



CROSSTALK

News Bulletin of the TRW Amateur Radio Club

Member, American Radio Relay League

NOVEMBER 1984

** FD'71 ** FD'73 ** FD'75 ** FD'76 ** WAS ** WAC **
Garrett/W6TRW Repeater: 145.32/- .600(2A-PL) -- UHF: 442.000in/447.000out

CALENDAR FOR NOVEMBER AND DECEMBER

Thursday	Nov 22, all day	Happy Thanksgiving
Saturday	Nov 24, 8-11am	Swapmeet
Tuesday	Nov 27, noon	Club Meeting, R4/1041 Speaker will be Mr. Mark Bergam. Topic will be the Solar Sail Project and the role that Amateur Radio will play. Caution total fascination possible!
Tuesday	Dec 4, after work	Early Exexutive Board Meeting. All members are welcome to attend!
Tuesday	Dec 18, noon	Early Club Meeting. Vote for New Club Officers!!
Saturday	Dec 29, 8-11am	Swapmeet

From the Library

What is new in:

George Lee, W6IOW

NEW MEMBERS - - OLD MEMBERS

QST Sorry, copy still not in yet.
Amateur Radio and the Olympiad
Digital Signal Processing for the experimenter
The Smith Chart in BASIC
The Effect of Real Ground on Antenna (Part 5)
Review of the FT-980
Review of Maxcom Ant. Matcher & Dipole Cable Kit

Welcome to the club:
Chuck Lindahl, K6AHF, a good friend of Bill Rodner and frequent user of the repeater. Chuck was the one who recommended the new repeater antenna.
Gary Komatsu, K6HPD, is quite ill. He is in the hospital with viral pneumonia and is being kept isolated, so no visitors. Get Well Soon, Gary!!!

HR Special issue on Receiver Technology:
IM & IP of Cascaded Stages
Preamplifier at work
Receiving Signals from Space
Receiver Sweep Alignment System

Membership Renewal

Bill Dews, K6AWO

Time to renew membership is upon us. The next Crosstalk will be out early because of Christmas vacation and the December meeting will be moved up one week too. This Crosstalk has a new membership application for you to pull out. Please take the time to attach a check and return it so that your membership will continue uninterrupted. If you need a Club badge add two dollars with your dues, and I'll see that you will get a TRW/ARC badge plus your new 1985 membership card.

CQ Special RTTY Issue:
Understanding Modern RTTY Codes and Modes
Product Review of:
HAL CRI-200 Computer Interface
MJF 1224 Interface for Commodore
Microlog AIR-1 RTTY/Morse System
Heathkit HD-3030 Terminal Interface
Kantronics Interface II and Hamsoft

More on Rechargeable Cells

The pros and cons of treating nicad cells goes on forever. The latest (and perhaps the best) is found in the June '84 issue of Amateur Radio.

Incidentally, the closely guarded secret of how a person can subscribe to Amateur Radio has been broached. Send \$35 U.S. Dollars to:

Wireless Institute of Australia
412 Brunswick Street
Fitzroy 3065
Australia

Yes, the ZIP Code has only four digits!

Thanks, Collector and Emitter.

73 Color Computer in SSTV
Free Form Filter Design (using modern chips)

KG6CR has donated 3 latest British magazines now in the shack for your reading. These are Practical Wireless, June and Sept. issues, and Radio Communication, June issue. Our Thanks, Paul.

We also have purchased 4 new books listed below now in the library. They are:

Vertical Antenna Handbook by Paul H. Lee, N6PL
The Complete DX'er by Bob Locher, W9KNI
Introduction and Operation of AMTOR by P. Anderson, W0XI
ARRL 84-85 Repeater Directory



Don Resor III, N6KAW

A fine day for the Swapmeet. The weather was a bit brisk in the morning but that didn't stop the swarm of interested buyers and sellers both. I arrived at 6:30 AM only to find that the seller's parking lot was already buzzing with activity and that the lot was almost full. May I please remind everyone that the official hours for the Swapmeet are **8:00 AM to 11:00 AM** and that it would be greatly appreciated by myself and the Executive Board that these hours try to be met as closely as possible.

This month I was assisted by Drew Gregory, KA6BFI and Ron Phillips, K6MLL as Swapmeet Supervisors. I hope that the fact that I got off to a late start morning and didn't arrive until 6:30 AM didn't offend my assistants. Drew and Ron being new to the Swapmeet didn't quite know how to handle the situations as they arose. Sorry to you both for having put you on the spot like I did.

