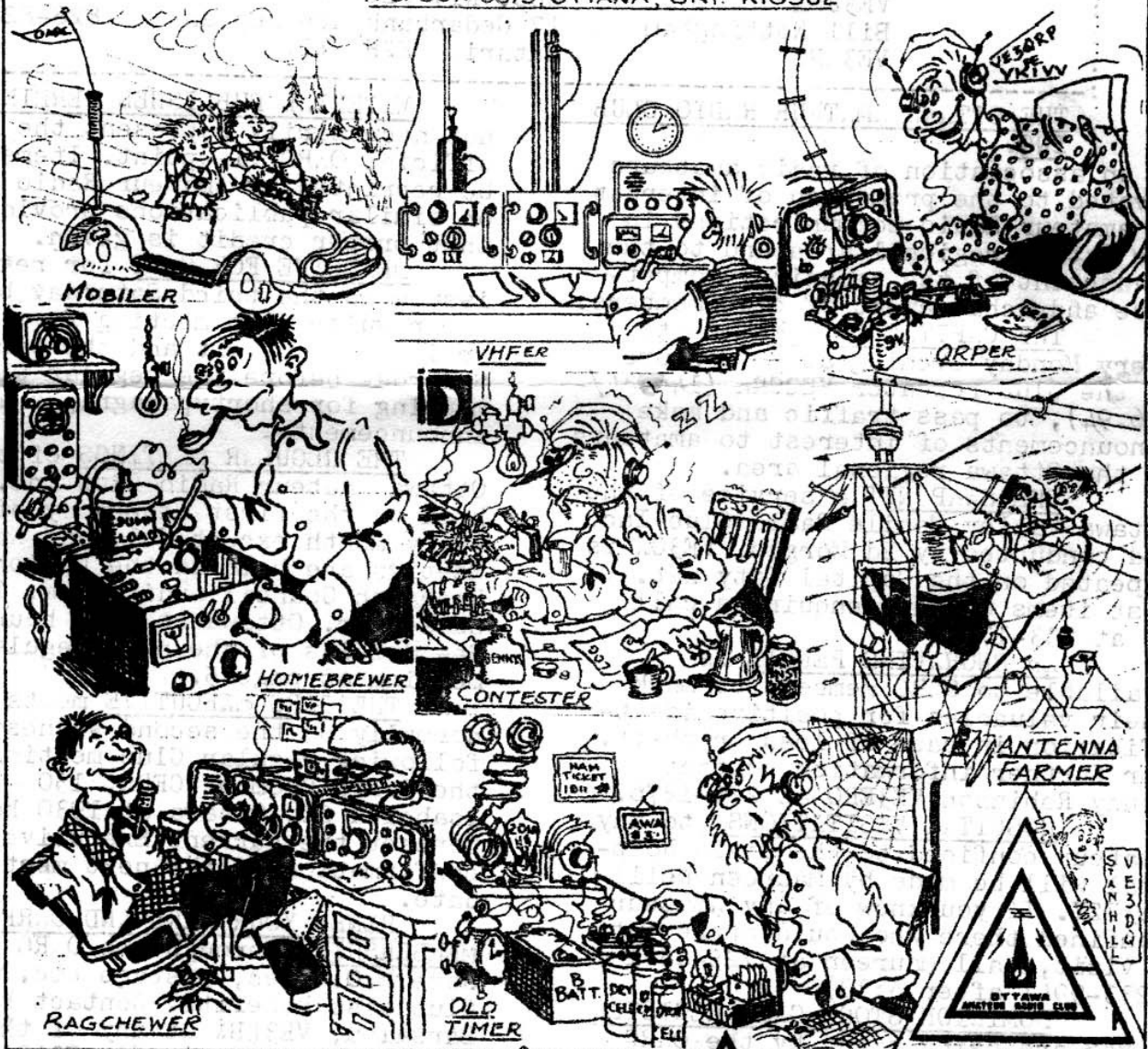




THE GROUNDWAVE

THE OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB INC.
P. O. BOX 6873, OTTAWA, ONT. K1G3J2



AMSAT

Club Call VE3RC



Repeater VE2CRA

--- THE GROUNDWAVE--- OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB INC. ---

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THE OTTAWA AMATEUR RADIO CLUB INC.

is an association of radio amateurs devoted to the promotion of interest in amateur Radio communications in the Ottawa regional area and to 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 (146.34/146.94), 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 Morgan, VE3GX is repeated on the Capital City net. To list items or make enquiries call ED at 733-1721.

an ENGRAVING PENCIL is available to O.A.R.C members to mark their valuables for positive identification in case of loss or theft. For further information contact Penny Robinson VE3ERO at 225-1276.

