HAPPY NEW YEAR FROM THE GROUNDWAVE

JANUARY

1977

OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB, BOX #8873, OTTAWA, ONT., K1G 3J2

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THE GROUNDWAVE - OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB - JANUARY 1977

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MATERIAL PUBLISHED HEREIN does not necessarily represent the official OARC viewpoint. Items may be reprinted by Amateur Radio publications with proper credit.

DEADLINE FOR COPY for the February issue will be January 15 for articles of length and January 22 for short items and announcements. Address all correspondence to: Carl Everson, VE3BYX, Box #4, Osgoode, Ontario, K0A 2W0.

THE OTTAWA AMATEUR RADIO CLUB is an association of Radio Amateurs devoted to the promotion of interest in Amateur Radio communication in the Ottawa regional area, and to promote the advancement of the technical competence and achievement of Club members.

THE CAPITAL CITY NET meets every Monday evening at 2000 hours on the Club repeater, VE2CRA, (146.34 MHz in/146.94 MHz out), to pass traffic and make announcements of interest to Amateurs in the Ottawa regional area. THE SWAP NET, a service of the Ottawa valley Mobile Radio Club Inc., and conducted by Ed, VE3GX, is also repeated at this time. To list items or make enquiries, call Ed at 733-1721.

THE NEXT REGULAR MEETING of the Ottawa Amateur Radio Club will be held at the National Research Council, 100 Sussex Drive, Ottawa on Wednesday January 5, 1977 at 2000 hours. The main item on the agenda will be the election of officers for 1977. See page 2 for the report of the Nominating Committee. A short film will be on hand for the meeting as well. Remember that only paid-up 1977 OARC members are eligible to vote. Also remember to bring your 1976 membership card to be eligible for the grand year-end draw for a valuable (over $20.00) useful and versatile piece of supplementary Amateur gear.

THE OARC EXECUTIVE meets regularly on the second Monday following the regular Club meeting in the Board Room at CFRA, 150 Isabella Street, at 2000 hours.

1977 MEMBERSHIP FORMS appear inside the back cover of this issue. You must be a paid-up 1977 member to vote in the election of officers on January 5 or to receive further issues of THE GROUNDWAVE. Remember the family membership plan - $7.00 for an individual and members of his immediate family residing at the same address and receiving only one copy of THE GROUNDWAVE per month

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RENEW YOUR ARRL MEMBERSHIP through the OARC - you save time, postage and M.O. fees, and the Club also benefits. See Hank, VE3BR, at any of the meetings.

MAUREEN NEILL, VE3FZY, spends her working day around the Civic Hospital and has offered to visit any Amateur confined there. If you know of anyone who would appreciate a visit, call Maureen at 725-4581, or after 5:30 PM at 233-9941.

RECIPES WANTED for a YL cookbook being prepared on behalf of the Canadian Ladies' Amateur Radio Association (CLARA) for the 1977 ARRL convention in Toronto. Call Penny, VE3ERO, or Marg, VE3EQE, (225-1276 or 521-5906 respectively) to see what subjects they need filled up and then submit your favourite gourmet delight for continent-wide distribution.

THE GROUNDWAVE NET is conducted by Bud, VE3UD, on the Monday evening proceeding the regular Club meeting at 2100 hours on or near 3770 kHz SSB. Bud reads THE GROUNDWAVE for the benefit of white cane Amateurs in the area but everyone is welcome to tune in.

WHEN YOU COME TO THE END OF A PERFECT DAY-----

-----better check things over again!!!

MINUTES OF THE PREVIOUS MEETING A meeting of the Ottawa Amateur Radio Club was held in the auditorium of the N.R.C. on Sussex Drive, Wednesday 1st December 1976.

The meeting was called to order at 2007 hours and the President welcomed all visitors.

The minutes of the previous meeting were accepted as printed in THE GROUNDWAVE on a motion by Jim, VE3AHN, seconded by Cary, VE3ARS.

Carl, VE3BYX, reported for THE GROUNDWAVE and reminded the members that articles are still needed for future issues.

Fred, VE2DNW, reported that components for the synthesizer project are on the way and that there will possibly be a rebate of approximately $20.00.

