

the canadian amateur

October 1975 Number 8

Region Director nominations invited

By-Law # 2, Article 4,

(a) INVITATION TO SUBMIT NOMINATIONS:

Not less than four months prior to the date of each annual meeting, the Secretary shall cause a notice to be published in The Canadian Amateur inviting the FULL members of the Federation to submit nominations for election to the office of Director in their respective Regions.

(b) NOMINATIONS

In any one region, five or more FULL Members may nominate any other Full Member residing in such Region for election to the office of Director by signing and having the nominee sign a notice of such nomination and by sending such notice to the Secretary by Registered Mail not less than three months prior to the date of the next Annual Meeting.

By the above terms of the Corporate By-Law, the Secretary hereby invites nominations to be submitted for the five Regions - ATLANTIC; QUEBEC; ONTARIO; MIDWEST (Man, Sask, Alta, NWT); and PACIFIC (B.C., Yukon, Pacific Maritime Mobile).

The appropriate Region for each membership shall be determined by the geographical location designated in the postal address as recorded in the books of the Federation except that a Full Member residing temporarily outside of Canada shall be included in

Maritime ops aid in sea emergency

A suddenly stricken seriously ill child on the Newfoundland-Nova Scotia ferry Ambrose C, seven hours out of Sydney on September 8, plus poor propagation conditions on the marine HF bands presented a difficult decision to the captain to proceed or return to Sydney in the absence of medical advice.

Turning to the Amateur bands, the wireless op, VE0MBG, called for assistance on 3757 and VE1NY Laddie, in Waterford, VE1UN, Fred in Fredericton, and VE1AJI, Mike in St. John, answered him. Mike, who is the CARF Atlantic director, alerted the MOT in St. John and ship-to-shore communication for medical help was established through the distress frequency on 500 Kilohertz.

Third Party agreement

The DOC announced on Sept. 30 that a formal agreement permitting Amateur radio operators of either country to exchange messages or other communications from or to third parties has been signed with Guatemala and Uruguay.

the Region appropriate to that member's most recent call-sign of postal address in Canada.

QUALIFICATION FOR DIRECTORS: Directors elected by Full Members shall each be, at the time of election and throughout the term of office, a Full Member and a resident of Canada. A Full Member must hold a Certificate of Proficiency in Radio of at least AMATEUR class issued by the Department of Communications (Transport).

Nominations will close on the 31st day of December 1975.

K.E. Rolison, VE3CRL
Secretary

New BC/Alta 40M Phone Net

A new BC/Alta Phone Net is now in operation on Sunday mornings. Frequency used is 7168 kHz and time is 1700 GMT

This net is looking for more Amateur participation in the Western and Pacific provinces and will serve as an adjunct to the Trans Can Net on 20 M. More information can be obtained from F.G. Nanason, VE7IQ, 963 Belmont Ave, North Vancouver, BC

the canadian amateur



Vol. 3 Oct. 1975 No. 8

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CANADIAN AMATEUR RADIO FEDERATION INC.

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MEMBER SOCIETIES

- Society of Newfoundland Radio Amateurs
- Nova Scotia Amateur Radio Association
- Amateur Radio League of Prince Edward Island
- New Brunswick Amateur Radio Association
- Radio Society of Ontario, Inc.
- Amateur Radio League of Alberta
- Amateur Radio League of Manitoba
- Saskatchewan Amateur Radio League
- British Columbia Amateur Radio Association

From the Front Office

Prior to the emergence of your national Federation as a viable force in Canadian Amateur radio, there was no Canadian organization that could, or would, function as a true national society. During that period, the American Radio Relay League did a good job filling the vacuum that existed in our country.

Today, the situation is different. Your Federation is now effectively performing the majority of duties required of a Canadian national society. Your Federation stands ready to take over certain responsibilities assumed by the League. In particular, the one change that CARF has requested is Canada's membership in the International Amateur Radio Union. This change requires only the recognition of CARF as the national society by the Canadian Director of the ARRL.

CARF is not trying to put an end to the League presence in Canada. Instead, the Canadian Division should continue to function as a normal division of the parent League but should relinquish its quasi-national status to the Federation. CARF does have the necessary organization, administration, finances and channels of communication to effectively fill this role.

One factor that is unknown to the bulk of the Amateurs of Canada is that the Canadian Division and the parent League are prohibited from having formal relations with the national Federation by the terms of the IARU constitution. With CARF installed as Canada's member to the IARU, there is no bar to relations with the League or its division in Canada. Quite the reverse - relations would be encouraged as sister members of the international body.