HOSPITAL VISITATIONS to any amateur confined to the Civic Hospital will be made by Maureen Neill VE3FZY. If you know of any amateur confined there who would appreciate a visit, call Maureen at 725-4581 (233-9941 after 5:30)

DOMINION STORE CASH REGISTER TAPES are being saved by the O.A.R.C so save up your tapes (and your neighbours and friends as well) and contact members of the Executive for further details.

MATERIAL PUBLISHED HEREIN does

not necessarily represent the official O.A.R.C viewpoint. Items may be reprinted by Amateur Radio and/or similar publications provided that proper credit is given.

DEADLINE FOR COPY for regular issues is the third Saturday before the regular Club meeting for articles of length and the second Saturday before the regular Club meeting for short paragraphs and announcements.

THE REGULAR MEETINGS of the Ottawa Amateur Radio Club Inc. are held on the first Wednesday of every month except July and August. Meetings are held in the National Research Council Auditorium, 100 Sussex Dr. Ottawa at 2000 hours. See details of the next regular meeting on page 5.

THE O.A.R.C EXECUTIVE meets normally on the second Wednesday following regular Club meetings in the Board Room of CFRA, 150 Isabella St. Ottawa at 1930 hours. Contact the current Executive for confirmation of the next meeting date.

RENEW YOUR ARRL AND CARF MEMBERSHIPS through the O.A.R.C and save M.O. fees, postage etc. The Club also benefits. Contact Brian Barsalou, VE3LBX at any of the Club meetings or at 829-7340 for further details on remittance forms.

Minutes of the Ottawa Amateur
Radio Club, Inc. 6 February 1980

The meeting was called to order by Paul, VE3ICV, President at 2005 hours. Visitors included VE1LF from New Brunswick, VE3IAY recently moved to Ottawa from Manitoba, a YL non-amateur, and John VK4QA from Queensland, Australia.

Paul asked for a motion that the minutes of the January meeting as published in the February Groundwave be adopted. This was moved by Rick VE3HVA and seconded by Joe VE2DZT. There were no matters arising.

Apologies for absence were received from Dave VE3GSA, Secretary, and from Ken VE3PU, Membership Chairman.

John VE3CXL gave a brief report on Club finances. The formal budget will be presented at the March meeting. Projections are that the Club will run a slight operating deficit this year. However, there will still be over \$2000 available for special club activities such as purchase of equipment.

Rick VE3HVA advised that the bulk purchased sweep tubes were now available.

Paul reminded members that a club owned IC-215 two meter rig is available for members who are hospitalized.

Paul advised the meeting that he had received a call from someone who had available a Marconi built WW II vintage transmitter which had been part of a battleship communications system. Anyone interested should call Mr. Campbell at 523-7849.

The Field Day Chairman for 1980 is John VE3DYJ.

Brian VE3JKZ asked for a volunteer to provide coffee and cookies at Club meetings.

Paul reminded club members that the banquet for last year had failed because of a lack of interest. He asked for a show of hands to indicate any interest for this year. Based upon the response

the executive will pursue the planning for a club banquet.

The OARC representative for ARRL and CARF membership is Brian Barsalou VE3LBX.

Guest John Aarsse VK4QA gave a talk on amateur radio in Australia. He also referred to some of the Queensland awards which are available, such as the Worked All Cities and Worked All Shires. John presented Paul with the Official Queensland tie, and a lapel pin representing the "Order of the Golden Kangaroo".

Merv VE3CV reminded members that the Snowbird Net meets on 21.265 at 0935 on weekdays. Local hams can natter with Canadians wintering in Florida.

Dave VE2DZE announced that a Vancouver beacon is operating on 28.196 MHz. A Vancouver group is also operating a packet radio beacon on 14.073 MHz.

Art VE3ZS asked for operators to assist with communications for the upcoming annual Jock River White Water Canoe Race. About thirty operators with mobile rigs are required.

Doug VE3CDC has copies of the recent January examination papers for those interested. They are to be published in the CARF Newsletter.

Anyone interested in going to the Dayton Hamfest should contact John VE3CXL or Paul VE3ICV.

