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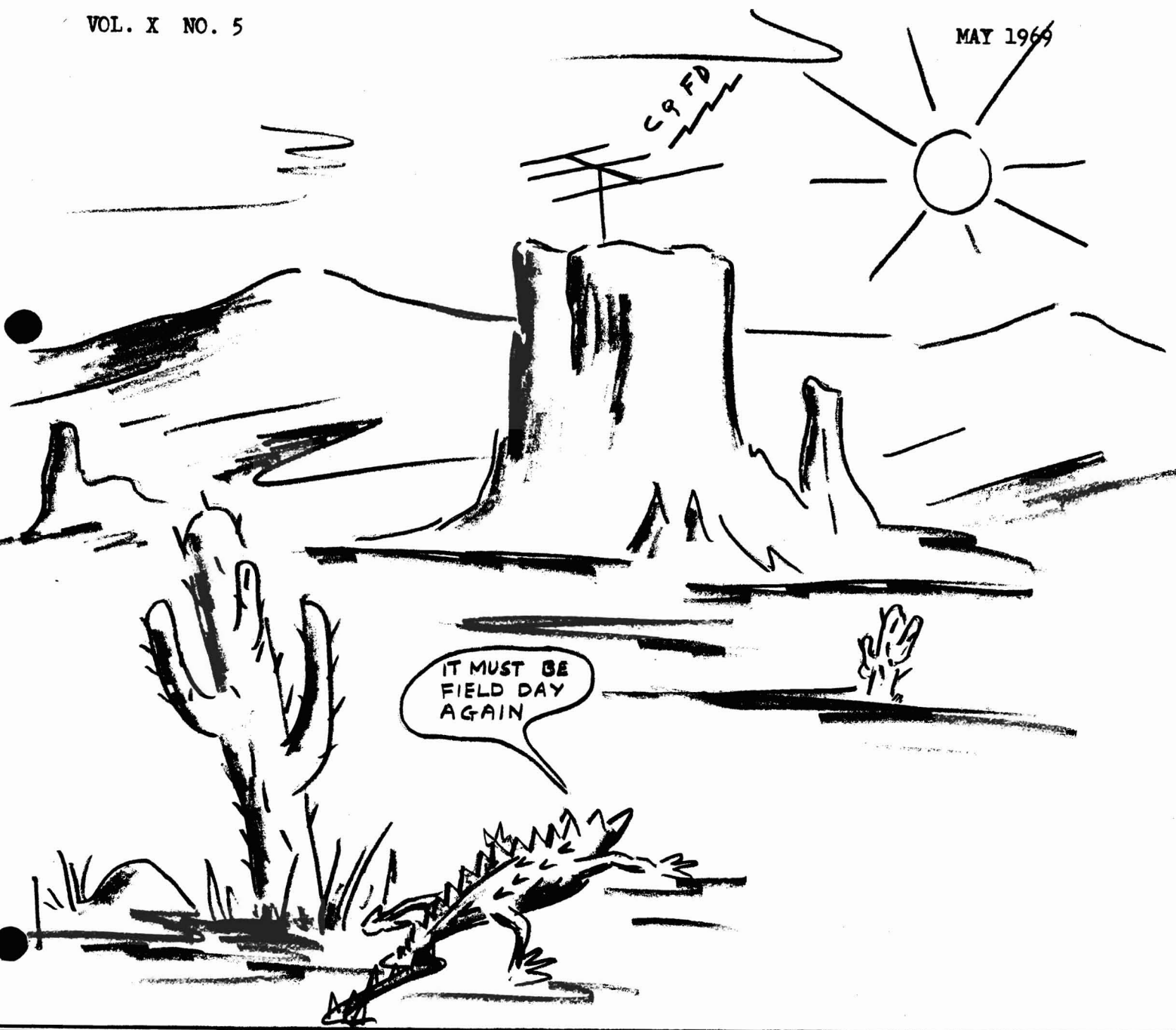


ORANGE COUNTY AMATEUR RADIO CLUB

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

VOL. X NO. 5

MAY 1969



NEXT MEETING: FRIDAY, MAY 16<sup>TH</sup> -

DEMONSTRATION AT  
HEATHKIT

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

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THE PREZ SEZ

Of the 50 currently paid-up members of OCARC, we have 45 membership survey cards on file reflecting the member's personal activity status and interests. I have reviewed each survey card and have formulated the following information as to our club's posture in various areas.

