RF

VOL. XLVII NO. 2 P.O. Box 3454, Tustin, CA 92781-3454 February 2006

The PREZ Says:

Hello OCARC!
I managed to get through my first month without any recall petitions. So all must be well! This year I would like to see more participation from club members. I would like to ask each and every one of you one simple question. What is your favorite Amateur Radio activity? Field Day is my personal favorite.

How about telling us about your favorite activity, now that you have a clear understanding what that activity is. I am challenging the club members to do demonstrations and talks to the group. I don't expect a full meeting presentation, although that would be great. How about giving a demonstration on SSTV, APRS, ATV or even something that is not an acronym. Do you want help with getting an antenna or gear set up for the demonstration? All you need to do is ask me!

Remember, this is your club. The club membership has a collective wealth of knowledge. So let's share the wealth. Don't forget to bring a show and tell item to the February meeting.

73,

Willie - N8WP

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THE ORANGE COUNTY AMATEUR RADIO

Club Dues:

Regular Members…$20
Family Members*…$10
Teenage Members…$10
Club Badge**…$3

Dues run from Jan. through Dec. & Are prorated for new members.
* Additional members in a family of a regular member pay family rate up to $30 per family
** There is a $1 charge for the badge being mailed to you.

ORANGE COUNTY AMATEUR RADIO CLUB – W6ZE

2006 Board of Directors:

President:
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(714) 318-4047
n8wp@arrl.net

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kkonechy@pacbell.net

ARRL Assistant Director:
Ken Konechy, W6HHC
(same as above)

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 P.M.
AMERICAN RED CROSS
601 N. Golden Circle Dr.
(Near Tustin Ave. & 4th St.)
Santa Ana, CA

Club Breakfast:
First Saturday of the month
at 8:00 am
Jaugerhaus
2525 E. Ball Road
(Ball exit off 57 freeway)
Anaheim, CA

Club Nets (W6ZE):
7.086 ± MHz CW OCWN
Sunday 9-10 a.m.
Rick KF6UEB, Net Control

28.375 ± MHz USB
Wednesday 7:30-8:30 p.m.
Bob AF6C, Net Control

146.55 MHz Simplex FM
Wednesday 8:30-9:30 p.m.
Bob, WB6IXN, Net Control

Orange Section Ham Radio Opportunity!

Richard Fisher, KI6SN - ARRL Orange Section Public Information Coordinator

The Southern California radio amateur community has a rare opportunity to bring amateur radio to school classrooms and scout groups in coming weeks with the "launch" of SUITSAT-1 from the International Space Station.

In early February 2006, a very unusual Extra-Vehicular Activity (EVA) will be conducted high above the Earth. "During this spacewalk, the ISS crew will push a Russian spacesuit overboard - with no humans in it, of course," writes Frank H. Bauer, KA3HDO, AMSAT vice president for human spaceflight programs. "And for a week or two, this Suit-robot-satellite will take on a life of its own - parroting students' (pre-recorded) voices from around the world, voicing down suit health telemetry and sending a special commemorative picture to all who want to receive it."

Full details of this extraordinary mission can be found at:
http://www.amsat.org/amsat-new/articles/BauerSuitsat/index.php
AND
http://www.suitsat.org

"Students, scouts, teachers, ham radio operators and the general public are encouraged to track the space suit, hear the conversations from space, copy the suit telemetry and capture the picture," KA3HDO added. "A special certificate will be distributed to those who receive the voice signals and those who capture the picture. We also will have a special award for those students who receive the 'special words' that are embedded in the messages from our Suit-Sat student 'crew members.'" SUITSAT-1 deployment is tentatively scheduled for Feb. 2, 2006 – but that date is subject to change. So please check the web sites.

This event provides a great opportunity for amateur radio clubs in Southern California to introduce students and scouts to ham radio. Although they will not be able to "talk" to SUITSAT-1, they will be able to listen to perhaps the most unusual satellite since Sputnik. You are encouraged to visit the SUITSAT-1 web site for complete details and the latest updates, and, if possible, to contact schools or scout troops in your area to volunteer services in setting up the simple receiving equipment needed to successfully copy SUITSAT-1.

* There is a tech talk article regarding this starting on page 22.

BPL Improvements Beginning to Happen

Excerpts from e-mail of Ed Hare W1RFI (ARRL) by Ken W6HHC

The following are excerpts of ham radio progress being made over the BPL (Broadband Over Power Lines) interference issue as described by Ed Hare W1RFI, the ARRL Lab Manager who is heading the ARRL efforts to improve BPL. These e-mails originally appeared on the Yahoo Ham Radio BPL reflector/chat-group (BPLandHamRadio@yahoogroups.com) Also excerpted is status of activities to improve BPL interference by other (potentially) affected like short wave broadcasters, etc.

From e-mail sent January 13, 2006:

..... What is especially telling, IMHO, is that the telcom industry is very much aware of licensed radio services and they, too, have included notches in the ham bands as their industry standard. The result is that they have not encountered major interference problems. The BPL industry is moving in that direction, too:

* Motorola does BPL with HomePlug modems and additional filters. They communicate regularly with ARRL staff.

* Current and IBEC stay off of HF on overhead power lines and use modems that notch the ham bands. Both communicate regularly with ARRL staff.

* Main.net it trying to notch the ham bands in their entire installation in Manassas. It remains to be seen how well this will work out, but previous attempts to do so on a smaller basis in Rochester, MN were not very successful. Their cooperation is improving some, but the proof will be in the pudding.

