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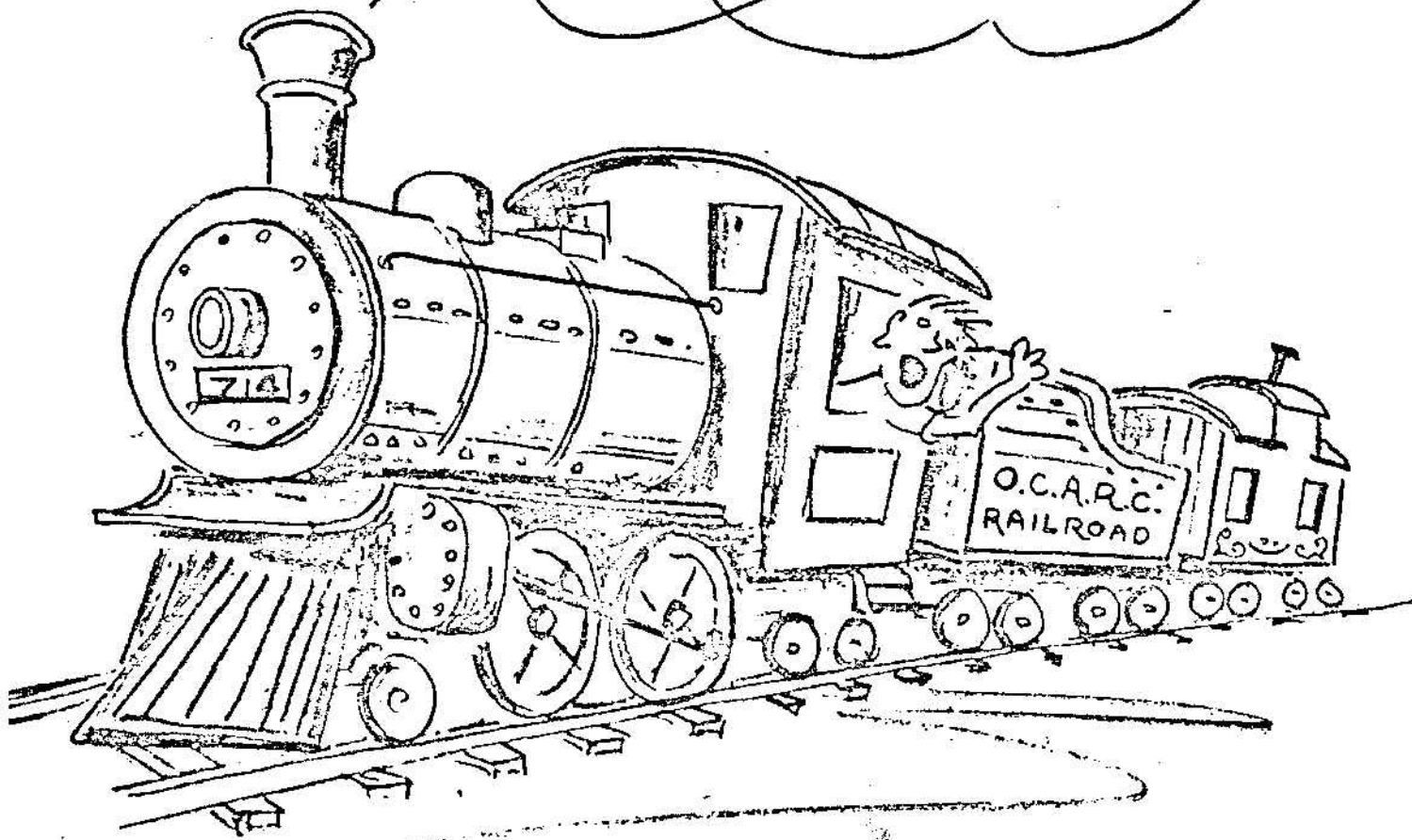
VOL. XIV NO. 11

ORANGE COUNTY AMATEUR RADIO CLUB

November 1973

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

ELECTIONS Nov. 16



"ITS RAILROAD TIME"

