



# R F



## ORANGE COUNTY AMATEUR RADIO CLUB

VOL. XXVIII No. 1 P.O. Box 3454

TUSTIN, CA. 92681 Jan. 1987

MEET  
THE  
BOARD

Pteranodon Jeanie  
EZS,  
Secretary

Brachiosaurus Jim  
JSV, President

Triceratops Kei  
NGO,  
MAL

TERRIFIC JAN. PROGRAM!  
SEE INSIDE!!

Diplodocus Ken  
HHC, Treasurer

Tyrannosaurus  
Frank, VKZ  
TVI

Stegosaurus  
Bob, AF6C  
Membership

Iguanodon Mac, MIL  
Pub. Rel.

Woolly Mammoth  
Ron, EZP  
Activities

Megalosaurus (?) (?)  
V. Pres.

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1987 CLUB BOARD of DIRECTORS

President	Jim Talcott	N6JSV	838-5395
Vice President	(open)		
Secretary	Jeanie Talcott	KB6EZS	838-5395
Treasurer	Ken Konechy	W6HHC	541-6249
Activities Chairman	Ron Toering	KA6EZP	971-5180
Membership Chairman	Bob Eckweiler	AF6C	639-5074
Public Relations	Mac MacInnes	W6MIL	594-0442
T.V.I. Chairman	Frank Smith	WA6VKZ	492-3218
Member at Large	Kei Yamachika	W6NGO	538-8942
Member At Large	(Past President holds another position)		

CLUB APPOINTMENTS

Club Historian	Bob Evans	WB6IXN	543-9111
W6ZE Trustee	Bob Eckweiler	AF6C	639-5074
R.F. Editor	Bob Evans	WB6IXN	543-9111
Teen Representative	(open)		

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CLUB FUNCTIONS

MONTHLY MEETING: 3rd Friday of each month, 7:30PM at:  
MERCURY SAVINGS & LOAN  
Jan 16th 1095 Irvine Blvd. (4th St becomes Irvine)  
Tustin, Ca. Talk-in on 146.55 MHz  
Feb 20th  
Mar 20th (Take the 4th St. exit to the 55 FREEWAY  
and head east. Continue about two blocks  
past Newport Blvd. on the left.)

CLUB BREAKFAST: 1st Saturday of each month, 8:00AM at:  
MIMI's CAFE  
Feb 6th 17231 17th Street  
Tustin, Ca. (714) 544-5522  
Mar 6th  
(55 FREEWAY at 17th Street east.)

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CLUB NETS

BAND	MODE	DAY OF WEEK	LOCAL TIME	FREQ MHz
2 Meters	FM	Wednesday	2100 hrs.	146.550
15 Meters	SSB	Wednesday	2000 hrs.	21.375X
15 Meters	CW	Sunday	2000 hrs.	21.175X