* Mitsubishi's entries in the BPL database indicate that they are notching the ham bands in their installations. Their older-generation installation in Cottonwood did that pretty well, but the Cottonwood notching of their next-generation equipment is not done as well. Mitsubishi communicates regularly with ARRL staff, and they are trying to address these issues.

* Amperion is not universally notching the ham bands, although a couple of the entries in the database indicate that they are doing this in a few systems. I have personally seen a local BPL system in Agawam, MA that is notched in the ham bands. The system in Shelton, CT is not properly notched, though, operating at full strength on

some amateur spectrum and with poor notches in others. Although at one point, Amperion indicated that they wanted to work with ARRL, they unilaterally stopped doing so.

* Ambient is not notching in the ham bands in all systems, although in one, Briarcliff Manor, they have told the FCC that they are. Follow-up tests by ARRL showed them to be at full strength in the amateur bands on several legs of that system. Although Ambient started out by being very cooperative with ARRL, that cooperation never extended to not using the ham bands at full strength until formal complaints were filed. At this point, Ambient does not communicate with ARRL and all correspondence about interference must be done by the attorneys for Ambient, ARRL, the involved utility and formal complaints through the FCC.

What is most telling is that, in general, the better a job and industry or company is doing at avoiding interference, the better they are doing in the marketplace.

Ed, W1RFI/6

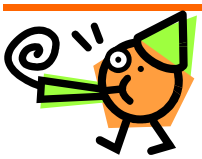
From e-mail sent December 28, 2005:

.....ARRL has standing to speak for Amateur Radio. The real disappointment is that the other users of the spectrum, groups like APCO and the international shortwave broadcasters, have not spoken for themselves. In the presence of their silence, ARRL cannot and should not try to speak outside its standing. If it were to do so, the BPL industry would pounce on that, claiming that these other radio communications users do not see an interference problem, but ARRL is making up one that doesn't exist. They [BPL industry] would then use that to try to completely discredit ARRL's legitimate concerns for interference in the ham bands.

The League has worked with these other entities and made its information available to them. All they [shortwave broadcasters, etc.] would have to do to make good use of it is to do 10% of the work that ARRL has put into this effort, and to allow their speaking out to give standing to ARRL to be able to help them address their interference concerns.

They have not, and under the circumstances, unless you ..... willing to lose credibility for Amateur Radio, ARRL must continue to work only within its standing to speak for Amateur Radio.

Ed Hare, W1RFI
ARRL Laboratory Manager



THANK YOU!

We want to thank all the people who helped O.C.A.R.C. make this year's Holiday party a huge success! We appreciate your generosity and support of our club.

1. Heil – Heil Quiet Phone Headset
2. NCG-Comet – M-245MA 146/440 MHz magnet mount antenna
3. Ouachita Radio Hamstore – Heil Traveler
4. DX Store – Small Wonder Labs DSW-II-30 QRP Transceiver Kit for 30 Meters
5. DX Store – Bird Wattmeter
6. HRO – HRO Gift Certificate
7. HRO – QRZ CD Rom
8. ADI/Pryme – 2 Meter FM Mobile Rig
9. WA6WZN & WA6WZO – ARES Field Resources Manual
10. WA6WZN & WA6WZO – ARRL Basic Radio Book
11. KI6APH – 4 Baskets for the Women's Prizes
12. U.S. Sensor - $500 Donation to the Field Day Fund

Career Opportunity: Vertex Standard USA, Inc. (YAESU)

Job Title: WDXC Program Manager
(WDXC: "World DXers Club," a Customer Loyalty program)
Reporting To: Vice President
Job Start: Immediately
Job Basis: Full-time

Chief Responsibilities:

You will be responsible for supervising the WDXC program at Vertex Standard USA. This is a new customer-loyalty program that builds long-term sales through a value-added partnership with current and potential customers. WDXC responsibilities include, but may not be limited to:

- Overseeing the growth and maintenance of the WDXC membership;
- Overseeing the WDXC Web Site, and coordinating with other departments and our Web designer in the promulgation and maintenance of timely articles, news updates, and support issues;
- Overseeing and supervising the final assembly and testing of products (such as the FT DX 9000) being assembled under WDXC auspices;
- Overseeing the WDXC Auction Site operations, including coordination and supervision of the efficient flow of paperwork related to the inspection, repair, and certification of previously-owned YAESU equipment;
- Coordinating promotional materials and activities related to WDXC;
- Attendance at such trade shows as management may deem appropriate and necessary for the advancement and expansion of WDXC and the YAESU product;
- Reporting to management, on a regular basis, regarding WDXC status, problems, and opportunities.

General:

An Advanced or Extra Class Amateur Radio license is required, as are current active DX experience and broad HF transceiver knowledge. Strong English writing and communications skills are a must, and foreign language capability (especially Spanish) is definitely a plus. Computer experience is mandatory, and knowledge of Amateur Radio computer-based operations (logging software, HF Packet/RTTY, PSK31) is also desirable.

Vertex Standard USA, Inc. offers a competitive compensation and benefits package, including a 401(k) plan, medical and dental insurance, and a generous vacation schedule.

If you would like to be considered for this exciting position, please send your resume to Vertex Standard USA, Inc. Attn. Mr. Jeff Quan, Chief Financial Officer, 10900 Walker Street, Cypress, CA 90630. Fax: (714) 527-1494. No telephone inquiries accepted. See the WDXC Web site at http://wdxc.yaesu.com.

Attention Members!!!

Do you know a fellow ham that would be interested in joining OCARC? Do you have a friend that is curious about ham radio and wants to learn more about our hobby? Why not invite him or her to one of our exciting monthly meetings?!?! The meetings are fun, informative and entertaining. And don't forget about the raffle prizes too. So bring a visitor to one of our meetings, and help **your** club expand!

