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WATTS

10 - 2008

Year 78 +10m

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



PARC, PO Box 73696 Lynnwood Ridge 0040, RSA



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

Bulletins :145,725MHz 08:45 Sundays / Sondae

Relays : 1840, 3700, 7066, 10135, 14235, 51400, 438825, 1297000kHz

Activated frequencies are announced prior to bulletins

Swapshop: Live on-air after bulletin 2m and 40m

Bulletin repeats | herhalings : Mondays 19:45 on 145,725 MHz

24 Sept. Blockhouse Sprint Contest

ZS6PTA/H Heritage Day Fort Schanskop



← Pierre ZS6PJH in operating position (behind the banner)

Some 30 QSO's were made of which many were with other blockhouses.

Other members who assisted with station setup were Vince ZS6BTY, Pieter ZR6AHT, Hans ZR6HVG, Craig ZS6RH (and family). Visitors were Jan ZS6VOL, with Peter ZS6PJ and son Brendan ZS6BW and their wives.

→ antenna mast



In this issue

- Minutes 10 Sept Notules
- Member's pages Lede-bladsye
- Member news Lede-nuus
- Simple RF probe
- Technical | New sat. | Lightning advice | Tegnies
- Fuse indicator | Beacons
- Page eight Bladsy agt

In hierdie uitgawe

Next Meeting 11 Oct 2008

Time: 13:30 for 14:00
PARC Clubhouse
South Campus
University of Pretoria
SE cnr University and
Lynnwood roads

PARC Management team / Bestuurspan Aug. 2008- Aug. 2009:

Committee members

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SARL liason, fleamarket					
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Rallies, Hamnet, Projects	Roy Newton	ZS6XN	newtonr@telkomsa.net	012-547-0280	083-575-7332
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Public relations	Thobile Koni	ZS6TKO	toko40@mweb.co.za		082-493-2483
Social	Molly Peer	ZR6MOL	molly@peer.co.za	012-333-0612	

Minutes of the monthly club meeting of the Pretoria Amateur Radio Club held at the South Campus of the University of Pretoria on 10 Sept. 2008

Welcome: The chairman welcomed all present.

Present: See register, 15 members.

Apologies: Johan ZS6JHB, Bill ZS6KO, Pierre ZS6PJH, Alméro ZS6LDP, Willie ZS6WGR

Personal: Bill ZS6KO report no change in Ivan ZS6AUT's condition.

Minutes: The minutes of the previous meeting were accepted. Proposed by Vitor ZS6VG and seconded by Ivan ZS6CCW.

Matters Arising: None.

Correspondence: None.

Rallies: Johan ZS6JHB reported on 3 rallies to be held in October. The first rally is the all tar to be held on 4 October, the second is the off road at Lydenburg with comms only required for Saturday 11 October, and the third is the old Tzaneen rally to be held in the Bronkhorstspuit – Bapsfontein area on 18 – 19 October.

Flea Market: The PARC spring flea market date for the end of November will require to be changed. A new date will be advised.

Social: The next meeting will be a Saturday with a bring and braai. A rally braai will be held late November. The date and venue will be advised.

Finances: The bank is charging a minimum of R15 for a cash deposit when subs are paid. We have R5005-50 in the back and R1121-00 in cash.

Hamnet: Disaster operations meeting in Centurion, arranged by Tshwane Metro, at the civic centre at 18:00. A further meeting will be at Eastlynn community centre on 22 September.

Fox Hunts: A recommendation to hold this on Sundays was tabled. The matter will be placed on bulletin with a request for comments..

Projects: Roy ZS6XN reported that he still has kits available for the both the 3 and 10 LED versions of the battery monitors.

Contests: The weekend of 20 – 21 September is the SARL VHF/UHF contest, possibly at Donkerhoek. The heritage day, 24 September, social and fun event will be a field station at Kranskop near the monument. The HF contest is coming in November.

Youth: The SARL would like stations set up a schools for 8 October. Jota and CQ hou koors are later in October.

Technical: Craig ZS6RH reported on problems related to the 'noise floor', effectively cutting the range of the repeater. Also experiencing interference from the navigation lights.

General: Vince's propagation maps on the web site are appreciated..

