

Newscaster

The Official Publication of the
Winnipeg Amateur Radio Club
The Winnipeg Senior Citizens Radio Club

March 1996

Handheld Operation & the Linking System

Presentation by
Derek Hay, VE4HAY

Date: **March 11, 1996**
Time: 7:30 p.m.
Place: Sturgeon Creek Regional Secondary School

Other Important Dates:

Articles: Mar 13 - Deadline for April meeting

WARC: April 8 - HomeBrew Night
April 14 - Flea Market

WSC: Mar 14 Norlander - Breakfast
Mar 20 Club Rooms - General meeting

ARES: April 16 - meeting

Other: Mar 9 - Fargo's HAM Radio & Computer Fair
April 19 - M.R.S. meeting & Elections
June 23,23 - Field Day
Sep. 7,8 - MARM Hamfest

WARC: Executive for 1996			
Past President	Barrett Filbert	VE4ABA	338-2441
President	Richard Kazuk	VE4KAZ	895-4778
Treasurer	Rick Lord	VE4OV	896-0631
Vice-President	Jeff Dovyak	VE4MBQ	694-8146
Secretary	Roxanne Byron	VE4ZF	257-8525
Membership	Keri Kazuk	VE4KER	895-4778
Flea Market	Jim Ross	VE4AJR	256-6366
Program	Rob Kaufmann	VE4GV	488-0077

Words from the President of WARC: by Richard, VE4KAZ

Well, February has come and gone. I wish I could say the same about the snow, but it just keeps coming, and coming. Kind of like that Energizer bunny on television. Thanks, once again, to Lee Smith VE4ANC for his presentation on Nostalgia Radio CKVN. Lee has informed me that he will keep us updated on his situation in dealing with the CRTC and CJOB.

We are still looking for a site for the Field Day weekend, June 22 and 23. Please contact myself, or anyone of the Executive if you have any suggestions for potential sites.

It was recently suggested to me that we should have a Club crest that we could put on baseball caps. So get busy and start drawing. Bring your drawings to the W.A.R.C. meeting on March 11, or mail them to the Executive c/o the Seniors Club. Everyone will have a chance to view the entries and cast their vote at the meeting. The winner will be announced during the meeting.

The Spring Flea Market Committee is well under way with their planning and organizing for the Flea Market to be held April 14, 1996. If you have any suggestions, comments or questions please submit them to Jim Ross VE4AJR, the Flea Market Chairperson, or to myself.

Advance Warning: April's meeting is Home Brew Night. No. Not the kind that comes in a bottle that you made in your basement. We would like you to bring any project that you have built. It can be as simple as a stand for your 2 metre portable, or as complex as an H.F. rig. We would like Home Brew Night to be more of a show and tell night than anything else. So dig out your projects, no matter how big or small, simple or complex, and bring them with you to the April Club meeting and show your fellow hams your inventions.

Winnipeg Senior Citizens Radio Club

released by Alf, VE4ALF (President - 96)

First, an apology - your scribe must plead illness for the absence of last month's column. Our first big news for 1996 is the election of the new Board, Executive, Chairpersons (and assistants) of the various committees, and other committee heads.

President Alf Keber, 4ALF
 Vice-president Tom Faulkner, 4PEG
 Secretary Ian Rollo, 4MAC
 (with Ed Henderson, 4YU as Acting Secretary)
 Treasurer Tom McRae 4TSM
 (with John Agar, 4EI as his assistant)
 Past President Adam Romanchuk, VE4SN.

Board members are: John Agar, 4EI Bill Davis, 4WU;
 Albert Diamond, 4AX; Mike Fedak, 4ABV;
 Lila Forrester, 4LIL; Gil Frederick, 4AG;
 Harsha Godavari, 4SAI; Ed Henderson, 4YU;
 Lorne Kristjansson, 4RLK; Colin McBeath, 4JCM;
 John Mitchell, 4CCW; Jeffrey Morris, 4JEM;
 Eberhard Schumann, 4ZI, Arch Tingley, 4AAI;
 Larry Whittaker, 4SW.

