respect to local emergency communications coordination within the County of Sonoma. This Memorandum of Understanding shall serve as a framework within which the parties may develop and maintain a spirit of cooperation while performing their respective roles in support of local emergency communications.

II. Recitals

A. Sonoma County / Operational Area Auxiliary Communications Service

Sonoma County’s Auxiliary Communications Service (ACS) is a team of volunteer communication professionals dedicated to assisting local government agencies within Sonoma County with public safety and emergency communications in times of disaster and/or community need. ACS is operated under the supervision of the Sonoma County Department of Emergency Services and when applicable, operations will be in accord with the provisions of the Radio Amateur Civil Emergency Service (RACES) as provided for by the Federal Communications Commission (FCC) and the Federal Emergency Management Agency (FEMA).

The County-wide ACS organization has nine local geographic Units and one central coordinating Unit. Each of these ten Units has a designated Unit Leader that reports to the ACS Radio Officer. Each local area ACS Unit provides ACS services to a local government jurisdiction while remaining within the chain of command of the Sonoma County / Operational Area ACS program. ACS follows the principles of the Standardized Emergency Management System (SEMS) and the Incident Command System (ICS).

County has formally selected ACS as the primary volunteer service that augments local government public safety communications for all local government jurisdictions and other disaster relief organizations within the County of Sonoma in the event of failure, overload or other problems that might jeopardize their usefulness.

Further, all local government jurisdictions within Sonoma County have formally accepted ACS services as administered by the Sonoma County Department of Emergency Services as their principal method of

auxiliary emergency communications. ACS services are provided to the local municipal governments and other agencies, while the ACS program is managed and coordinated by the County. Operational control of local ACS units assigned to local jurisdictions is at the discretion of the local jurisdiction, following the ACS chain of command and ACS policies and procedures. Local unit policies and procedures that are developed must be consistent with ACS guidelines and be approved by the ACS Radio Officer.

B. Amateur Radio Emergency Service

Amateur Radio Emergency Service (ARES) is an emergency preparedness element of the Field Organization of the ARRL, a national amateur radio organization. The ARRL has formal national-level agreements with the American Red Cross (ARC), the National Weather Service (NWS), the Federal Emergency Management Agency (FEMA), the Association of Public-Safety Communications Officials-International (APCO-International), the National Communications System (NCS), the National Association of Radio and Telecommunications Engineers (NARTE), the Salvation Army, the Society of Broadcast Engineers (SBE), the Quarterly Century Wireless Association, Inc. (QCWA), and Radio Emergency Associated Communications Team (REACT).

The ARRL has fifteen geographical Divisions, with each Division having three to seven Sections. Each Section may be further divided into Districts. The local section of ARES is the San Francisco Section of the Pacific Division. The Districts within the San Francisco Section consist of seven counties, including Sonoma County. The San Francisco Section ARES organization is administered under an elected Section Manager. The Section Manager appoints a Section Emergency Coordinator, who (along with appointed local Emergency Coordinators and District Emergency Coordinators) directs ARES communications preparedness activities in each section. Amateur Radio Emergency Service is a radio communication service certified by the American Radio Relay League (ARRL), and conducted by volunteer licensed radio operators, for providing emergency radio communications to public service organizations. In Sonoma County, ARES’ primary responsibility is providing communications and logistic / resource allocation traffic for non-governmental agencies. ARES may be deployed to augment emergency communications for governmental agencies within the County of Sonoma when requested by ACS.

ARES volunteers are radio amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service when disaster strikes. Many ARES volunteers specialize in the transmission of health and welfare information for the families and friends of disaster victims. ARES follows standard Incident Command System (ICS) protocols in times of emergency.

III. Cooperation Agreement

To coordinate the communications resources of ACS and ARES utilized during disasters and emergencies, and to the extent permitted or required under existing plans, procedures and regulations, the County, ACS participants and ARES have agreed to the following:

A. To ensure an efficient liaison between ACS and ARES, the points of contact will be as follows: For County, the ACS Radio Officer or designated Assistant Radio Officer. In the absence of the Radio Officer or designee, the point of contact will be the Sonoma County Department of Emergency Services' Emergency Services Coordinator or designee. For ARES the point of contact will be the District Emergency Coordinator (DEC), or in the absence of a DEC, the ARES Section Emergency Coordinator (SEC). In the absence of the DEC and SEC, the point of contact will be San Francisco Section Manager or Assistant Section Manager.

