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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 Kalnins
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

MEETING MINUTES JAN. 83

The meeting convened at 8 pm with Moe VE3LPT in the chair.
Nineteen members were present with no visitors.
There was no old or new business to conduct, but the following comments from members were noted.
Bill VE3NEG suggested new repeater frequencies to reduce problems with interference. It was suggested that Andy notify members in "Feedback" and further discussion and vote to be taken at next meeting.
Tom mentioned that Norm had heard 160 metre mobile phone in operation on 1.876 fm. It was suggested that people monitor to find out if this was illegal or harmonic problem etc.
Bill NEG notified us that we can use CY3 prefix during International Year of Communication.
Meeting was then turned over to Ted VE3AEO.

Jack VE3DTS

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AGENDA FOR MEETING:

February: - Business - Vote on frequency change of VE3OSR.
- Speaker - Weather permitting, Bill Hardie VE3EFX will be our guest speaker and his topic - Traffic handling and possibly some pointers on DX.

March: - VE3AEO and group can still use some suggestions, so if you have a good idea contact him.

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ADDITIONS TO 1983 MEMBERSHIP LIST

VE3FOT	Harvey Smith	650 4th St.A.E. Apt. 125	Owen Sound N4K 1C1	371-2095	2
VE3HXX	Ian Southerland	RR5	Owen Sound N4K5N7	371-7787	2
VE3KPT	Jeff Marklevitz	Box 434	Chesley N0G 1L0	363-2523	1
VE3NEM	Tom Merner	RR5	Owen Sound N4K 5N7	371-9499	1
	Stan Guzanos	Box 11	Flesherton N0C 1L0	924-2473	SW

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NOTE:

Next meeting of GBARC will be on Thursday 17th February 1983, 8 pm sharp; Owen Sound Tourist center, Springmount.

DEADLINE For next month's submissions is 01 March 83.

FROM EDITORS DESK:

Well another month has rolled around and time to get the old quill working again. A pleasant surprise this month, its the first time that I have received more than enough material for one issue. Very encouraging, thanks one and all who contributed.

Rahn VE3MAI, is still recouperating in the Owen Sound Hospital. Thanks to Fred VE3KHQ for the loan of a portable, and Jerry's VE3CAC power supply, Rahn is able to listen to OSR but unfortunately unable to transmit, so watch what you say about him Hi Hi. A speedy recovery wish from all of us and looking forward to hear you from the home base.

Watch out for a rare bug which seems to have arrived in the OSR area. Symptoms are; Lighter pocket books or bank accounts, itchy fingers, urge for small amplifier construction, urge for typing practice and impaired vision where letters of the alphabet dance on TV monitors. According to some intensive research the cause seems to be computers sending CW. Jerry VE3CAC, Ted VE3HXW, Fred VE3KHQ, Ted VE3AEO and yours truly are the victims so far. Initial experiments look very promising and look for increased activity on the Charlie Whisky portion of the bands.

A pat on the back to Dave VE3DXO, who has done a terrific job with our GBARC net. Controllers are prompt and available and judging by last weeks check ins the audience sure has grown. Thanks and keep up the good work Dave.

A sure sign of spring are the anouncements for upcoming Flea Markets. Just received info on the Southern Ontario Repeater Team Flea Market in Arva on Sunday 15 May 1983, Complete details next month

Fred VE3KPK, has been in touch with the Repeater Council and explained our situation regarding relocation and/or new repeater. He has asked the council to keep us in mind for some future move and in the meantime we should be making efforts for gathering funds etc to make this a reality.

In order to alleviate our present interference problem with other repeaters during inversions the Council suggested a frequency move to 147.300 mhz. Take some time to think about this between now and the February meeting and be prepared to discuss this matter thoroughly. A vote on the move will be taken so, if you have any opinions make sure you attend to voice them.

Dayton Hamvention will be held on April 29th, 30th and May 1st this year. If you are planning to attend it would be wise to make your bookings early.

Feedback is introducing a new column with this ussue. Thanks to the able efforts of Fred Kuznicki VE3KPK, we are starting a new series on RTTY. Since this seems to be an active area for expanding our experimental service, I am sure that much will be learned by our members and it may entice some newcomers to this mode. Much appreciated Fred.

For the computer enthusiasts, TV Ontario is starting a basic computer course on 16th February around 9 pm. This will be aired both on Wednesdays and Saturdays. Anyone interested should check the local listings or contact TV Ontario for further details and text books. Cost of Books around $60.00.

73's VE3LCZ

R T T Y

Dear Om's:

This is a first of a series on RTTY. Well I dont know where to start really but, I think I will start with all the diffrent codes.

The oldest and still in use is Baudot. Baudot is a 5 level code, what means 5 bites to each character. Then there is a ASKII code, what is a 8 level code, but ASKII is also used in 6,7 and 16 level (or bits).

On the ham bands HF, Baudot is mostley used. The reason is because of the 3 Khz bandwidth and QSB where 5 level code is doing a much better job. On the VHF frequencies, ASKII is used because you are able to use FM modulation, it gives you a much wider freq. range and also less QSB.