Effective contact and liaison would be achieved the moment CARF is recognized by the League as the Canadian Director ARRL would then be offered a permanent position on the National Executive of CARF. This one change would engender the spirit of mutual support and co-operative effort that your Federation has been trying to achieve for many years.

The recognition of CARF would put an end to the partitions that presently plague Amateur radio in Canada. It would demonstrate, to the satisfaction of every Amateur, that the leaders of these two organizations are determined to work together for the general good of Canadian Amateur radio. This would ensure that officials and supporters of both CARF and ARRL would work together in solving our many mutual problems without frittering away energy on petty bickering.

There will be only one change when CARF is recognized by the ARRL. Canada is now represented in the councils of the IARU by the Canadian Director ARRL. On recognition of CARF, Canada will be represented by a member of the National Executive of the Federation. No other change in the respon-

SHORT-CIRCUITS



Atlantic Convention

The Atlantic Convention at Moncton on Labor Day weekend, sponsored by the Moncton ARC, drew some 250 Amateurs to the festivities at the Beausejour Hotel.

The technical program included an excellent talk on AMSAT and Amateur satellites by Malcolm Redding, VE1IZ, who played to a standing room only audience.

The Atlantic Director for CARF, Mike Koval, VE1AJI, spoke to the NBARA annual meeting and Doug Burrill, VE3CDC, had some words for the NSARA forum under the chairmanship of Bernie Bonnar, VE1UT.

Both meetings were brought up to date on CARF direct participation in ITU and DOC committees in preparation for the 1979 frequency conference.

The dinner dance and banquet were emceed by Walt Wooding, VE3CLJ, who missed his calling as a night club entertainer.

SONRA President Nate Penny, VE0NP brought Newfoundland official representation to an Atlantic Convention for the first time in many years.

Old-timers Noel Eaton, VE3CJ and Ron Hesler, VE1SH represented the American Radio Relay League. Ron announced his candidacy for ARRL Canadian Director to replace VE2MS, George Spencer.

Kingston Club to provide service for Regatta

In connection with CORK (Canadian Olympic Regatta, Kingston) the Regatta events which will be held at Kingston, Ontario as part of next year's Summer Olympics, arrangements have now been made with the Kingston Amateur Radio Club to provide a free Amateur Radio Service from the city via C220 to all destinations authorized to accept such traffic.

Kingston-RASO, in addition to a direct telephone pair link with C220 will also route traffic through HF Station VE3DXY.

IARU News

Federal Republic of Germany

The number of Amateur radio licences in the Federal Republic of Germany has risen by nearly 10 per cent during 1974 to 29,287. Relatively highest expansion occurred to the licence class C (VHF-phone only) with 25 per cent, while classes A and B (HF/VHF) increased by five per cent.

Eighty-five per cent of classes A and B and 92 per cent of class C licensees are registered as members of D.A.R.C.

Kenya

It is proposed to raise the annual licence fee in Kenya, Tanzania and Uganda to \$110 US. It is hoped that Amateur presentations will have this disastrous increase rescinded.

sibilities of the Canadian Director nor of the functions of the Canadian Division ARRL would be required.

The League and the Federation can work and co-operate in the true spirit of Amateur radio. Alternatively, the two organizations will continue to function as rival, dissenting and competitive bodies. There is no middle ground.

The Ontario Trilliums assume VE3 QSL duties

On Aug. 8, 1975 The Ontario Trilliums Ladies Amateur Radio Club assumed the duties of the ARRL VE3 QSL Bureau. The bureau was formerly operated by Russ Buckley VE3UW who has resigned for reasons of health.

Envelopes and postage already on hand at the bureau will be used to forward your QSL cards to you promptly. All further supplies of envelopes and postage should be sent to the new VE3QSL Bureau listing:

The Ontario Trilliums
Post Office Box 157
Downsview, Ontario, Canada M3M 3A3



Canadian Repeater Advisory
Group

VE1 news dominates this month's report, as your CRAG editor was on vacation in the Maritimes.

The Yarmouth repeater, due to interference problems with a repeater on the New England coast, is changing frequency from 146.34-146.94 to 146.01-146.61. The frequency choice was dictated by the number of New England channels which reach Yarmouth.

In New Brunswick, another mountain-topper, VE1 TWO is slated for October on Mount Champlain on 146.10-146.70, a frequency chosen after some computer work on intermod and other problems which would be encountered at the commercial site.

A repeater is in the mill for Amherst, NS, on 146.19-146.79 and in St. Stephen, NB, VE1IE is on the air from a temporary site on 146.22-146.82.

