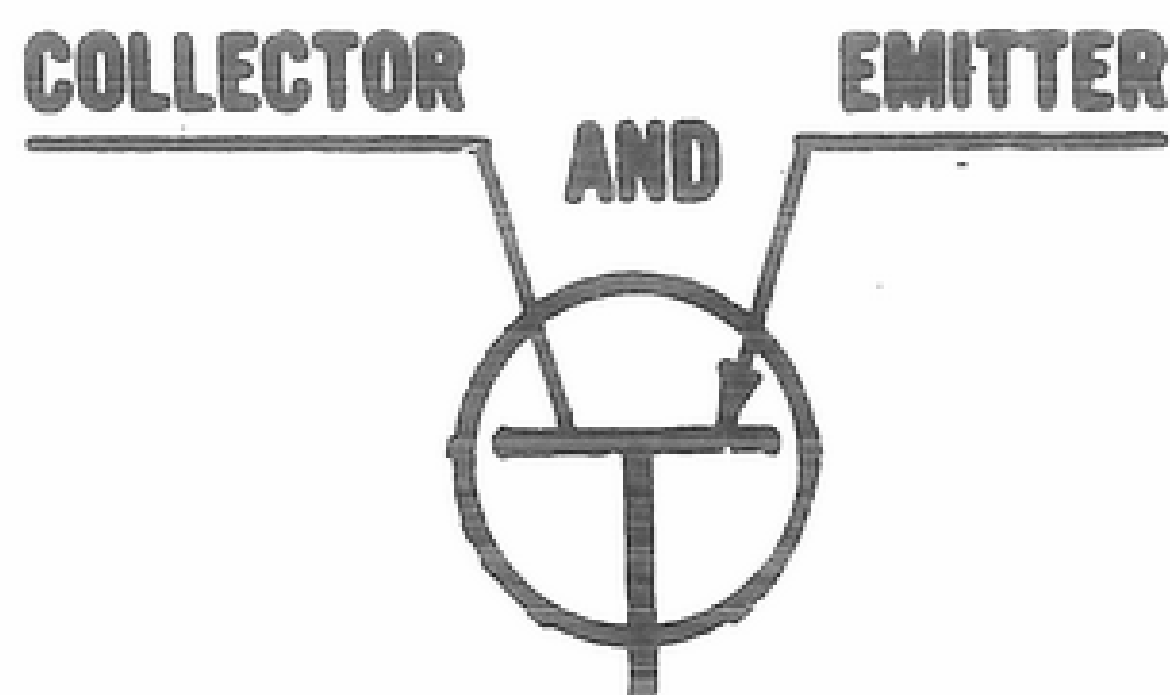


# Central Oklahoma Radio Amateurs

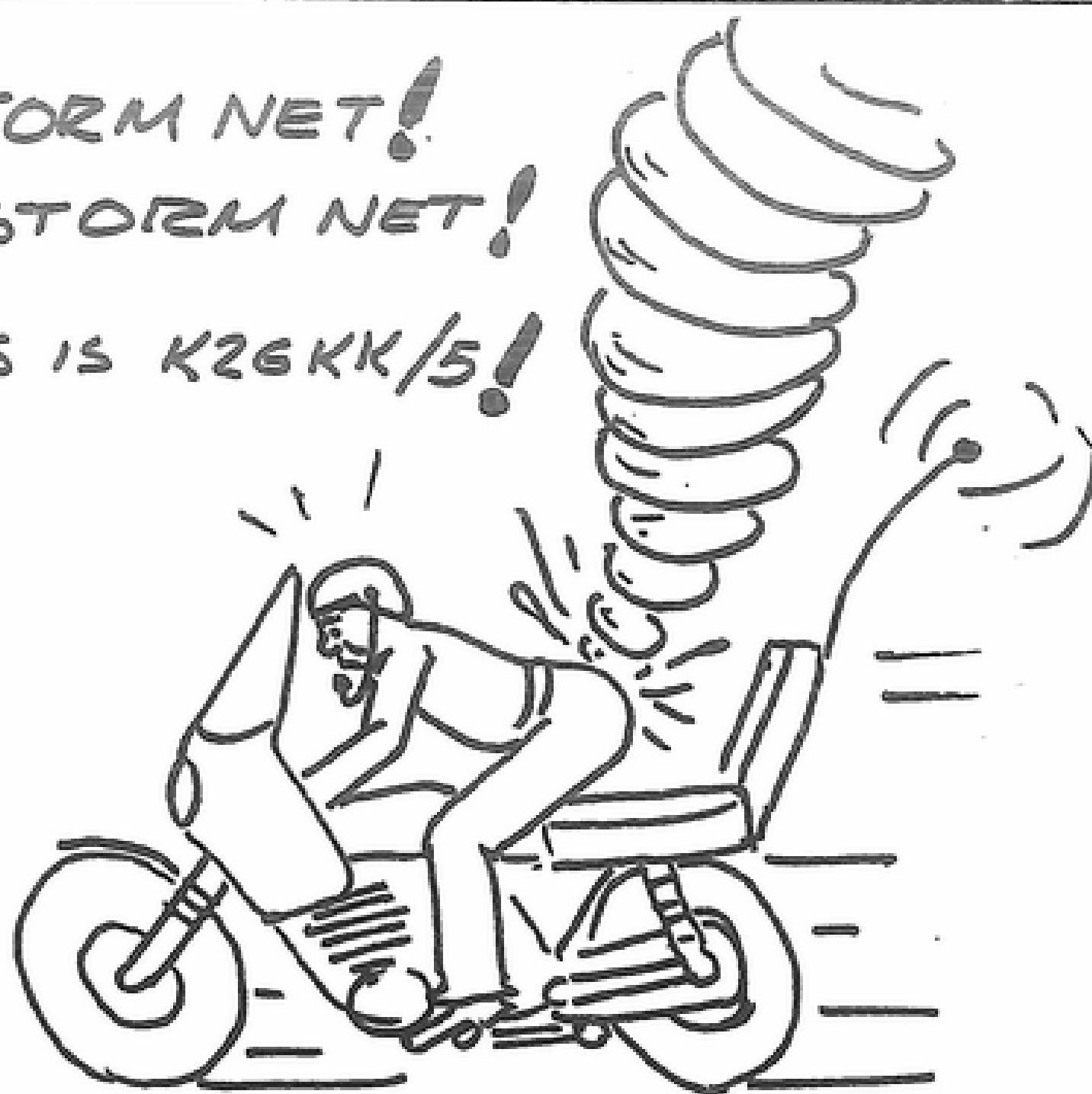


Volume 1

December 1975

Number 11

**CQ STORM NET!**  
**CQ STORM NET!**  
**THIS IS K2GKK/5!**



## MINI-TORNADO, 19 NOVEMBER

So far, nobody has been able to classify the mini-tornado which destroyed a restaurant on I-35 in northeastern Oklahoma City on 19 November. The question remains as to whether it was a left-over from Spring 1975 or a premature appearance of Spring 1976. It was very fortunate that the restaurant had been closed for some time, since the winds struck with no warning and the level of destruction would certainly have caused serious injuries and death if the restaurant had been occupied.

The vicious weather did provide one benefit, though. An out-of-season storm really tests the response of amateur radio. Even though most amateurs were at work at the time, ten responded quickly. K2GKK activated the Severe Weather Net after coordination with Radar Control at KMFV, Channel 9. W5JCa was dispatched to the vicinity of Frontier City to report on current weather and damage. W3MLK was sent to the town of Jones to check out that area where a "Hook" radar echo had been observed by Radar Control. The net was secured after 45 minutes of operation when the severe weather moved out of the Oklahoma City area.

Thanks, guys, for the rapid response.

The CORA Collector and Emitter is published monthly by CORA for the participating Amateur Radio Clubs in the Central Oklahoma area. Material contained herein may be reprinted without prior permission with credit given this publication. Address all correspondence to CORA Collector and Emitter, Box 15013, Oklahoma City, OK 73115.

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Editor for OCVHF	Joe Buswell	WA5TRS	732-0676
Editor for OKCAP	Don Moore	WA5FFK	787-5189

Central Oklahoma Radio Amateurs (CORA) Inc. was organized to enhance the cooperation of Oklahoma Amateur Radio Clubs in sponsoring activities of mutual interest to the Clubs and Radio Amateurs. Participation in specific CORA activities is optional with the individual Clubs. CORA officers are:

President	Ken Kendrick	WB5ECJ	751-4917
Vice President	Gary McCormick	WA5ETV	946-2898
Secretary	Ellard Foster	W5KE	789-6702
Treasurer	Bob Williams	WB5LHR	789-0987

Participating clubs for CORA Collector and Emitter:

**AERONAUTICAL CENTER AMATEUR RADIO CLUB, INC.**

Postal Station 18, Oklahoma City, OK 73169

Meetings: 8:00 p.m. on first Friday each month, Flight Standards Building, FAA Aeronautical Center. Club Station W5PAA.

President	Bob Ashby	W5HXL	942-5375
Vice President	Al Prince	WB5KCU	789-1160
Secretary/Treasurer	Bill Oliver	K5KDR	329-6333
Asst to President	Ken Ford	WB5KHU	528-8770

**OKLAHOMA CENTRAL VHF AMATEUR RADIO CLUB, INC.**

323 N. W. 10, Oklahoma City, OK 73103

Meetings: 8:00 p.m. on third Friday each month, American Red Cross, 323 N. W. 10. Club Station W5LOW.

President	Carl Drumeller	W5JJ	789-3788
Vice President	Tom Stinson	W50ZE	942-3714
Secretary	Jef Casey	WB5GWB	528-0252
Treasurer	Ellard Foster	W5KE	789-6702

**MID-OKLAHOMA REPEATER, INC.**

Meetings: 8:00 p.m. Tuesday of first full week each month, Oklahoma City EOC, 4600 N. Eastern. WR5ADE 34/94  
WR5ADF 07/67

President	Bill Noland	WA5FWD	354-5018
Vice President	Jim Kearns	WA5LFN	751-6035
Secretary/Treasurer	Don Graham	WA5TAW	733-3044

Mail dues to Sid Gerber, 829 E. Bouse, MWC, 73110

**OKLAHOMA CITY AUTOPATCH ASSOCIATION, INC.**

Meetings: 8:00 p.m. on third Monday each month. WR5ACB 22/82  
147.81/21

President	Frank McCollom	WB5JBL	751-3577
Vice President	Larry Dillard	WB5CWB	685-4065
Secretary/Treasurer	Jim Denman	WB5EOL	681-6048

7705 S. Charlotte Drive, Oklahoma City, OK 73159

Subscription Price: \$3.50 per year to non-affiliated club members



W5PAA

## THE PRESIDENT'S CORNER

Election of Club officers for 1976 at the January meeting deserves your careful consideration. Who do you want to guide the Club and its activities through the next year? If you would like to serve, or have a recommendation, get in touch with the nominations committee and let them know your desires.

George Lagaly	W5NTL	789-4073
Howard Ridgeway	W5WSW	946-7610
Ellard Foster	W5KE	789-6702

DECEMBER MEETING. Dinner meeting at Dodson's Cafeteria, S. W. 59th and Penn, 6:30 p.m., December 5, 1975.

JANUARY MEETING will be at the regular time and place, but a week later than normal, 8:00 p.m., January 9, 1975. The first Friday, being the day after New Years Day, didn't look like a good time to have the meeting - some of us may be a little slow in recovering from New Years Eve.

Red Carpet treatment in the Great Plains. Rolled the "Porta-Shak" out Oct 30 to enjoy the autumn weather on a four day weekend. Destination was Quartz Mountain State Park to do a little roaming in the southwest part of the State, a neglected corner on prior trips. Approaching the park, we saw the huge C-5's flying out of Altus. They are so big they appear to be slowly floating in the sky like a big blimp. As soon as the "Porta-Shak" was set up in the park, I strung up the 75 meter inverted vee and checked into three Oklahoma nets looking for W5ATO in Granite, he didn't check in. Started monitoring .52 and there he was mobile enroute to Altus for dinner and an evening of bowling. We met Raymond, W5ATO and his YL Janie in Granite Friday morning where we enjoyed a conducted tour of the quarry and monument works, followed by a run over to Mangum for lunch. After lunch, Raymond dropped us off at the Qth of H. C. Ford, W5CAG. H.C. took us up to the top of "Old Baldy" the head of Granite's cable TV system. It is 1900 feet above average terrain, so you can see forever in all directions. The wind is also a bit brisk up there, gusting above 60 mph while we were there. In addition to the TV antennas, H. C. has a pair of 11 element beams on 2 meters - what a location to work out on VHF! H. C. then gave us a tour of the Ford's Museum, old cars, radios, etc. His prize item is a 1914 REO in tip top shape. The activity on 2 meter FM amazed me, with some rag chewing on .52 that I haven't heard since the old 6 meter Nite Owl Net days. I worked 10 stations in the Granite, Lone Wolf, Mangum area. The hospitality of the local amateurs made this a very memorable trip - thanks to all the gang in that area.

