
XTAL

for the

radio amateur

J. H. Doble, VE3ACG
Ashburn,
Ontario. 2/50

CONTENTS

Executive Committee Minutes	3
75-Meter Mobile	4
VE-W Contest Results	5
Here's How	6
VE3CAR Schedule	3

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

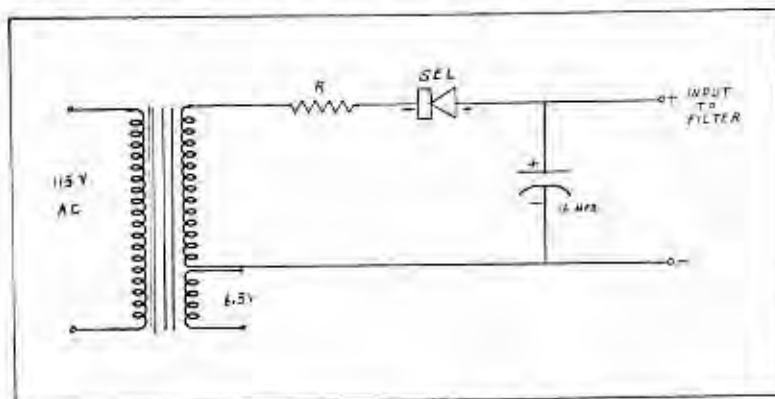
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CAROA EXECUTIVE COMMITTEE MINUTES

Minutes of Executive Committee Meeting held at the home of Art Stephens, VE3YS, on Sunday, July 23, 1950

1— Meeting called to order by President Bob Macdonald, VE3APS, with the following in attendance; Members: VE3ZE, AUQ, DU, AZH, YS, AAZ, APS, ANO, Visitors: VE3JB, ANU.

2— The President drew the committee's attention to the section of the constitution dealing with the requirements for a quorum, pointing out that business could be conducted by four members of the executive provided a mail ballot was taken of absent members.

3— The president brought before the executive the minutes of a meeting of amateurs held in Clinton, Ont., on July 8, 1950, for the discussion of certain proposals presented by the meeting to this committee for approval.

4— Motion that Motion 19 of the Clinton meeting be approved and carried out by CAROA. (This motion dealt with the proposal that CAROA executive should approach all amateur radio clubs across Canada, point out the aims of CAROA and its purposes, and request their assistance in soliciting membership and support for CAROA within their area.)—Carried unanimously.

5— Motion that VE3AAZ, YS, APS be appointed a committee to provide the club secretary with mimeographed letters for distribution as in previous motion. — Carried unanimously.

6— Motion that Bruce Underwood, VE3ANU, be appointed to fill the unexpired portion of the term of Bob Haslett, VE3RH. — Carried.

7— Motion that CAROA set up a committee to promote contests co-incident with other international contests to promote Canadian Activity in such contests. — Carried.

8— Motion that the National Report be retained as a feature section in XTAL. — Carried.

9— Motion that the resignation of the President, Bob Macdonald, VE3APS, be accepted.—Carried.

10— Motion that the resignation of Tom Powell, VE3ZE, be accepted. Action on this motion postponed till a mail vote of absent members of the executive can be taken.

11— Motion that R. Kirkby, VE3RL, be appointed to executive committee to fill the unexpired portion of the term of Mr. Macdonald. — Carried.

12— Nominations opened for presidency. Jack Beardall, VE3MJ, sole nominee. Poll of remaining members to be taken.

13— W. Anderson, VE3AAZ, A. Stephens, VE3YS, and A. Frazer, VE3ANO, volunteered to form a committee of signing officers till such time as a new president and treasurer are elected.

A. W. FRAZER,
(Acting Secretary).

VE3CAR SCHEDULE

3680 Kcs.	Thursdays	2100
7200 Kcs.	Tuesdays	2100
14100 Kcs.	Thursdays	2200
14165 Kcs.	Sundays	1300
146.49 Mes.	Tuesdays	2130

(All times E.S.T.)

HELP WANTED

The Toronto Headquarters is in urgent need of some voluntary assistance in connection with the administration of CAROA and XTAL. Anyone willing to offer a couple of hours a week please contact VE3YS.

