



HAM HUM

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Vol. XXII
No. 6

June 1972

JUNE MEETING

WHEN: FRIDAY, JUNE 9, 1972

TIME: 8:00 P.M.

WHERE: UNIVERSITY OF NEBRASKA AT OMAHA
ENGINEERING BUILDING - ROOM 256
64th and DODGE STREETS

WHAT: PROGRAM BY DOUGLAS A. BLAKESLEE, WIKLK
(Editor, Radio Amateur's Handbook)
"Antennas, Facts and Fallacies" - a talk that reviews
popular antennas, including the dipole, ground plane,
inverted V, quad, triband beam and others, discussing the
strong points and problems of each.

DON'T MISS THIS PROGRAM! VISITORS WELCOME!
REFRESHMENTS - EYEBALL QSO'S

HAM HUM is the official organ of the Ak-Sar-Ben Radio Club, Inc., of Omaha, Nebraska, mailed monthly to all members and to others upon request.



Next copy deadline: June 23rd

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JUNE MEETING

By Bob Andrus, KØLUG

June 9th is the date and antennas our bag, or so the story may go. A talk will be given by one of the authorities from ARRL, Douglas A. Blakeslee, W1K1K, who will give us a good idea of what antenna to use for what frequency. Along with his talk he will show a few slides and will also answer questions anyone cares to ask.

Mr. Blakeslee is editor of the Radio Amateur's Handbook. He has written many articles for QST as well as other publications. His article "Double Standards" appears on page 13 of the April issue of QST and his most recent article "Notes On The Amateur Station Counter" appears on page 31 of the June issue of QST.

This program should prove to be very interesting for all of us, especially since we have Field Day coming up during the month of June. Perhaps we can learn enough about antennas from Mr. Blakeslee to help us gain some points at Field Day activities.

Normally at our June meeting the Field Day Chairman gives us a pep talk and tells us what is to be done on 2

Field Day. This year, however, since we learned in advance of Mr. Blakeslee's proposed visit in June, our Field Day Chairman gave us a build-up at the last meeting. See page 3 for information regarding activities on Field Day.

NORFOLK REPEATER NEWS

Please be advised that 2 meter repeater is now in operation daily at Norfolk, Nebraska on 146.340 - 146.940. Identifier: KØHKE. This facility is privately owned, operated and maintained by:

Lyle Johnson, KØHKE

710 South 4th Street

Norfolk, Ne. 68701

Frequency monitored from 4:00 P.M. to 10:30 P.M. daily and all day on Mondays.

FIELD DAY – JUNE 24 & 25

Field Day is just around the corner.
A meeting was held recently with the

following shack ramrods and assignments are as indicated:

and 75 meters	Jim Garr, WBØCLU	Phone 453-1349
40 meters	Bob Serlet, WAØZPW	Phone 553-0469
20 meters	Lloyd McElhaney, KØDKM	Phone 451-6851
6 and 2 meters	Rev. Wayne Heck, WB9HJM/Ø	Phone 734-4643
Novice	Bob Hendricks, WNØEBA	Phone 345-6743

Looks like we have a very good bunch of Field Day ramrods plus operators and loggers.

Remember, Field Day starts on June 24th at 1800 GMT (1:00 P.M. our time) and runs till June 25th at 2100 GMT (4:00 P.M. our time). We will need lots of help to set up the shacks, antennas, etc. There will be signs to direct you to the site. We hope you can all come out and have a lot of fun – any time, day or night.

Everyone please bring a covered dish to the site and be sure to put your name on it so we will know to whom the pans, dishes, etc. belong. Harold McClenahan, WAØDGA, has consent-

ed to be our great cook again this year!

Here are some of the "don'ts" at the Field Day site: no fireworks; no motorcycles; the new home being built is off limits; also, there are some prize horses on the property – okay to look, but please do not scare them. Thanks again to Norval and Connie Bowen!

Remember, everybody come out for Field Day – work hard and have fun. We want to be on top again this year.

73,

Mike, WBØBMV

P.S. If you want to bring out your rig, please do so.

1972 CODE AND THEORY CLASSES

Supplementing article by Bob Lockwood, WAØDHU, which appeared on page 10 of the May 1972

issue of Ham Hum, following is a list of students who passed the novice code test:

Steve Bowder	Ronald Hohensee	Gearell Scherer
Katherine DeWitt (YL)	Jim Kilby	D. R. Schwalm
David Dreith	Ellen Morrissey (YL)	Edward Trabold
Wayne Goetz	Dave Neumann	Tim Trabold
Pat Hennessy	F. H. Norton	Judy Underriner (YL)
Amy Hohensee (YL)	T. M. Novak	

Congratulations to all!