73  
W5HXL



MINUTES OF THE AERONAUTICAL CENTER AMATEUR RADIO CLUB  
November 7, 1975

The meeting was called to order at 2005 by President Ashby. There were 29 members and guests present. President Ashby asked for a round of self introductions.

Bill, K5KDR, George, W5NTL, and Howard, W5WSW, had no great accomplishments during the month. Don, WN5NIY, passed his general and advanced class in October and is awaiting the new ticket. He bought a Heathkit HW202 - put it together, sold it, and ordered the new synthesized HW202-6 which has not arrived yet. Ivan, W5HFU, has been fooling with a touchtone. Carl, W5JJ, was lazy. Al, WA5KCU, was out of town much of the month. He spent some time at Lake Eufaula and then went to Cape Kennedy in Florida. Charlie, WA5JGU, had an exciting time in Big Bend National Park in Texas and he even took some pictures (but not of the excitement). Elmer, W5BKN, has been selling the Woody Johnson estate. Tom, W5OZE, has been playing on 2 meters - working skip. He reported W5QAY is a silent key. Kermit, K5JEA, has been chasing DX. Ed, K5LIL, worked 2 new countries with Kermit. Ellard, W5KE, Marvin, WA5HQP, and Lyle, W5SJC, did not accomplish much. Bill, WA5RAQ, has an intermittent problem in his SB202. He is awaiting word from Heath. Dorothy, WB5ELG, will be going to the hospital for some tests. If they prove positive, she will be a candidate for a new type of eye surgery for those who are blind due to diabetes. She said she needed our prayers. J.W., WA5KFT, got his Hustler going on 80 M. Ken, WB5KHU, worked Joe, WA5TRS, in Colorado. Fred, WB5PWO, is about to get on the air. He had to wait 83 days for his license. Dennis, WB9GBS, is a student at the Academy. H.O., WA5MLT, waited 16 weeks on his license. After some phone calls to Gettysburg and Washington he got it and is on H.F. now. Al, W5TJL, has a new granddaughter. Leonard, WA5FSN, has experienced a power supply failure in his auto - the first one in 9 years. Butch, no call, is working on the code. Bob, W5HXL, was with the mob at Texhoma. He and the XYL spent 4 days at Quartz State Park.

The December meeting will be held at Dodson's cafeteria located at S.W. 59th and Pennsylvania on December 5 at 6:30 p.m.

The January meeting will be moved from January 2 to January 9 for obvious reasons.

Discussion was held concerning the periodicals the club subscribes to.

Billy J. Oliver, K5KDR  
Secretary-Treasurer



### JAMMER

Pat Fennacy, W6YEP, showed us the jammer which caused our WR6ACU repeater to be out of service over the Labor Day weekend. This little "gem" consisted of a crystal, transistor, and assorted parts haywired together with a battery that would have run it continuously for the better part of a year. It had a DC input of about 25 MW and was suspended in a tree top a few hundred feet from the repeater. Pat flew over the area in his plane and pinpointed the general area, after which our committee on the ground climbed several trees before the jammer could be seen from less than 10 feet away.

SKIP

Fresno Amateur Radio Club, Inc.

"Instant" license upgrade and possibly even instant license is going to happen Charley Higginbotham, W3CAH, promised. Discussions on how it will be done are well along, and he expects a system to be introduced soon whereby an applicant who successfully passes his upgrade exam from General to Advanced, for example, can walk out of the examiner's office with authority to go home and operate the Advanced band segments! It's even possible that a successful previously unlicensed applicant could be issued a license and a call on the spot. At least part of this package could be given the amateur community as a 1975 Christmas present.

H. R. Report

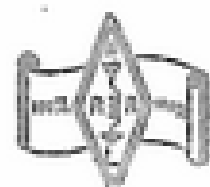
Canada goes after ignition noise with a new Radio Interference Regulation that takes effect next September. The new regulation will severely limit the permissible radiation from any spark ignition engine, including autos, chain saws, and snow mobiles with the one exception of aircraft engines. The regulation will eventually be extended to include other RFI sources, such as power tools and high voltage transmission lines.

H. R. Report

### ELECTION OF OFFICERS

It is again time to think about the election of club officers for the next year. Although the present officers have done an excellent job they should not be expected to do all the work year after year. After several years in office one feels he has done his share, at least for awhile. There are a number of good qualified members in the club who could provide capable leadership as officers and create more interest within the club. If you would like to be a club leader and bring new blood and ideas into the club's activities, contact George Lagaly, W5NTL, FAA ext 2788 or 789-4073. Chairman, nomination committee.

W5NTL



W5PAA

Central Oklahoma Chapter QCWA meeting November 16, was a pleasant experience. Their quarterly meeting was at Val Genes, Peacock Room with Magie, Fred W5NL's YL, showing slides and narrating their trip to Europe last August. Both Magie and Fred are expert photographers and the slides they brought back prove it.

The QCWA, Quarter Century Wireless Association, is an organization of amateurs who have been licensed 25 years or more, i.e., old fuddy duddies. The Central Oklahoma Chapter has quarterly dinner meetings to share "eye-ball" QSO's and reminders of "the good ole days". They also meet weekly on 3850 at 0830 Sunday mornings. Red, W5RDE, is Chapter Chairman and presides at the net meetings.

W5HXL

WANTED: 12 volt inverter power supply for SBE-33 or inverter 12 DC to 115 AC at 80 to 100 watts. Badly needed in the "Porta-Shak" to play the color TV when there is no place to plug in.

Bob, W5HXL 942-5375

FOR SALE: Estate of W5EEL "Woody":

- (1) Miscellaneous test equipment
- (2) Mims signal squirter rotor and 20' of tower with 6M beam.
- (3) 20, 10, and 2M beam (disassembled)
- (4) Numerous AM and CW transmitters
- (5) BC522 2M Rx and Tx
- (6) 6M Tx
- (7) Grab bags
- (8) Instructograph

Call Elmer Fields, W5BKN, 943-4979

Please mail all correspondence concerning the Aeronautical Center Amateur Radio Club to:

Aero Cent Ama Radio Club  
Postal Station 18  
Oklahoma City, OK 73169

ARRL Dues \$ 9.00  
ACARC Dues \$ 1.50  
\$10.50



## TECHNICAL REVIEWS

W 5 J J



### TECHNICAL REVIEWS

IEEE SPECTRUM, Oct, has quite a tribute to amateur radio, spoiled only by the use of the scurrilous term "ham". It seems that 16% of IEEE members surveyed were radio amateurs!

SHORT WAVE MAGAZINE, Oct, has "Line Termination in Aerial Design" by W5JJ, "Compact Modulator/Power Supply Unit" by G3OGR, and its usual excellent Communications News. The new R. L. Drake Company 0.5 to 30 MHz moderate priced SSR-1 receiver is shown.

AMATEUR RADIO, Sep, continues its "Amateur Building Blocks" series, gives details on building a high performance 144 MHz preamplifier and converter, shows how to build a two-band (3.5 and 7 MHz) antenna.

CQ, Oct, is remarkable in the excellence of its articles. For the digital freak, there's a programmable keyer. W6SAI continues his superb series on antennas. K4JYM tells about making a 200-W 12-V power supply. W6HDM has a thought-provoking article on basic concepts. W7FF explains PEP moderately well. W9EGQ clues Novices on what to expect from the proposed Communicator Class license. W2DD spreads the word on SSTV.

73 combines Nov and Dec and covers much ground, some of it quit well. WA2OKZ explains third order intermodulation. W2FEZ tells how to build a tuner for use with an end-fed (Fuchs) antenna. WA1SNG gives good info on feedlines, departing from the common fictions. WA5RON pushes the use of tubes for low-powered xmtrs. And there's a whole stack of stuff for digital diddlers!

HAM RADIO, Nov, goes heavily for projects suitable only for those with unlimited time, talent and funds! In addition, K6HCP tells about an audio filter, W2LTF expounds on a novel way of crystal control, K6SDX touts varactor control of VFO's, and KH6HDM discusses dipole antennas with only a minor excursion into the realm of fiction. G4ADJ shows how to use TTL IC's and surplus crystals to build one's own SSB transceiver.

ELECTRONIC TECHNICIAN/DEALER, Oct, courtesy of W5KE, has very excellent info on selecting and installing mobile antennas. It also suggests that Heathkit dummy antennas be filled with a mixture of one part of mineral oil and four parts of melted parafin; if it's tipped over, it'll not spill.

RADIO-ELECTRONICS, Dec, tells about the variety of digital panel meters now available. One type responds quickly enough and retains a visual indication of its maximum to make feasible the reading of PEP input; that would save us from lying about it, as we now must do! There's also info on the AF power FET that Japs have been using in some of their high-class audio gear. Will we get one for RF?

RADIO COMMUNICATION, Oct, kicks off with a digital readout device to replace the dial of a transceiver. Following this is an unusual type of beam antenna, combining fed and parasitic elements. How about "A 160 Mtr SSB XMTR using Active and Passive Phasing Techniques"? It'll set you thinking, as will a number of items in "Technical Topics," novel ways of sideband generation, TTL square-wave generator, and the intriguing PALO oscillator which bids fair to challenge the crystal.



## THE NOVICE OPERATOR: 1975

Time was, the typical Novice Class operator was a young chap, one using an inexpensive receiver and often a home-built, low-powered transmitter. No more! That type has been sucked into the CB rat-race and lost to the ranks of amateur radio. Now the typical Novice is well up in years and uses an SSB transceiver that costs around \$700.00.

And that's a bloody shame. We (the Amateur Radio Service) could use a continuing influx of keen young amateurs, true amateurs, seekers of the new and unexplored. For it's from this group will come the QCWA members of the year 2000.

There's another unusual aspect of today's Novice operators. A huge number of them have absolutely no knowledge of radiotelegraph operating procedure! Or, for that matter, any other radio operating practices. They know the International Morse Code quite well, better than the Novices of twenty years ago. But, somewhere along the line they bypassed any exposure to that equally-needed skill, that of effective communication. And, after all, that is what procedure is all about, a degree of stylization that promotes effective and time-efficient communication.

Which brings us to a suggestion in WORLD RADIO NEWS. Its editor makes a very wise suggestion that much (if not all) code training be based upon typical exchanges between amateur radiotelegraph stations. To be of greatest worth, such exchanges should be carefully edited to exclude all traces of liddism and to avoid the deep-rutted routines many Novices adopt....signal report, location, name, rig, and antenna and then a long drawn out sign off.

Let's give Novices a good start!

W5JJ

## CHATTER

WB5NX0, Bill Peterson, has a new call, but he's an old timer, being a "retread" from the 1920's. Bill is building a kW amplifier to follow his TR-4

W5TKC, Clarence Drumeller, flew back to OKC from Ft. Eustis, VA, to attend a fraternity bash at Central State University.

W5KE, Ellard Foster, attended the hamfest at Hurst, TX, probably the only representative of the OKC region.

W5HFU, Ivan Miller, is compiling a list of the amateurs, ex-amateurs, and (hush yo' mouth) CBers who drop in on the mini-hamfest held each morning at 0930 in the Around the Corner Restaurant at NW 50 and MacArthur.





## Club NEWS

W5LOV  
The Elmer Gooder Memorial  
Station

### FROM THE PRESIDENT

WE'RE SNEAKING UP ON THE TIME TO ELECT A NEW SLATE OF OFFICERS. PAT, WB5JYK, IS EMBARKED UPON A SEARCH FOR NOMINEES. LET'S HOPE HE FINDS MEMBERS WHO ARE QUALIFIED FOR AND WILLING TO SERVE AS LEADERS FOR OUR CLUB.

RADIO CLUBS, TRADITIONALLY, WAX AND WANE. THOSE TIMES OF UP-SWING ALMOST ALWAYS COINCIDE WITH THE TERMS OF LEADERS WHO ARE GUNG-HO, WHO ARE FULL OF VIVEGAR, PRODDED BY BUBBLING ENTHUSIASM.

