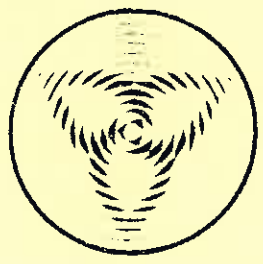
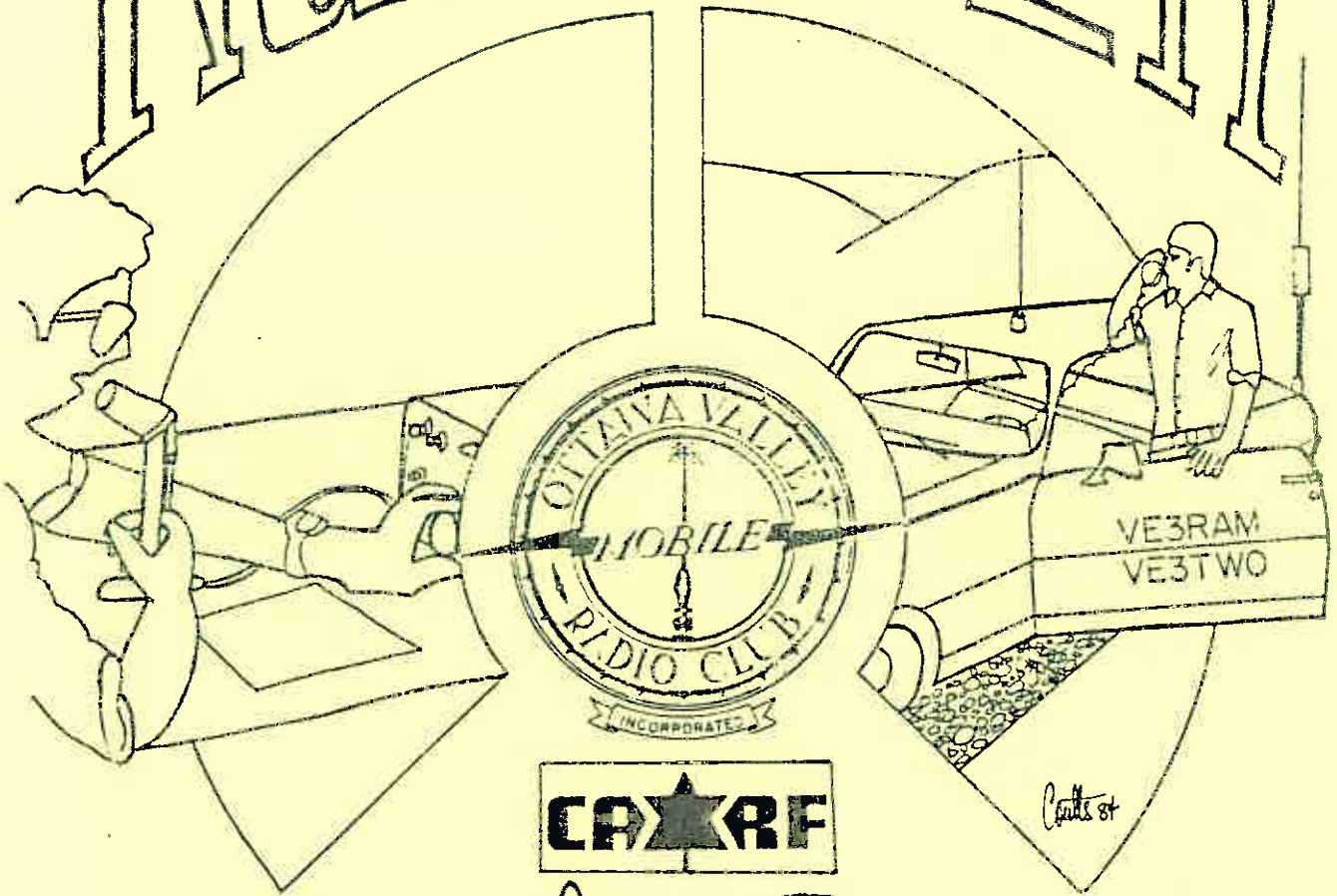


RAMBLER



APRIL 16, 1987

Come and sample a few good ideas

**** HOME BREW NIGHT ****

THE OTTAWA VALLEY MOBILE RADIO CLUB INCORPORATED

1986-1987 EXECUTIVE

PRESIDENT	Vance Johnson	VE3OAO	824-9555
VICE PRESIDENT	Bill Seyler	VE3OAI	836-5818
SECRETARY	Kris Anderson	VE3OWE	225-4152
TECHNICAL ADVISOR	Alan Boyce	VE3LND	737-4937
PUBLIC RELATIONS	Bob Brown	VE3JDB	729-6440
TREASURER	Bob Hicks	VE3OSN	745-9392
PAST PRESIDENT	Bob Campbell	VE3KLK	729-7536
EDITOR	Jerry Wells	VE3CDS	225-7374
MEMBERSHIP	Pat Brewer	VE3KJQ	820-9309

CLUB SPONSORED ACTIVITIES

POT HOLE NET - OVMRC Net - Every Sunday, 1000 local time on 3760 kHz. SSB. All radio amateurs are welcome to participate.

THE WISE OWL NET - OVMRC Net - Ragchew net every Friday evening at 2000 local time on the club repeater VE3TWO - 147.30/90 MHz.

