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WATTS

05 - 2009

Year 79 +5m

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 / Sondag

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

ZS6JPL shack. Johan Lehmann is welbekend in die amateur gemeenskap. Hy bedryf omtrent elke amateurband met boonste gehalte apparaat en antennes waarvan hy sekere handelsmerke ook versprei.



In this issue

- Minutes 4 Apr Notules
- Member's pages Lede-bladsye
- Member news / Activities Lede-nuus en Aktiwiteite
- Satellites
- Technical Coax traps Tegnies
- The Spiderbeam Project
- Page eight Bladsy agt

In hierdie uitgawe

**Next Meeting
14 May 2009**

Time: 19:30 for 20:00
PARC Clubhouse
South Campus
University of Pretoria
SE cnr University and
Lynnwood roads

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

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SARL liason, fleamarket					
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Minutes of the monthly club meeting of the Pretoria Amateur Radio Club held at the South Campus of the University of Pretoria on 4 April 2009

Welcome: The chairman welcomed all present.

Present: See register, 19 members and 3 visitors.

Apologies: 2 as per register

Minutes: The minutes of the previous meeting were in Watts, and were accepted. Proposed by Alméro ZS6LDP and seconded by Alf ZS6ABA.

Matters Arising: The Voortrekker event is 16 May at Elardus Park primary school. It runs from 07:00 till 12:00. Richard ZS6UK, Sarel ZS6EK and Whitey ZS6JJJ will be there. Richard ZS6UK will apply for educational licenses.

Finances: The balance in the current account is now R2761.78 and R163 in cash.

Activities

Rallies: Johan ZS6JHB reported that the next rally is the Sasol in the lowveld and consists of 14 stages. The format of the rally was explained. New technology will be used at the stages. There is no information from Dieter on the Total which should be in May.

Fox Hunts: The fox hunt will be announced on bulletin and responses requested. Tentatively 19 April.

Flea Market: The next PARC flea market will be held on 30 May at the PMC premises. It was suggested that an antenna day be organised to coincide with a future flea market around spring.

Social: A day in the sun is being planned.

Technical: The repeater receiver at Moreletta has been moved to Donkerhoek. Moreletta want R1400 per month. Keevykop was damaged by lightning, the circuit breaker at the end of the long power feed was blown to bits.

Roy ZS6MI is the contact for the Ptawug wireless user group.

RAE: Alméro ZS6LDP has one student, the closing date for the May exam is 12 April.

SARL AGM: The motions for the upcoming SARL AGM were discussed and the meeting proposed that we vote in favour of motions 1 & 3 and against motion 2. Richard ZS6UK will represent PARC at the AGM. It was proposed that he be assisted with cost.

General: Spider web antennas – Alf ZS6ABA and a team are working on this wire antenna which is said to be as effective as a Yagi. Estimated cost is R2000 for 5 bands.

Deryck ZS6KQ reported that TV licenses and Telkom line rental are at half price for persons of 70 years and over.

Next meeting: The next meeting will be Wednesday 13 May 2009 at 20:00.

Editorial – *a repeat of this appeal for more action...*

I must make a new appeal to members to make more use of our website. If you are new to it, please log in as **xyzyy** initially and then change your password to what you prefer. Remember your callsign must always be entered in **capital**s. Check and correct your personal details on the member's page. Add photos to the gallery, place tech articles, projects, activity and forum discussions on the relevant pages etc. Our website is open to all our members to use and contribute items. This privilege is not only restricted to the webmaster or moderators. The latter will however keep an eye and remove undesirable postings!

Redaksioneel – *'n herhaling van hierdie pleidooi vir meer aksie...*

Ek moet hier 'n nuwe pleidooi aan lede maak om meer gebruik te maak van ons webwerf. As jy nuut is, log dan in met **xyzyy** en verander dan die wagwoord na wat jy verkies. Onthou om altyd jou roepsein met **hoofletters** in te tik. Gaan jou persoonlike besonderhede na en korrekteer dit op die lede-bladsy. Voeg fotos by op die galerye, tegniese- en projek artikels, aktiwiteite en forum besprekings op die betrokke bladsye ens. Ons webwerf is daar vir al ons lede om te gebruik en by te dra. Hierdie voorreg is nie net vir die webmeester of moderators nie. Laasgenoemdes sal egter wel ongewenste plasinge verwyder!

