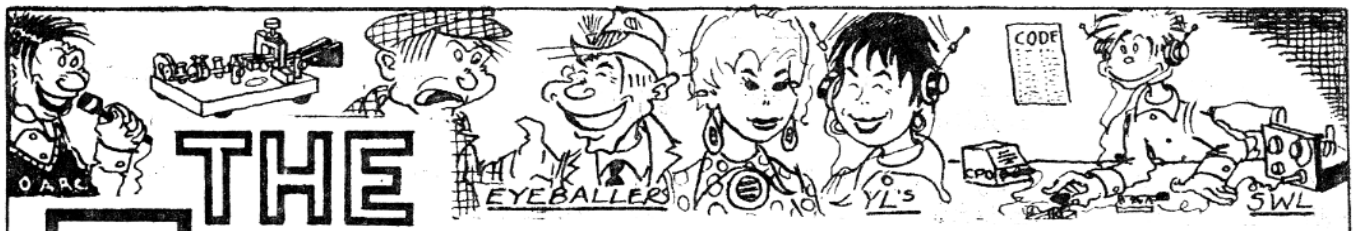
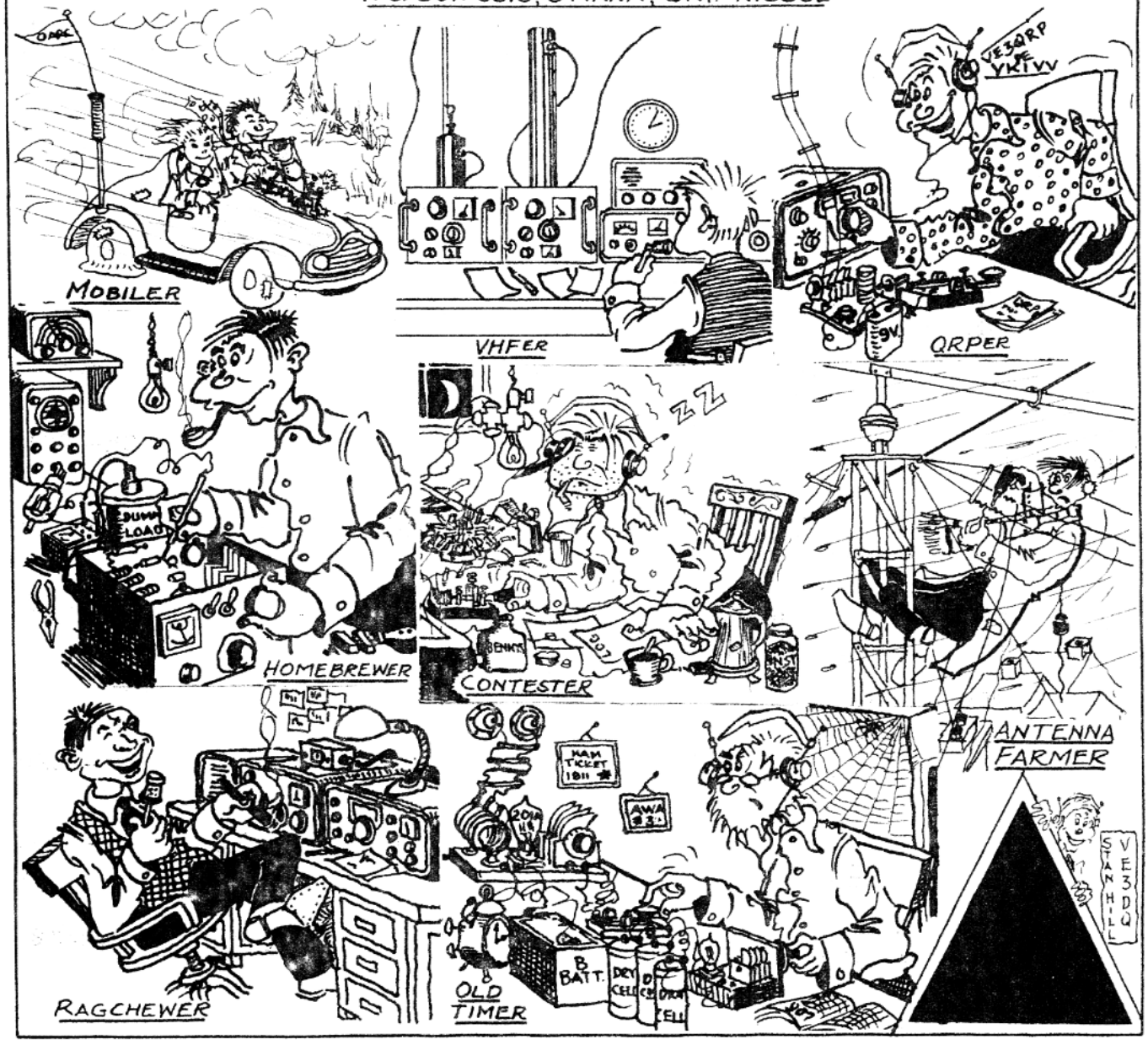
Feb 94