(Listen for W6ZE, net control) XPlus or minus QRM

## \*\*\* ON THE NETS \*\*\*

12/3 15m phone net - no activity. 12/7 15m CW net - IXN took brother to CIGNA Health Center to determine sudden swelling in his elbow. 12/10 15m phone net - AF6C was away from home. 12/14 15m CW net - IXN checks in Karl, IEH. We talk abt swollen elbows & possible bursitis in IXN's brother's elbow. We also discuss various sources of RFI at JSV's QTH. Karl was interested in our use of an AM radio (battery operated) to check for RFI sources. 12/17 15m phone net - Net is informal. NG7D & IXN discuss 35mm slides, computer printouts, software music programs for Commodore + a template for you composers, the Surgeon General's report on 2nd hand smoke, fiber optics and telephone extension lines. John gets his Regency MX-7000 back...it had a faulty keyboard, speaker, bad solder joint and a broken lead! 12/21 15m CW net - IXN checks in Karl, IEH. We discuss how to hood-wink, cajole, and persuade the XYL to do all the Christmas shopping. IEH is trying to copy some old photos, as he resurrects his old 4x5 equipment from 'mothballs'. Karl reports that DX bands are improving. He heard Norway! We exchanged 'Merry Christmas' wishes. 12/24 15m phone net - 'Twas the night before Christmas when out on the net...IXN calls AF6C, but NG7D answers instead. John listens to Voyager on 6550. We talk abt 2m antenna height of 30ft. John's MX7000 goes out on him agn! Maybe the model should be the 'Lemon 7000'! John says solar cycle DX activity will pick up in 1988 & reach maximum in 1992. 12/28 15m CW net - IXN listens to W6ADO on 7099.5 in the AM, and discovers that he cannot copy accurately above 20wpm. IEH can copy 28wpm in his head! AF6C did not join us, so we talked abt JSV's noise problem. IEH's XYL wants a computer, but IEH says that's an expensive way to log recipes!! 12/31 15m phone net - IXN, NG7D, and ULU all met on an informal net. John was bringing his log book up to date and he provided us wid info on his VCR & his 8 hr T-160 tapes. ULU wud join us on the CW net if it was held on a different night!! AF6C was busy working on his auto, changing spark plugs, etc. ULU is feeling much better, beginning to enjoy retirement, and having his family over tomorrow for New Years.

\*\*\* OCARC: Program for Jan. 16, 1986 \*\*\*

Speaker: Jack Cadman, former Chief Criminalist, Orange County Sheriff's Department.

Background: He joined the Department in 1948 and spent 29 years helping to solve crimes and developing new methods in the field of criminology. The criminal often is unaware that he has left tiny bits of evidence at the scene of the crime; Mr. Cadman's painstaking study of this evidence led to many prosecutions and sentences of Orange County criminals.

Current: He is presently a Professor at Cal State University of Los Angeles and Director of Master of Sciences in Criminalistics. All of his students must first be graduate chemists, which reveals the quality of the men and women who are later employed in this exacting science.

Program: He will detail some of the notorious cases which were headlines here in Orange County for those 29 years.

He welcomes questions, but members are requested to withhold their questions until the conclusion of his presentation.

