

January, 1950

Vol. XII-No. 1

XTAL

for the

radio amateur

J. H. Doble, VESACG
Ashburn,
Ontario.
2/50

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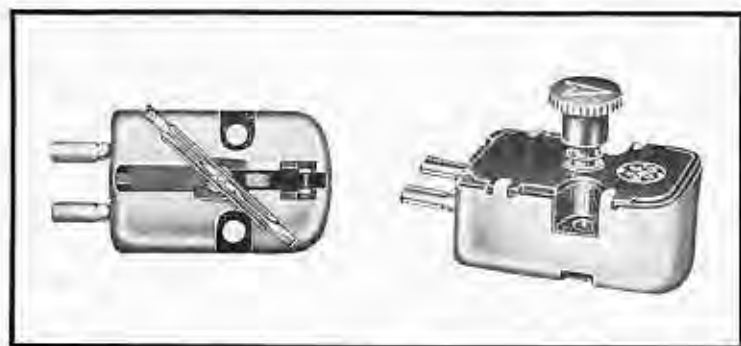
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OFFICIAL JOURNAL
THE CANADIAN AMATEUR RADIO OPERATORS' ASSOCIATION
TORONTO, ONTARIO

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An Open Letter From The President

Members:

If you have written us in recent weeks and have not had a prompt reply, please bear with us. We are still without salaried office personnel and expect to continue in that position for a few months to come. However, the secretary will do the best he can with your letters.

When you write us on a matter requiring some sort of action on our part, the proper official gives it attention even though you do not receive advice to that effect. After appropriate action is taken, your letter is placed in the file of the secretary who, in due course, gives it consideration. If he believes the action we have taken on receipt of your letter is sufficient, he will not answer your letter. If, on the other hand, he is of the opinion that a reply should be sent he will do so. Remember, there are a lot of letters in the secretary's file and to immediately answer them all would be something of a task for a man who appears to have very little time which he can devote to the affairs of CAROA other than the duties which he understood to be his when he accepted the office.

All the time the present officers were elected, we had a full-time salaried office assistant. All the many odds and ends of things that have to be done from day to day, including the answering of routine correspondence, were done by our lady employee. Under those circumstances the secretary, for instance, merely kept a record of proceedings at meetings and prepared the draft minutes of meetings from which our office assistant made a final copy for distribution to the members of the Executive Committee.

We no longer have an office assistant, but the same volume of work must be done somehow. Theoretically, the job belongs to every member of the executive but, obviously, we can only count on those of the committee who reside in Toronto. In order to create some sort of workable arrangement, certain local members of the executive have accepted responsibility for specific departments of our activity which can only be handled at headquarters. So that you may know who to compliment if a department functions efficiently, or blame if it does not, I am setting out the names of our work team.

Art Stephens, VE3YS, has volunteered to keep our membership records and XTAL mailing list in good order. Every mail brings in something that, in one way or another, causes work to be done on those records. There are changes of address, membership expiries, new members and the correction of existing errors. When a mem-

ber sends along his membership renewal, the new expiry date must be entered in our records and changed on the XTAL plate at the office of the company which mails XTAL. All that falls to Art.

WAVE certificates, contests and being general assistant to everyone is the chore of Art Fraser, VE3ANO. If an advertiser sends along something to be used in an advertisement, Art is the man who will clear it through customs. In fact, all the odd jobs fall to Art, who takes them on with a cheery smile.

Our secretary is Bob Haslett, VE3RH. He has been relieved of everything except general correspondence and minutes, which will keep him fully occupied. It was felt that the manner in which correspondence is handled generates good or bad will. In fairness to the secretary, we have made it possible for him to devote himself almost exclusively to his correspondence.

The Publications Manager, Tom Powell, VE1ZE, has responsibility for the production of XTAL. Karl Emes, VE3RG, has volunteered to help Tom in that field. They will be a good team, so watch for regular and better XTALS.

The books and finances have again fallen to the lot of the president inasmuch as our Treasurer, Bob Hunt, VE3WX, lives 120 miles distant.

There are two other executive members residing in these parts who hold themselves in readiness whenever possible in the persons of Wally Anderson, VE3AAZ, and Al Wilson, VE3AMB. The business side of those two men is such that they have not much free time so cannot accept departmental responsibility. They constitute the flying squadron, or reserve force, when they are available.

Now, as to leisure time which can be devoted to the affairs of CAROA, none of us seem to have enough of it. Every Wednesday night is work night. Those of us with specific responsibilities are expected to work at them constantly and, in addition, we are all expected to congregate at CAROA office on Wednesday night when we make a general assault on whatever has to be done. If a man is responsible for a particular phase, and he is absent on Wednesday night, that is just too bad for him, for he loses the opportunity of getting general help. That is so because the rest of us do not know what he has awaiting attention. All this adds up to some of us spending in the interests of CAROA spare-time hours in the course of a week which is just about equal to two full business days.

(Continued on page 8)

Improving Noise Limiter On AR-77 and GR-10 Receivers

By Floyd G. Gribben, VE2XR

Living in an apartment house surrounded by many users of electrical QRM makers wasn't all I had to contend with as a ham. The shack was perfectly situated about 75 feet from two street-car stops and a stop street! Then to improve the overall picture, the bus company installed a bus stop, complete with a sign to keep me reminded, 15 feet from my receiver.