VE3JW - Amateur radio station of the National Museum of Science and Technology. The OVMRC helps maintain the station and schedules operators for the station as part of an Amateur Radio public relations display. VE3JW operates on all HF Bands, both CW and phone. Slow scan TV is also demonstrated. For information or if you wish to operate the station, contact the Public Relations Coordinator.

LOCAL AMATEUR RADIO ACTIVITIES

POT HOLE NET - Sponsored by Ed, VE3GX. An informal slow speed CW net meeting each Sunday (except July and August) at 1100 hrs on 3620 kHz. to provide and stimulate interest and proficiency in CW procedures.

CAPITOL CITY FM NET - Sponsored by the Ottawa Amateur Radio Club Inc. every Monday evening at 2000 hrs local time. Conducted on VE2CRA repeater 146.94/146.34.

SWAP NET - Sponsored and conducted by Ed, VE3GX, each Sunday as part of the Pot Hole Net and each Monday as part of the Capitol City FM Net (except July and August). Ed may be reached at 733-1721 for listings and queries.

THE MILITARY NET - Sponsored and conducted by Frank, VE3MSC, Tuesday at 2000 hrs on VE3TWO 147.30/147.90 MHz.

Membership in the OVMRC is open to all those interested in Amateur Radio. Regular meetings are held on the third Thursday of each month (except July and August) at 2000 hrs unless otherwise posted. Meetings normally take place in the auditorium of the Museum of Technology on St. Laurent Blvd (south of the Queensway).

The OVMRC provides code practice 24 hours a day. Dial 825-0786.

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QUA VE3OAO
ORLEANS, A CLASS OWL

CQ to all OVMRC Members, The Wise Owls and Interested Rambler Observers...

Welcome to Volume 30, Number 4 of the Rambler. (The initial three letters of the name RAMbler are intentional. Our club's radio call sign is VE3RAM. So the question might be, "Which came first, the RAM?, or the Rambler?"

Last Friday evening (March 27) was the tenth running of the Wise Owl net Qualifying Run. And along with a group of other participants, I somehow managed to check in all ten nets. So, I think, I'll be getting a Class "A" Wise Owl Certificate!

By the time you receive this issue, the Spring OVMRC Flea Market will be history. We hope you all enjoyed it and were able to make some good deals, both buying and selling.

We'll have to get the Nominating Committee designated and operating to canvass all our members to identify those individuals who will be willing to stand for election to one of the upcoming vacancies on the OVMRC Executive. Please think about the possibilities of serving for a year. It has its rewards. This has been a good experience. I know we are all busy with our work, homelife and hobbies, but some of us could spare some time to serve a position to help our growing club. Be ready to answer, "Yes, I'm Willing to help the OVMRC for a year!"

when a person from the OVMRC Nominating Committee calls you.

Next, you'll be getting a call from another person who will be canvassing our GOOD MEMBERS (that is ALL of you!) to help us with our 1987 OVMRC Field Day, June 27 & 28. If you would be able to support this exercise of our emergency preparedness with some operating time at one of the stations or would be willing to be a station master and perhaps loan us your radio transceiver for the 27 hour event, be willing to respond to the enquiries of our Field Day Canvassing Committee when they call upon you.

My relatives are coming for a short visit during the week that our next meeting will be held on, so I have asked our Vice President, Bill VE3OAI, to take my place on the evening of April 16. I may show up for the Home Brew or entertainment portion, but I want to be free of the responsibility of running the meeting. If you are planning to bring something for HOME BREW Night, please call one of the executive members as listed on the inside front cover of the Rambler to let us know what you have and how long it will take for you to Show-and-Tell about it, so that we can plan our time accordingly. We will try to keep the business portion of the meeting as brief as possible, though there will need to be a vote on an amendment as published elsewhere in this issue.

We have reserved this same night to present to you Ian McIntyre VE3CZ, who will talk



to us on the subject of "Scanning Electron Microscopes" which are used in Forensic Sciences and Micro-Electronics. If too many folks have plans to show us their winter projects, we can have Jan come back later in the year, i.e. September, November or later.

With that, I'll be signing clear. 73 de VE3OAO, Vance, President 1986-87

CHANGE TO BY-LAWS

Due to the increase in the cost of the printing and mailing of the Rambler, the executive recommends that the club dues be increased to \$12 per year. We also recommend that the Rambler "subscription only" membership be discontinued. This will mean changing by-law no. 3 so that the first line will read: "Dues for full members and associate members shall be \$12.00 per annum." The last line from "persons who are..." to "(for ten issues).", referring to the Rambler subscription, would be deleted. You will be asked to vote on this at the next club meeting.

Your Executive

NOTICE OF MEETING

The next regular meeting of the Ottawa Valley Mobile Radio Club will be on April 16 at the Museum of science and Technology. The program is our annual "Home brew Nite". Bring along your most recently built gadget and tell us all about it...

MEMBERSHIP MEMO

I'll start off with some good news. The club membership has broken another record again this year. We now have 148 members. Remember that membership fees are only five dollars for the rest of this month and are valid until October of this year. One year memberships will be available next month at the new rate of \$12 per year.

So far no one from this year's amateur radio course has passed all parts of the DOC exam. This is a first. I don't think that this has much to do with the skill level of the students. I'm sure they will get it this month. Mind you, it doesn't help when three of your star pupils get cold feet and don't show up.

