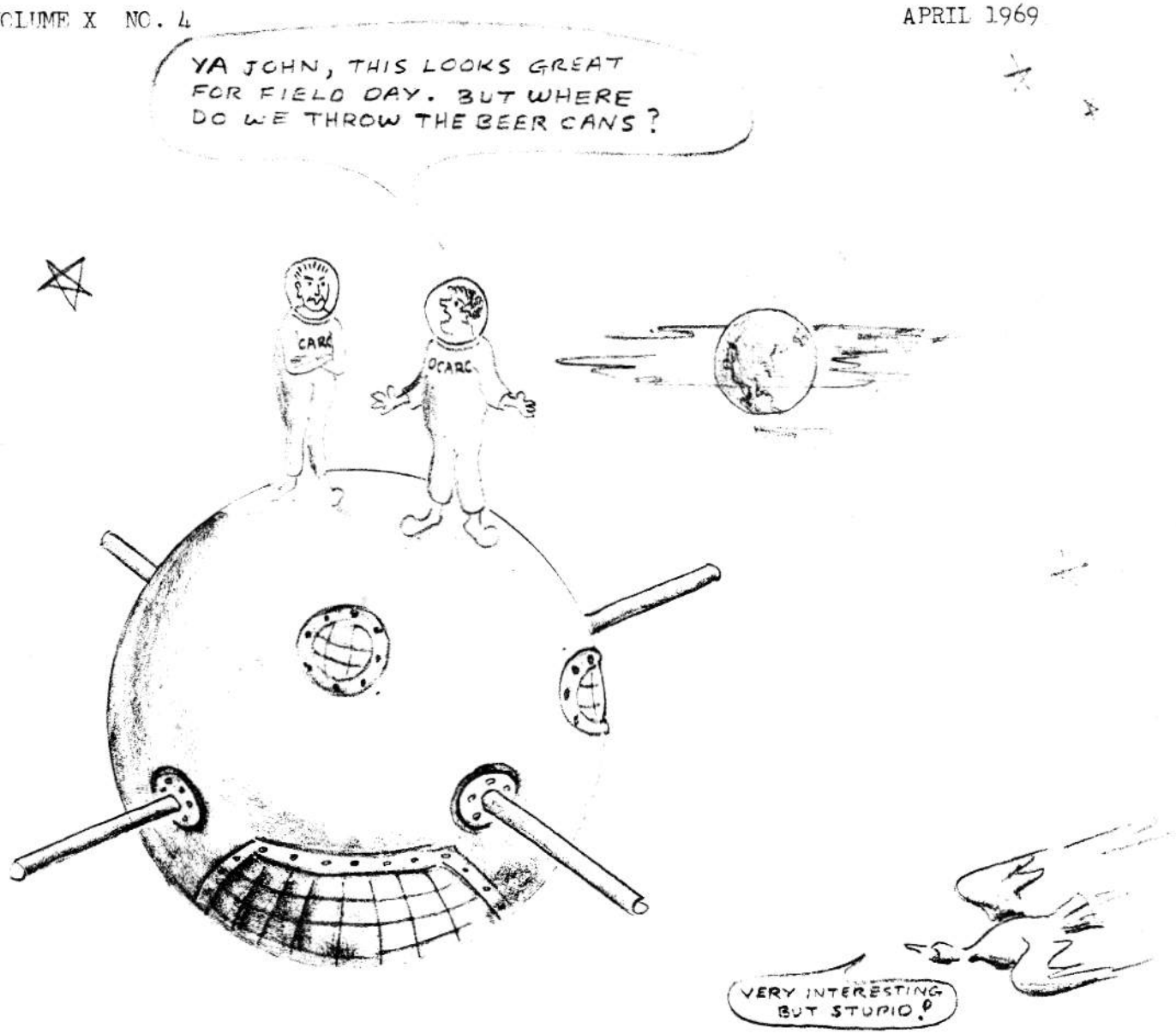
RF

ORANGE COUNTY AMATEUR RADIO CLUB

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

VOLUME X NO. 4 APRIL 1969



NEXT MEETING FRIDAY, APRIL 18TH - "THEORY AND CONSTRUCTION OF QUADS"

PRES:	JERRY, WA6ROF	MEMBERS AT LARGE		ACTIVITIES:	JOHN, W6BNX
V. PRES:	DAVE, WB6RVM	DAVE, W6OCJ		PUB. REL.:	KEN, W6HHC
SECY:	FRANK, WB6TBU	JACK, WB6UDC		MEMBERSHIP:	BILL, WB6WCO
TREAS:	BILL, WB6CQR			TVI:	DAVE, W6GPR

