



# County of Orange RACES

## NetControl

March 1999



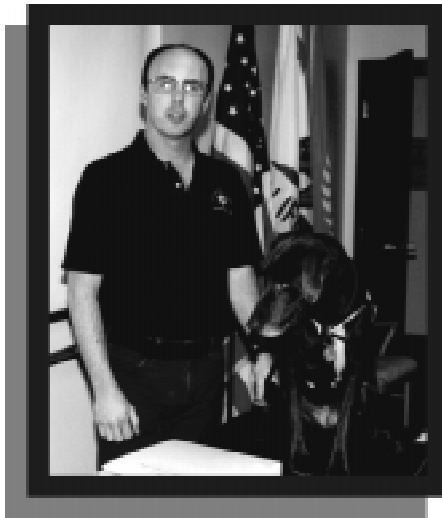
Newsletter of the County of Orange Radio Amateur Civil Emergency Service

### Top Story

The Nose Knows  
By: Lt. Joe Selikov, KB6EID

Thanks to OCSO Reserve Sgt. Ron Moore, KD6LFF and Hershe, a seven year old chocolate Lab., for providing a very informative February general meeting. Sgt. Moore is assigned to the K9 unit and he along with Hershe respond when a search is instituted for victims presumed dead. Sgt. Moore explained that each four legged member of the team is trained to recognize different scents. The specialized training includes arson, drugs, explosives, and search/rescue.

Arson dogs, mostly Labrador Retrievers, are trained to recognize incendiary substances. The dogs are used after the fire is out to help reduce the amount of chemical analysis needed to prove arson. The dog's handler will mark locations pointed to by the dog



Hershe and OCSO Sgt. Ron Moore

for later lab analysis.

Some dogs are trained to find drugs. These dogs are usually breeds that work well around people such as Labradors. The primary use is around an airport. They work

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### Mar. Meeting

The guest speaker for our March general meeting is Chris Storey, KA6WKN. Chris will share with us some of his experience as a member of the United States Navy-Marine Corps Military Affiliate Radio System (MARS) since 1985 and a member of the National Communications System Shared Resources HF Radio Program (SHARES) since 1994. He has served as the Assistant Region Five Director for Emergency Communications, Assistant Region Five Director for the MARS Radioteletypewriter System (MARSTELSYS), and as the Assistant Southern California Area Coordinator for Network Operations of Navy-Marine Corps MARS. Chris is a member of OCRACES and is employed as a dispatcher for LA County SD. The meeting starts at 1930 hours and is located at 840 North Eckhoff St., Suite 104, in Orange. This is an open meeting. Guests are welcome.

### Upcoming Events

Mar. 1	General Meeting, Alternate EOC
Mar. 8	Staff Meeting, Knott's Berry Farm
Mar. 9	Award Presentation, Civic Center Plaza
Mar. 15	Baker to Las Vegas Meeting, Alternate EOC, 7:30 PM
Mar. 15-17	APCO Western Regional Conference, San Diego
Mar. 20	ATV Training, Loma Ridge, 10:00 AM
Mar. 26	Deadline for <b>NetControl</b>
Apr. 5	General Meeting, Alternate EOC
Apr. 10-11	Baker to Las Vegas Challenge Cup
Apr. 12	Staff Meeting, Alternate EOC

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Visit the OCRACES Web Page @ <http://www.ocraces.org>

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## Captain's Corner By Ray Grimes

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It looks like the beginning of 1999 is going to be a quiet time. Enjoy it, it will become busier as we approach Baker to Vegas, Field Day, and the many events we traditionally support. This is a good time to check and replenish your duty bags with fresh batteries and updated food supplies. You should do this before Operation Boysenberry II. You never know what you might need for this realistic field exercise. While it is a relatively quiet time, take advantage of available training. LACoDCS has offered several excellent training sessions, and OCRACES will be providing a very comprehensive Amateur Television in Public Safety seminar at the Loma Ridge EOC on March 20. There is also the valuable American Red Cross sponsored Disaster

Training Academy on June 2. Another important goal of OCRACES is to increase our membership. Bring a friend to the next general meeting. Remember though, to be available to introduce your guests and to assist them in obtaining OCRACES information and literature during the meeting.