The license structure of the membership is predominately General and Advanced class, however we do have four Novices and five Technicians registered. 34 of those registered are ARRL members, which I am pleased to see as this represents 68% of the total membership. I would like to push this figure upward, towards 100% if possible, for there is great pride and benefit in being 100% league affiliated, not to mention the support it will render ARRL. If your not a member, contact WB6CQR and join through our club now.

Mode of operation of most club members is SSB and CW, with DX and NET operation being tied as the most routine activity. Field Day, rag chewing and home brew gear are all high in individual interests. 90% have fixed stations at home and 19 members have mobiles. 14 have phone patches and 9 have emergency power capabilities.

Not many commented on suggested club functions, but those that did were helpful. W6DEY sez: "Club programs should attempt at all times to include the interest of the wives and girl friends of members. I would like to see some breakfast get togethers, say at a Park or a Pancake House, if we could locate one with a dining room to hold the group. Getting the women together and making friends will cement club relations very good." W6PJU sez: "Interesting programs and social events. Would like to see more YL members and more activities encouraging attendance of XYLs." WB6PMK sez: "To obtain my General I need CW work (have gotten up to 10 wpm in past years) then I would be interested in DX, Nets, etc. I formally was HC1BA (Ecuador) General." (How about that?) WN6UMB sez: "As a novice there isn't much I can do, but hope the club can continue its work."

Many favor social get togethers which it appears we need to have more of. The survey information has satisfied me that generally we are steering in the direction that is desired by the membership. Yielding to those wanting some CW code practice, commencing JUNE we will run code practice before the meeting at approximately 6:30 pm, so those of you desiring it come ondown early, and don't forget to bring along a pencil or pen. And to those who think they can't do much for the club because of one thing or another, to those I say you can by active participation in the club programs: Field Day, the Hamfest and others yet to come. Everyone can contribute something, regardless of their license class. The success of our programs depends upon you - the members.

Vy 73,  
*Jerry*  
Jerry, WA6ROF  
President



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THIS MONTH'S MEETING --- AT HEATHKIT ON BALL ROAD

This month's meeting will be a special demonstration held on the third Friday, May 16 at 7:30 PM at the HEATHKIT ELECTRONIC CENTER located at 330 E. BALL RD. in Anaheim. VP, Dave - WB6RVM says that Bob Carrothers, W6Kff, of HEATHKIT will present a display and demonstration of all the latest HEATH ham gear and also some of the latest HEATH test equipment.

There will be a station set up for operation by the club members and also a demonstration of the new UHF repeater station in the area. Dave tells me that the repeater at "TWIN-PEAKS" has been used by some of the fellows in this area to talk to ORANGE COUNTY from Los Vegas.

There will be free coffee and donuts at the meeting and also there will be some FREE DOOR PRIZES supplied by HEATHKIT. It sounds like a great meeting so be sure you don't miss it. And don't forget MR. RF will be there.

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MINUTES OF THE LAST MEETING -- APRIL 18, 1969

The meeting was called to order at 1945 hours by our President, WA6ROF. The officers of the club were introduced by WB6TBU. Bud Barkhurst, WA6VPP, was announced as the winner by Mr. "R. F.", and received a club badge.

C. R. MacKay, W6OPS, was our speaker of the evening, and was well qualified to talk on the subject of "Quads". Mr. MacKay is Vice-President of the Fullerton Radio Club and has been an amateur since 1922. His subject was an interesting one and was well received.

