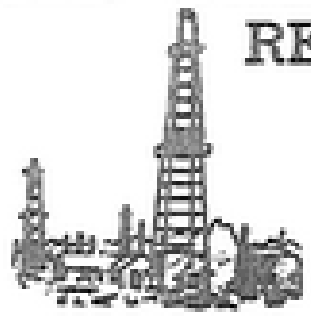


MID-OKLAHOMA REPEATER NEWSLETTER FOR FEBRUARY 1974
REGULAR MEETING FEBRUARY 5th AT CITY EOC--TEST EQUIPMENT TOPIC
MID-OKLAHOMA REPEATER INC.



Serving Central Oklahoma Amateur Radio Operators

MORI MEETING SCHEDULED - - We'll all gather round the room this February 5th in the City Emergency Operating Center at 46th and Northeastern in OKC for another MORI meeting. Besides the social occasion, club business topics will center on the hidden transmitter (see item this newsletter) and potential changes in the executive meetings. The program will be something that no one should miss and will feature Tom Hoflich K5YZQ on the topic "Getting or Building Test Equipment Cheaply." Tom is an avid experimenter and generally has three or more projects underway at any one time. Not only will he be displaying equipment he has built for test purposes but will also demonstrate his prototype frequency synthesizer he built (easier than you think) that works with a Motorola HT. (Now if he could just get it down to hand held size). Tom will also talk about Broad band amplifiers and their uses as well as demonstrating an inexpensive two meter signal generator which features infinite attenuation of the two meter signal. All in all, quite a show. Make plans now.

HAMFEST UPDATE--WA4AQW reports that new information regarding the upcoming proposed OKC Hamfest will be available at the meeting this Tuesday. Representatives from the five local amateur radio clubs will be meeting this week to determine feasibility. Cooperation seems to be building and once definite plans are formulated, mailing lists and advertisers will be informed. Carl reports that feelers made to several of the amateur population of Tulsa were very favorable and indicative that a lot of interest could be generated. For Details--Watch This Space.

WHAT WAYNE WANTS--WAYNE GETS--SIGNED MORI--Club Trustee WA5AOB reports that he is looking for a needed transformer for the power supply for the 07/67 machine. Any of you with the iron works that might fill either of the following specifications and would like to donate it to your repeater society--get in touch with Wayne. The transformer will need:

1. Five amps or more capability, and either:
 - A. 18 Volts either side of center tap or if not center tapped then
 - B. A total voltage rating output of 15 Volts.

The strange voltage requirements are functions of the losses that occur in stepping down through voltage regulators. If you can help, then contact Wayne. Phone Number 732-1870.

ELECTION RESULTS--For those of you haven't already heard, two elections had to be held at the last meeting instead of one. I'm grateful that the club members present expressed confidence in the job that I've done as Secretary-Treasurer to elect me President. As the result of my election, the job of Secretary-Treasurer became vacant and the club elected Tim Mauldin WA5LTM as the new Secretary-Treasurer. Although this brings a shift in the MORI Backfield, I don't think that it will change the direction of the goals of the club set by previous presidents. The most important goals will be the completion and licensing of the new 07/67 machine, providing emergency backup power for both repeater systems, a successful OKC Hamfest, and a continuation of the good relationships with the other radio clubs in the OKC area. The resources available for project and work efforts from these groups will be tremendous and I believe that there is a need for a central organization for coordination. I think that with Tim, Carl, Wayne, and the many other hardworking members of MORI that these goals and others can be worked toward.

EXCUSE ME SIR, BUT HAVE YOU SEEN A TRANSMITTER AROUND HERE?----Fun for the whole family. The Oklahoma City Autopatch Society has scheduled a hidden transmitter hunt Sunday, February 17 starting at 2:00 p.m. In addition, they have invited all members of MORI and other surrounding clubs to participate for the free prizes and refreshments, including a new Ringo Antenna and other items. In addition, early finders will be available to avail themselves of free refreshments courtesy of OKCAutopatch as incentive to be among the talented few. The rest of us will be contented to bring our own refreshments. MORI Member W5ORH, trustee for OKCA says that everyone will be asked to check in on frequency and/or meet at a central location. Then the 22/82 repeater will be taken off the air and the hunt will then proceed on 82. Jay and the others will be at the hidden transmitter site and will be talking reverse of the repeater so that hunters will be able to interrogate the transmitter for test signals. Anything goes in finding the transmitter as long as no laws or FCC Regulations are broken. Any equipment that you could muster will be allowed. K5OHU reports that some success could be obtained with just rabbit ears at a 45° angle, but for those of you who need something more sophisticated, we present a couple of items as a supplement to the newsletter that should prove useful. Besides your rig, you'll need an antenna and an "S" meter. We (or K5OHU and W5ORH) have conveniently solved both. Check the supplement and start building. Jay will have a short discussion of the hunt at the meeting. This is a useful skill that we could all use, especially if trying to track down kerchunkers. Down with them and all other Bad Acting Operators. Jay sez the first hunt won't be too difficult. It's simple. You find his cigar, you find the transmitter. See you at the hunt. All this and prizes to boot.