MAY MEETING

By Bob Andrus, KØLUG

News of the last Club meeting can be put into two words: Great Show! Under the very capable hands of our new Board member, KØUIV, Del Gibson, and his associates, we toured the Engineering Building at the University of Nebraska at Omaha. To say that the UNO Engineering facilities are behind other universities would be like telling Bob Lockwood that he couldn't teach another code and theory class. Hi. We all came away from the meeting with a much greater appreciation of the higher learning facilities being offered to the young people of today.

Did you ever see so many gadgets grouped in one room before? It took all the willpower that WØRMB, Cecil could muster to keep from walking off with half the room. Better luck next time, Cecil!

We thank the UNO faculty for their kind indulgence and help in putting together this program for our Club meeting.

ROSTER ADDRESS CHANGE

Frank D. Taylor, WØGOJ
4604 Hascall Street
Omaha, Nebraska 68106

CORRECTION

(See page 12-May 1972 HAM HUM)

The piano wire whip for the TR-22 should be cut to 18-3/4 inches. (I used No. 18 gauge wire) SWR = 1.2:1.

Dale Diamond, WBØGXJ

NEW MEMBERS ADDITIONS TO ROSTER

John B. Askew, WNØHFS
Box 187
Thurman, Iowa 51654
Phone: (712) 628-2591

Dale Diamond, WBØGXJ
5607 Williams Street
Omaha, Nebraska 68106
Phone: 553-9067

Douglas D. Hanson, WBØHCC
4705 Walnut Street
Omaha, Nebraska 68106
Phone: 558-9849

Patrick D. Hennessy, WNØHCD
4706 Walnut Street
Omaha, Nebraska 68106
Phone: 556-8305

James D. Howard, K5TNP/Ø
1106 Hackney Drive
Papillion, Nebraska 68046
Phone: 339-5318

Jon J. Penner, WNØGQT
6227 Nebraska Avenue
Omaha, Nebraska 68104
Phone: 571-5076

Vernard Riportella, WBØGAJ
824 Tipperary Drive
Papillion, Nebraska 68046
Phone: 339-8223

REPEATER CONTRIBUTIONS

Thanks to the following for recent contributions to the repeater fund:

Charles A. Michel, KØQVL
Russell A. Minks, WAØVEE

HENRY L. THOLSTRUP'S HISTORY OF EARLY EXPERIENCES IN WIRELESS AND RADIO

PART TWO

At the time there was a Wireless Club in Milwaukee. When we attended the next meeting there was a lot of discussion going on about signals that they had heard on their wireless sets and were baffled, as many of them were of the opinion that voice could not be heard on their spark receivers. Several did declare that they did hear voices on their sets. They wanted to know how this was possible and why. Their curiosity got so intense that they made arrangements for Dr. Jansky from the Univ. of Wisc. at Madison to come to the next meeting and explain the whole thing to them. We did not disclose our identity to them and about our operation since we were not licensed and thought we might get into trouble and we also were not absolutely sure that someone else was experimenting too. But later from some of their statements about what they heard on their sets we were convinced that it was our signals that had started the whole commotion. Dr. Jansky did clear it up for the club that it was definitely possible to receive either spark transmitter signals as well as the phone signals on the crystal sets. (This was all done in Jan. and Feb. of 1922, so I don't know if we were actually the first phone Hams on the air in that area, but at least we were very definitely quite early in the Ham Phone Game.) We also had to stop the experiments as the use of the telephone transmitter for this purpose

burnt the carbon granules badly and the operation on the telephone circuit was so bad the phone company had to change it a couple of times, and they couldn't understand why they had so much trouble with that particular phone. (We never told them.)

I next experimented with the 'Meyers' Tube, and was able to make it operate as an oscillator, and use it as a detector for receiving. I left school to go to work for Western Electric in Chicago on automatic telephone installations. I was a relay adjuster on the frames for the State-Central Exchange down on Washington St. After a couple months I became proficient enough that they made me the Relay Instructor and was soon tearing old relays and condensers apart to show some of the staff how to make radio receivers. Regenerative type circuit, Reinhartz, etc.

