ANODE

Volume 1 Issue 6 July

From the editor's desk.....

Somewhat of a change to the see the headline "from the editor's desk" instead of the Chairman's desk. But following the Annual General Meeting held earlier this month there has been a change in a number of the committee portfolios; the Chairman for one is now Sarel ZS6APO and he will, in future, be supplying a column in subsequent issues in ANODE. I will continue doing the editorial side of the magazine, which means that I will have more time available to devote to this publication.

Last year Tony ZS6CST proposed a key rethink on ANODE; one of his proposals that it serve an informational role for topics concerning amateur radio in general (in addition to the other social news.) This means that each edition should contain an item of technical data for retention. My own interests lie in satellite and related activities as well as VHF/UHF operations (that is where anything less than 430MHz is DC !!) Consequently, reference material about these two are easy to come by. DX, QRP, HF operating and contesting less so. There might therefore be some bias towards the former which I hope will not be too onerous. Hopefully we can also squeeze in a construction or related article as well .

Our format has changed over the years; from the simple news sheet popularised by Garth about 10 years ago to the full size A4 and then down to A5 and now back to A4. This last format seems to be the easiest one to work with but the present 4 pages is limiting and so depending upon the input for the month will increase to 6. I am trying to use the "newsletter" format as contained in MS Word which allows for columns but to date have not had too much success and so it seems as if we will settle on the single column.

My previous plea for input was not too successful so sit yourselves down in front of the computer and send me your input. Any input form is acceptable: Wordperfect V5/V51; MS Word; MS Works; Lotus 1-2-3; ASCII/DOS text. Floppy disks (360k or 1.2mb); stiffie disks (1.44mb) or even CD Rom can be sent. As a last resort, handwritten input will be retyped by myself . So, there is little to prevent new input being received.

That just about wraps it up for this month,
73 de Cedar ZS6JQ

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HOPES AND DREAMS

I thought that our readers might find this short paragraph of interest. It was extracted from the ZS6WR bulletin board system on Sunday morning.

Date/time : 16-Jul 11:11
CRAIG SHIRGOLD IS A 7 YEAR OLD BOY WHO LIVES IN KEENE N.H.HE IS DYING OF AN INOPERABLE BRAIN TUMOR. HE MADE A WISH TO THE CHILDREN'S WISH FOUNDATION THAT HE WANTS ONE MILLION GET WELL CARDS SENT TO HIM BY AUGUST 15, SO HE CAN MAKE THE GUINESS BOOK OF WORLD RECORDS BEFORE HE DIES. CARDS CAN BE MADE OR BOUGHT.

PLEASE SEND THE CARDS TO THE FOLLOWING ADDRESS:
CRAIG SHIRGOLD
c/o CHILDREN WISH FOUNDATION
32 PERIMETER CENTER EAST
ATLANTA, GEORGIA 30346

PLEASE HELP THIS LITTLE BOY OUT. HE IS FROM MY HOME UP NORTH.YOUR SUPPORT IS APRECHIATED PLEASE HELP A DREAM COME TRUE.
73'S.....DE.....KE4SEY

KE4SEY@WA3JPY.#EWN.NC.USA.NOAM

----------oo00oo----------

Nog 'n jaar is agter die rug en ons Jaarvergadering het gekom en gegaan.

Dit is aangenaam om weer die Klub se microfoon in die hand te he as voorsitter vir die volgende termyn vir een jaar. Graag bedank ek die lede wie die vertroue in my gestel het om my weer te kies in die hoedangiheid.

As ons die jaar wat verby is in gedagte roep val dit my op dat dit seker nie die maklikste was vir die Radio Liga in die geheel nie. Die finansies vir die Liga was onder loep geneem en ons weet wat die onvermydelike gevolg was - hoer subskripsies.

Nou ja, ek dink ek het almal wat to hietoe gelees het, seker al warm onder die boortjie. Maar wag, kom ons kyk hoe ons die Wesrand Tak vit U waarde vir U geld gee. Verkeerd gedink, ek gaan nie die ou argumente herhaal nie, net 'n paar gedagtes gee !