This state of affairs called for drastic action in the way of limiter improvements, so the noggan, with pad and pencil, were put to work. Out of the toil came the "After" circuit as shown in Fig. 2. For those without instruction manuals, the "Before" diagram shown in Fig. 1 is just the way that part of the set looked before surgery! The parts designation numbers I have shown are those as used on the manufacturer's circuit diagram.

Unlike most conversion jobs, it was found that no holes need be drilled in the chassis. Even more uncanny was the fact that none of the tubes need be disturbed from their sockets, nor were more tubes or germanium diodes required to do the job! Comparing the two diagrams will show you how the noise limiter improvement was achieved.

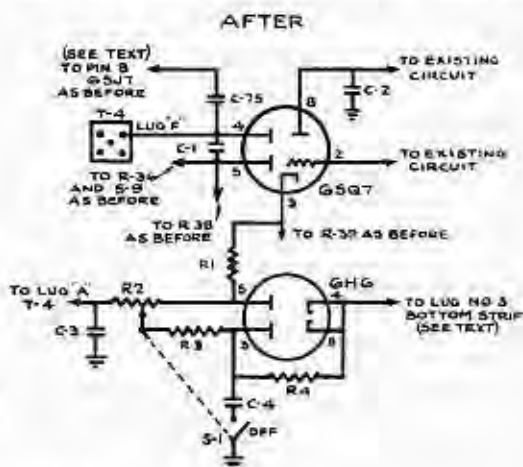
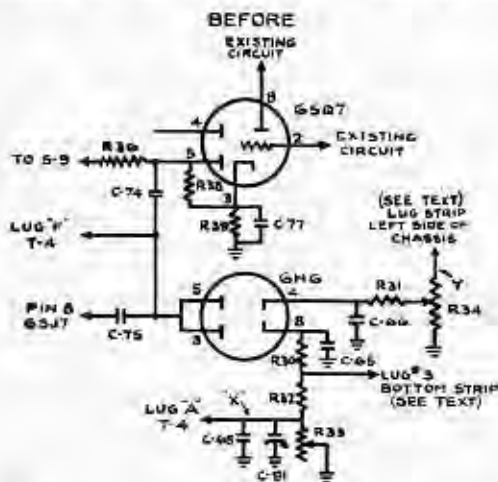
For the curious, outside of the two-tone paint job and the chrome trimming on the AR-77, the GR-10, its war-time counterpart, differs only by the fact that it lacks the broadcast band, although it has a band below it. In addition, the GR-10 has a crystal socket mounted on the chassis for use when crystal control of the oscillator is required for spot frequency operation. Otherwise, both sets are pretty much the same.

Many hesitate to make changes to their receivers for fear that they will "gum up" the

works entirely. However, rest assured such is not the case here if you follow the instructions carefully.

The first step is to disconnect all wires leading to the set and remove it from its cabinet. Then turn the set over with the front of the chassis facing away from you in order to follow the instructions to come, for it is in this position that references will be made in order to locate the various items for you.

The next step is to remove all the unwanted parts and wiring. Those to be removed are shown in the "Before" diagram under Fig. 1 and are marked "Remove". The 6SQ7 tube is the one located next to the right hand end of the front-most shield partition of the coil assembly. So you'll remember, mark the tube number on the chassis near the socket. The 6SJ7 tube is to the right of the 6SQ7. The IF transformer T-4 is adjacent to the 6SQ7 in a vertical line and nearest you. It can be identified by the slotted adjusting screw protruding from its center. In a straight line to the right of T-4 is the 6H6 tube. Mark the tube number on the chassis here, too. Padding condenser C-91 and the slotted-shaft variable resistor R-33 are on the right sidewall of the chassis. The black shielded wire designated as "X" in Fig. 1, connected to both C-91 and R-33, is similarly located. The noise limiter control R-34 is located topside on the same bracket that mounts the BFO pitch control variable condenser. Lead "Y" is a red and black wire. At least it was in my case. It is connected to one of the outer lugs on the limiter control. This should be disconnected but left dangling for re-use later. So should the lead on the center lug of the control. Now, trace this first wire (red and black) down through the chassis, across the



front and over to a lug strip on the left sidewall of the chassis. Then snip it off at the lug and pull it through the other cabled wires until it is dangling free in the right-hand portion of the chassis where the changes are taking place. Then leave it as is for the moment. The only wiring to be left on the 6H6 socket are the filament leads on pins 2 and 7. On the 6SQ7 socket pins 4 and 5 may be found to be joined together by a jumper. Such was the case on my AR-77. In any event, they should not be connected together for the new circuit, so snip out the jumper if you find one. Removing the jumper leaves one lug empty. This is O.K. for now. When you come to the removal of resistors R-30 and R-32, you will find that they are joined at lug No. 3 as mentioned in Fig. 1. To locate this lug, first note that there are two lug strips on the right-hand sidewall of the chassis, mounted one above the other. The lower strip is the one you are after. Count the lugs starting from the end farthest from you. Next locate C-75 and disconnect only the lead going to the 6H6 socket. Then resolder this same lead to lug "F" on T-4. When you come to the removal of C-65 and C-66 you may set aside one of them for use in the new circuit which will then be known as C-3 in Fig. 2. As shown under Fig. 1, resistors R-36, R-38 and R-39 and condenser C-77 should not be disturbed. Resistors R-36 and R-38 will be found to be joined together at either pins 4 or 5 on the 6SQ7 socket which will leave either one of the two pins vacant for the time being. It does not matter which pin is left empty so long as these resistors join at pin 4 or 5. Fig. 1 shows pin 4 vacant to show what I mean. The rest of the removal ceremony can be dealt with by following Fig. 1.

