

DEC 70

the Groundwave

December

1970

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A PUBLICATION OF
THE OTTAWA AMATEUR RADIO CLUB

GROUNDWAVE is the official bulletin of the Ottawa Amateur Radio Club, a noncommercial association of radio amateurs devoted to the promotion of interest in amateur radio communication and experimentation in the Ottawa regional area, and to the advancement of technical competence and achievement of club members.

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OTTAWA AMATEUR RADIO CLUB EXECUTIVE, 1970-71

Pres:	Larry Emmerson	VE3GGA	883 Dunlevie	728-7307
V.P.:	George Roach	VE3BNO	103 Strathcona	234-0885
Sec:	Dick Bonnycastle	VE3FUA	810 Edgeworth	728-8655
Treas:	Gord Grant	VE3DY	2050 Balharrie	733-4892
Directors:	Jack Bassil	VE3YT	2061 Lenester	722-8457
	Bill Ross	VE3GDW	50 Selkirk	746-4973
	<i>John</i> J. Morton	VE3ALK	1055 Cameo Dr.	722-9841

225-2540

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Check into the
Capital City F.M. 2 Meter Net
Time - 2000 hrs. each Monday Evening
Frequency - 146.460 in and 146.940 out
via the VE2CRA Repeater

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CLUB MEETINGS

The Ottawa Amateur Radio Club holds regular meetings on the first Wednesday of each month for the months of September through June. The meetings are normally held at the National Research Council auditorium, Sussex Drive, Ottawa, Ontario.

Visitors are always welcome so come along and meet the boys and girls.

* * * * *

Place: National Research Council, Sussex Drive
 Date: December 2nd, 1970.
 Time: 8:00 p.m. Local Time
 Program: (a) *Dr. J. Belrose:
 Communication Antennas in Ionospheric Research.
 (b) Miniature Auction
 (c) Other Business

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* NOTE: Dr. J. Belrose, VE2CV, is from the National Radio Propagation Laboratory of the Communication Research Centre, and will give an illustrated talk on antennas for Communications and Ionospheric Research.

FROM THE MINUTES OF THE
REGULAR MEETING OF THE OARC FOR
NOVEMBER 1970

The meeting was opened by the President, Larry Emmerson, by announcing the change in location for the Auction. He explained that the Army had found it necessary to withdraw the offer to allow us to use the Wallis House and that we had a difficult time finding an alternative spot. It was by the efforts of George Acton, VE3EQH, that we were finally granted the use of the Algonquin Auditorium on Baseline Road and Woodroffe Avenue just behind the west end Shoppers City.

Roy Maskell then spoke to the meeting and asked for help in the listing of the items. He asked the persons who were willing to help to see him at the closing of the meeting. He also explained how to get to the College and where the parking facilities were located.

The President then announced that the National Research Council had lost the neck microphone just after our last meeting and if it was taken by accident would the person return it as soon as possible.

Larry announced that the beginners class was now in full swing and that anyone wishing to join should do so at once before it was too late to catch up. The classes are now being held on one night only and that was Wednesday. The theory classes would be from 7 to 9 p.m. and the code from 9:15 until 10:30 p.m.

The Club was also reminded to keep in mind that there would be a repeater group meeting on November 23, 1970 at CERA on 150 Isabella Street at 8:00 p.m.

The President then asked Mr. John Morton to speak on his recent trip to the RSO convention.

John, VE3ALK, then gave a very interesting talk on his trip to Windsor to the convention. He indicated that it was held in the very attractive Holiday Inn and that he and Holland Shepherd were the only two he knew who went from this area. He indicated that he and Shep had met many of their long time friends and that it had been very enjoyable. He mentioned that the RSO were very actively engaged in trying to convince the Ontario Government to give in to allowing proper Ham license plates similar to those in use in other Provinces. He indicated that the Government still would not give in because they said that they were contemplating a change in the Plate system and no decision would be reached now, but that maybe after the new system is introduced, they would consider further discussions.

John was thanked by the President who indicated that the RSO was in need of representatives in this area and those who would consider a post should be in touch with the Executive.

Larry, VE3GGA, then explained to the Club that their Executive had arranged to purchase about 20 Walkie-talkies and that orders for these had been taken after it had been announced that they were available on both 3760 kHz on the Pot Hole Net and on the Capital City Net on 2 meters. Unfortunately only 17 were made available and so all orders had to be filled and so there were none left over for sale at this meeting. Larry did announce that there was a chance of getting a number of DT23's and that anyone interested in these should get in touch with the Executive.

