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HAMS Waywite News

MIDLANDS AMATEUR RADIO CLUB

P.O.Box 1076, HILTON, 3245

May 2008



AFFILIATED TO
THE SARL & IN
ASSOCIATION
WITH THE NATAL
CARBINEERS

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The Chairman's Fax

The days do go past so quickly now days and I seem to be running out of time to do everything that has to be attended to. Do try the new repeater on 145.775 which is situated at Windy Hill. It does seem to be working very well, thanks must go to Mike, ZR5ML, and Shaun, ZR5S who have really done us proud with all the time that they have spent on this temporary project.

Don't forget the Chinese auction at our next meeting. There is a complete HF transceiver with all its gadgets. The reserve price is R200.00 and all you have to do in order to get this bargain is to make an offer in excess of the reserve price. The lucky bidder will be the proud owner of this equipment which last worked in January this year, all funds received will go to the Club bank account by kind favour of OM Des, ZS5CJ from Howick. Thanks Des

† *It is with regret that we announce the passing of Brian Steele, the local transformer winder who at one time was a member of the PM Branch of the SARL. Our thoughts go out to his wife Sybil and his family.*

Please if you receive this copy of the May newsletter it is truly hoped that you will make an effort to attend the meeting on the 17 May 2008. There are numerous items on the agenda which relate to the current membership and your attendance is required to finalise these matters, this means you! At this stage there are only four members who are exempt from attending meetings.(ZS5NZ, ZS5TZ, ZS5HL,ZS5AH) And of course those who live too far to attend.

Please try to support the Thursday Net at 19.30 hrs On 3,620 MHz

Cu at the meeting

73 DE ZS5MQ

PLEASE NOTE THE NEW CLUB HOUSE HOURS.

Saturday from 08:30 to 10:30

The club meets on the third Saturday of every month, except December at 13:00 at the Natal Carbineers Conference Center, Geere Street, PMB.

Sunday Morning Bulletins (MARC and SARL) as well as the Club Net from 07:45 on 3620 kHz and the 145.750 MHz repeater.

Sunday Club Net Controller: Mickey Esterhuysen, ZS5QB

National News Bulletin: Robin Seal, ZS5MRS

From the Editor

The next few months are going to be busy ones for MARC. Members will have to do some thinking and some doing. Thinking about your new committee and whether YOU are willing to serve on it. Doing to finish your project for the coming Walter Reid construction competition - yes, there is still some time left! The cold winter nights have arrived and there is nothing better for cold hands than a hot soldering iron.

Is the human brain a digital system? As discovered by Luigi Galvani some time before 1780, an electric pulse applied to a nerve causes the muscle to which it is attached to contract. Some modern research has shown that a single pulse would cause a muscle to contract slightly. To increase the contraction these pulses are sent more frequently which, to my mind, is nothing else but Pulse Width Modulation - the same technique that we use to vary the speed of electric motors using a computer. Even our common nerve endings that allow outside information such as touch or temperature to be sent to the brain convert pressure or friction to electrical pulses - more digital modules! The time to go digital is not tomorrow, it was very, very long ago! We just have to keep up.

73,
Wessel, ZS5BLY.

CLUB BANKING DETAILS

Bank: First National Bank	Branch: Bank Street	Branch code: 220-825
Account holder: Midlands Amateur Radio Club	Account Number: 625057756507	
Type of account: Current	<i>Reference to use is your call sign</i>	

News and Views

① Today (06 May, 2008 Ed), ZR5ML (Mike), ZR5X (Shaun) and myself, met at the Durban University to re-install an APRS digipeater to cover the greater Durban area. This, after lightning unmercifully relinquished the old digi, Antenna, KPC3 tnc and Alinco radio beyond repair. This time we installed a xtal controlled Midlands radio (xtal to eliminate some of the intermod suffered in this area), a diamond x-200 antenna (a smaller antenna this time, mounted below the top of the 6m mast) a "UI-Digi tnc and a co-axial surge arrestor.

When powering up, we were somewhat disappointed. The digi was receiving the i-gated traffic from ZS0PMB (Hilton) but was not digipeating it. We thought that the smaller antenna may not have had enough gain and the s/n ratio was too low. We returned home with our shoulders somewhat drooped. But wait, what's this.....? From PMB, I could log into ZS0DBN and communicate quite well with it. No time-outs or repeated packets. Mmmmmmmmm? so DBN was receiving us ok, and PMB was receiving DBN ok. After some Googling, I came up with an incorrect setting in UI-Digi (ZS0DBN). After correcting this remotely, DBN fired up and digi'ed all the traffic from PMB. So it all ended well. Durban now has APRS coverage again.

