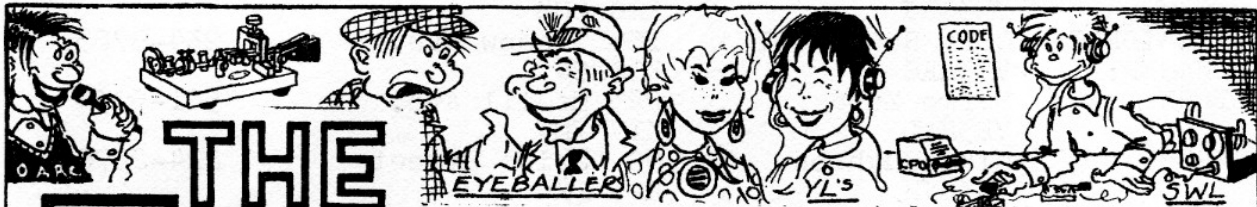


JUNE/74



# THE GROUNDWAVE

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



THE OTTAWA AMATEUR RADIO CLUB, P.O. BOX 8873, OTTAWA, ONTARIO GW JUNE 74 1

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BOOK:	VE3GIH	K2C 1H1	

EDITORIAL EMISSIONS:

\* Did you know that there is another GW? In this month's mail, we received a copy of the Saint Paul Radio Club Inc's. Ground Wave;- How about that? We find it to be a very lively, meaty and informative bulletin, full of good articles created by the club's members, and news of the interests and doings of the club members. The SPRC Inc. obviously is an old club, since they held their first banquet in 1931. Like our current GW, their GW has 10 pages. Their mailing list is 380 copies. Marv.Mahre WØMGI is the Editor.

\* We are pleased to welcome Ken Scrivens VE3LJ to the GW as Technical Editor. In the past, we always knew that Ken's expertise was available if we felt stumped, so we are pleased to make it official. Welcome to the "Corn Crib" Ken!

\* Some members have expressed curiosity as to the identity of "Staff" who writes our excellent Transistor column. This month, as you will see, he finally casts off his cloak of anonymity.

\* JULY GROUNDWAVE: The deadline for submission of articles will be: Tuesday, June 18th, 1974. Keep the copy comin' gang!

MINUTES OF THE MEETING-MAY 1974

GW ~~JUNE~~ ... 74 2.

The regular monthly meeting of the OARC took place at the NRC on May 1 at 2010 hours. The proceedings were called to order by President Larry O'Brien with a welcome to visitors Allan Hamilton, Phil Irons, Al Lobinston, and Dave Holt. The minutes of the last meeting were drawn to the attention of the membership and motion that they be accepted was made by VE3 DIH; seconded by VE3 CNJ. CARRIED.

Bill Porter WA3 AAC will accept the honorary membership at a later date as he had other commitments for this date. The SKI MARATHON money is not yet in so members are asked to be patient.

VE3 DEP made a motion that we purchase an Elliott addressing machine for the Groundwave. Seconded by VE3 CDC. The machine is worth \$500 new; it was offered for \$250; we can get it for \$175. The plates can be typed by GW staff at a cost of 6¢ versus 25¢ from Addressograph. CARRIED.

VE3 ARS reported for the Repeater committee on the new receiver which is narrow band. He reported on its installation by himself, VE3 CRX, VE3 CUZ, and VE3 GRJ on April 30. Technical problems were encountered. Comments on the operation were asked for with several members pointing out that some older equipment is not adaptable to narrow band and all manner of problems were or would occur because of this. VE3 ARS said that the receiver would be with drawn from use and an attempt would be made to widen the deviation it will accept. The old receiver will continue in use for the Present. It will take 2 to 3 weeks to iron out bugs in the new receiver after it is in use. It is hoped that the deviation on the In and Output will be the same.

A chairman for the beginners class will be needed for the fall. It is hoped that we will get Wed. nights for classes. A Program chairman is also needed for the club. VE3 UD reported that Field Day plans are going well but more bodies are needed.

The Radio Conference in Geneva now on needs phone patch facilities for our people who are there.

VE3 UD presented a very interesting talk on Transmission Lines and Matching putting to rest some myths concerning matching and SWR. A lively question period followed. The meeting adjourned at 2210 for coffee and ragchew.