On the subject of exams, you may have heard on The Wise Owl net that the DOC may have a volunteer examiner program operating in Canada as early as June of this year. A trial amateur administered exam has already been conducted in London. This program will cover all parts of the exam, not just the code as we now have. The exact form of the exam is still unknown.

The club is conducting code exams on meeting nights. If you would like to try an exam please let me know BEFORE the meeting night as I can't always be there.

Pat Brewer
VE3KJQ



MINUTES OF MARCH OVMRC MEETING

The meeting was opened at 20:04 by President Vance VE3OAO who welcomed a large attendance of 50 or so including guests. The minutes of the February meeting were approved as published. The OVMRC flea market will be held on April 4th at Canterbury High School. The early date was selected because the school is not available on May 2nd which was the first choice. Four volunteers have come forward to assist with field day preparations such as phoning members to find out who is interested in participating. The volunteers to date are: Bill VE3WSN, Kris VE3OWE, Claire VE3PPT and a student Murray Hawkins. Vice President Bill VE3OAI has secured permission to borrow a 3 section military tent. Bob VE3JDB will write to the museum to enquire about using the front lawn as the field day site. The executive discussed the request from Frank VE3MSC to broadcast the technical portion of the meetings on VE3TWO. The request was turned down as it would tend to detract from attendance at club meetings. A request from the Horse People to provide communications at their event this summer was also considered by the executive and was turned down because of the experience with this group last year, such as lack of organization, failure to provide maps or any other information as promised and a presumption that the volunteer amateur radio operators were also qualified horse jumping judges. President Vance VE3OAO read out the letter from the Horse People and his

reply on behalf of the club which was supported by the membership.

Honourariums were awarded to Russ VE3FSN, Pat VE3KJQ and Brice VE3EDR in recognition of their work with the course. These are derived from the course fees. The executive meeting will be held at Vice President Bill's VE3OAI next Thursday and Bill will take over the April meeting for President Vance who will be on vacation.

EXECUTIVE REPORTS

Vice President Bill VE3OAI reported that he had secured permission for the use of a 3 section military tent on field day and suggested that this be mentioned in the letter to the museum requesting use of the front lawn.

Public Relations Director Bob VE3JDB noted that a young lady reporter (Cindy) from the Ottawa Citizen was in attendance to learn about amateur radio. She was welcomed with a round of applause.

Jack Ravenscroft VE3SR read a letter that was received from the plaintiffs lawyer to offer terms of a proposed settlement that were rather restrictive in terms of operating procedures and which he found not acceptable. The appeal is not expected to be heard before late September.

The Editor of the Rambler, Jerry VE3CDS noted that the report from membership Chairman Pat VE3KJQ had inadvertently been left out of the Rambler and invited him to present a summary of the highlights to the meeting. Jerry read the report on the WISE OWL net for the benefit



of those who were participating. He also mentioned that he had appreciated receiving the article from Jack Ravenscroft which appeared in the Rambler and provided a summary of the developments in the case. Membership Chairman Pat VE3KJQ noted that there are now 146 club members. This is a new record. Membership fees for the balance of the year are now \$5.00. Pat mentioned that Gord VE3OSM had successfully passed the advanced amateur code receiving test. Congratulations Gord! Pat is looking to borrow a January 1987 issue of CQ. He also mentioned that Bytown Marine have the MFJ 1270 Terminal Node Controller for Packet Radio in stock at \$240.00. Alan VE3LNH mentioned that several people are interested and suggested that perhaps a bulk purchase could be made from another supplier at a better price in the \$200.00 range. Publicity Chairman Bob VE3JDB mentioned that there is a new log book at VE3JW to keep track of all volunteer activities at the station. Peter Hafichuk VE3LBW announced that the Joe Norton award had not been awarded last year. The award provides \$800.00 to the winner who must be a resident of the National Capital Region and who has received the amateur class certificate between 1st April 1985 and 1st April 1987. A 600 to 900 word essay on how the applicant plans to use the proceeds of the award to contribute to Amateur Radio is to be submitted to the executive of the Ottawa Amateur Radio Club who administer the Joe Norton award. He invited any

qualified applicants to speak with him or with President Vance VE3OAO.

Art VE3ZS reported that CARF had just received a news release that the Russians announced a ski expedition from Russia to Canada between February and April 1988. They are requesting that Canadian Radio Amateurs cooperate with the expedition. Further details will be in the TCA magazine.

Ray VE3FN reported for CRRL that FCC has issued a notice of Proposed Rule Making concerning the reallocation of amateur band frequencies in the 220 MHz region. The lower 2 MHz portion of 216-220 would be for mobile use while the amateur band would be shifted up to the 220-225 MHz range. This is opposed by ARRL and CRRL are studying this to see how they can offer support to ARRL.

The next regular meeting will be on 16th April. This will be "Homebrew Nite" so bring in all of your winter projects and show them off. Ian McIntyre VE3CZ will speak on the uses of the scanning electron microscope which should be an interesting presentation.

