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WATTS

09-2012

Year 82 + 9m

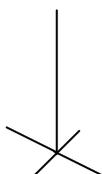
Monthly newsletter of the Pretoria Amateur Radio Club
Maandelikse nuusbrieff van die Pretoria Amateur Radio Klub.

✉ PARC, PO Box 12602, Die Hoewes, 0163, RSA

web <http://www.parc.org.za> mail: zs6pta@zs6pta.org.za

Bulletins: 145,725 MHz 08:45 Sundays/Sondae
Relays: 1.840, 3.700, 7.066, 10.135, 14.235, 51.400, 438.825, 1297 MHz
Activated frequencies are announced prior to bulletins

Swapshop: 2m and 7.066 MHz Live on-air after bulletins
Bulletin repeats Mondays | herhalings : Maandae 2m 19:45



APRS Project

This club project has been ongoing since SMT assembly training started at the end of January.

Get-togethers to sort out hiccups in the assembly and getting APRS units operational have occurred a few times since then and the picture here is from last July.

Finalization for many participants will probably be after our fleamarket on 1 September.

See also page 5.

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- Subscription renewal notices
- Technical | AGM notice – AJV kennisgewing
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- | Thermoelectricity
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In hierdie uitgawe

Next fleamarkets and socials 2012

1 Sept
8 Dec

Venue: PMC, Silverton

PARC Management team / Bestuurspan Aug. 2011 – Aug. 2012

Committee members

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AGM | Saturday 8 September 2012 | AJV

Venue: Eldo Falls 11 AM – details p3

There will be a presentation by Hans v/d Groenendaal ZS6AKV

Motions are awaited

**Members must please indicate if they will attend the AGM for the purpose of budgeting and catering.
Lede moet asb laat weet of hulle sal bywoon vir begroting- en spysenieringdoeleindes.**

Please notify the secretary Jean ZS6ARA (see above) or any committee member

**!! Only paid-up members may nominate and vote at the AGM.
!! Slegs opbetaalde lede mag by die AJV nomineer en stem.**

ARE YOU OVERDUE?

SARL Subscriptions (were due 1 July)

Ordinary member R400
Licensed senior member (retired persons over 65) R230
Family member R130
Student member R65

PARC SUBS / LEDEGELD (were due 30 June)

Please remit your subs in time to our treasurer or by transfer to:

Betaal asb. u ledegeld betyds aan ons tesourier of per oorplasing aan:

**Bank : FNB Ordinary members/ gewone lede R150
Branch : 25 20 45 Spouses, pensioners R50
Account : 546 000 426 73**

Your call sign must appear as statement text! !

SUPPORT YOUR CLUB AND THE SARL

Birthdays Verjaarsdae

Sept

- 21 Johan ZS6JHB
- 24 Estie ZS6CC
- 26 Graham ZS6GJR



Anniversaries Herdenkings

Sept

- 02 Lily and Harry ZS6AMP (56)
- 07 Gerda and Roger (10)
- 28 Retha and Roy ZS6XN (27)
- 29 Karin en Sarel ZS6EK (33)
- 30 Elma en Chris ZS6LOG ()

Joys and Sorrows | Lief en Leed

Our little Angel

From a heartbroken Roy ZS6MI and Marita

Still a baby



In hospital



Vicky and Marita



Whilst fighting back the tears I am trying to tell you about my little Angel that touched our lives. She was a three year old 3 kg Yorkie. I was really blessed to have had 3 years of her unconditional love and exceptional friendship. Sometimes she would run down the passage looking for me and then once she found me she would greet me with a special high pitched little growl, after which we would have a short chat she would then jump onto the bed and wait for me. Never in my life have I come across a tiny little bundle of love that I could connect with and communicate with and have a real soul mate for the few years of her very short life.

My little darling the loss of your presence is being felt by everyone here, I will remember and miss you every day, the house has gone terribly quiet, your happy excited bark is no longer there to be heard, your excited way of running out into the garden every morning and greeting the day is no longer here

She developed renal failure and within a too short time after diagnosis and a very a severe treatment her little body just simply could not regain kidney usage and eventually she passed away.