Ons het reeds die gelope tyd sprekers gehad wat 'n wye sprektrum gedak het. Daar was gepraat orr SAUK TV en Radio dekking, nagsig instrumente onderhoudvan herlaaibare batterye en vele meer. Van die vergaderings was so goed bygewoon, ander minder goed. Ons wil weer sprekers kry om oor interesante onderwerpe te kom praat, maar benodig U, die lede se insette om te bepaal waarin U belangstel en moontlik ook vir ons kantak persone se name te verskaf.

Daar gaan ook op kommitee vlak ondersoek word watter projecte aangepak gaan word. Wat van QRP toerusting bou ? Die gebruik daarvan, moontlike QRP ekspidisies ensovoorts. Die veld is groot, maar die kommitee kan net voorstelle maak, dir is die lede wie moet deelneem om 'n sukses van enige projek te kan maak.

Indien ons so 'n bietjie herkou aan bogenoemde kom ons tot die slotsom dat die Wesrand Tak daar is om vir sy lede. Sonder die samewerking van ons lede kan die kommitee min verrig en sal die tak nie vorder soos ons dit graag wil sien nie.

Die volgende is op ons agenda binnekort plaasvind en ons het U ondersteuning nodig:

'n HAMNET oefening in die Krugersdorp area - kry tussenin mibiels toerusting

agtermekaar.

Die RIE (Roodepoort International Eisteddfod) is voor die deur.

HF/BHF Kompetisies binnekort.

Wesrand Vlooimark - 26 Augustus en vele meer word nog gereel.

I hereby want to thank the outgoing committee for their hard work in the past year. All your hard work did not go unnoticed. Cedar, Rad, Rina and Karin who were in the hot seats, a special word of thanks on behalf of all the members of the West Rand Branch.

A word of welcome to the "new" committee. Thanks for accepting or re-accepting the nominations. May the Branch go from strength to strength.

73 de Sarel ZS6APO

The regulatory basis of band plans

Where do bandplans come from and how binding are they?

There is only one radio frequency spectrum and all users,whether they are commercial (broadcasting, business), official (military, public communications, etc) or radio amateurs, must be accommodated within it. This calls for international agreements between countries which take the form of a Convention, signed by all governments at regular World Radio Conferences (WRC s). The administration of this complex business is performed by the International Telecommunications Union (ITU). The ITU publishes and enforces the agreements reached at the WRC in the form of international frequency allocations or band plans which are binding on all signatories of the Convention.

It is incumbent upon each signatory government to allocate spectrum in terms of the ITU band plan and to administer the use thereof according to the ITU regulations, which form part of the convention. Individual governments can deviate from the ITU bandplan for technical or other valid reasons. Such deviations must, however, be shown in the ITU band plan documents as "Notes".

Since there are differences in spectrum usage around the world, the convention makes provision for three Regions, each with its own ITU frequency allocation or band plan. South Africa, along with the entire Africa, Europe and parts of the Middle East falls within ITU Region 1. The ITU band plans make provision for band segments reserved for the Amateur Service, either exclusively or on a shared basis. National governments allocate amateur bands accordingly but can deviate from it. Amateur Radio organisations can only officially influence the decisions of the WRC through their own national government representatives, since only governments can vote at the WRC conference. The International Amateur Radio Union has now achieved observer status at the WRC which had opened the door for more effective international lobbying. This is very important in view of the global pressure on radio spectrum, but does not diminish the necessity for strong national amateur radio organisations with good working relationships with national authorities.

Once segments of radio frequency spectrum or bands have been allocated to the amateur radio fraternity, it is necessary to decide exactly how it should be used to best advantage. Organised amateur radio has formed the International Amateur Radio Union (IARU) to, amongst other matters, attend to the question of spectrum usage or band planning. The IARU is also divided into the three regions of the ITU, each region holding its own conferences where these matters are decided upon. In terms of decisions taken at the conference the IARU secretariat publishes the IARU bandplans, in our case for Region 1. The South African Radio League is a member of the IARU and is bound by that Organisation`s constitution to set out the South African band plans in line with that of the IARU. As on international level, the SARL can deviate from those band plans for sound technical or other reasons, but the deviations should be appended to the IARU band plans as "Notes". To achieve this it is necessary that such proposals should be tabled at the IARU Conference and accepted by it.