Committee Chairpersons (and assistants) are:

Computers- Lorne Kristjansson, 4RLK
 (Harsha Godavari, 4SAI);

Finance- Tom McRae, 4TSM;
 Phone- Ruth Breckman, 4RMB
 (with many other members);

Health & Welfare- Lila Forrester, 4LIL
 (Bill Davis, 4WU);

Security & Housekeeping - Colin McBeath, 4JCM;
 Membership- Arch Tingley, 4AAI;
 Social Mike Fedak, 4ABV;
 Technical- Eberhard Schumann, 4ZI
 (John Mitchell, 4CCW);

Training & Education- Sandy Sandwith, 4SZ;
 Public Relations Gil Frederick, 4AG;
 Red Cross Emergency- Tom Mills, 4SE; and
 Emergency Coordinator- Jeff Morris, 4JEM.

The club wishes to thank Keith McConnell, 4BC, for his donation of a Capacitance/Resistance Tester - a welcome addition to the workbench equipment. Keith also wants everyone to remember the next Seniors'

Breakfast at the Norlander Inn - THURSDAY, MARCH 14, beginning at 9 a.m. In regards meetings, the next GENERAL Meeting of the club will take place WEDNESDAY, MARCH 20. These are important meetings, and as many members should come out as can - let's try and fill the clubrooms for this one! Meeting starts at 9:30 a.m.

Some interesting developments are happening at the club- the new rotor has been ordered, and work will commence on straightening the tower (it has a 1" per 4' list) and installing the rotor when weather conditions permit. John, 4EI, has requested that the club have a TCP/IP address on the local VE4IP packet service, and a possible internet address (club members can read his full descriptive letter posted on the bulletin board). The CW classes are going quite well, and the DOS/computer course with Harsha is also continuing with good interest. Many members continue to check into the morning Seniors' Net (VE4WPG at 9 a.m.), as well as the TLC (Totally Lost & Confused) Net held each night from 9 p.m. onwards, on 147.480 Simplex. If you ever wanted to ask any question and get lots of answers, this is the place to be!

Al Schroeder, 4AMS, is in Concordia Hospital (Rm. 128 for those wishing to visit), operating 2m and checking into the morning net, while waiting for placement in a personal care home. Stan, 4SCM, is presently in Grace Hospital, awaiting results of some tests. Stan, 4SRM is having cataract surgery. Fred Fear, 4NRD, continues to have regular medical treatments. We wish the best to all.

Duty officers for daytime manning of the club are being solicited by Adam, 4SN. If you are available, either for the whole day or even part, please call the club at 233-3122.

The Canadian Red Cross is celebrating their 100th Anniversary this year, and have made arrangements for special prefixes to be used by Canadian hams from March 1 through May 31, 1996. Listen for VG3CRC, HQ station in Ottawa, who will be active daily through March, on as many bands and modes as possible. A special QSL card is available. Other Red Cross stations will also be active across Canada (VE4WSC is a Red Cross-designated station, and has been requested to operate as CH4WSC during this period). More on this later. If you want to check into the National Red Cross Net, tune to 14.125 on Sundays at 1900Z.

We are sorry to report two Silent Keys; Eric Smith, 4MK, and George Reynolds, ex-4AG (really, 4AG, as no VE prefix in 1920!), ex-VE4VU, ex-VE4AJ. George was well-known for his published works, one of which was "Early Wireless and Radio in Manitoba - 1909-1924".

Comments or if you just want to reach us :

Newsletter Editor

Winnipeg Amateur Radio Club

C/O VE4WSC

598 St. Mary's Road

Winnipeg, MB R2M 3L5

Excerpts were published in issues of QUA (WARC monthly newsletter) some years ago.