Now that you have removed all the items required, let's get going with the rewiring by first mounting the new limiter control, R-2 in Fig. 2, with its three lugs pointing downward towards the base of its mounting bracket. Then shorten the shaft, if necessary, to the length of the shaft of the old control. Then start wiring the new control by first grounding one side of S-1 (on the rear of the control), keeping in mind that this switch should be open when the control is in the extreme counter-clockwise position. From the other lug on S-1, run a wire of eight inches or so down through the chassis hole directly below and leave the end free for the moment. Now, the two wires left dangling from the old control should be considered. In my case one was a blue and white lead and the other a black and red. Connect the blue and white lead to the centre lug of the new control. The far end of this lead should then be connected so that it joins up with one end of R-3 at lug 4 on the top lug strip on the right sidewall of the chassis. Lug 4 is the fourth lug counting from the end of the strip furthest from you. Next, solder the black and red wire to one of the outside lugs on the new limiter control. Then connect its far end to lug "A" on T-4. Now run an additional wire down through the hole where the other two limiter leads pass and connect it to pin 5 on the 6H6 socket. At the control end, solder it to the remaining lug. Next, mount a one-lug insulated tie-point on

the right hand sidewall where C-91 was once mounted. Then connect the unsoldered lead coming from one side of S-1, on the rear of the limiter control, to this tie-point and connect one side of C-4 similarly, then solder. The other side of C-4 is connected to the chassis.

Because a change in loading on T-4 was brought about by the wiring changes, a very slight retuning job is necessary on this transformer. The retuning will require a steady carrier, so switch the receiver to the broadcast band if you have a model AR-77 or to a good steady shortwave station (e.g. WWV) if you own a model GR-10. This is done with an antenna on the receiver. Then turn on the AVC but have the limiter control in the off position. Tune in the carrier so that you obtain a mid-scale "S" meter reading, then proceed to tune T-4 by means of its slotted adjusting screw. Tune for a maximum "S" meter reading.

Assuming that all wiring was checked previously, let's try our new limiter! By the way, do not put the receiver in its cabinet yet. With the limiter control still in the off position, switch to the ten-metre band and look for your usual auto ignition noise. Lovely, isn't it? Now, before your ears go to pieces, reach for the limiter knob and turn it on. As you increase the control in the clockwise direction you should notice an increase in the limiter action. If not, and assuming the wiring is correct, you should reverse the two outside leads on the limiter control. In any event, you are sure to notice the big improvement over your old limiter.

Before you tidy up some of the wiring and put the set back in its cabinet, you may like to try this stunt. I found that, due to the fact there is no tone control on the set, I had nothing with which to cut down the set hiss, frying noises and general QRN. Experiment decided that I should put a condenser from pin 8 on the 6SQ7 to the chassis. The condenser shown as C-2 in Fig. 2 was the one I found worked the best with my crystal type headphones. A trial of condensers will find the one most suitable for the type of phones you are using.

Now all you have to do is put the set back in its cabinet, put on the knobs, sit back, and tune in on much quieter receiving conditions with the Spark Plug Symphony a thing of the past.

SCARBORO A.R.C. 4th ANNUAL BANQUET

Y.W.C.A. Building
1152 Gerrard St. East, Toronto

Saturday, February 11, 1950

Registration starts 3 p.m. Dinner served at 6.30 sharp. Tickets limited. Get yours early. Tickets \$3 per person. Prizes, entertainment, rag-chews, etc. Watch supply stores for placard announcement regarding ticket sales.

Dear O'M

VE3MB DISCUSSES QRM PROBLEM

Editor, XTAL:

I am writing you to bring to the attention of amateurs in general through the medium of your fine magazine an ever-present headache existing on the amateur bands, particularly on the 3.5 to 4 Mc band — QRM. And I am speaking especially of 'phone QRM in the 'phone band. I approach this subject with considerable trepidation, because it is something which we have all experienced and we are inclined to take it for granted and to say, "Oh, heck, what are we going to do about it?" Well, I believe there is something we can do about it if each of us will do our part.

Here is one illustration of an unnecessary bit of QRM. About a week ago VE1IE, together with one VE2 and two VE3 stations, were trying to work a G6 and we were all on the same frequency. During our attempt, a VE2 station came on this frequency with an S9 plus signal and blanketed the other station completely. VE2XO broke in a couple of times and asked this VE2 station to please QSY, as we were trying to work a G6, but without result. The result was that I eventually got fed up and pulled the big switch. Now, anyone who made a practice of listening on a frequency before throwing the big switch could have found out that this frequency was occupied, and he could also have found out that this group of stations were trying to work England and as a matter of courtesy he could have either QSY'd or joined the group. Then the AFARS net on 3815 Kc suffers from QRM almost every night. Surely most of the amateurs know about this net and could as a matter of courtesy stay off that frequency during the operation of the net.

