

# ALAMEDA COUNTY EMERGENCY MANUAL

*Welcome to the current edition of the Alameda County "Instant Trainer" Emergency Manual. This manual was prepared to provide emergency service information for Amateurs responding to incidents in the Alameda County Operational area.*

*This "Instant Trainer" contains a selection of reference material and training information from a wide variety of sources. In compiling information for this "IT" it quickly became evident that there was a tremendous wealth of relevant information to choose from. It became the task of the editors to sort through this information and select that material which met two main criteria, information that is of vital importance in an emergency, and information for advance preparation of equipment and materials prior to an emergency event.*

*It is the hope of the editors that the Amateur Radio Operator interested in providing emergency communications services take it upon themselves to become familiar with the local area agencies and personnel and to become proficient in emergency communications by taking advantage of training meetings and exercises that are conducted on a regular basis in the Alameda County area.*

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## ***WHAT TO DO FIRST IN CASE OF AN EMERGENCY***

- 1 CHECK THAT YOU, YOUR FAMILY AND PROPERTY ARE SAFE AND SECURE BEFORE YOU RESPOND AS AN ARES VOLUNTEER.**
- 2. MONITOR 147.240 MHz, PLUS . DO NOT TRANSMIT BUT ONLY LISTEN UNLESS DIRECTED OTHERWISE**
- 3. READ THE PAGE IN THIS MANUAL THAT APPLIES TO YOUR CITY AND FOLLOW INSTRUCTIONS**
- 4. CONTACT YOUR LOCAL EMERGENCY COORDINATOR, OR HIS/HER DESIGNEE, FOR FURTHER INSTRUCTIONS.**

## ***WHAT TO DO IN CASE OF AN EMERGENCY***

### **FREMONT, UNION CITY AND NEWARK**

**LISTEN-----**to 147.015 MHz plus 600 kHz  
(If a PL is required use 103.5 Hz.)

This repeater will be used for the Resource Net. The net control station will indicate when you can check in.

Be sure to listen carefully for instructions. See the next page for your city's tactical and simplex frequencies.

***IF THE REPEATER IS DOWN USE ITS OUTPUT FREQUENCY IN SIMPLEX MODE***

***FREMONT, UNION CITY AND NEWARK  
TACTICAL and SIMPLEX  
FREQUENCIES***

These frequencies are reserved solely for handling traffic. Do not use them to advise of your availability. Go to the Resource Net Frequency for that purpose on 147.015, Please see previous page.

- **Fremont's** tactical traffic is on repeater, 146.940 MHz minus 600 kHz. Fremont's simplex frequency is 145.700 MHz
- **Union City's** tactical traffic is on repeater 146.610 MHz minus 600 kHz. PL 123.0 Hz. Union City has a new repeater available for its use, namely, 443.725 MHz plus 5 MHz, PL 118.8 Hz. Union City's simplex frequency is 146.415 MHz.
- **Newark's** tactical traffic is on these simplex frequencies: primary 144.365 MHz, secondary-146.555 MHz.

## ***WHAT TO DO IN CASE OF AN EMERGENCY***

### **IN HAYWARD, CASTRO VALLEY, SAN LORENZO AND SAN LEANDRO**

**LISTEN**-----to 145.130 MHz minus 600 kHz, P/L 127.3 Hz and follow instructions. You may be directed to one of the following:

444.825 MHz plus 5 MHz, P/L 127.3 Hz

52.76 MHz plus 1 MHz, P/L 114.8 Hz

Simplex frequencies: Hayward 145.565 MHz, San Leandro  
146.445 MHz

**LIST  
CHE**

***WHAT TO DO IN CASE OF AN EMERGENCY***

**IN NORTHERN ALAMEDA COUNTY  
BERKELEY, ALBANY, EL CERRITO AND EMERYVILLE**  
**LISTEN -----** to and then  
**CHECK IN -----** on 147.480 MHz simplex  
or 440.900 MHz plus 5 MHz, PL 114.8 Hz

**IN ALAMEDA, OAKLAND AND PIEDMONT**  
**LISTEN -----** to and then  
**CHECK IN -----** on 146.880 MHz minus 600 kHz, PL 77 Hz

***IF REPEATER IS DOWN USE ITS OUTPUT FREQUENCY IN SIMPLEX MODE***

## ***WHAT TO DO IN CASE OF AN EMERGENCY***

### **IN DUBLIN, PLEASANTON AND LIVERMORE**

**LISTEN** ----- to      and then

**CHECK IN** ----- on      147.120 MHz plus 600 kHz

(alternate is      145.350 MHz minus 600 kHz)