### Staff Assignments

I wish to make a preliminary announcement of some changes in OCRACES staff personnel assignments. John Roberts has withdrawn as lieutenant of the Bravo squad. This is due to increasing work commitments which take him away from the local area, and the reality that in a disaster, John will be called to support the State, taking precedence over OC-

RACES. I wish to thank John for all of his years of service in this position. John will become a sergeant in the Alpha squad and will continue to share his technical expertise on several key projects and activities. Following this, I wish to announce a new promotion and appointment to Squad Bravo lieutenant. Several good applicants were considered for this key position. Upon due consideration of qualified people, Jim Carter had recently been interviewed by me and has accepted the task. Jim brings a wealth of technical knowledge and has unfailingly supported OCRACES for years, committing both time and personal finances to support our programs. An important asset of a squad lieutenant is "people skills". I think all

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## ECC News and Views by Robert Stoffel

As we start the new month I would like to introduce the latest addition to our OCRACES roster, Robbe Gibson, K6RAG. Please provide him the assistance and guidance necessary as he learns about the roles and responsibilities of our organization.

I would like to acknowledge several OCRACES members for some of their ongoing projects and activities. Dave Wilson has provided a copy of the OCRACES Packet Radio Plan. This is an excellent starting point in developing our plan. We are looking to fill the position of Digital Communications Coordinator. This draft will be most helpful to the new coordinator as we finalize our plan. If you are interested in the coordinator position, please contact Ray Grimes. Our Visual Communications Coordinator, Jim Carter, and members of the committee have been busy with several projects. First, a new television monitor has arrived and will be installed at the Loma Ridge RACES radio room for both commercial TV and ATV reception. Jim has also been working with SCRRBA on the tri-agency proposal. An ATV overview will be presented at Loma Ridge on Saturday March 20 at 10:00 a.m. This is an

open presentation for any City or County RACES member interested in learning more about ATV. And Mike Krueger, OCRACES Training Officer, has been busy planning our next field exercise, Operation Boysenberry II. This is an "announced" drill that will replace our usual staff meeting in March and is required for all OCRACES members.

I am pleased to report that the County of Orange Board of Supervisors will recognize Chief Radio Officer Ray Grimes for his outstanding volunteer contributions to our OCRACES program on March 9, 1999. This is an open presentation at 0930 in the Board Hearing Room, 10 Civic Center Plaza in Santa Ana. All OCRACES members are invited to this presentation.

Last month, the ReddiNet Central Point was officially transitioned from UCI Medical Center to Loma Ridge. The new Central Point is located at the OCC paramedic communications console. This followed the implementation of an all-new ReddiNet II hospital communications system that was introduced in late January. With the Central Point now at Loma Ridge, we will see some increased activity by HDSCS when the ReddiNet

Central Point is activated. Training on ReddiNet II operations for all OCRACES personnel will be conducted at a future staff meeting.

For RACES organizations and members interested in public safety communications, you may find the 29<sup>th</sup> APCO Western Regional Conference, one of the largest public safety communications programs in the nation, to be of interest. This three-day conference will feature exhibits and seminars covering all aspects of public safety communications. The event is set for March 15-17, 1999 at the San Diego Concourse and Westin Hotel at Horton Plaza. It will be five years before southern California will see another conference of this caliber. Full registration or day passes are available. If interested, phone or fax (562) 868-9896, or visit their web site at [www.cpra.org](http://www.cpra.org) for additional information.

In closing, all OCRACES members will receive in the mail with this copy of *NetControl* an updated copy of the Response Form titled "Frequency Guide." This has been updated and should replace your current copy. Have a great month, the frequency is now clear for routine traffic.

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# Training

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## How do they do it?!

### Tricks of the "Net Control Operator" Trade Pt.1

By: Lt. Mike Krueger, N6MIK

Prior to the 1920's Police officers walked the beat alone. They had no way of receiving reports of activities in the town except by word of mouth from citizens that happened to find them. If the officer was in a situation that required assistance, he could only yell for help. Citizens would often help, or try to find another policeman.

The Detroit Police Dept. went 'on the air' with the first voice radio system in 1922, with a call sign of "KOP" (with a K) This was a one way system, with the dispatchers broadcasting calls 'in the blind' to units. Classified as a "broadcast station" by the predecessor to the FCC, the Police dept. was required to provide entertainment to the public between police dispatches. To comply - They hired musical bands to play throughout the day. When a call came in, the public safety dispatcher would stop the music and broadcast the call - then signal the band to play again.

