



R F



ORANGE COUNTY AMATEUR RADIO CLUB

VOLUME X NO. 2

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

FEBRUARY 1969

QRX, I THINK
I JUST WENT
MOBILE!



MODJESKA
LANE

PRES: JERRY, WA6ROF
 V. PRES. DAVE, WB6RVM
 SECY: FRANK, WB6TBU
 TREAS: BILL, WB6CQR

MEMBERS AT LARGE

DAVE, W6COJ
 JACK, WB6UDC

ACTIVITIES: JOHN, W6BNX
 PUB. REL. : KEN, W6HHC
 MEMBERSHIP: BILL, WB6WOO
 TVI : DAVE, W6GPR

*** LAST MEETING ***

MINUTES OF MEETING - JANUARY 17, 1969

The meeting was called to order by WA6ROF at 2007 hours. The new officers for 1969 were introduced and our new teenager representative WB6NRK was also introduced at this time.

The Treasurer's report was read and WB6CQR reported that the club ended the year 1968 with a deficit of \$296.51.

WA6ROF announced that the club badges were now available at a cost of \$2.50 per person.

It was announced that WA6ROF and WB6CQR would represent our club at the meetings of the Council of the Orange County Amateur Radio Clubs.

WB6CQR reported that the Christmas traffic handling at Orange Coast Plaza was a success and should be repeated with some changes.

WA6ROF made mention that the capsule drawing was no longer serving its purpose and would be replaced by a "greeter" system. W6HHC was appointed the official greeter of the club. The third person to shake his hand at a club meeting would be declared the "winner".

WB6RVM introduced our speaker of the evening Bob Evans, WB6IXN. He took us on a trip to the planets and held everyone spell-bound.

The meeting was adjourned at 2151 hours and the raffle was held.

WB6TBU



* * * * NEXT MEETING * * * *

The next meeting will be held Friday, February 21 at 7:30 PM in the Lincoln Savings and Loan Co. Building at Seventeenth and Bristol, Santa Ana.

The program will be presented by our WB6CQR...Major Bill Hall, Commander of the Orange County Civil Air Patrol Senior Squadron 29 located at the Orange County Air Port. Bill tells us that the program will concern CAP communications activities in this area. A movie, "Search and Rescue Mission" concerning CAP efforts in a simulated plane crash exercise, will be shown. After the movie, Bill will explain the communications setup of the Civil Air Patrol. I'm sure we'll have a good turnout for the meeting.

Speaking of attendance...well, things haven't been so great in that area lately. The old capsule drawing was intended to draw the members to the meetings; but, I guess it hasn't worked too well lately. So the board has decided to take a new approach. EACH MONTH, ONE UNANNOUNCED MEMBER WILL BE CHOSEN "MR. RF". The third and fifth persons shaking his hand before the meeting will become winners. They will be notified when the meeting is brought to order and each will receive a free O.C.A.R.C. badge with his name and call engraved. If they already have a badge they will receive \$2.50 cash. So let's all make it down to the next meeting and shake everyone's hand. We might even get to make a few new friends.



BOARD MEETING

The first meeting of the Board of Directors for 1969, was held on January 13th, at the home of WA6ROF. In attendance were W6BNX, W6WRS, W6HHC, WB6W00, W6COS, WB6UDC, W6GPR, WB6CQR, and WB6TBU.

A motion was made and carried to purchase 100 badges at a cost of \$173.26. A motion was made and carried to charge \$2.50 per person per badge.

The board recommended to the president that our new teen-age representative be WB6NRK.

The duties of the new officers were explained in full by WA6ROF.

The field day location for 1969 was discussed at length, and W6BNX will explore the possibility of a new location.

The treasurer reported that we ended the year 1968 with a loss of \$296.51.

The meeting was adjourned at 2145 hours.

LOOKING AT TRANSISTOR AMPLIFIERS
BY
W6HHC

This month we'll explain how to look at a transistor amplifier and figure out what the gains are. The key to figuring out the gains is knowing how to "model" it. Last month the transistor was modeled to look like two diodes for certain DC conditions. Now, the transistor must be modeled differently for AC conditions.

AC MODELING

If a transistor is biased correctly (this will be explained better next month), it becomes an AC amplifier. The simplest model of an AC amplifier is shown below in FIGURE 1.