Birthdays

Mayl
Verjaarsdae



Meil

Anniversaries Herdenkings

02 Chris ZS6LOG
06 Lourens ZS6KRT
06 Suzete ZS6SZT, doger van Pieter ZS6PVW en Magda ZS6MVW
08 Philip ZS6MZ
10 Roy ZR6RV, son of Marieta and Roy ZS6MI
11 Zdena, sw of Ivo ZS6XT
13 Hannes ZU6HDT
14 Johannes ZS6BPB
14 Pieter ZS6PVW
15 Darren, son of John ZR6JAO
17 Vince ZS6BTY

04 Ronel en Pieter ZR6PSR ()

18 Karen, daughter of Pat ZR6AVC and Frank ZS6GE
20 Deryck ZS6KQ
23 Lily, sw of Harry ZS6AMP
25 Tjerk ZS6P
26 Vitor ZS6VG
28 Flip ZS6BSO/ZS4GE
31 Dave ZS6JW

Joys and Sorrows | Lief en Leed

Ivan ZS6AUT is still being cared for
Molly ZR6MOL is still in hospital

New members | Nuwe lede

ZS6Q Hein Fromman
ZS6LME Louw Eerasmus

Web applications received | Web aansoeke ontvang:

ZR4LP	Johan Visagie	ZS6WDL	Jaques Swanepoel
ZR6IIF	Pierre Massyn	ZR6JLL	Jaco Lubbe
ZR6RAF	Liam Harrison		
ZS6ALP	George Tokarczyk	ZS6OS	Johan v/d Schyff

Diary | Dagboek (UTC times)

May 02 West Rand fleamarket 1200 local
09 RTA at the NARC
14 PARC Wednesday evening meeting 20:00
15 Closing date foe SARDT award nominations
16-17 EU PSK DX Contest BPSK31 1200-1200
16-17 HM King of Spain Contest CW 1200-1200
16-17 Portuguese Navy Day CW/Digi/SSB 1500-1500
17 Worked All Britain Contest SSB 1000-1400
20 MOON Contest CW/Digi/SSB 1800-2000
23-24 Baltic Contest CW/SSB 2100-0200
20-21 CQWW WPX Contest CW 0000-2359
30 PARC fleamarket at PMC 0800 local

Snippets | Brokkies

- **Our Keevy Kop site** received a lightning strike on 28 February with dramatic results that Craig ZS6RH had to repair.
- **An Antena Brag Day is being planned to coincide with our spring fleamarket in August.**
- **License fees** will increase. Finality is awaited. Payment for a five-year period may become compulsory though the SARL will plead for options.

Be an Early Bird!

Parc subs | Ledegeld 30-06-2009

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

Betaal asb u lede-
geld betyds aan
ons tesourier of
per oorplasing na:

Bank : FNB
Branch : 25 20 45
Account : 546 000 426 73

Ordinary members | gewone lede R70
Spouses, children, pensioners R50

Your callsign must appear on the statement text!


