



ORANGE COUNTY AMATEUR RADIO CLUB

VOLUME XI NO. II

P.O. BOX 95, ORANGE, CALIF. 92668

FEBRUARY 1970

PRESIDENT :	Jack, WB6UDC	MEMBERS AT LARGE:	ACTIVITIES :	Ron, WA6FIT
V. PRES. :	Bill, WB6CQR		PUB. REL. :	Frank, WB6TBU
SECY. :	Ken, W6HHC	JERRY: WA6ROF	MEMBERSHIP :	Mike, WA6UBW
TREAS. :	John, W6BNX	SETH : W6LCP	T V I :	Kay, W6NGO

\*\*\* NEXT MEETING \*\*\*

Monthly meetings are held on the 3rd Friday of each month at the Lincoln Savings & Loan Bldg., 17th & Bristol, Santa Ana. The next meeting will be held on Friday, February 20, at 7:30 p.m., at the same location.

Amateur Radio is a delightful hobby and a means of relaxing after the day's work. An activity which, for the most part, provides us with many pleasant memories.

BUT WAIT!! Lurking in the background are many unforeseen incidents and circumstances which could possibly ruin your whole day. What are they? What can you do ahead of time to protect yourself? How much of a chance are you taking? Don't miss the February meeting, because Mr. Carl Writer of the Allstate Insurance Company will present an interesting and informative program discussing liability insurance as it particularly pertains to the field of amateur radio, and how a ham might protect himself and his equipment.

Did you ever stop to think what the consequences might be if your antenna fell down, you mobile unit shorted out an overhead line, or your "rig" was stolen? Suppose you were transmitting from your mobile unit and someone walked up, touched your antenna and burned themselves. What if you helped pull an accident victim from his wrecked, burning car; thus saving his life, only to be faced sometime later with a lawsuit claiming you caused a permanent back injury by moving him?

If you don't know the answers to all these questions, don't miss the February program. Mr. Writer will be available for a short question and answer session on questions of a general nature following his presentation ..... ALOHA !! .....

Bill, WB6CQR

THE PRES SEZ:

Looking ahead in the coming year at the upcoming activities, the one big club event is Field Day. Other joint club efforts take place during the year, but Field Day is the really big affair for everyone to get out and plan and rehearse for any upcoming emergency situation. All this is accomplished very well; and at the same, we have a great time participating in the fun and competition of this event. Although Field Day is several months away, it is not too early in the game to start planning this great activity. As you all know, the responsibility for Field Day falls on the broad shoulders of the Activities Manager -- in this year's officer line up, this is Ron Cade, WA6FIT. Ron will need the help of every member of the club to make the event a success. At this early date, we should start organizing. Team captains should be getting their operators and equipment commitments made in advance. The members who participate and sign up now, will mark their calendars for this event so as not to commit themselves to something else for that date. Over the past several years we have had several sites for Field Day, each with its own merits or faults. Here is where we need help. Any suggestions made are more than welcome. Remember though, just to say that the last location is worse than some other at some other time etc., isn't quite enough. If you want the change or suggest a change, please provide details as to who, how, when, and where. The man to see, of course, is Ron, WA6FIT. Let us start planning for Field Day now, and with the enthusiasm now, that we have when that day arrives.

JACK, WB6UDC

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THE AMERICAN RADIO RELAY LEAGUE, INC.  
225 Main Street, Newington, Conn. 06111

OFFICIAL BULLETIN NR 258 FROM ARRL HEADQUARTERS  
NEWINGTON CONN JAN 29 1970 TO ALL RADIO AMATEURS BT

Australis Oscar 5 continues to operate successfully on 144.050 and 29.450 MegaHertz. Modulation of the 10 meter signal has been much lower in amplitude than nominal. Amateurs receiving signals from the satellite are urged to send reports to Amsat, Box 27, Washington, D.C. 20044. Special reporting forms are available without charge from this address by sending an addressed stamped envelope. Reception reports will be confirmed. Continue to listen to W1AW bulletins for orbital predictions and further information about Australis Oscar 5 AR

ARRL OVS: Please continue to spread the word on vhf.