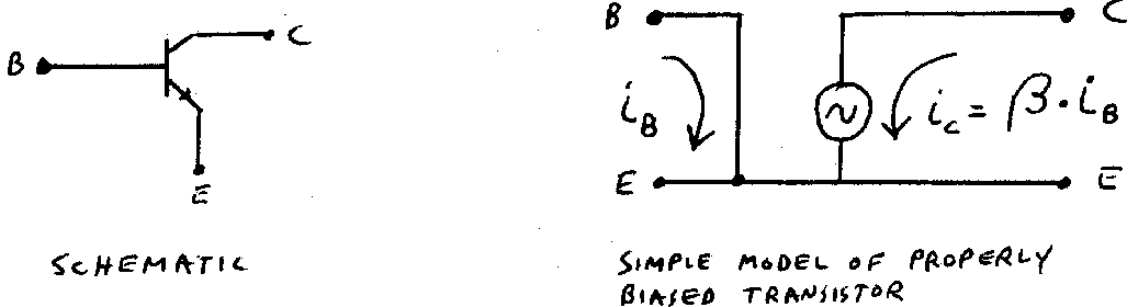


FIGURE 1

IN this model, all the internal impedances (both resistive and capacitive) are neglected for the sake of simplicity. Thus to an AC signal, the path from the base to emitter can be considered a bare wire. Now imagine that there is an ammeter in that wire. It measures any AC currents that are flowing and relays that information to the collector circuit. There, the current generator in the collector receives that information and adjusts its output to be β times the base current reading. Now look at the circuits in figures 2 and 3. FIGURE 2 is the "AC" schematic of an amplifier circuit. An AC schematic is made by drawing all power supplies, batteries, and large capacitors as short circuits. FIGURE 3 is an AC model of the same amplifier.

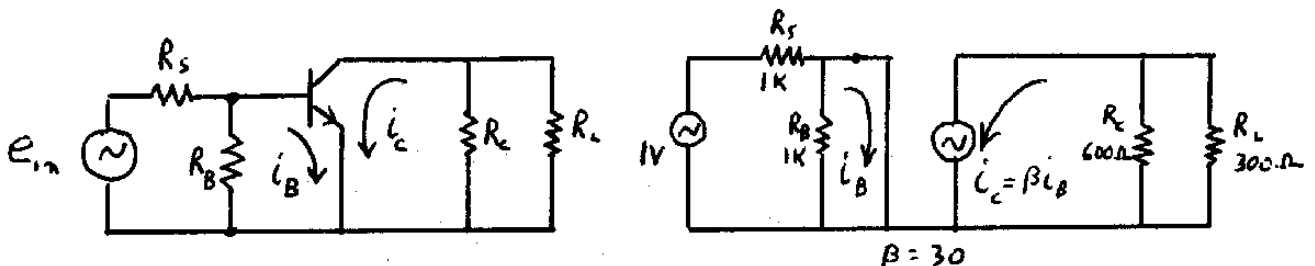


FIGURE 2
AC Schematic Of An Amplifier

FIGURE 3
AC Model Of AN Amplifier

LOOKING AT TRANSISTOR AMPLIFIERS **continued

In FIGURE 2 , the resistor R_s is the source impedance of the generator, such as the impedance of a micro phone. R_b is the effective resistance of the biasing resistors, R_c is the collector resistor, and R_L is the resistance of the load, such as a speaker. Since R_b is shorted by the base of the transistor, all of the current coming out of the resistor R_s goes into the transistor and becomes base current. The current coming out of the resistor is:

$$I_{in} = \frac{E_{in}}{R_s} = \frac{1V}{1K} = 1 \text{ ma.}$$

The AC collector current produced is then $\beta I_b = (30)(1 \text{ ma.}) = 30 \text{ ma.}$ This collector current is then divided up between the two resistors R_c and R_L . FIGURE 4 shows how to determine how the currents are divided

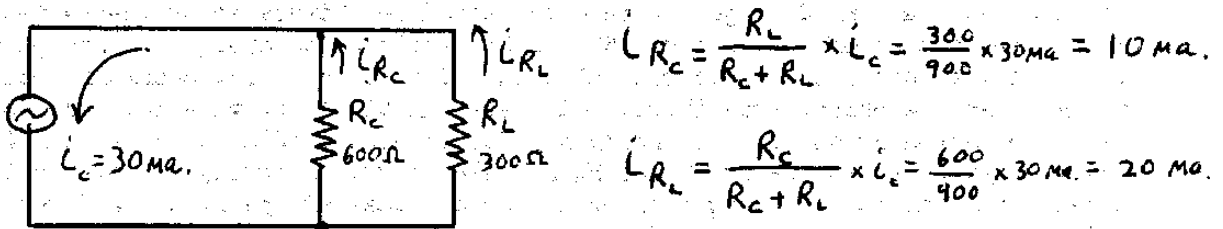


FIGURE 4

GAIN CALCULATIONS

The simple amplifier model of FIGURE 3 had 1 ma. of current flowing out of the signal generator and 20 ma. flowing into the load. Now the various gains can be determined as follows:

The voltage gain is

$$G_{VOLTAGE} = \frac{V_{R_L}}{E_{in}} = \frac{I_{R_L} \times R_L}{E_{in}} = \frac{6V}{1V} = 6$$

The current gain is

$$G_{CURRENT} = \frac{I_{R_L}}{I_{in}} = \frac{20 \text{ ma}}{1 \text{ ma}} = 20$$

The power gain is

$$G_{POWER} = \frac{P_{LOAD}}{P_{SOURCE}} = \frac{(V_{R_L})^2 / R_L}{(E_{in})^2 / R_s} = \frac{.120}{.001} = 120 \text{ or } 21.7 \text{ DB}$$

Next month we will finally get around to designing that transistor amplifier.

IMPORTANT ANNOUNCEMENT *** I thought I would take this opportunity to tell all you club members of my new daughter. My wife had the quite little rascal at 3:37 AM on Feb. 6. The future novice weighted in at 8 lbs 2 1/2 oz and was 19 inches long. Mother and daughter are doing fine; I'll be fine in a few more weeks.

KEN W6HEC

QST QST QST— Don't forget that 1969 membership dues must be paid by March. The dues this year are \$3.50. Also the new O.C.A.R.C. badges are available for \$2.50 . Bill CQR will take the dues and take orders for your badge.

LOCAL DISASTER ACTIVITIES

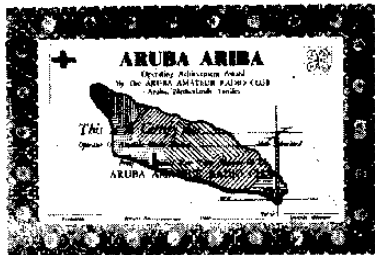
The cartoon on the front cover illustrates one type of emergency that is well known in So. California. The Amateur Radio Emergency Corp is prepared for any unexpected emergency and did we ll when the recent rains came.

from Dave...WB6RVM

At 19:45 GMT on Jan. 25 (just before the scheduled Simulated Emergency Test) the Santa Ana chapter of the American RED CROSS developed an emergency when phone lines went out of order during torrential rainfall in two local mountain communities. Citizen Band personnel were there, but were unable to provide reliable communications from the canyon areas. Section Emergency Coordinator WB6RVM activated the AREC with Max, W6DEY/m going to the Red Cross HQ and Alex W6WRJ Assisting by using walkie-talkies between the car and the second floor Red Cross Disaster Operations offices. Dave, W6GPR was dispatched mobile to Modjeska Canyon and Jack, W6GYWN, was sent to Silverado Canyon. Jack was able to get into the area and establish contact with the Red Cross Disaster and Evacuation centers. Two messages concerning safety of personnel were handled. Numerous operational messages were handled until 23:50 GMT when phone service was restored and the net secured. Participating stations were:

W6DEY-SCM, Orange Section; WB6RVM, SEC, Orange Section; W6WRJ, W6FMT, WB6GPR, W6GYWN, WB6HAG, WB6RQF, WB6QAK, and WB6OOR.

I think you gentlemen deserve a lot of credit for your preparedness, coordination, and unselfish service. Keep up the good work



ARUBA ARIBA AWARD

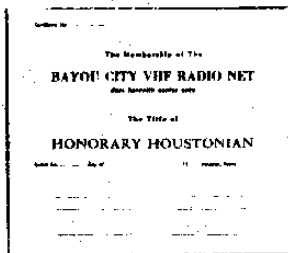
BY: ARUBA AMATEUR RADIO CLUB

The award is issued to those amateurs who have worked and confirmed contacts as follows:

1. Three (3) contacts with different members of the Aruba Amateur Radio Club.
2. The contact may be phone, c.w., or SSB on any authorized amateur band.
3. Contacts made during contests will qualify for this award.
4. Application must be accompanied only by a list of the stations worked. This list shall include the stations worked, date, time, etc.

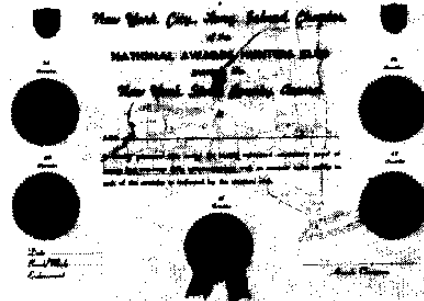
COST: \$1.00 US currency or 3 IRC's.