***IF REPEATER IS DOWN USE ITS OUTPUT FREQUENCY IN SIMPLEX MODE***

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H= Home                      W= Work

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H= home

W= work

PLEASANTON and LIVERMORE EC  
also DISTRICT EC

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H = Home

W= Work

# ***MUTUAL AID FREQUENCIES***

147.240 MHz plus 600 kHz    AlCo OES San Leandro  
 444.200 MHz plus    5 MHz    AlCo OES San Leandro

## **How to communicate with Alameda County using packet radio: using 145.030 MHz**

<u>EOC</u>	<u>Location</u>	<u>Alias</u>	<u>PBBS</u>	<u>Keyboard</u>
AlCo	Dublin	ALCO1	W6VOM-11	W6VOM-1
Alternate AlCo	San Leandro	ALCO2	W6VOM-12	W6VOM-2

The San Leandro Hill digipeater's alias is ALCO3

3952 KHz + -	Western Public Service Net
7255 KHz + -	WESTCARS
145.695 MHz Simplex	National Alerting Frequency
<b>146.520 MHz Simplex</b>	<b>National Calling Frequency</b>
144.990 MHz Simplex	NCPA BBS Emergency Frequency
223.500 MHz Simplex	General Calling Frequency
446.000 MHz Simplex	General Calling Frequency

## *INITIAL ACTION CHECK LIST*

The net control station (NCS) and/or ARES 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 "Ready" kit.
- Obtain tactical call sign for your location/assignment.
- Initiate personal event log.
- Enter assigned frequency(s) on a 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.
- Use tactical call sign for your location, while observing FCC's ten-minute identification rule.
- Monitor your assigned frequency **AT ALL TIMES**. Notify the net control station (NCS) if you have to leave.

## ***WHAT WILL BE EXPECTED of YOU and HOW to GO ABOUT IT***

*If an emergency occurs, follow instructions given on previous pages. The net control station in your area will provide additional instructions. These very likely will 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**

1. Check-in with the assigned contact (probably the Communications Unit Leader).
2. Get ready to operate. Check all connections.
3. Initiate log and check-in with net control. Get tactical call sign for your location.
4. Enter assigned frequency on log sheet and on frequency plan if it is being used. Record backup frequency.
5. Use log form for message record including short subject title.
6. Use formal message form when a precise record is required. Be sure to get sender's name and title.
7. Use tactical call sign for your location observing proper use of your own call for identification. Do not identify excessively with your FCC call sign; your tactical call sign is more important.
8. Remember: your primary function is message handling. Keep chatter to a minimum. Do not spread rumors. Refer members of the press or other media to those in charge.
9. At all times monitor your assigned frequency. Use a second rig or scanner to listen around. **DO NOT** leave the frequency or fail to listen without checking with net control.

**NOTE:** *It is a violation of Federal Law to repeat anything heard as a rumor by repeating messages or information heard on a scanner. Broadcast only messages or information given to you for broadcast by a responsible official.*

## OPERATIONAL DO'S AND DONT'S

- Do listen for your tactical call sign.
- Do answer promptly when called.
- Do keep the channel available for others wanting to break in.
- Do keep all transmissions short.
- Do use simplex for your personal use if feasible- avoid using a high-level repeater for long periods.
- Do know how to interrupt the net.
- Do use short, simple phrases.
- Do establish contact before sending messages that are longer than just a few words.
- Do acknowledge all transmissions to you.
- Do state questions in a positive form.
- Do answer questions as directly as possible; do not explain unless asked for a clarification.
- Do ask for whom the message is intended if not obvious.
- Do let third parties speak over your radios.
- Do shield your microphone from the wind.
- Do use ear plug or earphone unless someone else has to hear.
- Do bring charged spare batteries.
- Do bring a higher gain antenna for your HT other than rubber duck.
- Don't use VOX or a locking PTT switch.
- Don't wear HT on belt and try to talk.
- Don't leave a net without checking out.
- Don't make unnecessary transmissions.
- Don't use CW shorthand jargon, e.g. Q signals or 10-signals; **instead use** "affirmative", "will do", "I copy", "I understand" etc.
- Don't talk louder in noisy environment.
- Don't acknowledge the existence of a jammer in your transmissions.
- Don't assume interference is always due to a jammer, it could be that someone has a PTT switch closed.

## ***OTHER IMPORTANT THINGS TO DO BEFORE YOU HEAD TO YOUR ASSIGNMENT***

**The very first and most important thing** is to make sure that your family and others that might be dependent on you are safe and in a secure location. No one will be expected to perform well in an emergency if there exists the distraction of being concerned about the well being of others close to them. You may find that you have to 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. You may find your family is more supportive of you going off on weekends to special events if they understand the training you are getting or giving will be utilized when the real emergency occurs.