WB5HAK is looking for a 16 transmit crystal for a Gladding 25 XCVR. Contact Don at 525-7361.

FCC LOOSENS UP--Licensing Requirements, that is. Pat Devlin, Trustee of the Tulsa Repeater system, reports from SAROC (at which Prose Walker was in attendance) reports that the FCC is beginning to mitigate some of the details that had to be submitted for a repeater application. It appears that it is not now necessary for a potential applicant to submit the average height above terrain measurements for the system. Also, it is no longer necessary to submit repeater antenna patterns for approval by the Commission. These must be made a part of the permanent station log. This makes sense. The real question involved here was of what use to the FCC were these statistics? The obvious answer was none. Initially, the Commission thought that it would have to act carefully to prevent interference between repeater stations. Thus the idea of requiring these patterns arose in order to give the Commission some appreciation of the terrain surrounding the station. Instead it gave repeater applicants an appreciation of what a pain the requirement was. Since the FCC had never acted to control the first step to be made in reducing interference (that is by frequency assignment, a No No at this time), then it did little good to require applicants to submit information with regard to height above average terrain in order to determine repeater coverage when the specific frequencies (i. e. 146.34/146.94 Mhz) weren't specified but only the band involved. Height above average terrain measurements are useful when determining the power requirement, but proof of the calculations was certainly not in the best interests of speedy application processing, plus it was a requirement which required much work for minimum return. Also the Commission has recently hired Gary Hendrickson W3DTN (Former FCC columnist for RPT Magazine) to help process repeater applications. All in all, the spirit now appears to be one of streamlining the approval steps and cooperation. HAM RADIO REPORT has stated that the repeater application backlog is clearing rapidly. Thus it would appear that things are picking up in Bureaucracyland. MORI has not yet been the beneficiary of these increased services, still awaiting the long hope for license for both 34/94 and 07/67.

MORI POETRY REPOETER--The newsletter takes a turn from Bad to Verse with the following literary (?) tomes, submitted by WA5NON, A. Non Amous. If it stings, then maybe he is on target. Here goes-----

With Regard to the Sounds on 94,
In Excess, Listeners may find a Bore,
My solution to you,
QSY to 52,
No Ragchewing Base to Base Anymore.

Had enough? OK One more, this one's short for all you masochists.

Minimum Power for Maximum Use.
How many of you avoid this abuse?

It takes more than a Ham license to write this stuff. A Poet's license is also needed. Manuscript are solicited from all you Renaissance Hams.

Opinions expressed in the MORI NEWSLETTER are those of the writer and not necessarily those of Mid-Oklahoma Repeater Inc. unless otherwise represented as such. Equal time (within space limitations) will be offered to anyone sufficiently offended to write in about it. This newsletter is published by Mid-Oklahoma Repeater Inc. as a service to its members. For information about the club, contact any officer or member of MORI.

Micheal Salem	WA5EPK	1324 Lincoln	Norman, Okla	73069	Pres.	321-5453
Carl Freeman	WA4AQW	4833 Eric Drive	Del City, Oklahoma	73115	V-P	672-5476
Wayne Hogan	WA5AOB	113 E. Mornside Dr.	Midwest City, Okla	73110	Trus.	732-1970
Tim Mauldin	WA5LTM	3033 SW 60th	Oklahoma City, Okla	73159	Sec-Tr	681-0660

MID-OKLAHOMA REPEATOR INC.
1324 Lincoln
Norman, Oklahoma 73069

To Amateur Radio Station

First Class

Here is your February
MORI Newsletter!!!