THE GROUNDWAVE

THE OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB
P. O. BOX 8873, OTTAWA, ONT. K1G3J2



OARC

NEW EXECUTIVE

PRESIDENT:	Larry Obrien VE3GRJ	25 Rockway Cres. #9 K2G 0M3	829-7813
VICE-PRESIDENT: NET MANAGER:	Cary Honeywell VE3ARS	164 Clemow Ave. K1S 2B4	234-8765
SECRETARY:	Margaret (Marj) Zuba VE3 HAL	223 McGill Ave. K1V 7M7	521-5074
TREASURER:	Mike Hughson VE3DVH	60 Norice Street K2G 2X6	224-2376
DIRECTOR:	John Henry VE2DNM	200 Bourgeau St. S. Aylmer, P.W. J9H 5M1	684-8255
	Bud Punchard VE3UD	3193 Riverside Dr. K1V 8H8	733-8384
	George Roach VE3BNO	104 Strathcona Ave. K1S 1X6	234-0885
GROUNDWAVE EDITOR:	Dave Parks VE3GSA	71 MacLaren St. #2 K2P 0K5	232-6255
GROUNDWAVE PUBLISHERS:	Cy Chapman VE3CUK	2244 Kipling St. K1H 6T5	731-6172
	Ian Hamilton VE3AMK	128 Osgoode Street K1N 6S4	232-9110
PROGRAM:	Jack Travis VE3GFR	708 Tweedsmuir Ave. K1Z 5P9	728-4001
MEMBERSHIP:	Vic Cyr VE3DEP	1969 Belcourt Blfd. Orleans K0A 2V0	824-1204
INSTRUCTION (CODE):	John Watson VE3CPY	841 Kingsmere Ave. K2A 3J8	722-3941
ARCHIVIST:	Nick Krauchuke VE3FFW	39 Charkay Street K2E 5N5	224-7179
COFFEE:	Jerry Martin VE3CNJ	1771 Hutton Street K1G 1M1	731-3220
CANADIAN ASSETS:	Croft Taylor VE3OR	60 Pineglen Crescent K2G 0G8	825-3434

MINUTES OF THE MEETING - JANUARY, 1974

The January meeting of the OARC was opened by retiring President George Roach on January 2nd at 2010 hrs. He extended a welcome to visitors VE4 OS, Ian McMillan, and VE3's EWZ, EWE, and ADX. He drew the minutes of the last meeting to the attention of the members. VE3 OR made a motion the minutes be accepted, seconded by VE3BYO; CARRIED.

The members were reminded that rigs, vehicles and BODIES are still needed for the Marathon Ski Tour. The auto rally is also looking for help. The Membership chairman reports 174 regular and 49 associate members. The Repeater chairman reports that the solid-state receiver is nearly ready to go up. We are still negotiating with VE3STP on a switch in frequencies.

The Treasurer reported that we have $2225.96 in cash and $586.91 in equipment for a total equity of $2860.12. He recommends no increase in membership fees. The audited budget will be published in the Jan. Groundwave. VE3CDC reported that an ARRL column and a repeater column are being added to the Canadian Amateur. He also has some 220 MHz AM transceivers available at $7.50. VE3BEW will be writing up some recent activity on the 450MHz band using fast scan TV.