Secretary,  
Marj Zuba, VE3 HAL

JUNE MEETING

Time and Place: Wednesday, June 5th, 1974, 8 P.M.  
National Research Council, Sussex Drive

Program: Jim Lafreniere VE3CLZ and John Henry VE2DNM will give a Show and Tell on two different approaches to building your own hand-held calculator.

Come one, come all! Visitors are welcome. The program promises to be very interesting, especially to some of us who began "doing our numbers" using a slate and a slate-pencil! Also Gerry's java seems to be getting better by the mugful. What is your secret ingredient Gerry? Slipping chickory into the pot and serving up Steamboat Coffee? C U there!

- \* \* \* -

TO THE MEMBERS

Ottawa is about to lose a very prominent ham couple in the names of Don and Marge Zuba VE3CUZ and VE3HAL. They are taking the hilly highway to Cold Lake, Alberta this summer. Both of them have always pitched in and helped when the pinch was on and a better couple to work with you will never find. ....

Marge has been a good Secretary for the club and I can attest to the hours she has spent writing and answering letters for the O.A.R.C., besides that, she's good lookin':- what else could we ask? On behalf of the club and myself, I would like to express sincere thanks to Marge as Secretary and Don as an all-around handy man, for everything they have done for the Ottawa Amateur Radio Club.

All is not lost, because Hank VE3BR has agreed to fill Marge's pretty shoes for the remainder of the year. Welcome aboard Hank.

L. R. O'Brien VE3GRJ  
President.

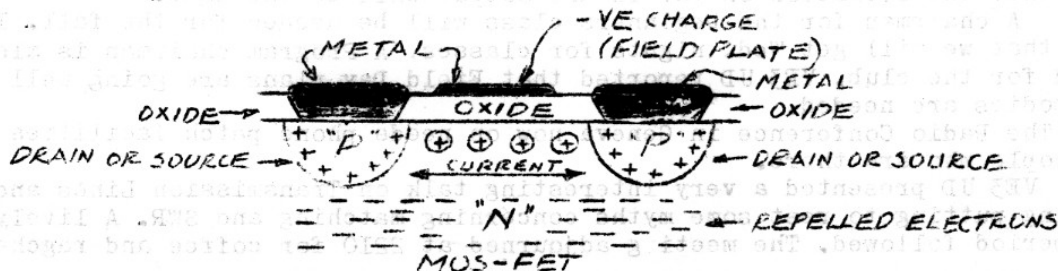
- \* \* \* -

### HOW DOES A TRANSISTOR TRANSIST?

Question: Could you tell us about Field Effect Transistors - FETs?

Answer: A somewhat unusual transistor, the MOS-FET (under a variety of names) is making possible many of today's computers and hand-held calculators. It is smaller than a transistor and can consume less current than the average bipolar device.

If you remember previous articles, we talked about P-type and N-type semiconductors and P-N junctions (diodes). The most common type of MOS-FET consists of two P-type areas at the surface of an N-type wafer.



As you can see, current cannot flow from either direction. Since current can't flow under normal conditions, the device isn't much good. But wait! What if we put a negative charge on the metal which is lying on the oxide? At some point enough electrons will be repelled to make the N material close to the oxide look like P material, and surprise! - it becomes a P-P-P device or a resistor. It is only a resistor while there is a negative charge on the aluminum above the N material. We could also make one the other way about with N-P-N, but then it would take a positive voltage to give us an N-N-N resistor. These devices are known as normally OFF MOS-FETS.

We can also have normally ON devices, but that's another story.

S. TAFF

Note-A new series of articles called "Learning to Work with Semiconductors" by WICER and WICP started in the April 1974 issue of QST.

An Historical Note: In the October 1948 QST there was an article announcing the development of the transistor by the Bell Labs. It is called "The 'Transistor' - an amplifying crystal" and ends with the observation, "These clever little devices are well worth keeping an eye on." That's just gotta be the understatement of the century!

- \* \* \* -

"I entered this here fancy eatery; and I sat there and I et and I et: for hours I shovelled it in - but I never reckanized a thing I et!"- Tom Mix

OSCAR

The response to our request for more copy for the GW has been most gratifying, and here is an item received from George VE3BNO concerning the Satellite Program. As Doug VE3CDC stated at one of our club meetings, Amsat is "where it's at" in Amateur Radio these days, so we will publish the April Bulletin of Amsat Canadian News in its entirety. Randy Smith VE2BYG was quite active as a member of our club some years back and Larry VE3QB is of course a local Amateur.

