CROSSTALK

News Bulletin of the TRW Amateur Radio Club

Member, American Radio Relay League

SEPTEMBER 1986

** FD'71 ** FD'73 ** FD'75 ** FD'76 ** WAS ** WAC **

Garrett/W6TRW Repeater: 145.32/-.600(2A-PL) -- UHF: 442.000in/447.000out

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CALENDAR FOR SEPTEMBER AND OCTOBER

Wednesday	Each Wednesday, noon	Emergency Communications Team Check-in. 145.32 via repeater and simplex.
Friday	Each Friday, 7-8am	Club Breakfast, S Cafeteria, VERY informal, good breakfast for less than $2.00!!
Saturday	Sept 20, 9:00am	Amateur Radio License Examinations, Hesse Park, Rancho Palos Verdes. Next tests Nov. 15
Saturday	Sept 27, 8-11am	Swapmeet. Corner of Compton/Marine and Aviation, in Manhattan Beach. Seller's lot is directly behind the Standard Station. Sellers please DO NOT arrive before 0700!
Tuesday	Sept 30, noon	Club Meeting, R4/1041. Speaker is not confirmed at press time, but possibilities are a representative from Henry Radio or one of the ham equipment manufacturers.
Tuesday	Oct 14, after work	Executive Board Meeting. All members are welcome! At Shakey's Manhattan Beach, 2000 N. Sepulveda Blvd., just south of Marine Ave.
Tuesday	Oct 28, noon	Club Meeting, R4/1041.
Saturday	Oct 25, 8-11am	Swapmeet.
Saturday	Nov 15, evening	**Annual Club Banquet** Del Conte's Restaurant. More details inside!

***** **NOTE: Club Meeting is on September 30th - NOT September 23 as reported in last month's Crosstalk** *****

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General Meeting 26 August 1986 — **Paul Lukas, N6DMV**

Chris Wachs opened the meeting. **Announcement:** Next Club meeting is on Tuesday Sept. 30th NOT Sept. 23rd as printed in the August Crosstalk! The minutes of the last meeting were accepted as printed in the Crosstalk. We now have 80M through 10M capability in the Club station. The Club shack was cleaned by a dedicated crew and a 20 inch fan was installed to supplement the not-so-cool air-conditioner. The membership is at 215 now. The phone in the shack is a one-way affair, you can call in and only within the company, no outside calls can be made. This results is a lower monthly cost for the phone line. Do not forget to check in on the emergency net on each Wednesday at 1200 local time on the TRW repeater 145.32 MHz -.600 2A-PL. Next, our own Chris Wachs was called upon to speak to us on the JAS-1 satellite which was launched on the 12th of August. The audio from the launch site in Japan was translated and the English version was heard on our repeater with good audio quality. There were some nervous moments after the launch because this was the first launch of the type H-1 rocket, developed by Japan's National Space Development ency (NASDA). The rocket took off at 1345 hours from e Tanegashima Space Center in southern Japan. Informative articles on the rocket and payloads were in May and June QST and July and August Aviation Week and Space Technology. The prime payload was a Reflecting Geodesic Satellite (RGS) and, of course, JAS-1 (Japanese Amateur Satellite) rode piggyback. The first of it's kind Mode J (2 Meters uplink, 450 MHz downlink) 1 watt transponder worked perfectly and the satellite was turned over to hams after a few orbits. The satellite will also have a Packet store-and-forward bulletin board that will require a special external modem with your TNC as the uplink will be Manchester encoded. With the low earth orbit there will be a worst case +8kHz frequency shift due to Doppler effects. The JAS-1 satellite will provide about 8 accesses per day of up to 15 minutes each. Chris has orbital data for prediction programs. OSCAR 10 is very sick as the memory has crashed again and has not been able to be put back into operation. Some experts feel that the basic problem is the eccentric orbit of the satellite and the radiation doses are adversely affecting the NMOS memory. Thank you Chris for a very informative and interesting presentation. Some additional data: JAS-1 circles the earth 12.44 times a day, at an altitude of 900 miles, covers to 50° to the north and south, the 20 WPM CW beacon is at 435.799 MHz, 2M access 145.9 to 146.0 MHz, downlink 435.8 to 435.9 MHz. To obtain the downlink frequency subtract the uplink frequency from 581.8. The door prizes included 3 calculators, 1 AC multistrip, 1 30 drawer stroage cabinet. 16 people attended the meeting. For more infor on JAS-1 see the June issue of QST, page 71. The meeting was adjourned at 1159 local time.

