



**ORANGE COUNTY AMATEUR RADIO CLUB**

VOL. XXXIII NO. 8

P.O. BOX 3454, TUSTIN, CA 92681

AUGUST, 1992

### **Innova Electronics Representatives to Speak at August Meeting.**

The August guest speaker will be Curt Messler, the Marketing Director of Innova Electronics Corporation. Curt will be accompanied by Traci Stewart of Morgan Marketing and Public Relations who represent Innova.

Innova manufactures twelve volt chargers, power packs and accessories that are sold in retail stores. Of particular interest to amateurs is the rechargeable DC Power Pack that can keep your handheld going longer than fourteen standard 450 milliamp nicad battery packs. Just the thing a ham needs for the Big One, or any long operations in the field. Innova also manufactures an optional solar panel to recharge the power pack when no other power source is available.

Powering your handheld is just one of many uses for the DC Power Pack. The unit will power twelve volt tools, consumer electronics, lamps etc. up to 50 watts and more. Curt will be telling you more about this product and others of interest

to Amateurs. Innova is located in Fountain Valley; their products are manufactured in the USA.

Mr. Messler has been a member of the product management team since 1989. Among his other responsibilities, he is responsible

## **August 21st Program: Innova Reps**

for the growing family of Innova product brands.  
de AF6C.

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**WHEN YOU SEE FRANK, WA6VKZ, TELL HIM YOU MISS HIS "PREZ SEZ" ARTICLE!**

### **CLUB NOTES**

#### **Product Raffle!**

Tickets are still available for the PK-232 and the copy of Packet Gold Software for only \$1.00 a ticket!

October Auction is Coming!

Clean out your ham shacks and auxiliary storage areas - get ready to sell that priceless "stuff" to get the money to buy other ham's priceless "stuff"

November is Election Time -- If you are interested in serving on the Board - Contact Cindy, KC6OPI.

There is NO meeting on Friday, August 14th -- this month started on a Saturday - 3rd Friday is the 21st.

## EARTHQUAKE INFO!

by Nancy Bucher, N6XQR

The W6FXN repeater on 145.460, long known as the "Earthquake Repeater" has not been operational for several weeks now. The repeater was suffering audio problems before it came down completely and straight answers about its future location and capabilities are impossible to come by. Temporary arrangements were made with another club repeater but those arrangements do not appear to be working out too well for the weekly Wednesday night net. The 145.460 frequency has now been overrun by the Spanish speaking stations.

That's the bad news -- but there is certainly good news to share. Most of the active seismic folks

can still be found! They have moved to 147.705 (down - PL of 114.8 for the Oat Mountain repeater location). There is a second repeater in the system and it works best if you completely let the carrier drop before keying up.

Most evenings these hams can be found trading their numbers and discussing the day's earthquake activity. Club members who can be found there include Dorothy, N6ZNC - frequent Net Control for the "QuakeReporting Net," -- Bob, WB6IXN, who is doing ongoing research on the possible effect of lunar gravity on probability of seismic events -- Bob, KD6BWH, who provides the daily OCRA numbers (Orange County Register Animals - a count of lost dog and cat ads and found dog and cat ads). Much sharing of information in-

cluding epicenters and magnitude, well levels, and other measurements are regularly given out. Just come up on frequency and call Dorothy, N6ZNC.

If you have a computer with a modem, you might be interested in a new BBS run by Jerry, N6UME and Dorothy, N6ZNC called the PSN (Public Siesmic Network). This BBS is part of a 3-node (and growing) BBS system endorsed by the USGS and is available to both hams and non-hams. It has just come on line and contains many very interesting files available for down load, including current seismic activity in California and programs that will let you view seismic tracings on your computer. Just call (818) 797-0536 (supports up to 2400 baud, set up is N-8-1). There are also files that give specs for a hardware interface from a siesmometer to a computer. Weekly Cal-Tech and northern California seismic reports are also available.

### 1992 CLUB BOARD of DIRECTORS

President.....	Frank Smith.....	WA6VKZ.....	838-3180
Vice President .....	Bob Eckweiler.....	AF6C.....	639-5074
Secretary .....	Jane Breller.....	KC6TAM.....	310/866-2077
Treasurer .....	Carmine Fiorello...	AB6KE.....	837-5133
Activities.....	Bob Schnabel.....	KM6TL.....	776-8486
Membership .....	Bob Buss.....	KD6BWH.....	534-2995
Public Relations ....	Cindy Hughes.....	KC6OPI.....	971-3448
T.V.I. Chairman ...	Clark Turner.....	WA3JPG.....	856-2131
Member at Large ..	Ken Konechy.....	W6HHC.....	744-0217
Member at Large ..	Mike Abreu.....	K6KAA.....	832-8503

#### CLUB APPOINTMENTS

Club Historian .....	Bob Evans.....	WB6IXN.....	543-9111
W6ZE Trustee.....	Bob Eckweiler.....	AF6C.....	639-5074
RF Editor .....	Nancy Bucher.....	N6XQR.....	537-8728
Refreshments.....	Cindy Hughes.....	KC6OPI.....	971-3448

#### DUES

Regular Member.....	\$12.00	Additional Family Members ..	\$6.00 each
Teenage Members (under 20).....	\$6.00	Optional Club Badge.....	\$5.00

Dues for new members are prorated quarterly from January of each year. Family members must reside at the address of a Regular Member. One RF is sent per household.