SARL Subs also due 30-06-2009

Bank : Absa
Branch : 632 005
Account : 407 158 8849



Satellites

Information from Roy ZS6MI

<p>Oscar-7 Channel 1</p> <p>TX 432.150 LSB. RX 145.950 USB. Uplink 432.125 to 432.175 Mhz LSB. Down 145.975 to 145.925 Mhz USB.</p>	<p>Oscar 16 Channel 2</p> <p>TX 432.150 LSB. RX 145.950 USB.</p>	<p>Oscar 27 Channel 3</p> <p>TX 145.850 FM. RX 436.797 FM</p>
<p>Oscar 29 Channel 4</p> <p>Tx 145.950 LSB Rx 435.850 USB Uplink 145.900 to 146.000 LSB. Down 435.800 to 435.900 USB.</p>	<p>Oscar 50 Channel 5 74.4 tone</p> <p>TX 145.850 FM 67Hz tone to PTT RX 436.795 FM</p>	<p>Oscar 51 Channel 6</p> <p>TX 145.920 FM. RX 435.300 FM. QRP TX 145.880 FM. RX 435.150 FM.</p>
<p>Oscar 52 Channel 7</p> <p>TX 435.250 LSB. RX 145.900 USB. Uplink 435.220 to 435.280 LSB Down 145.930 to 145.870 USB</p>		
<p>ISS Channel 9</p> <p>TX 145.200 FM. RX 145.800 FM. Repeater 145.800 FM</p>		
<p>ISS Crossband Repeater</p> <p>RX 145.880 FM TX 437.800 FM</p>		

Have You every Wondered

By Roy ZS6MI

I was reading an article in one of the cyberspace magazines and came across a very interesting subject. Yes, it is in connection with the perception one has as to the identity and looks of the other fellow you are talking to, this is either via a Keyboard or a Morse key or for that matter the Microphone.

We as human beings have this uncontrollable urge to contact others and talk to them, so they say. It becomes mind boggling when you sit and think about this, here you have a virtual world where you can only imagine what the other person looks like, as you have never met him before, face to face that is, and most probably never will.

Take this scenario for example, You have made contact with another station via one of the PSK modes, your computer is happily deciphering the different tones as they arrive and that is all you see on the screen, that is all the information you have. How on earth do you put a face to this person, You now can have a look at perhaps the efficiency of the contact that would suggest experience, and that is normally coupled to age. With that little information you have you then to create a virtual image of this person relying on your virtual creation identity ability that you have attained over the years of operating on the radio.

A similar sort of thing greets you when you tackle a morse key, what do you listen for to be able to get some sort of idea what the the other operator looks like. Here again the efficiency of the contact may tell you the age, possibly some of the things mentioned during the contact may give a little away as to the personality of the person . Once again you have to delve far into the recourses of your ability to try and identify the other person.

Talking on a microphone, is most probably the easiest, you can hear the tone of voice as well as the age of the voice, you can hear the characteristics of the voice, so you can form a quick idea of the life experience the person you are talking to has, and possibly the age of the person, as well.as moving into more of a defined picture in your minds eye of what the other fellow looks like.

Hope you have been more successful than I and been hitting the jackpot every time. There you are guys - just something to think of whilst enjoying the hobby, have fun.

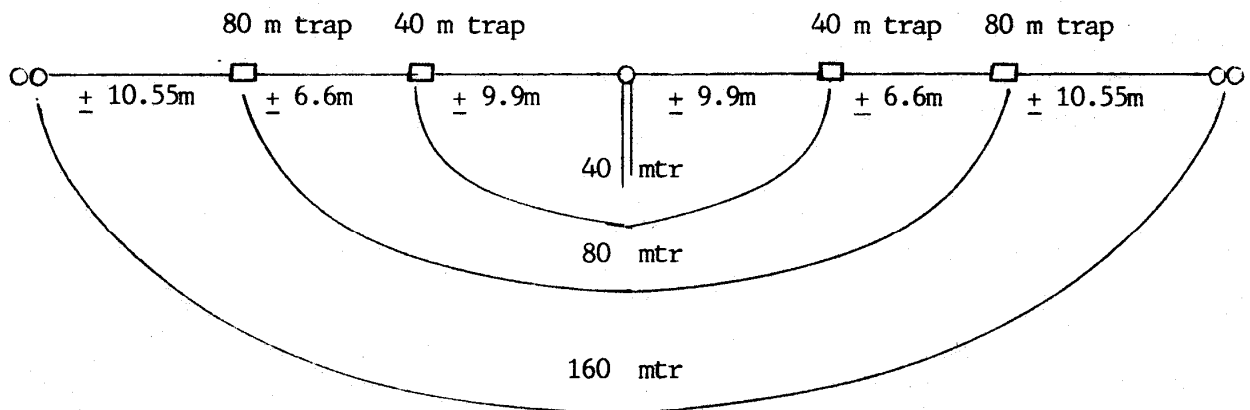
You can't keep a good design down...

