SCMA TOURS THE LAFD METRO DISPATCH CENTER

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Welcome to the 4th Quarter Edition of The Monitoring Post covering the months of October, November and December 2012. The Monitoring Post is the official publication of the Southern California Monitoring Association – the SCMA.

On our cover this issue is a photo by SCMA Member Kent Cullom, LA-111 showing a portion of the new Los Angeles Fire Department Metropolitan Fire Communications (MFC) dispatch center.

This holiday please remember the following folks that support the S.C.M.A. thru-out the year! Buy locally and let them know that you support them too.

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From The Club President
Rick Di Fiore, LA-101

Hello Everyone,

Well I hope everyone is doing fine and you guys are making all the meetings at our new location at “Dinah’s Family Restaurant” at the foot of Westchester hill.

I would like to thank Rich, N6CIZ, for stepping in and covering the two L.A. City Fire Department tours we just had. On the November 3rd, tour we got the ok for taking pictures and Kent, LA.111 and Rich, LA-104 got some super shots of are new communications center. No other group has been in there yet, but I have to say that the Chief’s, the men and women of the LAFD showed us and explained everything to the two groups of SCMA members that took the tour.

I would like to welcome all are new members who have join up with us at SCMA in the past few months, we do look forward to seeing you all at the next meeting.

I would like to let everyone know now to start saving up some money for the Christmas Party raffle...this year we have out-done are self’s and we will have a “Digital” police scanner to give away, along with some other super great gifts so heads up! Put a dollar a night away and you’ll have 31 bucks for the raffle it’s easy to do. This year’s Christmas Party is at our new meeting location Dinah’s.

As we get ready for the New Year will there be a world to wake-up to? If the Mayans aren’t correct, next year we will have some more great club tours and guest speaker for everyone. See you guys at the November 14th, meeting, dinner and talk at 6:00 p.m., and meeting at 7:30 p.m. please try not to be late.

Best of Monitoring to You, 73’s...Rick

WA6KFI / LA-101

Visit our Web Site: www.SoCalScanner.com
Members of the SCMA were invited to tour the Los Angeles Fire Department’s new Metropolitan Fire Communications (MFC) facility at 500 E. Temple Street. The tour was divided into two groups, one on October 25 that was led by LAFD Chief Glen Miyagishima, the second on November 3rd led by LAFD Chief Greengard.

During the early morning hours of February 28, 2012, 911 call taking and resource dispatching moved locations from the Operations Control Division (OCD) four floors under City Hall East to the new facility – and what a change it is!

Construction of the 120,000 square foot facility which includes Metro Fire Communications, Fire Station 4 and the City’s Emergency Operations Center, began on January 19, 2006 as part of Prop “F” funding.

The old OCD has become the Department’s back-up dispatching facility and the radio call sign "OCD" is no longer operative. Now, all inbound and outbound radio transmissions use the call sign, “Metro.” The Coldwater back-up dispatch center is no longer operational.

While technology abounds at Metro Dispatch, it takes highly trained personnel to use it. To begin the training, members must have a minimum of four years of field experience as firefighters. Once selected for dispatch training, members begin an arduous nine-week 40-hour-per week classroom training program. This training consists of learning the Department’s dispatch protocols, fire station locations, and specialty apparatus locations throughout the City.

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LAFD Metro Dispatch

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Following the classroom portion of the training, members are required to utilize their newly learned skills by working 20-24 hour shifts on the dispatch floor. Each of the newly trained dispatchers has an experienced dispatcher assigned to them as their trainer and mentor. Once the new dispatchers complete the more than 800 hours of training, they are ready to begin their new assignments as one of the LAFD Dispatchers assigned to Metro Fire.

History of the LAFD Radio System

In 1934, the Los Angeles Fire Department installed Los Angeles Police Department radio receivers and later transceivers exclusively in fire boats and Battalion Chiefs’ cars. But the Department continued to rely primarily on telephones and street-corner fire alarm boxes for field communications. The Westlake Signal Office on 6th Street near Alvarado, and the “Coldwater Signal Office” on Mulholland Drive, would often phone LAPD Communications when they had fires or other urgent messages for Battalion Commanders.