I have been an amateur since 1932, and we have always had QRM and probably always will. There are many more Canadian stations now using this band than formerly, and we all know there is not enough room on the Canadian phone band for everybody. I also know that each and every one of us has the right to use this band whenever he likes, and on any frequency he desires within the limits of the band. If every amateur in Canada who uses phone were to get on the band every night we would have bedlam and no one would get anywhere. It is obvious, therefore, that there is a large percentage of amateurs who do not use the band every night. And I am one of them. Many nights I stay off the band because there is no room for me. I always listen on my frequency before throwing the big switch to see if it is occupied, and if it is I either QSY if there is a spot to go or stay silent. It would seem to be only a matter of courtesy for all amateurs to do the same instead of putting the station on the air regardless of whether their spot is occupied or not. It would seem to be similar to going into a restaurant and, after finding all seats occupied, promptly sit on someone's lap and proceed to eat, regardless of the other fellow's rights of priority. If there were more courtesy and tolerance practiced on our old friendly band we would

all be happier with our hobby even if we had to remain silent the odd evening, and let the other fellow have his fun. Your turn will come.

There is another type of QRM which is, in my opinion, entirely unnecessary. That is the practice of testing during the evening hours. I have known stations, unidentified, to put an unmodulated carrier on this band for a matter of minutes. The other evening there was a Canadian station using NBFM quite near the net frequency and he was overdeviating to such an extent that he was splashing over onto the net frequency.

Now, let us play the game with all due thought for the other fellow. We all have our rights but it is sometimes a mark of courtesy to forgo those rights and give the other fellow some consideration. If we would all practise courtesy and tolerance just a little more, I am sure we would get more pleasure out of our fine hobby, and much of our present QRM would disappear.

73 — Whit, VE3MB.

PRESIDENT'S LETTER

(Continued from page 5)

I am giving you these details because it is expected that every member of the Executive Committee who resides locally will pitch in and pull his fair share of the weight. If he does not do so, our membership will not be pleased about the fact. Also, I want it to be clearly understood that if a local member of the executive falls down it is the man who is at fault, not CAROA.

The local members of the Executive Committee are a good bunch of fellows. I just wish you could see them on a Wednesday night. One would think they were being paid to work instead of being out-of-pocket as some of them are. There is a firm resolve in the hearts of each and every one of them to overcome every and any obstacle that may rear its head on the path of CAROA progress. The determination is there — success, inevitable.

From time to time I will give you an open letter on some phase of CAROA so that Canadian amateurs may have a much better understanding of matters at association headquarters. To the out-of-town members of the Executive Committee, and to District Representatives, let me say that I have asked the secretary to periodically send you a communication which will keep you fully informed on administrative matters. I have also requested that minutes of meetings of the Executive Committee be enlarged to include a summary of discussion leading to conclusions. It is my desire that you be kept as fully informed as possible even though many miles separate you from our meetings.

So, friends, again let me plead with you to be kind to us with your understanding indulgence. We are really labouring under difficulties coupled with the necessity of earning a living.

Yours fraternally,

R. A. Macdonald, VE3APS

Traffic Column

The Clinton district emergency net is now in operation, and includes 3BER, BTQ, ATR, DDV, RL, AWI, AIU, BAA, AFC, BHJ, BFW, BAI and BZE.

Stations active in the Ontario 40-meter net (QON) are 3BVR, IA, AZZ, BBM, BYH, WK, BTG, DCW, AJN, ASL, AIL, ATR, BLY, BVR, DBJ, 2BB, 2XB, 1VJ and W9AEY.

The Kingston club holds a 40-meter session on the second and fourth Wednesdays. If you have Kingston traffic, try 7188 Ke at 8 p.m., Wednesdays.

TRAFFIC SCORES

	November		
3BBM	71	3WK	61
3IA	165	3ATR	89
3APS	25		
	December		
3IL	153	3YJ	29
3BER	48	3BTQ	45
3NI	78	3HK	21
3BSA	30	3RG	38
3AOK	16	3AYW	10
3BUS	26	3DF	32
3ANO	94	3IA	685
3WK	198	3ATR	131
3DU	87	3CP	30
3AG	8	3TO	3
3ZE	3	3BUR	391
3GI	141	3WY	99
3BUG	41	3ADN	22
3VD	10	3FQ	29
3DEI	10	3AJN	42
3BBM	209	3APS	57

CAROA BY RADIO

Owing to the volume of routine work falling on the shoulders of the Toronto members of the Executive Committee, by reason of the fact that we are without paid employees, we have decided that, as much as possible, we shall answer our correspondence by radiogram.

Why not? In fact, we might well ask why we have not done so more extensively in the past. Our hobby is one of communication, and there are traffic nets from coast to coast.

So let us use our hobby to the greatest possible extent in our CAROA business. If you have a question to ask just start a radiogram on its way. If you write us and we can answer by radiogram we shall do so.

Since the December issue of XTAL, we have dispatched radiograms to the following: VE5NG, 5RB, 3ANU, 3NI, 7US, 5YF, 5RB.

