Statewide EMS Operations and Communications

Resource Manual

State of California
Emergency Medical Services Authority

Statewide EMS Operations & Communications Resource Manual
EMSA #145 1998 - FIRST EDITION; 2009 – SECOND EDITION

STATEWIDE EMS OPERATIONS AND COMMUNICATIONS RESOURCE MANUAL

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This document was supported by the Preventive Health and Health Services Block Grant from the Centers of Disease Control and Prevention (CDC) and a grant from the Department of Commerce. Points of view or opinions expressed in this document are those of the authors and do not necessarily represent the official views of CDC or policies of the Department of Commerce.

INTRODUCTION

PURPOSE

This Emergency Medical Services (EMS) Operations and Communications Resource Manual has been developed by the State of California Emergency Medical Services Authority (EMS Authority) primarily as an operational manual to be available to all local EMS agencies. It contains useful information for EMS operations, as well as provides the data necessary to enable radio communications during transport operations within the state.

The manual is also intended to be useful for instructional purposes in training programs for Emergency Medical Technicians (Basic, Intermediate, and Paramedics) through its operational approach and sections on radio frequency communications.

SUMMARY

The Operational Information section of this manual contains requirements of the Federal Communications Commission (FCC) rules relating to communications operations, information on standard operating practices, discussion of the various radio frequency bands, and an explanation of primary sources of interference which can disrupt normal communications, as well as a definition of the concepts involved in EMS communications.

The California EMS Allocations section contains an alphabetical listing, by local EMS agency, of all radio frequencies for EMS operations within the state, as well as hospital emergency department addresses, telephone information, and helipad coordinates. Radio dial codes are shown for those counties using selective addressing for radio communications with hospitals. In addition, the telephone number of each ground and air ambulance provider is included showing the quantity of ALS, BLS, and air transport permitted vehicles licensed to each. The most recent information added to this manual for each local agency are coordinates for commonly used helispots for ground to air transfers that may be designated as an emergency landing zone.

OPERATIONAL INFORMATION

FCC RULES AND REGULATIONS

The Federal Communications Commission (FCC) prescribes a framework of rules to govern the transmission of radio signals. Under these rules, each user of the radio spectrum must be eligible to operate on given frequencies and be authorized to do so. The FCC rules and regulations are organized into various parts and subparts which address the FCC's practice and procedure as well as the particulars of the radio services into which the frequency spectrum is allocated, including frequency assignment policy and operating requirements. Public Safety communications including the Special Emergency Radio Service is governed by Part 90 of the FCC Rules.

1. General Requirements.

Licensees of radio systems have direct responsibility for the proper operation of each transmitter licensed. They must ensure that radios are used in accordance with the FCC rules and for purposes directly related to the particular activities for which they are licensed. Priority is to be given to communications involving the imminent safety of life and property, but licensees are required to keep transmission times to a minimum and employ efficient operating procedures to maximize the utilization of the frequency spectrum.

With the exception of those frequencies assigned for the exclusive use of a licensee in the frequency bands 470-512 MHz and 806-824/851-869 MHz, frequency assignments are considered to be available on a shared basis only. All licensees, and applicants for new licenses, are required to cooperate in the selection and use of frequencies in order to reduce interference and make the most effective use of the authorized radio facilities.

Licensees are required to take reasonable precautions to avoid causing harmful interference to other radio users. This includes monitoring the operating frequency for communications in progress and other such necessary measures to minimize the potential for interference.

2. Station Identification

For public safety communications systems, each station or system of stations must be identified by the transmission of the assigned FCC call sign during each exchange of transmissions, or once every 30 minutes if operation is continuous. Identification must be made by voice in the English language or, alternatively, may be made by automatic means using the International Morse Code. In addition to the call sign, station or unit identifiers may be transmitted as necessary or desirable for system operation.

3. Operator Requirements

No operator license or permit is required for the individual personnel operating radio equipment. Any person having the consent of the system licensee may provide authorized communications on behalf of the licensee. Cooperating users of other's radio systems should maintain a written agreement of use for such systems.

The licensee will at all times exercise responsibility for operations and is expected to provide observation, servicing and maintenance as often as necessary to ensure compliance with all applicable rules. Operators should be trained initially and recurrently regarding the complex nature of EMS communication systems utilized, as well as those local systems granting and expecting access.

OPERATING PRACTICES

In the course of providing emergency health care to the public, many of the individual participants practicing in the EMS system are required to communicate with one another via two-way radio facilities. Good operator practice is essential to the effectiveness and efficiency of any public safety communications system. For EMS, good practice followed by EMTs/paramedics, dispatchers, physicians and emergency department nursing personnel relates directly to a reduction in response time which in turn saves lives, reduces further injuries and minimizes suffering.

1. Equipment Familiarization

A first step in proper communications techniques is a familiarization with the radio equipment to be used by the operator. There are many different brands and types of radio equipment items that EMS personnel will encounter in their work, and manufacturers are continually introducing new products which will always present new educational challenges. As a minimum, communications systems are comprised of mobile and portable radios, base/repeater stations and various radio control devices. Additionally, they may include more complex aspects such as telemetry, satellite receiver voting systems, vehicular repeaters and trunked operations.

EMS personnel should take sufficient time to learn the correct operation of each item of communications equipment that they use. They should fully investigate the various features of that equipment in order to maximize the extent to which the equipment assists in delivery of emergency services. Operators are encouraged to ask questions of their colleagues, equipment maintenance technicians and manufacturers' representatives to ensure understanding.

Most EMS radio systems provide the flexibility to communicate to various hospitals and dispatch centers via the use of selectable channels, tones, and codes. EMS personnel must understand the procedures for such selections which are normally based on patient destination, status, local area, or combination of similar factors. EMS providers should include quick-reference documentation for use by field personal that is designed to be utilized during emergent circumstances. Hospital providers should also keep similar reference materials readily available at their radio positions.

2. Communications Skills

The objective of radio communications in EMS is to convey information in a concise and accurate manner. The communications skills exhibited by operator personnel can have a positive influence on the outcome of a particular event.

A. Operating

For most EMS providers there is generally a protocol (written or unwritten) to govern radio communications. If unwritten, such procedures are probably defined by tradition. No attempt is made here to establish a particular mode of operation however; certain key points are highlighted for the benefit of operator personnel.

Follow standard protocol established by the EMS service. It may address the manner in which calls are to be placed from one unit of the service to another and govern the manner in which messages are formatted.

Maintain channel discipline. Courtesy and respect for the communications of others sharing the radio channel go a long way in preserving order, especially in congested geographic areas with much radio traffic. Monitor the channel before transmitting to prevent interference to other users. Think ahead and keep transmissions short and to the point to maximize airtime.

Practice verbal communications skills. Speak distinctly, at a moderate rate, and directly into the microphone or handset to maximize intelligibility. Keeping the microphone close to the mouth overcomes background noise and permits the operator to speak in a normal tone of voice. Shouting is to be avoided as it results in audio distortion.

Use plain language to describe a particular condition or event when in doubt of the appropriate aural brevity code which might otherwise be used. Individuals under stress may find it easier to relate clear and simple descriptions.

B. Technical Considerations

Key your transmitter before engaging in speech. The complexities in communications system design often introduce delay in the time it takes to turn on the various components comprising the system. Transmitters take time to come up to full power output, tone squelch decoding equipment requires time to open receivers and receiver voting systems take time to select the best receiver. While these events generally are accomplished in less than one second's time, there are many voice transmissions that could be missed in their entirety if the operator did not delay slightly before beginning his/her voice message. Pausing one second after depressing the push-to-talk button on the microphone or handset is sufficient in most cases to prevent missed words or responses.

Transmissions should generally be kept to less than 20 seconds, or within the time specifically allocated by the system. Most radio systems limit transmissions to less than 30 seconds to prevent malfunctioning transmitters or accidentally keyed microphones from dominating a system, and will automatically stop transmitting at the expiration of the allowed time cutting off additional audio.

Keep loudspeaker clear of clutter. Papers or other materials covering or obstructing loudspeakers can diminish receiver audio and alter intelligibility.

Avoid turning receiver volume too low. A low setting may fail to attract the operator's attention to an incoming call.

RADIO THEORY

1. Land Mobile Radio Frequency Bands

In the spectrum between 25 MHz and 1,000 MHz are various bands allocated by the FCC for two-way mobile radio communications known as land mobile radio bands. They have the following common designations:

25 – 50 MHz	VHF Low Band
150 – 174 MHz	VHF High Band
450 – 470 MHz	UHF Band
470 – 512 MHz	UHF TV Sharing (specific areas only) or "T" Band
806 – 824/851 – 869 MHz	800 MHz Band

Each of these frequency sub-bands are widely used for two-way land mobile radio communications in the Public Safety Radio Services. The choice as to which one is best for a particular operation depends on the frequency availability, the particular type of communications system required, the radio coverage area required, and many other engineering factors. Because of the consistently high demand for radio frequencies within the past few years, it usually becomes a matter of frequency availability rather than preference. However, when it is possible to choose the operating frequency of a radio system, the characteristics for each band should be carefully considered. Each frequency band has its unique properties which must be factored into the overall engineering of the system design for each user.

2. VHF Low Band

VHF Low Band has, as its advantage, the farthest coverage distance (other factors being equal) of any of the land mobile frequency bands. Given the same operating conditions (transmitter power and antenna height) low band will generally "talk" farther base-to-mobile and mobile-to-mobile. It is also better suited for traversing hilly terrain and penetrating heavily wooded areas than higher frequencies.

Unfortunately, VHF Low Band has several disadvantages not shared by higher frequencies. It is commonly affected by skip interference (which occurs when radio signals are reflected from the upper atmosphere at great distances from the location of origin). It is not uncommon to receive stations over 2,000 miles away, and such occurrences tend to disrupt local communications. VHF Low Band is also affected to more of an extent by man-made noise sources than higher frequencies. Automobile ignition systems, motors, commercial power lines and electric fences in the vicinity of radio receivers may create so much electrical noise that the desired radio signals may be masked at times to the point that they become unusable.

Additionally, and for some of the above reasons, VHF Low Band does not generally fare well in urban environments. In addition to the above shortcomings, antennas for VHF Low Band communications must be relatively large compared to higher frequency antennas; attempts to shorten these antennas for convenience or practicality results in inefficiency and reduced coverage area.

3. VHF High Band

Within the 150 MHz range of VHF High Band, skip interference is considerably reduced. Manmade noise sources also are not of as much concern, and better penetration into metropolitan area environments is realized. Due to the shorter wavelength of VHF High Band, it becomes practical to use shorter antennas that exhibit greater gain than with similar lengths at VHF Low Band.

VHF High Band has typically been, for the above reasons, the band of choice for many applications. In many parts of the United States, however, VHF High Band has become so congested, particularly in metropolitan areas, that interference of several kinds from neighboring systems is often received. Point-to-point co-channel interference is particularly severe in view of the simplex-type allocation of these frequencies by the FCC. VHF High Band is also characterized by a somewhat shorter communications range than VHF Low Band, especially on a mobile-to-mobile basis.

4. UHF BAND

UHF Band communications are virtually free from skip interference and electrical noise when compared to lower bands. At 450 MHz, the radio waves are physically shorter than VHF Low Band or High Band such that they have an ability to easily reflect off of common hard surfaces. Thus, the UHF Band is often an excellent choice for penetrating into, and around, heavy building structures in urban areas.

As frequency is increased however, losses due to hills and foliage also increase. The UHF Band has more difficulty transmitting signals over hilly or irregular terrain than with lower bands. Hills tend to block the signal more severely and can significantly reduce range. Also, absorption of the signal by trees and other foliage is more prevalent at UHF and must be factored into any UHF system design. Since mobile-to-mobile range is significantly less than that accommodated by the lower frequency bands, repeater stations are commonly used to relay transmissions between mobile units.

Most EMS systems utilize the Emergency Medical Service UHF MED channels within this band.

5. 700 MHz Band

Until recently, the FCC has licensed most of the 700 MHz spectrum to television broadcasters for analog television. This spectrum was deemed desirable for both broadband communications in general and public-safety uses due to the unique propagation characteristics of this band and the fact that many urban areas currently use the 800MHz band. This spectrum is divided into two bands -- the lower and upper 700 MHz. The lower band is 48 MHz wide, and the upper band is 60 MHz wide. Of the upper 60 MHz, 24 MHz is reserved for public safety use since this portion of the spectrum is contiguous with the existing 800 MHz band already in use by public safety. The FCC auctioned large portions of the lower 700 MHz band to commercial carriers who will use the spectrum for broadband applications, while the upper 700 MHz band is divided in to several sub-bands. Public Safety will use the upper-most band of the 700 MHz while the adjacent “D block” band will be auctioned by the FCC in an effort to create a Public / Private

partnership which will operate a nationwide broadband network, with priority access granted to public safety.

The lower a radio signal's frequency, the farther it can propagate provided that no objects obstruct its paths. Conversely, the higher a frequency, the more easily it can penetrate dense obstacles like walls and buildings. Higher frequencies also tend to be used to support trunked radio systems and high speed data networks which are more efficiently utilize the spectrum, enabling radios to transmit more data for each hertz of frequency band. As a result, the 700-MHz band should provide better coverage in urban areas for public safety when used to support a properly designed and implemented system than current cellular bands do.

6. 800 MHz Band

The characteristics of the 800 MHz Band are very similar to the UHF Band except that the negative aspects are somewhat accentuated. With the proper engineering and design however, the 800 MHz Band can be a viable alternative to the lower frequencies. Beyond any question it is currently the one band for which the latest communications technology is offered. It is also the only land mobile frequency band that (at least today) is generally less congested than lower bands. In many areas of the United States, including areas of California, the 800 MHz Band is the only band in which new channel assignments are currently available. EMS units utilizing 800 MHz systems are typically affiliated with a local agency hosting such systems. These systems are usually based on a complex trunked radio network. The trunked system administrator must grant access to and normally provides and/or maintains equipment of the local EMS providers to access these systems.

RADIO FREQUENCY INTERFERENCE

The ability to communicate by radio may be significantly affected by other communications systems operating on the same or different frequencies. Most interference that occurs is unintentional and can be difficult to identify if it can be detected at all.

1. Co-Channel Interference

This type of interference is most readily identified and occurs from different radio systems sharing the same frequency. Ideally, systems are authorized with sufficient geographic distance between them such that one system does not hear the other system and vice-versa. On occasion, however, atmospheric conditions will support better than normal communications range and audible signals of the distant system are received. Depending on the strength of these co-channel signals, normal communications may be disrupted or precluded. Co-channel interference will result on shared radio channels, such as the UHF MED channels, unless careful coordination of frequency assignment and usage is ensured.

2. Receiver Desensitization

When using a radio receiver in the physical vicinity of a transmitter operating on a frequency close to that which the receiver is tuned (but not directly on it), the receiver’s ability to hear

weak on-channel signals is impaired. The effect may be to lose a desired transmission completely or it may appear to be partially cut off.

3. Transmitter Noise

Transmitters are not perfect devices and will radiate some amount of noise in addition to the primary signal. This noise appears on either side of the transmitted signal and can interfere with nearby receivers tuned to other frequencies. The end result is similar to what is experienced with receiver desensitization, but the mechanism of interference is masking of desired signals by the noisy transmitter.

4. Intermodulation Interference

Inter-modulation interference, or "inter-mod", is caused when two or more radio signals of different frequencies combine to create yet other frequencies (a process known as mixing). If one of the new frequencies produced happens to occur on a desired receiver frequency, interference may result to desired signals. Such frequency mixing often occurs either in a transmitter or a receiver.

Transmitter-produced inter-mod occurs when strong radio signals are combined in the power amplifier of a transmitter, and the mix frequencies are re-radiated along with the intended signal. If one of the mix frequencies is heard in the affected receiver, it may be possible to detect the audio of the interfering signal as comprised of multiple voices in accordance with the number of transmitters participating in the mix.

Receiver-produced intermod manifests itself when two or more strong off-frequency signals combine in the receiver electronic circuitry to create still other frequencies through mixing. Like the transmitter-produced case, if one of the resultant frequencies is nearly the same as the frequency to which the receiver is tuned, the inter-mod signal will compete with the desired received signal.

Inter-modulation interference can generally be identified by listening to the interfering signal, because it will usually be comprised of two or more voices and is likely to suddenly cease when one of the transmitters contributing to the mixing process is turned off. However, the process of identifying the participants so as to remedy the interference problem may not be so easy since they may be located at other radio sites and operate in different radio services. Additionally, inter-mod is produced in sites other than transmitters and receivers. These sites of production may include antennas, metallic flashing on rooftops, rusted or corroded mechanical joints of antenna towers, and on occasion, rusted automobile bodies or similar materials.

5. Equipment and Interference Rejection

While the occurrence of interference in the radio environment cannot be totally eliminated, it can often be controlled to the point where its harmful effects minimize the disruption of communications. For the public safety services, the purchase of communications equipment exhibiting quality in the design of interference rejection circuitry will do much for dealing with the problems of receiver desensitization, transmitter noise and inter-modulation interference.

Additionally, proper system engineering is required to provide for ancillary protective devices (such as radio frequency filters and isolators) where needed.

CONCEPTS OF EMS COMMUNICATIONS

1. General

An EMS communications system must provide the means by which emergency medical resources can be accessed, mobilized, managed, and coordinated in both normal and adverse situations. An EMS communications system must therefore, employ sufficient communications paths and operational capabilities among all participants to facilitate the functional EMS communications concepts described in the remainder of this section.

2. Citizen Access

The EMS communications system must have the ability to receive and process any incoming requests that report emergencies and require emergency medical assistance. All individuals shall be able to summon help rapidly in an emergency situation whether for medical, police, fire, rescue, or other emergency need. Local, statewide, and national uniformity is required to fully enable this concept.

The State of California 9-1-1 Plan provides for a cohesive statewide emergency telephone number system to provide citizens with this rapid direct access to public safety agencies.

3. Vehicle Dispatch and Response (VDR)

On notification of need for emergency medical assistance, the communications system must enable prompt dispatch of EMS vehicles (including notification of rotor-wing aircraft) to the location of the emergency. The communications system must further enable dispatchers to communicate with responding vehicles while in route to the scene, while at the scene, while in route to hospital emergency department facilities, and during their return to availability for further assignment.

4. Automatic Vehicle Location

Use of automatic vehicle location (AVL) systems provide real-time geographic location of vehicles to ensure the nearest available vehicle is dispatched to the scene of an incident. Additionally, an AVL system displays vehicle positions to dispatchers on either tabular and/or graphic displays as well as providing the information necessary to a computer-aided dispatch (CAD) program when utilized in a system status management structure.

5. Crew Alert Paging

As a sub concept to vehicle dispatch and response some EMS communications systems, as determined by local procedure, may require the direct alerting of EMS personnel either individually or in groups, through the use of either monitor or paging receivers, station public

address system, or by means of two-way handheld portable radios with a selective call capability. Crew alert paging may also include call-specific information via digital pager or paper printout.

6. Local Medical Coordination (LMC)

The EMS communications system must provide EMS field personnel with a channel of communications that permits the exchange of vital information between both EMS field personnel and emergency department personnel while the patient is at the scene of the medical emergency and while being transported to an emergency department facility. Typical LMC communications involve patient status and destination, as well as information permitting or requesting medical control decisions regarding patient care.

7. Statewide Medical Coordination (SMC)

In addition to LMC capability, the EMS communications system must provide a communications channel to enable medical coordination between EMS field personnel and emergency department personnel during situations in which a vehicle is out of its prime area and unable to access an emergency department using their assigned LMC channels, or in isolated critical situations during which prolonged use of the LMC channel would not be feasible due to other LMC communications traffic. Such uses of the SMC channel would typically occur for temporary durations.

8. On-Scene Coordination (OSC)

The EMS communications system must have the capability for mobile and portable radios to communicate directly (unit-to-unit) while on the scene of an emergency requiring multiple vehicle and multi-agency responses. Typically this coordination takes place either on VHF high band interoperability channels, or on channels maintained by the local rescue agencies involved.

9. Medical Resource Coordination (MRC)

The EMS communications system must allow for point-to-point coordination of EMS resources between hospitals, providers, and communications control centers for response to a disaster or mass casualty incident. Telephone lines between communications control centers are typically used for resource coordination during normal operations, and networked software specifically for this use is becoming more prevalent. However, radio communications are needed during situations following hurricanes, tornadoes, floods, fires, etc., when telephone lines are inoperative, or when telephone central office switching facilities are jammed or disabled. Most EMS agencies and hospitals maintain some functionality of the HEAR network VHF high band frequencies for this purpose.

CALIFORNIA EMS ALLOCATIONS

GENERAL

The following tables of radio channels and allocations and organizational data for EMS communications within California was a major undertaking by the State of California. The effort began in 1997 with a survey of all counties, EMS providers, and hospitals in the State. That survey was followed by numerous site visits, mail surveys and telephone inquiries continuing through the fall of 1998. In October 2008, revision efforts began by requesting that each local agency representative review data relating to its respective area(s) and submit any corrections or changes to the previously submitted information. Every effort has been made to ensure the data collected is as accurate, complete, and up-to-date as possible. If errors are identified, please advise the EMS Authority.

INTRODUCTION TO TABLES

Note: In the following tables the symbol N/A = Not Available and N/R = No Response

The following tables are organized alphabetically by the local EMS agency. Within each local EMS agency is a list of radio channel information, followed by information on emergency department facilities, and EMS providers.

1. Radio Channel Information

Radio channel information is shown by channel use description, by continuous tone controlled squelch (CTCSS) frequency (in Hertz), by primary or alternate status, and by base-transmit and base-receive frequency in (MHz or MED channel number).

A. MED Channel Frequencies

MED Channel numbers 1 through 103 are prescribed by FCC Rules, Part 90.27(c)(13)(i) and 90.27(b) as corresponding to the following radio transmit frequencies in MHz:

MED Channel	Frequency (Base/Mobile)	Frequency (Mobile Only)
1	463.000	468.000
2	463.025	468.025
3	463.050	468.050
4	463.075	468.075
5	463.100	468.100
6	463.125	468.125
7	463.150	468.150
8	463.175	468.175
9	462.950	467.950
10	462.975	467.975

B. CTCSS Frequencies

Continuous Tone-Controlled Squelch (CTCSS) systems provide a reduction of nuisance interference in FM radio systems by incorporating a sub-audible tone onto the radio carrier information such that only a similarly equipped radio receiver will open its squelch circuit to receive the transmission. Systems equipped with CTCSS will eliminate much interference from distant sources, although CTCSS by itself cannot prevent undesired "FM capture" from occurring due to nearby simultaneous co-channel transmissions.

CTCSS frequencies are designated by the Electronic/Telecommunications Industries Association (EIA/TIA) in EIA/TIA Standard 603. The following table is a portion of those CTCSS frequencies above 90 Hz and below 211 Hz which are approved for EMS radio communications in California. Since there is an abbreviated code scheme for these frequencies common to systems supplied by Motorola Communications & Electronics Inc., the Motorola (MOT.) code designations of these CTCSS frequencies are also shown. Similarly, the Wolfsberg (WOLF.) codes are also shown. To the extent possible, CTCSS tones within a local geographic area should be exclusively from either Group A or Group B to avoid false sensing due to adjacent tone frequencies.

Group A

CTCSS Freq.(Hz)	MOT. Code	WOLF Code
100.0	1Z	14
107.2	1B	16
114.8	2A	18
123.0	3Z	22
131.8	3B	24
141.3	4A	26
151.4	5Z	28
162.2	5B	32
173.8	6A	34
186.2	7Z	36
203.5	M1	38

Group B

CTCSS Freq.(Hz)	MOT. Code	WOLF Code
94.8	ZA	12
103.5	1A	15
110.9	2Z	17
127.3	3A	23
136.5	4Z	25
146.2	4B	27
156.7	5A	31
167.9	6Z	33
192.8	7A	37
210.7	M2	-
210.7	M2	

Excluded from the above list are:

CTCSS frequencies below 90 Hz which may cause unacceptably long receiver response times in some systems; frequencies above 211 Hz which may require special engineering considerations in production; frequencies which would receive interference from common 60 Hz AC power systems; and non-EIA frequencies offered by some manufacturers which would limit intersystem and mutual-aid operations.

C. Primary/Alternate Allocations

The primary and alternate designations on some MED Channels shown on the following tables derive originally from FCC rules requiring not less than four channels (three, if bio-medical telemetry is not employed) be provided from EMS base station operations for medical coordination between ambulances and hospital emergency departments. The primary/alternate scheme of allocation is necessary to insure that a channel is available when needed considering simultaneous MED Channel use in adjacent areas.

2. Emergency Department Information

For each local EMS agency, emergency department facilities are listed with their address followed by the 24-hour telephone number of either the switchboard (Main), emergency department (ED) or both.

3. EMS Provider

Within each local EMS agency, EMS providers are listed alphabetically showing the type of transportation (ground [G], air [A], water [W]) quantity of ambulances, whether or not the vehicles transport to a hospital and the highest level of Advanced Life Support (ALS) or Basic Life Support (BLS) certification at the location. The telephone number of each provider is also shown.

Agency Contact
Michael King, EMS Director
1000 San Leandro Blvd., Ste. 200
San Leandro, CA 94577
(510) 667-7739
FAX: (510) 618-2099
E-MAIL: Michael.King@acgov.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) Trunked system	800 MHz	N/A	N/A	N/A
Statewide Medical Coordination Fire White CALCORD	 N/A N/A	 N/A N/A	 N/A N/A	 N/A N/A
Calling Channel	800 MHz	N/A	N/A	N/A
Dispatch (for each EMS Agency) Trunked system	800 MHz	N/A	N/A	N/A
Direct to hospitals Trunked system, telephone	800 MHz	N/A	N/A	N/A
Other (e.g. tactical, etc.) For disasters Fire White CALCORD	800 MHz 155.400 N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Alameda Hospital 2070 Clinton Avenue Alameda, California 94501	(510) 522-3700	
Valley Care Medical Center 5575 W. Los Positas Blvd. Pleasanton, California 94588	(925) 847-3000	37-41-39.000N 121-52-46.000W TLOF – 64’ X 64’
St. Rose Hospital 27200 Calagora Avenue Hayward, California 94545	(510) 264-4000	

Eden Hospital 20103 Lake Chabot Road Castro Valley, California 94546	(510) 889-5048	37-41-54.000N 122-05-22.000W TLOF - 55' Diameter.
Children's Hospital 747 52nd Street Oakland, California 94609	(510) 428-3273	37-50-12.000N 122-15-59.000W TLOF - 67' x 67'
Highland General Hospital 1411 E – 31st Street Oakland, California 94602	(510) 437-4800	
Alta Bates Medical Center 2450 Ashby Avenue Berkeley, California 94705	(510) 204-4444	
San Leandro Hospital 13855 East 14th Street San Leandro, California 94578	(510) 357-6500	
Washington Hospital 2000 Mowry Avenue Fremont, California 94538	(510) 797-1111	37-33-23.000N 121-58-38.000W TLOF - 70' x 70'
Kaiser Hospital, Oakland 280 West Mac Arthur Blvd. Oakland, California 94611	(510) 596-7667	
Kaiser Hospital, Hayward 27400 Hesparian Blvd. Hayward, California 94545	(510) 784-4000	
Summit Medical Center 350 Hawthorne Street Oakland, California 94609	(510) 655-4000	
San Ramon Regional Medical Center 6001 Norris Canyon Road San Ramon, California 94623	(925) 275-9200	

Helispot Location	Latitude/Longitude	Description of Location

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response West	(510) 895-7600	G	40	yes	ALS
Alameda County Fire Department	(510) 618-3485	G	0	no	ALS
Alameda Fire Department	(510) 522-4100	G	3	yes	BLS
Albany Fire Department	(510) 528-5771	G	1	yes	ALS
Berkeley Fire Department	(510) 644-6665	G	3	yes	ALS
CALSTAR	(800) 252-5050	GA	2	yes	ALS
California Department of Forestry and Fire	(925) 862-2197	G	0	no	BLS
CHP	(707) 253-4906	A	1	yes	ALS
East Bay Regional Parks District	(510) 881-1833	GAW	0	yes	BLS
Emeryville Fire Department	(510) 596-3750	G	0	no	ALS
Fremont Fire Department	(510) 494-4290	G	0	no	ALS
Hayward Fire Department	(510) 293-8690	G	0	no	BLS
Lawrence Berkeley Lab Fire Dept	(510) 486-636 0	G	0	no	BLS
Lawrence Livermore National Laboratory	(925) 422-3980	G	1	no	BLS
Livermore Fire Department	(925) 737-5463	G	0	no	ALS
Naval Supply Center Fire Dept	(510) 263-3276	G	0	no	BLS
Newark Fire Department	(510) 793-1400	G	0	no	ALS
Oakland Fire Department	(510) 238-6725	G	0	no	BLS
Piedmont Fire Department	(510) 420-3030	G	1	yes	BLS
Pleasanton Fire Department	(925) 484-8114	G	0	no	ALS
Reach Helicopter	(707) 575-6886	GA	2	yes	ALS

Agency Contact
Art Lathrop, EMS Administrator
1340 Arnold Drive, #126
Martinez, California 94553
(925) 646-4690
FAX: (925) 646-4379
E-MAIL: alathrop@hsd.cccounty.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination				
Contra Costa FPD	46.32	46.32	162.2	N/A
Moraga-Orinda FPD	46.38	46.38	162.2	N/A
San Ramon Valley FPD	45.88	46.44	162.2	N/A
Richmond Fire Department	46.42	46.06	162.2	N/A
Pinole/Rodeo Fire Departments	46.48	46.48	162.2	N/A
East Diablo/Bethel Isl. FPD's	46.18	46.18	162.2	N/A
Statewide Medical Coordination				
Fire Medical Mutual Aid	N/A	N/A	N/A	155.400
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Contra Costa FPD	46.32	46.32	162.2	N/A
Moraga-Orinda FPD	46.38	46.38	162.2	N/A
San Ramon Valley FPD	45.88	46.44	162.2	N/A
Richmond Fire Department	46.42	46.06	162.2	N/A
Pinole/Rodeo Fire Departments	46.48	46.48	162.2	N/A
East Diablo/Bethel Island FPDs	46.18	46.18	162.2	N/A
Direct to hospitals				
MEDARS 12 (T-band)	491.9125	488.9125	N/A	N/A
MEDARS 13 (T-band)	491.6125	488.6125	N/A	N/A
MEDARS 14 (T-band)	491.6625	488.6625	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Doctor's Hospital, San Pablo Campus 2000 Vale Road San Pablo, California 94806	(510) 970-5000	37-57-15.000N 122-20-10.000W TLOF - 41' x 41'

Sutter Delta Hospital 3901 Lone Tree Way Antioch, California 94509	(925) 779-7200	
Kaiser Antioch Medical Center 5601 Deer Valley Road Antioch, California 94531	(925) 813-6500	
John Muir Medical Center 1601 Ygnacio Valley Road Walnut Creek, California 94598	(925) 939-3000	37-54-46.000N 122-02-18.000W TLOF - 65' Diameter.
Kaiser Medical Center-Walnut Creek 1425 South Main Street Walnut Creek, California 94596	(925) 295-4000	
Kaiser Richmond 901 Nevin Ave Richmond , California 94801	(510)307-1500	
Contra Costa Regional Medical Center 2500 Alhambra Avenue Martinez, California 94553	(925) 370-5000	
Mt. Diablo Medical Center PO Box 4110 2540 East Street Concord, California 94524	(925) 682-8200	37-55-28.000N/ 121-43-57.000W TLOF - 42' X 42'
San Ramon Regional Medical Center 6001 Norris Canyon Road San Ramon, California 94583	(925) 275-9200	

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response West	(925) 602-1300	G	47	yes	ALS
Bethel Island Fire Protection Dist	(925) 634-3400	G	0	no	ALS
Contra Costa County Fire Protection District	(925) 941-3640	G	0	no	ALS
Crockett-Carquinez Fire Protection District	(510) 787-2717	G	0	no	BLS
East Diablo Fire Protection District	(925) 634-3400	G	0	no	BLS
El Cerrito Fire Department	(510) 215-4450	G	0	no	ALS
Moraga/Orinda Fire Protection Dist	(925) 258-4599	G	2	yes	ALS
Pinole Fire Department	(510) 724-8970	G	0	no	ALS
Richmond Fire Department	(510) 307-8031	G	0	no	BLS
Rodeo-Hercules Fire Protection District	(510) 799-4561	G	0	no	ALS
San Ramon Valley Fire Protection District	(925) 838-6691	G	7	yes	ALS

Agency Contact

Richard W. Todd, Acting EMS Administrator
415 Placerville Dr Ste J
Placerville, CA 95667
(530) 621-6505
FAX: (530) 621-2758
E-MAIL: rtodd@co.el-dorado.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination				
East Slope-Police	154.445	156.03	N/A	N/A
West Slope	159.225	151.19	Multiple	N/A
Statewide Medical Coordination	Microwave	Microwave	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
East Slope-City Fire	154.445	N/A	N/A	N/A
East Slope-Lake Valley	N/A	154.34	N/A	N/A
West Slope	159.225	151.19	Multiple	N/A
Direct to hospitals				
East Slope	Mednets	Mednets	Multiple	Cellphone
West Slope	Mednets	Mednets	Multiple	Cellphone
Other (e.g. tactical, etc.)				
East Slope-S&R Sierra Channel	160.875	160.875	N/A	N/A
East Slope-White Fire	154.280	154.280	N/A	N/A
West Slop[e Command Channel	159.270	154.430	Multiple	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Marshall Hospital 1040 Marshall Way Placerville, California 95667	(530) 622-1441	38-43-22.7N/ 120-14-28.8W
Barton Memorial Hospital PO Box 9578 South Lake Tahoe, California 96158	(530) 541-3420	38-54-40.700N/ 119-59-48.600W TLOF - 42'

Helispot Location	Latitude/Longitude	Description of Location

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
California Department of Forestry	(530) 644-2345	GA	0	no	BLS
Cameron Park CSD/CDF	(530) 677-6190	G	1	yes	ALS
Diamond Springs/El Dorado Fire Protection District	(530) 626-3190	G	1	yes	ALS
El Dorado County Fire Protection District	(530) 644-9630	G	5	yes	ALS
El Dorado Hills Fire Department	(916) 933-6623	G	1	yes	ALS
Fallen Leaf Lake Fire Protection District	(530) 542-1343	G	0	no	BLS
Garden Valley Fire Protection Dist	(530) 333-1240	G	0	no	ALS
Georgetown Fire Protection District	(530) 333-4111	G	1	yes	ALS
Lake Valley Fire Protection District	(530) 577-3737	G	1	yes	ALS
Latrobe Fire Protection District	(530) 677-6366	G	0	no	ALS
Meeks Bay Fire Protection District	(530) 525-7548	G	0	no	BLS
Mosquito Fire Protection District	(530) 626-9017	G	0	no	BLS
Pioneer Fire Protection District	(530) 620-4444	G	0	no	ALS
Rescue Fire Protection District	(530) 677-1868	G	0	no	ALS
South Lake Tahoe Fire Department	(530) 542-6152	G	3	yes	ALS
Tahoe Douglas Fire Protection Dist	(775) 588-3591	G	0	no	ALS
North Tahoe Fire Protection Dist	(530) 583-6913	G	0	no	ALS

