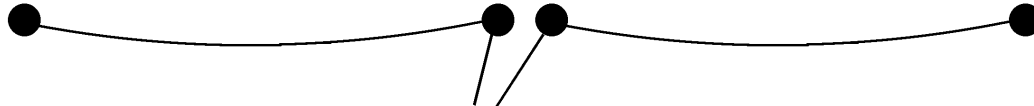


DIPOLE



NEWSLETTER OF THE SANDTON AMATEUR RADIO CLUB

CHAIRMAN'S QSP – December 2002

As always, I am late to provide my contribution to Dipole! This month I will be extremely brief due to severe pressure of time!

First, my best wishes to all of you for the festive season. If you are driving on the roads, please do so carefully and defensively, so that you all return safe and sound in 2003.

Your Committee has planned a great year and the provisional Diary of Events appears elsewhere in this copy of Dipole. Please let us know if there are any obvious conflicts so that we can correct it as soon as possible.

We plan to start morse classes on the air on the 700 repeater soon, and some ZR's are already planning to take their morse tests

during December. This may be a good time for you to knuckle down and get your morse up to speed and join the ZS's on the international bands.

Our first event in 2003 will be the Hunting Lions in the Air contest, in conjunction with the Fourways Lions Club. As it is so early in the year (11-12 January), this one always catches us unawares, as many people are just returning from holiday at this time. Please listen to the club bulletins for details of this fun contest, and consider participating at our club station.

Until next time

73 & 88

Peter
ZS6PHD

BULLETIN TIMES

The Sandton Club bulletin is broadcast every Sunday at 08h45 with a repeat at 17h45 on the following frequencies: -

08h45 145.700 MHz. FM, 438.800 MHz. FM and 7.082 MHz. LSB
17h45 145.700 MHz. FM and 438.800 MHz. FM

DIPOLE December 2002

BULLETIN PRESENTERS

Date	Presenter	Telephone	HF Relayer
01 December	Jenny ZS6JEN	011 888-1252	Harry ZS6HJM
08 December	Steve ZS6XU	011 787-2225	Gordon ZS6GAM
15 December	Paul ZS6GBJ	011 788-2797	Paul ZS6GBJ
22 December	Pauline ZU1PLN	011 706-1950	Steve ZS6XU
29 December	<i>Presenter still to be found – any volunteers?</i>		
05 January	Mike ZS6MWG	011 803-7603	Harry ZS6HJM
12 January	Robbie ZS6RHP	011706-1950	Gordon ZS6GAM
19 January	Gordon ZS6GAM	011787-4665	Paul ZS6GBJ
26 January	Scamp ZS6SMP	011782-0685	Steve ZS6XU

COMMITTEE MEMBERS

Position	Name and Call sign	Home and Work tel nos.	Fax and Cell nos.	email address
Chairman:	Peter Hers ZS6PHD	792-4634 517 2703	- 083 445 4634	zs6phd@mweb.co.za
Vice-chairman:	Graham Hartlett ZR6GJH	824-6017 463-2636	463-8456 082 441 6989	zr6gjh@icon.co.za
Secretary/ Treasurer:	Colin de Villiers ZS6COL	704-1643 458-6677	458-6701	deviic@mweb.co.za
Social	Jan Schubart ZS6ARV,	807-6347 802-1216	802-1911 082 458 1484	jans@netdial.co.za
	Stretch Walters ZR6PTT		082 466 7824	illusion@yebo.co.za
Bulletins	Robbie Parkinson ZS6RAP	706-1950 463-0661	082 567 5649	fredfarm@mweb.co.za
Education:	Steve Baynes ZS6XU	787-2225 787-2225	787-5931 082 929 6817	zs6xu@mweb.co.za
	Stretch Walters ZR6PTT		082 466 7824	illusion@yebo.co.za
Dipole Editor:	Christopher Usher ZS6UC	880-1651	880-0840	usser@metroweb.co.za
Contests:	Scamp Porter ZS6SMP	782-0685 782 0685	888 5051 082 443 0054	
	Peter Hoyle ZR6KZ	782-7749 888-7128	888-8307 083 395 2705	daimon@icon.co.za
QSL Manager:	Ray Vincent-Lambert ZS6RAE	795-2847 795-1368	795-2829	lambert@icon.co.za
Additional member:	Paul Vermaak ZR6POL	083 959 4648		psverm@email.com

DIPOLE December 2002

Sandton Amateur Radio Club

Diary of events for 2003

As at: November 2002

Notes:

- All events and dates subject to change! Please always check the most recent version of the schedule.
- Technical sessions still to be advised by ZS6XU and ZR6PTT

Date	Event	Venue	Responsible
January			
11-12	Hunting Lions in the Air In conjunction with the Fourways Lions Club	QTH of Steve ZS6XU Bond St, Ferndale	Lions liaison: ZS6XU Operators: ZS6PHD
22	SARC Committee Meeting	QTH of Colin ZS6COL	
February			
5	Start of Sandton RAE course	NARC Radiokop	Peter ZS6PHD / Graham ZR6GJH
...	Breakfast and visit to nature reserve	Paulshof nature reserve	Jan ZS6ARV
26	SARC Committee Meeting		
March			
15-16	VHF/UHF Contest – 1 st leg	Breedt's Neck, Magaliesberg	Scamp ZS6SMP / Peter ZR6KZ
26	SARC Committee Meeting		
29	SARL AGM	Bloemfontein	
...	4X4 event		Graham ZR6GJH
April			
...	Visit to Maryvale Bird Park + Potjiekos competition or braai	Maryvale Bird Park, Springs	Jan ZS6ARV
23	SARC Committee Meeting		
May			
10	RAE mock exam and revision day	NARC, Radiokop	
17	RAE Examination	NARC, Radiokop	
18	Fun incident rally and braai	Johannesburg	JAN ZS6ARV
28	SARC Committee Meeting		
June			
...	Talk on contesting	NARC Radiokop	Chris ZS6UC
25	SARC Committee Meeting		
July			
23	SARC Committee Meeting		
27	Visit to antenna testing station	Pretoria	Thomas ZR6TXA / Jim ZS6NS
August			
2	SARC AGM	NARC	
27	SARC Committee Meeting		
September			
17	SARC Committee Meeting		
20-21	VHF/UHF Contest – 2 nd leg	Breedt's Neck, Magaliesberg	Scamp ZS6SMP / Peter ZS6KZ
October			
...	Visit to Johannesburg International Airport: Control tower, emergency services, antenna farm and simulators (if possible!)	Jhb International Airport, Kempton Park	Steve ZS6XU
22	SARC Committee Meeting		
November			
16	Visit to de Wildt Cheetah Farm + Year end braai	De Wildt ?	Jan ZS6ARV

DIPOLE December 2002

COMPETITIONS AND OTHER EVENTS IN DECEMBER 2002 AND JANUARY 2003

December 2002

Wednesday 4	Solar eclipse (see SOLAR ECLIPSE below)
Sat 7/Sun 08	ARRL 160 Meter Contest (www.arrl.org)
Sat 7/Sun 08	Tops 80 Meter CW Contest
Sat 14/Sun 15	ARRL 10 Meter Contest (www.arrl.org)
Sat 21/Sun 22	9A [Croatian] Contest (www.hamradio.hr)
Saturday 28	RAC Canada Winter Contest (www.rac.org)
Tuesday 31	11.59 New Year's Eve Net

January 2003

Sat 11/Sun 12	Hunting Lions in the Air (The rules can be found on www.sarl.org.za/public/contests/lionita.asp . See also the Chairman's QSP and Diary of Events.)
Sunday 12	NRAU-Baltic Contest, SSB
Sunday 12	Midwinter Contest, Phone
Sunday 12	DARC 10-Meter Contest
Fri 24/Sun 26	Port Elizabeth Amateur Radio Society's national VHF/UHF contest (see PEARS NATIONAL VHF/UHF CONTEST <i>below</i>)

For a calendar of HF contests worldwide see Bruce Horn's web site WA7BNM 12-Month Contest Calendar at www.hornucopia.com/contestcal/contestcal.html.

RESULTS OF THE SEPTEMBER 2002 SARL VHF/UHF CONTEST

After a recent amendment to the provisional results, the following results – call signs and points scored - are apparently final. Well done to the club for coming first in its category by a large margin, and to club member Richard ZR6RDU for his result.

Fixed Station All Modes	Field Station All Modes	Fixed Station Fm Only
ZR6ZL 1226	ZS6STN 3519	ZS6XT 293
ZS6PTB 397;	ZS6TDK 1723,5;	ZS6PDK 231
ZS5LEE 226;	ZS6EGB 1327,5;	ZR6RDU 221
ZS5AM 185;	ZS6SRC 745,5	ZS5DG 36
ZR5DK 137.	ZS4BFN 676,5;	
.	ZS4NS 582	

ACCESSING THE 145.650 REPEATER

The 145.650 repeater needs an 88.5Hz CTCSS tone to access it. CTCSS (continuous tone coded squelch system) functions by using a sub-audible tone that is superimposed by a transmitter on a transmitted signal to control a receiver's squelch.