CUSTODIAN: ALPHONSO J. GEERLINGS, PJ4AE, AWARD MANAGER, ARUBA AMATEUR RADIO CLUB, BOX 273 OR 186, SAN NICOLAS ARUBA, NETHERLANDS, ANTILLES.



Honorary Houstonian Award

Honorary Houstonian Award: This certificate issued free of charge by the Bayou City VHF Club of Houston, Texas. Work ten (10) club members and send GCR list to Ben Harris, K5DRF, P.O. Box 295, Manvel, Texas 77578. For club membership list, send s.a.s.e. to Ben.



NEW YORK STATE COUNTY AWARD

BY: NEW YORK CITY - LONG ISLAND CHAPTER OF THE N. A. H. C.

Award is issued in five Classes as follows:

- CLASS 5 - (Basic Award) 15 Counties
- CLASS 4 - 30 Counties
- CLASS 3 - 45 Counties
- CLASS 2 - 60 Counties
- CLASS 1 - 62 Counties

Award is 11" x 14", multi-colored and carries all band and mode endorsements.

COST: GCR list and \$2.00. Seals, no charge; send GCR.

ENDORSEMENTS: Gold Seal endorsements for each additional 15 counties up to 62 Counties.

CUSTODIAN: JOSEPH TRICARICO, WA2MWO, 448 KELLER AVE.. ELMONT. N. Y.

Amateur Radio Operator Answers Distress Call From Ship at Sea, Helps Save Seaman's Life



Robert (Bob) Jones

During the evening of October 16th, Robert G. Jones, a Collins electrical engineer in the automatic process division in Dallas, was operating his amateur radio station at his home in Garland, Texas, when he picked up an emergency call for medical assistance.

Such a distress call is unusual, and adding to the excitement of the call was the fact that it was being transmitted from an American merchant ship, the USS Mystic Mariner, then sailing in the Indian Ocean, approximately 200 miles north of Madagascar . . . and some 11,000 miles distant from Garland.

Answering the call, Bob learned from the shipboard communicator that an 18-year-old crew member had taken an overdose of phenobarbital and was in critical condition. Medical help was badly needed to save the boy's life.

Bob, whose call is W5TGA, quickly telephoned his family doctor in Garland, but was unable to reach him. However, Bob found help from another source. The doctor's answering service operator, Mrs. Frances Hamby, who is also a licensed vocational nurse, volunteered to help Bob locate another doctor.

In a matter of minutes, Mrs. Hamby was back in touch with Bob, having located a Garland physician. Communicating by phone, through Bob's amateur radio equipment, Mrs. Hamby learned the details of the sailor's illness, and relayed this information to the doctor who was standing by at another phone. The doctor then gave her directions for treating the seaman which she, in turn, relayed back to the ship personnel.

The three-member team — Bob, Mrs. Hamby and the Garland doctor — talked with the ship's first aid personnel for more than an hour via the telephone-amateur radio hookup, and the medical assistance they were able to give possibly saved the young seaman's life.

When the ship docked at Colombo, Ceylon, an island south of India, the sailor was well enough to visit the local doctor, and the youth has since completely recovered.

An avid amateur radio operator since he was 15 years old, Bob has been an active "ham" operator except for four years he attended Texas A & M, where he received a BS degree in mathematics and physics.

"The call from the Mystic Mariner is one of the most exciting things ever to happen to me during the years I have been associated with amateur radio. It's not every day that you have the opportunity to provide assistance under such conditions," Bob said.

A member of the Garland Amateur Radio Club, Bob maintained contact with the ship on a continuous basis from Oct. 26 until it returned to the United States in December. Another amateur radio operator, Larry Slay, K5WUL, who also works at Collins as a systems engineer in the Dallas systems engineering division, helped Bob maintain a daily schedule with the Mystic Mariner. Larry contacted the ship during the morning hours before he came to work, and Bob took over in the evening.

"It's really by chance that I picked up the distress call from the Mystic Mariner instead of Larry. He had been on the air, and had just signed off, when the distress call was received," Bob explained.

The Mystic Mariner docked at Houston late Thursday, Dec. 19. This gave Bob and Larry the opportunity to make a quick trip to Houston on Saturday, Dec. 21, in order to meet and visit with the ship's crew.

Bob and Larry handle phone-patch traffic from all over the world, and many of their contacts originate from the South Pole. "Every Thursday night, I patch the fellows from the South Pole into their friends and relatives in the United States. There are servicemen, doctors and scientists stationed down at the Pole, and during certain times of the year radio is the only means of direct communication they have.