Agency Contact
(Fresno, Kings, Madera, Tulare)
Dan Lynch, EMS Administrator
PO Box 11867
Fresno, CA 93775
(559) 445-3387
FAX: (559) 445-3205
E-MAIL: DLynch@co.fresno.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordinator(real time)				
Med 1	468.00	463.00	114.8	N/A
Med 2	468.025	463.025	114.8	N/A
Med 3	468.050	463.050	114.8	N/A
Med 4	468.075	463.075	179.9	N/A
Med 5	468.100	463.100	179.9	N/A
Med 6	468.125	463.125	179.9	N/A
Med 7	468.150	463.150	179.9	N/A
Med 8	468.175	463.175	114.8	N/A
Med 9	467.950	462.950	141.3	N/A
Med 10	467.975	462.975	114.8	N/A
Med 11	458.300	453.300	156.7	N/A
Med 12	458.325	453.325	156.7	N/A
Med 13	458.1875	458.1875	156.7	N/A
Med 14	456.425	451.425	114.8	N/A
Med 15	466.575	461.575	114.8	N/A
Med 16	468.625	463.625	156.7	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Hanford City Fire	465.575	460.575	146.2	N/A
Kings County Fire	465.625	460.600	146.2	N/A
Fresno City Fire		153.845	173.8	N/A
Clovis City Fire		154.235	103.5	N/A
Fresno County Fire		153.890	None	N/A
NCFPD		154.190	100.0	N/A
Fire White Net 1		154.280	None	N/A
HEAR		155.340	None	N/A
Madera County Fire		151.460	None	N/A

Tulare City Fire	155.055	154.335	162.2	N/A
Visalia City Fire	155.055	154.325	131.8	N/A
Portville City Fire	155.085	156.000	123.0	N/A
Tulare County Fire	155.895	154.010	131.8	N/A
Dinuba City Fire	156.075	154.085	146.2	N/A
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)				
Calcord	156.075	156.075	156.7	N/A

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Community Regional Medical Center 2823 Fresno Street Fresno, California 93715	(559) 442-6000 - *Main* (559) 442-2432 - *ED* TLOF - 52.5 x 54	**Pad A** 36-44-39.000N/ 119-47-07.000W **Pad B** 36-44-37.000NN/ 119-47-07.800W TLOF - 52.5' x 54' **Pad C** 36-44-35.000N/ 119-47-06.000W TLOF - 44' x 45'
Saint Agnes Medical Center 1201 E. Herndon, #105 Fresno, California 93720	(559) 449-3000 - *Main* (559) 449-3534 - *ED*	36-44-14.0/ 119-45-58.000W TLOF - 50' x 50'
Community Medical Center Clovis 2755 E. Herndon Avenue Clovis, California 93611	(559) 324-4000 - *Main* (559) 324-4040 - *ED*	36-50-19.000N/ 119-39-29.000W TLOF - 75' x 75'
Sierra Kings Hospital 372 W. Cypress Reedley, California 93654	(559) 638-8155	
Kaiser Permanente 7300 N. Fresno Street Fresno, California 93720	(559) 448-3138	
Selma Community Hospital 1141 Rose Avenue	(559) 891-1000	

Selma, California 93662 Coalinga Regional Medical Center 1191 Phelps Avenue Coalinga, California 93210-9609	(559) 935-6400	
Veteran's Administration Hospital 2615 E. Clinton Ave Fresno, California 93703	(559) 225-6100	
Hanford Community Medical Center 450 Greenfield Avenue Hanford, California 93230	(559) 582-9000 - *Main* (559) 585-5251 - *ED*	36-19-48.000N/ 119-39-31.000W TLOF - 55' Diameter.
Central Valley General Hospital 1025 N. Douty Hanford, California 93230	(559) 583-2100 - *Main* (559) 583-2250 - *ED*	
Corcoran District Hospital 1310 Hanna Avenue Corcoran, California 93212	(559) 992-5051	
Children's Hospital of Central California 9300 Valley Children's Place Madera, California 93637	(559)353-3000	**Pad 2** 36-52-57.300N/ 119-47-59.800E TLOF - 48' x 48' **Pad 3** 36-52-53.000N/ 119-48-04.000W TLOF – 20' x 20'
Madera Community Hospital 1250 E. Almond Madera, California 93637	(559) 675-5500 - *Main* (559) 675-5520 - *ED*	
Community Medical Center Oakhurst 48677 Victoria Lane Oakhurst, California 93644	(559)683-2992	
Kaweah Delta District Hospital 400 W. Mineral King Visalia, California 93277	(559)625-2211- *Main* (559)625-7215 - *ED*	
Tulare District Hospital 869 Cherry St Tulare, California 93274	(559)688-0821 - *Main* (559)685-3450 - *ED*	

Sierra View District Hospital (559)784-1110 - *Main*
465 W Putnam (559)784-8885 - *ED*
Portville, California 93257

Helispot Location	**Latitude/Longitude**	**Description of Location**
Batterson – Madera	37-22-79 / 119-37-75	Helipad at Fire Station, Mtns
Buckeye – Fresno	37-03-00 / 119-23-8	Forest Service Helipad, 4000’
Dunlap – Fresno	36-45-43 / 119-09-90	Ranger Station or Library PL
Hwy 41 & Rd 200 - Madera	37-37-0 / 119-44-5	Park N Ride Area
Millerton Lake – Fresno	36-59-20 / 119-40-96	Boat Ramp or Fire Station
North Fork – Madera	37-14-40 / 119-30-74	Forest Service Pad
Kettleman City – Kings	36-03-02 / 119-56-38	Trucking Co. or Fire Station
Huntington Helipad – Fresno	37-14-06 / 119-10-1	Hunting Lake Fire Station Pad

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB’s**	**TRANS**	**EMT**
American Ambulance	(559)445-5900	G	68	yes	ALS
American Ambulance of Visalia	(559)730-3015	G	8	yes	ALS
Avenal District Ambulance	(559) 386-4021	G	2	yes	ALS
CHP	(559) 488-4121	A	1	yes	ALS
California Hot Springs Ambulance	(559)548-6548	G	1	yes	LALS
Camp Nelson Vol. Ambulance	(559)542-2140	G	2	yes	LALS
Clovis City Fire Department	(559) 297-2460	G	0	no	BLS
Coalinga City Fire Department	(559) 935-1652	G	3	yes	ALS
Dinuba City Fire Department	(559) 591- 5931	G	4	yes	ALS
Exeter District Ambulance	(559) 594-5250	G	4	yes	ALS
Fresno City Fire Department	(559) 498-1542	G	0	no	BLS
Fresno County Fire Department	(559) 485-7500	G	0	no	BLS
Hanford City Fire Department	(559) 585-2545	G	0	no	BLS
Imperial Ambulance	(559) 784-8500	G	6	yes	ALS
Kings County Fire Department	(559) 582-3211	G	0	no	BLS
Kingsburg City Fire Department	(559) 897-5457	G	3	yes	ALS
Lemoore City Fire Department	(559) 924-6797	G	0	no	BLS
LifeStar Ambulance	(559) 688-2550	G	6	yes	ALS

Madera County Fire/CDF	(559) 661-5497	G	0	no	BLS
Mobile Life Support (AMR)	(559) 730-3022	G	8	yes	ALS
North Central Fire Protection Dist	(559) 846-5353	G	3	yes	ALS
Pistoresi Ambulance	(559) 673-8004	G	8	yes	ALS
Portville City Fire Department	(559) 782-7536	G	0	no	BLS
Sanger City Fire Department	(559) 875-6568	G	5	yes	ALS
Selma City Fire Department	(559) 896-2525	G	3	yes	ALS
Sequoia Safety Council	(559) 638-9995	G	5	yes	ALS
Sierra Ambulance	(559) 642-0650	G	6	yes	ALS
Skylife of Central California	(559) 456-7878	A	1	yes	ALS
Tulare City Fire Department	(559) 684-4300	G	0	no	ALS
Tulare County Fire Department	(559) 732-5954	G	0	no	BLS
Visalia City Fire Department	(559) 731-4266	G	0	no	ALS

Agency Contact
(Sonoma/Mendocino/Napa)
Bryan Cleaver, Regional Administrator
475 Aviation Blvd., Suite 200
Santa Rosa, CA 95403
(707) 565-6501
FAX: (707) 565-6510
E-MAIL: bcleaver@sonoma-county.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
MedNet (Napa)	155.835	155.100	131.8*	155.100
Med 1	155.100	155.100	N/A	N/A
Med 2	155.265	155.265	N/A	N/A
Med 3	468.000	463.000	N/A	N/A
Med 4	468.025	463.025	N/A	N/A
Med 5	468.050	463.050	N/A	N/A
Med 6	468.075	463.075	N/A	N/A
Med 7	468.100	463.100	N/A	N/A
Med 8	468.125	463.125	N/A	N/A
	468.150	463.150	N/A	N/A
	468.175	463.175	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Napa	N/A	N/A	127.3**	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
	155.835	155.100	N/A	N/A
	155.265	155.265	N/A	N/A
Napa 4	N/A	N/A	N/A	155.805/City Fire Dept.131.8
Direct to hospitals	155.355	155.355	N/A	N/A
Napa (Cellular)	155.355	155.355	131.8	N/A
Other (e.g. tactical, etc.)	155.340	155.340	N/A	N/A
Napa	N/A	N/A	N/A	N/A

*131.8 T&R Atlas Pic
** 127.3 T and 131.8 R – MT ST Helena

Helipad

Emergency Department Facilities	Telephone	Latitude/Longitude
Healdsburg General Hospital 1375 University Avenue Healdsburg, California 95448	(707) 431-6500	
Howard Memorial Hospital 1 Madron Street PO Box 1430 Willits, California 95490	(707) 459-6801	
Kaiser-Santa Rosa 401 Bicentennial Way Santa Rosa, California 95403	(707) 571-4000 - *Main* (707) 571-4510 - *ED*	
Mendocino Coast District Hospital 700 River Drive Ft. Bragg, California 95437	(707) 961-1234	39-25-55.000N/ 123-47-55.000W TLOF - 40' x 40'
Palm Drive Hospital 501 Petaluma Avenue Sebastopol, California 95472	(707) 823-8511	38-23-48.000N/ 122-49-05.000W TLOF - 65' x 65'
Petaluma Valley Hospital 400 North McDowell Blvd. Petaluma, California 94952	(707) 778-2634 – *Main* (707) 864-1250 – *ED*	38-15-19.000N/ 122-37-46.000W TLOF - 65' Diameter
Queen of the Valley Hospital 1000 Trancas Street Napa, California 94558	(707) 252-4411	38-19-45.000N/ 122-17-35.000W TLOF - 40' Diameter
Redwood Coast Medical Services 46900 Ocean Drive Gualala, California 95455	(707) 884-4005	
Saint Helena Hospital 650 Sanitarium Road Deer Park, California 94576	(707) 963-3611	38-32-34.000N/ 122-28-38.000W TLOF - 55' x 55'
Santa Rosa Memorial Hospital 1165 Montgomery Drive Santa Rosa, California 95405	(707) 546-3210 – *Main* (707) 525-5207 – *ED*	38-26-38.000N/ 122-42-01.000W TLOF - 53' x 68'
Sonoma Valley Hospital 347 Andrieux Street Sonoma, California 95476	(707) 935-5000	

Sutter Medical Center 3325 Chanate Road Santa Rosa, California 95404	(707) 576-4000 – *Main* (707) 576-4040 – *ED*	38-28-15.000N/ 122-42-21.000W TLOF - 42' x 42'
Ukiah Valley Medical Center 275 Hospital Drive Ukiah, California 95482	(707) 462-3111	39-09-34.000N/ 123-16-42.000W TLOF - 40' x 40'
Warrack Hospital 2449 Summerfield Road Santa Rosa, California 95405	(707) 542-9030	

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
American Medical Response	(707) 579-9421	G	10	yes	ALS
Anderson Valley Ambulance	(707) 895-3123	G	1	yes	ALS
Angwin Volunteer Ambulance	(707) 965-2468	G	2	yes	BLS
Bell's Ambulance Service	(707) 433-1408	G	3	yes	ALS
Bodega Bay Fire Dept.	(707) 875-3700	G	1	yes	ALS
Brooktrails Fire Dept/Ambulance	(707) 459-4441	G	1	yes	BLS
CALSTAR	(707) 462-5972	N/R	N/R	N/R	ALS
CDF-Helo 101	(707) 459-7408	A	1	no	BLS
CHP Helicopter	(707) 224-3123	G	8	yes	ALS
Cloverdale Ambulance Service	(707) 894-5862	G	1	yes	ALS
Coast Life Support	(707) 884-1216	G	2	yes	ALS
Covelo Fire Department Ambulance	(707) 983-6719	G	2	yes	BLS
Elk Fire Department	(707) 877-3350	G	2	yes	BLS
Laytonville Fire Department	(707) 984-6055	G	2	yes	ALS
Mendocino Coast Hospital/Amb.	(707) 961-1234	G	2	yes	ALS
Mercy St. Helena Ambulance	(707) 257-0103	A	1	yes	ALS
Napa City Fire Department	(707) 963-1510	G	4	yes	ALS

Petaluma Fire	(707) 778-4390	G	2	yes	ALS
Piner's Ambulance	(707) 257-9593	G	0	no	ALS
REACH Helicopter	(707) 575-6886	A	2	yes	ALS
Redwood Empire Life Support	(707) 542-6771	G	20	yes	ALS
Russian River FPD	(707) 869-9089	G	3	yes	ALS
Sonoma Co. Sheriff Department	(707) 527-9595	A	1	yes	ALS
Sonoma Fire - Medical	(707) 996-2102	G	2	yes	ALS
Ukiah Ambulance	(707) 462-3001	G	4	yes	ALS
Ukiah Fire Department	(707) 463-6274	G	3	yes	ALS
Ukiah Flightcare	(707) 462-1414	A	1	yes	ALS
Willits Ambulance	(707) 459-7088	G		yes	ALS

Agency Contact

Ryan E. Kelley, EMS Administrator
Imperial County Public Health Department
797 Main St. Suite A
El Centro, CA 92243
(760) 482-2974
FAX: (760) 336-3903
E-MAIL: ryankelley@imperialcounty.net

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) Med 2			N/A	Prim
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel			N/A	Prim
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to hospitals			N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Pioneers Memorial Hospital 207 W. Legion Road Brawley, California 92227	(760) 344-2120	32-57-30.000N/ 115-33-15.000W TLOF - 50' Diameter
El Centro Regional Medical Center 1415 Ross Avenue El Centro, California 92243	(760) 339-7100	32-36-51.000N/ 115-34-47.000W TLOF - 40' Diameter
US Public Health Service Fort Yuma Indian Hospital Winterhaven, California	(760) 572-0217	

Helispot Location	Latitude/Longitude	Description of Location
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
Blythe Ambulance Services	(760) 922-8460	G	4	yes	ALS
Calexico Fire Department	(760) 768-2150	G	2	yes	ALS
Gold Cross Ambulance Service	(760) 353-3380	GA	9	yes	ALS
Rural/Metro Corporation	(520) 782-4757	G	10	yes	ALS
West Shore Ambulance Service	(760) 395-6800	G	4	yes	ALS

Agency Contact
(San Bernardino, Inyo, Mono)
Virginia Hastings, Executive Director
515 N. Arrowhead
San Bernardino, CA 92415-0060
(909) 388-5823
FAX: (909) 388-5825
E-Mail: vhastings@cao.sbcounty.gov

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
San Bernardino	800 MHz (6ALS1)	800 MHz (6ALS1)	N/A	N/A
Inyo	155.865	155.895	131.8	Primary
Mono	154.025	154.025	131.8	Primary
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	800 MHz (6ALS1)	800MHz (6ALS1)	N/A	N/A
Dispatch (for each EMS Agency)				
Mono	155.760	153.860	136.5	N/A
Direct to Hospitals				
Mono	155.895	154.025	136.5	N/A
Other (e.g. tactical, etc.)				
HEAR NGT	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Arrowhead Regional Medical Center 400 N. Pepper Ave. Emergency Dept. Colton, California 92324	(909) 580-1357	**Helipad #1** 34-04-31.000N/ 117-20-57.000W TLOF - 70' x 70' **Helipad #2** 34-04-31.000N/ 117-20-57.000W TLOF - 104' x 104'
Barstow Community Hospital 555 S. Seventh Street Barstow, California 92311	(760) 256-1761 ext3030	34-53-37.000N/ 117-01-03.000W TLOF - 40' x 40'
Bear Valley Community Hospital	(909) 866-6501 ext8201	

41870 Garstin Drive P.O. Box 1649 Big Bear Lake, California 92315		
Chino Valley Medical Center 5451 Walnut Avenue Chino, California 91710	(909) 464-8604 ext8967	
Colorado River Med. Ctr. 1401 Bailey Avenue Needles, California 92363	(760) 326-4531 ext198	
Community Hospital of San Bernardino 1805 Medical Center Drive San Bernardino, California 92411	(909) 887-6333 ext3550	
Desert Valley Hospital 16850 Bear Valley Road Victorville, California 92395	(760) 381-8041 ext8587 or 8580	
Doctors Hospital-Montclair 5000 San Bernardino Montclair, California 91763	(909)625-8307	
Hi Desert Medical Center 6601 White Feather Road Joshua Tree, California 92252	(760) 366-6126	34-07-54.000N/ 116-16-32.000W TLOF - 40' x 40'
JJP VA MED CTR AMB Care/11C 11201 Benton St. Loma Linda, California 92357	(909) 825-7084 ext6102	
Kaiser Permanente Hospital 9961 Sierra Avenue Fontana, California 92335	(909) 427-5521	34-04-22.000N/ 117-25-53.000W TLOF - 65' x 65'
Loma Linda University Medical Center 11234 Anderson Street, Room A108 Loma Linda, California 92354	(909) 558-4444	**North** 34-03-00.000N/ 117-15-49.000W TLOF - 54' x 54' **South** 34-02-56.000N/ 117-15-50.000W TLOF - 51' x 51'

Mammoth Hospital 85 Sierra Park Road P.O. Box 660 Mammoth Lakes, California 93546	(760) 934-3311 ext. 2234	
Mountains Community Hospital P.O. Box 70 Lake Arrowhead, California 92352	(909) 336-3651 ext3080	34-15-55.000N/ 117-10-02.000W TLOF - 50' Diameter
Northern Inyo Hospital 150 Pioneer Lane Bishop, California 93514	(760) 873-5811 ext2264	
Redlands Community Hospital 350 Terracina Blvd Redlands, California 92373	(909) 335-5600	
San Antonio Community Hospital 999 San Bernardino Road Upland, California 91786	(909) 920-4747	34-06-09.000N/ 117-38-11.000W TLOF - 50' Diameter
St. Bernardine Medical Center 2101 N. Waterman Avenue P.O Box 2338 San Bernardino, California 92406	(909) 883-8711 x3364	
St. Mary Regional Medical Center 18300 Hwy 18 P.O. Box 7025 Apple Valley, California 92307	(760) 242-2311 ext6500	
Southern Inyo Hospital 501 E. Locust Street P.O. Box 1009 Lone Pine, California 93545	(760) 876-5501 ext2220	
Victor Valley Community Hospital 15248 Eleventh Street Victorville, California 92395	(760) 843-6099	34-31-40.000N/ 117-17-34.000W TLOF - 60' x 60'

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
AMR - Redlands	(909) 793-7676	G	38/7	yes	ALS/BLS
AMR - Rancho Cucamonga	(909) 477-5000	G	38/9	yes	ALS/BLS
AMR – Victorville	(760) 925-7400	G	19/3	yes	ALS/BLS
Adelanto (City) Fire Department	(760) 246-3344	G	0	no	BLS
Antelope Valley Fire Department	(530) 495-2900	G	0	no	BLS
Apple Valley (City) Fire Dept	(760) 247-7618	G	0	no	BLS
Arrowbear Lake CWO	(909) 867-3479	G	0	no	BLS
Barstow (City) Fire Department	(760) 256-2254	G	0	no	ALS
Bear Valley Paramedic	(909) 866-7478	G	8	yes	ALS
Big Bear City Fire Department	(909) 585-2565	G	0	no	BLS
Big Bear Lake Fire Department	(909) 866-7566	G	0	no	BLS
Big Pine Fire Department	(760) 938-2146	N/R	N/R	N/R	BLS
Bridgeport Fire Department	(760) 932-7101	G	0	no	BLS
Bureau of Land Management	(760) 872-4881	G	0	no	BLS
CDF-#13 Yucaipa	(909) 797-1000	G	0	no	ALS
CDF-#6 Highland	(909) 862-3031	G	0	no	ALS
CHP-Air	(760) 254-2956	A	2	yes	ALS
Chalfant Valley Fire Department	(760) 873-3990	G	0	no	BLS
China Lake Naval Weapons Ctr	(760) 939-2146	G	3	yes	ALS
Chino Valley (City) Fire Dept	(909) 902-5260	G	0	no	BLS
Cole-Schaefer Ambulance Svs	(909) 622-1273	G	7	yes	BLS
Colton (City) Fire Department	(909) 370-5100	G	0	no	BLS
Crest Forest Fire District	(909) 338-3311	G	3	yes	ALS
Daggett Community Service Dist.	(760) 254-2415	G	0	no	BLS
Death Valley National Monument	(760) 786-2342	G	3	yes	ALS
Delano Ambulance Service	(661) 725-3374	G	4	yes	ALS
Desert Ambulance Service	(760) 256-6854	G	6	yes	ALS
Green Valley Lake Fire Dept	(909) 337-8586	G	0	no	BLS
Hesperia (City) Fire Department	(760) 947-8023	G	5	yes	ALS
Independence Fire Department	(760) 878-2113	G	0	no	BLS

Lee Vining Fire Department	(760) 647-6358	G	0	no	BLS
Liberty Ambulance	(760) 375-6565	G	3	yes	ALS
Loma Linda (City) Fire Dept	(909) 799-2850	G	0	no	BLS
Long Valley Fire Department	(760) 935-4545	G	0	no	BLS
Lucerne Valley Fire Department	(760) 248-7322	G	1	yes	BLS
Mammoth Hospital	(760) 934-8631	G	1	yes	BLS
Mammoth Lakes Fire Department	(760) 934-2300	G	0	no	ALS
Mercy Air Service	(909) 829-7030	A	8	yes	ALS
Montclair (City) Fire Department	(909) 626-1217	G	0	no	BLS
Mountain Warfare Training Ctr.	(760) 932-7761	G	3	yes	BLS
Searles Valley Minerals	(760) 372-2341	G	1	yes	BLS
Olancha/Cartago Fire Department	(760) 764-0029	N/R	N/R	N/R	BLS
Ontario (City) Fire Department	(909) 935-2002	G	0	no	ALS
Ontario Airport Fire Department	(909) 337-2815	G	0	no	BLS
Paradise Fire Department	(760) 387-2720	G	0	no	BLS
Rancho Cucamonga Fire Dept	(909) 477-2770	G	0	no	ALS
Redlands (City) Fire Department	(909) 798-7600	G	0	no	ALS
Rialto (City) Fire Department	(909) 820-2501	G	3	yes	ALS
Running Springs Water District	(909) 867-2630	G	5	yes	ALS
S. Amargosa Valley Emergency Service	(760) 852-4506	N/R	N/R	N/R	BLS
San Bernardino Co. Fire Dept	(909) 387-5974	G	0	no	BLS
San Bernardino Co. Fire-Fontana	(909) 829-4441	G	0	no	BLS
San Bernardino Co. Fire Agency-Yucca Valley	(760) 365-3335	G	3	yes	ALS
San Bernardino Co. Fire Agency-Forest Falls	(909) 794-4413	G	1	yes	BLS
San Bernardino Co Fire Agency-Lake Arrowhead	(909) 337-8586	G	5	yes	ALS
San Bernardino Co Fire Agency Searles	(760) 372-5988	G	2	yes	BLS
San Bernardino Co. FD-Wrightwood	(760) 249-3206	G	5	yes	ALS
San Bernardino City Fire Dept	(909) 384-5286	G	0	no	ALS

Sheriff's Aviation	(909) 356-3800	A	3	yes	ALS
Symons Emergency Services	(760) 873-8904	G	4	yes	ALS
Twentynine Palms Fire Dept	(760) 367-7524	G	0	no	BLS
Upland (City) Fire Department	(909) 931-4180	G	0	no	ALS
Victorville (City) Fire Dept	(760) 955-5277	G	0	no	BLS
White Mountain Fire Department	(760) 933-2617	G	N/R	N/R	BLS

Agency Contact
Ross Elliott, Director
1800 Mount Vernon Avenue, 2nd Floor
Bakersfield, California 93306
(661) 868-5200
FAX: (661) 322-8453
E-MAIL: relliott@co.kern.ca.us

Channel Use		TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)					
MUTUAL AID R	County Mutual Aid	453.2250	458.2250	131.8	131.8
Med 1R	Soledad	463.0000	468.0000	186.2	186.2
Med 2D	Direct	463.0250	463.0250		186.2
Med 3R	Fm Hill	463.0500	468.0500	186.2	186.2
Med 4D	Direct	463.0750	463.0750		186.2
Med 5R	Grapevine	463.1000	468.1000	186.2	186.2
Med 6D	Direct	463.1250	463.1250		186.2
Med 7R	Mebane	463.1500	468.1500	186.2	186.2
Med 8D	Direct	463.1750	463.1750		186.2
Med 9R	County-wide	462.9500	467.950	186.2	186.2
Med 10D	Direct	462.9750	462.9750		186.2
Statewide Medical Coordination		0	0	0	N/A
Calling Channel Med 7 Med 9		 463.1500 462.9500	 468.1500 467.9500	 186.2 186.2	 186.2 186.2
Dispatch (for each EMS Agency) Several, Not centralized					
Direct to hospitals Med 9		 462.9500	 467.9500	 186.2	 186.2
Assigned COR Radio Frequencies (Non-Repeater, line-of-sight only)					
Med-1	San Joaquin Hospital	463.000	468.000	PL 173.8	
Med-2	Mercy Main	463.025	468.025	PL 173.8	
Med-3	Bakersfield Memorial Hospital	463.050	468.050	PL 173.8	
Med-4	Delano Regional Medical Center	463.075	468.075	PL 173.8	
Med-5	Kern Medical Center	463.100	468.100	PL 173.8	
Med-10	Bakersfield Heart Hospital	462.975	467.975	PL 173.8	
Greater Bakersfield & Delano (Kern Medical Center, Mercy Hospital, San Joaquin Hospital, Bakersfield Memorial Hospital, Heart Hospital, Mercy Southwest Hospital, Delano Regional Medical Center)					
MED9R	County-wide	462.9500	467.9500	186.2	186.2

MED5R	Grapevine	463.1000	468.1000	186.2	186.2
Kern Valley Hospital					
MED9R	County-wide	462.9500	467.9500	186.2	186.2

Tehachapi Hospital					
MED9R	County-wide	462.9500	467.9500	186.2	186.2
MED1R	Soledad	463.0000	468.0000	186.2	186.2
Ridgecrest Regional Hospital					
MED9R	County-wide	462.9500	467.9500	186.2	186.2
MED3R	FM Hill (Lone Butte)	463.0500	468.0500	186.2	186.2
Other (e.g. tactical, etc.) Med 7		463.1500	468.1500	186.2	Med-Alert Comm

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Bakersfield Memorial Hospital 420 34th Street Bakersfield, California 93301	(661) 327-1792	35-23-28.000N/ 119-00-19.000W TLOF 40' x 40'
Bakersfield Heart Hospital 3001 Sillect Ave Bakersfield, California 93308	(661) 316-6000	
Delano Regional Medical Center 1401 Garces Hwy Delano, California 93215	(661) 725-4800	
Kern Medical Center 1830 Flower Street Bakersfield, California 93305	(661) 326-2000	35-23-03.000N/ 118-58-05.000W TLOF - 70' Diameter
Mercy Hospital 2215 Truxtun Ave Bakersfield, California 93301	(661) 632-5000	
Mercy Southwest 400 Old River Rd Bakersfield, California 93311	(661) 663-6000	
San Joaquin Community Hospital 2615 Eye Street	(661) 395-3000	35-23-01.000N/ 119-01-08.000W

Bakersfield, California 93301		TLOF - 40'X40'
Kern Valley Hospital 6412 Laurel Ave Lake Isabella, California 93240	(760) 379-2681	35-43-41.825N/ 118-25-11.305W TLOF - 66' x 66'
Ridgecrest Community Hospital 1081 North China Lake Blvd. Ridgecrest, California 93555	(760) 446-3551	35-38-25.000N/ 117-40-16.000W TLOF - 77' Diameter.
Tehachapi Hospital 115 West "E" Street Tehachapi, California 93561	(661) 822-3241	

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
Bakersfield Fire Department	(661) 326-3941	G	0	no	BLS
CARE Ambulance	(760) 376-2271	G	7	yes	ALS
California City Fire Department	(760) 373-4841	G	0	no	ALS
Delano Ambulance	(661) 725-3374	G	6	yes	ALS
Hall Ambulance Service, Inc.	(661) 322-8741	GA	63	yes	ALS
Kern Ambulance	(661) 758-3200	G	7	yes	ALS
Kern County Fire Department	(661) 391-7000	G	0	no	BLS
Kern County Fire Department	(661) 391-7000	A	1	yes	BLS
Mercy Air Service Inc.	(909) 357-9006	A	1	yes	ALS
Liberty Ambulance	(760) 375-6565	G	9	yes	ALS
Taft Fire Department	(661) 765-4136	G	0	no	BLS
U.S. Borax Ambulance Service	(760) 762-7610	G	1	yes	ALS

BLS Rescue Aircraft – limited use for transport

Agency Contact

Cathy Chidester BSN, MSN, Director
10100 Pioneer Blvd., Suite 200
Santa Fe Springs, California 90670
(562) 347-1500
FAX: (562) 941-5835
E-MAIL: cchidester@dhs.lacounty.gov

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
Shared w/other counties	155.340	N/A	N/A	N/A
HEAR – intra-county	155.280	N/A	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to hospital	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)				
RediNet – For disasters	968.000	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Alhambra Hospital 100 S. Raymond Avenue Alhambra, California 91801	(626) 570-1606	
Antelope Valley Hospital Medical Ctr 1600 West Avenue J Lancaster, California 93534	(661) 949-5000	34-41-17.000N/ 118-09-31.000W TLOF - 60' Diameter
Bellflower Medical Center 9542 E. Artesia Blvd. Bellflower, California 90706	(562) 925-8355	
Beverly Hospital 309 West Beverly Blvd. Montebello, California 90640	(323) 726-1222	
Brotman Medical Center	(310) 836-7000	

3828 Delmar Terrace Culver City, California 90231		
California Hospital Medical Center 1401 S. Grand Avenue Los Angeles, California 90015	(213) 748-2411 Main (213) 742-5446 ED	
Cedars Sinai Medical Center - Saperstein Critical Care Tower 8700 Beverly Blvd. Los Angeles, California 90048	(310) 855-5000- *Main* (310) 967-8781 – *ED*	34-04-38.000N/ 118-22-44.000W 89' Diameter
Centinela Freeman Regional Medical Center, Centinela Campus 555 East Hardy Street Inglewood, California 90301	(310) 673-4660 - *Main* (310) 419-8636 - *ED*	
Children's Hospital of Los Angeles 4650 Sunset Blvd. Los Angeles, California 90027	(323) 660-2450 - *Main* (323) 660-2450 x4455 - *ED Manager*	34-05-50.000N/ 118-17-2.000W TLOF – 50' Diameter
Citrus Valley Medical Center Inter-Community Campus 210 W. Bernardino Road Covina, California 91723	(626) 331-7331- *ED*	
Citrus Valley Medical Center Queen of the Valley Campus 1115 S. Sunset Avenue West Covina, California 91790	(626) 962-4011 - *ED*	
City of Angels Medical Center Downtown Campus 1711 West Temple Street Los Angeles, California 90026	(213) 989-6100	
Coast Plaza Doctors Hospital 13100 Studebaker Road Norwalk, California 90650	(562) 868-3751 - *Main* (562) 868-3751 x2158 - *ED Manager*	
Community Hospital of Huntington Park 2623 E. Slauson Avenue Huntington Park, California 90255	(323) 583-1931	
Community Hospital of Gardena 1246 West 155th Street Gardena, California 90247	(310) 516-7931	

Community Hospital Of Long Beach 1720 Termino Avenue Long Beach, California 90804	(562) 498-1000	
Daniel Freeman Memorial Hospital 333 N Prairie Ave Inglewood, California 90301-4514	(310) 330-8400	33-58-10.000N/ 118-20-40.000W TLOF – 65’ x 65’
Doctors Hospital of West Covina 725 S. Orange Avenue West Covina, California 91790	(626) 338-0502	
Downey Regional Medical Center 11500 Brookshire Avenue Downey, California 90241	(562) 904-5000 - *Main* (562) 904-5119 - *ED Manager*	
East Los Angeles Doctors Hospital 4060 E. Whittier Blvd. Los Angeles, California 90023	(323) 268-5514 - *Main* (323) 268-5514 x200 - *ED Manager*	
East Valley Hospital Medical Center 150 West Route 66 Glendora, California 91740	(626) 335-0231	
Encino Hospital Medical Center 16237 Ventura Blvd. Encino, California 91436	(818) 995-5000 - *Main* (818) 995-5350 - *ED Manager*	
Foothill Presbyterian Hospital, Johnston Memorial 250 S. Grand Avenue Glendora, California 91740	(626) 963-8411	34-08-00.000N/ 117-52-06.000W TLOF - 40' x 40'
Garfield Medical Center 525 N. Garfield Monterey Park, California 91754	(818) 573-2222	
Glendale Adventist Medical Center 1509 Wilson Terrace Glendale, California 91206	(626) 409-8202	34-09-06.000N/ 118-13-45.000W TLOF - 42' x 42'
Glendale Memorial Hospital & Health Ctr 1420 South Central Ave. Glendale, California 91204	(626) 502-1900	
Good Samaritan Hospital – Los Angeles 616 Witmer Street	(213) 977-2121	34-03-16.000N/ 118-15-51.000W