FROM THE CHATTER ONE HEARS ON 80 METERS THERE IN AN EXPANDING INTREST IN OPERATION ON 160 METERS. ALTHOUGH THAT WAS NEVER A FAVORED OPERATING FREQUENCY OF MINE, I'VE USED IT A BIT, MOSTLY WITH LOW POWERED TRANSMITTERS FOR LOCAL RAGCHEWING. BUT EVEN A FEW WATTS WILL GET OUT QUITE WELL DURING THOSE PERIODS WHEN THE LEVEL OF ATMOSPHERICS IS LOW. SOME PERSONS HOLD THAT SUPER ANTENNAS ARE NECESSARY FOR 160 METER OPERATION. I'VE NEVER HAD AN ANTENNA SOLELY FOR THAT BAND BUT HAVE USED EVERYTHING, FROM A HERTZ CUT FOR 80 METERS AND FUNCTIONING AS A T-MARCONI, TO A SHORT AND PURELY RANDOM LENGTH OF WIRE. THIS, OF COURSE, WAS BEFORE THE DAYS OF TRANSMITTERS CONSTRUCTED TO LOAD ONLY INTO 52 OHM NON REACTIVE LOADS! IN FACT, WITH THE EXCEPTION OF A VIKING RANGER USED ONCE OR TWICE ON 160, MY OPERATION ON THAT BAND WAS ONLY WITH TRANSMITTERS I'D DESIGNED AND BUILT. I RECALL ONE 15 WATT RIG THAT USED TO GET INTO IOWA AND COLORADO QUITE WELL, EVEN WITH AN ANTENNA THAT NO ONE WOULD BRAG ABOUT!

THE POINT OF ALL THIS IS THAT THE LACK OF AN IDEAL ANTENNA OR HUNDREDS OF WATTS OF POWER SHOULD NOT DISCOURAGE YOUR TAKING A SHOT AT 160 METERS.

ANOTHER FACTOR IS THAT 160 IS ONE BAND WHERE 6A3 EMISSION, SOMETIMES CALLED "AM", WILL NOT RESULT IN YOUR BEING ORDERED OFF THE BAND BY SOME PUNK WHO PROBABLY HAS NEVER SEEN THE INSIDES OF HIS TRANSMITTER. SO IF YOU HAVE A HOMEBUILT RIG, AN OLD DX-100, OR SOMETHING ELSE OF THAT NATURE, DRAG IT OUT OF HIDING, DUST IT OFF, MATE IT TO SOME SORT OF ANTENNA, AND GIVE 160 A WHIRL!

I'LL SIGN THIS OFF WITH 73 TO ALL. 73, BEST REGARDS, NOT 73'S, BESTES REGARDSSES, AS I NEVER USE THAT TYPE OF BABY-TALK EVEN WITH MY GRANDCHILDREN!  
CARL, W5JJ

### DECEMBER MEETING

DON'T FAIL TO SCHEDULE DECEMBER 19 AS OCVHRARC PARTY NITE! UNLIKE SOME PREVIOUS DECEMBER PARTIES, WE'LL NOT EXCHANGE PRESENTS. INSTEAD, WE WILL HAVE ALREADY TAKEN A SUITABLE ITEM TO MRS WB5KHU FOR GIVING TO THOSE CHILDREN WHO OTHERWISE MIGHT HAVE HAD A DULL AND DREARY CHRISTMAS. AND WE'LL GET TOGETHER FOR A SOCIAL SESSION. HAVE YOUR YF FIX UP A COVERED DISH OR TWO. BRING ALONG A PLATE, A CUP, NAPKINS, FLATWARE, AND A HEARTY APPETITE. AND IT GOES WITHOUT SAYING THAT YOU'LL ALSO BRING THAT LOVELY LADY WHO SHARES YOUR LIFE AND MAKES THAT LIFE SO WORTH



## Club NEWS

W5LOW  
The Elmer Gooder Memorial  
Station

LIVING! IF YOU HAVE NOT BROUGHT YOUR PRESENT, FOR A YOUNGSTER 2 TO 18 YEARS OLD, TO EITHER KEN, HIS WIFE, OR CHARLIE, WA5JGU, BETTER DO IT RIGHT AWAY BEFORE YOU FORGET IT!

YOU WHO HAVE FERTILE MINDS SHOULD BE CLICKING THOSE MINDS INTO GEAR TO DREAM UP SOME SUITABLE ENTERTAINMENT FOR THE GROUP, A SKIT PERHAPS. LET YOUR IMAGINATION RANGE FAR AND WIDE! MAYBE A PRE-RECORDED, TAPED, SPOOF, TO PUNCTURE A FEW EGOS. BUT MAKE DAMN! SURE YOU'RE WEARING YOUR BULLET-PROOF VESTS! THE MORE SKITS THE MERRIER! BE THERE!

THE ONLY BUSINESS WE'LL TRANSACT IS THE ELECTION OF OFFICERS TO TAKE OVER AT THE JANUARY MEETING. IF OUR SECRETARY HAS BALLOTS READY, THAT ELECTION SHOULD OCCUPY ONLY A FEW MINUTES, DETRACTING A MINIMUM FROM YOUR ENJOYMENT OF A SOCIAL PARTY! CARL, W5JJ

### WHAT'S GOING ON?

FOR ONE THING, THE CLUB HAS VOTED TO SURPLUS OUT SOME OF OUR EXCESS EQUIPMENT AND SPARE PARTS. SEE KEN, WB5KHU, IF YOU'RE INTRESTED. ONE PARTICULAR GODDIE IS THE JOHNSON VIKING ADVENTURER THAT HAS BEEN USED IN THE NOVICE POSITION AT W5LOW. IT'S A DANDY NOVICE RIG, DEPENDABLE AND STABLE, WILL LOAD INTO MOST ANYTHING, RUNS THE FULL LEGAL LIMIT!

THERE ARE SOME RUMBLES ABOUT HAVING SOME DE-CENTRALIZED CLASSES STARTING NEXT JANUARY. THE IDEA IS TO KEEP THEM SMALL IN SCOPE AND NUMBERS AND GEOGRAPHICALLY SCATTERED FOR CONVENIENCE. PROSECTIVE INSTRUCTORS SHOULD CONTACT ME FOR FREE ADVICE, AND IF NEEDED, AN INSTRUCTOR GUIDE.

TWO-METER FM HAS A NEW ADVOCATE IN LEONARD, WA5FSN, WHO HAD A WATER PUMP FAILURE ON HIS WAY HOME TO KINGFISHER FROM THE LAST CLUB MEETING. A CALL FROM LEONARD BROUGHT HELP FROM KEN, WB5KHU, WHO TOWED HIM OVER TO CHARLEY, WA5JGU'S HOUSE, WHERE LEONARD AND HIS YL SPENT THE NIGHT. THE THING WAS FIXED THE NEXT MORNING AND LEONARD WAS ON HIS WAY WITH THANKS TO ALL WHO HELPED.

I KNOW YOU HAVE BEEN WATING TO HEAR THIS...THE WINNAH OF THIS MONTH'S CONTEST TO SEE HWO GETS TO WRITE AN ARTICLE FOR THE PAPER! MELVIN, WA5OPP, CLARKE, K3WGF/5, AND CECIL, W5PML, ARE THE LUCKY WINNERS!  
JOE, WA5TRS

### FOR THE GOOD OF THE ORDER...

I HAVE BEEN A LICENSED AMATEUR RADIO OPERATOR FOR ONLY THIRTEEN, OR SO, YEARS, BUT DURING THAT TIME AND DURING WORLD WAR TWO, AS A COMMUNICATIONS SGT., I HAVE HAD AN INTENSE INTREST IN RADIO COMMUNICATIONS, THAT I REALLY FEEL IS THE RESULT OF IT BEING MORE THAN JUST A "HOBBY". PARTICULARLY, I AM INTRESTED IN PUBLIC SERVICE PERFORMED BY HANDLING TRAFFIC AND CONDUCTING TRAINING. I AM ALSO VITALLY INTRESTED IN PRESERVING OUR ORDERLY SOCIETY BY FOLLOWING THE RULES MYSELF AND, HOPING IT IS RECEIVED IN THE HELPFUL SPIRIT IT IS INTENDED, PROVIDING ASSISTANCE TO OTHERS. POLICING OURSELVES IS NOT MY OWN PERSONAL DREAM, IT IS SOMETHING



## Club NEWS

WSLOW  
The Elmer Gehlert Memorial  
Station

WITH WHICH WE HAVE ALL BEEN CHARGED.

AMATEUR RADIO IS AN EXTREMELY COMPLEX ACTIVITY, WITH SO MANY DIFFERENT FACETS, THAT ONE AMATEUR COULD NOT POSSIBLY ACCOMPLISH TO PERFECTION, ALL AREAS IN A SINGLE LIFETIME. SOMETIMES WE TEND TO BE CRITICAL OF JOBS DONE FOR AMATEUR RADIO OF WHICH WE HAVE NO KNOWLEDGE AT ALL. I HAVE BEEN CRITICIZED, AS A TRAFFIC HANDLER, BY AMATEURS ON VHF WHO HAVE NEVER HANDLED A MESSAGE. I ASK THAT YOU FIND YOUR OWN SPECIALTY AND DO IT. I HOPE YOU CAN DO IT WITH THE COOPERATION OF OTHER AMATEURS, FOR THE GOOD OF AMATEUR RADIO.

NOW I CAN'T SAY AMATEUR RADIO WITHOUT THINKING ARRL, BECAUSE, THIS IS THE MASTER CLUB THAT ENCOMPASSES ALL THE FACETS OF AMATEUR RADIO AND THE RESOURCE OF EXPERTS THAT HAVE BEEN THERE BEFORE US. THESE EXPERTS HAVE A LOT OF GOOD IDEAS, PLANS, AND SYSTEMS THAT WORK; NOT THAT SOME OF THEM COULD NOT BE IMPROVED; BUT LET'S NOT IGNORE OR ABOLISH THEM. LET'S USE THEM AND IMPROVE THEM, AS NEEDED. ANYTHING THAT BENEFITS AMATEUR RADIO, BENEFITS THE LEAGUE. IF IT BENEFITS THE LEAGUE, IT BENEFITS YOUR CLUB. IF IT BENEFITS YOUR CLUB, IT BENEFITS YOU. IT ALSO WORKS THE OTHER WAY AROUND. LET'S ALL WORK TOWARD THE SAME GOAL IN OUR DIFFERENT SPECIALTIES. LET'S NOT HEAR IT SAID, FOR EXAMPLE, "WHAT RIGHT HAS HE TO SAY? HE DOESN'T WORK ON THE MACHINE!" A MEMBER HAS ONE VOTE, SO DOES THE PRESIDENT. A FEW YEARS AGO I MADE THE STATEMENT THAT I COMPARED AN AMATEUR WHO WAS ANTI-LEAGUE TO A CITIZEN WHO WAS UN-AMERICAN. I STILL FEEL THAT WAY.

AMATEUR RADIO HAS AN AGREEMENT, THROUGH THE ARRL, WITH THE AMERICAN RED CROSS TO AID IN DISASTER WORK. A STATE RED CROSS MEETING AT MUSKOGEE IS SCHEDULED SOON TO POINT OUT, TO OTHER CHAPTERS IN THE STATE, THE ADVANTAGES OF WORKING WITH AMATEUR RADIO OPERATORS AND HAVING STATIONS IN THEIR OWN CHAPTERS. I WILL ATTEND THAT ALL-DAY MEETING. THOSE IN ATTENDANCE WILL BE GIVEN A SIMULATED EXAMPLE OF AMATEUR RADIO COMMUNICATIONS DURING DISASTER CONDITIONS.

THIS BRINGS TO MIND ANOTHER MATTER. OKLAHOMA COUNTY NEEDS AN EMERGENCY COORDINATOR. LOCAL CLUBS SHOULD SEARCH MEMBERSHIPS FOR A QUALIFIED AMATEUR FOR THIS POST. IT IS ALMOST TIME FOR SIMULATED EMERGENCY TEST. CHARLIE, WA5JGU

### HOW TO ASSOCIATE WITH A BETTER CLASS OF JOINTS

SINCE MY RETIREMENT FROM ONE JOB, MY HOBBY OF ELECTRONICS AND AMATEUR RADIO HAS RESULTED IN MY EMPLOYMENT BY A SMALL ELECTRONICS SHOP AS AN ENGINEER, DESIGNER, FLOOR SCRUBBER, PARTS CHASER AND CHIEF ASSEMBLER. IN OTHER WORDS, I'M THE ONLY ONE IN THE SHOP! MY WORK CONSISTS MOSTLY OF ASSEMBLING COMPONENTS ON CIRCUIT BOARDS AND FINAL TESTING OF THE END ITEM. IN DOING THIS I HAVE DISCOVERED A FEW THINGS ABOUT SOLDERING THAT MAY BE HELPFUL TO OTHERS.

