



# RF



## ORANGE COUNTY AMATEUR RADIO CLUB, INC.

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

April 2006

### The Prez Sez.....

By Willie N8WP



Wow, did we have a good turnout!!

Hello OCARC!

Spring has sprung in Orange County. I really like it when daylight savings time kicks in. This gives me the opportunity to experiment with antennas outside after work! Along with the April showers we will have May flowers. We will need to begin collecting them because the Orange County Fair is coming up and the theme is Flower Power. OCARC will be there for several days. Let's get some volunteers out there and have a good time. We need to have a good showing because our own Kristin, K6PEQ, is

heading up this effort for OCCARO.

We managed to overfill our meeting room again last month! Gordon West did an outstanding presentation on GPS. Thank you so much Gordo. All that GPS talk and working the Baker to Vegas race has me all stirred up about playing with APRS again. Amateur radio is such a diverse hobby. There is always something new to play with, or shake the cob webs out of your brain to use again.

Speaking of the Baker to Vegas race... Orange Police Department came in third place. That is a great accomplishment with so many other teams. Ken, W6HHC, has included an article in this month's newsletter [see Page 10]. I had a great time working the race. I brought Frank, WF1A, with me and met up with an old Las Vegas friend, Jamie Gore, N3TOY. We worked together as a team during the graveyard shift of the race. I want to take this opportunity to say hi to Luke and Art from AES Las Vegas. I just found out that they read the 'RF' in Sin City!

Again, spring is always busy with Amateur Radio activities. I am looking forward to heading north next weekend for the DX Convention at Visalia (remember what happens in Visalia, stays in Visalia), Dayton Hamvention, and of course Field Day! The Southwestern Division ARRL Convention will also be held in San Diego this September. I hope to see everyone at one or more of these events.

73,

Willie  
N8WP

### April Meeting

The April meeting will be held in the Red Cross Building meeting location. Our speaker is Catherine Deaton of the Los Angeles FCC Office, who will present a program on:

### "FCC Happenings"

The presentation will center on the latest FCC happenings affecting amateur radio.

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

The next general meeting will be:

**Friday, Apr 21<sup>th</sup>  
@ 7:00 PM**

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

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## Monthly Events:

### General Meeting:

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

### Club Breakfast:

First Saturday of the month  
at 8:00 AM  
Jagerhaus Restaurant  
2525 E. Ball Road  
(Ball exit off 57-Freeway)  
Anaheim, CA

## Club Nets (Listen for

### W6ZE):

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

28.375 ± 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.

**TechTalk #50 –****The Sunspot Cycle and Propagation**

by Ken Konechy – W6HHC

In the last TechTalk article, we studied the history of sunspot cycles and the fact that we have reached the “bottom” of the cycle number 23. NASA reported that for 21 of February's 28 days, the sun was blank. NO SUNSPOTS at all. We also described that .....in general, a large number of sunspots creates good propagation conditions (that is: skip) for the HF bands below 30 MHz. In a related manner, if the sun contains few sunspots, then the HF propagation is much poorer than at the peaks.

In this article I will attempt explain the connection between sunspots and HF propagation. I have been a ham since the famous sunspot conditions in 1957, and I always knew that more **SUNSPOTS** were good for DXing. But, I never quite got around to understanding other terms that are kicked around when serious people talk about propagation. These other terms that also affect HF propagation are the **SOLAR FLUX**, **SOLAR FLARES**, **A INDEX**, and **K INDEX**. So let's explore these terms and understand what they have to do with good propagation or poor propagation.

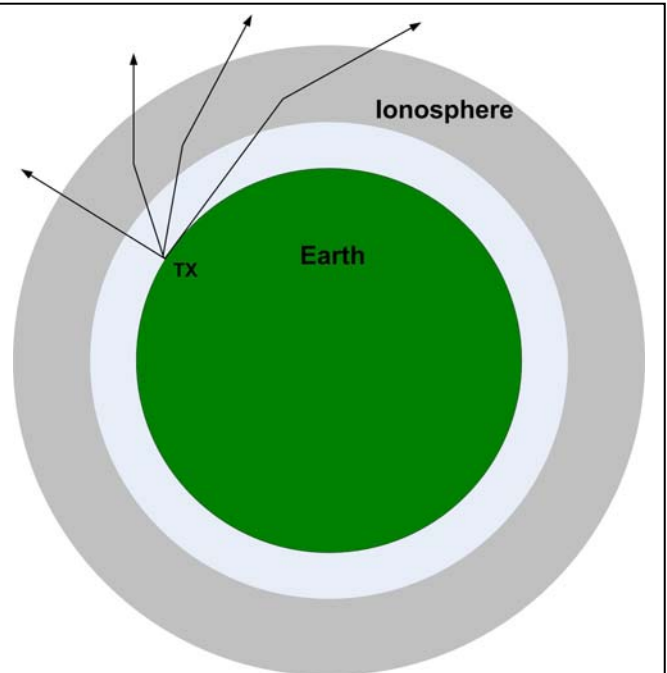
**HF Skip Condition Propagation**

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 used is not too high. (See RF Newsletter 2005-September for more details) The main ionosphere layers to pay attention to for creating good communications are the F2-Layer and the D-Layer. Energy from the sun energizes the oxygen molecules above the Earth causing ionization to occur. Usually more sun energy will increase the amount of ionization in the ionosphere and thereby create better skip conditions. **Figure 1** shows what can happen if there is not enough ionization....the signal does not skip back to Earth...no distant contact can occur.