Los Angeles, California 90017		TLOF - 55' x 55'
Greater El Monte Community Hospital 1701 N. Santa Anita El Monte, California 91733	(626) 579-7777	
Henry Mayo Newhall Memorial Hospital 23845 McBean Parkway Valencia, California 91355	(661) 253-8000	
Hollywood Presbyterian Medical Ctr 1300 N. Vermont Avenue Los Angeles, California 90027	(323) 413-3000	34-05-47.000N/ 118-17-22.000W TLOF - 40' x 40'
Huntington Memorial Hospital 100 W. California Blvd. Pasadena, California 91105	(626) 397-5000	34-08-02.000N/ 118-09-10.000W TLOF – 40’ Diameter
Kaiser Foundation Hospital – Baldwin Park 1011 Baldwin Park Blvd. Baldwin Park, California 91706	(626) 851-1011	
Kaiser Foundation Hospital – Bellflower 9400 E. Rosecrans Avenue Bellflower, California 90706	(562) 461-3000 - *ED*	
Kaiser Foundation Hospital – South Bay 25825 S. Vermont Avenue Harbor City, California 90710	(310) 325-5111	
Kaiser Foundation Hospital - Mental Health Center 765 College Street Los Angeles, California 90012	(213) 580-7200	
Kaiser Foundation Hospital - Panorama City 13652 Cantara Street Panorama City, California 91402	(818) 375-2000	
Kaiser Foundation Hospital – Sunset 4867 Sunset Blvd. Los Angeles, California 90027	(323) 667-4011	
Kaiser Foundation Hospital – West Los Angeles	(323) 857-2000	

6041 Cadillac Avenue Los Angeles, California 90034		
Kaiser West Los Angeles Hospital – Woodland Hills 5601 De Soto Avenue Woodland Hills, California 91367	(818) 719-2000	
Lakewood Regional Medical Center 3700 E. South Street Lakewood, California 90712	(562) 531-2550	
Lancaster Community Hospital 43830 N. 10th Street West Lancaster, California 93534	(661) 948-4781	
Lincoln Hospital Medical Center 443 S. Soto Street Los Angeles, California 90033	(323) 261-1181	
Little Company of Mary Hospital 4101 Torrance Boulevard Torrance, California 90503	(310) 540-7676	
Little Company of Mary, San Pedro Hosp. 1300 W. 7th Street San Pedro, California 90732	(310) 832-3311	
Long Beach Memorial Medical Center 2801 Atlantic Avenue Long Beach, California 90806	(562) 933-2000	33-48-30.000N/ 118-11-11.000W TLOF - 40' x 40'
Los Angeles County – Harbor-UCLA Medical Center 1000 W. Carson Street Torrance, California 90509	(310) 222-2345	33-49-44.000N/ 118-17-33.000W TLOF - 40' x 40'
Los Angeles County – Olive View UCLA Medical Center 14445 Olive View Drive Sylmar, California 91342	(818) 364-1555	
Los Angeles County + USC Medical Center 1200 N. State Street Los Angeles, California 90033	(323) 226-2622	34-09-30.000N/ 118-12-30.000W TLOF - 40' x 40'
Los Angeles Community Hospital 4081 E. Olympic Blvd.	(323) 267-0477	

Los Angeles, California 90023		
Los Angeles Metropolitan Medical Ctr 2231 South Western Avenue Los Angeles, CA 90018	(323) 730-7300	
Memorial Hospital of Gardena 1145 W. Redondo Beach Blvd. Gardena, California 90247	(310) 532-4200	
Methodist Hospital of Southern California 300 W. Huntington Drive Arcadia, California 91007	(818) 445-4441	
Mission Community Hospital - Panorama City 14850 Roscoe Blvd. Panorama City, California 91402	(818) 787-2222	
Monterey Park Hospital 900 S. Atlantic Blvd. Monterey Park, California 91754	(626) 570-9000	
Northridge Hospital Medical Center - Roscoe Campus 18300 Roscoe Blvd. Northridge, California 91328	(818) 885-8500	34-13-12.000N/ 118-31-56.000W TLOF – 60’ Diameter
Norwalk Community Hospital 13222 Bloomfield Avenue Norwalk, California	(562) 863-4763	
Olive View Medical Center 14445 Olive View Drive Sylmar, California 91342	(818) 364-1555	34-19-36.000N 118-26-39.000W TLOF – 56’ X 56’
Olympia Medical Center 5925 San Vicente Boulevard Los Angeles, CA 90019	(310) 657-5900	
Pacific Hospital of Long Beach 2776 Pacific Avenue Long Beach, California 90806	(562) 595-1911	
Pacifica of the Valley Hospital 9449 San Fernando Road Sun Valley, California 91352	(818) 767-3310	

Pomona Valley Medical Center 1798 N. Garey Avenue Pomona, California 91767	(909) 623-8715	
Presbyterian Intercommunity Hospital 12401 E. Washington Boulevard Whittier, California 90602	(562) 698-0811	33-58-16.000N/ 118-02-57.000W TLOF - 60' x 60'
Providence Holy Cross Hospital Medical Center 15031 Rinaldi Mission Hills, California 91345	(818) 365-8051	34-16-47.00N/ 118-27-38.00W TLOF – 65’ X 65’
Providence St. Joseph Medical Center 501 S. Buena Vista Street Burbank, California 91505	(818) 843-5111	34-09-20.000N 118-19-41.000W TLOF - 50' x 50'
Providence Tarzana Medical Center Tarzana Campus 18321 Clark Street Tarzana, California 91356	(818) 881-0800	
San Dimas Community Hospital 1350 W. Covina Blvd. San Dimas, California 91773	(909) 599-6811	
San Gabriel Valley Medical Center 218 S. Santa Anita Street San Gabriel, California 91776	(626) 289-5454	
Santa Monica-UCLA Medical Center 1250 16th Street Santa Monica, California 90404	(310) 319-4000	
Sherman Oaks Community Hospital 4929 Van Nuys Blvd. Sherman Oaks, California 91403	(818) 981-7111	34-09-36.000N 118-26-55.000W TLOF - 48' x 52'
Shriner Hospital for Children-Los Angeles 3160 Geneva Street Los Angeles, California 90020	(213) 388-3151	
St. Francis Medical Center 3630 E. Imperial Highway Lynwood, California 90262	(310) 900-7301	33-48-31.200N 118-11-11.800W TLOF - 94' x 64'

St. John's Hospital and Health Center 1328 22nd Street Santa Monica, California 90404	(310) 829-5511	
St. Mary Medical Center 1050 Linden Avenue Long Beach, California 90813	(562) 491-9000	33-46-50.000N 118-11-09.800W TLOF - 40' x 40'
St. Vincent Medical Center 2131 W. 3rd Street Los Angeles, California 90057	(213) 484-5525	34-03-48.000N 118-16-08.000W TLOF - 50' x 50'
Torrance Memorial Medical Center 3330 Lomita Blvd. Torrance, California 90505	(310) 325-9110	
Tri-City Regional Medical Center 21530 South Pioneer Boulevard Hawaiian Gardens, California 90716	(562) 860-0401	
USC – University Hospital 1500 San Pablo Street Los Angeles, California 90033	(323) 342-8500	34-03-14.000N/ 118-12-03.000W TLOF - 55' x 55'
Valley Presbyterian Hospital 15107 Van Owen Street Van Nuys, California 91405	(818) 782-6600	
Verdugo Hills Hospital 1812 Verdugo Blvd. Glendale, California 91208	(626) 790-7100	34-12-15.000N/ 118-13-00.000W TLOF - 62' x 62'
West Hills Regional Medical Center 7300 Medical Center Drive West Hills, California 91307	(818) 676-4000	
White Memorial Medical Center 1720 Cesar Chavez Avenue Los Angeles, California 90033	(323) 268-5000	
Whittier Hospital Medical Center 15151 Janine Drive Whittier, California 90606	(562) 945-3561	

Helispot Location	Latitude/Longitude	Description of Location

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
APT Ambulance Company	(310) 846-4000	G	29	yes	ALS
Alhambra Fire Department	(626) 570-5190	G	2/5	yes	ALS
Allen Ambulance Service	(323) 732-9156	G	1	yes	BLS
AmbuServe, Inc.	(310) 644-0500	G	28	yes	ALS
AmeriCare Ambulance	(310) 835-9390	G	6	yes	ALS
AMR-Antelope Valley Division	(800) 433-7522	G	20	yes	ALS
AMR-Glendale/San Fernando Div.	(310) 851-7710	G	40	yes	ALS
AMR-Los Angeles Division	(310) 851-7710	G	89	yes	ALS
AMR-San Gabriel Valley Division	(310) 851-7710	G	63	yes	ALS
AMR-Metro/South Division	(310) 851-7710	G	69	yes	ALS
Antelope Ambulance Service	(661) 95*-1998	G	11	yes	ALS
Arcadia Fire Department	(626) 574-5112	G	2/1	yes	ALS
Avalon Fire Department	(310) 510-0203	G	1	yes	BLS
Beverly Hills Fire Department	(310) 281-2700	G	2/4	yes	ALS
Bowers Ambulance Service	(562) 988-6400	G	18	yes	ALS
Burbank Fire Department	(818) 238-3411	G	3/8	yes	ALS
Care Ambulance	(714) 828-7937	G	94	yes	BLS
Compton Fire Department	(310) 605-5670	G	2	yes	ALS
Culver City Fire Department	(310) 253-5900	G	2/4	yes	ALS
Downey Fire Department	(562) 904-7301	G	2	yes	ALS
El Segundo Fire Department	(310) 524-2395	G	2	yes	ALS
Emergency Ambulance Service	(714) 990-1742	G	7	yes	ALS
Gerber Ambulance Service	(310) 524-6464	G	8	yes	ALS
Glendale Fire Department	(818) 548-4814	G	5/12	yes	ALS

Guardian Ambulance Corporation	(626) 792-3688	G	8	yes	ALS
Hall Ambulance Service, Inc.	(661) 322-8791	G	7	yes	ALS
Hermosa Beach Fire Department	(310) 376-2479	G	½	yes	ALS
Huntington Ambulance Service	(310) 904-1550	G	3	yes	ALS
Impulse Ambulance, Inc.	(818) 982-3500	G	4	yes	BLS
LaHabra Heights Fire Department	(562) 694-8283	G	1	yes	ALS
Los Angeles City Fire Department	(213) 485-7153	GWA	95/46	yes	ALS
Los Angeles Co. Fire Department	(323) 881-2485	GWA	75/21	no	ALS
Los Angeles County Sheriff Dept	(323) 881-7800	A	3	yes	ALS
Los Angeles County Lifeguard	(310) 989-7203	GW	2	yes	ALS
La Verne Fire Department	(909) 596-5991	G	2/2	yes	ALS
Long Beach Fire Department	(562) 570-2500	G	9/11	yes	ALS
Manhattan Beach Fire Department	(310) 802-5203	G	2	yes	ALS
Mauran Ambulance Service	(818) 365-3182	G	9	yes	BLS
Medcoast Med Service, Inc.	(866) 926-9990	F	3	yes	BLS
Mercy Ambulance Service	(877) 486-3729	G	3	yes	BLS
Westmed/McCormick Ambulance Service	(310) 219-1779	G	60	yes	ALS
Med-Event Medical	(909) 880-2979	G	12	yes	BLS
MedReach Ambulance	(310) 781-9395	G	10	yes	BLS
Monrovia Fire Department	(626) 256-8100	G	1/1	no	ALS
Montebello Fire Department	(323) 887-4510	G	3/2	no	ALS
Monterey Park Fire Department	(626) 307-1270	G	3/2	yes	ALS
Pasadena Fire Department	(626) 744-4655	G	9/9	yes	ALS
Priority One Medical Transport	(800) 600-3370	G	30	yes	ALS
PRN Ambulance, Inc.	(323) 888-7750	G	26	yes	ALS
Redondo Beach Fire Department	(310) 318-0663	G	3/3	no	ALS
Rescue Services International	(800) 989-5027	G	6	yes	BLS
San Gabriel Fire Department	(626) 308-2880	G	1/3	yes	ALS
San Marino Fire Department	(626) 300-0735	G	2/1	yes	ALS
Santa Fe Springs Fire Department	(562) 944-9713	G	4	no	ALS
Santa Monica Fire Department	(310) 458-8651	G	¾	no	ALS

Schaefer Ambulance. Service, Inc	(323) 469-1473	G	52	yes	ALS
Sierra Madre Fire Department	(626) 355-1401	G	1	yes	BLS
South Pasadena Fire Department	(626) 403-7300	G	2/1	yes	ALS
Torrance Fire Department	(310) 781-7000	G	7/6	no	ALS
West Coast Ambulance	(800) 880-0556	G	14	yes	ALS
West Covina Fire Department	(626) 338-8800	G	4/6	no	ALS

Agency Contact

Miles Julihn, EMS Administrator
899 Northgate Dr., Suite 104
San Rafael, CA 94903
(415) 499-6871
FAX: (415) 499-3747
E-MAIL: mjulihn@co.marin.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/A	N/A	N/A	N/A
Statewide Medical Coordination	154.280	N/A	N/A	N/A
Calling Channel – Aircraft to Fire	156.075	N/A	N/A	N/A
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

(All MERA Motorola Type II Smart Zone – 480 Trunked System)

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Novato Community Hospital 180 Rowland Way Novato, California 94947	(415) 209-1300	
Kaiser Hospital, San Rafael 99 Monticello Road San Rafael, California 94903	(415) 444-2400	
Marin General Hospital PO Box 8010 San Rafael, California 94912-8010	(415) 925-7000	

Helispot Location	Latitude/Longitude	Description of Location
Field	38-06-00.49/ 122-33-38.07	Adjacent to hospital
School	38-00-13-50N/ 122-33-14.69W	Flat grassy field
Park	37-56-53-66N/ 122-32-10.61W	

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response	(415) 499-9191	G	10	yes	ALS
Corte Madera Fire Department	(415) 925-5077	G	1	yes	ALS
Marin County Fire Department.	(415) 499-3742	G	4	yes	ALS
Novato Fire Protection District	(415) 898-9719	G	3	yes	ALS
Ross Valley Paramedic Authority	(415) 258-4686	G	1	yes	ALS
S. Marin Emergency Med Paramedic System	(415) 389-4144	G	4	yes	ALS
San Rafael Fire Department	(415) 485-3307	G	3	yes	ALS
St. Joseph's Ambulance Service	(415) 460-6020	G	9	yes	BLS/ALS
Stinson Beach Ambulance	(415) 868-0622	G	1	yes	ALS

Agency Contact

Chuck Baucom, EMS Administrator
260 East 15th Street
Merced, CA 95340
(209) 381-1255
FAX: (209) 381-1259
E-MAIL: cbaucom@co.merced.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (Med 8)	468.175	463.175	N/A	N/A
Local Dispatch Coordination (Med 9)	467.950	462.950	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Ambulance Dispatch	467.950	462.950	N/A	N/A
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)				
Fire White for disasters	155.400	N/A	N/A	N/A
CALCORD	156.075	156.075	156.7	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Mercy Medical Center-Merced 301 E. 13th Street Merced, California 95340	(209) 385-7201-*ED*	
Mercy Hospital 2740 M Street Merced, California 95346	(209) 384-6444	
Dos Palos Memorial Hospital 2118 Marguerite St. Dos Palos, California 93620	(209) 392-6121	
Memorial Hospital of Los Banos 520 West I Los Banos, California 93635	(209) 826-0591-*Main*	37-03-45.8N/ 120-51-43.7W TLOF - 40' x 40'

Helispot Location	Latitude/Longitude	Description of Location

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response	(209) 576-1984	G	3	yes	ALS
Air Medical Team	(209) 576-3939	A	1	yes	ALS
Atwater Fire Department	(209) 357-6353	G	0	no	BLS
CALSTAR	(800) 252-5050	A	4	yes	ALS
Los Banos Fire Department	(209) 827-7025	G	0	no	BLS
Mediflight of Northern California	(209) 572-7050	A	3	yes	ALS
Merced City Fire Department	(209) 385-6897	G	0	no	BLS
Merced Co. Fire/CDF	(209) 385-7345	G	0	no	BLS
Riggs Ambulance	(209) 725-7011	G	14	yes	ALS
Skylife of Central California	(209) 292-5248	A	2	yes	ALS
Westside Ambulance	(209) 520-1790	G	3	yes	ALS

Agency Contact

Tom Lynch, EMS Director
19065 Portola Dr Ste I
Salinas, CA 93908
(831) 755-5013
FAX: (831) 455-0680
E-MAIL: lynchtg@co.monterey.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
Med 2	468.025	463.025	173.8	N/A
Med 5	468.100	463.100	173.8	N/A
Med 6	468.125	463.125	173.8	N/A
Med 7	468.150	463.150	173.8	N/A
Statewide Medical Coordination	0	0	0	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
AMR – Med 9	467.950	462.950	N/A	N/A
AMR – Med 10	467.975	462.975	N/A	N/A
CRFA	156.240	154.995	N/A	N/A
Direct to hospitals				
Disaster only	800 MHz	N/A	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Community Hospital of Monterey Peninsula 23625 Holman Highway Monterey, California 93942	(831) 624-5311	
Salinas Valley Memorial 450 East Romie Lane Salinas, California 93901	(831) 757-4333	
Natividad Medical Center 1441 Constitution Blvd. Salinas, California 93906	(831) 755-4111	36-41-52.000N/ 121-38-58.000W TLOF - 74' Diameter

George Mee Memorial Hospital 300 Canal Street King City, California 93930	(831) 385-6000	36-12-30.000N/ 121-07-50.000W TLOF - 50' x 50'
Watsonville Community Hospital 75 Nielsen Street Watsonville, CA 95076	(831) 724-4741	

Helispot Location	**Latitude/Longitude**	**Description of Location**
Salinas Airport	36-66463664/-121-6119361	Salinas Airport
Marina Airport	36-67384889/-121-76229	Marina Airport
Monterey Airport	36-58665627/-121-8472087	Monterey Airport
Soledad Prison Fire Department	36-46645551/-121-3847101	Soledad Prison Helipad
Greenfield: El Camino Real/ Cherry Street	36-32965603/-121.2518764	Greenfield Hall
835 Forest Avenue Pacific Grove	36-61370626/-121.9185501	Pacific Grove Middle School Football Field

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
AMR	(831) 883-3280	G	20	yes	ALS
AMR-Santa Cruz	(831) 423-7030	G	1	yes	ALS
Big Sur Volunteer Fire Brigade	(831) 667-2113	G	0	no	BLS
Cachagua Fire Protection District	(831) 659-7700	G	0	no	BLS
Cambria Community Healthcare District	(831) 927-8304	G	1	yes	ALS
Carmel Regional Fire Ambulance	(831) 624-7881	G	3	yes	ALS
Carmel Valley Fire Protection Dist	(831) 659-2021	G	3	yes	ALS
Carmel-by-the-Sea Fire Dept	(831) 624-1718	G	0	no	BLS
Carmel-by-the-Sea Police Dept	(831) 624-6304	G	0	no	BLS
CDF-Aromas Tri-County Fire Protection District	(831) 333-2600	G	0	no	BLS
CDF-Carmel Highlands Fire Protection District	(831) 333-2600	G	0	no	BLS
CDF-Consolidated State Resources	(831) 333-2600	G	0	no	BLS
CDF-Cypress Fire Protection Dist	(831) 647-6208	G	0	no	ALS

CDF-Pebble Beach	(831) 333-2600	G	0	no	ALS
CDF- South Monterey County	(831)678-0690	G	0	no	BLS
Central Coast Ambulance Services	(831) 899-3100	G	11	wc	BLS
CHP-Monterey HQ	(831) 796-2100	G	0	no	BLS
CSUMB Police Department	(831) 582-3360	G	0	no	BLS
Del Ray Oaks Police Department	(831) 349-9333	G	0	no	BLS
Department of Fish and Game	(831) 649-2870	G	0	no	BLS
Gonzales Police Department	(831) 675-4235	G	0	no	BLS
Gonzales Volunteer Fire Dept.	(831) 675-4223	G	0	no	BLS
Greenfield Police Department	(831) 674-5111	G	0	no	BLS
Greenfield Volunteer Fire Dept	(831) 674-5484	G	0	no	BLS
King City Police Department	(831) 385-4848	G	0	no	BLS
King City Volunteer Fire Dept	(831) 385-3343	G	0	no	BLS
Marina Dept of Public Safety	(831) 384-5225	G	0	no	BLS
Mid Coast Fire Brigade	(831) 624-3473	G	0	no	BLS
Monterey Fire Department	(831) 646-3900	G	0	no	BLS
Monterey Peninsula Airport Fire Department	(831) 648-7008	G	0	no	BLS
Monterey Police Department	(831) 646-3805	G	0	no	BLS
Naval Postgraduate School Police	(831) 656-2556	G	0	no	BLS
North County Fire Protection Dist	(831) 633-2578	G	0	no	BLS
Pacific Grove Fire Department	(831) 648-3110	G	0	no	BLS
Pacific Grove Police Department	(831) 648-3147	G	0	no	BLS
Parks Department – South County	(831) 427-2311	G	0	no	BLS
POM-DLI/Fort Ord Police Dept	(831) 242-7738	G	0	no	BLS
POM-Fort Hunter-Liggett	(831)386-2517	G	3		BLS
POM-Fort Ord Fire Department	(831) 242-7545	G	0	no	BLS
Salinas Fire Department	(831) 758-7261	G	0	no	ALS
Salinas Police Department	(831) 758-7236	G	0	no	BLS
Salinas Rural Fire District	(831) 455-1828	G	0	no	ALS
San Ardo Volunteer Fire Dept	(831) 627-2465	G	0	no	BLS
San Luis Ambulance	(831) 543-2626	G	17	yes	ALS

Seaside Fire Department	(831) 899-6262	G	0	no	BLS
Sheriff-Central Patrol (Salinas) Station	(831) 755-3807	G	0	no	BLS
Sheriff-Coastal (Monterey) Station	(831) 647-7675	G	0	no	BLS
Sheriff-Custody Operations Bureau	(831)755-3789	G	0	no	BLS
Sheriff-Search and Rescue (SAR) Team	(831) 647-7702	G	0	no	BLS
Sheriff-South County Station (KC) Station	(831) 385-8366	G	0	no	BLS
Sheriff- Special Operations (Salinas)	(831) 755-3775	G	0	no	BLS
Sheriff's Office-HQ	(831)755-3803	G	0	no	BLS
Soledad Fire Department	(831) 678-2054	G	0	no	BLS
Soledad Police Department	(831) 678-1332	G	0	no	BLS
Spreckels Volunteer Fire Company	(831) 455-2211	G	0	no	BLS
U.S. Forest Services-Monterey	(831) 385-5434	G	0	no	BLS

Agency Contact
(Alpine, Amador, Calaveras, Mariposa, Stanislaus)
Steve Andriese, EMS Administrator
1101 Standiford Ave #D1
Modesto, CA 95350
(209) 529-5085
FAX: (209) 529-1496
E-MAIL: sandriese@mvemsa.com

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
Alpine				
Med 1	468.000	463.000	100.0	Prim
Med 2	468.025	463.025	179.9	Prim
Amador				
Med 13	458.425	453.425	100.0	Prim
Med 3	468.250	463.050	167.9	Alt
Med 8	468.175	463.175	100.0	Alt
Med 9	468.950	463.950	100.0	Alt
Calaveras				
Med 3	468.050	463.050	107.2	Alt
Med 9	467.950	462.950	167.9	Prim
Mariposa				
Med 8	468.175	463.175	123.0	Prim
Med 14	456.425	451.425	149.9	Alt
Stanislaus				
Med 1	468.000	463.000	179.9	
Med 5	468.100	463.100	179.9	
All Hospitals VHF Med - HEAR		155.385	88.5	
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Alpine Medical				
Markleeville	154.100	153.800	107.2	Prim
Bear Valley	154.100	153.800	131.8	Prim
Alpine Fire				
Kirkwood-Camino (CDF)	159.225	151.190	123.0	Prim
Bear Valley-San Andreas	159.450	151.175	156.7	Prim
Amador Medical				
VHF	159.225	151.190	123.0	Alt
Med 10	467.975	462.975	100.0	Prim
Amador Fire				
Camino (CDF)	159.225	151.190	123.0	Prim

Calaveras Medical				
Med 9	467.950	462.950	167.9/ 103.5	Prim
Calaveras Fire				
San Andreas (CDF)	159.450	151.175	110.9	Prim
Mariposa Medical				
Mariposa CDF	151.460	159.390	146.2	Prim
Mariposa CDF-Med 14	451.425	451.425	179.9	Alt
Stanislaus Medical				
AMR	151.5725	160.055	1110.9	Prim
	155.295	155.295	88.5	Alt
Stanislaus Fire				
Modesto City	154.145	155.940	123.0	
Stanislaus County Fire	153.770	153.770	123.0	Duplex
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Sutter Amador Hospital 810 Court Street Jackson, California 95642	(209) 223-7500	38-21-00.000N/ 120-45-48.000W TLOF - 60' Diameter
Mark Twain St. Joseph Hospital 768 Mountain Ranch Road San Andreas, California 95249	(209) 754-3521	38-11-34.000N/ 120-40-24.000W TLOF - 70' Diameter
John C. Fremont Hospital 5189 Hospital Road Mariposa, California 95338	(209) 966-3631	37-30-10.000N/ 119-58-90.000W TLOF - 65' Diameter
Emanuel Medical Center 825 Delbon Avenue Turlock, California 95380	(209) 667-4200	**Temp. Ground Base** 37-30-44.000N/ 120-50-18.000W TLOF – 45' Diameter **Proposed Rooftop** 37-30-44.000N/ 120-50-18.000W TLOF - 65' x 65'
Memorial Medical Center 1800 Coffee Road Modesto, California 95355	(209) 526-4500	37-40-10.000N/ 120-58-19.000W TLOF - 30' Diameter

Oak Valley Hospital 350 South Oak Oakdale, California 95361	(209) 847-3011	37-45-30.000N/ 120-51-35.000W TLOF - 50' Diameter
Doctors Medical Center 1441 Florida Avenue Modesto, California 95350	(209) 578-1211	37-39-53.000N/ 120-59-46.000W TLOF - 65' x 65'
Kaiser Permanente Hospital 4601 Dale Road Modesto, California	(209) 557-1000	

Helispot Location	**Latitude/Longitude**	**Description of Location**
Alpine County		
Bear Valley Ski Resort	38 29.53 120 02.67	Land in Parking Lot on North end of Building (Elevation 7050')
Bear Valley Resort	38 27.03 120 02.06	Right along Hwy 4. Across the street from Air Strip. Caution: Light Poles along road (Elevation 6700')
Kirkwood Meadows	38 41.58 120 04.29	(Elevation 7500')
Amador County		
Bear River (Quarry)	38 32.28 120 15.56	On the spillway side of the first dam. (Elevation 5796')
Calvary Chapel [18480 Ridge Road, Pine Grove]	38 24.85 120 41.14	S side of Ridge Road between Druid Lane and Toma Lane. (Elevation 2355')
Camino Del Apparacio	38 29.94 120 39.48	S side of Fiddletown Road 2 1/2 miles W of the Shake Ridge Road intersection. (Elevation 2797')
Cdf Academy [4501 Highway 104, Ione]	38 22.03 120 56.55	E side of Highway 104 between Preston and Mule Creek Prisons. (Elevation 330')
Colburn Field [Plymouth]	38 28.57 120 51.05	W of Highway 49 on S end of Amador County Fairgrounds @ ball field. (Elevation 1070')
Comanche Boatramp	38 14.21 120 56.82	S of Comanche Parkway @ end of Comanche Parkway @ Park Headquarters office. (Elevation 281')

Darling Ranch [15851 Shake Ridge Rd]	38 120	26.62 43.95	N side of Shake Ridge Rd., ¼ mile E of East Quartz Mt. Rd. (Elevation 1897)
Eagle's Nest [17220 Lambert Road]	38 121	26.45 00.69	1 ½ mile N of Carbondale Road, W side of Lambert Road, behind white gate. (Elevation 233')
Homestead [Ranch House Estates)	38 120	24.50 37.25	N of Highway 88 on W side of Homestead Drive. Across from Ranch House Estates (Elevation 2598')
Howard Park (Ione)	38 120	20.56 55.89	Soccer field @ SW corner of the sports complex. (Elevation 296')
Iron Mountain Ski Resort	38 120	37.50 12.60	1/16 mile N of Highway 88 on Mormon Emigrant Trail. 1st road to right. (Elevation 7440')
Jackson Valley Sta. #171 [2701 Quiver Drive]	38 120	14.98 57.24	Intersection of Comanche and Quiver Roads. (Elevation 300')
Kirkwood Meadows	38 120	41.58 04.29	(Elevation 7500')
Latrobe [Amador Christian Center] [16829 Latrobe Road]	38 120	27.26 54.93	NE corner of the intersection of Highway 16 and Latrobe Road. (Elevation 685')
Lockwood Station #151 [23141 Shake Ridge Road]	38 120	29.24 35.73	N of Shakeridge Road near the market. (Elevation 3199')
Lockwood Station #152	38 120	27.67 39.51	NE corner of intersection of Shake Ridge Road and Hale Road (Elevation 2640')
Lumberyard Ranger Station	38 120	32.97 18.40	N of Highway 88 immediately W of USFS Lumberyard Ranger Station. (Elevation 6456')
Mace Meadows [26570 Fairway Drive, Buckhorn]	38 120	27.28 32.03	N side of Highway 88 at Meadow Drive (Elevation 3000')
Pardee Marina Parking Lot (Main Gate)	38 120	17.18 52.16	W side of the Pardee Lake between store and marina fueling station. Widest part of parking lot. (Elevation 566')
Pardee Vista Point	38	15.92	E side of Pardee Road ¼ mile N of Pardee

	120	51.32	Dam (Elevation 764')
Peddler Hill Maintenance Station	38 120	35.02 15.26	N side of Highway 88 at CALTRANS Peddler Hill Maintenance Station. (Elevation 7090')
Peddler Hill Vista Point (Aka Bear River Overlook).	38 120	33.97 15.73	S side of Highway 88 at Peddler Hill. (Elevation 6768')
Pine Grove Camp [13630 Aqueduct Road]	38 120	24.30 38.39	N of Highway 88 off Aqueduct Road. (Elevation 2411')
Pioneer Lumber Mill [Aka Cal Mills (Pioneer)]	38 120	26.08 30.53	S side of Highway 88 @ paved entrance to cedar mill. (Elevation 3036')
Plasses's Resort	38 120	38.48 07.53	S side of Hwy 88 at W end of Silver Lake. Between Chapel and lake's edge @ windsock. (Elevation 7285')
Plymouth Elementary School [18601 Sherwood Street]	38 120	28.80 51.28	S side of Main Street at intersection of Sherwood Street. (Elevation 1038')
Plymouth Fairgrounds	38 120	28.41 50.47	
River Pines	38 120	32.47 45.00	E side of Highway 16E between South Fork of the Cosumnes River and Meadow Drive. (Elevation1950')
UPPER JACKSON VALLEY (Aka Boring Ranch)	38 120	19.45 54.37	1/8 mile S of Hwy 88 on E side of Upper Jackson Valley Road., first farmhouse w/ PG&E lock. (Elevation 399')
Westover Field (Sutter Hill)	38 120	22.75 48.02	E of Highway 49 at the end of Airport Road. Land on Marked Helipad on Ramp (Elevation 1690')
4000'emergency [28233 Highway 88, Amador Pines]	38 120	29.84 30.47	N side of Highway 88 near the 4000' elevation sign. (Elevation 4000')
Calaveras County			
Angels Camp Pd (Frogtown)	38 120	04.54 33.54	
Appaloosa	38 120	02.58 33.54	On Hwy 4, NW side of Bear Mountain. North of New Melones

			(Elevation 1480')
Copperopolis Fire Dept	37	58.73	
	120	38.40	(Elevation 600')
Crescent Cove	38	10.90	North side of Hwy 4, two pads
	120	22.60	(Elevation 3250')
Jenny Lind	38	05.56	
	120	52.14	(Elevation 300')
Mokolumne Hill	38	18.10	Land in Ball Park
	120	42.25	(Elevation 1500')
Moran & Rainey	38	15.22	Ball Park at intersection of Moran and
(Arnold)	120	19.98	Rainey Streets. SW end of Golf Course. Land in parking lot next to pond. (Elevation 4000')
Mountain Ranch Ball Park	38	13.72	
	120	32.40	(Elevation 2400')
Saddle Creek	37	55.15	Golf Course by Copperopolis
	120	38.14	(Elevation 820')
Sandy Gultch Ballpark	38	22.50	
	120	31.58	
Willseyville	38	22.24	
(Associated Office)	120	31.69	(Elevation 3000')
Mariposa County			
Awahnee Meadow	37	44.90	Call Yosemite Fire 20 minutes out
(Yosemite Clinic)	119	34.86	(Elevation 4000')
Badger Pass Ski Resort	37	39.83	Upper Parking Lot
	119	39.79	(Elevation 7265')
Cathy's Valley	37	26.18	
	120	05.10	
Greeley Hill Market	37	38.48	
	120	07.91	(Elevation 2900')
Horseshoe Bend	37	41.56	North tip of Lake McClure, Wires at north
	120	10.44	
Mariposa Airport	37	30.65	Mountain Peak on North Side of Airport 4360'
	120	02.51	(Elevation 2254')
Ponderosa	37	44.29	Concrete Helipad East of Coulterville. Sits
	120	10.38	on Ridgeline. VASI set at 9

		(Elevation 2700')
Usona Helipad	37	27.75
	119	47.14

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
AMR	(209) 567-4000	G	26	yes	ALS
Air Medical Team	(209) 550-0881	A	1	yes	ALS
Altaville-Melones Fire Protection District	(209) 736-2331	G	0	no	BLS
Amador Fire Protection District	(209) 223-6391	G	0	no	BLS
American Legion Ambulance	(209) 223-2963	G	6	yes	ALS
Bear Valley Fire Department	(209) 753-2232	G	0	no	BLS
Burbank-Paradise Fire Protection District	(209) 523-1129	G	0	no	BLS
California Department of Forestry-Sutter	(209) 267-5215	G	0	no	BLS
Department of Forestry	(209) 966-3622	G	0	no	BLS
Ceres Fire Department	(209) 538-5701	G	0	no	BLS
City of Angels	(209) 736-4081	G	0	no	BLS
Copperopolis Fire Protection Dist	(209) 785-2329	G	0	no	ALS
Denair Fire District	(209) 632-5032	G	0	no	BLS
Ebbetts Pass Fire Protection Dist	(209) 795-1646	G	0	no	ALS
Glenco Rlrd Flat Fire Protection District	(209) 286-1536	G	0	no	BLS
Hughson Fire Protection District	(209) 883-2863	G	0	no	BLS
Hughson Paramedic Ambulance	(209) 883-9177	G	5	yes	ALS
Ione Volunteer Fire Department	(209) 274-4548	G	0	no	BLS
Jackson Fire Department	(209) 223-1646	G	0	no	BLS
Jackson Valley Fire Protection District	(209) 763-5848	G	0	no	BLS
Jenny Lind Fire Protection District	(209) 786-2227	G	0	no	BLS
Keyes Fire Protection District	(209) 634-7690	G	0	no	BLS
Kirkwood Fire Protection District	(209) 258-4444	G	0	no	BLS
Mariposa County Sheriff's Office	(209) 966-3615	G	0	no	BLS

Mariposa County Fire Department	(209) 966-4330	G	0	no	BLS
Markleeville Volunteer Fire Dept	(916) 694-2357	G	0	no	BLS
Medi-Flight of Northern California	(209) 572-7050	A	2	yes	ALS
Mercy Medical Transport	(209) 966-5762	G	3	yes	ALS
Modesto City Fire Department	(209) 572-9590	G	0	no	BLS/ALS
Mokelumne Hill Fire Protection District	(209) 286-1536	G	0	no	BLS
Mountain View Fire Protection District	(209) 634-4766	G	0	no	BLS
Mountain Ranch Fire Protection District	(209) 754-4330	G	0	no	BLS
Murphys Fire Protection District	(209) 728-3864	G	0	no	BLS
Newman Fire Dept.	(209) 862-1716	G	0	no	BLS
Oak Valley District Ambulance	(209) 847-3011	G	4	yes	ALS
Oakdale City Fire Dept.	(209) 847-5904	G	0	no	BLS
Oakdale Rural Fire Protection Dist	(209) 847-6898	G	0	no	BLS
Patterson District Ambulance	(209) 892-2618	G	3	yes	ALS
Pine Grove Conservation	(209) 296-7591	G	0	no	BLS
Plymouth Vol. Fire Department	(209) 245-4833	G	0	no	BLS
ProTransport 1 Ambulance	(800) 650-4043	G	2	yes	ALS
Salida Fire Protection District	(209) 545-0365	G	0	no	BLS
Stanislaus Consolidated Fire Dist	(209) 525-4650	G	0	no	BLS
Sutter Creek Fire Protection Dist	(209) 267-0285	G	0	no	BLS
Turlock City Fire Department	(209) 668-5800	G	0	no	BLS
Turlock Rural Fire Protection Dist	(209) 632-3953	G	0	no	BLS
Valley Home Fire Protection Dist	(209) 847-8556	G	0	no	BLS
Foothill Fire Company	(209) 786-2697	G	0	no	BLS
Westside Ambulance	(209) 862-2951	G	2	yes	ALS
West Stanislaus Fire Protection District	(209) 892-5621	G	0	no	BLS
Westport Fire Protection District	(209) 537-1391	G	0	no	BLS
Woodfords Fire Department	(916) 694-2750	G	0	no	BLS
Woodland Avenue Fire Protection District	(209) 524-4239	G	0	no	BLS

Agency Contact
(Del Norte, Humboldt, Lake)
Larry Karsteadt, Executive Director
3340 Glenwood Avenue
Eureka, CA 95501
(707) 445-2081
FAX: (707) 445-0443
E-MAIL: larry@northcoastems.com
Or: execdir@northcoast.com

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/A	N/A	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Del Norte Ambulance		155.175	N/A	N/A
City Ambulance of Eureka Inc.				
Crescent Fire Protection District		154.250	N/A	N/A
Arcata/Mad River Ambulance Service		155.175	N/A	N/A
Arcata Fire Department		46.06	N/A	N/A
Eureka Fire Department		154.43	N/A	N/A
Fortuna Fire Department		33.70	N/A	N/A
Garberville Fire Department		46.22	N/A	N/A
Humboldt Fire District #1		154.325	N/A	N/A
Loleta Fire Department		154.010	N/A	N/A
Clearlake Oaks Fire Department		155.205	N/A	N/A
Kelseyville Fire Protection District		155.025	N/A	N/A
Lake County Fire Protection District		155.205	N/A	N/A
Nice Volunteer Fire Department		155.025	N/A	N/A
Upper Lake Fire Protection District		155.025	N/A	N/A
Northshore Fire Protection District				
Briceland Volunteer Fire Dept.				
Blue Lake Volunteer Fire Dept.				
CAL FIRE				
Carlotta Volunteer Fire Dept.				
Crescent City Volunteer Fire Dept.				
Ferndale Fire Department				
Fieldbrook Volunteer Fire				
Fort Dick Fire District				
Fruitland Ridge Volunteer Fire Dept.				
Gasquet Volunteer Fire Dept.				
Honeydew Volunteer Fire Dept.				