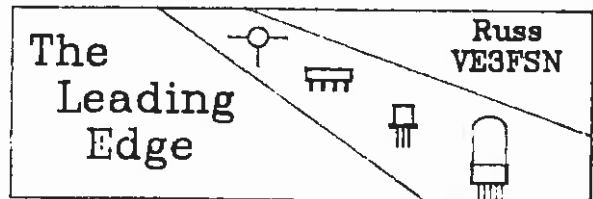
Kris VE3OWE introduced the guest speaker Bill Westbrook VE3EKA. Bill is a past president of the Telephone Pioneers Amateur Radio Club and has many years of experience in communications including amateur radio. His special area of interest is slow scan TV and his talk dealt with this aspect of amateur radio. He provided a very colourful (pun intended) demonstration of slow scan TV which is now using fourth generation equipment such as scan converters that allow the



use of video cameras to place pictures in permanent memory storage. Computer interfaces allow sophisticated image processing. Bill provided an excellent outline of the slow scan process as it is used by radio amateurs to transmit colour pictures around the world. There are SSTV nets (1:00 pm local time on 14.230 MHz). SSTV has progressed a long way from its beginning in 1958 when Copthorne MacDonald (WA2BCW) now VE1BFL developed it while an engineering student at the University of Kentucky. The problem he solved was how to compress a 3 MHz TV signal to a 3KHz voiceband signal! Quite an achievement and further developments are still being worked on. President Vance thanked Bill VE3EKA for a most interesting and educational presentation and the members joined in with a well deserved round of applause. We hope to have Bill return in future to bring us up to date on the latest developments in SSTV. The meeting was adjourned at 21:50 on a motion by VE3OFM and seconded by VE3NJ.

Kris Anderson VE3OWE
Secretary

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Research into very low loss, fibre optic materials is moving into high gear. New materials being investigated include such exotic substances as zirconium tetrafluoride and beryllium fluoride. These substances show the theoretical possibility of providing a fibre optic cable with losses approaching 0.005 dB/km. Such values could lead to cable installations with repeater spacings of over 2000 km.

A new radar system has been demonstrated by engineers at Marconi Radar systems. Using frequencies in the 3 MHz to 30 MHz range, it is possible to detect aircraft which are still over the horizon and far beyond the normal detection range.

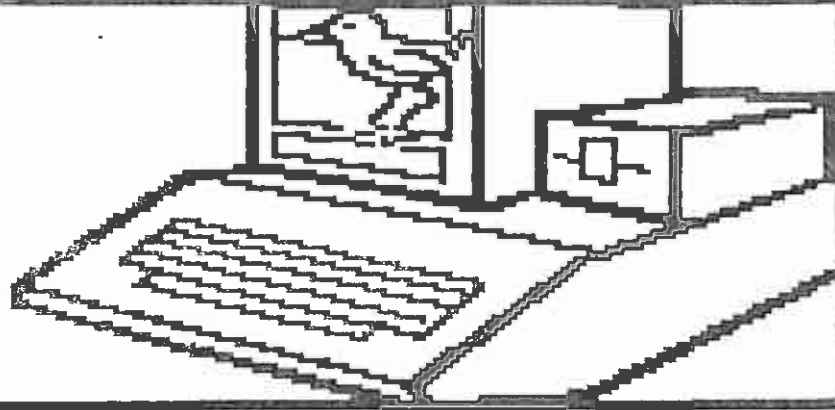
A new method of soldering is being developed to deal with the increasing use of surface mounted components. The infra-red laser system is said to offer advantages of speed, flexibility, precision and yields joints which are more resistant to fatigue failures.

After 15 years of development, the sodium sulphur battery appears to be close to going into commercial production. Early next year, the new battery will be demonstrated and is expected to give a one-tonne electrically powered van, a daily range of 240 km between charges. The battery is expected to cost \$7000 and have a life of over 5 years.



COMMODORE 64 Hints & Tips & " Odd Things "

by VEB KLK



Each issue of RAMBLER contains a few hints & tips relating to the C-64 Computer. Any ideas found by readers, that they would like to pass on, will be welcomed, and included in future editions.

TIP #1. If you do a fair amount of programming, you may find that the repetitious SAVING, LOADING and re-SAVING can impose quite a strain on the disk you are working with. This could be a bit disastrous to a valuable disk that contains some of your often-used programs. It is an excellent idea to do all your programming on one disk, VERIFYING each SAVE as you go along, to prevent your efforts from getting away from you. Then, when the new program is finished to your satisfaction, transfer it to a disk in your normal software library for ready use, and save a copy in your collection of back-ups. This habit will help you keep disks in your main library in good condition.

TIP #2. If you plan to acquire a MOUSE for your computer, remember, it will work best on a clean smooth surface. Inevitably computer desks aren't always clean or

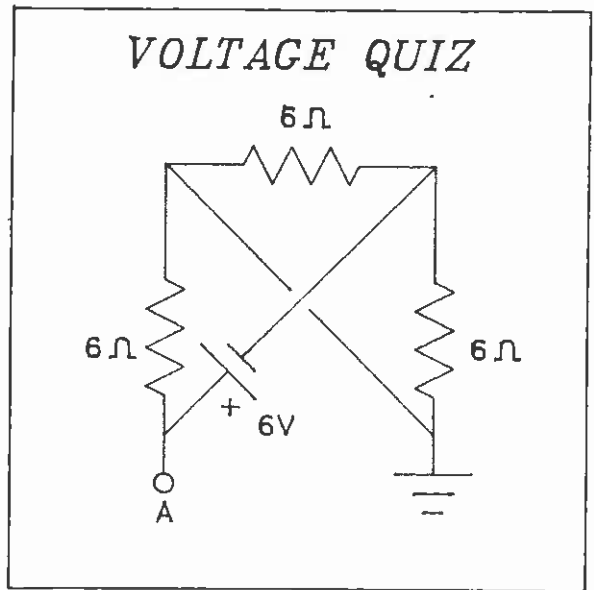
smooth and the collected "grunge" does little good to the "wee" MOUSE. Rather than buy an expensive pad for your MOUSE to run on, you can find a plain plastic place mat quite cheaply, or, cheaper still, snatch one from the kitchen, when the XYL is not looking. They are more than adequate in size and are easy to keep clean. (WARNING: I disavow any responsibility, if you get caught lifting one of the family's favourite mats.)