MORI MEMBERSHIP UPDATE--Another good month. This list is cumulative and updates the main list sent out three months ago. We'll try to have a revised list next month.
 RENEWALS: K5HQP, W5OZE, WB5FTE, WA5EAI, WA5LTM, W5TKS, W5CDG, K5YTW.
 Make this change on list: Change call of WA5ZAI to WA5ZAJ (Ok? Leonard).
 Several of the renewals and memberships were for less than a year indicating the transitory nature of MORI Members.

NEW MEMBERS SINCE NOVEMBER

K5AYL	Bob Lyon	4409 Wafford	Del City, Okla	73115	
WB5AUF	Abe Crook	3448 N. W. 18th	OKC, Okla		
K5CFM	Tony Merritt	11417 Greystone	OKC, Okla	73120	755-0820
WB5DOH	Mike Burger	525 West Guy, Apt 4	Pauls Valley, Okla		
W5DVY	James Harmon	3224 N. Ridgewood	Midwest City, Okla	73110	732-6303
WA5EJU	Carl Sheff	505 Ercoupe Drive	Midwest City, Okla	73110	
WB5ISN	Dennis Orcutt	3210 South Rankin	Edmond, Okla	73034	341-4200
WB5ISO	Wendall Cochran	624 Woodland Way	OKC, Okla	73127	789-0623
WB5JBL	Frank McCollom	Route 2, Box 149	Edmond, Okla	73034	751-3577
W5JCJ	O. B. Ramsey	4917 N. Wisconsin	OKC, Okla	73111	427-6916
W5MCJ	Jerry Broudy	1920 Westbrook Terrace	Norman, Okla	73069	329-0262
K5OHU	Jim Caldwell	3120 N. W. 61st Terrace	OKC, Okla	73112	842-7280
K5QDR	John Huckaby	4344 Suntane Road	Del City, Okla	73115	
WA8SJN	Stephen Budensiek	4808 N. College	Bethany, Okla	73008	789-5818
K5URJ	Perry McWhorter	3418 N. W. 29th	OKC, Okla	73107	
W5VZY	Lee Lash	1403 N. Purdue	OKC, Okla	73127	942-0177

MORI EMERGENCY ASSISTANCE LOG--The growth continues slowly, but surely. Please do not ignore informing the club about public service you render via the repeater. Dig out those emergency assistance cards and let us know when something happens. If you need cards or additional cards, then notify the secretary-treasurer. Your old cards become a part of the permanent public service file of the club. Entries for this month.

- 1/14/74 W5KOZ at 4:53 p.m. reported a gas tank in the street on N.W. 23rd in front of the state capitol. He alerted the EOC who then notified the City.
- 1/14/74 K5HFN at 5:20 p.m. reported a brush fire in the 8800 block of S.E. 25th. He alerted the EOC who then called the fire department. The police were also notified after several children were seen playing in the area before the fire.
- 1/23/74 W5VZY reported a signal light malfunction at N.W. 10 th and Linwood. He alerted the EOC and the City was notified.
- 1/27/74 K5QDR at 6:09 p.m. reported a signal light stuck at N.W. 10th and Walker. He alerted the EOC and the City was notified.

A SIMULATION IS WHEN YOU GET READY FOR THE REAL THING DEPT--WA5JGU reports that the Simulated Emergency Test Sunday, January 27 appears to have been a big success. Amor the disasters that were planned for the local amateur crowd was a simulated small plane collision with a Boeing 727 and a resulting mid-air explosion with no survivors. In addition, to other items they also threw in an overturned Butane transport on the N.W. Expressway. Preliminary figures estimated that from 35 to 40 amateurs took part in the field with five command posts and over 130 pieces of traffic from W5LOW , the Red Cross Station. Most of the activity took place on 3900 Khz., 52 Simplex, and 6 meters with occassional use of the repeater when needed. In addition, by prearrangement with WA5AOB, there was a 15 minute shutdown of the repeater to test communications capability during down time such as would occur during an actual disaster. After the test was secured at 4:35 p.m. after about 3 1/2 hours, everyone who could met down at the Red Cross for a 40 minute critique and dinner. "The experience was education for everyone concerned, although some mistakes were made, everyone seemed to get into the groove quickly and smoothly." "Many of the hams there for the first time said that it was most enlightning and Charlie especially complimented the novice and Explorer scouts. Good show!