TEENAGE REPRESENTATIVE
DAVE, WB6NRK

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"THE PREZ SEZ"

Congratulations to our Secretary, WB6TBU, and a young familiar face, WB6RJX, for shaking hands with "MR. RF" (W6BNX) and winning a club badge (or $2.50 if a non-member or already having a badge). I understand that Keith, WB6RJX, threw in a buck and converted his winnings to a club membership and committed himself to the club's Field Day venture. This is the kind of spirit we like to see. We're gonna have a big Field Day this year at a new location, and W6HHC is going to attempt to stir up a HAMFEST this year - to raise money for the club - so don't miss the action, not to mention the monthly editions of "RF." We need your help to make these plans successful. Support your club! Make sure your dues are paid and take an active part in the club projects. We can have a whale of a time if we all work togeather as a team. Membership dues can be mailed directly to our Treasurer - Bill Hall, WB6CQR, 320 E. St. Andrews Place Santa Ana 92707.

Items of interest: Phone patching is no longer taboo. Effective March 1, 1969, Technician Class licensees may be appointed as Emergency Coordinators at the option of the SCM. The new ARRL Advisory Committees for VHF Repeater and Contests are now fully established and listed on page 62 & 63 of March QST. Your ideas and suggestions for improvements and changes in these specialized areas should be sent directly to your nearest committee member or the Chairman. Strange, I don't see any of our club members serving on either committee.

Our Teenage Representative, Dave, WB6NRK, was circulating at last meeting getting some information from the younger members. Sounds like he has something up his sleeve. Bet these young fellers wl really put on a showin' at Field Day. They might even make some of the rest of us look like novices if we don't get out there and work. Hi. Who was it that said they would send us a "Public Service" writeup for this paper?

Vy 73, Jerry, WA6ROF
President

MINUTES OF THE LAST MEETING--MARCH 21,1969

The Apollo 8 film was shown and was very interesting indeed.

W6DEY, who was scheduled to meet with John Griggs, ARRL Director, requested any comments to pass along. Late delivery of Q.S.T. was mentioned.

Bill, WB6CQR, won the grand prize of the raffle, a mobile mike.

Visitors at the meeting were: Richard Martin WA6DQR, John Roberts WA6LAB, Vernon Dopp WB6OUP, Don Smith, John Anderson W6IVP, Richard Muenchausen, Doug Lumley, G. Paul Jones, Bob Weidner WA6GFR William Weise W6CPB, and Robert Chase WB6MPE.

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THIS MONTH'S MEETING

Monthly meetings are held on the THIRD Friday of each month at the LINCOLN SAVINGS AND LOAN BLDG., at Seventeenth ST. and BRISTOL in Santa Ana. The next meeting will be held at that location on APRIL 18, at 7:30 PM.

PROGRAM.... Dave, WB6RVM, tells us that this month's meeting will be highlighted by a talk on "THE THEORY AND CONSTRUCTION OF QUADS" by Clarence MacKay, K6OPS. It sounds like an extremely interesting program and will be a good way to find the answere to the old question--Quads or Beams???

Don't forget to fill out and send in the questionaire included in this month's edition of "RF". This will help your officers know what you enjoy most and produce programs and articles that interest you. Those of you that filled them out at the last meeting did not get one.

ATTEND YOUR CLUB MEETINGS.....IT'S YOUR CLUB LOOK FOR MR. RF

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LAST BOARD MEETING

The meeting of the Board of Directors was held on March 14, 1969, at the home of WA6ROF. In attendance were: W6HHC, WB6UDC, WB6WOO, WB6NRK, WB6TBU, and WA6ROF.

Field Day was discussed, and WB6TBU was requested to pass on to John, W6BNX, the name of the person to contact regarding the Field Day site on the Irvine Ranch. A thorough briefing on Field Day operating procedures will be presented to the club members on the last meeting night prior to Field Day. The subject of food for Field Day was discussed with no definite conclusions reached.

The Board Members kicked around the idea of either selling or auctioning the club P. A. System with no definite conclusions reached.

It was decided that definite tasks should be assigned to our Teenage Representative, WB6NRK. He is to contact and "feel out" other younger members in the club on what their desires might be in regard to our club programs.

WB6UDC was selected to submit articles concerning DX for R. F. Publication. It was decided that the names of all visitors to club meetings should appear in R. F. All certificates and citations given to the club in the past, will be displayed at all future club meetings.

