APRIL 1982

THE ORC NEWSLETTER

Official publication of the OZAUKEE RADIO CLUB PO Box 13, Port Washington, WI 53074. Mail editorial contributions to WB9RQR, 11541 North Laguna Drive, Mequon, WI 53092.

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FROM THE (NEW) EDITOR

At the last meeting, Terry (WA9AWO) and Ann (WD9JHP) announced that they would be moving, near the end of March, to points South (of Chicago). We will all miss Terry and Ann, and their participation and leadership in ORC affairs. We hate to see them go, but we are glad for them too, because the move means a new job and new vistas. Little do they know, though, that yours truly has tied a huge rubber band to their back bumper! It is guarenteed to bring them home several times per year, hopefully during Swapfest, Field Day, and both Sweepstakes Weekends! I suspect a slightly smaller, but even more effective rubber band is tied to both of their heartstrings. We all wish them well, and expect to see them often.

May 12th will be the next club meeting, and in keeping with the policy set by previous editors, the deadline for copy will be May 5th, one week prior to the meeting. Copy may be neatly handwritten and circuits hand sketched; I will redraw sketches for you and the copy will be typed on my word processor. Your new editor reserves the right to patch up English, when it will improve the clarity of an article. Hope that is OK with everyone. To encourage submission of articles, you can even phone me and dictate them, provided they are not more than a few paragraphs long. How is that for an offer? In case you misplaced your roster, my home phone is 242-6966. If that one is busy and I am not on the computer line, 242-6522 will get me. You can even try me during the day, at 257-8473. Keep those articles coming folks!!!!!

73.....Stan Kaplan.....WB9RQR

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FROM THE TREASURER

Attention ORC/ARRL members: YOU CAN ADD $2.00 TO OUR CLUB TREASURY AT ABSOLUTELY NO COST TO YOU!!! If you are renewing your ARRL membership/QST subscription and if you apply through the club, we are permitted to retain $2.00 for the treasury. This is a fixed amount and does not change, be it a one, two or three year renewal. I have the proper forms with me at every meeting. The only other thing we need from you in addition to a check for the usual fee is the expiration notice sent to you from the ARRL, which we must send in with the application.

Tnx and 73s.....Laraine Anderson.....KA9HJR

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F R O M T H E R E P E A T E R V I C E - P R E S I D E N T

The efforts of Cesar, N9APC, and Jeff, WA9USA, have measurably improved our repeater receiver sensitivity, which is now down to about 0.07 microvolts!

Though we have had a multiple-receiver splitter on hand, it has never been installed in our system because it was cut for the wrong frequency. Jeff recently obtained a Motorola preamp for us, and Cesar modified it for our application. They then installed it in our splitter, and on Saturday, 27 March, they installed the splitter in our system and tuned up the receiver. You may well have already discovered a difference in your ability to work through the repeater, if you routinely use low power or work on the fringes. Many thanks to Cesar and Jeff from the repeater users for improving our capabilities!

73------Skip------KA9DDN

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F O R S A L E

Texas Instruments TI-58 Hand Programmable Calculator. Includes manuals, charger, case and the Master Library Software Module. $60/will negotiate. Contact Skip, KA9DDN.

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F O R S A L E

Items for sale from the estate of Gene Musbach, WB9RQW: 1) Heath Model IM-11 VTVM. 2) Midland Transistor Code Oscillator #25-109. Best offer; contact Barry Anderson, WB9SFK, 375-0590.

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EXCELLENCY SEZ

Shakespeare, thru Julius Caesar, said: "There is a tide in the affairs of men, which, taken at the flood, leads on to fortune". At any rate, the water has been a risin here for some time...besides, Illinois is downstream.

I don't know exactly where we will reside next - at least, specifically. Call signs won't change, and assuming propagation doesn't either, we should be able to make contact with the hams in the land of Oz.

It is time to bid you "adieux" and "Auf Wiedersehen" (for those of you who read only one language, check with Cesar for translation).