WHO'S WHO ON 52--- An informal survey by WA5LTM indicates that the most popular simplex frequency is 52. You'll remember that 146.52 Mhz. is the national simplex frequency and several years ago at a MORI meeting, the club endorsed the use of 52, 55, 58 for direct work and discouraged the use of the primary repeater output 146.94 Mhz. Tim's survey turned up the fact that the second most popular frequency for simplex appeared to be 58. Those of you anticipating the purchase of simplex crystals will do well to keep this survey in mind. Don't buy 46 simplex crystals as that is frowned on by the Ardmore Repeater Group because that is the input of their repeater. In order of popularity, then buy 52, 58, 55. We'll continue our survey.

REPEATERS ANONYMOUS--Although repeater listings are becoming more complete with the passage of time, if anyone is planning a trip to California and would like a complete repeater listing, please see WA5EPK. A passing postman gave me a copy. Going to Puerto Rico? Then see KP4DJT. He's got all the poop.

BARGAIN BILLBOARD

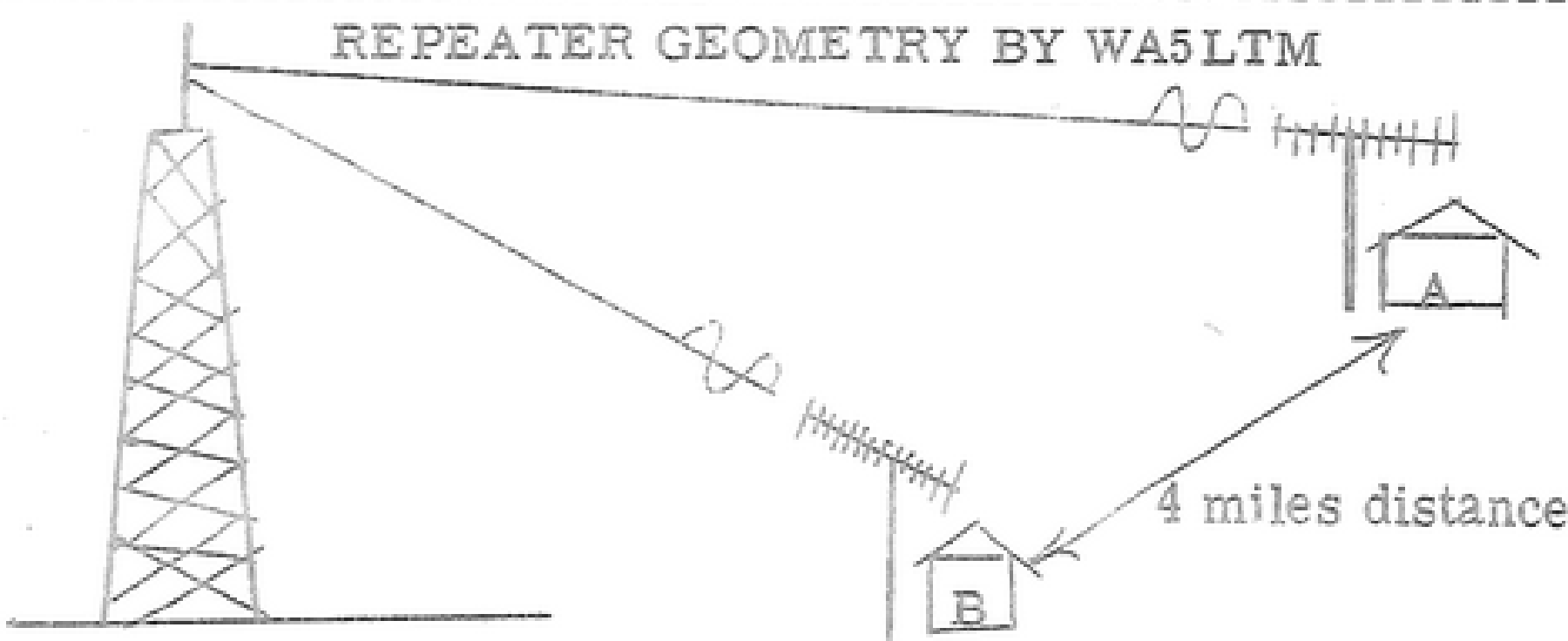
WANT TO BUY---Used transistor checker. Contact WA8SJN. 789-5818.
WANT TO SELL---Rackmount BC-348 receiver with various additional parts. Asking \$30.
Also Eico Model 324 RF Signal Generator. 150 Khz--435 Mhz. in seven bands. Internal and External Modulation. Asking \$25. Contact Jim Koerner WA5JTJ. 1415 Lincoln, Norman, Okla. Phone 321-6957.