**Workman's Compensation.** You will be covered by this insurance for any personal harm or injury you may suffer from the time you leave your home and return only if you are signed up in advance by a "competent authority". You may be issued an assignment number, so bring that with you. When you arrive at your staging area request the coverage of the insurance and ask if you should deal with any paperwork to make you an official member of the insured group.

All agencies are prepared to extend their Workman's Compensation to include Disaster Service Workers; this includes the American Red Cross, local police and fire departments, and the California Department of Forestry. Special insurance coverage is provided by private groups such as bicycle clubs who put on special events utilizing your services; don't hesitate to ask the event coordinator.

**Mutual Aid:** Registered "Disaster Service Workers" (DSW), in the event of an emergency, may be "called-out" to respond in their local community. The official call-out is the mechanism to begin insurance coverage (through Workers' Compensation) of registered worker. 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. If that occurs, you will be called-out by the city in which you are registered, and told to report to the city that needs help. Workers' Compensation is extended to the registered worker by the city in which they are registered.

**REMEMBER:** DO NOT report to either your local city, or a city that needs help, **UNLESS** you are (1) registered as a DSW, and (2) you have been officially called-out and told where to report. Otherwise, Workman's Compensation **WILL NOT** apply.

## ***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 either "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". (This net is considered to be informal in its approach.) Nets may also be declared "CLOSED", which directs amateurs to pass traffic through the NCS, or obtain the permission of the NCS before communicating directly with another station.

The ability to remain cool, calm and collected is needed by a good NCS. There is no doubt that being NCS can be a pressure-cooker assignment and it's easy to become frustrated or angry. If you have a frustrating problem then ask for help from other members of the net. Anger doesn't solve the problem! Probably the best way to avoid getting angry is to develop a strong sense of humor. Humor can diffuse tense situations.

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 a weekly ARES net. Contact your local Emergency Coordinator: that person will be GLAD to help you find opportunities.

### **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, it is suggested that you have a second operator who is in a position to transcribe incoming traffic. This keeps your hands free to operate the radio AND take notes as necessary to keep the net moving. Also recommended is an operating position with adequate workspace and good access to the radio's controls. Also, if operating in close proximity to other important operations, consider using headphones to prevent distracting/being distracted by others.

When an event goes beyond the boundaries of a single city/agency to the point where mutual aid is necessary, it becomes necessary to create the next type of net; the "Resource Net".

*Remember*, other agencies such as Red Cross can establish their own TACTICAL NETS . The 'other' tactical nets should have someone monitoring the main TACTICAL NET, so that communications between that agency and the TACTICAL NET can occur.

#### **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 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.

It is conceivable that this net could become cluttered with a high volume of traffic. It may be necessary to create further COMMAND NETS to allow this traffic to flow efficiently.

## **NET CONTROL BASICS**

One of the most essential parts of a traffic or emergency net is the character and skill of the Net Control Station (NCS). The NCS coordinates all net activity and shapes the net operation. The basic duties of the NCS are:

- 1. CONTROL THE NET.** The NCS is in charge of the net while the net is in session. The NCS is responsible for controlling who uses the frequency. This needs to be balanced with the fact that you are managing a group of volunteers. As NCS you will need to determine whether a tight or loose net discipline is required for the incident!
- 2. HAVE A CLEAR SIGNAL.** Net Control should have a commanding signal, i.e. everyone should be able to hear the NCS.
- 3. RESOURCE MANAGEMENT.** NCS must keep track of which resources are on the net and who has departed. The NCS must also know what resources each operator brings to his assignment.
- 4. IDENTIFY A BACKUP NCS.** Find an alternate NCS so serve as backup.
- 5. 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. An organized recording system keeps confusion down.
- 6. 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. Try to remind the other stations on the net *TACTFULLY* of this same procedure.
- 7. MAINTAIN AN EVEN PACE.** Encourage operators to pass messages at an even rate, not going too slow or fast. 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. Request that stations ask you for fills in the text at the end of each paragraph and confirm receipt at the end of the message. If unsure, request the station to repeat the message.

**8. 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 perfectly legal as long as the FCC station identification requirements are met. (Every 10 minutes when using the channel.)

**9. TRAFFIC MANAGEMENT.** Different nets handle different types of traffic. Know which types of nets are currently in operation, and where those nets are being conducted. If a certain message is inappropriate for your net, direct the calling station to another net and frequency where the traffic may be better handled.

