

# HAM RAG

Affiliated with ARRL

NET meets each Monday at 9:00 P.M. local time on 28.7 megahertz

FEBRUARY ISSUE 1973

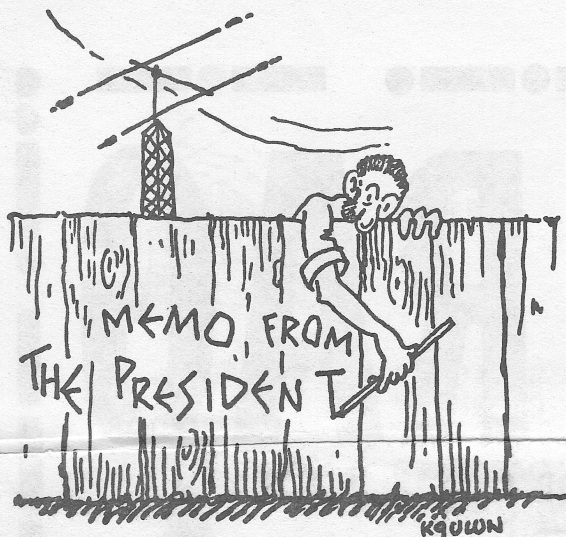
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## President's Log

Have you ever asked yourself what is R.A.R.A. all about? Or, what are you doing in amateur radio anyway? This log will address itself to those questions. First a personal note. My thanks to your past Presidents, Gunny and Dave for assuming R.A.R.A. leadership last year. I would never have had the opportunity to become a ham if it wasn't for this organization, the people in it and rag chewers like Gunny and Dave. I wanted to be a ham for twenty years but never got the necessary help until I joined in 1971. Thanks again.

Back to the opening questions. Article I of your constitution, "Purpose", doesn't quite provide a comprehensive answer. I've rewritten that Article in order to answer my questions.

### R.A.R.A.'s Purpose

1. Provide a vehicle for dissemination of technical information on amateur radio.
2. Serve as a social outlet for the exchange of individual experiences and knowledge of a mutual interest.
3. Provide the impetus to young people interested in pursuing electronics as a profession.
4. Foster a personal satisfaction from achievement in a challenging hobby.
5. Satisfy the needs of community and country that depends on a well trained and organized communication auxiliary, especially in times of emergency.

I feel certain that our efforts should have these goals in mind or we are simply wasting our time, as an organization. With the assistance of each member of R.A.R.A. we can accomplish these aims through the activities of 1973.

AA

SOME HIGHLIGHTS FROM 1972 CHRISTMAS PARTY



unnar, K9WTS, retiring President, with ERL, A9WMI and Jack, K9UWN. ERL has just received the Dayton Radio Club honor award of the year and Jack is holding the Amateur Radio News Service Award for the year's best illustrations in the ARNS group publications.



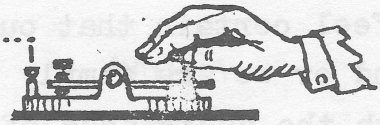
ERL, WA9WMI and RAY WB9ILH with their XYLS. This was typical of the fun enjoyed by all at the RARA Xmas dinner.

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Bill Rigway WB9KOS has graciously offered to be the "official name tag supplier". The cost is \$1.50 with \$1.00 of the proceeds to R.A.R.A.. Bill works cheap! We will have samples at the next meeting..

# NOVICE



## One Solution for a TR Switch de WB9 IOG

We have received a number of telecons requesting help on the design and construction of an adequate transmit/receive switch.

Since most of us are loath to part with the necessary \$20.00 for a Dow Key relay, om IOG has found an inexpensive solution for this problem.

After a few hundred OSO's, the manual switch most of us start with becomes an irritating nuisance. A more desirable solution would be an electrical switch similar in action to the Dow Key but costing far less money to achieve.

Eventually, I worked out the following assembly which will cost you about \$2.98 plus some coax connectors and a tin box. The switch is built around Radio Shacks miniature DP DT relay No. 275-205, rated for 115 V. AC use. A schematic of the relay contacts is provided in the package so it's a simple matter to hook up the proper contacts for the 115 V. service, antenna, transmitter and receiver. An extra set of contacts remain which may be utilized to mute the receiver, activate a linear or, as in my shack, a VFO switch.

I used a modified tie down terminal to mount the relay base to a small aluminum box and also to provide a ground return. The relay has a mounting stud provided in its base. I mounted it horizontally in the box to avoid any fancy nibbling.

For the Novice bands (10 through 80 meters) the wiring inside the box, provided it is less than a few inches, may be done by regular "hook-up" wire (standard or solid). Keep the wires as short as possible. If greater length than 3-4 inches are involved use coax cable such as RG58 U.

Most transmitters have a 115 V. AC accessory plug on the rear apron of the chassis which can be used to provide the 115 V. AC power to the relay and may be properly wired to provide actuation by the relay function switch.