"Recently, I made a phone-patch for a crewman aboard an American vessel sailing in the South China Sea to his relatives in California. Communication was via the long-path route eastward, and covered approximately 17,000 miles. This was a record patch distance for me," Bob said.

When asked what kind of amateur radio equipment he owned, Bob gave the right answer — "Collins." He thinks Collins manufactures the best, and most reliable, amateur radio equipment available today.

Obscene Ham Radio Problem, Says FCC

BY DONALD FINLEY

UPI Staff Writer

WASHINGTON (UPI)

—If you think some of the stuff you see on the newsstands or in the movies is indecent, you should hear what people are saying right on the air.

The offending language—some of it's as filthy as imaginable—is spewed out through broadcast transmitters operated by private citizens or businesses.

The regular radio and television stations would be shut down quickly for even approaching what some private operators say on the air. But as is the case with pornographic publications and dirty movies, authorities say the problem of policing the obscenity is very difficult.

A transcript taken by the Federal Communications Commission of one ham radio operator's broadcast went into intimate details of sexual relations and homosexuality, apparently just for the sake of being obscene. The FCC has hundreds of similar transcripts on file.

C. B. Plummer, chief of the FCC's field engineering bureau, said obscenity by operators of small radio transmitters has become a major problem over the past five years.

Styles Vary

Federal law prohibits broadcasting any "obscene, profane or indecent language" over the public airways. A violation can be punished by up to two years in prison and a \$10,000 fine for each offense, as well as revocation of his license—if he has one.

The styles of this obscenity vary. For some, Plummer said, the vulgarity is incidental, with dirty words thrown indiscriminately into whatever the broadcaster is saying. Others seem to take vicarious pleasure going into lewd details—particularly men who believe there are women listening on other radio receivers.

He said many of the violations occur "during Saturday night drinking sprees."

The majority of the offenders are Citizens Band licensees or persons who operate transmitters without licenses, Plummer said. Violations are less frequent, he added, among amateur operators—the so-called hams.

Ham Operators

Robert M. Booth Jr., general counsel for the American Radio Relay League—an organization

of 90,000 ham operators—says the real amateurs, by and large, do not violate obscenity laws.

"The hams have always prided themselves on self-enforcement," Booth said. He estimated there are only about 20 to 25 amateur license holders who use obscenity over the air "on a continuing basis" and most of these are "younger kids who don't realize the significance."

FCC officials say efforts to curb broadcast obscenity are hampered by a lack of clear court definitions of "obscene" and indecent—and also by the difficulty of catching violators red handed in the act of airing offensive remarks.

J. Russell Smith, chief of the legal advisory and enforcement division in the FCC's safety and special radio service bureau, pointed out that the prevailing Supreme Court ruling states that to be obscene, material must "appeal to the prurient interest in sex"; be "patently offensive because it affronts contemporary community standards relating to descriptions or representations of sexual matters"; and be "utterly without redeeming social value."

ORANGE COUNTY AMATEUR RADIO CLUB, INC.
P.O. BOX 95
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VOL. X NO.2 DATED FEBRUARY 1969

FIRST CLASS

DATED MATERIAL

" THE HOLLANDER CORNER "

HAMAD: FOR SELL: A Galaxy V transceiver complete with Xtal calibrator, VOX, AC power supply and remote VFO. Also a Galaxy 2000 linear amplifier with power supply and a deluxe console with phone patch, clock, and SWR bridge. All the manuals, cables, etc. are included.
ALL FOR \$700????? Call DAVE HOLLANDER W6COJ 532_5340

LAFAYETTE HA-650 6 meter transistorized battery powered portable transceiver. Tunable superhet receiver covers 50 to 53 mhz. Input power to transmitter final is 2.5 watts with 6 crystal positions, complete with 6 crystals, microphone, new batteries, leather carrying case and 54 inch whip antenna. Like new condition. Excellent for hill-topping.

Price \$60 WB6NRK 544-5369

HEATHKIT HW-30 2 meter transceiver. Less than six months old. no modifications made at all to this unit. Brand new condition.

Price \$35 WB6NRK 544-5369

CONGRATULATIONS ARE IN ORDER:

Jack Hollander, WB6UDC, just walked off with top honors in the 1968 CQ WORLDWIDE WPX SSB CONTEST for the CALIFORNIA-ALL BANDS class. He scored 184,464 points with 498 contacts in 144 prefixes. Well done Jack; but wait 'till I get my tower up.