One of the draftsmen was Lewelling who also wrote articles for the Chicago Daily Tribune. He was good at just rearranging the circuit on paper so it looked like a different circuit, and put it in the next article for the paper. Good business for him as he got good pay for the articles, but at that time I didn't know he was the author of the articles and was taking the stuff I taught and wrote it up.

I left Western Electric later after being transferred to Detroit, Mich. and in 1923 I entered the Univ. of Minnesota. The Univ. had a ham transmitter 9XI. It was a Western Electric 250 watt job with 3000 volts on the plate supplied from a motor generator. After a couple of years, between school studies I learned more about tubes and receivers, also better at the code, so I got some gear

together and built a transmitter and receiver and got a license for it. I got the license in 1925, 9DG and that Station was located at 2738 Park Ave., Mpls, Minn. At the Univ. I majored in Communications, and at about that time I was the Radio Operator for the 151st Field Artillery of The Minnesota National Guard. I had taken ROTC at the Univ. for 2 years (1924-26) so I was eligible for a commission in the Sig. Corps, which I received in 1926. I was active in the Sig. Reserves for 15 yrs. (In the early 30s I was on duty at Wright Field and put an automatic volume circuit on one of their aircraft rec's. It worked well too.) In 1926 I built another station and rec. and had it located at my home in Northfield, Minn. 9UV was the call assigned to me there. Both rigs were low power, but they got out very well. During my attendance at the Univ. I found time to build custom radio broadcast rec. sets. The first used the UV199 and later the UV200 and 201s. I also worked part time on the staff of Operators at WCCO, as I had obtained a 2nd Class Commercial Ticket No. 1486 issued out of Chicago in 1927. I also was operator of WBL at times, but was mostly on remote pick ups.

At the Univ. I received a Fellowship and continued studies for a Masters Degree which I received in 1928. (I taught Elec. Eng. subjects to sophs and juniors.) I was offered a job at Westinghouse in their Radio Engineering Dept. at Chicopee Falls. Also one at The Dept. of Comm. (Installing radio beacons on airways) but I took the Westinghouse offer. I lived in Springfield, Mass. and applied for a license and was issued W1PU in 1928, but in a few months the Fed. Comm.

Auth. issued me another call, W1TR, as they had issued the other one in error as it was already assigned. In July 19, 1929 my Operator License No. 12916 was issued to me out of Boston by C. C. Kolster.

At Westinghouse I worked under Henry Forbes, who was a Section Engr. on radio receivers and special devices. Forbes had been with the Bu. Stds, also was Chief Eng. at Cutting & Washington, builders of transmitters in Buffalo, N.Y. I was in the special rec. dept. where I had the opportunity to design and build such devices as field intensity meas. equip. for Sig. Corps, automatic static recorders for the Navy (weather and storm locaters). One of the units is now in the Ford Museum at Dearborn, Mich. I also worked jointly with the Wireless Specialty Co. in Boston on direction finders. A Series of them were built and installed on Great Lake boats out of Cleveland port. I also designed and built dir. finders for use on Navy battleships. At Wireless Spec. Co. I had the good fortune to work with Dr. Pickard and Mr. Dolbear, both fine and very brilliant men.

In July of 1930 I left Westinghouse to join up with the General Motors Radio Corp. in Dayton, Ohio, to take charge of their Standards and Measurements Labs as well as co-ordinator for problems between engineering and production of radio sets. Household and automotive sets were built there. So after getting settled in a house and job I applied for a license in the 8th District and was issued W8EFK for my 119 Norman Ave. address. I moved over to 905 Sunnyview Ave. and shortly after that Gen. Motors closed up the plant and

search for another job was started immediately. That was in 1932. The former Chief Eng. of Gen. Motors Radio gave me a call and asked if I would be interested in printing telegraph equipment, so we got some ideas together and started work on it by July. Since he lived in the Oakwood section which was all the way across town, I moved over to 331 Claranna Ave. in Oakwood. My transmitter was a home brew copied after the design of one we built at Westinghouse for the Coast Guard while at Chicopee Falls, Mass. a 1kw job, but mine consisted of a 210 M.O. a 210 Buffer and a 211 Final. This I operated on the 7 mc band. I also had a 56 mc rig to work about town using a 230 for output and B battery for power supply. It worked very well but not too many others around on 56 mc to work at that time. Shortly after I moved from Mass. to Dayton, Ohio I went up to Detroit, Mich. and took another exam. and was issued a new License No. 17371 signed by M. W. Grinnel on 14 July 1931. My W8EFK license was Ser. No. 8D5204 and was issued in March, 1932. It was later extended to Mar. 31, 1935, by F.R.C. Spec. Min. No. 636 on Jan. 6th, 1933.