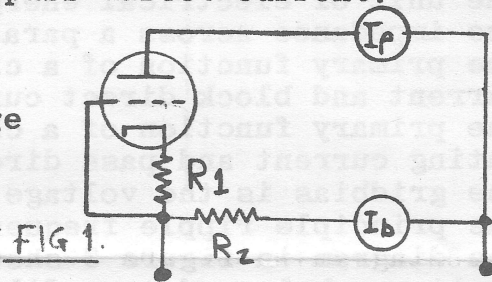
Exercise care in wiring the relay and if you are not sure about some point or connection check it with some older club members before using it. I'd hate to hear someone had blown his receiver with 75 watts!

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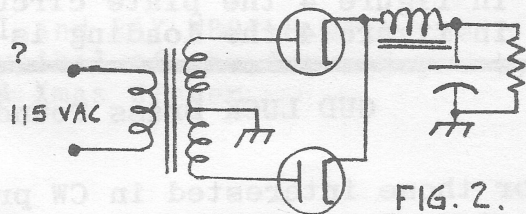
Next meeting Friday, Feb. 9, 1973 at 7:30 P.M. in Room 222, Rock Valley College. Coffee and doughnuts will be served. Follow Springbrook Road to East Parking Lot.

Exam Quiz No. 5  
General Class License.

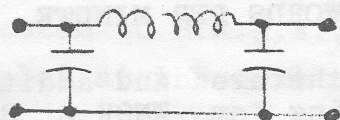
37. Electrical resistance is normally measured with:  
A- An ohmmeter B- An ammeter C- Voltmeter D- Wattmeter  
E- Frequency meter
38. The reciprocal of resistance is: A- Inductance  
B- Reluctance C- Admittance D- Capacitance E- Conductance
39. If the voltage applied to a given circuit is halved and the resistance in the circuit is halved, what will the resultant current flow be? A- Tripling of the current flow  
B- Quadrupling of the current flow C- Doubling of the current flow D- Halving of the current flow E- No change
40. If the plate input to a transmitter tube is 500 watts and the R.F. power output is 375 watts the plate efficiency is:  
A- 25 % B- 50 % C- 75 % D- 100 % E- 175 %
41. The impedance of a series tuned resonant circuit is  
A- Zero B- Low C- Negative D- High E- Infinite
42. The unit of electrical energy is the: A- Watt B- Horsepower  
C- Joule D- Lumen E- Farad
43. The impedance across a practical, parallel LC circuit at resonance is: A- Zero B- Negative C- Low D- High  
E- Infinite.
44. The primary function of a capacitor is to:  
A- Pass alternating current and block direct current.  
B- Pass alternating current and pass direct current.  
C- Block alternating current and block direct current.  
D- Block alternating current and pass direct current.  
E- Pass alternating current only.
45. The primary function of a choke coil is to:  
A- Pass alternating current and block direct current.  
B- Pass alternating current and pass direct current.  
C- Block alternating currents and block direct current.  
D- Block alternating current and pass direct current.  
E- Pass alternating current only.
46. In Fig. 1 if  $R_1$ ,  $R_2$ ,  $I_p$  and  $I_b$  are 500  $\Omega$ , 60 k $\Omega$ , 20 mA and 5 mA respectively the grid bias voltage is: A- 100 Volts B- 2.5 Volts  
C- 25 volts D- 10 volts  
E- 1 volt.



47. In Fig. 2 what is the principle ripple frequency if the AC supply frequency is 60 cycles per second?  
A- 180 cycles per second.  
B- 60 cycles per second.  
C- 360 cycles per second.  
D- Zero cycles per second.  
E- 120 cycles per second.



48. The schematic diagram in Fig. 3 is that of a:  
A- High pass filter with M-derived  $\pi$  section unbalanced type.  
B- Low pass filter with M-derived  $\pi$  section unbalanced type  
C- Band pass filter with constant K  $\pi$  section unbalanced.  
D- Band pass filter with constant K  $\pi$  section balanced type  
E- Low pass filter with constant K  $\pi$  section unbalanced.



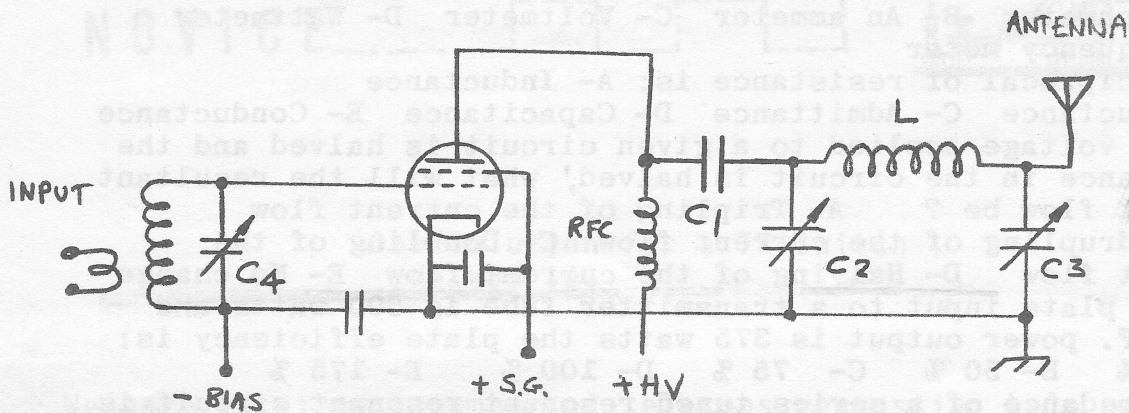


FIG. 4.