.....  
 Amateur Radio  
 Installations  
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 Jerry (KK6YO)  
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 .....

## On the Nets -- July, 1992

by Bob Evans, WB6IXN

**7/1 15m phone net** - Acting NC, RND, holds an informal net until AF6C climbs on board! Check-ins were: RND, XO, IXN, XQR, & ZH. W6ZE/AF6C & RND take reports on the Landers & Big Bear earthquakes that occurred during FD last Sun.! XO listens to his neighbor's pool sloshing, & the tune of falling books from his high book shelf. Mother nature 'gently' awakens XQR from a refreshing sleep Sun. morning, & RND 'jumps up & down'..not for joy..John works FD at the epicenter of the Landers event!! AF6C gets a gud speaker lined up for July meeting, & IXN reports on meaning of 'Richter' magnitude. ZH says all OPs are low in S units at his QTH as he tells us abt a picture that succumbed to the pull of gravity, breaking the frame!

**7/1 2m phone net** - W6ZE/IXN, to the tune of aftershock after aftershock on Crystal seismometer, checks in BPX, XTJ, NG7D, ZH, TAM, RE, XQR, XO, BWZ, RND, UF, JBS, HHC, WH, VDP, FZE, AF6C, KSP, ONZ, BWH, & OPL. 21 OPs in all!..Great checkin! BPX stays in bed & lets Blanche 'do all the walking' during the 7.4 event! XTJ watches the FD towers & ants. sway in the 'seismic breeze' & watches the 'electrical display' provided by swaying SCE power lines! 04:35 hrs..RND goes on air..04:55 hrs..a 'freight train' roars thru RND's RV..John is abt 8 mi. from the epicenter! Ask John at next Club meeting, what it feels like to be at the epicenter of a 7.4 mag. event!! NG7D, still tired from the TRW Swap Meet, covers his head with a pillow in case the window near his head shud shatter. And John loses abt a 100 gal. of water from the pool! XQR mentions the Club breakfast on July 4, to all OPs. And Nancy gets a new tent, stove, & lantern in case she has to move into the backyard for awhile! RE announces that STS 50 has ant. problems, not quake related, however. And after being rudely awakened by Mother N., Alex returns to the FD site. ZH & TAM report that Al, IBR, & Dotty, IBP, are safe in Moreno Valley. ZH is not affected by Hughes layoffs. TAM watches TV, & Chris receives a QSL card from Nigeria. XO 'flies in & flies out'! BWZ & VDP sip a cup of coffee and watch the 'SCE fireworks' during the Event. UF & NT, intent on 40m CW, thinks somebody was shaking their tent..It was Mother N., OPs! JBS wud hve gladly changed places with RND! "I've waited all my life to be at the epicenter of a big one!", exclaimed Gary. Excitation along the Whittier fault slithers a 'new environ' under JBS' backyard! Is this the reason for the appearance of 'black gold'? Stay tuned for chapt. 3 of 'Gary Toils for Oil'! HHC 'rocks & rolls' to the music of 'The Tremors' at FD while Diane watches water slop from the pool 'to the time of the music'! WH misses all the excitement! Jim was sleeping during the 1st one, & out jogging during the Big Bear event! WH was formerly KD6FYW! VDP gets all necessary QSLs for Grid squares..Now to check them & apply for the award! FZE falls asleep before NC gets to him, & OPI is glad the EQ didn't damage the new light station from the Red

Cross. Cindy also announces a Red Cross operating & upgrading program to be held the 3rd Wed. of the month at 6:30 pm. ONZ tnx OPs for equipment & help at FD! BWH & Linda, asleep on the ground, are gently jostled by Mother N. in time to observe the SCE 'fireworks'! AF6C asks OPs for FD reports, as Bob & HHC begin the FD report for ARRL.

**7/2 40m CW net** - W6ZE/RND checks in IXN, NT, UF/QRP, & NG7D/QRP. RND copies all OPs FB. A bad keyer & fun with the horses keeps NT busy over the weekend, & Ray is rewarded with a sunburn! UF, his 1st FD under his belt, tnx OPs for their help as all OPs hear his sigs QRP tonite! XQR landlines IXN..Nancy will be over at JBS' QTH to pick up sum literature during net! IXN informs OPs that hundreds of aftershocks relentlessly warble Crystal seismometer! UF's station on 40 makes a lil' over 200 contacts for FD! And RND racks up a 1353 point total for FD, the 7.4 temblor notwithstanding! NG7D retunes the rig & is heard by all OPs FB! And John & VES work FD QRP from Gary's QTH, using battery power!

**7/8 15m phone net** - IXN tunes in late due to a 5.4 event at Big Bear. W6ZE/AF6C has already checked in NGO, HHC, W6TA, then RND, IXN, & NG7D. IXN misses NGO's remarks, but hears AF6C tell OPs that N6ARE, Julian, will be next Club meeting speaker! HHC, at AF6C's QTH tells OPs that Club FD total was 2983 contacts for 7500 + points!! IXN & RND can hardly wait for the FD report in QST! WT6A will start his next ham radio class at Irvine Valley College on Sept. 9. AF6C laments the passing of the old Club hangout..Fiddlers' Three! NG7D works the Net from the TWF System remote!