The repeater is the Deutsche Welle repeater. It is apparently in Honeydew, rather than Sandton as stated in the Band Planning Committee list of 2 meter repeaters in Division 6 and in the November Dipole.

70CM REPEATERS IN AND AROUND DIVISION 6

<u>CLUB</u>	<u>REPEATER LOCATION</u>	<u>TRANSMIT FREQUENCY (MHz)</u>
The DX Club	Loch Vaal	431.300
Pretoria	Klapperkop	434.725
Kempton Park	Kempton Park Club House	434.750
Potchefstroom	Sandnek near Shamrock	438.325
Magalies	TNT property, Magaliesberg	438.575
Sasolberg		438.600
Alberton		438.625
Johannesburg	Northcliff	438.650
OTL	Steenkampsberg	438.675
Alberton	Primrose Hill	438.700
Magalies	Waverleykop, Magaliesberg	438.750
Noord Wes	Klerksdorp	438.775
AR Marshals Ass	Kyalami Motor Race Track	438.775
Sandton	Bryanston water tower	438.800
Pretoria	Klapperkop	438.825
SABC	Radio Park	438.850
Potchefstroom	Blitzkop on farm Brakspruit	438.875
Rustenburg	Magaliesburg Co-op	438.875
Club 2000	Potchefstroom	438.900
Rand Radio Club	GEC Building, Kew, Alberton	438.950
East Rand	Brakpan	438.975
West Rand	Wilro Park water tower	439.000

OTHER 70CM REPEATERS

<u>CLUB</u>	<u>REPEATER LOCATION</u>	<u>TRANSMIT FREQUENCY (MHz)</u>
<u>Tygerberg</u>	<u>Tygerberg, Cape Town</u>	<u>434.625</u>
<u>Durban North</u>	<u>Durban North water tower</u>	<u>434.700</u>
<u>Pietermaritzburg</u>	<u>Kelly Hill, Greytown</u>	<u>434.750</u>
Border	Vincent Park Centre, East London	438.650
<u>Port Elizabeth</u>	<u>Newton Park</u>	<u>438.650</u>
<u>Bucshee/Fortklapperkop</u>	<u>Hippo Eagle's Nest,</u>	<u>438.725</u>
<u>Highway</u>	<u>79 Haygarth Road, Kloof</u>	<u>439.125</u>

The receive frequency is 1.600 MHz below the transmit frequency.

The editor would welcome corrections, additions and other comments on the 2-meter repeater table in the November issue of Dipole and on the 70cms repeater schedule on this page. Email him at ussheer@metroweb.co.za.

I.R.L.P.

Restricted IRLP operating hours for the Durban IRLP node:

Due to bandwidth restrictions imposed by the Durban ISP, the IRLP may only be used from Monday to Friday between 18h00 and 08h30 and during weekends from 18h00 on Friday to 08h30 on Monday.

During working hours, outgoing calls are disabled, but incoming connections are still allowed. During the restricted hours, incoming callers are likely to be told that there are time restrictions and be asked to call back outside these times.

Current User Codes

There have been a number of changes to node status codes since the inception of the system. The latest codes are –

- *1 - checks current node status (link off/connected to node xxxx)
- *2 - checks current time
- 73 - disconnects
- *3 - checks a previously called busy node for when it becomes free
- *4 - checks the node number, time and date of the last node connected
- *5 - tells the number of connections since last counter reset.

Four Digit node numbering

In order to accommodate the ever-increasing number of nodes, the IRLP node-numbering scheme has been upgraded from a 3-digit to a 4-digit node number. This was done by adding a 0 to existing node numbers – thus the Johannesburg (East Rand) node has changed from 840 to 8400 and the Durban node from 830 to 8300. With the 4 digits numbering scheme, the connect and disconnect procedures may differ slightly previous practice –

- to connect send the 4-digit node number only
- to disconnect send 73

SOLAR ECLIPSE

PATH OF TOTALITY

When you see a solar eclipse the sun and the moon both look the same size. In fact, the sun is 400 times the moon's diameter but the sun is 400 times further away from earth. When standing on the right spot at the right time on 4 December 2002 you will see a total eclipse with the moon covering the entire sun. This spot is anywhere in the path of totality.

The path of totality of the eclipse will enter South Africa at 08:19 CAT. The width of the path will be about 70km.