TO START WITH, A SOLDERING GUN IS A NO NO FOR MOST CIRCUIT BOARD WORK. THIS TOOL IS CLUMSY TO USE AND GENERATES MORE HEAT THAN YOU NEED. LAST, BUT NOT LEAST, THE SOLDERING GUN CREATES AN

A/C FIELD WHICH MAY ZAP A SENSITIVE COMPONENT IF THE HEAT DOESN'T. A GOOD 25 WATT IRON IS SUFFICIENT FOR MOST CIRCUIT BOARD WORK. THESE IRONS ARE AVAILABLE WITH IRON CLAD, NICKLE OR CHROME PLATED TIPS THAT DO NOT ERODE AS COPPER TIPS DO AND ARE EASILY CLEANED SPOTLESS BY A QUICK PASS THROUGH A DAMPENED SPONGE. WELLER AND UNGAR MAKE THIS TYPE OF TIP.

TO EXPEDITE SOLDER MELTING AND MINIMIZE FLUX BLEEDING, THE CORRECT SIZE SOLDER SHOULD BE USED. A SIZE #31, 60/40 TYPE IS USUALLY OK FOR MOST CIRCUIT BOARD WORK. ERSIN MULTICORE AND KESTER 44 ARE MY CHOICE OF BRANDS.

PRIOR TO ASSEMBLY, THE CIRCUIT BOARD SHOULD BE INSPECTED TO ASSURE THAT THE FOIL IS CLEAN AND FREE OF OXIDATION OR CORROSION. A DAMP SPONGE TIP WIPE TRAY SHOULD BE PLACED CONVENIENTLY CLOSE AND USED EACH TIME THE IRON IS PICKED UP FOR A SOLDERING OPERATION. INSPECT EACH COMPONENT PRIOR TO INSERTION IN THE CIRCUIT BOARD, MAKING CERTAIN THE LEADS ARE BRIGHT AND CLEAN. IF THIS IS NOT THE CASE, AND USUALLY IT IS NOT, THE LEADS MUST BE SCRAPPED THOROUGHLY PRIOR TO INSERTION IN THE BOARD. LEADS ON SOME COMPONENTS HAVE A SOLDER COATING THAT APPEARS DULL AND CAN BE SOLDERED WITHOUT SCRAPING. OTHER LEADS WITHOUT THIS COATING LOOK THE SAME. THEREFORE I MAKE IT A RULE THAT IF IT ISN'T BRIGHT AND CLEAN, I SCRAPE IT.

AFTER THE COMPONENT HAS BEEN POSITIONED IN THE BOARD, PICK UP THE IRON AND CLEAN THE TIP THROUGH THE SPONGE. POSITION THE SOLDER AT THE LEAD AND BOARD JUNCTION. PLACE THE IRON TIP TO THE TIP OF THE SOLDER. SOLDER MELTING WILL BE IMMEDIATE, IF THE IRON TIP IS CLEAN, AND THE TIP WILL SETTLE TO THE LEAD-CIRCUIT BOARD JUNCTION. FEED THE SOLDER AROUND THE OPPOSITE SIDE OF LEAD UNTIL PUDDLING OCCURS, COMPLETELY SURROUNDING THE LEAD. AFTER PUDDLING OCCURS, WITHDRAW THE SOLDER AND SLIDE THE SOLDERING IRON TIP UP THE LEAD. THIS FURTHER ASSURES A SOLDER BOND ON THE LEAD. THIS COMPLETE OPERATION TAKES ABOUT THREE SECONDS PER LEAD, PROVIDING THE IRON WAS PROPERLY CLEANED. REMEMBER, IF THE TIP IS NOT CLEAN THE OXIDIZED FLUX FROM THE PREVIOUS OPERATION WILL CONTAMINATE THE NEW SOLDER CONNECTION AND MAY AFFECT ITS INTEGRITY. A CLEAN TIP ASSURES QUICK MELTING AND PUDDLING OF SOLDER WITH MINIMUM HEAT TRANSFER TO COMPONENTS SINCE LESS HEATING TIME IS REQUIRED.

FLUX ON THE BOARD CAN BE EASILY REMOVED BY SCRUBBING WITH A TOOTH BRUSH DIPPED IN ALCOHOL, MEK, LACQUER THINNER OR, THE BEST THING I HAVE DISCOVERED, DECOUPAGE THINNER.

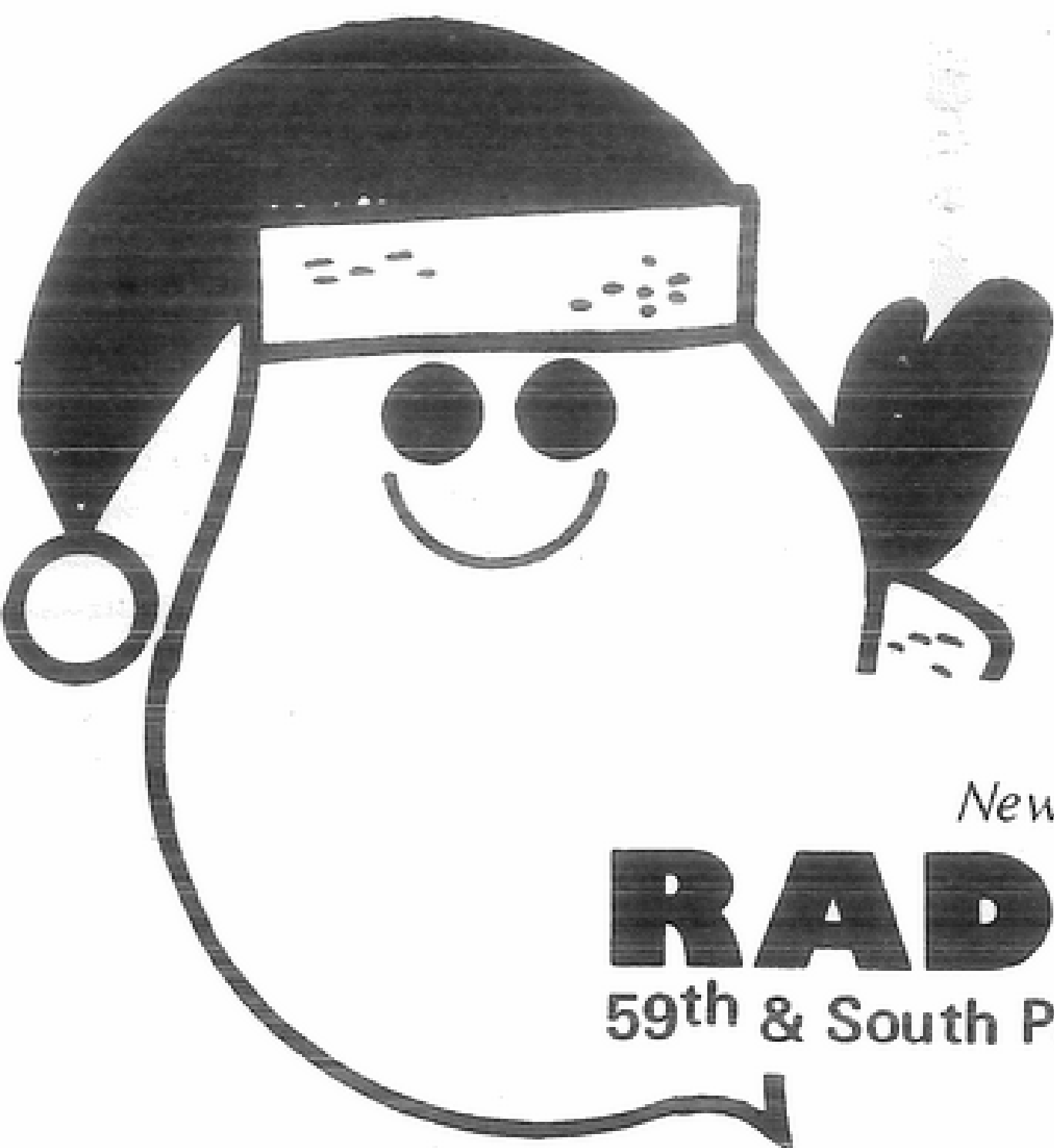
EVERYONE IS USUALLY EAGER TO GET A KIT OR PROJECT TOGETHER SOON AS POSSIBLE, BUT IT IS HOURS FASTER IN THE LONG RUN TO SPEND A FEW EXTRA MINUTES ON THE SOLDER CONNECTIONS AND AVOID THE FAULT ISOLATION TIME NEEDED TO FIND THOSE "BAD SOLDER JOINTS".

RAY, WB5BTT

#### WHAT EVER HAPPENED TO OLD WHAT'S HIS NAME?

A FEW EVENINGS AGO, I HAPPENED TO CHECK IN TO THE TRAFFIC NET WITH JOE, WA5TRS, AND WAS INFORMED THAT THE "WHEEL OF FORTUNE" HAD BEEN SPUN AND I HAD BEEN SELECTED TO WRITE AN ARTICLE FOR THE PAPER. TO THOSE OF YOU WHO KNOW JOE AS WELL AS I FEEL THAT I DO, THIS COULD BE INTERPERTED AS EITHER AN "HONOR" OR A "JOKE" /JUST LUCK, ED/ I PREFER NOT TO STATE WHICH I THINK IT IS, AS IT MIGHT BE USED AGAINST ME. YOU WIN SOME AND LOSE SOME.

/CONTINUED PAGE 13 /



MERRY  
CHRISTMAS

*New and Used Equipment*

**RADIO STORE**

59th & South Penn, Oklahoma City, Oklahoma

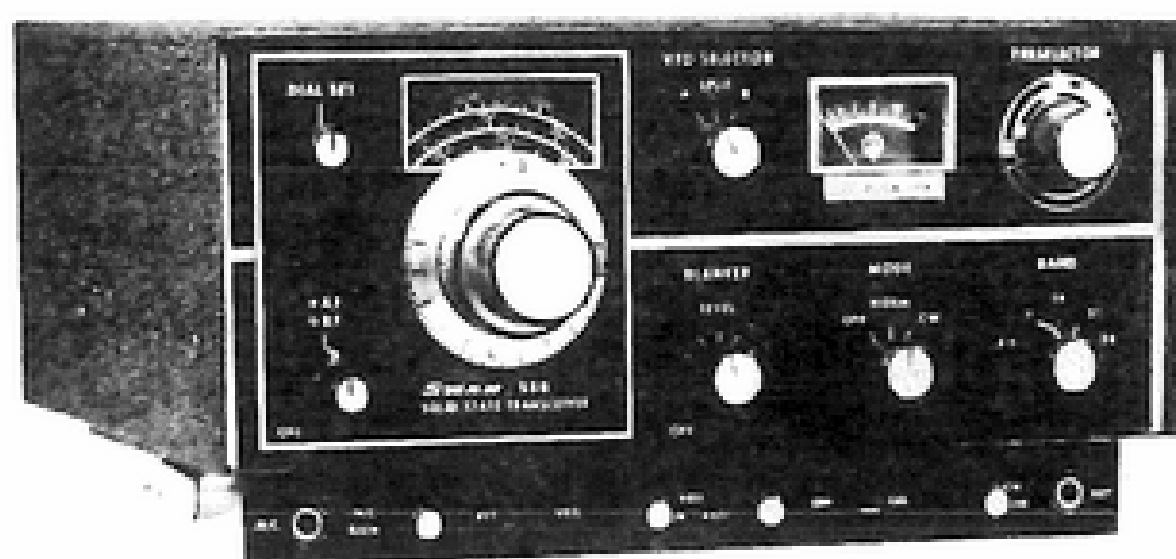
THIS YEAR-- HELP SANTA'S HELPERS FIND THE RIGHT GIFT  
FOR YOU.

CIRCLE SOME GOODIES AND EQUIPMENT ON THE FOLLOWING  
PAGES -- LEAVE THEM IN A NOTICEABLE PLACE !

## THE BEST PRACTICAL DEVELOPMENTS IN AMATEUR RADIO

Hams the world over value amateur radio products from Swan Electronics. Among the most respected of these are the unique single-sideband rigs with that "special something" extra — like those illustrated here.

