

# CROSSTALK

News Bulletin of the TRW Amateur Radio Club

Member, American Radio Relay League

AUGUST 1986

\*\* 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 AUGUST AND SEPTEMBER

Wednesday	Each Wednesday, noon	Emergency Communications Team Check-in. 145.32 via repeater and simplex.
Friday	Each Friday, 7-8am	Club Breakfast, S Cafeteria, VERY informal, good breakfast for less than \$2.00!!
Tuesday	Aug 26, noon	Club Meeting, R4/1041. Speaker will be Chris Wachs, WA2KDL. He will speak about the newly launched JAS-1 satellite and the recovery effort on OSCAR 10.
Saturday	Aug 30, 8-11am	Swapmeet. Corner of Compton/Marine and Aviation, in Manhattan Beach. Seller's lot is directly behind the Standard Station. Sellers please DO NOT arrive before 0700!
Tuesday	Sept 9, after work	Executive Board Meeting. All members are welcome! At Shakey's Manhattan Beach, 2000 N. Sepulveda Blvd., just south of Marine Ave.
Sat, Sun	Sept 13, 14	September VHF QSO Party. You don't have to compete to give W6TRW points.
Friday	Sept 16, noon	Last Club Picnic, El Nido Park, on 182nd west of Hawthorne.
Tuesday	Sept 23, noon	Club Meeting, R4/1041.
Saturday	Sept 27, 8-11am	Swapmeet.

### Emergency Communications Notes

Rich Sauer, N6CIZ

As the new Emergency Communications Coordinator, I'd like to take the opportunity to wish my predecessor, Dale Jensen, K6ZTI, the best of luck on his new venture away from TRW. Dale has really been helpful in assisting me in the transition as have Scott Gilmartin, WD6BNR, and Jim Cox, K7JAJ. Thanks for the help guys!

The Emergency Communications Team Net needs your support every Wednesday at noon on the Club repeater. Check in with the net control station, giving your call, name, location and power level. Also, don't look for me to be the net control operator every week. Anyone can do that - and should! It's good practice for as many people as possible to act as the net control from week to week. After all, in a real emergency, the first guy on the air is going to have to do the job. So, if no one else is doing it, jump in, write down the relevant info and send it to me and I'll get it printed here in the Crosstalk. The check-ins to the net for July 30th were: K7JAJ, Jim - Net Control by default, W6ZWS, KE6LB, K6ZTI, K6AWO and W6ZYM. The check-ins on August 6th (using W6NWP/R) were: N6CIZ - Net Control, WD6BNR, W6EKK, WA2KDL, W6AZY, K6AWO, KA6BKL and KE6LB. Thanks to you all.

Finally, I'm trying to locate all of the 2 Meter handheld radios that the Club owns for emergency communications use. If you have one, please contact me or take a minute and send me a note with your name, call, mail station, extension, serial number and/or unit number of the radio, number of battery packs and chargers. I can be reached at X62050 and my office is at R4/1071.

### ARRL National Convention

Bill Dews, K6AWO

TRW/ARC members who will be at the ARRL National Convention in San Diego, September 5, 6, 7, and want to rest, talk, etc., please use the frequency 145.32 MHz simplex, low power, and we can tell you the room number to come to. If you have no radio, go to the main desk and ask for Bill Dews' room.

Remember to stop at the store and pick up some cold drinks or whatever to wet your whistle.

There is no form to mail in this month's Crosstalk, but you can get in by purchasing your ticket at the door. Cost will be \$10 per person but young people 18 years or younger will get in free!

### W6TRW HF Rotary Beam Project Completed

Bob Hume, K6GB

The KT34XA Tribander for 20/15/10 Meters is now in place on the new Rohn tower at our Building 65 Club Station. The SWR is close to 1:1 across each band due to the broadband design of the KT34XA which uses two driven elements. I would invite all members to visit the W6TRW shack to try it out.

This project has taken about two years to complete. I would like to thank all the Club members who participated, SEA which helped in the design and installation of the base plate welding to the roof beams and guy eyebolt installation. Thanks also to the Swapmeet crew who helped bring in the funds to pay for this project.