73 --- W1NJM

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John, W6BNX, has acquired the FLDX2000 Linear, and this should help out considerably with those Military patches he runs.



## BOARD MEETING MINUTES OF JANUARY 7, 1970

The first board meeting of the new officers was called to order by the President, Jack - WA6UDC, at 1950 PST. Members present were: WB6UDC, W6COJ, WB6CQR, W6GPR, WA6ROF, W6NGO, W6BNX, WB6TBU, WA6FIT, WB6NRK, W6LCP, WA6UBW, and W6HHC. After reading the duties of each officer, the board appointed Dave, WB6NRK, to again Teenage Representative.

The upcoming convention in 1972, was discussed and the board decided to request two chairmanships; Housing and Registration, and Exhibits. Jack WB6UDC, appointed Ron -FIT and Ken -HHC to attend the next meeting of the Orange County Council of Amateur Radio Associations as representatives of the OCARC.

Dave -GPR indicated that the club should once again attempt a hamfest for this summer, but on a smaller scale than the one hoped for in 1969. Dave was commissioned to do some preliminary investigations for such a hamfest. Ron -FIT then indicated that a net should be organized for the OCARC to enable members to talk to each other more than once a month. (See announcement in this "RF".)

Ken -HHC, made a motion that was carried to make Max W6DEY, and his wife Mildred W6PJU, LIFE MEMBERS of the Orange County Amateur Radio Club in recognition of the service that both have been to the club over many years.

Mike -UBW, brought up the availability of a new possible meeting site at the First Western Savings Building on 17th St. Ron -FIT, said he would check the new site. Bill -CQR, reported that we had assets of \$799.45.

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## MINUTES OF THE MEETING - JANUARY 16, 1970

The meeting was called to order by WB6UDC at 1945. The program of this meeting was the showing of the ARRL film, "The Ham's Wide World". It was an excellent movie and is the finest film on ham radio that I have ever seen.

After the program, Jack WB6UDC, discussed the board meeting results. Ron -FIT, told of the formation of an informal radio net for the club, being set up on 15 meters (see announcement elsewhere). A report on the possibilities of a hamfest for this summer had been prepared by Dave -GPR, and was read by WB6UDC. July 26th was indicated as a possible date for a hamfest at Irvine Park. Dave hopes that some of the activities might be: Swap-meet, T-hunt, Field strength contest, and small raffle. Ron -FIT, reported on his findings at the new possible meeting site. He said the new site appeared to be an excellent choice, but Jack, WB6UDC, requested the board members to all visit the new site before a decision is made. It was announced that the board had voted to make Max W6DEY, and Mildred W6PJU, LIFE MEMBERS of the OCARC.

Ken -HHC, reported on the meeting of the Orange County Council of Amateur Radio Organizations. Ken was elected chairman of the council for 1970. The next meeting of the council hopes to determine the various chairmanships for the 1972 convention at Disneyland. Bill -CQR, discussed some possibilities of future programs. Bill said the next program would be on "A Ham's Legal Liability". John -BNX, offered statues with your call letters for \$5.00.

## BIOGRAPHY OF A HAM

I was born in 19\_\_ , but not a ham! Some may say I was a born "ham", but that is not really true. Actually, I was born and raised in Chicago, Illinois, and at the early age of 12, got interested in electricity and trains. This interest grew into building radios and even a slight brush with some fellow Boy Scouts who had their ham tickets.

Following high school graduation, I went to Armour College of Engineering (Now IIT) until it became "necessary" to enlist in the U.S. Army Signal Corps in World War II. My background in electronics helped considerably, and I went to Radar and Radio Repair Schools.

Following World War II, I went back to Illinois Technology and earned my BS in Electrical Engineering. During this time, I purchased a Hallicrafter S-41 Receiver which, for you old-timers, was the old Echophone with Hallicrafter paint and logo. I even went off and built a 50 watt CW Transmitter, but couldn't spend the time to learn the code. I did, however, manage to build some home designed TV Receivers from the ground up, which included winding the I. F. Transformers.

I was married, and the first ham in the family was born (WB6NRK) in Evanston, Illinois. Following this, two daughters, Ione and Helene came along. We then found our way to California in 1957.

