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ORANGE COUNTY AMATEUR RADIO CLUB

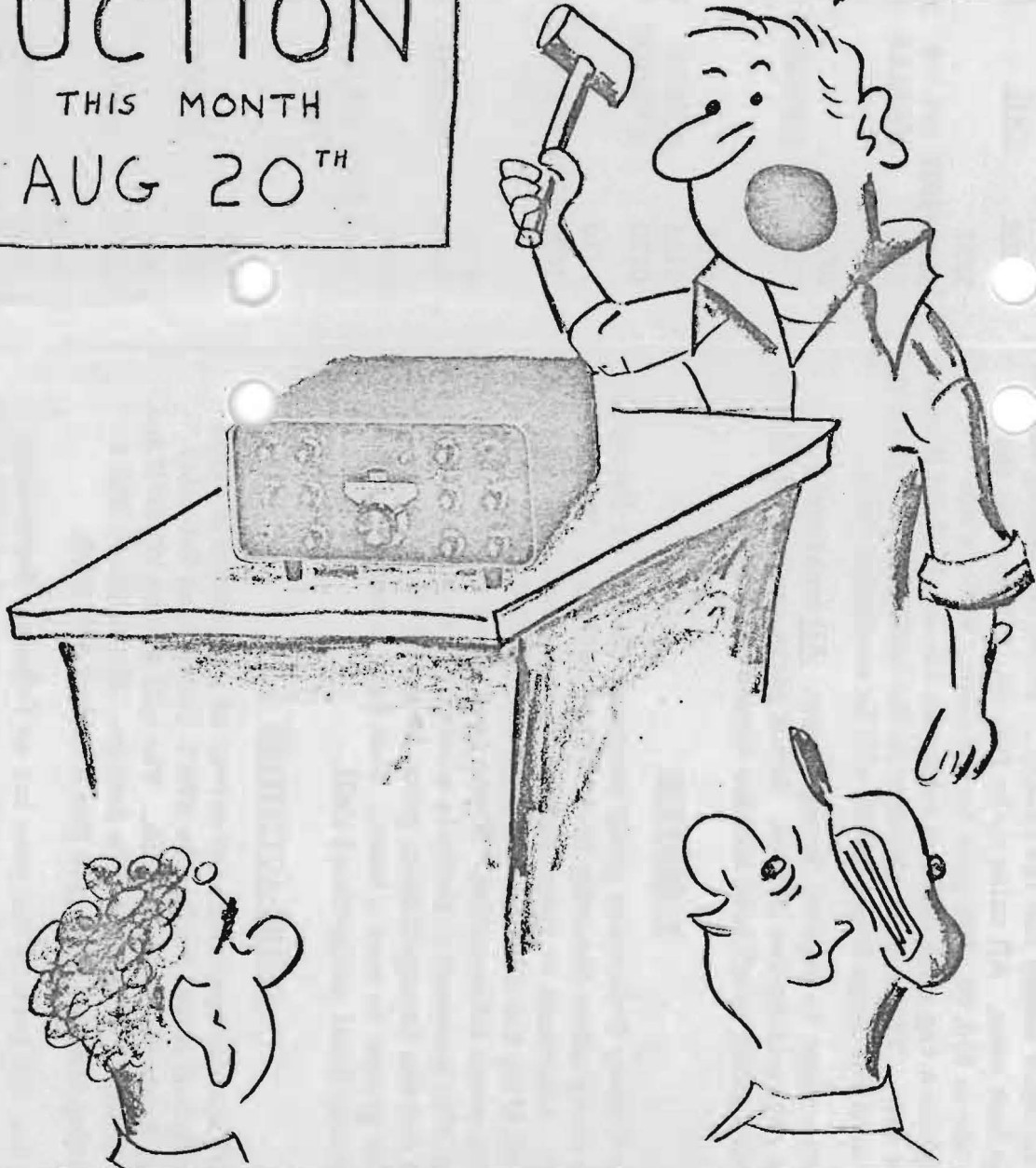
VOLUME XII NO. 6

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

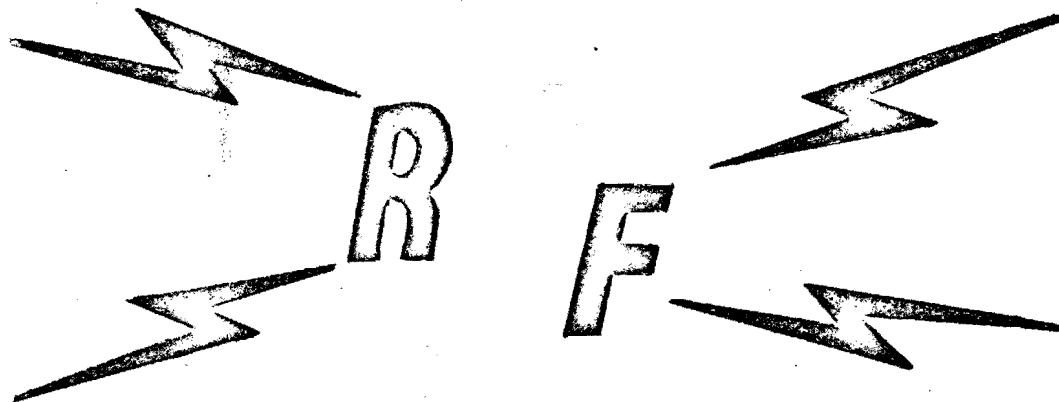
AUG. 1971

O.C.A.R.C.
AUCTION
THIS MONTH
AUG 20TH

DO I HEAR
\$5 ?



SEE YOU AT THE AUCTION!



ORANGE COUNTY AMATEUR RADIO CLUB

P. O. Box 95, Orange, Ca 92669

Volume XII, No. 6

August 1971

AUCTION - MEETING - AUCTION

August 20, 1971 - 7:30 P. M.

1971 Club Officers

| | | |
|------------|-------------------------|----------|
| Pres: | Bill Hall - WB6CQR | 839-9393 |
| V. Pres: | Ken Konechy - W6HHC | 541-6249 |
| Sec: | Ron Cade - WA6FIT | 897-8059 |
| Tres: | Bill Robinson - WB6WOO | 542-7958 |
| Activity: | Bob Eckweiler - WB6QNU | 639-5074 |
| T. V. I.: | Roger Coult - WA6AAL | 541-8348 |
| Mem: | Don Gould - W6EQY | 821-8518 |
| Pub. Rel.: | Jack Shaw - WA6YWN | 633-8742 |
| M/A/L: | Jerry Verduft - W6MNY | 524-5827 |
| | Jack Hollander - WB6UDC | 544-5369 |
| R. F. | Richard Nelson - WA60BM | 557-6614 |

OCARC "RF" AUG '71 (1)

JULY MEETING MINUTES