Gil, 4AG and Vern, 4VQ continue to have fun teaching basic electronics to the kids at Frontenac School. The crystal radio/ audio amplifier project has been finished - the next project is building a code practice oscillator, and learning CW! Antennas will be mounted on the roof for VHF and HF operation later this Spring. Want to know how to 'adopt a school'? - Vern will be more than pleased to help you. Remember, kids you teach today are our radio amateurs of tomorrow

MINUTES for W.A.R.C. - Feb. 12, 1996

Meeting called to order 19:33, Richard Kazuk presiding. There were 69 in attendance with everyone introducing themselves in the customary fashion by name and call sign.

Moved by VE4HAY and seconded by VE4VQ that the minutes of January 8 be accepted as printed in the Newscaster. *Motion carried.*

OLD BUSINESS: none

CORRESPONDENCE: notice from MARM of their second annual hamfest September 7 and 8, 1996.

TREASURER'S REPORT: Rick VE4OV reported balance of \$4 870.47

STANDING COMMITTEES:

ATTENDANCE & DOOR PRIZES: Membership prize of a timer and raffle prizes of a recharger and a box of chocolates will be awarded after business meeting. All members reminded to sign in for membership draw and everyone welcome to purchase raffle tickets.

FLEA MARKET: Jim VE4AJR advised Waverley Heights to be the site as no other location could be arranged for the same cost and size.

ARES: Jeff VE4MBQ report published in Newscaster; no questions.

CON. ED.: Rick VE4OV reported new ham Norm VER3H passed sending/receiving code 5WPM. Rest of the class progressing well.

PROGRAM: March program will be on 2M and presented by Derek VE4HAY. April is Homebrew night and the format will be somewhat different in that Tom will give a short presentation on "home brewing" and the goods will be looked at during the coffee break. Awards will be presented after the break.

FIELD DAY (June 22-23): An alternate site is being looked into as the Falcon Resort is booked full. The new site must permit the club to operate generators, radios etc for 24 hours.

NEW BUSINESS:

NOTICES:

High Arctic: Mike VE4AES is the local contact for anyone who worked in the High Arctic.

New WARC Logo Contest: All members are invited to use their creativity to design a new logo for WARC. A prize will be awarded to the designer whose logo is chosen.

License Plates: Anyone wanting their call sign as their plate number should contact VE4TB.

SPECIAL INTEREST GROUPS

Meeting adjourned at 20:00 by Richard VE4KAZ
PRIZES: Membership draw - Timer won by George VE4GHR

Raffle prizes - Recharger won by Larry VE4LRB

Chocolates won by Robert VE4RST

ARES Committee Report by Jeff, VE4MBQ

In lieu of a guest speaker we had an expanded business meeting in February. A number of important ideas were discussed including fundraising and what events the members would like to line up for the coming months. The Winnipeg ARES Executive will be meeting in early March. The members decided at the February meeting that Winnipeg ARES will decline the involvement in the 1996 Winnipeg Airshow since the role envisioned for Winnipeg ARES this year was not one of training that we were comfortable with.

The next Winnipeg ARES meeting will be Tuesday March 19, 1996 at 19:00hrs at St John Ambulance, 535 Doreen Street. Guest Speaker will be Jim Townsend, VE4CY, the Assistant Section Emergency Co-ordinator (digital) for Manitoba ARES. Jim will be telling us about the MDECG packet system as well as providing examples on how packet may be the desirable mode of communications for some ARES operations. I am also trying to secure a speaker from Manitoba Emergency Measures to give us a basic presentation on the potential for flooding in Southern Manitoba and how ARES might be of assistance. In the event that we do have two speakers at the meeting the business portion of the meeting will be very brief.

**RAC NEWS BULLETIN INTERNET
EDITION - 15 FEBRUARY 1996**

Issued at RAC Administrative Office

NO LICENCE FEE INCREASE IN 1996!

RAC Vice-President for Government Affairs, Jim Dean, VE3IQ, has learned that radio amateurs will not face a licence fee increase when the 1996 licence renewals are mailed out. It had been rumoured that licence fees would be increased as a consequence of the realignment of the Radio Regulations with the new "Radio Communication Act" of 1989. Industry Canada has revised the Radio Regulations and had expected to publish them in the Canada Gazette in December 1995.