As a refresher course on propagation...I have reprinted some details about the F2 layer and the D layer at the end of this article.

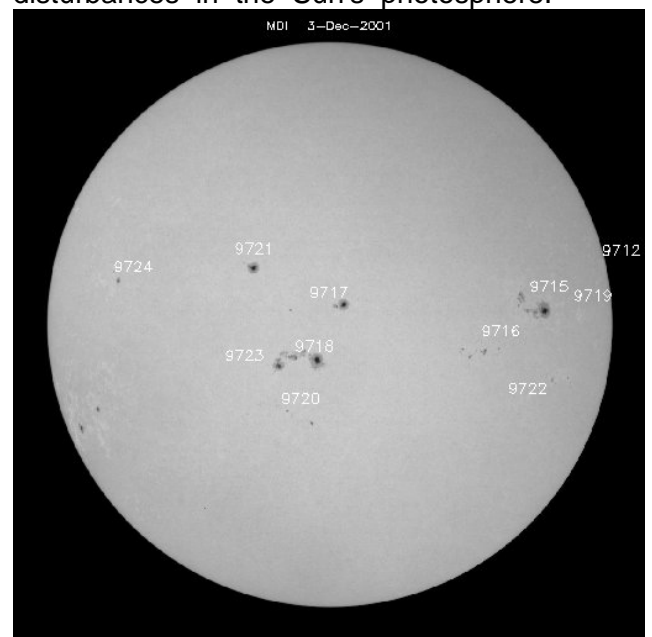
**SUNSPOTS**

Sunspots come and go with an 11-year rhythm called the sunspot cycle. Electric currents in the Sun gener-



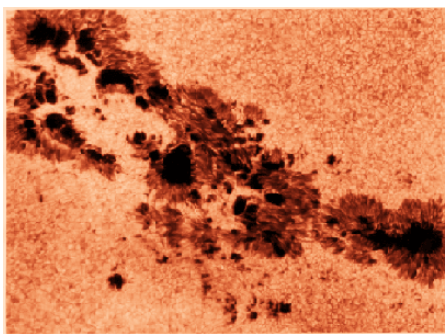
**.Fig 1 – Signal reflection does not occur because ionosphere is too weak or signal freq too high**

ate magnetic fields. Sunspots are temporary disturbances in the Sun's photosphere.



**Fig 2 – Typical Image of Sunspot Activity**

Sunspots appear dark because temperatures are considerably lower than in surrounding areas. **Fig 3** is a close-up view of some typical sunspots. While sunspots can last weeks or months, they do eventually disappear. Often sunspots break into smaller and smaller sunspots. In last month's TechTalk on Sunspot history, it was explained that the number



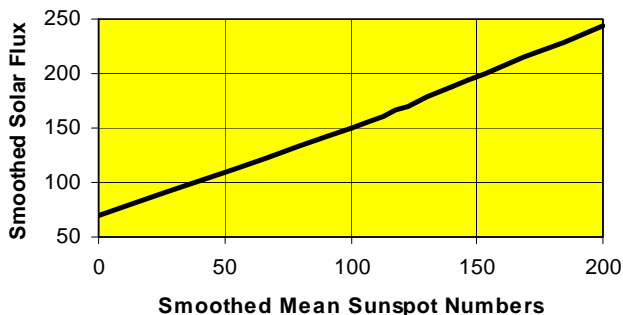
**Fig 3 – Close-up Image of Typical Sunspots (Courtesy of the National Solar Observatory)**

of sunspots can range from zero to 200 (the highest recorded number from 1958). But, how do these dark spots on the sun improve DX?? And...if much of February in 2006 had zero sunspots, why was there still some skip on 20M? Let's explore some of those other propagation-related terms.

**SOLAR FLUX**

Another way of judging solar activity and solar energy is the SOLAR FLUX. This is a measurement of the intensity of the 2800 MHz radio noise coming from the sun. The SOLAR FLUX commonly varies between values of 60-to-300. The 2800 MHz radio flux correlates very well with the intensity of ionizing UV and X-ray radiation. **Fig 4** (excerpted from The ARRL Handbook) shows a nearly "straight line relationship" between the number of sunspots and the value of the SOLAR FLUX. You can obtain the current value of SOLAR FLUX on the WEB at either

**Fig 4 - Solar Flux (2800 MHz) vs. Sunspots**



[www.sec.noaa.gov/today.html](http://www.sec.noaa.gov/today.html) or at DX Listeners Club at [www.DXLC.com/solar/](http://www.DXLC.com/solar/).

**SOLAR FLARES**

A solar flare occurs when magnetic energy that has built up in the solar atmosphere is suddenly re-

leased. Radiation is emitted across virtually the entire electromagnetic spectrum, from radio waves at the long wavelength end, through optical emission to x-rays and gamma rays at the short wavelength end. The amount of energy released is the equivalent of millions of 100-megaton hydrogen bombs exploding at the same time! SOLAR FLARES can be a terrible event for hams. The extra X-ray radiation causes an immediate increase in D-Layer ionization known as "sudden ionization disturbance" (SID). The D-Layer becomes so strong that signals in the range from 2-to-30 MHz may completely disappear.