There is also a move afoot to set up a Maritime repeater council, a move which would mean that there would then be repeater co-ordinating bodies in all provinces.

Last minute news from BC FM Association says a new Kamloops rig is going on 146.25-146.85 but does not give the call; and VE7DTE is on the air in Dawson Creek, 146.34-146.94.

One Man's Opinion

In the May 1974 issue of The Canadian Amateur you asked for suggestions to justify the continued existence of Amateur radio for an international frequency conference. It has taken a long time to write this because my suggestion may not be well received, but I believe it bears Consideration.

Canadian Hams are licenced to operate Amateur Experimental stations and provision is made to permit the emission of radio signals in furtherance of the experimental objective. Unfortunately we have become, like US Hams, operators of commercial equipment or kits and we are more interested in achieving DXCC than in putting technical ideas into practice. We justify our privileges by offering public service assistance. Yet the official interpretation of the Amateur service - experimental - is forgotten.

I submit that Amateur bands would be much less crowded if more of us tried to honor the spirit of the Canadian licence and employed our frequencies for proving the value of innovations - but there seems to be no incentive to take this approach. It is therefore recommended that Canada set an example for most nations by reducing the legal power limit to about 150 watts.

Two objectives will be achieved. First, we will set an example for others to reduce band congestion and the dog-eat-dog attitude so prevalent today. Secondly, there will be a greater challenge and

satisfaction in achieving successful communication over long distances; we will be encouraged to try that long-dormant idea for a better antenna or speech compression, and further the true purpose of Canadian Amateur radio. Best of all, however, will be the demonstration of Ham initiative in making best use of the available spectrum, an achievement that will probably most impress the frequency conference.

In the October 1971 issue of Wireless World, Pat Hawker, G3VW, recommended that the British power limit be raised from 150 to 1000 watts to give UK Hams equal opportunity to win international operating contests. Not all countries of the world have standardized at the 1000 watt limit, but, if some of us so privileged do not move to reverse the trend, congestion and mutual interference of chaotic proportions will ultimately result.

I sincerely hope that CARF can support and advocate a reduction in power and a return to real experimental service.

C.E. Hooker, VE3CQH

Olympic QSL

CANADA

OLYMPICS 1976

UR CALL

Ur Name here.
Address,
City and Province
Postal Code

The Department of Communications has granted the joint request of the Federation and the ARRL to permit Canadian Amateurs the use of special prefixes during Olympic Year.

The special prefix "XJ" may be used in place of "VO", and "XO" in place of "VE". Amateurs are not obliged to use these prefixes and do not have to seek further permission for their use.

Amateurs wishing special QSL Cards are reminded that these can be obtained through the CARF QSL Card Service (sample packets 25 cents) from Box 356, Kingston, Ontario K7L 4W2.