Editorial

I wish to make another appeal for members to supply your editor with publishable material of a nature that reflects the activities of its members. There should be no need to constantly have to copy and paste from the internet to fill these pages although some of that material is always useful. You as a club member receiving this newsletter surely expects to read about this club and its members' activities? That does not exclude you - the reader - to also submit a photo, anecdote or project report to this rag.

Redaksioneel

Ek wil graag weer 'n pleidooi maak aan lede om u redakteur met publiseerbare materiaal te voorsien van 'n aard wat die aktiwiteit van ons lede weerspieël. Dit behoort nie nodig te wees nie om gedurig van die internet te moet put om hierdie bladsye vol te maak, alhoewel van die materiaal altyd nuttig is. U as klublid wat hierdie nuusbriëf ontvang verwag tog sekerlik om van die klub se lede en aktiwiteite te lees? Dit sluit u – die leser - ook nie uit nie om fotos, praatjies of projekverslag aan te bied vir hierdie blaadjie.

Birthdays

Oct

Verjaarsdae

- 01 Evan ZS6ELI
- 06 Poppie ZS6BCP en Hansie ZS6AIK (45)
- 02 Hans-Peter ZS6AJS
- 02 Andre ZS6BRC
- 03 Janine, lv van Nico ZS6AQ
- 03 Poppie ZS6BCP, lv van Hansie ZS6AIK
- 03 Celeste, dogter van Bernice en Pieter ZR6KSA
- 05 Jay ZS6BUD
- 06 Danny ZS6AW
- 09 Ed ZS6UT
- 10 Harry ZS6AMP
- 10 Roy ZS6MI
- 11 Kevin ZR6KM, seun van Tim ZS6TIM
- 13 Bill ZS6KO
- 14 Iza ZR6IZA
- 15 Caleb, son of Phil and Craig ZS6RH
- 16 Vasti, dogter van Hennie ZR6HEN
- 16 Hennie ZR6HWM, seun van Poppie ZS6BCP en Hansie ZS6AIK
- 17 Frikkie ZS6MF
- 20 Corlene, dogter van Poppie ZS6BCP en Hansie ZS6AIK
- 20 Martinho ZS6BQP



Okt

Anniversaries Herdenkings

- 13 Susan en Freddie ZS6JC ()
 - 17 Elmarie ZR6AXF en Johan ZS6JPL (15)
 - 31 Janine en Nico ZS6AQ
-
- 21 Louise, lv van Almero ZS6LDP
 - 22 Marieza, dogter van Marilise en Pierre ZS6PJH
 - 26 Rae, sw of Mike ZS6AFG
 - 26 Callie ZS6BRY, seiun van Susan en Freddie ZS6JC
 - 26 Merilyn, sw of Deryck ZS6KQ
 - 26 Ken ZS6NB
 - 27 Craig ZS6RH
 - 28 Tracy, daughter of Joey and Graham ZR6GJR
 - 29 Pierre, seun van Marilise en Pierre ZS6PJH
 - 27 Craig ZS6RH
 - 30 Andre ZS6GCA
 - 30 Viv ZS6BZS
 - 31 Jessica, daughter of Anne and Jac ZS6QA

Joys and Sorrows | Lief en Leed

- **Ivan ZS6AUT** is reportedly still unwell

Diary | Dagboek (UTC times)

- Oct**
- 01 RSGB 21/28MHz 07:00-19:00
 - 04-05 Oceana DX SSB Contest 08:00-08:00
 - 08 Set up a school station for Space Week
 - 11 PARC Club (afternoon) meeting**
 - 11-12 Oceana DX SSB Contest 08:00-08:00
 - 18-19 ARRL EME Contest 00:00-23:59
 - 18-19 WA Germany Contest 15:00-14:59
 - 25-26 CQWW SSB Contest 00:00-24:00

FUTURE MEETING DATES

Even months: Saturdays 14:00
Odd months: Wednesdays 20:00

Oct	11	2008			
Dec	13	2008	Nov	12	2008

The club is still awaiting many outstanding subscriptions. Please remind anyone that you may know of, to renew.