**7/8 2m phone net** - W6ZE/IXN checks in BPX, NG7D, ZH & TAM, RND, RE, VDP, PFA, OPI, UK, HHC, XQR, AF6C, KE, & BWH. BPX visits the Doc. Wyatt, a 156/70 BP under his belt, continues to exercise & improve, with visions of driving the auto soon, dancing in his head! NG7D doesn't know what to make of the Fla. WX in CA...Even Las Vegas had crazy WX, said John! NG7D & WA6VES made 50 contacts, QRP battery pwr, on FD, with PFA their 1st contact on 10m! ZH & TAM, with Phillipine & Okinawa QSLs under their belts, work Somalia & the Seychelles..garnering KB6STW aboard the Space Shuttle along the way!..And, Jane is once again gainfully employed, with visions of 'new gear' dancing across ZH's 'mental monitor'. RND loses his 'distinguished position' as 'epicenter snooper'!..You see, John was not at the epicenter of the 5.4 at Big Bear this evening! And John doesn't sign with 73 anymore, it's now "7.4 all"! And RE, having completed 'vampire duties' with the Red Cross, takes advantage of a cloudy 4th to wax & polish the auto. Then Alex reads late ARRL bulletins & airs 'Newline'. If PFA cud 'fool Mother Nature' he wud! Tom doesn't care for the Florida WX! Max jumps in the pool, leaving a warm PFA sweltering poolside! XQR completes 'RF'. It will be in BWH's hands tomorrow eve. And Nancy has plenty of FD tapes ready for quick distribution at next Club meeting! OPI, harmonics in summer school, helps Red Cross with quake assessment damage & disaster help. ONZ doesn't

*Continued on Page 4*

## Net Notes - Continued from Page 3

volunteer fer cook. He's too busy 'bringin in the bacon'! UK is gld to be bk in So. CA. after the 4-corners motorcycle tour. DeWitt doesn't care fer the Fla. -type WX! They covered 11,631 mi. in 40 states! KE is nw up on packet, & getting ready fer AMTOR, as Carmine really enjoyed his very first FD! BWH says this Fla. WX is 'like home in the middle of summer'! VDP says Rolf, QW, is in Big Bear! Thus, Rolf probably was shaken by the 5.4 this evening! Now, QW & RND have epicenter events in common!

**7/9 40m CW net** - W6ZE/RND checks in IXN, LYT, & NT. All OPs hve gud sigs! LYT doesn't like the hot WX or the earthquakes. IXN reports continuing aftershocks frm the NE. NT anchors the water heater. W6ZE explains 'QNI' to Ralph, and John notes DX stations starting to come in on 40m. Hope Ralph will be a regular check-in on the CW net!

**7/15 15m phone net** - W6ZE/AF6C checks in IXN, RND, QE, & NGO. IXN comments on the 5.1 temblor NNE of Mojave last Sun. morn., & asks AF6C to bring 7.4 Caltech report to meeting wid him. RND & PFA attend a Disaster meeting, & PFA shows group a threshold box fer Crystal seismometer! IXN doesn't hear QE in the QRN, smthing abt 'a gud cup of tea', & sorting QSL cards tonite! Kei has been 'kicked back', wid a cold drink in hand, watching the 'big tube', wid thoughts of giving the grass a 'haircut' tomorrow! And AF6C hasn't fallen off an ant. tower fer 20 yrs. this past FD! Congrats, Bob!

**7/15 2m phone net** - RE landlines IXN & tells him (frm last NETNEWS) its not 'MARS stuff', but, 'NARS stuff'. Tnx, Alex! W6ZE/IXN checks in KE, OPI & ONZ, NG7D, ZH & TAM, WH, RE, RND, VDP, UK, XQR, & AF6C. Limited space causes KE to operate the OSCAR station frm UEA's QTH, as Carmine prepares an Oscar article fer next 'RF'! Wid the PK-232 going, KE investigates the world of AMTOR, ASCII, & Baudot! OPI & ONZ aren't mobile or at the QTH!..They are operating frm the N.A. Christian Convention at the Anaheim Conv. Center! NG7D & VES finish the QRP FD log & get it off to ARRL, as John prepares to get the Argonaut 509 refurbished. ZH & TAM 'gorge' on Rocky Road ice cream, as Jane 'keeps up her strength' working 2 jobs, and helping ZH wid 'weekend DX' (92 countries on 10m, Singapore & Fr. Polynesia QSLs in, wid 5W1AU, Samoa, worked). BWH prepares to help at the O.C. Fair on Sat. wid the WCARC. Need a QSL frm STS-50? RE says send a business SASE & QSL to ARRL & designate 2-way or SWL contact! UK was bombed by a jammer, but tells us that W6MXX, Bob Miller, has Alzheimers & must dispose of his station. UK will get a list of items to XQR. RND says QE thinks meeting is a week frm Fri.! Did QE get his last RF?! John hopes VHF bands are open tomorrow fer a sched. bk east! VDP tests a 2m amplifier, & Larry finds 17m to be uncrowded & a gud group of OPs on the band! And VDP tells us QW got caught in the aftershocks at Big Bear last week, leaving Rolf slightly un-nerved! XQR talks

to her folks in Ohio & reports the gud job OPs are doing on tornado watch! Nancy also tours the Caltech Seismological Lab last Sun. morn., & watches an aftershock roll thru! AF6C finishes wid XQR's FD station log, and plays wid a noise bridge.