Make sure to inform your friends of our club's website, which is always kept up to date. Information on club meetings, activities and our newsletter archive make it a worthwhile site to surf! http://www.w6ze.org

2006 CONTEST SCHEDULE

February	13 - 17	School Club Roundup
	18 - 19	ARRL International DX Contest (CW)
March	4 - 5	ARRL International DX Contest (Phone)
June	10 - 12	ARRL June VHF QSO Party
	24 - 25	ARRL Field Day
July	8 - 9	IARU HF World Championships
August	5 - 6	ARRL UHF Contest
	19 - 20	ARRL 10 GHz and Up Contest
September	9 - 11	ARRL September VHF QSO Party
	16 - 17	ARRL 10 GHz and Up Contest
November	4 - 6	ARRL November Sweepstakes (CW)
	18 - 20	ARRL November Sweepstakes (Phone)
December	1 - 3	ARRL 160 Meter Contest
	9 - 10	ARRL 10 Meter Contest

Orange County Amateur Radio Club General Meeting Minutes
January 20, 2006

The meeting was held at Red Cross in Santa Ana and started at 7PM. All directors were present. There were total of 28 members and visitors present.

Arnie Shatz, N6HC, provided a great talk about his Kure Island DXpedition during September-October 2005.

We had a Show-n-Tell, with PSK-31 presentations given by Willie, N8WP and Ken, W6HHC.

Orange County Amateur Radio Club Board Meeting Minutes
February 4, 2006

The meeting was held at Katella Grill and started at 7:30 AM. All directors were present except Dan-N6PEQ and Kenan-N6CCE. Fourteen people attended the breakfast.

Chip Margelli, K7JA, will give a presentation at the February meeting that he is calling “Field Day from a Suitcase (or Two)”.

The Audit Committee will meet and audit the financial record February 4, 2005.

The club board voted and approved sending AR Newsline $50 in support of their activities collecting and distributing ham radio news.

The March 2005 breakfast will be held at Jaegerhaus on Ball at the intersection of the 57 freeway. It will begin at 8:00 AM.

Field Day discussions have begun and it was determined that the club offer the opportunity to other hams that may not have a Field Day to come and participate in both planning and operating at the event.

A survey will be distributed by email as well as hard copies (at the next general meeting) that will survey membership interest in activities. This will help plan interesting events and activities.

The total assets of the club are now $3,634.68.

Prepared and submitted by:

Steve, N1AB

*** Product Spotlight ***
Elecraft, Inc.
T1 Miniature Automatic Antenna Tuner

By: Dan Dankert N6PEQ
n6peq@dxer.com
Tel: 714-544-9846

A few months back we profiled the small Z11Pro auto antenna tuner manufactured by LDG Electronics. This month we feature an ultra small battery operated antenna tuner, which can even fit in your pocket! Elecraft, Inc. introduced an extremely "cool" auto tuner called the "T1". The T1 is small and lightweight! Elecraft also allows you to purchase the tuner as a kit or fully assembled. So if you are looking for a fun weekend project, purchasing the kit version might be right up your alley! Besides the small size, the T1 features an internal 9-volt battery compartment, LED style SWR and Power meters, and low power consumption.

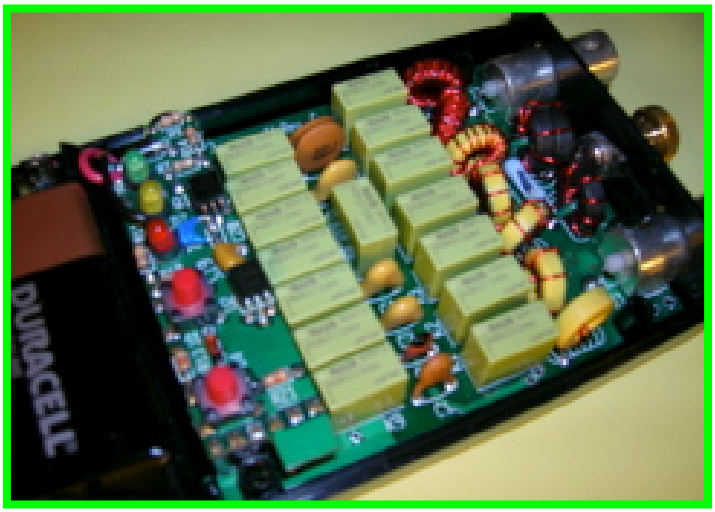
Elecraft Model T1 Manufacturer's Specifications	
Frequency Coverage	**1.8 to 54.0 MHz**
Power Handing Capability	**20 Watts Peak (10 Watts Peak on 6 Meters) 10 Watts Continuous**
Tuning Time	**2 to 8 seconds (Initial Tune) 1 to 2 seconds (Re-Tune from Memory)**
Tuning Capability	**Inductance Range: 0-7.5 microhenry in 128 steps Capacitance Range: 0-1300 pF in 128 steps**
Size/Weight	**4.4" L x 2.5" W x 0.9" H 5 oz (0.14 kg)**
Power Requirements	**8 to 10 Vdc Current Drain: 20 mA average during tune (0 mA when off)**
RF Connectors	**Type "BNC" Female**

The front panel of the tuner, pictured to the right, is straightforward. LEDs provide for SWR or Power indication. The LED's also alert of a low battery state and verify whether the tuner is inline or bypassed. There are only two buttons on the entire tuner. This makes for simple operation! One button is used to power up the unit and initiate tuning. The second button selects between bypassing and placing the tuner inline. A quick reference instruction sheet is also included on the face of the tuner. This eliminates the need to have a loose instruction sheet nearby.