**K-INDEX VALUES**

The K INDEX provides an indication of magnetic activities during the last three hours on a scale from 0-thru-9. This is how you know that there has been a solar storm/flare.

**A-INDEX VALUES**

Daily geomagnetic conditions are summarized in an A INDEX that corresponds to daily K INDEX values. See the table below: (from The ARRL Handbook)

Description	Typical K	A Range
Quiet	0-1	0-7
Unsettled	2	8-15
Active	3	16-29
Minor storm	4	30-49
Major storm	5	50-99
Severe storm	6-9	> 100

**Propagation Refresher Course:**

**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. For 20M the night time MUF can stay above 14 MHz throughout the night during peak sunspot cycle conditions.

**D-Layer** - The main characteristic is that this layer 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) usually escape (except during SID) the effects of D-Layer.



## **“HAM ELMERS TEAM UP FOR ICOM HELP”**

**By Gordon West, WB6NOA**

Most ham operators have a specific area of radio expertise. Putting these experts together for free web advice has long been a dream, come true, by Dale Piedfort, KB7UB, and Dan Dankert, N6PEQ. Together they have formed a collection of ham radio experts, specifically addressing questions and answers about ICOM equipment.

The new web site is found at <http://www.icomelmer.com>, and is intended to provide the amateur radio community with free advice on ham radio related topics and brand specific questions about ICOM gear.

“The website has put together a comprehensive collection of experts in numerous aspects of amateur radio. These areas include equipment selection, antennas, DXing, contesting, mobile operating, mobile marine, RF grounding, RFI/TVI, and is a site tailored for the newly licensed amateur, as well as for the seasoned operator,” explains Dale Piedfort, KB7UB, formerly with Ham Radio Outlet and now retired and living in the southeast.

“Even though our free website is named icomelmer.com, we are not dedicated exclusively to users of ICOM equipment. We just KNOW ICOM equipment very well, so we can answer brand-specific questions easily,” comments Dan Dankert, N6PEQ, displaying his ham station with an equal balance of every brand of ham radio equipment from DC to laser daylight.

“Our website provides hams with a forum to conveniently post questions. Our growing team of communications specialists will then analyze the inquiry, and provide the ham with the best recommendation,” adds Dankert, explaining they can help solve the problem when you find yourself torn between acquiring one of two different radios, and you are seeking some additional feedback in order to make that final decision.

“Are you debating what antenna to install on your new tower, or want some tips on how to keep your 100 watts out of your new surround sound system? We can help!” adds Dale, well known for his humor-

ous positive approach to almost any type of radio dilemma.

Is this new site a carbon copy of the long list of help pages already on the internet for ham radio operators?

“We are not like other ham radio websites—we have put together the best and brightest ham radio experts who have agreed to make themselves available to share their knowledge and collective skills, in a professional manner, and take the time to walk an individual through a solution to a particular problem,” comments Dankert. “In general, it is our ultimate intent for this website to become the ultimate Universal Elmer, offering free expert advice from professional hams who take great steps to present a balanced overview of a specific topic or problem.

“We have spent time cultivating individuals who are well-versed in many aspects of amateur radio, and are also willing to take the TIME and make the effort to help those new hams to get on the air properly with some one-on-one internet problem solving,” adds Dankert.

### **The team continues to grow!**

- *HF Equipment & Antennas: Dale, KB7UB*
- *VHF/UHF, HF DXing & Contesting: Dan, N6PEQ*
- *Maritime Mobile: Gordon, WB6NOA*
- *HF Mobile Installations: Jim, N6DHZ*
- *VHF/UHF Mobile Installations: Ken, N6CCE*
- *Digital Mobile & Portable: Bill, K6ACJ*
- *QRP & Stealth HF House Installations: Bob, K0OK*
- *VHF/UHF Handheld & Scanners: Terry, N6WI*

“We are looking for expert hams to join us as Elmers,” adds Dan Dankert, explaining that this Elmer group is divided up among specialists, giving the inquiring ham an expert in a specific area.

“Again, don’t let our web address fool you—we are unbiased in the brand of radio equipment, and we focus in matching the right radio with how a new ham or a seasoned ham plans to use it. That is our mission as an Elmer,” finalizes Dan Dankert, N6PEQ. “Check out our website and let us know what questions you may have,” adds Dan.

<http://www.icomelmer.com>

**"NEW AND IMPROVED TECHNICIAN CLASS  
HAM TEST"**

By Gordon West, WB6NOA

All current 35-question, entry-level, Element 2 Technician class examinations get trashed at 11:59 p.m., June 30th. The current Element 2 entry-level Technician class question pool, made up of 511 total questions for the brand new applicant, is summarily discharged to the dumpster on June 30, 2006.