My thanks go to the staff of the Valley Farm Animal Hospital for their loving and unconditional care and concern for my little angel. Unfortunately after diagnosing renal failure it is often too late and the patient has then reached the point of no return. God Bless my Little Angel

Diary | Dagboek (UTC times)

Sept

- 01-02 All Asian DX Contest Phone 00:00-24:00
- 02 DARC Digital Contest 11:00-17:00
- 08 PARC AGM**
- 15-16 SARL VHF/UHF Analogue/ Digital Contest 10:00-10:00
- 29-30 CQWW RTTY Contest 00:00-24:00

† Some of us oldies will remember **Les ZS6NV** who frequented our repeater many-a-day as well as HF every morning. He passed away 9 August after a long illness.

Molly ZR6MOL had a relapse and is back in special care.



PARC AGM 8 Sept.

Our AGM will be held at Eldo Falls (large lapa) 11 AM:
220 Ashwood Drive
C/O Hans Strijdom Drive
Clubview, Centurion



Attendance and braai catering only R45 !

PARC Fleamarket 28 Aug.



.....and some rear ends....





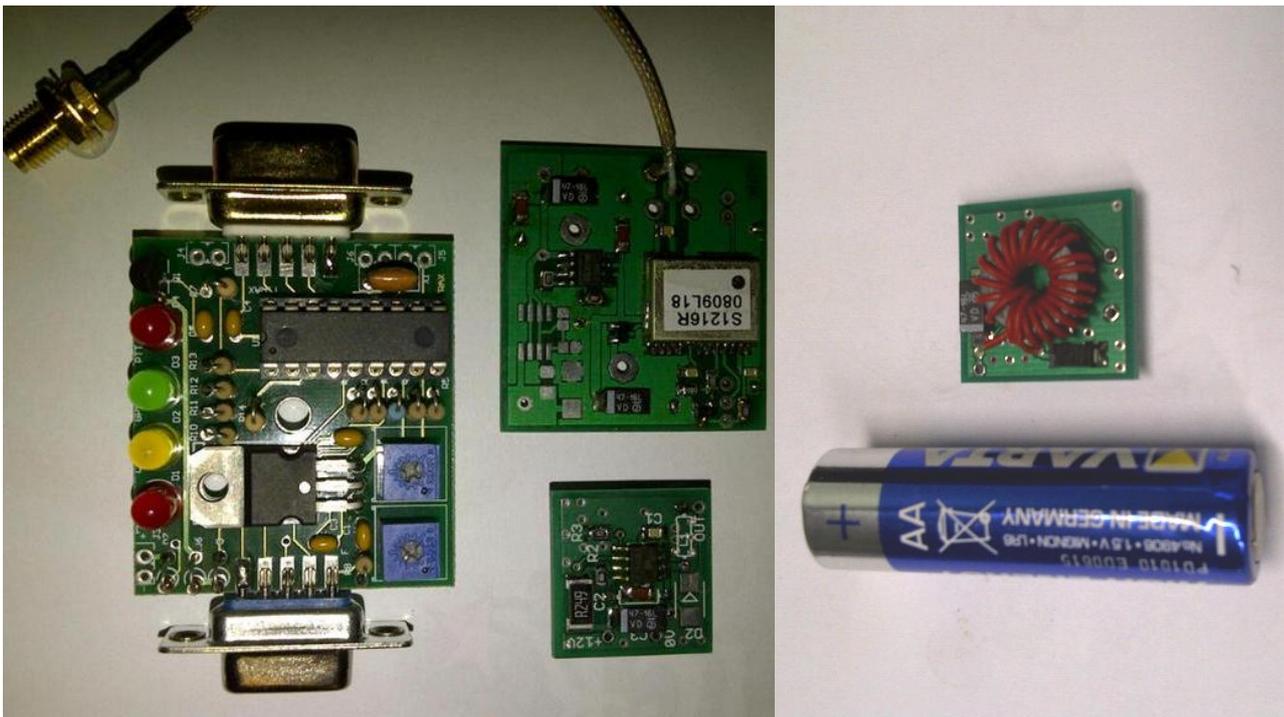
Was Evan ZS6ELI the
only one in ZS to
send in a log?

