

NORTH SHORE RADIO CLUB

P.O. Box 171, Oshawa

April, 1971.

Executive - 1971

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LAST MEETING

Sorry, I did not attend the last meeting, so I can not tell you anything about it. I am still hoping for some information from other members who send in some copy and tell us all about the happenings during that meeting.

I came across an interesting article about the proposed changes in our fone portion of the bands. I cut it down in size a little, I do not want to get in trouble with our typist (right Lorna?) Being a cw man myself, I have no comment on this article, it speaks very well for itself.

Following is the text of a bulletin from ARRL Headquarters:

OFFICIAL BULLETIN NR 313 FROM ARRL HEADQUARTERS
NEWINGTON CONN FEBRUARY 25 1971 TO ALL RADIO AMATEURS BT

FCC today released a Notice of Proposed Rule Making proposing rules amendment to reduce present Extra Class cw segments from 25 kHz to 10 kHz, and to expand voice privileges with a new structure as follows -- Extra Class only, 3750-3775, 7150-7175, 14150-15175, 21200-21225, 28350-28375. Extra and Advanced 3775-3875, 7075-7100 for interregional contacts only, 7175-7225, 14175-14250, 21225-21325, 28375-28500. General, Conditional and higher have space above 3875, 7225, 14250, 21325 and 28500 kHz. Novice privileges, all cw, would be modified to 7100-7150, 21100-21200 and a new segment 28150-28250 kHz. Eighty and two meters unchanged.

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Interested parties may comment to FCC until June 1. League members should check the full info in April QST and then convey their opinions on the proposals to their division director.

This is at present only a proposal; no definite changes in U.S. sub-bands can take place until the FCC has considered the comments that will be filed up to the June 1st deadline: that could be as long as a year from the date of the proposal. Action taken then will not necessarily be to adopt the proposed changes but could be to adopt them in a modified form. It is unlikely that the Commission will completely withdraw this proposal although that course of action is not an impossibility.

What Should We Do?

First, resist the temptation to scream the place down. It won't do any good and there will probably be too many people doing that already.

Second, make sure you understand how these proposals relate to U.S. incentive licencing. (Oct. '67 QST p.78-85 explains the program.)

Third, discuss it with your club members and come to some conclusions in the light of two possibilities:

1. that the proposals may be adopted in their entirety
2. that the proposals may be adopted in an altered and less extensive form.

Forth, ensure that your conclusions are conveyed to your Provincial Society for transmission to the Canadian Amateur Radio Federation (CARD) and also the the Canadian Director of the American Radio Realy League. DO NOT send anything to the DOC. This is not yet a matter for their consideration although the Department is fully aware of the FCC action.

You may, if you wish, submit comment to the FCC. Comment on a Commission Docket is not restricted to U.S. nationals but there are rules for such briefs, one of which is that you should submit an original and 14 copies. An enquiry to FCC, Washington 25, D.C. would establish the correct procedure.

Finally, fifth, don't neglect this matter. The future of your amateur radio operation is being discussed.

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OUR SPRING DANCE:

Tickets for the spring dance should be on sale at the April meeting. For those not informed yet, this dance will be held on May 1st at the 420 Wing Club Building 10 at the Oshawa Airport. Come one and all, bring your guests, They may come for the same price - \$4.00 per couple.

The copy of our last bulletin left some to be desired - our apologies. You may have seen the "Did You Know That" section. Well, that is the kind of news we would like to get from our members and it will appear in this part of the bulletin so that everyone knows about the wellbeing or misfortunes of the other members. I just gathered a few to get it started, now it is up to you to fone us and tell us about the happenings around the house.

Another few weeks and the good (antenna) weather should be around. Let's hope so, I have a lot of work to do on mine yet before she's all finished. The hold-up is the rotor, as soon as the latter arrives, she will go up, and so will the beam. thus providing me with 10, 15 and 20 meter coverage.

From informed sources come the word that the examinations for the hams-to-be will be held on either April 12, 19 or 26. Lets hope it is 26, that will give them another few weeks to brush up on whatever they have to brush up on. If all goes well with this class we should have many new faces in the club and perhaps at Field Day where they are much needed. Our Field Day property owner, Bill Cox, is trying his luck again this year. We wish him all the luck.

W. A. S.

We now have a W.A.S. Manager, VE3FJC, Walter Beach. I expect Walt will come up with rules and regulations, so I will not go into this any further, but I might say this: Even if you already have this certificate, you can still take part because the starting date will be somewhere in April. Enough of that, Walt will enlighten us further.

Hank, VE3FHV

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PRESIDENT'S REMARKS:

Last month I joked about some antennas that were laid low by winter storms. This month I find myself off 20, 15 and 10. It seems my feed line of RG8U parted from its N type jitting at the beam. Oh well, spring is coming and we'll be dancing on May 1st.

Bill, VE3CKK is off the air because of a collapsed pole holding the end of his antenna. This will require the attention of our members that are physically in better shape than Bill. I understand Ray, VE3DEN has been in difficulties with water in his coax feed line. Tough winter.

Next meeting, Jack VE3DCK will have slides of our past dances and field days. Also a rerun on shots of various ham shacks in the membership. PLAN TO ATTEND.

One Electrical Engineer to another as a pretty secretary goes by - There goes a closed circuit head on a solid state body.

Ken, VE3FPP

A N N O U N C E M E N T

NORTH SHORE RADIO CLUB W.A.S. AWARD

Contest Rules as follows:

1. CONTEST PERIOD - April 1/71 until we have a winner or until Dec. 31/71 at which time a winner will be declared.
2. BANDS - All bands, any mode: e.g. cw to SSB, cw to cw.
3. LOG INFORMATION In lieu of Q.S.L. cards.
Our members are all honest.
4. LOG BOOK INFORMATION - To be presented for verification of winner.