DIPOLE December 2002

Most people do not see more than one total eclipse in their lifetime. So, even if you are outside the path of totality, at least take this opportunity to see a partial eclipse. But please take the well-publicized viewing precautions.

SPECIAL EVENT STATION

A mobile special event station ZS6SOL will be on the air from 30th November to 7th December and will give a commentary from the South bank of the Limpopo River. The station will operate on 40, 20 or 15 meters - probably around 7.075, 14.200 and 21.155 MHz depending on band conditions.

SOLAR ECLIPSE D-LAYER IONOSPHERIC EXPERIMENT - RADIO AMATEURS AND SHORT-WAVE LISTENERS INVITED TO PARTICIPATE

On 4 December 2002 most of the country will experience a partial solar eclipse.

A number of observers from the University of the Witwatersrand School of Physics and UNISA Department of Astronomy as well as students from the American International School will conduct an experiment to study the effect of the eclipse on medium wave propagation.

For the experiment to be successful the group has enlisted the assistance of a community radio station *Radio Today* which operates at the top end of the medium wave band.

All radio amateurs and short-wave listeners are invited to monitor "Radio Today" on 1465 kHz for about 24 hours starting on 3 December 2002.

Some earlier experiments carried out by Tony Voorvelt ZS6CCD have shown that at night the station can be heard over 1000 kilometres.

HOW TO PARTICIPATE IN THIS RESEARCH PROJECT

It is important to note how the monitored signal changes from daytime conditions (if heard) to nighttime conditions and then at sunrise on 4 December 2002 till the time of eclipse maximum or totality, depending on where the receiving station is situated.

The exercise will hopefully show the effects of the sun on D-layer propagation.

THE D LAYER

The D-layer is the lowest layer in the ionosphere at approximately 70 km above the earth and is very dependant on the sun for its existence. It is also that part of the ionosphere that affects the propagation of long and medium wave frequencies between 20 kHz and 2 MHz.

All reports are important, so do not think that because you are situated out of the main eclipse area your signal report will be of no value to the research team.

Tony comments that in these times of hi-tech-off-the-shelf radio equipment, it may seem that there is little that the average amateur and short-wave listener can do to further scientific knowledge in radio communication science. Nothing is further from the truth as will be demonstrated with this project.

DIPOLE December 2002

EQUIPMENT REQUIRED

The only equipment that you will need is a reasonably good radio receiver, a wire antenna approximately 20 metres long thrown into a tree or suchlike and a fairly accurate clock. The clock can be set on the short-wave time service of WWV on 10 MHz or 15 MHz.

ACTUAL RESEARCH

At about sunset on 3 December tune your radio receiver into *Radio Today* on 1485 kHz. You may need to listen very carefully for the station, as it may be very weak in your area. As the evening progresses the signal should get stronger. However during the summer months you may have QRN from lightning and this could make things a little difficult.

The *Radio Today* transmitter is situated in Marks Park in Johannesburg, LAT 26 09 37S LONG. 28.00.11E. It consists of a Nautel FET transmitter feeding a 1/10 wavelength vertical antenna with capacity hat and ground radials.

What makes this station ideal is that it broadcasts up at the top end of the medium wave band (1485 kHz), that it is on the air 24 hours per day and that it uses a low power transmitter which makes it particularly very sensitive to ionospheric propagation conditions.

An HF station will be set up at the Westrand Radio Club and the research site at Limpopo. Reports may be called in on 7080 and 14280 kHz.

REPORTING ON THE INTERNET

Download a report form from the SARL website. Fill it in and send it to Wits at tony@physnet.phys.wits.ac.za and armi@sarl.org.za.

Please send your reports to both email addresses. All reports received at ARMI will go into the draw for an attractive calculator-world clock combination. The winner will be announced the Sunday after the eclipse. Please ensure you include a telephone contact number.

OTHER MEDIUM WAVE STATIONS

If you live too close to *Radio Today* or can't hear the signal, choose another station at the top of the medium wave band that you can hear at night and monitor it for a few days to get the feel of how it performs at your location.

PEARS NATIONAL VHF/UHF CONTEST

The Port Elizabeth Amateur Radio Society's national VHF/UHF contest will take place from 18:00 SAST on Friday 24 January to 18:00 SAST on Sunday 26 January 2003. It is open to all amateurs in South Africa and neighbouring countries. The contest is scheduled for the best time of the year to make long distance tropo contacts on the 144, 432 and 1296 MHz bands. The 50 and 144 MHz bands also provide meteor scatter contacts in the mornings and sporadic-E openings could appear in the daytime, listen to the VHF beacons.