TIP #3. Did you ever notice that often, there is a non-response, when you try to use the RUN/STOP/RESTORE combination? If so, DON'T haul the computer off to the repair shop. Your problem is not unique. For the desired result, the circuit controlled by the RESTORE key must detect a distinct and rapid change in status. That circuit will miss the action entirely, if you treat it gently. To get results, PRESS RUN/STOP and hold it like the SHIFT key while you wake up the RESTORE key with a smart tap. That should produce results.



MYSTERY PROGRAM.

Following the directions in the February RAMBLER, enter and SAVE the April material shown below.



```

13 REM *      BILL JAMES      *
14 REM * FOR THE COMMODORE LXIV *
20 PRINT"(CLR)"
30 INPUT"WHAT SERIAL NUMBER?";S:S$=STR$(S-1):GOSUB500:PRINT
300 OPEN3,4:CMD3
340 PRINTS$;" | | | | |"
380 PRINT"                                PHONE: YOUR NUMBER"
392 PRINT"                                YOUR ADDRESS"
394 PRINT"                                CITY/PROV/P.CODE"
405 PPINT" | | | | |"
415 PRINT"*****"
    
```

FROM CRRL NEWS

The appeal in the Jack Ravenscroft case has now been filed. The appeal is based on legal arguments rather than the technical merits of the case. It suggests, among other things, 1) that Jack Ravenscroft's conduct did not amount to actionable nuisance because the problems in the plaintiff's equipment were intermittent, the plaintiff rejected measures which would have reduced or eliminated the problems, and in any event, the problems were clearly the result of the RF susceptibility of the plaintiff's equipment; 2) that the lower court decision violated the principle of statutory authority which states that when the Parliament of Canada authorizes an activity, and outlines procedures to be

followed should problems arise out of that activity, and no negligence is involved in carrying out that activity, the activity is immune from the law of nuisance; and 3) that the lower court decision, based on the law of nuisance which is a provincial law, infringed on the Parliament of Canada's exclusive right to regulate radio communications, and was therefore unconstitutional.

DOC has officially informed CRRL and CARF that their Amateur Radio examination questions bank has been stocked with multiple-choice questions for all except the Digital Amateur examination. CRRL and CARF will be given printouts of the questions, and will be consulted before adding or changing questions. DOC is encouraging amateurs to



submit changes or new questions through CRRL or CARF. The current practice of scheduling Amateur Radio examinations four times a year will end on June 01, After that, examinations will be scheduled as required, at the discretion of personnel in the DOC District Offices. There will be several different examinations in circulation. Examination papers will be reused. DOC also officially informed CRRL and CARF that it is studying the certification of private examiners. A project, designed to determine the best way of doing this, is currently under way in Ontario and Quebec.

Planning to travel abroad? Canada has reciprocal licensing agreements with the following countries: Antigua and Barbaadu, Australia, Austria, Bahamas, Barbados, Belgium, Bermuda, Botswana, Brazil, Chile, Colombia, Costa Rica, Denmark, Dominica, Dominican Republic, Ecuador, Finland, France, Germany (Federal Republic of), Greece, Grenada, Guatemala, Haiti, Honduras, Iceland, India, Indonesia, Ireland, Israel, Italy, Jamaica, Japan, Luxembourg, Malta, Netherlands, New Zealand, Nicaragua, Norway, Panama, Papau New Guniea, Peru, Phillipines. Poland, Portugal, Saint Lucia, Senegal, Sweden, Switzerland, Trinidad and Tobago, United Kingdom, United States, Venezuela, and Yugoslavia. Need an application form for a reciprocal licence or permit? Contact CRRL, Box 7009, Station E, London, Ontario N5Y

FATHERS TIME WARP

Sometimes I read an article -
It makes me glad
Sometimes I read an article -
It makes me sad
I read an article by VE3SR -
It made me mad

Eleven years ago last December, a group of us gathered in the Trebla Bldg to write the D.O.C. exam - most of us left that day with our call sign. The advice we received from older operators we met after getting our ticket formed the basis of a gentleman's code which we were proud to operate-by. The stories of "getting into" the kitchen toaster or "coming across" the church organ on Sunday morning were humorously given; but like the stories at my fathers (pun) knee, they were intended to point out a lesson. The lesson was that:

"We have a PRIVILEGE to operate within a system which gives us much FREEDOM, this is not, nor has it ever been considered a RIGHT.

Like the privilege we all earned to use the family car, it too carries the same big stick that dangles ever over our heads. If you screw up you must pay; and you don't get the privilege back until you finish paying."