Hoopa Volunteer Fire Dept. Klamath Volunteer Fire Dept. Kneeland Fire Protection District Korbel Volunteer Fire Dept. Lakeport Fire Dept. Maple Creek Volunteer Fire Dept. Myers Flat Volunteer Fire Dept. Miranda Fire Dept. Orick Volunteer Fire Dept. Palo Verde Volunteer Fire Dept. Orleans Volunteer Fire Dept. Petrolia Fire Protection District Patricks Point Volunteer Fire Dept. Redcrest Fire Department Phillipsville Fire Department Rio Dell Volunteer Fire Dept. Redway Volunteer Fire Dept. Salyer Volunteer Fire Dept. Salmon Creek Volunteer Fire Dept. Scotia Volunteer Fire Dept. Samoa Peninsula Fire Dept. Smith River Volunteer Fire Dept. Shelter Cover Fire Department Southern Trinity Volunteer Fire Dept. South Lake County Fire Dept. Telegraph Ridge Fire Dept. Sprowel Creek Volunteer Fire Dept. Trinidad Volunteer Fire Dept. Westhaven Fire Department Weott Volunteer Fire Department Willow Creek Volunteer Fire Dept. Whitethorn Fire District Yurok Tribe Volunteer Fire Dept. Lake Pillsbury Fire Department				
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Jerold Phelps Community Hospital 733 Cedar Street Garberville, California 95542	(707) 923-3921	
Mad River Community Hospital PO Box 1115 Arcata, California 95518	(707) 826-8264	40-54-00.000N/ 124-05-00.000W TLOF - 60' x 60'
Adventist Health-Redbud Hospital PO Box 6720 Clearlake, CA 95422	(707) 994-6486	
Redwood Memorial Hospital 3300 Renner Drive Fortuna, California 95540	(707) 725-7238	
St. Joseph Hospital 2700 Dolbeer Street Eureka, California 95501	(707) 445-8121	40-47-02.000N/ 124-08-48.000W TLOF - 62' x 62'
Sutter Coast Hospital PO Box 2009 Crescent City, California 95531	(707) 464-8511	
Sutter-Lakeside Hospital 5176 Hill Road Lakeport, California 954530	(707) 263-5651	39-06-21.300N/ 122-54-20.400W TLOF - 40 Diameter

Helispot Location	Latitude/Longitude	Description of Location
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
Arcata Mad River Ambulance Inc.	(707) 822-3353	G	1	yes	ALS
City Ambulance of Eureka Inc.	(707) 445-4907	G	5	yes	ALS
Clearlake Oaks Fire Department	(707) 998-3294	G	2	yes	ALS
Del Norte Ambulance Inc	(707) 487-1116	GA	5	yes	ALS
City of Fortuna Ambulance	(707) 445-4907	G	2	yes	ALS
City of Gaberville Ambulance	(707) 445-4907	G	1	yes	ALS
K'ima W Ambulance	(530) 625-4261	G	3	yes	ALS
Kelseyville Fire Protection District	(707) 279-4268	G	2	yes	ALS
Lakeport Fire Department	(707) 263-4396	G	3	yes	ALS
Lake County Fire Department	(707) 994-2170	G	0	no	ALS
Loleta Fire Department	(707) 733-5407	G	0	no	ALS
Northshore Fire Department	(707) 274-3100	G	2	yes	ALS
Orleans Fire Department	(530) 627-3493	G	0	no	ALS
Shelter Cove Fire Department	(707) 986-7507	G	0	no	ALS
Southern Trinity Area Rescue	(707) 574-6616	G	2	yes	ALS
Southlake County Fire Protection District	(707) 987-3089	G	3	yes	ALS
REACH		A	1	yes	ALS

Agency Contact
(Butte, Colusa, Glenn, Lassen, Modoc,
Plumas, Shasta, Sierra, Siskiyou, Tehama, Trinity**)**
Dan Spiess, Chief Executive Officer
43 Hilltop Dr.
Redding, CA 96003-2807
(530) 229-3979
FAX: (530) 229-3984
E-MAIL: dspiess@norcalems.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
Antelope Peak	468.050	463.050	1,8	N/A
Bass Mountain	468.075	463.075	5,8	N/A
Beckwourth Mountain	468.175	463.175	4,8	N/A
Widow Mountain	468.100	463.100	6,8	N/A
Bloomer Mountain	468.175	463.175	3,8	N/A
Bear Springs	468.175	463.175	6,8	N/A
Cedarville	468.150	463.150	6,8	N/A
Dyer Mountain	468.150	463.150	4,8	N/A
Grey Butte Mountain	468.000	463.000	1,8	N/A
Hayfork Bally	468.125	463.125	2,8	N/A
Hough Mountain	468.125	463.125	4,8	N/A
Likely Mountain	468.100	463.100	6,8	N/A
Mahogany Peak	468.175	463.175	1,8	N/A
Oregon Mountain	468.175	463.175	5,8	N/A
Red Hill	468.125	463.125	7	N/A
South Fork Mountain	467.975	462.975	5,8	N/A
Shasta Bally	468.050	463.050	5,8	N/A
Shaffer Mountain	468.075	463.075	6,8	N/A
Slater Butte	468.125	463.125	1,8	N/A
Southfork Mountain	468.025	463.025	5,8	N/A
St. John Mountain	468.025	463.025	3,8	N/A
Tuscan Butte	468.100	463.100	8,5	N/A
West Prospect Peak	468.000	463.000	8	N/A
Statewide Medical Coordination	0	0	0	N/A
Calling Channel	0	0	0	N/A
Dispatch (for each EMS Agency)				
Trinity Center Fire Department	155.925	155.115	N/A	P
Mt. Shasta Ambulance	155.010	155.010	N/A	P
Downieville Fire Department	46.200	46.200	N/A	P
Lewiston Fire Department	155.925	155.115	N/A	P

Happy Camp Ambulance Service	468.125	463.125	N/A	N/A
Peninsula Fire District Ambulance	153.770	154.190	N/A	N/A
Surprise Valley Hospital Ambulance	155.175	155.175	N/A	P
Northern Siskiyou Ambulance	158.835	158.835	N/A	N/A
Trinity County Life Support	155.925	155.115	N/A	P
Westside Ambulance	468.025	463.025	3	P
Modoc Medical Center	154.515	154.515	N/A	P
Butte Valley Ambulance	N/A	N/A	N/A	N/A
Redding Medical Center	467.975	462.975	5	Prim
	468.050	463.050	5	Alt
American Medical Response	467.975	462.975	5	Prim
	468.050	463.050	5	Alt
City of Etna Ambulance	N/A	N/A	N/A	N/A
Enloe Hospital				
Chico	467.950	462.950		N/A
Colusa	153.905	153.905	N/A	N/A
Glenn	468.025	463.025	3	N/A
Air	154.430	154.430	N/A	N/A
Burney Fire Department Ambulance	460.675	460.675	N/A	N/A
Salmon River Vol. Fire Rescue Co.	156.105	154.250	N/A	N/A
McCloud Fire Dept. Ambulance	151.325	151.325	N/A	N/A
Hyampom Fire Department	155.925	155.115	N/A	N/A
Plumas District Hospital Ambulance	468.125	463.125	PL1	N/A
Direct to hospitals				
Oroville Hospital	468.175	463.175	N/A	N/A
St. Elizabeth Hospital	468.100	463.100	PL5	
Banner Lassen Medical Center	468.075	463.075	PL6	
Biggs-Gridley Hospital	468.175	463.175	PL3	
Colusa Regional Medical Center	468.025	463.025	PL3	
Eastern Plumas Health Care	468.175	463.175	PL4	
Enole Medical Center	468.075	463.075	PL3	ED
	468.25	468.025	PL3	Dispatch
Fairchild Medical Center	468.050	463.050	PL1	
Feather River Hospital	468.050	463.050	PL3	
Freemont-Rideout Hospital	468.125	463.125	PL210.7	
	155.220		PL127.3	
Glenn Medical Center	468.025	463.025	PL3	
Indian Valley Hospital	468.150	436.150	PL4	Prim
	468.125	463.125	PL4	Sec
Mayers Memorial Hospital	468.100	463.100	PL6	Prim
	468.175	463.175	PL6	Sec
Mercy Med Center Mt. Shasta	468.150	463.150	PL1	Prim
	468.050	463.050	PL1	Air Contact
Mercy Med Center Redding	468.075	463.000	PL5	Ground Contacts

	468.050	463.050	PL5	Air & Trinity County
Modoc Medical Center	468.125	463.125	PL6	Prim
	468.050	463.050	PL6	Sec
Mountain Community Health Services	468.125	463.125	PL2	Hayfork Bally
	468.125	463.125	PL7	Oregon Mtn
Plumas District Hospital	468.125	463.125	PL4	Prim
	468.125	463.125	PL7	Sec
Shasta Regional Medical Center	468.025	463.025	PL5	Ground Contacts
	468.050	463.050	PL5	Air Contacts
Seneca District Hospital	468.150	463.150	PL4	Prim
	468.025	463.025	PL6	
	468.125	463.125	PL4	
Surprise Valley Hospital	468.100	463.100	PL6	
Other (e.g. tactical, etc.) (varied by each local agency)				

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Banner Lassen Medical Center 1800 Spring Ridge Dr Susanville, California 96130	(530) 252-2000	40° 26' 18.1752"N/ -120° 39' 2.3688"W TLOF – 50’ Diameter
Colusa Community Hospital 199 E. Webster Street Colusa, California 95932	(530) 458-5821	
Eastern Plumas Health Care 500 First Avenue Portola, California 96122	(530) 832-4277	
Enloe Hospital (Medical Center) 1531 Esplanade Chico, California 95926	(530) 891-7300	39° 44' 31.7688"N/ -121° 50' 59.4996"W TLOF - 75’ X 66’

Fairchild Medical Center 444 Bruce Street Yreka, California 96097	(530) 842-4121	
Feather River Hospital 5974 Pentz Road Paradise, California 95969	(530) 877-9361	
Glenn Medical Center 1133 W. Sycamore Street Willows, California 95988	(530) 934-1800	
Mayers Memorial Hospital 43563 State Highway 299E PO Box 459 Fall River Mills, California 96028	(530) 336-5511	
Mercy Medical Center Mt. Shasta 914 Pine PO Box 239 Mt. Shasta, California 96067	(530) 926-6111	41° 19' 8.0616"N/ -122° 19' 23.1456"W TLOF – 36’ Diameter
Mercy Medical Center Redding 2175 Rosaline Ave PO Box 496009 Redding, California 96049-6072	(530) 225-6000	40° 34' 20.2548"N/ -122° 23' 50.3016"W TLOF – 87’ Diameter
Modoc Medical Center 228 McDowell Street Alturas, California 96101	(530) 233-5131	
Oroville Hospital 2767 Olive Highway Oroville, California 95966	(530) 533-8500	39° 30' 25.0668"N/ -121° 32' 28.6656"W TLOF – 48’ X 48’ (round)
Plumas District Hospital 1065 Bucks Lake Road Quincy, California 95971	(530) 283-2121	39° 56' 21.4224"N/ -120° 57' 45.2088"W TLOF - 65’ X 70’
St. Elizabeth Hospital 2550 Sister Mary Columba Drive Red Bluff, California 96080	(530) 529-8000	40° 8' 57.246"N/ -122° 13' 16.9392"W
Seneca District Hospital 130 Brentwood Dr. PO Box 737 Chester, California 96020	(530) 258-2151	

Shasta Regional Medical Center 1100 Butte St. Redding, CA 96001	(530) 244-5400	**North Pad** 40-35-11.000N/ 122-23-02.000W TLOF – 45’ X 45’ **South Pad** 40-35-11.000N/ 122-23-02.000W 54’ Diameter
Surprise Valley Hospital 741 Main St. PO Box 246 Cedarville, California 96104	(530) 279-6111	
Trinity Hospital 60 Easter Ave. PO Box 1229 Weaverville, CA 96093 .	(530) 623-5541	

Helispot Location	**Latitude/Longitude**	**Description of Location**
Colusa Community Hospital	39° 12' 26.4996"N/ 122° 0' 1.0332"W	
Eastern Plumas Health Care	39° 48' 18.7164"N/ 120° 28' 13.9152"W TLOF – 50’ X 50’	Lawn
Fairchild Medical Center	41° 43' 6.9564"N/ 122° 38' 46.536"W	Lawn
Feather River Hospital	39° 45' 25.9956"N/ 121° 34' 17.1804"W	
Glenn Medical Center	39° 31' 13.6812"N/ 122° 12' 28.4652"W	
Mayers Memorial Hospital	41° 1' 27.5484"N/ 121° 25' 27.7608"W	
Modoc Medical Center	41° 28' 47.9964"N/ 120° 32' 39.8076"W	
Seneca District Hospital	40° 18' 18.4428"N/ 121° 14' 3.012"W	

Surprise Valley Hospital	41° 31' 55.9668"N/ 120° 10' 18.8292"W
Trinity Hospital	40° 44' 24.9504"N/ 122° 56' 31.0884"W

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response	(530) 246-9111	G	9	yes	ALS
Anderson Fire Department	(530) 378-6699	G	0	no	BLS
Burney Fire District	(530) 335-2212	G	2	yes	ALS
Butte Co. Fire Department	(530) 538-7111	G	0	no	BLS
Butte Valley Ambulance Service	(530) 397-2105	G	2	yes	BLS
Cal Fire / Shasta Co. Fire Department	(530) 225-2418	G	0	no	ALS
Chester Fire Department	(530) 258-3456	G	2	yes	ALS
Coffee Creek Volunteer Fire Dept	(530) 266-3516	G	1	yes	ALS
Cottonwood Fire Protection District	(530) 347-4737	G	0	no	BLS
Downieville Fire Protection District	(530) 289-3333	G	1	yes	BLS
Dunsmuir Fire Department	530) 235-2551	G	0	no	ALS
Eastern Plumas Health Care	(530) 832-4277	G	4	yes	ALS
Enloe Hospital	(530) 891-7418	G	7	yes	ALS
Etna Ambulance	(530) 467-5256	G	2	yes	ALS
Fall River Mills Fire Department	(530) 336-6117	G	0	no	BLS
First Responder	(530) 891-4357	G	16	yes	ALS
Fort Jones Fire Department	(530) 468-2178	G	0	no	BLS
Graeagle Fire Rescue	(530) 836-1340	G	0	no	ALS
Grenada Fire Department	(530) 436-2381	G	0	no	BLS
Hamilton Branch Fire Protection District	(530) 596-3458	G	0	no	BLS
Happy Camp Ambulance	(530) 493-2322	G	2	yes	ALS
Happy Valley Fire Department	(530) 357-2345	G	0	no	BLS
Hayfork Volunteer Fire Department	(530) 628-5336	G	0	no	BLS
Hyampom Fire Department	(530) 628-5701	G	1	yes	BLS

Lewiston Volunteer Fire Dept	(530) 778-3965	G	1	yes	BLS
Mayers Memorial Hospital	(530) 336-5511	G	2	yes	ALS
McArthur Fire Protection District	(530) 336-5026	G	0	no	BLS
McCloud Community Service Dist	(530) 964-2422	G	1	yes	BLS
Mercy Medical Center	(530) 225-6290	G	8	yes	ALS
Modoc Medical Center	(530) 233-5131	G	4	yes	ALS
Montague Fire District	(530) 459-5343	G	0	no	BLS
Mount Shasta Ambulance	(530) 926-2665	G	8	yes	ALS
Mountain Gate Fire Department	(530) 275-3003	G	0	no	ALS
Northern Siskiyou Ambulance	(530) 842-3583	G	3	yes	ALS
Oak Run Volunteer Fire Company	(530) 547-4324	G	0	no	BLS
Old Station Volunteer Fire Dept	(530) 335-7111	G	0	no	ALS
Peninsula Fire District	(530) 259-2306	G	1	yes	ALS
Plumas District Hospital	(530) 283-1322	G	3	yes	ALS
Red Bluff Fire Department	(530) 527-1126	G	0	no	BLS
Redding Fire Department	(530) 225-4141	G	0	no	BLS
Salmon River Volunteer Fire Rescue Co.	N/A	G	1	yes	BLS
Shasta Fire Department	(530) 241-4615	G	0	no	ALS
Shasta Lake City Fire Protection District	(530) 275-7474	G	0	no	ALS
Shasta Lake Volunteer Fire Dept	(530) 238-2129	G	0	no	ALS
Shasta Regional Medical Center	(530) 244-5192	G	2	yes	ALS
Shingletown Volunteer Fire Dept	(530) 474-3914	G	1	yes	ALS
Sierra Emergency Medical Services Alliance (SEMSA)	(530) 257-1803	G	4	yes	ALS
South Lassen EMS	(530) 257-0249	G	3	yes	ALS
St. Elizabeth Hospital	(530) 529-8000	G	5	yes	ALS
Surprise Valley Hospital Amb.	(530) 279-6111	G	1	yes	BLS
Tehama County Fire Department	(530) 529-8548	G	0	no	BLS
Trinity Center Volunteer Fire Dist	(530) 266-3378	G	0	yes	ALS
Trinity County Life Support	(530) 623-2500	G	4	yes	ALS
W. Almanor Fire Department	(530) 259-5112	G	0	no	BLS

Weed Fire Department	(530) 938-5030	G	0	no	BLS
Westside Ambulance Association	(530) 865-3998	G	2	yes	ALS
Westwood Fire Department	(530) 256-3589	G	1	no	BLS
American Medical Response	(530) 246-9111	G	9	yes	ALS

Agency Contact

Greg Boswell, RN, EMS Administrator
405 West Fifth Street, Suite 301A
Santa Ana, CA 92701
(714) 834-3500
FAX: (714) 834-3125
E-MAIL: gboswell@ochca.com

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) 800 MHz, 6B through 6K	Trunked	Trunked	N/A	Prim
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel - 800 MHz, 6A	Trunked	Trunked	N/A	Prim
Calling Channel-UHF –Med10	467.950	462.950	103.5	Alt
For Outside agency interoperability 800 MHz – ICALL UHF – OC Access VHF – OC access Landline- OC Control ONE 714-628-7008	 866.0125 465.525 159.000	 821.0125 460.525 151.085	 156.7 103.5 136.5	 Alt Alt Alt
Dispatch (for each EMS Agency) 800 MHz Radio System	Trunked	Trunked	N/A	Prim
Direct to hospitals 800 MHz, 4G and 5K	Trunked	Trunked	N/A	Prim
Other (e.g. tactical, etc.) 800 MHz Radio System	Trunked	Trunked	N/A	Prim

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Anaheim General Hospital 3350 W. Ball road Anaheim, California 92804	(714) 827-6700	
Anaheim Regional Medical Center 1111 West La Palma Ave. Anaheim, California 92801	(714) 774-1450	
Chapman Medical Center 2601 E. Chapman Avenue Orange, California 92869	(714) 633-0011	

Childrens Hospital of Orange County 455 S. Main Street Orange, California	(714) 997-3000	33-46-54.000N/ 117-51-51.000W TLOF 50’ x 50’
Coastal Communities Hospital 2701 S. Bristol Santa Ana, California 92704	(714) 754-5454	
Huntington Beach Medical Center 17772 Beach Blvd. Huntington Beach, California 92647	(714) 842-1473	
Saddleback Memorial/San Clemente 654 Camino De Los Mares San Clemente, California 92672	(949) 496-1122	
West Anaheim Medical Center 3033 West Orange Anaheim, California 92804	(714) 827-3000	
Fountain Valley Regional Hospital 17100 Euclid Street Fountain Valley, California 92708	(714) 966-7200	
Garden Grove Hospital and Medical Ctr 12601 Garden Grove Blvd. Garden Grove, California 92843	(714) 537-5160	
Hoag Memorial Hospital Presbyterian 1 Hoag Drive Newport Beach, California 92658	(949) 645-8600	33-37-27.000N/ 117-55-43.000W TLOF - 40' x 40'
Kaiser Permanente Medical Center 441 Lakeview Anaheim, California 92807	(714) 978-4000	
Kaiser Permanente Medical Center/Irvine 6640 Alton Parkway Irvine, California 92618	(949) 932-5000	
La Palma Intercommunity Hospital 7901 Walker Street La Palma, California 90623	(714) 670-7400	

Los Alamitos Medical Center 3751 Katella Avenue Los Alamitos, California 90720	(714) 826-6400	
Mission Hospital Regional Medical Center 27700 Medical Center Road Mission Viejo, California 92691	(949) 364-1400	33-33-38.000N/ 117-39-55.000W TLOF - 52' x 96'
Orange Coast Memorial Medical Center 8820 Talbert Avenue Fountain Valley, California 92708	(714) 378-7500	
Placentia Linda Hospital 1301 North Rose Drive Placentia, California 92870	(714) 993-2000	
Saddleback Memorial Medical Center 24451 Health Center Road Laguna Hills, California 92653	(949) 837-4500	33-36-30.000N/ 117-42-32.000W TLOF - 40' x 40'
St. Joseph Hospital 1100 W. Stewart Drive Orange, California 92686	(714) 633-9111	
St. Jude Medical Center 101 East Valencia Mesa Drive Fullerton, California 92835	(714) 871-3280	
Mission Hospital Medical Center/ Laguna 31872 Coast Highway South Laguna, California 92677	(949) 499-1311	
UC Irvine Medical Center 101 The City Drive South Orange, California 92868	(714) 456-6011	33-47-20.000N/ 117-53-23.000W TLOF - 40' Diameter
Western Medical Center-Anaheim 1025 S. Anaheim Blvd. Anaheim, California 92805	(714) 533-6220	
Western Medical Center-Santa Ana 1001 North Tustin Avenue Santa Ana, California 92705	(714) 835-3555	33-45-06.000N/ 117-49-55.000W TLOF - 50' x 50'

Helispot Location	Latitude/Longitude	Description of Location

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
Ambuserve Ambulance	310-644-0500	**G**	**2**	**yes**	**BLS**
AmeriCare Ambulance Service	(714) 633-4135	G	15	yes	BLS
Anaheim Fire Department	(714) 254-4000	G	0	no	ALS
Bowers Ambulance Service	(562) 591-3371	G	1	yes	BLS
Brea Fire Department	(714) 990-7644	G	0	no	ALS
Care Ambulance Service	(714) 828-7750	G	136	yes	BLS
Costa Mesa Fire Department	(714) 754-5106	G	0	no	ALS
County Rescue Ambulance	(714) 682-2524	G	11	Yes	BLS
Doctor's Ambulance Service	(949) 951-8535	G	27	yes	BLS
Emergency Ambulance Service	(714) 990-1331	G	11	yes	BLS
Fountain Valley Fire Department	(714) 593-4436	G	0	no	ALS
Fullerton Fire Department	(714) 738-6502	G	0	no	ALS
Garden Grove Fire Department	(714) 741-5600	G	0	no	ALS
Huntington Ambulance Service	(310) 592-1627	G	2	yes	BLS
Huntington Beach Fire Department	(714) 536-5411	G	7	yes	ALS
La Habra Police Department	(562) 694-8977	G	2	yes	ALS
Laguna Beach Fire Department	(949) 497-0700	G	0	no	ALS
Lifeline Ambulance	(800) 700-9344	G	10	Yes	BLS
Lynch Ambulance Service	(714) 670-8307	G	41	yes	BLS
MedCoast Ambulance	(562) 926 -9920	G	25	Yes	BLS
Medix Ambulance Service, Inc.	(949) 470-8921	G	29	yes	BLS
Mercy Air Service Inc.	(909) 357-9006	A	3	yes	ALS
Newport Beach Fire Department	(949) 644-3101	G	5	yes	ALS
Orange City Fire Department	(714) 288-2500	G	6	yes	ALS
Orange County Fire Authority	(714) 289-7410	A	0	yes	ALS

Pacific Ambulance	(949) 470-2355	G	34	Yes	BLS
Premier Medical Transport	(714)353-9556	G	7	Yes	BLS
Priority One Medical Transport	(800) 660-3370	G	10	yes	BLS
PRN Ambulance	(866) 776- 2274	G	5	Yes	BLS
Santa Ana Fire Department	(949) 647-5700	G	10	yes	ALS
Schaefer Ambulance Service, Inc	(800) 582-2558	G	6	yes	BLS
Shoreline Ambulance	(714)847-9107	G	9	Yes	BLS

Agency Contact

Bruce Barton, EMS Administrator
PO Box 7600
Riverside, CA 92513-7600
(951) 358-5029
FAX: (951)358-5160
E-MAIL: bbarton@co.riverside.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination *(Real time)*				
MEDNET 1 (Hospital Net)	155.265	155.265	110.9	Prim
MEDNET 2 (Northwest/ Central Zones)	155.295	155.295	110.9	Prim
MEDNET 3 (Southwest/Hemet Zones)	151.355	151.355	110.9	Prim
MEDNET 4 (Desert Zones)	155.205	155.205	110.9	Prim
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Direct to hospitals – *(Basic)*				
MEDNET 1	155.265	155.265	110.9	Prim
Corona Regional Medical Center	**DTMF**	Prim		
Kaiser - Riverside		Prim		
Parkview Community Hospital		Prim		
Riverside Community Hospital		Prim		
Riverside County Regional		Prim		
Moreno Valley Community Hospital		Prim		
Inland Valley Medical Center		Prim		
Rancho Springs Medical Center		Prim		
Menifee Valley Medical Center		Prim		
Hemet Valley Medical Center		Prim		
San Gorgonio Memorial Hospital		Prim		
Desert Regional Medical Center		Prim		
Eisenhower Medical Center		Prim		
John F. Kennedy Medical Center		Prim		
Palo Verde Community Hospital		Prim		
Medical Direction - *(Paramedic)*				
Med 1 – (Desert Reg, Inland Valley)	468.000	463.000	167.9	Prim
Med 2 – (RCRMC)	468.025	463.025	167.9	Prim
Med 3 – (Eisenhower)	468.050	463.050	167.9	Prim
Med 4 – (JFK, Hemet)	468.075	463.075	167.9	Prim
Med 5	468.100	463.100	167.9	Prim

Med 6 – (Riverside Com. Hosp	468.125	463.125	167.9	Prim
Med 7	468.150	463.150	167.9	Prim
Med 8 – (All Base Hospitals)	468.175	463.175	167.9	Prim
Other (e.g. tactical, etc.)				
CALCORD	156.075	156.075	N/A	N/A
HEAR (Local)	155.340	155.340	N/A	N/A
HEAR (Regional)	155.280	155.280	N/A	N/A
Fire White 1	154.280	154.280	N/A	N/A
Fire White 2	154.265	154.265	N/A	N/A
Fire White 3	151.295	151.295	N/A	N/A
CDF Net 1	151.385	NA	N/A	N/A
CDF Net 2	151.175	NA	N/A	N/A
Western & Eastern Co. Sheriff's Interface	159.450	158.850	110.9	N/A
Coachella Valley Co. Sheriff's Interface	158.760	159.090	110.9	N/A
Eastern Co. Sheriff's Interface	154.890	158.850	192.8	N/A

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Corona Regional Medical Center 800 S. Main Street Corona, California 91720	(909) 737-4343 - *Main* (909) 733-6242 - *ED*	
Desert Regional Medical Center 1150 N. Indian Canyon Drive Palm Springs, California 92262	(760) 323-6511 - *Main* (760) 323-6251 - *ED*	33-50-20.000N/ 116-32-30.000W TLOF - 50' x 50'
Eisenhower Medical Center 3900 Bob Hope Drive Rancho Mirage, California 92270	(760) 773-1440 – *Main* (760) 773-1221 – *ED*	33-45-57.000N/ 116-24-20.000W TLOF - 40' Diameter
Hemet Valley Hospital 1116 E. Latham Hemet, California 92543	(909) 652-2811 - *Main* (909) 766-6450 - *ED*	
Inland Valley Regional Medical Center 36485 Inland Valley Drive Wildomar, California 92595	(909) 677-8671 – *Main* (909) 677-9778 – *ED*	33-35-33.000N/ 117-14-11.000W TLOF - 50' x 50'
Riverside Community Hospital 4445 Magnolia Ave. Riverside, California 92501	(909) 788-3300 - *Main* (909) 788-3200 - *ED*	
JFK Memorial Hospital 47-111 Monroe Street	(760) 347-6191 – *Main* (760) 775-8111 – *ED*	33-42-25.000N/ 116-14-02.000W

Indio, California 92201		TLOF - 40' x 40'
Menifee Valley Medical Center 28400 McCall Blvd. Sun City, California 92586	(909) 679-8888 - *Main* (909) 672-7018 - *ED*	
Riverside County Regional Medical Ctr 26520 Cactus Avenue Moreno Valley, California 912555	(909) 486-4000 – *Main* (909) 486-5650 – *ED*	33-54-46.000N/ 117-11-00.000W TLOF - 47' Diameter
Moreno Valley Medical Center 27300 Iris Avenue Moreno Valley, California 92360	(909) 243-0811 - *Main* (909) 243-2018 - *ED*	
Palo Verde Hospital 250 North 1st Street Blythe, California 92225	(760) 922-4115 - *Main* (760) 922-4115 x5235- *ED*	
Kaiser Hospital Riverside 10800 Magnolia Ave. Riverside, California 92505	(909) 353-2000 - *Main* (909) 353-3661 - *ED*	
Parkview Community Hospital 3805 Jackson Street Riverside, California 92503	(909) 688-2211 - *Main* (909) 688-8312- *ED*	
Rancho Springs Medical Center 25500 Medical Center Dr. Murrieta, CA 92562	(909) 696-6000 - *Main* (909) 696-6061 - *ED*	
San Gorgonio Memorial Hospital 600 N. Highland Springs Ave. Banning, California 92220	(909) 845-1121 – *Main* (909) 845-4410- *ED*	33-55-51.000N/ 116-56-34.000W TLOF – 48’ Diameter