Industry Canada has advised that the draft revision requires some changes, and that a Gazette notice for public comment is unlikely before June 1996. While it is expected that the realignment of the Radio Regulations will result in licence fee increases for all users of the radio spectrum, such increases will not take place in 1996 and will be instituted only after public consultation.

DIGITAL CELLPHONE AND PACE-MAKERS

"Laboratory research conducted by Health Protection Branch Laboratories has confirmed reports that electromagnetic interference (EMI) from nearby digital cellular phones may affect the operation of some implanted cardiac pace-makers.

"It must be emphasized that these effects have been seen only with some of the new digital cellular phones now being introduced in North America; there have been no reports of interference from analog cellular phones which have been in use for a number of years."

American clinics have reported that digital cellular phones could produce the effects of:

- % inhibition of ventricular output
- % asynchronous pacing
- % atrial channel tracking of electromagnetic noise.
- % safety pacing (unwanted but non hazardous pang).

Health Canada pointed out they have not received reports of similar incidents in Canada; however, the Department has conducted laboratory tests on fourteen pace-makers and found one single chamber model and two dual chamber models were susceptible to EMI from digital cellular telephones.

The EMI effects occurred during transmission from the phone and when it was within 4.5 cms of the pace-maker. An analog phone under similar spacing did not produce an effect.

Suggestions for use of a digital cellular phone:

- % Avoid carrying a digital cellular phone close to a pace-maker.
- % Hold the phone to the ear opposite the side of the body where the pace-maker is implanted.
- % Avoid carrying the phone in the breast pocket near the pace-maker.

Copies of the full text of this news release are available from RAC Headquarters for \$1. covering handling and postage. Request Medical Alert Bulletin No. 108

FIELD DAY PACKAGE

The old "field day package" has been replaced by a new publication, the "ARRL Contest Year-book", incorporating the rules for all ARRL contests and other related material, plus field day information.

This book is now available through the RAC office for \$10.00, postage, handling and GST included.

Clubs are reminded to place their orders well in advance, to ensure receipt of the material prior to Field Day. ORDERS MAY *NOT* BE PLACED VIA PACKET.

ITU TO LOOK AT AMATEUR REGULATIONS "MORSE CODE UNDER REVIEW!"

A review of international radio regulations affecting the Amateur Radio Service and the Amateur Radio Satellite Service will take place at a World Radio Conference to be held in 1999 (WRC-99) by the world governing body, the International Telecommunications Union (ITU). This matter is so important to the future of Amateur Radio that the International Amateur Radio Union (IARU) is placing special emphasis on preparations for this event. There is a possibility that after WRC-99 it will not be necessary to have a working knowledge of Morse Code in order to operate below 30 MHz.

At WRC-95 one administration proposed that "RR2735", the regulation requiring a knowledge of Morse Code below 30 MHz, be suppressed - that is, abolished. Based upon policy which had been developed at recent IARU regional conferences, IARU prepared a paper opposing this proposal, and several administrations took the floor at WRC-95 in debate to oppose the abolishment of Morse Code below 30 MHz. The proposal was defeated. Following this, an agenda item for WRC-99 was established which allows regulation of the Amateur Service and Amateur Satellite Service to come under consideration. This means not just the Morse Code issue, but a complete review of regulations governing all aspects of these services will be undertaken. This presents a serious challenge to IARU--to take a leadership role in the management of potential changes which impact on the future of Amateur Radio.

Meeting the challenge, IARU President Richard Baldwin, W1RU has established an ad-hoc committee named "The Future of the Amateur Service Committee" (FASC) to guide the formulation of an IARU position on the WRC-99 agenda. The committee will examine international regulations governing the Amateur Service and the Amateur Satellite Service (other than frequency allocations) with a view to formulating the changes, if any, that are desirable to properly reflect the objects, needs, obligations, and privileges of the services for the next century, so that the services remain viable and valuable, meaningful and relevant to both the community and to those licensed in the services.