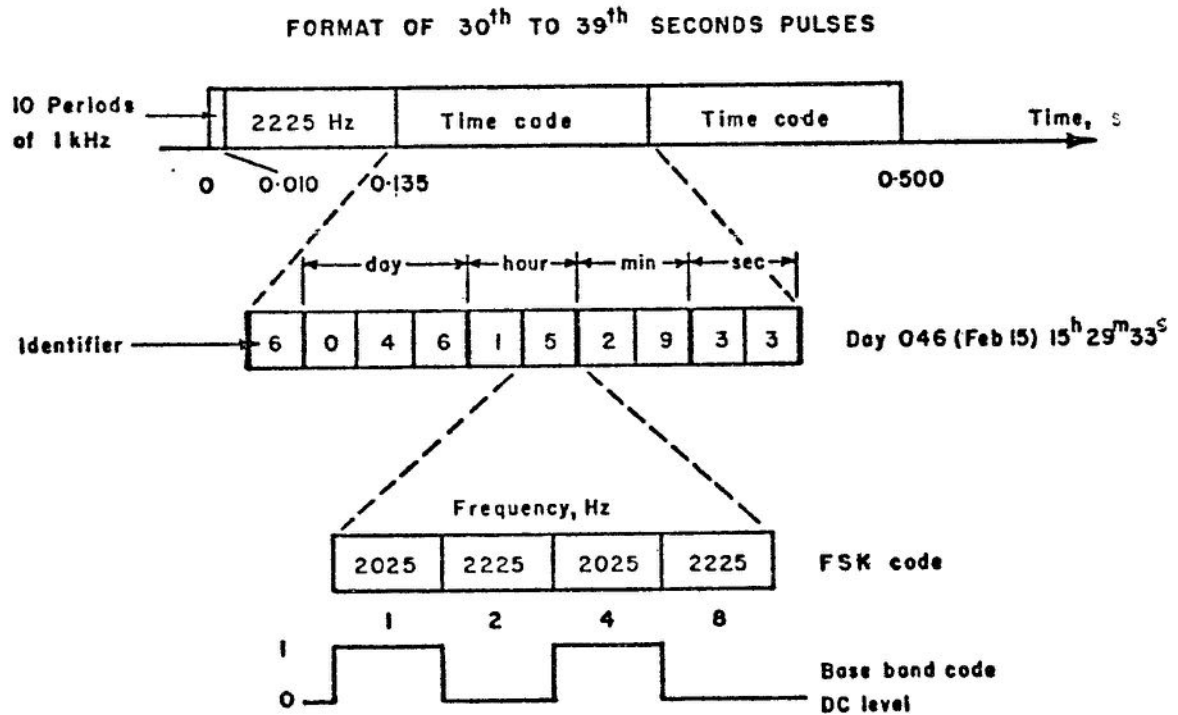
RASO Bulletin

In view of recent work transfers the following changes have occurred:

The function of Technical Director, previously held by VE2MS, George Spencer, will now be carried on by VE2SH, Don Dashney.

The function of VHF Coordinator English Language Networks, held by VE2BOG, Bill O'Connor, will be carried on by VE2AGD, Raymond Dubois.

CHU PROVISIONAL FSK TIME CODE



New tone on CHU

Canada's time standard station, CHU, in Ottawa has added a new function to its familiar "beep-beep-beep". From the 30th to the 39th second you will hear two tones which are designed to automatically set remote digital clocks either through radio receivers or via telephone lines.

The new signal uses the standard commercial 300 band FSK system, with frequencies of 2025 and 2225 Hz. The code is a modified ASCII in which each eight bit character contains two BCD digits. The first digit is the number 6, which must be identified in the receiving clock and which prevents code inversion. The remaining nine digits give the day, hour, minute and second. This message is repeated, and the remote clock will update at the end of the repeat message only if the two messages are identical in all respects. The total message, including the repeat, has a duration of 0.365 sec. and can therefore be incorporated in the seconds pulse.

CHU has converted to SSB, with full carrier and upper sideband (mode 3A3H) and is compatible with AM reception, but requires more careful tuning on AM sets. The bandwidth has been reduced to 3 kHz from 6 kHz which has reduced interference in some cases. For more technical information, send a SASE to CARF, Box 356, Kingston.

TAYLOR COMMUNICATIONS MFG., CO.
 BOX 126 AGINCOURT ONTARIO CANADA

canadian capsule comment

VE8 Reports

The Calgary Convention was attended by VE8's RO, CM, NN, OO, DC, CD/6 and FD/6.

VE800 Frank and VE8NN Diana are moving to Prince George, BC, at end of August.

Ex VE8LG Jerry is back in Fort Smith, but is not on air yet.

VE8DO John at Cape Hooper has just purchased a Multi 2000 so will be working via Oscar soon.

VE8CM Stu at Hay River just purchased a two metre transverter and will be on air soon with it.

VE8NS Al at Fort Smith will be the new QSL manager for VE8 land (Box 340, Ft. Smith, NWT X0E 0P0).

VE8RO Al and VE8RE Bob both visited WB0IRL Gerry while on holidays.

VE8CF George from Pine Point spent the summer near Winnipeg, working VE8CF/4.

VE8PA Pam from Fort Smith spent the summer in Great Britain and Europe on a working holiday. She is a pharmacist and is from VK2 land originally.

VE8WW Alf from Fort Smith returned from holidays with an aircraft - who knows, maybe going 2m aeronautical mobile?

VE8NN Diana from Fort Smith at long last has advanced licence.

No new vehicle licence plates to be issued in NWT in 1976, so unfortunately our requests for VE8 call plates were turned down.

73/88 Diana VE8NN

Wheelchair Roundup

On Saturday, June 21, the WCRU held its annual Garden Party and Barbeque at the Villa Hospital with about 50 members and friends attending.

The weather was even on our side, as it was a beautiful sunny day. Entertainment was provided by our lifetime member Jack Ayre and by Richard VE3ERW who played taped background music. Mary Hedges VE3COH presented a cheque for \$50 to the Villa ARC on behalf of the Ontario Trilliums on the occasion of TOTS 10th Anniversary.

Len VE3DOR also made a presentation to our President, Richard VE3ERW. Everyone had a good time and, on behalf of the WCRU, I would like to thank all who helped make this a success.

Don Green, VE3HDV surprised us recently by announcing his engagement. Congratulations Don and Gwen.