NOTE FOR DXERS

Through VE3BYJ we have been requested by ZE2JN, Southern Rhodesia, to alert VE5's, 6's and 8's for him on 14 Mc. about 2300 EST. He needs those districts for WBE award.

VE5RB is on 75 fone from 4 to 5 p.m., CST, to hear about and discuss CAROA matters with Saskatchewan hams.

CLUB NEWS

Clinton A.R.C. meets first and third Friday each month in Bldg. 50C, R.C.A.F. Station, at 7 p.m. The 1949 executive was re-elected by acclamation. Mel Hill, 3BAL, is president; Bob Kirkby, 3RL, secretary; Alex Velleman, 3BTQ, chief op. Four SWL's recently received their tickets, and 3RL, BHJ and BFW passed the fone exams. The club station has been completed, and uses two transmitters for operation from 10 to 80, AR88 and AR77, a 10-20 beam, 20 and 40 doublets, 80-meter dipole. The officers visited Centralia R.C.A.F. station to assist in forming a club there.

Officers of the Halifax A.R.C. for 1950 are: President, Bret Fader, 1FQ; vice-president, Ray Helpard, 1LK; treasurer, H. Wyman, 1HC; secretary, Doug Johnson, 1OM. P.O. Box 663, Halifax.

The Northern Saskatchewan A.R.C. held their regular monthly meeting at the shack of 5PA. 5IC gave a demonstration of micromatch and grip-dip oscillator. The rest of the evening was spent needing poor 5PA. Marshall takes an awful beating every time he is good enough to let the boys use his shack. Sez Marshall: "You know, I enjoy ham radio just fine and am quite satisfied with my set-up until you guys come along and tear it to pieces." 5PA and 5VB tried to give a demonstration of 20-meter mobile but the very cold weather got them down, so they decided to wait for a warmer night.

The Saskatoon A.R.C. held a very successful meeting in December when 5MQ gave an instructive talk on the propagation of radio signals. Don Leitch, VE4L, of Winnipeg, was the guest speaker at the January meeting. Don gave an interesting demonstration of commercial portable and mobile equipment. On Jan. 6, the boys broke down and devoted a whole evening to their yls and xyls. A turkey dinner and social evening was enjoyed by all. 5OB acted as MC for the evening. Good prizes were awarded to lucky winners. 5EN and his xyl were welcome visitors from Kyle. The entertainment committee composed of 5MQ, 5KQ, 5GR and 5FY did a swell job.

The Regina A.R.A. held their regular monthly meeting at the Armories on Jan. 5 with 25 members present. A very satisfactory report on the classes for up-and-coming hams was received. 5LJ gave an interesting lecture on antennas which was enjoyed by all and proved most enlightening to the hams-to-be.

The Saskatoon A.R.C. have decided to hold a hamfest in Saskatoon on July 1st and 2nd. Keep these dates in mind fellows and decide now to spend the July 1st holiday in Saskatoon.

CAROA NATIONAL REPORT

VE3

BCD is now most active on 10 fone but drops down to 75 for occasional rag chews. AHQ and VL operate 75 mobile. CY very busy in shop now. AJI is on 10 fone and BQB on 10 CW. QW has gone up to 10 fone. DPB and ANU are on 40 CW and have a joint effort on two meters now on test. The Kitchener-Waterloo club has 29 members, 19 being licensed.—3ANU.

VE5

Madolyn Sinclair, Ve5YF, D.R.
411 33rd St. W., Saskatoon

Hello gang: Hope you all had a swell holiday season and have settled down to sane living again. I just sat down to compile a report and discovered I have two reports on hand from outside of Saskatoon and no white writing paper in the house. This is going in on yellow copy paper, and you think you have troubles!

Bob Paul reports that the gang in Prince Albert are still going strong and continuing to get in each other's hair. Strenuous working hours have kept him from getting on the air but he hopes to have his ticket and rig finished early in 1950. 5IC is building a new rig and 5SD is struggling with his 10-over-20. 5AW is working with radio all day so is doing wood-work in the evening for relaxation but is still mingling with the ham radio bunch. 5VB keeps CKBI on the air and still finds a little time for 20 meters.

We greatly appreciated a letter from 5JK at Tyvan, a real old-timer and an ardent CW man. Stu has deserted 80 for 40 and is piling up the DX. Tnx and gud luck Stu.

The Sask. phone net is operating on 3830 every day of the week at 1930 MST. 37 members now answer the roll call including a VE6 and a VE4. During the Xmas rush, messages were being handled from VE7 to VE3 direct with great success. Much credit is due to the net members and their able controller 5IC.

75 phone has been open every morning for weeks and the Sask coffee club has been having a wonderful time with S9 sigs and no QRM. 5RB has been making good use of the time to get in a plug for CAROA. Get your bucks in, boys.

The Saskatoon gang are keeping all bands alive with 5AN on 10 and 20 sporadically (his word, not mine). Incidentally Fred broke his wrist trying to wind up his Chev in 30 below weather. 5AJ is rebuilding receiver. 5CJ working 10 meter phone and getting in on the ground floor of earthquakes. 5DR is still doing good work keeping skeds with South America and getting his name in the local paper. 5DG took out himself a bride and is on honeymoon.