**10. LISTEN.** After asking for reports or soliciting traffic, *LISTEN!*

A. Take down as many calls as you can distinctly hear before acknowledging anyone.

B. Acknowledge all the stations that you heard, then yield the frequency over to a single station. 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.

## ***EARTHQUAKE NET CONTROL OPERATOR CHECKLIST***

*THIS SECTION DESCRIBES THE PROCEDURE FOR A NCS IMMEDIATELY AFTER AN EARTHQUAKE OCCURS.*

- 1) LISTEN** to the local area RESOURCE frequency. Ask if there is a resource net control station present. If there is not, then assume the role of Resource Net Control. Resource Net Control should be your only task until you are relieved from the responsibility. If required to control the frequency, declare a closed directed net. Be prepared to share the frequency with other net control stations as directed by the area Emergency Coordinators. Be prepared to use the repeater output frequency if the repeater is down. Before instructions are provided by the area Emergency coordinators direct people to prepare themselves, standby, and monitor this frequency for instructions. Communicate to those checking into the Resource Net, the information provided by the area Emergency Coordinators.
- 2) START A LOG.** Record the stations checking into the Resource Net and what resources they have available, most importantly, themselves. Record what city they live, in if they are a registered volunteer with that city, and when they will be available. Provide this information to the area Emergency Coordinators.
- 3) TAKE REPORTS** of life-threatening damage or injury only, NOT “I see smoke in the distance” or “my house is OK”. Delay the passing of Health and Welfare traffic (for the moment). *CONCENTRATE ON THE BIG PICTURE.* Find out where damage is greatest so that resources can be concentrated there. *BE FLEXIBLE.*
- 4) CHECK-IN** with RESOURCE NET CONTROL. Ask all amateurs to stand by on the RESOURCE NET and be ready for possible assignment.
- 5) POST A MONITOR** on the NATIONAL ALERTING FREQUENCY, 145.695 Simplex.
- 6) ASSIGN OPERATORS, IF 'CALLED OUT' BY A COMPETENT AUTHORITY,** to local Emergency Operations Centers, Red Cross Chapters, hospitals and other emergency locations as appropriate. If possible, dispatch at least two amateurs to each site. Fill out an INCIDENT ASSIGNMENT WORKSHEET for each location and log each amateur’s response. Insure that logs are being filled out at each location.
- 7) ESTABLISH A HOSPITAL NET** if indicated. Appoint a NET CONTROL and ask for volunteers to respond to local hospital emergency

rooms. Determine if the hospitals are accepting any patients.

**8) CONDUCT A BRIEFING** on the net once the nature of the incident and its approximate size have been determined,. Say what you know to be true and factual; avoid repeating rumors. Estimate the amateur radio requirements for the next 12 hours and ask for volunteers to contact RESOURCE NET CONTROL for assignment. For those amateurs who do not have an assignment, have them monitor the RESOURCE NET for informational updates on an hourly basis and prepare their emergency equipment and supplies for use.

**9) MAINTAIN RADIO DISCIPLINE.** Instruct everyone not having an immediate assignment to monitor the RESOURCE Net. Accept non-emergency traffic as time and conditions warrant.

**10) TURN OVER THE OPERATION** to your relief and get some rest once your shift is completed. You cannot do it all yourself, and we need you rested and refreshed for your next scheduled shift. **DO NOT** work more than 12 hours on a shift and take frequent breaks while on shift. Have another operator fill-in while you take a break. **DO NOT** let operators in the field work more than 12 hours unless there is absolutely no alternative.

*(The editors gratefully acknowledge the assistance of Mark Keiser, previous EC City of Fremont, who expertly prepared this section; his working source was the Santa Clara Net Control Handbook.)*

## *PRINCIPLES OF DISASTER COMMUNICATIONS*

- 1. Keep the QRM 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 formal traffic 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 by the radio operator 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. NTS and ARES leadership coordination.** Within the disaster area itself, the ARES is primarily responsible for emergency communications support. The first priority of those NTS operators who live in or near the disaster area is to make their expertise available to their Emergency coordinator (EC) where and when needed. For timely and effective response, this means that NTS operators should talk to their ECs before the time of need so they will know how to best respond.

## ***BASIC DEPLOYMENT EQUIPMENT CHECK LIST***

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:

- 2-METER HT
- 2-METER MAGMOUNT  
ANTENNA AND COAX
- EAR-PHONE
- PAPER AND PENCIL
- ARES ID CARD/DSW CARD
- EXTRA BATTERIES
- APPROPRIATE CLOTHING
- FOOD AND WATER

The majority of these items should be kept in a "Ready Kit". Just pick it up on your way out the door for deployment. You might also consider the items on the following list for inclusion in this ready kit, designed to allow you to stay in the field for up to 72 hours.