On the HF frequencies you will find hams will use Baudot at a speed of 60 words a minute, also a speed of 100 words is periodically. W1AW sends bulletins in 60 words Baudot and repeat the same bulletin at 110 ASKII 8 level.The news broadcastimg stations use Baudot at 66 words a minute. Some of the weather stations use 66 Baudot, but there are others sending at 100 Baudot.There are many more combinations in RTTY like an inverted signal where the mark and space freq. is inverted or different types of RTTY, but I will take it up at another time.

In RTTY there are three different shifts used, 170,425 and 850.The ham operator using 170 shift, the comercial are using 425 and the military, 850.I will or try to explain why hams are using 170 shift.

There are two different sets of tones used, one is the low tone where the freq. of the mark (what is the carrier) is at 1275.00 Hz and the space in the case of a 170 shift would be 1445.00 Hz. Then we have the high tone where the carrier or mark freq. is at 2125.00 Hz. and the space in the case of a 170 shift would be 2295.00 Hz. Say you would like to use with the high tone a 850 shift then the space freq. would be at 2975.00 Hz, most of our transcievers have a filter in the SSB mode (that is used in RTTY LSB) of 2400.00 Hz. As you can see you would not be able to copy the high shift.In North America most of the gear has the high tone, better units have both. Like the expensive Hal, the Robot you can order it to your preference, high or low tone. In Europe they are using only low tone. Well there is one negative point about low tone, and that is , it won't work too well when you are using the higher bands and use a FM signal.

Now when you like to start in RTTY you have to plan ahead of time what you would like to do , just stay on the ham bands or would like to copy the press or other comercial station with good results. Then you have to take in consideration what gear you presently own before you go to purchase equipment.

In the next issue I will talk about equipment.

Fred VE3KPK

OTHER TESTS

When current gain and current leakage checks are required, the transistor should be removed from its circuitry.

If no commercial transistor tester is available, the following circuit can be used.

LEAKAGE AND GAIN

(a) Leakage current is usually measured between collector and emitter with the base open. The maximum leakage current (Iceo) is not always quoted on data sheets but it may be roughly calculated by multiplying the collector cut-off current (Ico) by the current gain B. If the current shown on the ammeter "A" is in excess of this figure, the transistor is defective, see figure 1-1. Closing the switch completes the base circuit, and the collector current should rise. The current gain B of the transistor can be established by dividing the collector current indicated on ammeter "A" by the base current indicated on ammeter "B".

DYNAMIC TESTING

(b) Even though a transistor may exhibit satisfactory leakage and gain characteristics, it may still be unserviceable in high frequency or high impedance circuits, or high speed swiching applications.

Neon Test - in this test, see figure 1-2, the transistor is operated as an oscillator. The neon will glow if the transistor is shorted, open, or has excessive leakage. Output can be measured on an oscilloscope or a a-c voltmeter for more exacting test.

Signal Gain Test - in this test, see figure 1-3, the transistor is used as an amplifier. The signal is measured by comparing input and output signal using a tuned a-c voltmeter or oscilloscope. By varying the oscilloscope frequency over the operating range of the transistor, a reasonably accurate assessment can be made of the transistor performance.

The circuits described should prove adequate for normal maintenance work. If more sophisticated tests are required they should be performed on commercial dynamic testers or their locally manufactured equivalents. These machines provide facilities for checking input impedance, voltage feedback ratio, alpha cut-off, beta cut-off, collector capacitance, and the like.

TRANSISTOR SUBSTITUTION

Where feasible, transistors may be substituted to check circuits in very much the same manner as tubes.

For a quick check it is not always necessary to use an identical transistor, provided that a unit of the same polarity configuration and general type is used. Naturally, in a substitution of this nature, the circuit performance will probably be degraded, but the fact that there is an output at all generally indicates a satisfactory circuit.

When making a permanent replacement, it is vital that the new transistor be exactly as specified by the equipment manufacturer.

This is because there is often a substantial difference in the characteristics of "identical" transistor types made by different manufacturers. Even when built to identical specifications, transistors can exhibit considerable difference in performance, particularly in the high frequency response characteristics.

Therefore, if the equipment manufacturer specifies a certain type of transistor from a specific source as the recommended replacement, there is a distinct chance of degraded performance if the product of another manufacturer is used.

.....conclusion next month.