Good luck, kids! 5EE is vainly looking for someone to talk to on 2 meters. 5EW worked across town on his new rig and waiting for a warm day to put up an antenna. 5FY is going around looking like the cat that swallowed the canary. He struck pay dirt with his scope assisted by 5GR who complains he can't get his own work done what with FY's scope and a table for the xyl. 5GB is building a xmitter, and 5MJ is looking for bugs. Both hope to be on air soon. 5JC is baby sitting. No time to get rig on the air. 5LG works 40 and 80 CW. 5MQ decided the QRM from two young sons was too much, so was going to QRT. The xyl gave him a surprise D104 for Xmas. You can't quit now, Jack. 5OB is having arguments with the weather. That little shack of his out behind CFQC (sometimes taken for a ham-shack) gets pretty cold in this 40 below weather. 5FL and 5RJ are QRT because of ill health. Ron is the patient and Flo his efficient nurse. Tough luck, kids, hope to hear you clattering up the bands again soon. 5JB reports the birth of his third daughter. Congrats, Bob and Helen. We never know whether to add 5HR in Saskatoon news or not. Hal sort of rotates between Regina, Moose Jaw and Saskatoon. The xyl and family live here, so guess he belongs to us. Hal does fb on TLI.

Listening on 80, we hear a couple of new calls — 5IM and 5MB of Kennedy. 5IM is visiting in VE3-land. 5GX is a new call on 80. His name is Bruce and he hails from Ft. William. 5KI is now heard from Willow Bunch. 5HS is back on 75 after a bout in hospital. 5WS and 5FB are putting in a good sig on 75 and are active net members. We also hear them getting good reports on 10 with their new Hammond beam. 5CH is using 15 watts with a 75 meter beam of his own invention and putting out a wonderful sig. Let's have the dope on that beam, Viggo.

Should you hear weird noises on 5WC's sig, don't be alarmed as it is only the pet squirrel. Mr. Squirrel really modulates that rig. He is a real family pet and refuses to make a bed of anything but good nylon hose. 5UC is having fun with his new panadaptor and working 75 and 20. 5RL has a cubical quad smack on top of his brand new bungalow. Not very beautiful, but efficient, we hope. 5CR and bride visited in Saskatoon over the holiday season. Clint hopes to be heard soon from Biggar. 5GC is off the air due to mumps. Tough luck, Garnet.

From Regina we hear that congratulations are in order to 5JV. He has received his DXCC award with confirmation from 103 countries, all on CW. 5DN has new speech clipper in audio and working fb. We can even read 5JW now that he has an antenna. How about some news, gang? Cheerio and 73.

—Madolyn

VE6

W. R. Savage, D.R.
329 15th St. N., Lethbridge

6CF is very busy on 80 CW and is doing a nice job of it. JD has burnt up another lank coil in his kilowatt, but he didn't get his hand in it this time. NF has operated mobile on 10 for so long he doesn't remember who is on 80. LQ was so busy in Calgary that he couldn't get around to the gyp joint. YN is busy on 20 fone; that's why the absence of 75, fellows. LZ is thinking of putting a hole in a can of apple juice and waiting for it to turn into apple cider. What that man can't think up. HB lets his battery run down on his tractor. GK is down with a cold but not so that he can't be on the air. Hi! AX gets lucky and wins a new ICN dial. Nice going, G20. What a flashy VFO or freq meter you can plan now. BZ says he always listens to the lone net on Wednesday night while he is rewinding films. TM and OD make a visit to TA and KU on the weekend. QS did not expect any QSL cards but sends in envelopes. NB is rebuilding his antenna tuner and is installing hand-switching. FP sends in for his cards and wants a QSO. Well, sure hope to have one with you soon, Jack. AB is working on 10 CW now and thinks it is a screwy band. ZZ has a good brother who sends in for his QSL's. Thanks a lot, Ernest. UB was very busy in the SS contest. KO is making a trip into the W9 district; Ken informed us he would be too busy to go shopping. The S.A.R.C. now has its new amateur radio classes going, and

there is a nice bunch turning out for them. EL seems to be quite active on 75 fone lately. I think he now has a rig for each day of the week; most hams are satisfied with a rig for each band. We hear again from PY and find he has been busy building a house on a five-acre plot which is five miles south-west of Calgary. He plans to have it wired, as the AC line goes right past his place. He also is contemplating some V beams, so look out, fellows.