The next item on the agenda was a discussion of the new proposed regulations for repeater use in Canada. There was considerable discussion with objections being raised on almost every point of the proposed regulations. It was finally decided to form a committee to look into the various points raised at the meeting and draw up recommendations for submission by the Club. The committee consisted of Tony Vandenberg, VE3FXG, Colin Rowe, VE3AZY, and Larry Kayser, VE3QB and if possible the committee member's recommendations would be presented at the repeater meeting on November 23 for ratification. The motion to form this committee was moved by Bill Ross, VE3GDW, and seconded by Clarence Humble, VE2NM. The motion was carried.

George Acton, VE3EQH, then presented to the meeting a new transistorized frequency meter which he had just completed. He explained the circuit and how it worked and that it was a copy of a circuit which appeared in QST in March 1967.

The Guest Speaker of the evening was Holland Shepherd, our local area SCM and a very well known and active ham in the area. Shep spoke in some length on the role played by the ARRL and some of the benefits which the Canadians have derived from the large American Organization. Shep was of the opinion that CARF was not ready to supply the needs of Canadian Amateurs on the same scale as the present ARRL society is doing.

Shep indicated that he was the Communications Manager for Ontario and as such would be very concerned with emergency work, traffic nets, field day but that his activities were not restricted to ARRL sponsored activities and he would keep his hand in many phases of Ham radio. He indicated that he was sure that there was not a single amateur interest that the ARRL do not provide activities for. They have awards and competitions, field days, help for the beginner and all kinds of awards and other activities too numerous to mention. He then illustrated the activities of hams by recounting the events surrounding the Coppercliff-Sudbury wind disaster and how the Hams handled the traffic for that area until the regular communication systems could be repaired and put back in service.

Shep closed by telling all the Hams to enjoy their hobbies but to please plan your station so that you can take part in the emergency group as you never know when you will need it.

After the Guest Speaker was thanked the President announced that there would be a competition within the Club for all Hams who have been licensed for less than 3 years. The competition would consist of writing a letter in to the President telling him why you would like to have a Tri-band vertical antenna. The antenna would be given free to the ham with the greatest need and the best written letter.

Dick Bonnycastle was then called forward to present to the Club his version of a converter which could be built for listening to W1AW on an ordinary transistor radio. He suggested that this set could be built as a Club project and loaned to beginners while they are taking the course. He indicated that the total cost would not exceed \$20.

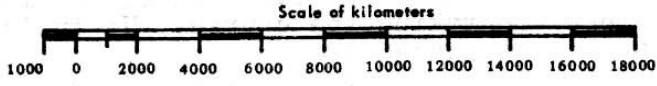
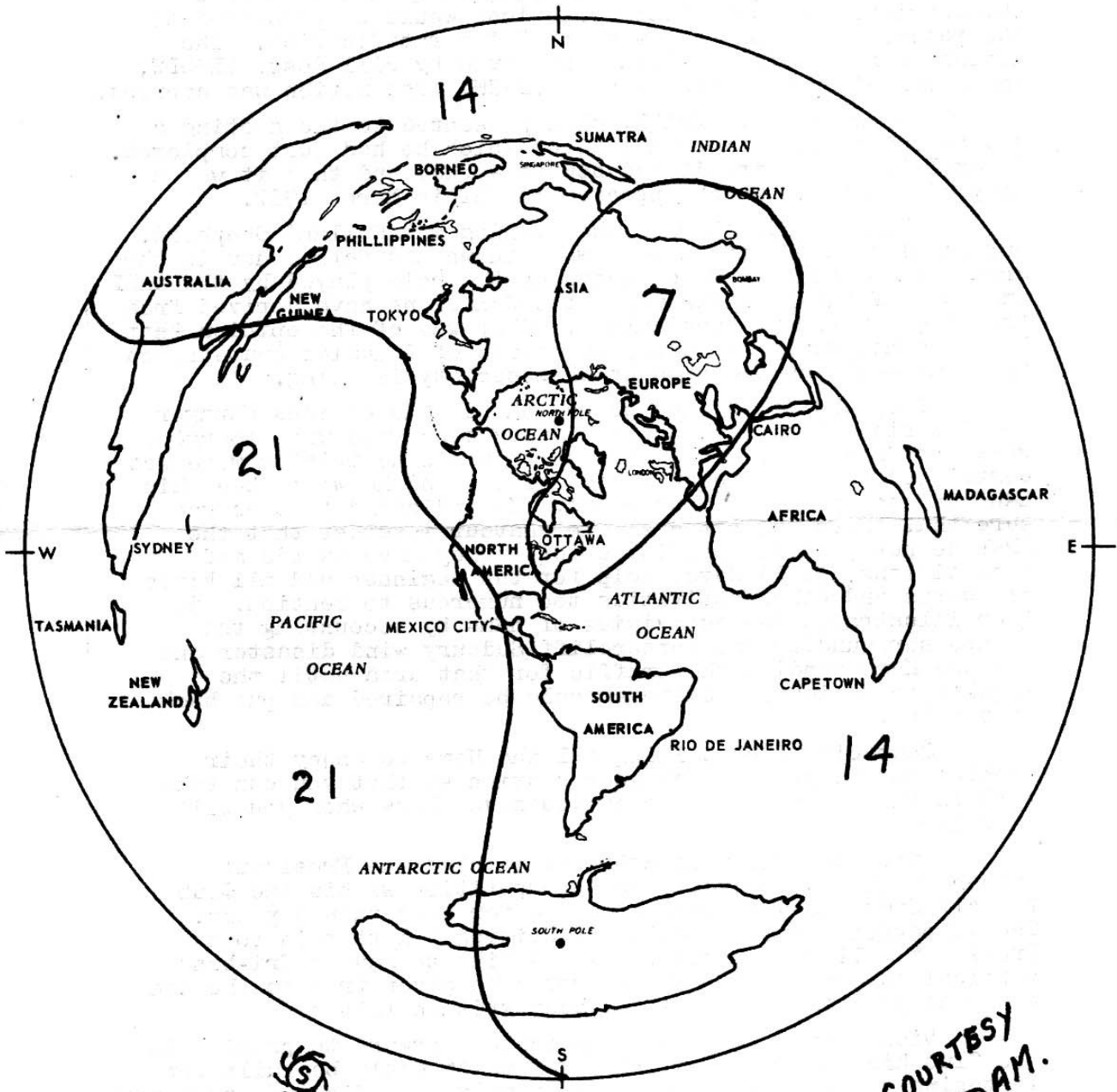
The meeting closed after it was determined that the films which were to be shown would not work.

