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FEEDBACK

Monthly Publication

of

The Georgian Bay

Amateur Radio Club

The Georgian Bay Amateur Radio Club (GBARC) was instituted in October, 1973, at a meeting of amateurs living in the area. That nucleus consisted of VE3BIS Dick; VE3CRV Jim; VE3DTS Jack and VE3EFX Bill.

Since then the Club has grown to approximately 50 resident and non-resident members.

Regular meetings are held monthly except July and August, on the third Thursday. Currently they are held in the Tourist Information Center at Highway #21 and #70, 6 kms west of Owen Sound.

A repeater, for use by all licensed amateurs, is located near Woodford, 15 kms east of Owen Sound. The call is VE3OSR and frequencies are 146.34 in and 146.94 out. Coverage is roughly from Collingwood to Southampton and from the Bruce Penninsula to Durham.

A GBARC Net is held every Sunday at 9:30 a.m. on 3.783 mhz. Any amateur is invited to check in on phone or cw.

PAST PRESIDENTS OF THE CLUB ARE:

VE3CRV Jim	1973-74-75
VE3BIS Dick	1975-76
VE3DXO Dave	1976-77
VE3HIP Ian	1977-78
VE3HXX Ian	1978-79
VE3IDS Don	1979-80
VE3FOT Harvey	1980-81
VE3LPD Laverne	1981-82

OFFICERS FOR 1982-83 ARE:

President:	VE3LPT Moe
Vice President:	VE3NEG Bill
Sec. Treas.	VE3IDS Don
Editor:	VE3LCZ Andy
Tech. Director:	VE3LZX Don

Feedback correspondence should be sent to the Editor - Andy Kainins
Box 1177
Port Elgin, Ont.
NOH 2CO

Yearly dues for Full Membership are $12.00, reduced to $10.00 if paid before Dec. 31st.

Club crests, designed by and available from VE3WF Fred at $2.00 each.

More complete information on dues, membership, club activities, etc, may be obtained by contacting the Secretary-Treasurer:
Don Richards
Box 44
Hepworth, Ont.,
NOH1PO

PRESIDENTS MESSAGE

A very Happy New Year to all and hope this will be another good year for amateur radio.

I would like to take some space here to thank Fred KPK for his effort and expense while working on the repeater situation. The majority of the members are happy with things the way they are so the repeater situation will not likely change.

As suggested at the rag chew at the last meeting, this months meeting will start at 8:00 sharp Jan 20th, hope to see you there.

VE3LPT Moe

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MEETING MINUTES DEC.82

One Guest - VE3CGM Stew MacKinnon from Oliphant.
Motion made by VE3DTS - Seconded by JUO that the club buy the staff of the tourist building a box of chocolates.
Business session adjourned.
Ted AEO announced Jan. meeting is on a tech. gab session. Bring your problems.

Don VE3IDS

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AGENDA FOR MEETINGS

JANUARY: Bull session - Amateur Technical Theme ask questions, answer questions, anything new for Xmas, exam help, new ideas for projects, assistance with old projects, etc.

FEBRUARY: Suggestions for a topic would be appreciated. Ted and his group have certainly done a good job, so lets give them a hand in nurturing some new ideas.

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NOTE:

Next meeting of GBARC will be on Thursday 20 Jan 83, 8 PM sharp. Owen Sound Tourist Information Center, Springmount.

NOTE:

Deadline for submissions to Feb Feed Back is 1st Feb 1983.
Be Prompt.

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FROM EDITOR'S DESK:

All the best wishes for 1983 to all and hope that everybody survived all the festivities with minimal after effects. Judging by the weather, 1983 should be a promising year.

Plans are well along to have QST mailed in London to ARRL/CRRL members. The magazine will be sent by truck from Kentucky, then by second class mail from London. It is hoped to implement the new system early in 1983.

The Westlink news tape is played every Sunday at 15.00Z on 7.238 MHZ. This is an excellent source of up to date news on matters pertaining to Amateur Radio. The signal is broadcast from Illinois so the reception in Ontario is good.