The former Chief Engineer and I developed a working model of printing teleg. and had it working via radio. Through Mr. Chas. (Boss) Kettering, who financed us, we were introduced to Mr. Thomas Watson, Pres. of I.B.M., and he arranged the purchase of our inventions by IBM. So in June 1935 we went to work for IBM in Endicott, N.Y. Since this was in the same district I had only to get my address changed. I first was at 42 Tremont Street in Binghamton and shortly after that I

moved to 3201 Marne Ave. in Endwell. Again in 1938 I moved to 28 Terrace Drive in Binghamton, N.Y. I used the same antenna in Dayton and in N.Y. A single wire with the feeder just off center. It was cut for the 40 meter band and the feeder was 5/8th wavelength long and I'm still using it. In 1942 IBM transferred me up to Rochester, N.Y. so I had my registration transferred to 72 Monterey Road, Roch., N.Y. and was here from Sept. 1942 until Aug. 1944 when I moved into my present address at 135 Willowbend Road, Rochester, N.Y. My Call was the same until some time after WWII when the districts were rearranged and new calls were assigned. I was given W2RDV in 1946 but soon after this I learned that if you ever had a two-letter call you could apply and if it had not been reissued to someone else you could have it. When I applied I was given my present call, W2UV which was apparently derived from my old call 9UV as 9DG had already been assigned. I've been very happy with this call. W2 Ultra Violet.

Mr. Ken Gardner told me about the OOTC and got an application from Smith, and owing to some time out for trips I did not get it sent in for quite a while later but my HRO still gets me hams from all over, pretty crowded at times, but it is good to hear some of the old timers on the Air.

73-Henry L. Tholstrup

FOR SALE

Galaxy 2000 Linear with external power supply. \$250.00 or best offer.
Jay C. McAleer, WAØLLQ
Phone: 339-3448



FIELD DAY RULES



ELIGIBILITY

The Field Day is open competitively to all amateurs in the ARRL Field Organization (plus Yukon and N.W.T.). Foreign stations may be contacted for credit but are not eligible to compete.

OBJECT

For portable and mobile stations, to work as many stations as possible. For home stations, to work as many portable and mobile stations as possible.

CONDITIONS OF ENTRY

Each entrant agrees to be bound by the intent as well as the provisions of these rules, the regulations of his licensing authority and the decisions of the ARRL Awards Committee.

ENTRY CLASSIFICATIONS

Entries will be classified in accordance with the number of operating positions capable of instantaneous operation at any one time during the FD period, followed by the designation of the nature of the individual or group participation. This does not prohibit more operating positions than your intended classification; however, use of electronic or mechanical devices or other methods of simultaneous operation on two or more bands without counting them separately in the entry classification is prohibited.

Class A. Club or non-club group (3 or more licensed amateurs) set up specifically for operation in the FD and using portable identification. Such stations must be located in places which are not regular station locations and must use no equipment or facilities installed for permanent station use, nor any structures installed permanently for FD use. Stations must be operated under one call (except when a novice position is used, as provided by miscellaneous rule c) and under control of a single licensee or trustee for each entry. All equipment (including antennas) must lie within a circle whose diameter must not exceed 1000 feet. All contacts must be made with transmitter(s) and receiver(s) operating from a power source independent of commercial mains. Entrants who, for any reason, operate a transmitter or receiver from commercial mains for one or more contacts, will be listed at the end of their class.

Class B. Non-club stations operated by not more than two licensed amateurs. Other provisions same as for Class A.

Class C. Stations located in vehicles capable of operation while in motion and normally operated in this manner, including antenna. Class C stations may operate stationary, but no stationary equipment or facilities may be used. A Class C station may not be used as a station in any other class. The operator of a Class C station may also operate from another station during the FD period, but scores for his (mobile) operations must be submitted separately.

Class D. Stations operating from permanent or licensed station locations, not portable or mobile, using commercial power.

Class E. As above, but using emergency power for transmitters and receivers.

FIELD DAY PERIOD

FD operation starts at 1800 GMT the fourth Saturday of June and lasts until 2100 GMT the following Sunday, a period of 27 hours. Class A and Class B entries who do not begin any setting-up operations until 1800 GMT on Saturday may operate the entire duration of the FD period. Others may operate no more than 24 consecutive hours.