None too soon. The present Tech examination and pool is a hodgepodge of old NOVICE questions, very old TECHNICIAN class questions, some newer questions submitted by an outer-space engineer, plus a handful of GENERAL questions, and totally off-base with encouraging newcomers to really learn the material, rather than speed read for 511 rote memory answers.

The current Technician class examination got a hasty patch-and-add job in July of 2003, after ham radio restructuring in 2000. New questions were added (actually old, tired questions), pulled from the deleted Novice test, and few current questions were subtracted to make up for the addition—causing the pool to swell from 384 to an unmanageable 511 total questions!

Statistics compiled by one testing group revealed a downward trend in test-taking, a downward trend in test-passing, likely associated with anyone opening up an Element 2 question pool book and quickly realizing it was going to be a skill of memorization, rather than true question research and understanding.

**OLD QUESTION EXAMPLE**

T0D04 In the far field, as the distance from the source increases, how does power density vary?

- A. The power density is proportional to the square of the distance
- B. The power density is proportional to the square root of the distance
- C. The power density is proportional to the inverse square of the distance
- D. The power density is proportional to the inverse cube of the distance

How did YOU do on this entry-level question?

T1B07 What are the frequency limits of the 13 cm band in ITU Region 2?

- A. 2300-2310 MHz and 2390-2450 MHz
- B. 2300-2350 MHz and 2400-2450 MHz
- C. 2350-2380 MHz and 2390-2450 MHz
- D. 2300-2350 MHz and 2380-2450 MHz

How did you do on this non-technical question for beginners? How many beginners would actually operate on the 13 cm band, homebrewing their own equipment from a cannibalized analog 2.4 GHz cordless telephone, anyway?

Ham exam coordinators who meet yearly in Gettysburg, Pennsylvania, representing their volunteer examiner coordination group, agreed that the entry-level Technician class examination needed to be "fixed," and soon. Instead of waiting until June of 2007, the scrapping of the current question pool for a new pool was set for this July 1, 2006.

"The National Conference of Volunteer Examiner Coordinators (NCVEC) announces that the Question Pool Committee (QPC) has adjusted the schedule for revising question pools used in the amateur radio service," comments Jim Wiley, KL7CC, the Chairman of the Coordinator's Council.

"The QPC anticipates that the new questions will be released to the public in early 2006, AND BECOME EFFECTIVE ON JULY 1," adds Wiley, realizing the tall order to completely redesign the new Technician class examination based on the following criteria:

- A. Question level should be on a high school reading level
- B. Approximately 10 main topics
- C. Avoid questions with negative answers or "all of the above," or "none of the above" answers
- D. No existing questions based on obsolete technology
- E. Need questions on digital communications, APRS, IRLP/Echo Link, and satellite

Questions should be written to a level that a middle school student would be expected to be able to handle

PULL ALL THIS OFF IN 90 DAYS, seeking a minimum of 385 questions for the new Element 2 pool

The QPC pulled it off! Jim Wiley, KL7CC, Perry Green, WY1O, with the ARRL, and Larry Pollock, NB5X, of the W5YI Group each took specific areas of question topics and divided them out to groups like AMSAT, TAPR, Weak Signal Societies, digital user groups, internet linking experts, and an open invitation for everyone in ham radio to come up with at least one new, fresh question for the entry-level Element 2 Technician class question pool.

Plenty of fresh questions were developed by these team leaders of the Question Pool Committee, thanks to short notice offerings from the ham community and multiple forums. These QPC members worked throughout Thanksgiving and December holiday weeks, meeting their scheduled release date of early January for the new pool that kicks in July 1.

QPC assistants for additional question input were :

Roland Anders, K3RA  
 Dave DeFebo, WB9BWP  
 Tom Fuszard, KF9PU  
 Fred Maia, W5YI  
 Steve Sternitzke, NS5I  
 Gordon West, WB6NOA

Not a facelift! Not a redo! Not a rewrite! But rather fresh, new questions to encourage applicants to really apply some study time in preparation for the new Element 2 examination.

#### NEW QUESTION EXAMPLE

What does it mean when you are using an amateur satellite operating in mode V/u?

- A. You are transmitting a special code for satellites launched in Asia.
- B. You are transmitting to the satellite on VHF and receiving the satellite on UHF.
- C. You receive the satellite on VHF and transmit back on UHF.
- D. The satellite is storing your message for transmission at a later time.

What is the normal bandwidth required for a conventional fast-scan TV transmission using combined video and audio on the 70 cm band?

- A. More than 10 MHz
- B. About 6 MHz
- C. About 3 MHz
- D. About 1 MHz

What technology do Echo Link and IRLP have in common?

- A. Ionospheric propagation
- B. AC power lines
- C. Voice over internet protocol
- D. PSK 31

For the new beginning ham, logical safety questions when they are assembling their first ham station:

What can happen if a rechargeable nickel metal hydride battery pack is charged or discharged too quickly?

- A. The battery pack could overheat, give off dangerous gases, and explode.

- B. The terminal voltage will oscillate rapidly.

- C. The voltage will be reversed.

- D. It is difficult to overcharge the common battery pack.

The new Technician class Element 2 entry-level question pool is available for inspection on line at numerous web sites. As you read over the entire pool, it may remind you of when you took YOUR FCC-administered examination years ago—short, concise questions with short word answers. Two answers absolutely wrong, one answer plausible but incorrect, and one answer absolutely correct.