75-METER MOBILE

By ALEX VELLEMAN, VE3BTQ*

Third of a series of articles describing a complete mobile station for 75 phone.

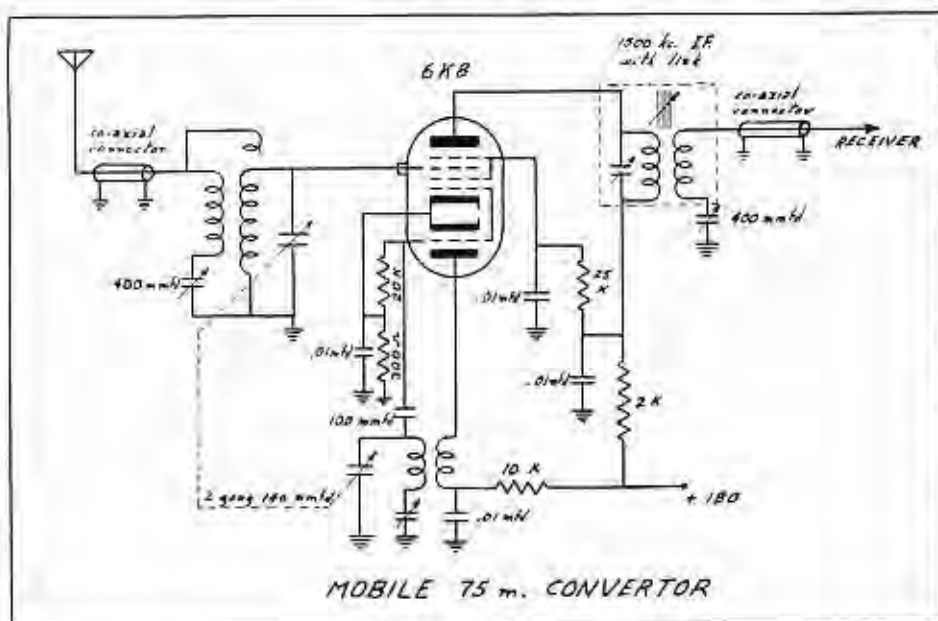
Now, there is the matter of converters, and receiving the signal. The assumption is that the car is equipped with a car radio, and that either by pushbutton, or by some other reliable means, the operator can come to the same point on the dial each time, which will be near 1500 Kc, and at the same time free from some broadcast station.

The leads from the relay control panel (part 2) give 6 volts for the filaments, and 180 or better for the plate supply of the converter, and plate voltage is supplied only when the transmitter is not in the "transmit" condition.

Either twin lead or co-ax feeds the transmitter aerial to the converter. Co-ax is to be

not the same length, so some gadget is necessary to make the line appear the same length to the receiver, and again, this is done with a padder in the low end of the link coil.

At this point it might be wise to warn you about a few of the annoying quirks and noises that appear in the car radio when you tune it to higher frequencies. Now ignition noise, that you thought never existed in your car, appears. First, it may be necessary to put either resistor type spark plugs in the car, or else plug suppressors in each plug. The distributor suppressor that worked OK for the broadcast band might not be satisfactory for higher frequencies, and high-grade suppressors are necessary. Again,



preferred for ignition interference reasons, and as this line presents a certain amount of reactance, this is tuned out by a padder condenser in the "cold" end of the input link. The oscillator is the conventional type, and needs very little explanation. Over the small range that is being tuned, there is little or no need for a padder to make the oscillator and R.F. coils track. The frequency difference of the two units is 1500 Kcs. plus or minus about 10 Kc. At this point careful decoupling is necessary, so a network is provided. Again, the output of the converter is fed into a co-axial or shielded line, which is longer than the line which feeds the aerial to the receiver. If the line is not longer, it certainly is

there are such things as dome light interference, even in metal top cars, and gas gauge interference, ammeter noise, speedometer cable noise, wheel noise, heater and air conditioner noise, generator hash, voltage regulator noise, fan belt noise, and a multitude of others. A few of them I will outline, as well as the cures that worked for me on two cars, but remember, only a few of them might exist in yours, and they might not even be listed above!