Wanted -- For Sale -- Freebies

For Sale: Kenwood AT-230 Antenna Tuner - covers all 9 Amateur HF Bands. $100 firm! Contact Paul Herbert, KG6CR, (213)536-3404 (work).

From the Library — George Lee, W6IOW

What's new in the September issues of:

QST: An All-Band 1.5 KW Output 8877 Linear.
Review of the MFJ-1270 TNC.
Review of the KLM 220-22LBX 220MHz Yagi.
Packet Radio in Emergency Communications (Packet Station in a suit case).

HR: Analyzing 80 Meter Delta Loop Arrays (NEC program assesses performance in presence of a "real" ground)
NE5205 Wideband RF Amplifier (small signal to 600 MHz for about $2).
Remotely Controlled Stations (Remote Base).
A Very Sensitive LF or HF Field Strength Meter (Active Meter).
Low Cost Spectrum Analyzer with KiloBuck Features (for about $50).

CQ: Review of Ten-Tec Corsair II Xcvr, Part I.
The Unexpurgated Transmatch, Part II (Roll Your Own)

73: Not Yet Arrived.

The Library has a number of duplicate copies of QST for 1960's and 1970's donated by members. Any organization or individual who could make use of them can have them for free by contacting George Lee, 535-6247 or 535-6150 or my mail station is 138/5659.

Tidbits from the Jolly Little S...!

A new potential ham joined the ranks of the populace of the planet earth on August 12th, as Jeff (N6JI) and Sara (KCØHU) received their 3rd harmonic, Charles. At last report mother and son were doing well.
Paul Herbert, KG6CR, was roaming the Swapmeet last month requesting donations to help defray the cost of Porta-Potty when he was asked by one contributer where the unit was. When Paul informed him that it was the green structure in the corner of the parking lot, the gentleman replied "Oh, I thought that was a 10 Meter cavity!"
In this issue you will find a rather lengthy article about Amateur Radio and the Great California Earthquake that is predicted for the future. The article does not present a pleasing picture. The article came to us from the Los Angeles Area Council of Amateur Radio Clubs (LAACARC) and deserves the greatest exposure possible. I urge other newsletters to reprint it so that as many hams as possible get to read it. It will conclude next month with some answers to the issues presented this month.
For those of you that may be interested, here is my receipe for Buttermilk Pancakes that I used for the Field Day Sunday Breakfast.
Ingredients

1+1/2 cups of flour	2 eggs
1 teaspoon baking soda	1 tablespoon vegetable oil
1/2 teaspoon salt	2 cups buttermilk
1 tablespoon sugar	

Sift the dry ingredients together (when was the last time you got your sifter out?). Beat the eggs and add the oil and buttermilk and mix the wet ingredients. Add the dry ingredients to the wet and mix only long enough to get a smooth mixture with small lumps. Mixing too long makes the pancakes tough. Makes about 18 4 inch pancakes.
Cooking the pancakes requires the proper heat under the pan. You cannot speed up the cooking by raising the heat, you will only burn the pancakes. The heat will determine how dark or light the pancakes are when they are done. If you want to wait and serve all of the pancakes at one time they can be kept warm in a 150° oven without futher cooking or toughening. Serving on plates warmed in the oven keeps the pancakes warm while you eat them. Warming the syrup helps too; 20 seconds in the microwave oven will do it.