The unit itself feels rugged and beefy. It is small enough to fit into your pocket, and the T1 includes an "auto power-off" feature, so you need not worry about accidentally depleting battery life during transporting the unit. If you prefer, you may install the battery flipped backwards (left to right) during transport (e.g. hiking), which eliminates any possibility of powering up the tuner inadvertently. The T1 tunes in SSB, CW or constant carrier, so there is no need to change modes to tune your antenna. The tuner is capable of 32,768 different tuning combinations, due to its 7 inductors, 7 capacitors and 2 network types. Only 0.5 watt is required to initiate tuning, so virtually any QRP rig will work with the T1.

Pictured to the left are the tuner's RF connections. Two female BNC connectors are used for "RF In" and "RF Out". A threaded ground terminal, which includes a knurled thumbscrew, provides for easy grounding. This also just happens to be a perfect spot to connect a "*N6PEQ Portable Ground Radial Kit*" (www.n6peq.com) for maximizing your radiated RF signal! These are all the connections required to operate the T1.

Shown to the right is the internal battery compartment located on the backside of the tuner. Elecraft estimates that an alkaline battery will last for "many months", while using a lithium battery results in "well over a year" of tuning capability. The T1 analyzes battery status at power-up, and will give an indication of a low battery state through an LED on the front panel.



Pictured to the left is the inside circuitry of the T1 tuner. Note the very compact construction of the unit. The banks of latching relays and inductors are striking. It's quite amazing how Elecraft was able to squeeze all of these components into such a small chassis! Very little space is wasted. This results in an auto-tuner, which is about half the size of a small manual tuner, and approximately one fourth the size of a typical "small" auto tuner.

The installation of the T1 is simple! First, connect a coax jumper from your transmitter to the "XCVR" input of the tuner. Second, connect your antenna to the tuner's "ANT" jack. Third, it is recommended that you ground the tuner using the "GND" terminal of the T1. This completes the installation! You're now ready to enjoy using the T1.

Frankly, there is not much of a learning curve required to use the T1. A simple press of the "PWR/TUNE" button, powers up the tuner, which is confirmed by lighting of the green LED. To begin the tuning sequence, just start transmitting. You will hear the latching relays actuate. After a couple of seconds, the tuning will cease. The LED's will then indicate the SWR. Specific LED combinations indicate the following approximate SWR levels: "Green" =1:1, "Green" and "Yellow"=1.5:1, "Yellow"=2:1, "Yellow" and "Red"=2.5:1 and "Red"=3:1. If you desire to determine your RF power output, quickly tap the "PWR/TUNE" button. Once the yellow LED flashes, you are then to begin transmitting. The colored LED's will then indicate the following approximate output power levels: "Green"=0.5 to 1.5 watts, "Green" and "Yellow"=1.5 to 3.0 watts, "Yellow"=3.0 to 5.0 watts, "Yellow" and "Red"=5.0 to 8.0 watts and "Red"= greater than 8.0 watts. The tuner automatically turns itself off if output power drops below 0.5 watts for more than 3 seconds.

Additional information is provided in Morse code via the yellow LED using the "INFO" feature. These parameters include SWR, battery voltage, inductance, capacitance, network configuration, band ID and firmware revision. In addition to the yellow LED, these parameters are sent via Morse code over a very weak RF signal. In order to copy this low level RF signal, it is recommended to disconnect the antenna from the tuner in order to reduce background noise.

The T1 can also be interfaced to certain transceivers for automatic band switching. When interfaced, the tuner will recall the settings last used by the tuner for the selected band. Elecraft currently offers an interface cable for use with the Yaesu FT-817 QRP transceiver.

I found the tuner to operate as advertised. The tuning sequence is quick and effective. After the initial tuning within a band segment, subsequent tuning concluded in roughly a second. The convenient size of the T1 allows it to be used in the most space-limited applications. If you are planning a QRP backpacking adventure or just a mini expedition to the beach, the T1 might just be the tuner for you!

Shown to the right is the T1 tuner next to an Icom IC-7000. Note the small size of the tuner. This combination can easily fit into a small Pelican case or backpack. Just remember not to exceed 20 watts into the T1.

More information on Elecraft's complete line of amateur radio equipment, including the model T1, can be obtained by contacting:

Elecraft, Inc.
P.O. Box 69
Aptos, CA 95001-0069
Tel: 831-662-8345
Fax: 831-662-0830
Email: info@elecraft.com
Website: **http://www.elecraft.com**
T1 Street Price: $179

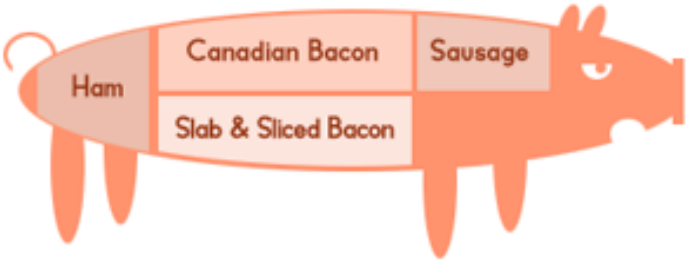
Renew Your OCARC Membership

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



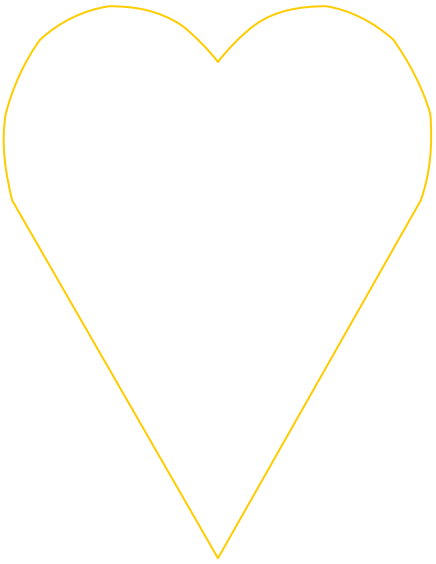
Ham Cuisine

by Dan Dankert N6PEQ
n6peq@dxer.com

The following recipe for "Spicy Ham Chili" was found on the National Pork Board website. Talk about a great recipe for Field Day! Enjoy!