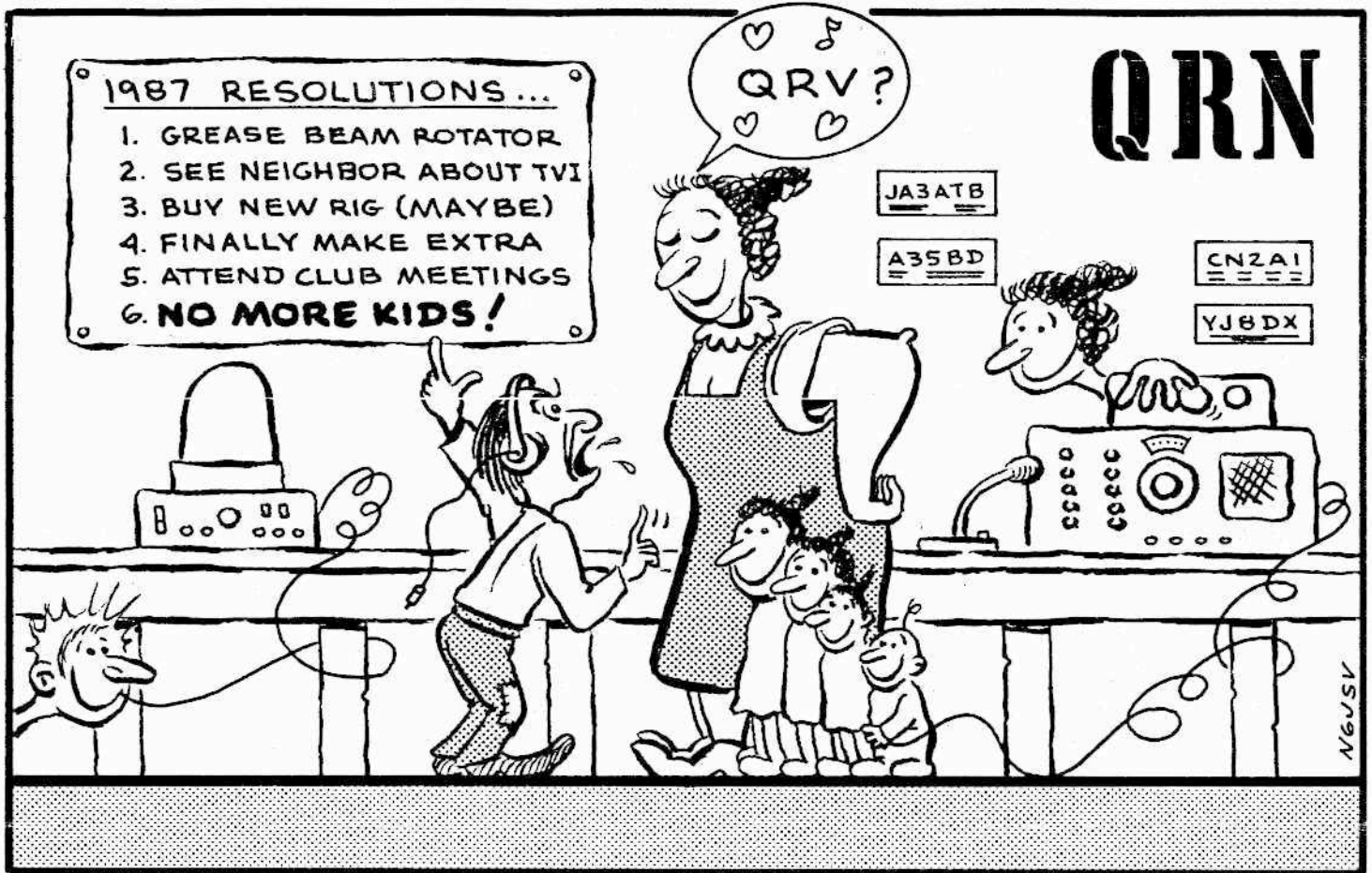
ORANGE COUNTY AMATEUR RADIO CLUB  
MINUTES OF BOARD MEETING  
JANUARY 4, 1986  
AT THE HOME OF JIM N6JSV

Meeting was opened by Jim N6JSV, the President, at 3:00 p.m.  
Roll call of officers revealed that the following officers  
were present:

Jim	N6JSV	President
Jeanie	KB6EZS	Secretary
Ken	W6HHC	Treasurer
Ron	KB6ELP	Activities
Bob	AF6C	Membership
Frank	WA6VKZ	TVI
Kei	W6NGO	Member at Large

1. Ken Konechy will be the new net control for 2 meters.
2. Future Board meetings will be held following the Saturday morning breakfasts, at a member's home.
3. Jeanie accepted the position of Club Secretary for 1987.
4. Alex was recommended as assistant director to Fried Heyn to represent the Club in the ARRL SW Division.
5. A Novice/Tech training course is planned for Spring. Students who pass the examination will get a year's Club membership as part of their training fee. Fee will be \$22, including training materials. Upon getting their licenses, students will be refunded \$5 as a reward for successful completion of training and licensing.
6. To attract new members to the Club, Bob will put a notice of Club meetings in the Register; Jim will contact World Radio News for a notice of Club meetings; Ron will place copies of the RF at the HRO; Frank offered to give a one-half hour presentation about Club activities at computer clubs.
7. The Novice/Tech training class will be taught by Bob Evans and Bob Eckweiler, assisted by Frank. The training class location will be held in the activities room of a bank or savings and loan. Jim will investigate possibilities at Mercury, Republic or Sears Bank for approximately 12 Saturdays.
8. The CW net will continue to be controlled by Bob Evans, with a change of evenings to either Monday or Thursday, the choice being Bob's. It has been found that a lack of participation was due to other activities by Club members on Sunday evenings.
9. A new location for the Saturday morning Club breakfasts will be investigated by Jeanie.
10. The RF will be printed by Bob in January, Frank in February and Ken in March. By alternating, this arrangement will take the load of the job from any one member. It will also save the Club substantial money over a year's period.
11. Members are encouraged to submit the names of persons, who could give meeting programs, to Jim.
12. Ken and Jim will instigate a plan to photograph all members' shacks for an interesting program and also to be preserved by Bob, the Club Historian.
13. Beach Cities Amateur Radio Club has offered to join with us in a dual Field Day in 1987. They have a permanent hill-top site in San Clemente. The Board approved, with further 'investigation' by Frank.