The Wheelchair Roundup lost a good friend in June. Shirley Young, who was a resident of the Villa passed away June 21 after a long illness. Though Shirley was not an Amateur, she attended all of our get-togethers and was a friend to all. We will miss her deeply.

Intruder on 40 M ?

It has just come to my attention that the Canadian Government operates its Radio Canada International stations on various frequencies in the 40 metre Amateur band. I was under the impression, and it has been indicated in several publications, that in Region 2 (that's us) 7000 to 7300 kcs was exclusively Amateur allocation ... could you check this out ... Surely there is enuff broadcast garbage on 40 metres now without Canada adding a few more "QRM GENERATORS".

John J. Gibbs VE7BDQ
Prince Rupert, BC

John also attached a CBC schedule which verifies this observation. Our own government shows CBC International programs on 7155, 7225, 7285 and 7235 KHz which appears to be a violation of the ITU regulations to which our government subscribes.

Investigation by CARF with DOC reveals that these 7 MHz frequencies are indeed used by CBC stations located in ITU Region ONE or by other stations there which carry CBC programs, all theoretically beamed away from Canada.

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6 elements

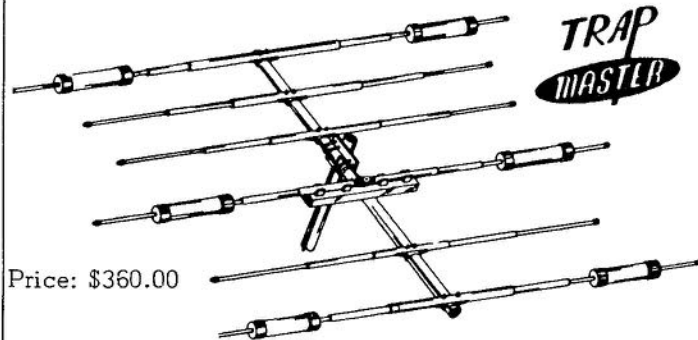
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VE3BPM

Editorial: Can we run our own show ?

Are we mature enough to run our own show or do we always have to be told what to do?

For many years now, in fact longer than most of us can remember, the lower Amateur bands have by regulation (law) been sub-divided into "CW" and "phone" segments. Initially, this was done to provide "guard" bands to protect services on adjacent frequencies from phone sidebands and splatter. But now the bands have been officially divided up between CW and phone mainly because of the inability of Amateurs themselves to sort out and amicably resolve their own problems.

Why is it that in Canada (and the U.S.) it is necessary to have laws that tell us what we can and cannot do with our allocated frequency bands? Amateurs in other countries seem to be able to carry on successfully without the need for such official intervention. Surely our Amateur fraternity has now reached the age of self-determination and no longer needs to be told what to do. Why should the DOC have to expend many man-years of work (and thousands of dollars) in an attempt to solve an unresolvable problem? They never will be able to satisfy everyone. We can do the job just as well (or better) ourselves.

It is the writers firm belief that CW and phone sub-allocations (except for band-edge guard bands where necessary) should not be made part of official legislation. If we are not mature enough to sort this problem out among ourselves, perhaps we should not be enjoying the hobby. If we carry on in our

present regimented fashion, CW may soon be prohibited in certain segments of the bands; and there will be sub-bands for SSB, USB, LSB, RTTY, and others.

So what if there is some interference between CW and phone operations - is it all that terrible? It may even improve our operating techniques and capabilities.

Such an "open" band concept does not in any way affect the incentive concept since phone and other privileges would still be allocated according to the qualifications (class of radio operator's certificate) and experience of the licensee.

Legislatively, this can be easily accomplished by simplifying the list of Amateur frequency bands in the General Radio Regulations, Part II, to show only the complete Amateur bands and by deleting Schedules II through IV. When an operator became appropriately qualified, he would be authorized to operate phone on any one or more of the applicable high frequency bands without reference to any specific segment of the bands.

These are strictly the opinions of the writer, who has listened to the pros and cons of this argument for many years, as well as having been involved in the official side of trying to find an acceptable solution to the many "demands" of groups and individuals within the fraternity.

Let's grow up and do the job ourselves as responsible and reasonable individuals.
VE3ZS

Learning to live with IC's

Just as hand-wired circuits gave way to printed circuit boards, so are PC discrete assemblies giving way to integrated circuits. The principal reasons are the same - lower manufacturing costs, elimination of human labor, and the advertising value of something new.

The first ICs simply replaced audio amplifiers, or some similar circuits; they were what was called SSi (small-scale integration). Then came devices with more and more functions on each chip and we had MSI (medium scale) and LSI (large scale) which has resulted in complete computers consisting of a half dozen chips wired together.