Max, W6DEY, announced that the class of licence held by the club trustee, limits the type of operation for Field Day.

The proposed ruling by the City of Orange limiting the height of antennas was discussed. It was decided that representatives of the amateur fraternity would be on hand at the hearing.

Ken, W6HHC, gave an explanation of what a "Ham Fest" was, and how we could raise much needed revenue for the club by holding one in the near future.

Field Day was discussed and it appears that a site in the Turtle Rock area was the best possibility at the moment. John, W6BNX, was to do further investigative work in conjunction with Bill, WB6WOO. It was mentioned that the Fullerton Radio Club is proposing ground rules for local competition.

Visitors at the meeting were as follows:

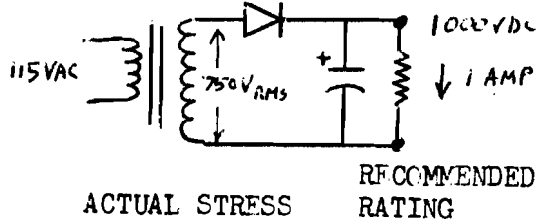
Tim Donovan	WA6UBR	Mel Bittner	--
Paul Taylor	--	Seth Lover	W8ELW/6
Eddie Lohse	WN5YJJ	Steve Wilkens	WN6BPY
Ray Owens	K5SAN	Larry	WN6AZB
Bob Mercer	K6EIS	Ben Frances	K6OZB
John Mason	K6MLU	Bob Huard	WA6PUC

SEMICONDUCTOR POWER SUPPLIES  
by  
W6HHC

Using semiconductors in power supplies is really the same as designing with vacuum tubes, except that semiconductors operate more efficiently. Except for some very high voltage applications, semiconductors are better because they don't (1) lose power to heat up filaments, (2) lose power in huge voltage drops across the rectifiers, and (3) waste the space consumed by tubes and sockets.

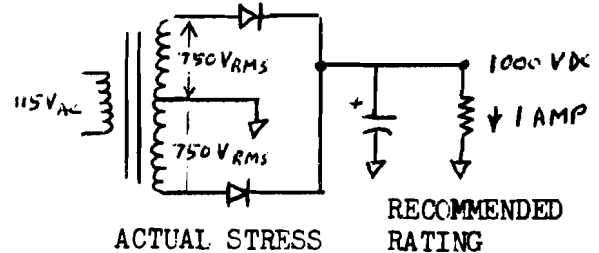
UNREGULATED POWER SUPPLIES

The three basic types of rectification circuits remain the same whether you use vacuum tubes or semiconductors. You still must pay careful attention to the ratings of the devices, because not only will your circuit not work correctly, but you are more likely to destroy the rectifiers if they are semiconductors. The most important ratings are MAXIMUM INVERSE VOLTAGE ( $V_r$ ) and MAXIMUM AVERAGE-FORWARD-CURRENT ( $I_f$ ). Figures 1, 2, and 3 show the three basic circuits and what kind of voltages and currents the diodes will see in each case



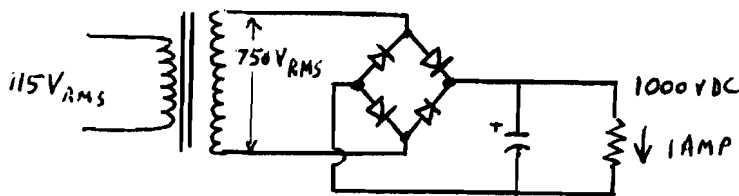
	ACTUAL STRESS	RECOMMENDED RATING
$V_r$	1060V	1300V
$I_f$	1 AMP	1.5 AMP