VE3MAI - Rahn McNally is presently recouperating in the Owen Sound Hospital. Hopefully by the time everyone reads this, Rahn will be home and well on the road to recovery. Thats a desperate way to keep up to my time off Rahn! Hi.

We now have a net manager for our Sunday's GBARC net. VE3DXO Dave has taken on the task and should certainly improve things as far as controllers are concerned. We can all give him a hand to make things a little easier, in making sure that when our turn comes we are there or contact the alternate controller. A little courtesy would also help in keeping off 2 meters during the net times, unless circumstances necessitate for you to contact someone who is unable to get on 80.

Silent Key - VE3IZP, Fred Hemstead, Shelbourne.

If you are interested to hear what a "Digitalker" sounds like from one of the Russian Satelites just tune in on 145.825 MHZ FM, somewhere from 2PM to 4PM, local time and beam pointing south.

After a few frustrating months, some form of thanks for their efforts should go to Jim, VE3CRV and Paul, VE3KOI in bringing our OSR repeater back to life. As I understand it cavity returning and some squelch modifications did the trick. Nice to see that 1.5 watts from "J" pole on side of tower at 25 feet in Port Elgin puts in intelligible audio. Watch the upcoming "For Sales" for some good deals on 100 watt linears.

73's
Editor

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REPEATER REPORT

Fred, VE3KPK, Harvey VE3FOT, Bill VE3NEG, Jim VE3BFV and Stan Guzanos of the repeater committee presented their findings regarding the relocation and/or new repeater.

- Ant. Location; CBC Tower near Kemble El. 986'
Elevation; At 300' level
Type; 4 Bay Dipole. 27" off S.E. Leg
Coverage Area; Tobemory, Port Elgin, Collingwood, Dundalk, Downtown Owen Sound.
Access; 55 Air Miles, 5/8 whip with 10 watts from mobile.
Date Required; Ant and Heliax required by 5 Jan 83.
Installation; By Tower Erection Crew.

continued

- Equipment ; Use present OSR or Purchase new machine.
  Location; Housed in allocated space in building on site.

- Expenditure: Proposal#1; Ant 2C-10C4, Hiliax, Connectors
  Mounting Brackets, Sales Tax, Hoisting,
  Legal Costs, Cavity Retuning,
  Repeater Overhaul + Misc.
  $2384.96

  Proposal#2; Proposal #1 + New Repeater.
  $3759.96

- Fund Raising
  * Through Service Clubs
  * Wintario
  * Installments Proposal #1 $38/members
    Proposal #2 $50/members
  * Repeater Shares

Lengthy discussion took place, where everyone got a chance to present their point of view, everything from legalities to status of present repeater. Following this discussion, votes where cast on Proposal #1 or Proposal #2 or other opinions. General concensus was that a large proportion of members were interested in new site but not at the present time.

This now stands as an action for some future date. Fred decided to resign as chairman of this committee and left the position open for any takers. None came forth.

Thanks to Fred and the repeater group, for the time and effort spent in acquiring all the data for these proposals.

Editor

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FOR SALES

Triden 2, Solid State 100 W Transceiver, Covers 80,40,20, 15 and 10. Analogue Readout. no AC supply, operates on 12 v DC 20 amps.	$500.00
Model 33 printer for microlog or robot. Checked over by company.	$100.00
Heavy Duty Transformer 2500 volt Hammond	$ 25.00
Heavy Duty Transformer 1100 volt	$ 25.00

Contact - Laverne Wyville
VE3LPD
538-1888 Meaford

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Tone Alert, VE3BIS designed and built. Responds to 4 digit access for individual paging and to a single digit for emergency purposes. Self contained with speaker, capability of monitoring with speaker muting, built in "Horn". Just add 12v DC and transceiver audio. Available Immediately

Contact - Andy Kalnins VE3LCZ
832-5868 Port Elgin

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FOR SALES

TRS80 Computer-Level II Basic, 16K, with CRT, Cassette Tape Recorder, Some Tapes, Manuals for Level I & II and other reference books - Excellent Shape.	$750.00
28ASR Teletype - good condition, needs small amount of work (c/w tape punch & reader)	$100.00
35ASR Teletype c/w tape punch & reader, all manuals - been running, needs reassembling	$100.00 as is
12" B/W Television set, excellent condition (Ideal for computer monitor)	$100.00