DIPOLE December 2002

RAINFALL STATISTICS FOR OCTOBER 2002

(Compiled by Colin ZS6COL from his own readings):

Total for this month:	75	100% of average
24 year average for this month:	75	
24 year highest rainfall in this month:	170	1993
24 year lowest rainfall in this month:	8	1999

Total for the year (since August):	93	83% of average
24 year average since August:	112	
24 year highest rainfall since August:	224	1993
24 year lowest rainfall since August:	22	1999

Number of days rain this month:	9
24 year average for this month:	8

Number of days rain since August:	14
24 year average since August	12

Summary: The average for the month was exactly equal to the 24 year average. The year to date total is somewhat behind the average at 83%.

HAM RADIO OPERATING MANUALS ON THE WEB

During call-ins after the club's Sunday bulletin on 17 November, the editor of Dipole mentioned that the ARRL current feature article of November 16, 2002 entitled *Surfin': Manuals for Nothin' and Your Searches for Free* states that the Federal Communications Commission (FCC), a USA government agency, has many user manuals, external and internal photographs, schematic and block diagrams, test reports and sometimes parts lists on file as well as other documents relating to every piece of equipment that requires FCC certification. The department within the FCC that manages this service is the Office of Engineering and Technology (OET). According to the author of the article, Stan Horzepa, WA1LOU, the OET has made it very easy to get this information, provided you know where to look. This sounded great news, but the editor has found that obtaining the information is not all plain sailing.

To get access to all this information, first go to the OET's FCC ID search page - www.fcc.gov/oet/fccid/. In the middle of the page are two blank fields that you can fill in with information on the radio or other device in question. The FCC ID number should be on a label on the equipment if it was sold in America. However, it is unlikely to be on any equipment bought in South Africa.

The first three letters or numbers of the ID show the manufacturer. The remaining letters or numbers designate the equipment product code. For example, the ID for the Yaesu VX-5R handheld is K66VX-5R. K66 is Yaesu's FCC number, and VX-5R is the equipment product code.

After entering the ID in the appropriate field, click the "Start Search" button. You should obtain a web page with a list of possible matches. All the links take one to the same web page. The relevant links are in the second column labelled "Display Exhibits." Under that column are selections labelled "Detail" and "Summary." While the "Summary" link will take one to a page

DIPOLE December 2002

that only lists files that are available, the "Detail" link takes one to where the resources can be downloaded.

If you click on the "Detail" link, you will arrive at a web page listing of all of the documents the FCC has on file for the item concerned. However, the manufacturer might subsequently have updated the material submitted to the FCC as part of the certification process.

On the *Surfin'* article of November 23, 2002 entitled *One Hundred and Counting*, the same author says that shortly after his previous week's *Surfin'* column hit the web, he began receiving e-mails from people who were unable to obtain information from that web site. Their attempts resulted in the message: "There are no attachments for public review associated with this application".

The reason for this seems to be that an applicant who submits information to obtain an FCC ID number, may opt to pay an additional fee to suppress public viewing of the submitted data. As a result, some FCC ID numbers provide access to information, while others do not.

There is no consistency regarding the suppression option. The same applicant may choose to suppress information for one piece of equipment and not another. Thus, Yaesu chose to suppress information regarding its FT-530, but not its VX-5R.

Stan Horzepa does not know how to find the FCC ID number for a specific piece of equipment which doesn't have the FCC ID number label on it or in the equipment manual.

Incidentally, he received more e-mail with regards to his *Surfin' Manuals for Nothin'...* article than any other instalment of the column so far.

Contributions of articles and letters to the editor and ham ads

The editor thanks those who contributed to this issue of Dipole and invites contributions to future issues on ham-related topics to Dipole.

The editor would also be glad to receive readers' views on which Dipole articles are liked and which are felt to be of little interest. Ideas for future article or topics would also be welcomed. So would any success stories in getting equipment information from the OET's FCC ID search page.

If club members have ham equipment for sale or to swap or if they want any ham items, they may email an ad to the editor. Small file pictures of any items offered may be submitted.

Contributions, letters, comments and ads may be emailed to the editor at ussheer@metroweb.co.za.

"Amateur radio is silent now - its keys stilled, its microphones lifeless. Dust gathers in scores of thousands of radio shacks, their operators off to war."

This is the first paragraph of chapter one of the 1944 edition of ARRL's *The radio amateur's handbook*. They weren't all the good old days.