1973 CLUB OFFICERS

PRESIDENT	BOB ECKWEILER	WB6QNU	639-5074
V. PRES.	KEN KONECHY	W6HHC	541-6249
SECRETARY	JACK BRIGGS	WB6YMV	544-3665
TREASURER	TED GLICK	K6LJA	542-1390
ACTIVITY	ERNIE FUERTE	WA6GXV	839-7107
TVI	DAVE HOLLANDER	W6COJ	541-9133
MEMBERSHIP	BILL ROBINSON	WB6WOO	542-7958
PUBLIC REL	JACK SHAW	W6YWN	633-8742
M.A.L.	RON CADE	WA6FIT	897-8059
	KEI YAMACHIKA	W6NGO	538-8942

EDITOR	DON KLOS	W6OOH	832-9682
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OCARC ACTIVITIES

MEETING 3rd Friday of each month, 7:30 PM at;
Mercury Savings and Loan
1095 Irvine Blvd (4th Avenue)
Tustin, Calif.

GUESTS ARE ALWAYS WELCOME

BREAKFAST 1st Saturday of each month, 8:30 AM at;
Mannys Restaurant
17th Street at the Newport Freeway
Santa Ana, Calif.

MEETS IN BACK OF ROOM

15M NET Club station W6ZE meets every Wednesday
at 8:00 PM on 21.375 MHz. All amateurs
are welcome to check in. Club and ARRL
bulletins read.

15m CW NET Club station W6ZE meets every Wednesday evening
from 7PM to 8PM on 21.175 Mhz. All amateurs
are welcome to check in. Lots of CW practice for
everyone.

CALLBOOK SERVICE

The club has copies of the latest callbooks which are available at each meeting. Also, you can contact Ernie, WA6GXV on Tuesday and Thursday Evenings between 7:00 PM and 9:00 PM if you need addresses. If you have more than one call for Ernie to check, he'll get them all and call you back that same night. Ernie has indicated that he will accept calls on Sunday morning if he is home.

THE PREZ SEZ:

Well November is upon us and a new year will soon follow. Along with it will come a new Board for the club. The Board consists of ten elected members who govern the club and work to improve it for all members.

As I look back on the past year I feel a lot has been accomplished to improve our Club. One valuable change is the switch in emphasis at the club meetings away from excessive routine business, making for more interesting and informal gatherings. Another change is in the number of Novices in the club. They can be a club's best asset and have certainly increased our membership numbers. Our activities this year were all a success though I'd like to see more participation. The two fishing trips (handled independently of the club treasury) the get-together at Newport Dunes, Field Day, etc. were enjoyed by all who attended.

At the November meeting elections will be held for next year's club officers. As past president I will automatically fill one of the Member At Large positions next year. Other positions are available for YOU to fill. If you would like to run for any office please contact Ken HHC or me. Remember it's your club. Take an active part in it.

Here is a list of offices and a brief rundown of their responsibilities:

President: Presides over the Board of Officers and club meetings.

Vice President: Aids the President, sets up programs for the meetings, is in charge of organizing the yearly Christmas Party.

Secretary: Keeps minutes of meetings and helps with club correspondence.

Treasurer: Keeps account of income and expenses of club. Is in charge of collecting dues, processing membership cards & selling of club related items.

Publicity Chairman: Responsible for club publicity especially for Field Day credit.

Activities Chairman: Responsible for club activities, especially Field Day. Purchases door prizes for raffle, and furnishes coffee and donuts for meetings.

Membership Chairman: Puts out club rosters. Greets new members and keeps list of them and guests for RF. Mails out RF.

TVI Chairman: Keeps peace between hams and their uninformed neighbors.

Members At Large: Sit on board to help board members as needed.

Each December the club sponsors a Christmas Party for members and their families. This is the last event of each year and always a lot of fun. Plan now to attend & bring the wife and kids. More information on this event to follow.

NEW MEMBERS SINCE JULY

The ORANGE COUNTY AMATEUR RADIO CLUB is proud to welcome the following new members who have joined since the end of July.