Contact - Cam Thomas VE3CTQ
6 Penatangore Row,
Kincardine
396-7083

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Heathkit FET Transistor Tester Model IT3120 (Try a good trade or negotiate)	$100.00
Lampkin Modulation and Deviation Indicator Model 205 A/B Mint condition - plus new instruction manual	$100.00
Drake R4B T4XB P/S and Speaker	Best Offer
G.E. Pacer 2 MTR Less Xtals 15w needs 2 tubes	$ 50.00
Marconi: DT34 and DT75 2mtr, solid state except 2 final tubes (Assortment of 5)	$ 50.00
Shure 444 Desk Microphone	$ 50.00
10 Meter mono band, 3 element (in carton)	$100.00
15 Meter mono band, 3 element (in carton)	$125.00
2 Meter Beam, II Element	$ 35.00

Contact - Walter Stoyko VE3FFN
519-923-3544

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HW101 Plus AC Power Supply $400.00

Contact - Steve Sauder
396-7982
Kincardine

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PUZZLE - Unscramble the words

1) protearo
2) ssmaeesg
3) eeerrvic
4) taannne
5) ilacaxo
6) bfecdeka
7) tnmunmiicocoa
8) atruema
9) twioktal
10) acriltolso
11) toomdunali
12) bensidda
13) dfneeel
14) butse
15) bulccia dqua
16) resom edco
17) pcssooolliec
18) 3 rosev
19) naubl

ANSWERS

1 operator, 2 message, 3 receiver, 4 antenna, 5 coaxial
6 feedback 7 communication 8 amateur 9 kilowatt
10 oscillator 11 modulation 12 sideband 13 feedline
14 tubes 15 cubical quad 16 morse code 17 oscilloscope
18 VE3OSR 19 balun

A LETTER TO THE EDITOR

I was pleasantly surprised to see your short note about Halley's Comet, in the December issue of Feedback. Naturally, I am gratified to see us breaking away from our self-imposed incarceration in the radio portion of the spectrum, remembering that there is more of said electromagnetic spectrum above 3×10^{11} MHz., than the portion used by Hams. No man lives by farads alone.

To keep the pot boiling, here are a few choice bits of trivia, with which to confound your friends and be the hit of the "Cocktail Circuit". The Sun, is the original Hydrogen Bomb, and the original Hydrogen Fusion Reactor. Every second of time for the last $4\frac{1}{2}$ billion years nuclear explosions of millions of times more powerful than any that have been detonated here on earth, have taken place, and as far as we know, will continue to take place for at least that many years to come. The temperature of the surface (photosphere) is about 5800 degrees K, (Kequals -273 degrees Celsius), but the temperature at the core is about 1,600,000 degrees K. Diameter is 109x Earth's diameter. The sun is not a solid object, but consists of gasses in molecular and ionized form, rotates on its axis once every 25 days at the equator, and once every 31 days at the poles. Its density (weight / unit volume) is about $\frac{1}{4}$ that of earth. As a star, it is small to average in size, low in luminosity (total radiative energy given off) is comparatively small (4×10^{23} kw) and has a gravitational pull 28 times that of earth, with an escape velocity of 384 Miles / sec, (earth is 7 Miles / sec.) Sunspots, magnetic fields, solar flares, magnetic storms, aurora, what of all these ? What? Why? How? If you want a connection with your favourite hobby, we can supply it. Maybe we can talk about Halley's Comet in 1984 or 1985.

VE3FOT

MAINTENANCE OF TRANSISTORS

CARE AND SERVICING OF TRANSISTORS

Transistors, although generally more rugged mechanically than vacuum tubes, are still comparatively easy to damage by im proper treatment or electrical overload. Many technicians have learned this the hard way, at the cost of one or more transistors. Some of the more important precautions are listed below.