Snippets | Brokkies

- **PARC came 2nd** place in the recent **SARL HF Phone Contest**. In the single operator category, **Roger Jones ZS6RJ** came 4th. Participation in the CW leg was poor.
- **School station** (8 Oct) assistance/operators required: Phone Richard ZS6UK 012-333-0612
- **Rally assistance** (4,11,18 Oct) may still be required: Phone Johan 082-492-3689
- **Foxhunts** preferably on Sunday afternoons? Let Richard ZS6UK know.
- **Our next fleamarket** is planned for 1 November 08:00
- **Interference** from repeater tower navigation lamps has been a consistent problem for us and it is suspected that the electronics in the energy-saver lamps gets affected by near-field RF. LED-type lamps will be tried as soon as available.
- The **EME for Africa Project** trailer is making good progress with antennas and an expedition to V5 is envisaged early 2009.
- **Heritage Day 24 September** saw our ZS6PTA effort by **Vince ZS6BTY** and visitors at Fort Skanskop near the Voortrekker Monument. Thanks to Vince for your valiant initiative.
- Pieter ZS6AHT, Hans ZS6HVG and Craig ZS6RH as well as his YL Phil and Lourens ZS6KRT visiting, braved the bad WX during the **SARL VHF/UHF Contest** on the weekend of 2–21 September. Pieter will report next month on *the tribulations of club contesting..* Your efforts are much appreciated! This reminded one of our members of a contest experience 22 years ago:

Memories of another VHF contest in 1986 - Raymond ZS6ALG

I heard Pierre, ZS6PJH, reporting this morning that it was very cold and windy up on the Donkerhoek ridge where he had spent the night with the club's VHF-UHF competition station. This brought back memories of a similar expedition in early September 1986, to the Wolkberg south of Haenertsburg.

Arnold Mynett, ZS6BMS, was the main force behind that expedition. He provided homebrew antennas and transverters for the 2-metre, 70-cm, and 23-cm bands, 3 commercial HF transceivers, and two homebrew 6-cm transceivers. The late Chris de Souza, ZS6AVC, provided logistics. Farrell Segall, ZS6RW, provided intellectual technical backup to Arnold, and I provided Morse proficiency backup to him.

Arnold had planned the Wolkberg location (where the TV masts are) to gain the maximum benefit from the rules for contacts between grid squares. However, a gale-force, cold southerly wind blew throughout the two days of the contest, destroying all tropospheric layering, and we had very few contacts beyond the 2-m band horizon. Most of the Pretoria and Reef stations were

therefore beyond our reach. ZS6AXT in Vereeniging was a notable exception, in keeping with that station's exceptional performance through the years!

Towards nightfall of the Saturday we all took a little walk to witness Arnold and Chris making 3 contacts between the 4 grid squares that came together there, using the 6-cm transceivers. Those contacts probably earned the station more points than the rest combined!

On the Sunday at midday, Chris' Landrover, which he had parked without setting the hand brake, also took a little walk, and rolled down an embankment, landing on its roof. It took us till dusk to pull the Landrover back onto its wheels (with the help of 3 labourers and a tractor from a local farmer), make its back door close again, clean out its carburettor (which had filled with lubricating oil), pack up, and load the station into it. We drove 40 km to Haenertsburg along the gravel roads in the dark, and then hundreds of km to Pretoria, without further problems. (I have wondered through the years whether more modern Landrovers would also have functioned perfectly after such an accident!)

The transverters were crystal-controlled. The HF transceivers were "on loan" from an unnamed firm, and they had to be back in stock on the Monday morning.

The 6-cm transceivers used self-controlled cavity oscillators, diode mixers, and cheap commercial FM receivers as IF and AF for receiving. Their transmitters were the same oscillators, frequency modulated by some means that I have forgotten. They operated 100 MHz apart, providing duplex communication!

