



RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. XLVII NO. 09

P.O. BOX 3454, TUSTIN, CA 92781-3454

September 2005

The Prez Sez....

by Ken Konechy – W6HHC



The OCARC had a very nice gathering on Aug 30 for two long time club members who are now leaving the area.

A going-away-party was held at Marie Calendar's Restaurant to recognize the contributions of these two members (see page 7 for details and pictures.)

Bob Buss KD6BWH has been a member for 15 years (shortly after he got his license) and Frank Smith has been a member for 28 years (shortly after the U.S.M.C. moved him to California).

The OCARC is going to miss both of these hard working members...miss them as club officers...miss them on the board of directors...and miss them on the club nets.

The OCARC yearly radio auction is coming up in another month on Oct 21. See Page 5 and OCARC WEB for details. I need members to send me a list of equipment to draw people to the Auction.

As I am preparing this article and this issue of RF newsletter, I am monitoring 20M, at 14.265 MHz, to the disaster relief net activities being provided by the Salvation Army for victims of Hurricane Katrina. Ham Radio is providing a significant role in providing communications for the affected area, while the normal phone services are lost, cell phone towers are down or cell fone amps are flooded, and even city and county services are either down or overloaded. Ham Radio continues as a community service resource for both health-and-welfare and emergency communications.

September Meeting

The speaker at September general meeting will be OCARC member Jim Shryne – N6DHZ providing a virtual tour of the:

KFI Transmitting Site

Using a PowerPoint slide show, Jim will show us the transmitter room and the antenna site as it was before the antenna came down. Get see what a 50,000 Watt transmitter and feed line look like.

Don't miss it. All members and visitors are welcome.

The next general meeting will be:

**Friday, Sept. 16th
@ 7:00 PM**

We will be meeting in Room 208
in the east Red Cross Building

In This Issue: Page:

The Prez says.....	1
September Meeting.....	1
OCARC Info	2
Tech Talk – Ionosphere Propagation	3
OCARC Auction.....	5
General Meeting Minutes	5
Board Meeting Minutes	6
Going-Away-Party	7
Special Thanks	7
ARRL Receives \$100K for Katrina	8

**THE ORANGE COUNTY
AMATEUR RADIO CLUB,
INC.**

P.O. Box 3454, Tustin, CA 92781



2005 Board of Directors:

President:

Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

Vice President:

Willie Peloquin, N8WP
(714) 318-4047
n8wp@arrl.net

Secretary:

Rich Helmick, KE6WWK
(714) 343-4522
R2535@sbcglobal.net

Treasurer:

Cheryl Peloquin, KC6KTT
(714) 318-4047
Cherool@escapees.com

Membership:

Dan Dankert, N6PEQ
(714) 544-9846
n6peq@dxer.com

Activities:

Kristin Dankert, K6PEQ
(714) 544-9846
kdankert@comcast.net

Publicity:

Bob Eckweiler, AF6C
(714) 639-5074
af6c@arrl.net

Technical:

Kenan Reilly, N6CCE
(714) 543-5073
n6cce@yahoo.com

Members At Large:

Lowell Burnett, KQ6JD
(714) 997-0999
KQ6JD@aol.com

Steve Brody, KB1GZ
(714) 974-0338

stevebrody@sbcglobal.net

2005 Club Appointments:

W6ZE Club License Trustee:

Bob Eckweiler, AF6C
(714) 639-5074
af6c@arrl.net

Club Historian:

Bob Evans, WB6IXN
(714) 543-9111
bobev@netzero.net

RF Editor (acting):

Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

WEB Master:

Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

ARRL Assistant Director:

Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

ARRL Awards Appointee:

Larry Beilin, K6VDP
(714) 557-7217
k6vdp@aol.com

OCCARO Delegate:

Kristin Dankert, K6PEQ
(714) 544-9846
kdankert@comcast.net

Monthly Events:

General Meeting:

Third Friday of the month
at 7:00 PM
American Red Cross
601 N. Golden Circle Dr.
(Near Tustin Ave. & 4th St.)
Santa Ana, CA

Club Breakfast:

First Saturday of the month
at 7:30 AM
Katella Grill (Main & Katella)
1325 W. Katella Avenue
(2 miles west of 55 freeway)
Orange, CA

Club Nets (Listen for W6ZE):

7.086 ± MHz CW **OCWN**
Sun- 9:00 AM – 10 AM
Rick KF6UEB, Net Control

21.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Bob AF6C, Net Control

146.55 MHz Simplex FM
Wed- 8:30 PM - 9:30 PM
Bob, WB6IXN, Net Control

VISIT OUR WEB SITE

<http://www.w6ze.org>

for up-to-the-minute club information, the latest membership rosters, special activities, back issues of RF, links to ham-related sites, vendors and manufacturers, pictures of club events and much much more.