For dome light, gas gauge, ammeter and air conditioner noise, a condenser at the load will cut the noise appreciably, in the case of the dome light, at the switch; the ammeter and gas gauge, at the meters, and the air conditioner, at the switch. The speedometer, however, is something that will take a bit of work. Remove the spline from the speedometer itself, and run the car

* Technical Instructional Staff, R.C.A.F., R & C.S., Clinton, Ontario.

at the speed at which the noise was apparent. If the noise is still there (this may be done by jacking up one wheel, and letting the wheel spin), replace the speedometer spline, and remove it at the transmission end. Now run the car, and if the noise is gone, the noise is in the cable. Remove both ends of the cable, and then remove the bowden cable insert. Clean the insert in a bath of thinners, carbon tetrachloride or other cleaning material. Then pour some of the cleaner down the actual cable shell, until it comes out the other end clean. Now replace the cable, after rubbing it lightly with some form of vegetable anti-freeze oil or grease. Make certain that the grease or oil that you use will not jell at temperatures above the lowest that are prevalent in your locality. The speedometer noise should now be cleared. If the noise stopped when you removed the cable from the speedometer end, then let the dealer take care of the speedometer for you, as the noise cannot economically be cleared by you.

Clocks have a bad habit of causing interference, too, if they are electrically operated, and a small condenser at this source of noise will also cure it.

Fan belts with an impregnation of some metallic or carbon compound are procurable and eliminate the noise. Wheel noise can be very easily cured by inserting springs (obtainable at your wholesaler) between the wheel bearing and the hub cap. Generator hash may be easily cured by placing a condenser at the cor-

rect terminal of the generator. Voltage regulator noise, however, is normally eliminated only by either a series tuned circuit at the operating frequency between the offending terminal and a soldered connection to the body of the car, or a parallel tuned circuit of very heavy wire in series with the offending lead. Make certain that the voltage regulator is really causing your interference, before you attempt to do anything in this line, however, and then do it with the assistance of the local ignition and electrical service man. He has replacement units that you can work with, and a new voltage regulator may be all that you need.

One last word — the rig, whether it be in the trunk, in the glove compartment or in the front under the dash, or even under the hood, requires considerable current to start the motor-generator. To make the rig as efficient as possible, you will no doubt run very heavy cable from the battery to the rig, to avoid voltage drop. Remember, you have available now from the battery about 300 amperes. **FUSE THAT LINE. AND FUSE IT AT BOTH ENDS.** This way you are sure that if a short occurs in the rig, or if the cable does rub through under the car, only a fuse will blow, and you won't have to buy a new car because of an electrical fire that you could have prevented for the price of a couple of fuses and fuse holders.

Now you have the dope on the complete set-up except for the aerial. Let's hear you operating "75 Meter Mobile" soon!

1950 VE-W CONTEST RESULTS

HIGH TEN				Midwest Division	
W1BFT	22064	VE7HC	34992	Kansas — W0DYX	2304
W4KFC	17536	VE5QZ	31950	New England Division	
W2WC	14336	VE2NI	18972	Conn. — W1RY	12180
W3FQZ	14112	VE3BTG	17873	Maine — W1GKJ	5280
W1RY	12180	VE1KJ	15120	E. Mass. — W1AQE	5184
W5MCT	10240	VE3MI	14508	W. Mass. — W1JYH	9600
W6YHM	9984	VE3BVR	10656	N. Hamp. — W1BFT	22064
W8YGR	9660	VE3BXI	10020	Pacific Division	
W1JYH	9600	VE3BTE	9716	Santa Clara — W6YHM	9984
W9KZZ	9600	VE1MK	9214	Roanoke Division	
SECTION LEADERS				N. Carolina — W4PRL	
				Virginia — W4KFC	
				17536	
				Southeastern Division	
				Alabama — W4CYC	
				Ea. Florida — W4CKB	
				3456	
				8232	
				Southwest Division	
				Los Angeles — W6ISQ	
				San Diego — W6MI	
				6216	
				5568	
				West Gulf Division	
				So. Texas — W5AQE	
				Puerto Rico — KP4KD	
				2880	
				432	
				Canada	
				Maritime — VE1KJ	
				Quebec — VE2NI	
				8812	
				Ontario — VE3BTG	
				17883	
				Sask. — VE5QZ	
				31950	
				B.C. — VE7HC	
				34992	
Atlantic Division					
East Penn. — W3AIZ				9360	
Md. Del. D. C. — W3FQZ				14112	
So. N. J. — W2ORS				1680	
W. N. Y. — W2ZDZ				3408	
W. Penn. — W3ODU				6000	
Central Division					
Ill. — W9HFK				5600	
Ind. — W9JTX				320	
Wis. — W9KZZ				9600	
Delta Division					
La. — W5MCT				10240	
Miss. — W5LPL				192	
Great Lakes Division					
Michigan — W8YCT				16	
Ohio — W8YGR				9660	
Hudson Division					
East N.Y. — W2EFU				1776	
N. Y. C. - L. I. — W2WC				14336	
No. N.J. — K2CC				7920	