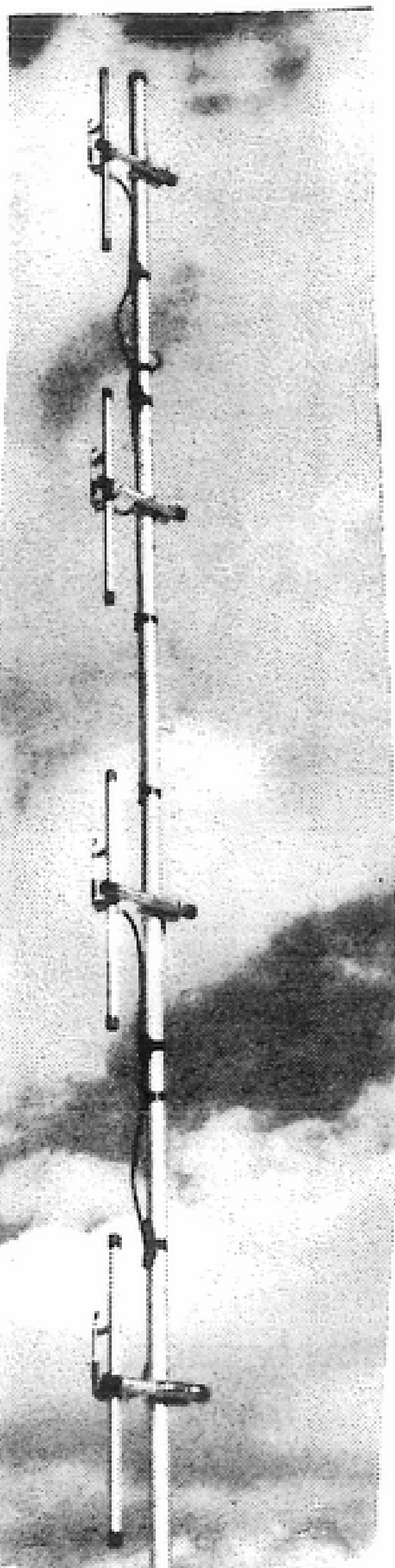
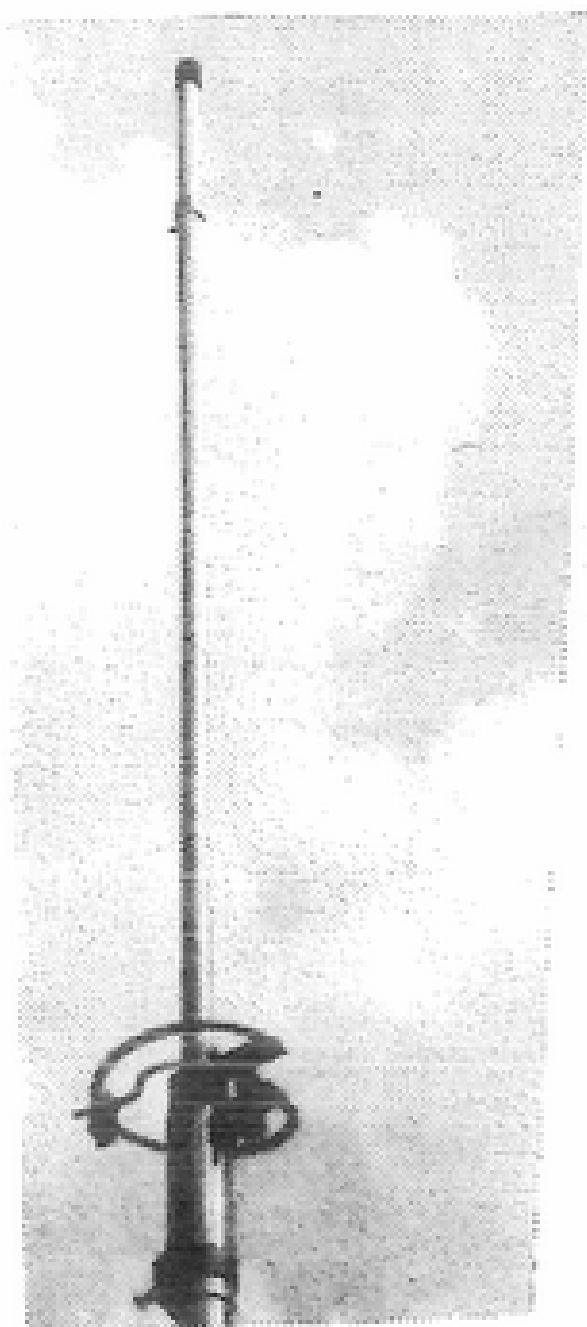
**SWAN 700CX** Champion Transceiver. 700 watts P.E.P. input on the five most popular amateur bands. No other manufacturer gives you this much power and convenience for your money.



SS-200A

**SWAN SS-200A** Transceiver. Fully solid-state, unique broadband tuning on all five bands, and infinite VSWR protection. Maintains up to 300 watts P.E.P. input on any frequency selected.

# Cush Craft



**RINGOS** 3.75 dB Gain (reference  $\frac{1}{4}$  wave whip). Half wave length antennas with direct dc ground, 52 ohm feed takes PL-259, low angle of radiation with 1-1 SWR. Factory preassembled and ready to install, 6 meter partly preassembled, all but 450 MHz take  $1\frac{1}{4}$ " mast. There are more Ringos in use than all other FM antennas combined.

Model Number	AR-2	AR-25	AR-6	AR-220	AR-450
Frequency MHz	135-175	135-175	50-54	220-225	440-460
Power—Hdlg. Watts	100	500	100	100	250
Wind area sq. ft.	.21'	.21'	.37'	.20'	.10'

\$15.95 \$18.95 \$21.95 \$15.95

**4 POLE** Up to 9 dB Gain over a  $\frac{1}{2}$  wave dipole. Overall antenna length 147 MHz — 23' 220 MHz — 15', 435 MHz — 8', pattern 360° = 6 dB gain, 180° = 9 dB gain, 52 ohm feed takes PL 259 connector. Package includes 4 complete dipole assemblies on mounting booms, harness and all hardware. Vertical support mast not supplied. **\$49.95**

AFM-4D 144 - 150 MHz, 1000 watts, wind area 2.58 sq. ft.

**TWIN BEAMS** The big signal (22 element array) for 2 meter FM, uses two A147-11 yagis with a horizontal mounting boom, coaxial harness and all hardware. Forward gain 16 dB, F/B ratio 24 dB,  $\frac{1}{2}$  power beamwidth 42°, dimensions 144" x 80" x 40", turn radius 60", weight 15 lbs., 52 ohm feed takes PL-259 fitting. **\$69.95**

A147-22 146 - 148 MHz, 1000 Watts, wind area 2.42 sq. ft.

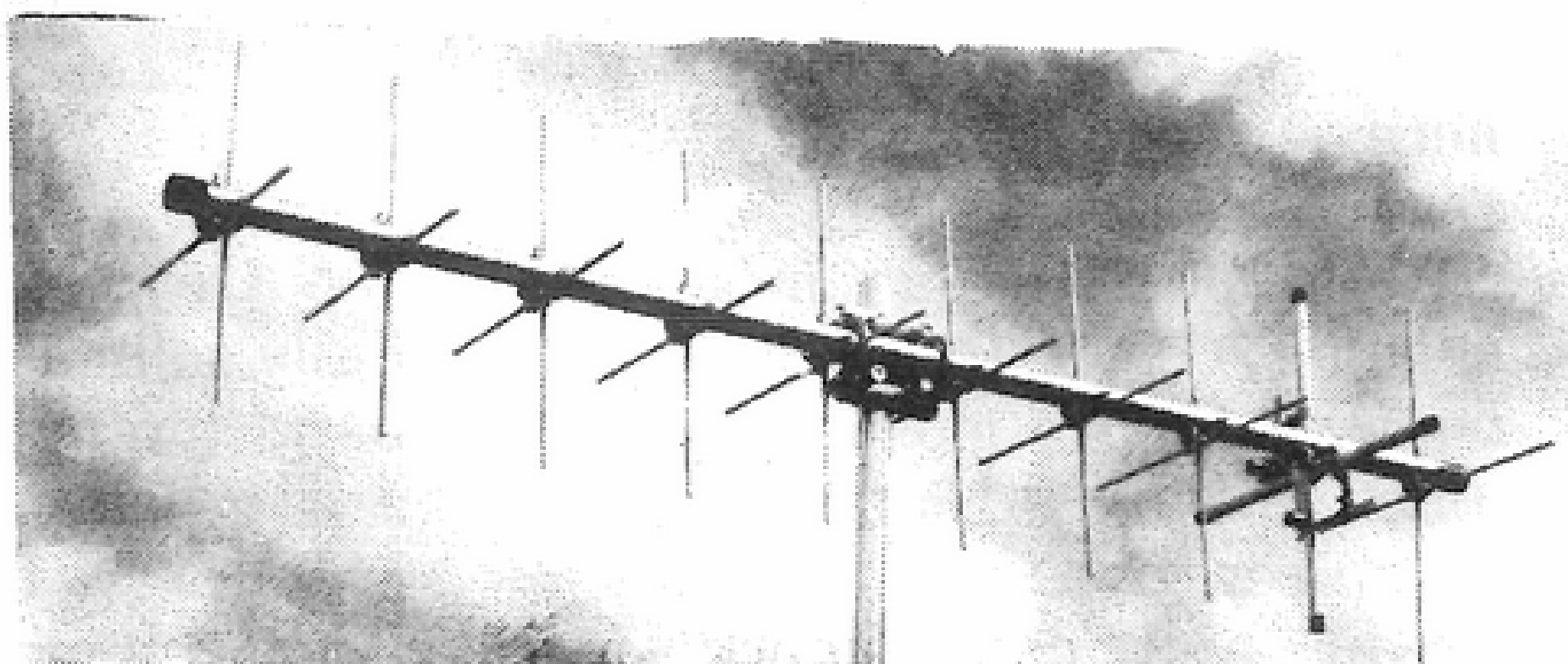
**BEAMS** The standard of comparison in VHF-UHF communications, now cut for FM and vertical polarization. The four and six element models can be tower side mounted. All are rated at 1000 watts with direct 52 ohm feed and PL-259 connectors.

Model Number	A147-11	A-147-4	A449-11	A449-6	A220-11
Boom/Longest ele.	144"/40"	44"/40"	60"/13"	35"/26"	102"/26"
Wght./Turn radius	6 lbs., 72"	3 lbs., 44"	4 lbs., 60"	3 lbs., 18"	5 lbs., 51"
Gain/F/B ratio dB	13.2/28	9/20	13.2/28	11/25	13.2/28
$\frac{1}{2}$ Power beam	48°	66°	48°	60°	48°
Wind area sq. ft.	1.21	.43	.39	.30	.50
Frequency MHz	146-148	146-148	440-450	440-450	220-225

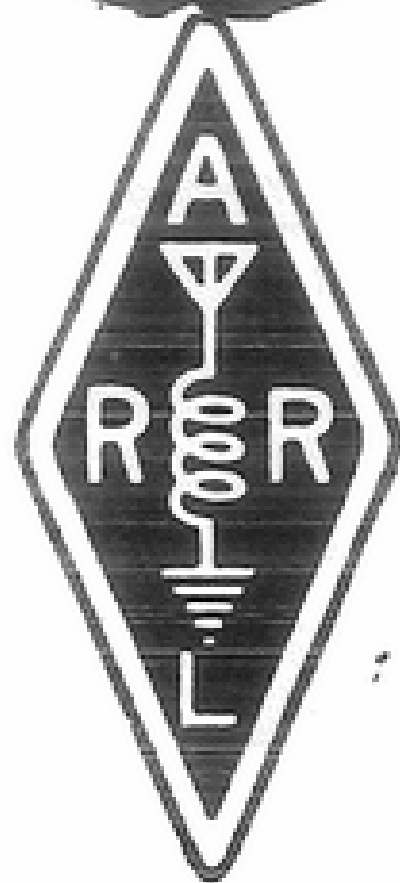
FM \$21.95 \$14.95 \$17.95 \$13.95 \$19.95

**TWIST** 12.4 dB Gain: Ten elements horizontal polarization for low end coverage and ten elements vertical polarization for FM coverage. Forward gain 12.4 dB, F/B ratio 22 dB, boom length 130", weight 10 lbs., longest element 40", 52 ohm Reddi Match driven elements take PL-259 connectors, uses two separate Feed lines. **\$42.95**

A147-20T 145 - 147 MHz, 1000 watts, wind area 1.42 sq. ft.



# ARRL



# BOOKS

## HINTS AND KINKS

Only \$1.50

### THE RADIO AMATEUR'S HANDBOOK — 1976 Edition

Internationally recognized, universally consulted. The all-purpose volume of radio. Packed with information, useful to the amateur and professional alike. Written in a clear, concise manner, contains hundreds of photos, diagrams, charts and tables.