All during this time, the thought of amateur radio never came into focus much, until my son, Dave WB6NRK, got his Novice Ticket at 11 years (WN6IWX). The fire got lit! Dave got me enthused so that I obtained my Novice Ticket (WN6UDC) in September 1966, and my General in June, 1967.

NRK needed me about waiting in the pile ups for DX, so we took on the challenge and built what we consider is a fair DX set-up, having now accomplished DXCC with 252 countries worked and 230 countries confirmed. In 1969, joined the Southern California DX Club and was elected a Director for 1970.

Over the years, my jobs have been involved in hearing aid design at American Sound Products; PRC-8,9,10 "Walkie Talkies" at Admiral Corp; and R-390A Receivers at Motorola. In 1957, we moved to California and joined Collins Radio and did engineering and sales work in data communications, computers, and teletype equipment. Joined Hallicrafter-Pacific in data equipment, then back to Collins. Presently am with Hughes Aircraft Ground Systems Group in Fullerton. My duties are Staff Engineer in the Systems Division with primary responsibilities of communications.

JACK, WB6UDC

# THE SIMPLE BEAM ANTENNA

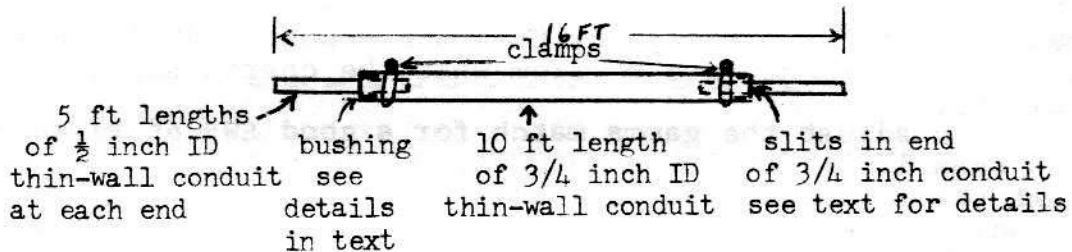
by  
W6HHC

This article is not intended to tell you what the exact theoretical length of elements should be or what the exact F/B ratio will be. However, I do want to share with you some practical approaches to beam construction and tune up. It is inexpensive, it is easy, and you will get better than a 1.05:1 SWR ratio.

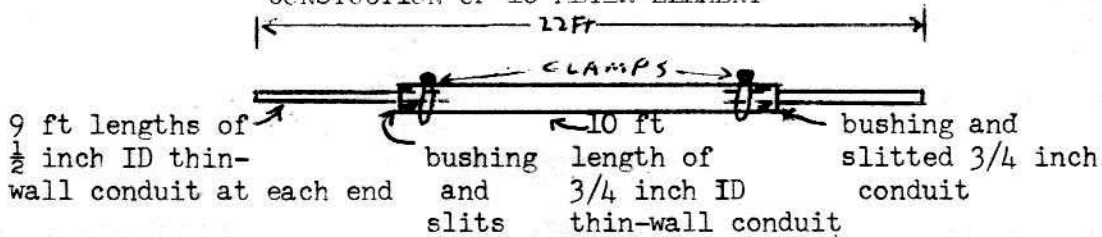
The simplest antenna construction is the "plumber's delight". This type requires no insulation between elements and boom nor complicated "split element" construction. This type of construction is perfect for a gamma match system. the gamma match is easy to build and easy to adjust. I prefer making antennas out of THIN-WALL electrical conduit. This material is Very cheap, easy to buy, and stands up well in weather. Of course, aluminum is much lighter and would be the best choice, but it is more expensive.