VE3FFW as Nominating Committee Chairman conducted the vote for the new executive. The newly elected executive is comprised of the following members:

President	VE3 GRJ	Larry Obrien
Vice-President	VE3 ARS	Cary Honeywell
Secretary	VE3 HAL	Marj Zuba
Treasurer	VE3 DVH	Mike Hughson
Directors	VE2 DNM	John Henry
	VE3 UD	Bud Punchard
	VE3 BNO	George Roach

The new President took over as chairman of the meeting and announced that we are in need of a Program Chairman. A motion to thank the outgoing executive was made.

VE3CVH presented a most interesting demonstration on radio controlled aircraft (models). The meeting adjourned for coffee and ragchew at 2130.

Secretary, Marj Zuba

February Meeting

Wednesday, February 6th at 8 p.m.

National Research Council, Sussex Drive

March Groundwave

The deadline for submission of articles will be:

Tuesday, February 19th

See you at the meeting.

TV BEFORE THE CATHODE RAY TUBE -- PART 2

At the risk of being laughed out of the O.A.R.C because of my basic ineptness concerning things electronic, I will attempt to describe the equipment involved and methods used. For obvious reasons, my information is second hand, but I will do my best to be accurate.

As mentioned before, the signal was a continuous line of dots varying in strength, that actuated a neon lamp in a range of from zero (black) to a maximum bright red, The lamp was plugged into the phone jack of the receiver, This G.E. neon lamp was placed directly behind a vertically mounted eighth-inch thick Beaverboard disc, roughly the size of a record turntable. The disc contained 48 small holes about ½" apart, punched through with a small brad, forming a ring of holes starting near the circumference of the disc and gradually diminishing in diameter, until the last hole met the first, but ½" closer to the axis of the disc. This half inch difference represented the total height of the picture to be formed on the plate of the neon bulb which was itself but ½" square.

To see the picture, the viewer peered through the holes as they sped across the face of the bulb, and it was necessary that each hole in the disc scan the plate at the precise time and speed of the transmitting scanner to maintain synchronization. It is evident then, that speed control was critical. The disc had to travel at 1200 rpm, The driving motor used in this case was a ¼hp ac motor borrowed from a circular saw. Its speed was primarily controled by a variable resistor inserted in the line, but fine synchronizing was accomplished with the ball of the thumb placed against the edge of the disc, bringing the speed down to the critical value. The drive from the motor consisted of a rubber wheel fastened to the extended shaft and set to turn against the flat of the disc in much the same manner as some record players are driven. By moving this drive wheel closer or further from the centre of the disc, the basic speed of the scanner could be adjusted. Although the tube was a G.E. 110 volt general purpose neon lamp, it served very well in its capacity as a TV screen.