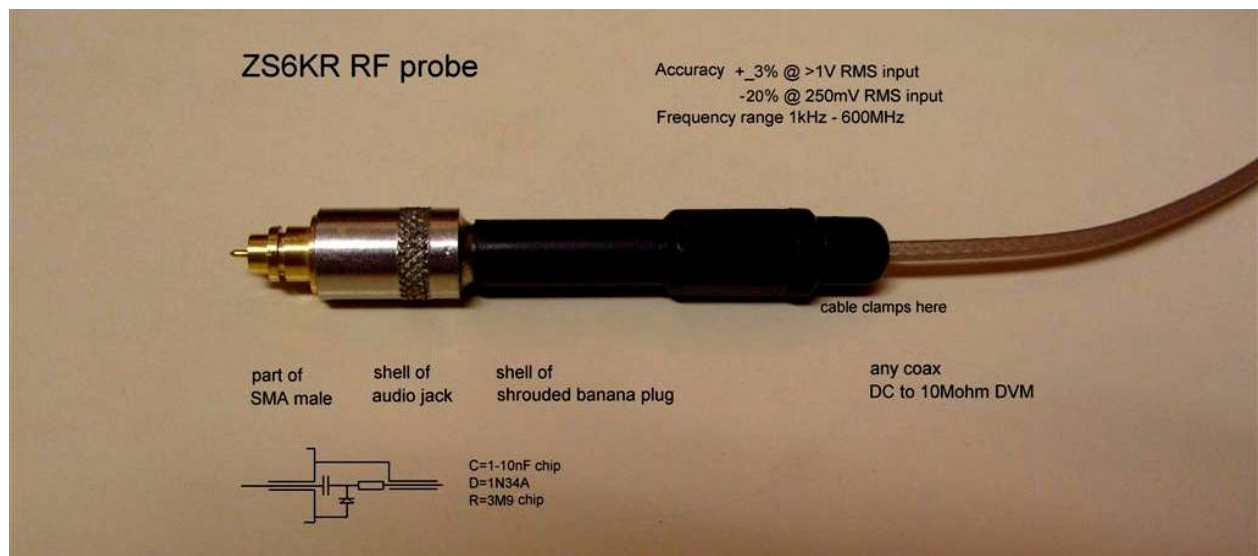
The expedition was fun of sorts. - Raymond, ZS6ALG.

Brendan ZS6BW getting ready for HF Mobile

(FT857D radio, VHF, UHF and 40m antennas)



Your editor's September project.

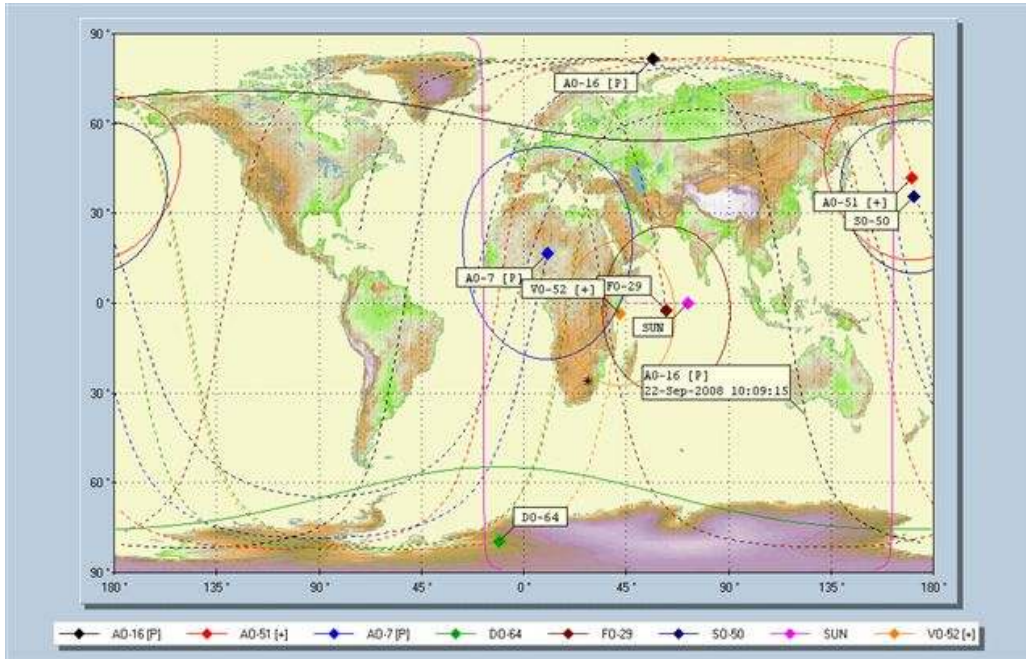


MFJ 259/269 Calibration Service
Hans ZS6KR offers to calibrate your analyzer for R175.- Repairs also undertaken.
Two day service.
Phone 012-333-2612 or 072-204-3991

Satellite working easier than ever

from Roy ZS6MI

Satellite **AO-7** is currently available and has a very large footprint (blue contour and path). This screen shot is from Ham Radio de Luxe and the contour and path of the popular **AO-51** can also be seen in red.