WANT TO SELL--Squires Sanders SS-1R Receiver 80-10 Meters with WWV at 10 and 15 Mhz. Speaker and built in noise limiter--\$275. Clegg Zeus 6 and 2 meter transmitter, 150 watts. AM and CW with VFO and Crystal control--\$200. Gonset Communicator IV for 6 meters with VFO for 6, 2, meters and 220 Mhz. ---\$75. Drake 2-C Receiver with matching speaker and Q-Multiplier--\$250. KAAR-PHONE DT-76, 6 transmit, 6 receive, 180 watt two meter transceiver. All solid state except for final (instant heating). (94/94, 34/94, 22/82, 28/ 88, 16/76)---\$450. HR-2A Transceiver with 12 frequency deck loaded with complete set of International Crystals--\$190. Call Tony 755-0820.

FCC FINANCIAL STATEMENT--WHO PAYS FOR WHAT AND WHY?----Recent reports from the Commission indicate that the Commission took in about \$25 million in fees last year, a \$600,000 increase over the previous year. Here's the breakdown:

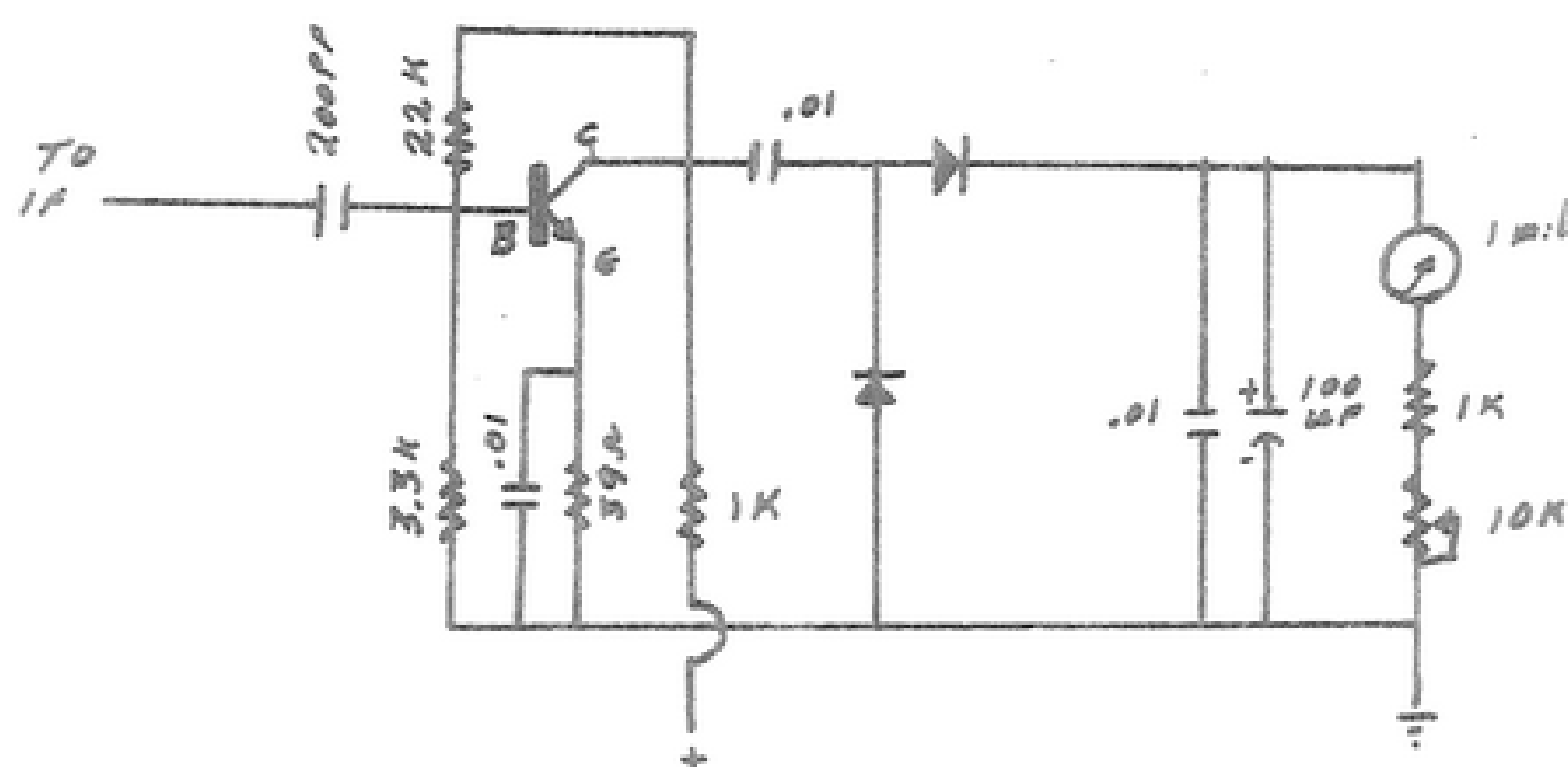
Broadcast Services	\$10,275,180	
Safety and Special Services	\$7,384,123	
Common Carrier	\$4,548,746	Other smaller figures are omitted.
Field Engineering	\$1,473,407	
Cable TV	\$485,344.	