AMSAT Canadian NewsApril 74

Dear OM:

Activity by Canadian members during the first quarter of the year has been considerable. Since the initial newsletter in January the major event has been the transfer of OSCAR 6 command from VE3QB to VE2BYG. OSCAR 6 has, as you know, been performing well, and the spring schedule change on April 1st, eliminating the morning orbits, is intended to maintain this performance by altering the charge/discharge cycle to the changing sunlight conditions.

In Alouette, Randy VE2BYG took over autocommand of OSCAR 6 on February 15 at 2300z. It is a large job alone besides which Randy has taken over as Command Station Manager which is quite a load especially in the period of declining sun for OSCAR 6. This work is not without a serious level of frustration and we wish him well with the undertaking. Along with building and getting going his own version of SMART (System Multiplexing Amateur Radio Telecommand) Randy has also received K9PVW's Codestore unit with which he is having considerable problems as it appears to have been damaged in transit. In support of the command station the Sinclair 229a Special antenna donated by Sinclair Labs in Toronto has been sent to Bagotville along with an 8-level tape punch for use with the SMART system. Jean Claude Tremblay VE2DLA arranged the transportation gratis through his Saguenay Mercantile Co.

In Ottawa, the main event has been the receipt by Larry VE3QB of a Data General Nova 800 mini-computer, loaned for an indefinite period from Bell Canada. Rick VE3CVJ took over the procurement of this item a few months back. This machine will be an interim replacement for SMART until the microprocessors, under development in VK, become available in about 12 to 18 months. The applications team will be composed of Larry VE3CRX and Wes VE3GFQ working on software, Rick VE3CVJ and Greg VE3GIH on interfacing, and VE3QB operating the outcome of their efforts. We expect to be on line not later than June and will be ready to go for sure with the launch of AOB which is now proposed for July. The experience gained with this fine computer will help greatly in determining what is needed for the microprocessors to come in the future.

Also in Ottawa an electrical (RF) dummy of the new AOB (to be called OSCAR 7 after launch) has been built and is called ETU3. Manny VE3ARU graciously supplied the metal work and material and our mechanical specialist Ron VE3CNM made the precision pieces so that we might use this unit as a test bed for the AOB antenna system. VE3QB was to do some work in this area however medical problems severely limited things and the work had to be sent to Washington for completion. After the test it is planned to dress up the dummy and use it as a demo of what AOB looks like.

Also at VE3QB, a new command exciter has been assembled through a gift from Dave VK3ZDH, and it awaits crystals to be tuned up. This is the basics of our new command set-up for AOB. A keyboard keyer design has been redone by Kayo K9PVW, so that it will interface to the Codestore loading unit and permit a reasonable method of loading the memory for transmission to the satellite. A new TR44 rotator is being converted to digital control.

.....

In Toronto Ernie VE3HD, in conjunction with VE3QB, has been corresponding with John VE3NQ/W6 who own a non-operating company called 'CANSAT Systems Ltd.' which is the name (CANSAT) we would like to have for the Canadian group. Several letters have been exchanged and we are very hopeful that John's idea of a 'nominal sum' and ours are within our ability to raise funds to purchase the company from him. We will convert to a non-profit corporation as is AMSAT in the US. We feel there is a real need to organize formally in the near future. This does not prevent us from receiving donations at present and if members know of any source of funds, Ernie VE3HD would be pleased to hear about it.

Larry VE3QB reports that he is monitoring the current drain versus temperature of the 435.1 beacon prototype (constant voltage) on a new Stark VTVM which has been donated by Tom VE3GEQ. This has a book of some 20 pages of calibrations which were made by an SWL who works with Tom in the CSA Labs in Toronto. Tom has recently got on OSCAR 6 and is working out quite regularly.

In late February VE3QB happened to be in Washington on a business trip and spent a few days and evenings with the AMSAT gang. By coincidence this was also when Karl DJ4ZC and Werner DJ5KQ were also in Washington so a meeting was called. The main outcome was that it has been decided that AMSAT-DL will send prototypes of the new 146 and 435 EER repeater to Canada for conversion into flight hardware for the next satellite after AOB. This will be a major undertaking and will be concurrent with our existing program of converting AMSAT 146/29 transponder to 146/435 by using our beacon exciter as a local oscillator. Bob VE2AO, our resident RF man, is coming up with a new mixer and two stage linear for a peak output of about 4 watts. A third effort is underway in JA and a VK program by Peter VK3ZPI is understood to be in the works. As a by-product of this visit some VE's might have received a note in the last AMSAT Newsletter as Larry took a few rest periods while licking the stamps and wrote notes on a few of the covers. Perry K3JTE, always seems to have a real good job on hand whenever an unsuspecting visitor shows up.