RALLY TRAP ANTENNA

160/80/40 MTRS

Originator Tinus ZS6TL

An article on this antenna appeared in the June issue of WATTS. Since then several of these antennas have been made by our members who took part in the recent Castrol Motor Rally, and it's proved to be a trap antenna which can be made according to the specifications and will function first time with the minimum of test gear.



If you require an antenna for 80 and 40 metres only, all you have to do is to make only the 40 mtr traps, and accordingly, if you require a 160/80 mtr dipole, you just have to make the 80 mtr traps

The traps are wound on formers made of 40mm outside diameter grey PVC tubing. The inductances are of RG 58 CU coaxial cable of good quality.

Cut the PVC tubing to the following lengths:-

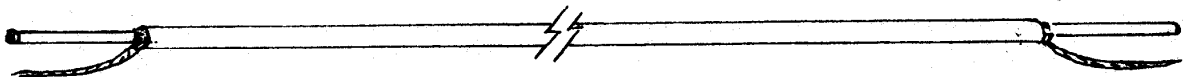
40 mtrs 110mm (2 lengths)
80 mtrs 165mm (2 lengths)

In all the formers drill a 5mm diameter hole, 25mm from the one end of the former.

Capacitive Inductors : Use RG 58 CU coax.

40 mtr length : 1630mm + 150mm on each end for stripping, ie total 1930mm. (2 lengths)

80 mtr length : 3010mm + 180mm on each end for stripping, ie total 3370mm. "



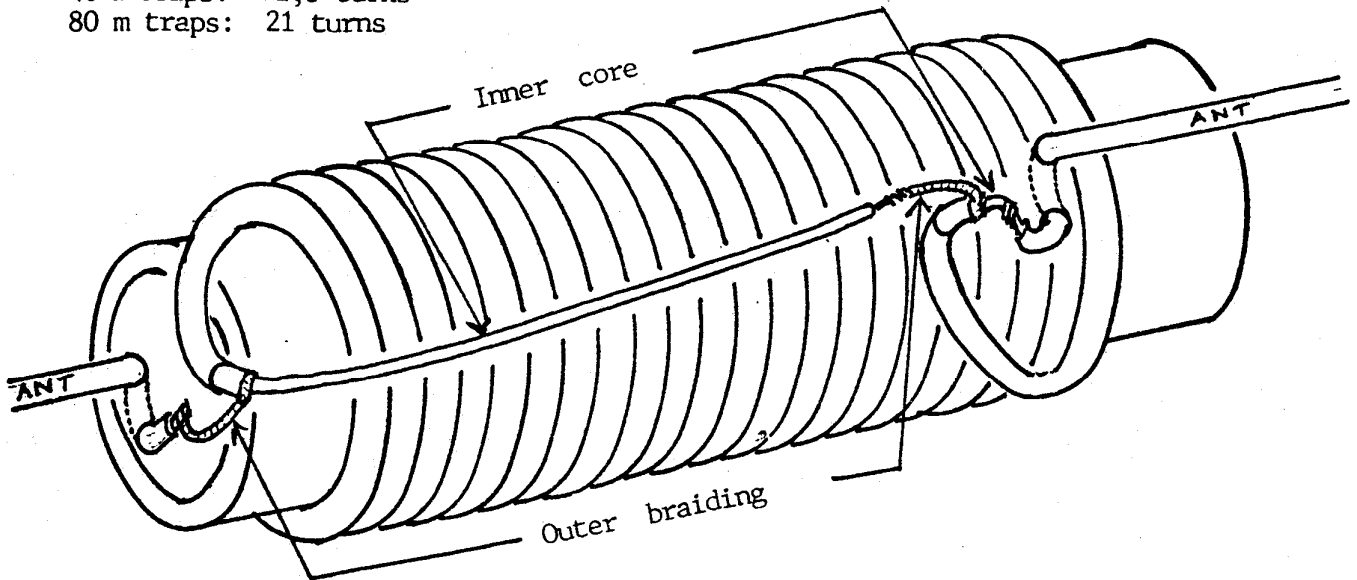
Winding the trap coils: Start by inserting the end of the coax into the 5 mm hole drilled in the former until the coax jacket extends at least 10 mm into the inside of the former.