Notice the various areas to encourage the applicant to do plenty of home study WITHOUT rote memorization before the big exam. Also see that none of the older questions were “dumbed down,” but rather sharpened up on how the material is presented to the test applicant.

In fact, developing some sample examinations for a student pre-test before they began to study the book reveals that an applicant has no easier time passing a test now without reading the book than on the older existing exam. Also notice that General-class type questions, such as dealing with F2 layer ionospheric skip, have been pulled from the Technician class question pool and will go into the new General class question pool being developed later this year. (For you 6-meter buffs, we can revisit the F2 ionosphere question in a few more years as we climb back up to solar cycle 24!)

Beginning this July 1st, candidates for the ham radio test will now study those topics that have relevance to getting started on their privileges above 50 MHz. The examination subtly promotes some of our newer operating modes, such as weak signal work, internet linking with radio, fast-scan television, APRS, satellites, and good old 2-meter repeater operation with plenty of questions on good operating practice with that new single- or dual-band handheld.

After all, once we get them into ham radio and on the air with local communications, now is the time to work with these new hams and encourage them to add high frequency to their existing exciting VHF/UHF privileges they have just earned with a refreshingly clean, new, Element 2 Technician class question pool hitting town this July 1, 2006. Still 35 questions, multiple choice, on the test, with 74 percent passing grade.

**BPL and Ham Radio  
Radio System Receives \$500,000  
Funds Will Start Emergency Link**

ANDREA SCHOELLKOPF Journal Staff Writer  
5 April 2006  
Albuquerque Journal

The [New Mexico] governor has approved \$500,000 to upgrade the state's amateur radio repeaters for use in emergency situations.

State Rep. Thomas Anderson, R-Albuquerque, sought the capital outlay funding at the request of amateur radio groups and county emergency services coordinators throughout New Mexico.

Anderson said the idea came about after a New Year's Day grassland fire in Hobbs that destroyed 10 homes. He said telephone lines and cell phone towers were either down or inadequate.

"There were only like three people who could communicate, and they were all amateur radio operators," Anderson said. "(Hobbs emergency officials) realized how important amateur radio support was."

Emergency officials told Anderson -- a licensed operator since 1993 - the best way to improve the system would be for a statewide linked repeater network.

Sandoval County district emergency coordinator Michael Scales said emergency managers are working with amateur radio groups to design the system to present to the state Department of Public Safety for approval.

The network would entail about 10 new towers in the state, focusing on populated and underserved areas. Scales, also an amateur radio hobbyist and president of the Sandoval County Amateur Radio Emergency Service, said the network would only be for use during times of emergency, although it could be used for local activities to make sure the system is operable.

He said the radio networks were of use during the hurricane disasters last year when people were trying to relay information across the country.

While New Mexico doesn't have hurricanes, it does experience tornadoes and forest fires. Also, a severe set of floods in northern New Mexico last year required evacuation.

"We're there when everybody else can't find an answer to the solution," Scales said.

Scales said there were delays in trying to get the information from Hobbs to Santa Fe because it had to be relayed through additional amateur radio operators, instead of being able to use a direct connection.

While the state has multiple bands, they are private, heavily used and not always operable during an emergency, Scales said. For instance, sun spots can interfere with frequency from 15 minutes to four hours.

**Plasma TV --- Mother Of All RFI  
Producers**

Have you noticed the big sales push by Best Buy (and others) of those plasma TV screens? You know, the ones whose prices have 4 digits in them. There are even payment plans where the price is spread over months or years to help you afford them. Many of these are going to be sold this holiday season.

Unfortunately, no one is mentioning the horrendous RFI that these things put out on HF.

I recently installed a CCTV system to keep an eye on my toys. The security company, ADT, suggested a Panasonic 42" Plasma TV/CCTV monitor since the light output was high enough that the pix could be viewed in broad daylight.

The morning after the installation of the plasma screen, I noticed a huge digital signal about 7.001 MHz and a few other places on the same band. Next, I checked 20 meters. Then 15 meters. Same signal but a little weaker as I went up in frequency. Then, I looked at 80 meters -- a gigantic noise at 3.505 MHz and other frequencies in the band. 160 meters was the same. What was this!

I did a little direction finding and found that it was coming from my house! Sure enough when I switched off the recently installed plasma display, the noise disappeared and I could hear the DX again.

The security company, ADT, talked with Panasonic, who informed them that there was nothing that could be done. I owned it. I hooked up my HP Network Analyzer to see just how bad the problem was across the HF spectrum. It was unbelievably strong!