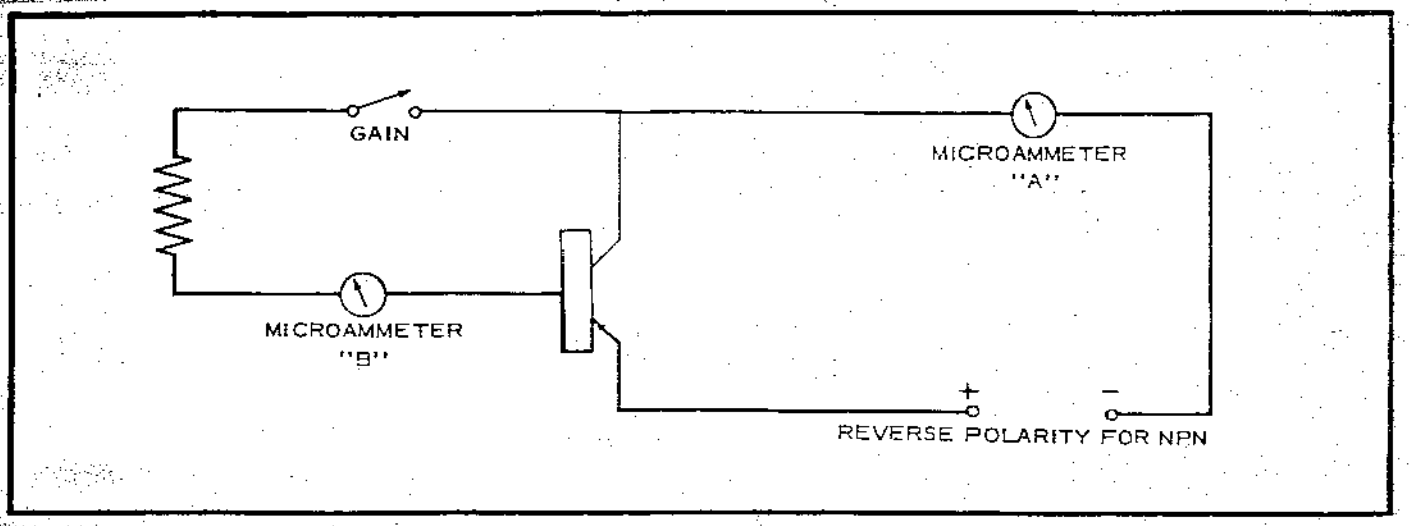

Figure 1-1 Test Circuit For Leakage and Gain Test

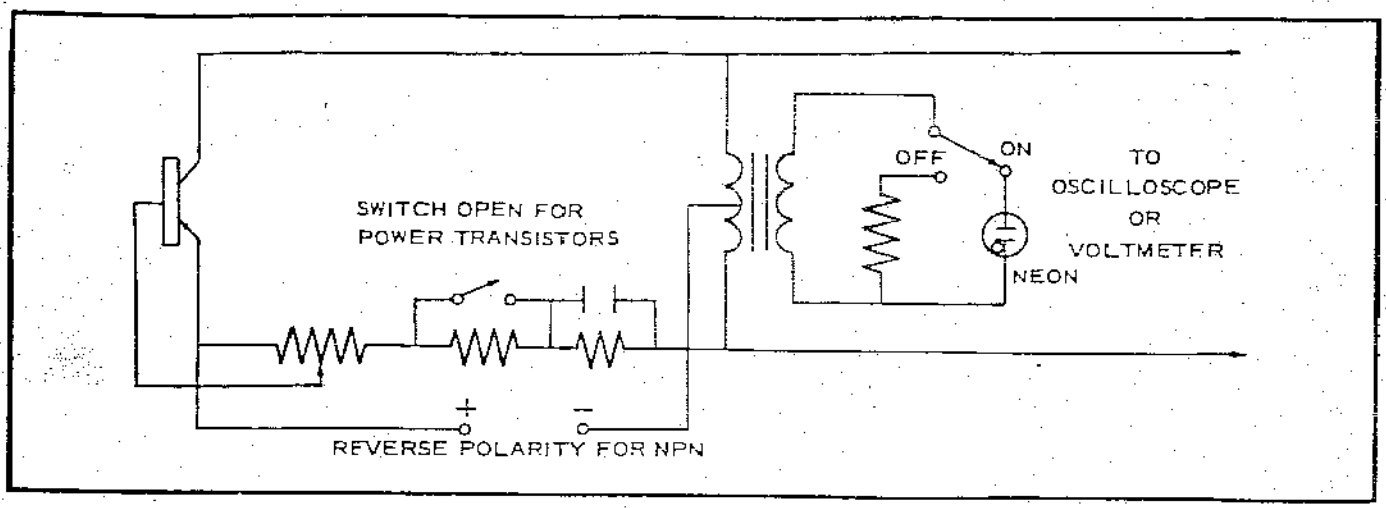

Figure 1-2 Test Circuit For Neon Test

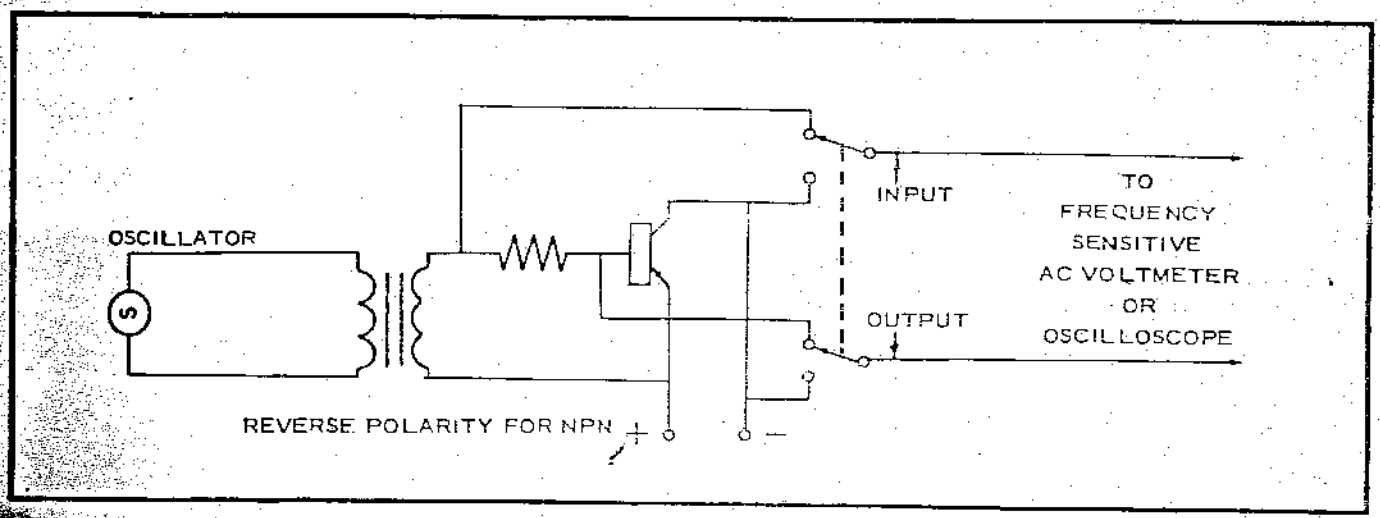

Figure 1-3 Test Circuit For Signal Gain Test

Over the past six months we have seen reports of various DXpeditions in DX Bulletins and other publications. These receive a large amount of original information, but sadly, after reading a number of these, 50% of what they print is wrong. In some cases it is pure conjecture, and even downright misrepresentation. With so much incorrect information one wonders if these publications serve any useful purpose.

HEARD ISLAND — UPDATE

Compiled by: Hugh VK6FS

VK6 DX Chasers Club

Since the news first broke in AR, May '82 issue, that the VK6 DX Chasers Club members were investigating the possibility of bringing VK0 Heard Island on line, much talk has ensued. Some of the comments have been good and encouraging, but others have been mean and could even have been described as downright vicious.

Members of the group have repeatedly been subject to deliberate interference, (it certainly was deliberate as it would follow when we moved frequency) also innuendo has been resorted to by some people to try and infer something underhand was happening when we, in self defence, resorted to sudden frequency shifts to a pre-arranged plan, and also used reverse sidebands.

Innuendo was resorted to in order to suggest we were risking the safety of our expedition members by having the radio operators at Atlas Cove while the rest were miles away climbing Big Ben. That one can be answered by the fact that one of the radio operators is also a qualified Medical Doctor. Another qualified Medical Doctor is a member of the mountaineering party. I wonder if two Medical Doctors and a Medical Researcher would be sufficient numbers to stage the first ever Medical Conference to be held on Heard Island?