Club Dues:

Regular Members ...\$20
Family Members* ...\$10
Teenage Members ..\$10
Club Badge**\$3

Dues run from January thru Dec and are prorated for new members.

*Additional members in the family of a regular member pay the family rate up to \$30 per family.

**There is a \$1 charge if you'd like to have your badge mailed to you.

Tech Talk #44

Ionosphere Propagation

By Ken Konechy – W6HHC

This TechTalk article on propagation started as a question that I asked at the 2005 Field Day event. There had been a good 6M opening on Sunday morning, but there had been no burst of new contacts on the “dead” 10M band. I asked “**If there was an opening on 6M...shouldn't there have been an opening at the same time on 10M, too??**” Nobody felt expert enough to provide a knowledgeable answer. So I researched the subject.

Long distance communications can occur because radio signals can bounce off the ionosphere...IF (a) the ionosphere layer is strong enough and (b) the frequency is not too high. Figure 1 shows how a signal will NOT be reflected back to Earth if ionosphere is too weak or if the frequency of the signal is too high (has too much energy). The signals “punch” through.

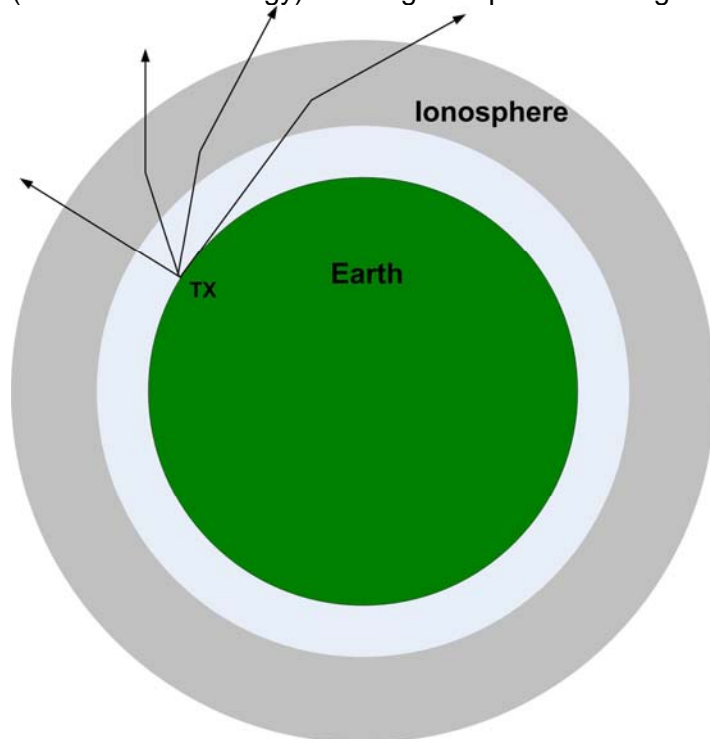


Fig 1 – Signal reflection does not occur because ionosphere is too weak or signal freq too high

In Figure 2, the signal “skips” off the ionosphere, IF the angle is not too steep AND the frequency is not too high. The highest frequency that will reflect is called MUF (Maximum Usable Freq). MUF depends on the strength of the ionosphere layer and usually varies by time of day. Steep angles can also “punch” through the ionosphere unless the signal frequency is

low enough to have very low energy.