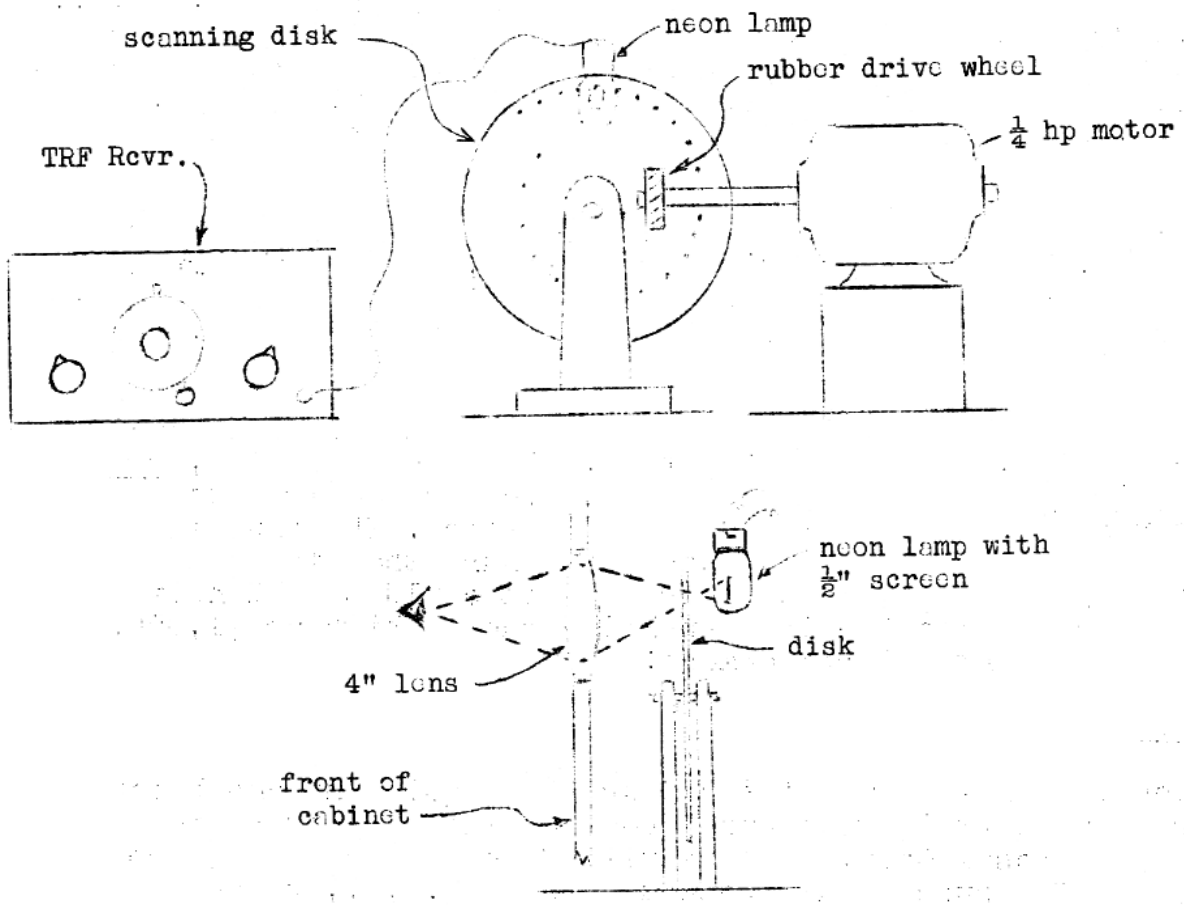
In April of 1930, George improved his receiving apparatus, He purchased a new scanning wheel, neon tube and synchronizing motor from Jenkins Laboritories in Washington. The wheel was of slightly different design so that it was placed horizontally with the bulb mounted within its circle. The screen size in this lamp was 1½" square and the number of holes in the disc had been increased to sixty, thus producing sixty scanning lines per frame and resulting in better picture detail. Picture transmissions were received that year from Jenkins in Washington and station W2XAB in New York City.

In 1932, Lafayette, Indiana's Purdue University (W9XG) supplied the entertainment, consisting ofuunedited newsreels, with a 1500 watt signal at 2800 kc, using 60 lines at 20 frames per second. When Peck Television Co. of Montreal (VE9AK) transmitted in 1935, they first used 60 lines at 64 frames per second, and later changed to 180 lines at 24 frames. Unfortunately, these signals were transmitted on 52.00 Mc - out of the receiver's range.

As transmitting stations turned their attention to the CRT type of television, and revised their equipment accordingly, the old 'Disc and Scanner' fell into disuse and made its way into oblivion. It was more than fifteen years before I was to see TV again.

Many of us have gained a certain satisfaction in building a piece of gear and having it perform well in comparison with the other fellow's; but I can only surmise the deep excitement borne of an endeavour that produces successful results so new and unique as to have standard at hand with which to compare them. Given this fundamental ingredient, what hobby holds more personal satisfaction than amateur radio?

73's VE3CVK



This receiver produced good pictures regularily from a distance of about 900 miles in 1930.

Regretfully, Cy's father passed away shortly after the first part of this article appeared. He was truly one of the original radio Amateurs.

DO YOU KNOW...