73------WA9AWO------Terry A. Berg

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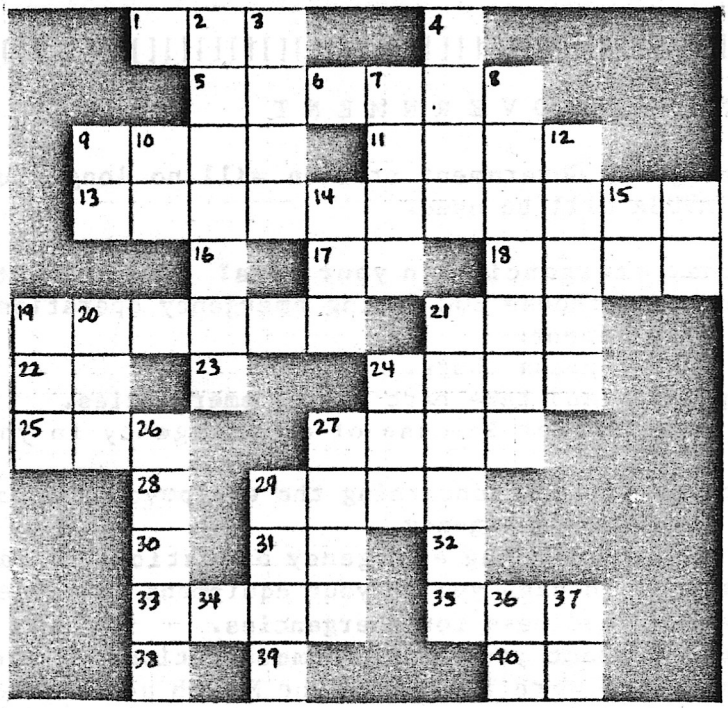
Puzzle Page



ACROSS

1. The current in an inductance ——s the applied voltage by 90 degrees.
4. Meter (abbrev).
5. Passive but important component in most modern loudspeakers.
9. When a transistor is destroyed accidently, this is the ultimate cause.
11. A component which is burned-in by the manufacturer can be said to be ——. Old hams.
13. Type of current which comes out of the household wall socket.
16. I x R = .
17. Optical density (abbrev).
18. Impedance of a series circuit = the square ---- of the resistance squared + the reactance squared.
19. A state found in tube envelopes.
21. Modification (abbrev).
22. Low frequency (abbrev).
23. E / I = .
24. A known means by which VHF signals are propagated beyond the horizon is called a propagation ——.
25. Our friendly governmental licensing bureau.
27. Part of a receiver which helps to shield from extraneous RF.
28. Symbol for inductance.
29. Simplist and least efficient of the AC wave rectifier circuits.
30. ———— modulated (abbrev).
31. Initial period (abbrev).
32. -MF (source of electrical energy, abbrev).
33. Signals (CW abbrev).
35. Something that hams try never to generate! (abbrev)
38. A kind of meter (abbrev).
39. Units of inductance (abbrev).
40. Something that hams try hard to generate! (abbrev)

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COINS

There are ten stacks of ten coins. All look exactly alike, but 9 stacks are genuine coins and one stack consists of counterfeit coins. Genuine coins weigh 1 gram each, while counterfeit coins weigh exactly 1/2 gram each. How can you find out which stack is counterfeit? You have a scale, but you are permitted only one scale weighing.

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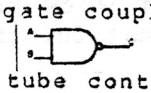
DOWN

1. —— frequency (abbrev).
2. Ham (formal title).
3. Kids love to swing on these, but we use them in logic circuits.
4. Million (prefix).
6. Gain (abbrev).
7. An AND gate coupled with an inverter: 
8. Vacuum tube containing four electrodes.
10. 0.1 Hz would be considered by most to be -xtremely --- frequency (abbrev).
12. This electronic component conducts in but one direction.
14. A kind of memory you cannot write to.
15. Do hams solder connections in a transmitter which is plugged into the power lines?
19. Very low frequency (abbrev).
20. A kind of frequency control commonly found in broadcast band receivers.
21. A popular kind of field effect transistor which has an oxide insulation layer between its gate(s) and the drain-source junction.
23. Same as 23 across.
24. A device which is not adjusted properly can be said to be ——adjusted (prefix).
25. Frequency (abbrev).
26. WB9RQR is working toward an extra ——— license.
27. Capacitors (pleural abbrev).
29. Some of the voltages in a full gallon amp!
34. E / R = .
35. Time (abbrev).
36. A kind of regulating tube.
37. Intermediate frequency (abbrev).
38. This letter is used twice in the common abbreviation for a popular ham television mode.
39. Same as 39 across.
40. E^2 / W = .