The prize of books for the evening raffle was won by John VE3DOM. The club has received a donation of a power supply and two utility cases. Thus, three more tickets were drawn and the winners were Rod VE3JDK, Bill VE3KEB and Croft VE3OR.

The main speaker of the evening was Dick Atkinson VE3JBO who gave a presentation on the VUCOM CRT terminal which is now becoming surplus from the telephone companies. The talk included a working demonstration of two VUCOM terminals operating in conjunction with a minicomputer. Anyone interested

MINUTES Continued

in obtaining a VUCOM should contact Croft VE3OR.

Fred VE3IO asked for volunteers to assist him in promoting the EMI Committee activities. Fred also hopes to pursue the technical clinic activities to check members' rigs using spectrum analysis, to adjust high and low pass filters, etc.

George VE3DMC advised members that the Canadian Overseas Net should be operating on Wednesdays and Saturdays at 2330Z on 21.351. VS6CZ and HS4AMI are active daily at 1330Z on 14.160

On a motion by Doug VE3CDC seconded by Art VE3ZS, the meeting adjourned at 2215 hours.

NOTE to DXers

George Collins VE3FXT has been worked from the OTTAWA are recently from Thailand using the call HS4AMI. He is currently with the Department of Geology at the University of Khon Kaen. George has told me that to send a couple of IRC's costing 90¢ is useless for Thailand. The least expensive QSL route is via his manager VE3DPB. Air Mail from Thailand costs 65¢ U.S., so if you want a card direct, send currency in the form of a dollar bill (not green stamps--these come from supermarkets and such places and are useless in a Thai post office).

73,
VE3JKZ

P.S. And we complain about 35¢ for an airmail stamp!

MEET YOUR NEW EXECUTIVE Cont.

In the February issue of the Groundwave, several short biographies of members of the executive were presented. Two more members are introduced to you this month.

Fred Green, VE3IO -- Director

Fred got his start in amateur radio as VE4NC in 1937 using wind generated power while he was a rural school teacher near Moose Jaw, Saskatchewan. After a stint in the RCNVR, he resumed operation of VE4NC in 1945 with four watts from a single 117L7GT. His first Ontario call was VE3BKS in Ottawa at the Central Experimental Farm site of the Defence Research Board's Radio Propagation Laboratory. He obtained his present call, VE3IO, in 1948.

Fred's occupation before retirement was conducting research in Radio Frequency Interference and Noise and automatic spectrum monitoring at the Communications Research Centre of DOC at Shirley Bay. His other hobby, which competes with amateur radio, is promoting the use of electric cars.

Dave Parks, VE3GSA -- Secretary

Dave was first licensed in the summer of 1967 as VE3GSA while a high school student. He received his Advanced licence in 1969. His basic interest in amateur radio was spurred by many hours spent in the basement of VE3DY. He is currently active in community oriented radio communications on two meters and is planning to expand his activities on the HF bands. He is employed by the Department of Supply and Services.

CLUB PROJECTS

Brian Summers VE3JKZ

Toward the end of 1979, two potential club projects were mentioned. With the holiday season and change of executive, things came to a halt for a while, but here is a brief status report.

Keyboard Meyer: John VE3CXL is following up on this project. He will be buying a printed circuit board from the U.S., obtaining a keyboard and other components and

--continued on page 5

NEXT MEETING

The next regular meeting of the Ottawa Amateur Radio Club, Inc. will be held on Wednesday, March 5 1980 in the auditorium of the National Research Council, 100 Sussex Drive, Ottawa, at 2200 h.

The featured speakers will be John Henry VE2VQ and associates who will give a talk on:

Getting Started with
Amateur Satellites

The talk will be particularly aimed toward the amateur with the usual complement of HF and/or VHF/FM equipment who is interested in trying OSCAR operation. It will cover the additional equipment required, how to put it all together, and how to operate.

Club Projects - cont.

and will be building a prototype for demonstration at a club meeting in the not too distant future.

Power Supply: At the January executive meeting, I offered to look into a power supply designed by Mitch Powell with the view of making it a club project. The basic design permits a fixed output voltage in the range of 5 to 15 volts at a maximum current rating of 1 to 20 amperes. About 18 of these power supplies have been built in the southwestern Ontario region, so the design is well proven. The specific output voltage and maximum current rating must be chosen to determine the exact components which will be required, such as power transformer, number of series pass transistors and heat sinks.