WB6AJV	Bob Mallard	3701 Parkview, apt 15A, Irv.	
WN6ARK	Roger Denny	5372 Santa Barbara, G. G.	
WA6HNI	Andy Ziros	123 Maude Ln., Anh	998-0895
WA6OBM	Rick Nelson	2541 W. Camden Pl, S. A.	557-6614
W6OKX	Lee Sheridan	11652 Newport, S. A.	838-0086
WA6TCB	Dick Ahlefeld	2020 maple, Org	538-3767
WA6TZA	Neal Vadnais	1818 N. Fairview, S. A.	839-7378
WB6UDC	Dave Hollander	13531 Malena, Tstn	544-5369
K6ZP	Grover Frater	24581 La Hermosa, Lgna Ngl	547-6553

ARRL FIELD DAY RESULTS IN !!!

ATT. NOVICES, GEN'LS, ADV'S & EXTRAS:

The November issue of QST has listed the 1973 Field Day results. Your participation has resulted in W6ZE being listed as the 2nd highest score for California in the 4A classification (four simultaneous transmitters). A partial listing is below:

WA6LXN/6	W. Valley ARC	3002 / 6504
W7YE/7	Ariz. Mt. Moguls	2713 / 5926
W9LM/9	Northwest ARC	2187 / 4874
W4CVY/4	Columbus ARC	1997 / 4549
WØERH/Ø	Johnson Co RAC	1966 / 4432
W6ZE/6	OCARC	1964 / 4378

For you TEN METER activists here is a new ARRL contest. It looks like a great opportunity to increase 28 MHz activity and at the same time learn or practice proper contest procedures. (Remember we need contest operators for Field Day!)

ARRL is pleased to announce a new ten meter contest to take place 1200 GMT Dec. 15 to 2359 GMT Dec. 16, 1973. As recommended by the ARRL Contest Advisory Committee, the activity is open to, and contacts are permitted with, all amateurs worldwide. DX may work DX. No time limit. Double points for QSOs with people. A station may be worked once on CW and once on phone. Two points for each contact. A contact had the multiplier is the sum of states, Canadian call areas, countries and ITU regions in the case of non land based stations. Full rules will appear in the November issue of QST. Please help to coordinate this information in an effort to improve occupancy of ten meters.

The Fullerton ARC-W6ULJ also took 2nd highest in Cal in the 5A class with a total of 2331 / 5262. The Anaheim RC- K6SYU was 3rd highest for Cal in the 5A class with a total of 1888 / 4376.

MANY THANKS TO ALL OF YOU WHO HELPED!

HORN KEYS de WB6WOO

Editor's note..This article describes a simple IC project which may or may not be of immediate interest to you. However, for those who would like to learn a little more about how to apply IC's, how an oscillator works etc, we recommend that you read on-----

The availability of low cost IC's has renewed my interest in "fun" projects which were too complicated and costly to be practical a few years ago. Did you ever see a motorist with "ham" plates and try to beep out on your horn? I saw W6HHC's car once and tried this and got no response except an unfriendly stare from several motorists, probably because my horn CW isn't the best. I soon discovered that Ken wasn't in the car at the time. This got me thinking again about an automatic horn keyer. This time, instead of time delay relays and all sorts of gadgets, I used TTL IC's. The circuit shown on the next page uses 4 IC's with total cost of under \$2.00. The cost of the discrete components, the relay and the button switch depends upon the size of your junk box.

Before describing how it works, I must confess that I've never found time to build the unit. And since I size my resistors by trial and error, you'll have to do some tinkering yourself to get the correct values.

OSCILLATOR-With the RC combination shown, you should get about 4 beeps per second. The N channel FET is used because the gate doesn't draw current from the RC network. Assume that the output of the second NAND is high. When the capacitor charges to about + 3 volts, this positive input to the gate lowers the source-drain resistance of the FET causing a low input to the first NAND. Unless both inputs are high, the output of the NAND is high. But if the first NAND is high, the output of the second NAND goes low. This discharges the capacitor and when the gate voltage drops below about 2 volts, the source-drain resistance of the FET becomes very high causing the input to the first NAND to go high which causes it to have a low output and the cycle continues----- The speed can be easily changed in proportion to the value used for R1.