**7/16 40m CW net** - W6ZE/RND checks in IXN, NT, N7AZ, & UF. AZ tries to get sum cool air in the shack, & Bob enjoyed himself wid the gang on FD! UF finds the heat & humidity unreal! And no 'DX grass' grows under Larry's feet as he polishes off China, Czechoslovakia, Finland & Indonesia, to name a few! And Larry cools off by walking dwn to Balboa Pier! W6ZE/RND worked AZ before, when Bob had the Drake Twins & a Delta Loop ant., on 2/12/89. Bob says, 'I'll bet it was in the Novice Roundup!' IXN watches the aftershock pattern climbing northwestward toward the Ridgecrest region! And RND tells AZ they worked each other on 7.055 CW!

**7/22 15m phone net** - W6ZE/AF6C checks in COJ, XTJ, IXN, RND, XO, & YZG. COJ enjoyed Julian's talk at last Club meeting, & Dave has company tonite! IXN can't hear XTJ tonite, & vice versa! IXN tells OPs that seismic activity seems to be shifting north of Barstow toward the Ridgecrest area, & AF6C listens to the 'booms' of Naval exercises off the coast. RND visits the L.A. Maritime Museum where he helps W6NGK wid sum of the operating chores. The station has over 293 countries confirmed. XO & RND discuss bike riding as a form of exercise, & the dog 'walks' Bob fer exercise too! Chemical tests all completed, YZG schedules another MRI, gets negative advice: When ailing, find a hole & pull the sod over top! Undaunted, Lu continues work wid the computer & tells OPs his chandelier is the best indicator of intensity & duration of earthquakes!

**7/22 2m phone net** - W6ZE/IXN checks in XTJ, RE, NG7D, VDP, RND, ZH & TAM, AF6C, FHN, XQR, & YKH. XTJ re-arranges the inverted V to make room for sum new ants. roofoode! RE installs 2 1/2 wave ants., in phase, abt 20+ ft. above ground, and asks OPs to give reports. And Alex leaves -.... cans of trash fer the G-man! RE updates OPs on ARRL bulletins & airs Newline. NG7D hears Alex FB, after hving been in the hosp. wid suspected ulcers. IXN thot maybe the paramedics had given John sum Lydia Pinkham's Pink Pills fer Pale People to alleviate his 'RF' stomach! And, wid a memorable hematoma on his arm, IXN advises John to hve the 'vampires' sharpen their teeth before his next hosp. visit! VDP gives RE a 60/9 report, & Larry attends the Rio Hondo Swap Meet & doesn't sell much. action too slow, & WX too hot! RE lights up all RND's LEDs but one..And tired John doesn't know if that one shud be lit or not..John helped rip out heavy tile in the bathroom all day! ZH & TAM barely copied Alex frm up in Bellflower..And Newline was lost in the QRN. And TAM was complaining after the 1st day on the new job, so ZH retorts, 'She likes it!' XQR is expecting company at any time, so Nancy 'swoops in & swoops out'! AF6C & IXN discuss the Crystal Seismometer, & FHN & YKH 'fly in & fly out'!

Continued on Page 5

## Net Notes - Continued from Page 4

**7/23 40m CW net** - W6ZE/RND checks in IXN, NT, XQR, & KB7LOH. RND has to change freq. twice to try to avoid the QRM! All local sigs are weak tonite! Only NT can hear XQR! But KB7LOH, JJ, comes booming in frn Sierra Vista, AZ! And JJ hears most of us, too! IXN is tired after spending the day under the Church fixing lawn sprinkler wires. NT reports weak sigs & noisy band fer all OPs. RND has a QSO wid a friend on 20 CW, in CT, & band condx were FB! W6ZE invites JJ to join us on Thurs. eves. NT says XQR might be off freq. by a couple of KHz! And JJ says he lives near Tucson.

**7/29 15m phone net** - XTJ works days & enjoys being able to work the Club nets! And Jim is trying out the new beam, & Jim & IXN hear each other fer 1st time! AF6C asks IXN to check on a seismic event between 4:42 & 4:43 on 7/26. Seems an airplane under test might hve done some rockin' & rollin'! NGO watches 'black oil' flow frn the tractor as he contemplates putting sum new parts in the 'old girl's' innards! IXN & dad fight wid a #\*&% fuel pump on the old '79 Pinto (not a horse either!) W6ZE/AF6C checks in all above OPs plus a possible N6LCQ before being joined by co-NC, Ken, HHC, who shows up at Bob's QTH to return sum books, & remind all OPs abt the Club Bfast this Sat!