If there is interest among the members in building this power supply as a club project, I suggest that a "standard" OARC unit be agreed upon. From a recent 73 Magazine, I note that a Kenwood TR-7625 two meter 25 watt mobile rig requires 13.8 v. at 6 A. in the "high" 25 watt mode and at 3 A. in the "low" 10 watt position.

Thus, I would recommend that our standard supply provide 13.8 volts at 5 amperes continuous duty. This would be more than adequate for 10 watt rigs, and a good quality transformer should permit operation at 6 amperes for quite a while without excessive voltage drop or over-heating when used with 25 watt rigs.

The design uses a type 723 regulator with a darlington series pass transistor. Both over-voltage and over-current protection are provided. Should either condition occur, a relay is tripped, disconnecting the output. It is then necessary to switch the supply off and back on to restore the output. A high quality glass fibre, drilled printed circuit board is available for the regulator part of the circuit.

At the March meeting, a circuit diagram and P.C. board layout will be available for those interested in looking at them. Also, a list of those wishing to build this power supply is being compiled (there are already 13 names on it) and will be available at the meeting for those who want to sign up.

Following the meeting, I would like to form a committee of two or three people to correlate all the requirements and decide on one or more final configurations for the project. At least one member of this committee should be familiar with suppliers of both new and used components from whom we can purchase the parts. After the parts have been selected, the committee can pursue the project. If you wish to serve on the committee, please indicate this on the sign-up list at the meeting.

Simple Receiver: Another possible project not previously mentioned at the club meetings, but which was discussed at a recent executive meeting, is a simple receiver which could be used by SWLs or aspiring amateurs who currently have no reliable means of receiving code. A simple receiver covering the range

--continued on page 10

THE CONTEST CAPER

John Gilbert* VE3CXL

Few topics generate a greater divergence of opinion in amateur radio than contests. To some, they are the scourge of the hobby; the one single activity that has led to the decline in operating courtesy, to the periodic overcrowding of already crowded prime spectrum and to the frustration of ragchewers, traffic-handlers and DXers alike. To others, contests are the lifeblood of amateur radio, the ultimate test of operating efficiency; the big chance to prove that one's equipment and skill are a match for that blowhard down the street, or the chance to work in a multi-operator station with a team of other fine operators as wise as one's self.

The debate will continue, and so it should, as variety of interests is perhaps the greatest strength of our hobby. My own small contribution to the debate is to offer (at the risk of being branded as one of those \$%&*@ contesters) a brief description of the various types of contest, and to identify some of the advantages to the hobby which make it worthwhile to accept the periodic invasion of the HF bands by several hundred amateurs exchanging numbers with each other for hours on end. Since CW contests are the most fun, in my unbiased(?) view, my survey will include only CW, HF band contests.

Contests are by no means all alike. At the risk of oversimplifying, I have identified no fewer than four quite different types, each with its own loyal followers. The first type, which is probably

The author suffers from a fatal flaw in contesting. He becomes mesmerized by the action and forgets to send! As a result, he can usually be found in last place on the list of contest results.

at the top of the list of those heartily disliked by non-contesters, are the *really big* World-Wide DX Contests. These are the all band DX contests like the CQ WW, the ARRL DX and the ITU contests. The rules differ from one to the next, but the objectives are pretty much the same - to work as many stations as you can, worldwide, in a 48 hour period (or less in some cases). The name of the game is big power, big antennas, lots of stamina and a spouse who will put up with one twitching nervously for at least a week after the last contact of the contest has been made. These contests are enormously popular, providing truly worldwide interest and competition reminiscent of that in other areas such as sports. In fact, the term for such competitions used in Europe is "radiosport"; for the past three years, the IARU has sponsored a Radiosport Championship in July.

The worldwide DX contests are not the forum for exchanging pleasantries with old friends! Last year, we inadvertantly called one top contester five times due to an error in our check sheets and had the unique experience of witnessing the world's first attack of apoplexy on CW. For the big guns, it is very serious business indeed.

The second category of contests are those which I call the Regionals. Participation is limited to contacts between different specified parts of the world. Typical of these are the ARRL Sweepstakes, the CanaDX Can-Am contest, etc. which are limited to North America. Other parts of the world have their own regionals too. There is nothing quite so frustrating as listening to VKs and ZLs working each other on 80 meters, blissfully unaware that there are VEs eavesdropping on the action.