New Members - - Old Members

Welcome to the Club:
Dick Church, N4ARO who has recently re-upped after an absence from the Club. Dick holds an Extra ticket, is ARRL member and enjoys contests on 160 Meters.
Michael Borden, KA5WBS, holder of a Novice license and licensed for all of 16 months. Get that Technician ticket Mike and join us on the repeater!
Richard Warner, formerly WV6IDX, who recently passed his Novice exam and is awaiting his license in the mail.
Drew Gregory, KA6BFI, who has re-upped with the Club. Drew holds a General License and has been a ham for 8 years, enjoys HF and VHF and working RTTY.
Ray Rollack, KH6JKY, holder of an Advanced ticket and a ham for 9 years. Ray didn't say much else about himself on the application but with a KH call he must have spent some time in the Islands.
Welcome to you all and hope to give you an "eyeball QSO" sometime soon.

Manhattan Beach 10K Run — John Keller, N6JLS

The newly formed Manhattan Beach Amateur Radio Club (MBARC) has been asked by the City of Manhattan Beach to provide communications for the Manhattan Beach 10K Run to be held on Saturday, October 4, 1986. The MBARC was originally formed to answer a threat to the existing laws governing the installation of antennas and towers within the city. The city is interested in stimulating the Amateur Radio operator presence in the city for emergency communications and has installed a 2 Meter radio in the basement of the City Hall. The 10K Run is one of the largest attended 10K's in Southern California and the city is interested in keeping it a safe and enjoyable event. It is important that Amateur Radio make a good impression this time out, so the MBARC has asked f assistance from the TRW/ARC in this area. What is reall needed is experienced operators who have provided communications at other races and can help with some of the planning. However, anyone who is interested in helping will be greeted with open arms! The race course is within the city limits and ranges from the Strand to close to Sepulveda Blvd and from Manhattan Beach Blvd to Rosecrans. There is some hilly terrain in the area that may make simplex operation difficult without a relay. It is expected that 2 Meter frequencies will be used as most hams have 2 meter HT's. If you are able to help, please contact John Keller ASAP at (213)545-4019 (home) or (213)535-0116 (work).

Banquet Preview

The TRW/ARC Annual Banquet will be held on Saturday, November 15th in the King's Room of Del Conte's Restaurant. Choice of meals will be Baked Chicken and Prime Rib. Those who attended last year will tell you that the food was excellent and the room was good for the number of people we usually have attend. The cost for members and one guest will be $9.00 each and for non-members and additional guests it will be $14.50 each. Please send your check for the proper amount and your choice of meal to the Club Treasurer, Dave Stockwell at mail station R3/2170. If you are retired or an associate member, mail your check AND DINNER CHOICE, to the Club address found on the back page of the Crosstalk to the attention of Dave Stockwell, R3/2170. Don't forget that there will be $150 in door prizes for those attending a well as a great meal and an as yet unannounced gre speaker. No one has been lined up as speaker but one suggestion was Dick LaBelle, W6FXN, who has that earthquake monitoring equipment tied into his repeater. So set aside Saturday, November 15th on your calendar for an evening of interesting conversation and good food and just a darn good time!

Putt's Law
Technology is dominated by two types of people:
Those who understand what they do not manage.
  ose who manage what they do not understand.

Executive Board Meeting 9 Sept 1986 — Paul Lukas, N6DMV

President Chris Wachs opened the meeting at 1735 local time. Treasurer Dave Stockwell disclosed the financial standing of the Club. The next Picnic will be on Tuesday, September 16th NOT Friday, September 16th as printed in the August Crosstalk. The minutes of the last EBM were accepted as printed in the Crosstalk. Past President Walt Pearson is revising the Club Constitution to conform to new SEA standards. He enumerated some of the changes to be incorporated in the new constitution. Chris Wachs commissioned Walt and Paul Herbert to fine-tune and finalize the proposed document to be presented to the membership for a vote to adopt. John Keller volunteered to have the draft put on the computer. The phone in the ham shack has been reconnected and is good only for calls within TRW and incoming calls, there is no outside calling capability. The new number is (213) 535-0269. The phone line will be used for the control link for the remote base station of Mike Aust. Chris appointed Bob Hume and Jim Cox (in absentia) to coordinate the rules/controls and operation of the remote base. Bill Daley reported on the past LAACARC meeting and turned over handouts acquired there (newsletters, JAS-1 information, earthquake preparedness article, update to the Delegate Handbook). John Keller gave some cost data on what share of Full Memebers and Associate Members dues goes for the printing and mailing of the Crosstalk. He also announced a 10K run in Manhattan ach on October 4th. Planned activity is from 0730 to JOam. Volunteers are needed wth HT's to help with communications. Interested parties may contact John at (213)545-4019 (home) or (213)535-0116 (work). Chris adjourned the meeting at 1840 local time.