**7/29 2m phone net** - W6ZE/IXN checks in RE, ZH & TAM, OPI (wid ONZ on side), XQR, RND, XTJ, UK, KSP, ESD, KE, & VDP. RE & IXN clear freq. before net just in time fer check-ins. ZH & TAM continue to rack up the QSL cards. Bahrain, Poland, Lithuania, & Bulgaria, to name a few! They expect a confirmed DXCC by Christmas, & maybe a new rig to replace the aging 757, too! RE & OPI represent the OCARC at the OC Fair. RE & XYL get bk frn a concert in the park in Tustin, in time fer net. And Alex still piles up the tree parts fer the G-man. Alex tells OPs that FCC wants to transfer Novice testing to the successful VE program! Then RE airs an interest-

ing newslne. OPI avoids boxing & wrestling as the family watches Olympic events on TV. And XQR tells all that KB5LRF is now an extra! Congrats Scott! XQR & N6ZNC were off to Landers on Tues. to photograph land displacements in the 7.5 event. But alas! Nancy was attacked by the Desert Allergins, and, eyes watering profusely, Nancy & Dorothy leave a stream of tears behind them as they fly bk to the Southland! Although RND wasn't at the recent epicenters, his earthquake preparedness kit sets right beside him, as John & XYL sigh in relief as they view their almost refurbished bathroom! XTJ booms in at IXN's QTH, & we discuss Jim's new beam ant. KSP really enjoyed FD wid the Club, & Mack, we appreciated hving you there to help out! UK attends the smelly garlic festival up in Gilroy, much fun, on motorcycle, of course, & returns via the Coast route. Dewitt tells XQR he'll soon be helping wid VE sessions! Besides 'tripping the light fantastic 3 times last week, ESD is now playing golf. And like RE, Bob leaves plenty of tree parts fer the G-man! KE joins us after a QSO wid a sailboat near Tahiti. And Carmine finds time to work a little AMTOR between tiling a bathroom & kitchen in a rental house! VDP recommends a book frn World Radio titled 'Aerials' for reading by OPs. The book parallels many research findings already discovered by VDP!

**7/30 40m CW net** - W6ZE/RND checks in IXN & NT. XQR tries in vain to check in but no OPs hear her sigs! RND, NT, IXN, & XQR all hve extra water stored in case of a large EQ! RND completed a 50 min. QSO wid his friend in Conn. UF is going to the Mts. fer the weekend, so Larry is probably busy packing. NT hasn't had dinner yet, but its on the way! And no! Ray isn't storing goat milk fer upcoming quakes. However, he might drink the pool water..the dogs do..and they are not sick yet!

### Amateur Radio & Electronics Show\* (Swapmeet)

Day/Time  
3rd Saturday Each Month  
7:00 a.m. - 11:00 a.m.

Location:  
Rio Hondo College  
3600 Workman Road  
Whittier

Talk-In Frequencies:  
146.175+, 223.620-, 445.925-

If you have any questions,  
contact:

Mike Wulfestieg, N6RHZ  
President, CMRA  
(714) 537-4230

Sellers' Permits Sold at  
Gate. Contact:  
Hugh Headlee, N6SAY  
Director, CMRA

\*Sponsored by California Microwave Relay Association (CMRA), a non-profit corporation, dedicated to disaster communications; an Amateur Radio Emergency Services (ARES) member. Co-sponsored by Rio Hondo Radio Club (RHARC).

### No-Code Technician Weekend Classes Fountain Valley

Bob Gregg, AB6CH  
Instructor

August 28, 29, 30  
September 25, 26, 27  
October 23, 24, 25  
ADVANCED THEORY  
October 10, 11

CALL  
(714) 375-0387

## Minutes General Meeting July 17, 1992

The meeting was called to order by Vice-President Bob, AF6C at 7:35 PM. All board members were present with the exception of the President, Frank WA6VKZ.

The minutes were approved as published in the "RF".

The program for the evening was a talk by Julian Macassey N6ARE titled "The Telephone - What it's Made of and How to Fix it."

The Treasurer reported \$725.00 in checking, \$1173.54 in savings and no cash on hand.

The Membership Chairman reported 4 visitors at the meeting. He also has name badges for those who have paid for them.

The Christmas banquet will be held on December 15, 1992 at the Officer's Club at MCAS Tustin.

## Old Business

N6XQR still has copies of the Field Day Tapes for those who want them.

A meeting of Field Day Captains will be held to critique the club's efforts on a date to be determined later.

## New Business

The Ham Radio Business Council is circulating a petition which asks the FCC to clean up the airwaves from foul language, jamming, etc.

AF6C announced that the club needed to take an inventory of all club equipment and its location and suggested that a committee be formed to accomplish this. KK6Y suggested that this be done on packet radio but N6XTJ advised the club that only a maximum of 10 stations could participate in a packet net. The suggestion on the inventory was tabled.

## Good of The Club

Members are reminded that ARRL Convention will be held at the end of August at the Marriott in Los Angeles.

The Orange County Fair Ham Booth needs volunteers to help man the booth

The International Fire Chiefs Association needs Hams to man a display booth on September 9-16, 1992. See the RF for details.

## Activities

Ticket sales for the PK 232 are half completed. See KM6TL for tickets.

The meeting adjourned at 9:40 PM.

Respectfully submitted,  
Jane Breller - KC6TAM  
Secretary

## Minutes Board Meeting August 1, 1992

The board meeting was called to order at 8:45 AM at Ricky's Restraunt by President Frank, WA6VKZ. The following officers were absent: Carmine AB6KE, Bob KM6TL, Bob KD6BWH, Clark WA3JPG, and Mike K6KAA.