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0000 GMT - DECEMBER 1970

AZIMUTHAL EQUIDISTANT PROJECTION OF THE WORLD

(POLE OF PROJECTION AT OTTAWA)



COURTESY
VE3DAM.

1900 EST.

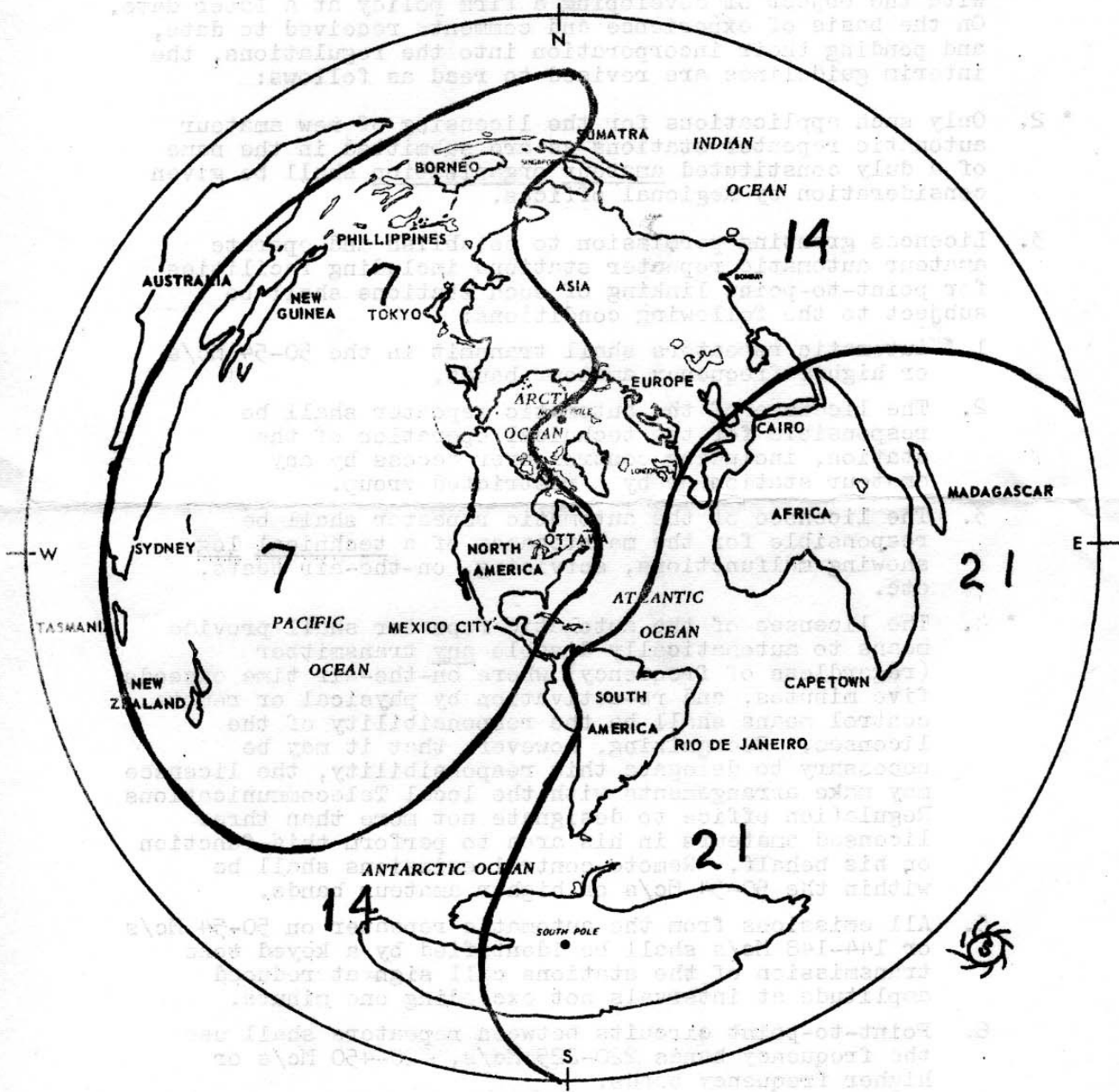
PROPOSED REVISION OF AMATEUR AUTOMATIC REPEATER LICENSING POLICY

1. As a result of a review of policy concerning the operation of repeaters in the amateur experimental service including point-to-point tandem operation, it was decided to permit the development of such repeater systems on a trial basis with the object of developing a firm policy at a later date. On the basis of experience and comments received to date, and pending their incorporation into the regulations, the interim guidelines are revised to read as follows:
- * 2. Only such applications for the licensing of new amateur automatic repeater stations as are submitted in the name of a duly constituted amateur organization shall be given consideration by Regional offices.
3. Licences granting permission to establish and operate amateur automatic repeater stations including facilities for point-to-point linking of such stations shall be subject to the following conditions:
 1. Automatic repeaters shall transmit in the 50-54 Mc/s or higher frequency amateur bands.
 2. The licensee of the automatic repeater shall be responsible for the technical operation of the station, including control over access by any amateur station or by a restricted group.
 3. The licensee of the automatic repeater shall be responsible for the maintenance of a technical log showing malfunctions, servicing, on-the-air tests, etc.
- * 4. The licensee of the automatic repeater shall provide means to automatically disable any transmitter (regardless of frequency) where on-the-air time exceeds five minutes, and re-activation by physical or remote control means shall be the responsibility of the licensee. Recognizing, however, that it may be necessary to delegate this responsibility, the licensee may make arrangements with the local Telecommunications Regulation office to designate not more than three licensed amateurs in his area to perform this function on his behalf. Remote control emissions shall be within the 50-54 Mc/s or higher amateur bands.
5. All emissions from the automatic repeater on 50-54 Mc/s or 144-148 Mc/s shall be identified by a keyed tone transmission of the stations call sign at reduced amplitude at intervals not exceeding one minute.