Our next step is to move the Hilton (ZS0PMB), up to higher grounds onto Mt Gilboa on the Karkloof. This leaves ZS0EST (Estcourt) too close (40km) to PMB for any valuable use. So we will move Estcourt to Harrismith, on top of Van Reenens Pass. We are hoping PMB will talk to ZS0HRS (Harrismith) reliably. If this works out, we will have the N3 covered from Durban to the Vaal Dam. That is Massive, for only 3 digi's.

I would still like to see a digi in the southern Drakensberg. Underberg or Franklin. And in the future, a south coast digi and a north coast digi. All on 144.800mhz.

(Thanks to Shaun, ZR5S for the above information)

① The Swartberg repeater has had its share of lightning and strong winds as well. First lightning took out the receiving antenna. This was replaced only to be taken out, this time with the transmitting antenna, by storm winds. The antennae have been repaired by ZS5BLY and returned for testing. It seems that there was more than antenna damage done by the discharge and the repeater is now with Craig for repairs.

① Work is progressing well on the Windy Hill and Mt. Gilboa sites. Keep your ears open for the testing phase, and possibly for a call for help: it's your repeater, so roll up those sleeves.

Good-bye to the Radfords

By the time you read this Rod and Rose will be winging their way towards their new home in New Zealand. At the last meeting we said our farewells to the Old Timer and his YL over a spread supplied by the good ladies of the club. Thanks to Bert and Barbara, Gail, Gretha, Sylvia and Elain for their efforts- all of us enjoyed it very much.

In his farewell speech OM Rod entertained the meeting with some interesting stories about happenings in the Club over the past years. OM Rod was sent away with a certificate of good behaviour and was also given Life Membership of MARC. The chairman, OM Bert then presented small gifts to Rod and Rose. OM Errol, ZR5EGW (he has known Rod for a very long time, but was very discreet!) then spoke for the members and thanked Rod for his contributions to the Club - even those tongue-in-cheek challenges to any newly elected chairman!



Rod ZS5RK

Up goes Mike and the Antenna!



Mike, ZS5BGV

Under the watchful eye of the chairman (who remained firmly on *terra firma*) OM Mike, ZS5BGV scaled the tower at the Club house to install a hallyard with which the 80m antenna could be raised and lowered. The previous one had mysteriously disappeared under the watchful eyes of the Army!

I think that this is a good time to thank all those members who climb towers, scale cliffs, battle their way up mountains, make and paint enclosures, fix antennas and repeaters, keep the club house neat, and spend a considerable amount of their own time and money on all these activities. This is what keeps the experimenters experimenting and the talkers talking: this is Amateur Radio!

It is not only the technical chores that have to be done, there are many other activities which could also use more bodies and more hands and more input from anybody willing to do so. Any volunteers?

Repeaters

The 145,775 MHz repeater has been moved to Windy Hill for a trial period. Please use it whenever possible so that the coverage can be determined and a decision taken as to whether it is to remain there or not.



Standard Resonators		
Power Rating 400 Watts		
Part Number	Description	Approximate Bandwidth
RM-10	10 Meter	150-250 kHz
RM-12	12 Meter	90-120 kHz
RM-15	15 Meter	100-150 kHz
RM-17	17 Meter	120-150 kHz
RM-20	20 Meter	80-100 kHz
RM-30	30 Meter	50-60 kHz
RM-40	40 Meter	40-50 kHz
RM-75	75 Meter	25-30 kHz
RM-80	80 Meter	25-30 kHz



Ameritron's SDA-100 is without a doubt the best built, best looking, best performing HF Mobile Screwdriver Antenna in the world! When properly installed on your vehicle this antenna will provide continuous coverage from 10 Meters through 80 Meters with a 6 foot whip. Remove the whip to get 6 Meters through 40 Meters coverage.



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X200
 144/430MHz(2m /70cmz)
 Gain:6.0dB(144MHz) ,8.0dB(430MHz)
 Max. power rating:200W
 Impedance:50ohms
 VSWR:Less than 1.5:1
 Length:2.5m
 Radial length:approx.52cm
 Weight: 1.2kg
 Rated wind velocity: 50m/sec.
 Mast diameter accepted:30mm to 62mm
 Type:2 x 5/8wave(144MHz),4 x 5/8wave(430MHz),FRP outershell



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Contact: - Shaun Rudling (ZR5S) on 082-676 1488 or
shaun@pmbnet.co.za

The Mass of the Earth

As Sir Isaac Newton pointed out, objects have a gravitational attraction for each other, which depends on their mass and the distance between them. So if an object in space passes Earth, and its path is affected by the gravitational pull of our planet, we have a way of measuring the Earth's mass.