Never overheat transistors or their leads since excessive heat can cause permanent damage. In equipment containing soldered-in transistors it is important to complete the soldering as quickly as possible. Use a clean, hot, well-tinned iron and good quality solder. The lead being soldered should be held with a pair of long-nosed pliers between the point where heat is applied and the body of the transistor. Used in this fashion, the pliers form a heat sink conducting heat away from the transistor itself.

Observe proper power supply polarity. This point is rather obvious but bears repeating. Reversing the plate voltage polarity of a triode vacuum tube will keep the stage from operating but will generally not injure the tube. Reversing the collector voltage polarity of a transistor will usually ruin it, instantly and permanently.

Guard against high transient voltages or currents. A damaging transient pulse may be caused in a number of ways such as the application of a signal having a sharp leading or trailing edge, inductive kickback, circuit switching, etc. Never insert or remove transistors from their sockets with the power "on" and avoid all test techniques which might result in sharp voltage transients in the equipment.

Observe extreme caution when testing transistors. A number of good transistor testers are on the market and should be used, except in cases of emergency. The technique of using an ohmmeter to check forward and reverse resistances can often result in ruining a transistor. Extreme care should be used in using this method, and the best rule is to take the extra time necessary to locate a transistor tester.

With regard to handling transistors and diodes, an important rule is never to hand a transistor or diode to anyone. The safest practice is to lay the component on a wooden table and let the other person pick it up. The static discharge that can occur between two individuals will usually exceed the transistor breakdown characteristics.

TRANSISTOR TESTING WITH AN OHMMETER

If a transistor tester is not available during maintenance, an ohmmeter may, in some cases, be used to perform fundamental checks to determine transistor serviceabliity. The ohmmeter will not make absolute checks, and must not be considered as entirely suitable for all transistors. It will, however, give an accurate indication of quality for switching transistors and for most amplifier and oscillator transistors.

To determine the suitability of a particular ohmmeter for use with transistors, three characteristics of the instrument must be known. The voltage applied at the test leads must be known. This voltage changes as the ohmmeter range is changed, and must not exceed 3 to 5 volts. The current available from the internal batteries of the ohmmeter must be known. Current also changes as the ohmmeter range is changed. Current must not exceed three to five milliamperes. Also, the polarity of the voltage applied to the ohmmeter test leads must be known.

The triplett model 630 multimeter is well suited for transistor testing. Voltage available is 1.5 volts d-c on the R x 1000 and R x 10 ranges. Current available on the R x 1000 range is 0.3 ma; on the R x 10 range, 3 ma. Test lead polarity is positive on the COM lead, negative on the V lead. During transistor testing, it is recommended that the test leads be reversed so that the red lead is positive. In the test steps which follow, the positive lead referred to is the lead which exhibits positive polarity when measured with an external voltmeter.

PREPARATION FOR TESTING

Obtain the ohmmeter to be used. Be sure that it conforms to the polarity, voltage, and current requirements. Remove at least two leads of the transistor from the circuit. If it is impossible to remove the transistor from the circuit, examine the module schematic and determine the approximate total shunt resistance bridging the two transistor elements to be checked. Take this resistance into account when performing the following steps.

The resistance values stated in the following steps are approximate, and will vary over a wide range with different transistor types and different ohmmeters. The important observations to be made are:

a) The ratio of resistance indications when the ohmmeter leads are reversed..
b) An open-circuit indication; and
c) A short-circuit indication. In general, the resistance indications at the high end of the ranges given apply to small-signal transistors, while the resistance indications at the low end of the range given apply to large-signal or power transistors.

TESTING PNP TRANSISTORS

Connest the positive lead of the ohmmeter to the emitter, the negative lead to the base. Ohmmeter indication should be approximately 50 to 150 ohms.

Connect the positive lead of the ohmmeter to the base, the negative lead to the emitter. Ohmmeter indication should be approximately 30,000 to 60,000 ohms. If the absolute value of resistances read, differs greatly from the values above, check that the ratio of resistance is on the order of 500-to-1 or greater. Indications with large variations from the above probably indicate a defective transistor.

Connect the positive lead of the ohmmeter to the collector, the negative lead to the base. Ohmmeter indication should be approximately 50 to 160 ohms.