IARU and national amateur radio band plans are not generally enforceable by law. Its implementation is based on a most remarkable aspect of our hobby, namely a gentleman`s agree ment to adhere to internationally agreed band plans. This agree ment has proved eminently successful ever since the inception of amateur radio and hopefully will remain so. Non-conformance with the agreement may however expose one to some regulatory sanctions, such as the danger of losing one`s licence for wilfully causing interference to other users of the radio spectrum!

Introduction to the VHF, UHF and some of the microwave bandplans

The band plans which follow are arranged similar to those of the IARU.

1. Columns 1 and 2 follow IARU band plans except in the case of the 6 meter plan where the band allocated to Southern African countries is much wider than that in Europe.

2. Columns 3 and 4 set out the South African usage of specific segments of the bands. Please note that column 3 gives two types of allocation ie. band segments and specific channel frequencies. Also note that in some critical instances the band segment specification incorporates essential guard bands.

3. Where specific band segments or spot frequencies are allocated to across border or international activities it is obviously essential that the international allocations be followed precisely. Examples are EME bands and band segments for other VHF/UHF dx activities such as trans-equatorial propagation, meteor scatter, satellite operation, etc.

4. Channel numbers follow those of the IARU, except for the addition of more explanatory prefixes such as in the case of the 70 cm band where the prefixes differentiate between links, digital and voice repeaters. The channel numbers of the 6 meter band are unique to South Africa.

5. Every Amateur Radio Operator in South Africa should study these bandplans thoroughly to ensure maximum enjoyment for all.

THIS COMPLETES THE INTRODUCTION TO BANDPLANS WHICH WAS DRAFTED BY PHILIP ZS6CON DURING THE COURSE OF LAST YEAR WHEN UNDERTAKING THE PUBLICATION OF THE REPEATER HANDBOOK. NEXT MONTH WE WILL CONTINUE WITH PUBLISHING THE BANDPLANS PROPER.

Radio Tips: Amateur Satellite Frequencies and Modes

The amateur "space fleet" is constantly growing. In fact, by the time you read this, two more ham satellites may be in orbit.

Here is a chart of satellite frequencies according to the modes they use. Whether you operate SSB, CW, FM or packet, there's a satellite waiting for you to try! For more information, pick up a copy of the *Satellite Experi-menter's Handbook*. Contact your favorite dealer, or see the *ARRL Publications Catalog* elsewhere in this issue.

Satellite	*Uplink (MHz)*	*Downlink (MHz)*
SSB/CW		
AMSAT-OSCAR 10	435.027—435.179	145.825—145.977
AMSAT-OSCAR 13	435.423—435.573	145.825—145.975
	435.601—435.637	2400.711—2400.747
Fuji-OSCAR 20	145.900—146.000	435.800—435.900
RS-10	145.860—145.900	29.360—29.400
RS-12	21.210—21.250	29.410—29.450
RS-15	145.858—145.898	29.354—29.394
Packet—1200 bit/s		
(FM FSK uplink, PSK downlink except as noted)		
AMSAT-OSCAR 16	145.90, .92, .94, .96	437.05/437.026
DOVE-OSCAR 17	None	145.825
Telemetry only. FM FSK downlink.		
WEBERSAT-OSCAR 18	None	437.10
Telemetry and images only.		
LUSAT-OSCAR 19	145.84, .86, .88, .90	437.126/437.15
ITAMSAT-OSCAR 26	145.875, .900, .925, .950	435.870
MIR Space Station	145.55	145.55
Packet mailbox. FM FSK simplex.		
Packet—9600 bit/s		
(FM FSK uplink and downlink.)		
UoSAT-OSCAR 22	145.900, .975	435.120
KITSAT-OSCAR 23	145.85, .90	435.175
KITSAT-OSCAR 25	145.87, .98	436.50
FM Voice		
AMRAD-OSCAR 27	145.850	436.800
Repeater. Weekends only.		
MIR Space Station	145.55	145.55
Occasional simplex QSOs with the cosmonauts.		