## ANTENNA CONSTRUCTION

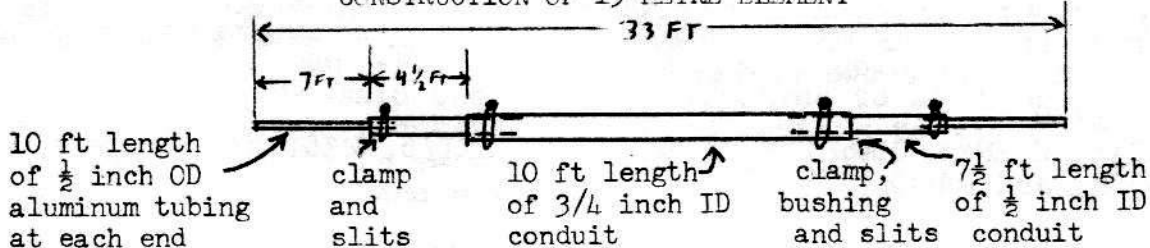
The basic construction starts with building the elements. First get the element lengths from either the RADIC AMATEUR'S HANDBOOK or, better yet, the BEAM ANTENNA HANDBOOK by Bill Orr -W6SAI (available at Henry Radio). But don't think that those lengths you find in the charts will work every time. Many things affect the elements and those lengths are not sacred, they are just good places to start from. The best way to get the exact lengths is through on-the-air-tests, but, I'll talk about this later. Bellow is shown typical element construction for 10, 15, and 20 meters.



### CONSTRUCTION OF 10 METER ELEMENT



### CONSTRUCTION OF 15 METRE ELEMENT



### CONSTRUCTION OF 20 METER ELEMENT

## THE SIMPLE BEAM ANTENNA -- cont'd

For clamping the elements together, I recommend using "heater hose" clamps available at auto parts stores or Sears. Since the fit between  $\frac{1}{2}$ " and  $\frac{3}{4}$ " conduit is sloppy, place a bushing over the  $\frac{1}{2}$ " conduit where you clamp. You can make these bushings by cutting off  $1\frac{1}{2}$ " - 2" pieces of  $\frac{1}{2}$ " conduit and slitting them lengthwise down one side with a hacksaw. Then spread open the slits with a screwdriver. Place the bushing over a piece of  $\frac{1}{2}$ " conduit and conform it with a hammer until you get a nice fit. In order to get a clamping effect, it is necessary to also cut slits in the end of the outer conduit. This can also be done with a hacksaw by making lengthwise cuts down the diameter of the conduit. You will need four slits at each end. They should be 4" - 7" long. Because of the snug fit, it is not necessary to place a bushing over the aluminum tubing for the 20 meter elements.

You can use  $1\frac{1}{2}$ " ID thin-wall conduit for booms up to 10 ft. long. Booms up to 27' can be made by telescoping  $1\frac{1}{2}$ " conduit inside  $1\frac{1}{2}$ " thin-wall conduit. I use single U-bolt clamps to fasten the elements to the boom.

### TUNE-UP PROCEDURE

The secret of good results is tuning up with a local station (no QSB or (QRM)). Here is the basic procedure:

- 1) Place your antenna at some convenient height and check the SWR across the band. Adjust the Gamma capacitor and gamma length for low SWR at the frequency where your SWR had been lowest.
- 2) When you get an SWR of less than 1.75, adjust the driven element towards the desired operating frequency. NOTE: Actually adjust all of the elements by the same amount. Don't be worried if the elements are 6" from what the charts say they should be.
- 3) Now, again adjust the gamma match for a good SWR at resonance (less than 1.3).
- 4) Adjust the reflector only to obtain your best F/B ratio.
- 5) Now, adjust the closest director only to get maximum forward gain. (The effect of peaking the directors should be insignificant.)
- 6) Finally, adjust the gamma match for a perfect match (1.05?) at resonance.

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QST QST QST --- CHECK IN THE OCARC NET

Here's your chance to meet and chat with your friends each week. Listen for W6ZE each Thursday evening at 8:00 p.m. on 21.375 MHz. We're a friendly group and would like to have you join us. Here's the list of check-ins for the first two weeks:

JANUARY 23, 1970

W6ZE (W6HHC)\*, W6BNX\*, WA6FIT\*, WB6WOO\*, WA5ZXT/6, WB6TYX\*, WB6QNU\*, W6ZHD\*, W6OSG, and WB6MKJ.

JANUARY 29, 1970

W6ZE (W6HHC)\*, W6GNO\*, WB6QNU\*, WA6FIT\*, W6ZHD\*, WA6BYY\*, WA5ZXT/6, WB6WOO\*, and K6QD.