Our ship has received an air criticism. For Pete's sake, how much more do we need in safety factor? Anaconda II has twice circumnavigated the world. Even this year it participated in the Sydney to Rio de Janeiro Yacht Race and sailed round Cape Horn going down to Lat. 65° south looking for extra wind. We should be able to assume that by now Skippe. Grubic would know a little of blue water sailing.

It has been suggested that Anaconda II will be battling the weather all the way from Fremantle (Perth) to Heard Island. Never has it been the intention to sail direct. The original, and present, itinerary is Fremantle North, then west, then south with the favourable trade winds to Amsterdam and St Paul islands then further south to Kerguelen Island, then onto the last 200 nautical miles to Heard Island itself. Return will be direct to Fremantle with a tail wind. (Albeit a little brisk at times).

For safety the ship is equipped with satellite navigation, Omega, radar and two off-shore computers. Also radio access to OTC and other world wide coastal radio stations. If she should lose the 98ft main mast there is still the 74ft mizzen. Should that also go she has the auxiliary motor and as a last resort the VK0HI radio masts could be rigged for a jury sail, with a little bit of initiative by the mechanical engineer in the radio party.

Again the inference is "we know not what we do" and that certain radio organisations should tell us about the birds and bees. "Where angels fear to tread"!!!!!! Right from the outset the HEARD ISLAND EXPEDITION 1983 has been a registered business under Australian Corporate Law. Accountants have been appointed to keep an eye on the till and a firm of solicitors to attend to all matters legal.

Amateur Radio has been our outlet for reporting progress. However, due to the many steps necessary to obtain various permits, licences, equipment, etc, we have stated from the beginning that we would not publish anything that has not been confirmed in writing from the relevant authority, agent or sponsor.