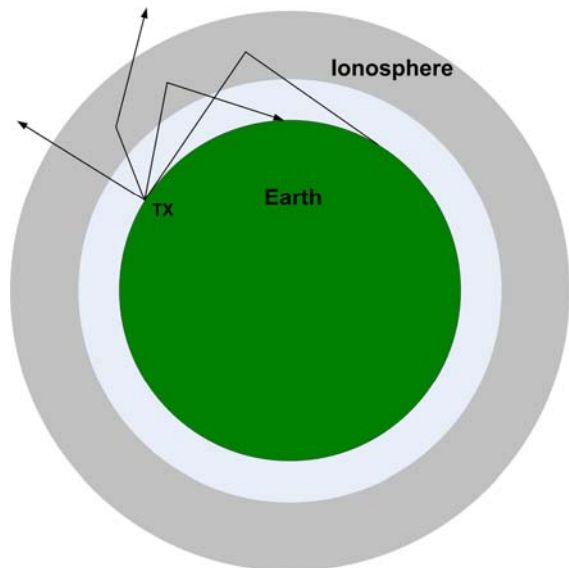


Figure 2 – Signal “skips” off the ionosphere to reflect back to Earth.

The main ionosphere layers to pay attention to for creating good communications are the F2-layer and the E-layer.

F2 Layer - ionization layer at 200-to-400 Km high. The 20 meter through the 6 meter bands use this layer effectively. The solar activity energizes the oxygen molecules and causes ionization. It takes a solar flux of 200 to make F2 MUF reach 50 MHz. Allows 2,500-3,000 mile maximum communication range. The ionization follows the sun. General rule is that sun should be at mid-point at local noon at 10M and 6M. For 20M the night time MUF can stay above 14 MHz throughout the night during peak sunspot cycle conditions.

F1-Layer - not an important ionization layer for HF or VHF propagation. This daytime layer has a height of about 150 Km. It only can produce refracting of the signal (bending), not reflection back to Earth.

SPORADIC-E – an ionized cloud of metal molecules 90-to-120 Km high. 1,500 miles is maximum range. 15M-to-6M. Two seasons per year (May-June-July and Nov-Dec-January). Typical clouds are several hundred yards thick and 40-to-100 miles long. Can occur at any time of day....usually in late afternoon ...usually ends by midnight.

TechTalk - cont'd from Pg 3

D-Layer - Its main feature is that it absorbs radio waves, particularly HF, because the electrons are frequently colliding and dissipating energy of radio waves instead of propagating them. This layer is 60-to-90 Km high. Extreme daytime D-layer absorption severely affects 160M and 80M bands. There is moderate daytime absorption on 40M. The higher energy levels of 20M signals (and higher) escapes the effects of the D-Layer.

So if you followed all of this... you will understand that F2-layer and Sporadic-E are good for long distance communications and the D-layer is a "signal killer". This is why 40M and especially 80M conditions are so much better at night time after the D-layer has dissipated. Figure 3 shows how with strong ionosphere ionization, double skips can occur, providing even longer distance contacts. In reality, when band conditions are really good, the signal can skip many times and reach more than half-way around the world.

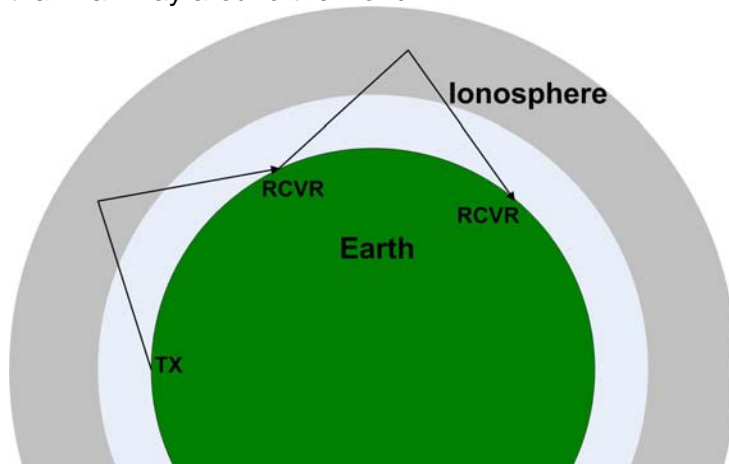


Figure 3 – Double-skip provides even longer distance communications by skipping off the ionosphere and then skipping off the earth, back up to the ionosphere again

There are three more specialized variations of these propagation layers that I do want to cover in order to close out this review: TransEquatorial Propagation, Back-Scatter, and F-Layer-Gray-Line communications.

TEP - TransEquatorial Propagation – Caused by strong ionization of F-layer at equator. Allows north-south propagation. Allows 6,000 mile range communications. Occurs on 15M-thru-2M. The reason for longer communications distance is that a "double-reflection" occurs in the ionosphere (that bulges upward over the equator) before the signal finally heads back to Earth.