6. Point-to-point circuits between repeaters shall use the frequency bands 220-225 Mc/s, 420-450 Mc/s or higher frequency bands.
7. Point-to-point circuits between repeaters (above 220 Mc/s) need not be identified by tone coding.
- * 8. Phone patches shall not be permitted in conjunction with the operation of automatic repeaters.

1200 GMT.- DECEMBER 1970

AZIMUTHAL EQUIDISTANT PROJECTION OF THE WORLD

(POLE OF PROJECTION AT OTTAWA)



0700 EST.

- * 9. Canadian amateur automatic repeaters shall be accessible only to Canadian amateurs, or to other authorized amateurs operating in Canada.
 - *10. The interconnection of Canadian amateur automatic repeaters with automatic repeaters outside Canada is prohibited.
 - *11. The operation of an automatic repeater outside of Canada by an amateur station in Canada is prohibited.
4. Regional Superintendents, Telecommunications Regulation should exercise discretion in applying these guidelines to existing repeaters operating in the 50-54 Mc/s or 144-148 Mc/s bands. However, these guidelines shall be applied to all new automatic repeaters, also to existing repeaters where the licensee applies for authority to operate point-to-point facilities above 220 Mc/s.

* Indicates new or revised provision.

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NOTICE

The Ottawa Valley Mobile Radio Club Incorporated invites hams to participate in the Pot Hole Net on 3760 kHz on Saturday and Sunday each week at 10 a.m.

The Saturday net features the very popular Swap Net where you may list equipment which you wish to sell or trade. All equipment will be listed for a period of 1 month and persons wanting to take advantage of this service should get in touch with Ed Morgan, VE3GX, telephone 733-1721 or for those who live out of town, via either 3760 kHz or 146.940 MHz.

The net also provides a "wanted" service where you can list equipment you wish to purchase.

The Swap Net is also featured on the Capital City 2 Meter Net on Monday evening at 2000 hours via the VE2CRA Repeater.

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ITU LIST OF COUNTRIES THAT HAVE NOTIFIED
OBJECTIONS TO AMATEUR RADIOCOMMUNICATIONS

September 30, 1970

Article 41, section 1560 of the ITU Radio Regulations states that "Radiocommunications between amateur stations of different countries shall be forbidden if the administration of one of the countries concerned has notified that it objects to such radiocommunications".