The actual fire calls were seldom broadcast over police radios as the Fire Department remained skeptical for years about the dependability of two-way radios. Instead, the Chiefs were simply told “Phone Westlake (or Coldwater).” The Chiefs carried telephone handsets in their cars, and would stop at the nearest fire alarm box, plug in, and receive their information from their respective Fire Department signal office.

It wasn’t until 1946 that LAFD engines and trucks became equipped with two-way radios. Configured in the 33-MHz band, the frequencies from this original allocation were used into the late 1980’s.

Prior to modernization in 1972, LAFD dispatch operations were conducted manually in three separate locations throughout the City: Westlake, Coldwater and San Pedro Signal Offices. After a comprehensive study, consolidation of the three older dispatch sites into the new OCD in Level P-4 at City Hall East occurred. Implementation of the first generation computer-assisted “Fire Command and Control System” was not far behind.

Today, every field member of the Los Angeles Fire Department is equipped with a hand-held radio which provides them with a communication link to MFC as well as every LAFD resource in the City. This system operates on 18 dedicated voice radio channels utilizing the 800 MHz band in a conventional analog format. We’ve come a long way!
LAFCD Metro Dispatch

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Personnel

There are 75 Firefighter III/Dispatchers, 9 Captains, and 3 Battalion Chiefs assigned on platoon duty at Metro Fire Dispatch. These personnel are equally divided into three platoons working the same 24-hour shifts as Neighborhood Firefighters. While on duty, the 25 Dispatchers and 3 Captains, all of whom have field experience and are certified as Emergency Medical Dispatchers, are scheduled to work on the “floor” by alternating watches at various times during their 24-hour tour of duty.

The number of Dispatchers and Captains scheduled on the floor is normally 1 Captain and 11 dispatchers. However, based on the Departments emergency needs, when necessary, all personnel can be summoned to the dispatch floor to augment the number of members on the dispatch floor.

In addition to the members assigned to platoon duty at MFC, a small army of civilian and special-duty uniformed personnel work behind the scenes in the Dispatch System Support Unit to keep this vital operation up and running.

Dispatching

An available calltaker answers the emergency call and enters the incident type and location (if the call is a 9-1-1 call, the location is automatically entered) into the computer. An identifying number is assigned automatically to the incident and the location is checked against the street index file by the computer. The computer determines the closest fire station, unit availability, and displays a recommended assignment of companies. The Dispatcher is also notified by the computer of any other incidents in progress within 1,500 feet of the new incident.

EMS incidents require the call-taker to adhere to written protocols that include appropriate “key questions” and when indicated, pre-arrival instructions. “Key questions” are designed to ensure that the proper level of service is dispatched to every emergency medical incident while pre-arrival instructions help to provide comfort, and oftentimes life-saving instructions to citizen rescuers on scene prior to the arrival of Fire Department personnel.

The Los Angeles Fire Department is the only major metropolitan fire department in the United States that provides its citizenry with the benefit of highly trained dispatch personnel with years of field fire and EMS experience.
LAFF Metropolitan Fire Center (MFC) Dispatch. Photos by Kent Cullom, LA-111, and Rich Sauer, LA-104. See more photos online at SoCalScanner.com
Amateur Radio Emergency Services and Disasters

Author: Don Tuite

The second morning after Hurricane Sandy hit the East Coast seems like a good time to think about ham radio and emergency response issues.

I got involved in these issues myself when my neighbor, Dave, told me about his experiences after the Loma Prieta earthquake in 1989.

Dave’s a lawyer, so he was down at the Courthouse when the quake struck. At the time, the courthouse and the police station were co-located. The police station had (still has) a ham radio station (HF, VHF, UHF) on the premises. Those were both good things, because what there was of a public safety communications structure in Northern California came down with the quake, and for all anybody knew, so had the overpasses on 101 and I-280, the main north-south corridors. (They hadn’t, but were rumored to.)

For the first long hours, the mayor and the police and fire chiefs had no idea what was going on. During that period, Dave, who was part of a trained and drilled ham radio emergency services organization, got on the air, into an emergency net and filled them in.