COUNTER-Each JK flipflop divides the input pulse rate by two. Q and \bar{Q} are always complements with Q initially high and \bar{Q} initially low.

BEEP LOGIC-By inspection of the P and Flipflop output state diagrams you can see the relationship between P,A,B,C and D. Starting from the left, count over to the fourth positive P for example. Then below you can see that A is high, B is high, C is low and D is low. Now, observe the shaded P pulses. If the horn would beep in sequence with these, we would have the desired HI. The first logic term PC means that if P is high and C is low the horn should beep. This gets us the first 4 beeps and the space and the 6th beep but we wouldn't get our 5th beep with this logic alone. For this, we add +PAB which means if P is high and A is high and B is high the horn should also beep. Obviously we could complicate the logic by defining the state of all flipflops but it isn't necessary. For example, the first beep could also be PABCD and the second PABCD etc. See if you can find a simpler combination than BEEP=PC+PAC.

HORN KEYER CIRCUIT- continued

STOP LOGIC-To keep from getting another 3 beeps on the end and for other obvious reasons it is necessary to stop everything after the 6th beep. This is done with the logic AD. Notice that A goes high immediately after the 6th dit or beep and D is already high. And this is the first time that both A and D are high at the same time. Hence STOP=AD.

POWER CONTROL-This circuit took more "thinking" than all the rest put together. The requirements for this circuit are: 1) it resets all flipflops so that initially all Q's are low and all T's are high. 2) it turns on power only long enough to complete one cycle and then it turns off the power. 3) it converts +12V to the +5V required for TTL IC's. To reset the 7473's, it is merely necessary to momentarily ground IC pins 2 and 6. The relay contacts are used to latch the relay on until a STOP signal is received from the STOP logic output. Once power has been applied to the NAND its output is high until the STOP line goes high. Thus the transistor is turned on and holds the relay on. As long as the relay is on, 12V will be applied to the 17.5 ohm resistor. This resistor drops the voltage and allows sufficient current to enable the zener diode to hold VV at +5V. If the circuit were on continuously, the 17.5 ohm resistor should be about 5 watt or more, but for this application one or two watts should suffice.

HORN SWITCH-The horn is driven by the HORN SWITCH circuit shown. This circuit is in turn driven by the BEEP LOGIC output. The final NPN transistor is of sufficiently high current rating to drive the horn.

That's about all there is to it. Let me know what the proper values are for those unidentified resistors--I'll pass the information on to the RF editor. 73's de W6TEC

FIELD DAY 1984

by Les Cobb, W6TEE

This is the final report from your Field Day Committee. After three months of continuous work, we managed to get the application package for our Field Day station authorization in to the Commission by the December 31 deadline. The package ran 144 pages this year, six more than last year, because of the new requirement for character references.

The committee took a trip to Flake Lake, the site chosen for Field Day this year, to dig down through the snow to survey the exact location for each band to be operated. Distances between band positions were accurately measured for the System Network Diagram and each spot was marked on the USGS map for calculation of height above average terrain. Unfortunately, this is a better site than the one we had last year, and so we will only be allowed to compete on the 6-5 under FCC...

We want to thank those who signed up as Field Day operators at the November meeting so that we could get the applications for modifications to your licenses for operating a Field Day station in the package. It is unfortunate that regulations limit us to six operators. We hope that some of you will still be available by June.

We are still undecided about the Field Day message. Everyone is quite shook up over Pete, our former trustee, having his license revoked because of last year's message. It told the SCM that we were at Finagle's Campground, which of course is a commercial business, which of course made the message illegal.

Joe offered us the use of his three element beam for 20 meters, but we had to turn it down. The manufacturer does not have the radiation patterns for this antenna on file with the Commission. We will get by with the vertical we used last year.