Connect the positive lead of the ohmmeter to the base, the negative lead to the collector. Ohmmeter indication should be approximately 30,000 to 60,000 ohms. If the absolute value of the resistances read, differs greatly from the values above, check that the ratio of resistances is on the order of 200-to-1 or greater. Indications with large variations from the above probably indicate a defective transistor.

Connect the positive lead of the ohmmeter to the emitter, the negative lead to the collector. Ohmmeter indication should be approximately 100 to 7000 ohms.

Connect the positive lead of the ohmmeter to the collector, the negative lead to the emitter. Ohmmeter indication should be approximately 5000 to 60,000 ohms. If the absolute value of the resistances read, differs greatly from the value above, check that the ratio of resistances is on the order of 8-to-1 or greater. Indications with large variations from the above probably indicate a defective transistor.

Connect the positive lead of the ohmmeter to the base and emitter, the negative lead to the collector. Ohmmeter idication should be approximately 5000 to 60,000 ohms.

Connect the positive lead of the ohmmeter to the emitter, the negative lead to the base and collector. Ohmmeter indication should be approximately 100 ohms. If the absolute value of the resistances read, differs greatly from the values above, check that the ratio of resistances is on the order of 300-to-1 or greater. Indications with large variations from the above probably indicate a defective transistor.

TESTING NPN TRANSISTORS

The tests for NPN transistors are identical to those for PNP transistors in paragraphs above except that the polarity of the ohmmeter voltage is reversed for all parts of all checks. Indicated resistances and resistance ratios are the same.

MORE ON TRANSISTOR MAINTENANCE NEXT MONTH

NET CONTROL OPERATIONS

GEORGIAN BAY AMATEUR RADIO CLUB

Our weekly Net has been in operation continuously since the first general Club meeting in November, 1973. It is held every Sunday at 9.30 AM local time on 3.783 Mhz. It usually runs for about half an hour. The R.S.O. Bulletin is read at 9.45 AM. Sometimes the check-ins are not numerous but someone is always there in the event of Club news, traffic, messages, etc, particularly with respect to the South Georgian Bay area.

Members feel we should continue the format of the Net, as in the past, in its relatively informal nature. However it was agreed that a Net Manager and appointed Net Controllers would help maintain continuity and increase effectiveness.

Following is a list of Controllers that has been set out for the next four months. All members should arrange to be on time. It is the responsibility of the Controller to:-

a) control the Net himself, or

b) arrange for the Alternate Controller to take the Net, or

c) arrange for a Second Alternate to take the Net, and

d) remind the Controller for the following week that he is next in charge.

SUNDAY DATES	NET CONTROLLER	ALTERNATE CONTROLLER	SECOND ALTERNATE
Jan. 2	DXO Dave	LPT Moe	
9	LPT Moe	LPD Laverne	
16	LPD Laverne	LCZ Andy	
23	LCZ Andy	BFV Jim	
30	BFV Jim	DTS Jack	
Feb. 6	DTS Jack	AEO Ted	
13	AEO Ted	IDS Don	
20	IDS Don	FOT Harv	
27	FOT Harv	HXX Ian	
Mar. 6	HXX Ian	LPG Mal	
13	LPG Mal	AUB Jack	
20	AUB Jack	JUO Don	
27	JUO Don	CRV Jim	
Apr. 3	CRV Jim	BSF Verne	
10	BSF Verne	FFN Walter	
17	FFN Walter	BIS Dick	
24	BIS Dick		

VE3DXO Dave N. M.