The astronomer Edmond Halley (1656 - 1742) suggested that by observing the rare passage of Venus across the Sun from certain points on the Earth would yield the distance from Earth to the Sun. Scientists travelled to more than 100 spots around the world - including South Africa - to make their measurements in 1761. These turned out contradictory and inconclusive, but Captain James Cook's measurements in Tahiti provided the basis for the calculation that the Sun is about 150 million km away from Earth.

London scientist, Henry Cavendish, suffered from extraordinary shyness, but was able to get on with all sorts of experiments on his own, including testing the equipment made by a parson called John Michell for measuring gravitational deflection - and hence the mass of the Earth. Bill Bryson explains: "The work was incredibly exacting, involving 17 delicate, interconnected measurements, which together took nearly a year to complete. When he at last had finished his calculations [in 1798], Cavendish announced that the Earth weighed.....six billion trillion metric tonnes, to use the modern measure." This is close to what today's sophisticated techniques would also yield. "All of this merely confirmed estimates made by Newton 110 years before Cavendish without any experimental evidence at all," Bryson adds.

..... and its Size.....

One of the first people to try to work out the size of the Earth was English mathematician Richard Norwood (1590 - 1675). He took two years to measure the distance from the Tower of London to York with a piece of chain, and used the result, together with measurements of the angle of the Sun at the two places, to calculate the length of one degree of the meridian as 110,72 km. Others followed with more measurements but came to different conclusions about whether the Earth was a perfect sphere and in what way it wasn't. One team spent more than nine years trying to take accurate measurements in the Andes, near the equator.

In fact the Earth's circumference is greater around the equator (40 075 km) than through the poles (40 008 km).

.....as well as its age.....

Scottish scientist James Hutton presented proof in 1788 that the Earth was much, much older than the 6 000 years generally believed at the time. By the end of the 1880's, physicist Lord Kelvin had refined his own estimate of the Earth's age to 20 million years. Once the steady, measurable rate of radioactive decay had been discovered in 1902, scientists could work it out more accurately.

The most recent accepted calculation, made by geochemist Clair Patterson at the California Institute of Technology in 1956, is 4,6 billion years, based on precise measurements of the lead/uranium ratios in old rock.

The oldest rocks on Earth are about 3,8 billion years old, so there is almost no trace left on the planet about the very early Solar System. That's why Patterson used meteorites as his rock samples.

The chemical evidence is that life on Earth began somewhere between 3,8 and 4,0 billion years ago, and the oldest fossils and biodiversity have been dated back about 3,5 billion years ago.

.....and keeping track!

Nowadays, scientists can make all sorts of precise measurements of the Earth. One system developed by the French government agency, *Centre National d'Etudes Spatiales* (CNES), is called DORIS (*Doppler Orbitography and Radiopositioning Integrated by Satellite*). It determines the orbits of satellites equipped with receivers, using ground stations on Earth as reference points. It is used to study the levels of oceans and ice fields and the shape and movements of Earth, including continental drift.

("Quest" Vol 4, No 2)

Bulletin Readers

11th May	Bert	ZS5MQ
18th May	Wessel	ZS5BLY
25th May	Mickey	ZS5QB
1st June	Mike	ZS5BGV
8th June	Robin	ZS5MRS
15th June	Bert	ZS5MQ
22nd June	Wessel	ZS5BLY

On the Giggle-Hertz bands

(Staff that man the Technical Support desks at computer companies are a very special breed. I will try and present some of their stories here)

A man, attempting to set up his new printer, called the printer's tech support number complaining about the error message: "Can't find the printer".
On the phone he said that he even held the printer up in front of the screen, but the computer still couldn't find it.

E-mail from a friend: "CanYouFixTheSpacebarOnMyKeyboard"

They said it

Why do they call it rush hour when nothing moves?	Robin Williams
No investigation, no right to speak.	Mao Tse-Tung
Perhaps one has to be very old before one learns how to be amused rather than shocked.	Pearl S. Buck

NEXT MEETING

The next meeting of the Club will take place on Saturday, 17th May, 2008 at the usual venue starting at 13:00. Committee meeting will start at 12:00. Remember the Chinese Auction! This means that you have to place your bid for the radio in a sealed envelop and hand it to the secretary (the process sounds a lot like the tender procedures for a government contract, but I doubt whether the secretary can be bribed.!)