The best approach to troubleshooting these little beasts is the observation of the signal input and signal output, after first making sure that the right DC supply voltages are present. When using a VOM for testing live ICs, it is good practice to use an isolating resistor in series with the meter test probe. For example, if your meter is a 20,000 ohms per volt unit and you are using it on the 25-volt range, the input resistance is 500,000 ohms. A 500,000 ohm resistor in series with the test lead will act as a choke. To read the meter, multiply the reading by two.

The most common IC defect is the failure of the internal connections, wires about one-quarter the size of a human hair. Failures are due to weld failures, excessive heat, voltage, or current, often caused by the failure of some other component. There are no IC failures due to wearout because ICs have lives in the millions of hours.

Before replacing an IC that has failed, it is advisable to make sure, with the IC out of the circuit, that the proper voltages and currents are applied to its terminals. Remember, an IC goes out in microseconds with no noise, no flash, no warning at all.

The Groundwave - de VE3BYX

CLARA News

A special thanks to the following YLs from CARF for service and time involved in the Across the

A special thanks from CARF to the following YLs for service and time involved in the Across the Country Mail-out: Cathy VE3GJH, Mary VE3COH, Marg VE3AIZ, Thelma VE3ARG, Irene VE3FQK, Betty VE3ASZ, Viv VE3HGA, Pam VE3BVG, Jean VE3DGG, Ruth VE3GVQ, Gwen VE3AYL, Audrey VE3CCO and Gail VE3GSQ.



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The receiver hams have dreamed of . . .

NEW R-4C FEATURES:

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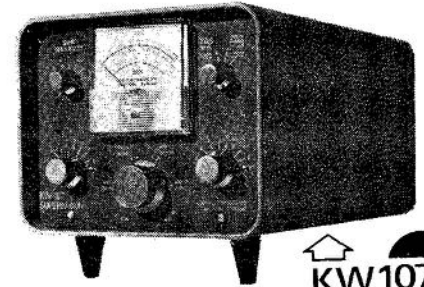


T-4XC Transmitter

The one worthy of the R-4C

NEW T-4XC FEATURES:

- Plug-in relay
- More flexible VOX operation; including separate delay controls for phone and CW
- Crystal control from front panel for amateur, Mars, commercial uses
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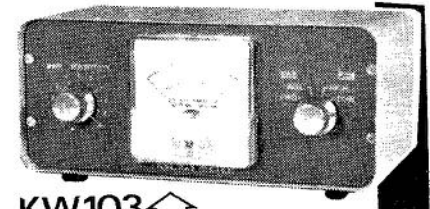
LINEAR AMPLIFIER

L-4B

KW107



STATION CONSOLE C-4



KW103



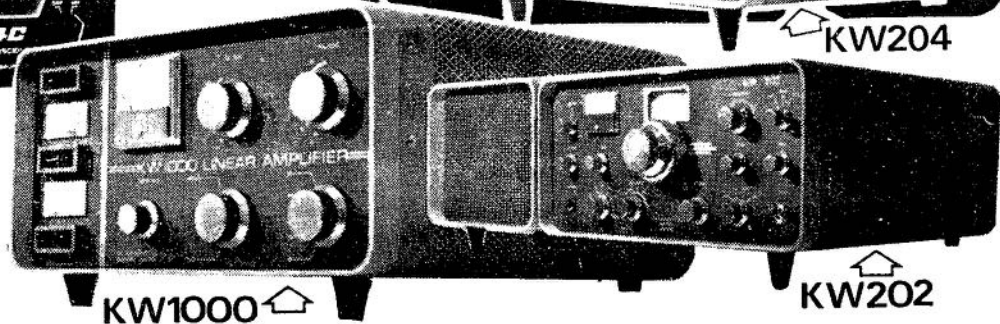
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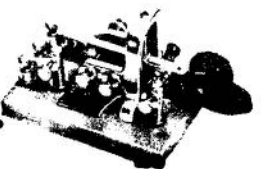
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VIBRO-KEYER

VE3 News

The Groundwave

The last of the great radio pioneers is gone. Ernst Frederik Werner Alexanderson passed away on May 14 this year at the age of 97. Famous for the invention of the high freq alternator which made trans-Atlantic R/Telegraphy possible, he was granted over 300 patents - an average of one every seven weeks during his career with GE. His improvements to Fessenden's HF alternator produced the 'standard' transmitter for HF high power transmission until it was superseded by vacuum tubes. His work with Harold Beverage produced an antenna which not only eliminated the German radio barrage during WW1 but also greatly reduced natural static. In 1927 he had the first demonstration of home television.