FIGURE 1 -- HALF-WAVE RECTIFICATION



	ACTUAL STRESS	RECOMMENDED RATING
$V_r$	2120V	2500V
$I_f$	0.5 AMP	0.75 AMP

FIGURE 2 -- FULL-WAVE RECTIFICATION



	ACTUAL STRESS	RECOMMENDED RATING
$V_r$	1060V	1300V
$I_f$	0.5 AMP	0.75 AMP

FIGURE 3 -- BRIDGE FULL-WAVE RECTIFICATION

It is very important to check the specifications of the diodes you plan to use in a particular power supply and make sure the ratings are adequate. However, sometimes it is impractical to obtain devices with proper ratings. For example, you may have trouble locating a semiconductor diode with a 2500V  $V_r$  rating. However, lower rated devices may be connected in series to give good operation and little loss in efficiency. If, for example, you have diodes rated at  $V_r=650V$ , then you can put four of these diodes in series to make a rectifier rated at 2600V. The author recommends putting 100k resistors in parallel with each diode to distribute the voltage evenly. Some experts recommend also putting a .05µfd disc capacitor also across each diode to prevent damage from transient voltage spikes. Figure 4 shows the circuit of Fig. 2 redesigned using lower rating diodes.

SEMICONDUCTOR POWER SUPPLIES

by  
W6HHC

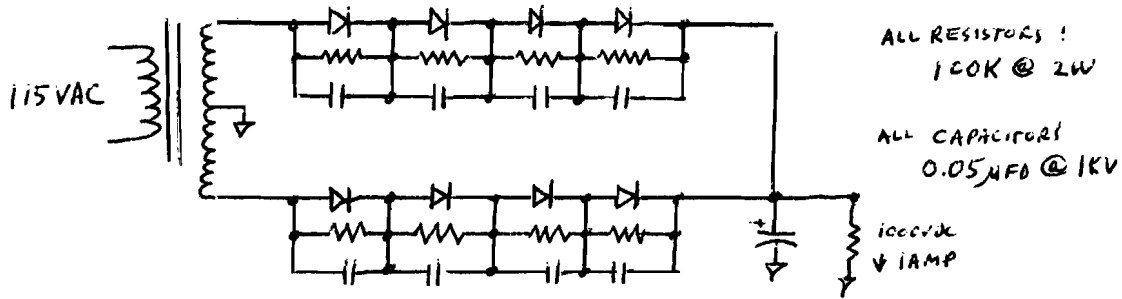


FIGURE 4 -- POWER SUPPLY USING LOW VOLTAGE DIODES

RIPPLE IN SIMPLE POWER SUPPLIES

Usually filter chokes are not used in low voltage power supplies (0-75V) and many times not in high voltage supplies. The reason is that the voltage drop across a filter choke is usually excessive. For example, in a one amp supply with a 3Hy choke (100 ohms), 100V will be dropped across the choke. This may be OK with a 1KV supply, but can you imagine what this would do to a 12V power supply? Therefore, a large filter capacitor is the main source of ripple suppression in a simple power supply. The heavy line in Fig. 5 is what the output voltage (voltage on the capacitor) looks like for full-wave rectification. The ripple factor is expressed as the percentage of PEAK-TO-PEAK RIPPLE divided by PEAK VOLTAGE. How large the ripple is, depends on how much the capacitor voltage decays (discharges) between half-cycle peaks. How much the capacitor discharges depends on the value of the time constant formed by the filter capacitor,  $C_f$ , and the load resistance,  $R_L$ .

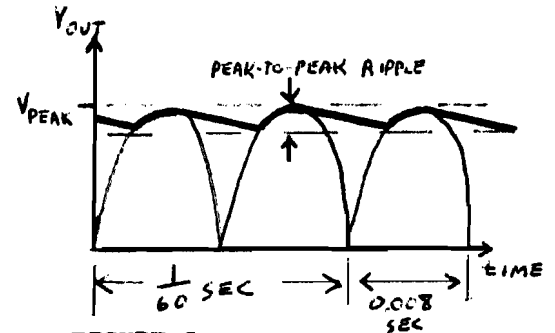


FIGURE 5

For example, if the output voltage is 1000 vdc and the current is 1 amp, then the load resistance is:

If you desire 10% ripple, then make the time period of one half-cycle (.008 sec.) equal 10% of the time constant formed by  $(R_L)(C_f)$ . Therefore since  $T=R_L C_f=.08$  sec,

$$\text{then } C_f = \frac{T}{R_L} = \frac{0.08 \text{ sec}}{1000 \Omega} = 80 \text{ MFD}$$

Figure 6 shows what value of capacitor you need, depending on what the load is and what amount of ripple you can tolerate. Use twice the capacitance shown if you are using only half-wave rectification.

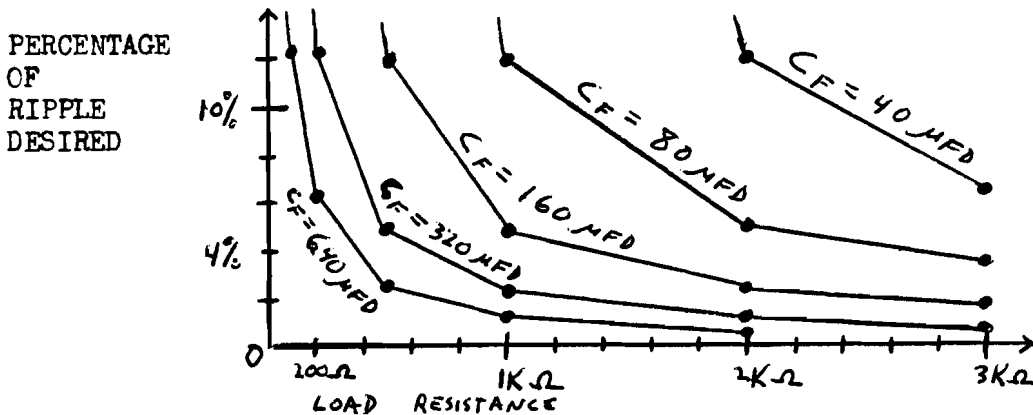


FIGURE 6 -- CAPACITANCE VS. RIPPLE CURVES

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CITY OF ORANGE ANTENNA ORDINANCE

A hearing before the City of Orange planning commission concerning the proposed new " antenna restrictions " ordinance is planned for sometime on Monday, MAY 12. The new ordinance would add servere restrictions to the building of antennae by not permitting any antennae to be high enough tofall on neighboring property or power lines. It is the author's opinion that the proposed ordinance is too servere and should be modified to only restrict the quality of construction used in antennae and towers. Let's hope that concerned hams in the area can convince the government leaders of Orange of the unjust punishment imposed by such an ordinance on the amateur fraternity. If we fail now, Your city or town may be the next one to try such a law.

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In addition to the above requirements the following rules will be applied:

1. Phone, C.W., or SSB, on any authorized amateur band mobile, fixed, maritime mobile, or portable station.
2. Only one contact with any one Neth. Antilles station in the same call area will be recognized.
3. Contacts must be dated after Jan. 1, 1959.
4. Contacts made during contests will qualify.
5. The decision of the award Committee for granting the award is final.
6. Applications must be accompanied only by a list of the stations worked, date, time, signal report, etc.

WORKED ALL NETHERLANDS ANTILLES AWARD

BY: ARUBA AMATEUR RADIO CLUB

- A. Ten (10) different amateur radio stations on the island of Aruba.
- B. Five (5) different amateur radio stations on the island of Curacao.
- C. One (1) amateur radio station on the island of Bonaire.
- D. One (1) amateur radio station on one of the Windward islands which consists of: Saba, St. Martin and St. Eustatius.

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.

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via SIGNAL REPORT

... what I like most about Field day is roughing it.

BY JACK, WB6UDC

I hope that you enjoyed my first column of DX FROM ORANGE COUNTY. There has been quite a good deal of activity on the bands from all over the world since last month.