The Chairman of the Nominating Committee, Vic, VE3DEP, reported that the following nominations have been put forward: for President, Penny Robinson, VE3ERO; Fred Towner, VE2DNW ; for Vice-President, Rick Van Gastel, VE3HVA; for Secretary, Larry Bradley, VE3CRX; Maureen Neill, VE3FZY; for Treasurer, Cy Chapman, VE3CVK; for Directors, Bud Punchard, VE3UD; Jim Dean, VE3CMV; Zyg Skrobanski, VE3GZS; Bob Clayton, VE3HBQ; Hap Chase, VE3HRC. The deadline for other nominations is Dec. 20, 1976. January will be election night and all candidates must be paid-up full members for 1977.

The EMI Committee was reported to have been quite active in the Blosson Park area. Ray, VE3CUA, would like reports on any problems with mid-band TV converters and will give help if needed. The DOC will run a test on conversion problems.

Ross Barker, VE3GG, an OARC member, is now a silent key and condolences were sent to the family on behalf of the Club.

A request for two volunteers to audit the Club books was responded to by Ron, VE3AZN, and Ken, VE3IHX.

As of January 1. 1977, a repeater club in connection with VE2KPG will be formed with membership fees of $5.00.

The Ski Marathon will be held on Feb 26 and 27, 1977. On Sunday (27) there will be a 50 Kilometer race backward over the first part of the course which will require some extra communication coverage. If anyone has any Model ASR Teleprinters or IC-22's which they would be willing to loan for a day or the whole weekend, or if anyone wishes to volunteer their services to man check-point communication centers, contact Larry, VE3CRX.

Lorne Doreen, VE3SZ, of Deep River was present to present Carl, VE3BYX, the Editor of THE GROUNDWAVE with the RSO President's Award for excellence in club publications.

It was reported that call-letter license plates will only be replaced on a demand basis, the $25.00 charge being a one-time charge, not a recurring fee.

Members were reminded to keep their 1976 membership cards as there will be a draw at the January meeting.

Rick, VE3HVA, enquired for anyone interested in (a) bulk purchasing of resisters, (b) PC boards for the cost of materials only and (c) PL-259's at approx 85-87¢ each.

Bud, VE3UD, made an appeal for information on the technical activities of Amateurs in the VHF field, for example, slow and fast-scan TV, satellite, two-metre, scanner, synthesizer, antenna, etc developments, also information on activities in the 420-450 MHz band. This information is required for a paper being written on 400-490 MHz spectrum usage and for other research in preparation for the WARC Conference.

Ron, VE3AUM, commented on Bud, VE3UD, reading THE GROUNDWAVE oner the air for the benefit of area white-caners and on the good reports being received on ti from all over the country.

VE3BEB enquired about the display case at the Children's Hospital and it was reported that it will be changed and that some projects are going to be built for it.

Speakers from Telesat presented a very informative slide presentation and talk on the various aspects of satellite operations. John Henry, VE2DNM, a Club member, introduced the other speakers and also spoke on Systems and Spacecraft, Henry McDee, VE3ACF, spoke on Locations, Duncan McCanish, VE3CKG, spoke on Operations, and Ed Fuchs, ex-PAØTU, spoke on Locations. A vote of thanks was called for by the President for a very interesting presentation.

The meeting was adjourned on a motion by John, VE3HRJ, seconded by Ralph, VE2BMH, at 2230.

Maureen Neill, VE3FZY, Secretary

REPORT OF THE NOMINATING COMMITTEE The following OARC members are hereby nominated as being eligible and suitable for election to the offices indicated for the year 1977.