QSL Services

Members wishing to use the out-going services for distribution of QSL cards should forward their cards, arranged in alphabetical order by countries, to CARF National QSL Bureau, PO Box 66, Islington, Ontario M9A 4X1.

Your membership number should appear on bottom left of envelope or package containing cards. If you are a new member, put PENDING in place of number.

New executive for NBARA

The New Brunswick ARA elected a new executive during its annual meeting at the Atlantic Convention over the Labor Day weekend.

The 45 members elected the following officers: President Gordon Perry VE1WK; Vice-President, Howard F. Mann VE1RC; Secretary, John Fallon VE1SY, St. John; and Treasurer, Bob Eschazier VE1ST, Shediac.



Working with SQUELCH

WHAT IS SQUELCH?

Not all Amateurs are technically proficient on a professional basis and for those who are really 'amateurs' here is an explanation of how their squelch circuits work. This comes from the pen of Bob Eldridge, in 'Resources Protection' magazine for October 1973. It was primarily written for a security officer audience which usually has VHF FM equipment as part of its arsenal against intrusion and theft.

Squelch is the feature on a radio-telephone set which suppresses background noise in the receiver in the absence of a signal.

QUIETING is the term used to describe the way noise disappears as soon as a signal appears on channel. The louder the signal, the more it suppresses the noise so that if the degree of quieting is measured, it gives one measure of the magnitude of the signal being received.

The presence or absence of the quieting effect is used to activate the SQUELCH circuitry of a receiver. The diagram is a simplified block diagram of the squelch action. In an FM set, the discriminator stage receives a frequency modulated signal at intermediate frequency and turns it into an audio signal. If there is no signal the output is NOISE; if there is a signal with no modulation on it, the output is a rather gentle hiss; if there is a strong signal with modulation on it the output is audio plus a gentle hiss; if there is a weak signal the output is audio plus a disturbingly high amount of background noise. The squelch circuit reacts in a different way to each of these conditions.

How Squelch Works

Following the discriminator there is a noise/audio filter. Noise is mainly frequencies much higher than those of

speech; the useful parts of speech are those frequencies between about 300 Hz and 3000 Hz.

The filter is in effect a black box which takes into itself everything which comes in and pumps it out in two more or less separate packages--all the frequencies below 3000 Hz (speech) and all those above 3000 (noise). To be safe, most designers prefer to leave a bit of a guard band to be sure speech doesn't creep into the noise branch, so noise sometimes starts at 6000 or 7000 Hz in their philosophy.

The noise output is fed to a rectifier diode. When it comes from the noise branch of the filter it is of course an alternating wave form (ac), and the rectifier creates from it a dc voltage, which is then used to open a switch which is in series with the audio feed somewhere.

Sometimes the switch is an actual relay (the SQUELCH RELAY) but more often it is a bias condition on the grid of a vacuum tube or the base of a transistor.

Out of the other branch of the filter comes audio, usually in the form of speech. If there is no signal being received, all the frequencies of noise which exist within the speech band come out through the audio branch. Although we speak of noise being of higher frequencies than speech, this is not really quite true. There is plenty of noise within the speech band, but it is a rather complicated job to separate that kind of noise from speech, so for squelch purposes we deal only with that part of noise which is easily filtered from speech.

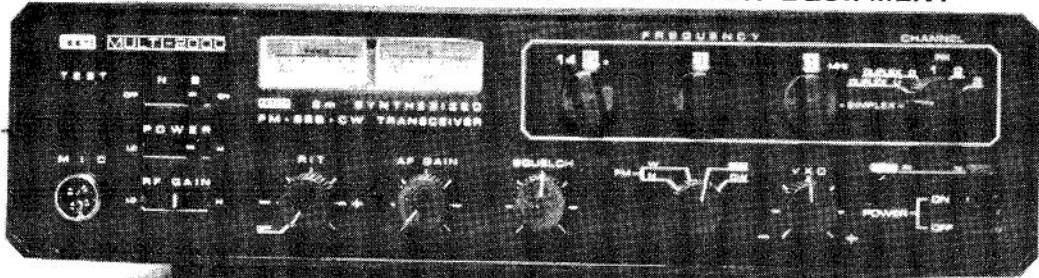
Now we have two normal conditions to describe: Good signal and No signal.