The possibility of a future ham fest to raise money for the club was discussed, and W6HHC was assigned to investigate the possibilities and present his thoughts at our next regular meeting.

It was decided that the Board Members would continue to meet on the Friday prior to the club meeting until June; thereafter, they will meet on the Monday prior to the club meeting.

The meeting was adjourned at 2230 hours.

A TRANSISTORIZED PRE-AMP ADDS NEW LIFE TO YOUR VOM

BY

W6HHC

The following article is intended to show you what can be done with the information I have given on transistor circuits. The preamplifier will make the AC voltage range of your VOM ten times more sensitive and give you at least ten times more input impedance. Next month we'll take a look at using transistors and diodes in power supplies.

What we want

Most VOM's do not have very sensitive AC voltage ranges; usually 1.5V (rms) is the lowest they go. Also, most VOM's have an input impedance of 5000Ω /volt, so when measuring small voltages it is impossible to get accurate measurements across resistances greater than about 1K or 2K (loading effect).

So it would be real nice to build an amplifier with a calibrated gain of ten. Then a signal of 300 MV would give 3 V output and you can measure this on the 3 volt range of your VOM. In addition, if the input impedance of the amplifier is around 150K, then you have the same thing as 1.5 megΩ /volt and can measure accurately across resistors as large as 10K to 20K (without) any loading.

How we start

The amplifier designed last month won't do all we want, but is a good starting point. Let's investigate further requirements by asking the following questions:

1) Does it have enough output voltage? Yes we designed that stage for 3V (rms) maximum output signal which is what we need to drive the VOM to full scale deflection.

2) Does it have enough gain? The gain of the amplifier was:
$$G_{VOLTAGE} = \beta\left(\frac{R_c}{R_{in}}\right) = 50\left(\frac{1K}{15K}\right) = 3.33$$
So we have to add another stage of amplification with a gain of at least 3 so that 3 x 3.33 = 10 which is the total gain we need.

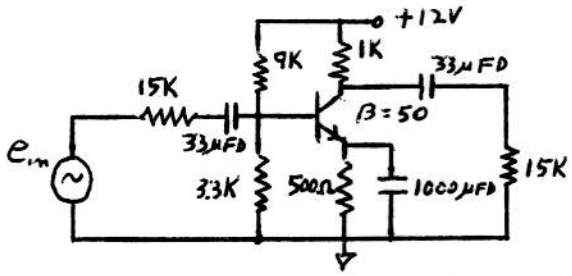


FIG. 1--- Last month's amplifier design.

3) Is the input impedance enough? No, the input impedance of last months gain was equal to R_{in} or 15K if we add a stage of gain lets make the input resistor, R_{in}, equal to 150K to prevent loading down the circuitry we are measuring.

A TRANSISTORIZED PRE-AMP ADDS NEW LIFE TO YOUR VOM --- continued

Design Procedure

So, all we have to do is to build a second stage of amplification similar to the first one and put it in front of the one we designed last month. (Since the gain of transistors usually vary quite a bit, we will put a calibration attenuator between the two stages so that the total gain can be set to exactly ten.)

1) If we add a 15K calibration pot to ground (see Figure 2) then the input impedance of last months amplifier becomes 7.5K ($\frac{R_P R_{in}}{R_P + R_{in}} = \frac{(15K)(15K)}{30K} = 7.5K$). This input impedance is now actually the load (R_{LOAD}) for the new stage. So using last months design procedure: $C_{OUT} \approx 60$ MFD

2) Since the load (R_{LOAD}) for the new stage is 7.5K, you get maximum power transfer if R_C of the new stage is also 7.5K.

3) Using V_{CC} = 12V, R_C = 7.5K and R_{in} = 150K as the starting points you can whip through last months design procedure and get all the other component values. Your finished pre-amp now looks like Figure 2.