When I first got on the air, I envied those hams with antenna farms and no neighbors; however I lived in an apartment in downtown Ottawa and that as they say has made all the difference.



I have operated from the top of various buildings, running the full legal power; and at one time being only 30 feet away from another ham's antenna array, we were also less than 300 feet away from a towering adjacent apartment building. Just Luck you say?? not really!!!

Rick (VE3HVA) and myself worked out our operating schedules and bands such that we did not interfere. You see that was back in the good old days when we were experimenters and we helped each other. We are still friends and to this day look back on the apartment as the "good old days". There were problems with neighbors, there were bound to be, but by operating out of peak TV times and by the judicious use of power we never had a repeat complaint. By treating people with common courtesy and showing our willingness to eliminate the cause of the problem we made friends in the buildings not enemies.

Despite a burning desire to sample all that this wonderful hobby had to offer, we did realize that this was only a HOBBY after all. Lest we forget, the purpose of any hobby is basically to have FUN.... and it is not fun to have the neighbors glower at you when you go outside. Better a new set of neighbors or a new HOBBY !!!.

I learned a long time before getting my licence that there is a point at which one should cut ones loses. The case in question, as I perceive it, is clearly an example of everything that should NOT be done, being done, and being done badly. The amateur groups, in their support of VE3SR have condoned

his behavior and run the real risk of alienating the public against all amateurs. If you want the reputation of the "10-4 good buddies" then you are going about it the right way.... What of the cry I hear "If we don't back Jack then we will all lose"... This is a lot of bunk!. They haven't banned drinking just because there are people stupid enough to drive while drunk, and they won't stop the rest of us from operating just because a few insist on abusing the privileges we have been granted as a group.

In case you haven't noticed the D.O.C. believes we should police our own members. They allow us to administer the morse code examination for licencing and usually consult us before making any changes that might affect us. How do we repay the D.O.C. for their trust? We support the side that makes a mockery out of every code of conduct we have struggled so hard to establish. Why should they now look on us any differently than the GRS. We are certainly not acting any more responsibly than the GRS.

If you supporters of this witch-hunt continue, it is your attitude that will get us all placed under the watchful eye of "Big Brother". It seems to me that without your financial support, this retarded mess would have been cleared up long ago.

VE3AHN

Answer to voltage quiz;
4 volts



For over 90% of the people living in Canada, isolation is just a word. We sit huddled next to the American border with out communications networks of roads, railways and radios. Yet there is a vast land which stretches north almost to the Pole, a vital part of our growing country, that most of us never see or understand. A land which depends on radio as a lifeline to the rest of the country. Over a quarter of a century ago, I had my chance to see, first hand, what those communications can mean.

Passing through a broken cloud layer, the aircraft touched down on the hard ice of the bay on the Labrador coast, close to a very small village. The single engine Beaver revved up its engine and then died. Now that we were safely down. I opened my eyes and peered out the window. Straight out of the ice covered bay, the cliffs rose 500 meters to craggy bluffs topped with ice and snow. Just to my right, hugging the cliffs as if searching for warmth, was the village itself. Painted radio towers, dwarfed by the cliffs beyond, were set slightly to the east of the village. Not one tree in sight! "I wonder what the huskys do?" I asked myself. Just then, I spotted a figure running from the village. The figure quickly became a man, carrying a suitcase, dressed in a parka. He jumped up the ladder and scrambled into a seat. "Get me the ... out of here!", he shouted to the pilot. "Welcome to the Great White North", I muttered to myself!

I had been hired by the Federal Government as a radio operator a few months previously. I was assigned to this "outpost" on the shores of the Labrador. The station, comprised of two radio operators and a cook, had no running water, two new 25 kilowatt generators and a "honeybucket", that, as the junior operator, I had to empty! The station was operated as a ship/shore facility from the first of June until the first of December. During the "off-season", we performed two functions, telegraph relay operators, and weather observers. Twice a day we had schedules for Canadian National Telegraph, and every three hours we sent our coded weather observations to Montreal via Goose Bay. Except for an aircraft every six weeks, weather permitting, we were conveniently forgotten by the rest of the world.

The first week of January saw a great white sheet of ice stretching outward from the coast for nearly 150 kilometers, making passage extremely hazardous, even for icebreakers. They knew better than to test their strength against ice that had slipped from the Greenland Icecap. Even the remnants of that ice had sent many "unsinkable" ships, including the TITANIC, to a watery grave.

It was a bitterly cold, clear night with a wind straight off the Pole. The aurora borealis, the beautiful "northern lights", were playing a symphony in soft blues and greens directly overhead, and radio conditions were, in lying, unsend, on the table in front of me. I stared at an accumulating pile of undelivered messages, and they stared right back at me, accusing memos of a



job left undone. Those symphonics of colour, playing in the winter sky, were a result of one of the worst magnetic storms that old sol had thrown our way since the advent of radio. My tri-hourly calls to Goose Bay had gone unanswered for the last five schedules.

I decided to try to tune the receiver on the AM broadcast band. Normally, broadcast reception at night was excellent from both Europe and North America, but the blackout was affecting even the broadcast band. the only station I could hear was Julianehab in Greenland speaking Eskimo with a danish accent. So much for the world of the broadcast band!

Hoping to find some friendly sounds, I tuned the receiver to the morse code international distress and calling frequency, 500 kilohertz. The nights are indeed long, when all you have for company is the "dits" and "dahs" of far away stations.