BANDS

Each phone and each cw segment is considered as a separate band. All voice contacts are equivalent and RTTY is counted as cw. A station may be worked once on each band. Cross-band contacts are not allowed. The use of more than one transmitter at the same time in a single band is prohibited, except that a novice position may operate on any novice band segment at any time. Contacts made by retransmitting either or both stations do not count for scoring purposes.

EXCHANGES

Stations making contact, in order to count their contact as valid, must exchange ARRL section (see page 6 in any QST) and signal report.

VALID CONTACTS

A valid contact is defined as a two-way exchange (see above) between stations. Class A, B or C stations may contact any other station. Class D or E stations may contact any Class A, B or C station.

MISCELLANEOUS RULES

a. Operators participating in the FD may not, from any other station, contact for point credit the FD portable station of a group with which they participated. This is intended to outlaw any kind of manufactured contacts.

b. A station used to contact one or more FD stations may not subsequently be used under any other call during the FD period. This rule is intended to outlaw multiple contacts on the same band with the same station, using different calls. It is not, however, intended to prohibit the use of jointly-owned stations which are normally used under different calls by members of the same family.

c. Any Class A group whose entry classification is three or more transmitters may also use one novice operating position (to be set up and operated only by novice class licensees) without changing their basic entry classification. The novice position must use a novice call sign and must keep their own logs and check sheets. The novice position QSO total may be added to the group QSO total before multiplier.

SCORING

Scoring is based on the number of valid contacts times the multiplier corresponding to the highest power used at any time during the FD period, plus bonus points.

Power Multipliers. If all contacts are made using a dc input power of 10 watts or less and if a power source other than commercial mains or motor-driven generator is used (e.g. batteries, solar cells, water-driven generators, etc.), multiply by 3. If any

or all contacts are made using a dc input power of 200 watts or less, multiply by 2. Multiply by 1 if any or all contacts are made using a dc input power over 200 watts up to 1000 watts. Over 1000 watts, multiply by ZERO! Power on ssb phone is considered to be half the peak envelope power.

1. Batteries may be charged while in use for Class C entries only. For other classes, batteries may be charged (during the FD period) from a power source independent of the commercial mains.

Bonuses. The following bonus points may be added to the score (after the multiplier is applied) to determine the final score. Only Class A and B stations are eligible for bonuses.

1. 100 points for 100% emergency power, per transmitter classification. ALL equipment and facilities at the FD site must be operated from a source independent of the commercial mains.

2. 50 points for public relations. Publicity must be obtained or a bona fide attempt to obtain publicity must be made. Evidence must be submitted in the form of a clipping, a memo from a BC/TV station stating publicity was given or a copy of material sent to a news media for publicity purposes.

3. 50 points for message origination. A message must be originated by the club president or other FD leader, addressed to the M or SEC, stating the club name (or non-club group), number of operators, field location and number of AREC members participating. The message must be transmitted during the FD period and a fully serviced copy of it must be included with the FD report.

4. 5 points for each message received and relayed during the FD period, up to a maximum of 50 points. Copies of each message, properly serviced, must be included with the Field Day report.

Club Aggregate Mobile Score. Entries under Class C may be combined to form an aggregate score for their club, having no connection with the club's portable entry, if any. Individual reports must include the club name. The club secretary or other designated club official must submit the club aggregate mobile score claim. Only bona fide members of a club operating in the club territory (175 mile radius from the club headquarters address) may contribute to this aggregate mobile score.

REPORTING

Entries must be received by ARRL Headquarters by August 1. The proper summary sheet, plus a list of stations worked on each band and appropriate proof(s) for bonuses constitute an entry. A copy of your FD log is not required unless specifically later requested by ARRL. This does not, of course, relieve you of the responsibility for keeping an operating log as required by FCC/DOC. Send a stamped addressed envelope to ARRL Hq. for FD forms which include the rules, a summary sheet and a sample of a suggested check sheet.

An alphabetical list of stations worked per band (i.e. 80 cw, 75 phone) is required. Pattern yours after a sample Op Aid 6. See May QST.

FOR REPEATER COMMITTEE CONSIDERATION

This little circuit would serve the purpose of eliminating the squelch tail from both Woodmen and Council Bluffs by keeping the resulting noise bursts from entering the modulator of the repeater's transmitter.