In Edmonton, VE6AK reports the formation of the Edmonton UHF Club containing several OSCAR users. Still very poor activity level from B.C.

In Rochester, N. Y., May 17/18 VE3QB and VE2BYG present a session on OSCAR 7 and its capabilities at the Western New York Hamfest and VHF Conference.

Letters received following the mailing in January were appreciated. Please send any comments or news items to the address below.

73,  
Ernie Welling VE3HD  
165 Catalina Drive,  
Scarborough, Ontario M1E 1B3

\* \* \*

OTTAWA AREA NEWS

Ottawa Amateur Radio Club Picnic

The OARC Picnic will take place Sunday, July 21st at 2 P.M. in the Vincent Massey Park, Section "V". Tickets are 50 cents per person up to \$2.00. See George Roach VE3BNO for tickets. The line forms on the right!

The West New York Hamfest and VHF Conference was held in Rochester, N.Y. over the May 17-18 weekend. Canada was well represented with George Spencer VE2MS, Larry Kayser VE3QB, Randy Smith VE2BYG, and Bob Pepper VE2AO seated at the banquet head table. Larry VE3QB received the Certificate of Achievement Award for his work with AMSAT. Ottawa Amateur Radio Club members Cary VE3ARS, Doug VE3CDC, Hank VE3BR and George VE3BNO took part in the Hamfest activities. George VE3BNO

1975 RSO Convention to be hosted by O.A.R.C.

At the RSO Delegates Meeting held April 20th, 1974, attended by Ottawa Area Delegates George Roach VE3BNO and Lorne Doreen VE3SZ, it was agreed that the Ottawa Amateur Radio Club will host the 1975 RSO Convention on October 3rd and 4th, 1975

Mistaken Identity or Deliberate Misprint?

In the May 21, 1974 issue of the Citizen was a story picked off the AP wire which the Citizen headlined "Woman claims harassment via ham radio", about massive harassment of a Chicago woman, Mrs. Guardi, by a gang of CBers, in which the poor woman was afraid to face her tormentors in court, since she was told by an anonymous telephone caller that she would never live to testify in court. Mrs. Guardi said she began being harassed soon after she complained about the flow of obscenities over her citizens-band radio.....Now, surely the Citizen must know the difference between Amateur Radio and CB radio, so Radio Amateurs can only wonder whether the reference to "ham radio" was deliberate or a mistake. There are all too many of these occurrences, such as the item that appeared in Dear Abby last year, and the recent item in the "Be Heard" column of the Ottawa Journal, in which an Ottawan complained about hearing voices on his hi-fi set, and the columnist declared right off the bat that the culprit was a "ham operator". Although CB state volubly these days that they are cleaning up their channels, the incidence of "public services" such as that provided to the Chicago woman are becoming more common every day. Trouble is, a lot of people don't know the difference between CBers and Radio Amateurs and lump all non-commercial radio buffs in their minds as the Satan's Choices of the electronics world. According to an item in the 73 Hotline, the Department of Justice in the U.S. is putting the heat on the FCC so that they are having second thoughts about giving CB further channels, due to CB "public service" to the striking truckers and road blockaders, which permitted the truckers to be so well organized that they were able to hold the country up to ransom.

Stan VE3DQ

Ottawa Octo Wins Award

Charles Wendell VE3CGW, who celebrated his 80th birthday on February 12th, recently won a 10 meter award. Charles contacted and QSL'd 15 El Paso Texas Amateur Radio Stations on phone and has been awarded the Worked All El Paso Certificate. Fine business, Charles!

Credit - The Ontario Amateur.