The expedition has had the best advisers from its inception including many who have been to Heard Is. To drop names there are Professor Graeme Budd who has been there six or seven times including wintering over. Dr Phillip Law PhD, Director of Antarctic Division for 10 years. Warwick Deacock, Director of the Explorers Fund and a member of the 64/65 Patanella expedition. Two members of the expedition have been to Casey Base and one to Macquarie Island.

Insurance cover will protect the personnel, equipment and the overall operation from Heard Island. Some manufacturers would be horrified if they only knew what suitability tests we have run on their products. These tests may make an amusing article for AR at some future date when all the tumult and shouting dies down.

A very brief resume of the qualifications of the expedition:- William Blunt, *Architect, mountaineer and photographer*. Co-leader and Convenor; Dr Ross Vining, *Medical researcher, mountaineer, photographer, co-leader*; Meg Thornton, *Architect, mountaineer and photographer*; Alasdair McGregor, *Artist with extensive wilderness experience, will conduct resource inventory as requested by Australian Heritage Commission*; Jonathon Chester, *Professional photographer and mountaineer, participated in 1980 Australian Expedition to Annapurna III in the Himalayas*; Martin Hendy, *Surveyor and mountaineer, 1981 season at Casey Base*; Dr Richard Priddy, *Mountaineer and 1981 season at Casey Base as Medical Doctor*; David Shaw, *Electronics Technical Officer, amateur radio operator and 1980 season at Macquarie Island*; Alan Fisher, *Mechanical Engineer, USA amateur radio operator licenced 28 years*; Dr Charles Brady, *Medical Doctor, USA amateur radio operator, has specialised in Sports Medicine*.

The Department of Science and Technology have a standard five page list of compliances and questions that are to be submitted by groups or individuals before permission is granted for persons wishing to visit Heard Island, our submission from the expedition giving all the requested details became a book of 38 A4 size pages.

The Secretary of the Department of Science and Technology, in a letter to the Heard Island Expedition has given approval for the visit as planned and the reserved call of VK0 been issued to Dave, VK3DHF, the le the DXers making the trip.

The Heard Island Expedition have ch Patron, Sir Edmund Hillary, K.B.E. who first man to climb to the summit of Everest. Some thirty years later the Island Mountaineers will attempt to second group to reach the summit of B which is an active volcano.

We believe this is the first time ev amateurs have pooled resources with pe other interests to bring on one of the rar most inaccessible of Islands. We believe the 4-6 weeks that will be availabl operators will be able to allow for ha stand off the Island for up to a week wai the weather to abate sufficiently to be transfer men and equipment by rubbe through surf, on to an open beac complete safety.

We have also realised that OLD SOL going to behave himself just because an worldwide want to contact VK0HI. Sola could knock great holes in propagation f on end. So therefore, we assume we a able to get at least three weeks operating good conditions in our 4-6 we stay Antarctic paradise.

ADDITIONAL LIST OF EQUIPMENT A FOOD SPONSORS

Berri Fruit Juice, Biro Bic (Australia) P Colemans, Cohees, Damer Thermal, Explore Guy Fuller Cook, Architects and Engineers Jones IXL, King Gee, Kraft, Nabisco, Nam Ware, Nestles, New Zealand Alpine Club, No Equipment, Outboard Marine (Australia), Purox Industries, Quaker, Robertson and Marks R Rosella, Safcol Holdings, Sanitarium, Surf Lif Association of Australia, TNT, Vegetable Oils W. L. Gore & Associates, Wilderness Equipm

BULKED DONATIONS RECEIVED

COXA .....
Virginia Century Club .....
WIA VK4 Division .....

Misprint:

(1) VK2 Division quoted as $200 (Oct. AR) shou read $300.

(2) VK6CT (Oct. AR) should read VS6CT.

ADDITIONAL DONATIONS RECEIVED THE VK6 DIVISION

Acadiana DX Assoc. *$100, Mexico DX C N4WW *$50, VK1LF $5, VK1MM $10, Ano VK3NNH $10, VK3YL $25, VK4NUN $15, VK5 VK6ZGA $10, VK7 Anon. $5, W1EW *$5.

ADDITIONAL LIST OF ASSOCIATE MEMBERS

L25543, VK 0-7 QRPP Club, VK's 2AYF, 2I DYP, KKK, OI, OC, 3AET, AGH, AXO, 8FN, 8I KAR, YIP, YXK, 4AGW, BTX, CS, KSF, WIA, YX ASZ, WD, BALD, ALJ, AWJ, CU, DQ, JP, KG, H YD, ZGA and W4ERU.