FOR PRESIDENT	Ronny Robinson VE3ERO	-OARC Vice-President for 1976 -helped to organize 1976 OARC Field Day -interested in all phases of Amateur Radio work, especially assisting future hams -XYL of Dave, VE3BTY -assisted with Boy Scout Jamboree
	Fred Towner VE2DNW	-held licences VE7MB, VE3CDT, VE8TU and VE8RCS. -was instrumental in organizing the bulk purchase of the two-metre synthesizer kit -during the past 25 years has done CW traffic handling -is now interested in experimentation and DX work
FOR VICE/PRESIDENT	Rick Van Gastel VE3HVA	-has been buying components in bulk at reduced prices for fellow hams -sends code practice weekly for aspiring hams -participated in Field Day and the Ski Marathon -enjoys the public service aspect
FOR SECRETARY	Maureen Neill VE3FZY	-has been Secretary for the past two years (OARC) -employed at the Civic Hospital -faithfully visits fellow Amateurs confined to the Civic Hospital
	Larry Bradley VE3CRX	-OARC Vice-President in 1975, President in 1976 -active on HF, VHF and UHF -organizer of the Canadian Ski Marathon Communications
FOR TREASURER	Cy Chapman VE3CVK	-has been dedicated Treasurer of the OARC for the past two years -active on HF and VHF
FOR DIRECTOR (three to be elected)	Bud Punchard VE3UD	-retired vice-president of Northern Electric -director of OARC for past three years -has helped to organize Club Field Days -active on HF and VHF -recent recipient of the Andrew McNaughton Award which is the top Canadian award for achievement in the engineering profession
	Bob Clayton VE3HBQ	-active on 40-metre CW -since 1961 has held calls VE2BLU, VE6AQY, and VE2DHA/aeronautical mobile out of Biafra -active at Club Field Days -has taught the OARC Beginner's Class -employed as Air Maintenance Engineer for MOT
	Jim Dean VE3CMV	-former GROUNDWAVE editor and OARC Director -formerly taught OARC Beginner's Class -since 1953 has held calls VE3DRV, VE7BGK, VE1ANF and VEØNEH (HMCS Iroquois) -active on HF and VHF with special interest in DX'ing and antennas.

(Continued on page 3)

REPORT OF NOMINATING COMMITTEE (Continued from page 2)

FOR DIRECTORS (Continued)

Hap Chafe VE3HRC
-former president of Gander Amateur Radio Club
-since 1946 has held calls VO2CM and VO1CW
-before WWII held VO1Q
-active on HF and interested in DX and rag-chew

Zyg Skrobanski VE3GZS
-presently holds license G3XDZ
-active on HF and VHF
-interested in 'junk-box' building and experimentation
-employed at Bell Northern Research

OTTAWA AMATEUR RADIO CLUB FINANCIAL REPORT Nov 30, 1976

Please note that this report includes several items which are 'flow-through' items not directly related to OARC finances, for example, $1200 from the 1975 RSO convention is passed on th the Children's Hospital and over $5400 is handled for the bulk purchase of components for members participating in the synthesizer project.

LIQUID ASSETS	Nov 30, 1976	Nov 30, 1975
Brought forward, Dec 1, 1975	$ 2,269.37	
Total receipts	$10,009.59	
Gross cash equity	$12,278.96	
Total disbursements	$ 8,638.00	
Balance forward	$ 3,640.31	
Current liabilities (#)	$ 1,322.23	
NET CASH EQUITY	$ 2,318.08	$2,269.37
FIXED ASSETS		
Club equipment at aquisition	$ 2,469.07	
Less accumulated depreciation	$ 1,448.65	
CURRENT VALUE	$ 1,020.42	$1,076.89
TOTAL CURRENT CLUB EQUITY	$ 3,338.50	$3,346.26

(#) Synthesizer project balance of $1,322.23 represents participants' equity currently held by the Club.

Increase in cash equity for the year: $48.71
Decrease in total equity for the year: $ 7.76

Submitted to the OARC executive, Dec 13, 1976. C.E. Chapman, VE3CVK, Treasurer, 1975-76.

NCC REGION BOY SCOUTS have recently aquired some Amateur gear and are looking for some Scouters who are also Amateurs. If you fill these requirements, please contact: Mac Atkinson at 684-5940 (home) or 225-2770 (Scout HQ).

CORRECTION TO THE DECEMBER GROUNDWAVE Information regarding the achievements of Hal Parsons, VE3QA, was entirely erroneous. The following information should be more accurate. The total number of countries which Hal has worked is 345. The total number of countries which can, at this date, be worked for credit is 322. Of these, Hal has 317 confirmed. This indicates that Hal has worked many countries which, for ARRL purposes, have passed out of existence. Hal is a member of the ARRL DX Honor Roll which includes anyone who has above 312 countries confirmed. Our apologies to Hal for the inaccuracies and we hope we have set the record straight this time. This is what happens when a VHF'er gets lost in other fields. Ed.