The meeting was called to order at 1730 by President Chris Wachs. Attending the meeting were Frank Cartier, Jim Cox, Bill Daley, Scott Gilmartin, Paul Herbert, Bob Hume, John Keller, Walt Pearson, Rich Sauer, Dave Stockwell, Chris Wachs, Jim Wike and Paul Wisiolek. Chris reported that at 2147 UTC 12 Aug 86 the JAS-1 satellite was successfully ejected into orbit from the launch vehicle. Scott Lobue has accepted the position of Shack Inspector and will be responsible for making sure that all members keep the shack in good order. Scott wished to buy some parts organizers to further clean up the shack. A motion to allocate a maximum of \$20 for the purchase of the organizers was moved, seconded, voted and passed unanimously. Chris Wachs requested for reimbursement for a box fan for the shack. Motion to reimburse Chris \$21.27 was moved, seconded, voted and passed unanimously. Vice President Scott Gilmartin stated that the originally scheduled speaker, Dale Jensen, may not be able to make the meeting. He will have a speaker by the end of the week. Scott reported for Librarian George Lee that there were 4 checkouts in June, 3 checkouts in July and 1 so far in August. George also reported that the May and September 1985 issues of QST were missing from the Library. Scott also mentioned that he has been discussing the Emergency Communications Team with Barbara Murrin. Emergency Communications Team Coordinator Rich Sauer presented an ECT Concept paper to those present. Much discussion followed concerning the viability of the ECT in the present situation, and the future capabilities if another repeater was made available. Rich was tasked with developing a presentation for the next EBM concerning an ECT plan to train and provide support to the Emergency Assistance Team and Security in case of emergency. John Keller, filling in for Secretary Paul Lukas asked if there were any changes to the last EBM minutes as printed in the newsletter. No changes were indicated and the minutes were accepted. John also mentioned that due to new job duties and the move of his department to the new building, he will be without computer support. Several possible alternatives were discussed so that John can continue as newsletter editor. Activities Chairman Jim Wike stated that a Club Picnic will be this Friday Aug 15th. Jim will not be in town for the next meeting and Paul Herbert offered to handle the door prizes if Jim would purchase them. Training Chairman Paul Wisiolek stated that at the last license examination 9 persons attended and 7 upgraded. One additional person was tested at Paul's home and passed his Novice test. Frank Cartier stated that the Club made \$40 on the auction at the July Swapmeet. Frank did not feel that the income was worth the effort. Frank also stated that he is looking for operators for the September VHF QSO Party and that W6TRW will be on all bands from 6 Meters to 1296 MHz. Frank was considering setting up in a rare grid square, DM23, in the Joshua Tree National Forest. Technical Chairman Jim Cox stated that the W6TRW repeater has been working very well and the W6NWP repeater is working as good as it can in the present location. Charlie Clarke, W6NWP, has expressed the wish to move the repeater to a new site. Jim cautioned that moves must be TASMA coordinated. Bill Daley read the minutes of the LAACARC meeting. Bill stated that there is now a Local Interference Committee and a new procedure for dealing with interference. DON'T CONTACT THE FCC. Write or call your Section Manager. Do not react to the interference on the air. If the situation persists let the Section Manager know and he will contact the FCC. Bill also thought the Club budget was in error and Treasurer Dave Stockwell produced the check stubs to verify the budget. This led to a budget discussion and the options the Club has for the purchase of equipment for the Club station. Trustee Bob Hume wished to purchase a Kenwood TS-440 Transceiver, while Rich Sauer wished to get equipment to link two repeaters and Chris Wachs wanted to purchase new

### ...more Executive Board

rotors, antennas and feed line for the OSCAR station. After much discussion it was agreed to purchase rotors and half the coax but no antennas. The motion for the purchase was seconded and passed 3 to 2. The meeting adjourned at 1932 PDT.