ST sent in a letter but failed to put in some news, so let's hear from you again, Roy, with some info. MZ moves to a new QTH but has been so busy he hasn't got his rig set up. I expect he will get busy right after Xmas. MM is still running a flea-power rig and is looking forward to the winter so he can get in some good QSO's. RL must do a little ham work when not busy with CFCN, because he sends in for QSL cards and had some waiting. KS says he really likes his new QTH (Edmonton). He is running $\frac{1}{2}$ KW on 40 CW and seems to be getting out fb. AC always has trouble. He blew up his T40's and has been using 15 watts to an 897 for some time now. I am sure one of these days, Frank, that your good xyl will fix your final and have you back on the air with full power (hi). MA now has a 20-mtr xtal and can really get on ten fone and do his stuff. IP is in his own house now and is getting his rig set up. HM is doing some very fine frequency checking. ES is in hospital quite sick, and I am sure we all wish him a very speedy recovery. MN is busy again chasing dx on 20. LI is still working his ham radio in the cold. MJ works

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another ZS station. CJ, ZI and WZ have not been heard from for some time; wonder what they are cooking up. FE is selling out and going to college in the W land. OD is still carrying on with the fone net and keeps adding in the extra station. PI. is still waiting for Santa Claus to bring him a rig. QJ is going to try his hand out on the CW network; lots of luck, Ev. VN is still on ten; better get that 75-mtr antenna up, Len, and get in the fun. OF and EV are too busy working with oscilloscopes to be on the air. BC, we hear, is back in town and looking for a suite, some job Berny. Well that is all the news for this time fellows. Being the festive season, everybody was too busy writing notes to Santa Claus and didn't have time to send in reports. I hope you all received your requests and that you now will have time to send in some info for next month's report. So cheerio for now, best of luck during 1950, and may it be full of good QSO's for you. —73—Bill.

WELCOME OM

VE7OU, ex-VE1HZ—R. Watson.
VE7AQI, ex-VE4HK—H. E. Koehler.
VE7AQH, ex-VE3DCN—J. H. Ross.
VE7HK, ex-VE3OF—W. L. Watson.
VE7XZ—G. J. Alexander.
VE7AQQ—A. Collins.
VE7WA—E. J. E. Vint.
VE7KF—M. Kowalski.
VE7AQF—A. Hook.
VE7AQE—C. A. Cotton.

NEW YEAR WHOOPEE

The annual New Year's do was held at Riverside Lodge, Oakville, QTH of Norm and Mildred Busk, VE3AGW.

The turnout was fine, with 88 present from Hamilton, Toronto, Galt, Beamsville, St. Kitts, Detroit and Oakville.

There seemed to be plenty of "807's" and "higher output bottles" scattered hither and yon, and everyone had a swell time. Entertainment took the form of dancing, watching TV, and a little later on singing, although some will deny the latter! Music was supplied by Gord Clark, local musician; Wib Clemence, VE3KM, and Arnold Swazee, VE3DEG, and the boys were really in form.

Along about 2 a.m. everyone put on the feed-bag and partook of a very excellent meal, and for those who sought a second helping there was still lots more in the kitchen. After the eats the gang gathered in the dance hall and some swell prizes were given out to both ladies and gents.

For those who still had some go in them, it was suggested that the party retire to the recreation room for further dancing and entertainment. No one seems to know exactly when the party broke up, with the possible exception of Norm and Mildred, who had to straighten out the place after the end of festivities.

I speak for everyone when I say that a really bang-up time was had by all, and we wish to thank Norm and Mildred Busk and all others who helped to make this celebration a success.

—VE3BFF.

VE7

Ernie Savage, VE7FB, D.R.
4553 West 12th Avenue, Vancouver

Bill 7WM is too busy building and selling beams to get on the air. Micky 7AFN is getting the itch again and is talking about transmitters. Hal 7ALJ has got several 10-meter fellows to keep him company, and he has been busy with mobile 75. Marv 7OT blossomed forth on 75; 20 must be dead. The gang of 50 Megs are working steady and going farther afield each day. Bob 7VG has taken the 19 set off the air and replaced it with his own make. Russ 7ZF received a HQ129X for Christmas. Allan 7SW is too busy to be heard often. Jim 7TF is still rolling in traffic. Wilf 7US, EC for South-east B.C., is still looking for new city to join the net. Hedie 7XW, Don 7AOB, Fred 7JU have a private net on 40, and Hedie will be the master mechanic on Model A cars soon; he bought one. Ron 7BY has moved into his new shack made with a four-foot yard stick, still looking for the lost footage. Fred 7MU mobile unit sure pours out a potent signal. Vic 7CN is still nursing his broken leg, but is getting along fine, so we hear. Maxie 7DZ still hasn't raised his big stick. Wes 7YI busy with net control of the B.C. Net but is still looking for new net members. Doc 7AKG in Sherman is on ten and would like the city fellows to listen in the evenings for those outside. — 73 — Ernie.

FOR EXPERIMENTERS

Here's a little kink that will help owners of 1155 receivers to tune to the 160-meter band. Adjust the slugs and trimmers on Band 3 until the receiver covers the range from 700 to 2000 kilocycles. It will line up perfectly.

My 10-meter quad has proved so effective with ten watts to the final that I'm deluged with requests for the lowdown on it. I don't claim that it's the ultimate or that it can't be improved upon, but submit it as a starting point for those who care to experiment. I haven't the facilities here to make a thorough check on it. I know the 72-ohm feed does not match, and I adjusted the feeder length to get correct loading. Who can give a correct matching arrangement?

The radiator is an 8'3" square fed with 72 ohm twinlead. The director is 8' square, spaced 41" from the radiator. The reflector, with spacing of 62", is 8'9" square, with a stub 28" long, spaced 2", at the bottom corner. A light wooden frame holds the wires in position, and the whole thing rotates on a single upright. I used strips of plexiglas with holes to take wires to support and insulate the elements at each corner.