A TV IS A DEVICE-----

-----which makes it necessary to wake up before you go to bed!

A MONITORING PIONEER RECALLS THE WAY IT WAS by Ed Davey

The Lowrey farm near Almonte looked just about right. I'd already been up the Ottawa Valley as far as Deep River, testing reception at sites all the way along Highway 17. I set up my receiver in Hawley Lowry's milk barn and slung the sky wires from the roof peak. I spent the next three days and nights in the barn checking out reception.

I was a little leery that the CPR main-line tracks might through a bump into the accuracy of our direction finding, but time has proven the site okay. Twenty years ago last summer the Almonte Monitoring Station went into operation. I was manager from 1956 until I retired in 1964.

I began my career as a radio operator on the East coast in 1924 when I joined the radio branch of the old Department of Marine and Fisheries. In 1930, I was transferred to Ottawa as a shortwave operator. About 1927, surveys had begun for the opening of navigation through Hudson Strait to Churchill, and the radio branch was given responsibility for maintaining radio communications from Ottawa. Shortwave stations were set up at Port Burwell, Cape Hopes Advance, Nottingham Island, Chesterfield Inlet and Churchill.

The receiving station over which I presided was located in a greenhouse potting room at the Experimental Farm in Ottawa. The radio test room had been located at 299 Wellington Street, but there was a lot of electrical interference in the area. In those days, a streetcar ran down Wellington to Hull and its passage would blot out any signals.

The director of radio at that time, Commander C.P. Edwards, was good friends with the director of the Experimental Farm, Dr. Edgar Archibald. As a result of this friendship, the receiving station found a new home in the country--as it was then--far from sources of interference. The free accommodation was welcome, as appropriations were hard to come by.

The original transmitter was a 500-watt Marconi job. As more funds became available, the Ottawa shortwave station bought a four-kilowatt transmitter, also supplied by Marconi. The new transmitter was installed in space leased from a wholesale grocery firm on Wellington Street where the National Library now stands. The 4kW Ottawa shortwave station had the call letters VAA and transmitted on a frequency of 11,990 kilocycles. When radio regulations required all transmitters to be moved out of town, this transmitter was dismantled and scrapped.

In late 1936, I was promoted from radio operator at VAA and given the job of organizing the Ottawa Monitoring Station. This was the nucleus of the present nation-wide monitoring service, set up to monitor all aspects of radio communications, both domestic and international, to ensure that the regulations laid down by the Radio Act of Canada and by the International Telecommunication Union (ITU) are respected.

The war came along, and the Ottawa Monitoring Station was engaged, as were a number of other monitoring stations, in intercepting enemy communications for the navy. The monitoring station at Hartlen Point, Nova Scotia, was built primarily for this purpose. It was operated by the Department of Transport with close supervision by the Director of Naval Intelligence. I was involved with the installation of equipment at this site. There were two basic types of equipment: a high-frequency direction finder (Adcock type), and an intercepting station which could pick up and record enemy transmissions. Thus the station could copy the message and get a bearing line to its source. Information from similarly equipped stations--some 15 around the North American coast--enabled correlating stations in Ottawa and the United Kingdom to plot the positions of transmitting U-boats.

I also selected the site for the monitoring station which opened at Beaumont, Quebec, in 1954. The residents of the area had a pretty good monitoring system of their own. Every farmer I interviewed between Levis and Montmagny quoted the same selling price, whether two acres or ten were involved. The amount was exactly what we had in the appropriation for the purchase of land, $3,500. In 1966, this station was moved to St. Lambert de Levis. (Reprinted from 60 Days, a publication of the Department of Communications)

(Mr. Ed Davey, who now lives in Chatham, Ontario, retired in 1964 as manager of the Almonte Monitoring Station after 40 years in radio communications. - Ed.)

THE FELLOW WHO DOES NOT MAKE A MISTAKE

does nothing

AND THAT IS A MISTAKE!