(Asterisk \* indicates OCARC Member)



DX FROM ORANGE COUNTY

by JACK, WB6UDC

Everyone interested in DX is looking forward to the ARRL DX contest which has started this past weekend. The phone sections are the 7th and 8th of February, and the 7th and 8th of March. The CW portion starts the 21st and 22nd of February, and the second half is the 21st and 22nd of March.

The contest represents an excellent opportunity for those of you who do not submit scores or try to compete to pick up some new countries---in fact, it is an excellent way!

In January, the CQ 160 Meter Test, took place. Activity was pretty good as evidenced by the fact that WB6NRK made 109 contacts working four countries, thirty states, and all call areas except the second in the US Top Band. DX activity is also increasing as is evidenced by the "West Coast DX Bulletin". Active stations are Kenya, 5Z4KL; Curacao, PJ2VD; Honduras, HH2HH; and Bahamas, W4BRB/VP7. Attendance at the Fresno DX Convention was a real success with 223 registrations, making it the biggest in its 21 year history.

This convention is a joint effort of the Northern and Southern California DX Clubs, and incidentally, the NCDXC now handles all of your QSL Cards. This year's speakers were KH6GLU of VR3 Fanning and FW8 Wallis Island DXpedition fame. The Heard Island visit was presented by W7ZFY; W7GVA presented his trip to C31CL Andorra and to HB0XVU Lichtenstein.

Incidentally, yours truly, was elected a Director of the Southern California DX Club. Of even greater significance, is that WA6FIT has received his DXCC certificate from ARRL. This has represented quite an effort and a real accomplishment for Ron, since he is an apartment dweller. Congratulations Ron! Much good DX was heard last month as evidenced by the logs below.

E16AH	Ireland	John	21300 mhz	1634 GMT		
ZP50J	Paraguay	Jeff	14235	0146		
HB9AHA	Switzerland	Rene	21290	1655		
KC4AAE	Antarctica	Jim	14260	0453		
ZMLAAT/K	Kermadec	Roy	14275	0625		
PJ3JHH	Aruba	Henri	28560	2118		
KC6CS	Caroline Isle	Milt	21295	0131		
5R8AS	Madagascar	Chet	14235	1711		Long Path
(The above was submitted by WA6FIT)						
AX0KW	Macquarie Isle	Karl	14058	1518		Long Path CW
UO5BZ	Moldavia	Ed	14230	1524		Long Path
YU1BPQ	Yugoslavia	Dile	14060	1523		Long Path CW
UA9KXX	Vorkuk	Nick	14028	1514		Long Path CW
VQ8CFB	St. Brandon	Jack	14028	1547		Long Path CW
JT1AG	Mongolia	Dambi	14208	0211		Long Path
5N2AAF	Nigeria	Mike	28544	1641		
YT2RGO	Yugoslavia	Mlar	14030	1553		Long Path CW
FP8CS	St. Pierre Isle	Roger	14206	1439		
GD3GMH	Isle of Man	Geoff	14220	1548		Long Path
8Q2AYL	Maldiva Isle	Soma	14208	0251		Long Path
9N1RA	Nepal	Jinny	14251	1517		Long Path
9K2AV/A	Kuwait	Sam	14239	1523		Long Path
9X5AA	Ruanda	Leo	14203	1557		Long Path
3A2EE	Monaco	John	14230	1634		Long Path
SU1MA	Egypt	Moety	14244	1557		Long Path
FL8MB	Somoliland	Marcel	14245	1525		Long Path
EA9AQ	Spanish Morroco	Clem	28570	1646		
FB8YY	Antarctica	Andre	14215	1512		Long Path

----- 73, JACK, WB6UDC

ORANGE COUNTY AMATEUR RADIO CLUB

"R.F."

HAMADS \*\*\* \*\*\* \*\*\* HAMADS \*\*\* \*\*\* \*\*\* HAMADS \*\*\* \*\*\* \*\*\* HAMADS

WANTED:

1. All band vertical antenna  
Contact: Milt, WN6LDM  
Tel.: 892-5888
2. C.W. Station for a Novice  
Contact: Frank, WB6TBU  
Tel.: 539-1769



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P. O. Box 95  
Orange, California 92669

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First Class!!!  
Dated Material