### FCC Novice Class Definitions

### GERVAKf Bulletin or the W5YIPES Report

1. PARASITIC ELEMENTS: A common problem caused by the proliferation of mistletoe growing out of a dipole antenna.
2. DIPOLE ANTENNA: Any antenna that is suspended between two poles, hence the name "dipole."
3. FOLDED DIPOLE ANTENNA: A dipole antenna that has not yet been taken out of the box.
4. BROADBAND: A sexist term formerly applied to ham bands erroneously thought to have been restricted to YL hams.
5. ANTENNA FEED: A mixture of powdered aluminum, kibbles & Bits and cod liver oil.
6. DIGITAL LOGIC: Counting on one's fingers during FCC exams (use of square roots and exponential numbers is not recommended for those who are not double-jointed).
7. FERRITE BEADS: Highly poisonous bait for ferrites, small nocturnal animals that feed on coaxial cable.
8. DECAY TIME: A little-known property of integrated circuits defined as the number of days an IC will function before it's insides rot out.
9. PUSH-PULL AMPLIFIER: An amplifier with handles on either end of the case.
10. FREQUENCY RESPONSE: The number of QSLs received divided by the number sent divided by 100.
11. CARRIER FREQUENCY: The number of aircraft carriers in a fleet, specifically, those equipped with radio.
12. RF SUPPRESSION: A recent attempt by consumer activists to put severe restrictions on radio transmissions.
13. POLARIZATION: The sticking together of CW characters in an extremely cold environment.
14. MUF: Maximum Usable Fudge: The most home-made fudge a ham radio operator can eat during a DX contest. Thanks to the Locked ARC Bulletin who got it from the West Coast ARC, who got it from the GERVAKf Bulletin.

### New Members - - Old Members

Two TRW/ARC members are calling it quits at TRW. Jim McWilliams, W6RTG, has already said good-bye and Darwin Salisbury will be gone by the time that you read this. We hope that both of you enjoy the new phase of your life that you are embarking upon. Welcome back to the Club Rendall McKechnie, W6ZWS. Mac, as he is known to his friends, is the TRW/ARC's most reluctant member. Everyone is instructed to make Mac welcome on the repeater, at Club meetings, etc., because we are so happy to just get his dues. Welcome to the Club Ivan Shulman, WB2KIT, an associate member with an Advanced ticket and an ARRL member to boot. Welcome to all and hope to see you at the next Club Meeting! Badges have been ordered for Ivan, WB2KIT and John, K6MAU and should be available at the next Club Meeting.

### Wanted -- For Sale -- Freebies

Wanted - Loan of a Precision Multimeter to calibrate 4 1/2 digit Multimeter. Contact Bob Hume 217-3624 (work).  
For Sale - MFJ TNC-2 Packet Radio Terminal Node Controller. New in the box, Never Used! Good looking package. Selling price \$136. Contact Bill Schrecengost 536-3316 (work).

## From the Library

George Lee, W6IOW

What's in the ham magazines for August:

- : Construct a Wire Log-Periodic Dipole Array for 40 or 80 Meters.  
Inexpensive RF Switches for the Ham Shack (Interesting and Inexpensive!).  
Product Review of Dick Smith K6345 Radio Direction Finder.  
1986 ARRL National Convention Preview.
- HR: A Packet TNC for the IBM PC (Single Plug-In Card).  
Annunciator Bell for the Kantronics KPC-2 (If your terminal doesn't respond to the 3 bells when a connect is made, try this).  
Low Noise Phase-Locked VHF VCO, Part 2 (Noise level is >60 dB below carrier).  
Using Heathkit HD4040 TNC for HF and VHF Operations.  
How to plot "Great Circles" on your map (for the DXer).  
General Purpose Line Transformers (HF thru VHF w/o ferrite cores).
- CQ: Special Antenna Issue!  
The TH28DX (You DXers: Want >20 dB gain for 14,21,28 MHz? Read This!).  
CQ REviews the MET NBS 144/7T 2 Meter Yagi (about 10 dB gain).  
Go Climb a Tower (Notes on safe climbing).  
The Unexpurgated Transmatch, Part 1.  
A Short Vertical for 160 & 80 Meters (45' with an 8' diameter top hat).
- 73: Special Packet Issue! (GOOD INFO!!)  
A Packet Primer  
How to make friends at 1200 baud.  
So you want to be a Sysop?  
Birds and Bauds (5 Experts combine to define our place in space).  
Connect Alarm! (Beeps whenever a connect is made).  
Survival Training for Mountaintop Digipeaters (Network of W6AMT).  
And if that wasn't Enough! (NK6K takes questions from the audience).  
Kit Corner: The DSE 500 MHz Freq/Period Counter.  
Lightening Never Strikes (A Method to Protect Yourself).