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THE RESULTS OF THE CARF POLL concerning new classes of Amateur Certificates are now tabulated and are presented here below. The 1,413 responses from the estimated 3,000 ballots distributed make it clearly evident that no one solution will be acceptable to all Amateurs. The comments contained in over 100 letters written on the subject stressed three main points of view: (all pertaining to Question B)

a. A power limit of 200 watts to allow use of commercial Amateur transcievers, most of which are in this power range.
b. Frequency limits the same as the American Novice Class licence.
c. A definite time limit of one or two years, non-renewable.

Replies received represented a good cross-section of Canadian Amateurs, including maritime mobile (VEØ) stations, an Amateur on duty in Germany and one temporarily residing in the USA, all holding current Canadian Station Licences.

FIGURE I RESPONSE TO CARF OPINION POLL SEPT-OCT 1976

	RESPONSE	%
A. ARE YOU IN FAVOUR OF A "NO-CODE" EXPERIMENTER CLASS CERTIFICATE?		
1. YES- As proposed by DOC (1000 watts, all modes, all bands)...............	63	4
2. YES-But limited to working above 50 MHz-No HF priviledges................	223	16
3. YES-But limited to 220 MHz and above, plus 50-54 MHz.....................	155	11
4. YES-But limited to 144 MHz and above.....................................	84	6
5. NO-Not in favour...	888	63
B. ARE YOU IN FAVOUR OF A NOVICE CLASS 5 WORD-PER-MINUTE CERTIFICATE?		
1. YES-As proposed by DOC (90 watts CW on parts of 80-40-15-10 metres)......	778	55
2. YES-But with 100 watts only, on any part of 80-40-15-10 metres...........	50	4
3. YES-But with limits written on separate sheet re Certificate life, power, modes, bands...........	86	6
4. NO-Not in favour of a separate novice class but rather simplify the Amateur Class requirements...	65	5
5. NO-Not in favour (No change to present requirements and two classes).....	433	31

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A NOTE RE CALL-LETTER LICENCE PLATES received from Paul Smith, VE3FAA, but too late for the last issue of THE GROUNDWAVE.

"I have received notification from the Ministry of Transportation and Communications to the effect that 'In Ontario it will no longer be necessary to replace the licence plates on passenger vehicles every five years'. Amateurs will therefore no longer be required to pay the additional $25.00 for call-sign licence plates on a 5-year basis. One set of plates should be enough for any Amateur with a specific call. Those Amateurs fortunate enough to have call-letter plates presently, will not need to pay again in 1978. To date, over 700 sets of plates have been ordered and this news should spur on those who are dragging their feet. It is requested and hoped that all Amateurs will pass this word along." Paul Smith, VE3FAA.

Application should be made to: Dept. Of Transportation and Communications, MacDonald Block, Queen's Park, TORONTO, Ontario, Attn Miss G.E.Graham. Include all details from your present registration form, front and back, including your present registration (plate) number together with the call letters requested, the address from your station licence and $25.00 payable to the Treasurer of Ontario. Amateurs are reminded that call-letter plates are available only for passenger vehicles registered in the name of the person holding the Amateur call-letters requested. Some Recreational Vehicles and certain vans may be eligible but one should get a ruling on this from Queen's Park beforehand. The Ontario Government had indicated that they would expect in excess of 1,000 applications in order to make it a worth-while project on their part. After the many years of lobbying for this priviledge and the many hours of work put into it by many Amateurs across the province, it is hoped that it will now be supported in sufficient numbers to warrant the representations made.

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CAUTION IS THE MOST VALUABLE ASSET IN FISHING-----

-----especially if you are a fish!