Back-Scatter - this interesting variation of ionosphere skip occurs by your signal bouncing back off the "edge" of a sporadic-E cloud or the edge of an F2 layer and hitting some location on your side of the cloud. For example: I have worked into San Francisco on the 15M band by pointing my beam over the Pacific Ocean towards Hawaii. The San Francisco station was also pointing his beam over the Pacific Ocean.

F-Layer Gray-Line - provides a unique propagation opportunity for the 160M and 80M bands. The Gray-Line paths can be considered a special form of propagation that takes into account the unusual ionospheric conditions that exist along the twilight regions, between night and day. As the day begins, the highly absorbent D-layer is recreated. At the end of the day, the D-layer quickly disappears, but the F2-layer dissipates more slowly. So, for a brief while along the gray-line transition, there is a unique opportunity that the D-layer is missing but the F2-layer exists. The net result is that at dawn, California stations can work 160M over the North Pole into parts of Europe or Asia that are just going into sunset.

There are several other interesting forms of RF propagation. But, this introduction article will not cover these other forms of propagation and "skip" such as Tropo-ducting, auroral-scatter, meteor-scatter, knife-edge, satellite, Near Vertical Incidence Radiation (NVIR), and earth-moon-earth (EME).

So the answer to my FD question is: **"Yes, when the 6M opening occurred at Field Day...10M was also open at the same time. The 50 MHz ionosphere conditions would have extended down to 28 MHz...maybe with even better skip? The opening probably was Sporadic-E skip, since the solar flux was too weak to raise the F2 MUF to 50 MHz."**

Reference books used:

- "Six Meters - A guide to the magic band" by Ken Neubeck WB2AMU
- "The VHF/UHF DX Book" published by the RSGB
- "The ARRL HANDBOOK" – 2000 edition

ANNOUNCING the Annual W6ZE Ham Radio Auction

Presented by the Orange County Amateur Radio Club, W6ZE

Friday Eve. October 21, 2005

Auction begins
at 7:00 PM
Sharp

The auction will be held at the American Red Cross
Building, 601 N. Golden Circle Drive in Santa Ana.

For complete details & some of what will
be auctioned, or to list what you will bring
to sell, see our website at W6ZE.org or
phone Willie 714-318-4047 or Ken 714-744-0217



You need not be a member to buy or sell.

Let's make it a good one. Turn your junk into
someone else's treasure and into your cash.

Let your cash turn someone's junk into your
treasure.

OCARC General Meeting Minutes

August 20, 2005

The meeting was called to order at 19:15 by President Ken Konechy W6HHC. Roll call by acting secretary Lowell Burnett KQ6JD, with nine directors in attendance a quorum was present.

Ken then introduced our own Willie Peloquin N8WP as the evening speaker. Willie then gave his presentation on ECHO LINK, he then gave a short demonstration talking with a friend in Escondido CA. The Presentation was enjoyed by all.

Secretary - Last month minutes were approved as published in the RF.

Treasurer - Cheryl Peloquin KG6KKT reported that \$2,253 were in our bank accounts.

OLD BUSINESS

- Kristin Dankert K6PEQ and Dan Dankert N6PEQ, re-

ported the Club Pot Luck held at their QTH was a great success and that we should have them more often.

- President Ken Konechy, said that tonight he was starting to take donations, for the Spectrum Defense/BPL Fund. A container was passed around and \$87.00 was collected. The club will be taking collections over the next two months, with the club matching each dollar up to \$200.00.
- The club Auction is in October and flyers should be made available at HRO.

NEW BUSINESS-

- VP Willie Peloquin said he wanted the club to participate in the California QSO Party this October. He wants to set up at the Salton Sea. More Information will be made available soon.