Although we occasionally get carried away in these pages with certain situations that exist in Ham Radio today, our intentions are good. The intent is to convey some of the considerations that go into decision making at the Commission level and to show where some of the concentration of power occurs. These figures are not so unusual until you consider that the NAB (National Association of Broadcasters) has petitioned the Supreme Court to invalidate new higher fees for Broadcasters because of a Congressional edict which says that "where the identity of the ultimate beneficiary is obscure, the service is considered of benefit to the general public and no charge shall be imposed." Based on this, the NAB says, "Commission's activity was a wrongful attempt to recoup the costs of Commission activities which are of benefit to the public generally and do not constitute special services inuring to the benefit of identifiable recipients." HO HO! Although I haven't seen any recent profit statements for many of the radio or television stations around the country, I will bet my final that they aren't starving. The broadcasting public serves the broadcaster more than the broadcaster serves the public. The service that they provide may certainly inure to the public, but there is no question that they are helping themselves to a share of the profits. The basic idea is that they are profit oriented and they enjoy a franchise which gives them exclusive rights to the frequency in their area. Why should they be chosen over other groups? Because they are supposed to demonstrate and justify their license. But any station operated through a Commission license must operate in the public interest or its license would be suspended. Perhaps the error lies in the Congressional edict. Do amateurs' services inure to himself as an identifiable entity or to the public in general? My analysis is that the amateur gets a little of both, but in no way can he recoup his licensing and operating expenses through revenue mechanisms like broadcast stations. Thus his use of the spectrum must definitely inure to his own personal benefit or sense of accomplishment and especially to that of the public (i.e. having a trained and prepared corps of dedicated skilled operators available during emergencies). Something to think about. Who do broadcasters pay only a relatively small part of their total investment for licenses (based on a relationship to their highest commercial rate) while others are required to pay more which might constitute a larger percentage of their investment? It makes you wonder about the makeup of the people on the commission. (Most of whom are former broadcasters?) How are laws (regulations of the Commission) made? Think about it.

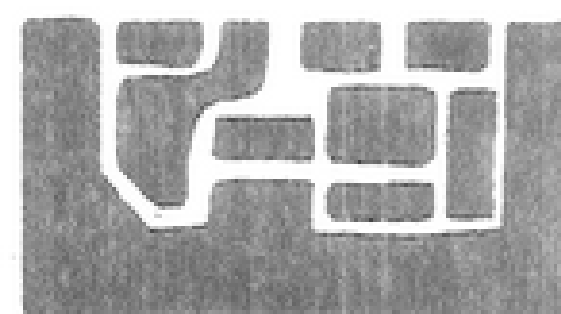


Repeater Geometry Question: How many antenna elements are necessary for someone to talk from Point A. to Point B?
Answer: No one knows. Use 52 Simplex and find out.