HOW TO KEEP THE MOBILE RIG GOING when you have to be out in the freezing rain. by Bill Cousins, VE3GPR

First, have a cup of coffee! But get a take-out kind that uses styrofoam cups. When you have enjoyed what was in the cup, punch a small hole in the center of the bottom and place it upside down over the antenna and slide it down to the spring or coil (if a 5/8 type). A rubber band or vinyl tape will hold it in place. If your antenna is a 1/4-wave type, you may have to do this inside as well to hold it in place. This really works! I have driven over 200 miles with no problems but with over 1/4 inch of ice on the antenna above the cup. Happy winter hamming! 73,
Bill, VE3GPR

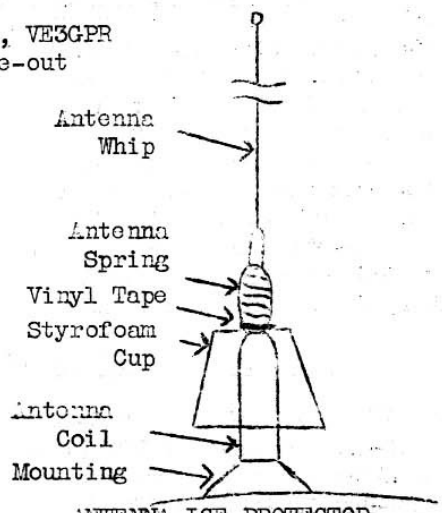

FIGURE I ANTENNA ICE PROTECTOR

ALL MEN MAKE MISTAKES-----
--husbands just find out about them sooner!

MORE CHANNELS FOR CB RADIO IN CANADA The Department of Communications plans to expand the General Radio Service (CB) in Canada from its present 22 channels to 40 channels, effective next April 1st. The GRS band, now 26.96 to 27.23 MHz, will then become 26.96 to 27.41 MHz. Coupled with this band expansion will be stricter technical standards for new equipment involved. These will be aimed at minimizing interference with broadcasting and other radio services, as well as within the GRS band itself.

First introduced in Canada in 1962 as a simple, low-cost means of personal or business radio communication, GRS has undergone explosive growth during the past two years resulting in congestion and degradation of service as increasing numbers compete for available channels. After Jan. 1, all equipment submitted - whether 22 or 40 channel - must meet the new standards. Equipment approved only under Issue 4 will not be licensed after next July 1, unless it was covered by a previously-issued licence. Land mobile and fixed system licensees currently operating with private channels on frequencies in the expanded band will have the option of either remaining, without protection from GRS, or applying for new frequencies. The department will attempt to assign them channels either just below 26.96 or just above 27.41 MHz. The DOC is developing still tighter GRS technical standards to take effect about mid-1978.

A background paper, titled "IMPROVEMENTS TO THE GENERAL RADIO SERVICE," contains further information. It may be obtained by writing to the Director-General, Telecommunication Regulatory Service, DOC, 300 Slater St., Ottawa, K1A ØC8, or from any of the regional offices of district offices. (DOC News Release, Ottawa, October 6, 1976)

WHERE ARE THE "HF INTERNATIONAL" BOYS GOING TO GO NOW? HF International is a US organization who's sole aim is the illegal operation on the 11 metre band. The group promotes illicit operation in the business portion of CB (27.3 to 27.5 MHz) where normal CB is not (yet) permitted. Their membership is over 18,000 (prior to Feb. 1975) and they operate either a VFO or a Ham rig like the FT101B. An FT101 has a bandswitch and a bootlegger is a bootlegger whether its eleven meters or twenty.

This group publishes a magazine called SSB News and their main concern is over the proposed US docket which would allocate new CB channels. The HF International group claim this action would force them to other frequencies "probably in the ten meter Ham Band". (This quote is from the SSB News). So now it's coming! What are we going to do about it? (Taken, in part, from an article by Ed Sieb, VE2BAQ, in the Marcogram)

THE WIRED CITY IS HERE An experimental operation in a suburb of Tokyo provides about 300 families with: off-air TV, pay-TV, local programming, facsimile newspapers, teletext on-screen information, a request service for still pictures and other information, a two-way educational channel, and other services. A second project is planned near Osaka with even more features to choose from.

HOW GOOD IS YOUR HAM STATION?

An interesting discussion took place recently on our repeater and it revealed the keen interest that hams have in improving the efficiency of their stations.

How does one determine if one's station is as good as we think it is? The discussion centered around establishing a "figure of merit" for Amateur stations and how this could be done. It was generally agreed that the steps would be observation, measurement and verification. One way of assessing the overall efficiency would be to add up all the individual plus and minus points of antenna gain, power, receiver sensitivity, etc.