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
AmbuServe Ambulance	(310) 644-0500	G	5	yes	BLS
American Medical Response - Riverside	(951) 782-5234	G	87	yes	ALS
American Medical Response - Desert	(951) 782-5234	G	21	yes	ALS
American Medical Response - Hemet	(951) 782-5234	G	22	yes	ALS
Blythe Ambulance Service	(760) 922-6111	G	7	yes	ALS
Blythe Fire Department	(760) 922-6111	G	0	no	BLS
Cathedral City Fire Department	(760) 770-8200	G	4	yes	ALS
Cavalry Ambulance	(888) 774-9900	G	6	yes	BLS
CHP Air Operations	(760) 399-0085	Air	1	yes	ALS
Corona Fire Department	(951) 736-2220	G	0	no	ALS
CRA Ambulance	(951) 943-3654	G	9	yes	BLS
Hemet Fire Department	(951) 765-2450	G	0	no	BLS
Idyllwild Fire Protection District	(951) 659-2153	G	3	yes	ALS
Inland Medical Response Amb.	(951) 686-0053	G	2	yes	BLS
Lynch Ambulance	(714) 632-0225	G	10	yes	BLS
Mercy Air Transport	(800) 222-3456	Air	6	yes	ALS
Mission Ambulance	(800) 899-9100	G	17	yes	BLS
Morongo Fire Department	(951) 949-7193	G	0	no	BLS
Murrieta Fire Department	(951) 461-6162	G	0	no	ALS
Norco Fire Department	(951) 737-8097	G	0	no	ALS
Palm Springs Fire Department	(760) 323-8181	G	0	no	ALS
Pechanga Fire Department	(951) 506-5332	G	0	no	BLS
Premier Ambulance	(909) 433-3939	G	2	yes	BLS
Priority One Medical	(800) 600-3370	G	3	yes	BLS
Reach	(760) 355-2269	Air	1	yes	ALS
Riverside City Fire Department	(951) 782-5321	G	0	no	ALS
Riverside Co. Fire Dept - Coves	(951) 955-4700	G	8	yes	ALS
Riverside Co. Fire Dept - Indio	(951) 955-4700	G	6	yes	ALS
Schaefer Ambulance	(800) 966-4727	G	3	yes	BLS

Agency Contact

Bruce Wagner, Chief of EMS
9616 Micron Ave, Ste 635
Sacramento, CA 95827
(916)875-9753
FAX: (916) 875-9711
E-MAIL: wagnerems@msn.com

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	800 MHz	Analog Trunked radio System		
Statewide Medical Coordination	868.9875	823.9875	156.7	P
Calling Channel	866.0125	821.0125	156.7	P
Dispatch (for each EMS Agency)	800 MHz	Analog Trunked Radio System		
Direct to hospitals	800 MHz	Analog Trunked Radio System		
Other (e.g. tactical, etc.)	868.9875	823.9875	156.7	P

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Mercy San Juan Hospital 6501 Coyle Avenue Carmichael, California 95608	(916) 537-5000	38-40-09.000N/ 121-18-53.000W TLOF - 40' x 40'
Mercy General Hospital 4001 J. Street Sacramento, California 95819	(916) 453-4545	
Mercy Folsom Hospital 1650 Creekside Drive Folsom, California 95630	(916) 983-7400	
UC Davis Medical Center 2315 Stockton Blvd. Sacramento, California 95817	(916) 734-2011	**Tower II** 38-03-17.000N/ 121-27-21.000W TLOF - 40' x 40' **Heliport #** 38-33-04.000N/ 121-27-03.000W TLOF - 40' x 40'

Methodist Hospital 7500 Timberlake Way Sacramento, California 95823	(916) 423-3000
Kaiser South Sacramento 6600 Bruceville Road Sacramento, California 95823	(916) 688-2000
Kaiser Hospital Sacramento 2025 Morse Avenue Sacramento, California 95825	(916) 973-5000
Sutter General Hospital 2801 L Street Sacramento, California 95816	(916) 454-2222
Sutter Memorial Hospital 52nd and F Street Sacramento, California 95819	(916) 454-3333

Helispot Location	**Latitude/Longitude**	**Description of Location**
Mercy General Hospital	38-32.9N/ 121-22.3W	
Mercy Folsom Hospital	38-40.0N/ 121-08.9W	
Methodist Hospital	38-27.7N/ 121-25.1W	
Kaiser South Sacramento	38-28.3N/ 121-25.5W	
Rideout Memorial Hospital	39-08.4N/ 121-35.6W	
Sutter Davis Hospital	38-33.4N/ 121-46.1	
Sutter General Hospital	38-32.9N/ 121-22.3W	
Sutter Memorial Hospital	38-32.9N/ 121-22.3W	

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response	(916) 374-8431	G	11	yes	ALS
Auburn Fire Department	(530) 823-4211	G	0	no	BLS
Beale AFB Fire Department	(530) 634-8672	G		yes	ALS
Bi-County Ambulance Service	(530) 674-2780	G	15	yes	ALS
California Highway Patrol	(916) 322-3337	G	0	yes	ALS
CDF - Loma Rica/Browns Valley	(530) 749-2316	G	0	no	BLS
CDF – Nevada/Yuba/Placer	(530) 823-4904	G	0	no	ALS
CALSTAR	(530) 887-8259	A	0	yes	BLS/ALS
Capay Valley Fire	(530) 796-3300	G	0	no	BLS
Colfax Fire Department	(530) 346-2323	G	0	no	BLS
Courtland Fire Protection District	(916) 775-1210	G	0	no	BLS
Cosumnes Community Service District	(916) 405-7100	G	6	yes	ALS
Davis Fire Department	(530) 757-5684	G	0	no	BLS
Delta Fire Protection District	(707) 374-2233	G	0	no	BLS
Dobbins Oregon Fire Protection District	(530) 692-1175	G	0	no	BLS
Dunnigan Fire Protection District	(530) 724-3315	G	0	no	BLS
Dutch Flat Fire Department	(530) 389-2287	G	0	no	BLS
Elkhorn Volunteer Fire Dept	(530) 371-4541	G	0	no	BLS
Esparto Fire Protection District	(530) 787-330	G	0	no	BLS
First Responder EMS Inc.	(916) 381-3780	G	18	yes	ALS
Folsom Fire Department	(916) 984-2284	G	4	yes	ALS
Foothill Volunteer Fire Depart	(530) 675-2383	G	0	no	BLS
Foresthill Safety Club	(530) 367-2509	G	2	yes	BLS/ALS
Forty-Niner Fire Protection Dist	(530) 265-4431	G	0	yes	BLS
Galt Fire Protection District	(209) 745-1001	G	4	yes	ALS
Grass Valley Fire Department	(530) 274-4370	G	0	yes	BLS

Herald Fire Protection District	(209) 748-2322	G	0	no	BLS
Higgins Fire Protection District	(530) 269-2488	G	0	no	BLS
Isleton Fire Protection District	(916) 777-7776	G	0	no	BLS
Knights Landing Fire Protection District	(530) 735-6590	G	0	no	BLS
Lincoln Fire Department	(530) 645-4040	G	0	no	BLS
Linda Fire Department	(530) 743-1553	G	0	no	BLS
Madison Fire Protection District	(530) 662-5745	G	0	no	BLS
Marysville Fire Department	(530) 741-6622	G	0	no	BLS
Medic Ambulance Service	(916) 564-9040	G	4	yes	ALS
Nevada City Fire Department	(530) 265-2351	G	0	no	BLS
North Star Fire Department	(530) 562-1212	G	0	no	BLS
North Tahoe Fire Protection Dist	(530) 583-6913	G	0	no	BLS
Penryn Fire Protection District	(916) 663-3389	G	0	no	BLS
Placer Consolidated Fire Protection District	(530) 889-7991	G	0	no	BLS
Placer County Fire Department	(530) 823-4909	G	0	no	BLS
Placer Hills Fire Department	(530) 878-0405	G	0	no	BLS/ALS
Pleasant Grove Fire Department	(916) 655-3937	G	0	no	BLS
REACH	(707) 447-6886	A	1	yes	ALS
Rocklin Fire Department	(916) 632-4150	G	0	no	BLS
Sacramento Int. Airport Fire Dept	(916) 874-0648	G	0	no	BLS
Sacramento Fire Department	(916) 264-5352	G	16	yes	ALS
Sacramento Metropolitan Fire District	(916) 566-4000	G	13	yes	ALS
Sierra Nevada Memorial Hospital Ambulance	(530) 274-6233	G		yes	ALS
South Placer Fire Department	(916) 791-7059	G	3	yes	ALS
Squaw Valley Fire Department	(530) 583-6111	G	0	no	BLS
Sutter County Fire	(530) 822-7400	G	0	no	BLS
US Forest Service	(530) 367-2224	G	0	no	BLS
Walnut Grove Fire Protection District	(916) 417-4070	G	0	no	ALS
Wheatland Fire Department	(530) 633-2930	G	0	no	BLS

Wilton Fire District	(916) 687-6920	G	0	no	ALS
Winters Fire Department	(530) 795-4131	G	0	no	BLS
Yuba City Fire Department	(530) 741-4691	G	0	no	BLS
TLC Transportation Inc.	(916) 368-5202	G	4	yes	ALS

Agency Contact

Marcie Morrow, EMS Coordinator
1111 San Felipe Rd., Ste. 102
Hollister, CA 95023
(831) 636-4066
FAX: (831) 636-4037
E-MAIL: mmorrow@sanbenitoco.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	155.280	155.280	2000	Prim
Statewide Medical Coordination	463.000	463.00	2000	Prim
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to Hospitals (Mednet 1)	468.000	463.000	2000	Prim
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Hazel Hawkins Hospital 911 Sunset Drive Hollister, California 95023	(831) 637-5711 – *Main* (831) 636-2640 – *ED*	36-49-57.000N/ 121-22-57.000W TLOF - 30' x 30'

Helispot Location	Latitude/Longitude	Description of Location
Hollister Airport	36-53-16.3N/121-24-42.31W	Airport

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
AMR	831-636-9391	G	2	yes	ALS

Agency Contact

Marcy Metz, Acting EMS Director
6255 Mission Gorge Rd.
San Diego, CA 92120
(619) 285-6429 ext. 6546
Fax: (619) 515-6527
E-MAIL: Marcy.Metz@sdcounty.ca.gov

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) Trunked System	800 MHz	N/A	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to hospitals Trunked System	800 MHz	N/A	N/A	N/A
Other (e.g. tactical, etc.) Trunked System	800 MHz	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Alvarado Community Hospital 6655 Alvarado Road San Diego, California 92120	(619) 287-3270	
Rady Children's Hospital San Diego 3020 Children's Way San Diego, California 92123	(858) 966-8800	32-47-57.000N/ 117-09-06.000W TLOF – 80' Diameter
Sharp Coronado Hospital 250 Prospect Place Coronado, California 92118	(619) 435-6251	
Fallbrook Hospital 624 East Elder Street Fallbrook, California 92028	(760) 728-1191	
Sharp Grossmont Hospital 5555 Grossmont Center Drive La Mesa, California 91941	(619) 465-0711 – *ED* (619) 644-4066 – *Main*	32-46-46.000N/ 117-00-22.000W TLOF - 40' x 40'

Kaiser Foundation Hospital 4647 Zion Avenue San Diego, California 92120	(619) 528-5000 - *Main* (619) 528-5700 - *ED*	
Scripps Mercy Hospital and Medical Ctr 4077 Fifth Avenue San Diego, California 92103	(619) 294-8111 – *Main* (619) 686-3800 – *ED*	32-45-05.000N/ 117-09-34.000W TLOF - 39' x 39'
US Naval Hospital-San Diego 34800 Bob Wilson Drive San Diego, California 92134	(619) 532-6400 - *Main* (619) 532-82745 – *ED*	
US Naval Hospital-Camp Pendleton US Marine Corps. Camp Pendleton, California 92055	(949) 725-1288	
Palomar Medical Center 555 East Valley Parkway Escondido, California 92025	(760) 739-3000	33-07-28.000N/ 117-04-28.000W TLOF - 65' Diameter
Paradise Valley Hospital 2400 East Fourth Street National City, California 91950	(619) 470-4321	
Pomerado Hospital 15615 Pomerado Road Poway, California 92064	(858) 485-6511	32-59-54.000N/ 117-03-21.000W TLOF - 45' Diameter
Scripps Mercy Hospital-Chula Vista 435 H Street Chula Vista, California 91910	(619) 691-7000	
Scripps Memorial Hospital-Encinitas 354 Santa Fe Drive Encinitas, California 92024	(760) 753-6501 - *Main* (760) 633-7685 - *ED*	
Scripps Memorial Hospital-La Jolla 9888 Genesee Drive La Jolla, California 92038	(858) 457-4123 – *Main* (858) 626-6150 - *ED*	32-53-53.000N/ 117-14-19.000W TLOF - 60' Diameter
Sharp Chula Vista Hospital 751 Medical Center Court Chula Vista, California 91910-6699	(619) 482-3400 - *Main* (619) 482-5825 – *ED*	32-37-11.000N/ 117-01-19.000W TLOF - 40' Diameter

Sharp Memorial Hospital 7901 Frost Street San Diego, California 92123	(858) 939-3411– *ED* (858) 939-3400 - *Main*	32-47-57.000N/ 117-09-115.000W TLOF - 40' Diameter
Tri-City Medical Center 4002 Vista Way Oceanside, California 92054	(760) 724-8411- *Main* (760) 940-3518 – *ED*	33-11-07.000N/ 117-17-25.000W TLOF - 58' x 68'
UCSD Medical Center 200 West Arbor Drive San Diego, California 92103	(619) 543-6222 – *Main* (619) 543-6400 – *ED*	32-45-16.000N/ 117-09-53.000W TLOF - 45' x 50'
UCSD Thornton Hospital 9300 Campus Point Drive La Jolla, California 92037	(619) 657-7000 - *Main* (619) 657-7600 - *ED*	

Helispot Location	**Latitude/Longitude**	**Description of Location**

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
American Medical Response	(619) 492-8100	G	86	yes	ALS
Alert Ambulance	(619) 298-7203	G	6	yes	BLS
Alpine Fire Department	(619) 445-2635	G	0	no	ALS
Ambumed Ambulance	(619) 644-5321	G	6	yes	BLS
Americare Ambulance	(760) 781-3895	G	12	yes	BLS
Balboa Ambulance	(619) 295-1941	G	13	yes	BLS
Barona Fire Department	(619) 390-2794	G	2	yes	ALS
Bonita-Sunnyside Fire Dept	(619) 479-2346	G	0	no	ALS
Borrego Springs Fire Department	(619) 767-5436	G	3	yes	ALS
Boulevard CSA	(619) 766-4633	G	0	no	BLS
Cal Fire	(619) 588-0364	G	0	no	BLS
Camp Pendleton Fire Department	(760) 763-2702	G	4	yes	ALS
Campo Reservation Fire	(619) 478-5310	G	0	no	BLS
Care Medical Transport	(619) 514-4111	G	26	yes	BLS
Carlsbad Fire Department	(619) 931-2141	G	3	yes	ALS

Chula Vista Fire Department	(619) 691-5055	G	0	no	BLS
Coronado Fire Department	(619) 522-7374	G	2	yes	ALS
Deer Springs Fire Department	(619) 749-8001	G	0	no	ALS
Del Mar Fire Department	(619) 755-1522	G	1	yes	ALS
El Cajon Fire Department	(619) 441-1600	G	3	yes	ALS
Elfin Forest Fire Department	(760) 744-2186	G	1	yes	BLS
Encinitas Fire Department	(619) 633-2800	G	0	no	ALS
ER Ambulance	(619) 401-9900	G	2	yes	BLS
Escondido Fire Department	(619) 738-5400	G	4	yes	ALS
Federal Fire Department	(619) 556-7001	G	6	yes	ALS
Imperial Beach Fire Department	(619) 423-8223	G	0	no	ALS
Intermountain Valley Fire Dept	(760) 789-3710	G	0	no	BLS
Julian-Cuyamaca Fire Dept	(619) 765-1510	G	2	no	ALS
La Mesa Fire Department	(619) 667-1355	G	0	no	ALS
Lakeside Fire Department	(619) 390-2350	G	2	yes	ALS
Lemon Grove Fire Department	(619) 469-4115	G	0	no	ALS
Medfleet Ambulance	(619) 222-2244	G	3	yes	BLS
Mercy Air Ambulance	(909) 347-9006	A	6	yes	ALS
Mercy Medical Transport	(760) 739-8026	G	6	yes	ALS
Miramar Fire Department	(858) 577-6136	G	2	yes	ALS
Mt. Laguna Volunteer Fire Dept	(619) 473-8143	G	0	no	BLS
NASSCO	(619) 544-8889	G	0	no	BLS
National City Fire Department	(619) 336-4271	G	0	no	ALS
North County Fire Department	(619) 723-2005	G	4	yes	ALS
Oceanside Fire Department	(619) 966-4883	G	4	yes	ALS
Ocotillo Wells Fire Department	(619) 358-7735	G	1	yes	BLS
Pala Fire Battalion	(619) 742-1632	G	0	no	ALS
Palomar Mountain CSA 100	(619) 742-1693	G	0	no	BLS
Pacific Ambulance	(619) 544-8889	G	21	yes	BLS
Pine Valley Fire Department	(619) 696-2612	G	0	no	BLS
Poway Fire Department	(619) 679-4340	G	3	yes	ALS
Priority One Transport	(800) 600-3370	G	10	yes	BLS

Ranchita Fire Battalion	(619) 565-5257	G	0	no	BLS
Rancho Santa Fe Fire Department	(619) 756-5971	G	0	no	ALS
Ramona Municipal Water District	(619) 789-1330	G	2	yes	ALS
SDMSE	(619) 280-6060	G	85	yes	ALS
San Diego City Fire Department	(619) 533-4300	G	0	no	ALS
San Marcos Fire Department	(619) 744-1050	G	4	no	ALS
San Miguel Cons. Fire Dept	(619) 670-0500	G	0	no	ALS
San Onofre Fire Department	(949) 368-6655	G	1	yes	BLS
San Pasqual Fire Department	(619) 745-9565	G	0	no	BLS
Santee Fire Department	(619) 258-4100	G	2	yes	ALS
Schaefer Ambulance Service, Inc	(619) 583-0454	G	4	yes	BLS
Solana Beach Fire Department	(619) 755-1179	G	0	no	ALS
Sycuan Fire Department	(619) 445-2614	G	2	yes	ALS
Valley Center Fire Department	(619) 751-7600	G	0	no	BLS
Viejas Reservation Fire Dept	(760) 751-7600	G	1	yes	ALS
Vista Fire Department	(619) 726-2144	G	3	yes	ALS
Warner Springs Ranch Fire Dept	(619) 782-3555	G	0	no	BLS
West Shore Ambulance Company	(760) 395-6800	G	3	yes	ALS

Agency Contact
John F. Brown, MD, Medical Director
68-12th Street, #220
San Francisco, CA 94103-1242
(415) 355-2607; fax: (415) 552-0194
e-mail: john.brown@sfdph.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) San Francisco has a trunked 800 MHz system with 23 frequencies called Citywide Emergency Radio System (CERS) using Motorola equipment. It services police-fire-EMS-sheriff. This works with eight repeaters. Local medical coordination is assigned four talk groups: EMS1, EMS2, EMS3, EMS4. The first two are encrypted for field providers to notify hospitals; the second two are used by Dispatch and the private companies, as well as non-emergency communications with SFFD. EMERGENCY BACK-UP SYSTEM Med 9 Med 10	 462.95 462.98	 467.95 467.98	 167.9 167.9	 Alt-1 Alt-2
Statewide Medical Coordination HEAR Network	155.34	155.34	CSQ/ DTMF	Prim
Calling Channel	n/a	n/a	n/a	n/a
Dispatch (for each EMS Agency) See comments above. The Dispatch talk groups are: FD-A1 FD-A2 FD-A3	 462.95 462.98 488.36 488.56 488.76 489.11 489.16 489.19	 467.95 467.98 491.36 491.56 491.76 492.11 492.16 492.19	 167.9 167.9 506 506 506 506 506 506	 Alt Prim Prim Prim Prim Prim Prim Prim
Direct to Hospitals (talk groups): EMSA1-community hospitals				

EMSA2-SF General, and Base Hospital physician consults				
Other: OES State Fire Net	159.195	154.160	103.5	Alt
Fire White	154.280	154.280	CSQ	Alt
CALCORD	156.075	156.075	CSQ	Alt
N.Cal. Mutual Aid-9 (Firemars-low)	821.9125	866.9125	156.7	Alt

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Chinese Hospital 845 Jackson Street San Francisco, California 94133	(415) 677-2300	
Kaiser Permanente Medical Center 2425 Geary Blvd. San Francisco, California 94115	(415) 833-3300	
California Pacific Medical Center -St. Lukes Campus 3555 Cesar Chavez San Francisco, California 94115	(415) 641-6625	
California Pacific Medical Center -Pacific Campus 2333 Buchanan San Francisco, California 94115	(415) 600-3333	
California Pacific Medical Center - Davies Medical Center Castro & Duboce Streets San Francisco, California 94114	(415) 600-6060	
St. Francis Memorial Hospital 900 Hyde Street San Francisco, California 94121	(415) 353-6300	
St. Mary's Hospital & Medical Center 450 Stanyan Street San Francisco, California 94117	(415) 750-5700	
San Francisco General Hospital 1001 Potrero Avenue San Francisco, California 94110	(415) 206-8111	

UCSF/Stanford Medical Center 505 Parnassus Street, L-138 San Francisco, California 94143	(415) 502-8841
VA Medical Center 4150 Clement Street San Francisco, California 94121	(415) 221-4810
Seton Medical Center 1900 Sullivan Avenue Daly City, California 94015	(650) 991-6892
Kaiser South City 1200 El Camino Real So. San Francisco, California 94080	(650) 742-2513

Helispot Location	**Latitude/Longitude**	**Description of Location**
Galileo High School	36-48/122-25	Football Field
Nob Hill	37-47/122-25	Stop traffic on Calif. Street
Ferry Park	37-47/122-23	
Washington Square	37-48/122-24	
James Lang Playground	37-46.897/122.25.527	
Jackson Playground	37-45.903/122.23.926	
Treasure Island	37-49.411/122.22.410	Soccer Field/asphalt parking lot
Yerba Buena Gardens	37-47/122.24	
Kimball Playground	37-46.995/122.25.527	
Lafayette Park	37.47/122.25	Grass clearing at the Southeast Corner of Washington & Laguna
Moscone Playground	37-48.079/122.25.995	
Golden Gate Park	37-46.002/122.27.760	Big Rec
Golden Gate Park	37-46.042/122.27.296	Kezar Stadium
Golden Gate Park	37-45.932/122-29.652	Polo Field
Rossi Playground	37-46.702/122-27.499	
South Sunset	37-44.184/122-29.840	
West Sunset	37-44.967/122-29.981	No. 3 Playground
West Sunset	37-45.069/122-29.867	No. 2 Playground
Balboa Playground	37-43.355/122-26.725	
Crocker Amazon Field	37-42.777/122-26.004	
Candlestick Park	37-42.83/122-23.12	Parking Lot – K railed area between between gates E & F Across from RV Park
Rolph Playground	37-44.979/122-24.362	

Crissy Field (NPS* LZ# 63)	37-48.15/122-28.01	Access through Marina Gate
Presidio Main Parade Grounds	37-48.02/122-27.29	
Fort Scott Parade Grounds	37-48.04/122-28.28	
Baker Beach	37-47.34/122-28.60	Parking Lot

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
AMR- S. F. Ambulance Service	(800) 931-9197	G	19	yes	ALS
Bayshore	(650) 525-9700	G		yes	ALS
Cal Star	(800) 252-5050	A		yes	ALS
King American Ambulance Co.	(415) 931-1400	G	13	yes	ALS
Life Flight	(800) 321-7828	A		yes	ALS
National Park Service	(415) 561-5184	G	1	no	ALS
Presidio Fire Department	(415) 561-5656	G		yes	ALS
Pro-Transport-1	(707) 586-4041	G		yes	ALS
REACH	(800) 338-4045	A		yes	ALS
San Francisco Fire Department	(415) 558-3291	G	20	yes	ALS
St. Joseph's Ambulance Service	(415) 921-0707	G	2	yes	BLS

Agency Contact
Dan Burch, EMS Administrator
PO Box 1020
Stockton, California 95201
(209) 468-6818
FAX: (209) 468-6725
E-MAIL: dburch@sjgov.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
San Joaquin General Hospital – North Co.	468.000	463.000	DPL 132	P
San Joaquin General Hospital – South Co.	468.025	463.025	5B	P
Kaiser Hospital Manteca	468.050	463.050	DPL 331	P
Sutter Tracy Community Hospital	468.075	463.075	5B	P
Doctors Hospital of Manteca	468.100	463.100	DPL 532	P
Lodi Memorial Hospital	468.125	463.125	5B	P
Dameron Hospital	468.150	463.150	DPL 732	P
St. Joseph's Medical Center	468.175	463.175	5B	P
Med 1	468.000	463.000	DPL 132	P
Med 2	468.025	463.025	5B	P
Med 3	468.050	463.050	DPL 331	P
Med 4	468.075	463.075	5B	P
Med 5	468.100	463.100	DPL 532	P
Med 6	468.125	463.125	5B	P
Med 7	468.150	463.150	DPL 732	P
Med 8	468.175	463.175	5B	P
Med 9	467.950	462.950	N/A	N/A
Med 10	467.975	462.975	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)				
CALCORD	156.075	156.075	N/A	N/A

Dispatch and tactical frequencies for transport and non-transport providers.

Channel	Function	Rpt/ Smplx	Current	Rx Freq	PL/DPL	Tx Freq	PL/DPL
Control 1	North Dispatch	R	Orange	154.1300	110.9	156.1200	156.7
Control 2	Countywide Repeated Frequency (NB)	R	Command 1	152.3525	100.0	157.5825	DPL143
Control 3	Countywide Repeated Frequency (NB)	R	Command 2	152.4125	100.0	157.6125	DPL365
Control 4	South Dispatch	R	Gold	155.8950	82.5	154.3100	82.5
Control 5	South Rept Tactical (NB)	R	Ripon COM	159.1125	DPL565	154.6575	DPL565
Control 6	South Rept Tactical	R	Tracy Tac 2	154.7250	82.5	158.8950	82.5
Interop	SFD Interoperability	R	STO Pub				
TAC 1	Fireground Tactical	S	Blue	154.0700	110.9	154.0700	110.9
TAC 2	Fireground Tactical	S	Brown	154.2350	156.7	154.2350	156.7
TAC 3	Fireground Tactical	S	Gold	155.8950	82.5	155.8950	82.5
TAC 4	Fireground Tactical	S	Purple	158.9400	192.8	158.9400	192.8
TAC 5	Fireground Tactical	S	Green	153.9500	82.5	153.9500	82.5
TAC 6	Fireground Tactical	S	Grey	154.7250	82.5	154.7250	82.5
TAC 7	Fireground Tactical	S	SCD (TRY)	153.8150	82.5	153.8150	82.5
CalCoord	Air Operations	S	CalCord	156.0750	CSQ	156.0750	CSQ
White 1	Fireground Tactical	S	White 1	154.2800	CSQ	154.2800	CSQ
White 2	Fireground Tactical	S	White 2	154.2650	CSQ	154.2650	CSQ
White 3	Fireground Tactical	S	White 3	154.2950	CSQ	154.2950	CSQ
Metro Airport	Airport Tactical	S	Airport Fire	155.0250	127.3	155.0250	127.3
Lodi Dispatch	Lodi City	R	Lodi Primary	154.0100	192.8	159.0600	192.8
Manteca City	Manteca City Fire Dispatch	R	SCD	155.0550	82.5	153.8150	82.5

Emergency Department Facilities	**Telephone**	**Helipad Latitude/Longitude**
Dameron Hospital 525 W. Acacia Street Stockton, California 95203	(209) 944-5550	
Lodi Memorial Hospital 975 S. Fairmont Ave. Lodi, California 95240	(209) 334-3411	38-07-21.000N/ 121-17-09.000W TLOF - 65' x 65'

St. Joseph's Medical Center 1800 N. California Street Stockton, California 95204	(209) 467-6400	37-58-16.000N/ 121-17-15.000W TLOF - 45' x 45'
San Joaquin General Hospital 500 W. Hospital Road French Camp, California 95231	(209) 468-6000	37-53-19.000N/ 121-17-02.000W TLOF - 40' Diameter
Doctor's Hospital Manteca 1205 E. North Street Manteca, California 95336	(209) 823-3111	
Sutter-Tracy Community Hospital 1420 Tracy Blvd. Tracy, California 95376	(209) 835-1500	
Kaiser Hospital Manteca 1777 W. Yosemite Avenue Manteca, California 95336	(209) 825-3555	37-47-54.000N/ 121-14-44.000W TLOF - 70' x 70'

Helispot Location	**Latitude/Longitude**	**Description of Location**

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
AMR Inc.	(209) 948-5136	G	26	yes	ALS
Air Med Team	(209) 576-3939	A	1	yes	ALS
Air Methods	(209) 572-7050	A	3	yes	ALS
Escalon Ambulance	(209) 838-1351	G	2	yes	ALS
Manteca District Ambulance	(209) 823-1032	G	5	yes	ALS
Mediplane Inc. (REACH)	(707) 575-6886	A	2	yes	ALS
Ripon Fire Department	(209) 599-4209	G	1	yes	ALS
Stockton Fire Department	(209) 937-8801	G	0	no	ALS
Priority One Medical Transport	(209) 368-7575	G	5	yes	ALS
Protransport-1	(800) 650-4003	G	1	yes	BLS
Numerous non transport providers	N/A	G	0	no	BLS

Agency Contact

Charlotte Alexander, EMS Administrator
712 Fiero Ln., #29
San Luis Obispo, CA 93401
(805) 546-8728
FAX: (805) 546-8736
E-MAIL: calexander@sloemsa.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)				
Med 1	468.000	463.000	N/A	N/A
Med 2	468.025	463.025	N/A	N/A
Med 3	468.050	463.050	N/A	N/A
Med 4	468.075	463.075	N/A	N/A
Statewide Medical Coordination	0	0	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Med 1	468.000	463.000	N/A	N/A
Med 2	468.025	463.025	N/A	N/A
Med 3	468.050	463.050	N/A	N/A
Med 4	468.075	463.075	N/A	N/A
Direct to hospitals				
Med 2				
Med 3	468.050	463.050	N/A	N/A
Med 4	468.075	463.075	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Twin Cities Community Hospital 110 Las Tablas Road Templeton, California 93465	(805) 434-3500 – *Main* (805) 434-4550 – *ED*	35-33-30.000N/ 121-17-15.000W TLOF – 45’ x 45’
Sierra Vista Regional Medical Center 1010 Murray Street San Luis Obispo, California 93401	(805) 546-7600 - *Main* (805) 546-7650 - *ED*	
Arroyo Grande Community Hospital 345 S. Halcyon Road Arroyo Grande, California 93420	(805) 489-4261 - *Main* (805) 473-7626 - *ED*	

French Hospital Medical Center (805) 543-5353 - *Main*
1911 Johnson Avenue (805) 542-6377 - *ED*
San Luis Obispo, California 93401

Helispot Location	**Latitude/Longitude**	**Description of Location**

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
CHP Air Operations	(805) 239-3553	A	1	yes	ALS
Cambria Community Healthcare	(805) 927-8304	G	3	yes	ALS
San Luis Ambulance Service	(805) 543-2626	G	11	yes	ALS

Agency Contact

Barbara Pletz, EMS Administrator
225 37th Avenue
San Mateo, California 94403
(650) 573-2564
FAX: (650) 573-2029
E-MAIL:bpletz@co.sanmateo.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/A	N/A	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)	N/A	N/A	N/A	N/A
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Kaiser Hospital Redwood City 1150 Veterans Blvd. Redwood City, California 94063	(650) 299-2201	
Kaiser Hospital So. San Francisco 1200 El Camino Real So. San Francisco, California 94080	(650) 742-2513	
Mills Hospital 100 South San Mateo Drive San Mateo, California 94402	(650) 696-5057	
Peninsula Hospital 1501 Trousdale Drive Burlingame, California 94010	(650) 696-5500	
Sequoia Hospital 170 Alameda de Las Pulgas Redwood City, California 94063	(650) 367-5541	

Seton Coastside (650) 563-7107
600 Marine Blvd.
Moss Beach, California 94038

Seton Medical Center (650) 991-6892
1900 Sullivan Avenue
Daly City, California 94015

San Mateo Medical Center (650) 573-2761
222 West 39th Avenue
San Mateo, California 94403

Helispot Location	**Latitude/Longitude**	**Description of Location**

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
American Medical Response	(650) 235-1333	G	35	Yes	ALS/BLS
Bayshore Ambulance	(650) 525-3855	G	12	Yes	BLS
Belmont/San Carlos Fire Dept	(650) 802-4255	G	0	No	ALS
CALSTAR	(916) 921-4000	A	3	Yes	ALS
Central County Fire Authority	(650) 558-7600	G	0	No	ALS
CDF	(650)573-3842	G	0	No	ALS
Coastside Fire Protection District	(650) 726-5213	G	0	No	ALS
Coloma Fire Department	(650) 755-5666	G	0	No	ALS
Foster City Fire Department	(650) 286-3350	G	0	No	ALS
Life Flight	(650) 723-5578	A	1	Yes	ALS
Millbrae Fire Department	(650) 259-2400	G	0	No	ALS
North County Fire Authority	(650) 991-8138	G	0	No	ALS
Redwood City Fire Department	(650) 780-7400	G	0	No	ALS
San Francisco Int'l Airport (City & County of San Francisco)	(650) 821-4650 (650) 821-7405 (650) 821-4610	G	0	No	ALS
San Bruno Fire Department	(650) 616-7096	G	0	No	ALS
San Mateo Fire Department	(650) 522-7900	G	0	No	ALS

South San Francisco Fire Dept	(650) 829-3950	G	4	Y	ALS
Woodside Fire Protection District	(650) 851-1594	G	0	No	ALS

Agency Contact
Nancy Lapolla, EMS Administrator
300 North San Antonio Road
Santa Barbara, California 93110
(805) 681-5274
FAX: (805) 681-5142
E-MAIL: nancy.lapolla@sbcphd.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/A	N/A	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				N/A
Med 10	467.975	462.975	167.9	
Patch to hospitals				
Med1	N/A	N/A	173.8	N/A
Med 2	N/A	N/A	173.8	N/A
Med 3	N/A	N/A	186.2	N/A
Med 4	N/A	N/A	146.2	N/A
Med 5 (SB Cottage Hospital)	468.100	463.100	146.2	N/A
Med 6 (Goleta & Santa Ynez Cottage Hospitals)	468.125	463.125	167.9	N/A
	468.150	463.150	N/A	N/A
Med 7 (Lompoc Valley Med Ctr)	468.175	463.175	N/A	N/A
Med 8 (Marian Medical Center)				
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A
Med Net intercom – all hospitals & EMS Agencies are linked on an intercom system (Telco & Microwave networked). Hospitals can selectively call each other or perform a call.				