TONE ALERTING PROPOSAL

This proposal is to adopt a standard set of audio tones and procedures for emergency alerting. Two levels of urgency are defined. The system is similar to that used by NOAA Weather Radio and allows speakers to be muted until an alerting tone is received.

The first level of urgency is expected to be the most common situation. An example is where a mobile urgently needs communication to request help, to protect life or property. If he receives no reply to his call for aid, he may key "Touchtone Zero" for five seconds. This will unmute receivers equipped for this system and should bring response.

Operators who monitor repeaters often tire of the chit-chat. By muting their receivers until Touchtone Zero is received, they can enjoy quiet and still respond to urgent calls. They may wish to limit their response to a higher-level emergency and therefore the "ARES Emergency Tone" is also proposed. All receivers should respond to this tone by unmuting and sounding the alarm.

The ARES Emergency Tone is proposed as 1050 Hz., the same as used by NOAA Weather Radio. Normally it would be transmitted only at the direction of a County Emergency Coordinator (ARRL Amateur Radio Emergency Service) or an emergency government (CG) official. For example, it would be used to call up a severe weather net.

The proposed standards are:

- 1) An urgent alerting tone of 5 to 10 seconds of Touchtone Zero.
- 2) An ARES Emergency Tone of 5 to 10 seconds of 1050 Hz.
- 3) Receivers should respond after not more than 3 seconds.
- 4) The response to Touchtone Zero may be defeated, but every receiver should always respond to the ARES Emergency Tone

de The Ground Wave (St. Paul).

/Watts Snoo

/Wisconsin Assoc. of Repeater

A CHEAP AND EASY TONE ALERT

The many discussions that took place after the 1979 Woodstock tornado disaster revealed the urgent need for some method of quickly alerting a great many hams, a need to bring up emergency communication links, all to be done at the time of need by anybody suitably equipped, and preferably at low cost, to maximize participation.

A readily duplicated tone alert aqualch, designed to be tripped after a few seconds of standard tone seemed to be the best answer, so a literature search was begun. While many different ideas were found, the circuit on page 16 of February 1977 QST seemed to be the best candidate. However, a quick study revealed not only several mistakes and poor component choice, but gross errors in the P.C. pattern provided. So -- I redesigned the circuit, designed a printed-circuit-board artwork, and made a prototype. It works! Then I made all the final changes to the design that really improved it and that's what I show here.

The decoding function is done by a 567 I.C., a L.E.D. shows when the decoder is receiving a tone, and a 555 timer waits for a few seconds before triggering an SCR which latches a relay to activate the speaker.

A dummy load for the audio output stage is provided, to prevent harm to the audio output stage of your two-metre jewel, and back-to-back diodes provide a simple but effective limiter so that the 567 isn't overdriven. Switch S1 not only serves as an SCR reset switch, but it also permits normal use of the transceiver. Why it's all so simple, I don't know why we didn't do it before now.

Now to tone standards and tripping time. I have proposed to all that have listened that the most logical tone to use is 941 Hz, the standard tone used for #, 0 and *. Because it's readily available, this bottom-row tone has gained wide acceptance and will probably become the standard across Canada for emergency alert by hams.

The care and feeding of Nickel-Cadmium batteries - Larry Bradley VE3CRX

1. Introduction:

The increasing popularity of hand-held transceivers has brought more and more amateurs into contact with sealed nickel-cadmium batteries (Nicads). Most amateurs know very little about such batteries; this article will try to rectify the situation. We shall discuss Nicads under four headings -

- What they do and how they work
- How they behave under load
- How they behave under charge, and
- A few words on maintenance

2. A description of Nickel-Cadmium Cells:

The Nicads we use are composed of "sealed" cells that generate about 1.25 volts each. Most cells are not really sealed, but have a vent which can open at high pressures to allow gas to escape, rather than having the cell explode. The vent closes afterward to prevent loss of electrolyte. Some cells have a one-time vent which prevents a cell from exploding but may allow the cell to deteriorate quickly after venting.

The positive electrode of a Nicad cell is nickel hydroxide and the negative one is cadmium metal. These are in an electrolyte of potassium hydroxide. During discharge, the cadmium is oxidized to cadmium hydroxide, releasing electrons to the load. During charge, the current flow reduces the cadmium hydroxide back to cadmium metal. Unlike lead-acid cells, no gas is produced during the charging process. If the cell is overcharged, oxygen is produced at the positive electrode. If the rate of overcharge is low enough, the oxygen can be used up at the negative electrode as fast as it is produced; if too high, pressure builds up in the cell.