Spicy Ham Chili

Ingredients:
1 pound ham, cut into 1/2-inch cubes
2 tablespoons olive oil
1 large onion, chopped
1 jalapeno chile, seeded and minced
2 cloves garlic, minced
2 28-oz. cans chopped tomatoes, un-drained
1 10-oz. package frozen whole kernel corn
1 15-oz. can black beans, rinsed and drained
1 green bell pepper, seeded and diced
2 tablespoons brown sugar
1 tablespoon ground cumin
1 1/2 teaspoons ground coriander
1 tablespoon Worcestershire sauce



Cooking Directions:
In a small skillet, heat the olive oil and sauté onion, jalapeno and garlic until onion is tender, roughly 4 minutes. Place onion mixture in a 4 to 5 quart crock-pot, and add remaining ingredients mixing gently. Cover and cook on "High" setting for 4 hours. Serve over hot rice, with sour cream, shredded Cheddar cheese, and chopped fresh cilantro, if desired. Serves 6 people. Wear rubber gloves when handling hot chile. Please use caution when sautéing chile. Do not inhale fumes or stand with face directly over skillet.

BAKER TO VEGAS ASSISTANCE NEEDED

The City of Orange ham radio group known as COAR is again supporting the Orange Police Department team as they run in the 120-mile Baker to Vegas Challenge Cup race.

For the OPD team, this years race starts Saturday April 1, 2006 about 3 PM and will end sometime early AM on Sunday. Do to circumstances beyond our control we are short of hams to work this event. We are asking for your support and for you to volunteer to help us provide communications throughout the race. If you can assist by giving a few hours or being available for the entire race your help will be greatly appreciated. Please contact Rich Helmick KE6WWK at 714 343 4522 or Volunteer Coordinator Debbie Klein for Orange PD at 714 744 7328.

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 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!

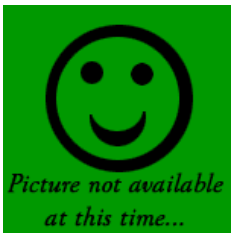
Upcoming OCARC Events !!!

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

February 17th (Friday 7:00pm)
"Field Day in a Suitcase (or Two)" by Chip Margelli K7JA.....
Field Day is the single biggest operating event in all of North America. It brings thousands upon thousands of Hams together for a weekend of trying out new antennas, new power sources, and new chili recipes. For several years now, Chip Margelli, K7JA and a group of friends have turned Field Day into a travel adventure, operating from Puerto Rico, Cuba (!), and the U.S. Virgin Islands. Come to the February 17th meeting to find out how their Piña Colada Contest Club has developed and perfected the "deployable Field Day" concept!

March 17th (Friday 7:00pm) General Meeting:
GPS by Gordon West WB6NOA
...Gordo teaches us about the exciting technology of GPS!

April 21st (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 23rd, 24th & 25th
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.

July 12th (Wednesday) & July 29th (Saturday)
OCARC's days at the Orange County Fair ham radio booth
...OCARC's annual opportunity to promote our club and our hobby!

October 20th (Friday 7:00pm)

Annual Club Auction
...Bring your gear to sell!
Spread the word. Tell your friends!

December 15th (Friday-Time & Place TBA)
Annual Holiday Party...We're talking Food, Fun & Raffle Prizes!!!

OCARC
Member Spotlight

In this month's Member Spotlight, we are featuring a short Q&A session with a newer member of OCARC. Although he is new to the club, many of you already know him. In the spotlight is Dale Piedfort, KB7UB, from Mena, Arkansas.

RF: What year were you first licensed as a ham, and how old were you at the time?
KB7UB: I was first licensed in 1977 and was 34 years old at the time.

RF: What were your previous call signs (if any), and in what years did you hold these previous call signs?
KB7UB: WD6DPJ 1977. N6AIW 1978, N7CCU 1980 & KB7UB 1980

RF: How did you originally get interested in amateur radio?
KB7UB: In 1962, I was with Patrol Squadron 5 stationed in Keflavik, Iceland. Keflavik is actually an International Airport, and the military is there by invitation of the Icelandic government. The Quarters were like a hotel, and two people shared a room. My roommate was a radioman on one of the aircraft, and just happened to be a ham as well. On the weekends he would drag a large APU to the barracks, and fire up the largest radio that I had ever seen, and would talk to the U.S. as well as other countries. Then he had a ham, located in Michigan, run a phone patch back home for me, That did it. I was pretty much hooked, but it would be almost another 15 years before I had the time to follow up and get my ticket.

RF: Did you have any Elmers? If so, who were they?
KB7UB: I sure did, Bob W6TWA (ex W6TIO) and Chuck WA6JQK (SK)

RF: What is your favorite band and why?
KB7UB: It has to be 10 meters. When its open, a coat hanger and 1 watt will do wonders.