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Santa Barbara Cottage Hospital PO Box 689 Santa Barbara, California 93102	(805) 569-7210	
Goleta Valley Cottage Hospital 351 South Patterson Avenue Santa Barbara, California 93111	(805) 967-3411	34-26-02.000N/ 119-48-31.000W TLOF - 40' Diameter

Lompoc Valley Medical Center 508 East Hickory Avenue Lompoc, California 93436	(805) 737-3333	
Marian Medical Center 1400 E. Church Street Santa Maria, California 93454	(805) 739-3000	34-57-03.000N/ 120-24-42.000W TLOF - 56' x 56'
Santa Ynez Valley Cottage Hospital 700 Alamo Pintado Road Solvang, California	(805) 688-6431	

Helispot Location	**Latitude/Longitude**	**Description of Location**
Santa Barbara Cottage Hospital	34 25.881N/ 119 50.084W	Via KSBA Airport Signature Air
Lompoc Valley Medical Ctr	34 39.980N/ 120 27.512W	Via KLPC Airport
Santa Ynez Valley Cottage Hosp.	34 36.119N/ 120 7.519W	Dirt area next to hosp

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
American Medical Response	(805) 688-5500	G	30	yes	ALS
CA Lifeguard/Department Parks-Recreation	(805) 968-3834	G	0	no	BLS
Carpinteria Summerland Fire	(805) 684-4591	G	0	no	ALS
County of Santa Barbara Parks Department	(805) 568-2461	G	0	no	BLS
Guadalupe Fire Department	(805) 343-1444	G	0	no	BLS
Guadalupe Police Department	(805) 343-2112	G	0	no	BLS
Lompoc City Fire Department	(805) 736-4513	G	0	no	BLS
Lompoc Police Department	(805) 736-2341	G	0	no	BLS
Montecito FPD	(805) 969-7762	G	1	no	ALS
Santa Barbara City Lifeguard	(805) 897-2574	G	0	no	BLS
Santa Barbara County Fire Dept	(805) 681-5500	G	4	yes	ALS

Santa Barbara City Fire	(805) 965-5254	G	0	no	BLS
Santa Barbara Police Department	(805) 897-2300	G	0	no	BLS
Santa Barbara Sheriff Department	(805) 681-4100	G	0	no	BLS
Santa Maria Fire Department	(805) 925-2631	G	0	no	BLS
Santa Maria Police Department	(805) 925-0951	G	0	no	BLS
UCSB Police Department	(805) 893-3446	G	2	yes	ALS

Agency Contact

Bruce H. Lee, EMS Administrator
645 South Bascom, Room 138
San Jose, California 95128
(408) 885-4250
FAX: (408) 885-3538
E-MAIL: BruceH.Lee@hhs.co.santa-clara.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) Cellular	N/A	N/A	N/A	N/A
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)	T-811.4375	94.8	R-856.4375	(192.5)
Direct to hospitals	T-812.4375	156.7	R-857.4375	(225.7)
Other (e.g. tactical, etc.) Radio Paging Signs	458.100	453.100	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Good Samaritan Hospital 2425 Samaritan Drive San Jose, California 95124	(408) 559-2217	
Stanford University Hospital 300 Pasteur Drive, Suite H1249 Stanford, California 94305	(650) 723-7337	37-26-08.000N 122-10-26.000W TLOF - 72' x 72'
Kaiser Medical Center- Santa Clara 700 Lawrence Expressway Santa Clara, California 95051	(408) 851-5312	37-23-93.000N/ 121-79-99.000W TLOF – 50’ x 50’
Palo Alto Veterans Hospital 3801 Miranda Avenue Palo Alto, California 94304	(650) 493-5000	
Community Hospital of Los Gatos 815 Pollard Road Los Gatos, California 95030	(408) 866-4040	

Santa Clara Valley Medical Center 751 South Bascom Avenue San Jose, California 95128	(408) 885-6987	37-18-51.000N 121-56-03.000W TLOF - 65' x 65'
Saint Louise Hospital 9400 No Name Uno Gilroy, California 94020	(408) 848-8681	37-02-09.000N/ 121-34-17.000W TLOF - 50' x 50'
Regional Medical Center of San Jose 225 N. Jackson Avenue San Jose, California 95116	(408) 259-5000	37-21-45.000N/ 121-50-54.000W TLOF – 54’ x 54’
O’Connor Hospital 2105 Forest Avenue San Jose, California 95128	(408) 947-2666	
El Camino Hospital 2500 Grant Road Mountain View, California 94042	(650) 940-7055	
Kaiser San Jose Medical Center 250 Hospital Parkway San Jose, California 95119	(408) 972-7782	

Helispot Location	**Latitude/Longitude**	**Description of Location**
Good Samaritan Hospital	37-25-21.000N/ 121-94-65.000W	
Palo Alto Veterans Hospital	37-39-98.000N/ 122-13-62.000	

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB’s**	**TRANS**	**EMT**
(City) Campbell Police Dept	(408) 866-2121	G	0	no	BLS
(City) Gilroy Fire Department	(408) 848-0385	G	1	no	ALS/BLS
(City) Gilroy Police Dept.	(408) 848-0329	G	0	no	BLS
(City) Los Altos Police Dept	(650) 948-8223	G	0	no	BLS
(City) Milpitas Fire Department	(408) 942-2394	G	0	no	ALS/BLS
(City) Milpitas Police Department	(408) 942-3911	G	0	no	BLS
(City) Morgan Hill Police Dept	(408) 776-7304	G	0	no	BLS

(City) Mountain View Fire Dept	(650) 903-6803	G	0	no	ALS/BLS
(City) Mountain View Police Dept	(650) 903-6354	G	0	no	BLS
(City) Palo Alto Fire Department	(650) 329-2220	G	3	yes	ALS/BLS
(City) Palo Alto Police Dept	(650) 329-2556	G	0	no	BLS
(City) San Jose Fire Department	(408) 277-4084	G	0	no	ALS/BLS
(City) San Jose Police Dept	(410) 277-4000	G	6	no	BLS
(City) Santa Clara Fire Dept	(408) 984-3054	G	0	no	ALS/BLS
(City) Santa Clara Police Dept	(408) 261-5324	G	3	no	BLS
(Town) Los Gatos Police Dept	(408) 354-4257	G	0	no	BLS
American Medical Response - West	(408) 574-3800	G	95	yes	ALS/BLS
AMTRAK Police	(408) 271-3546	G	0	no	BLS
Bayshore Ambulance	(650) 525-3855	G	7	yes	BLS
California Dept of Forestry	(408) 779-2121	G	0	no	BLS
Calif. Highway Patrol – Gilroy	(408) 848-2324	G	0	yes	BLS
Calif. Highway Patrol - Redwood City	(650) 369-6261	G	0	no	BLS
Calif. Highway Patrol - San Jose	(408) 277-1800	G	0	no	BLS
CSU Police Dept	(408) 924-2222	G	0	no	BLS
California Community College District Police	(650) 949-7317	G	0	no	BLS
California Community College District Police	(408) 864-5555	G	0	no	BLS
California Community College District Police	(408) 288-3735	G	0	no	BLS
California Shock Trauma Air Rescue	(510) 887-3063	A	2	yes	ALS
California Community College District Police	(408) 741-2092	G	0	no	BLS
FBI - San Jose	(408) 998-5633	G	0	no	BLS
Golden State Medical Services	(408) 879-1400	G	4	yes	BLS
Lifeflight	(650) 725-4829	A	1	yes	ALS
Mid-Peninsula Regional Open	(650) 691-1200	G	0	no	BLS
Nasa Ames Fire Department	(650) 604-5416	G	0	no	BLS

South Santa Clara Co. Fire Dist	(408) 779-2121	G	0	no	ALS/BLS
Santa Clara Co. Fire Department	(408) 378-4010	G	0	no	ALS/BLS
Santa Clara County Parks Dept	(408) 358-3741	G	0	no	BLS
Santa Clara Co. Sheriff's Dept	(408) 299-2101	G	0	no	BLS
Stanford Dept of Public Safety	(650) 725-2149	G	0	no	BLS
Sunnyvale Dept of Public Safety	(408) 730-7162	G	0	no	BLS
Westmed Ambulance	(510) 614-1423	G	11	yes	ALS/BLS
Reach Air Medical Services	(707) 575-6886	A	3	yes	ALS
Silicon Valley Ambulance	(408) 225-2212	G	7	yes	ALS/BLS

Agency Contact

Celia Barry, EMS Administrator
1080 Emeline Ave
Santa Cruz, CA 95060
(831) 454-4120
FAX: (831) 454-4272
E-MAIL: celia.barry@health.co.santa-cruz.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time) Local Govt HEAR Net	 153.935 155.385	 155.055 155.385	 131.8 CSQ	 Prim Alt
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel Private	 47.66	 47.66	 103.5	 Prim
Dispatch (for each EMS Agency) Med 3	 468.050	 463.050	 173.8/ 186.2	 Prim
Direct to hospitals	N/A	N/A	N/A	N/A
Other (e.g. tactical, etc.) Fire-Red	 153.770	 154.325	 162.2	 Prim

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Watsonville Community Hospital 298 Green Valley Road Watsonville, California 95076	(831) 724-4741	
Dominican Santa Cruz Hospital 1555 Soquel Drive Santa Cruz, California 95065	(831) 462-7700	36-59-27.000N/ 121-58-52.000W TLOF - 80' x 80'

Helispot Location	Latitude/Longitude	Description of Location
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
AMR	(831) 423-7030	G	10	yes	ALS
Aptos/La Selva FPD	(831) 685-6690	G	0	no	ALS
Central Fire Protection District	(831) 479-6842	G	0	no	ALS

* Ambulance communication to hospitals : BLS –MED 8
ALS – MED1and MED 4 – varies by location

Agency Contact

(Nevada, Placer, Sutter, Yolo, Yuba)
Victoria A. Pinette, MS , EMS Administrator
5995 Pacific St.
Rocklin, CA 95677
(916) 625-1702
FAX: (916) 625-1730
E-MAIL: vickie@ssvems.com

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/R	N/R	N/R	N/R
Statewide Medical Coordination	N/R	N/R	N/R	N/R
Calling Channel	N/R	N/R	N/R	N/R
Dispatch (for each EMS Agency)	N/R	N/R	N/R	N/R
Direct to hospitals	N/R	N/R	N/R	N/R
Other (e.g. tactical, etc.)	N/R	N/R	N/R	N/R

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Kaiser Roseville 1600 Eureka Road Roseville, California	(916) 973-6600	
Sierra Nevada Memorial Hospital 155 Glasson Way Grass Valley, California 95945	(530) 274-6020	39-14-32.000N/ 121-02-48.000W TLOF - 26' x 44'
Tahoe Forest Hospital 10121 Pine Avenue Truckee, California 96161	(530) 587-6011	39-19-27.000N/ 120-11-57.000W TLOF – 40’ Diameter
Sutter Roseville Medical Center One Medical Plaza Roseville, California 95661	(916) 781-1200	38-45-58.000N/ 121-14-52.000W TLOF - 46' Diameter
Sutter Auburn Faith Hospital 11815 education Street Auburn, California 95604	(530) 885-7201	

Sutter Davis Hospital Road 99 Davis, California 95616	(530) 756-6440	
Woodland Memorial Hospital 1325 Cottonwood Street Woodland, California 95695	(530) 662-3691	
Rideout Memorial Hospital 726 Fourth Street Marysville, California 95901	(530) 742-7381	
Sierra Nevada Memorial Hospital 155 Glasson Way Grass Valley, California 95945	(916) 274-6020	39-14-32.000N/ 121-02-48.000W TLOF - 26' x 44'
Tahoe Forest Hospital 10121 Pine Ave. Truckee, California 96161	(530) 587-6011	39-19-27.000N/ 120-11-57.000W TLOF - 40' Diameter
Sutter Roseville Medical Center 333 Sunrise Ave. Roseville, California 95661	(916) 781-1200	
Sutter Auburn Faith Hospital 11815 Education St. Auburn, California 95603	(916) 885-7201	

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
American Medical Response	(916) 563-0600	G	22	yes	ALS
Alpine Meadows	(530) 583-2342	G	0	no	BLS
Alta Volunteer Fire Department	(530) 389-2676	G	0	no	BLS
Auburn Fire Department	(530) 823-4265	G	0	no	BLS
Beale AFB Fire Department	(530) 634-8672	G	0	no	BLS
Bi-County Ambulance	(530) 674-2780	G	10	yes	ALS
CALSTAR	(530) 887-8259	A	4	yes	ALS
CDF - Nevada/Yuba/Placer	(530) 823-4904	G	0	no	BLS
CDF- Lake/Napa/Yolo RU	(707) 963-3601	G	0	no	BLS
California Highway Patrol	(530) 823-4055	A	1	yes	ALS
Camptonville Volunteer Fire Dept	(530) 288-3425	G	0	no	BLS
Capay Valley Fire Department	(530) 796-3300	G	0	no	BLS
Clarksburg Fire Protection Dist	(530) 744-1700	G	0	no	BLS
Colfax Fire Department	(530) 346-2323	G	0	no	BLS
Davis Fire Department	(530) 756-3743	G	0	no	BLS
Dobbins Oregon House Fire Protection District	(530) 692-2255	G	0	no	BLS
Donner Summit Fire Department	(530) 426-3000	G	2	yes	ALS
Dry Creek Fire Department	(530) 771-0107	G	0	no	ALS
Dunningan Fire Protection Dist	(530) 724-3314	G	0	no	BLS
Dutch Flat Fire Department	(530) 389-2287	G	0	no	BLS
East Nicolaus Fire Department	(530) 656-2485	G	0	no	BLS
Elkhorn Volunteer Fire Dept	(530) 371-4541	G	0	no	BLS
Esparto Fire Protection Dist	(530) 787-3300	G	0	no	BLS
Foothill Vol. Fire Department	(530) 675-2383	G	0	no	BLS
Foresthill Safety Club	(530) 367-2509	G	2	yes	ALS
Forty-Niner Fire Protection Dist	(530) 265-4431	G	0	no	BLS
Grass Valley Fire Department	(530) 274-4370	G	0	no	BLS
Higgins Fire Protection Dist.	(530) 269-2488	G	0	no	BLS
Knights Landing Fire Department	(530) 735-6590	G	0	no	BLS
Lincoln Fire Department	(916) 645-4040	G	0	no	BLS

Linda Fire Department	(530) 743-1553	G	0	no	BLS
Live Oak Fire Department	(530) 695-3522	G	0	no	BLS
Loma Rica/ Browns Valley CSD	(530) 692-1616	G	0	no	BLS
Loomis Fire Protection District	(916) 652-6858	G	0	no	BLS
Madison Fire Protection District	(530) 662-5745	G	0	no	BLS
Marysville Fire Department	(530) 741-6622	G	0	no	BLS
Meridian Fire Department	(530) 696-2306	G	0	no	BLS
Nevada City Fire Department	(530) 265-2351	G	0	no	BLS
Nevada Co. Cons. Fire	(530) 273-3158	G	0	no	BLS
Newcastle Fire Protection Dist	(530) 663-3323	G	0	no	BLS
North San Juan Fire Protection Dist.	(530) 292-9159	G	0	no	BLS
North Tahoe Fire Protection Dist	(530) 583-6913	G	7	yes	ALS
Northstar Fire Department	(530) 562-1212	G	0	no	BLS
Olivehurst PUD	(530) 743-7117	G	0	no	BLS
Ophir Hill Fire Protection Dist	(916) 273-8351	G	0	no	BLS
Oswald-Tudor	(916) 673-2804	G	0	no	BLS
Peardale-Chicago Park Fire Protection District	(530) 273-2503	G	0	no	BLS
Penryn Fire Protection District	(530) 663-3389	G	0	no	BLS
Placer Co. Fire Department	(530) 823-4904	G	0	no	BLS
Placer Foothills Cons. Fire Protection District	(530) 889-7991	G	0	no	BLS
Placer Hills Fire Department	(530) 878-0405	G	0	no	ALS
Pleasant Grove Fire Department	(530) 655-3937	G	0	no	BLS
Plumas-Brophy Fire Protection District	(530) 633-2727	G	0	no	BLS
REACH	(707) 447-6886	A	2	yes	ALS
Rocklin Fire Department	(916) 632-4150	G	0	no	BLS
Rough & Ready Fire Protection District	(530) 432-1140	G	0	no	BLS
Sierra NV Memorial Hospital Ambulance	(530) 274-6000	G	7	yes	ALS
Smartville Fire Protection Dist	(800) 540-2008	G	0	no	BLS

South Placer Fire	(916) 791-7059	G	3	yes	ALS
Squaw Valley Fire Department	(530) 583-6111	G	0	no	BLS
Sutter Basin Fire Protection Dist	(530) 738-4220	G	0	no	BLS
Sutter CDF	(530) 741-7370	G	0	no	BLS
Sutter Fire Department	(530) 755-0266	G	0	no	BLS
Truckee Fire	(530) 582-7850	G	4	yes	ALS
U.S. Forest Service	(530) 288-3231	G	0	no	BLS
U.S.Forest Service	(530) 367-2224	G	0	no	BLS
U.S.F.S.Tahoe National Forest	(530) 478-6221	G	0	no	BLS
U.S.F.S.Truckee Ranger District	(530) 587-3558	G	0	no	BLS
UC Davis Fire Department	(530) 752-1236	G	0	no	BLS
Walton Fire Department	(530) 673-7833	G	0	no	BLS
Watt Park Fire Protection Dist	(530) 273-8088	G	0	no	BLS
West Plainfield Fire Protection District	(530) 756-0212	G	0	no	BLS
West Sacramento Fire Dept	(530) 373-5840	G	0	no	BLS
Wheatland Fire Department	(530) 633-2930	G	0	no	BLS
Willow Oak Fire Protection Dist	(530) 662-0781	G	0	no	BLS
Winters Fire Department	(530) 795-4131	G	1	yes	BLS
Woodland Fire Department	(530) 661-5844	G	0	no	BLS
Yolo Fire Protection District	(530) 662-8808	G	0	no	BLS
Yuba City Fire Department	(530) 741-4691	G	0	no	BLS
Zamora Fire Protection District	(530) 662-6883	G	0	no	BLS

Agency Contact

Michael Frenn, EMS Administrator
275 Beck Ave., 2nd Fl., MS5-240
Fairfield, CA 94533
(707) 784-8155
FAX: (707) 421-6682
E-MAIL: mfrenn@solanocounty.com

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/R	N/R	N/R	N/R
Statewide Medical Coordination	N/R	N/R	N/R	N/R
Calling Channel	N/R	N/R	N/R	N/R
Dispatch (for each EMS Agency)	N/R	N/R	N/R	N/R
Direct to hospitals	N/R	N/R	N/R	N/R
Other (e.g. tactical, etc.)	N/R	N/R	N/R	N/R

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Kaiser/Vallejo 975 Sereno Dr. Vallejo, CA 94589	(707) 651-4910 (A Side) (707) 651-4920 (B Side)	
NorthBay Medical Center 1200 B. Gale Wilson Blvd. Fairfield, CA 94533	(707) 429-7830	38-15-41.000N/ 122-02-50.000W TLOF - 40' x 40'
Sutter Solano Medical Center 300 Hospital Dr. Vallejo, CA 94589	(707) 554-5210	38-07-55.000N/ 122-14-09.000W TLOF - 40' x 40'
VacaValley Hospital 1000 Nut Tree Blvd. Vacaville, CA 95688	(707) 446-5710	38-21-21.000N/ 121-57-91.000W TLOF - 40' Diameter
David Grant Medical Center DGMC/SGHE 101 Bodin Cir Travis AFB, CA 94535-1800	(707) 423-3825	

Helispot Location	Latitude/Longitude	Description of Location

NONE

VEHICLE CHARACTERISTICS

Emergency Providers	Telephone	TYPE	AMB's	TRANS	EMT
Benicia Fire Department	707-746-4275	G	0	no	ALS
Cordelia Fire Department	707-864-0468	G	0	no	ALS
Dixon Fire Department	707-678-7060	G	0	no	ALS
Fairfield Fire Department	707-436-7222	G	0	no	ALS
Isleton Fire Department	916-777-7776	G	0	no	BLS
Medic Ambulance	707-644-1761	G	15	yes	ALS
Montezuma/Ryer Island Fire Protection District	707-374-5962	G	0	no	BLS
Rio Vista Fire Department	707-374-2233	G	0	no	ALS
River Delta Fire Department	916-777-8700	G	0	no	BLS
Suisun Fire Dept	707-425-9133	G	0	no	BLS
Suisun Fire Protection District	707-425-3605	G	0	no	BLS
Vacaville Fire Department	707-449-5468	G	4	yes	ALS
Vacaville Fire Protection District	707-447-2252	G	0	no	BLS
Vallejo Fire Department	707-648-4526	G	0	no	ALS

Agency Contact

Clarence Teem, EMS Coordinator
20111 Cedar Road North
Sonora, CA 95370
(209) 533-7460
FAX: (209) 533-7406
E-MAIL: cteem@co.tuolumne.ca.us

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	N/A	N/A	N/A	N/A
Statewide Medical Coordination	155.295	155.295	N/A	N/A
Calling Channel	155.295	155.295	110.9	N/A
Dispatch (for each EMS Agency)	462.250	467.250	N/A	N/A
Direct to hospitals	462.400	462.400	N/A	N/A
Other (e.g. tactical, etc.)	N/A	N/A	N/A	N/A

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Sonora Regional Medical Center 1000 Greenley Road Sonora, California 95370	(209) 532-5000 (209) 536-3436	37-58.40/120-22.15

Helispot Location	Latitude/Longitude	Description of Location
Bald Mountain	38-08.4/120-05.65	CDF Base: 123.025 VHF
Brightman Dump	38-21.37/119-52.26	Normally up canyon winds
Buck Meadows	37-49.06/120-06.00	So. Edge of pad slopes steeply off
Cherry Lake Dam	37-58.00/119-54.50	
Chinese Camp Fire	37-52.40/120-26.20	
Columbia Airport		
Don Pedro Dam	37-41.94/120-25.74	
Keystone Bark & Mulch Plant	37-50.30/120-30.60	
Moccasin Point	37-48.97/120-18.15	On Lake Don Pedro along Highway 120, Bottom of Priest Grade - 120, next to power station – Caution: Many Wires

Outpost	37-59.87/120-16.09	Field NE corner of intersection of Highway 108 & Soulsby Road behind mini-mart.
Poker Flat	37-52.54/120-34.56	
Sonora Fair Grounds	37-58.00/120-24.00	
Tuttletown Boat Ramp	37-58.83/120-30.92	

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
Tuolumne Co. Ambulance	(209) 533-5815 (Dispatch) (209) 533-5100 (Admin.)	G	10	yes	ALS

Agency Contact

Barry Fisher, EMS Administrator
2220 E. Gonzalez Rd., Ste. 130
Oxnard, CA 93036-0619
(805) 981-5308
FAX: (805) 981-5300
E-MAIL: Barry.Fisher@ventura.org

Channel Use	TX-Freq	RX-Freq	CTCSS	Prim/Alt
Local Medical Coordination (real time)	155.205	155.205	103.5	Alternate
Cellular Phone	N/A	N/A	N/A	Primary
Statewide Medical Coordination	N/A	N/A	N/A	N/A
Calling Channel	N/A	N/A	N/A	N/A
Dispatch (for each EMS Agency)				
Ventura County Fire	154.010	154.010	100.0	Primary
Oxnard Fire Department	156.210	154.145	141.3	Primary
Direct to hospitals				
VCMC, SVH, SJPVH, OVCH	155.355	155.355	103.5	Primary
LRHMC, SJRMC, SPMH, CMH	155.385	155.385	103.5	Primary
Other (e.g. tactical, etc.)				
12 Designated SEMS channels for disasters	N/A	N/A	N/A	N/A

These frequencies are composed of the departmental frequencies of 12 County Departments.

Emergency Department Facilities	Telephone	Helipad Latitude/Longitude
Community Memorial Hospital Loma Vista & Brent Ventura, California 93003	(805) 652-5011	34-16-29.000N/ 119-15-25.000W TLOF - 64' x 66'
Los Robles Hospital and Medical Ctr 215 W. Janss Road Thousand Oaks, CA 91360	(805) 497-2727	34-12-28.000N/ 118-52-54.000W TLOF - 50' x 50'
Ojai Valley Community Hospital 1306 Maricopa Highway Ojai, California 93023	(805) 646-1401	
Simi Valley Hospital and Health Care Ctr	(805) 955-6000	34-17-22.000N/

2975 N. Sycamore Drive Simi Valley, California 93062		118-44-38.000W TLOF - 50' Diameter.
St. John's Pleasant Valley Hospital 2309 Antonio Avenue Camarillo, California 93010	(805) 389-5800	
St. John's Regional Medical Center 1600 North Rose Avenue Oxnard, California 93030	(805) 988-2500	34-13-00.000N/ 119-09-25.000W TLOF - 60' Diameter.
Ventura County Medical Center 3291 Loma Vista Road Ventura, California 93003	(805) 652-6000	34-16-40.000N/ 119-15-05.000W TLOF - 41' x 41'
VCMC Santa Paula Hospital 825 North 10th Street Santa Paula, Ca 93060	(805) 525-7171	

Helispot Location	**Latitude/Longitude**	**Description of Location**
NONE		

VEHICLE CHARACTERISTICS

Emergency Providers	**Telephone**	**TYPE**	**AMB's**	**TRANS**	**EMT**
American Medical Response	(805) 517-2000	G	28	yes	ALS
Gold Coast Ambulance	(805) 485-3040	G	22	yes	ALS
Lifeline Medical Transport	(805) 653-9111	G	5	yes	ALS
Ventura County Sheriff Search/Rescue	(805) 388-4212	A	3	yes	ALS
Fillmore Fire Department	(805) 524-1500	G	0	no	ALS
Oxnard Fire Department	(805) 385-7722	G	0	no	BLS
Santa Paula Fire Department	(805) 525-4478	G	0	no	BLS
Ventura City Fire Department	(805) 339-4300	G	0	no	ALS
Ventura Co. Fire Protection Dist	(805) 389-9710	G	0	no	ALS
Ventura Co. Federal Fire Dept.	(805) 989-7034	G	0	no	BLS

GENERAL ACRONYMS FOR EMS COMMUNICATIONS

A

AA—above average terrain
AC—alternating current
ACD—automatic call distributor
ACLS—advanced cardiac life support
ACSB—amplitude compandored single-sideband
ADP—automatic data processing
AGL—above ground level
ALS—advanced life support
ALERT—automatic law enforcement response team
ALI—automatic location identification
AM—amplitude modulation
AMSL—above mean sea level
ANI—automatic number identification
APB—all points bulletin
APCO—Associated Public-Safety Communications Officers
ASCII—American Standard Code for Information Interchange
ASTM—American Society for Testing and Materials.
ASTRA—Automated Statewide Telecommunications And Records Access
ATLS—Advanced Trauma Life Support
AT&T—American Telephone and Telegraph Company
AVC—automatic volume control
AVI—automatic vehicle identifications

B

balun—balanced-to-unbalanced line transformer
BCD—binary coded decimal
BFO—beat frequency oscillator
BIT—binary digit
BLS—basic life support
BPS—bits per second.
BSC—binary synchronous communications

C

C—Celsius
CAD—computer –aided Dispatch
CB—citizens band
CCH—computerized criminal history
CCITT—International Telegraph And Telephone Consultative Committee
CCSA—common control switching arrangement
CCTV—closed circuit television
CCU—Coronary Care Unit or Critical Care Unit
CDC—Cooperative Dispatch Center
CG—Channel Guard(R) Trademark of General Electric
CMED—Central Medical Emergency Dispatch
CMR—Common Mode Rejection
CMRR—Common Mode Rejection Radio
CNIL—Calling Number Identification and Location
CO—Central Office
COG—Council of Governments
COR—Coronary Observation Radio
CPR—cardiopulmonary resuscitation
CJIS—Criminal Justice Information System
CTCSS—Continuous Tone Controlled Squelch System

D

dB—decibel
dBm—decibel reference to 1 mW.
dBu—decibel referenced to 1 mV/m
dBv—decibel referenced to 1 V
dBW—decibel referenced to 1 W
DC—direct current
DCS—Division of Computer Services
DDD—direct distance dialing
DID—direct inward dialing
dod—direct outward dialing
DOD —US Department of Defense

DOT—US Department of Transportation
DRG—diagnosis related grouping
DP—double pole
DPDT—double pole double throw
DTMF—dual-tone multi-frequency
DPST—double pole single throw

E

EACOM—emergency and administrative communications system
EAS—extended area service
E & M-–the receive and transmit leads of a signaling system
EAX—electronic automatic exchange
ECC—emergency communications center
EDP—electronic data processing
EIA—Electronic Industries Association
EMD—emergency medical dispatcher
EMF—electromotive force
EKG—electrocardiogram
EMDPRS—emergency medical dispatch priority reference system
EMS—emergency medical service
EMSS—emergency medical service system
EMT—emergency medical technician
EMT-B—emergency medical technician-basic
EMT-D—emergency medical technician-defibrillator
EMT-I—emergency medical technician-intermediate
EMT-P—emergency medical technician-paramedic
EOC—emergency operations center
EOM—end of message
ERCC—emergency resource coordination center
ERP—effective radiated power
ESS—electronic switching system
EST—Eastern Standard Time
ETA—Estimated Time of Arrival
ETV—Educational Television

F

F—Fahrenheit
FCC—US Federal Communications Commission
FCCA—Forestry Conservation Communications Association
FEMA—Federal Emergency Management Agency
FET—field-effect transistor
FM—frequency modulation
Freq.—frequency
FORTRAN —formula translation (computer language)
FSK—frequency-shift keying
FX—foreign exchange

G

GE—General Electric
GESS—General Electric Service Station
GFW—ground fault warning
GHZ—gigahertz (1000 MHz)
GIGO—garbage in, garbage out
GMT—Greenwich Mean Time (Zulu)
GSA—General Services Administration
GT&E—General Telephone and Electronics

H

HEAT—hospital emergency administrative radio
HF—high frequency
HYSIS—highway safety information system
HV—high voltage
Hz—hertz

I

I—current in amperes
IAFC—International Association of Fire Chiefs
IACP—International Association of Chiefs of Police
IC—integrated circuit
ICO—individual channel oscillator
ICOM—integrated circuit oscillator module
ICU—intensive care unit
ICX—intercity exchange link

IEEE—Institute of Electrical and Electronic Engineers
IF—intermediate frequency
IMSA—International Municipal Signal Association
IMTS—improved mobile telephone service
IRAC—Interdepartmental Radio Advisory Committee
ISPERN—Illinois State Police Emergency Radio Network
IT&T—International Telephone and Telegraph Corporation
ITU—International Telecommunication Union

J

JAN—Joint Army-Navy Specifications
JETEC—Joint Electron Tube Engineering Council
JFET—junction field-effect transistor
UPS—uninterruptible power supply
USIT—US Independent Telephone Association
USFS—US Forest Service
Journal of Emergency Medical Services

K

UPS—uninterruptible power supply
USIT—US Independent Telephone Association
USFS—US Forest Service
kbps—kilobits per second
kHz—kilohertz (1000hertz)

L

LATA—local access transport area
LMR—land mobile radio
LEAA—Law Enforcement Assistance Administration
LETS—Law Enforcement Teletypewriter Service
LORAN—long range navigation
LSI—large scale integration
LOS—line of sight
LRO—lead regional organization
LSU—life support unit

M

MAST—Military Assistance to Safety and Traffic
MCCU—mobile coronary care unit
MF—medium frequency
MHz—Megahertz
MICT—Mobile Intensive Care Technician
MICU —Mobile Intensive Care Unit
MRCC—Medical Resource Coordination Center

N

NABER—National Association of Business and E Radio, Inc.
NCIC—National Crime Information Center
NCMCN —North Carolina Medical Communications Network
NEAR—national emergency aid radio
NHTSA—National Highway Traffic Safety Administration
NLETS—national law enforcement telecommunications system
NPA—Number Plan Area

O

O-D—origin-destination
ONI—operator number identification
OTP—Office of Telecommunications Policy

P

UPS—uninterruptible power supply
USIT—US Independent Telephone Association
USFS—US Forest Service

PABX—Private Automatic Branch Exchange
PBX—Private Branch Exchange
PL—Private Line(r) Trademark of Motorola
PM—Pulse Modulation
PSAP—public safety answering point
PSCC—Public Safety Communications Council
PTT—Press to Transmit or Push to Talk

Q

QEI—quantifiable evaluation indicator

R

RCU—remote control unit
RF—radio frequency
Rx—receive

S

SERS-Special Emergency Radio Service
SIRSA—Special Industrial Radio Service Association
SMR—Specialized Mobile Radio
SMSA—standard metropolitan statistical area
SPA—State Planning Agency
SWR—Standing Wave Radio

T

TASI—time assignment speech interpolation
TCAM—telecommunications access method
TLOF – Touchdown Liftoff Area
Telco—telephone company
TPL—terminal per line
TPS—terminal per station
Tx—transmit

U

UHF—ultra high frequency
UL—Underwriters Laboratories, Inc.
UPS—uninterruptible power supply
USIT—US Independent Telephone Association
USFS—US Forest Service

V

V—volts
VAC—volts, alternating current
VDC—volts, direct current
VHF—very high frequency
VOM—volt-ohm meter
VOR—voice operated relay
VOX—voice operated switch
VSWR—voltage standing wave ratio
VTVM—vacuum tube voltmeter
VU—Volume Unit

W

WATS—Wide Area Telephone Service
WECO—Western Electric Company
WPM—words per minute

X

Xcvr.—transceiver
Xfmr.—transformer
Xmit.—transmit
Xmtr—transmitter
Xtal—crystal

Z

Z—impedance
ZULU —time zone at Greenwich, England

FCC CODES AND NAMES OF RADIO SERVICES

industrial:
- IB—business
  - IF—forest products
  - IM—motion picture
  - IP—petroleum
  - IS—special industrial
  - IT—telephone maintenance
  - IW—power
  - IX—manufacturers
  - IY—relay press

Motor Carrier:
- LI—interurban passenger
  - LJ—interurban property
  - LU—interurban passenger
  - LV—urban property

Land Transportation:
- LA—automobile emergency
  - LR—railroad
  - LX—taxicab

Public Safety:
- PF—fire
  - PH—highway maintenance
  - PL—local government
  - PP—police
- PO—forestry conservation
  - PS—special emergency
  - RS—radio location
  - ZA—general mobile

Classes of Radio Stations (FCC):
- FB—base
  - FB2—mobile relay
  - FB4—community repeater
  - FX1—control
  - MO—mobile
  - MO3—mobile/vehicular repeater
  - FXO—operational fixed
  - FX2—fixed relay
  - FX—fixed
  - FLT—auxiliary test
  - FXY—interzone
  - FXZ—zone
  - LR—radio location
  - MR—radio location mobile

806-821/851-866 MHz Bands:

Conventional	Category	Trunked
GB	business	YB
GO	industrial/land transportation	YO
GP	public safety/special emergency	YP
GX	commercial (SMRS)	YX

292-930 MHz Band:
- GS—private carrier paging systems

GLOSSARY

A

acoustic feedback—The transfer of sound waves from a loud speaker or end terminal to any previous component within an audio system.

activity—The expenditure of time and resources.

adapter—A device used for changing the terminal connections of a circuit or part to connect to another circuit or part with unlike connections.

alphabet, phonetic—A method of passing alphabetic information substitution over a poor communication path with word substitution for letters. One phonetic alphabet is: Alfa, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliett, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Sierra, Tango Uniform, Victor, Whiskey, X-ray, Yankee, Zulu.