K5OHU "S" METER FOR REGENCY HR-2A



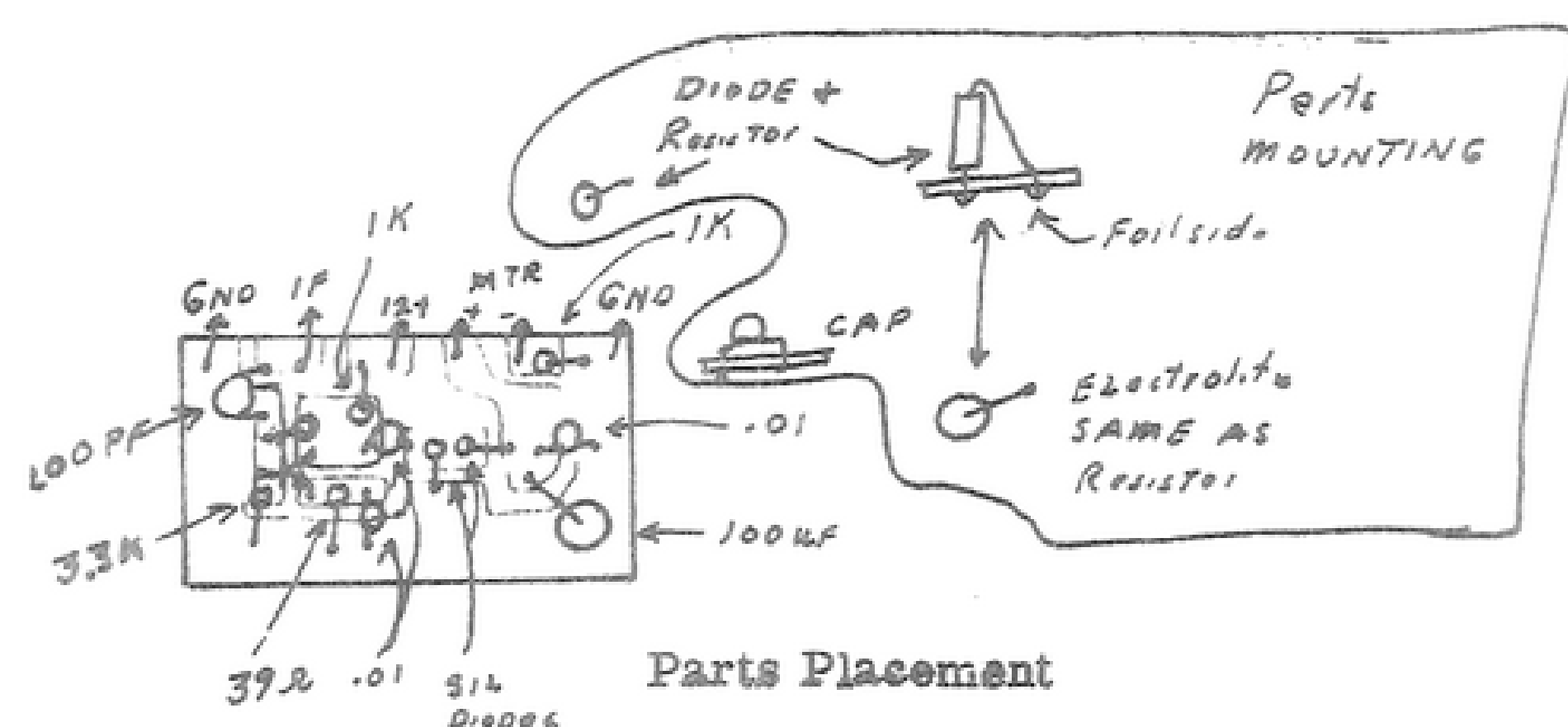
Schematic Diagram



ETCH TEMPLATE

PARTS LIST

- 1 - 200 pf.
- 3 - .01 uf
- 1 - 100 uf, 10WVDC
- 1 - 39 Ω
- 2 - 1K
- 1 - 3.3K
- 1 - 22K
- 1 - 10K pot
- 1 - 1 Milliampere meter
- 2 - S.I. Diodes
- 1 - NPN Audio Transistor

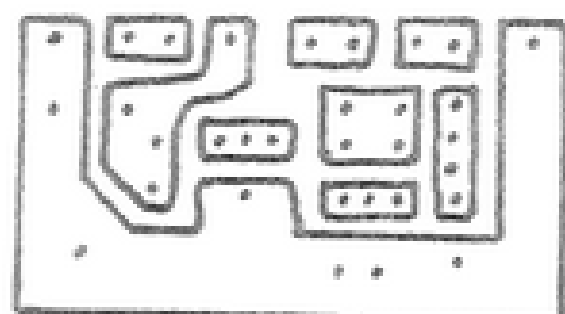


Parts Placement

Jim suggests that you mount the 10K potentiometer inside the meter box.