B. ACS and ARES will generally encourage liaisons with each other and urge participants of both organizations to develop effective communications and cooperation through ongoing communications and information sharing. Regular, periodic reporting on activities, services, local agreements, plans and procedures and contact information will be provided in writing and kept current.

C. Each organization will work through its own lines of authority and respect the lines of authority of the other as outlined above.

D. ACS will encourage local interaction between the local ACS Unit Leaders and the local ARES Emergency Coordinators in an effort to establish cooperative relationships, and closer ties between the two organizations. Both parties recognize that when these relationships develop at the local level, effective service to the public is significantly enhanced. Neither organization will discourage its volunteers from participating in the other organization.

E. ACS and ARES will work to establish protocols and procedures that facilitate efficient field operations where both groups are involved in emergency communications response. Each organization retains the

right to develop and maintain independent protocols and procedures that will accurately reflect the respective relationships agreed upon.

F. Each organization will avoid duplicative or competitive activities in order to ensure effective delivery of emergency communications service. Local working relationships and existing local agreements between either of the two parties and their served agencies will be respected. Both parties recognize the principal roles of each group as outlined above.

G. Other areas of mutual cooperation and future agreements may be developed and established as necessary.

VI. Implementation

This Memorandum of Understanding shall take effect upon signature by authorized officials of the County, ACS and ARES. This memorandum may be amended by mutual agreement in writing of both parties, and will remain in effect until terminated. Either party may terminate this memorandum upon 30 days written notice. Nothing herein will create any joint venture, partnership or other business association, nor shall either party enter into any obligation or commitment on behalf of the other. This memorandum does not create rights in, nor is it intended to benefit, any third parties.

Signed March 14, 2003

Sandy Covall-Alves, Emergency Services
Coordinator.Sonoma County / Operational Area
Emergency Services

Ken Harrison, ACS Radio Officer
Sonoma County / Operational Area Emergency
Services

Leonard Gwinn, Section Manager, San Francisco
Section American Radio Relay League

Richard Freitas, Sonoma County District
Emergency Coordinator, San Francisco Section
American Radio Relay League

APPENDIX M: Statement of Affiliation Between The Federal Emergency Management Agency and the American Radio Relay League

The *Department of Homeland Security* (DHS) and the *American Radio Relay League* (ARRL) view community disaster preparedness and response as top priorities for their respective organizations and for the American people. As such, our organizations have come together to provide mutual support for *Citizen Corps*.

Under the direction of DHS, *Citizen Corps* is a community-based initiative to engage all citizens in homeland security and community and family preparedness through public education and outreach, training opportunities, and volunteer programs. Programs under the *Citizen Corps* umbrella include federally sponsored programs and other activities that share the goal of helping communities prevent, prepare for, and respond to terrorism, public health issues, and disasters of all kinds. It encourages all Americans to take an active role in building safer, stronger and better prepared communities.

ARRL is a non-commercial membership association of radio amateurs organized for the promotion of interest in Amateur Radio communication and experimentation, for the establishment of networks to provide communications in the event of disasters or other emergencies, for the advancement of the public welfare, and for the representation of the Radio Amateur in legislative and regulatory matters. ARRL is the principal organization representing the interests of the more than 650,000 U.S. Radio Amateurs. Because of its organized emergency communications capability, *ARRL's* Amateur Radio Emergency Services (ARES) can be of valuable assistance in providing critical and essential communications during emergencies and disasters when normal lines of communications are disrupted. *ARRL* conducts emergency communications training and certifies proficiency in emergency communications skills.

Together DHS and the *ARRL* agree to work collaboratively to:

- ✓ Raise public awareness about the use of Amateur Radio as a public safety resource;
- ✓ Provide training and accreditation for Amateur Radio Emergency Communications;
- ✓ Promote the formation of local *Citizen Corps Councils* and assist those Councils with providing public education, training and volunteer service opportunities that support first responders, disaster relief organizations, and community safety efforts;
- ✓ Publicly acknowledge the affiliation of *Citizen Corps* and the *ARRL*, which may include website links, co-logos on publications, and reference in printed materials, including articles and news releases;
- ✓ coordinate their respective activities to further their shared mission; and
- ✓ Keep each other informed of activities conducted in support of *Citizen Corps* and to provide an annual report summarizing those activities.

On this 21st day of June 2003, both parties enter into this agreement in good faith and agree to pursue the shared mission as stated.

Signed: Michael D. Brown
Under Secretary, FEMA

Jim Haynie
President, ARRL