The frequency was completely quiet. My eyes skipped to the clock on the operating consol. It was 15 minutes after the hour. "Oh", I thought the international silent period." (It's a three minute period each half hour which gives ships in grave or imminent danger, an opportunity to be heard) I was just reaching to turn off the receiver and wade through a meter of snow to the bunkhouse, when weakly, but clearly, I heard the morse characters "SOS SOS SOS", the international distress signal!

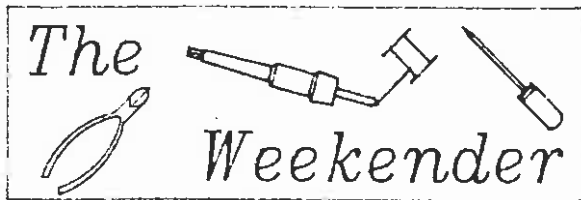
Instantly the bunkhouse was forgotten, I was listening very intently. My pencil began following the flow of dits and dahs transcribing them into English. "From Liberian tanker ARIESQUIP position latitude 43.07 south long. 45.03 east, on fire, sinking, 36 crew, require immediate aid, abandoning ship."

Nothing more was heard. Silence continued fgor another few ticks of the clock, then a powerful station on the American east coast began calling, obviously unaware of the call for help. I looked at the message again. Had I been imagining things? 43.07 south 45.03 east. Surely I had copied that message incorrectly. I had no world map at the station, but if memory serves me, that would be somewhere in the south atlantic or even in the indian ocean off South Africa! This old RCA receiver that I was using wasn't on the Titanic, but it was designed before 1935, and heaven only knows where it had been in the interim! With hundreds of coast stations hundreds of miles closer, someone else must have heard that distress call. But if so, why was it "business as usual" on the frequency? I sat as if petrified, straining to hear something further. Nothing, absolutely nothing! Halifax called with a traffic list, and then a weak station in Venezuela was heard calling a ship. Was I the only one who had heard the distress call?

to be continued next month....

The above article reprinted from the London Ontario Amateur Radio Club bulletin





If you have ever had the desire to start up the coffee pot as you head home from work or maybe set up your HF station so that it can be controlled remotely, this Weekender is for you.

The project for the next two months is a DTMF decoder. This month I will describe the basic operation and next month I will present some ideas for interfacing the decoder to the real world.

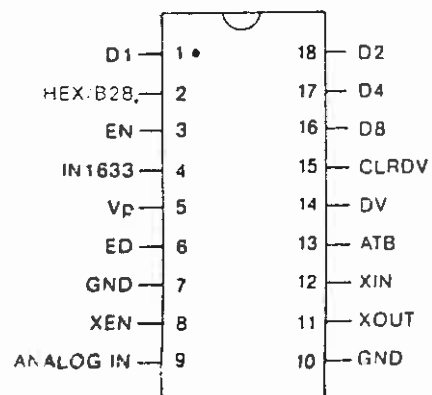
SSI 202 Receiver Chip

The decoder is built around one of the new DTMF receiver chips on the market - the SSI 202. A block diagram is reproduced here and as you can see, there is a far amount of circuitry packed into the 18 pin DIP package.

The receiver chip operates as follows. The input signal is filtered to remove any 60 Hz component that may be riding along with the signal. The audio signal is then split and passed through two band pass filters, one allowing only the four low frequency tones to pass through and the other allowing only the four high frequency tones to pass. The signal in each group is then amplified and limited by a zero crossing detector, to remove any noise and level fluctuations. These signals enter a bank of tone frequency band pass filters, followed by digital logic which then determines which digit is being received.

As a result of the high complexity incorporated in the chip, the external component count required to make the chip function is very low. As a matter of fact, the basic receiver can function with the addition of a crystal, resistor and 5 volt DC power source.

The receiver chip has a number of selectable options available which may be of use to you. I will explore some of these this month and next.



16 Channel Decoder

While the basic receiver as discussed above, will detect the 16 DTMF digits, the output is not really in a usable form. The digital output appears as a 0 or +5V signal, in either the hex or 2 of 8 format.

The addition of a 4514B 4 to 16 line demultiplexer, converts the hex format into 16 distinct outputs, each corresponding to one of the DTMF digits. Upon receipt of the correct tones, the output line corresponding to that digit goes from 0V to +5V, and remains there until the next digit is received.



This is the simplest form of decoder that is usable and the additional 4514B chip obtainable for only several dollars.

Components

If you want to try this simple decoder, here is a list of parts.

SSI 202 chip	RS 276-1303
3.58 MHz xtal	RS 272-1310
0.01 uF disk	RS 272-1065
1 M resistor	RS 271-1356
4514B chip	Active

Construction

The circuit layout is non-critical and the circuit may be easily assembled on a small piece of perf board. The only things to remember are: take care to avoid hum pickup and do not exceed the maximum allowable +7V supply voltage.