The antenna is the biggest single contributing factor and the most important part of any installation. Using the half-wave dipole as the reference , as is the convention, the popular quarter-wave ground-plane is 3 dB less effective. For a beam antenna, we can mark up plus dB's according to the manufacturer's specifications. For all antennas at ground level, there are other factors to take into account such as reflections, etc.

The transmission line losses increase progressively with frequency and become quite important at VHF. At 147 MHz, for example, a 100-foot length of RG/8U coaxial cable has a loss of about 3 dB , more if the connectors are not made or installed well. At 21 MHz, however, cable losses can be neglected for the average lengths in use.

The antenna height can have a great bearing on both transmission and reception, the old theory of reciprocity again. On VHF, if you double the height of your antenna, you gain a cool 6 dB, providing that no extra loss is introduced by a longer lead-in. Thus, improvements in this area are enjoyed mutually because they are reflected on both transmit and receive.

The antenna location can have similar mutual effects. On HF frequencies and generally with wire antennas, the efficiency is very much a matter of the individual arrangement used, ie of the height above ground, the kind of terrain that forms the "ground", the proximity of buildings, trees, power lines, telephone wires (particularly if they run parallel and close to your antenna wire), the height in wave-lengths above ground (as this affects lobes and radiation angles) and many other lesser factors. It is next to impossible to assess the overall efficiency of a wire antenna precisely. The inverted-V is an enigma in itself. It may have several kinds of polarization, horizontal in one direction, vertical in another. However, it is a good all-round antenna for HF and is a good mechanical arrangement for the heavy cable is supported where it is most needed - in the center, by the tower supporting the antenna.

The transmitter power is directly responsible for the degree of quieting of a signal into an FM receiver. When full-quieting is achieved, however, further increases in transmitted power have no real significance in improving the signal into the receiving station. Similar effects occur on other modes as well but at high power levels the number of watts required to produce one dB increase in signal level becomes prohibitive.

The receiver sensitivity of properly operating state-of-the-art equipment is pretty much a common factor these days. Manufacturers in this very competetive industry all strive to get the best possible receiver performance in their products, best signal-to-noise in a CW-SSB system or lowest microvolts to achieve full quieting in an FM system. Because it is so competetive, they all end up with about the same sort of figures and the choice in this particular facet of the design is limited. This "sameness" in receiver sensitivity enables us to eliminate it from the assessment of over-all efficiency.

The final assessment really boils down to a few of the factors mentioned, transmitter power, antenna height and gain and a lot of that elusive quantity "X", which is operator skill and know-how. Low power in skilled hands can achieve the same, or better, results as higher power in unskilled hands. What we need most then is bigger and better antennas plus a good supply of operator skill. Let's develope it to its fullest, it represents money in the bank!

(Edited from an article in Marcogram by Walter Dolphin, VE2TD)

IT PAYS TO BE A HAM In awarding a license for a new FM broadcasting station in Monticello NY, the judge reported,"...it must be noted that...started as an Amateur radio operator at the age of 13. Amateurs, who must take and pass serious examinations... before they are licensed can generally be depended upon to comply religiously with... policy and rules. The fact that...was an Amateur...was a significant factor in evaluating the...proposal". The applicant's request was granted. (NOFARS via New Ham News)

LETTER TO THE EDITOR Dear Editor; Please print the following in THE GROUNDWAVE for comments.

Herewith is submitted a proposal for a remotely-controlled transmitter to enable hams of Ottawa, especially those living in places where the erection of a reasonably efficient HF antenna is impossible or impractical, to operate HF.

To encourage use, the remote station will be built in such a way as to utilize the existing equipment most hams already own. The following equipment will be needed to utilize the remote station on either 20-meter SSB or CW: a 2-meter FM transciever capable of operation on 146.58 simplex; a code oscillator and key; a touchtone pad; an HF receiver capable of reception on 14.010 (or 14.165 for SSB) MHz.

To begin with, the station will be set up to operate on 14.010 MHz CW only. After funds and help become available, a provision to incorporate an SSB output on 14.165 MHz will be made available. However, until the bugs are worked out, it will be a CW station only.