NOTES

1. **Denotes US currency.*
2. *!Denotes Canadian currency.*
3. *The list is correct as at the 24th Sept 1982.*

Revised UoSAT Telemetry Sensor Points, Calibrated After Launch

Telemetry Sensor Allocation:

Channel	Parameter	Range	Cal. Equation
00	Secondary S/C Computer (F100L)	0-1A	I= 1.2N mA (0.125A I 1A)
01	Solar Array Current +X	0 - 2A	I= 1.12N + 200(for Is less than 200 mA)
02	Battery Half Voltage	0 - 10V	V= N/100 *(1.01)
03	Radiation Detector A O/P	0 - 5V	Count= 40N *(1.04)
04	Radiation Detector B O/P	0 - 5V	Count= 40N *(1.04)
05	Magnetometer Expt. HX-Coarse	0 - 5V	V= N/200 *(1.01)
06	Magnetometer Expt. HY-Coarse	0 - 5V	V= N/200 *(1.01)
07	Magnetometer Expt. HZ-Coarse	0 - 5V	V= N/200 *(1.01)
08	Battery Pack-A Temperature	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
09	Spacecraft Facet Temperature +X	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
10	Visual Display Expt. & CCD Current	0 - 1A	I= 1.2*(N – 30 mA (0.15A I 1a)
11	Solar Array Current +Y	0 - 2A	I= 1.12N + 200(for Is less than 200 mA)
12	2.4 GHz Beacon Expt. Power O/P	0 - 2000mW	P= (N – 99)*0.633 mW
13	Radiation Detectors Expt. EHT Volts	0 - 1000V	V= N volts
14	Radiation Detectors Expt. Current	0 - 250 mA	I= (N + 20)/8 *(0.983) mA
15	Magnetometer Expt HX-Fine	0 - 5V	V= N/200 *(1.01)
16	Magnetometer Expt. HY-Fine	0 - 5V	V= N/200 *(1.01)
17	Magnetometer Expt. HZ-Fine	0 - 5V	V= N/200 *(1.01)
18	Battery Pack-B Temperature	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
19	Spacecraft Facet Temperature -X	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
20	Spacecraft Computer Current	0 - 1A	I= 1.2*(N – 25) mA (0.125A I 1A)
21	Solar Array Current -X	0 - 2A	I= 1.12N + 200(for Is less than 200 mA)
22	Battery/BCR +14V Bus	0 - 20V	V= N/50 *(1.056)
23	Sun Sensor +Z Axis	0 - 5V	V= N/200 *(1.01)
24	10.4 GHz Beacon Expt. Current	0 - 250 mA	(N – 40)/4 * 0.97
25	Magnetometer Expt. Temperature	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
26	Magnetometer Expt. Current	0 - 250 mA	(N/8)*0.9945
27	Telecommand Receiver Current	0 - 250 mA	I= (N – 16)/8 *(0.952) mA
28	Module Box Assy. Temperature +X1	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
29	Spacecraft Facet Temperature +Y	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
30	Battery Charge Current	0 to +5A	I= 3N mA
31	Solar Array Current -Y	0 - 2A	I= 1.12N + 200(for Is less than 200 mA)
32	Power Conditioning Module +10V	0 - 20V	V= N/60 *(0.93)
33	Telemetry System Current	0 - 20 mA	I= (N – 16)/30 *(1.084) mA
34	2.4 GHz Beacon Expt. Current	0 - 250 mA	I= 0.4*(N – 11) *(1.072) mA
35	145 MHz Data Beacon Power O/P	0 - 2000mW	P= (N – 82)*1.67
36	145 MHz Data Beacon Current	0 - 250 mA	I= (N – 7)/4 * 1.014
37	145 MHz Data Beacon Temperature	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
38	Module Box Assy. Temperature -X1	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
39	Spacecraft Facet Temperature -Y	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
40	+14V Line Current	0 - 5A	I= 2.86N mA
41	+5V Line Current	0 - 5A	I= 1.28(N – 50) mA (0.075A I 1A)
42	Power Conditioning Module +5V	0 - 10V	V= 2N/300 *(1.12)
43	Sun Sensor -Z Axis	0 - 5V	V= N/200 *(1.01)
44	HF Beacons Expt. Current	0 - 250 mA	I= (N – 36)/3 *1.038 mA
45	435 MHz Data Beacon Power O/P	0 - 2000mW	P= (N – 102)*1.792
46	435 MHz Data Beacon Current	0 - 250 mA	I= (N – 34)/3 *1.053 mA
47	435 MHz Beacon Temperature	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
48	Module Box Assy. Temperature +Y1	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
49	Spacecraft Facet Temperature +Z	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
50	+10V Line Current	0 - 5A	I= 3N mA
51	-10V Line Current	0 - 5A	I= 1.3*(N – 60) mA
52	Power Conditioning Module -10V	0 - -20V	V= 0.0158N - 0.0224'N'('N' of +10v line)
53	Navigation Magnetometer X-Axis	0 - 5V	V= N/200 *(1.01)†
54	Navigation Magnetometer Y-Axis	0 - 5V	V= N/200 *(1.01)†
55	Navigation Magnetometer Z-Axis	0 - 5V	V= N/200 *(1.01)†
56	Speech Synthesiser Current	0 - 250 mA	I= (N-16)/10 *1.009 mA
57	CCD Imager Temperature	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
58	Module Box Assy. Temperature -Y1	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C
59	Spacecraft Facet Temperature -Z	-30 to +50°C	Temp= (474 – N)/5 *(1.01) Degrees C