The Bayonne, NJ PD placed 4 cars equipped with 2 way radios into service in March 1933, however the Connecticut State Police were the first to use the brand new "FM" 2 way radios that allowed the cars to talk to the dispatcher as well as to each other.

A lot has changed since then, as communications equipment and computers have become a part of our every day lives. Much like the radios and computers that we use, the responsibility and functions of the public safety dispatcher have evolved. This month's training topic (part 1 of 2) takes a look at some of the protocols used by a dispatcher, and how those protocols can be applied to a RACES Net.

**Phonetic Alphabets:** Phonetic alphabets are a tool that radio users rely on in times of bad coverage, poor conditions, or when the message being transmitted has a personal name or other non-standard word. There are two types of phonetic alphabets

in use today: The APCO/POLICE phonetics (Adam, Boy, Charles, David,) and the international phonetics (Alpha, Bravo, Charlie, Delta).

When using phonetics on the air, do not mix letters from both alphabets (Alpha, Boy etc.). This creates confusion, and delays in the message passing. For the same reason, words must not be created on the fly to substitute forgotten phonetics.

The phonetic equivalent of the letter replaces the letter itself. Spelling the name Joe phonetically would be " Juliet,Oscar, Echo." The following would be incorrect: "J as in Juliet, O as in Oscar, E as in Echo. In addition to making it very hard to copy, the second example takes up more precious airtime.

When broadcasting a common first name, and uncommon last name, is should be stated as "First name John, last name Doe - phonetically Delta Oscar Echo". The IPA has long been the Amateur Radio Operators standard, and replaced the APCO phonetics as the public safety standard on June 1, 1974.

**Numbers:** The pronunciation of numerals is of critical importance. Numerical strings should be stated by integer name - One Six Three Two, not "one thousand six hundred thirty two". This will reduce time and potentially life critical errors. The mixing up of address numbers is the largest cause of response delays in the public safety field, and the most common mistake made is the pronunciation of the numerals in the address.

Some examples of confusing addresses are listed below:

250 Four-Wheel road. - Or is it: 254 Wheel Road?

30 51<sup>st</sup> Street. - Or 3050 First Street?

2 64<sup>th</sup> Avenue. - Or.... 260 Fourth Avenue?

The last one is a little tricky. Since people are used to hearing 3, 4, or 5 numbers in an address, it is a good idea to say "Number" before 1 or 2 digit addresses, so units do not lose their train of thought.

Remember - field units do not have the advantage of seeing the original document, and may become confused when

receiving a string of numbers that appear unrelated. Numbers should be broadcast with natural pauses, and broken into groups if the case permits. For example, a social security number would be sent as "550-11-1255" and not 55-0111-255". It is acceptable to use "15 cc's" or '40Mg"

**Descriptive information:** As a field unit or a Net Control Operator, you will need to send and or receive descriptive information many times during an event. The best way to ensure that the information is passed clearly and correctly is to know the pattern. The standard pattern for reporting or broadcasting descriptive data for a person is Top to Bottom, inside out. That is "April is wearing a cowboy hat, white shirt, pink jacket and tan pants". This pattern is the standard because it follows a logical order. The receiver of the message knows what is coming next and doesn't have to sort the data while receiving it. There is another method, used when the detailed description of a person is not known, such as a suspect in a crime. Here you use the features most easily recognized at a distance. Race, Sex and Weight are the three common ones here.

Another item often described is a vehicle. The pattern for cars is easy to remember.

**C** = Color

**Y** = Year

**M** = Make

**B** = Body style

**A** = And ("And Anything Else" such as bumper stickers, broken windows etc.)

**L** = License.

You can see the pattern. For example: Black 1997 Ford Pickup with a broken rear window, 5C29452

Each RACES activation is different, and each Net Control Operator will be faced with unique challenges. Proper use of time saving codes, predetermined designators, and reporting patterns are essential in maintaining efficient radio operations.

Next month, I'll introduce you to several personal readiness tips and on-air hints that, when combined with the above information will make you a professional Net Control Operator. Until next month - 73!