The July meeting of the OCARC was called to order by Vice President Ken Konechy at 8:00 p. m. Ron WA6FIT introduced the Club Officers to 32 members and guests attending. Bill, WB6WOO read the Treasurer's report. We have \$654.76. Field day expenses came to \$139.51. W6NGO gave us a report on Club badges. They are \$1.00 each per hundred and \$1.25 each per 50 pieces. It was decided that we will purchase 50 badge blanks from the source Kay has found. Ron, WA6FIT, gave a report on the 1971 Southwestern Convention. LeRoy, W6SYC, announced that the Newport Beach Amateur Society would have a program on Slow Scan T. V. July 23, 1971. Ken, W6HHC, presented a slide program on this year's Field Day. Jerry, W6MNY, announced that the Orange section AREC group placed 14th in the January S. E. T. Ken, W6HHC, announced that the August meeting will be the Annual Auction - raffle of prizes. Meeting adjourned at 0925 p. m.

Cheerfully submitted by
Ron Cade, WA6FIT.

BITS AND PIECES

Slow Scan T. V. For those of you who missed the excellent presentation of Slow Scan T. V. for the Amateur at the Newport Amateur Radio Society Meeting you will have another chance at the ARRL convention. Robot Research, Inc. will be at the convention to demonstrate their equipment.

15 M beam will be for sale after September 7, 1971. It is homebrew, of robust construction having a 20' boom, 2" dia. and tapered elements (3) from 1" to 3/4" in three steps. For details see Ron Cade, WA6FIT, or call at 897-8059.