Under good signal conditions there will be little or no noise arriving at the noise rectifier, and the squelch relay or electronic switch will be closed because of the absence of a dc voltage from the noise rectifier. Speech arriving at the

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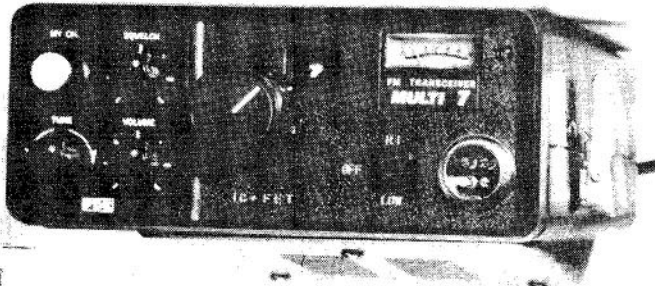
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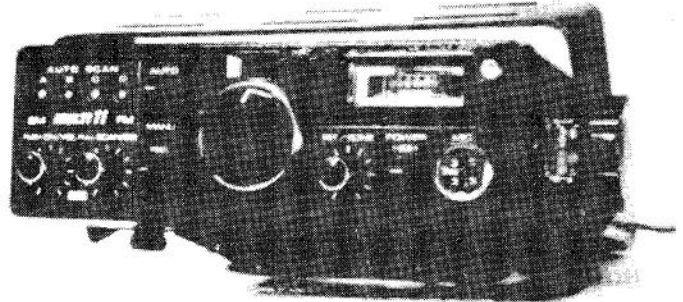
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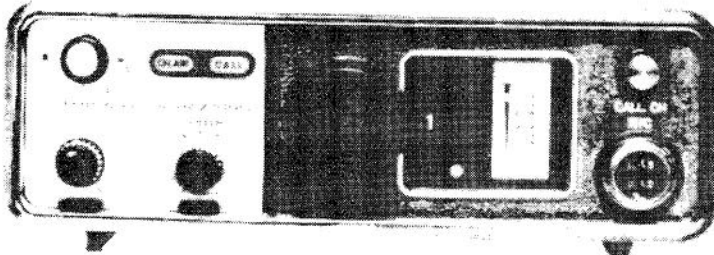
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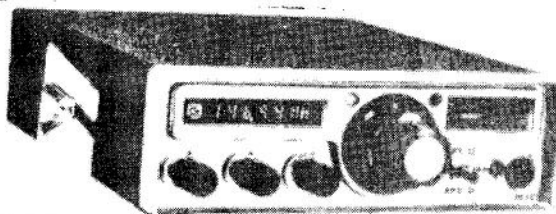
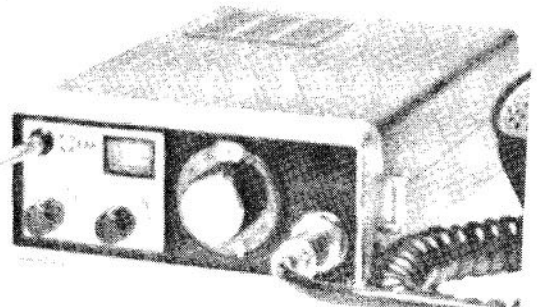
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switch from the audio branch will be passed on to the audio amplifier and thence to the loudspeaker. The set is UNSQUELCHED.

Under no signal conditions there will be plenty of noise arriving at the noise rectifier, it will create a dc voltage at the output of the rectifier, which will open the switch, thus blocking the path of the undesirable loud hiss, and leaving the loudspeaker quiet. The set is SQUELCHED.

The Squelch Control

If the squelch control is turned fully in one direction it affects the dc output from the noise rectifier in such a way that it negates the squelching effect, and UNSQUELCHES the set. Most users have a habit of turning the control this way once in a while to assure themselves that the set is still in operation, and they usually leave the knob in such a position that once in a while they hear a little surge of noise which assures them of the same thing.

If the knob is turned fully in the other direction the set is TIGHTLY SQUELCHED, which means that it will take a fairly strong signal to open the switch and let the audio through. Some sets can be squelche up to such an extent that it takes a really strong signal to open the switch, but most of them can only be tightened up to about a microvolt or less, which is still a fairly weak signal. Sometimes the interference on the channel is much lower in signal strength than the desired signals, but the squelch control cannot be tightened enough to squelch them out, so the user has to put up with the unnecessary chatter. On the other hand of course, if the squelch control is accidentally or mistakenly put into a very tight position, there is a real danger that desired signals will be missed.

Amateurs who have been faced with a problem related to Amateur Radio operation (and who hasn't) and who have come up with solutions are asked to share their trials and victories with other Hams through technical articles, hints and kinks mailed to CARF, PO Box 356, Kingstoh, Ont K7L 4W2.

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