With just a few QSO's he obtained this certificate
for **FIRST PLACE** in South Africa.

APRS Project (continued)



The project consists of 3 PCB's. Far and bottom RHS: switch mode 5V PSU. LHS: Tracker PCB and below: GPS PCB



Roger ZS6RJ treats himself to a birthday present –

another one for his collection



This one is the Begali Magnum and tips the scales at 4 pounds. A solid chunk of metal, topped with a layer of palladium coating, houses all the elements. No vibration - no matter how hard you hit the paddles.

The finger pieces are narrow spaced and made of aluminium for excellent tactile feedback.

It has precision racing bearings, 14kt gold contacts, finely adjustable contact gaps and magnetically controlled return force.

Spacing of the finger pieces can be adjusted from ¼" to ½".

DJ6SI – Report on the arrest in Kos, Greece

- careful when operating in a foreign country!
(from HF happenings 510 . Info from Raoul ZS1REC)

By Baldur Drobica, DJ6SI, and translated by Bernd Koch, DF3CB

I booked a holiday trip break of one week on the island of Kos in Greece in May this year. I took a HF station with me to give some DXers new band points or even a new country. I could install a G5RV with the permission of the hotel management.

After three days, at 01 in the morning, my XYL DL6KCD and I were woken up by an attorney and five police officers in civilian clothes.

My wife is suffering from Alzheimer and had three bypasses. I was accused of conducting radio communications without a Greek radio license. The second accusation was that I could also watch other frequencies with my transceiver, a FT-890AT. My objection was rejected that I operate legally on base of the CEPT regulations.

The hotel manager printed the CEPT list, which is available on the website of the DARC and handed the printout out to the attorney. The paper was ignored, folded and put into the pocket.

My transceiver was confiscated together with the power supply and the headphones with the remark that it had to be checked by a specialist. They also tried to confiscate my notebook, which I tried to defeat because the notebook was not related to the transceiver that had to be checked.

Two mobile phones, cameras and the logbook were also confiscated; we were handcuffed and taken to the police station. The handcuffs were so tight that they cut into my flesh and draw blood.

I was taken to a hospital where the wound my on hand was treated. In absence of a prison cell, the police wanted to put me into a drunk tank but the attending physician declined that. So I had to spend four hours at the police station sitting on a chair. My hint that I had to see my un-oriented wife was rejected by saying that she is enclosed in the (hotel?) room and being closely guarded from outside.

After long discussions I was then escorted by two police officers to visit my wife at the hotel, medicate and dress her. Personal care and showering, was rejected. Back at the police station, a protocol was created.

Then we were driven to the courthouse. It was now 11 AM. I was photographed and fingerprinted in the courtyard of the courthouse.

Then we waited again until 4 PM under police protection, when I was presented to the attorney who explained me the charges in a two- minute talk: transmitting without permission, having a radio with frequencies other than intended for amateur radio operators and the hindrance in handing out my notebook.

I was commissioned to the court for the next day at 12:00. I had to wait until 16:00 until a judge and an attorney came. The judge told me that he had no translator and appointed a new proceeding for the next day at 12:00. When I objected that we had to fly back the next day, he explained: "this is your problem." Finished.

I called the German Embassy in Athens on the morning of the next day and got the notification of the German-speaking lawyer on Kos. We met an hour before the opening hearing. My luck was that he was once interested in amateur radio. I handed him the documents that were kindly printed out by the hotel management had kindly printed for me: CEPT regulations of the DARC and this also in Greek language.

The hearing was very noisy and the objection of the attorney, he would turn to the European Court, the judge adjourned the hearing, let me go back to Germany and decreed that the lawyer could attend the next hearing alone.

Thermoelectricity

Thermoelectricity is generated by the direct action of heat. The subject also includes the study of heat generated by electricity, but not in the usual manner. Thermoelectric effects are the result of interactions between mobile electric charges and thermal conditions. These effects occur in liquids and solids, which may be metals, semimetals, semiconductors or ionic conductors. None of these major thermoelectric effects have been found in insulators or superconductors.

Seebeck Effect

If a homogeneous material has temperature $T(1)$ at one end and $T(2)$ at the other end while it is in an open circuit, then a difference in electric voltage will occur between the two ends. This voltage is independent of the detailed temperature conditions between the two ends.