GEORGIAN BAY AMATEUR RADIO CLUB

1983 MEMBERSHIP

CALL	NAME	ADDRESS	CITY	POSTAL CODE	PHONE	PATCH	CLASS
VE3AAF	Roy Miller	RR4	Uxbridge	L0C1K0			2
VE3AEO	Ted Scarrow	308 12th St.W.	Owen Sound	N4K3V4	376-9004		2
VE3AQT	Rob Ludlow	847 15th St.E.	Owen Sound	N4K1X7	371-1692		2
VE3AUB	Jack Barrett	RR2	Kemble	N0H1S0	371-1340		2
VE3BFV	Jim Harron	RR2	Kemble	N0H1S0	371-1209	P	2
VE3BIS	Dick Shave	Box 351	Southampton	N0H2L0	797-2401	P	2
VE3CAC	Jerry Dantzer	Box 1522	Port Elgin	N0H2C0	832-9582	P	2
VE3CGM	Stew MacKinnon	RR3	Wiarton	N0H2T0	534-2839		2
VE3CRV	Jim Vamplew	Box 324	Owen Sound	N4K5P5	376-8685 376-4951		2
VE3CTQ	Cam Thomas	Box 1583	Kincardine	N0G2G0	396-7083		2
VE3CXN	Henry Huhn	176 7th Ave.E.	Owen Sound	N4K2W7	376-4350		2
VE3DTS	Jack Avis	RR6	Wiarton	N0H2T0	534-0150		2
VE3DXO	Dave Dixon	Box 265	Markdale	N0C1H0	986-3082		2
VE3FFN	Walter Stoyko	Gen. Del.	Proton Station	N0C1L0	923-3544		2
VE3FOF	Bill Baker	Box 211	Paisley	N0G2N0	353-5830		2
VE3FTW	Alex McMillan	Box 211	Dundalk	N0C1R0			2
VE3GVL	Ed Bilkey	RR3	Markdale	N0C1H0	986-2649		2
VE3HFW	George Zeigler	RR6	Markdale	N0C1H0	986-3142		2
VE3HSE	Eric Hilbig	Box 191	Port Elgin	N0H2C0	832-2854	P	2
VE3HXW	Ted Brown	RR3	Chatsworth	N0H1G0	794-2424		1
VE3IDS	Don Richards	Box 44	Hepworth	N0H1P0	534-0887		2
VE3IXR	Murray Long	RR1	Elmwood	N0G1S0	364-4329		1
VE3JUO	Don Findlayson	Box 1056	Meaford	N0H1Y0	538-3190		2
VE3KOI	Paul Caccamo	P.O.Box 901	Wiarton	N0H2T0	534-2370		2
VE3KPK	Fred Kuznicki	Box 694	Owen Sound	N4K5R4	376-5228	P	2
VE3LCZ	Andy Kalnins	Box 1177 347 Waterloo St.	Port Elgin	N0H2C0	832-5868	P	2
VE3LPC	Ray Webber	412 Scott St. Box 1063	Walkerton	N0G2V0	881-0251		
VE3LPD	Laverne Wyville	Box 365	Meaford	N0H1Y0	538-1888	P	2
VE3LPG	Malford (Mal) Holmes	Box 310 35 Durham St.	Flesherton	N0C1L0	924-3276		2
VE3LPK	Terry Kalnins	Box 1177 347 Waterloo St.	Port Elgin	N0H2C0	832-5868	P	1
VE3LPO	Roger Cosgrove	40 1st Ave.S. Box 88	Chesley	N0G1L0	363-3312		
VE3LPT	Moe Hurlbut	Gen. Del.	Leith	N0H1V0	376-8458		2
VE3LZX	Don Rowe	1304 4th Ave.E.	Owen Sound	N4K2P7	376-0925		1
VE3MAE	Iain Harris	237 10th St.	Hanover	N4N1P1	364-4335		1
VE3MAI	Rahn McNally	Box 660	Port Elgin	N0H2C0	832-2597		1
VE3MTI	Ernest Madlener	Gen. Del.	Kimberley	N0C1G0			
VE3MTP	Hart Ridderbusch	397 3rd St.	Hanover	N4N1B4			1
VE3NEG	Bill Kohlman	895 Nodwell Ct. Box 2079	Port Elgin	N0H2C0	832-6345		1
VE3WF	Fred Keopke	593 23rd St.W.	Owen Sound	N4K4H1	376-6341		2
VE3NQC	Jim Singleton	Box 70	Southampton	N0H2L0	797-3419		1
	Arnold Flanigan	RR2	Wiarton	N0H2T0	371-0205		