American Standard Code for Information Interchange (ASCII)—An eight-level code for data transfer adopted by the American Standards Association to achieve compatibility between data devices.

amplitude compandored single-sideband—A form of sideband modulation used for narrow channel transmission that incorporates a pilot tone.

amplitude modulation(AM)—Modulation in which the amplitude of the carrier-frequency current is varied above and below its normal value in accordance with the audio, picture, or other intelligence signal to be transmitted.

analog—Physical representation of information such that the representation bears an exact relationship to the original information. Pertaining to data in the form of continuously variable physical qualities

analog communication—System of telecommunications used to transmit information other than voice which is sometimes used in telemetry.

antenna—A system of wires or electrical conductors employed for reception or transmission of radio waves. Specifically, a radiator that couples the transmission line or lead-in to space for transmission or receptions of electromagnetic radio waves. It changes electrical currents into electromagnetic radio waves and vice versa.

antenna, isotropic—A theoretical antenna with identical radiation in every direction.

antenna, parabolic—A directional antenna with a radiating(or receiving) element, and a parabolic reflector that concentrates the power in a beam.

antenna polarization—The direction of the radiated electrical field in relation to the surface of the earth. Generally vertical in mobile radio use.

arc—A discharge of electricity.

arrester, lightning—A device designed to protect electrical equipment or property from damage by lightening.

assigned frequency—The frequency appearing on a station authorization from which the carrier frequency may deviate by an amount not to exceed that permitted by the frequency tolerance.

Associated Public-Safety Communications Officers (APCO)—A non-profit public safety radio users group composed of administrators and communications technical, operations, and command personnel.

ASTM—A scientific and technical organization formed for the development of standards on characteristics and performance of materials, products, systems, and services.

attack time—The interval required after a sudden increase in input signal to a transducer (transmitter, receiver, etc.) to attain a percentage of final output level due to this increase.

attenuation—The decrease in amplitude of a signal during its transmission from one point to another. It may be expressed as a ratio or, by extension of the term, in decibels.

attenuator—A device for reducing the energy of a wave without introducing distortion. Also called a pad, gain control, level adjustor, volume control, etc.

audible signal—A buzzer, bell, or other audible sound device that indicates an incoming call.

audio—Pertaining to frequencies corresponding to normally audible sound waves. These frequencies range from 15 to 20,000 Hz.

aural—Pertaining to the ear or sound.

automatic gain control (AGC)—A receiver circuit that maintains the output constant with wide variations in the in the receiver input level.

automatic volume control (AVC)—A self-acting gain control which maintains the output of a receiver constant despite variations in received signal strength.

automatic number identification (ANI)—Equipment for recording the calling party's number without operator intervention.

B

back bone—A point-to-point communications system utilizing several stations.

back-to-back repeater—A repeater consisting of a receiver and transmitter with the output of the receiver connected directly to the input of the transmitter.

band (radio frequency)—A range of frequencies between two definite limits. By international agreement, the radio spectrum is divided into nine bands. For example, the very high frequency (VHF) band extends from 30 MHz to 300 MHz.

bandpass filter—Passes frequencies within a specified band, and attenuates all frequencies outside that band.

bandwith—(1) The width of a band of frequencies used for a particular purpose, (2) the range of frequencies within which a performance characteristic of a device is above specified limits. For filters, attenuators, and amplifiers these limits are generally taken to be 3 dB (half-power) below the average level.

baseband—For microwave systems, the available frequency band that the RF equipment is capable of transmitting.

base station—An item of fixed radio hardware consisting of a transmitter and receiver.

baud—Used to define the operating speed of a printing telegraph of data system. It is the total number of discrete conditions or signal events per second.

baudot code—A five-unit code used for teletypewriter signals.

beacon—A radio transmitter or lights designed to indicate exact geographical location or direction.

beam—A configuration of radiated energy whose rays are sharply directional and parallel.

beat—A regularly recurring pulsation from the combination of two-tone or frequency waves of different frequencies.

beat frequency—the frequency produced when signals of two different frequencies are combined and refracted. The beat frequency is equal in value to the difference between the original frequencies.

bel—A unit of relative power, named after Alexander Graham Bell, and used to express differences in power.

beeper—a pocket paging receiver that emits a beeping sound upon receiving a page specifically directed to it.

biomedical telemetry (biotelemetry)—The technique of monitoring or measuring vital biological parameters and transmitting data to a receiving point at a remote location.

Biophone—Trade name of Biocom, Inc. for portable telemetry devices.

bit—A unit of digital information (abbreviation of "binary digit").

boom microphone—A microphone arranged on an arm type mechanical support to permit better placement of the microphone.

braid—A group of fibrous or metal filaments or threads woven into a cylindrical shape to form a covering over one or more wires.

broadcast—Radio or television transmission intended for general reception.

Business Radio Service—A subpart of the Industrial Radio Services section of the FCC rules.

busy indicator—An indicator provided at a control point to indicate the in-use condition of a circuit or channel.

C

cable—One or more insulated or noninsulated wires used to conduct electrical current or impulses. Grouped insulated wires are called a multi-conductor cable.

calibrate—To determine error by comparison with a known standard.

call, all—The alerting of all decoder equipped units in a system by the transmission of a single coded signal.

call, group—The alerting of subdivided selective call groups by function, type of vehicle, location, etc. by sending a single coded signal.

call, individual—The alerting of a specific coded decoder unit by sending a single coded signal.

call answer—The initial answer of a call for assistance whether by 9-1-1 or other telephone method.

call sign—Federal Communications Commission assigned identifying letters and numbers used for identification of a radio station, transmitter, or transmission.

call referral method—The calling party is referred to a secondary number

call relay method—The call is answered at the PSAP where the pertinent information is gathered and then the interrogator relays the information to the proper public safety agency for their action. This can be accomplished by radio, intercom, telephone, etc.

call transfer method—The PSAP interrogator determines the proper responding agency and connects the user to that agency which then performs the necessary dispatching in accordance with prearranged plans with cooperating agencies.

call party hold—Enables the public safety answering point to control the connection for confirmation and tracing of a call.

capture effect—An effect occurring in FM reception when the stronger of two signals on the same frequency suppresses the weaker signal.

cardioid microphone—A microphone having a heart-shaped space response pattern of 180° in front, and minimum response in the rear.

carrier—A radio signal generally without voice or other information.

carrier control timer (CCT)—A device that limits the length of time that the transmitter carrier is on.

carrier frequency—The frequency of an unmodulated electromagnetic wave produced by the transmitter.

cavity resonator—A space enclosed by a metal conductor in which oscillating electromagnetic energy is stored and whose resonant frequency is determined by the geometry of the enclosure.

cellular radio—A commercially available mobile or portable radio telephone service.

Celsius—The metric scale of temperature in which water freezes at zero degrees and boils at 100°C. To convert a Celsius temperature to Fahrenheit, multiply by 9/5 and add 32.

central medical emergency dispatch(CMED)—See command and control center.

central office—Sometimes called a wire center; the smallest subdivision within the telephone system which has relatively permanent geographic boundaries.

change out—To replace.

channel element—A temperature compensated crystal oscillator

channel guard—General Electric's trademark for continuous tone coded squelch system (CTCSS).

channel, point-to-point—A radio channel used for radio communications between two definite fixed stations.

channel, radio—An assigned band of radio frequencies of sufficient width to permit its use for radio communication. The necessary width of a channel depends on the type of transmission and the tolerance for the frequency of emission.

channel, television—A band of radio frequencies 6 MHz wide used for television broadcast

channelization—The assignment of circuits to channels, and the arrangement of those channels into groups.

charge—To replenish the electrical potential in a battery or capacitor.

charge, fast or quick—A method of quickly recharging batteries under controlled conditions.

charge, trickle—The continuous charge of a battery at a slow rate.

chart, 4/3 earth's radius—A radio profile chart whose horizontal lines are curved to correspond to an earth having a radius 4/3 times larger than actual earth radius.

chassis—The framework on which parts of a radio or other electronic circuits are mounted.

circuit merit—A rating of overall circuit quality. Circuit merit '5" is clear circuit. Merit '3' is readable with noise. Any rating below '3' is not readable and generally unacceptable.

class of service—Service order code designation of the combination of telephone service features (equipment, calling area units, dial types) to which business and residence customers subscribe. It is used for rating, identification, and assignment purposes.

coaxial cable—A transmission line in which one conductor completely surrounds the other, the two being coaxial and separated by a continuos solid dielectric or by dielectric spacers.

code dialing—A method of signaling or encoding and decoding address codes by the use of standard telephone dial.

command and control center (central communications center)—A system which is responsible for establishing communications channels and identifying the necessary equipment and facilities to permit immediate management and control of an EMS patient. This operation must provide access and availability to public safety resources essential to the effective and efficient EMS management of the immediate EMS problem.

common mode rejection (CMR)—The ability of differential amplifier to reject unwanted signals.

communications subsystem—Comprises those resources and arrangements for notifying the EMS system of an emergency, for mobilizing and dispatching resources, for exchanging information, for remote monitoring of vital indicators, and for the radio transmission of treatment procedures and directions.

communications system—a collection of individual communication networks, transmission system, relay stations, control and base stations, capable of interconnection and inter-operations that are designed to form an integral whole. The individual components must serve a common purpose, be technically compatible, employ common

procedures, respond to control and operate in unison.

comparator—A circuit which compares tow or more signals, and selects the strongest or best.

compression—In audio systems, reducing the volume range of the input signal so that the minimum output has less noise, and the maximum output has less distortion.

compressor—A variable gain audio device used to provide a relatively constant output level for a wide range of varying input levels.

cone of silence—The area directly over or under a vertical transmitting antenna in which little or no signal is radiated.

console—A cabinet housing electronic circuitry normally used in controlling other equipment such s transmitters and receivers installed at a remote location.

consolette—(1) Motorola Communications name for a desk top radio station (2) A device for mounting a mobile microphone, control head and speaker.

continuous tone controlled squelch system (CTCSS)—A system wherein radio receiver(s) are equipped with a tone responsive device which allows audio signals to appear at the receiver audio output only when a carrier modulated with a specific tone is received. The tone must be continuously present for continuous audio output. CTCSS functions are sometimes referred to by various trade names such as private line or PL(Motorola Communications & Electronics), Channel Guard or CG(General Electric Mobile Radio) or Quiet Channel (RCA).

control console—A desk-mounted, enclosed piece of equipment which contains a number of controls or circuits used to operate a radio station.

control head—A device with appropriate controls, microphone, volume, squelch, on/off, etc., generally mounted in a vehicle, from which control of the radio or mobile unit is performed.

control point—A position from which a radio system is controlled and supervised.

control, remote—A control scheme for a radio system where all control functions are performed remotely via telephone lines.

continuous duty—(1) An unending transmission (2) Operating 100% of the time (3) EIA—full load output under the manufacturers normal loading conditions for the class of service for 24 hours.

control, local—A control system packaged with the control unit mounted directly on the base station.

coordination, frequency—The cooperative selection and allocation of radio frequencies such that all systems can operate with minimum interference.

couple—To connect two circuits so that signals are transferred from one to the other.

coverage—In a radio communications system, the geographic area where reliable communications exist; usually expressed in terms of miles extending radially from a fixed radio station.

crosstalk—The unwanted transfer of energy from one communication circuit to another by means of a mutual coupling.

crystal—A piece of quartz or similar material that has been ground thin and to the proper size to produce vibrations at the desired frequency. Used in radio transmission to generate, with a high degree of accuracy, the assigned carrier frequency of a station.

cut over—To transfer from one system to another.

cycle—One complete reversal of an alternating current, including a rise to the maximum level in one direction and a return to zero. The number of cycles occurring in one second is the frequency of the current. The word cycle is commonly used to mean cycles per second (hertz).

D

dBm—Decibels referenced to one milliwatt. Employed in communication work as a measure of absolute power. Zero dBm equals one milliwatt.

dBV—Decibels referenced to 1 V.

dBW—Decibels relative to 1 W (1 dBw = 30 dBm).

decibel (dB)—A unit which expresses the level of power value relative to a reference power value. Specifically, the level of power, value P, relative to a reference value, PR, in decibels is defined as dB = 10*log10(P/PR).

DC control—A remote base station control scheme that requires metallic conductors and currents

decoding—The conversion and recognition by the addressed (receiving) unit of numerical address codes that have been transmitted through a communications system.

dedicated telephone line—A telephone wire pair, originating at one point, and terminating at another point, operating in a closed circuit. Also called private line.

defibrillator—An electrical device used to eliminate fibrillation of the heart muscle, by the application of high voltage impulses.

demodulation—The process of recovering the modulating information from a modulated signal.

deviation ratio—The ratio of the maximum frequency deviation of the RF carrier to the highest frequency contained in the modulating band.

dial tone first—Allowance of a 9-1-1 or ‘0’ operator calls to be completed without the deposit of a coin in a telephone pay station.

digital—Data represented in discrete, discontinuous form, as contrasted with analog data represented in continuous form.

digital dial code—A signaling technique generally used in VHF radio systems to bypass a receiver CTCSS system

diplexer—A device which enables the use of two radio transmitters, operating on different frequencies, on the same antenna simultaneously.

direct—In terms of communications circuits, means a dedicated instant method of communications. A dial telephone is not direct, a radio or a ring down line are direct.

direct dispatch method—A system where all 9-1-1 call answering and radio

dispatching is performed by the personnel at the public safety answering point.

direct distance dialing(DDD)—Telephone service which permits subscribers to dial their own long distance calls.

direct leased land lines—Dedicated or designated point-to-point wire circuits telephone) used in transmitting voice or data communications. See dedicated telephone line.

direct trunking—An arrangement where a telephone line connection has no intermediate points before reaching the final destination (called) party.

directional antenna—An antenna which radiates radio waves more effectively in some directions than in others.

directivity—The value of the direction gain of an antenna in the direction of its maximum value.

dish—A type of antenna. A parabolic reflector used in microwave systems.

dispatch point—A position from which a radio system is used but not a supervision or control point. Dispatch points are not usually listed on a station radio license.

distortion—Unfaithful reproduction of audio or video signals due to change occurring in the wave form of the original signal, somewhere in the course of its transmission or reception. The lower the percentage
of distortion, the more distortion free the system is and the more intelligible the message.

diversity—A method of radio transmission, or reception, or both, which counteracts the effects of fading by combining several signals all bearing the same information.

doctor-interrupt—The ability of a physician or hospital-based communicator to interrupt the voice or telemetry transmission from a radio in the field.

dual-tone multi-frequency (DTMF)—The simultaneous generation of two audio tones generally compatible to AT&T's standard "touch-tone" frequencies. Used for control or signaling purposes. A method of sending specific pairs of audio tones for each digit, up to a total of 16.

duplex—The operation of transmitting and receiving apparatus at one location in conjunction with associated transmitting and receiving apparatus at another location: the process of transmission and reception being simultaneous. The simultaneous transmission and reception of information. A duplexed piece of equipment is capable of transmitting and receiving simultaneously. Duplex systems generally employ different transmitting and receiving frequencies.

duplexed operation—The operation of associated transmitting and receiving apparatus concurrently as in ordinary telephones without manual switching between talking and listening periods. For comparison see simplex operation.

duplexed/multiplexed telemetry unit—A radio device capable of simultaneous transmission and reception and concurrent transmission of both voice and EKG information.

duplexer—A device which is used in radio equipment to provide simultaneous transmit and receive capabilities on a single antenna.

duplex, half—A system in which communication may be in either direction but only one way at a time. Transmission in one direction at a time over a single channel.

E

E & M signaling—An arrangement by which signaling between two points on a radio or carrier path is accomplished. An M lead is associated with the transmit (or mouth) while the E lead is associated with the receiver (or ear).

EACOM—Emergency and Administrative Communications for hospitals. Trade name for VHF radio system operating on standard frequencies with a selective calling system between stations. The system is similar to Motorola Communications HEAR radio system.

effective height—The true electrical height of an antenna corresponding to a "perfect" antenna that will produce the same field strength. The height of its center of radiation above the effective ground level.

effective radiated power(ERP)—The calculated power output from an antenna system which incorporates all the gains and losses in the antenna system. ERP is calculated as follows (1) convert power output of transmitter to dB referenced to 1 W(dBw); (2) subtract all transmission line losses including losses in equipment between the transmitter and antenna (filter, diplexers, circulators, duplexers, etc.) expressed in dB; (3) add the antenna's power gain (expressed in dB reference to a half-wave dimple); and (4) convert the results into watts.

effective signal radiated—The rating basis for licensing radio transmitters. Equal to the square root of the effective radiated power times the antenna height in feet aboveground level.

EKG display console—A unit of electronic equipment located in a hospital emergency room, or cardiac care unit, or both, which displays EKG and records voice and data information received from an EMS scene by transmission via radio or telephone path. A demodulation display console.

electrocardiogram(ECG or EKG)—A visual or hard copy trace of a patient's electrical heartbeat information.

electrode—(1) Either of the two terminals of an electric source, such as a battery, (2) A conducting element through which electric current enters or leaves an electrolyte, gas, or vacuum, (3) A conducting element, usually metallic (such as silver/silver chloride), with a conducting medium or electrolyte (such as sodium chloride and water) attached to a patient to obtain the electrical signals of the heart.

electromagnetic radiation—Radiation associated with a periodical varying electric and magnetic field and is traveling at the speed o flight, including radio waves, light waves, X-rays, and gamma radiation.

electromagnetic wave—A wave of electromagnetic radiation, characterized by variations of electric and magnetic fields.

emergency call—A all that requires immediate action.

emergency medical dispatcher (EMD)—a trained public safety telecommunicator with additional training and specific emergency medical knowledge essential for the efficient management of emergency medical communications.

emergency medical dispatching—The reception and management of requests for emergency medical assistance.

emergency medical dispatch priority reference system (EMDPRS)—A medically approved reference system used by a local dispatch agency to dispatch aid to medical emergencies, which includes: systematized caller interrogation questions, systematized pre-arrival instructions, and protocols matching the dispatcher'' evaluation of injury or illness severity with vehicle response mode and configuration

Emergency Medical Service (EMS)—The service utilized in responding to the perceived individual need for immediate medical care in order to prevent loss of life or aggravation of physiological or psychological illness or injury.

emergency operations center (EOC)—(1) A secure, protected facility designed and equipped for the use of community officials to manage response of a community in time of emergency, (2) A communications center designed and operated by a community or within a geographic area for a combination of emergency resources, such as police, fire and EMS.

emergency resource coordination center (ERCC)— Generally a facility that has the resources and ability to coordinate all emergency services (police, fire, EMS, etc.) within a given geographic area. ERCC works in conjunction with a public safety answering point (PSAP) and may be in the same facility or location.

enclosure—A housing such as a case, cabinet, cabinet rack or console which is designed to provide protection and support to equipment.

encoding—The conversion of numerical address codes, such as telephone number or message codes, into a format of tone or on-off pulses of audio tones for transmission over a communications system, usually for individual or group addressing, such as for paging or selective calling.

exchange—A defined area, served by one or more telephone central offices, within which the telephone company furnishes service.

exciter—The low level stages of a transmitter which normally consists of an oscillator, modulator and multiplier.

extender board—A printed circuit board that plugs into a module's circuit connector at one end and the module on the other to maintain a circuit so that the module may be conveniently tested out of an inaccessible position.

F

facility—A communications facility is anything used or available for use in the furnishing of communications service.

facsimile—The process by which pictures, images, and other fixed graphic materials are scanned and the information converted into electrical signals for local use or transmission remotely to produce a likeness of the subject copy.

fading—The variation of radio field strength caused by a gradual change in the transmission medium.

fade margin—The number of decibels of attenuation which can be added to a specified radio frequency propagation path before the signal-to-noise ratio of the channel falls below a specified minimum.

FCC Part 90—The section of the Federal Communications Commissions Rules and Regulations that affects most EMS communications.

Federal Communications Commission (FCC)—A Board of commissioners appointed by the President under the Communications Act of 1934 to formulate Rules and Regulations and to authorize use of radio communications. The FCC regulates all communications in the United States by radio or wireline, including television, telephone, radio facsimile and cable systems.

feedback—The act of returning a portion of the output voltage of a circuit which includes amplification to the input of that circuit.

feedback, acoustic—The feeding back of sound waves from a loudspeaker to a microphone in the same audio system.

field strength—The strength of an electric, magnetic or electromagnetic field. Electromagnetic (radio) field strength is expressed in microvolts per metre or millivolts per metre.

fixed service—A service or radio communication between specified fixed points. Fixed station: (1) a radio station which is not mobile; (2) a station which is permanently installed; (3) a base station in a mobile radio system.

fixed relay station—An operational fixed station established from the automatic retransmission of radio communications received from either one or more fixed stations or from a combination of fixed and mobile stations and directed to a specified location.

F-Layers—The upper layers of ionization in the ionosphere. The f-1 layer is about 130 miles above the earth. The f-2 layer height varies from about 250 miles during the day to about 150 miles at night.

float—To operate a storage battery in parallel with a charger and a load at such voltage that the charger supplies the load current and the battery supplies only transient peaks above the normal load.

FM transmitter—A radio transmitter that emits or radiates a frequency modulated wave.

folded dipole—A receiving or transmitting antenna composed of two parallel dimples, connected at the ends. The connection to the receiver or transmitter is made at the center of one of the poles.

forced disconnect—The capability of the 9-1-1 center to disconnect a 9-1-1 call to avoid caller jamming of the incoming phone lines.

four wire operation—Telephone operation in which the inbound audio signal is carried on one pair of wires and the outbound signal on another pair.

free space loss—The theoretical radiation loss that would occur in transmission if all variable factors were disregarded. Free space loss depends only on the frequency and the distance between antennas.

frequency—The number of cycles, repetitions, or oscillations of a periodic process completed during a unit of time. The frequency of waves in the electromagnetic spectrum (radio waves) is designated in hertz (Hz), kilohertz (kHz = 1000 Hz). One hertz is equivalent to one cycle per second.

frequency modulation (FM)—A method of modulating a carrier-frequency signal by causing the frequency to vary above and below the unmodulated value in accordance with the intelligence signal to be transmitted. The amount of deviation in frequency above and below the resting frequency is at each instant proportional to the amplitude of the intelligence signal being transmitted. The number of complete deviations per second above and below the resting frequency corresponds at each instant to the frequency of the intelligence signal being transmitted.

frequency response—The transmission loss or gain of a system, measured over the useful bandwidths, compared to the loss or gain at some reference frequency (generally 1000 Hz).

fresnel zone—The circular zone about the direct path between a transmitter and a receive at such a radius that the distance from a point on this circle to the receiving point has a path length that is some multiple of a half wave length longer than the direct path.

fringe area—An area or locality at such a distance from the transmitter that the signals received are weak.

full-duplex operation—A method of operation of a radio system which provides simultaneous two-way communications between two points. In EMS radio systems, provides for mutual interrupt capabilities between the field technician and the physician or medical direction at a hospital location.

G

gain, of an antenna—The effectiveness of a directional antenna in a particular direction, compared against a standard (usually an isotopic antenna). The radio of standard antenna power to the directional antenna power that will produce the same field strength in the desired direction.

generator, standby power—A device which develops electrical voltage from mechanical energy. An a-c electrical power source held in reserve and used to supply the necessary a-c power when commercial power fails.

generator, signal—A portable test oscillator which can be adjusted to provide a test signal at some desired frequency, voltage, modulation, or waveform.

geographical assignment—The assignment and use of communications channels on a dedicated used basis within a given geographic area.

GHz—Gigahertz (billion hertz, 1000 MHz)

gin pole—A pole which is used together with ropes and pulleys as a derrick for lifting heavy loads and for erecting poles or towers.

ground—A reference point. Also a connection, intentional or accidental, between an electrical circuit and the earth or its equivalent.

ground plan antenna—A type of vertical transmitting or receiving antenna used primarily for short wavelength or high band communications. A ground plane antenna consists of a quarter-wave vertical element, and four radial elements spaced 90° apart, and mounted on the base of the vertical element. Antennas of this type are non-directional and have a low angle of radiation.

ground wire—A conductor leading from the radio equipment to an electrical connection with the ground.

guard band—A narrow band of frequencies provided between adjacent channels in certain portions of the radio spectrum to prevent interference between stations.

guy anchor—The buried weight or mass to which the lower end of a guy wire is attached.

H

half-duplex channel—A communication channel providing duplex operation at one end of the channel, but not the other. Sometimes, the base station is operated in the duplex mode, however, in EMS the portable or mobile radio is often operated in the duplex mode, and the base station at the hospital operated simplex, to permit the medical direction physician to interrupt transmissions from the field technician. See also Simplex.

half-duplex operation—Generally refers to the ability of directing medical personnel in EMS radio system to interrupt or 'break in' on radio transmissions from field personnel to give instructions or ask questions. Sometimes referred to as "physician interrupt". Requires duplexed communications equipment in the field.

half-wave dipole antenna—A straight, ungrounded antenna having an electrical length equal to half the wave length of the signal being transmitted or received. Mounted vertically, it has a donut-shaped pattern, circular in the horizontal plane.

ham—A term applied to an amateur radio operator, as opposed to business or commercial operators. A person that makes amateur radio operation a hobby.

harmful interference—Any emission, radiation, or induction which endangers the functioning of a radio service or seriously degrades,obstructs, or repeatedly interrupts a radio communication service.

hand microphone—A microphone designed to be held in the hand. Sometimes called a "palm" microphone.

handset—A device similar to a telephone handset used in place of a hand microphone.

hardcopy—A tangible printed copy of a message such as that obtained from a typewriter.

hardware—The screws, nuts, clamps, anchors, connectors, etc. used in the installation and maintenance of communications systems.

hardwire—To wire or cable directly between units of equipment without passing through other media.

harmonic—An integral multiple of a fundamental frequency. The third harmonic of 20 Hz is 60 Hz. The fifth harmonic of 40 Hz is 200 Hz.

hash—Noise signal produced by an electrical or mechanical source.

headphone—A device which can be placed on the head to allow individual listening to messages.

HEAR—Hospital Emergency Administrative Radio— Motorola Communications and Electronics trade name for a VHF radio system operating on

standard frequencies with a selective calling system between stations. The system is similar to General Electric Mobile Radio Department's EACOM radio system.

helix—A single layer, spiral wound coil usually having air or foamed polyethylene core.

hetrodyne—(1) pertaining to the production of difference in frequencies (beat frequencies) by the combination of the two frequencies, (2) to shift an incoming radio signal to a different frequency, often to a lower intermediate frequency.

Hetrodyne frequency—The beat frequency, which is the sum or difference between two frequency signals.

hertz(Hz)—International unit of frequency identical to and used instead of the old term cycles. One hertz is equal to one cycle per second.

high band—A portion of the VHF radio frequency spectrum from 150 to 174 MHz in which two-way radio operates.

hollerith code—A twelve-level code which defines the relation between an alphanumeric character and the punched holes in an 80-column data card.

hookswitch—The device on which a handset or microphone hangs when not in use. The handset operates a switch, or switches, which open the associated circuits.

hop—(1) The number of reflections from the ionosphere encountered by the radio wave in traveling from the transmitter to the receiver (2) the number of radio links required to span a given path.

hot line—Direct circuit between two or more points for immediate use without patching or switching. (See direct leased land lines) The hot line can employ various signaling configurations (ringdown, audio amplifier, etc.)

hot standby operation—A method of achieving reliable operation by energizing two identical equipments fed by and to a switchable input and output. A sensing device causes transfer of input and output circuits when a failure is indicated.

hum—Audio frequency interference which is at the frequency of the power supply or its harmonics.

humidity, relative—The ratio of the amount of water vapor the air contains to the maximum amount it could hold at the same temperature and pressure, expressed in percent.

hybrid—(1) Made up of several different components or a mixture of technologies. (2) A circuit required to convert 4-wire operation to 2 wire, while maintaining isolation of the 4-wire circuit.

I

ignition noise—Interference produced by sparks or other ignition discharged in a vehicle.

image—One of the two groups of sidebands generated in the process of modulations, so called because one is the reverse (mirror image) of the other with respect to operating frequency.

image frequency—In hetrodyne frequency converters, an undesired input frequency which can beat with the local oscillator to

produce the intermediate frequency and thus appear in the receiver output.

image rejection—The action of a receiver in suppressing the image frequency.

impedance—The total resistance that a circuit offers to the flow of alternating current. Impedance is a combination of resistance and reactance. The ohm is used as a unit of impedance measurement.

impedance match—The condition in which the impedance of one component is the same as the component to which it is connected or attached.

impedance, characteristic—The importance of characteristic impedance lies in the fact that when a transmission line is terminated, as with an antenna, in an impedance matching its own, then all of the energy or power flowing along the line is radiated by the antenna. If the impedance of the termination (antenna) is not matched to the transmission line, a portion of the energy will be reflected at the mismatch resulting in a lower output from the antenna.

Improved Mobile Telephone Service (IMTS)—A mobile radio telephone offering of a telephone company.

impulse—A surge of electricity having a single polarity.

indicator—A device used to inform of a condition or change in condition.

induced—Produced as a result of exposure to a changing electric or magnetic field.

Industrial Radio Service—An FCC-designated radio service.

in-band signaling—The transmission of signaling tones within the frequency band of the channel.

insertion loss—The loss introduced when a device or line section is interposed between two elements of a circuit.

insulation—Any nonconductive material used to prevent the leakage of electricity from a conductor, such as rubber, glass, mica, etc.

integrated circuit—A complete circuit consisting of transistors, capacitors, resistors, diodes, etc. which is formed on a single semiconductor substrate.

Integrated Circuit Oscillator Module (ICOM)—A frequency determining circuit used in General Electric radios containing a crystal oscillator circuit and other circuits used to generate the oscillator frequency.

interface—A concept involving the specification of the interconnection between two equipments or systems. The specification includes the type, quantity, and function of the interconnection circuits and the type and form of the signals to be interchanged via these circuits.

interference—Interference in a signal transmission path is either extraneous power which tends to interfere with the reception of the desired signals or the distribution of signals which results in loss of signal or distortion of information.

intermittent—Not continuously present; disappearing and reappearing.

intermittent duty cycle—A duty cycle of 1 minute on 4 minutes off, or 20% per electronic industries association (EIA).

intermodulation—The combination of two signals beating together to form a third unusable signal which interferes with the reception of the desired signal. In a radio receiver the method of expressing in dB below the desired signal, the receiver's rejection of the unwanted signal to its acceptance of correct signals.

intrinsically safe—A laboratory (UL) rating for equipment considered approved to operate in areas in which hazardous concentrations of flammable gases exist.

inverter—(1) Any of several devices used to convert direct current to alternating current (2) a single input, single output device which changes the polarity of (inverts) a signal when passing it from input to output. A negative signal at the input produces a positive signal at the output and vice versa. A differential EKG amplifier has a normal and an inverting input.

ionosphere—The upper portion of the earth's atmosphere beginning at about 50 miles above the surface of the earth' the cause of radio signals being bent, and returned to earth.

isolator—A passive RF device which permits transmission in only one direction, absorbing energy in the opposite direction.

J

jack—A connecting device ordinarily used to make electrical contact with mating contacts of a plug.

jacket—The outer covering on an insulated wire or cable.

jamming—The deliberate radiation, re-radiation or reflection of electromagnetic energy with the object of impairing the use of electronic devices, equipment or systems.

jumper—A short length of conductor used to bridge electrical connections.

junction box—A metal or other container into which wires or cables are led and connected.

K

key—A push-to-operate switch used for operating a transmitting circuit in a radio system

key telephone equipment—An instrument that has the capability of multiple line terminations. Each line is accessed by depressing an association button (key).

keypunch—A machine controlled by a typewriter like keyboard which enables an operator to punch holes in predescribed places in a hollerith code.

kilo—A prefix meaning one thousand.

kbps—Thousands of bits per second. kilohertz(kHz)—Equal to 1000 cycles per second. Replaces the term kilocycle.

klystron—An electron tube in which the electrons are periodically bunched by electric fields. Used as an RF oscillator for microwave equipment.

knockout—A metal disc punched in the side of a metal terminal junction box or cabinet which can be punched out to allow entry of a cable or conduit.

L

land line—A generic term which refers to the public-switched telephone system.

lag—The difference in phase angle expressed in electrical degrees between the voltage and current which produced it.

land-mobile—An abbreviation for land to mobile communications such as between base stations and mobile radios or from mobile radio to mobile radio.

Land Mobile Radio Service—A mobile radio service defined by the Federal Communications Commission-FCC Rules and Regulations Part 90.

LATA—Local access and transport area boundaries for telephone companies. The geographic area within which the local telephone company provides local and long distance service.