This effect was reported to the Prussian Academy of Sciences by Thomas Seebeck in 1822. Seebeck failed to understand the basic nature of his discovery, because in subsequent experiments he used closed circuits of two dissimilar materials and claimed that the resulting deflections of nearby magnetic-compass needles proved that heat currents produce the same effect as electric currents. Ohm's Law - stated in 1827 – showed that Seebeck's use of closed circuits had inadvertently produced electric currents.

Peltier Effect

Unlike the Seebeck effect, which occurs in a single material without an electric current, the Peltier effect only occurs at the junction of two dissimilar materials when electric current flows. Heat, called the Peltier heat, is either emitted or absorbed at the junction, depending on the direction of current flow. This effect was discovered by the French physicist Jean C.A. Peltier in 1834.

Once again the basic nature of the effect was at first misunderstood. Peltier believed he had discovered a violation of Ohm's law. It was not until a few years later, in 1838, that Heinrich Lenz demonstrated the true nature of this effect when he used a bismuth-antimony junction and froze a drop of water when passing electric current in one direction (absorbing heat). He then melted the drop by reversing the current (emitting heat).

Thomson Effect

In 1854 William Thomson (later to become Lord Kelvin for his contributions in laying the first transatlantic cable) used thermodynamic arguments to relate the Peltier and Seebeck effects. In the process he predicted a third effect – namely, that an electric current flowing through a homogeneous material that also has a temperature difference will cause the emission or absorption of heat in the body of the material. The direction of the electric current relative to the sense of the temperature difference (that is, flowing toward higher or lower temperature) determines whether heat is emitted or absorbed. This effect was subsequently discovered and called the Thomson Effect.

Applications

Electrical generation is based on the Seebeck effect. Metals show small Seebeck effects but material properties dictate their use in thermometers. The thermocouple, an open circuit using two dissimilar metals, is a widely used thermometer.

A semiconductor shows much larger Seebeck effects and it is commonly used to generate electric power. Because any source of heat energy is acceptable, a variety of methods are in use: heat from kerosene lamps and firewood (in remote areas), heat from nuclear decays (in space and floating weather stations), and heat from direct sunlight (in space) have all been combined with semiconductors to generate electric power ranging from ten watts to several hundred.

The Peltier effect is used in refrigeration and heating: a modern single-stage Peltier cooler can reduce temperature to nearly 70deg C below room temperature. In comparison to more conventional systems, Peltier coolers have the advantage of no moving parts, very local heat transfer and versatility- by reversing the current direction it can be changed from a cooling to heating system. A number of electronic systems require very local cooling or heating to obtain optimum performance: Peltier systems are ideal in these instances and used with transistors, lasers, microwave amplifiers and light detectors. Coolers have also been used to maintain biological samples in storage and transit. The largest Peltier systems built so far have been air conditioners used on US Navy submarines.

C/O NELSPOORT & 801 MALMESBURY STR, WINGATE PARK, PRETORIA [S25.49.36 & E28.16.07]

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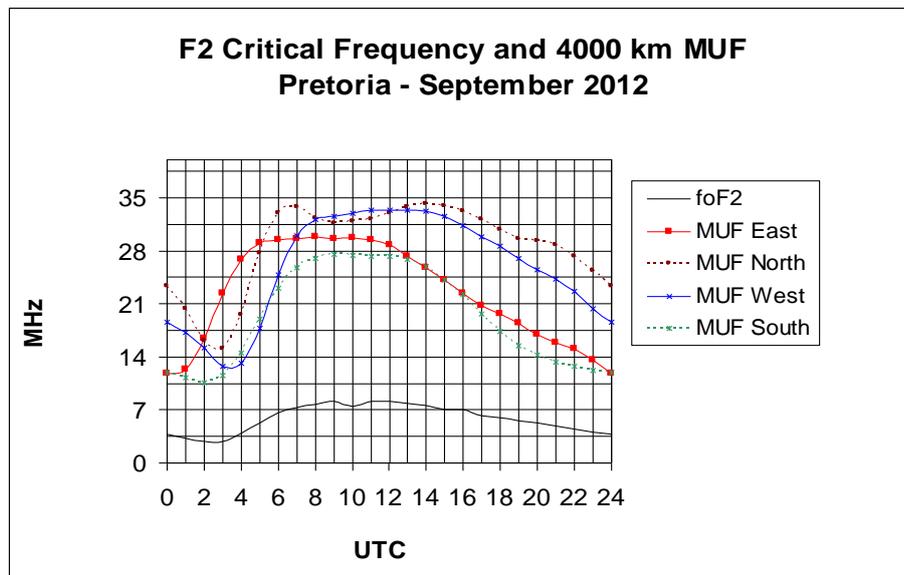
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- General equipment and TV repairs
- Small-scale design and manufacturing
- Frequency and power calibration
- Technical writing
- 3rd Party scrutiny of projects and documents
- MFJ 259/69 Analyzer repairs and calibration
- Valuation of ham estates and their disposal