The committee is chaired by Michael Owen, VK3KI and the members are Larry E. Price, W4RA; David Sumner, K1ZZ; John Bazley, G3HCT; Tom Atkins, VE3CDM; Terry Carrell, ZL3QL; and Dick Baldwin, W4RU (ex-officio). The committee's terms of reference are broad and encompassing. A full range of actions will be pursued including consultations with member societies and the preparation of papers, reports, recommendations and proposals for the consideration of IARU's Administrative Council.

Radio Amateurs of Canada will undertake a special review of the issues, the concerns of its members and will make known its views and position to the Region 2 IARU Executive Committee at an appropriate time. RAC's Board of Directors will review this matter at its forthcoming annual meeting at Ottawa in April 1996.

Spring Flea Market **by Jim, VE4AJR**

Date: Sunday, April 14, 1996

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Time: Vendors 09:00hrs.

WARC members renewing RAC membership

Please ensure that you quote WIN102 when renewing or beginning your RAC membership. The Winnipeg Amateur Radio Club receives a commission from RAC each time a member uses WIN102.

General Admittance 10:00 - 14:00

Place: Waverley Heights Community Centre
1885 Chancellor Dr.

Cost: General Admittance \$1.00
Tables 5.00 1/2 Table 2.50

Refreshments: Some Innovative thinking, on menu content, is presently in process. More detail in April by our excellent past volunteers in this area. (XYL & SE).

Note: Discussion is presently underway to secure some additional display space. This space concerns two rooms directly off the main hall. Details will be made available on local Nets in the near future.

Contact: Jim VE4AJR or by Packet: VE4AJR @ VE4KV.

Thank you all for your past attendance and help in setting up successful past Club Flea Markets.

Winnipeg Amateur Radio Club.

VE4EF Appointed to RAC/CARAB Team **extracted from TCA Feb/96**

RAC's board of directors is pleased to announce the appointment of Dave Panting, VE4EF, to the RAC team serving on the Canadian Amateur Radio Advisory Board (CARAB).

CARAB is a joint Industry Canada/Radio Amateurs of Canada forum which meets to address important matters related to the Amateur Radio Service and Amateur Radio Satellite Service.

CARAB has deliberated on many issues impacting on Amateur Radio in Canada, among them attempts to restrict antenna tower height, the struggle to keep 220-222 MHz as an Amateur band, EMCAB-2 and other electromagnetic interference problems, resolution of malicious interference complaints and policy on call sign procedures.

FCC proposes to suspend Amateur use of 76-77 GHz.

Extracted from the ARRL Letter, Jan 12/96

... the FCC has proposed amending Part 97 of its rules to "temporarily disallow amateur use of the 76-77

GHZ band, which the FCC hopes to open from commercial development along with other "millimetre" frequency bands above 40 GHZ. The band in question is part of the 75.5 to 81 GHZ allocation, which the amateur & amateur satellite services share with other users-- on a primary basis from 75.5-76 GHZ, and on a secondary basis from 76-81GHZ. The primary allocation from 76-81 GHZ is assigned to radiolocation, including radar.

The commission says the change will permit development of ... vehicle radar system that can be used in conjunction with Intelligent transportation Systems (ITS). ... the temporary restrictions can be relaxed if it can be shown that other in-band transmissions would not compromise vehicle radar system safety or if sharing guide-lines could be worked out.

At the same time, "to balance any perceived harm" tho amateur operators, the FCC proposes to upgrade amateur status in the 77.5-78 GHz band from secondary to co-primary with government and non-government radiolocation services.

In its comments, the ARRL objected to limiting the 76-77 GHz band to vehicle radar system. The league said it wanted to maintain existing ham allocations from 75.5 - 81 GHz to spur development of short-range, high speed data links.

ECONOMICAL ELECTRET MICROPHONE

by Tom, VE4AKI

If you have been using a mobile hand mike for your base station operation you have probably not found it to be very convenient. It can be tiring to hold and you can't lock the PTT button down. A desk mike would be more convenient but can be relatively expensive. So, how about "brewing" one of your own?