RF: Do you prefer CW, SSB or Digital?
KB7UB: I have to go with SSB, as I was never much of a CW operator, and haven't made a CW contact since 1992. The same goes for the digital modes, but that may change here in the very near future. I have become good friends with another ham here (W5JAY), and he is pushing me to get on RTTY, PSK31. He has offered to stop by and lend me a hand with the hookups.

RF: What aspects of amateur radio do you most enjoy and have a passion for, and why?
KB7UB: I cant just name one thing. It's the only hobby that I have never lost interest in. I enjoy DXing, the thrill of the chase and the end results when you get it in the log. Then there is the lifelong friends I have made over the years. Going to conventions and running into hams you have talked to for 20 years and never had met.

RF: Tell us about your most memorable or favorite QSO that you have had.

KB7UB: If I really have to pick only one it would be my last QSO with KH6IJ, Katashi Nose, who is one of the most remarkable individuals that I have ever had the pleasure of talking to. You didn't even have to hear his call sign, as by just hearing the voice you knew who it was. For a little more information on KH6IJ visit: http://www.peacesat.hawaii.edu/10ABOUTUS/Acknowledgements/special.htm Katashi Nose was one of the most distinguished amateurs of our time. Old timers still recall his big signal from KH6, and his flawless, proficient operating style in the DX contests for many decades. In 1983, Nose was honored as Radio Amateur of the Year at the Dayton Hamvention. In 1986, he was honored with a Lifetime Achievement Award at the International DX Convention in Visalia. He was also elected as an honorary member of the Northern California DX Club and the Western Washington DX Club. He became a SK in 1994. The call sign was later reissued to his daughter.

RF: Do you have a funny story that you care to share about a chasing a DX station?
KB7UB: For years I had a sked with SM0IVX and SM0HEP in Sweden. Late one Sunday, I heard Jorgen calling me right on schedule but very weak. I called him back, but there was no response to my calling him. After about 10 minutes of this the phone rang, and it was Jorgen calling to tell me the American Hockey team had beat the Russians! We couldn't figure out why he couldn't hear me, as he was hearing other 6-land stations. The next day, I found out I was trying to work him on the dummy load, and I never told him that.

RF: Have you ever received an "OO" notice?
KB7UB: Never received one from an "OO", but in 1979, while living in Seattle, WA. my faithful Yaesu FT301D developed a problem, and was on its way to Downey, CA. for a fix up. In the meantime, a friend

loaned me one of his spare Swan 500C's. Unknown to me, they were well known for drifting a lot, plus a few other problems. On one Wednesday in June of 1980, I received a letter with the dreaded FCC return address on it. Having only been licensed a few years that brought a chill to my very core. I opened it and read the comment about how the monitoring station in Omaha, Nebraska had heard me on 80 meters, 40 meters, 20 meters, 15 meters and 10 meters all at the same time. They asked what I was going to do to rectify the situation. My response went in the mail that day, explaining it wasn't my radio and I would not be using it again. Sure put the fear of God in me!

RF: What persuaded you to join OCARC?
KB7UB: I was a long time resident of Orange County, and I have a lot of friends in the club. Since it is one of the more active clubs. I just felt that I should support it.

RF: What do you think the maximum monthly smoothed sunspot number will be for solar cycle 24?
KB7UB: 212 plus or minus 2. What we need is a Solar-Flux of 212, an "A-Index" of 1 and a "K-Index" of 1.

RF: What radio equipment and antennas do you currently use?
KB7UB: The station currently consists of an Icom IC756 Pro III, Icom IC-746 Pro, Icom IC PW-1, U.S. Tower HDX-555 with MDP750, RMC1000 and MCL100. The tower is a little bare right now with only a M2 model 6M5X (5 element 6 meter yagi) and a Carolina Windom 80 on a 15 foot stand-off at the 55 foot level. Sitting on the ground ready to go up are a M2 model 40M3L (3 element 40 meter monoband yagi), HyGain model DB12/17 (7 Element 12 /17 meter yagi) and a Bencher Skyhawk (10 element yagi for 10/15/20 meters).

RF: What do you do for a living?
KB7UB: I currently do contract work for Icom America. They fly me around the country to various conventions, where I get to chat about my favorite radios and meet tons of new people. I retired from HRO in August of 2004, but just couldn't sit still, so Icom called and asked me if I was interested in doing that type of work. The rest as they say "Is History"!

RF: Now for the timeless question that keeps being debated! Assuming that money and the support structure is a non-issue, would you choose a full size yagi or a full size quad?
KB7UB: After having Mono Band Yagis on 10/15/20 for years, I would do it again without reservation. I have never been able to figure out why someone would put up an antenna that

requires as much maintenance as a Quad. Maybe if you lived somewhere with no wind, snow or ice, then you might try a Quad. If you were to do a survey, I am willing to bet that 95 percent of the Contest and DX Stations are using monobanders. There is something to be said for that.

RF: What is your favorite QSL card that you have obtained?
KB7UB: P5/4L4FN, I don't think that needs any explanation.

RF: How many DXCC countries have you worked?
KB7UB: 331 worked, I still need the following 4 DXCC countries: (1) 1A0 Soviet Military Order of Malta, (2) VU7 Lakshadweep Islands, (3) VU4 Andaman & Nicobar Islands and (4) Pratas Island.

RF: Do you have any family members that are hams? If so, who are they and what are their call signs?
KB7UB: My wife Dellena (AKA Dee) is KC6TIO,

Thanks Dale for the interview and pictures of your station, shack and antennas! We sure do appreciate the time. Now we just need to get you out to another OCARC meeting when you are in town!

