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Deryck ZS6KQ

WATTS

10 - 2007

Year 77+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.zs6pta.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

LEESOL RALLY

15 Sept 2007

Neville Algar ZR6NBA participation
and equipment.



Neville believes that size counts as well as creature comforts...

In this rally at Bapsfontein 2m simplex working was a necessity.
145,575 MHz was used.

3 Mobile and 5 field stations gave radio assistance.

50 vehicles took part and 37 finished.

In this issue

- Minutes
- Editorial
- Member's pages
- What is QSLing and how to QSL
- Technical | A two-stack remote matching system
- Page eight

Sept 1

In hierdie uitgawe

- Notules
- Redaksioneel
- Lede bladsye
- Tegnies
- Bladsy agt

AGM

29 Sept 2007

Time: 11:30 for 12:00

PARC Clubhouse

South Campus

University of Pretoria

SE cnr University and

Lynnwood roads.

PARC Management team / Bestuurspan Aug 2006- Sept 2007:

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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 1 Sept. 2007

Welcome: The acting chairman welcomed all present.

Present: As per club register.

Apologies: Chris ZS6BGH, Almero ZS6LDP, Chris ZS6LOG, Johan ZS6JHB, Pierre ZS6PJH. It was noted that apologies should be entered for all members involved on a rally at the time of a meeting.

Personal: It was reported that Leo Alexander ZS5WF has become silent key in Durban.

Minutes: The minutes of the previous meeting were published in Watts and taken as read. Proposed by Deryck ZS6KQ and seconded by Hans ZS6KR. It was noted that the meeting date in the previous minutes was wrong.

QSL Cards: Chris ZS6BGH will pick up cards. Members who desire their cards to be posted should send SASEs to the buro. Hans ZS6KR has forwarded a new list to the league for card collection.

Finances: The end of year accounts are ready for audit.

Club Activities

Rallies: Johan ZS6JHB and several members are away on a rally.

Fox Hunts: These were on hold until September. As none of the fox hunt members were present this was further postponed.

Social: The bring and braai after this meeting was held. It was noted that there will be a social after the AGM on 29 September. Members intending to be present must please contact the secretary, Johan, ZS6JHB, and advise numbers for catering purposes.

Projects: Roy ZS6XN was not present. He is working on a few projects.

Flea Market: The PARC winter flea market will be held on Saturday 29 June at the south campus of the University starting at 08:00. Magda ZS6MVW and family will be doing the usual eats and Richard ZS6UK will be doing the cool drinks. The PARC AGM will be held from 11:00 on the same day after the flea market. Members intending to attend should advise Johan ZS6JHB of numbers for reason of catering for the social afterwards. It was noted that the feeling that 11:00 was too early, and proposals that the AGM start later were made. A committee decision will be made on this.

Ham Diary: The ham diary from the SARL web pages was presented.

Next Meeting: The next meeting will be the AGM on September 29 starting after the flea market.

Editorial – AGM coming up – Please attend – support your club.

Redaksioneel – AJV nader – Kom asb. bywoon – ondersteun u klub.

AGM Braai

Please notify Johan ZS6JHB of your attendance (±lunchtime 29 Sept.) in order that you can receive a braai-pack mahala. Phone or SMS him ASAP. Numbers on p2.

Ledebydraes | Member contributions



Foto ontvang van Doppies ZS6BAQ.

Opening was 10 op September.

Adres:
Atterbury Boulevard,
h/v Atterbury en
Manitoba weg.

Nee, hy verkoop nie matrasse nie

Voorspoed aan ons entrepreneur!

Have you ever thought how the name WATTS came about
Do you think the following could have been a reason

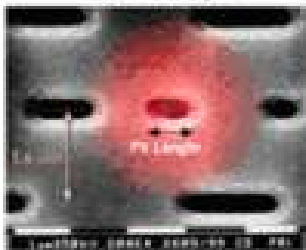


WATTS 10 - 2007
Year 77+10m
Without Any Tabloid Tendencies

Monthly newsletter of the Pretoria Amateur Radio Club
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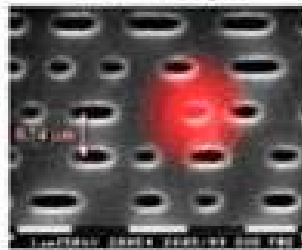
This one is from Peter ZR6FD who had this brainstorm interpretation of W.A.T.T.S as an acronym.