HAM-ADS

Advertising accepted for this classification subject to the following conditions:

1. The rate is seven cents per word.
2. A special rate of two cents per word is applicable to non-commercial advertising submitted by CAROA members.
3. Copy must be received by the 10th of the month preceding date of issue.
4. Remittance must accompany order.

QSL CARDS — Attractive, creative. Al Pearsall, VE8CB, 204 Rameigh Ave., Toronto.

FOR SALE — Supreme 365 Vacuum-Tube Voltmeter. New. \$50. J. H. Brownell, Poinc du Bois, Manitoba.

BC-348 RECEIVER wanted. Quote price and condition. William Coose VE3AJN, Stevens, Ontario.

FOR SALE — Janelle Rotary Converter, 110v. D.C. to 110v. A.C. 60 cycle 300 watts rating. In first class condition, \$25. Apply G. W. Fiddes, Green River, Ont. VE3ADX.

200 VOLT 400ma CT transformer, \$15. Practice audio oscillator, complete with key, phones, batteries, in varnished cabinet, \$7. Offers considered. Prices F.O.B. VE7DA. S. Croteau, 7949 Birch St., Vancouver.

FOR SALE 1155 receiver with either DC or AC power pack, speaker, and added audio stage \$50. Complete bandswitching, xmitter, 80 watts phone, 120 watts c.w. with modulator and 12 or 24 volt power supply, 160 to 10 meters, over-modulation indicator and built-in vfo for low frequency, Xtal osc. for 40 meters and up, \$70. PP modulation xformer for 811's with screen winding, \$7. A. E. Pugh, Baring, Saskatchewan.

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

TEN-METER beams S15. Tubings, fittings, etc. For information write Bill McCarter, VE7WM, 4684, West 8th Vancouver, B.C.

ATTENTION Wireless Set No. 19 Owners — We have available large stocks of parts, Dynamotors, Variometers, Inter-Connecting Cables, A.C. Conversion Blueprints, Technical Manuals, Condensers, Resistors, etc. Write for price list. Hunter's Radio Supply, 17 Edgewood Crescent, Toronto 5, VE3ANE.

HERE'S HOW

VE3DDM sends in a report of his mis-adventures while using 807's. Noting that 814's are available on the surplus market, he changed over and cleaned up TVI, BCI, parasitics, and all need for neutralizing.

(While on the subject of 814's in particular and tetrodes in general, one situation cropping up occasionally is that when such tubes are operating with plate voltages considerably below ratings, it is impossible to get the plate current up to rating without the plate showing color. This is a direct result of the "knee-type" characteristic of such tubes and indicates that the point has been reached where an increase in loading is causing the efficiency to go down faster than the input is rising — resulting in a decrease in output accompanied by a steep increase in plate dissipation. NOTE — Do not operate any Class C stage beyond the point where an increase in load (tighter antenna coupling) will cause a marked increase in plate current. — 3AAZ).

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XC 100 complete with 100 kc crystal and 6AK5 tube. Connect to any communication revr. to give marker signals on short wave bands. Power required 6.3v AC at 150 MA and 90 to 250 DC volts at 5-MA which can be supplied from almost any revr. The tube and xtal alone are worth the price and you get the unit all wired for only \$12.00

—Supply Limited—

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3800 - 3850 Kes mounted in FT Type Holder	.99

Special On Less Popular Frequencies

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3850 - 3950 Kes mounted in FT Type Holder	Two for .99

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956	1.00	826	\$1.50
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Tubes for R1155			
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