For additional copies or for information see:

Jim Caldwell K5OHU
3120 N. W. 61st Terrace
Oklahoma City, Oklahoma 73112
Phone: 842-7280



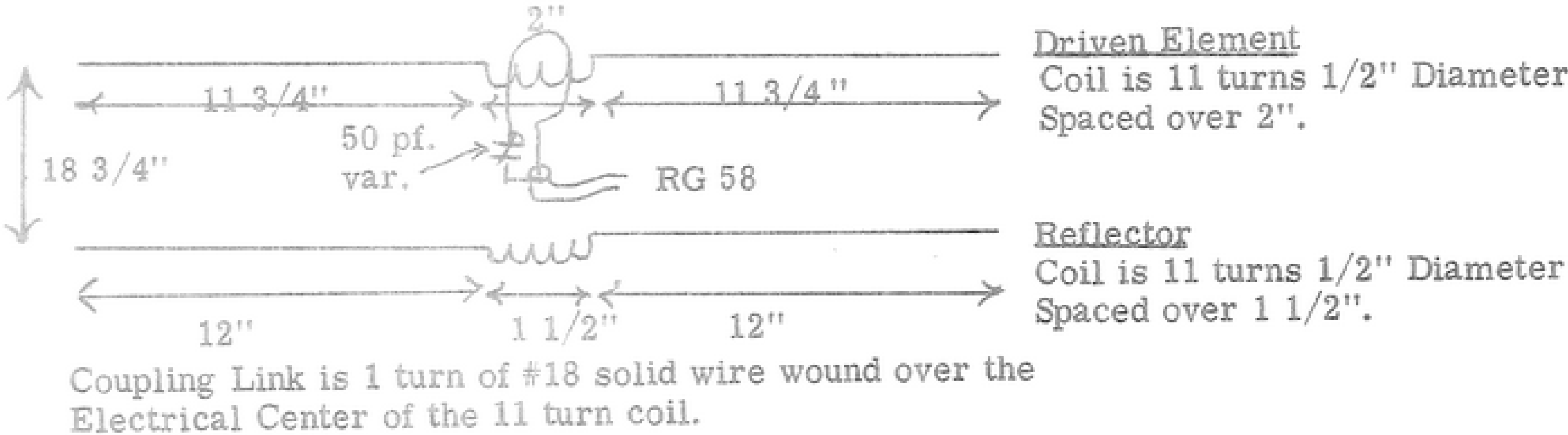
Drill Guide

Jim also has a few Printed Circuit Boards already etched at nominal expense on a first come, first serve basis.

MORI NEWSLETTER FOR JANUARY 1974

----ORH MINIBEAM--GAIN 5.4 DB--FRONT/BACK RATIO 10 DB--SWR 1.4:1----

Mike, Enclosed is the information on the ORH mini-beam. Found this the best method for use on a transmitter hunt. Was quite a problem trying to get a device that would be small enough to stick out a car window, give enough gain to find a weak signal, and yet be used to transmit on. But we finally came up with a most acceptable device. It can be built for about 50 ¢ and when used with a receiver "S" meter is most effective. When used on a talkie, it would key the Enid Repeater from my house. It was decided to use a beam instead of a loop as the conductor in a loop must not exceed .08 wavelength. As the radiation resistance of a loop is extremely low, most of the power supplied to a loop is wasted in conductor resistive losses when the loop is used for transmitting, a similiar condition exists when the loop is used for receiving. Because of its small size, only a very small amount of energy can be absorbed from the passing wave resulting in insufficient "S" meter movement. Therefore, we have come up with the mini-parasitic array. Hope this will be of some help to the boys. We have built several from the enclosed drawing and find them to come in very close if the instructions are followed. The only adjustment required might be moving the coil on the driven element in or out to get the SWR with limits. 2:1 SWR is OK, or even 3:1 is acceptable, but 1.5:1 or less can be easily obtained.



Elements are made from #14 galvanized wire, Cut a piece 46" Long, start winding the coils 13" from an end, then trim off excess from each end. If an SWR of 1.5 :1 is not obtained, squeeze in or pull out the coil of the driven element. An SWR of over 2:1 or 1.3 : 1 can be obtained by moving the coil only 1/8", so adjust accordingly. Mount the elements on a wood support (an old yard stick cutoff is excellent). The elements may be taped on. A broom handle may be affixed to the yard stick. Use the antenna in the clear. When used in the proximity of other antennas and metal objects, erroneous readings and High SWR's may be expected.

Coax should be brought 9" back toward the reflector, then directly down the broom handle.