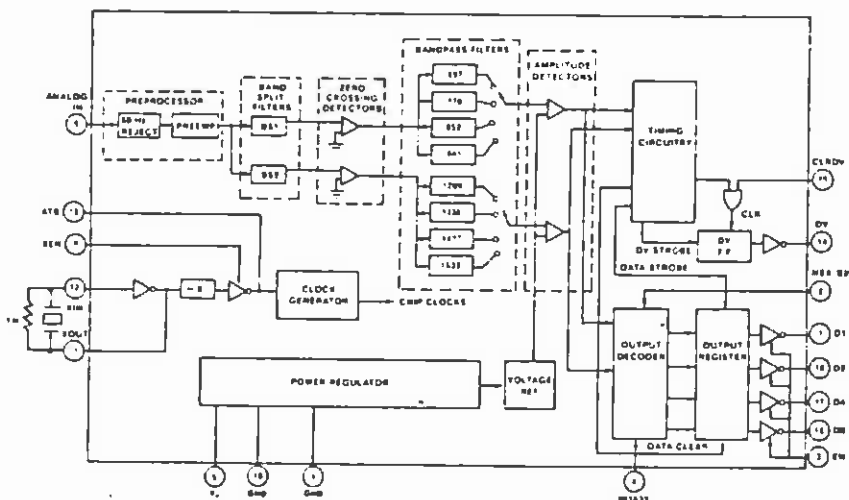


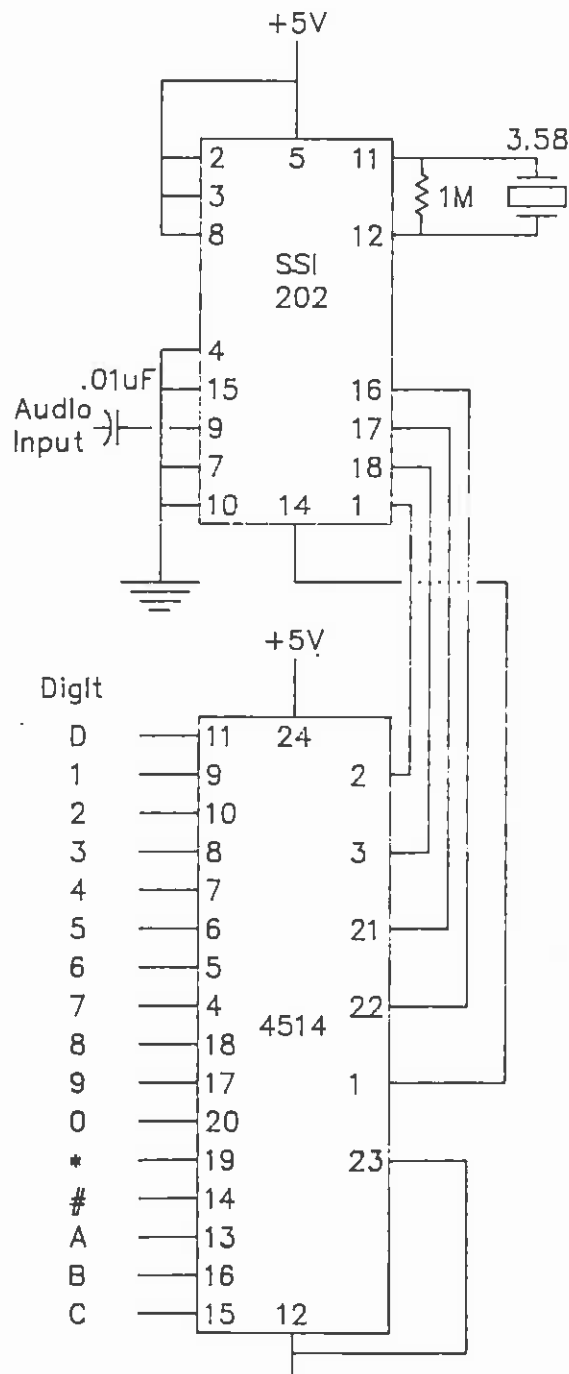
Figure 1. DTMF Receiver Block Diagram

Adjustment/Operation

There are no adjustments to be made to the circuit. If your wiring and components are

good, it will work the first time. The chip will accept a wide range of audio input voltages, so just connect the decoder to the earphone jack of your spare two metre rig, connect a voltmeter to one of the digit output lines and go nuts with the hand held.

16 Channel DTMF Decoder



Conclusion

This month I have described the general operation of the SSI 202 receiver chip and have shown how to build a very basic 16 channel decoder. Next month I will go into more detail on how to use the decoder and some ideas on interfacing it to the real world.

**SPECIAL CALL HUNTERS
CALL AN AMBULANCE**

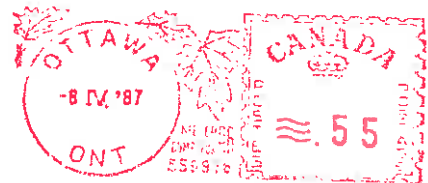
Collectors of special call signs can call an ambulance and get a special QSL card to prove it. GB4 SJA, the special event station celebrating St. John Ambulance Brigade's Centenary in England will be on the air throughout the 20th of June 1987 during

the Great Party to be held in Hyde Park, London, England. The station, operated by the Radio Society of Great Britain on behalf of St. John Ambulance, will monitor 10, 15, 20 and 40 meters. They prefer to use phone to allow non-amateurs to send voice greetings, and they will QSL all contacts with the special GB4 SJA card. They may accept CW traffic, depending on the traffic load and the operators.

Why not double your pleasure by inviting a member of St. John Ambulance to your shack as you make contact. Watch him experience the thrill of passing on his personal greetings to his overseas colleagues at their centennial party and get yourself an unusual QSL card to boot.

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