You’re probably thinking: That was 1989. All they had was spotty Gen-1 cell coverage. Today, the mayor and the chiefs would be communicating on their iPads before the first aftershocks rippled under their feet.

So here’s Important Thing #1:

1. Even today, the infrastructure for cellular communication runs mostly on underground fiber.

Fiber breaks. I know a place around here where, a few years ago, some persons not yet publicly identified, went down some manholes and cut a few fiber links. In the ensuing hours, people in hospitals, ambulance services, police and fire stations, all thought, “Gee, this is a slow night.”

Citizens who were calling those emergency-response guys couldn’t get through by voice, so they did what? They texted.

Texts looked like they were getting through, but they were actually just being buffered in the cell towers. Fortunately, it was a slow night. Eventually, hams did play a part in getting things straightened out, but it took most of the night and into the morning.

Now, here’s Important Thing #2:

2. Ham radio has changed; many citizens’ desire to serve in emergency communications is a big part of that.

When I got my general license in 1960, I had to take a bus and a subway to the Federal Building in downtown New York, demonstrate an ability to send and receive Morse code at 13 words/minute, draw a Hartley oscillator, and calculate some simple resonances and stuff. Today, the code requirement is gone, and most of the questions are about differences among various operating modes and regulations. Most people can sit through a cram course and pass the test the same day.

In my experience, the reason many of them are doing that is to get involved with emergency communications. (Amusingly, some of them also go on to become CW DX-hounds for the sport of it.)

Now here’s the most important thing:

3. One can’t just get a license, wait for a disaster, and show up.

You’re a liability if you haven’t had training. The guy behind the glass at the police station won’t give you the time of day. This is not a decision you make and sit on until the stuff hits the fan.

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Amateur Radio and Disasters

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You have to work at it. The best place to start is with Community Emergency Response Team (CERT) training. That’s because it’s more important that you and your neighbors work together to secure your home and neighborhood and collect some information about damage and injuries to communicate to the public safety people than that you show up and immediately get cluelessly underfoot.

CERT training will also introduce you to the Incident Command System, giving you some idea of what might need to be communicated, and by whom and to whom. There’s a choice of potential organizations. The classic is the Amateur Radio Relay League’s (ARRL’s) ARES and RACES organizations.

But that’s not the only option, and you may find that, in your area, other groups are better organized, or have better leadership, or for whatever reason are more compatible with you. I’m a member of the local ARES group, which has excellent organization and a wide range of practice activities. (For example, you have no idea how challenging it can be to participate in a networking operation until you have been involved in keeping up with all the groups participating in a city Fourth of July parade. Or with a day-long bicycling event for hundreds of participants over a hundred-mile course with sag-wagons, aid stops, lost bikers, and terrain that challenges the use of repeaters.)

Alternatively, in some areas, the Red Cross may be the most interesting group. When one of our communities had a major gas main explode, killing eight people and leveling 35 homes, there was a massive evacuation, and the job of the Red Cross was to manage the task of finding food and shelter for all those people. It was a massive logistics effort that the trained Red Cross hams executed brilliantly.

Locally, we also have a special unit of volunteer communicators who work with the county Sheriff’s organization, particularly on Search-and Rescue activities. These are all good alternatives, but you wouldn’t have time to work with them all. It’s a good idea to look around before you decide where to commit your good intentions.

4. You will learn useful stuff.

Quick! What’s the most unexpectedly dangerous kind of common vehicle in a highway crash? My CERT trainer, a Sheriff’s deputy, says it’s a pool-services truck. Mix those chemicals and you can send out a cloud of chlorine gas across a whole neighborhood. That’s good to know any time you’re out on the freeway.

Maybe more importantly from a ham radio perspective is that you learn where stuff is. Most of our local hospitals, schools and firehouses, even the manager’s office at the local general-aviation airport, have ham antennas, at least for 2-meters and 440-MHz. Where are the antenna drops? The local volunteers know, and without that knowledge, the drops are useless.