The following is theory of operation. Audio for modulation is fed through C_1 , X_1 and C_2 to modulator input. R_1 and R_2 form a bleeder network with the "cathode" of X_1 to center point. R_9 , R_{10} , and Q_2 form bleeder network for the anode side of X_1 . Q_2 is normally shut off. X_1 will be forward biased allowing audio to pass.

Noise, high frequency rushing sound is fed through C_3 to L_1 , through C_4 to base of Q_1 . Amplified noise will appear at collector of Q_1 and will be fed through C_5 to X_2 . X_2 will rectify the noise. R_6 , C_6 , C_7 filter the rectified noise with resulting positive DC voltage across R_{11} . A sample of this positive voltage appears

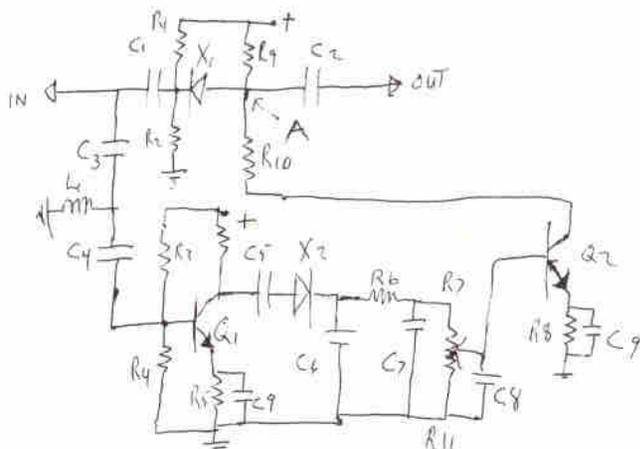
on the base of Q_2 turning it on. With Q_2 conducting, the voltage at test point A will go more negative reverse biasing X_1 . No squelch tail. When squelch tail is gone, no noise will be present and the positive voltage at the base of Q_2 will be gone. Q_2 will shut off.

R_7 is a sensitivity control and is adjusted to allow reasonably weak signals to be heard. The value of C_6 , C_7 , C_8 would be chosen to give proper time constant for best operation of circuit.

The value of C_3 , C_4 , and L_1 should be chosen to pass frequencies higher than 10 KHz and rejecting lower frequencies.

It is hoped that this idea might help the problem of squelch tail transmission. It would allow the use of a receiver with a conventional squelch circuit.

Respectfully submitted,
Bob Lockwood, WAØDHU



SPECTRONICS, INC.
"THE FM PEOPLE"

1009 Garfield Ave. Oak Park, Ill.

11 May 72

Gentlemen:

Thank you for sending us your Ham Hum each month. The fellas here look forward to reading each issue.

We saw in Ham Hum that your repeater was in need of some tubes. Enclosed you will find some 12AT7s and 6AK5s. These tubes are pull outs but most of them are good. We hope that they will be of some help.

73,

John Borgeaud, WA9EJD
Sales Manager

(Editor's Note: The Club thanks you, the Repeater Committee thanks you, and the repeater users thank you.)

May 5, 1972
Union, Nebraska

Henry L. Tholstrup's History of Early Experiences in Wireless and Radio was parallel to mine and at same time. Later in 1921 my Ford spark coil got to Red Oak, Iowa, and my 1/2 KW Thordson rotary spark gap to cage antenna got to east coast. My 5 watt home brew did the same. I had both power company and telephone company making requests.

The article was a review of my activities from 1913 to 1932. Will look for part 2; We are of same age.

Hollis Banning
(Old 9DUV)

P.S.

An old radio man, WØJOD, died a month ago - E. Fahrlander of Lincoln.

PRACTICAL APPLICATION FOR TRANSISTORS

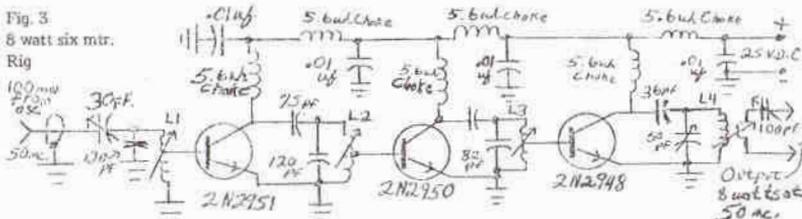
by

Bob Schoening, WØTKX (now WØBE)

Recent manufacturer's literature on high frequency transistors has yielded some interesting circuits. While for high frequencies, 160, 80, 40, 20, and perhaps 15 meters, we can get surplus NPN silicon mesa transistors for very low prices; it seems that it is necessary, in most cases, to pay the full price for the VHF jobs.