# Technical Exchange

## A Light Microphone

by: Ray Grimes, W6RYS

There is a new microphone technology on the market which is both lightweight and operates on light, so the name might apply to either virtue. The light microphone is more correctly known as an optical microphone. As you know, a microphone is a transducer, converting sound pressure into mechanical energy, then into electrical energy. Traditionally, a metal or plastic diaphragm is attached to a movable coil which is suspended within a fixed coil. As sound pressure causes mechanical motion of the movable coil, an electrical signal is produced at the fixed coil which is an analog representation of the sound.



distance from a microphone head in the form of a clear lens. Two fiberoptic strands are attached on opposite sides of the lens. A light-emitting diode (LED) is attached to one fiberoptic strand and a photodetector is attached to the other. The LED produces a fixed amplitude light signal which bounces off of the reflective membrane and back to the photodetector by way of the lens and fiberoptic strands. When sound vibrates the membrane, the amplitude of the light beam is modulated at the audio rate. An integral microprocessor provides the audio input circuitry and detected audio amplification to drive external devices.

What does this complex microphone circuit do that conventional microphones can't? Actually, not much more, but it does it so much better. The optical microphone is immune to electrical noise, virtually eliminating electrical noise pickup (AC hum, RF rectification, etc.). The optical microphone has an amazing frequency response, covering 0.05 Hz to 300 KHz within 3 dB. Compare that to the common dynamic microphone with a response of 40 Hz to 20 KHz within 6 dB.

The optical microphone has superb noise canceling properties in excess of -70 dB, as compared to the dynamic microphone's -40 dB. While the nominal impedance of a dynamic microphone is 20 ohms, the optical microphone impedance is stated by the manufacturer as "adjustable to customer requirements". Dynamic microphone sensitivity is typically -43 to -57 dB, with the optical microphone sensitivity being around -60 dB. A DC bias of between 3 to 24 volts is required to operate the LED and photodetector and associated processor chip.

No argument that the optical microphone is superior, but what applications could it be used in? How about broadcast and high quality studio recording where excellent frequency response and good noise canceling qualities are important? Optical microphones can also find applications in hands-free cellular telephone car kits, wireless devices, security systems, and military equipment. The optical microphone may also find popularity in Amateur Radio, though high fidelity is not necessarily a virtue in high-noise environments.

The optical microphone is a high-tech way of doing the same job, but much better. To explain how the optical microphone works, visualize a reflective membrane of clear plastic which is mounted a

## ESP

From  
Jan. '99



## Floods

Even without El Nino, it rains in California!

Statewide, last year's El Nino phenomenon brought record rainfall to Santa Barbara, Ventura and several other cities. It also caused 17 deaths and more than \$550 million in property losses.

El Nino has come and gone, but that doesn't mean Californians can put away their rain gear.

Even in an average year, severe storms can cause flash floods, contaminate the drinking water supply, disrupt electrical

service and damage homes and contents. They also can strand individuals playing near or crossing streams, rivers, flood control channels and intersections.

In the past 24 years, winter storms have claimed the lives of 103 residents, caused approximately 600 injuries and more than \$61 billion in property and agricultural

losses. The winter storms of 1995 and 1997 alone combined to cause 36 deaths and more than \$3 billion in property losses.

The table below shows how last year's rainfall in several Southern California cities and towns compared with that in an average year. Use this information to help reduce your risk of death, injury and property losses from flooding wherever you live, work or play.

Sources included the National Weather Service web pages.

City	County	Rainfall	
		Average Rainfall	97-98 Rainfall
Anaheim	Orange	14.60	31.43
Bakersfield	Kern	5.72	14.66
Bridgeport	Mono	9.14	9.88
El Centro	Imperial	2.68	4.94
Independence	Inyo	5.27	8.27
Los Angeles	Los Angeles	14.77	31.01
Riverside	Riverside	10.00	21.41
San Bernardino	San Bernardino	16.68	22.71
San Diego	San Diego	9.90	17.78
San Luis Obispo	San Luis Obispo	23.46	43.98
Santa Barbara	Santa Barbara	16.98	46.99
Ventura	Ventura	14.32	42.70

The Los Angeles County Office of Emergency Management has a program called ESP which stands for Earthquake Survival Program. As part of that program they supply a set of articles which focus on a different hazard each month. **NetControl** will publish each month's hazard through the end of the year.