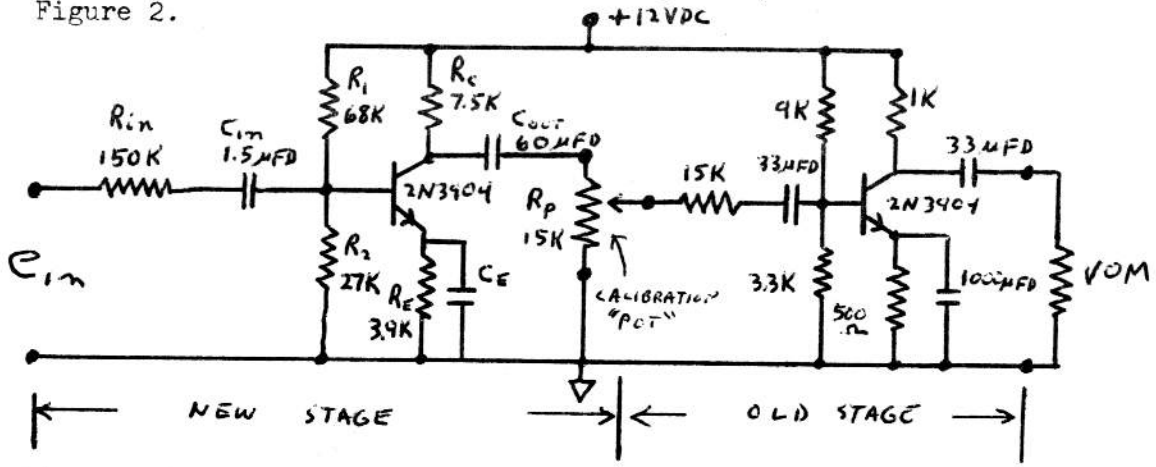
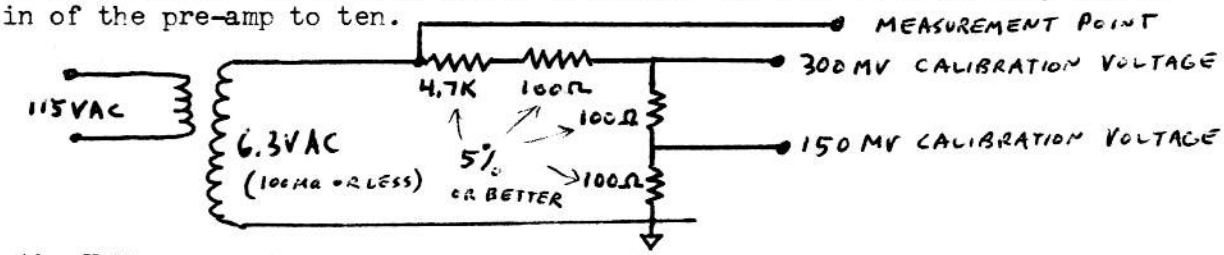


FIG. 2 – SCHEMATIC OF FINISHED PREAMP

Calibration

The finished preamplifier can actually be used with VOM's having either 1.5V or 3V (rms) scales. With the preamplifier you now have the ability to measure 150MV or 300MV full-scale. Below is a simple calibrator circuit to accurately adjust the gain of the pre-amp to ten.



1) Use the VOM as normal to measure the actual AC voltage at the measurement point. It should be about 6.3V (rms), but may be somewhat high or low. Record the actual voltage.
2) Connect thepre-amp to the VOM and to the calibration voltage you desire
3) Adjust the calibration pot in the pre-amp until the VOM reads:
   a) 2% of the recorded voltage for 150MV calibration.
   b) 4% of the recorded voltage for 300MV calibration.

*** THE GOOD OLD DAYS OF OCARC ***

We got hold of an old letter of the OCARC from Van Compernolle, W6FCT. It was dated Dec.29, 194land listed subscriptions for QST (at $2 each) from club members. How many do you remember and I wonder where most of them have gone?

W6MNP CECIL HAMILTON,	SANTA ANA	W6QUQ DICK PEARSON,	SANTA ANA
W6SIX WILL SCHAFFER,	SAN DIEGO	W6BVX JOHN TROTTER,	SANTA ANA
W6IDJ TOM McNEAL,	SANTA ANA	W6BFE HAYDEN HELT,	TUSTIN
W6GSZ ED WOOD,	SANTA ANA	W6UFG JOHN FARWELL,	SANTA ANA
W6IBN ROY CUMPSTON,	SANTA ANA	W6IXS GEORGE TOKAR,	BUENA PARK
W6JVA NORM HICKS,	SANTA ANA	W6KIU HARRY CHRISTENSEN	FULLERTON
W6NRM BOB WETTBRECHT,	TUSTIN	W6QXL ALYCE RAFFI,	FULLERTON
W6DHP JOHN WILLCUTT,	SANTA ANA	W6HQX RAY WOOD,	SANTA ANA

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A poem -- by Pat Fennacy

There once was a ham named Moose
In whose antenna a goose had roost
He tried to shake it loose
But in despair, gave the juice
Now the roost is a roast.

via FRESNO SKIP

hmmmmmmmmmmmmmmmmmmmmmmm

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Below is reprinted a copy of the letter our secretarywrote concerning the article reprinted in the "RF" in Feb.