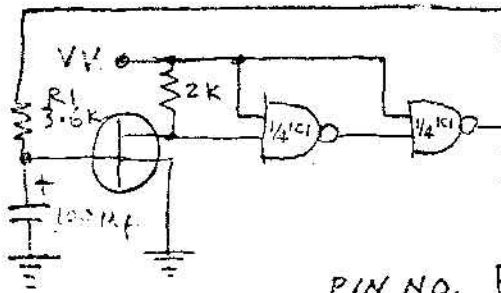
The hardest part of the application was the hourly tabulation of frequencies to be used. We were lucky to get a six month advance preparation forecast. We used that to post it out our operating schedule. Final coordination of frequencies was made through the State Council of Field Day Clubs to minimize QRM.

Each operating position this year will be equipped with a computer terminal for instant reference to all 20 volumes of the FCC Amateur Rules and Regulations. Remember, the commission has warned us that if ham citations do not go down, they will give the amateur bands to the CBers, since they already use them more than we do.

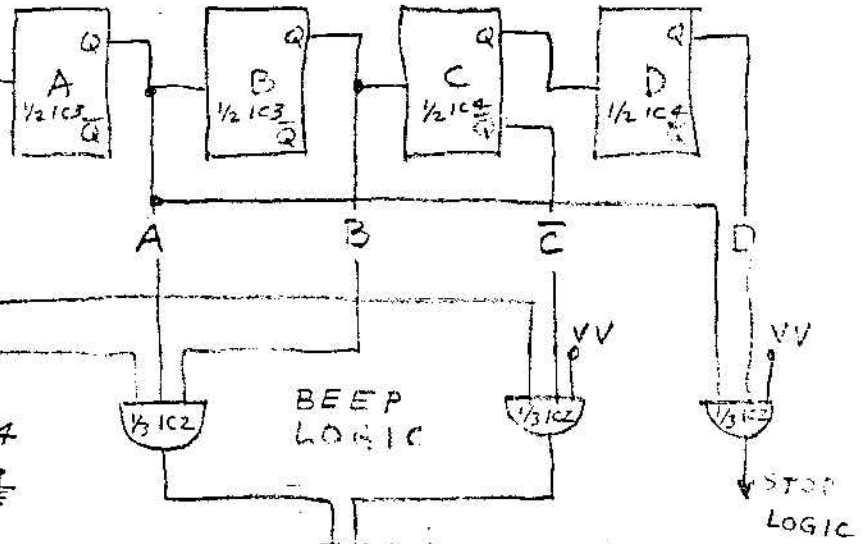
via WORLD RADIO/ NEWS



OSCILLATOR

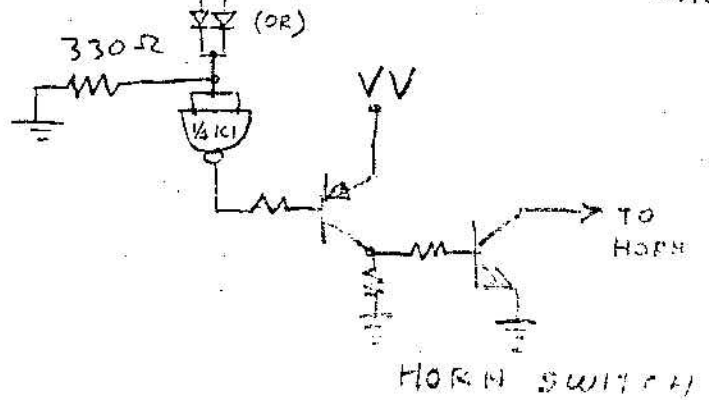
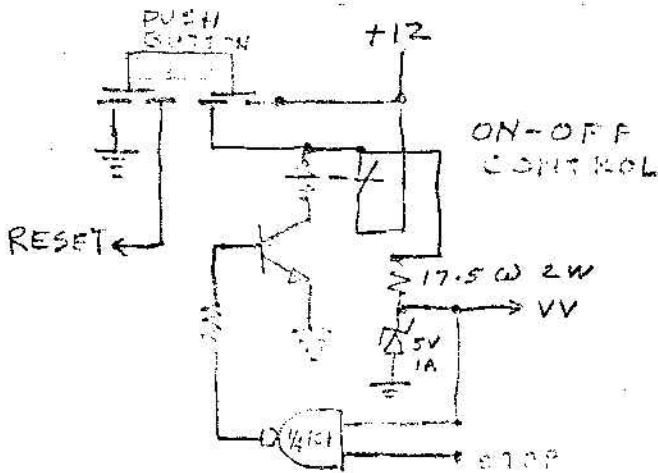