CD 0.7 Gbyte



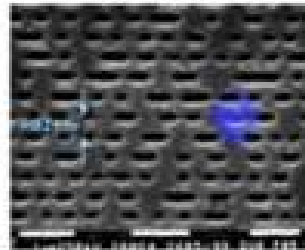
Track Pitch: 1,6 micron
Minimum Pit Length: 0,8 µm
Storage Density: 4,41 Gbitinch²

DVD 4.7 Gbyte



Track Pitch: 0,74 micron
Minimum Pit Length: 0,4 µm
Storage Density: 2,77 Gbitinch²

Blu-ray Disc 25 Gbyte



Track Pitch: 0,32 micron
Minimum Pit Length: 0,15 µm
Storage Density: 14,73 Gbitinch²

Johan ZS6JPL het h/d info oor die nuutste DVD tegnologie verskaf.

Dit gebruik 'n blou laser. Spelers en ondersteuning is alreeds hiervoor te koop.

Ouer DVD's kan nog steeds op Blue Ray spelers speel.

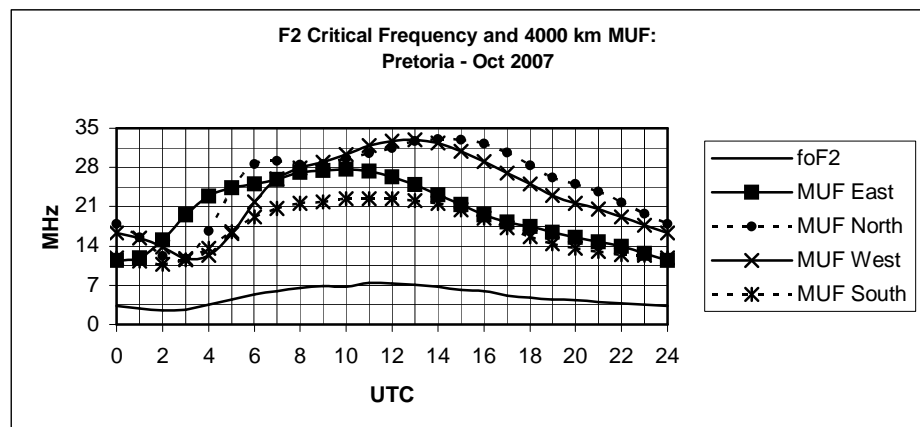
Long Term HF Propagation Prediction for Oct. 2007 (courtesy Vince ZS6BTY)

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.



What is QSL'ing and how to QSL?

Your editor's contribution to IntechNet 2 Sept 2007

Some notes on physical card exchange

QSL'ing, is sending and receiving proof of contact by way of "QSL" cards via the mail service. It is a type of postcard that conveys the technical detail of a contact by way of amateur radio in any mode. Any other embellishments can be added according to personal taste.

You may ask: What is the purpose of QSL'ing?

There are several reasons why amateurs send and receive QSL cards. One is that confirmation that the contact actually took place. Many awards are only issued with presentation of QSL cards as indisputable proof, although some awards are issued using the "honour system".

How do amateurs know each others address?

All amateurs are issued a call sign by their local communications authority appointed licensing body. When one receives a license, that persons name and address becomes public record, so, there are institutions that publish books and CD's that list names and addresses by call sign. There are also many search engines on the WWW that will give you that information.

Is it expensive to QSL?