The Swapmeet Raffle was drawn at the Club Meeting of October 30th. The winner was **Ron Phillips, K6MLL**. He was awarded a check for \$10.00 to be applied to a purchase at the next Swapmeet. Congratulations Ron!

Well, I guess it is about time that I made it a little more known who I am and what little changes there are in the woodwork. Hi Hi. I'm Don Resor III, N6KAW, and I'm the Assistant Swapmeet Manager. I'm filling in for Jim McWilliams, W6RTG, this month and next month as Jim will be off on business. As of January, 1985 I will hopefully be taking over the reins of command and will be the new Swapmeet Manager. I have been Assistant to Jim over the past year and hope that I have gained the knowledge from him to do as good of a job as he has done the past year. I know that Jim has made a major contribution to the Swapmeet and made it an enjoyable event for myself and the many others that participated this past year.

I will soon be looking for assistants to help in the '85 Swapmeet year and will be sending out the inquiry forms to recruit supervisors to help out so watch your mailboxes.

May I point out that the W6TRW Swapmeet is truly a group effort. Jim and myself both owe thanks to the Executive Board for their support and help. We can always count on the Executive Board to help us out when we ask. This is one of the ways that make this Club activity continue on strong month after month. But it doesn't stop with just the Executive Board's help, you the members of the Club count too. We would like to see you out there having a good time with us. Together as a whole we can make this activity along with the other activities that the club puts on more enjoyable. All that I ask is for you the members to participate, we need you out there too. 73's

Only one person can solve all the world's problems, and wherever you sit, he's usually in the chair right next to you.

Wanted -- For Sale -- Freebies

For Sale: Yaesu FT-207R Handi-talky, like new with extra battery and case. \$90. John Larson, W6IMQ, 532-0635(w)

Wanted: Anyone who has worked with or owned the Japan Radio Transmitter NSD 515 and Receiver NRD 515. Please contact Robert Block, KB6FBV at work (818) 501-3535 (9-5)

Most of the things that are really worth knowing cannot be taught.

<<<<<<<<>>>>>>>>

If the politicians aren't careful, the first of our natural resources to be depleted will be the taxpayer.

If the people who apologize for taking so much of your time really meant it, they wouldn't do it.

Ron told me that he used to use the Evelyn Wood Spee Reading Method until he went blind in one finger.

We bought a transmitter but no receiver. At our age we figure we've heard it all.

Tidbits from the Jolly Little S...!

Well, we'll start out this month correcting an error that got into last month's Crosstalk. Jack Koho, a fallen away ham who is returning to the fold, informed me that the address for Radio School, Inc. run by Gordon West was incorrect as stated in the From the W5YI Report column. In the column it was shown as 22414 College Drive and it should be 2414 College Drive, Costa Mesa, CA. 92626. The phone number was good and that's how Jack found out about the error.

In the "third time is the charm" department, now that we know that W6QIE sends code practice every evening except Monday from 8 to 9:30 PM local time on 3590 KHz because we had two months to memorize it, and that we can get local code practice on the W6MET repeater at 147.240 MHz, let's get the hours straight on the local practice. Before the Olympics it used to be a 24 hour deal but since the Olympics the operational hours have been trimmed. Now code practice is only sent from 10 PM to 7 AM each day. So you could listen going to work if you started early or you could listen if you go home late (like after typing the Crosstalk).

I promise to run this item in every Crosstalk until the situation is dealt with. Two of the Quad antennas for Field Day had a high SWR. They still worked OK but think what might have happened if they were well matched. S until they are fixed, I will remind all that the work needs to be done before the next Field Day. Volunteers may contact John Keller for info at X55485 M/S 82/2425.

Talk about getting your words of wisdom into print, there is a new book out on the market for the begining electronics student and those non-engineer types that are hams and looking for a little more explanation as to the why's and wherefore's of how pushing a few electrons around can do so much. It is entitled Electronics Priciples and Applications and is is co-authored by Kamiran S. Badrkhan and our own N. David Larky, WA6DMO. The is a glowing reveiw of the book in the November QST on page 21. Now let's see was that $E=IR$ or $e=mc^2$???

Thanks to all of you who said that they liked the look of the Crosstalk. You have no idea how good it feels to get a nice pat of the back like that considering the only compensation this job has is the pat on the back. It seems that this month's deadline has snuck up on me too quickly again and a few extra late night hours are necessary to get the newsletter out on time. But I am not complaining, as long as the pat's on the back continue. Hi Hi.