## Dues de Dews

Bill Dews, K6AWO

I think I better start to warm you up now - months ahead of time. The Executive Board will be talking about changing the Club dues in the near future. The last time we had a change was 10 years ago when I was President. So don't get all bent out of shape if you have to pay more in 1987.  
Remember you will vote on this yourself - not the Club officers. I'm just trying to let you know that it's been a long time in coming. If you don't think the officers are spending your money in the right way, you can run for office and we can try your way too.  
Hope not to lose many of you with the increase in 1987 but sometimes the buck will separate the men from the boys.

computers become more popular, we find:  
If a program is to be truly useful it will have to be changed.  
The value of a program is directly proportional to the weight of its printed output.  
Profanity is one language all programmers know perfectly.

## Tidbits from the Jolly Little S...!

In last month's issue of the Crosstalk, I ran an item, part of which is shown below. My YF Karen thought that that this item was quite sexist and I explained that I just copied it from the original source which I credited.

### Happiness Is.....

Having two neighbor gals (in their 20's) sun bathing on the day you planned to work on your beam, trim the bushes, cut the grass, wash the car, fix the back fence. To answer those members of the fairer sex who also may be hams I will add the following item with the hope that it may be found just as amusing to you as the original item was to the male members of our hobby.

### Happiness Is.....

Having two neighbor hunks (in their 20's) sun bathing and working out with weights on the day you planned to work on the garden, hang the wash(!), wash the windows, prune the apricot tree, play with the dog, etc.  
I want to thank Jim Cox for the information he passed on to me concerning last month's Crosstalk. He said that his YF picked up the issue, attracted to it by the Field Day pictures and ended up reading the entire paper. Jim said she even enjoyed it! I hope that other non-hams may also find this newsletter easy to read and have a better appreciation for Amateur Radio and the TRW/ARC because of it. Yes, I do spend a lot of time on this newsletter, but it is the voice of our Club to rest of the world. (And I do mean world, we exchange our newsletter with a club in Great Britain). That's also one reason why I continue to ask the TRW/ARC membership for inputs to the newsletter. We are a high technology company and I would hope that some of what we do, and learn to do, would be applied to Amateur Radio. I would like to print whatever you have right here. You don't have to give me finished copy, I will make it (and you) look good. In fact, in the area of look good, sometime within the next few months the Crosstalk will be getting a new look, not because we have to make a change but because the technology exists to make the change and make my job a little easier.  
Bill Rodner, K6AWS, still gets on the air from his QTH in Idaho and he likes to talk to all of the members of the TRW/ARC. These days he can be found at 7.223 MHz +QRM at 7:30 pm local time on Mondays, Wednesdays and Fridays.  
Speaking of things created by members of the Club and printed in the newsletter, on one of the pages you will find all the straight scoop on the 40 Meter Quad Antenna that comprises part of the W6TRW antenna "farm." We can thank our Club Trustee, Bob Hume, KG6B, for the good designs and the sticktuitiveness necessary to get all of the equipment purchased and installed. We now have a tri-band beam for 10, 15, and 20 Meters, a 40 Meter Quad, and an 80 Meter dipole. With the improvements to the satellite setup, we should be one hot station. We have a QSL card manager in the person of Mel Erb and if you make contact with another station, make sure that you log the contact so that Mel can verify that contact was made when the QSL cards begin to flow. Now all we need is some hot operators to get the contacts!  
HEY! The members of the Club that really love 6 Meters and above (loosely called VHFers) are going out to do a number on the ARRL September VHF QSO Party. Now last September they had the highest score west of the Mississippi River!! They have Mt Pinos reserved again but might try a different tactic by going to a relatively remote grid square, DM23, and hope to get contacts just because somebody doesn't have that square. If you have anything that works on 6 Meters or above, give a listen on Saturday and Sunday, September 13 and 14, and make contact!! You DO NOT have to send in a log to give the guys points!! You DO NOT have to compete in the contest yourself to give the guys points!! All you have to do is turn your radio on and make contact!! We got a lot of competition from the Northrop ARC during the last VHF contest and they did better than us, so we have our reputation to preserve and our standing in the September contest to uphold - LET'S DO IT!!