- that a Radio Inspector does not require a Search Warrant to enter your station for the purpose of conducting an inspection;

- that a Radio Inspector, when conducting a station inspection, has the right by law to inspect not only the radio apparatus but "all other telegraphic instruments and apparatus," e.g., teletype, in the station whether or not it is connected to the radio. He is also empowered to inspect "all books and papers (such as log books, messages, instruction books, QSL cards, etc.) used in connection with the operation of the station";

- that it is not legal to use the "10-Code" in the Amateur Service. The General Radio Regulations, Part II required that all Amateur transmission be made in "plain language. The 10-Code is not an internationally (ITU) recognized code, asis the Q Code!

- that it is contrary to the provisions of the General Radio Regulations, Part II to "install, place in operation, repair or maintain" any radio equipment which is required to be licensed if such a license is not in force. The onus is on the person performing the work to ensure that the gear is properly licensed. Watch yourself; it could be expensive to be a "good fellow" - the penalties run as high as $1,000.00 fine or 6 months imprisonment!

SURPLUS TIPS

If you are in the market for "surplus" equipment and become aware that certain gear has become available though Crown Assets Disposal Corp. as a result of forfeiture at the conclusion of a successful prosecutions by D.O.C., beware of what you might bid for it. If it is classified "surplus - Code SS-2, OK; but if it is "salvage - Code V take care. While all the pieces, except crystals, will be there, they will literally be pieces. If the equipment is not "type approved" for use in Canada, it hasbeen given the "treatment" by D.O.C. - with a pair of wire cutters!

All major components will have been dismounted from the chassis and all major wiring will have been cut short at terminals. This somewhat drastic procedure was adopted by D.O.C. only after the same piece of equipment had been seized three times!

Art VE3ZS

QLS QSL QSL QSL QSL QSL QSL QSL QSL QSL QSL QSL QSL QSL QSL

The Ontario QSL Bureau is located in Toronto and is operated by a team of dedicated amateurs headed up by:

Ross Buckley, VE3UW
20 Almont Road,
Downsview, Ontario

They have thousands of QSL's in their files for Ottawa area hams. Please send Ross a couple of stamped, self-addressed envelopes with your call marked in the upper left-hand corner so they can send you your cards. The envelopes should be business size envelopes. If you do not want your cards, please send in an envelope anyway so the volunteers in the bureau can reduce their workload.

Several hundred QSL cards have been accumulated from the old Ottawa QSL bureau and from the dead letter department of the post office. These cards are available from:

Earl Andrews
299 Atlantis
Ottawa, Ont. 722-2786

QSL's are available for the following calls:
VE3AK ALM AMQ ANH AP API AQJ BES BPV BY CAZ CBO CDS CDU CDW CGS CHG CIJ CJR CLZ CNO COM COU CPM CQJ CQP CRJ CT CTB CWE CZO CZR DAR DCE DEN DF DH DKB DMV DOS DTM DV DWB DXV DYV DZ EU EUI EV FB FCW FYQ GBD GBG GGH GHZ GJU GJW GKM HG KH KN LH LM MS MV ME NR NT OCI PN PQ PS PY RZ SX VI XE XM YT ZN VE2ADZ

Many of these cards are juicy dx and are cards that you have probably been waiting for.

AMSAT-OSCAR 6 Users List Summary - Reprinted from AMSAT NEWSLETTER Dec./73

October 15, 1973 (one full year of operation)
Total USA: 737 (40%)
Total Ouside USA: 1,079 (60%)
Total Countries: 74 (according to ARRL Countries List)
Total Stations: 1,816

RANKING OF AMSAT-OSCAR 6 USERS BY COUNTRY ON A PER-AMATEUR CAPITAL BASIS
(as of Oct. 15, 1973)