**How strong was it?**

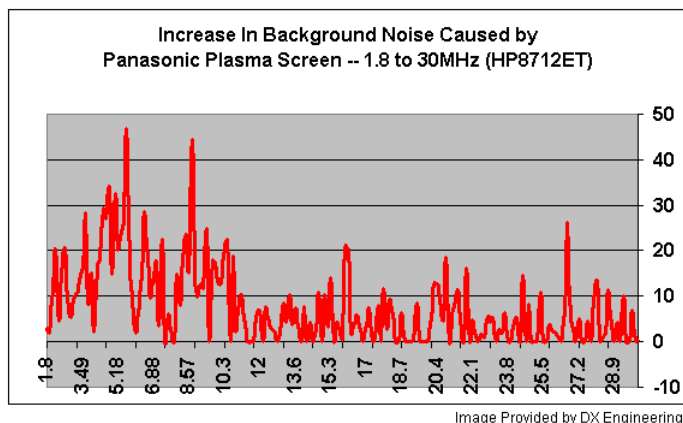
Below, is a graph that shows the noise output of the plasma TV on the HP Network Analyzer. Those numbers on the right side of the graph represent db above the ambient noise level here inside the house. Yes, that would be 50 db at the top. That's about 8 S-units!

Notice how the noise is the worst on the low bands, but the rest of the bands are impacted as well.



**Plasma TV - continued:**

Your new Super Duper Signal Sucker receiver will definitely find this baby on any of the HF bands!

**How did I get this graph?**

First, I turned the Panasonic OFF.

Then, I placed a 2m rubber ducky antenna about 10 feet from the front of the Panasonic Plasma display. I took a reading across the HF spectrum and saved it to a diskette file, which I then imported to an Excel file. This allowed me to graph the ambient noise of the area.

Next, I turned the Panasonic ON and repeated the test, again importing it to the Excel spreadsheet. After subtracting the ambient noise curve from the second curve with the screen operating, I obtained the noise produced by the screen alone.

**So What?**

So, you are now saying, "So what – there's a big difference between 10 feet away and the distance between me and my closest neighbor. I might not hear that thing at all." You are SO wrong!

I have a 40m antenna that is located a quarter mile from my house and the signal levels from the Panasonic Plasma screen are still S-3 to S-5. Plus, this is off the back of the unit where the signals are attenuated by the metal casing. The signals off the front are stronger.

I have a 4 square for 40m located about 150 feet from the side of the screen and my 'MP says it's S9+10db. So, unless the DX is stronger than that, you're likely to have a problem hearing them.

**Let's look at some numbers**

Just one Panasonic unit produces an S-3 raspy signal on lots of frequencies at ¼ mile away from my antenna. How many houses are within a ¼ mile radius from your house? 500? 1000? OK, now what percentage of those houses will have one of those super efficient raspy RFI generators by say, 2004? Let me guess at 2 percent. That means that you

will have 10 to 20 of these things within the ¼ mile radius of your station. Plus the prices are coming down which will result in a lot more of them. Got the picture?

**The FCC will protect us, right?**

This device, which is allowed to pollute the entire HF spectrum, is allegedly consistent with Part 15 rules; they say so right in the literature. It says that this device can't cause any licensed station any interference and it has to accept all the interference from licensed devices. Now all you have to do is get the rule enforced against all those people that surround you. Good Luck.

Some of the commercial airplane manufacturers are getting ready to use these things on commercial flights. The communication systems of the Friendly Skies are more concerned with VHF/UHF than the HF spectrum, so it's lucky for them that the spurious output of the screens is reduced as we go up in frequency. Even so, in order to comply with the regulations, some of the screen manufacturers have had to resort to a mesh over the front of the screen to form a sort of Faraday Shield that reduces the signals. Of course, this reduces the picture quality, too. So, don't expect your neighbors to start pulling the mesh over their screen to help you listen for the latest weak signal.

Apparently, the manufacturers don't think that those of us on the ground are worth the investment in shielding and the FCC backs them up with the limp Part 15 rules. Or maybe the Part 15 spawned the unthinking use of high voltage switching for a bright picture and RFI be damned attitude.

**What can we do?**

You could try one of the noise reduction boxes like the one made by MFJ or JPS but my experience has been that they require a lot of fiddling and retuning every time that you change frequency.

In any case, get ready for the RFI storm. It's forming right now at your local Best Buy and lots of greedy electronics manufacturers who don't mind polluting the spectrum while grabbing your money.

Is it true that if a device puts out a spurious signal on a certain frequency that it is susceptible to incoming signals of the same frequency? That's just a question. I'm not advocating anything.

**Paul  
NO8D**

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Editor's note: Dan, N6PEQ quotes "Yes, plasma T.V.'s are horrible RF generators. One of my neighbors has one, and I know when it is on!"

## Baker-to-Vegas Race (B2V) – Orange PD 2006 Summary

By Ken W6HHC

Since 1985, law-enforcement running teams have entered in a competitive foot-relay-race through the desert. This race, known as "Baker-to-Vegas" (and aka B2V), is a 120 mile long race, that starts outside Baker (CA), finishes in Las Vegas, and is broken into 20 "legs" or stages. This year over 220 different law enforcement teams participated. The runners of the Orange Police Department have been supported for many years with communications by hams belonging to COAR RACES, the OCARC members, and Communications Volunteers from Cypress. This year, ten members of OCARC helped with



**Fig 1 – OPD B2V Planning Meeting participants:** In back - Noah-KF6FOJ (vy tall), Bruce-KC6DLA, Mike-WA6OUE, Rich-KE6WWK, Bev-KI6APH, and Willie-N8WP ..... In front - Ken-W6HHC, Bob-AF6C, Steve-KB6ROL, Leon-KK6AB, Mike-KF6WRM, Rich-KR6BA, Robbie-KB6CJZ, Dieter-N6ZKD, Les-KM6SQ, and Lowell-KQ6JD.