Bill of Lefts

1. Work hard and you'll go left to the top.
2. Always know your leftful place.
3. Never be right holding the bag.
4. Remember that might makes left.
5. Attend church to hear the Left Reverend.
6. Strive to lead a lefteous life.
7. Exercise your birthlefts.
8. Be left as rain.
9. Economize by eating rightovers.
10. If you want it done left, do it yourself.

Those of you who are left handed (like yours truely) should appreciate the above. By the way, the word sinister comes from the Latin sinistra meaning left handed. The Romans felt that the left hand was the weaker of the two and that left handed people were less moral than right handed persons. The French gauche means left and in English someone who is gauche is considered awkward and whose company is not enjoyed. Also the French for right is adroit, which in English has been taken to mean well coordinated. From my experience, there are more intelligent left handed persons, percentage wise, than there are intelligent right handed rsons. I think it comes from having to learn how to ve in a right handed world. No, I would not advocate changing our driving to left side of the road, but I would love to have a left handed moustache cup!

The trouble with being punctual is that no one's there to notice.

The California Earthquake — Robert S. Hoover, KA6HZF

California is going to have a catastrophic earthquake within thirty years. It's as inevitable as it is unavoidable, a natural geophysical phenomenon we can neither prevent nor avoid.
The time window of the earthquake, it's approximate intensity and the general location of it's epicenter have been known for some time but little has been done to prepare for it. Great Earthquakes are shy things, less than two occur each year throughout the world and the last one to strike California was 1906. We call it the San Francisco quake, but the epicenter was probably a hundred miles north of there.
Having no experience with Great Earthquakes, most organizations have done very little to prepare for them. Amateur radio is perhaps the least prepared of all.
If you're like most people, your first thought is it won't be as bad as all that - California has had earthquakes before and come through okay. That attitude permeates the thinking of existing disaster organizations and it's as dangerous as it is inaccurate.

What We Must Plan For

There are earthquakes and there are Major earthquakes and then there are these horrendous killers called Great Earthquakes - seismic events with an intensity of Richter 8 and up.
In 1983 an earthquake struck the little town of Coalinga and shook down some older buildings. No one died but the media loved it, calling it a Major quake and milking it for all they could. As earthquakes go Coalinga was strictly a non-player. Unfortunately the town was almost on top of the epicenter.
In 1971 a Major earthquake struck the San Fernando Valley near the town of Sylmar. It destroyed a newly constructed Vetrans Administration Hospital, damaged another and ruined many commercial buildings. Sixty eight people died and 30,000 living below an old earthen dam were evacuated. The Sylmar quake was about one thousandth as powerful as the predicted Great Earthquake.
On Good Friday, 1964 a Great Earthquake struck Alaska. Sixty thousand square miles of terrain was uplifted, some as much as fifty feet. Anchorage suffered heavy damage to modern buildings and roads; homes and hospitals were destroyed. Anchorage was more than 200 miles from the epicenter.
The Great Earthquake due to strike California will be ten thousand times as dangerous as the Coalinga non-event; a thousand times as damaging as the San Fernendo quake. And it's epicenter will be scant miles from the most densly populated region of Southern California.