Just \$6.00

### SPECIALIZED COMMUNICATIONS TECHNIQUES FOR THE RADIO AMATEUR

Seven chapters cover the more esoteric forms of amateur radio: ATV, SSTV, FAX RTTY, Satellite Communication, and advanced communication techniques.

Just \$3.00

### FM AND REPEATERS FOR THE RADIO AMATEUR

A complete treatment of fm and repeaters. Includes chapters on receivers, transmitters, antennas as well as repeater operation. Of great value to the fm buff as well as those just becoming interested in the subject.

Just \$3.00

### THE ARRL ANTENNA BOOK

Only \$4.00

### LOG BOOK

Just \$1.00

## AMECO CODE COURSES

Probably the most carefully prepared code practice material anywhere. Extreme care has been taken to insure that the method of sending and the calculation of code speed is very similar to that used by the FCC in their exams. Each course includes a booklet to assist your progress.

### ON CASSETTE TAPES

As an extra bonus each Ameco Cassette Code Course consists of nearly twice the material contained on the older records at only a slight increase in price.

#### JUNIOR CODE COURSE

Covers from start to 8 WPM **\$4.95**  
Order 100-T

#### ADVANCED CODE COURSE

Covers from 8½ to 18 WPM. Includes FCC-type exams. **\$4.95**  
Order 103-T

#### SENIOR CODE COURSE

Double length tape covering the complete Junior and Advanced Courses start to 18 WPM **\$8.95**  
Order 101-T

#### EXTRA CLASS CODE COURSE

Covers from 13 WPM to 22 WPM. Includes sample FCC-type exams. **\$4.95**  
Order 104-T

### ON RECORDS

Carefully prepared 12" 33-1/3 RPM records.

**JUNIOR CODE COURSE** Order 100-33  
Covers from start to 8 WPM **\$3.95**

**ADVANCED CODE COURSE** Order 103-33  
Covers from 8½ to 18 WPM. Includes FCC-type exams. **\$3.95**

**SENIOR CODE COURSE** Order 101-33  
Two records covering both Junior and Advanced Courses, start to 18 WPM **\$7.50**

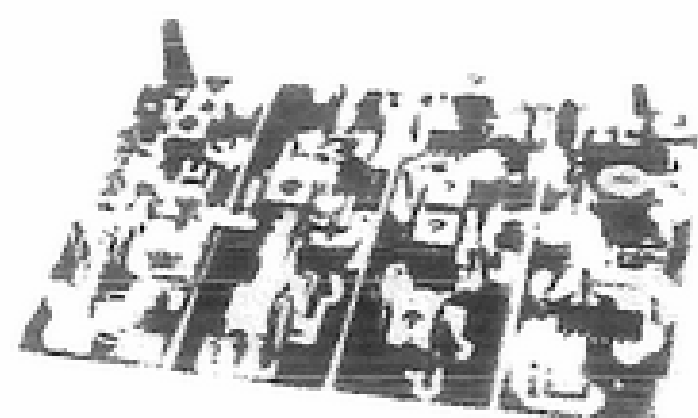
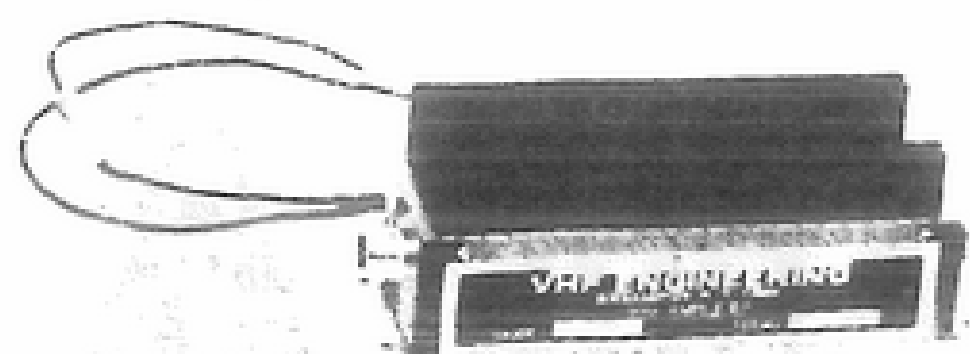
**EXTRA CLASS CODE COURSE**  
Covers from 13 WPM to 22 WPM. Sample FCC-type code exams. **\$3.95**  
Order 104-33

**GENERAL CLASS SUPPLEMENTARY CODE COURSE** Order 105-33  
Additional material from 12 to 15 WPM **\$3.95**

**EXTRA CLASS SUPPLEMENTARY CODE COURSE** Order 106-33  
Additional material from 19 to 24 WPM **\$3.95**



# Vhf engineering



PA2501H Kit . . . 2 mtr. power amp - kit w/ss  
switching, case, connectors . . . . . 59.95

PA4010H Kit . . . 2 mtr. power amp - 10w in - 40w  
out - relay switching . . . . . 59.95



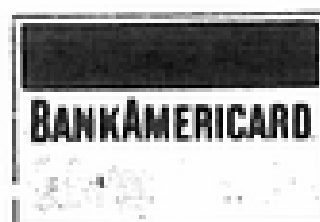
TX144B Kit . . . transmitter exciter - 1 watt -  
2 meters . . . . . 29.95

TX220B Kit . . . transmitter exciter - 1 watt -  
220 MHz . . . . . 29.95

TX432B Kit . . . transmitter exciter - NEW -  
432 MHz . . . . . 39.95

## OTHER PRODUCTS BY VHF ENGINEERING

CD1 Kit . . . . .	10 channel receive xtal deck w/diode switching . . . . .	\$ 6.95	RX50C Kit . . . . .	30-60 MHz rcvr w/2 pole 10.7 xtal filter . . . . .	59.95
CD2 Kit . . . . .	10 channel xmit deck w/switch and trimmers . . . . .	14.95	RX144C Kit . . . . .	140-170 MHz rcvr w/2 pole 10.7 crystal filter . . . . .	69.95
COR2 Kit . . . . .	complete COR w/3 second and 3 minute timers . . . . .	19.95			
CWID-1 Kit . . . . .	NEW - code identifier - 160 bits, field programmable diode matrix . . . . .	39.95	RX220C . . . . .	210-240 MHz rcvr w/2 pole xtal 10.7 filter . . . . .	69.95
SC3 Kit . . . . .	NEW - 10 channel auto-scan adapter, w/priority channel . . . . .	19.95	RX432C Kit . . . . .	NEW - 432 MHz receiver . . . . .	79.95



**\$1**

**WORTH \$1.00!!**

**WORTH  
\$1.00**

GOOD FOR PURCHASE OF TEN  
DOLLARS OR MORE. EXPIRES 12/31/75.

**RADIO STORE**

59th & South Penn, Oklahoma City, Oklahoma



/VHF CLUB CONT./

AS MOST OF YOU KNOW BY NOW, I AM NO LONGER IN THE RADIO BUSINESS, AS SUCH. HOWEVER I STILL KEEP MY FINGER IN THE 'POT'. I HAVE BEEN IN IT TOO LONG TO COMPLETELY QUIT THE 'RACKET'. I SOLD OUT THE 15TH OF LAST JULY AND SINCE THEN HAVE BEEN VERY OCCUPIED GETTING ACCLIMATED TO THIS NEW LIFE OF LEISURE. IT REALLY HASN'T BEEN THAT HARD THOUGH AS I DIDN'T LIKE TO WORK THAT WELL TO BEGIN WITH. I AM, AS I MIGHT AS WELL CONFESS, ACTUALLY RUNNING COMPETITION WITH CHARLIE, WA5JGU/JUG/, AS A NON WORKER. I TOO HAVE MY XYL WORKING. HOPE THAT SHE DOESN'T READ THIS! ENJOY IT VERY MUCH AND LIKE IT BETTER EVERY DAY.

MOST OF MY TIME IS NOW SPENT AT LAKE EUFAULA AS SOME OF YOU ALREADY KNOW, DOING NOTHING AND FISHING. QUITE A GOOD COMBO. TO ANY OF YOU GUYS WHO ARE INTRESTED, I HAVE THE NECESSARY EQUIPMENT TO FISH WITH, AND IF YOU CARE TO JOIN ME, I WILL BE AVAILABLE AND WILL WELCOME THE OPPORTUNITY TO TAKE YOU FISHING. I HAVE A BOAT THAT WILL ACCOMMODATE THREE VERY EASILY, SO GET IN LINE AND LET'S GO FISHING! I HAVE A RIG SET UP DOWN THERE AND AM ON 75 METERS EARLY IN THE MORNING AND AROUND 5 OR 6 IN THE EVENING. YOU WILL USUALLY FIND ME AROUND 3900 TO 3915. SOMETIMES, I AM ON LATER IN THE EVENING, SO GIVE ME A SHOUT IF YOU HEAR ME AND COME ON DOWN.

WELL I AM SURE THAT BY NOW YOU ARE READY FOR SOME OTHER BIT OF NEWS SO 73 FOR NOW. CUL  
BOB, W5MCM

WHERE HAVE ALL THE GOODIES GONE?

AT THE REQUEST OF BOB, W5HXL, HERE IS A REPORT ON SALVAGE ELECTRONIC SUPPLIES AVAILABLE IN OUR AREA.

1. BANKRUPT SALVAGE SALES 947-8009  
1144 N. MCARTHUR

TAKE THE XYL AND LITTLE HARMONICS TO THIS STORE AS THEY HAVE ABOUT EVERYTHING, AND AT HALF THE PRICE TAG SHOWN.

2. S & S RENTAL 525-3060  
2518 CLASSEN BLVD.

AGAIN, TAKE THE XYL AND LITTLE HARMONICS TO THIS STORE AS THEY HAVE RECORDS FOR 49¢ AND 8 TRACK TAPES FOR 89¢

3. SMITTY'S WORLDWIDE ELECTRONICS 525-9897  
1715 N.W. 16

FOR RADIO OPERATORS ONLY.

4. B & M OUTLET 946-0713  
601 N MILLER/MOVED?/

CALL THE RESIDENCE NUMBER, 848-7148. MR. TERRY GIBSON HAS 14 LARGE SPEAKER SYSTEMS FOR SALE AND IS ASKING ABOUT \$125.00 EACH FOR THEM. ALL ARE NEW.

5. SALVAGE SALES 235-1383  
2021 EXCHANGE

THIS STORE OWNED BY MR. GEORGE MILLER, HAS NINE TYPES OF 8 TRACK PLAYERS FOR CARS, SPEAKERS FOR CARS, SURPLUS TRANSMITTERS, DRIVE MOTORS FOR TURNTABLES, ETC. THIS STORE WANTS TO SELL IN QUANTITY ONLY. IDENTIFY YOURSELVES AS AMATEURS, AND SEVERAL SHOULD GET TOGETHER FOR YOUR PURCHASES.

/CONTINUED PAGE 14 /

/CONTINUED/

6. MR. ROY MUSGROVE 647-3216 /TOLL/  
ELECTRONIC AND AIRCRAFT, ETC. SURPLUS. THIS SALES AREA COVERS  
ABOUT 80 ACRES. TAKE YOUR LUNCH AS IT WILL TAKE ABOUT 4 HOURS TO  
COVER THE SURPLUS. WB5AUF, WALTER CROOK, 3448 N.W. 16, 943-4731,  
CAN GIVE YOU INSTRUCTIONS ON GETTING TO THIS PLACE OR YOU CAN  
FOLLOW ELLARD, W5KE'S, INSTRUCTIONS. HE SAYS TO CALL FIRST TO  
MAKE SURE THAT HE IS HOME AND MAKE ANY SPECIFIC ENQUIRIES THAT YOU  
HAVE. GO EAST ON S.E. 29 PAST TINKER AFB FOR ABOUT 11 MILES TO  
TEXAS CHURCH ON RIGHT. ON LEFT IS ACORN ACRES. ALSO THERE IS A  
SIGN THAT READS "GIRL SCOUT ENTRANCE 500 FT". /GIRL SCOUT COOKIE  
LAND/ OVER THE NEXT HILL TURN RIGHT AND GO 1/4 MILE ON NEW  
PAVEMENT. WHEN YOU COME TO THE FIRST STREET, TURN EAST TWO  
BLOCKS, THEN SOUTH TWO BLOCKS AND TURN IN BY THE MAIL BOX WITH  
ROY MUSGROVE'S NAME ON IT. A SIGN IS ALSO THERE TELLING YOU THAT  
HE IS CLOSED ON SUNDAYS.

7. ELLARD'S EX EL, 789-6702  
5905 N. W. 42ND  
ELLARD, W5KE, HAS A COMMERCIAL DUMMY LOAD FOR \$65.00 THAT IS A  
DANDY, PLUS OTHER GOODIES. OF COURSE, HE ALSO HAS OTHER DUMMY  
LOADS THAT ARE CHEAPER.