and products:

- Legal limit 30m and 40m dipole traps
- Linear power supply O.V. protection kits
- 30A DC switching supplies
- Nissei SWR/Power meters HF and VHF/UHF
- Connectors RF and DC
- Plug-in triple sequential industrial timer

Contact Hans at 012-333-2612 or 072-204-3991



Long Term HF Propagation Prediction for Sept. 2012

Courtesy ZS6BTY

(see also our website propagation tab)

DX Operating

The graph shows the 4000 km maximum useable frequency (MUF) to the East, North, West and South from Pretoria for the first hop using the F2 layer.

Local Operating

The F2 critical frequency (foF2) is the maximum frequency that will reflect when you transmit straight up. E-layer reflection is

not shown.

by Chris Codella, W2PA

5/22/2009

Pins

Across

1. Tube connection*
5. Close-knit group
10. Tube conn.*
14. Verdi opera
15. Ten-Tec rig
16. Ten-Tec rig
17. After-bath powder
18. Kazakhstan prefix
19. Bushel quarter
20. With 53 across, describes the * words
22. Analyze syntactically
23. Window alternative
24. ARRL org. pertaining to SS, others
25. B east of burden
28. Turner of TV channels
29. Platform on a ship's mast (a place for a /MM antenna?)
33. Odwalla fruit and ___

1	2	3	4		5	6	7	8	9		10	11	12	13	
14					15						16				
17					18						19				
20				21						22					
			23							24					
25	26	27		28				29				30	31	32	
33			34					35				36			
37								38				39			
40												42			
43															
			47												
50	51	52						53					54	55	56
57															
60															
63															

35. Not brilliant
36. Best kind of tower
37. New England net
38. Transistor conn.*
39. Singer Ronstadt
40. UA assembly
41. Cutter
42. Digital mode
43. Delta follower
45. YLRL non-member
46. "___ we having fun yet?"
47. Caller for calls
48. T8 land
50. RG8 ground
53. See 20 across
57. CW
58. Thorny
59. 7800 maker

60. H.S. tests
61. Cycle user
62. Put one's foot down?
63. Transistor conn.*
64. TI land first name
65. D.C. group

Down

1. Tube or Transistor connection*
2. EP coin
3. Like some chatter
4. S2 capital, old-style
5. Swift horse
6. Noted traitor
7. Device with only a 25 down and 10 across
8. Recent UA prefix, especially, e.g. M-V Is.
9. W1 dir. from W7
10. Just fine
11. Part of ARRL (abbr.)
12. Ckts. for 42 across use
13. Go backpacking
21. Ten-Tec amplifier
22. Golfer's goal
24. Computer port type
25. Tube connection*
26. Gray line time
27. Flower towers
29. Tube conn.*
30. JA poem
31. OOTC member, to an OTC member, probably
32. Tube connection*
34. Smartest
35. Jones' partner
38. Plains states NTS org
39. KH6 porch

41. The only CW most people know
42. KH5 land
44. CRT successor
45. OJ0 reef
48. What output power does, in resonance
49. Ohms, volts, and others
50. Transistor connection*
51. Drift
52. Prefix with VOX
53. Kenwood, once
54. Antenna farm unit
55. "Crazy" bird
56. Tiny parts
58. Big G SW org.