# Committee Reports

## Visual Communications

Coordinator: Jim Carter (WB6HAG)  
Web page:  
[http:// www.qsl.net/wb6hag/](http://www.qsl.net/wb6hag/)

**Tri-Agency Update** - The Tri-Agency program still remains on hold pending SCRRBA's response.

**ATV Training and Demonstration** - Various RACES organization members will attend the ATV training session presented by OCRACES members Jack Barth (AB6VC), Ray Grimes (W6RYS), Robert Stoffel (KD6DAQ) and Jim Carter (WB6HAG) on Saturday, March 20<sup>th</sup>. The training will include an introduction to ATV, where and how used, Public Safety perception, applicable FCC regulations, an overview for using the different frequency type transmitters and power requirements, filters, receivers, antennas, cameras, repeaters, and a live demonstration showing the OCRACES equipment as used in the field. The Helmet-cam that uses a business card size ATV transmitter will be displayed and demonstrated. City RACES organizations are still invited and may inquire, by calling Jim Carter at (714) 522-9358 during normal business hours or sending an E-mail to [jecarter@ix.netcom.com](mailto:jecarter@ix.netcom.com). Anyone who plans to use ATV should not miss this informative presentation.

**ATN Membership Meeting** - OCRACES members Ray Grimes, Jack Barth and Jim Carter attended the annual Amateur Television Network (ATN) meeting held in Pomona on February 20<sup>th</sup>. Personal funds were used to join ATN under the OCRACES name. The ATN organization owns and operates ATV repeaters on mountain tops throughout Southern California and Nevada. Membership allows OCRACES to utilize the ATN resources to provide video communications in time of an emergency.

**2.4 Gig Transmitter Update** - The committee continues to purchase and modify Wavecoms for operations from a few milliwatts to 100 milliwatts. Wavecoms provide an economical way of getting onto 2.4 GHz. Presently, there are two modification options, either change a crystal or change the PIC. Last month Jack Barth made contact with an out-of-state amateur who is reprogramming Wavecom Jrs. which allows the transmitting frequency to be changed to be within the amateur band. Additionally Jack identified four frequencies and placed an order for crystals. He will evaluate the results of the two options once the crystals have been received and installed.

**Baker to Vegas** - Baker to Vegas - The ATV link between Las Vegas and our Santiago ATV repeater still remains non-operational. However, we will assist San Bernardino RACES using 2.4 GHz ATV remote feeds of the race course to the Las Vegas ATV repeater. Video will now be available during the daylight hours and at selected night spots. OCRACES members Jack Barth and Ray Grimes will provide video from Pahrump using 2.4GHz and 913.00MHz. The Pahrump command post will be able to receive P-5 video from the Las Vegas repeater. The Las Vegas ATN group will assist by providing video at the finish line. We will now have video coverage from start to finish.

**GPS Video Integrator** - Intuit Circuits has released a new GPS video overlay PCBA for under \$100.00. This board allows a GPS display to be superimposed onto ATV video. Last year, two other companies were evaluated, each costing many times the price of the Intuit product. Both those products failed to meet expectations. Based on our evaluation, design changes were submitted to Intuit and enthusiastically received. We hope to display this new concept during the ATV training seminar on March 20<sup>th</sup> if the modified version is received in time.



Coordinator: Lt. Mike Krueger, N6MIK  
E-mail: [mikek@deltanet.com](mailto:mikek@deltanet.com)

**OCRACES B2V meeting** - March 15th at 7:30PM!

For all B2V staff members and van riders

signed up to date.

This will be the ONLY B2V meeting specifically for communicators riding in OCSD vehicles! We will discuss the frequency plan, equipment needs and plan our (usually complicated) transportation arrangements at this meeting.

**New Baker to Las Vegas Web page:**  
[www.ocraces.org/b2v](http://www.ocraces.org/b2v)

Tom Mirabella has done another outstanding job on this very informative page. You can check current assignments, APRS status and meeting schedules here.

73, Mike Krueger, N6MIK

## Field Day

By: Lt. Ken Mirabella, KM6YH  
Assistant Chief Radio Officer, OCRACES

Field Day is June 26<sup>th</sup> and 27<sup>th</sup> this year. OCRACES is planning to utilize Craig Park, Fullerton (an Orange County Park) this year for the event. To make this event even more fun for all we thought we would extend an open invitation to all RACES groups to participate with us during this years event.

*(Continued on page 6)*

*(The Nose Knows from page 1)*

behind the scene to sniff luggage and can even be brought onto an aircraft to find the seat a drug carrying passenger was sitting.

Bomb dogs are trained to recognize nitrates. Recognition is only part of the training, they also must be trained to provide a passive alert. Typically the dog is trained to sit when they recognize the scent. You do not want the dog pawing at something that could go off.

Search and Rescue training has four distinct specialties which include Wide Area Search, Disasters, Tracking, and Dead Body search.