RANK	COUNTRY	TOTAL AMATEURS	OSCAR 6 USERS	PERCENTAGE OF AMATEURS USING OSCAR 6
1	New Zealand	4,641	70	1.5%
2	Australia	6,461	85	1.3%
3	Finland	2,000	23	1.15%
4	France	7,500	81	1.1 %
5	Sweden	4,400	44	1.0 %
6	Czechoslovakia	2,070	20	0.97%
7	W. Germany	20,380	168	0.82%
8	England	16,837	113	0.67%
9	Japan	14,576	90	0.61%
10	Canada	12,892	57	0.44%
11	Italy	6,000	24	0.4 %
12	USA	282,840	737	0.26%
13	USSR	15,085	30	0.20%
14	Argentina	17,500	22	0.13%

Total 1564 (86% of all OSCAR users)

TO THE MEMBERSHIP OF THE OARC:

As the new president of the Ottawa Amateur Radio Club, I would like to thank the previous executive and committee members for their hard work -- Well Done, Thanks also to those who took such a keen interest in this year's elections especially Nick Krauchuke and the nominating committee.

There are many ways we, as hams, may enjoy our hobby. There are as many directions to take as there are hams to take them. Therefore, one of this year's exeuctives chief objectives will be to ensure that all members of our club have equal opportunity to participate in club activities. This means, all successful activities of the past year will continue and special emphasis placed on membership. This club can only reflect YOUR interests. Our ears are open to suggestions and possible projects. May I also take this opportunity to remind you that members are encouraged to attend executive meetings.

Some of us require more warning of coming events than others. During the next month, I will try to put together a tentative timetable of this year's activities and their approximate dates.

This will be published in the March issue of Groundwave for your future reference. Again, if you have any pet projects get them to me before the publishing deadline for the March Groundwave.

Considerations are many in the coming year, so let us unite ambition with reason and have yet another successful year for you and the Ottawa Amateur Radio Club.

Larry Obrien VE3GRJ
President OARC '74

TO THE EDITOR GROUNDWAVE: January 21, 1974

At one of the meetings of the OARC late last year, it was reported that the club had a substantial amount of money somewhere around the $2,000 mark, I think. Now we hear that approximately $800 profit is made on last years operations. Isn't this rather a lot of cash for a non-profit organization to have on hand??? Just think what $2,500 could do, We could put 3 or 4 shutins or CNIB operators on the air as a start, or could fund a station of some hospital or convalescent home on the lines done by Len Summer in Toronto, who through the help of various clubs in Toronto and private funding managed to equip the Queen Elizabeth hospital VE3QEH as a start and now has many stations as well as other hospitals on the air.

I don't think the club needs more than $500 dollars as an operating fund and maybe we should aim at a budget on these lines donating or using the excess funds to some good advantage in helping others less fortunate than ourselves.

Jack Travis, VE3GFR

With all the hoo haw going on south of the border (and now north of the border), about the possibility of losing the top section of the 220 band, it seems appropriate that we should now be seeing surplus 220 rigs coming on the market. Such a set is the 29-B set, which has just recently become available in our area. These sets are very simple and are priced low enough for all of us to be able to afford one. The transmitter and receiver sections are very simple to understand and even a beginner at UHF will quickly adapt to the circuit. The receiver is a simple super-regenerative receiver, and the transmitter is one 6J6 operating as a UHF oscillator and amplifier.

Tuning up the transmitter is fairly basic. You first take the military coax socket off the chassis and replace it with an so-239 or similar. Then you make a dummy load out of a No. 47 pilot lamp, attach it to the set and turn the transmitter to SEND. The next steps require an isulated tuning rod. First remove the covers from the tuning holes of the front of the set. You will find 2 holes under each cover. One of them is for channel 4 and the other is for channel 5. Next located the send holes and adjust the channel 5 adjustment until the shorting bar is about half way up the slot. You can tell by removing the cover on the bottom of the power supply and looking up into the transmitter. It will move towards the front of the set if you are tuning it properly. Then you locate a signal source, tune the channel 4 trimmer until you hear the signal. If you experiment with the adjustment you will find that your dummy load will glow brighter. Keep adjusting the settings until the signal on the frequency you want is peaked.

As an signal source I used an Accent 450 which receives on 448.3Mhz. When properly set and receiving on that rig, I was transmitting on 224.15 which is inside our band (and, incidentally, within the disputed portion of the band.)