ORANGE COUNTY FAIR - 2006

I need your help! The O.C. Fair is fast approaching and the planning has begun. The theme for the fair this year is "Flower Power – Year of the Garden." We need a theme for the Ham Radio booth that ties in to this theme. Do you have any ideas? If so, please contact Kristin Dankert at kdankert@comcast.net. We want to make this fair the biggest and best yet!

Valentine Word Search

D	X	I	G	N	E	L	M	E	S	R	M	E	E	T	I	N	G	S	F
X	E	M	M	A	H	E	V	M	B	T	C	A	D	G	H	E	A	U	N
I	A	C	F	Z	M	H	L	E	U	C	L	O	V	R	O	T	O	P	E
O	C	O	U	T	E	A	H	M	I	F	U	D	S	U	S	H	G	P	V
I	T	U	A	R	M	M	T	B	X	A	B	Y	U	O	R	A	N	G	E
D	I	N	H	H	V	S	M	E	C	F	H	E	A	R	G	N	T	G	L
A	V	T	E	L	F	F	A	R	U	D	H	S	U	P	P	K	J	D	B
R	I	L	L	W	U	B	D	H	E	R	R	O	P	P	U	S	A	C	T
Q	S	U	T	E	X	A	U	L	E	F	N	T	I	N	R	E	M	L	E
V	A	L	E	N	T	I	L	E	C	V	L	D	F	E	I	H	R	F	V
H	A	M	Q	U	E	D	C	O	U	N	T	Y	R	T	H	A	N	S	E
A	R	T	S	O	R	A	N	R	V	J	B	S	U	L	C	L	U	V	N
S	H	N	D	E	I	R	F	A	I	E	E	M	E	E	T	I	G	N	T
D	R	C	N	C	L	U	H	G	V	V	L	S	H	G	A	U	M	B	S
V	A	L	E	N	T	I	N	E	O	E	F	R	E	I	N	D	S	N	U
J	F	U	I	D	N	R	A	F	L	N	J	A	L	B	U	I	L	C	F
O	F	S	R	U	F	A	T	R	C	P	E	H	E	L	O	F	X	F	U
R	E	B	F	B	M	F	D	A	C	T	I	V	I	T	I	E	S	D	B
A	I	N	H	C	J	F	V	H	L	O	V	D	W	X	O	R	A	N	H
N	H	E	A	R	T	L	H	E	A	R	S	U	P	P	O	R	T	Y	M

LOVE
ORANGE
DXING
COUNTY
RADIO
AMATEUR
HEART

CLUB
MEMBER
VALENTINE
EVENTS
FRIENDS
ACTIVITIES
THANKS

HAMS
RAFFLE
SUPPORT
HELP
ELMER
MEETINGS
FUN

Tech Talk #48:

SuitSat-1 (now AO-54) Suffering from Reports of Weak Signals

By: Kenan Reilly, N6CCE

Prior to launch, ISS Expedition 12 Flight Engineer Valery Tokarev stuffs SuitSat-1 with its Amateur Radio payload. Tokarev later released SuitSat-1 into space during a February 3 space walk.

Based on recent reports, the already-puny 145.99 MHz signal from "SuitSat-1" may be getting even weaker. The unusual Amateur Radio transmit-only satellite, which consists of a discarded Russian *Orlan* spacesuit equipped with ham radio gear, was released February 3 by International Space Station (ISS) Expedition 12 Flight Engineer Valery Tokarev as he and Expedition 12 Commander Bill McArthur, KC5ACR, began a six-hour spacewalk. The crew stuffed some of its laundry into the spacesuit to help it to keep its form as it orbits Earth. Over the weekend, AMSAT-NA officially designated SuitSat-1 as AMSAT OSCAR 54 (AO-54).

Weak-Signal Reports Continue

“It appeared that signals had deteriorated since yesterday on both passes," said Tony Hutchison, VK5ZAI, in Australia upon measuring the received signal from a second pass over his location on February 6. Hutchison, who's the Australia coordinator for the Amateur Radio on the International Space Station (ARISS) program, SuitSat's sponsor. "It may be the angle that SuitSat was when it passed, but on yesterday's passes it was possible to detect it rolling," Hutchison continued. "I did detect voice this last pass, but it was well down in the noise, and I didn't hear any SSTV this last pass."

Bob King, VE6BLD, in Alberta, who's managed to copy SuitSat fairly well on several passes, also noted that the signal's strength had declined from what it was during the previous two passes he'd heard. King says he's using an FT-847 transceiver with the preamplifier on and a 22-element crossed Yagi with right and left circular polarization providing 19 dB of gain. A preamp at the antenna feeds into half-inch hardline to the shack.

"The bird was almost overhead, so the signals were about S6 when clear," he reported over the weekend. "I also received the SSTV signal with some noise."

The SuitSat-1 ID and Transmission

SuitSat-1 identifies by voice, "This is SuitSat-1, Amateur Radio station RS0RS," which was recorded in several languages. The telemetry is digital voice. There's also a CW ID that reportedly says "Spacesuit-1" instead of "SuitSat-1." SuitSat-1 also is transmitting a single slow-scan TV image.

ARISS remains very interested in obtaining any valid voice telemetry reports (post to SAREX@amsat.org). "The telemetry is transmitted about 30 seconds after the SSTV image stops," explains ARISS Ham Radio Project Engineer Kenneth Ransom, N5VHO. Ransom says the transmission order is SSTV image, 30 seconds of silence, voice identification, mission time, temperature and battery voltage. "The battery voltage is of most importance," he added.