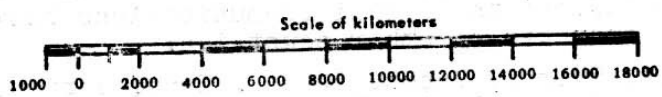
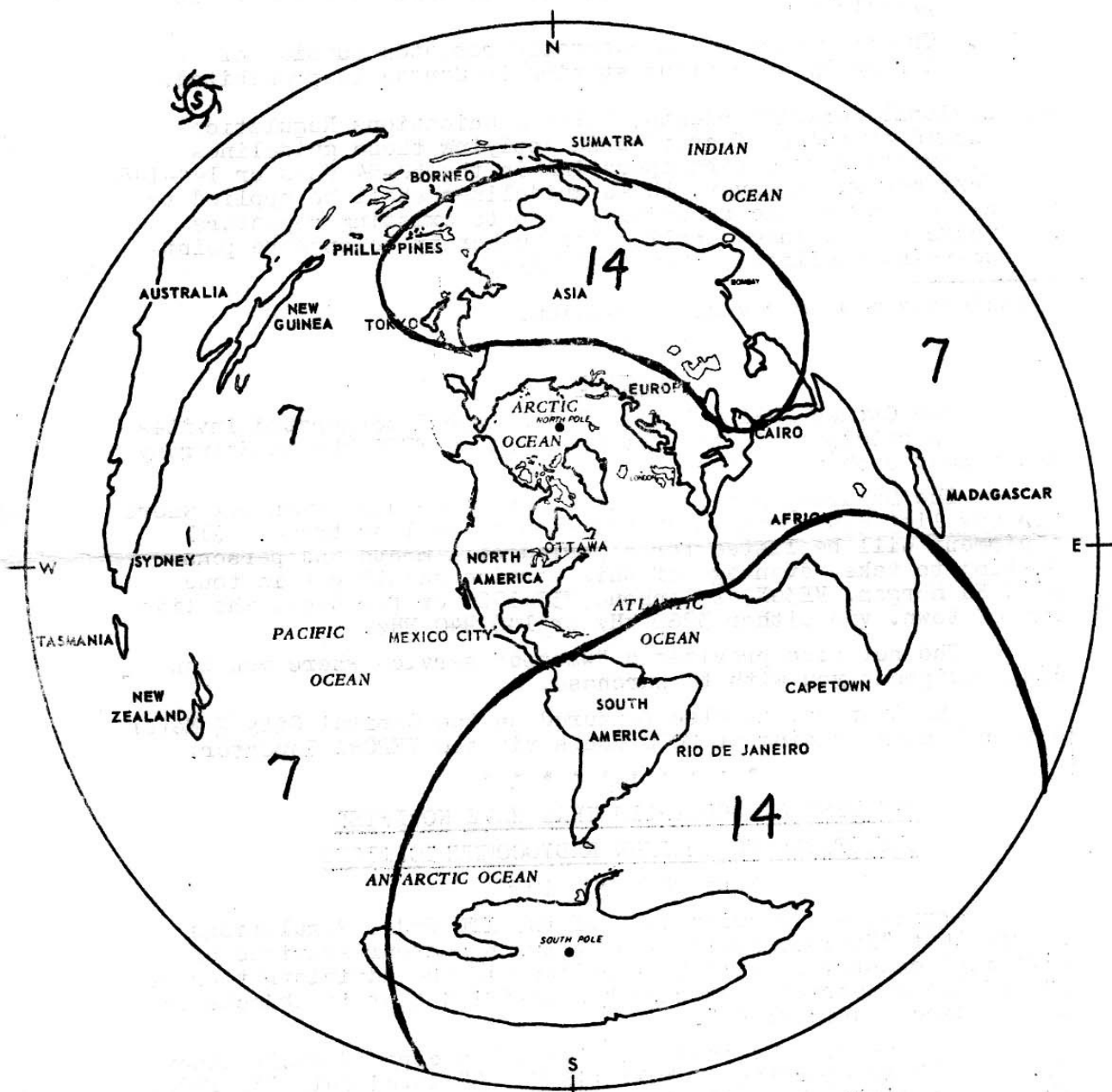
We have now received from the ITU a copy of their Annex No. 2 to their operational bulletin No. 55 dated July 13, 1970. This Annex lists the following 13 countries as having notified the ITU of their objections to radiocommunications between their amateurs and the amateurs of other countries.

Burundi, Cambodia, Cyprus, Gabon, Greece, Iraq, Jordan, Libya, Pakistan, Southern Yemen, Syria, Turkey, Viet Nam.

As a signatory to the ITU Convention, Canada has an obligation to observe the ITU Regulations.