For tuning, I located a doublet antenna about 200 feet away, with a 1N34 rectifier across the centre, connected to RF chokes to twinlead coming back to a milliammeter in the shack. Turn the quad antenna away from the doublet and adjust shorting bar on the stub until back signal is weakest. Then turn the quad around and watch the field strength meter go off scale. This is the best arrangement I've found for tuning and loading any antenna.

Ray Brown, VE5RB, Windthorst, Sask.

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You get regular naval pay on entry and extra *trades pay* on completion of training courses.



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Royal Canadian Navy

C. & U. S. R. S. COLUMN

By Sid Prior

Once again your SWL Editor got his copy over to headquarters in time for this issue of XTAL.

You know, months slip by so fast, before we know it summer will be here and Field Day will be a topic of conversation, and, as you know your SWL Editor, he loves them.

The SX25 has not been very busy in my shack this winter, as I have been revamping my studio B., so just how SWLing has been this winter so far I can't say, but if any of you chaps have been spending your time listening on the air, I would appreciate a note for next issue with what is new.

Wives are the darndest people! To illustrate — I purchased a No. 9 set and took it up to the office till my revamped shack in the basement was ready, then for 3 days, I lugged Mr. No. 9 home in parts and successfully sneaked it in the house, so at the critical moment when it was all in the rack on the new table I built for it, I called my good lady down to see my latest possession and receive a hawling out for harboring more junk, but lo and behold, she tells me, "I knew you had it, you can't fool me," kisses me, tells me if it makes me happy, O.K. I tell you fellows, wives are the darndest people.

To the chaps on 6 who would care to take part in a project currently organized for the U.S. Government, here is the dope:

Sporadic E observing project under the direction of

The Radio Amateur Scientific Observations,
Radio Magazines,
121 South Broad St.,
Philadelphia 7, Pa.,
U.S.A.

Project Supervisor — Oliver P. Ferrell.

The project, if you participate, supplies each observer with reporting forms and stamped return envelopes.

The schedule of the international service of the Swedish Broadcasting Corporation has been received. It indicates that most of its programs are in English, from midnight to 1900 GMT daily. Stations and frequencies are: SDO, 6065; SDP2, 10780; SBP, 11705; SBT, 15155.

So, my friendlys, for the time being, and until next issue — 73 — Sid Prior.

CAROA LAPEL PINS

Sterling silver lapel pins bearing the CAROA emblem are available at 75 cents each, postpaid. Send for one to CAROA, 46 St. George Street, Toronto 5, Ontario.

HAM-ADS

FOR SALE—1155 receiver, good for parts, \$15; also AR0 coil turret and tuning condenser, \$10. T. E. M. Dymond, P.O. Box 248, Grimsby, Ont.

FOR ALUMINUM TUBING and fittings for Ham and TV beams, see Bill McCarter, VE7WM, 4684 W, 8th Ave., Vancouver, B.C.

HAMS—Write for QSL cards. Attractive, creative. Al Pearsall, VE3BCB, 204 Ranleigh Ave., Toronto.

MESSAGE BLANKS—Now available at 35 cents per 50, 3 pads for \$1, postpaid anywhere in Canada. Order from CAROA, 46 St. George Street, Toronto 5, Ontario.

McELROY—The finest code equipment available for teaching code, for sale. Tape Puller TP890B, Electronic Keyer G813A. Set of 15 Tapes G15AA, and Class Recorder. Will sell as a complete set only. For details write C. Gutman, 4415 Esplanade, Montreal.

FOR SALE—Maseo Disc Recorder RK5 new. Also Webster Wire Recorder Model 80. Both machines in perfect working order. Complete with accessories, will sell separate or as a complete outfit for \$225. Please write for details, all inquiries answered. C. Gutman, 4415 Esplanade, Montreal.

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BOOKLETS AVAILABLE FROM GEN. ELECTRIC

A bulletin of exceptional interest to educational administrators has recently been published by Canadian General Electric Company. In it are described the educational services provided by the Company through a wide variety of publications made especially for technical classes in schools, universities and industry. The subjects covered include fundamentals of electrical practice, new research developments in atomic power, electronic lighting, air conditioning and in highly specialized industrial applications.

Inquiries for this booklet should be directed to the Educational Service Division, Canadian General Electric Company Limited, 212 King St. W., Toronto, or to the nearest C.G.E. office and should refer to it by number — 4416A.

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TRIPLETT

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*MEG OHMS: 0-1-100 . . . (4400-440,000 center scale).

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750P	5"	7,000	3 Ohm	4	4.20

Replacement Type	Size	Gauge	V.C. Imp.	Peak Input Watts	Your Cost
8100P	10"	8,000	3 Ohm		5.00
880P	8"	8,000	3 Ohm		4.50
865P	6½"	8,000	3 Ohm		3.95
850P	5"	8,000	3 Ohm		3.45

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BOOKS

"Loudspeakers" — "The Why and How of Good Reproduction" Manual by G. A. Briggs \$1.50
"Sound Reproduction" by Briggs \$1.85
"The Radio Handbook" New all constructional (2th edition) 3.75

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1415 F	7	8	10	2.28
1415 G	6	7	12	2.07
1415 H	8	10	10	2.80
1415 I	8	11	12	3.01
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