Novice X'Tals If you are a novice and need the loan of novice crystals contact Roger Coult, WA6AAL, at 541-8348. Roger is in charge of the OCARC Novice Crystal Bank.

Theory & Code If you are interested in helping or participating in theory or code classes contact Bill Robinson, WB6WOO, 542-7958, who is holding classes each Monday night. Usually 30 minutes code and 90 minutes theory.

OCARC "RF" August '71 (2)

Digital Clock The grand prize of a digital clock was won by Ken, W6HHC, at the July meeting raffle.

Welcome Back to Carl Youngquist, who has joined again after a short absence from the Club. Carl is W6DYI and lives in Placentia.

Surplus Our Expert in surplus has found another source of hard-to-get parts. It is R&L Electronics located at 12474 W. Washington Blvd., L.A., Ca 90066. Call Roy Kathner (213) 398-5377.

New Capacitor Type A new type of capacitor is being sold by Gould Ionics, Inc. that packs more capacitance into a smaller package than any other capacitor ever dreamed about two years ago. A Capacitor 1" in dia. 1/2" tall would have a value of 50f. That f stands for Farad in case you forgot working with pf, nf, and uf over the years. Not only is this new capacitor so large in capacitance but it has a very, very low leakage. It could be charged to 1/2 volt and would discharge itself 1% of its charge, terminal voltage drop of 0.005 volts, in approx. 140 years. Now that is a real capacitor. The device is called an energy storage device, ESD, and is an electrochemical capacitor. The 50 f unit is the largest size presently being manufactured and is a little expensive for experimenting with \$30 being asked for single units at the present time. For those of you interested in figures, the following table will compare the ESD with a standard aluminum capacitor.

| Parameter | ESD | Electrolytic |
|-----------------------------------|---------|--------------|
| Leakage current | 0.5 nA | 0.1ua up |
| Rated voltage | 0.5 V | 5.0 V |
| CV (Coulombs/in ³) | 80 | 0.044 |
| 1/2 CV (Joules/in ³) | 20 | 0.11 |
| ESR (effective series resistance) | 0.8 ohm | 0.1 ohm |

The obvious limitation of 0.5 V max. can be overcome by placing cells in series.

VHF DX ACTIVITY

Sam Goda, WA6JRA, sends in the following VHF DX activity logged at his QTH for the period of May 31 to June 20, 1971.

| <u>50 MHz</u> | | | | | | |
|---------------------------|-------------------|--------------------|-------------|-------------------|-----------------|------------|
| <u>Date/</u> <u>me</u> | <u>Call</u> | <u>Propagation</u> | <u>Name</u> | <u>QTH</u> | <u>Comments</u> | |
| 5/31 | | | | | | |
| 1530-1927 | W1 - 0 | Sporadic E | | | | FB Opening |
| 2144 | KL7GLL | SE 2 hops | Gene | Sitka | | RST 559 |
| 6/24 | | | | | | |
| 2226 | KP4DHC | SE 3 hops | Jose | Aguadilla P.R. | | RST 55 |
| 6/25 | | | | | | |
| 0154 | VE4MA | SE 2 hops | Andy | Winnipeg | | |
| 0220 | XE1AAN | SE 1 hop | Tad | Guadalajara | | |
| 7/10 | | | | | | |
| 1600-1728 | W1, 2, 3, VE2 | SE 2 hops | | | | FB Opening |
| 7/11 | | | | | | |
| 0453 | WE4MA | SE 2 hops | | | | |
| 7/12 | | | | | | |
| 2143-2344 | W1, 2, 3, 4, 8 | SE 2 hops | | | | FB Opening |

| <u>144 MHz</u> | | | | | | |
|---------------------------|-------------|--------------------|-------------|-------------|-----------------|---------|
| <u>Date/</u> <u>me</u> | <u>Call</u> | <u>Propagation</u> | <u>Name</u> | <u>QTH</u> | <u>Comments</u> | |
| 6/6 | | | | | | |
| 1523 | K7BBO | SE 1 hop | Dave | Tacoma | | RST 429 |
| 7/1 | | | | | | |
| 0412 | K6PXT | Tropospheric | Lee | San Leandro | | " 549 |
| 7/18 | | | | | | |
| 1616 | K7ICW | Tropospheric | Al | Las Vegas | | RST 55 |

On 7/12/71, I worked ten W1's, including WA1FSZ-N.H. for State No. 49, two W2, four W3 and one W8. I called CQ Delaware, State No. 50, for 1/2 hour and had to switch to CW after getting so hoarse, and still received no response! This opening was double hop sporadic E type with reflection from an E cloud somewhere midway. Working 6 meter CW/SSB DX through QSB, QRN and QRM plus really turns me on.