(Photo taken by Debbie Klein of OPD)

planning, preparations and/or operations in providing communications support for the OPD runners. **Fig 2 and 3** show that preparation efforts included testing equipment



**Fig 2 – Testing equipment and antenna before the big event at the QTH of KE6WWK:** L-R are Robbie-KB6CJZ, Rich-KE6WWK (red hat) and Mike-KF6WRM

(Photo by Bev-KI6APH)



**Fig 3 – The Pool-side Workbench of W6HHC tested out the brand new COAR 144/440 MHz antenna before the race.** L-R are Bob-AF6C (with mike) and Ken-W6HHC

(Photo by Ken-W6HHC)

prior to the B2V race. The B2V race began on Saturday, April 01, and continued on until the Sunday morning. **Fig 4** shows a terrific view of the open desert with the OPD runner



**B2V Race - continued**

leading what seems to be an endless line of runners and support vehicles from the competing teams.



**Fig 4 – The OPD runner (Team #57) out in the middle of desert.**  
(Photo by Byron-KC6YNG)

The Orange PD team of runners ran from 3:45 PM on Saturday through the night to reach the Las Vegas finish line at about 7:45 AM (PST) on Sunday morning....finishing in a record time of 16 hours and 2 minutes. **Fig 5** shows a runner traveling through the city of Pahrump, NV outside the COAR communications center, late at night. The team of hams



**Fig 5 – OPD runner on Leg 11 in Pahrump, NV at night**  
(Photo 5 and 6 by Bob-AF6C)

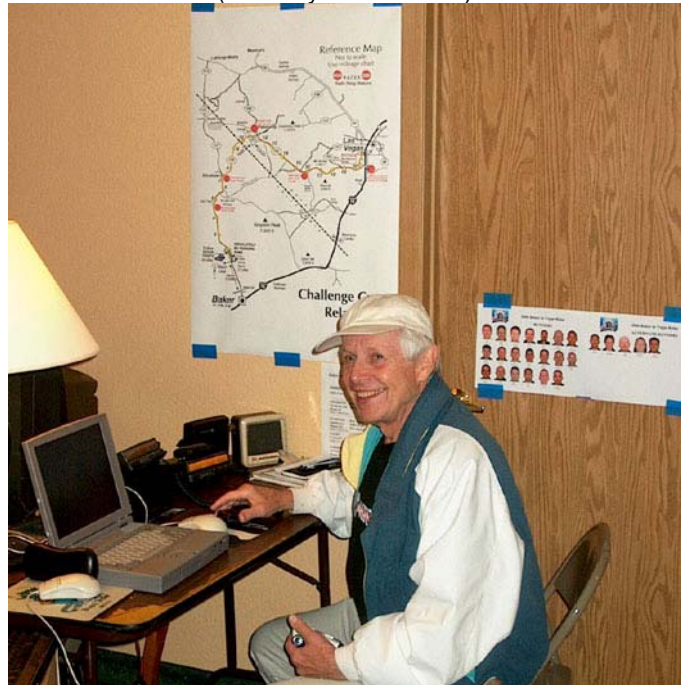
operated communication centers at Ibox Peak in CA, Shoshone CA, Pahrump NV, Sandy Valley Road in NV, and Las Vegas in order support direct communications with the “follow vehicle” that traveled next to the OPD runner (APRS equipped to provide location). Finally, a “support vehicle” traveled ahead to confirm that the next runner was in place.



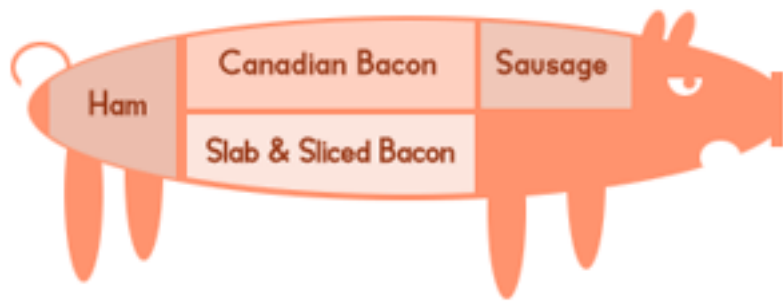
**Fig 6 – Pahrump comm. center with Ken-W6HHC**



**Fig 7 – Debbie Klein of OPD checks APRS with Bob-AF6C**  
(Photo by Ken-W6HHC)



**Fig 8 – Dieter-N6ZKD mans the LV communications center**  
(Photo by Bev-KI6APH)



## Ham Cuisine

*by Dan Dankert N6PEQ  
n6peq@dxer.com*

The following recipe for "Ham Jambalaya" was found on "The Other White Meat" website. This dish is the perfect meal while hunting DX on 80 meters late at night!