Wind the coax tightly around the former, 11.3 turns for the 40 m traps and 21 turns for the 80 m traps. Mark the spot where the winding ends and drill a second 5 mm hole. Insert the coax as in the start.

Cross connect the centre conductor of the beginning of the winding to the shield of the end of the winding. The trap is now complete.

WATTS OCT 82

40 m traps: 11,3 turns
 80 m traps: 21 turns

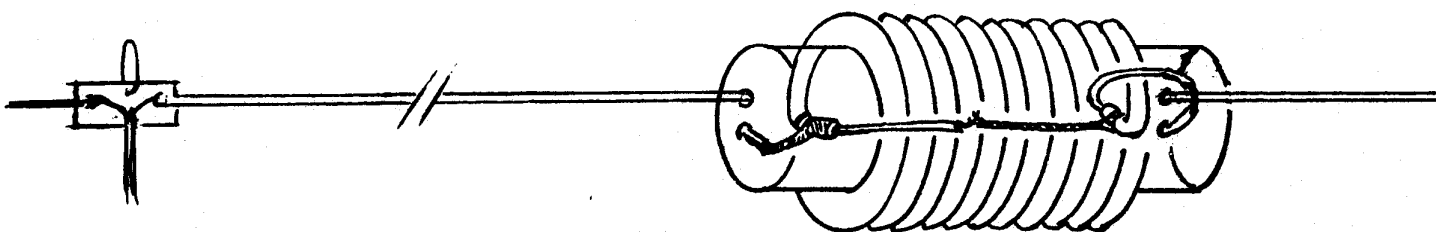


Start constructing the antenna by making up the 40 m section using RG 58 C/U coax as feeder (the editor used 70 ohm coax obtaining an SWR of 1:1 on the Rally freqs of the three bands) and trim for the lowest SWR at $\pm 7,076$ MHz (each leg will be approximately 9,9 m long). Now add on the 40 m traps plus an additional 6,7 m length of wire to each side of the antenna. Re-check the SWR on 40 m, if the trap is working, the resonant frequency will be slightly lower due to end effects. If it is too low the trap may be adjusted by spreading the coil winding slightly and re-checking the SWR.

Trim the 80 m sections for the lowest SWR at 3,570 MHz (each leg will be approximately 6.6 m per side). Now add on the 80 m traps again the resonance frequency will be slightly lower than before. Trim the 160 m section for the lowest SWR at 1.84 MHz (each leg will be approximately 10,9 m per side). Finally re-check each band and draw and SWR curve. Corrections can be done by trimming each section as necessary to produce a good SWR on all three bands. This antenna should yield an SWR lower than 1.5 to 1 on all three bands. The total length will be approximately 54 m, quite a bit shorter than the 78 m required for a normal 160 m dipole.

If you use a 10 m mast on the rally, then you must trim this antenna under the same conditions

WATTS OCT 82



At a ZARS Council meeting held 3 May 2004 ZARS took the decision to close the Zimbabwe QSL Bureau. This is simply due to the excessive cost of services that are now prevalent in Zimbabwe. The main cost is for the posting of cards to the various bureau around the world. This is coupled with a declining number of members such that reasonable subscriptions can no longer support the costs of running the bureau.

ZARS has recommended to members that QSL managers be sought if they do not already have a manager. A number have taken up the suggestion and arrangements have been made.

The spiderbeam project

An interest group is currently in existence to construct spiderbeams from locally available and manufactured materials. Alf ZS6ABA, Sarel ZS6EK, Whitey ZS6JJJ and Gawie ZS6GJJ have already made headway in this project and will be pleased if any others will join.