It is suggested that log information be written down and given to Walter Beach, VE3FJC at each meeting who will record and display each participants progress.

H O M E B R E W I N G

by VE3BHQ

There are many reasons for the popularity of Amateur Radio as a hobby. One may enjoy rag-chewing, traffic handling, chasing elusive DX or even building equipment.

For me, 1971 is an anniversary year since I obtained my call sign and made my first contact on Aug. 18th, 1946, twenty five years ago this summer. Many will know what I mean when I say "how time flies"!

The first equipment used at VE3BHQ was completely home brew - a two tube regenerative receiver and an 807 Tri-tet crystal oscillator, both of which were used to make many contacts. The reason for using homebrew equipment at that time was economics, however, I soon discovered that there was much more satisfaction to be gained by operating gear which one has personally built than by using commercial gear. The only commercial equipment which I ever purchased was a Hallicrafter S-40 receiver which I found quite inadequate and subsequently sold to an SWL.

There are several distinct benefits to be derived from using homebrew equipment:

(1) Economics - despite what many amateurs say, homebrew equipment (not kits) costs much less than comparable commercial gear, especially when surplus components, which are usually of higher quality than entertainment type components, are used. For example, my most recent project, a six digit frequency counter which counts reliably to 16 mhz and with careful adjustment of input level to 19 mhz. has cost less than \$150. using all new integrated circuits. The comparable Heathkit sells for \$270.00 and commercial models start at about \$500.00

(2) Operating features - when one builds equipment it is possible to build to your own specifications so that you can incorporate the features which you require, some of which may not be found on commercial equipment due to lack of public demand or cost-pricing, while features which you do not require may be omitted.

(3) Performance - for the same investment, well designed and built homebrew equipment will usually exceed the performance of commercial production line models. There are probably several reasons for this - the home constructor will usually select better quality components, use heavier and stronger construction and take more care and time in adjusting and debugging.

(4) Sense of achievement - this is one of the greatest benefits to be derived from homebrewing. (I do not refer here to liquid refreshments!) To receive a beautiful signal report and then report that "the equipment here is homebrew" gives one a deep sense of pride, accomplishment and achievement. Try it and find out!

Homebrewing - cont'd

(5) Education - the most frequently used excuse for not homebrewing is homebrew equipment has no trade-in and often low resale value, therefore, the money used in construction is wasted. I can only answer this in one way - if all of the equipment which I have built in the past quarter century were to go under the sledge hammer and into the garbage dump, the educational value received far exceeds the construction costs. As an educationalist I know that one learns best by doing, and gaining a good background in electronics is no exception. Few things make me feel sadder than an amateur who has purchased an expensive rig and has to return it to the factory to trouble shoot and replace a component.

You might well ask, where do I begin? Since nothing succeeds like success, begin on a simple project that you can successfully complete and then graduate to more complex equipment. Remember, you also learn by your mistakes, some of which may be costly. I well remember the day I blew up an 813 tube by exceeding the proper grid drive. Perhaps some of the better simple projects are the "gimmicks and gadgets" featured in QST. Ham Radio magazine also features a number of good projects as does 73 magazine and sometimes CQ magazine. These latter magazines suffer frequently from errors so if something in the circuit looks screwy have one of the pros check it for you.

The next step is to design your own equipment. For this you need to have accumulated quite a bit of electronic education, which incidentally doesn't have to be formal, although it helps a lot. To start from scratch there are several stages:

(1) Conception - begin by deciding what specifications are required for the equipment you require.

(2) Design -- select or devise circuits which will achieve the necessary specification requirements. Be careful in making and recording circuit diagrams and changes as these will be needed for servicing and trouble shooting later.

(3) Layout - every hour spent on a careful layout design will be rewarded by a reduction of construction and de-bugging time at least by several hours. Make lots of scale drawings and save them for future reference.

(4) Construction - build the piece of equipment. This stage usually requires the least amount of time.

(5) Make it work - if your design, layout and construction are perfect this stage will only amount to adjustment, however, it could generate into a trouble shooting job to detect wiring or design errors and could take some time. I usually de-bug each stage as it is constructed, eliminating a gigantic trouble shooting job at the end.

By now it must be apparent that you must have certain pieces of test equipment at your disposal if you are to home-brew. Perhaps the most useful piece of equipment is a vacuum tube voltmeter. This could be your first project and you may find it convenient to use kit form test equipment. Other necessary equipment should be a capacity-resistance bridge, grid dip meter, transistor tester, tube tester, R.F. generator, audio generator, oscilloscope, electronic switch (to produce a multiple trace on the oscilloscope), a good frequency standard or frequency counter and both low voltage and high voltage power supplies. Your test equipment may be constructed or purchased as it becomes needed for particular projects.

If you have been interested enough to read this far, in conclusion I would just like to say that I have obtained much enjoyment and education from a quarter century of homebrewing, my favorite facet of amateur radio. Construction projects here have included receivers, transmitters, test equipment, gadgets, A.F., H.F., V.H.F., CW, AM, SSB, and RTTY; and I have lots of ideas for the next twenty-five years and more if I am still around to enjoy them. To be modern, Get with it and try homebrewing, you might find it worthwhile in a surprising number of ways!

FERNY

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The April edition of Ham Radio Magazine has the best article on basic semi conductor theory seen to date according to Farny. The article starts on Page 50.