## Field Day

A couple of notes came to me from some of the members concerning this year's Field Day exercise and I feel that they merit printing, and giving credit to those who wrote them. Unfortunately, our Field Day Chairman, Dale Jensen, who has left TRW for supposed greener pastures, did not pass on to the editor the final results of our performance this year so I cannot fill you in. You and I will both have to wait until the November QST.

### Jim Cox, K7JAJ

Having been recently involved in logging for a contest, I have gathered some suggestions which I would like to offer others as a help for logging in future contests:

1. Logging is a serious job, not done well by persons who just happen along at the last minute. All loggers should meet with a director PRIOR to the actual contest, so that all are "playing by the same rules."

2. Log entries must not contain superfluous information, not part of (or irrelevant to) the actual contest. Operator names, slant bars for portable operation, etc., have no place on contest logs.

3. It is a basic, fundamental rule of national and international amateur radio contests that all times are entered in Coordinated Universal Time (UTC or Zulu time). This simple fact should be communicated to all loggers (or operators doing their own logging). It should go without saying that each time entry should include all four digits (without abbreviation). For those not familiar with the twenty-four hour clock, it should be observed that time begins (00:00) at midnight, and ends at midnight (23:59). There is no such thing as 24:00 or 24:30.

4. Someone, usually the contest chairman or logging director, must prepare a list of ARRL sections (where they are required in an exchange), and the abbreviation for each one. (A list of all ARRL sections can be found on page 8 of each QST. This list must be provided to each logger and to each operator, and should be committed to memory by them. This is to prevent questions like "What do I call the 'other' LA Section?" and "What about San Diego?" not to mention exchanges that include section names like "northern Long Island" and "eastern Washington."

5. Additional log information, while not actually required for the contest, is important for the permanent log. Items such as Date, Band, Mode of Operation, and Operator/Logger names must be included on every sheet.

(ed. Needless to say Jim took on the very big task of entering all contacts into the computer where they were massaged by a logging/duping program.)

### Bill Dews, K6AWO (All Washed Out)

The good thing that I see about W6TRW Field Day is that we have hams who are under 40 years old. (ed. me just barely!) The President can double his age and won't be as old as me. Hi.

One good reason for a few old hams to stay away from Field Day once in a while is to see if the newcomers can work on their own as we did many years back. Remember - Emergency training is Field Day.

Doug Freeman asked the President Doug Heydon (19 years ago) if the Club could participate in Field Day in June. Guess what, he got the job for 5 years before a few other members picked the Field Day Chairman job up. We had a few winning years too, and it was just as crazy then as now. Only the faces change.

(ed. I think Bill is trying to excuse the fact that he did not show up this year with some of his "old timer" buddies and missed out on a great pancake breakfast! I would agree with Bill except the years we won our class on Field Day we operated 6 or 7 stations. Not many clubs can put that many transmitters on the air at one time, but we can and we must if we expect to finish well. Everybody and his mother's uncle can get enough equipment together to operate 5 stations and really rack up the points. Yes, you "old timers" can stay home, AFTER you make sure that we have 7 stations on the air!)