The Spiderbeam is a lightweight and easily transportable HF multi-band antenna suitable for many home, expedition and field situations. If you do not wish to spend a fortune on a commercial antenna, this may be the solution for you. It has very attractive specifications and you can check out further details on <http://www.spiderbeam.net>

Your group leader in this project is Alf ZS6ABA and can be contacted at 082-373-9369.

The spider beam is a **trapless multiband yagi** constructed of 3 interlaced monobanders, making it a **highly efficient** antenna and **simple** construction. The driven element is a directly fed multiband dipole, again contributing **to a simple, broadband and low-loss** construction. The design is very **forgiving**, provided the wire elements were cut exactly in the beginning and high quality (non-stretch) wire is used. The mechanical design is optimized for **quick, lightweight portable installations**, using high quality materials for good **reproduceability** and a **long life** without performance degradation.

A typical 3-band design performs as follows:

20m Forward gain 4,5dBd (free space) 11,7 dBd
@15m above ground
15m Forward gain 4,7dBd (free space) 4,7 dBd
@15m above ground
10m Forward gain 4,9dBd (free space) 4,9 dBd
@15m above ground

Front-back ratios around 20dB

SWR <1,5 (14-14,4MHz)
SWR <1,5 (21-21,5MHz)
SWR <2,0 (28-29,3MHz)

Total weight <6kg and transportation length 1,20m

Power handling is 2kW HF continuously.



After completion of the design phase and successful trial runs in 2001 and 2002 CQWW contests, the Spiderbeam antenna plans were released to the public.

A very [detailed construction guide](#) (classic Heathkit-style step-by-step instructions) is available as a PDF document.

You are most welcome to download our free construction guide and build your own spider beam from scratch.

Several helpful OMs have kindly translated this manual to their mother tongue, making it available in several different languages. This incredible worldwide response and cooperation turned the construction guide turned into a truly international open-source project, and Spiderbeam into a worldwide known trademark for [affordable, high quality fiberglass antennas of all kinds](#).

Long Term HF Propagation Prediction for May 2009

courtesy ZS6BTY

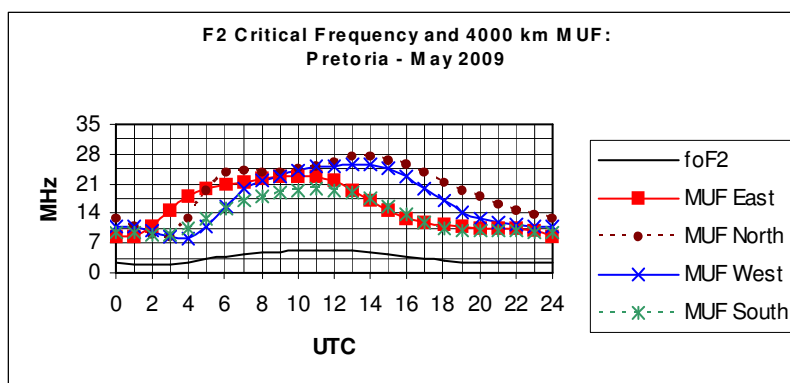
(see also our website prop tab)