Nicad cells come in many shapes and sizes, the most common being the AA, C and D sizes of normal flashlight cells. Cells are rated by their capacity in ampere-hours (AH). This is the current that a fully charged cell can deliver for one hour before its voltage drops below 1.0 volt. An AA size is usually rated at 0.45 AH, while D cells come in 1.5 and 3.5 or 4.0 AH capacities.

3. Discharge Characteristics

The term "C" is used to indicate a charge or discharge rate which is equal to the amp-hour capacity of the cell. Thus an AA size cell being discharged at a rate of 1C would deliver 0.45 amps for one hour. If a cell is discharged at a rate greater than C, its effective capacity decreases, while if used at a rate lower than C, the effective capacity increases. Thus an AA cell can deliver 45 milliamps for more than 10 hours but it could not deliver 4.5 amps for 1/10th hour (6 minutes). A freshly charged cell will show a no-load voltage of nearly 1.5 volts which will drop under load after a few minutes to about 1.25 volts; it will remain at this voltage until the cell is nearly exhausted, when the voltage will drop quickly to 1 volt or lower. At low temperature the effective capacity of the cell decreases. At -20°C the capacity is only 76% and at -30°C it is only 50%. The no-load voltage decreases somewhat at low temperature, while the internal resistance increases and may double at -20°C .

Nicads will self-discharge when not in use; the rate depends on the individual cell, its history of charge/discharge cycles and the temperature. However at room temperature, one could expect a cell to lose half its charge in six weeks. This can be avoided by keeping the cell under refrigeration, or on a trickle charge. Since individual cells in a battery are unlikely to be identical, as the battery is discharged through a load some cells are likely to become fully discharged before the others. If one cell is completely discharged while the others are still delivering current, that cell will get charged in the reverse direction. This will cause gas buildup, and eventual cell failure if it happens frequently. To avoid cell reversal the battery voltage should not be allowed to go below $N-1$ volts, where N is the number of cells in the battery. For a typical 10 cell battery (12.5 volts nominal), the battery should not be used once the voltage drops to 9 volts.

4. Charging Characteristics

A fully discharged cell when put on charge will quickly rise to about 1.4 volts and will remain there until the cell is nearly charged.

Care & Feeding of Nicads (Cont'd)

At this point the voltage will rise slowly and then decrease as the cell gets more and more overcharged. The cell voltage under charging conditions is temperature sensitive and decreases as temperature increases. As the cell approaches full charge, its temperature increases, and increases more rapidly once into overcharge. Cell pressure also increases rapidly in the overcharge region. How much the temperature and pressure increase depends on the rate of overcharge. If a cell is overcharged at too high a rate the increase in temperature will quickly destroy the cell.

Because of this nicads should not be charged by a constant voltage method, since cell voltage will decrease with increasing temperature causing more current to flow which will raise the temperature even more, resulting in eventual cell destruction. Instead one uses a constant current charger where the charging current is independent of the cell voltage.

Most cells are designed to withstand a continuous overcharge rate of 0.1C. That is, an AA cell can be left on charge at 45 milliamps continuously without damage. At this rate, it will take about 14 hours to recharge a dead cell, since charging efficiency is only about 75% at the 0.1C rate. Charging at a rate higher than this risks cell damage if overcharging is allowed to occur, an event that is almost inevitable, since there is no easy method of determining if the cell is fully charged. Some cells can be charged at a rate of 0.3C but unless one knows that a cell is of this type, it would be unwise to attempt it. It is possible to fast charge nicads at very high rates; full charge in 15 minutes is not unreasonable, provided the charging is stopped before the cell goes into overcharge. However it is very difficult to determine state of charge; using the fact that the voltage rises at the end of the charging is risky, since this is a temperature dependent phenomenon. It is possible to measure both voltage and cell temperature and terminate charging when either exceeds certain limits.

A safer way to fast charge is to first discharge the cell, and then apply a constant charging current (e.g. 4C) for a fixed time (e.g. 15 mins). With a battery of cells this is harder since the cells are not matched and each one is likely in a different state of charge. Once a battery

is charged it is possible to put it on a "trickle charge" of 0.02C or lower to counteract the self discharge characteristic.