SOUTH AFRICAN RADIO LEAGUE
WEST RAND BRANCH
LIST OF COMMITTEE MEMBERS AND PORTFOLIOS

SAREL ROSSOUW	ZS6APO	CHAIRMAN	339-1131
TIM STANLEY	ZS6BID	VICE CHAIRMAN	
ERIC LAWRENSON	ZR6ABP	SECRETARY	
SAREL ROSSOUW	ZR6APO	TREASURER	339-1131
CHRIS BOTHAM	ZR6AVA	MEETING SPEAKERS	673-2726
DAVE LLOYD	ZS6ACC	CATERING	407-5510
CEDAR RYAN	ZS6JQ	ANODE	763-6929
CEDAR RYAN	ZS6JQ	BULLETINS	763-6929
CHRIS BOTHAM	ZR6AVA	SPECIAL PROJECTS	673-2726
DAVE CLOETE	ZR6AOC	CLUB HOUSE	679-3991
DAVE CLOETE	ZS6PLC	DIGITAL COMMS	679-3991
DAVE LLOYD	ZS6ACC	RIE COMMITTEE	407-5510
ERIC LAWRENSON	ZR6ABP	SECRETARY	794-2188
GARTH BLAIN	ZS6BXT	TRAINING	672-6161
JOHAN v VUUREN	ZS6JVV	REPEATERS	760-3018
KEITH LIDDLE	ZS6AGF	CATERING	766-3293
KEITH LIDDLE	ZS6AGF	HF CONTESTS	766-3293
LOUISA COLEMAN	ZS6COP	CIVIL PROTECTION	673-1280
LOUISA COLEMAN	ZS6COP	RIE COMMITTEE	673-1280
PETER COLEMAN	ZS6PLC	DIGITAL COMMS	835-2866
PETER COLEMAN	ZS6PLC	BAND PLANNING	835-2866
PETER COLEMAN	ZS6PLC	SA AMSAT LIAISON	835-2866
PETER COLEMAN	ZS6PLC	SAATI LIAISON	835-2866
PETER COLEMAN	ZS6PLC	RIE COMMITTEE	835-2866
RAD H/FIELD-JONES	ZS6RAD	VHF CONTESTS	406-2330
SAREL ROSSOUW	ZS6APO	HAMNET	339-1131
SAREL ROSSOUW	ZS6APO	RIE COMMITTEE	339-1131
STEVEN KING	ZR6SJK	SPECIAL PROJECTS	887-3820
STEVEN KING	ZR6SJK	TRAINING	887-3820
TIM STANLEY	ZS6BID	VICE CHAIRMAN	
TIM STANLEY	ZS6BID	SPECIAL PROJECTS	
TIM STANLEY	ZS6BID	HF CW CONTESTS	
TIM STANLEY	ZS6BID	HAMNET	

BRANCH DETAILS

POSTAL ADDRESS: P. O. Box 562 Roodepoort 1725
TELEPHONE NUMBER: (011) 475-2368
LOCATION OF CLUBHOUSE: Kroton Street, Weltevreden Park

BULLETIN TIMES AND FREQUENCIES.

SUNDAYS: 11:15 start call in of stations
11:30 bulletin starts
145,025/,625 Mhz (West Rand repeater)
7,066 Mhz.

MEETING DATES AND TIMES: ALL MEETINGS START AT 19:30

Branch meetings: **2nd Monday of the Month**
QRP/Construction Group and Satellite interest group: **Ist Monday of the Month**
Committee meetings: **Last Thursday of the Month**
Radio Examination classes: **Every Wednesday Night.**

