Appendix VII: Operations on a Net

VII.1 Overview	
	This appendix summarizes many of the definitions, practices and protocols used by SFACS communicators operating on a net in an emergency or a drill.

VII.2 Types of Messages, listed by priority

Emergency	Communications having life or death urgency.
Priority	Important messages relating to property damage. Messages having a specific time limit. Official messages not covered in the emergency category. Messages directly relating to safety and providing shelter and food to displaced people.
Outgoing Welfare	Health and Welfare communications originating in the disaster area on behalf of disaster victims and directed to relatives and friends in other areas. Outgoing Welfare traffic for emergency responders may be given priority.
Incoming Welfare	Health and Welfare communications originating outside the disaster area. The quantity of these communications should be minimized as they are destined for either non-disaster areas where telephone service is available or for disaster areas where the ability to deliver is uncertain.
Routine	Other emergency-related traffic such as informational or staffing traffic handled via SFACS will fall into this category.

VII.3 Definitions

	A radio net consists of several stations on one radio channel (by simplex or repeater), following organized procedures and directed by a Net Control Operator (for short, Net Control). There are two types of nets:
Directed Nets	All stations on the net must get permission from Net Control before using the net. All calls should be addressed to Net Control. When appropriate, Net Control may give two stations on the net permission to talk directly with each other.
Open Nets	Net Control permits all stations on the net to call one another directly. Net Control intervenes only to straighten out confusion or to avoid conflicts.

VII.4 SFACS Protocols

Identification	Use tactical callsigns whenever possible to identify your transmission and to address another station. This is done so that the net can be conducted without regard to which operator is at each station. Use your FCC callsign at the end of your last transmission in a series or at the end of an unanswered call. If you are in a long conversation or if you are a net control operator, identify with your FCC callsign at least every 10 minutes.

During drills, include the phrase "this is drill traffic only" with your FCC callsign.

Urgent Traffic	If you have emergency traffic and need to have immediate access to the net, say "Emergency" and identify yourself with your callsign then wait to be acknowledged by Net Control.

If you have priority traffic and need to have rapid access to the net, say "Priority" and identify yourself with your callsign then wait to be acknowledged by Net Control.

Calling Another Station

If Net Control has given you permission to communicate directly with another station on the net, then remember that you are calling the other station. The standard SFACS protocol for calling another station is to use their callsign then your callsign, for example, "EOC this is EDCC3" then wait for their response.

Using VOX

Do not use VOX (voice-activated transmission) or a locking PTT switch. Manually activating push-to-talk (PTT) button allows you to control exactly when to transmit and avoids inadvertent transmissions.

Courtesy Tones

Almost all repeaters have a courtesy tone (which should not be confused with the sub-audible tone that is used to access a repeater). This tone is used to let the other operators using the repeater know that the operator speaking has released the PTT button.

Squelch Tails

The squelch tail is the white noise that you hear for a second or two after the courtesy tone, which is the end of the repeater transmission.

Proper radio procedure is to let the courtesy tone sound, and the squelch tail drop before you key up to reply. This is necessary for two reasons: 1) other operators have the chance to break into the net, and 2) the repeater needs to rest and reset the time-out timer.

Environmental considerations

Unless you are in a post that requires others to hear the radio transmissions, you should use an earpiece whenever possible. You will hear all signals directly without worrying about surrounding noise. In addition, those about you will not be distracted by your radio traffic.

Don't talk louder in a noisy environment. It's natural to talk louder if it gets noisy around you, but don't do that on the radio. Talking too loudly into a microphone may make your signal less understandable, not more.

Shield your microphone from the wind. Wind blowing across the microphone can make it impossible to understand you. Close the car window, pull up your collar or find another way to shield yourself from the wind.

When using a hand-held transceiver on the fringes of coverage, look for a transmitting and receiving "hot spot" site and use it. Don't walk around talking while in a fringe area.

Operating while mobile	Always know your location, whether mobile or portable and moving around. Keep a sharp lookout for landmarks. You must be able, if called upon, to accurately describe your location at anytime. This is particularly important if you are with a search team or other mobile units.

VII.5 Responsibilities of Net Control

The role of Net Control is to control traffic on a busy net. This requires careful attention and patience. Net Control also sets and maintains the pace of the net.

Net Control is responsible for opening and closing a net.

When a station requests access to the net, Net Control should acknowledged the station and ask what the station operator would like to do.

If multiple stations seek access to the net, Net Control must ask specific stations to standby using their callsigns. But, in doing so, Net Control must remember which stations are still waiting on standby.

When asking stations to check in, Net Control must acknowledge by callsign which stations were heard and which are expected to report next.

VII.6 Operating on a Net

Plan and review what you need to say before seeking access to the net.

Listen before transmitting. If you haven't been monitoring recently, listen for several seconds before transmitting. Make sure the currently transmitting station is finished, not just pausing, before you seek access to the net.

To request access to the net, during a pause in net activity, say "Net Control, this is (your tactical callsign)" and wait for acknowledgement from Net Control. When acknowledged, explain what you would like to do. Use short simple phrases and common courtesy.

If you call Net Control and do not get an immediate reply, be patient and call again in a minute or two.