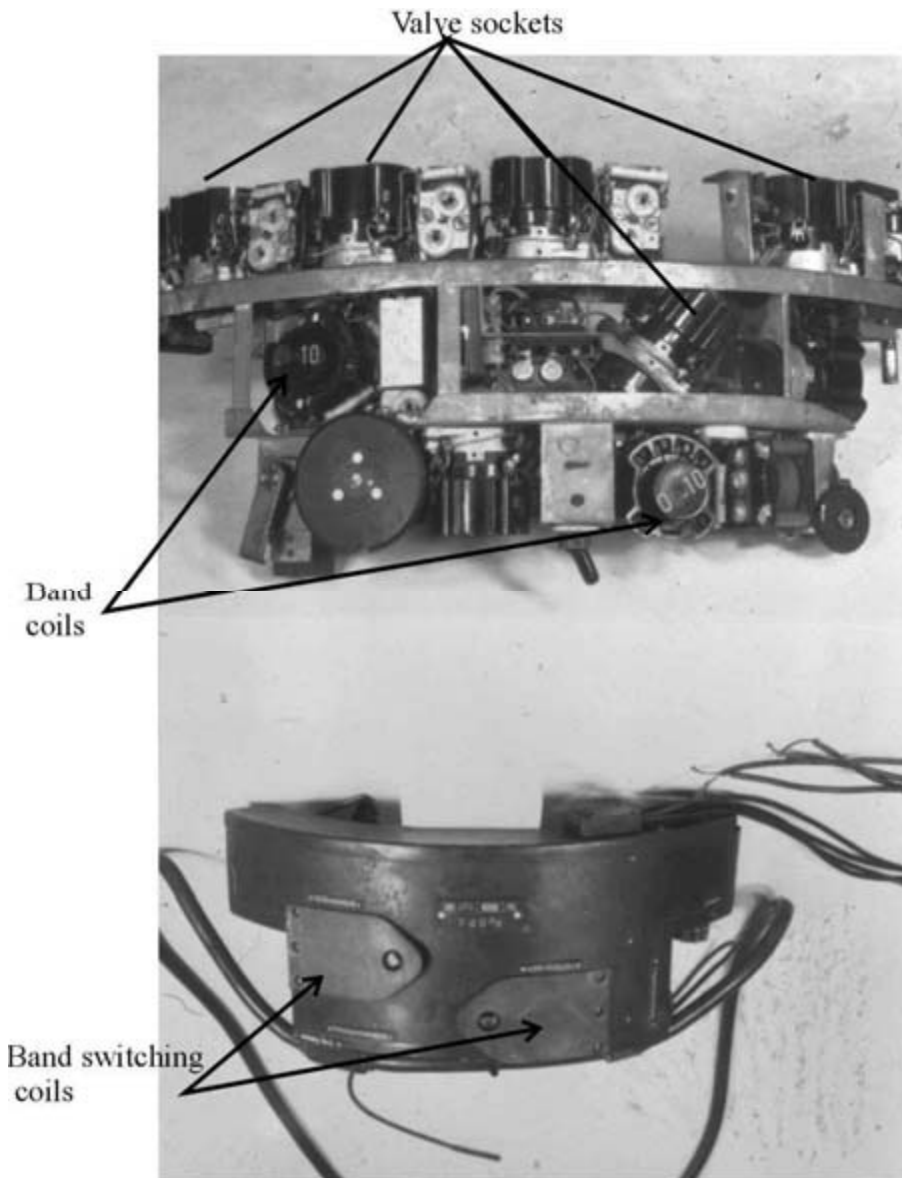
DX Operating

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.





Direction finding in the 40's

It is evident, that all belligerents during World War Two maintained wireless directed intelligence-networks. At the same time, all nations were keen to prevent and eliminate all elements of enemy clandestine radio services. The Germans were, in this respect, no exception. They maintained an extensive DF (direction finding) service located in all occupied territories (from Russia to Norway and all the way down to Northern Africa). As most secret agents were often hiding in populated areas like cities, the Germans deployed all sorts of inconspicuous carriers of DF equipment. Such as DFs build-in Laundry vans and even very small belt-radio-sets hidden, for example, under a (rain)coat. The Germans called this type of DF apparatus "Gurtelpeiler". This equipment was made by the Kapsch company in Vienna (which was then a part of the German Reich). The moving coil instrument-reading (indicating the field strength) was camouflaged by building it into a wristwatch. The one-turn DF loop antenna was bent around the rear of the operator's neck. Band switching was maintained by changing a set of two plug-in coils

(10 frequency bands, covering 3 - 20 MHz). The battery valves RV 2,4P700 (five in the set) and RV 2,4H300 (two in the set) were made by Telefunken. These valves were designed for 2.4 volt operations by regular dry cells or, utilizing NiCad wet cells.

These latter battery types were most popular in the Germany services. Millions of all sorts had been deployed during WW 2 on the German side. If someone ever finds one of these Nicad cells, it is quite likely that it can be operated properly, even after 60 years! They were sometimes known as "Edison-Sammler".

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