It can get expensive, especially if you make lots of contacts and everyone wants your card! Luckily, not everyone sends out cards, and not everyone wants your card. The cheapest way is to belong to a QSL service called a "QSL Bureau". This service accepts your outgoing cards and ships them off to their destination for a modest fee. Many countries have such a service but some may only have an outgoing DX service such as the ARRL in the USA. In South Africa we are lucky to have this service both ways - in and out. Bureau cards take much longer than direct mail, due to the handling and also the time involved in accumulating the right amount of cards to make the service worthwhile. Secondly there is another bureau on the other side in a similar situation.

How do the different "Bureaus" work ?

For most, you will need to be a member of that organization. To receive incoming cards, bureaus - including our SARL Bureau - require SASE's to be on file so that when 10 or so cards accumulate to you, you will receive them by normal mail.

Bureau staff have a thankless job handling thousands of cards over a year but they do it free of charge out of love for the hobby.

Remember that when you move to another address, let them know by way of new SASE's.

Now for some tips !

Not every card you send out will produce a return. That is just the way it is. Some amateurs just do not QSL for one reason or another. Cards occasionally get lost in the mail, or mail gets lost in various kinds of crime and disaster. In order to get a good rate of return, you need to do the following:

Choose or make a well designed card. Make sure all the information on the card is precisely correct.

ALWAYS use GMT, Greenwich Mean Time - also referred to as Coordinated Universal Time referred to as UTC, for both time and date.

Let me explain that in more detail:

Firstly, the card size should preferably be 140x85mm - not the old 6x4 inch postcard size. Everyone likes to receive a professional distinct card with some other unique picture or background of your person, shack, historical site, etc. Don't skimp in this department.

Your card, like your call sign, is your trademark.

The minimum QSO information it must contain to make it a valid QSL, is as follows:

1. Your own callsign and name with preferably your physical or email address.
2. The callsign of the station contacted and the operators' name and city.
If that station has a manager for incoming cards, state "via" the callsign of that manager.
Whether there is a manager or not, the destination callsign must be written on the rear of the card so that sorting by bureau staff can be made easier.
3. The date of contact.
4. The GMT time of when the contact was started.
5. The band on which the contact took place.
6. The signal report you gave that station.
7. The mode of contact ie: CW or SSB or PSK31 etc.
8. An indication of a return QSL required or that a QSL was already received.
9. Last but not least it is of interest to include somewhere your CQ and ITU zone number as well as your grid location. We are in CQ zone 38 and ITU zone 57.

This will ensure that the receiver of that card can present it for any award.

Today logging programs can print most of this information on a sticky label for which you can design a special space on your card.

Some notes on sending direct.

If you want a station's card in a hurry, you can bypass the bureau by sending direct. Send your card together with a self-addressed envelope plus reimbursement in the form of an International Reply Coupon that can be exchanged for return postage.

Address the envelope as if it was normal correspondence as callsigns attract thieves to remove IRC's or dollar notes that are sometimes used as preferred payment. Even then there can be a delay.

Your contact may be on holiday, in hospital or even gone silent key.

A special case is a DX-expedition that may have ended and may have electronic logs, but the cards may not yet have been designed or printed. Thousands of QSL labels have also to be printed.

Even if they are available, the sheer amount of work involved may have you under the big pile for several weeks.

In closing I can say from many years of experience that it is very satisfying to receive tangible proof of one's DX efforts.

Apart from having trophy value of some kind, most cards received invariably convey something personal of the operator, his country and operating conditions.

Common courtesy demands that you do the same in return.



5GHz Wi-fi record — 304km from Sardinia to central Italy at 5Mbps

Both sides used 35dBi parabolic dishes and needed a complicated multi-step process to align. The Italian Center for Radio Activities CISAR said it would like to expand the project to connect every ham user in the region. They want to realize a wide band digital network to connect all Italian ham radio users to each other and to other services such as Echolink, ATV and D-Star. **Any one here up to a similar challenge?**

Two stack match Yagi Antenna

From the website of
K8CU
www.realhamradio.com
Slightly condensed version.

Stacked rotary beams are popular. However, connecting two 50 Ohm antennas together presents some problems results in an SWR of 2:1. A method of easily switching between individual antennas and the combined pair gives solutions to these problems.