Miles for Millions

The OVMRC Inc., aided by members of the OARC, provided communications for the First Aid Posts manned by the St. Johns Ambulance Brigade along the 35-mile Miles for Millions Walk route on Saturday, May 4th. Doreen VE3CGO and Trev VE3BMC organized the Amateur Radio aspects of the event, as well as participated in the communications work itself. Doreen VE3CGO, Trev VE3BMC and Ed VE3GX each put in 17 hrs 40 mins. at the Net Control Station VE3CGO. Ralph VE3BMH spent 11 hrs. 30 mins. and Tony VE3FXG spent 5 hrs. 30 mins. in the St Johns OIC's Roving Mobile/Portable vehicle, and Cary VE3ARS contributed 12 hrs. 30 mins. in the Rothman Van. Manning the check points, 27 operators provided from 3 hrs. 30 mins. to 6 hrs. 05 mins. of communications service and three operators provided a total of 17 hrs. 05 mins. at the St Johns Dispatch Post VE3RAM.

The event was a resounding success with over 20,000 walkers registered, of whom 6,000 finished the 35-mile stretch. Officials estimate the proceeds will exceed \$200,000.00! The OVMRC Inc. thanked the members of our club for their work, and for the use of our repeater VE2CRA, in the May RAMBLER. Participants from OARC were VE3's AMK Ian, DNO Camille,

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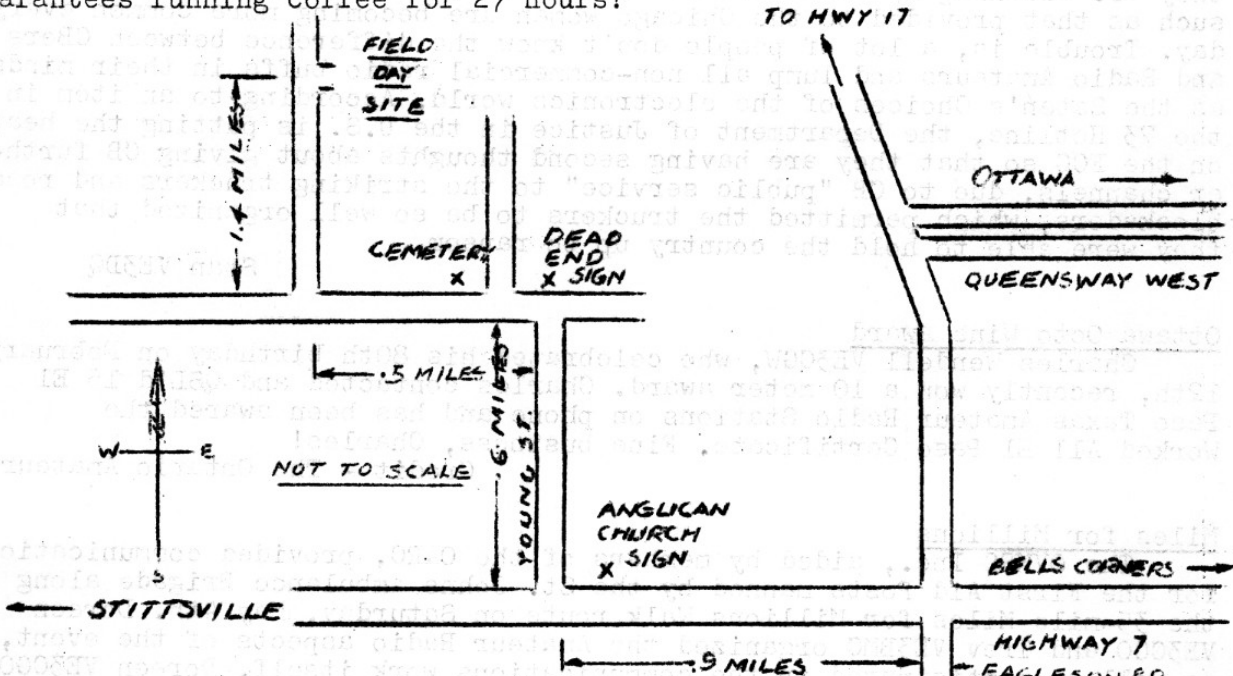
CJD Ed, BR Henry, GJG Tom, AOE Arlyn, DV Shep, GIR Ken, SH Bernie, DIH George, CDC Doug, CRX Larry, FFW Nick, ZS Art, BTJ Pat, UD Bud, GOS Heinz, LJ Ken, DGS Al, DEP Vic, AUM Ron, ARS Cary, and VE2DNM John. Some of the above public-spirited operators wear the hats of both clubs, in fact, Bernie VE3SH is the President of the OVMRC Inc. Congratulations to all for a job well done!