Los Angeles Times

Donald Finley - U.P.I.

Dear Sir:

The Orange County Amateur Radio Club would like to take exception to your article concerning obscenity over the air, which appeared in the Los Angeles Times on February 12, 1969. The article clearly states that the majority of the offenders are Citizen Band Operators; yet the heading for the article is "Obscene Ham Radio Problem". We realize that there could be a very small percentage of Ham operators who could be guilty of this offense; but I can assure you the percentage is minute, as Mr. Robert M. Booth Jr., General Counsel for the American Radio Relay League, stated in your article.

I am sure you know the difference between a Ham Radio Operator and a Citizen Band Operator, so please give them top billing if they are responsible. Respectfully yours,

Frank W. O'Leary

Frank O'Leary
Secretary
Orange County Amateur Radio Club

DX FROM ORANGE COUNTY by Jack, Wb6UDC

This column will attempt to give the high-lights of the current DX activities heard by this station. Anyone who has DX contributions besides these, please contact me so I can include them. I would particularly like to hear about 75, 80, and 40 meters, and we need some scoop on CW operations as well! If you want more information on these stations, don't hesitate to call me at my home QTH. So come on, all you DXers, let's hear from you on who you worked and if he is still on. Also, we need QSL information on this DX.

So as a starter, here is what was heard and worked from this shack since the last meeting. The call signs with the * were worked LONG PATH (SSB).

VS6DR	HONG KONG	Phil	14230	1525 GMT	QSL W2CTN
*YK1AA	Syria	Rasheed	14226	1521 GMT	
OK1AGC	Prague	Al	14211	0624 GMT	
UA9KAI	Ural	Bob	14212	0420 GMT	
WA4PUC/HC	Thailand	Don	14290	1459 GMT	QSL WA4PUC
*7Q7WW	Malawe	Walt	14211	1523 GMT	
LA8LG	Norway	Tore	28630	1502 GMT	
UA3AVY	Moscow	Lara	28660	1530 GMT	
VP2GBL	Grenada	Fred	28660	1520 GMT	QSL W4HYB
HB9UD	Geneva	Gunther	28520	1714 GMT	
9M2RD	Malaysia	Al	14206	1510 GMT	
*ZD5V	Swaziland	John	14210	1535 GMT	QSL XE2YP
JT1AG	Mongolia	Dambi	14212	1530 GMT	
DU1ZAG	Manila	Brian	14210	1538 GMT	
*ET3REL	Ethiopia	Dick	14215	1539 GMT	QSL W5LEF

WA4PUC/HS is legal and during his operations, the ARRL Bulletins did verify this without the use of his call. His operation has been restricted to a 20 KC segment of the 20 meter band. At this time, he is operating between 14280 and 14300 mhz. He will have gone QRT as of the 1st of April.

Get your activity on 10 meters as this as this band "ain't long for this world" with the sun spot activity passing its peak, so get those other guys out of your way and work those 10 meter DX stations now!

Please not the next DX contest coming up is in April and is the CQ WW Prefix contest. See CQ Magazine for the details.

Hope you found this first DX FROM ORANGE COUNTY worthy of your reading.

73 and GUD DX

Jack

WB6UDC

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* * * * * HAMAD * * * * * HAMAD * * * * * HAMAD * * * * *

FOR SALE.... A HEATHKIT SB-300 receiver with AM,SSB, and CW crystal filters included. In excellant condition.....only $195.

JIM TRIPP, WA6DIJ--774-2072

COMPLETE STATION... Collins 75-S1 RX, HEATHKIT DX-60 TX, CDR rotor and control, 40 foot TV pole, 10 and 15 METER QUAD, SWR bridge, transistorized keyer, and a code practice oscillator.

wayne STIMSON, WN6YAU-- 536-6783

FOR SALE.... A 1KW transmitter with the following features; 4-400A final with Pi-tank output, AM-CW-SSB (SSB excitter not included), final input power and class of operation completely adjustable (classC through linear), extra tubes including 4-400a,...professionally designed and built.....only $200.
Also a HI--GAIN Gamma match for tri-band beam,new, only $10.

GLEN CHAFFIN, K6OAE - 735-4791
1939 S. Main St., Corona

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ORANGE COUNTY AMATEUR RADIO CLUB, INC.
P.O. BOX 95
ORANGE, CALIFONIA -- 92668
VOL. X NO. 4 -- DATED APRIL 1969

FIRST CLASS!!

DATED MATERIAL