## ***WHAT TO HAVE READY TO BRING***

### **EQUIPMENT**

#### **• Instant Trainer**

- Transceiver(s) (Identified with your call sign)
- Scanner
- Headphones or earphone
- Extra battery packs (charged) or external battery
- Cigarette lighter power adaptor
- AC power supply & cord
- Battery charger - fast preferred
- 50' coax with connectors (including various adaptors)
- Portable antenna (mag mount, Hot Rod, etc.)
- Flashlight, batteries and spare bulbs
- Special adapters for your rig (DOES it have a standard power plug?)
- Soldering iron, solder, miscellaneous small tools, wire, plugs.
- Steno pad or notebook
- Message forms (current version)
- 50' of 1/8" inch nylon cord
- Spare fuses
- Repeater directory
- Duct and plastic friction tapes

### **'READY KIT'**

The 'Ready Kit' 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.

Non-food contents of the kit are 'minimums', but if you are a good 'Scout' they can sustain you for about 10 days without too much discomfort. Don't pack much more than shown on the list.

The clothing list assumes that you will wash underwear, socks and shirts every second day using the "cold water" detergent in the kit. If a washing machine is not available, you can use a 5 gallon bucket, or can. If you are 'on the move', put clothing in the covered bucket with water and soap. Vehicle movement will agitate. Rinse thoroughly to avoid skin irritation.

## **SPECIAL ITEMS**

- FCC License
- Disaster Service Worker and/or RACES ID
- Credit cards, or cash
- Tape recorder (Tape messages as they come in. )
- Spare tapes and batteries
- A minimum of \$2.00 in pay telephone change
- Telephone Company 'calling card. '
- Deck of cards (for 'off duty' )
- Pens and pencils
- Steno or spiral notebook
- RACES - ARES Manual
- Message forms (current edition)
- Maps (Thomas Brothers) and State highway maps

## **FOOD AND SHELTER**

On most RACES and ARES assignments, food will be provided. HOWEVER, the wise man never takes a chance as the food cart may 'miss the turnoff'. The following items are recommended for the 'Ready Kit'. The food portion of this kit should be checked at least every three months, and the entire contents replaced at least annually. Leave a note in the kit showing the date it was last checked, and the date items were replaced.

- One each Nalley's or Dinty Moore beef stew, or, freeze-dried dinner. (Alpine, Richmor, or equal)
- One each Maruchan "Instant Lunch"
- Three each Dry soup (Lipton's -- your choice)

- Two each Packet of salt and pepper (miniature)
  - Two each Fruit (small canned 'luncheon' type)
  - Instant coffee, tea or cocoa
  - Ten each Sugar substitute & powdered cream
  - One gal. water (72 hours )
  - Five instant oatmeal packets
  - Five granola bars
  - Two boxes throat lozenges or breath mints, to ease hoarseness
  - Knife, fork and spoon
  - Sierra cup or equal
  - Stove (sterno can, Coleman, Roberts, etc. )
  - Sleeping bag
  - Cot-lightweight
  - Pillow
  - Tent (visqueen tube tents are suitable for a short period of time.)
  - Three pair vinyl gloves
- NOTE: If your RACES - ARES 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 congregate 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. That's why the food list is provided.

## SUGGESTED MENUS

Food in the kit is enough to sustain you for about a day-and-a-half. When cooking, it's a good idea to cook with someone. Food for two can feed three.

A single Sierra cup serves as the cooking pot and cup. Here are some meal examples:

Breakfast: Boil water in Sierra cup. Add oatmeal. Top with sugar substitute, powdered cream and a little water. Eat the oatmeal, then fix cocoa or coffee. Have fruit here or at lunch.

Lunch: Boil water in the cup. Add water to Instant lunch. Boil second cup of water and make coffee. Granola bar for dessert.

Dinner: Prepare freeze-dried meal, or open can of stew and heat. Have canned fruit for dessert with a cup of coffee, tea or cocoa. Soup?

## CLOTHING

- Boots for work periods, tennis shoes for off-duty.
- Jacket (Weather changes quickly)
- Nylon \* 'windbreaker' or light sweater
- Underwear (2 changes)
- Socks (2 changes)
- Hat
- Long sleeve shirt plus 1 on your back
- Rainwear (a lightweight poncho works great! )
- Pants (shorts are usually not recommended)
- Handkerchiefs (2)

\* No Nylon on fire assignments. Use wool.