## General Meeting 29 July 1986

Paul Lukas, N6DMV

President Chris Wachs opened the meeting and gave the following data on JAS-1, the Japanese Amateur Satellite: scheduled liftoff 1330 PDT August 7, orbit parameters: altitude 900 nm, inclination 50 deg. The JAS-1 beacon will be at 435.795 MHz, 100 mW. The TRW/ARC BBS phone number is 316-9507. Chris suggested that the Club use 145.36 for Packet communications. The membership was reminded that the next picnic will be August 15th, where Jim Wike and his YF will serve their traditionally good food. There are some problems with the newly installed HF beam antenna. The rotor sticks in some places and there is an intermittent connection in the coax. The problems are minor and will be repaired soon. Dale Jensen has left TRW and we are in need of a Field Day Chairman. Rich Sauer, N6CIZ, has taken over as Emergency Communications Team Coordinator. We are also looking for a person to organize the Annual Dinner in November. You can call any board member and offer to help. Vice President Scott Gilmartin introduced the speaker, Bob Poole, AJ6F. He is the highest (and according to him, the lowest) elected ARRL official in Los Angeles. Bob gave us an extensive insight into the ARRL field organization. The numerous viewgraphs allowed us to see clearly the make up of the field organization. Thank you, Bob, it was an excellent presentation. Bob also hinted at some of the things in the works with the ARRL: a visitor's center at the ARRL HQ in Newington, Conn., the novice enhancement program, a DX advisory committee to look at changes in the DX award system, a legal research fund and compensating authors for QST articles. Bob will be at the September Swapmeet with lots of good ARRL information. John Keller reported on the status of the antenna ordinance problem in Manhattan Beach. The door prizes included: a clock radio, 2 sets of 100 QSL cards, a flashlight, 3 long nose pliers, a diagonal cutter and a calculator. The meeting was attended by 26 persons and adjourned at 1158 PDT.

When a man says he has a clear conscience, it often means he has a bad memory.

### TRW/ARC Picnic

I would really like to tell you how wonderful this month's Club Picnic was, but I was unable to attend due to about nine other things that I could of done, at least two of which had more priority than the Club Picnic.

However, knowing that I could not be there, I sent a reporter in my place. Unfortunately, he either had too many 80's or forgot that I have a last minute deadline to meet with the story. In any case, I didn't get the details but I'm sure that it was a great success again as all of the previous ones have been.

With that out of the way, you are given FINAL NOTICE here and now that the Club Picnic on Tuesday, September 16th is your LAST CHANCE to enjoy the free food and drink for this year. The picnic will be at noon in El Nido Park which is just off of 182nd Street between Inglewood Avenue and Hawthorne Blvd.

### 5 Ethic Keys

I will not drink.

But if I do,

I will not get drunk.

But if I do,

It will not be in public.

But if it is,

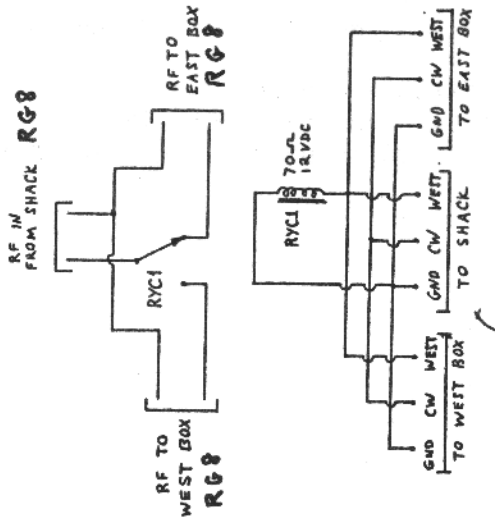
I will not pass out.

But if I do,

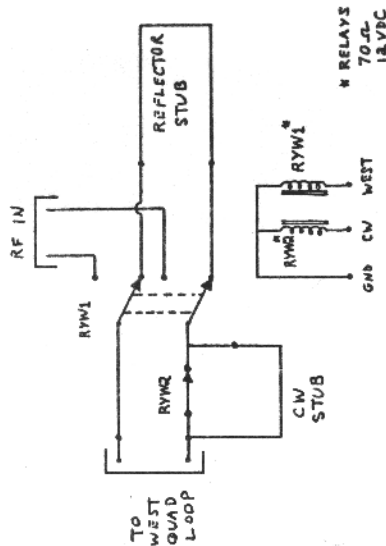
I will fall face down,

So my badge won't show!