This station accessory consists of two separate sections. One is the switch selectable control box and power supply that sits on the operating bench, and the other is the remotely mounted relay switching box that mounts on the tower. Four Jennings RJ1A-26 SPDT vacuum relays with 26 Volt coils are used. These provide reliable legal limit antenna switching.

Power to drive these relays is supplied using the antenna coax center conductor. RF chokes and bypass capacitors keep the RF isolated from the DC supply voltages. A home made 50 to 25-ohm balun transformer is used to match the 25 Ohm antenna impedance when both antennas are selected at the same time. This balun consists of 14-trifilar turns of #14 wire wound on a T-200-6 core 3. I assembled this transformer inside a round tin enclosure with a lid, and potted the transformer after assembly and testing. This potting procedure or toroid enclosure is not necessary.

Two one-kV mica capacitors with unmarked values are shown on the schematic of the toroid transformer. These are selected and their values determined during testing. Choose values that provide the lowest SWR using a test frequency of 30 MHz from an SWR analyzer. These capacitors compensate for stray inductance values of the toroid transformer. Once these capacitor values are experimentally determined, just solder them in place permanently. Expect values required to be about 10 to 30 pF or so. Clamping diodes are used across three relays to suppress switching transients caused by the relay coils. A Neon gas bulb is used for the same purpose for the relay that has bipolar DC voltages applied to it.

The station control box switch selector has a regulated 26 Volt DC power supply. Plus 26 Volts applied to the coax connector selects the lowest antenna. Minus 26 Volts selects the highest antenna, while no voltage supplied selects both antennas.

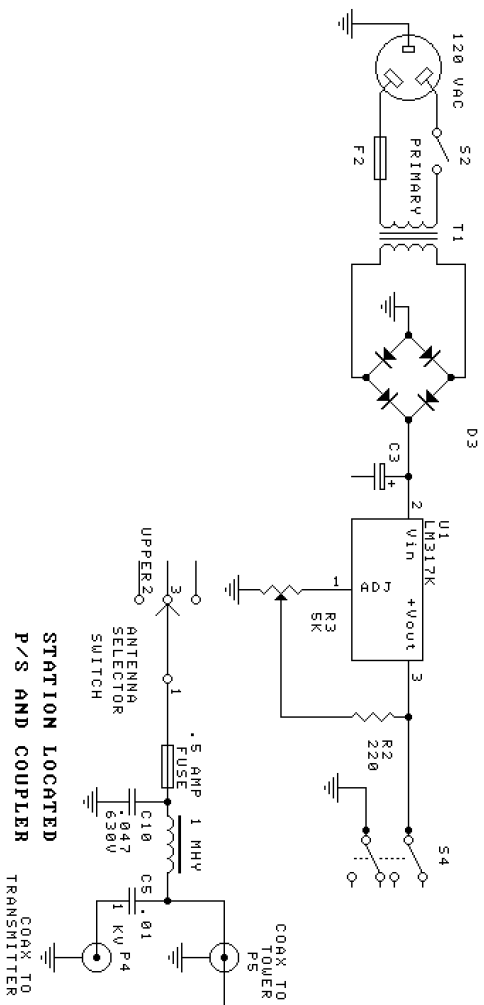
A single supply polarity is used. The isolated common of the power supply is reversed with the supply voltage to provide the necessary apparent minus voltage. This switching logic is done by the control box front panel mounted antenna selector switch. This is a two pole three position on-center off-on toggle selector switch.

The relay switching components are mounted in a die-cast aluminum box that also resides inside a weather resistant enclosure. The outside enclosure I used has a clear removable swing away front door that provides access to the internal relay components.