## Old Business

The club's Christmas Dinner reservations are confirmed for December 15, 1992 at the MCAS Tustin Officer's Club.

AF6C has turned in the club's Field Day scores to the ARRL. He did not submit our scores to OCARCO since they have changed the rules.

It was also brought up that the club has not been sending a representative to the OCARO meetings. Frank, WA6VKZ will contact Carmine AB6KE to ascertain if we have paid our dues to OCARO.

## New Business

Cindy KC6OPI has volunteered to chair the Nominating Committee.

Frank WA6VKZ announced that Ham Awareness Day will occur on September 7, 1992. Skipper is organizing a display at the Orange Street Fair for the Club

AF6C announced that the program for the 8/21 meeting will be a presentation from the Innova Company and for the September meeting SETI (Search for Extra Terrestrial Intelligence) will speak on their activities.

## Treasurer's Report

The Treasurer's report will be published in the "RF".

## Activities

N6XTJ announced that the Ham Radio Business Council is circulating a petition for the "Clean Air Act". This petition is a request for the FCC to clean up foul language over the air. See N6XTJ to sign the petition.

## Good of the Club

On August 8, 1992, The California Classic will need Ham Radio Operators to assist in safety communications. Contact Bob Tegel KD6XO to sign up.

The ARRL Convention will be held August 20 - 23, 1992 at the Los Angeles Marriott Hotel.

The International Fire Chief's Convention still needs hams. See "RF" for details.

The meeting adjourned at 9:07 AM.

Respectfully submitted,  
Jane Breller - KC6TAM  
Secretary

## Treasurer's Report as of 8-1-92:

Savings.....	\$1,173.54
Checking.....	\$725.00
Cash .....	\$181.00

## Public Service Opportunity

**Editor's Note:** Bob Berg is the person who got OCARC permission to hold its meetings at the Anaheim EOC. Please support this opportunity.

This is a request for Amateur Radio Operator support for an upcoming International Association of Fire Chiefs Conference which is being held September 12 - 16, 1992, at the Anaheim Convention Center.

This is an International conference, being sponsored this year by the Orange County Fire Chiefs Association and hosted by the Anaheim Fire Department. We expect Fire Chiefs coming from all over the world, with an estimated 10,000+ attendees.

I have been assigned the Command Post and communications support responsibility. As you know what that means, I am putting out a request for help. We have a need for volunteers to help in manning the Command Center and dispatching, working both Amateur and Fire System radios. There is a possibility we will also need messengers, which Ham Operators would be perfect at.

After working with Rich Toro, OCFD, and Bob Stoffel, OCC, we have developed a Communication Plan. We will be using both Fire 800 MHz and 2 meter/440 MHz ham radios. Fifty (50) 800 MHz portable radios are being loaned to us by Motorola, I am working on gaining access to both a 2 meter and 440 ham band repeater.

**What we need now are operators!** That is the purpose of this letter. We need ham operators to help handle communications during both the setup and conference periods. Duties would involve **actually "dispatching" calls**, answering phones and helping

coordinate operations. The operators would work right in the Command Center and would be an integral part of the entire operation.

The Orange County Communication Managers have made a commitment to support this conference, one of them will be "on-duty" during the entire conference time to help manage the dispatching operation.

We need at least three (3) communicators (to operate radios and answer phones), from 7:00 am to 7:00 pm and at least one (1) operator in the evenings, up until midnight. We have developed a scheduling chart (broken down into four (4) hour increments) which will be used to help sign up volunteers.

I look at this conference as a special opportunity to be able to share Ham Radio Operator's talents. This is not considered only an Anaheim R.A.C.E.S. mission. As this is an International conference, sponsored by the Orange County Fire Chief's Association (OCFC), I consider this a county-wide project. I hope you agree and that you and members of the Anaheim R.A.C.E.S. organization will join with us in support of this endeavor.

Please call either Bill Erickson (N6MXU) or myself, Robert Berg (KB6ZDB), at your earliest convenience to schedule the shift you would like to work.

Sincere Thanks,  
(signed) Robert G. Berg

Bill Erickson	(714) 974-5758	(Anaheim R.A.C.E.S. Officer)
Bob Berg	(714) 254-6950	(Anaheim Emergency Services Coordinator - Leave a message - I will call you back.)

**We need communication support for the following periods:**

**Dates:** September 9 - 16th (Wednesday - Wednesday)

**Time:** 0700 - 2400 (?)

**Shift Schedules:** Minimum 4 hour shifts (which are at your convenience)

## OSCAR Satellite Operation by Carmine Fiorello, AB6KE

With the advent of OSCAR-10 & -13 satellites, VHF/UHF DX communications were obtained with up to 5 hours on a daily basis. The satellite I will discuss here is OSCAR-13. OSCAR-13 was a joint effort by AMSAT North America and AMSAT-DL. The project managers were Jan King, W3GEY and Karl Meinzer, DJ4ZC. The 191 pound satellite was launched aboard a French Ariane-4 on June 15, 1988. The first OSCAR AO13 was lost on an aborted launch in 1985. The second stage of the Ariane rocket launched in French Guiana fizzled, and the poor satellite did a swan dive into the Atlantic Ocean. Tnx, France!