### Ham Jambalaya

#### Ingredients:

- 1½ cups of cubed ham
- 1 tablespoon of olive oil
- 1 cup of chopped onion
- ¾ cup of chopped green sweet pepper
- 1 teaspoon of minced garlic (2 cloves)
- 1 14½ oz. can of stewed tomatoes
- 1 14 oz. can of reduced-sodium chicken broth
- 1 teaspoon of Cajun seasoning
- 1½ cups of quick-cooking rice

#### Cooking Directions:

Heat the olive oil in a large saucepan over medium heat. Cook onion, sweet pepper and garlic in hot oil for approximately 5 minutes or until tender. Stir in un-drained stewed tomatoes, chicken broth, ham and Cajun seasoning. Bring to boiling then reduce heat. Simmer, uncovered, for 5 minutes. Stir in rice then remove from heat. Cover and let stand about 5 minutes or until rice is tender.



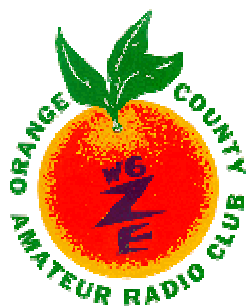


## Renew Your OCARC Membership

It's that time of the year again. Time to renew your OCARC membership for 2006, if you have not already done so.

Help continue to support your growing club. There are many entertaining monthly meetings, speakers and events planned for this year. But it can't happen without your support for OCARC.

Dues can be paid at the monthly club meetings, club breakfasts or via snail mail. Regular dues are only \$20. Additional family members are \$10 (Total). Membership for teenagers is only \$10 as well. What a deal!



OCARC

P.O. Box 3454

Tustin, CA 92781

## SUBMIT AN ARTICLE

Do you have an idea for a newsletter article? Maybe you have acquired a new piece of equipment, designed or constructed a new antenna, took a trip focused around ham radio, want to share an amateur radio related experience or discuss a technical topic. Why not write an article for the monthly RF newsletter? The article can be short or long, simple or elaborate, and can even include pictures!



The RF newsletter relies on articles from our members. So why not give it a try? Write an article and send it to the newsletter editor. It's fun, and at the same time, your contribution helps support our club and hobby!



# Upcoming OCARC Events!!!

(Check the club website for updates and additions  
<http://www.w6ze.org>)

**April 21<sup>st</sup>** (Friday 7:00pm) *General Meeting: The FCC visits OCARC! Catherine Deaton from the Los Angeles office of the FCC fills us in on the latest FCC happenings affecting amateur radio!*



**June 16<sup>th</sup>** (Friday 7:00pm) *General Meeting: Bill Scholz W1HIJ will give a presentation on operating HF while mobile!*

**July 12<sup>th</sup>** (Wednesday) & **July 29<sup>th</sup>** (Saturday): *OCARC's days running the Ham Radio booth at the Orange County Fair!*

## June 23<sup>rd</sup>, 24<sup>th</sup> & 25<sup>th</sup>

ARRL Field Day! *Get ready for Fun, Antennas & Food. Oh yeah, we're going to make some QSO's too!!!! Bring the family and friends for this weekend event. Don't forget to order your Field Day shirt.*



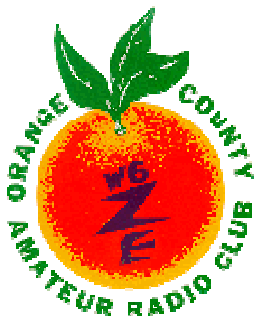
**October 20<sup>th</sup>** (Friday 7:00pm)  
Annual Club Auction ...Bring your gear to sell!  
Spread the word. Tell your friends!

The Orange County Amateur Radio Club "OCARC"

P.O. Box 3454, Tustin, CA 92781

Web: <http://www.w6ze.org>

Email: [ocarc\\_info@w6ze.org](mailto:ocarc_info@w6ze.org)



## Orange County Amateur Club Board Meeting Minutes April 8, 2006

Minutes for April 08 2006

The Board of Director's meeting was held April 8, 2006 and 18 people attended. All but one of the Directors were present.

Our speaker for the April meeting will be Katherine Denton of the FCC. Bill Sholtz from HRO will talk about marine communications in June.

### **Membership**

The Board approved the purchase of badge pockets for use by AF6C when he makes new or replacement badges. The monthly newsletter mailings to new members have not produced the new membership activity as hoped.

### **Old Business**

The newsletter will be a few days late this month.

Our President, Willie, has started to develop an automated web page for use by Pay-Pal.

The results of the survey to the membership was collated and the results published and distributed to the membership attending breakfast.

### **Baker to Vegas**

Ken W6HHC will submit a Baker to Vegas article that will be published in the newsletter. Rick KE6WWK gave a report on Baker to Vegas and reported that there seven club members who participated and four others who loaned equipment for use.

### **Treasurer**

The Treasurer reported that the club has \$3,921.86 in the bank

### **Field Day**

The four ea field day shirts have been ordered and will arrive soon. There may be a second order of shirts.

The Board voted to ask Bev to buy 10 tee-shirts for field day. The shirts will be used in different ways including selling to visitors at FD.

### **Good of the Club**

A discussion was held whether or not to buy coffee cups for sale. Bev will obtain samples of the coffee cup. A decision whether or not to buy the cups, will be made in the near future.

Respectfully submitted by  
Steve Brody, N1AB - Secretary