Law Enforcement Assistance Administration (LEAA)—An administration under the United States Department of Justice established by the Omnibus Crime Control and Safe Streets Act of 1968, restructured by the Justice Improvement Act of 1979 and abolished two years later.

leased line—A pair of wires or a circuit, usually leased or rented from a telephone company, designed for exclusive use between two fixed points for various communication control functions.

life cycle—A test performed on a material device to determine the length of time before failure.

line—A transmission lien or power line. A system of one or more wires.

linear—Describing a device in which the signal output voltage is directly proportional to the signal input voltage. A straight line relationship.

line, balanced—A two-wire line which has identical impedance from each wire.

line equalizer—A connection in series with a telephone line that will alter the frequency response characteristics of the line.

line, four-wire—A two-way transmission circuit using separate paths for transmit and receive functions.

line, loss—A transmission line, usually a coaxial cable, which is designed to have very high transmission loss per unit length used in tunnels, underground or buildings for radio communications systems.

line of sight—An unobstructed path between two points. Radio waves at those frequencies where signals travel in a straight line and are not reflected by the ionosphere.

line of sight distance—The straight-line distance from a radio station antenna to horizon. This represents the normal transmitting range of FM transmitting stations.

link—The portion of a radio relay system between adjacent radio stations.

load—(1) A device that receives power from a transmission system (2)The amount of electric power drawn by an electric or electronic device.

load, dummy—A device which can dissipate energy (into heat) without radiating it.

loading, antenna—Insertion of reactance in an antenna circuit to improve its

transmission characteristic in a given frequency band.

loading, ice—The stress imposed on an antenna or antenna structure caused by ice forming on its members.

loading, wind—The stress imposed on an antenna or antenna structure caused by wind.

lobe—One of the three-dimensional petals representing the radiation or reception efficiency of a directional antenna.

local government radio service—A service of radio communication defined by the FCC essential to official activities of states, possessions, and territories, including counties, towns, cities, and similar governmental subdivisions.

local service area—That area that can be called on the telephone without incurring multimessage units or a toll charge.

log—A list of radio stations showing frequency, location, power, and other data. Also a communication record for a station showing calls made, time, date and other data. A detailed record.

loop—(1) A short transmission line that connects a subscriber to a switchboard (2) A closed path in which a signal may circulate. This path may be within a piece of equipment, such as a repeater or carrier terminal, or may be a complete carrier circuit.

loop resistance—The resistance presented to the signaling portion of the terminating set by the wireline when the far end of the wireline is short circuited.

loss—A decrease in power suffered by a signal as it is transmitted from one point to another, usually expressed in decibels. Energy dissipated without accomplishing useful work.

loss, free space—The theoretical transmission loss between two radio antennas dependent only upon distance and frequency.

loss, path—The theoretical transmission loss between two
radio antennas dependent only upon distance and frequency.

loss, path—The reduction or attenuation of signal strength that occurs between the transmitted strength and the received signal strength.

low band—A section of the VHF radio frequency spectrum from 25 to 50 MHz in which mobile radio equipment is licensed to operate.

low loss—Describing circuits and transmission line in which little energy is lost from the input to the output.

lower sideband—The lower of two frequencies or of two groups of frequencies produced by a modulation process.

lug, spade—A connector which has an open end to slip under a terminating screw.

M

marginal—Operating at the borderline of permissible limits.

matrix—An array of horizontal and vertical input or output leads with cross points at the intersections, used as a means of switching from any input to any output.

mean—The arithmetic middle point of a range of values, obtained by adding the highest and lowest values and dividing by two.

median—The point below which there are as many instances as there are above.

medical communications control console—An installation of communications control equipment, usually located at a hospital, which provides for control of the transmitting and receiving equipment necessary for the medical communications.

microwave—A term applied to radio waves in the frequency range of 1,000 MHz and upward. Microwave radio generally performs the same functions as telephone cables, and may be used for radio remote control purposes.

mobile—Term used to describe equipment designed for vehicular installation.

mobile relay station—A fixed station established for the automatic re-transmission of mobile service radio communications which originate on the transmitting frequency of the mobile stations and which are retransmitted on the receiving frequency of the mobile stations.

mobile repeater station—A mobile station in the mobile service authorized to retransmit automatically on a mobile service frequency communications originated by handheld or portable units or by other mobile or base stations directed to such hand-carried units.

mobile service—A service of radio communications between mobile and land stations, or between mobile stations.

mobile station—A two-way radio station in the mobile service intended to be used while in motion or during halts at unspecified points.

mobile telephone service (MTS)—Telephone service between a fixed mobile radio base station and several vehicles equipped with mobile radios.

mobile transmitter—A radio transmitter designed for installation in a vehicle, vessel, or aircraft and normally operated while in motion.

mobile unit—A two-way radio equipped vehicle or person. Also sometimes the two-way radio itself, when associated with a vehicle or person.

modem—Contraction of modulator-demodulator.

modular—A construction technique incorporating the use of standard size units for interchangeability.

modulate—To vary the amplitude (AM), frequency (FM),
or phase of a high frequency wave or carrier in step with amplitude variations of another wave (the modulating wave). The carrier is usually a sine wave while the modulating wave is often a complex voice or EKG signal.

modulator—The electronic circuit that combines the modulating wave with the carrier wave. In radio transmitters the final audio-frequency stage which mates the audio signal with the carrier signal. In EKG telemetry, the circuit that combines the amplified EKG signal with the subcarrier (audio) signal for transmission by radio or telephone.

multi-channel system—A radio system which uses more than one radio channel. Also known as a multifrequency system.

multicoupler, receiver—A device which permits several radio receivers to use the same antenna. Usually a broadband amplifier with several output ports.

multi-frequency operation—Employing radio equipment capable of operation on two or more frequencies.

multijurisdictional system—A system covering more than one political boundary or agency.

multipath—The propagation phenomenon which results in signals reaching a radio receiving antenna by two or more paths usually resulting in a degradation of the original signal.

multiplex—Transmitting two or more signals over the same medium. In EKG telemetry equipment, the ability to transmit electrocardiograph(EKG) signals and voice signals concurrently over the same transmitter.

multiplex, frequency division—A multiplex system in which the total transmission bandwidth is divided into narrower bands each used for a single separate channel.

multiplex, time division—A method of multiplexing in which the total frequency spectrum available is used by each channel, but only for part of the time. A sharing of transmission ability, first by one parameter, then by another.

multi-tone—A method of signaling that involves tow or more tone signals produced simultaneously or sequentially.

mute—To silence or reduce sound level.

N

netting—The process of adjusting a system's transmitters and receivers to the same operating frequencies.

net loss—The algebraic sum of the gains and losses between two terminals of a circuit.

network—An orderly arrangement of stations interconnected through communications channels in order to form a coordinated entity.

nine-one-one(9-1-1)—A three-digit emergency telephone number accepted and promulgated by the telephone industry as the nationwide emergency number.

Nxx—The first three digits of a local telephone number that uniquely identifies that central office switching location within its area code number for nationwide long distance call routing.

noise—Interference characterized by undesirable random voltages cause by an internal circuit defect or from some external source. Any extraneous signal tending to interfere with the proper and easy perception of those signals which are intended to be received.

noise blanker—A device used in mobile radio applications which senses the presence of undesired noise on the desired channel and causes the desired signal to be interrupted for the time period that the undesired noise signal is present. The time period is controlled and measured in milliseconds so that the interruption of the desired signal is not audible.

noise level—Volume of noise usually expressed in decibels.

noise limiter—A circuit that cuts off the noise peaks that are stronger than the highest peak of the desired signal being received.

nomograph—A chart having three or more scales across which a straightedge can be placed to provide a graphical solution for a particular problem. In mobile radio, nomographs may be used to determine frequency spread, estimated radio range, antenna height, etc.

O

octave—The interval between two frequencies having a ratio of two to one.

ohm—An electrical unit of resistance.

ohm's law—The current in an electric circuit is directly proportional to the electromotive force in the circuit. In the form E=I*R, where E is the electromotive force (voltage), I is the current (amperage), and R is the resistance of the circuit (ohms).

omnidirectional—Equally effective in all directions.

open—A break in circuit continuity

outage—A disruption of communications from any cause, whether planned or accidental.

out-of-band signaling—Transmission of signals by frequencies outside of the voice band.

overload—A load greater than a device is designed to handle.

P

paging—A one-way communications service from a base station to mobile or fixed receivers that provide signaling or information transfer by such means as tone, tone-voice, tactile, optical readout, etc.

pair—Two wires of a signal circuit generally applied to telephone wherein one wire is designated "tip" and the second wire "ring".

passive—A device which does not contribute energy to the signal it passes.

passive repeater—A device intentionally interposed in a microwave transmission path to redirect or reflect energy.

patch—A means of connecting one system to another. A patch may be between radio systems, or radio to telephone, as in a radio/phone patch.

path, signal—The route by which intelligence is conveyed from transmitter to receiver or through a circuit.

personal radio—A small portable radio intended to be carried by hand or on the person of the user.

PERT—Program Evaluation and Review Technique. A management tool for comparing actual with scheduled program progress.

phase—The position at any instant which the periodic wave occupies in its cycle of 360°

phone patch—An interconnection between radio and telephone communications circuits which permits direct voice interchange between telephone lines and radio system.

pigtail—A splice made by twisting together the bared ends of two conductors.

plug-in—Describing any device having terminals so it can be connected by simply pushing it into a suitable socket or connector.

portable—An easily transportable radio.

primary power—A reliable source of electrical power normally serving as the principle source of energy to equipment, such as the commercial 120 volt a-c power main.

private automatic branch exchange-(PBX)—A telephone switchboard with many stations not individually identifiable to the telephone company's switching network requiring an operator.

private line(PL)—Motorola's trademarked name for continuous tone controlled squelch system, CTCSS.

propagation, electromagnetic—The travel of electromagnetic waves through a medium, or the travel of a sudden electric disturbance along a transmission line. Also called wave propagation.

protect—To equip with devices for safeguarding from damage by excessive voltages, current, or physical abuse.

public safety agency—A functional division of a public agency which provides fire fighting, police, ambulance, emergency medical, or other emergency services.

public safety answering point (PSAP)— The initial answering location of a 9-1-1 call and other calls for assistance.

public safety telecommunicator—An individual trained to communicate by electronic means with persons seeking emergency assistance and with agencies and individuals providing such assistance.

pull box—A box with a removable cover installed in a conduit run to facilitate pulling wire or cable into the conduit.

pulse—A signal of short duration.

pulsed tone—A system of selective signaling using a keyed on-off tone signal.

push-to-talk or press-to-talk(PTT)—In radio or telephone systems, that method of communication over a speech circuit in which transmission occurs from only one station at a time, the talker being required to keep a switch operated while he is talking. The keying button used to operate a radiotelephone transmitter.

Q

quarter-wave antenna—An antenna electrically equal to one-fourth of the wavelength of the signal to be transmitted or receive.

quartz—An element consisting of pure silicon dioxide. The original piezoelectric material widely used to control the frequency of oscillators.

quartz crystal—A thin square or rectangular slice of quartz which will vibrate at a frequency determined by its thickness.

quiet channel—The RCA Corporation's trademarked name for continuous tone controlled squelch system (CTCSS).

quieting—Reduction of system noise.

quick-call—Motorola communications Company trademarked name for a system of selective calling, normally using two pairs of two tones each in sequence. Quick Call II uses a pair of sequential tones similar to General Electric's Type 99 tone system.

R

rack mounting—A method of mounting equipment in which metal panels supporting the equipment are attached to pre-drilled steel channel rails or racks. The dimensions of the panels, the spacing of the rails and the size of the mounting screws are standardized.

rack unit—In mobile radio generally a rack mounting 19 in. between rails and a height of 1.75 in. per unit.

radio—The transmission and reception of signals by means of electromagnetic waves without a connecting wire.

radio-frequency power—The power associated with any signal consisting of electromagnetic radiation which is used for telecommunications.

radio interference—Undesired disturbance of radio reception. Man-made interference is generated by electric devices, with the resulting interference signals either being radiated through space as electromagnetic waves or traveling over power lines or other conducting media. Radio interference is also due to natural sources such as atmospheric phenomena, such as lightning. Radio transmitters themselves may additionally interfere with each other.

radio network—A number of radio stations, fixed and mobile, in a given geographical area which are jointly administered or which communicate with each other by sharing the same radio channel or channels.

radio common carrier (RCC) —An enterprise that is licensed by the FCC and the Public Utilities Commission to provide radio communications service to the public.

radio receiver—An instrument which amplifies radio frequency signals, separates the intelligence signals from the rf carrier, amplifies the intelligence signal additionally, and converts the intelligence signal to its original form.

radio relay system (radio relay) —A point-to-point radio transmission system in which the signals are received and retransmitted by one or more intermediate radio stations.

radio transmitter—A radio-frequency power source which generates radio waves for transmission through space.

radome—A dome shaped cover for a parabolic antenna which protects the antenna from the elements and their attenuating effects.

range—Distance over which a radio signal can be transmitted for effective reception or the distance at which a usable signal can be received.

receiver—An electronic device used to detect and amplify transmitted radio signals.

receiver, paging—A small, light, pocket sized receiver used for alerting individuals when they are away from their normal communication instruments.

referral methods—The calling party to a public safety answering point is referred to a secondary telephone number.

refraction—The change of direction experienced by a wave of any form of radiated energy when passing from one medium to another having a different dielectric constant or index of refraction.

regional EMS system—An emergency medical service area (trade, catchment, market, patient flow, geographic or governmental) that provides essentially all of the definitive emergency medical care for all emergencies and for the most critically ill and injured patients within the area.

relay—Transmission forwarded through an intermediate station.

relay station—Radio stations that rebroadcast signals the instant they are received, so that the signal can be passed on to another station outside the range of the originating transmitter.

reliability—The ability of an item to perform a required function under stated conditions for a stated period of time.

remote base station—A base station located away from the operating console, to take advantage of improved coverage offered by a better geographical location.

remote control—The operation of a device from a distance either electrically or by radio waves.

remote control equipment—The apparatus used for performing monitoring, controlling, supervisory control, or a combination of these functions at a distance by electrical means.

repeater—A combination of apparatus for receiving either one-way or two-way communication signals and delivering corresponding signals which are either amplified or reshaped or both.

repeater station—An operational fixed station established for the automatic re-transmission of radio communications received from any station in the mobile service.

repeater station, re-modulating—A microwave repeater station in which the signal is demodulated to the original baseband frequencies and re-injected onto the modulator for transmission to the distant station.

resource management center—A center responsible for the allocation of those resources essential to the most effective and efficient resolution, or management or both, of the immediate problem. In most communities these resources include police, fire and emergency medical services. The resource management center is most effective when its responsibilities encompass the whole of public safety response.

ringback—In a public safety answering center, permits the answering point to ring the hung-up telephone on a held circuit. The feature is useful when calling a party has failed to provide all necessary information to the answering point before hanging up.

ringdown—A type of signaling employed in manual operation telephone (as compared to dial) which utilizes a continuos or pulsing a-c signal transmitted over the line.

S

schematic diagram—A diagram or drawing which shows electrical connections of a radio or other electrical device by means of

symbols which are used to represent the components.

search lock monitor—A receiving channel scanning scheme which lock the receiver on the first channel received.

selective call—A system for alerting individual or groups of stations by means of coded signals.

selectivity—The ability to select one particular signal from other signals at nearby frequencies. This specification is important in urban areas where radio spectrum congestion exists. The more negative the dB rating, the better the specification.

selective routing—A routing of telephone call to terminate at a PSAP determined by the location of the calling telephone. This is accomplished by using a computer to process the calling telephone number.

sensitivity—The characteristic of a radio receiver which determines the minimum input signal strength required for a given signal output. In FM, sensitivity is the signal level required to produce e a given ratio of signal to noise. The more sensitive a receiver is, the weaker the signal it can receive.

service channel—In a microwave system, a voice channel fused for maintenance and fault location. Also called order wire.

service life—The life expectancy of equipment under normal conditions of use.

side tone—The signal that reaches a telephone receiver from the transmitter of the same set by way of a local path within the set.

Signal—The form of a radio wave in relation to the frequency serving to convey intelligence in communication.

signal-to-noise ratio—The ratio of the intensity of the desired signal to that of the undesired noise signal, usually expressed in decibels.

signal strength—A measure of the field intensity caused by a radio transmitter at a particular location within its operating range. Usually expressed as microvolts, or millivolts of signal.

simplex—1) —single frequency operation whereby all base stations and mobiles operate on one common frequency, (2) operation on two different frequencies in a system that can communicate in two directions, but not simultaneously, such as when a base station and a mobile radio operate on reversed pairs of frequencies without duplexing.

simplex channel—a communication channel providing transmission in one direction only at any given time. For comparison see duplex channel.

simplex operation—A method of radio operation in which communication between two stations takes place in only one direction at a time. This includes ordinary transmit-receive operation, press-to-talk operation, voice-operated transmit, and other forms of manual or automatic switching from transmit to receive. Also called simplex.

SINAD —The ratio of signal plus noise plus distortion to the noise plus distortion; expressed in decibels. An EIA standard method of measuring receiver sensitivity. Basically a measure of RF signal strength that will result in a readable signal.

siren—An acoustical or electromechanical device used as a warning signal on emergency vehicles.

solid state—Denoting the use of semiconductors instead of vacuum tubes or relays.

Special Emergency Radio Service (SERS)—That portion of radio communications frequency resources authorized by the FCC for use in the alleviation of emergency situations endangering life or property. See FCC Part 90.

spectrum—A continuous range of frequencies arranged in order of wavelength or frequency within which waves have some common characteristics, such as audio spectrum, radio spectrum, etc. The entire range of electromagnetic radiation extending from the longest known radio waves to the shortest known cosmic rays.

spurious response—The response of a radio receiver to an undesired frequency.

squelch—A circuit function that acts to suppress the audio output of a receiver when noise power exceeding a predetermined level is present.

squelch, carrier—A squelch system that responds to the presence of an RF carrier signal.

squelch circuit—A circuit that reduces or lowers the noise that would otherwise be heard in a radio receiver between transmissions.

stability, frequency—The ability of a radio transmitter to maintain any predetermined frequency, such as its assigned frequency. Measured in percent of the carrier. The lower the percentage the better the stability.

standing wave ratio (SWR) —A measure of the amount of lost transmitting power due to impedance differences between the transmission line and the antenna. The ratio of reflected to incident waves that exists at some particular point on a transmission line.

statewide EMS system—A network of EMS systems, integrated and coordinated at the state level.

strip chart recorder—An electromechanical device used to make paperchart recordings of EKG information. Usually it uses a heat-sensitive paper and a heated stylus.

subcarrier—A frequency sensitive device used to generate a modulated wave which in turn is applied as a modulating wave to modulate another carrier. For EMS telemetry the subcarrier frequency is 1400 Hz.

supergroup—In microwave systems groups of 60 channels each, occupying a particular range of frequencies.

switched network—A complex of diversified channels and equipment that automatically routes communications between the calling and called person or data equipment. The public telephone system.

synchronization—The process of making the carrier at the receiving end of a line or system match the frequency of the carrier at the transmitting end.

synthesizer, frequency—A highly precise crystal oscillator with frequency dividers

used to provide the precise radio frequency. A typical synthesizer can be set to small frequency increments and have an accurate output at the desired output frequency.

system—A combination of two or more stations in such a way as to provide communications.

T

tandem trunking—An arrangement where a telephone-line connection has one or more intermediate points that are required or permitted usually on a controlled dial pulse basis before reaching the final destination (called) party.

tariff—A document filed by a communications company with Public Utilities Commission which lists the services offered the public and schedule of rates and charges.

tarnish—A discoloration or stain on the surface of metal caused by exposure to chemicals or the atmosphere. To dull or destroy the luster of metal.

tee—A three-way connection in the shape of the letter t.

telecommunications—All forms of electrical transmission of intelligence including: telegraph, telephone, radio, and television. Pertaining to the art and science of communication by these methods.

telemetry—The sensing and measuring of information at some remote location and transmitting the data to a convenient location to be read and recorded.

telpak—An acronym for "telephone package", a schedule of bulk discount rates for multiple private line telephone services such as AT&T long-lines series 500 tariff offering.

telephone line—A telephone lien from a telephone company central office that is connected to key or non-key telephone equipment.

teletypewriter—An electromechanical device, similar to a typewriter, such that messages typed on the keyboard of the transmitter unit are converted into electrical signals, which when conveyed to the receiver unit, are printed on paper.

ten signals—A series of coded messages designed to reduce air transmission time and confusion in busy mobile radio systems.

thermal noise—Very small noise voltages that are present in all conductors, caused by the thermal agitation of charged particles within the conductor.

third harmonic—A frequency wave having three times the fundamental frequency value.

threshold—In an FM receiver, the point at which the peaks of the incoming RF signal exactly equal the peaks of the internally generated thermal noise power or the point above which increasing the input signal strength provides only a dB for dB improvement in the output signal-to-noise ration.

tip—The ball-shaped contact on the cord (tip) of a plug. One of a pair of telephone wires (the other of which is called the ring).

tone—An audio or carrier of controlled amplitude and frequency used in a selective signaling system or for equipment control purposes.

tone code—A specified character of transmitted tone signals required to effect a particular selection or function.

tone coded squelch—A system whereby a superimposed tone is transmitted with the radio carrier to protect against nuisance type interference.

tone, Type 90—General Electric's name for a system of single tone signaling. The tones are generally between 1000 and 2400 Hz in two bands.

tone, Type 99—General Electric's name for its two-tone sequential selective signaling system. Sometimes called Sel-Call. The tones are generally between 520 and 953 Hz.

topographic map—An accurately scaled map having contour lines which show the elevation above sea level. Used in preparing profiles of radio propagation paths.

touch pad—A method of signaling or encoding and decoding address codes by the use of a simple numerical push-button keyboard.

Touchtone—A Bell System trademark used to describe their method of signaling and use of dual tone multifrequency (DTMF) tones.

tower, antenna—A tall antenna support structure used to support one or more antennas or when an antenna must be mounted high above the ground or other support formation such as a building.

traffic—Used for messages handling by a radio communications system.

transceiver—The combination of radio transmitting and receiving equipment in a common housing, usually for portable or mobile use, and employing common circuit components for both transmitting and receiving.

transformer—An electrical device for voltage current transformation, or impedance matching or both.

transfer method—The PSAP interrogator determines the proper responding agency and connects the user to that agency. To perform the necessary dispatching in accordance with prearranged plans with cooperating agencies.

transient—A rapid, sometimes violent, fluctuation of voltage or current in a circuit usually of short duration caused by switching or changes in load.

transmitter—Apparatus for the production and modulation of radio frequency energy for the purpose of radio communication.

transmission line—A waveguide, coaxial line, or other system of conductors used to transfer signal energy efficiently from one location to another. In communications systems, the coaxial line between the base station and the antenna.

trunk—A circuit used for connecting a subscriber in a central office to all other services in/out of the switching equipment.

trunk line—A telephone line that terminates at a switchboard rather than a telephone.

TSPS—An electronic operating position system whereby operator-handled traffic is routed to its final destination via a central switching machine.

turret—A section of communications control console, containing switches, controls, meters, etc.

two-way radio—A radio that is able to transmit and to receive.

two-wire operation—Uses a single pair (two wires) for both transmitting and receiving.

U

Ultra High Frequency (UHF)— Frequencies between 300 and 3000 MHz.

ultrasonic—Describing frequencies higher than those which are audible. Generally above 20000 Hz.

unbalanced line—A transmission line in which the voltages on the two conductors are unequal.

Underwriters Laboratories, Inc.—A laboratory sponsored by the National board of Fire Underwriters which examines and tests devices, material and equipment whose action may affect casualty, fire, and life hazard.

unmodulated—Without modulation; the RF carrier signal alone as it exists during pauses in conversations.

upper sideband—The higher of two frequencies or groups of frequencies produced by a modulation process.

utility—A power, gas, or water service available to the public.

V

Van Allen belts—Radiation belts that surround the earth, consisting of electrons and protons at high energy levels.

varactor—A semiconductor diode used as a variable capacitor. Used as a harmonic generator, frequency multiplier, and amplifier.

vehicular repeater station—A mobile station in the mobile services authorized to retransmit automatically on a mobile service frequency, communications originated by hand carried portable units or by other mobile or base stations directed to such hand-carried units.

Versatone—General Electric company trade name for a solid state tuned tone determining element.

vertical antenna—A vertical steel tower, rod or shaft used as an antenna.

Very High Frequency (VHF)—Frequency between 30 and 300 MHz.

Vibrasponder—Motorola Communications company trade name for a tone determining vibrating reed element.

voice grade—A communications circuit which is nominally 300 to 3000 Hz.

voltage standing wave ratio (VSWR)— The ratio of the maximum voltage to the minimum voltage along a transmission line. It is the measure of the mismatch between the load and the line.

volume control—A potentiometer voltage divider used to adjust the loudness of an audio circuit.

volume unit (VU)—A measure of the magnitude of sound from an electrical wave. Measured in decibels.

voting—Automatic selection of remote radio receiver. Al incoming signals are compared for signal strength and the first signal found that meets or exceeds a preset level is selected and sent to the audio amplifier.

W

watt—The unit of power.

wattmeter—A meter to indicate the rate at which electrical energy is being used or produced.

wave—A propagated periodic disturbance such as a radio, light or sound wave.

waveguide—A transmission line comprising a hollow conducting tube within which electromagnetic waves may be propagated. Generally used in microwave communications systems.

wavelength—The distance measured along the direction of propagation between tow points that are in phase on adjacent waves. A wavelength is the distance traveled by a wave in the time of one cycle. Electromagnetic waves included both light and radio waves and travel in space at approximately 300,000,000 m/s. To determine the exact length of a wave, divide 300,000,000 m by the frequency in hertz.

wave, radio—An electro-magnetic wave which travels through space at the speed of light.

wave, refracted—A radio wave that is bent (refracted) as it travels into a second medium of propagation, such as from the atmosphere to the ionized layers of the stratosphere.

weatherproof—So constructed or protected that exposure to the weather elements will not prevent proper operation.

weathertight—So constructed that exposure to a driven rain will not result in the entrance of water.

wire—A single metallic conductor.

ADDENDUM

Interoperability Channel Naming

Names for Channels Coordinated/Managed by CalSIEC

April 4, 2008 - Subscriber Programming Shown

Yellow = Narrow (12.5 kHz) only with original FCC name shown

N = 12.5 kHz bandwidth

MW = 20 kHz bandwidth

W = 25 kHz bandwidth

Before Rebanding/Narrowbanding (Legacy Names)

Current Name	*Rx FREQ*	*Rx CTCSS*	*Tx FREQ*	*Tx CTCSS*	*Bandwidth*
VHF LOW BAND					
CLEMARS 7	39.4600	156.7	45.8600	156.7	W
CLEMARS 6	39.4600	156.7	Simplex	156.7	W
Pending FCC	39.4800 is used by various agencies in California				
CLEMARS 7 Input	45.8600	156.7	Simplex	156.7	W
None	45.8800	156.7	Simplex	156.7	W
VHF HIGH BAND					
VCALL	155.7525	none	Simplex	none	N
VTAC1	151.1375	none	Simplex	none	N
VTAC2	154.4525	none	Simplex	none	N
VTAC3	158.7375	none	Simplex	none	N
VTAC4	159.4725	none	Simplex	none	N
WHITE 1	154.2800	none	Simplex	none	W
WHITE 2	154.2650	none	Simplex	none	W
WHITE 3	154.2950	none	Simplex	none	W

Post-Rebanding/Narrowbanding

NPSTC Name	*Short Name (6 char)*	*Rx FREQ*	*Rx CTCSS*	*Tx FREQ*	*Tx CTCSS*	*Bandwidth*
VHF LOW BAND						
LLAW1	LLAW1	39.4600	156.7	45.8600	156.7	W
LLAW1D	LLAW1D	39.4600	156.7	Simplex	156.7	W
LFIRE2 (pend)	LFIRE2	39.4800	156.7	Simplex	156.7	W
LLAW3D	LLAW3D	45.8600	156.7	Simplex	156.7	W
LFIRE4	LFIRE4	45.8800	156.7	Simplex	156.7	W
VHF HIGH BAND						
VCALL10	VCAL10	155.7525	156.7	Simplex	156.7	N
VTAC11	VTAC11	151.1375	156.7	Simplex	156.7	N
VTAC12	VTAC12	154.4525	156.7	Simplex	156.7	N
VTAC13	VTAC13	158.7375	156.7	Simplex	156.7	N
VTAC14	VTAC14	159.4725	156.7	Simplex	156.7	N
VTAC17	VTAC17	161.8500	156.7	157.2500	156.7	W
VTAC17D	TAC17D	161.8500	156.7	Simplex	156.7	W
VTAC18	VTAC18	161.8250	156.7	157.2250	156.7	W
VTAC18D	TAC18D	161.8250	156.7	Simplex	156.7	W
VFIRE21	VFRE21	154.2800	156.7	Simplex	156.7	N
VFIRE22	VFRE22	154.2650	156.7	Simplex	156.7	N
VFIRE23	VFRE23	154.2950	156.7	Simplex	156.7	N
VFIRE24	VFRE24	154.2725	156.7	Simplex	156.7	N
VFIRE25	VFRE25	154.2875	156.7	Simplex	156.7	N
VFIRE26	VFRE26	154.3025	156.7	Simplex	156.7	N
VMED28	VMED28	155.3400	156.7	Simplex	156.7	N
VMED29	VMED29	155.3475	156.7	Simplex	156.7	N

NLEMARS	155.4750	none	Simplex	none	W
Current Name	***Rx FREQ***	***Rx CTCSS***	***Tx FREQ***	***Tx CTCSS***	***Bandwidth***
CLEMARS 1	154.9200	none	Simplex	Varies	W
CLEMARS 2	154.9350	none	Simplex	Varies	W
CALCORD	156.0750	none	Simplex	none	W
UHF					
UCALL	453.2125	none	458.2125	none	N
UCALLD	453.2125	none	Simplex	none	N
UTAC1	453.4625	none	458.4625	none	N
UTAC1D	453.4625	none	Simplex	none	N
UTAC2	453.7125	none	458.7125	none	N
UTAC2D	453.7125	none	Simplex	none	N
UTAC3	453.8625	none	458.8625	none	N
UTAC3D	453.8625	none	Simplex	none	N
CLEMARS 5	460.0250	Varies	465.0250	Varies	W
CLEMARS 4	460.0250	Varies	Simplex	Varies	W
SCMA C	484.2125	167.9	487.2125	146.2	W
SCMA E	484.2125	167.9	487.2125	167.9	W
SCMA N	484.2125	167.9	487.2125	156.7	W
SCMA W	484.2125	167.9	487.2125	173.8	W
SCMA D	484.2125	167.9	Simplex	167.9	W
CLEMARS 22	484.2375	none	Simplex	156.7	W
FDUMA	487.2375	none	Simplex	156.7	W
800 MHz					
ICALL	866.0125	156.7	821.0125	156.7	MW
ICALLD	866.0125	156.7	Simplex	156.7	MW
ITAC 1	866.5125	156.7	821.5125	156.7	MW
ITAC 1D	866.5125	156.7	Simplex	156.7	MW
ITAC 2	867.0125	156.7	822.0125	156.7	MW

VLAW31	VLAW31	155.4750	156.7	Simplex	156.7	N
VLAW32	VLAW32	155.4825	156.7	Simplex	156.7	N
NPSTC Name	***Short Name (6 char)***	***Rx FREQ***	***Rx CTCSS***	***Tx FREQ***	***Tx CTCSS***	***Bandwidth***
CALAW1	CALAW1	154.9200	none	Simplex	156.7	N
CALAW2	CALAW2	154.9350	none	Simplex	156.7	N
CALCORD	CACORD	156.0750	none	Simplex	None	N
UHF						
UCALL40	UCAL40	453.2125	none	458.2125	156.7	N
UCALL40D	CAL40D	453.2125	none	Simplex	156.7	N
UTAC41	UTAC41	453.4625	none	458.4625	156.7	N
UTAC41D	TAC41D	453.4625	none	Simplex	156.7	N
UTAC42	UTAC42	453.7125	none	458.7125	156.7	N
UTAC42D	TAC42D	453.7125	none	Simplex	156.7	N
UTAC43	UTAC43	453.8625	none	458.8625	156.7	N
UTAC43D	TAC43D	453.8625	none	Simplex	156.7	N
CALAW4	CALAW4	460.0250	156.7	465.0250	Varies	N
CALAW4D	CLAW4D	460.0250	156.7	Simplex	Varies	N
SCMA C	SCMA C	484.2125	167.9	487.2125	146.2	N
SCMA E	SCMA E	484.2125	167.9	487.2125	167.9	N
SCMA N	SCMA N	484.2125	167.9	487.2125	156.7	N
SCMA W	SCMA W	484.2125	167.9	487.2125	173.8	N
SCMA D	SCMA D	484.2125	167.9	Simplex	167.9	N
CALAW5D	CLAW5D	484.2375	156.7	Simplex	156.7	N
FDUMA	FDUMA	487.2375	156.7	Simplex	156.7	N
800 MHz						
8CALL90	CAL90	851.0125	156.7	806.0125	156.7	MW
8CALL90D	CAL90D	851.0125	156.7	Simplex	156.7	MW
8TAC91	TAC91	851.5125	156.7	806.5125	156.7	MW
8TAC91D	TAC91D	851.5125	156.7	Simplex	156.7	MW
8TAC92	TAC92	852.0125	156.7	807.0125	156.7	MW

ITAC 2D	867.0125	156.7	Simplex	156.7	MW
ITAC 3	867.5125	156.7	822.5125	156.7	MW
ITAC 3D	867.5125	156.7	Simplex	156.7	MW
ITAC 4	868.0125	156.7	823.0125	156.7	MW
ITAC 4D	868.0125	156.7	Simplex	156.7	MW
CLEMARS 9	868.5125	none	823.5125	156.7	MW
CLEMARS 8	868.5125	none	Simplex	156.7	MW
Current Name	***Rx FREQ***	***Rx CTCSS***	***Tx FREQ***	***Tx CTCSS***	***Bandwidth***
CLEMARS 21	866.2000	none	821.2000	156.7	MW
CLEMARS 20	866.2000	none	Simplex	156.7	MW
FIREMARS	868.9875	156.7	823.9875	156.7	MW
FIREMARSD	868.9875	156.7	Simplex	156.7	MW
FIREMARS2	866.9125	156.7	821.9125	156.7	MW
FIREMARS2D	866.9125	156.7	Simplex	156.7	MW

8TAC92D	TAC92D	852.0125	156.7	Simplex	156.7	MW
8TAC93	TAC93	852.5125	156.7	807.5125	156.7	MW
8TAC93D	TAC93D	852.5125	156.7	Simplex	156.7	MW
8TAC94	TAC94	853.0125	156.7	808.0125	156.7	MW
8TAC94D	TAC94D	853.0125	156.7	Simplex	156.7	MW
CALAW8	CALAW8	853.5125	156.7	808.5125	156.7	MW
CALAW8D	CLAW8D	853.5125	156.7	Simplex	156.7	MW
NPSTC Name	***Short Name (6 char)***	***Rx FREQ***	***Rx CTCSS***	***Tx FREQ***	***Tx CTCSS***	***Bandwidth***
CALAW9	CALAW9	851.2000	156.7	806.2000	156.7	MW
CALAW9D	CLAW9D	851.2000	156.7	Simplex	156.7	MW
CAFIRE1	CFIRE1	853.9875	156.7	808.9875	156.7	MW
CAFIRE1D	CFRE1D	853.9875	156.7	Simplex	156.7	MW
CAFIRE2	CFIRE2	851.9125	156.7	806.9125	156.7	MW
CAFIRE2D	CFRE2D	851.9125	156.7	Simplex	156.7	MW

Permitted Use Only: Reno VHF Public Coast Service Area #34, including California counties of Alpine, Inyo, Lassen, Mono, Plumas and Sierra.

Permitted Use Only: Southern California UHF TV-Band sharing area (primarily LA County).

Permitted Use Only: NPSPAC Region 6 (48 Northern California counties).