If a cell is continuously overcharged (e.g. at 0.1C) and is not discharged deeply during use cycles, the cell can lose some of its capacity - the so called "memory" effect. A deep discharge followed by a complete recharge will "erase" the "memory". One should discharge a battery deeply through normal use; if this is not possible, then at least the battery should be deeply discharged at regular intervals.

5. Maintenance of Nicads

Good quality nickel-cadmium cells have a very long life expectancy. General Electric claims their cells are typically good for 500 charge/discharge cycles and usually many more. To achieve this long life only a few precautions need be observed. Do not overcharge at a rate higher than specified by the manufacturer for the cell (typically 0.1C). Do not let a battery discharge to less than N-1 volts, where N is the number of cells in the battery. Do not overcharge cells at a temperature below 5°C. At -10°C the safe overcharge rate is only 0.05C, while at -25°C and overcharge is unsafe. A note of caution - because of their low internal resistance (.03 ohm for an AA cell), nicads can generate very high currents into a short circuit. An AA cell can deliver 40 amps for a short time. Care should be taken not to short out a charged cell. Do not carry one in a pocket where a key or coin could short it out. You could be in for a severe burn. With reasonable care, a set of nickel-cadmium cells should power your equipment for several years....

de Larry VE3CRX

Club Projects - continued

3.5-3.8 MHz to provide for lots of CW reception including that from WLAW, as well as the Sunday morning Swap Net. Perhaps the club could build several units to be loaned as required. The receiver could be small, simple, battery operated and be equipped with a small built-in speaker and have provisions for headphones. The design in the Dec. 1979 QST might be suitable. Has anyone built this or any other suitable receiver that would meet the requirements and which works well in the Ottawa area? Please let me know if you have.

Remember, It's what you learn after you know it all that counts.

O.A.R.C., Inc. BANQUET

Reserve Friday, April 18th for the Ottawa Amateur Radio Club, Inc. Banquet and dance. The big event will be held at the RA centre on that date. Only 60 tickets will be available. They will go on sale at the March 5th meeting--first come, first served. The exact price has not been determined, but it will likely be between \$14 and \$15 per person. If you will not be able to make the meeting, contact Dave, VE3JBX to discuss the possibility of reserving tickets.

Contest Caper -- continued

The regionals are highly competitive on a national level, and like the World-Wide contests, not likely to be won by the casual participant who happens to turn on the rig in mid-contest for a dozen contacts or so.

The third class of contests are those which limit the field of battle to a select group of people, for instance to "members only", such as QCWA, Telephone Pioneers, FOC, etc. These are downright friendly events for the members - but often viewed as an intrusion into public spectrum by others! There are an almost unlimited number of variations on the "members-only" contest theme, with almost any club, state, province or country being able to sponsor a special event or award. With a few exceptions, they are not normally highly competitive. Some, like the BERU British Commonwealth Contest, have been around for many years and provide a great opportunity to meet old friends.

The final category in my arbitrary classification of contests are the "Specials" which have some gimmick or peculiarity in the rules which set them aside from the regular contests. One example is the European DX Contest, held in August every year. It is sponsored by the DARC)

(Germany) and the gimmick is the inclusion of QTC Traffic. The general idea is that after a number of European stations have been worked, a list of these is reported back to another European station. Each QTC is a report of one previous contact. In effect, you send a record of your log to Europe - a great idea for the folks who have to check the incoming contest entries. Surprisingly enough, it proves to be great fun and is also a good test of operating skills. A second example of a "special" is the North American Sprint, held in February and sponsored by the National Contest Journal. In this one, stations calling CQ, QRZ or QRZ? must move 1 KHz after each contact before contacting another station, or at least 5 KHz before calling CQ again. In addition, the Sprint lasts only four hours -- and forget it if your code speed is a little rusty!

What is to be gained from these widely varied battles of the airwaves? First, most contesters suffer from a lazy streak which has led to the development of automatic keyers, computer logs and check sheets, highly efficient antennas and well integrated stations. In all seriousness, I will not be at all surprised to one day hear of a contest entry (probably a new world record) with no operators at all, but completely automatically operated! Some "big time" contest enthusiasts, with astonishing clairvoyance are even now able to *pre-print* the RST on their QSL cards (599 of course) thus demonstrating an understanding of propagation prediction of truly great proportions. Furthermore, contesting develops one's operating skill. Perhaps most important of all, contesting encourages people in a highly individualized hobby to work together as a team in a multi-operator entry. Last, but by no means the least, contests are a lot of fun -- why don't you give them a try?

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