The CQ WPX contest was held on the 12th and 13th of April. Band conditions were not as good as one would have liked for this type of activity. The object of this contest by the way is to work as many different prefixes as possible. These include all K,W,VE and any other prefix in the list of recognized prefixes. We were missing many European prefixes on the high bands due to the poor band conditions. There was also very little activity on 75 and 40 meter phone compared to the ARRL DX contest a month ago. Incidentally this contest is limited to two way SSB contacts only.

This month we have some FB contributions from Ron, WA6FIT. These inputs are not necessarily those contacts that he has made personally but from others as well. (There are some FB prefixes in this list)

YU2REB	Yugoslavia	Andre	21280 CW		
SP3AIJ	Poland	Ted	28025 CW	1629 GMT	
DX1AAV	Manila	Larry	28042 CW	0206 GMT	
PJ2VD	Curacao	Joeke	28020 CW	1528 GMT	
G3UHR/VO2	Labrador	Charley	28604 SSB	2342 GMT	
VK9RJ	Nauru Isle	Jack	28550 SSB	0032 GMT	
HP9FC/MM	Atlantic Ocean	Andy	14240 SSB	0245 GMT	QSL VE1ASJ
EL2BC	Liberia	Bill	14205 SSB	0516 GMT	
*ZS5FF	S. Africa	Bob	14211 SSB	1616 GMT	
HC8FN	Galapagos Isles	Forrest	14207 SSB	0400 GMT	QSL WA2WUV
XW8AX	Laos	Bill	21280 SSB	0224 GMT	
CX2AM	Uruguay	Americo	28530 SSB	0125 GMT	

The following are from the authors log:

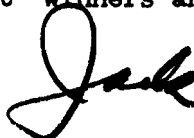
GI3JIM	Ireland	Jim	14217 SSB	0714 GMT
UA1KAG	Moscow	Sasha	14027 CW	0650 GMT
G2FPN	Nottingham	Sam	14035 CW	0707 GMT
YA1YB	Afghanistan	Wes	14209 SSB	1450 GMT
SM4CUQ	Sweden	Len	14035 CW	0705 GMT
VK9RY	Papua Terr.	Ron	14235 SSB	0852 GMT
VP8KQ	Argentine Isle ??	Dick	14216 SSB	0432 GMT
SV0WI	Athens	Don	14217 SSB	0557 GMT
VP2LA	St Lucia	Junior	14208 SSB	0550 GMT
5L2BA	Liberia	Ben	14205 SSB	0648 GMT
LX1BA	Luxenburg	Andre	14205 SSB	0600 GMT
CR8AI	Portugese Timor	Louis	14218 SSB	1539 GMT
SV0WN	Isle of Rhodes	Jim	28550 SSB	1621 GMT
YB2AJ	Indonesia		14208 SSB	1507 GMT
BV2A	Taiwan	Jim	14088 CW	1525 GMT
9N1MM	Nepal	Father Moran	14231 SSB	1526 GMT

In addition this station worked Gus from Rodriguez Isle VQ8CPR and Madieras Isle CT3AW during the contest. If any body has any info on how to QSL VS9K Kameron Isle this would be appreciated

Would like to obtain a list of all OCARC members who have received DX awards such as DXCC, WPX, WAZ any contest winners and any other type of certificate for DX activity.

See you next month,

73



WB6UDC

\* \* \* \* \* 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 25 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, K6CAE- 735-4791

1939 S. Main St., Corona

\* \* \* \* \* HAMAD \* \* \* \* \* HAMAD \* \* \* \* \* HAMAD \* \* \* \* \*

ORANGE COUNTY AMATEUR RADIO CLUB, INC.  
P.O. BOX 95  
ORANGE, CALIFORNIA -- 92668  
VOL. X NO. 5 -- DATED MAY 1969

first class !!!!

DATED MATERIAL !!!!