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E M E R G E N C Y   G O V E R N M E N T

Effective 14 April 1982, the Emergency Government station will no longer use the club call, W9CQO. Rather, WA9USA will be used.

Ready for severe weather or other emergencies in your area? Want to get a better idea of what goes on in the courthouse EOC during emergency operations? There is room for all levels of involvement:

- -Visit the EOC just to learn what happens there.
- -Learn the ropes as an EOC operator and take part during emergencies.
- -Help the local Communications Officer in case of an emergency in your area of the county.
- -Advise the local Communications Officer concerning the equipment you have available which would be of use in an emergency.
- -Stand by on our repeater frequency during emergency operations in case there is traffic for your area or in case you or your equipment is needed.
- -Offer suggestions to improve our readiness for emergencies.

If you would like to participate, contact your local Communications Officer. Their names, calls and phone numbers were listed in the March newsletter. Along these same lines, in order to involve more club members in the workings of Emergency Government and the EG Station, and to bolster our capabilities in case of emergency situations, we would like volunteer club hams to be available by phone. A computerized listing is being prepared of all ORC hams, listed by municipality, for use in emergency situations. Home phones are already available from the membership roster, but **it would be most useful to also have your work phone number for such a list.** Please contact Stan, WB9RQR, with that information so that he can enter it into the list.

73-----WA9USA-----Jeff Klopp

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W E L C O M E !   (O R   W E L C O M E   B A C K)

We welcome the following new members, or old members who reinstated their membership status after printing of the last roster:

1. KA9INW Dave Block 620 Gorman #203 Shakopee,MN 55379 (New)
2. W9DDB Steve Rukavina 422 Parkcrest Drive Thiensville, WI 53092 242-3621 (Renewal)
3. W9NGV Lowell Warshawsky 10303 W. Capitol Drive Wauwatosa, WI 53222 no phone (New)
4. W9RXJ Hal Giese 340-20th Street NW, Stewartville, MN 55976 (507) 533-4452 (Renewal)
5. No Call Joe Porth 921 Falls Street Grafton, WI 53024 377-6415 (New)

Welcome back to Steve and Hal, and a new welcome to Dave, Lowell and Joe. Joe is waiting for his new call; we will publish it when he gets it. Members, pen these names in on your 1982 roster!

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 10 Rem WA9UDZ - Ralph's Program
 20 Rem 12 March 1982
 30 Print"This program calculates transmission line power loss due to SWR"
 40 Print
 50 Print"Enter length of RG-8 solid dielectric cable used: "
 60 Input L
 70 If L=0 Then Goto 280
 80 Print"Enter frequency used :"
 90 Input F
100 Print"Enter transmitter power used :"
110 Input P
120 M1=0.166*Sqr(F)+3E-03*F
130 Rem CALCULATE DB/100 FEET MATCHED LOSS
140 R=M1*(L/100)
150 Rem CALCULATE TOTAL MATCHED LOSS IN DB
160 Print"The matched loss is  ";R;"  DB"
170 Print"Enter the measured SWR"
180 Input S
190 If S<1 Or S>100 Then Goto 170
200 E=(0.03*S**2.3)*Sqr(R)+(3E-03*S**3)*R+R
210 Rem APPROXIMATE TOTAL LOSS WITH SWR
220 Print"The total loss under these conditions is ";E;"  DB"
230 P1=10**(-E/10)*P
240 Rem CALCULATED POWER DELIVERED TO THE LOAD
250 Print"Approximately ";P1;" watts are delivered to the load."
260 Print
270 Goto 50
280 End
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**********S A M P L E R U N**********

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This program calculates transmission line power loss due to SWR

Enter length of RG-8 solid dielectric cable used:
? 100
Enter frequency used :
? 146.97
Enter transmitter power used :
? 100
The matched loss is  2.4533476561772  DB
Enter the measured SWR
?
The total loss under these conditions is 2.5975895528592  DB
Approximately 54.984596797148 watts are delivered to the load.
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COMPUTER CORNER Here are two programs, one by WA9UDZ and one by your editor. Ralph's program calculates power loss in RG-8 cable due to SWR at any frequency or power level. WB9RQR's program calculates capacitance, inductance or frequency (you supply data for two, it calculates the third). Sample outputs are shown.