Uplink AO-7
432,125 LSB
Downlink AO-7
145,975 mode B

Uplink AO-51
145,920MHz FM
28,140 PSK
Down AO-51
435,300MHz FM

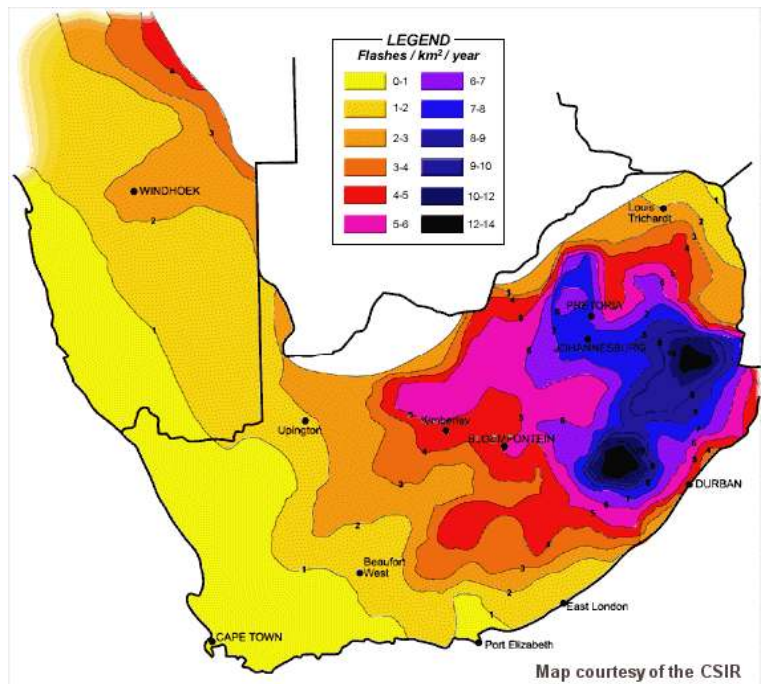
All satellite info and *keps* can be found via a link in HRD to www.amsat.org

Are you ready for the next season?

- visit www.sinetech.co.za for more info on protection

THE FACTS ARE :

- It is a fact that the highveld region of South Africa and Lesotho have amongst the highest lightning strikes per square km per annum in the world.
- On average every square km of South African highveld and Natal receives 7 direct lightning strikes per annum.
- The facts are a direct or indirect lightning strike within a 1,5km radius of your home or office can generate as much as 120 million volts and up to 180 000 Amps, sending lethal surges ripping through power cables and telephone lines. The core temperature of a lightning strike is as high as 20 000 deg C or five times as hot as the surface of the sun.
- Statistics prove that as much as 80% of problems on electronic equipment are associated, directly or indirectly, with lightning and overvoltage surges.



If your home or office building has a mast or external lightning protection rod then will this suffice?
Not really, as the electromagnetic effects and induction will still cause damage to equipment within the building.

In actual fact, if you install external lightning protection, you will actually require lightning current arresters and surge arresters to be able to withstand the induced energy.
Lightning striking up to 1.5km away can cause damage to sensitive electrical and electronic equipment.