## PERSONAL ITEMS

- Deodorant - high priority
- Toothbrush and toothpaste or denture cream
- Medicines (Vitamin pack)
- Glasses (reading and dark)
- Aspirin & antacids
- Sunscreen
- Comb or brush
- Camera and film
- Razor & shave cream (or electric)
- Deodorant soap (Dial, Irish Spring)
- Small bag, or box, 'cold water' laundry soap
- Towel and washcloth
- Travel alarm
- Pocket knife
- Flashlight and spare batteries and bulb
- Roll of toilet paper in a ziplock bag
- First Aid kit (in vehicle?)
- Ear plugs, to allow you to sleep in a shelter
- Mask covering eyes, to allow you to sleep in a shelter
- Leather gloves

## RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
<b>101</b>	<b>R</b>	<b>HXC</b>	<b>KB6JAW</b>	<b>20</b>	<b>FREMONT CA</b>	<b>1405</b>	<b>JAN10</b>
<p>TELEPHONE NUMBER: <b>(510) 555-1212</b></p> <p><b>BT</b></p> <p><b>ALL IS WELL HERE DESPITE</b>  <b>WHAT YOU HEAR ON TV.</b>  <b>CALL AUNT HELEN AND LET</b>  <b>HER KNOW WE ARE OK.</b></p> <p><b>BT</b></p> <p><b>DAVID AND CATHY</b></p>				<p>THIS RADIO MESSAGE WAS RECEIVED AT:</p> <p>AMATEUR STATION _____</p> <p>PHONE: _____</p> <p>NAME _____</p> <p>STREET ADDRESS _____</p> <p>CITY, STATE, ZIP _____</p> <p><i>(MESSAGES ARE TYPICALLY SENT WITH FIVE WORDS EACH LINE TO FACILITATE THE COUNTING OF THE WORDS. IN ACTUALITY MESSAGES MAY BE OF ANY LENGTH, BUT SHOULD BE KEPT BRIEF AS POSSIBLE.)</i></p>			
FROM		DATE		TIME			
REC'D				SENT			
				TO			
				DATE			
				TIME			

# RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
<p style="text-align: right;">THIS RADIO MESSAGE WAS RECEIVED AT:</p> <p style="text-align: right;">AMATEUR STATION _____</p> <p style="text-align: right;">PHONE _____</p> <p style="text-align: right;">NAME _____</p> <p style="text-align: right;">STREET ADDRESS _____</p> <p style="text-align: right;">CITY, STATE, ZIP _____</p>							
FROM	DATE	TIME	SENT		TO	DATE	TIME
REC'D							

## ***STANDARDIZED EMERGENCY MANAGEMENT SYSTEM-SEMS***

<b>SEMS FUNCTION</b>	There are five designated functions within SEMS. They are Management ("Command" at the Field Level), Operations, Planning/Intelligence, Logistics, and Finance/Administration. These functions are described below.
<i>Management</i>	The EOC Director has overall responsibility for all emergency functions. The Director may retain and/or delegate authority for functions listed below.
<i>Operations</i>	Coordinates field emergency response activities and implements the priorities established by management. Operation section (at city level) may include Police, Fire, Public Works, Care and Shelter and EMS. The operations section may also coordinate with other local agencies.
<i>Planning/ Intelligence</i>	Oversees the collection, evaluation, verification, and display of current information related to the emergency. Information sources include Operations field coordinators, direct contacts, and all available public and private sources. Planning is also responsible for preparing action plans, and maintaining documentation related to the emergency.
<i>Logistics</i>	Oversees the acquisition, storing, and distribution of essential resources and support services needed to manage the emergency. Logistics tracks the status of resources. Logistics provides services to all field units in terms of obtaining and meeting their personnel, materials, and equipment needs, including communications.
<i>Finance/ Administra- tion</i>	Oversees the cost accounting associated with the emergency. Finance/Administration prepares vendor contracts, maintains records of expenditures for personnel and equipment, and maintains records and processes claims. It provides preliminary and follow-up estimates of damage costs and losses.

### SEMS LEVELS

There are five designated levels in the SEMS organization: field response, local government, operational area, regional, and state. The type and severity of the emergency will determine the extent of activation for each level.