COUNTER

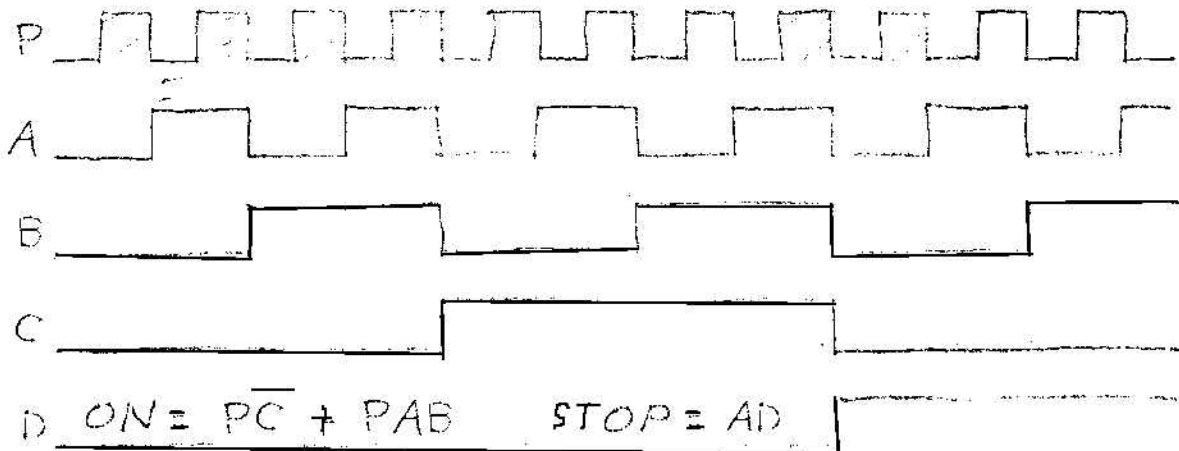


PART NO.	PIN NO.	
	\bar{C}	VV
IC1 7400	7	14
IC2 7411	7	14
IC3,4 7473	11	3,4,7,10,14
IC3,4 RESET	PINS 2,6 TO \bar{C}	

POWER CONTROL



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 HORN KEYS
 DE WBGWOO
 8-19-73



November Meeting -- HOMEBREW LINEAR and ELECTIONS!!!!

The next meeting will take place on Friday, November 16, at 7:30 PM in the MERCURY SAVINGS and LOAN BUILDING in Tustin. This month, the OCARC is pleased to announce that our own JIM BUCK-WB6BYZ will present a program on a 2KW PEP "JUNK BOX LINEAR". Jim has been a HAM since 1936 when his call was W9ZDS in Iowa, and is no stranger to building homebrew rigs. The presentation will emphasize mechanical construction details and techniques from the ground up and is abundantly supplemented with slides. You won't want to miss it.

Also it is that time of the year (as our cover again announces) to elect your OCARC officers for 1974. It's your club !!!!! VOLUNTEER YOUR SERVICES!!!!!! VOTE FOR YOUR OFFICERS!!!!!!!!!!!!

SEE YOU AT THE MEETING!!!!!!!!!!!!!!

LAST MEETING---HUGE SUCCESS!!!!!!!!!!

The October meeting was the annual OCARC auction. Your support again made it a huge success for the old OCARC treasury and a lot of fun for the participants. Ted-K6LJA announced that the clubs treasury swelled by about \$50.50 as a result of the auction. Thank you for your support.

ORANGE COUNTY AMATEUR RADIO CLUB, INC.
P.O. BOX 95
ORANGE, CALIF. 92668

Volume XIV, no. 11--Dated: November, 1973

FIRST CLASS !!

DATED MATERIAL !!