And as long as we are passing out pats on the back, I want to personally pass out pats to the entire Executive Board and Staff Members of the TRW/ARC. I am full of thanks, at this appropriate time of the year, that I have been able to be associated with this fine group of people. Our Executive Board meetings have been some of the most stimulating I have been to. We get down to the nitty gritty of how the Club will be run, what we do with your dues to best benefit you the membership, deal with problems that crop up, improve the Club Shack, and just enjoy each others company. No guilt trips here for those of you who don't want to be or can't be a part of it by volunteering for an office. But if you think you can spare the time and want a little more work with the only compensation a pat of the back, I urge you to join us and help run the club. Now if you will excuse me, I'll just get down off this soap box and get on with the rest of the Crosstalk.

General Meeting 30 October 1984

John Keller, N6JLS

President Walt Pearson called the meeting to order shortly after 12:00 noon. Secretary John Keller accepted the minutes of the September meeting as printed in the Crosstalk. Treasurer Paul Herbert stated that the proceeds from the September Swapmeet had not been received but the treasury was still in good shape and expected to remain that way through the end of the year. SEA Council Representative Bill Ivey stated that SEA had some small amount of funds that it was going to make available to the member clubs on a need basis. Vice President Chris Wachs stated that all details for the annual dinner have been worked out and the all is ready for an enjoyable evening on November 17th. Chris also stated that he had information for the AMSAT Annual Meeting for those members that were interested. The AMSAT Meeting is on Nov 10th. Walt Pearson stated that he has named Paul Weisz as the Delegate for the 1985 ARRL Southwest Division Convention, with Gary Komatsu and Jim McWilliams serving as Alternates. Emergency Communications Group Coordinator Dave Gilmore gave details on the Emergency Communications Group Check In to be held on Oct 31st. Trustee Bob Hume is looking for an assistant to help out organizing Antenna Parties to get the Club Shack operational again. Anyone interested should contact Bob at 217-3624. Membership/Nomination Chairman Bill Dews stated that the position of Activities Chairman is still open for nominations. The Activities Chairman is responsible for acquiring the door prizes for the general meetings and planning the Picnics during the summer months. Bill also stated that badges are in for W6SP, K7JAJ and N6KRF. Visitors to the meeting were greeted. They were Nelson Stockwell, N5AZF, and George Doza. A short presentation was made by John Orr, KX6A, on FM Deviation. John explained that with an FM transmitter the output power is constant so the figure of merit for a transmitter becomes the modulation index, which is the ratio of the Deviation Frequency to the Modulating Frequency. With a modulation index of 2.4048 all of the transmit power now goes into the sidebands and none is in the carrier. It is an accepted fact that the band of frequencies that carry the most information for transmitting voice is 300Hz to 3KHz. Given this information we can take the modulating frequency times the modulation index to determine that the ideal FM deviation is 3.6 to 4.8 KHz. Given this information the proper method for setting up an FM Transmitter is to set the audio amplifier gain for the microphone so that the 3.6 to 4.8 KHz level is reached on loud sounds (the number four for example) and then set the deviation control so that the absolute maximum FM deviation is 5 KHz., that is the deviation control acts like a hard limit and "clips" the input signal during overdrive conditions. Bill Dews then gave a quick description of how to operate the Club FM Deviation meter and how to set the PL and voice deviation levels.

Executive Board Meeting 13 Nov 1984

John Keller, N6JLS

President Walt Pearson called the meeting to order. Treasurer Paul Herbert presented a detailed report on the Club treasury with analysis of expenditures and income for the rest of the year. The analysis shows that the club can meet all responsibilities for the rest of the year as long as there are no large disasters. Basically we will end up with the same end of year balance that we had last year. Secretary John Keller accepted the minutes of the October Executive Board Meeting as printed in the Crosstalk. John also presented the board members with a copy of the Club calendar for the 1985 year. A number of changes were from this year's calendar to accommodate the ARRL SW Division Convention to be held in August. The calendar is to be printed in the December Crosstalk. Vice President Chris Wachs reported that he and John Keller had visited the Shangri-La Restaurant and