General Minutes continued on Pg 6

General Minutes - cont'd from Pg 5**GOOD OF THE CLUB**

- Ken will be the editor for the September RF. Please send all articles and information to Ken.
- A major RDF event was to be held at Central Park Huntington Beach August 20. For more information up-coming events check your Email and club web site.
- The clubs 15 meter and 2 meter Nets participation has been low, the last several weeks. Ken then had a discussion, on how to increase participation. Some of items suggested were:
 - 1) Back to Back Nets are too long and run too late for the early risers. A solution discussed may be to have each net on a different day or night.
 - 2) Wednesday nights are a busy time for some Sunday evenings may be good for doing a "split" of nets.
 - 3) Newline broadcast could be played at the beginning of the Net, then a discussion on the contents could be held.
 - 4) Have incentives, such as free raffle tickets or play games such Bingo or Trivia.
 - 5) List topic to be discussed during the Net, on the web site and RF, that way will know what to expect.
 - 6) It was also discussed, that rotating Net Controls could be instituted. That a member just check into the net and then just listen.
 - 7) If you have other ideas please submit to Ken or bring up at the club breakfast or monthly meeting.
- Our OCCARO Delegate Kristin announced that she has been chosen to be in charge of the Ham Booth at the Orange County Fair next year and she will need the full support of the club membership.
- VP Willie announced that this year Christmas dinner will be held at the Jagerhaus 2525 E. Ball RD, in Anaheim. Time and date to be announced soon.

Kenan N6CCE made a motion to adjourn the meeting it was seconded by Bob AF6C and passed by a voice vote.

Submitted by Lowell KQ6JD (Acting Secretary)

OCARC Board Meeting Minutes**2005-09-03**

The meeting was called to order at 7:35 AM by President Ken, W6HHC. There were 8 members and visitors present including 5 Board members.

Director Reports:

President - Ken reported that Vice President Willie, N8WP will be in charge of the October Board meeting. President Ken will edit the RF for September.

Vice President - Willie was under the weather so there was no report on future programs.

Secretary - reported the club received a renewal request from World Radio. President Ken directed Treasurer Cheryl KC6KTT, to send a check for renewal to World Radio.

Treasurer - Cheryl reported that the club had \$2430.50 in the bank accounts.

Publicity - Bob, AF6C reports that club info is still available at HRO on bulletin board. Bob will get Auction flyers to HRO early in September.

Activities, Technical, and Membership were not present to provide reports.

OLD BUSINESS:

RF editors - Thanks was given to Kristin K6PEQ for editing the last RF. Bob, AF6C will edit the RF in December and there is a need for an editor for October and November. (Note: Willie agreed to be editor in Oct)

ARRL Application - President Ken reported that the request for Special Services Club status is still being considered by the ARRL.

AUCTION - President Ken reminded the group that the club auction is coming in October and he still needs information on what is going to be sold so he can place same on the web page. Ken asked Bob AF6C to make a flyer advertising the auction so it can be placed at HRO in early September.

HOLIDAY DINNER - Cheryl informed the group that the club holiday dinner will be held on Fri, December 16, 2005 at the Jagerhaus in Anaheim (Ball & 57-Fwy).

OCARC SURVEY - Ken reported that the survey regarding feedback from the members regarding the club is still in the works.

BPL FUND - The BPL donation can was passed around during the meeting.

NEW BUSINESS

Bob, AF6C brought forth the need for donations for the hurricane Katrina victims and urged members to donate to that cause through the Red Cross.

GOOD of the CLUB:

- President Ken reported a great turnout and a great time was had by all at the good-bye-dinner for Frank, WA6VKZ and Bob, KD6BWH on August 30.
- Bob, AF6C reported that CNN had aired several stories regarding HAM radio and its positive use during the Hurricane and after.

The meeting was adjourned at 8:00 AM.

Respectfully Submitted
Rich Helmick KE6WWK
Secretary

A Going-Away Dinner for KB6BWH & WA6VKZ

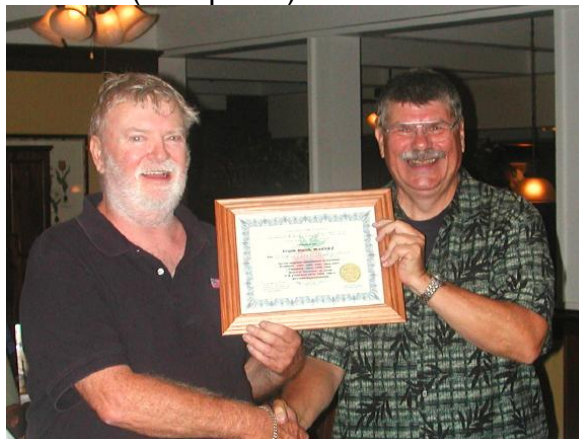
On August 30, friends of long-time OCARC members, Bob Buss – KD6BWH and Frank Smith - WA6VKZ, gathered to recognize the contributions of two extraordinary hams and to say good bye.