†Determine vector as follows: $B_z = -189.54*(N_y - 336.55)$ $B_y = +183.486*(N_x - 663.44)$ $B_x = -194.5*(N_z - 496.5)$

$B_t = (B_x^2 + B_y^2 + B_z^2)$

Submitted By: Bill VE3 EFX

AMSAT Satellite Report is published and mailed First Class bi-weekly by The Radio Amateur Satellite Corporation, P.O. Box 27, Washington, DC 20044 for the purpose of enhancing communications about the Amateur Radio Satellite Program. Subscription rate is $18.00 ($26.00 overseas) yearly by check or money order to "Satellite Report," 221 Long Swamp Road, Wolcott, CT 06716. Information published herein may be quoted without permission provided credit is given.

ITEM SUBMITTED BY: Bill VE3FOF

****

I HAVE A STORY FROM THE NORTH BAY CLUB THAT COMES VIA LQH MURIEL FOISY AND I THINK THIS IS A GOOD TIME OF THE YEAR FOR SUCH. I'LL SAY NO MORE SO WE CAN GET ON WITH THE STORY OF VE3MZH MIKE PECORE.

WE ALL HAVE OUR REASONS FORDOING THINGS AND FOR NOT DOING THINGS. I'M SURE WE ALL WANT THE BEST IN LIFE, WANT TO DO THE THINGS THAT PLEASE US, OR INTEREST US THE MOST.

SOMETIME AGO WE SET OUT TO ACQUIRE AN AMATEUR RADIO LICENCE. WE STUDIED, SAVED, SCRIMPED, READ, VISITED SHACKS AND SHOPS, ADMIRED EQUIPMENT, SET OUT GOALS, THEN SLACKED OFF. WHY? SURELY WE CAN HAVE THE STATUE WE WANT, YES, AND THE EQUIPMENT, BY PLANNING AND A TRAIT WE MAY HAVE FORGOTTEN - STICK TO IT IVENESS.

MANY TIMES WE HEAR INDIVIDUALS, BEMOAN THE FACT THAT THEY CANNOT GET THEIR MORSE, THERE IS NO WAY THEY CAN MAKE SENSE OUT OF THAT CODE, AND AT 10 WPM NEVER, OR THE PEOPLE WHOSE MINDS ARE BOGGLED AT THE THEORY, JUST CAN 'T BE DONE, I'M TOO OLD OR IT'S JUST NOT MY THING. BALDERDASH - YOU CAN ALL DO IT IF YOU WILL SINCERELY APPLY YOUR TALENTS, SET UP A SYSTEM FOR STUDY, AND ADHERE TO IT.

THERE IS ONE AMONG US THAT SETS AN EXCELLENT EXAMPLE OF PERSEVERANCE OVER DIFFICULT ODDS. I SPEAK OF MIKE PECORE, NOW HOLDING THE CALL VE3MZH. MIKE IS A QUADRAPALEGIC, AS THE RESULT OF AN AUTO ACCIDENT, WITH LITERALLY NO USE OF HIS HANDS, LIT. USE OF HIS ARMS, DESTINED TO LIVE FROM A WHEELCHAIR, A HOPELESS CASE. NO WAY,HE ANALYZED HIS PHYSICAL ASSETS, CONSULTED WITH HIS WIFE, PROCURED STUDY MATERIAL, AND ACCEPTED THE CHALLENGE TO SIGN ON FOR INSTRUCTION ON AN AMATEUR RADIO COURSE. REGULATIONS AND THEORY WERE DULY MEMORIZED, AS MIKE IS NOT ABLE TO WRITE OR MAKE SCHEMATIC DIAGRAMS. HE WAS, HOWEVER, ABLE TO ANSWER ANY AND ALL QUESTIONS PUT TO HIM BY THE DISTRICT RADIO INSPECTOR, TO THE INSPECTOR'S SATISFACTION. IN ADDITION HE DEVELOPED HIS ABILITY TO COPY CODE IN HIS HEAD, AT A SPEED OF ABOUT 18 WPM, SOMETHING IN EXCESS OF THE 15 WPM REQUIREMENT FOR ADVANCED AMATEUR STATUS.