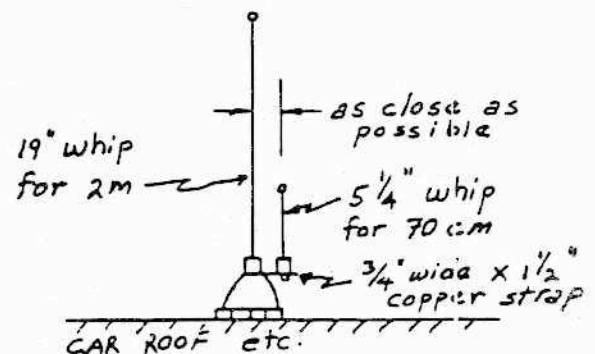
Meeting was adjourned at 5:00 p.m. Respectfully submitted, Jeanie  
KB6EZS



Jim Talcott was cartoonist for the Daily Trojan at USC and upon graduation, joined Walt Disney Studios where he was an animator. He drew two features for comic magazines, "Nutsy," and "Coo-Coo Clown." He appeared on L.A. television stations on the Frank Webb Show, "Let's Draw With Frank Webb," and produced animated puppetoons for Santa Fe Railroad, which were shown on national television. In a career of Sales Management, he used cartoons and comics to train hundreds of salesman. He was runner-up for the design of the ARRL Special Service Club logo, featured in the July, 1984, QST, page 51. (IXN for N6JSV)

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The following should be of interest to those who have recently purchased a Dual Bander. If you have an Icom or other 2 meter rig with one antenna jack, this is an almost zero cost antenna that is a real performer. It only takes minutes to assemble to your existing 2m antenna and that's all there is to it.



CRAWFORD AMATEUR RADIO SOCIETY  
BOX 653  
MEADVILLE, PA. 16335

## WHERE HAVE ALL THE SUNSPOTS GONE?

High frequency ionospheric sky wave propagation is possible because radio frequency energy is transmitted from the earth's surface to the ionospheric layers and refracted back to earth. The various layers (mainly the E and F layers) are important in returning these waves to earth.

Sunspots indicate the thermonuclear activity on the sun (eruptions, flares, etc.) These solar explosions are accompanied by radiant and corpuscular emissions. In brief it is these radiant/electromagnetic emissions (ultraviolet, X-ray, etc.) which ionizes our upper atmosphere and creates the ionosphere.

Sunspot numbers vary considerably from day to day resulting in little or no correlation between the daily sunspot number count and HF propagation. It is not uncommon for daily sunspot numbers during a month to vary between 10 and 130. For reasons yet unknown, there does not appear to be much correlation between monthly sunspot number averages of the daily sunspot count and HF ionospheric propagation conditions. However it has been shown that a twelve-month running average is a useful index of the upper atmosphere's state of ionization, and therefore, it's ability to refract HF radio waves. In order to perform HF propagation calculations it is these twelve-month averages that must be taken into consideration.

Sunspot cycle 21 reached a maximum sunspot number count in December 1979 at 164.5 and some of us remember what HF propagation was like in those days. Ten and fifteen meters were open all night long and DX could be worked with low power and simple antennas.

The predicted time of the next solar minimum sunspot count is based on the lengths of previous sunspot cycles. Cycle lengths over the last 136 years appear to fall into a bimodal distribution of about 123 months and 140 months. No objective methods are available for determining the current cycle (21), so forecasters conservatively chose an average length of 133 months (minimum to minimum). Using this value, the minimum monthly sunspot number for this cycle should occur in July 1987. A cycle length of 140 months would result in a minimum sunspot number in February 1988.