It is the joint Public Service participation of the area Radio Amateurs in events like the Miles for Millions, the Winter Car Rally, the Ski Marathon, the manning of VE3JW, and the service provided by Ed VE3GX to the Capital City Net with his Swap Net, that emphasize the spirit of co-operation that exists between the Amateur Radio Clubs in the Ottawa area, and augurs well for the future and growth of Amateur Radio throughout the region.

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FIELD DAY

This will be the last notice in Groundwave before Field Day on June 22 and 23. Although May QST has not yet arrived and the 1974 rules are not available, we expect they will be the same as last year. The site will be the same as last year - about 2 miles north of Hazeldean - see map. Setting up will begin at 18:00 GMT (2:00 P.M. EDT) on Saturday, June 22 and operation will continue until 21:00 GMT (5:00 P.M. EDT) on Sunday, June 23. Sunday breakfast will be available for those who survive Saturday night - but otherwise you must provide your own meals. Gerry VE3CNJ guarantees running coffee for 27 hours!



We have two 200 watt stations lined up, - one for C.W. and one for phone. We have antennas and cables for 15, 20, 40 and 80 meters. We have two gas driven generators - we have tent trailers and tents. We have stoves coolers, sleeping bags, cots, chairs, tables, food, gas tanks, flashlights lamps, fly dope, firewood, - firewood?, but now we need PEOPLE - operators, loggers, helpers, watchers, gas tank fillers, advisors, campers. Please call Glen Holt VE3GWY at 225-7185, or Bud Punchard 733-8384, and let them know that you are interested and what you can do. Don't leave it until the last minute - do it now- because a meeting will be called shortly to arrange final details.

This is a real fun challenge fellows - operating in the raw - come out and see how emergency stations work under adverse conditions.

Bud VE3UD

SPRING AUCTION 1974

Some wag has stated that the most efficient method ever devised to transfer radio junk from numerous hams' basements to numerous other hams' basements is the Amateur Auction. The Spring Auction sponsored by the OVMRC Inc. at EMO HQ on April 27th was a case in point, although there were a lot of good pieces of gear put on the block.

Ed Morgan VE3GX was the auctioneer and he conducted the fun affair with his usual aplomb and hilarious good humour. When asked the ratings of particularly heavy pieces of gear, he referred to them as one- or two-hernia jobs, and told a mysterious stranger identified only as "the man with the hat" who bid and bought enthusiastically that he hoped his money held out.

Some vintage items that a few years ago wouldn't have rated a second glance brought good prices as antiques. There were a couple of antique radios, an antique telephone, and several years' issues of QST from 1926 upward. This operator bid on the QST's, but I had deliberately limited the lucre in my purse to four bucks, and refreshments had already made inroads into that mini-stake (Where else but at an Amateur function can you get a good cuppa java for a thin dime?) so I was quickly outbid. Did, however, get some '48, '49, '50 issues of QST for cutting up to add to my collection of Gil cartoons. There was a beautiful National vernier dial and a BC-375-E tuning unit with a couple of good vernier dials, but I was outbid on those too.

Some of us are psychologically unsuited to getting much advantage from ham auctions. We get tongue-tied when we should be bidding like crazy, and we get buck fever at the wrong moments and bid frantically when we should be keeping our traps shut. The crowning folly of the event was my bid of two bits for yet another TV junker. Ed said, "You get colour yet, Stan," but the only colour around was my red face, since nobody, but nobody, would bid four bits and take me out of my predicament. It is best to skip the scene that ensued when I pulled into our driveway with that monster sticking out of the trunk of the car. At the auction, some wise guy had hollered, "It works!", so I bid with the thought that I could play with the thing and maybe learn something about TV's. But my nephew, who had witnessed my aberration, stated that it would take a miracle for that thing to work, since it had been deprived of a number of tubes, the speaker, and the line cord. After tinkering for several days, using parts lifted from other junkers, I got a raster and eventually faintly got what appeared to be the scowling visage of Mr. Watergate, but my YF declared it was Belefonte. On closer examination we decided it was an Indian valiantly protesting the James Bay land grab. Then I got what appeared to be the south end of a string of horses going north through a massive snowstorm, and some faint guitar music through the terrible hum of the speaker, so I guess I had either Roy Rogers or Gene Autry in a horse opry. I now get a rather jiggly picture in which Cannon looks like "The Thin Man" with the top of his head squashed flat, but the picture degenerates into rolling, bars, herringbone, and christmas tree after fifteen minutes of viewing. From the antics of this clunker, it appears I will learn a lot about TV before I get it working; or before I throw in the sponge and comply with the fervent entreaties of my long-suffering YF and haul the damn thing off to the dump!