Wait a second after keying before speaking to make sure you don't clip the first syllable of your transmission. Your radio may take a moment to change over to transmit, and the repeater may introduce its own delay. Also, if the station you are calling has a hand-held transceiver in battery-saver mode and the channel has been quiet, the first second or two of your transmission might go unheard.

Use plain English as much as possible. Brevity codes such as Q-codes and 10-codes are only useful when all parties on a net understand these unique codes. Some of these codes are known nationwide but some vary from region to region.

Keep transmissions short in order to allow other stations to interrupt if they get more urgent traffic and to allow Net Control to exercise control promptly.

Stop transmitting if you stop talking. Always release the push-to-talk (PTT) button if you need to pause for some reason.

When appropriate, you may allow an agency official to use your radio as it could be better and faster than passing messages back and forth. It is just as legal as passing third-party messages. If you are using a repeater, make sure the third party understands how to talk through a repeater, i.e., wait for the courtesy tone, etc.

Transmitting a formal message

Formal messages should be recorded on an EOC General Message Form, ICS 213, whenever possible. Pass the message exactly the way it is written on the form.

When appropriate, request permission from Net Control to pass the message directly to the receiving station.

Say the message slowly and in short phrases. Say "break" and release the PTT button between each phrase. Keep in mind that the receiving station operator is writing what you are saying. Use the ITU phonetic alphabet where appropriate to clarify the spelling of any word. (See Section VII.7 below.)

Do not repeat elements of a message without being asked to. When asked to repeat, repeat verbatim what you said before; do not paraphrase it.

If the receiver's read-back is correct, say so without repeating the message.

Be sure that the receiver acknowledges copying the message.

When transmitting numbers (house numbers, street, telephone etc.), transmit number sequences as a series of individual numbers. Never say numbers in combinations (e.g. "three, six", not "thirty-six").

If a proper name needs to be transmitted, always spell it out using the ITU phonetic alphabet, after pronouncing it clearly. Do not use self-invented or other phonetics.

Never pass information over the radio that will identify an individual, such as victim or patient names.

Receiving a formal message

Formal messages should be recorded on an EOC General Message Form, ICS 213, whenever possible. Record the message exactly the way it is received.

As you copy a message, consider who it is for and what you are going to do with it. If you cannot tell, then ask the station that is sending it, particularly if the message originates there. The sender may notice that the message shouldn't have been sent to your station after all and

may cancel the message.

Ask for any repeats or explanations you need.

When you've copied the whole message, acknowledge receiving it, or if uncertain, read it back.

When the sender agrees with your read-back, say you copied the message.

If you do not understand the whole message given to you or if you missed a word out of the transmission, reply with "Say Again", or "Say again all after/ before".

Responding to a request	Acknowledge transmissions directed to your station promptly, even when it is obvious from the context that you were asked to do something that you cannot do instantly.
	If asked a question, just answer it as directly as possible. Do not volunteer additional detail or an explanation of why something is so, but at the same time, use good judgment. For example, you may believe that the simple answer is misleading or the question may indicate that the person asking it does not understand the actual situation. If you think it necessary, volunteer more information, but be brief. Let the questioner ask for more detail if they choose to.
Helping Net Control	If Net Control or another station asks for a relay and you are able to provide it, step in to do so.
	Stay off the air unless you are sure you can be of assistance.

VII.7 ITU Phonetic Alphabet

In 1956 the International Telecommunications Union (ITU) adopted a phonetic alphabet that today is the worldwide standard for military, naval, civilian aeronautical and maritime, search and rescue groups, public safety, (law enforcement being an exception) and the ARRL. You need to be aware that other phonetic alphabets are currently in use and you may need to translate between them, but this ITU phonetic alphabet is the standard for SFACS.

Alpha	**H**otel	**O**scar	**V**ictor
Bravo	**I**ndia	**P**apa	**W**hiskey
Charlie	**J**uliet	**Q**uebec	**X**-ray
Delta	**K**ilo	**R**omeo	**Y**ankee
Echo	**L**ima	**S**ierra	**Z**ulu
Foxtrot	**M**ike	**T**ango	
Golf	**N**ovember	**U**niform	

VII.8 Key Words

Whenever possible, SFACS members should use the following key words when they communicate on a net.

Clear	I am finished with the current conversation
Out	Same as Clear
Over	Tells the other station that it's their turn to talk. Use this word when operating on simplex frequencies.
Standby	Please wait for further communication or instruction
Stop	I have more information. Tell me when you are ready for more information.

SFACS members should use the following key words to interrupt a communication between two other stations. Follow the use of any of these words with your callsign so Net Control knows which station wants to interrupt.

Break	Used contextually and can have different meanings
Break-Break	Always means "Emergency"
Comment	I want to say something related to the current issue
Contact	I want to call a specific station
Immediate	I have a situation that is more critical than the current issue that cannot wait
Information	I need information or want to give information
Medical	I have a medical problem here
Regarding	I have information pertinent to the current issue

This is a draft of Appendix VII of the emerging SFACS Operations Manual.

You can help improve this draft. Please give suggestions for correcting errors, clarifying ambiguities or adding missing issues to John Sebastian at JohnSeb@pacbell.net.

Thanks.