8. SOUNDS OUTWEST 787-3710  
7918 N.W. 23  
OWNED BY MR. GERALD E. "JERRY" MILLER. IF YOU BREAK DOWN AND WANT  
A C.B., HE HAS THE BEST STOCK AND PRICES IN OKC. ALSO HAS 5,000  
NEW AND USED TUBES THAT ARE HARD TO FIND. P.S. THIS IS MY SON,  
AND HE MAY BECOME AN AMATEUR SOME DAY.

9. MR. CARL DRUMELLER 789-3788  
5824 N.W. 58TH  
CARL, W5JJ, HAS MANY ITEMS OF USED EQUIPMENT FOR SALE

10. MRS. W. D. JOHNSON  
310 STEED DR, MWC  
MANY ITEMS FOR SALE FROM ESTATE OF W5EEL, DECEASED. ELMER, W5BKN  
WILL FURNISH INFORMATION.

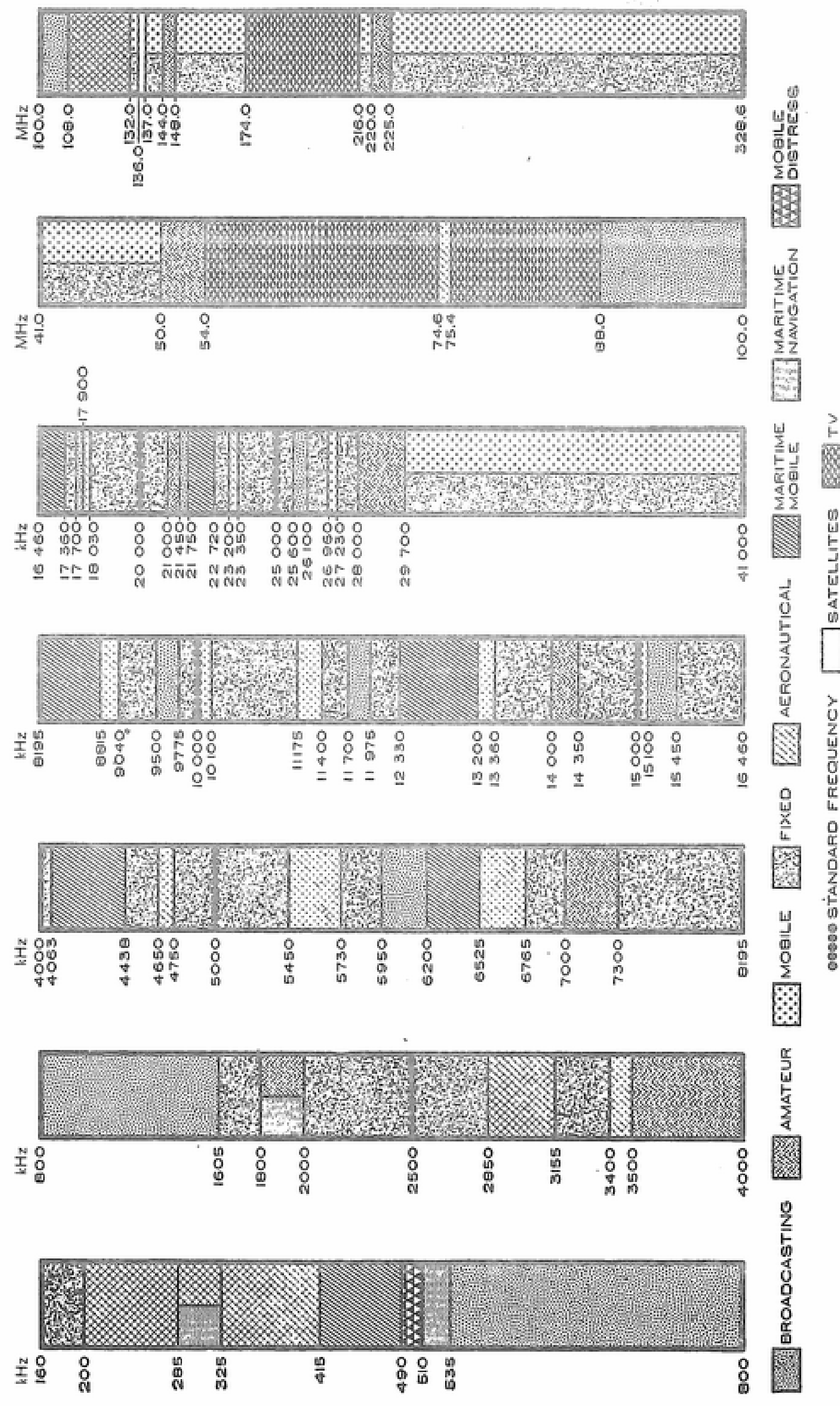
11. MR. WALTER ABE CROOK, WB5AUF 943-4731  
3448 N.W. 18TH  
HAS MANY ITEMS OF SURPLUS FOR SALE INCLUDING 5" AND 3" TUBES FOR  
SLOW SCAN TV. HE ALSO HAS NEW SSTV EQUIPMENT FOR SALE. HE PLANS  
ON SETTING UP A SURPLUS STORE FOR ELECTRONIC EQUIPMENT AFTER HE  
RETIRES. I WISH HE WOULD HURRY UP WITH THIS SERVICE.

12. MR. IVAN S. MILLER, W5HFU 942-4160  
4513 N.W. 31ST ST  
MANY ITEMS OF SURPLUS FOR SALE INCLUDING A HIGH VOLTAGE POWER  
SUPPLY, 3000 V AT 500 MA, COMMERCIAL CONSTRUCTION FOR \$25.00.  
MANY TRANSMITTING TUBES AND ABOUT 5000 NEW AND PULLED TUBES FROM  
EQUIPMENT. THESE ARE RECEIVING TUBES.

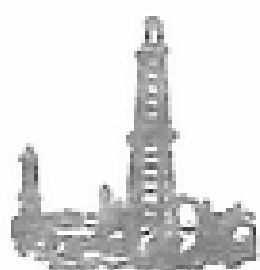
I HOPE I DIDN'T LEAVE ANYONE OUT THAT SHOULD HAVE BEEN LISTED.  
GOOD LUCK ON YOUR BARGIN HUNTING. 73 IVAN, W5HFU

MOTOROLA HT-200 FOR SALE  
TWO FREQ. 34/94 WIRED IN, 28/88, 07/67, PLUG IN. NEW CASE AND  
CARRYING CASE. DROP IN CHARGER, ACCESSORIES=WORTH OVER \$240,  
ASKING \$200. BRUCE WB5MEA, 685-8926 OR 325-4770 AT WORK.

YOU THINK YOU  
 HAVE TROUBLE  
 BECAUSE OF  
 INCENTIVE  
 LICENSING?  
  
 WHAT IF YOU  
 WERE A CBÉR  
 AND WERE  
 LOOKING FOR  
 CHANNEL 19  
 ON THIS  
 CHART???  
  
 IGNORANCE IS  
 BLISS!!



This is how the radio frequency spectrum is divided in North and South America from 160 kilohertz to 328.6 megahertz. Slightly different frequency allocations exist in Europe and Asia, although these differences are mostly confined to the higher frequencies (above 30 MHz).



## MID-OKLAHOMA REPEATER INC.

WHAT? MORI CHRISTMAS DINNER PARTY  
WHERE? BOYANZA SIRLOIN PIT No. 1318, 4640 S E 15  
WHEN? 7:30 P.M. December 13, 1975  
DETAILS: Dutch treat, you order what you want from the grill and join the party in the private diningroom  
DOOR PRIZES? YES! The committee that planned the party decided that you would probably like to take something home, so we put our money in door prizes for both CMs and XYLs.

---

The next MORI meeting is scheduled for January 6, 1976.

---

I suppose that there are many eloquent words that an outgoing president can or should say. All I can think of to say is, "THANK YOU". Somehow that sounds inadequate to really express how I feel about my term as president. I want to thank the officers, the members of the Executive Committee, the Trustees, and all the persons and members that served on committees this year and/or helped out on any of our projects. I write it this way, with no names, so that I will not miss anyone. However, there is one person I do wish to single out, a person that has put more hours into the MORI organization, not only this past year but in past years as well. He has given both of his time and his equipment, and many times has given up personnel time or projects to do something for the club. I want to extend a special "THANK YOU" to WA5AOR, Mr. B. Wayne Hogan!!

I have enjoyed this year very much, and am only sorry that my own personal obligations have robbed so much time that I could not do all I would like to have done. WA5FWD

---

For the benefit of those who might have missed the November meeting, we held the annual election of officers for 1976. They are as follows:

President: H. C. Townsend WA5MLT

Vice President: Chester Hazelwood W5GDL

Secretary-Treasurer: John Huckaby W5QDR

This is a very fine set of officers, and they are all at work to make MORI even better in 1976.

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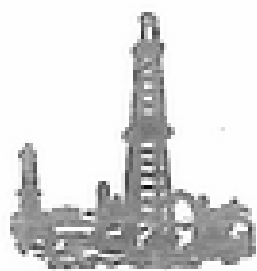
73s WA5FWD

"WHEATSTRAW CHRISTMAS PARTY AND BUSINESS MEETING"

WHEN? DEC. 14

WHERE? EL RENO, OKLA. SIRLOIN STOCKADE ON I40

TIME? APPROX 300 P.M.



## MID-OKLAHOMA REPEATER INC.

W R 5 A D F

On a Saturday morning in the middle of September 1974 a group of M O R I members got together and had one "whale-of-a" antenna party. By 18:00 hours that evening -de W R 5 A D F-was no longer a dream, 07/67 was now a reality.

In looking over the papers for this repeater I find that that "dream" started as far back as 1972. Negotiations for the site were carried on with WKY-TV largely by Clarence Blackstock WA5ACX.

In April of 1973 the license was applied for and took over 11 months of paper work and waiting and more paper before the call WR5ADF was issued. Wayne Hogan WA5AOB (and no doubt his secretary) were mainly responsible for fighting the "paper battle".

Although Clarence WA5ACX didn't make it to see 07/67 I am sure he would be very proud of our fine repeater and all those who had a hand in making it a reality.

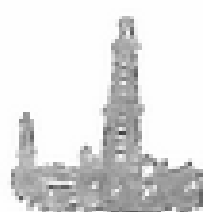
Enjoy it.

Ken K5VVZ

Trustee

FOR SALE Complete set of Ham Radio magazines for 1970 thru 1974, \$4.00. Call Bill, WA5RAQ. 632-4375.

FOR SALE OR TRADE: National NCX-5 Mark II 80-10 meter SSB, CW, & AM transceiver, 200 watts PEP. Matching NCXA 120/240 volt power supply. Excellent condition with manuals, service notes, and original boxes. Too many rigs. \$310 firm. Transceiver alone \$255 Firm. K2GKK/5, Mac, Phone: 672-4947.



## MID-OKLAHOMA REPEATOR INC.

Add the following names to the roster of MORI members:

W5OHH

Buzzy Brooks  
2809 Mockingbird Lane  
Midwest City OK 73110

W45WNV

Eugene R. Wokaty  
220 Gayle Drive  
Midwest City OK 73110

W52KJ

Harold R. Bray  
1309 SW 67 St  
Oklahoma City OK 73159

W85NCU

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WELCOME TO MORI! GLAD TO HAVE YOU WITH US.

### STOLEN FROM HR REPORT

#### Stolen from "HR Report"

Repeater crossbanding, Docket 20113 has been approved and becomes effective December 15. One portion of the decision specifically permits the operator of a 2 meter station, for example, to retransmit something he's hearing on 20 meters to a listening buddy on 2 meters by holding his mike in front of the 20 meter receiver and pressing the mike button. One prohibition still must be observed, however. Existing rules prohibit retransmission of an Amateur signal on a frequency the station being retransmitted is not licensed to use. Thus, the retransmission of a 40 meter Novice signal on 2 meters or of a Technician on 20 meters is still against the rules.



Legal phone patches without phone company interconnecting devices may be a reality in the near future. The FCC is considering setting up standards by which equipment could be certified for direct phone line connection, and the Justice Department is pushing them to come out with a comprehensive plan. ARRL is looking into the possibility of having phone patches included in the equipment category for which no coupler would be required.

# WANTED

## FOR JAMMING

ANY MISGUIDED RADIO OPERATOR,  
ON ANY HAMBAND!

## REWARD

 \$100.00 

FOR INFORMATION LEADING TO LICENSE  
SUSPENSION, REVOCATION, OR CRIMINAL CONVICTION.