made the final arrangements with the owners for the Annual Dinner. The Menu for the dinner had been arranged by Sammi Komatsu. Chris stated that the speaker for the November Club Meeting (Tues, Nov 27, noon, R4/1041) will be Mr. Mark Bergam. His topic will be the Solar Sail Project which he is the Program Director for. Mr. Bergam is a member of the World Space Foundation and works at the Jet Propulsion Laboratory. Mr. Bergam will briefly describe the World Space Foundation and then will describe the Solar Sail Project and the role that Amateur Radio will play in this project. Chris also passed out a sheet describing the ARRL January VHF contest. Chris was interested in getting club members involved as this is club competition. This is a medium class competition (fewer than 50 members participating). Chris suggested that there be some club awards given for the highest individual scores. The contest does not require all operators to be in one location and club members may act as individuals. There are FM restrictions and repeaters may not be used to make contacts or for soliciting contacts on other frequencies. More details will appear in the December Crosstalk and all of the rules will be in the December QST. Trustee Bob Hume stated that he has purchased 1985 Callbooks. Bob suggested that the present tower and rotor be retained and that a 40M beam be placed on it. The present crank-up tower is badly rusted and some welds have broken at the base. Bob suggested that it be replaced with two standard size 20ft sections on which the new rotor and beam antenna can be installed. This would eliminate the need to remove the top section of the present tower to accommodate the new larger rotor. This idea was well received and a decision to purchase the required tower section was put off until next year when the budget is developed. Don Resor reported to Bob that the IC-271 Vox is not operating. LAACARC Delegate Bill Daley stated that the LAACARC is now 32 years old. Bill stated that the ARRL has petitioned the FCC to issue a ruling preempting unreasonable antenna restrictions by State and Local governments. It is known as PRB-1. (See article elsewhere in Crosstalk). The W6 QSL Bureau handled 42,000 QSL's. The LAACARC wishes to start a Public Information Assistant (PIA) liaison with all of the member clubs. Needed is someone PR oriented to relate to the local media newsworthy events, like Field Day. Interested parties should contact Section Manager John Walsh, N6UK, (213) 335-0036 or (213) 354-3303. Bill reported that Tom Rockwell, K6ZT; Irv Emig, W6GC; Fried Heyn, WA6WZO and Jay Holladay, W6EJJ were recipients of Olympic Medallions from the LAOOC for their work preceeding, during and after the 1984 Olympic Games. John Keller reported for Membership Chairman Bill Dews that we now have 156 members, seven of which have already renewed for 1985. A membership application will appear in the November Crosstalk to get the ball rolling. Bill also suggested that the Club look into the purchase of a "Smartpatch" for the repeater. Acting Swapmeet Chairman Don Resor III passed out copies of the new Swapmeet rules further describing the types of items that may be sold/swapped at the Swapmeet and adding a warning to commercial operators attempting to deal at the Swapmeet. A few minor changes and typographical errors were corrected and the rules were approved by the Executive Board. Training Chairman Jim Cox stated that the VEC program is still settling out as the entrance of the ARRL into the arena as a nationwide VEC is causing some of the earlier approved VECs to drop out. Status of Volunteer Examiners under these VECs is unknown. Jim stated that there is a lot of information in each issue of QST Magazine.

Marconi never had TVI.

Then there was the principal who had to dismiss the cross-eyed teacher because she had no control over her pupils.

Los Angeles Area Amateur Radio Classes

Here is a great piece of information that comes to us from the Los Angeles Area Council of Amateur Radio Clubs (AACARC). For all of you aspiring or upgrading hams here is the info on where classes are being held.

BURBANK - Mondays, 7:30 PM, the Lockheed Employees Recreation Club Amateur Radio Club has classes held at 2814 Empire Ave., Burbank. For information call (818) 842-1863.

CULVER CITY - Tuesdays, 7:00 PM, Murphy's Radio Classes are held at the Senior Citizens Bldg., 4153 Overland Blvd., Culver City. For information call (213) 391-0312.

LONG BEACH - The Associated Radio Amateurs of Long Beach will arrange instruction on a tutored basis. For information call Ed Beer, (213) 423-9365.

MONTEREY PARK - The Monterey Park Amateur Radio Club are making arrangements at press time for classes. For information call (213) 721-7275.

NORTH HOLLYWOOD - Mondays, 7:00 PM, The San Fernando Valley Amateur Radio Club has classes held at the First Christian Church, 4390 Colfax, North Hollywood. For information call (818) 767-5131.

POMONA - Thursdays, 7:30 PM, The Tri-County Amateur Radio Association has classes at the Pomona Red Cross, 675 N. Park Ave., Pomona. For information call (714) 983-6645.

TORRANCE - Mondays, 7:00 PM, the United Radio Amateur Club has classes at Radio King, Inc., 25326 S. Crenshaw Blvd., Torrance. For information call (213) 534-4456.

WEST COVINA - Tuesdays, 7:00 PM, the Southern California Amateur Transmitting Society has classes at Edgewood High School, 1624 W. Durness, West Covina. For information call (818) 338-1263.