With many fingers crossed, the June, 1988, launch was successful and the OSCAR was placed into a Molynia (High Ellipse) orbit. The Molynia is a type of orbit where, when the satellite is at apogee (farthest away), the satellite seems to "hang" in orbit with little derivation in the quadrant it is in. Because of this, one can "Talk on the bird" for 5 to 7 hours at a time when one is in the satellite's window. The only disadvantage of the Molynia is that the satellite transverses the Van Allen radiation belt. AO-10's main computer failed after 3 years because of this. AO-13 has radiation hardened computer chips donated by Harris. This is a pleasant spin-off of Reagan's star-wars R&D.

The modes of communication on OSCAR-13 are: B, J, L, and S. Mode B (the one I used at OCARC Field Day) is:

Uplink	435.423 to 435.573	USB
Downlink	145.975 to 145.825	LSB

Mode J Uplink	144.423 to 144.573	LSB
Mode L Uplink	1296.641 to 1269.351	USB
Mode J Downlink	439.990 to 435.940	LSB
Mode L Downlink	435.715 to 436.005	LSB
Mode S Uplink	435.602 to 435.638	USB
Mode S Downlink	2400.711 to 2400.747	LSB

The 3 transponders on OSCAR-13 work frequencies:  
 Transponder 1 - Mode B - 435 MHz up, 144 MHz down  
 Transponder 2 - Mode JL - 144, 1.2 GHz up, 435 down  
 Transponder 3 - Mode S - 435 MHz up, 2.4 GHz down

To alleviate confusion, Mode B usually is operated 80% of the time. The others are for amateurs in countries who don't have either 1.2 GHz or 440 uplinks by IARU treaty. If you are starting in satellite, I suggest Mode B, it's the easiest one to work.

The modes of operation are regulated by ground telemetry control for maximum benefit to the users of the satellite. The transmitters aboard the satellite are battery powered with recharging via solar cells. (The satellite only transmits when the solar cells are exposed to sunlight.) The Mode B transmit power is about 12.5 watts on the downlink. For Mode B operation, a ham should use about 60-80 watts on 435 MHz

through a 13 dB gain yagi for the uplink and 12 dB gain yagi for the downlink.

Since the satellite spins about 25 RPM about its 2 axis in orbit, there is fading. Cross-polarized yagis are recommended. My personal choice are KLMs, although Hi Gain and Cushcraft also manufacture these antennas. An all-mode transceiver is also needed, the one I use is a Yaesu 736-R. ICOM and Kenwood also are fine choices. Also, a "power" amp for the uplink and a good gasfet preamp for the downlink. The pre-amp should have 18-25 dB gain with a 1 dB mar noise figure. Use 9913 with "N" connectors for the uplink and the same with UHF connectors on the downlink.

You must realize that, at apogee, the bird is about 26,000 miles up! The power/antenna gain are crucial. The KLMs I used at Field Day were about the best on the market (13 dB gain receive, 15 dB gain.) Those who worked my station noticed I had one of the loudest signals on the pass-band. HI HI! Once one tunes the bird in via the downlink telemetry beacon (145.812 USB) judge the signal strength and don't uplink with more power than is needed. The beacon is a good index on signal propagation and what your downlink should sound like.

A common mistake people assume is that one can use marginal antennas and lots of power -- not good. The satellite's power is shared across the pass-band and a loud uplink will drain too much power and degrade the performance of weaker station. The satellite has built-in AGC circuits, but the weaker stations will be blanked out. AMSAT-N.A. strongly recommends that those with 20-40-75 meter linear lid mentality stay away from OSCAR unless they can work weak signal on a shared basis. With conscientious people, a mixed bag of CW/SSB is worked across the pass-band. When the satellite is at apogee over the northern hemisphere, a window from Japan to eastern Europe is achieved. This is DX at its best.

On OSCAR, one can ask: What's a D-layer, F1 & F2 layer, are they important? These layers are transparent to VHF-UHF-SHF signals. In the near future, more OSCARs will be launched, AMSTAR WEST which will cover the Pacific Rim and AMSTAR EAST which will cover the Atlantic/Europe window.

On Field Day, we worked 80 stations/30 states and had 10 different operators -- it was fun! I want to personally thank George Ridley, N6UEA, for helping me on this project. Without him, I doubt I would have been successful. The many hours I spent at George's house experimenting definitely paid off during Field Day! At George's QTH, his first contact was Warsaw, Poland and mine was some poor soul who wanted to try QRPOSCAR work. If I wasn't sitting on the driveway when working him, I would have fallen down laughing. I told him his uplink would be a mile long!

**Editor's Note:** Carmine ran the very popular satellite station at Field Day for the OCARC. Look for an article soon from him on his experiences learning AMTOR!



## No FM Below 300

### by Gordon West, WB6NOA

All 2-meter mobile, base, and handhelds can transmit from 144 to 148 MHz. Some sets may even transmit well below 144, and well above 148, to accommodate MARS and U.S. Coast Guard Auxiliary sanctioned frequencies. Some sets, when modified, could even go as high as 165 MHz, too.

But back on the 2-meter band, let's take a look at life below 144.300 MHz. There's a lot more going on down there than you might think. And what IS going on down below 144.300 is absolutely off-limits to any 2-meter FM transceiver.