The easiest type to construct is an electret type. The electret elements are small, have good audio quality and output, but require a source of D.C. to operate. They are inexpensive and widely available.

The major components of a desk mike are the base and some kind of extension or arm to hold the mike element at a satisfactory height. The base should be of convenient size and sufficient weight to give stability ie. not tip over easily. A wide range of metal and plastic project boxes are available at outlets such as Radio Shack. These can be used by adding some weight inside using hot melt glue to hold it down. They can be

finished with spray paint to match or contrast with your equipment. Rubber feet can be attached to the bottom. Suitable enclosures can often be found by "recycling" containers from other consumer products. For example, my latest desk mike uses the housing from an old Commodore joy-stick for its base.

The mike element extension can be made any number of ways. If you are satisfied with a fixed position you can use rigid plastic pipe fittings. For more flexibility you could use flexible plastic tubing. Stiff wire could also be used. Old desk lamps with flexible goosenecks can be found at garage sales and pressed into service. Use your imagination! The mike element [a Radio Shack PN 270-90] is very small only about 1/2" [12.5 mm] in diameter. It should be enclosed at the top of the extension for protection. A small piece of acoustically transparent foam should cover the face of the mike to act as a blast screen.

A variety of switches can be used for controlling the PTT and LOCK functions. Radio Shack soft touch switches such as RS 275-1565 have a good feel and have proven to be reliable. The mike element requires a D.C. voltage in the range of 2-10 volts. This can be supplied by either a battery enclosed in the base or may be available at the mike jack on your transceiver. The following schematics show the wiring for both types. Check your manual for the proper pin configuration for your rig. Use shielded wire for all audio connections ie. to the mike element and from the mike to the transceiver. Radio Shack also lists a coiled mike cord that is suitable.[no, I don't work for Radio Shack but they are so handy]

Finish your mike to suit your tastes or to match your equipment. Make sure all wiring and batteries are securely fastened down [use hot melt glue!] and check for continuity and correct voltages. Lastly check for proper PTT operation and satisfactory audio response. The coupling capacitor can be varied in value to alter the frequency response. A lower value [as low as .01 uf] will restrict the low frequency response and raising the value will cut the high frequencies.

Well , there it is. I have only provided a general outline not a detailed set of plans. The details are up to you but here's your chance to show your initiative and creativity. With some effort the final product will be both functional and good looking.

NiCd battery discharger/charger

**by Ken Hughes Wokingham,
Berkshire**

NiCd cells should be discharged to 1V: this circuit does that and subsequently charges the cells at the 100mA rate.

Reference for the first TL082 comes from R_3 and is set to $0.7V_1$, V_1 being adjusted to V_{batt}/n , where n is the number of cells. While V_1 is above 1V, the BUZ10 is on and the cells are discharging, but when V_1 decreases to below 1V, the circuit is latched off via $D_2R_9C_1$ and discharge is complete. Switching in R_0 begins the 100mA charge, the value of this resistor being $(8-1.45n)/0.1$. Adjustment of R_6 allows the discharge of up to 30 cells, assuming R_6 is man enough for the job and can be adjusted with sufficient accuracy. Discharge resistor R_{11} is $5Xn$ (ohms).

The circuit will work with up to 20 lead-acid cells by setting V_{ref} to 1.75V, R_6 as needed and selecting R_{11} appropriately.

WHAT IS GOING ON INSIDE A CONDUCTOR?

By Vernon L. "Skink" Dutton, VE4VO

Ever since getting my "ticket" twenty years ago, I have been bothered with the problem of how to explain that a "voltagecurrent step" travels along a conductor at the speed of light while the so-called "drift velocity" of the free electrons in the conductor is of the order of 9 mm (about 3/8-in.) per sec. Pride is a terrible thing so I have concealed this lack of understanding but it is there and it has fretted me.

As I was leaving the February meeting, I spotted three back issues someone had left in one of the seats so I picked them up. One of these was a 1981 issue of Wireless World and it had the answer to my problem. Talk about old sinners and their guardian angels!