Damage We Can Expect

Southern California gets 90% of it's water from some place else. The earthquake will rupture the aqueducts and damage the distribution systems. Some local dams will fail. Five of the seven major power lines will fall. All oil and gas pipelines will break or be automatically shut down. All major highways and rail lines will be severed. And we are not prepared.
Estimates of dead and injured vary according to the time of the event. They range from 3,000 to 60,000 dead with hundreds of thousands injured. Hospitals which survive the quake can't begin to deal with the casualties. People will die for want of simple first aid, from shock and dehydration.
The earthquake will stagger our nation's economy. Projected estimates of property damage and business losses run into the hundreds of billions of dollars. Many industries will never recover from the Great Earthquake, even some industries in other regions. Southern California is a major player in aerospace, entertainment, electronics and computers. Los Angeles is the hub of transportation for the entire Southwest, its loss for even a few days will have a devastating impact on distant cities.
Studies by various agencies and committees make it clear the lives of all Americans will be touched in some way by

the California Earthquake. Our only recourse is to prepare for a rapid strategic recovery. But we are simply unprepared.

Geographically Southern California is remote from the rest of the country. Only four major highways and three rail routes link us to the nation. Nearly sixteen million Southern Californians are enclosed by a desert barrier stretching hundreds of miles to the east. To the north lies fifty miles of mountainous terrain and the ocean bars the west. San Diego to the south relies on the Los Angeles basin for its water, food and energy. The Great Earthquake will virtually isolate the region for up to two weeks. Two weeks without water, power or gas. Two weeks without the protection of firemen or police.

This will be the greatest natural disaster to ever strike our nation and it will go down in the history of amateur radio as our blackest hour because we were not prepared. For the first time hams will have failed their trust and the world will wonder why.

Precise prediction of the event could save thousands of lives and toward that end we are funding many research programs. In our uniquely American way we freely share this information with any nation facing a similar seismic risk. Chile and China read our reports as does Russia, Peru and Japan. It's ironic that many Russians are better informed of the threat than are most Californians.

Why Is Ham Radio Unprepared?

We've been preparing for the wrong diasater, that's why. To compound the error we've been told to practise the wrong kind of communications.

We aren't prepared for a Great Earthquake in Southern California simply because an earthquake is not a blizzard. Nor is it a spring flood. And it's not a tornado. People will die of exposure and drowning, and there will be flooding and buildings will be ripped to pieces - but it's going to happen all at once; all at the same time and all in a matter of minutes.

An earthquake is unique among natural disasters because it strikes without warning and destroys roads, structures and communications in one devastating blow. Then comes fire, with few firemen and falling water pressure. Worst of all, a Great Earthquake is not a local event, its damage can cover thousands of square miles. We can't expect help from neighboring towns, they're having their own earthquake, and hoping we can help them.

After the Great Earthquake it will take days for relief efforts to take hold. We'll be on our own. And we aren't prepared for it.

Our Disaster Plan is a Failure

A century of experience with limited-area, weather-related disasters has evolved a basic disaster plan intended to meet virtually any situation. But the basic plan contains many assumptions which simply don't apply to Great Earthquakes.

Designed around a central headquarters housing the disaster management staff and its supporting communications system, Central Site plans assume there will be time and means to notify key personnel; to "activate" their plan. They assume outside help will be quick to respond. Damage to roads or to the building, which would prevent it being used are not considered in the plan.

With such a long history of success most disaster literature doesn't bother to explain organizational structures; Great Earthquakes are simply too rare to have influenced our planning.

No single document covers all aspects earthquake preparedness. The problems facing communicators would require several volumes alone. The bibliography supporting this article is but a tiny fraction of the material available. To become fully aware of the unique problems in preparing for a Great Earthquake requires an intimate knowledge of many subjects not addressed by existing disaster plans. Many disaster managers are either unaware of the material or haven't taken the trouble to read it.

Central Site plans are unsuitable for dealing with wide-area, catastrophic events. A Great Earthquake requires a change in our strategic planning.

Earthquakes Don't Read Either

This will come as a great shock to most disaster planne but the Great Earthquake hasn't read your plan. It hasn't attended any of your drills. Far too few in the disaster business fully appreciate the opponent and their lack of knowledge is reflected in existing plans. Underestimating the danger of a Great Earthquake can be the last mistake you'll ever make.

How dangerous is it? Any Disaster Manager who knows his stuff would rather prepare for nuclear war. War is a threat faced by the whole nation, preparations would be well funded and centrally coordinated. War offers some element of warning; earthquakes give no warnings.