<i>Field Response</i>	The Field Response level commands emergency response personnel and resources to carry out tactical decisions and activities in direct response to an incident or threat.
<i>Local Government</i>	Local Government includes cities, school districts, or special districts (including water utilities).
<i>Operational Area</i>	The Operational Area concept represents the intermediate level of the state emergency organizations, consisting of a county and all political subdivisions, including cities and special districts, within the county area.
<i>Regional</i>	Because of its size and geography, the state has been divided into six mutual aid regions. In SEMS, the regional level manages and coordinates information and resources among operational areas within the mutual aid region, and also between the operational areas and state level.
<i>State</i>	The state level manages and coordinates state resources in response to the emergency needs of the other levels, and manages and coordinates mutual aid among the mutual aid regions and between the regional and state levels. The state level also serves as the coordination and communication link between the state and federal disaster response system.

# ***COMMUNICATIONS CONFIDENTIALITY***

## **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. Examples of these types of messages are:

- A. Messages concerning the death or injury of victims of the incident.
- B. Messages concerning the death or injury of emergency responders at the incident.
- C. Messages that affect the health and well-being of those people in and adjacent to the incident area.
- D. Messages of such a nature that the disclosure of the information could cause panic or other grievous harm to individuals, public or private.
- E. Messages of a private nature.

All message traffic should be evaluated for its sensitivity and transmitted to its destination via the most appropriate method.

## **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 of 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 broadcast 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.

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-----  
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PLEASE SEE SOUTH COUNTY

H= home      W= work

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H= home

W= work

# WEEKLY NETS OPERATING IN THE BAY AREA

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.

**Southern Alameda County**

<b>Monday</b>	7:30 P.M.	145.130 MHz minus 600 kHz	East Bay ARES / RACES
<b>Tuesday</b>	7:30 P.M.	147.015 MHz plus 600 kHz	Tri-Cities ARES / RACES
		(Tri-Cities includes Fremont, Union City and Newark)	
	8:00 P.M.	146.115 MHz plus 600 kHz	Santa Clara County ARES
		(This net is followed by an excellent training session)	
	8:00 P.M.	147.240 MHz plus	Alameda County ARES

**Northern Alameda County-Berkeley and Albany**

<b>Thursday</b>	7:15 P.M.	147.480 MHz simplex and / or 440.900 MHz plus 5 MHz PL 114.8 Hz	NALCO ARES / RACES
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**Alameda County, West of the Altamont Pass**

<b>Wednesday</b>	7:00 P.M.	147.24 MHz plus 600 kHz	ALCO RACES
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**Alameda, Oakland and Piedmont**

<b>Thursday</b>	7:30 P.M.	146.880 MHz minus 600 kHz PL 77 Hz	Oakland ARES / RACES
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**Pleasanton and Livermore**

<b>Monday</b>	7:00 P.M.	147.120 MHz plus 600 kHz PL 100	ARES / RACES
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## ***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 QRM. Low power also conserves batteries.
2. **Use simplex, whenever possible.** ARRL recommends 146. 52 MHz, but it's a good idea to have at least one other simplex channel available. Use a gain antenna at fixed locations for simplex operation.
3. **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.
4. **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.
5. **Monitor local ARES net frequency,** when otherwise not busy.
6. **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.
7. **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.

## ***HAZMAT INCIDENTS***

The term "hazardous materials" (HAZMAT) refers to any substances or materials which, if released in an uncontrolled manner (e.g. spilled), can be harmful to people, animals, crops, water systems, or other elements of the environment. The list is long and includes explosives, gases, flammable and combustible liquids, flammable solids or substances, oxidizing substances, poisonous and infectious substances, radioactive materials, and corrosives.

One of the major problems is to determine what chemicals are where and in what quantities. Various organizations in the US have established or defined classes or lists of hazardous materials for regulatory purposes or for the purpose of providing rapid indication of the hazards associated with individual substances. As the primary regulatory agency concerned with the safe transportation of such definitions of various classes of hazardous materials, established placarding and marking requirements for containers and package, and adopted an international cargo commodity numbering system.

The DOT requires that all freight containers, trucks and rail cars transporting these materials display placards identifying the hazard class or classes of the materials they are carrying. The placards are diamond-shaped, 10-inches on a side, color-coded and show an icon or graphic symbol depicting the hazard class. They are displayed on the ends and sides of transport vehicles. A four-digit identification number may be displayed on the placard or on an adjacent rectangular orange panel. If you have spent time on the roads you have undoubtedly seen these placards or panels

displayed on trucks and railroad cars. You may recognize some of the more common ones, such as 1993, which covers tankers placarded 1203 filling the underground tanks at the local gasoline station.

In addition to the placards, warning labels must be displayed on most packages containing hazardous materials. The labels are smaller versions of the placards (4-inches on a side). In some cases, more than one label must be displayed, in which case the labels must be placed next to each other. In addition to labels for each of the DOT hazard classes other labels with specific warning messages may be required. Individual containers also have to be accompanied by shipping papers (if you can safely get close enough!) which contain the proper shipping name, the four-digit ID numbers and other important information about the hazards of the material.