0600 GMT. - DECEMBER 1970

AZIMUTHAL EQUIDISTANT PROJECTION OF THE WORLD
(POLE OF PROJECTION AT OTTAWA)



0100 EST.

DX TOPICS

by R. John Athey, VE3CTX

The C.Q.W.W. Contest (Phone section) 24 and 25 October, got off to a disappointing start this year. Although propagation improved during the last day, scores are expected to be lower than usual for the Canadian amateurs.

Rumors that eleven more countries are to be placed on the banned list appear to have some foundation. 4UIITU at I.T.U. headquarters in Geneva confirms this report. However until we have official word from the D.O.C. only Jordan, Cambodia, Laos and Vietnam, JY, XU, XW8, 3W8, XV5 need be avoided.

28 MHz

Ten meters has come through with some very fine openings so far this fall. Asian and Indian Ocean DX in the mornings, Pacific and Japanese stations during the early evening. Some of the prefixes available have been YA, UF6, UL7, FH8, MP4, JA, JH, KX6, KH6, KR6. Also numerous RA, RB calls which are Russian novices with phone privileges.

21 MHz S.S.B.

8Z4A	Saudi Arabia/Iraq	21.252	at 1615	GMT	Heard only
	Neutral Zone				
K7UXP/KH6	Kure Is.	21.276	at 0004	"	QSL to KH6HGP
KH6GDR	Hawaii	21.276	at 0015	"	
3B8AD	Mauritius	21.175	at 1755	"	Paul P.O. 467 Port Louis

14 MHz C.W.

AP5CP	E. Pakistan	14.022	at 0150	"	Mohd. Rough note
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14 MHz S.S.B.

VP8LV	S. Orkney Is.	14.218	at 2350	"	c/o P.O. 137 Pt.
ZM4OL/A	Campbell Is.	14.226	at 0430	"	Heard only. Stanley
HH9DL	Haiti	14.184	at 0025	"	QSL via W6WLH
VPIWMU	Brit. Honduras	14.184	at 2207	"	
9C9WB	Iran	14.113	at 1915	"	Special prefix
9I6PV	Zambia	14.205	at 0435	"	" " Ex VE3EXP
9X5AA	Rwanda	14.194	at 0457	"	Leo QSL to WIYRC
FR7AE/E	Europa Is.	14.120	at 0324	"	Roger (counts as Juan
5R8BB	Madagascar	14.130	at 1737	"	en francais. de Nova)
OD5BA	Lebanon	14.181	at 1736	"	