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RG Type	Conductor Stranding No. x ∅ mm. and Type	Insulation Material and Nominal Core O.D. mm	Type and Number of Braided Shields	Jacket Material and Nominal O.D. mm.	Nom. Imp. ohms	Nom. Cap. pF/m	Nom. Attenuation dB/100 m			Nom. Weight kg/km
							200 MHz	400 MHz	3000 MHz	
RG-8/U	7 x 0.725 BC	PE 7.24	BC–1	PVC 10.3	52	96.8	9.5	15.0	58.0	160
RG-8A/U	7 x 0.725 BC	PE 7.24	BC–1	NC PVC 10.3	52	96.8	9.5	15.0	58.0	160
RG-11/U	7 x 0.40 TC	PE 7.24	BC–1	PVC 10.3	75	67	9.5	15.0	58.0	145
RG-11A/U	7 x 0.40 TC	PE 7.24	BC–1	NC PVC 10.3	75	67	9.5	15.0	58.0	145
RG-58/U	1 x 0.81 BC	PE 2.95	TC–1	PVC 4.95	53.5	94	20.0	31.0	200	45
RG-58A/U	19 x 0.18 TC	PE 2.95	TC–1	PVC 4.95	50	101	23.0	36.0	150	45
RG-58C/U	19 x 0.18 TC	PE 2.95	TC–1	NC PVC 4.95	50	101	23.0	36.0	150	45
RG-59/U	1 x 0.64 CCS	PE 3.71	BC–1	PVC 6.15	73	69	16.0	25.0	97.0	48
RG-59B/U	1 x 0.58 CCS	PE 3.71	BC–1	NC PVC 6.15	75	67	16.0	25.0	97.0	48
RG-62/U	1 x 0.64 CCS	SSP 3.71	BC–1	PVC 6.15	93	44.3	14.0	22.0	60.0	57
RG-62A/U	1 x 0.64 CCS	SSP 3.71	BC–1	NC PVC 6.15	93	44.3	14.0	22.0	60.0	57
RG-62B/U	7 x 0.203 CCS	SSP 3.71	BC–1	NC PVC 6.15	93	44.3	14.0	22.0	80.0	56
RG-63B/U	1 x 0.64 CCS	SSP 7.24	BC–1	NC PVC 10.3	125	36 max.	10.0	14.0	40.0	125
RG-71B/U	1 x 0.64 CCS	SSP 3.71	TC–2	HDPE 6.35	93	44.3	14.0	22.0	60.0	68
RG-108A/U	7 x 0.32 TC 2-COND	PE 2.0	TC–1	NC PVC 5.97	78	80 max.				52
RG-122/U	27 x 0.13 TC	PE 2.44	TC–1	NC PVC 4.06	50	101	35.0	55.0	190	30
RG-174/U	7 x 0.16 CCS	PE 1.52	TC–1	PVC 2.54	50	101	40.0	56.0	210	14
RG-178B/U	7 x 0.10 SCCS	PTFE 0.86	SC–1	FEP 1.78	50	95.1	66.0	90.0	255	9.5
RG-179B/U	7 x 0.10 SCCS	PTFE 1.60	SC–1	FEP 2.54	75	64.0	42.0	52.0	144	16
RG-180B/U	7 x 0.10 SCCS	PTFE 2.6	SC–1	FEP 3.56	95	49.2	24.0	34.0	118	30
RG-187/U	7 x 0.10 SCCS	PTFE 1.52	SC–1	PTFE 2.8	75	64	41.0	52.0	140	15
RG-188A/U	7 x 0.17 SCCS	PTFE 1.52	SC–1	PTFE 2.8	50	95	48.0	65.0	230	18.3
RG-196A/U	7 x 0.10 SCCS	PTFE 0.86	SC–1	PTFE 2.0 max.	50	95	67.0	92.0	250	10
RG-213/U	7 x 0.75 BC	PE 7.24	BC–1	NC PVC 10.3	50	101	9.5	15.0	58.0	162
RG-214/U	7 x 0.75 SC	PE 7.24	SC–2	NC PVC 10.8	50	101	9.5	15.0	58.0	162
RG-216/U	7 x 0.40 BC	PE 7.24	BC–2	NC PVC 10.8	75	67.5	9.5	15.0	58.0	170
RG-223/U	1 x 0.89 SC	PE 2.95	SC–2	NC PVC 5.48	50	101	19.7	29.0	118	51
RG-316/U	7 x 0.17 SCCS	PTFE 1.52	SC–1	FEP 2.49	50	95.2	48.0	65.0	230	18.2

Abbreviations

BC – Bare Copper
TC – Tinned Copper
SC – Silver Coated Copper
CCS – Copper-Covered Steel
SCCS – Silver-Coated Copper-Covered Steel

PE – Polyethylene
PEF – Foamed Polyethylene
SSP – Semi-Solid Polyethylene (Tube and Thread) Insul
HDPE – High Density Polyethylene
PTFE – Polytetrafluorethylene (Teflon)
FEP – Fluorinated Ethylene Propylene (Teflon)
PVC – Polyvinyl Chloride
NCPVC – Non-Contaminating Polyvinyl Chloride