The predicted time of the next solar maximum is based on the average time between minimum and maximum, which is about four years. Even numbered sunspot cycles appear "flat-topped," which means that the precise time of maximum is relatively meaningless. The forecasters predict that the maximum monthly sunspot number of the next sunspot cycle (22) will be reached in mid-1991. Sunspot numbers may be close to the maximum values for two years or more.

The predicted maximum sunspot count for the next cycle (22) is based on the National Oceanic and Atmospheric Administration

**SUNSPOTS - continued**

forecaster's opinion. The forecasters predict a maximum sunspot number of 100, plus or minus 10. This implies that the next cycle will be somewhat below average in magnitude, but will not be an unusually small cycle.

From the National Optical Observatory in Tucson certain sunspot regions were observed to have reversed polarity from the norm. This is an indication that the beginning of cycle 22 has started and was first observed in January 1986.

Despite such gloomy prospects for HF propagation over the next five years, DX can and will still be worked. The sunspot factor can be dealt with by paying strict attention to the propagation charts found in QST. Listen to determine when and where the propagation is. It sure is a lot harder during minimum.

FRM FVM&KC 'KEY CLICKS'

\*\*\* QUICKIES \*\*\*

The Orange County Council of Radio Clubs presented the OCARC with the Field Day Trophy for making the most contacts on Field Day. We have won the trophy nine times since 1970.

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We 'thank' Jim, JSV, for the cartoon in Jan. 'RF'. Let's have more of them, Jim! We also thank Jim for our excellent program for this month! DON'T MISS THIS ONE !! IT'S GOING TO BE A REAL GOODY!!!

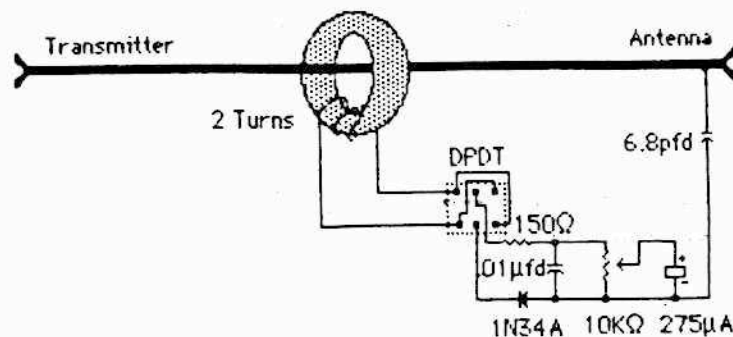
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Congratulations to Ken, HHC! Ken is now net control for 2 meters!!

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**Technical Tidbits**

By popular request, this months construction project is a reflectometer (SWR meter). A package of parts is available (including case and uhf connectors) for \$17.95. If you want to raid your junk box, nearly any torroidal core will work for the pickup.



frm Bob, N3BHZ  
CARS Crawford Key

DUES ARE DUE!

Dues for 1987 are now due. In view of the fact that we purchased the Field Day generator in 1986 and we have just paid the Club liability insurance, which was again increased for 1987, the Treasury is in rather sad shape. WE NEED THE MONEY!

Just \$12 a year, a dollar a month. Please bring cash or your check book to the January 16 meeting, or mail your check to P.O. Box 3454, Tustin, CA 92681, payable to OCARC. Thanks.



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WANT AD:

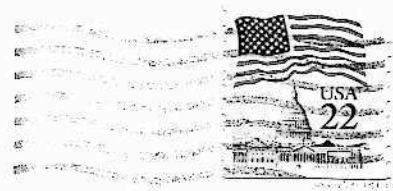
WANTED: 2 meter base transceiver. Jim (N6JSV) 838-5395.  
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ORANGE COUNTY AMATEUR RADIO CLUB

P. O. Box 3454

TUSTIN, CA 92681



FIRST CLASS!