144.000-144.100. FM is not permitted here! Part 97.305(c) reserves the bottom 100 kHz of the 2-meter band specifically for weak signal CW communications. Down here is where you will find moon bounce and meteor scatter signals. 100 kHz is a large chunk of band for these limited transmissions by only a handful of ham operators across the country, but nonetheless, regular FM transmissions are specifically prohibited in this 100 kHz bottom-band segment. I know, I know, you regularly hear simplex QSO's, plus a host of autopatch stations below 144.100, but they are all absolutely illegal.

144.100-144.300. This area is reserved exclusively for weak signal, single sideband transmissions, plus unattended automatic CW beacon transmissions. Here in Southern California, the Hawaiian beacon transmits on 144.170 MHz, and a Southern California beacon transmits on 144.285 MHz. You can sometimes hear the Southern California beacon coming through on a conventional FM transceiver. The Hawaiian and Southern California beacons are an important network for weak signal operators to detect 2,500-mile tropospheric ducting conditions. The ARRL band plan calls for a 25 kHz beacon window between 144.275 and 144.300.

The frequency 144.130 is often used for SSB communications between California and Hawaii when the tropospheric duct opens up. 144.200 is the national

simplex single sideband calling frequency. This frequency is quite active, but it's doubtful you will hear anything with a regular FM transceiver.

144.210 has several exciting SSB nets on Sunday evening and Wednesday evening conducted by David, K16FF. These nets are conducted exclusively on single sideband. FM not allowed!

The Federal Communications Commission rule 97.307(a) supports 144.100-144.300 as a recognized band plan for weak signal SSB communications. "No amateur station transmission shall occupy more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice." "Good amateur practice" means following the national band plan. And the national band plan, supported by the American Radio Relay League, recognized 144.100 to 144.300 as the weak signal SSB, using upper sideband, and CW beacon band. NO FM!

If you look carefully at the rules, FM IS permitted above 144.100. But FM is simply not tolerated between 144.100 to 144.300. Nor is FM tolerated in the satellite portion of the 2-meter band, 145.800-146.000. These 200 kHz are reserved exclusively for weak signal OSCAR satellite work using CW or SSB.

Don't fight the system. Don't operate FM below 144.300 MHz. Even though the rules may allow FM above 144.100, local band plans have precedence. And I'll tell you one thing for sure, the close knit fraternity of weak signal SSB operators between 144-144.300 are quick to detect ear-splitting FM transmissions, and even quicker to remedy the situation.

If you're operating FM below 144.300, and someone asks you move out of the weak signal portion of the band, do so. You don't want to mess with the weak signal boys and girls--they have kilowatts and 16 dB gain antennas at their disposal, certainly no match to a little 40 watt FM transceiver with a vertical whip.

Don't even think about putting an

autopatch down below 144.300. Even simplex FM transmissions with handheld transceivers are easily tracked down below 144.300.

Be a good ham operator, and pick your "secret" simplex channel above 144.300. How about 144.310? Or make contact on 144.330 and QSY. There are all sorts of great places for FM simplex communications, other than below 144.300.

Weak signal operators ask all hams to stop transmitting FM below 144.300. Even though the frequencies below "300" seem vacant, there is plenty of weak signal activity going on down there that you simply can't hear with a regular FM set. Weak signal operators encourage all hams to consider a multi-mode, 2-meter rig with SSB capabilities. On sideband, you'll be fascinated by the amount of long range activity down on "200." You will also be captivated by how strong the satellite signals are at 145.800-146.000. There's a lot more going on the 2-meter band than just the typical FM signals.

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Gordon West, WB6NOA  
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Instructor  
Oct. 10, 11 -- Fountain Valley

Gordon West Radio School, Inc.  
2414 College Dr.  
Costa Mesa, CA 92626  
(714) 549-5000 HOT LINE 10-4

## CLUB MEETINGS

General Meeting is the 3rd Friday of each month at 7:30 PM  
**Anaheim Emergency Operations Center**

909 East Vermont Anaheim, CA  
 West of 2nd set of railroad tracks.

A big antenna is in front with a red light on top.

Vermont runs east and west between Harbor and State College  
 Vermont is north of Ball and South of Lincoln

Board Meeting is the 1st Saturday of each month at 8:00 AM

**Ricky's Restaurant** -- Members and Visitors are welcome  
 10911 Westminster Ave. Garden Grove, CA (714) 539-7538  
 Northwest corner of Westminster and Euclid. South of 22 Fwy.

<b>GENERAL MEETING</b>	
August 21st	
September 18th	
October 16th	
<b>BOARD BREAKFAST</b>	
September 5th	
October 3rd	

### CLUB NETS

<u>BAND</u>	<u>MODE</u>	<u>DAY</u>	<u>LOCAL TIME</u>	<u>FREQ. MHz</u>	<u>NET CONTROL</u>
15 Meters	SSE	Wed	8:00 PM	21.375*	AF6C
2 Meters	FM	Wed	8:30 PM	146.550 simplex	WB6IXN
40 Meters	CW	Thur	8:00 PM	7.141*	WA6RND

(Listen for W6ZE, Net Control) \*Plus or minus QRM

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