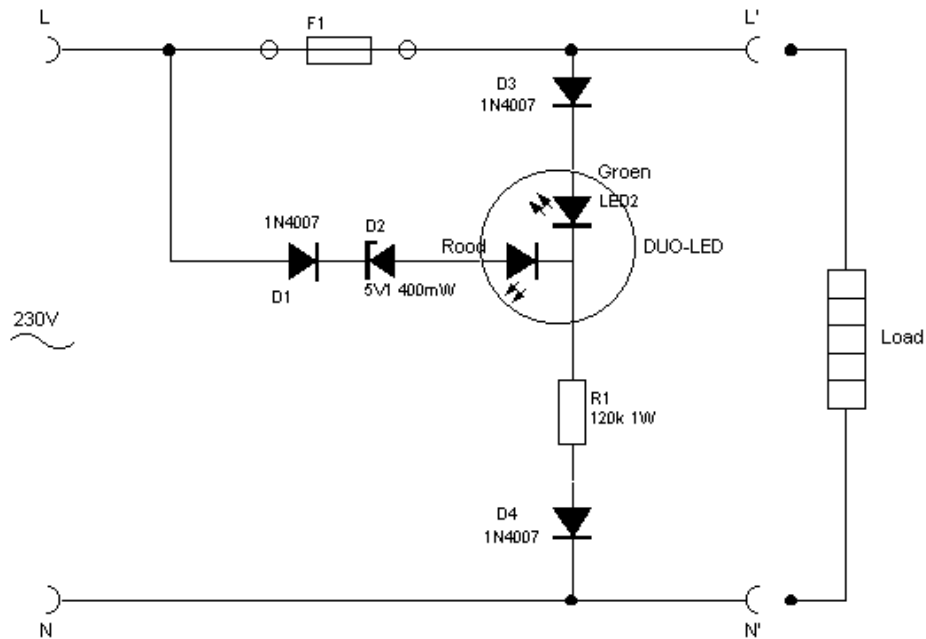
Read more on the abovementioned website and make your choices as to what extra effort you wish to expend.

Fuse Indicator

(found on circuitsonline.net)

This indicator uses a dual-colour LED to show whether a fuse blown or not. The circuit is suitable for 230V AC working and the LED will be green if all ok and red when blown.

In either case the LED currents pass through R1 and as long as the average half-wave current of approx $0,636 \times 230 / 120k = 1,25mA$ is maintained by lowering the value of R1, the circuit should even work down to 12V AC as well as DC.



Schedule of IBP/NCDXF Beacon Transmissions

source: NCDXF/G3USF

IBP = International Beacon Project. Each beacon transmits every 3 min, day and night. This table gives the minute and second of the start of the first transmission within the hour for each beacon on each frequency. A transmission consists of the callsign of the beacon sent at 22 wpm followed by four one-second dashes. The callsign and the first dash are sent at 100 watts. The remaining dashes are sent at 10W, 1W and 100mW.

Equipment is TS-50, Cushcraft R-5 multiband vertical and a Trimble Nav GPS receiver to ensure sychronization, with a control unit built by NCDXF.

Country	Call	Frequency					Op	Status*
		14100	18110	21150	24930	28200		
United Nations NY	4U1UN	00.00	00.10	00.20	00.30	00.40	UNRC	
Northern Canada	VE8AT	00.10	00.20	00.30	00.40	00.50	RAC/NARC	
USA (CA)	W6WX	00:20	00.30	00:40	00.50	01:00	NCDXF	
Hawaii	KH6WO	00.30	00.40	00.50	01.00	01.10	KH6BYU	
New Zealand	ZL6B	00.40	00.50	01.00	01.10	01.20	NZART	
West Australia	VK6RBP	00.50	01.00	01.10	01.20	01.30	WIA	
Japan	JA2IGY	01.00	01.10	01.20	01.30	01.40	JARL	
Siberia	RR9O	01.10	01.20	01.30	01.40	01.50	SRR	
China	VR2HK	01.20	01.30	01.40	01.50	02.00	HARTS	
Sri Lanka	4S7B	01.30	01.40	01.50	02.00	02.10	SRL	
South Africa	ZS6DN	01:40	01.50	02:00	02:10	02:20	ZS6DN	
Kenya	5Z4B	01.50	02.00	02.10	02.20	02.30	ARSK	
Israel	4X6TU	02:00	02:10	02:20	02.30	02:40	IARC	
Finland	OH2B	02:10	02:20	02:30	02:40	02:50	SRAL	
Madeira	CS3B	02.20	02.30	02.40	02.50	00.00	ARRM	
Argentina	LU4AA	02:30	02:40	02:50	00.00	00:10	RCA	
Peru	OA4B	02.40	02.50	00.00	00.10	00.20	RCP	
Venezuela	YV5B	02:50	00.00	00:10	00:20	00:30	RCV	

*check www.NCDXF.org for current status

Do you want to improve your Morse Code?

From: HF happenings 319

Bryn, N4VM has generously made available hundreds of hours of W1AW code practice MP3 files that you can download and play on your MP3 player or computer.

The files are located at www.pcpractice.com/CW/

They range in speed from 5 to 40 wpm. Text files showing the sent characters are also provided. They are indexed by speed: 5, 7½, 10, 13, 15, 20, 25, 30, 35 and 40 wpm as well by date of transmission.