Then, what’s the drill for getting into the police station? What do you say at the intercom by the door? Once you get in, where’s the ham radio equipment? How does it work? How do you run a net with simplex, if that’s what’s called for? What are the fallback plans when Plan A is a bust? What’s it like to “shadow” a politician or an incident commander during an event? There’s stuff you learn from being taught and stuff you learn from doing.

You may or may not have a ham license, or if you once had one, it may be defunct or out of date. Or you may be young enough to have decided that ham radio is just too “twentieth-century,” too much “getting the serum through to Nome” to be relevant. Well, yeah. Until the next time the text messages start backing up in the cell-tower buffers and the freeways are blocked by fallen overpasses. . . or the subway tunnels are full of seawater. Give it a thought. You’re needed.

This article originally appeared in Electronic Design
By Ryan Gallagher

Tracking cell phones by tricking them into operating on a bogus network is a law enforcement tactic shrouded in secrecy. Now the FBI is under pressure to release information about it—but the bureau doesn’t want to let go of 25,000 pages of documents on sophisticated cell surveillance technology.

In an Arizona court case last year (U.S. v. Rigmaiden), it emerged the FBI had used a “cell-site simulator” in order to track down a suspect. The portable equipment, sometimes described as either an “IMSI catcher” or a “Stingray,” covertly sends out a signal that dupes all phones within a specific area into hopping onto a fake network. The spy tool can force targeted phones to release unique identity codes that can then be used to track a person’s movements in real time.

Now, the Electronic Privacy Information Center is attempting to obtain internal FBI documents relating to the technology. EPIC is taking legal action to force the prompt disclosure of records concerning Stingray devices or other cell site simulator technologies, alleging that the FBI has “failed to comply with statutory deadlines” by not handing them over quickly enough following a freedom of information request made in February. The FBI has found 25,000 pages of documents that relate to the request, about 6,000 of which are classified—but says it may need up to three years to process the files before they can be released.

One reason stingray technology is particularly contentious is because by design they result in “collateral” snooping. During the Arizona court case, FBI special agent Bradley Morrison stated in an affidavit that “all wireless devices in the immediate area of the FBI device that subscribe to a particular provider may be incidentally recorded, including those of innocent, non-target devices.” (The FBI has insisted that the information it gathers using the tracking tools is routinely deleted, with a spokesperson telling the Wall Street Journal last year that “our policy since the 1990s has been to purge or ‘expunge’ all information obtained during a location operation.”)

There are also questions about the constitutionality of how the technology is used. According to EPIC, the devices are sometimes deployed with no warrant—possibly rendering their use a violation of the Fourth Amendment, which prohibits unreasonable searches and seizures. The Supreme Court in January ruled that the use of GPS trackers constituted a “search,” but when it comes to mobile phone tracking the government has continued to argue that Americans should have no reasonable expectation of privacy over their location data.

Though more advanced versions of Stingray-style technology can intercept text messages and phone calls, the focus on the FBI’s use of the technology has predominantly concerned location tracking. The 25,000 documents held by the FBI likely contain sensitive and controversial details about the full capabilities of its cell surveillance gear—which could partially explain the bureau’s aversion to full disclosure.

But this isn’t just a federal-level issue. According to a report by LA Weekly last month, state cops in California, Florida, Texas, and Arizona have also used Stingray technology. Farther afield, in the Czech Republic, there are concerns that similar devices may be in the hands of criminals. And DIY Stingrays can be built by anyone with $1,500 to burn and a bit of hacker savvy. One way to help protect yourself is to use encryption. Another is to revert back to a 1980s mindset by scrapping your cell phone and sticking to landlines.

Source: www.slate.com
HISTORY OF THE CAR RADIO

Seems like cars have always had radios, but they didn't. Here's the true story:

One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset. It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car.

Lear and Wavering liked the idea. Both men had tinkered with radios (Lear had served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car. But it wasn't as easy as it sounds:

Automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running.

One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago. There they met Paul Galvin, owner of Galvin Manufacturing Corporation.

He made a product called a "battery eliminator" a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity more radio manufacturers made AC-powered radios. Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker. Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard.

Good idea, but it didn't work -- Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.)

Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention.

Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioneers could hear it. That idea worked -- He got enough orders to put the radio into production.

WHAT'S IN A NAME

That first production model was called the 5T71. Galvin decided he needed to come up with something a little catchier.

In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - Radiola, Columbiola, and Victrola were three of the biggest. Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola. But even with the name change, the radio still had problems:

When Motorola went on sale in 1930, it cost about $110 uninstalled, at a time when you could buy a brand-new car for $650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about $3,000 today.)
Car Radio History

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In 1930 it took two men several days to put in a car radio -- The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna. These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them. The installation manual had eight complete diagrams and 28 pages of instructions.

Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression -- Galvin lost money in 1930 and struggled for a couple of years after that.

But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory.

In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich Tire Company to sell and install them in its chain of tire stores.

By then the price of the radio, installation included, had dropped to $55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.)

In the meantime, Galvin continued to develop new uses for car radios.

In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts.

In 1940 he developed with the first handheld two-way radio -- The Handie-Talkie -- for the U. S. Army

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II.

In 1947 they came out with the first television to sell under $200. In 1956 the company introduced the world's first pager. In 1969 it supplied the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon. In 1973 it invented the world's first handheld cellular phone.

Today Motorola is one of the largest cell phone manufacturers in the world -- and it all started with the car radio.

WHATEVER HAPPENED TO

The two men who installed the first radio in Paul Galvin's car, Elmer Wavering and William Lear, ended up taking very different paths in life.

Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation.

He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade.)

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being! And it all started with a woman's suggestion!

Thanks to SCMA Member Kent Cullom for sending along this article.
NEW FIRE CHIEF DODGE CHARGER 3.7 LITER

I-pad mount & Motorola XTL 5000 radios on console. Whalen lights/siren remote control on cord handset in dash. 2 handheld chargers just to the rear of the center console and 2 lightbars in the headliner front and rear. Trunk: Motorola XTL 5000 radios (blue & white frequencies) Whalen lights/siren control (silver box) and AVL (small black box). Big battery in trunk under this slide out where the spare tire is located.

LA County Fire Gets a New Dodge Charger
Actual Craig’s List Ad. Is this stuff is still available? I need to get RF sliding out of my antenna faster.

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**One tube of rare cb antenna grease - $250**

**rochester. NY craigslist > for sale / wanted > electronics**

Avoid scams and fraud by dealing locally! Beware any deal involving Western Union, Moneygram, wire transfer, cashier check, money order, shipping, escrow, or any promise of transaction protection/certification/guarantee. More info

For sale one tube of rare cb antenna grease. This stuff came out in the 60's. It was developed by the Department of Defense for the armed services. It was mainly used in the field on handheld units, tripling their range. It is a closely guarded secret by technicians & HAM's. When the FCC found out some amateur radio supply outlets had purchased a sizable quantity of the RF grease through US Army & Navy surplus auctions, the FCC outlawed the sale of it in the US. What the RF grease does is make your signal slide out your antenna faster and with less friction. Because of this you get less RF friction (hysteresis). The results are: lower SWR readings & increased power handling, the faster moving RF signal builds up a tremendous RF inertia, resulting a higher DB gain on your signal, (like a slingshot effect throwing a faster & larger signal) (typically 3.8-4.7 db gain) and 4x the power handling capacity. Modulation & SSB benefit a whopping 6 db gain. over an untreated isotropic dipole antenna lasts for about 6 months then, just wipe off any old grease and put some new on. This is probably the best kept secret in amateur radio! The guys at the shoot-out's won't tell you about this amazing secret! Triple the RF output of a 200 watt box to 600 ERP, etc... (effective radiated power) This RF grease also causes a very cool side effect if you feed over 100 watts into a treated antenna you will see a cool purpleish-pink halo glowing around your antenna on key up at night, pulsating with your modulation! (not to cool for the military, this is why they stopped using it!) For now all I have is one 16oz. tube. $250.00 FIRM
# Los Angeles Fire Department

## LAFD Operations

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## LAFD Supplemental Tactical

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*Thanks to RadioReference.com for this list*