49. In Figure 4 the plate circuit is:  
 A- Series fed. B- Non resonant. C- Direct coupled  
 D- Series resonant E- Shunt fed
50. In Figure 4 the loading of the R.F. amplifier is controlled mainly by:  
 A- L B- C1 C- C2 D- C3 E- C4.

ANSWERS TO QUIZ NO. 5.

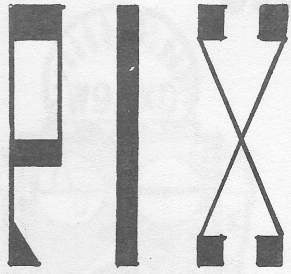
37. Electrical resistance is measured with an ohmmeter.  
 38. The reciprocal of resistance is conductance.  
 39. There is no change in current flow.  
 40. The plate efficiency is  $375/500 \times 100 = 75\%$ .  
 41. The impedance of a series tuned resonant circuit is low.  
 42. The unit of electrical energy is watt.  
 43. The impedance across a parallel circuit is high.  
 44. The primary function of a capacitor is to pass alternating current and block direct current.  
 45. The primary function of a choke coil is to block alternating current and pass direct current.  
 46. The grid bias is the voltage drop across R1 or 10 volts.  
 47. The principle ripple frequency is 120 cycles per second.  
 48. The diagram in figure 3 shows a low pass constant K  $\pi$  section unbalanced type filter.  
 49. In figure 4 the plate circuit is shunt fed.  
 50. In figure 4 the loading is controlled mainly by C3.

GUD LUCK Brass Pounders!

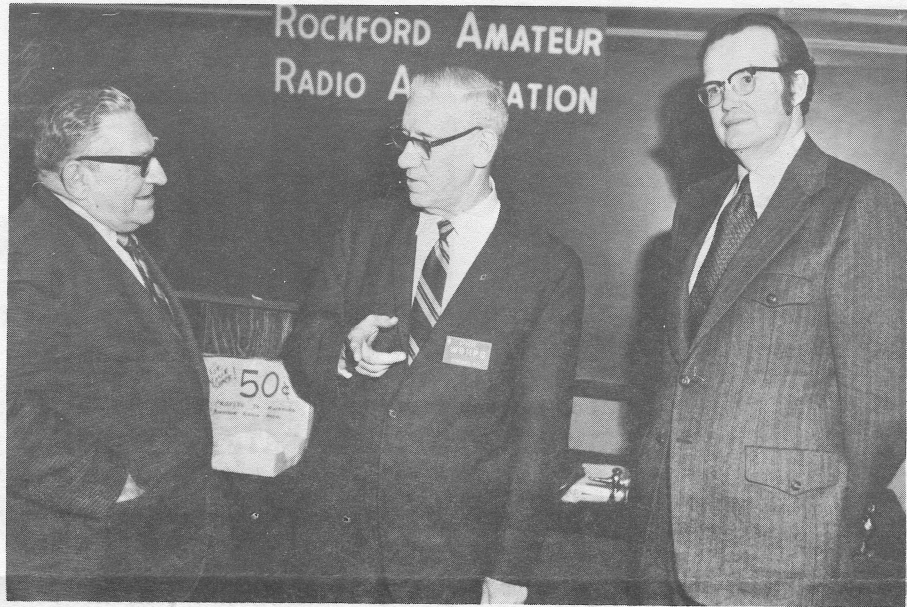
For those interested in CW proficiency, a new practice net has been proposed. At a meeting on Thursday evening, January 25, an outline and schedule of operation was arranged as follows:

1. The net will meet at 7:00 PM local time on Monday and Thursday evenings
2. Frequency: 21.177 (15 METERS)
3. Code Speed: About 9 WORDS PER MINUTE.

The net is open to any ham in the area and additional information may be had by calling Tom, WN9K Z, 877-0306 or  
 WN9KZQ, 398-7300.



# GALLERY



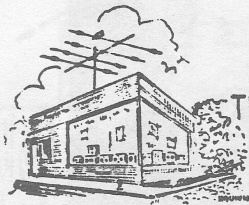
Left to right in this frame shows Ernie W9MAP, Phil W9HPG and Gun K9WTS. On this occasion Phil, who is ARRL director for our division addressed the club on ARRL night in April of last year -



L. to R. Dave Larsen, WN9HPV, Dave Barquist, K9PAK and Don Jackson, W9BQC.

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The club is looking for a Historian. We seem to know little about the past 15 or 20 years of R.A.R.A. members or activities. Any volunteers?



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