There are also two directories 18 and 18 wpm - both of which contain 18 wpm Morse code practice. Below the directories of the various speeds are directories with dates.

These directories (folders) are different files than the ones above and are from an earlier period where perhaps Bryn indexed the files by date instead of by speed.

Therefore, if you run out of the ones indexed by speed, there are entire W1AW sessions recorded here. Current W1AW MP3 files and text files' showing what was sent are on the ARRL server at <http://www.arrl.org/w1aw/morse.html>.

The ARRL also maintains an archive of these files - and text translations of the Morse at <http://www.arrl.org/w1aw/morse/Archive/>

We wish to thank Bryn, N4VM for the gift to the Morse community on the Internet and here on the CW email list. We thank the ARRL and their members for this excellent resource. 73, David Ring, N1EA

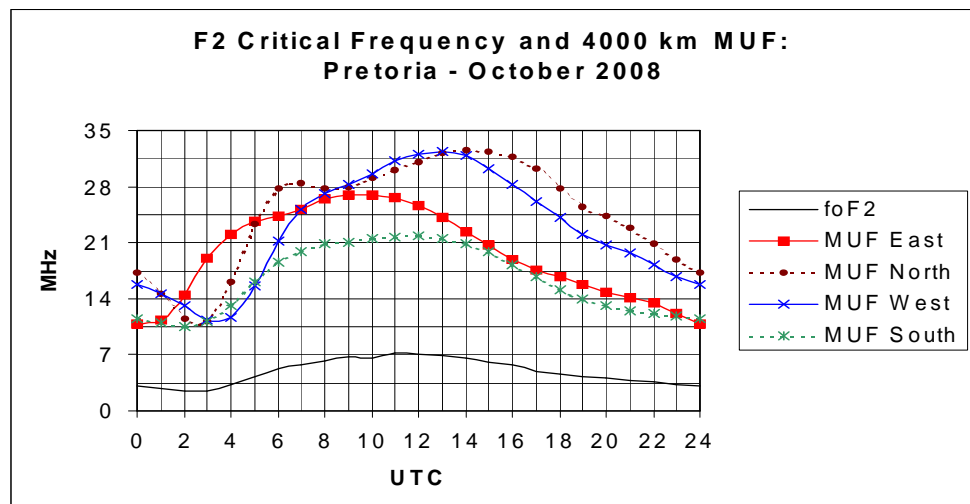
Long Term HF Propagation Prediction for October 2008 courtesy ZS6BTY

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.



New book publication - LB Cebik W4RNL (SK) entitled SCV Notes.

SCV is a term coined by the author for a family of antennas in this 300-page book including 182 modeling files and 100's of illustrations.

SCV is an abbreviation for Self-Contained Vertical which is a vertically polarized antenna, usually constructed from copper wire for upper MF and lower HF use.

LB wrote this new book because he felt many amateurs seemed not to realize the close inter-relationship among members of the SCV family, let alone the fundamentals of their operation.

For much more info on this new book release: <http://www.antennex.com/news/index.html>



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SMILE

I don't suffer from insanity –
I enjoy every minute of it ...

Consciousness-
That annoying time between naps...

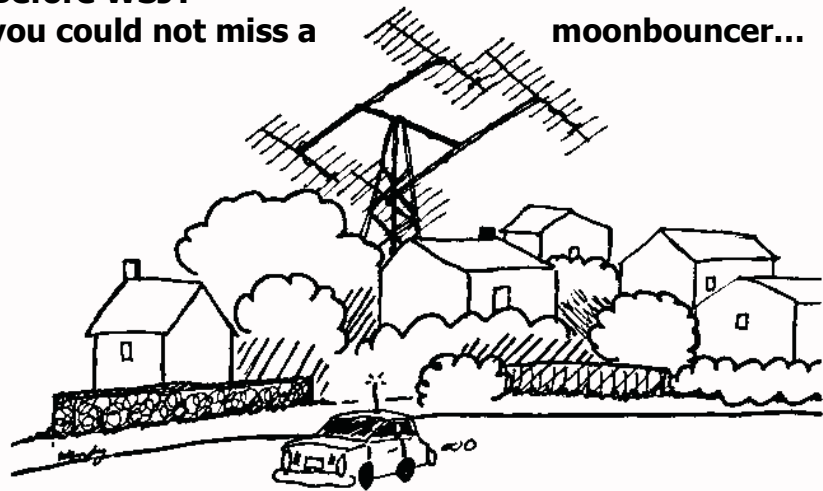
Characteristic impedance -
The usual reaction of your spouse
when told about the proposed
antenna system..