Heard Around the World

SuitSat-1's very weak VHF signal notwithstanding, reports have come from stations and listening posts literally around the globe. ARISS International Secretary Rosalie White, K1STO, reports the ARISS Team was continuing to receive files containing some SSTV audio as well as snippets of voice and CW. "You can hear deep fades in the signal as the suit spins--something we learned from this experiment," she said. "The team is coming up with ideas including things that students can do with all the data we collect from recordings, such as looking at spin rate and transmission fading." White notes that the SuitSat Web site has logged some 5 million hits since the beginning of February, and media interest in the project remains high.

ISS Commander Bill McArthur, KC5ACR, at the helm of NA1SS. McArthur has said he's been unable to copy the SuitSat-1 signal from the ISS. [NASA Photo]

A.J. Farmer, AJ3U, listens for SuitSat-1 from his Maryland backyard. Farmer has set up a web site to collect audio clips from SuitSat-1.

Collection Point Established for SuitSat-1 Audio Clips

A.J. Farmer, AJ3U, in Maryland, has invited the Amateur Radio and monitoring communities to post audio clips to his web site (www.aj3u.com). Farmer reported early this week that SuitSat's orbit was some two miles below and one minute ahead of the ISS's.

Farmer provided Keplerian elements for use in satellite tracking software:

1 28933U 05035C 06035.17648092 .00150877 00000-0 98827-3 0 18
2 28933 51.6460 151.5234 0008831 241.8711 118.1817 15.74747302
34

SuitSat-1 Reports via NA1SS Crossband Repeater Discounted

Several reception reports on the SuitSat web site (www.suitsat.org) indicate SuitSat-1 audio has been retransmitted via the NA1SS crossband repeater aboard the ISS. While the NA1SS Phase 2 station has been configured to retransmit SuitSat's 145.99 MHz signal on 437.800 MHz, Ransom says he tends to discount the validity of the signals heard on UHF.

"Be very careful about reports via the UHF repeater," he cautions. "Since it hears everything, people are reporting every little squeak and whistle." He says ARISS activated the VHF-to-UHF crossband repeater as part of a "just-in-case" philosophy, and any reports posted are "very hard to verify" at this stage.

"To my knowledge, Bill McArthur has not heard SuitSat from the ISS," he adds, "so it stands to reason that the crossband relay has not either."

Several reports mention hearing packet signals, but SuitSat-1 carries no packet gear. All telemetry transmissions are by digital voice. Ransom believes that voice signals heard via the crossband repeater on UHF are "most likely" coming from ground stations.

Likewise, the packet bursts are emanating from "uninformed ground stations" trying to relay via the ISS digipeater, which has been turned off, Ransom and Farmer speculate. Ransom again urged all Earth stations not to transmit on SuitSat-1's 145.99 MHz frequency--which is also the normal packet uplink channel--until the SuitSat-1 experiment ends.

ISS Commander Discusses SuitSat-1 During Series of QSOs

During a series of VHF contacts from NA1SS following the spacewalk, Expedition 12 Commander McArthur expressed surprise that was unable to hear SuitSat-1 from the ISS shortly after coming inside from the spacewalk. He initially believed the unique satellite was dead.

"We should have been pretty close but didn't hear anything," he told one station. Scott Avery, WA6LIE, provided downlink audio of the QSOs.

Bob King, VE6BLD, in Alberta--shown here with his extensive antenna system--has posted several SuitSat-1 reports.

What Went Wrong?

Some early speculation about SuitSat-1's difficulty has centered on whether SuitSat-1's batteries might somehow have been adversely affected by the temperature extremes of space. Telemetry copied by VE6BLD indicated a voltage of 7.0 V, while the nominal battery voltage is 28 V, but it's not known if the telemetry was accurate.

"It's the same battery we use in our spacesuits," McArthur told another station in a post-spacewalk QSO, "and so I would think they would handle the temperature, but it's hard to say." McArthur noted that the batteries on an *Orlan* spacesuit are in an external compartment that's already exposed to the harsh space environment.

McArthur remained upbeat about a future SuitSat mission. "Where there's a will there's a way," he philosophized. "We've got more suits that need to be jettisoned." He said the SuitSat-1 project "was pretty well set up and wasn't that difficult for us to execute."

Ransom told ARRL February 6 that he had not seen the low-voltage report. "But since the initial reports from Japan were weak signals, then the issue is likely to have been present from the start," he said, adding that premature media reports of SuitSat-1's demise were based on a lack of reports for several orbits.

"Little did we know that the output was so diminished," he said. "It is now apparent that everything is functioning but that the output level is extremely low." He expressed hopes that additional telemetry would

"help support or dismiss the current list of potential causes for the low output" and help ARISS to pin down the problem's cause.

ARISS Chief Remains Optimistic

ARISS International Chairman Frank Bauer, KA3HDO, said over the weekend that evidence to that point in the mission suggested a problem with the antenna, the feed line, the transmitter output power "and/or any of the connections in between." Bauer called on stations around the world to help narrow down what's causing the weak signal by making an extra effort to listen for SuitSat-1 on 145.99 MHz and especially to copy the voice telemetry.

Early on February 4, Bauer was able to hear one overhead pass that included at least part of the English-language ID, recorded by his daughter, Michelle. "Keep your spirits up, and let's continue to be optimistic," he urged later in an official SuitSat-1 status report. "And please keep monitoring!"

Happy Valentine's Day!

I don't know about celebrating Valentine's Day but I do know that it is important to tell others how important they are in our lives. With life as hectic as it can be, make sure you take time out to appreciate your friends. It shouldn't take a holiday for us to do this but sometimes it is just a good reminder. I personally am glad to be a member of O.C.A.R.C. and feel that every member of our club is an asset and I am glad that they are part of our club. Thanks for making O.C.A.R.C. great! See you at the meeting!

Kristin, K6PEQ