We Need a Plan That Works

If we're to be ready for the Great Earthquake we must adopt an All-Hazard, Multiple Site plan. Central Site plans work well for limited area disasters and a central site is needed for the mundane chores of disaster organizations, but lack the capacity and flexibility to deal with wide-area, catastrophic disasters. Central Site plans should be retained only as a sub-set of a more comprehensive All-Hazard plan.

We must design our plan around the local schools, tactically we've no other choice. Schools are within areas of maximum residential population but removed from areas of greatest structural or industrial hazard. The location of the local school is known to nearly all residents of a given area. Operationally schools are ideal, with open areas for helipads and structures which are relatively quake resistant.

There's a fourteen percent chance the earthquake will strike while schools are occupied and it's likely we won't be able to mount any effective relief efforts until our people make sure their families are safe; they'll head for the schools anyway.

Multiple Site planning is particularly well suited for getting our communications system into operation quickly. Communicators need only go to the nearest school. This means a communicator is still useful no matter his location when an earthquake strikes, he simply finds the nearest school and checks in. If he's a Key Man to the disaster plan he may be airlifted to whatever site is chosen as Command-Control headquarters or he can use locally available communications resources to do his job. He need only become a part of the network to be able to make decisions.

This illustrates a point overlooked in existing plans - it isn't the building which is necessary to the relief effort but the people. A comprehensive plan must be designed around decision makers, not around the building housing them. The communication plan must be flexible enough to acccomodate a scattered command structure and still function. This calls for a design with a high degree of modularity and fully portable, self-contained communications equipment. Our present plans don't have these features.

Our Communication Plan is a Failure

Traditional disaster communication planning assumes existing radio systems such as fire and police will remain in place but will be overloaded by the disaster. Hams are counted on to provide extra capacity.

Limited local failures of the telephone system are anticipated and amateurs are expected to replace critical telephones with radio links.

Communications unique to the disaster such as coordination between refugee centers also falls to ham radio. Health and Welfare traffic is a traditional role for us and makes up the bulk of traffic following any disaster.

This neat summary becomes fiction when edited by an earthquake.

To assume a form of communication - radio or telephone - will survive a Great Earthquake is dangerous. Modern public safety communications uses repeaters, just like we

do. A critical analysis reveals less than 5% of existing repeaters, amateur or commercial, will withstand a Richter 8+ event.
Before any repeater is included in the planning for a catastrophic event it should be hardened, completely self-contained and be accessable. Few of Southern California's hundreds of repeaters meet this criteria.
Existing disaster communications plans and the sterile drills they spawn are largely comprised of "Ham as Telephone" roles. In many cases the plan is designed around the drill(!). When something goes awry during a drill it's called a "disaster" and everyone finds the play on words very amusing.
To use a licensed amateur radio operator and his/her equipment as a telephone is ludicrous. It doesn't take a license to key a mike. There will be an overwhelming demand for communications and communicators following the Great Earthquake, a need greater than we can fill even if every ham is pressed into service.
Many critical communications problems can be resolved with a simple fixed link between two points. We should be identifying these needs, seeing the proper equipment is installed and teaching people to use it. When the earthquake strikes, one of the first resources we'll run out of is hams. To have one standing around pretending he's a telephone can cost lives instead of saving them.

Real-World Disaster Communications

Communications is the glue binding together the myriad elements of modern Disaster Management. The disaster manager doesn't care who gives him the glue - RACES, REACT or a man off the street. Anyone who can cut the mustard gets the job.
There are three main roles for communications in modern Disaster Management: Damage Assessment, Command-Control, and Health and Welfare. Most hams are only familiar with the latter.