Stan VE3DQ

\* \* \*

CHANGES TO THE DIRECTORY - By Vic Cyr VE3DEPAddress Change: Hugh Clark VE3FG

House 65, 109 Valleywoods Rd.

Don Mills, Ont M3A 1Y4

Bob Clayton VE3HBQ

1174 Tawney Rd.

Ottawa, Ont. K1G 1B7

731-2691

New Members: Dave Holford

837-21 Eastvale Dr.

Ottawa, Ont.

746-7732 995-3457

Bob Sangster VE3FB

548 Fraser Ave.

Ottawa, Ont. K2A 2R4

722-2548 992-8897

REPEATER NEWS

Ontario Repeaters

The following list of Ontario Repeaters was winnowed from a composite Ontario-U.S. border list published in the TFMCS Inc. Bulletin.

<u>Input</u>	<u>Output</u>	<u>Call</u>	<u>Location</u>	<u>Sponsor</u>	<u>Trustee</u>	
146.10	146.70	VE3TTY	Toronto (Proposed)	TFM	VE3APZ	
146.16	146.76	VE3DRW	Hamilton (alternate output 146.79)	HARC	VE3CFM	
146.25	146.85	VE3BOR	Barrie (Planned)		VE3FJB	
146.28	146.88	VE3MRT	Bracebridge		VE3 AL	
146.28	146.88	VE2ZO	Montreal			
146.34	146.94	VE3PBO	Peterborough	PARC		
"	"	VE3SAR	Sarnia			
"	"	VE3KER	Kingston			
"	"	VE3NFM	North Bay			
"	"	VE3SSM	Sault Ste. Marie (Alt i/p .46)			
"	"	VE3TIS	Timmins		VE3DQL	
"	"	VE3TAR	New Liskeard (Alt. i/p .46)			
"	"	VE3NRR	Deep River		VE3AGN	
"	"	VE3OSR	Owen Sound		VE3CRV	
"	"	VE3	London		VE3ETJ	
"	"	VE2CRA	Ottawa	OARC	VE3CEZ	
146.34	146.76	VE3TOR	Toronto (non-standard pair)		VE3CWA	
146.37	146.97	VE3KSR	Kitchener (alt. .34/.94)		VE3LV	
"	"	VE3WXR	Brockville		VE3HY	
146.40	147.00	VE3WIN	Windsor			
146.40	147.18	VE2RM	Montreal (Going to 147.00 output in 1975)			
146.43	147.03	VE3GOD	Goderich		VE3AIU	
146.43	147.30	VE3WCR	Port Colborne (proposed move to .90/.30)		VE3BSZ	
146.46	147.06	VE3RPT	Toronto	TFMCS	VE3ARV	
"	"	VE3LAC	London	LARC		
"	"	VE3KCR	Chatham			
"	"	VE3III	Windsor		VE3FWV	
"	"	VE3KBR	Belleville			
"	"	VE3SRS	Sudbury			
"	"	VE2ZO	Montreal			
"	"	VE3	Timmins		VE3TA	
"	"	VE3YQT	Thunder Bay		VE3GST	
"	"	VE3STP	Renfrew			
146.55	55/15	VE3TCR	Brantford (LoBand Simplex-proposed 75/15)		VE3GEO	
146.58	58/18	VE3MOT	Toronto (LoBand Simplex-proposed 78/18)		VE3GUS	
147.66		VE3TFM	Toronto (Alt. i/p .66)(.87/.27 See below)			
147.72	147.12	VE3OSH	Oshawa	NSRC	VE3ATI	
147.75	147.15		Hold for VE3TCR Brantford (presently 55/15)		VE3CEO	
147.78	147.18		Hold for VE3MOT Toronto (presently 58/18)		VE3GUS	
147.81	147.21	VE3RSB	Burlington	BARC	VE3CZN	
147.84	147.24	VE3NRS	St. Catharines	NPARC	VE3WT	
147.87	147.27	VE3TFM	Toronto	TFMCS	VE3DJS	
147.90	147.30		Hold for VE3WCR Pt. Colborne (presently 43/30)		VE3BSZ	
147.93	147.33	VE3TDX	Toronto	ODXA	VE3MJ	
146.52	Simplex	National Calling Frequency				
52.760	52.525	VE3RPT	Toronto	TFMCS	VE3ARV	
52.525	Simplex	National Calling Frequency				
222.34	222.94	VE3KRA	Peterborough		VE3RA	
222.38	222.98	VE3	Toronto	TFMCS	VE3DVW	
447.1	442.1	VE3AHS	Welland			
448.3	443.3	VE3	Toronto	Pioneer	RC	
"	"	VE2CRA	Ottawa	OARC	VE3CEZ	
449.4	444.4	VE3UKW	Toronto		VE3BNB	
446.0 and 449.5	Simplex National Calling Frequencies.					