A Peter Dawe and a Mr. Catt were having a "battle" over this very problem through the Letters section. Mr. Dawe pointed out something that I had overlooked (as had Mr. Catt). There are 8.5×10^{28} free electrons in a cubic metre of copper which means that, in a conductor having a cross-sectional area of 1 sq. mm, there are 8.5×10^{22} free electrons per metre, which is an impressively large number. This also means that, in one millimetre of that wire, there are 8.5×10^{19} free electrons which gives meaning to Mr. Dawe's assertion that "the electrons transmitting the wavefront do not have to come from anywhere since they are already present everywhere along the wire."

Then Mr. Dawe introduced an analogy that was new to me. I will record it as he wrote it, only pointing out that a railway "truck" in England is what we call a "freight-car" on this side of the Atlantic.

"A simple analogy often given in explanation is that of the transmission of a forward movement along a

line of trucks, each in contact with the next, along a railway line. If a push is applied, each truck moves quite slowly and only a short distance, but the 'step' of movement, or push, is very rapidly transmitted from one end of the line to the other."

Living, as I do, about 150 metres from the Sioux Line, I will always think of Mr. Dawe with gratitude as I hear the "wave front" pass along a string of cars when the CPR is doing some shunting in the St. Boniface yards

Why Dit = E

Researched by Gil, VE4AG

ref: *The Cambridge Factfinder*

Ever wonder how Samuel Morse decided on which letters should have least dots and dashes, and which should have most?

Well, Sam went into a printer's office and checked on the quantities of type used for each letter, to determine the frequency of use. He found the following, in descending order:

e(12,000)	t(9,000)	a(8,000)	i(8,000)	n(8,000)
o(8,000)	s(8,000)	h(6,400)	r(6,200)	d(4,400)
l(4,000)	u(3,400)	c(3,000)	m(3,000)	f(2,500)
w(2,000)	y(2,000)	g(1,700)	p(1,700)	b(1,600)
v(1,200)	k(800)	q(500)	j(400)	x(400)
z(200).				

So he decided on this order in compiling the Morse Code: e, t, a, i, n, o, s, h, r, d, l, u, c, m, f, w, y, g, p, b, v, k, q, j, x, z.

Notes from your Editor:

by Derek, VE4HAY

I guess my constant prodding and poking for articles is just starting to pay off. I want to thank Tom for another couple of articles (the second one will be in next month), Gil for sending me Vern's article as well as time to reference why code is what it is. Also John who sent me an article (see next month) from Arizona while he was snow-birding. And I sure wish my memory was better, but one Old-Man gave me the article on the Discharger by Ken Hughes last meeting. But, after listening to Lee's great presentation, I forgot who I got the article from. Sorry, but if you are at the next meeting, make sure you tell the people next to you that you gave it to me, so that you will get that warm feeling inside

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knowing that you contributed to the club, rather than just sat back and sucked it all in. Thanks.

It seem that the newsletter is slowing put together each month, a few hours at a time during the month, and then I get the executive articles just hours (ok maybe a day) before the deadline, and then I spend hours on hours formatting it to fit the page properly etc.. Well, next month the newsletter will be done 3 days after this coming General meeting as I will be out of town for the normal deadline. And rather than offend the entire membership, I will offend the executive, by making them write their articles for April and give them to me at the March meeting. seems fair (HI HI).

Spring is coming soon, and with that a whole new series of fun events related to Amateur Radio. Check out the various contests that are on. If you are out of shape and will not be running in the marathon, why not volunteer to help out with the communications (see VE4ZF or VE4YF for more info). There will be a few other running or bicycle races that hams help out at. How about getting involved with your community, why not check out a ARES (Amateur Radio Emergency Service) meeting (see VE4DJM, or VE4KAZ, or VE4MBQ).

You can submit articles to me via the internet as: derek@facs.mb.ca or ve4hay@ve4umr.ampr.org or via packet as: ve4hay@ve4kv.#wpg.mb.ca.noam. I can also be reached on MWCS or at my home number 257-1420.

Applied Communications & Electronics

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