Damage Assessment

This isn't a traditional role for hams because most disasters, being of limited area and weather-related are quickly assessed by professional, salaried personnel. Earthquakes are different. Following a Great quake there will be hundreds of road/bridge failures and thousands of fires. There won't be enough professional public safety personnel to go around. This creates a deadly paradox for the disaster manager: he must apply his limited relief resources with the wisdom of Solomon but he doesn't know where to apply it. He has to determine the areas of greatest need in both the immediate, tactical sense and for longer term, strategic goals. To do this he needs an accurate picture of the damage.
The disaster manager - the collective title for a staff of experts - must define the area in terms of damage and hazards. It calls for dirt bikes, ultra light aircraft and guys with strong legs. The status of facilities and the extent of damage must be communicated to the disaster manager by the best means, usually radio. And it must be communicated in the precise language of damage assessment.
Knowledgeable disaster managers would like to use hams in this role but find few who are young enough. Damage assessment is a physically demanding job that requires many skills in addition to the ability to communicate. Given the time window of the event, training expended on older hams will be largely wasted.

Command-Control Functions

The disaster manager must monitor the application of his relief resources. The resources may come from any source, from many different agencies with differing communication equipment. To keep track of everything requires a sophisticated Command-Control communications system linking them together.
Command-Control is a job for Super Ham. No communicator who has bashed his way to an Advanced ticket need apply. There's a need for technical expertise, common sense and a cool head - qualities growing rare in our shrinking ham community.
Age disqualifies many of us for damage assessment duties but Command-Control functions are sedentary. If they have the mental toughness it's ideally suited for older hams. With its specialized language and procedures Command-Control has a marked learning curve, and while complex, the material is easily mastered by most hams. But we will need hundreds of hams in this role. Is it practical to train a sixty year old ham for a task which may not occur for thirty years?

Health & Welfare Traffic

Ham radio has always borne the brunt of Health & Welfare messages following a disaster but we aren't prepared for the volume of traffic a Great Earthquake will produce. Our failure will contribute the the virtual collapse of the telephone system across the nation.
There are about fifteen million Californians in the area of hazard, about 9.2 million in the area of maximum risk. After the quake we can expect between 900,000 and 3.2 million pieces of outgoing H & W traffic.
Approximately 45 million Americans have family, fiends or business interests in Southern California. In the first few days following the quake they will generate between nine and fifteen million pieces of incoming H & W traffic.
We just aren't prepared for it. Even the low estimate of outgoing traffic will swamp our facilities. We are too slow and too poorly organized. We're using the wrong equipment and the wrong procedures.
Across the nation the National Traffic System will bog down as it tries to handle messages into and out of the disaster area.
When we don't respond to queries it will cause a kind of national paranoia. Lacking hard facts, rumors and fears will escalate. People will generate duplicate messages hoping one will get through. They'll keep trying the telephone despite all requests not to.
We're too old for Damage Assessment, we haven't the skills for Command-Control and we lack the capacity for Health and Welfare. The people depending on us are in for a rude surprise.

What Price Failure?

We've got a good record as disaster communicators but we've never faced a Great Earthquake. For years we've been eating out on our reputation but it's like a high-priced baseball player lionized for hitting a lot of home runs. At his salary he's supposed to hit homers - as licensed amateur radio operators we're supposed to provide emergency communications.
When was the last time you read the regulations? You and the government have entered into a contract; the government grants you various privileges and you in turn agree to help out with emergency communication; it's the only form of communications specifically mentioned.
There's no such thing as a free lunch; Amateur Radio is not a hobby, it's a "Service" (check the regs). We're allowed to use commercially valuable portions of the spectrum because we've made a contract to provide a needed service during a disaster.
So the Great Quake hits and finds us unprepared; what do we do? Shrug our shoulders and say we did our best? Promise to do better the next time? I don't think that's going to work, not with thousands of dead behind us. Following the earthquake will come years of hearings and finger-pointing, trying to find fault and assess blame. If we aren't prepared it's likely to mean the end of ham radio as we know it. There won't be a second chance. Disaster Managers will make sure they have reliable communications "next time", and if the only frequencies available are ours, that's what they'll shoot for.

(ed. This is not the end of this article - only as much as I could fit this month. Next month this will finish with; Can We Prepare in Time?, What Can We Do to Prepare?, Modern Disaster Communications Equipment, One Final Chore for Ham Radio, and Summing Up. I **know this is long and unpleasant to read, but you owe it to yourself to read it, understand it, and decide what YOU are going to do.**