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 10 Rem Program LCF to compute FREQUENCY or CAPACITANCE or INDUCTANCE,
 15 Rem and the LC RATIO.  by Stan Kaplan, WB9RQR, March 1982.
 20 Print
 25 Print"Which of the following parameters do you wish to calculate:"
 30 Print"Frequency (1), Capacitance (2), Inductance (3) or End Program (0)
 35 Input X
 40 If X=0 Or X>3 Then Goto 185
 45 If X=1 Then Goto 65
 50 Print"Enter the frequency (in megahertz)"
 55 Input F
 60 If X=2 Then Goto 80
 65 Print"Enter the capacitance (in picofarads)"
 70 Input C
 75 If X=3 Then Goto 135
 80 Print"Enter the inductance (in microhenries)"
 85 Input L
 90 If X=2 Then Goto 115
 95 F=1000/(6.28318*(Sqr(L*C)))
100 Print
105 Print"The frequency (in megahertz) = ";F
110 Goto 155
115 C=10**6/((39.478)*(F**2)*(L))
120 Print
125 Print"The capacitance (in picofarads) = ";C
130 Goto 155
135 L=10**6/((39.478)*(F**2)*(C))
140 Print
145 Print"The inductance (in microhenries) = ";L
150 Goto 155
155 Print
160 R=L*C
165 Print"The LC ratio is:  ";R
170 Print"The same frequency will always be obtained so long as"
175 Print"this product of inductance and capacitance is held constant."
180 Goto 20
185 End
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**********S A M P L E R U N**********

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Which of the following parameters do you wish to calculate:
Frequency (1), Capacitance (2), Inductance (3) or End Program (0)
? 3
Enter the frequency (in megahertz)
? 7.55
Enter the capacitance (in picofarads)
? 150

The inductance (in microhenries) = 2.9625091131509

The LC ratio is:  444.37636697264
The same frequency will always be obtained so long as
this product of inductance and capacitance is held constant.
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MINUTES OF MEETING OF 10 MARCH 1982

REPEATER MEETING convened by KA9DDN at 7:07 PM. Opening balance, $613.68. Purchase of IC-30 receiver, $206.96; Wisconsin Association of Repeater dues, $20.00; savings account, $86.10. Final balance, $472.82. The 911 access trouble has been cleared. Some thought should be given to adding additional code character information to the repeater ID to alert users to various non-normal conditions. Comments and suggestions are welcome. Query by WA9AWO concerning repeater carrier dropouts. Skip (KA9DDN) thinks this may be due to a false response to some tones. The new audio board is expected to eliminate this problem, plus the problem of single digit dump that someone has been using to annoy repeater users. Meeting terminated at 7:11 PM.

REGULAR MEETING opened at 9:13 PM by WD9FQW. Minutes of previous meeting accepted as presented in the Newsletter. Treasurer's report presented by KA9HJR: RECEIPTS - 1982 dues, $75.00; refreshment kitty, $18.64; Swapfest, $5.00; total, $98.64. DISBURSEMENTS - February refreshments, $23.53; Newsletter, $4.68; Post-everything Party prizes, $325.13; Post Party complimentary dinners, $39.50; Post Party printing, $8.27; Swapfest reservation deposit (Circle B) for 1983, $125.00; total, $526.11. ASSETS - Checking account, $168.57; savings account, $1079.68; 81 patches @ $0.75 = $60.75; total, $1309.00. Starting balance: $1736.47. Receipts: $98.64. Disbursements: $526.11. BALANCE - $1309.00. Treasurer's report accepted as read.