- AUCTION -

The Annual OCARC Auction of Amateur and Electronics goodies will be held at 7:30 p. m. on August 20, 1971 in the basement of the Lincoln Savings and Loan building located at 17th Street and Bristol in Santa Ana (southeast corner). The purpose of the Auction is to raise money for the OCARC. Rules for selling are the same as last year. All sales up to \$50.00, 20% goes to the Club; sales above \$50.00, 10% goes to the Club. Sellers are advised to place a tag with call and minimum bid on all their items brought for sale. There is an elevator in the building. The parking lot will be used for large items which will be auctioned first.

Special instructions to buyers: Bring Money. All amateurs or electronics enthusiasts are invited. Small parts can be individually sold or traded prior to official auction time at 8:00 p. m.

T-HUNTERS

The Orange County T-Hunters group meets at the top of Panarma Heights on every other Saturday (8-14-71) at 1945 hrs. Two Meter AM is used. Amateurs or interested parties can call Paul Sheridan, WB6TDO, at (714) 838-8438 or Leroy Sparks, W6SYC, at (714) 557-8122 for more information. If you have never participated in a T-Hunt this amateur activity is a must for rounding out your experience and the Orange County group is one of the most enthusiastic groups to turn a beam. This hunt is based on milage requiring exceptional navigational skill.

OCARC ACTIVITIES

OCARC will assume operation and set-up of a 15 meter station at the Disneyland Hotel during the ARRL Convention Saturday and Sunday, September 4th and 5th. The call will be WD6WD and Ron Cade, WA6FIT will handle the details. If you would like to operate during the two days give Ron a call at 897-8059.

Programs for the rest of the year are as follows: September: Amateur applications of noise and demonstration of the Omega-t systems antenna noise bridge. October: Planetarium show at the Garden Grove Planetarium with emphasis on radio astronomy. November: Annual election with a home brew contest of best kit and best home brew for prizes. December: Christmas Party.

OCARC "RF" August '71 (7)

EATING FUN

The Club Breakfast, Saturday, July 3rd, was a tremendous success, with the largest turn out yet! What was most surprising was that this was only one week after Field Day and during a long weekend. The members and guests at the breakfast were: WA6BPX - Wyatt; W6HHC - Ken; WN6ENT - Paul; K6IJA - Ted; WA6FIT - Ron, his wife and two big sons; W6ZHD - George; WB6TBU - Frank; WA6LHB - Art, his wife, two young daughters and son; W6NGO - Kei; WB6QNU - Bob and his new love who had to remain out in the parking lot; and W6EQY - Don, his wife and two lovely daughters. Hmmm, let's see now if my math is correct that makes 21 people at the breakfast.

Those of you who feel rotten because you missed out on this fun affair, don't fret. There will be another one on the first Saturday of August (and hopefully the first Saturday of every month). The breakfast starts about 8:30 a. m. at Manny's Restaurant on 17th Street right at the Newport Freeway in Tustin. Maybe the Club President and/or past Presidents will be there next month!

73, Erwin (the Breakfast Table) Troll

OCARC FIELD DAY SCORES

The following breakdown of Field Day contacts shows the shortage of operators, as many stations stopped operation during the night.

| <u>Band</u> | <u>Contacts</u> |
|-------------|-----------------|
| 2 meters | 109 |
| 15 meters | 136 |
| 20 meters | 530 |
| 40 meters | 106 |
| 80 meters | <u>274</u> |
| Total | 1,155 |

The total score for the Club, including all bonus points, etc. (power, publicity) was 2,510 points. Needless to say, all those attending enjoyed themselves and overall operation went very smooth.