The receiver is a bit different, but the tuning procedure will be the same as that of the transmitter since you are tuning the same type of oscillator. We will all have to get together some night and net all the receivers to one transmitter. The receiver, being a super-regen, will be broad enough to allow for most transmitters being off frequency by a bit.

Further information of the sets is available from those of us who received the first batch and have had time to experiment with them. Contact VE3CDC, VE3ARS, VE3UD, VE3DVH or VE3CEZ.

Cary VE3ARS

STATEMENT OF ACCOUNTS SCHEDULE 2

DESCRIPTION	NUMBER	DEBIT $	CREDIT $
Membership	200		886.54 (1974) 1,115.15 (1973)
Beginners Class	201		246.00
Club Projects	202	85.99	
Hand Books	202/A	44.90	
Advertising	203		10.00
Auction Commission	204		344.26
Executive Expense	100	637.90	
Publishing	101	713.75	
Membership	102	67.45	
Beginners	103	16.00	
Repeater Station	105	239.35	
Picnic	107	8.77	
Articles for Resale	106		98.75
Field Day	106/A	57.45	
*Miscellaneous Credits (accumulation)			16.97
		$1,871.56	$2,717.67
Profit for Period			$ 846.11

*Made up from Coffee Fund Credits and miscellaneous change etc.

December 19, 1973

G.E.McCullum
Treasurer

BALANCE SHEET SCHEDULE 1

	JUNE 10, 1972 $	NOVEMBER 30, 1973 $
MEMBERS EQUITY		
Cash	1,427.10	2,225.96
Equipment	586.91	586.91
Equipment Increase		47.25
	2,014.01	2,860.12
Increase in Members Equity	$846.11	

CURRENT CASH ASSETS

Band Statement	2,654.48	
For Deposit	nil	
Petty Cash	1.47	
		2,655.95

CURRENT CASH LIABILITIES

Cheques Outstanding	429.99
NET CASE EQUITY	$2,225.96

1974 MEMBERSHIP DIRECTORY

The 1974 OARC Membership Lists have been mailed....

Vic Cyr, VE3DEP, Membership Chairman, wishes to disclaim all responsibility for errors or ommissions -- but he would like to hear about them. Check your entry and if it is in error please call Vic and let him know at 824-1204.

Corrections will be published in future issues of Groundwave.

Here is the first ommission...

G. Lalonde VE2GP
187 Brian Street
Gatineau, Quebec
J9P 4R9 663-4890
(Is Vic's own entry correct???)

NEW PROGRAM CHAIRMAN

Jack Travis, VE3GFR is the new Program Chairman, please inform him of your ideas. Jack is a former member of the Westside ARC in Toronto.

Jack Travis VE3GFR Home: 728-4001
708 Tweedsmuir Ave. Off.: 829-9651
Ottawa, Ont.
K1Z 5P9

EXECUTIVE MEETINGS

Executive Meetings are to be held on Tuesday nights in future.

QUARTER CENTURY WIRELESS ASSOCIATION

Development of a local chapter of the QCWA is coming along well. If you are interested why not call Ken Scrivens, VE3LJ and get on the bandwagon.

A NOTE FROM THE NOMINATING COMMITTEE FOR 1974

This year we managed to call about 90% of you. Unlike last year, the membership responded much more favourably. We received many commitments and enough nominees to enable us to have a democratic type of election.

Apologies go out to the remaining 10% (Time was against us.)

I would like to thank four committee members, Ralph VE2BMH, Cary VE3ARS, Doug VE3CDC and Bill VE3EEE for their efforts in call up the multitude.

I am also pleased with the way the members of the club co-operated on election night. There was a minimum of static which helped the process along.

Speaking of elections, thanks also goes out to the three polling superintendants Doug VE3CDC, Gerry VE3CNJ and George VE3EQH who distributed, collected and counted the ballots.

Good luck to the elected candidates. Better luck next year to the runners-up.

1974 can be a good year if we work at it. As a president once said, "Ask not what your club can do for you. As what you can do for your club." In other words, stand up and be seen, don't lay down and be recognized.

Nick VE3FFW
Chairman, Nominating Committee
(Retired)