Query by treasurer as to whether spouses were included in motion to pay for DINNERS OF TOWER CLIMBERS. Motion in minutes of the December 1981 meeting made no mention of spouses (W9WQ). Report by WB9SFK on SWAPFEST PROGRESS: he will call a meeting, at his home, of committee chairmen and other interested parties in the near future. Information will be disseminated on the club net frequencies. POST EVERYTHING PARTY REPORT: WB9PAS not present, so no report was given. Brief discussion on setting up a CLUB STATION. Site? Ralph Evans, WA9UDZ, will assume position of TRUSTEE, replacing Bob Truscott, W9LO, who is moving away from the area. W9CQO will be used as the CLUB STATION CALL and REPEATER ID when licenses are renewed in the near future. WA9USA has submitted names of 11 club members to Madison for certification as RACES OPERATORS. Decision on RACES RENEWALS will be a county responsibility. WA9AWO is leaving the area and has asked WB9RQR to assume the duties of NEWSLETTER EDITOR, so future submissions should be sent to Stan. WD9FQW made a statement expressing GRATITUDE to TERRY and ANN BERG for their manifold contributions to the club. Motion to adjourn was seconded and carried at 9:45 PM.

E.J. Bauer-----W9WQ-----Secretary

AGENDA - APRIL 14, 1982 - 7:30 PM

INTRODUCTION
ADOPTION OF AGENDA
SECRETARY'S REPORT
(Reproduced in this Newsletter)
TREASURER'S REPORT
OLD BUSINESS
Swapfest report (WB9SFK)
NEW BUSINESS
Field Day committee organization
New business from floor
ADJOURNMENT
REFRESHMENTS
Courtesy of Bob Williams, W9DQS

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R T T Y

Our editor-publisher, in his frantic search to fill out the pages of this publication, has scraped the bottom of the barrel. He has asked for an update article on RTTY operation in the county. So far as I know, but for myself, there isn't any. Oh, I understand that Cesar, N9APC, still has a Model 26 in the line. I believe he uses it as a sort of stage setting to impress people who wander into his shack. There is a nice little installation as part of the emergency government lashup that serves the same purpose. Larry, KA9EXY, was furnished with: 1. a lubrication and adjustment job on his Model 15; 2. a custom made, metered, adjustable current loop supply; 3. the loan of two terminal units, and, 4. the installation and adjustment of an FSK circuit on his transmitter. He says he can't get anybody. But Larry! You have to turn the stuff on!

John, KB9DY, sort of shot past with a unit he acquired from Barry, WB9SFK (another RTTY operator who was out of it before he got into it).

At the Post Everything Party, Dean, K3GGN, professed some interest in harnessing his computer to his hand-held so that he could give the 146.70 Mhz bunch a hard time. Add all of this up and what do you get? Near nothing, but Ed (WA9BMA) sneaking down into his basement when he can to see if he can find any new countries.

New countries are getting harder to find. The DXCC score is now 85/64. I am getting so hard up that the first thing I look for when the ham magazines come in is for DXpeditions that run RTTY. There were a few in February; I got two of them. The first was XF4DMX on Revilla Gigedo, and the second was VP2EDX on Anguilla. I missed CR9 from Macao. In the meantime, I confirmed OX3FG, Greenland, CN8BI, Morocco, and worked HC1CZ. They are the only RTTY operators in their respective countries. There are still quite a few "easy ones" out there, but I haven't printed them, let alone worked them.

Ten meters continues to furnish the most interesting assortment of DX. The band is opening at 0700 local and before on the better days. Low power stations with indifferent antennas are coming in from the eastern Mediterranean. African stations are regulars. As the day moves along, the Germans and Italians blow everybody else off. In the early evening, 15 has had some interesting shotgun openings that range from southern South America all the way across to KL7. YJ8TT, Espiritu Santo, New Hebrides, is a regular. There tend to be few signals on the band, but those that do come through are interesting.

As usual, 20 meters is filled with high power rag chewers, 40 has a few ops on it that got lost, and the 3720 khz bunch are much in evidence.

The 146.70 gang is active on an irregular schedule. There is no RTTY activity at this time.

I was talking to Ralph, WA9UDZ, about my problem of finding new countries. He was going to work up a computer program that would constantly search the 10 and 15 meter band for rare prefixes. When such a prefix was detected, the program would cause the transmitter to be tuned up on the proper frequency,

cause the beam to be placed on the proper heading, start up the printer and send out a call. The comeback would then be acknowledged, QSL promised, etc., a sign-off would be sent, the call logged, and the transmitter shut down. He had it all just about worked up, but when I insisted that the computer also print out and mail the QSL, he threw up his hands in disgust and abandoned the project. He muttered something about being darned if he would put the whole DX callbook in computer memory. Oh well, maybe I can get someone else interested.

73-----Ed-----WA9BMA

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