Bob Buss first got his Ham Radio license in 1990. He found and joined the OCARC in 1990 and has been active ever since. Just a few of Bob's many contributions include: President of OCARC twice, on the Board of Directors for 13 years, and many years of re-broadcasting Newsline files for the OCARC weekly nets. Bob (with his new KØBWH call letters) and his wife Linda will be moving to Sheldon, ND later in September.



Bob Buss – KD6BWH (L) accepts a Certificate of Recognition from OCARC President Ken - W6HHC

Frank Smith joined the OCARC after he left the USMC in 1977 and wound up in OC. He claims to be the only OCARC member to ever operate from the Antarctic...while in the USMC he operated as KC4USX from Williams-Antarctic for two seasons and as KC4USB from Byrd Station-Antarctic for 6 weeks. He has been a member of the OCARC since 1977. Frank has held every office in the OCARC (except VP).



Frank Smith – WA6VKZ accepts a Certificate of Recognition from OCARC President Ken – W6HHC

Just a few of Frank's contributions and services include: President of OCARC five times (he claims a record for being elected OCARC President five times), served on the Board of Directors for 22 years, and provided a trailer at FD that became known as "the traveling hardware store". Frank is moving back East to Philadelphia in early Sept.

OCARC will miss both of you!!

SPECIAL THANKS!

Thank you for your donations, discounts, and support of our club!

James Shryne, N6DHZ

The DX Store
Amateur Radio Equipment for DXers
www.thedxstore.com

15758 La Forge St., Suite #373 Toll Free: 1-866-899-DXIS (3947)
Whittier, CA 90603-2334 USA E-mail: n6dhz@thedxstore.com

WORLDWIDE DISTRIBUTION

HAM RADIO OUTLET

Dan Dankert
N6PEQ/ZF2RE

933 N. Euclid Street
Anaheim, CA 92801
(714) 533-7373
1-800-854-6046

ANAHEIM, CA • ATLANTA, GA • DENVER, CO • OAKLAND, CA
PHOENIX, AZ • PORTLAND, OR • SALEM, NH • SAN DIEGO, CA
SUNNYVALE, CA • VAN NUYS, CA • WOODBRIDGE, VA

Mon. - Fri. 9:00 AM to 6:00 PM Tel: (714) 521-8080
Sat. 9:00 AM to 5:00 PM Fax: (714) 521-8920

"Since 1956"
FORD Electronics, Inc.
Electronic Parts Distributor
Wholesale • Industrial • Commercial
Network Equipment

8431 Commonwealth Ave., Buena Park, CA 90621-2527
Email: sales@fordel.com

ARRL Receives \$100K Fed'l Grant to Support Katrina Efforts

(Excerpts from ARRL WEB story)

The Corporation for National and Community Service (CNCS) will provide a \$100,000 grant supplement to ARRL to support Amateur Radio's emergency communication operators in states affected by Hurricane Katrina. The grant will help to fund "Ham Aid," a new League program to support Amateur Radio volunteers deployed in the field in disaster-stricken areas. ARRL Chief Development Officer Mary Hobart, K1MMH, expressed gratitude to CNCS for its generous response. Ham Aid, she said, offers a unique opportunity to support individual radio amateurs helping to bridge the communication gap Hurricane Katrina has caused.

"For the first time in ARRL history, we will be able to reimburse some of the expenses that hams incur in response to a disaster," she

said. "We only wish that we could justify an expense reimbursement program like this every time Amateur Radio Emergency Service volunteers are called upon to help in a disaster or emergency, sometimes placing themselves in harm's way."

In addition to providing emergency communication within and outside the affected areas, Amateur Radio Emergency Service (ARES) members and individual radio amateurs are supplementing the communication needs of emergency management and relief agencies, including the American Red Cross and The Salvation Army. Hobart said it's only due to the scope of the unprecedented and tragic Katrina disaster that CNCS agreed to help support dedicated Amateur Radio volunteers.

Trained Amateur Radio operators will be on site for the duration of this disaster response, which could run into several weeks or months. "Many will leave their jobs and families and travel on their own expense, using their own equipment," Hobart points out.

ORANGE COUNTY AMATEUR RADIO CLUB, INC
P.O. BOX 3454
TUSTIN, CA 92781-3454

First Class Mail

***Time Dated Material.
Please Expedite!!***