Dogs used for Wide Area Search are usually working breeds. They are trained to recognize the scent of humans. This type of search might be called to find a missing person.

Dogs trained for Disaster Search are looking for live people. At the end of the day if

all that was found were dead bodies, the searchers will stage a live find to provide the dog with a positive reward. Dogs, like people, are sensitive to not fulfilling their mission with a success.

Tracking dogs are trained to find a specific scent. These dogs are typically Bloodhounds. Bloodhounds are said to have a sense of smell 3 million times greater than that of humans. Bloodhounds are not the most agile dogs nor are they the smartest but they sure can smell.

Dead body search is done by dogs that have been trained to recognize the specific scent. These scents are the easiest to train a dog to recognize since dogs, by nature already like the smell. Most body searches include finding clandestine graves, structures after all the living have been removed, open fields such as hiking paths, and water areas such as lakes. This is Hershe's specialized area of training and Sgt. Moore shared with use some of

their experiences.

Sgt. Moore estimates that he and Hershe spend on the order of 100 hours per month training. It is a continual process which includes socializing and being exposed to people and crowds, and going places that they might be required to search. In addition, Hershe undergoes agility training and is exposed to unusual surfaces. Some dogs are also exposed to over-the-side training and helicopters.

Sgt. Moore uses synthetic body smells which come in Fresh, Old and Drowned victim. Hershe is rewarded by playing her favorite game, Frisbee. Training and work are distinguished by the wearing of a special harness. When she wears the vest she knows it is time to work. OCRACES would like to thank Sgt. Moore for giving up what little free time he has to provide a most interesting evening.

*(Staff Assignments from page 2)*

will agree that Jim is well respected by the OCRACES membership and will provide the effort necessary to support this program. John Roberts will be reassigned to Squad Alpha, as a sergeant, under Steve Sobodos. Jim will maintain the present staff in Bravo squad, with Marty Mitchell and Dave Wilson as sergeants. Squad Charlie will continue with Joe Selikov as lieutenant, and Al Baird as sergeant.

*(Field Day continued from page 5)*

As you know OC Parks close at dusk, but because we are an OC agency they let us spend the night camping and contesting. We have the whole park to ourselves. Obviously we have plenty of room for anyone who would like to come visit or camp.

Our goal is to not make this an OCRACES event, but a general Field Day event for anyone who would like to come and participate.

We have quite a lot of equipment, antennas, a small tower and generators, but we could always use additional equipment. Bring what you would like to use or use ours. This Field Day should be what you make it.

If your group or any individuals would like

to participate, help, plan or coordinate, bring equipment, etc. please contact either Robert Stoffel, Ralph Sbragia (Field Day Coordinator) or myself for further information.

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## HDSCS

HDSCS was recommended and accepted for inclusion in "Partnerships in Progress—A Compendium of Exemplary Practices in Emergency Management, Volume III," published by the Federal Emergency Management Agency (FEMA). The compendium finally appeared in printed form just before the end of the year. It also can be downloaded from the World Wide Web. HDSCS has received a Certificate of Merit from FEMA for our efforts in behalf of hospitals and their patients.

<<http://www.fema.gov/library/lib07.htm>>

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## City Watch

The following article was submitted by Gary Holoubek, the Chief Radio Officer for Fullerton RACES. The article does not imply that OCRACES or the County of Orange supports one vendor over an-

other. The intent of the article is to commend vendors for providing good service.

By: Gary Holoubek, WB6GCT

"wb6gct@juno.com"

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## GOOD EXPERIENCES

Everyone likes to "complain" about bad experiences with vendors. But I will tell you about some good experiences I have had with local vendors.

As RACES Officer of Fullerton RACES, I recommended purchase of Yeasu FT-2400 two meter radios for the alternate EOC and the EOC van some years ago.

One of the radios quite working. Couldn't get it to tune to a frequency, receive or transmit. It was taken to the Yeasu facilities in Cerritos. They found the internal lithium battery dead. So if your FT-2400 starts acting up, it may need a new battery. It will not work on the 13.8 Volt input only! Now the good part, they replaced the battery with no charge. The next month the other FT-2400 did the

*(Continued on page 8)*

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## Silent Key

### **David Gray, WB6HUG**

David Christian Gray passed away February 20, 1999, at 0145 hours.

David was surrounded by his wife Stacey, his family, friends, and his Lord.

David died peacefully after facing a long illness. His last moments were lived with the same extreme courage, dignity and wisdom he demonstrated throughout his illness.