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REPEATER NEWS (continued)VE2CRA and VE3STP Switch Inputs

The switch of input frequencies between VE2CRA and VE3STP was accomplished on May 12th. Cary VE3ARS put in long hours to carry out the work to make the switch, ably assisted on frequency checking, etc. by VE3ANT, VE3CUZ, VE3AAC, VE3EQH and many others. Listening at this QTH it sounded like Cary was up on the hill throughout the whole weekend and he is to be commended for his energetic devotion to the task. We hoped to have a report by Cary himself on the C/O and the installation of the new solid-state receiver, but at this writing, he is ill; no doubt worn to a frazzle by his hard work on the repeater and his swatting at University. Some stations are having trouble getting into the new receiver, but only 18 repeaterites showed up at the tune-up session, so what can you expect? Only about a half-dozen stations called into the last CCN using .46, thus tripping VE3STP instead of VE2CRA, so guess most of the fellows have their .34 crystals. This reporter has not crystallized up as yet; but then, I'm in no hurry as I march to a different drummer. If you are having problems, see Cary's article in the May GW. VE2CRA now 146.34 in/146.94 out. VE3STP now 146.46 in/147.06 out. Stan VE3DQ

Greater Montreal Repeater Council Formed

At a meeting in Montreal on April 20th, the Greater Montreal Repeater Council was formed. Officers are Ian VE2BEN Chairman, Jules VE2BDM Secretary, Pierre VE2DRC and Richard VE2DGU Frequency Co-ordinators. The group will co-ordinate repeater activities in the Montreal area with the St. Lawrence Valley Repeater Council to the West, and the VHF Committee of RAQI to the East. Repeater and Simplex frequencies will be re-adjusted to conform to the frequency plan adopted by ARRL and CRAG within the next fifteen months.

Credit - Montreal Amateur Radio Club MARCO-GRAM  
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NEWS RELEASESDOC News

The new director of the DOC Ontario Region is Walter D. Lyon. He is a native of New Brunswick and obtained his Engineering degree from UNB and an MBA from Western Ontario. He comes to DOC from the Ministry of Transport where he was Ontario Regional Manager of Telecommunications and Electronics. Mr. Lyon replaces "Bud" Hoodspith who moved to Ottawa to become Director General of Telecommunications Services. Credit - The Canadian Amateur.

New Amateur Examinations to be Announced by DOC

While details are not yet available, it is understood from a reliable DOC source that the ancient and somewhat outdated content of the Amateur Experimental Certificate exams have been brought up to date in content and with a new format, probably the true-or-false type which educators find easy to mark and which will simplify the work of examiners in the field.

The code requirement of ten words per minute remains as ammust for the Amateur class and 15 for the Advanced Amateur Certificate.

Credit - The Canadian Amateur.  
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Coming Events: Ontario Hamfest Picnic, Elora Gorge Park, July 6, 7 & 8.  
Sponsor SARC - OARC Picnic, Vincent Massey Park, July 21 - F.D. June 22 & 23  
Montreal Hamfest, Aug. 4, -MacDonald College - RSO Convention, Oct.25,26 & 27  
Holiday Inn, Hamilton - \* \* \* -

ARCOVERS: Vic VE3DEP finally found the bolts for his tower....-Did Cary VE3ARS find that xtal, or is it forever lost like those 1968 FD steaks? Congrats to Cary on getting his year at Carleton U....-Art VE3ZS is going back to west coast for a few weeks....-Gord VE3DY wants to make a sideswiper....-Luck to Marge & Don VE3HAL & VE3CUZ in Cold Lake!... 73 ...--