One of the most interesting VHF power transistors is the Amperex 2N2786. Alone this unit will give from 1/3 to 1/2 watt output at 220 mc, and an easy 1/2 watt on six meters. Amperex has obtained 1-1/2 watts output with four of them in parallel at 235 mc, although at this frequency "unilateralization" circuits were required, not only to prevent oscillating as do "neutralizing" circuits for vacuum tubes, but to greatly reduce the drive requirements. A typical circuit is shown in Fig. 1, which employs no unilateralization. The output circuit computations are similar to those in the last *Splatter* in which we printed some of these circuits. Other circuits such as a simple tapped tank would be satisfactory. The circuit shown has the advantage of drawing more current at resonance than when detuned. When an ordinary "tapped down" parallel tuned circuit is used, off resonance adjustment causes the rise in current which we are used to seeing with tubes, and might overheat the transistors.

Fig. 3
8 watt six mtr.
Rig



L1, L2-4 T. #16 1/4" diam. slug-tuned form. Winding 1/2" long tapped 1/2 turn from ground. (.07 to .1 uh)

L3-4 T. #16 3/8" diam. slug-tuned form. Winding 5/8" long tapped 1/2 turn from ground. (.12 to .15 uh)

L4-4T. #14 5/8" long & 1/2" diam. air wound (.18 uh)

L5-Variable or adjustable link—one turn near cold end of L4.

Note: Originally the osc. was frequency modulated for AM, the last two stages could be modulated as in the 10 mtr. rig.

de Splatter, Minneapolis, Minn.

FOR SALE — BY WHOM?

Received following ad for publication but no signature or call given:

Galaxy V with power supply
and speaker cabinet \$250.00
CDR — AR-22 \$ 20.00
Hy-Gain 20M full sized beam \$ 60.00
4-250A, 4-125A, 4-65A and
many more tubes.

Black metal Xmtr cabinet.

Will the seller kindly identify himself?

(A prospective buyer may notify HAM HUM of his interest and we will notify seller when his identity is received.)

FOR SALE

Element wide spaced 20 meter telrex beam. Very reasonable.

Dick Newsome, WØHXL
Phone: 453-6232
4304 Erskine St., Omaha

NEW BOARD MEMBER

At the May meeting the membership approved the selection of Delbert G. Gibson, KØUIV, as a member of the Board of Trustees to fill the unexpired term of WAØWOT.

Congratulations, Del!

FOR SALE

AR-22 antenna rotor (new); also two Model 100 Robosonics telephone answering machines in need of repair, or combine the two to make one good one. Make offer.

Call 397-2832

Joe Berounsky, KØQDB

WANTED

Looking for ARC-5 type receivers — unmodified.

Russ Minks, WAØVEE
1010 Center Street
Omaha, Nebraska 68108
Phone: 346-8629

GUEST EDITORIAL

By Mike Dodd – WA4HQW

You hear it all the time: "Yessir, they really have a good repeater up there at Square Corners." (Who are "they" – don't you belong to the repeater Association?) But, if you stop to think about it, you'll probably come to the conclusion that it takes two things to make a good name for the repeater – the equipment and the operators.

More and more hams in the area are getting just plain fed up with the garbage pouring unceasingly from their FM rigs. (There's one nice thing about two-meter FM – it makes you realize how good you guys really had it on the low bands!) It is hard to understand what gets into an otherwise intelligent person when he hits the microphone button on his two-meter FM rig. Meaningless prattle spills from his lips and he gives the impression that he keyed his brain OFF when he keyed his transmitter ON.

Let's look at this logically; most repeaters are considered very similar to the telephone. Repeater use is simple, QRM-free, and easy to listen to. It doesn't really make sense to use the repeater any differently than you use the telephone. Consider the following example.

Your phone rings. It's Sam, your friend four blocks down the street (going through the switchboard downtown when he could have walked over to see you directly). You say howdy to each other and then the following conversation ensues.

SAM: Well, I wonder how we are making it through the switchboard

tonight. We just got this new phone today and we sure hope it sounds fine. It's a wall-mount job, with a carbon microphone and coiled cord. Hope the audio sounds clean. By the way, we raised the telephone line another feet this afternoon; that ought to give us a little better signal. So how copy there You?