OCRACES wishes to extend our deepest sympathies to David's family and friends. We are all better people for knowing and having David in our lives.

## Meetings:

**General:** First Monday of Month  
(open to public) @ 1930 hr

**Staff:** Second Monday of Month  
(members only) @ 1930 hr

## Meeting Location:

OCSD/Communications  
840 N. Eckhoff St. , Suite 104  
Orange, Ca. 92868-1021

## County RACES Frequencies

6 m: 52.62 MHz output, 52.12 MHz input, 103.5 Hz PL

2 m: 146.895 MHz output,  
146.295 MHz input, 136.5 PL;  
(primary net Mondays, 1900 hrs.)

2 m Packet: 145.07 MHz  
(1830 – 1900 hours)

1.25 m: 223.76 MHz output,  
222.16 MHz input, 110.9 Hz PL

70 cm: 449.175 MHz output,  
444.175 MHz input, 107.2 Hz PL  
(private)

## OCRACES Web Page:

<http://www.ocraces.org>

## OCSD/Comm's Staff:

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Assistant Radio Officers  
Jim Carter, WB6HAG  
Mike Krueger, N6MIK  
Joe Selikov, KB6EID  
Steve Sobodos, KN6UX

Sergeants  
Al Baird, KC6TWI  
Marty Mitchell, N6ZAV  
John Roberts, W6JOR  
David Wilson, KE6AFR

## NetControl Editor:

Lt. Joe Selikov, KB6EID  
[jsel@earthlink.net](mailto:jsel@earthlink.net)

*(Fullerton from page 6)*

same thing. Again Yeasu came through with a free battery.

I am also a member of the "HAMER" group with the Anaheim Police Dept. We have a Yeasu FT-7400. It had a problem with the frequency dial. So I took it into Yeasu for repair and being leery of "dead" internal batteries, I asked them to check it.

I got the radio back repaired for a very reasonable fee. They also replaced the Lithium battery for free.

So I will continue to recommend Yeasu for RACES use.

I am the technical chairman for the Anaheim Amateur Radio Association. We have 4 repeaters. I have replaced Comm Spec decoders twice in the past 10 years. The first time they repaired the defective decoder, no charge. The second time, they couldn't find any problems, but updated the circuit, added a new dip switch and included a new installation kit. Again no charge. These devices were long out of warranty.

So I would recommend Comm Spec (on Taft street in Orange) to anyone needing encoding/decoding equipment.

73's, Gary

## Did You Know?

by: Ray Grimes, W6RYS

As we have seen on several occasions, surprising new technologies and new applications sometimes evolve from unrelated projects. For example, police use of infrared scopes followed military development and application of these devices. Search and Rescue teams also found infrared scopes effective in locating lost people in darkness. The principles of microwave cooking of food was accidentally discovered during the performance of laboratory experiments with microwave energy used in the development of radar systems. The story is told that in 1945 a Raytheon engineer had a chocolate bar in his pocket which melted when in the proximity of the radar equipment under test (good for the consumer, not so good for the engineer). How's this for another unusual twist of technology? Seismic acoustical sensors have been placed throughout California by the U.S.G.S. (United States Geologic Survey) to help pinpoint earthquake events. This network of sensors is tied to a large computer system which helps seismologists quickly track seismic epicenters. A U.S.G.S. seismologist who lived near Menlo Park, California recognized the similarity of seismic shock waves traveling through the ground and sound waves trav-

eling through the air. The U.S.G.S. in cooperation with the Menlo Park Police Department installed 5 acoustic sensors, linked by radio, around a high crime area of that city. The very same seismic tracking computers which were used to localize low-frequency earthquake waves were re-programmed to recognize and triangulate higher speed weapons sounds propagated through air. While this team observed that single shots were recognizable, the rapid fire of an automatic weapon was most readily identifiable. The system worked best at night when the ambient noises of the city were lowest. In 1995, citizens of Redwood City petitioned their government to install such a system. In 1996 that system was installed by a private contractor. Other cities such as Washington, D.C. are considering installation and use of similar acoustical triangulation systems for crime prevention. The Police Chief of Redwood City commented that this system started to payoff even before it was completely installed. The word on the street got out quickly that the cops now had the ability to pinpoint illegal gunfire by remote control.

source: USGS web page

[www.quake.wr.usgs.gov](http://www.quake.wr.usgs.gov)

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