Details of the placards and emergency response procedures can be found in the comprehensive DOA Emergency Response Guidebook, copies of which may be available for review at your local CD, police, sheriff or fire department. You may also want to consult your Local Emergency Planning Committee (LEPC) or State Emergency Response Commission (SERC) concerning what role Amateur Radio might have in your local plan. For more information about hazardous materials in general contact FEMA, Technological Hazards Division, Federal Center Plaza, 500 C St., SW, Washington, DC, 20472 (202) 646-2861.

## ***HAZMAT INCIDENT GUIDELINES***

- Approach the scene cautiously - from uphill and upwind. If you have binoculars, use them!
- Try to identify the material by any ONE of the following:
  - The four-digit number on a placard or orange panel.
  - The four-digit number (preceded by the initials "UN/NA") on a shipping paper or package.
  - The name of the material on the shipping paper, placard or package.
- Call for help immediately and let the experts handle the situation. Do not attempt to take any action beyond your level of training. Know what you are capable of doing.

## ***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

# **AMERICAN RED CROSS**

## **Location of offices in the San Francisco Bay and related areas**

### **Union City Office**

33641 Mission Blvd.  
Union City CA 94587  
(510) 429-3300

### **Alameda Office**

2017 Central Ave.  
Alameda, CA 94501  
(510) 522-2715

### **Livermore Office**

373 N. L St.  
Livermore CA 94550  
(925) 294-7800

### **Concord Office**

1300 Alberta Way  
Concord, CA 94521

### **Richmond Office**

3200 MacDonald Ave.  
Richmond, CA 94804  
(510) 307-4400

### **Oakland Office**

3901 Broadway  
Oakland, CA 94611  
(510) 595-4400

### **Marin Office**

712 5th Ave.  
San Rafael, CA 94901  
(415) 721-2365

### **Solano County Office**

508 Alabama St.  
Vallejo CA 94590  
(707) 643-5683

### **Palo Alto Area Chapter**

400 Mitchell Lane  
Palo Alto, CA 94301  
(650) 688-0432

### **San Francisco Chapter**

85 Second St., 7th Floor  
San Francisco, CA 94109  
(415) 202-0634

### **Mission Service Center**

810 Valencia St.  
San Francisco, CA 94110  
(415) 206-7940

### **San Mateo Office**

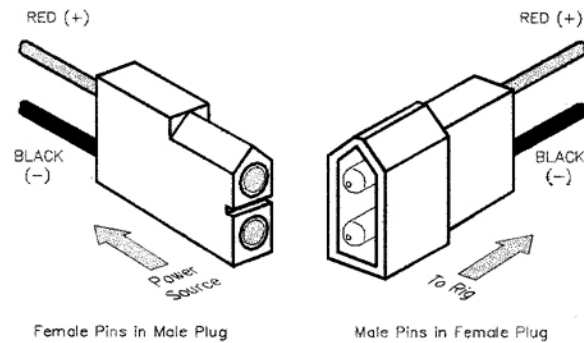
1710 Trusdale Dr.  
Burlingame, CA 94010  
(650) 259-1750

# ***AMERICAN RED CROSS FREQUENCIES***

<b>FREQUENCY</b> MHz	<b>CHANNEL CODE</b>	
47.420	National frequency	Red
47.540	Local Use	Blue
47.460	Local Use	Tan
47.500	Local Use	Black
47.580	Local Use	Purple
47.620	Local Use	Green

(all are in simplex mode)

# POWER CONNECTOR STANDARD



MOLEX Series 1545 connectors are used to promote compatibility and interchangeability among personal VHF/UHF radio equipment and disaster sites. Polarity should always be verified prior to connecting to radios and power supplies.

Thanks to ARRL and the ARES Field Resources Manual, p.68

**Credits:** This manual has been prepared by borrowing freely from publications generated by the Contra Costa and Santa Clara County ARES / RACES organizations, in particular the section related to Net Control from Santa Clara's excellent *Net Control Handbook*. We thank the ARES / RACES members of both groups for their outstanding contributions to emergency communications.

The Editors also included in the Instant Trainer several very useful sections found in the ARRL publication, *ARES Field Resources Manual. A Quick Trainer-----*. Our sincere thanks.

The concept of an "Instant Trainer" should be credited to David Hunt KB6JAW. His contributions are sincerely appreciated.

END OF DOCUMENT

Any suggested changes or corrections are welcome. Please transmit them to your EC so that the master copy can be changed.

Best regards,

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