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OFFICIAL BULLETIN NR 297 FROM ARRL HEADQUARTERS

NEWINGTON, CONN., NOVEMBER 12, 1970

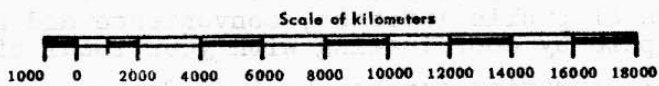
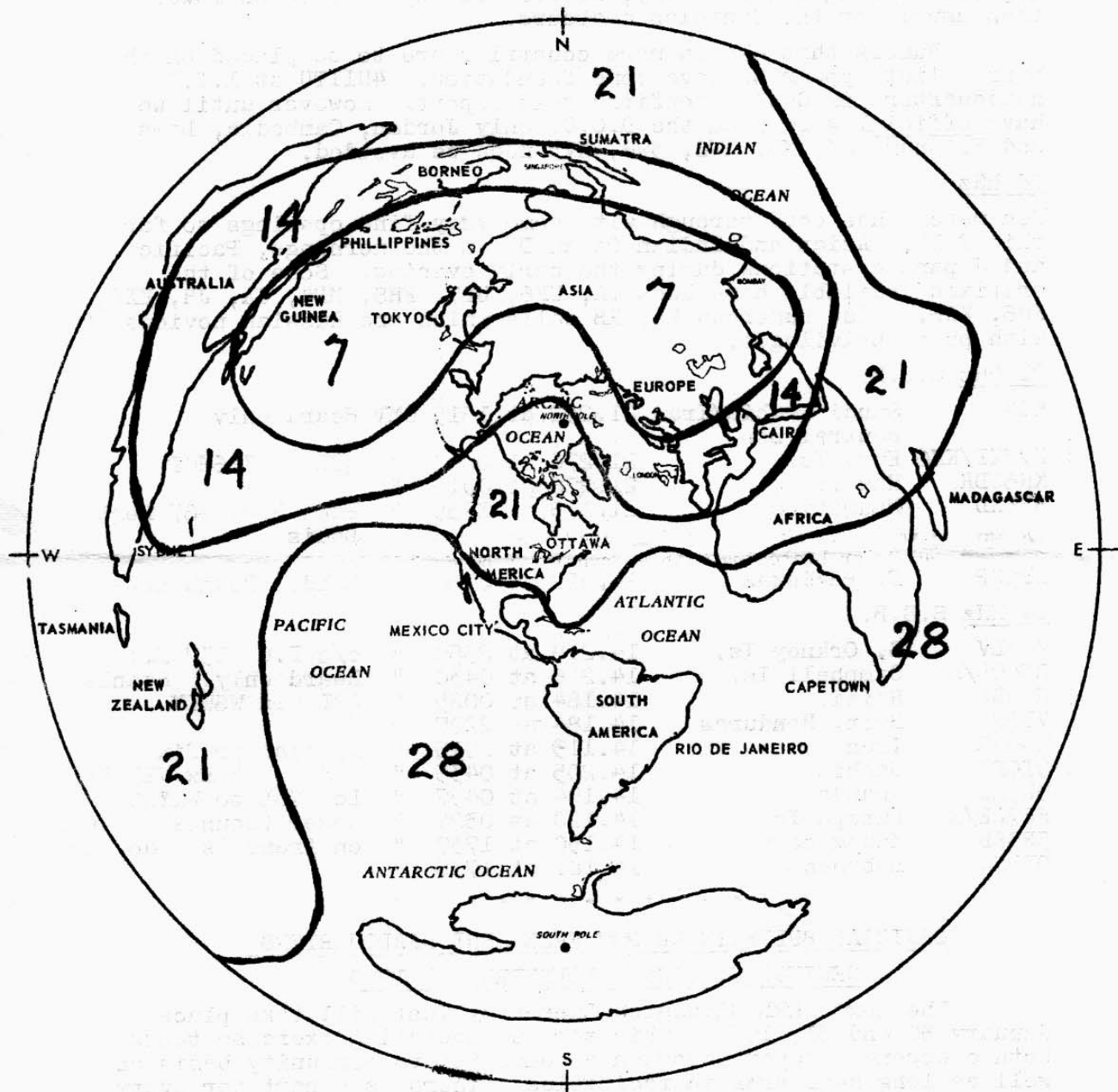
The next ARRL Simulated Emergency Test will take place January 30 and 31, 1971. This serious operating exercise tests both emergency preparedness on a community to community basis as well as long haul traffic facilities. There is a part for every amateur in the SET. Help do your share to justify the amateur service in terms of public interest, convenience and necessity. Plan to participate by coordinating with your local officials.

Further information can be obtained from your Section Communications Manager, address page 6, QST. SET rules will appear in the December issue of QST.

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1800 GMT. - DECEMBER 1970

AZIMUTHAL EQUIDISTANT PROJECTION OF THE WORLD
(POLE OF PROJECTION AT OTTAWA)



1300 EST

SIMPLE 80 METER CONVERTOR

(Demonstrated at the November OARC Meeting)