CONTACT ED PECK, ATTY., 405 14TH ST., SUITE 800,  
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*This offer is a legitimate one from friends of WCARS.*



#### FROM THE PRESIDENT

WELL WE HAD A TWO METER MEETING MONDAY, NOVEMBER THE 17, AT THE OKLAHOMA MILITARY ACADEMY AND I THINK ABOUT EIGHT MEMBERS AND TWO GUESTS SHOWED UP. I KNOW BUSINESS MEETINGS CAN BE DULL BUT UNLESS THE MEMBERSHIP WANTS CLUB BUSINESS DECIDED BY THE EXECUTIVE COMMITTEE AND WANTS NO SAY IN HOW THINGS ARE RUN THEN WE WILL HAVE TO HAVE MORE REPRESENTATION THAN WE HAVE HAD LATELY. THE NEXT REGULARLY SCHEDULED MEETING IS ON DEC 15, and at that time we will decide if you want to have regular meetings or not. It was suggested that a program of some type might turn members out and I agree, but someone is going to have to be responsible to see that we have one? so volunteers step forward.

Members present voted to have a door prize drawing at meetings to be decided by the executive committee and two prizes with a \$25 price limit on each prize to be given away. So next meeting you might be one of the lucky two. The prizes are good for Auto Patch members only.

The tech committee for 450MHZ repeater says by the time you read this the machine will be operational. Problems with the 22-82 are being solved and as soon as they finish painting channel 9 tower and we get the proper weather the 81-21 machine will go on the air. All equipment is ready to go up.

The six meter equipment according to WA5FLT, is still not ready due to time available to work on it. So we still don't know when it will be up on the air.

Several people are on 52.525 FM now in the Oklahoma City area so lets hear some of you on six. So surprise me and see me at the meeting next month.

Frank WB5JBL

NEED AN STANDY BY FM TRANSMITTER? HERE IS A PROJECT YOU MIGHT TRY.

#### FM OSCILLATOR UNIT FOR THE ARC 3 AM TRANSMITTER

This unit can be built so as to be mounted on the front of the army surplus ARC 3, converting it to two meter FM.

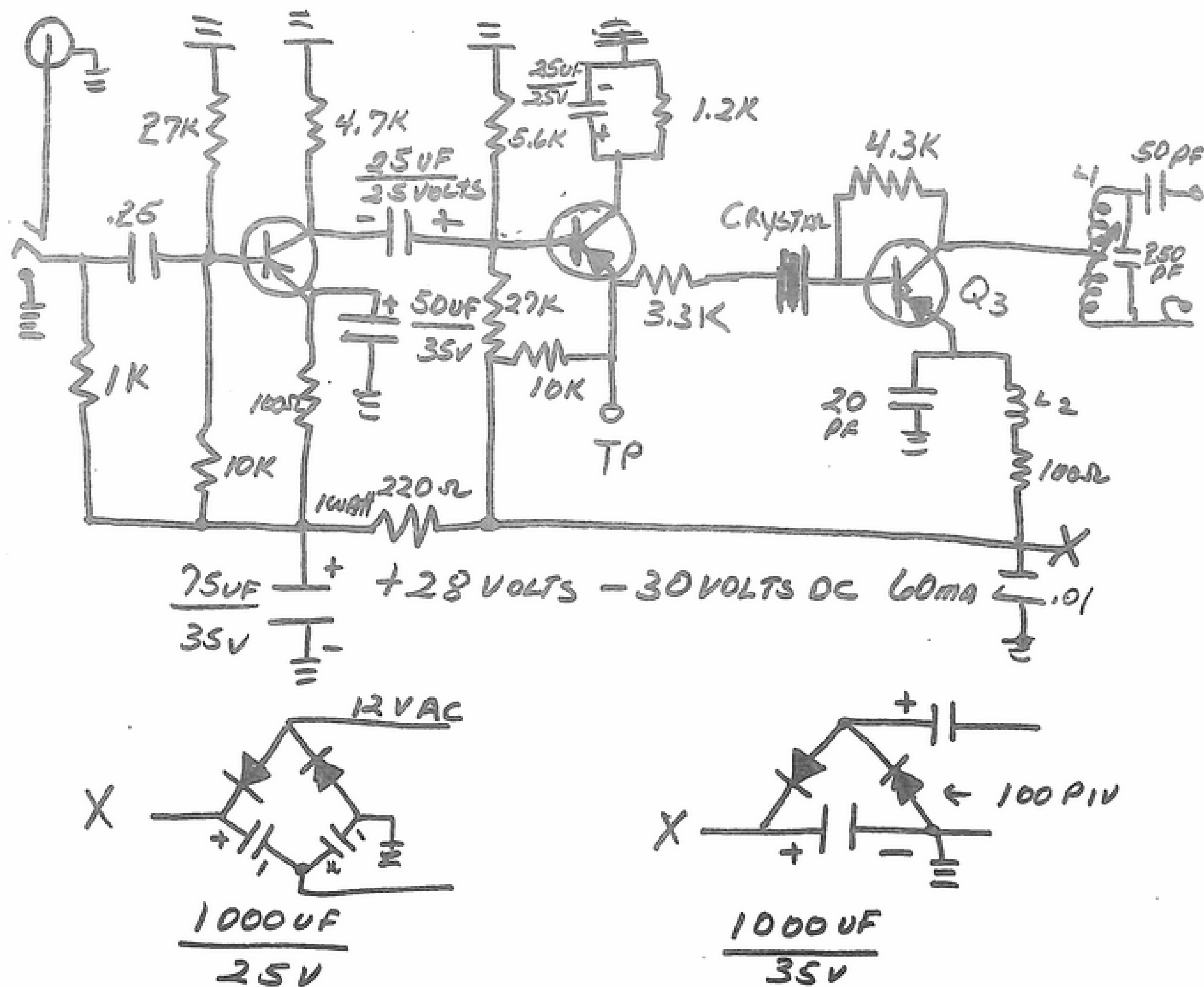
The oscillator is made to plug into the crystal bank located on the front pannel. It is necessary to get 12 volts AC out of the transmitter and a connection to the push to talk circuit must be made. The top crystal socket can be stripped and used to bring out the 12 volts AC and the bottom socket used to take approximately 13 volts of RF into the transmitter. With the type carbon microphone this oscillator will give about 7KHZ deviation.

A construction detail not shown on the schematic is a heat sink that must be used on Q3 the oscillator transistor. Two square inches of copper is adequate.



ARC 3 FM MODULATOR

To PUSH TO TALK RELAY



Q1, Q2, RCA OR OTHER MEDIUM POWER AMP 40319

Q3 RCA 49319, STOCK ITEM FROM RADIO INC. TULSA, OKLA

L1 14 turns ON A SLUG TUNNED CORE ½ INCH IN DIAMETER BY 5/8 INCH LONG

L2 8 TURNS AIR WOUND ¼ INCH IN DIAMETER BY 3/8 INCH LONG

VC VARICAP, ZENITH NR 103-146



two power supply configurations are shown. One is used for transmitters with ungrounded filament strings and the other for grounded filaments. The voltage must not exceed 30 volts DC. If it does a 15 ohm 10 watt resistor must be used in series with the AC supply to the power supply shown.

Test point on the schematic should read +7 volts for the varactor to be linear with equal deviation above and below the channel frequency.

The 7 to 45 variable capacitor is adjusted for minimum capacitance that will read a -14 volts at the ARC 3 crystal socket with the oscillator type filament hot.

The voltage values for the electrolytic caps are correct on the schematic. In the top, ungrounded, diagram the caps are in series and the 25 volt electrolytics are enough, however in the bottom, grounded, schematic one capacitor is on the 12 volt AC side and the other must take the full DC voltage. This capacitor then must have a minimum of 35 volt rating, as shown on the diagram.

The crystal holders contain no crystals but have been stripped and used for a mechanical means to mount the modulator on the front of the transmitter and as an electrical means to get the 12 volts AC and get the output from the modulator into the transmitter. The crystal is mounted in an octal socket and is 1/18th of the desired frequency.

Taken from the Oklahoma Army MARS POW-WOW and written by K5KHA.

Schematic and parts on back page.

#### WORDS OF ADVICE FROM THE CLUB TRUSTEE

K5CE, the club trustee has asked the users of the repeater not to use it as they would in making contacts on high Frequency. Example WA5XYZ, WA5 XYZ this is WA5ABC are you in there STEVE? He says since its a closed system and reaches all of us with ample strength one call such as WA5XYZ from WA5ABC. If your call is not answered it is not necessary to say, no signal heard WA5ABC clear. Also it is not required to indicate if the other station is mobile 5 or not, such as both mobile 5. Other than these suggestions he wants to commend the membership for the way they have used the equipment. WB5JBL

#### More on 160 Meters

Carl, W5JJ, has some interesting comments on Top Band elsewhere in this issue. 160 is, in fact, a very interesting and useful band. With the sun-spot cycle at the bottom of the barrel, 80/75 meters is just about useless for QSOs within the state during the hours of darkness. 160 works just fine though. Nighttime QRN is very low and QRM is so minor you would think you were in the Extra and Advanced sub-bands on 75. Signals start coming in very well about 1800. Your 80/75 meter doublet will work fine with a simple tuner. My first CQ dredged up Wyoming. Drag out that old rig, dust it off, and tune it up. See you on Top Band. K2GKK/5.

## THE ZANY NEWS FREQUENCY






EATIN' MEETIN' - - As I was preparing the calendar for December I was impressed by the number of times a chow hound could have an excuse for loading up. Four was the number I came up with but no doubt there will be other ones. See the calendar on the back page. Don't know who designed it that way but I'M going in for oral surgery the day before the MORI feed and may still be "incapacitated" for the Wheatstraw and VHF spreads but all things being equal we will make the ACARC meeting. For the rest of you, get into the Christmas Spirit and make them all for food and Eyeballing.

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SPEAKING OF SPIRIT(s) - - - \$2.25, the average cost of a cab ride, could save your friend's life. Your friend has a drinking problem. But it's nothing to his driving problem. Every time he drives drunk, he's risking his life and the innocent lives of others. Every time may be the last time. Spend a few dollars. Send him home in a cab. That's all. If you can't do that, drive him yourself. Or let him sleep on your couch.

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WHO'S ON FIRST - - Or more accurately, who's on what frequency? In this month's issue is a copy of an all spectrum chart that was furnished by Fred, K5HFN which should settle some arguments. You know the columns of the Collector & Emitter are open to just about any one, there are a few kooks in this world that are not welcome, so why dont you make this YOUR PUBLICATION by clipping, lifting or writing in your own words anything that you think might interest other amateurs. Your thoughts and writings don't have to be polished or earthshaking just do the best you can and give it to your favorite Club Editor or if it is more convenient get it to me. If it needs re-typing or polishing we will do it (with your approval) and let the 356 other readers of C & E share in it.

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MIDWEST CITY VOLUNTEERS -- No, we are not asking you to volunteer for some unpleasant task or even a rewarding one. You have already volunteered and your evidence is laying on the operating desk in my shack. What am I talking about? Red Cross lapel buttons and "drops" to add to one already received for assisting in Red Cross disaster communications. If the ones listed below will contact me by phone, eyeball, U S Mail (enclose s.a.s.e.) or come by you will be ready for the next time you put on a suit .  
Bill, WA5STC      Mac, K2GKK/5      Lloyd, K5YTW      Carl, AW4AQW/5  
Sid, W5KOZ      Fred, K5HFN      Marvin, K5HQP      Wayne, WA5AOB

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NO C & E NEXT MONTH - - In keeping with standard practice and the fact that most of the volunteer help which makes this paper possible will be engrossed in the Christmas - New Year celebrations there won't be a January issue, just this combined edition. There are special notes under the December calendar about January meetings. After a rest we will be back for February,

<div> <div>DECEMBER</div> <div>HAM HAPPENINGS</div> </div>						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY		SATURDAY
GO TO CHURCH	1	2	3	4	 ACARC	6
7	8	9	10	11	12	 MORZ
 WHEASTRAW	OKCAP SPECIAL MEETING	16	17	18	 VHF	20
21	22	23	24	25 	26	27
28	29	30	31	<div> MERRY CHRISTMAS  from  Central Oklahoma Radio Amateurs </div>		

See each club section for this months times & places.

JANUARY 1976 - - No calendar. Check page 2 for regular times and places for meetings. Except ACARC will meet on the second Friday, 9 January on account of New Years. OKCAP meeting is no\$ firm. Check on it.

CORA COLLECTOR & EMITTER = Box 15013, Oklahoma City OK 73115

ADDRESS CORRECTION REQUESTED

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