YOU: Real fine there, Sam, by golly. By golly, that new phone really sounds fine business here. Yep, you're coming in full quieting here on the Western Electric desk phone. We've had this old phone for about ten years, by golly, and it really does a fine business job. It's the standard black model, but we've added a new sensitive earphone to it. We can really tell the difference, by golly, and we are gonna play around some more with it. Oh, yea, I think we're gonna put an extension phone in the bathroom; then we can work through the switchboard when we're shaving, Hi Hi. So back to you there Sam, by golly.

SAM: Yessir, You, you're really booming in here. Real fine on the phone in the bathroom, too. Just don't get any shaving cream on the microphone, Hi Hi. Well, I'm real pleased with this new phone. It sure is a lot better than the old one we had

And so it goes. Over and over and over and over. Did you really get anything out of your conversation? Did you learn anything useful tonight? Are you really interested in all Sam's activities (and is he interested in yours)? **WOULD YOU REALLY USE THE TELEPHONE LIKE THAT? WHY USE THE REPEATER IN SUCH A MANNER?**

Come on, Pal, THINK! Nobody is really interested that you are running a Goose Model IV. Everyone has heard all about the rig from ten other guys already. And you must be getting into repeater pretty well; the other guy is copying you and hasn't said that you sound terrible. If you are having problems, the other fellow will call them to your attention. Why ask for trouble. You don't call five different people throughout the day to see how your telephone sounds. Why do it on FM?

THINK! THINK! THINK! If you don't have anything to say, STOP TALKING. Your microphone button automatically returns the rig to "receive" when you remove your thumb. What a wonderful invention! Just remember, as you rattle on and on: there are almost a hundred other hams listening to you and forming an opinion of you. Some day someone might turn you off.

Yes, they really have a good repeater up there at Square Corners. The equipment is working very well. Now all that remains is to improve what comes out of that equipment. How much better to hear, "That repeater group sure is a great bunch of hams. Really nice guys and sharp operators and a pleasure to listen to on the air." Let's work toward that.

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NOTICE OF HAM FEST

Central Nebraska Amateur Radio
Club annual Steak Fry and Hamfest -
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1972.

Send reservations to L. D. Dunbar,
WAØLWK, Milburn, Nebraska 68857.

BORROWED GEAR

In visiting with Cecil DeWitt, WØRMB, he informed me he would very much like to know who borrowed his pole-climbing safety belt. After some good natured bantering it was discovered he didn't really care who borrowed his safety belt but what he really desired was the return of his safety belt. All of this leads to "Ham Hum's Subject Of The Month"-Now is the time for all good (or bad) Hams to return the gear they borrowed. Look around the shack. I'll bet you will find some that was borrowed and not returned, so call the "borrowee" to see if he is home and then deliver it. The phone call will probably remind him of something he borrowed from you which you can pick up at the same time. Better yet, make arrangements to deliver the gear at the next Club meeting on June 9th. That way you will both be at the meeting and if all of our members will do this we would no doubt have about 125% attendance, including the "borrowees" who are not members. Besides that you will enjoy a good program!

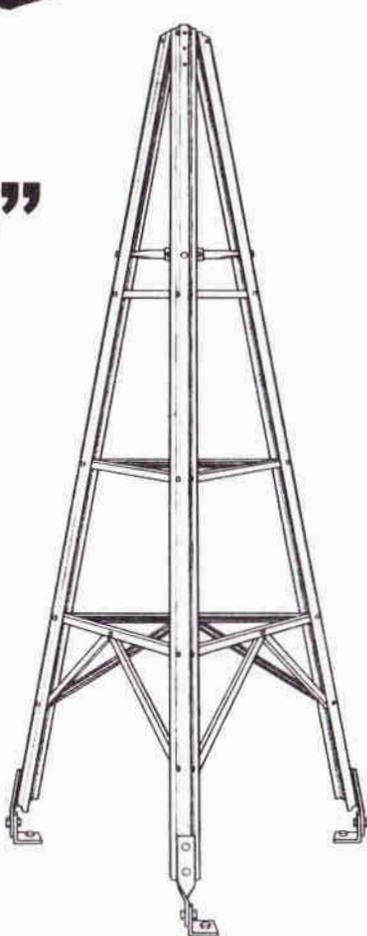
Someone please bring Cecil's safety belt to the meeting. He will be there and has agreed to grant amnesty to the absconder.

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