(8)

OCARC "RF" August '71

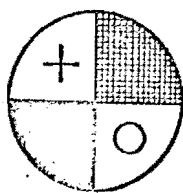
SLOW SCAN T. V.

The Newport Amateur Radio Society invited Robot Research, Inc. of San Diego to demonstrate slow scan T. V. at their July 23rd meeting. The presentation covered operating principles and demonstration of recorded pictures as well as live pictures so everyone was on T. V.

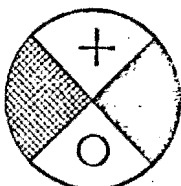
The system essentially compresses the bandwidth of a normal video 4.5 MHz picture into the audio spectrum of 1.2 to 2.3 KHz by presenting one complete "frame" every 8 seconds. To view this slow scan picture requires a long persistence (P7) phosphor CRT and very low ambient light levels (full moon light is about maximum). The resolution and detail are astounding and makes the whole system exciting. Since the picture is audio, tones within the bandpass of most SSB rigs, it is now possible to see your DX contact. Photographing a frame is easy with any camera and makes a permanent picture or a replay can be made from a regular audio tape recorder which was connected to the receiver speaker terminals when the pictures were received.

The cost of adding video to your SSB station would be \$960.00 for monitor and camera. The average homebrewer might reduce that figure about 40% to 60% if he has some video experience.

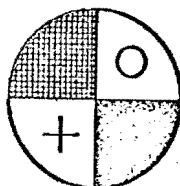
Which figure doesn't belong?



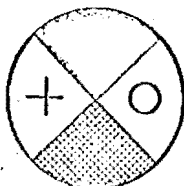
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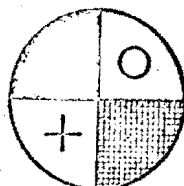
2



3



4



5

Have you ever computed the length of an antenna or lead-in which was to be a half wavelength and ended up with something like 33.45 feet? The problem was converting the .45 feet into something which could be read from your ruler or tape measure. The following table has been used by WA6OBM and converts decimal parts of a foot to inches. The numbers following the dashes in the table are sixteenths of an inch. From the table .45' is 5-3/8".

DECIMAL PARTS OF A FOOT TO NEAREST 1/16 INCHES

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0.0' | 0" | 1/8" | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" | 13/16" | 15/16" | 1-1/16" |
| 0.1' | 1-3 | 1-5 | 1-7 | 1-9 | 1-11 | 1-13 | 1-15 | 2-1 | 2-3 | 2-5 |
| 0.2' | 2 3/8" | 2 1/2" | 2 5/8" | 2 3/4" | 2 7/8" | 3-1 | 3 1/8" | 3 1/4" | 3 3/8" | 3 1/2" |
| 0.3' | 3 5/8" | 3 3/4" | 3-13 | 3-15 | 4-1 | 4-3 | 4-5 | 4-7 | 4-9 | 4-11 |
| 0.4' | 4-13 | 4-15 | 5-1 | 5-3 | 5-5 | 5 3/8" | 5 1/2" | 5 5/8" | 5 7/8" | 6" |
| 0.5' | 6" | 6 1/8" | 6 1/4" | 6 3/8" | 6 1/2" | 6 5/8" | 6 3/4" | 6-13 | 6-15 | 7-1 |
| 0.6' | 7-3 | 7-5 | 7-7 | 7-9 | 7-11 | 7-13 | 7-15 | 8-1 | 8-3 | 8 1/4" |
| 0.7' | 8 3/8" | 8 1/2" | 8 5/8" | 8 7/8" | 9" | 9" | 9 1/8" | 9 1/4" | 9 3/8" | 9 1/2" |
| 0.8' | 9 5/8" | 9 3/4" | 9-13 | 9-15 | 10-1 | 10-3 | 10-5 | 10-7 | 10-9 | 10-11 |
| 0.9' | 10-13 | 10-15 | 11-1 | 11-3 | 11-5 | 11-7 | 11 1/2" | 11 5/8" | 11 7/8" | 12" |

ORANGE COUNTY AMATEUR RADIO CLUB, INC.

P. O. Box 95

Orange, California 92669

Vol. XII, No. 6 Dated: August 1971

First Class

Dated Material

James Richards

18802 E. 17th

Santa Ana, California 92705