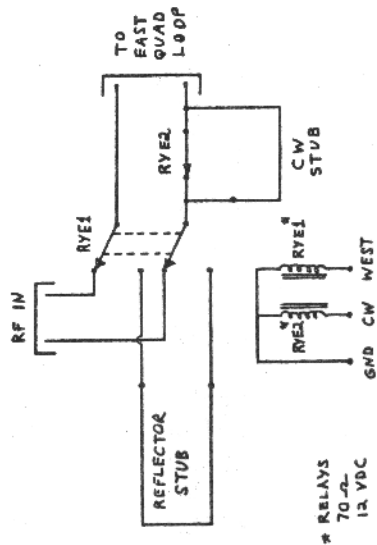
RF IN  
FROM SHACK



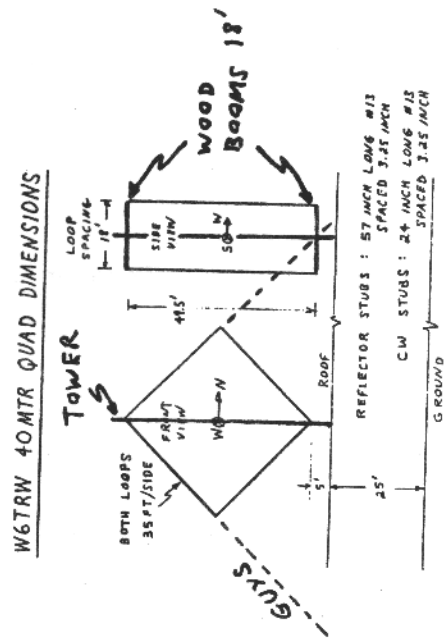
CENTER CONTROL BOX 40 MTR QUAD



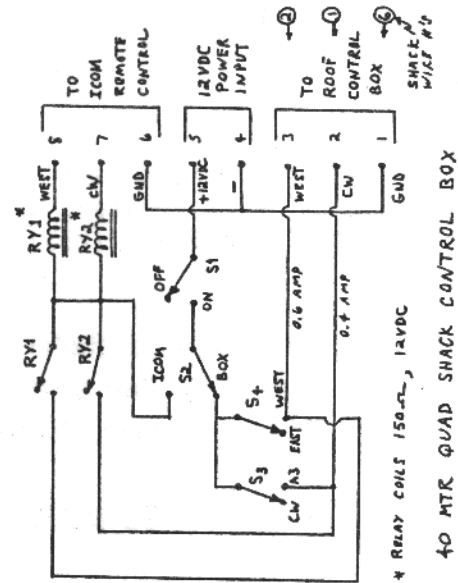
WEST CONTROL BOX 40 MTR QUAD



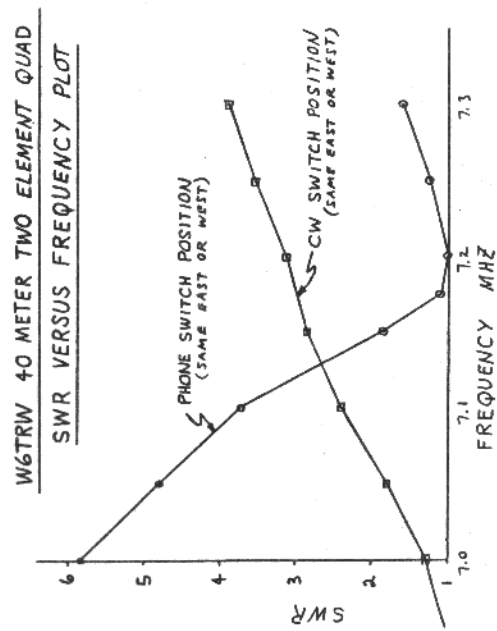
EAST CONTROL BOX 40 MTR QUAD



W6TRW 40MTR QUAD DIMENSIONS



TO MTR QUAD SHACK CONTROL BOX



W6TRW 40 METER TWO ELEMENT QUAD  
SWR VERSUS FREQUENCY PLOT