Dick Bonnycastle VE3FUA

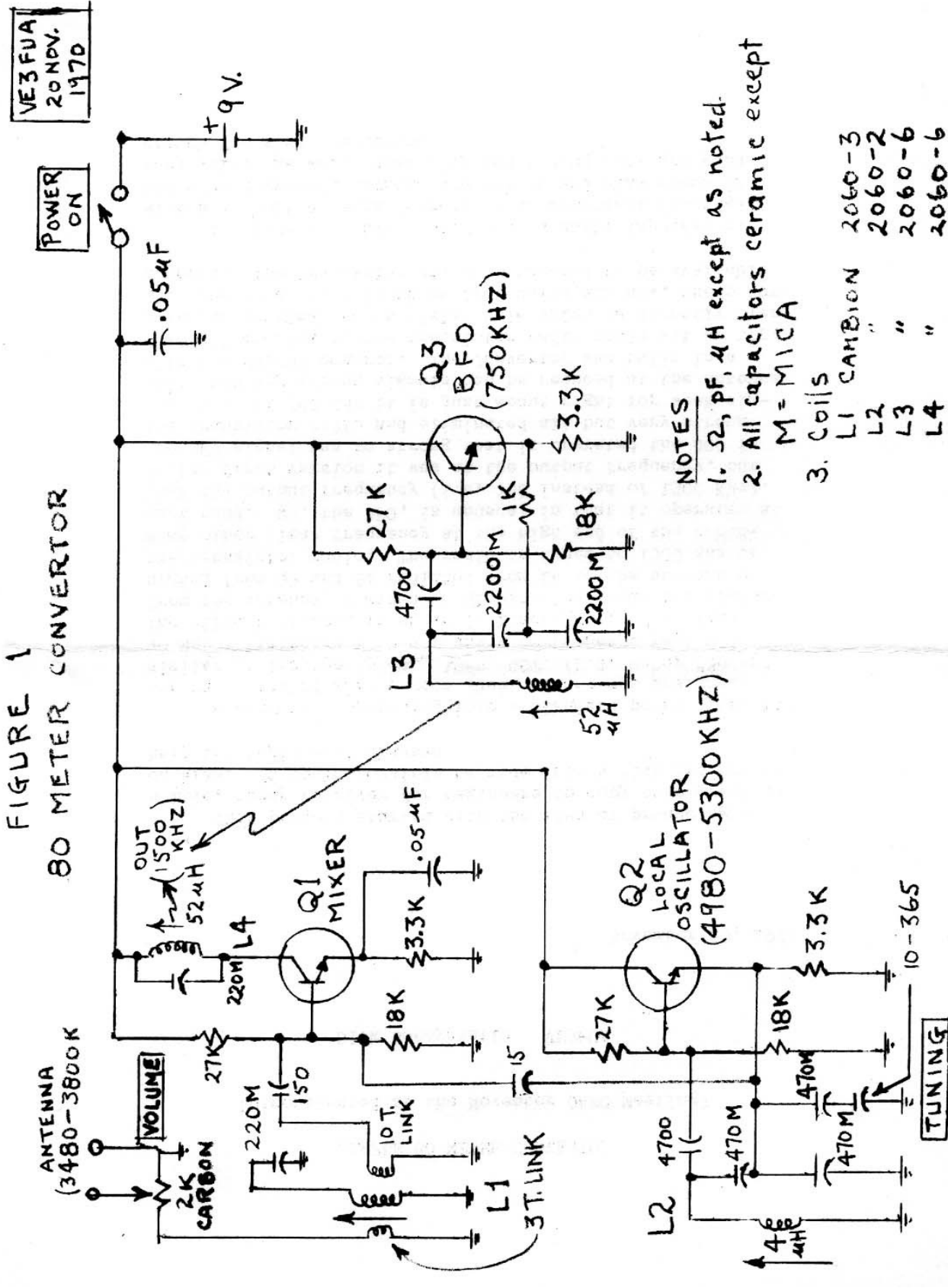
November 20, 1970

This project started with the idea of producing a simple, cheap receiver for beginners to copy code practice on WLAW. It could possibly be made into a club project to help the beginners' classes.

A convertor operating into a standard pocket transistor radio looked like a good idea, so one was designed, similar to the one in July 1969, QST. (L.G. McCoy "80 and 40 Meter Listening With a Transistor BC Set", page 22). The circuit diagram is shown in figure one. The signal from the antenna is mixed in Q1 with the local oscillator signal from Q2 and is radiated from L4 to the antenna on the transistor radio. The radio is tuned to 1500 KHz or some other clear frequency at the high end of the broadcast band. Q3, the BFO, is unusual in that it operates at half the output frequency (i.e. 750 instead of 1500 KHz). In the first version it was at the output frequency, but the BFO signal was so strong that it operated the AGC in the transistor radio and eliminated all but very strong signals. At 750 KHz it is just about right for weak signals, and any strong signals can be reduced at the antenna with the VOLUME control. The Convertor was built in a 7"x5"x3" minibox so the transistor radio could sit on top, with its antenna over a 1"x1½" hole which is directly over L4. The total cost is about \$20, using all new, cheap components. The transistor radio is assumed to be available.

In operation this little set is quite impressive. With a 30 foot antenna (strung on an apartment railing) and a good ground, signals are strong and WLAW comes in very well. As well, stability and tuning rate are good enough for single sideband.

FIGURE 1
80 METER CONVERTOR



NOTES

1. Ω , pF, μ H except as noted.
2. All capacitors ceramic except M = MICA
3. Coils
 L1 CAMBION 2060-3
 L2 " " 2060-2
 L3 " " 2060-6
 L4 " " 2060-6
4. TRANSISTORS $f_T > 100$ MHZ

H E A T H K I T

AN UPDATED VERSION OF THE POPULAR HW-100 5-BAND SSB-CW
TRANSCEIVER HAS RECENTLY BEEN ANNOUNCED BY HEATH COMPANY

The new Heath HW-101 shares many features in common with its predecessor, such as 80-10 meter capability, 180 watt PEP input, built-in VOX and crystal calibrator. New features include an improved 36- to- 1 ball bearing dial drive assembly that delivers smoother, more accurate tuning. Improved receiver circuitry results in an increase of sensitivity... now 0.35uV for 10 dB S-N/N. The HW-101 also includes provision for front panel selection of built-in 2.1 kHz SSB crystal filter or the optional 400 Hz CW crystal filter.

Other features of the HW-101 include built-in CW sidetone, ALC input for connection of a linear amplifier, front panel microphone and headphone jacks, complete metering facilities and new styling in Heath forest green with gray-green front panel.

The HW-101 is priced at \$359.95 and will be available in December.

Please let us know if you do not receive your catalogue.

HEATH

COMPANY

A DIVISION OF SCHLUMBERGER CANADA LIMITED

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