Parasitic element –
A person who takes lists for DX
stations.

Wrinkled was not one of the
things I wanted to be when I
grew up.

Ham and eggs –
A day's work for a chicken,
a lifetime commitment for a pig.

Before WSJT
you could not miss a moonbouncer...

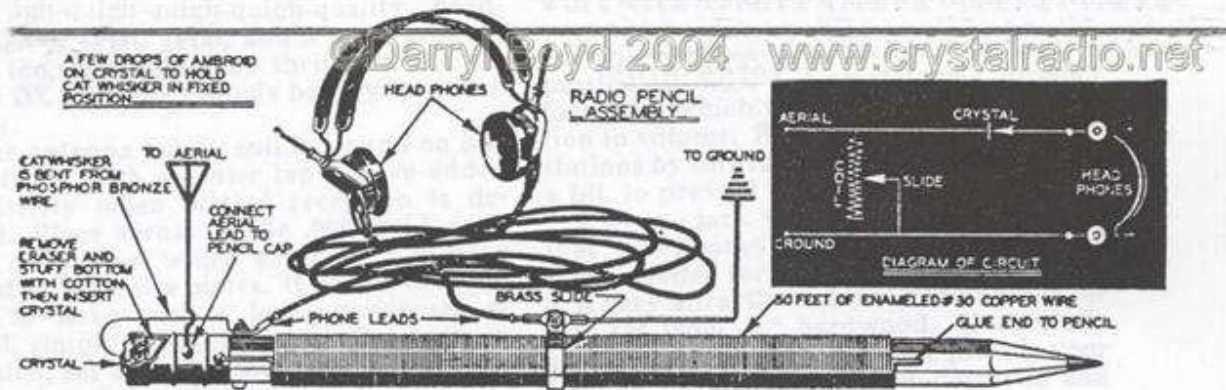


OK, FRED. I'M ON MAPLE STREET. NOW, WHICH
ONE IS YOUR HOUSE?

Engineers (and Hams?)

Engineers are notoriously frugal. This is not because of cheapness or mean spirit; it is simply because every spending situation is simply a problem in optimization, that is, "How can I escape this situation while retaining the greatest amount of cash?"

Clothes are the lowest priority for an engineer, assuming the basic thresholds for temperature and decency have been satisfied. If no appendages are freezing or sticking together, and if no genitalia or mammary glands are swinging around in plain view, then the objective of clothing has been met. Anything else is a waste.



CRYSTAL SET designed by T. A. Blanchard is built on $\frac{3}{8}$ " diameter novelty pencil. Solder the top lead of the coil to the metal cap, and simply glue bottom end to the pencil. Remove eraser, push wad of cotton into bottom of cap, and insert a mounted crystal. Bend cat whisker from a

length of phosphor bronze wire, and hold in place with bolt going through wood part of pencil. Scrape the enamel off a narrow strip of the coil, so that slide makes contact. To use, connect aerial, ground, and headphones, move slider and adjust crystal until stations are heard.

Understanding Engineers (continued)

One day, an engineer was crossing a road when a frog called out to him and said, 'If you kiss me, I'll turn into a beautiful princess'. He bent over, picked up the frog and put it in his pocket. The frog spoke up again and said, 'If you kiss me and turn me back into a beautiful princess, I will stay with you for one week.'

The engineer took the frog out of his pocket, smiled at it and returned it to the pocket. The frog then cried out, 'If you kiss me and turn me back into a princess, I'll stay with you and do ANYTHING you want.'

Again the engineer took the frog out, smiled at it and put it back into his pocket. Finally, the frog asked, 'What is the matter? I've told you I'm a beautiful princess; I'll stay with you for a week and do anything you want. Why won't you kiss me?'

The engineer said, 'Look. I'm an engineer. I don't have time for a girlfriend, but a talking frog, now that's cool.'