WHITTIER - Tuesdays, 7:00 PM, classes are held at Rio Hondo College, Room A207, 3600 Workman Mill Road, Whittier. For information call Tom Polley, (213) 692-0921 extension 294.

WOODLAND HILLS - Wednesdays, 8:00 PM, the West Valley Amateur Radio Club has classes at the Woodland Hills Recreation Center, 5939 Shoup Ave., Woodland Hills. For information call (818) 716-7013.

ANTENNA ZONING

From the W5YI Report

The ARRL filed a massive (28 typewritten page) document with the FCC on July 16, 1984, entitled "Establishment of a Policy of Limited Federal Preemption of State and Local Regulation of Amateur and Other Radio Station Installation and Operation." The League asked the Commission to issue a "Declaratory Ruling" that local and state governments may not arbitrarily prevent antenna effectiveness by zoning against them. The League particularly wants the FCC to hear from amateurs who have local restrictions that prevent antenna effectiveness. The FCC published the "Request for Issuance of Declaratory Ruling" in the September 14th Federal Register and set a public comment period which extended until November 9. Very few comments have been received by the Commission in support of the ARRL petition. The FCC has granted an ARRL request for an extension of comment time to December 24. The League's original filing and instructions for filing your comments is available from ARRL HQ for a sale with 88 cents postage. Ask for PRB1 material. The following summarizes the League arguments.

(1.) - Amateur Radio has struggled for over half a century to convince municipalities that amateur radio is interstate commerce and of such a nature that unreasonable local regulation makes it impossible to accomplish the statutory and regulatory goals set for it by the Federal Government.

(2.) - There have been many state court zoning cases that hold that amateur radio is as normal, reasonable and incidental use of residential real property.

(3.) - Amateur radio antennas and transmitters have been and are now routinely regulated to the point of uselessness by municipalities under the guise of state police power zoning authority.

(4.) - It is seldom that a municipal restriction on amateur antenna systems which actually impairs the station's communications effectiveness bears any trace of a basis in safety and health concerns. Most seem to deal with "aesthetics" and are arbitrarily established.

(5.) - Amateur antenna cases consistently pit licensees against the very communities they seek to serve with public service and emergency communications resulting in the expenditure of funds which can never be recouped to defend a federally-granted right to operate an amateur station in the licensee's home.

(6.) - Most amateur antenna cases are disposed of by summary judgement against an amateur, specifically because the Federal Government has never stated its interest in effective, reliable amateur communications. Thus amateurs are denied a basis for arguing that municipalities must not enact restrictions so severe as to preclude effective, reliable amateur communications.

(7.) - Since amateur radio is a non-commercial service, amateurs seldom have financial resources to challenge local ordinances. Rather they are routinely put off the air entirely or forced to operate with inferior, ineffective indoor antennas which increase incidents of radio frequency interference.

(8.) - In 1977 the FCC issued a Public Notice entitled "Local Laws Regulating Radio May be Pre-empted by Communications Act" and discussed the Commission's jurisdiction and pre-emptive authority over local regulation of radio. It offered no means, however, by which a municipality might judge an ordinance as unduly restrictive which should be pre-empted.

(9.) - The FCC has only exhibited concern over antenna height where airport safety is involved. The Rules have no detailed regulation of antenna height, but rather one blanket limitation on height to 200 feet.

(10.) - State and local laws "stand as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress" as reflected in the Federal regulation of amateur radio pursuant to the Communications Act of 1934.

(11.) - The Commission should issue a ruling which states the Commission's intent to preempt all local ordinances which provably preclude or significantly inhibit effective, reliable amateur communications and which are not clearly necessary to insure the safety of a proposed antenna installation. The statement should indicate that while conditions may be placed on the antenna installation, to assure that reasonable local interests are met, they cannot be so restrictive as to prevent antenna effectiveness.

A few weeks ago radio amateurs defeated a proposed Arcadia city ordinance that would have prohibited tri-band beam antennas and even the smallest tower in the Tri-Ex catalog. This was done by an impressive show of force at the council meeting by about 100 amateurs. What is needed is this FCC ruling preempting local and state governments from enacting restrictive ordinances. If you or someone you know has had problems getting permission to put up a tower or antenna be sure to tell the FCC about it!! Fried Heyn, WA6WZO and Wayne Overbeck, N6NB, the Director and Vice Director have appealed for a Snowstorm of mail to the FCC.

It is important that you send one original and four copies of your comments to:

Secretary
FCC
Washington, DC 20554

The first page of your comments should include the heading, "Comments in Response to PRB-1"

A librarian knows volumes.