To operate, the ham would monitor 14.010 MHz on his HF receiver to ensure a clear frequency, then access the transmitter with his tone encoder (as he does the autopatch). He would then call CQ by placing his two-meter mike near to his code oscillator.

This is not a new idea and is presently being carried on successfully in other areas. The station is contemplated to be busy but once the novelty wears off, it will be much the same as repeater operation with a new twist. If we can conduct ourselves on a repeater, then there is no reason this remote station cannot be successful also. But it all depends on you! The project won't get off the ground without your support. We have a site available. Let's hear your comments. Rob Bareham, VE3ACY, 523-4246, 2450 Southvale Cresc., Suite 706, Ottawa, Ontario, K1B 4L7

SEVERAL LOCAL AMATEURS were participants in a taping of the CBC program, Platform, recently. The program was aimed at dealing with the problems of CB and members of the OARC executive were on hand to present the idea of Amateur Radio as an alternative. The program will be shown on CBOT (Ch. 4) on Sunday Jan 9 at 11:30 PM and will be rebroadcast on Saturday Feb 5 at 12:30 noon.

CB ISN'T THE ONLY BOOMING TWO/WAY SERVICE Figures released by the FCC for the situation in the US show the following increases: public safety - 506%; transportation - 237%; CB - 150%; industrial - 106%; marine - 91%; aviation - 28%; for the ten-year period 1965-1975. What about Amateurs? For the same period they showed a net loss of 3%. Do you see the handwriting on the wall yet? It is perhaps unfair to class the Amateur Service with these other two-way services because 'Amateur' is much, much more than simply a two-way service. However it is these other services which are eying a lot of the spectrum space occupied by Amateurs and with which we will have to compete at the WARC in 1979. And 1979 isn't that far away now. While these are US figures, we can expect that the same trends are, or will be soon, reflected in Canada. We will need to show a justification very soon, if it is not already too late, for our use of the VHF bands if we want to keep a good portion of them. I wonder how many of the other services mentioned above require a knowledge of Morse code at 10 wpm in order to operate on their respective bands? True, Amateur Radio is an 'experimental' service. Do we need Morse code to experiment at VHF? Perhaps we do, but I don't hear too much of it even on the more populated bands. Ed.

WANTED - ASSISTANT EDITOR(S) FOR THE GROUNDWAVE Many hands make light work, and no-one likes light work any more than I do! If you have any of the following: literary ability, an interest in a specific area of Amateur radio, an interest in photography, a 'nose for news', or even just a vague desire to 'do something' for the Club, contact the Editor at 826-2426 or at Box 4, Osgoode and I'm sure we can find something for you to do.

REPEATER VE3JGP IS NEARING COMPLETION This six-metre repeater will input on 52.76 MHz and output on 52.525 MHz and is presently in the initial testing stage. Designed to cover the Ottawa metropolitan area, initial results are encouraging and indicate a much wider coverage. Dust off that old six-metre gear follows and help populate this almost-forgotten band.

MEMBERSHIP FORM (1977)

Please enclose a cheque - Five (5) dollars - payable to:
OTTAWA AMATEUR RADIO CLUB
P.O. BOX 8873
OTTAWA ONT. K1G 3J2
Att: Membership Chairman

NAME: _____ CALL: _____
(first) (last)

ADDRESS: _____

CITY: _____

POSTAL CODE: _____ PHONE NO: HOME _____

OFFICE _____

Class of license: Amateur ___ Advance Amateur ___

Activities: SSB-
AM-
VHF-FM-
CW-
RTTY-
SSTV-
VHF-

BANDS:

I am a: MEMBER APPOINTEE OFFICIAL

ARRL	___	___	___
RSO	___	___	___
CARF	___	___	___
RAQI	___	___	___

I have a gas/diesel generator YES___ NO___

I have a 2 meter hand-carried portable YES___ NO___

What are your main interests in AMATEUR RADIO? HF___
VHF___
OTHERS___

What would you like to see the club do different next year ?

THE OTTAWA AMATEUR RADIO CLUB
BOX 8873, OTTAWA , ONTARIO,
CANADA, K1G 3J2

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