WE UNDERSTAND MIKE'S PHYSICAL SHORTCOMINGS, AND THE DETERMINED DRIVE TO MEET THE CHALLENGE HEAD ON. HE CANNOT SEND CODE, HE CANNOT WRITE, BUT HE HAS DEVELOPED HIS MEMORY TO THE EXTENT HE IS ABLE TO RETAIN A WORKING KNOWLEDGE OF THEORY AND REGULATIONS, AND COPY CODE IN HIS HEAD. AT THE TIME OF HIS ACCIDENT, MIKE LOST THE ABILITY TO SPEAK, HE NEVER HOWEVER LOST THE GIFT OF THE GAB, HE PERSISTED AND CAN NOW TALK AS WELL AS EVER, BOY CAN HE TALK. WITH THE AID OF HIS WIFE AND FAMILY, THE KNOWLEDGE GLEANED FROM THE AMATEUR COURSE, AND THE MANY ACTS OF ASSISTANCE BY AREA AMATEURS, HE HAS AN (ALWAYS MOBILE) STATION ON 2 METRES OPERATING FROM HIS WHEELCHAIR, AT HIS OPERATING BENCH IN HIS SHACK WILL BE FOUND AN ICOM 701 OF WHICH HS IS JUSTLY PROUD. GIVEN THE OPPORTUNITY TO BUY THIS EQUIPMENT HE HAD TO DETERMINE HIS ABILITY TO COPE WITH TUNING AND ADJUSTMENTS. THIS HE QUITE CAPABLY DOES WITH A WAND ATTACHED TO ONE ARM BY A STRAP, OR A WAND HELD BY THE TEETH SUCH WAND HAD A RUBBER TIP OR A SOCKET ATTACHED, BY WHICH HE ROTATES KNOBS OR SWITCHES WITH HIS MOUTH.

THE VOX OF COURSE CAN BARELY KEEP UP TO THE LINE OF LINGO THAT IS FED INTO HIS MICROPHONE. MIKE'S OPERATING IS RECORDED ON TAPE, AND DULY TRANSCRIBED ONTO A LOG SHEET BY HIS SON, DAUGHTER OR WIFE.

MY FRIENDS, HERE IS A CHAP, APPARENTLY BEATEN DOWN BY FATE, HE WANTED TO BE A HAM, FACED THE CHALLENGE, QUALIFIED IN EVERY RESPECT, AND HAS BEEN ISSUED AN ADVANCED AMATEUR CERTIFICATE OF PROFICIENCY BY THE DEPARTMENT OF COMMUNICATIONS CANADA. HE IS DULY LICENSED, NOT SPONSORED, AND THE ONLY HELP HE HAS OR WILL REQUIRE, IS PHYSICAL, TO ERECT AND MAINTAIN ANTENNAS AND EQUIPMENT.

TO ME THIS IS "STICK TO IT IVENESS" PORTRAYED TO THE UTMOST. IT WORKS, SO BE HEARTENED. ALTHOUGH I BECAME ACQUAINTED WITH MIKE AFTER HIS QUALIFYING, IFEEL BETTER FOR HAVING MET HIM. IT IS APPARENT HIS ENTHUSIASM IS CONTAGIOUS.

MIKE, A DIP OF THE FINALS TO YOU, MAY YOU ENJOY MANY HAPPY YEARS OF AMATEUR RADIO, TO THE REST - PULL UP YOUR SOCKS, YOU CAN DO IT IF YOU TRY.

CHUCK VE3CEH

RETIREMENT

How many times have you wondered what to do about retirement; The problems with retirement is what to do with your new found available time, and the impact of purpose the fear of losing the responsibility with which we used to justify our existance.

The way it seems to me is the way I view all creatures, part of a whole, neither very important nor very unimportant. I eventually came to the conclusion that all I did during my whole life was to assist evolution. I also concluded if I had never existed, evolution would be about the same. All living things great or small strive for their existance, regardless how futile the effort may seem. So strive to do all the silly things you always wanted to do. If its important to you its worth striving for. It won't be too long untill you are settled in a new stream of endeavor where the priorities are decided by you.

Retirement should start long before you are due to stop going to work, it should be a gradual awareness change. If you are lucky enough to be your own boss then start giving a younger person the decision making responsibilities. If you are one of those people who are indispensible then I'm sorry. I probably won't be able to suggest anything that would interest you.

Retirement is a time to do many of the things that you felt all along were to time consuming. Do you have a hobby? Thats a big plus for the retiree. Hobbies are many and varied. It seems to me that a good way for a retiree to still be involved and yet be retired would be if the boss would allow part-time employment, one or two days a week at the old job or as an advisor. Maybe some of you who are still working can impliment some sort of scheme.

Strive, thats the key word. Lets not get into the lay-around habit. I make a list of projects I would like to get at when time allows. Yes, when time allows. I'm sure you have heard it before (I don't know how I had time to go to work). Yes, it's a fact. Another observation you may wish to ponder is the way people with hobbies fit into a retirement roll with little adverse effect.

So I say don't worry about retirement. After all, you don't have all the time in the world, but you do have a lifetime of expertise to apply to endeavors of your own choice for a few years. I say lets get at it.

I'm for Ham Radio.

73 Dick
VE3BIS

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DX REPORT

Niue Isl. - ZK2RS active on weekends, 28500 and 28600 KHZ at 2200Z

North Cook Isl. - ZK1WE will be active for next six months.

Rodrigues Isl. - 3B8DA/3B9 Alec, has been heard on 14,217.

Franz Josef Land - UK1RGO 14215 and 14204, 1100 to 1300 Z.