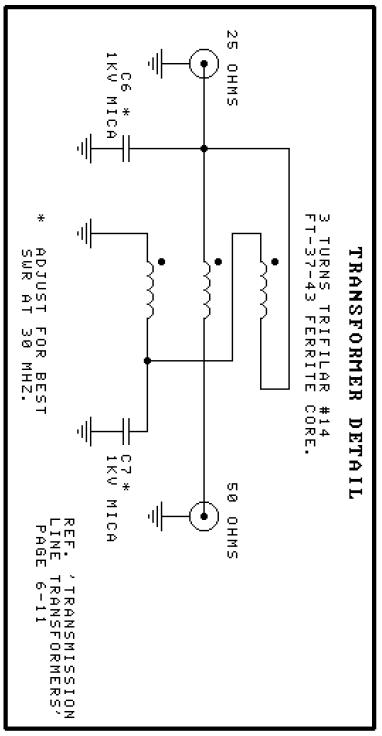
This selectable antenna stack match is easy to test without installing it on the tower. Connect a SWR analyzer to the "transmitter" coax connector. Connect 50 ohm PL259 terminators on each of the "upper" and "lower" antenna connectors. Test for a low SWR reading while selecting all antenna combinations. Once you are satisfied with this test, you are ready to install the remotely mounted relay box on your tower.

The only precaution during use is to remember to never hot switch the relays while you are transmitting! Only change antennas when you are listening. Following this simple precaution, I have obtained good operation from this two antenna stack match for six years while running legal limit power. No problems have developed since installation.

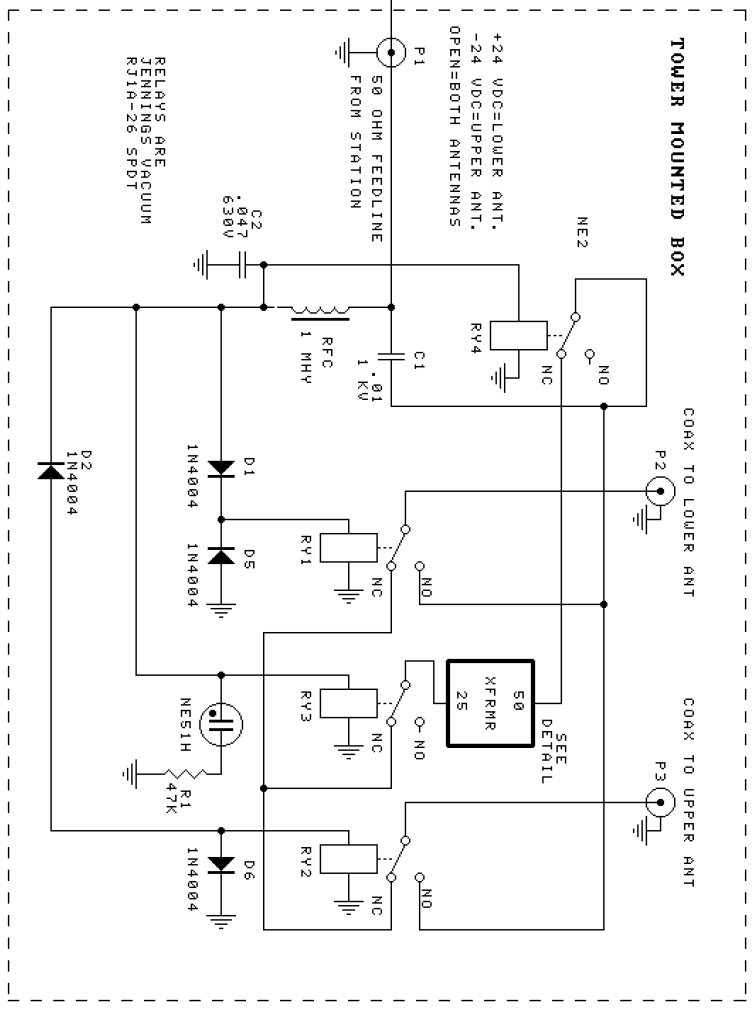




STATION LOCATED
P/S AND COUPLER



* ADJUST FOR BEST SWR AT 30 MHZ.
REF. TRANSMISSION LANE TRANSFORMERS PAGE 6-11



REVISIONS		
NO	DATE	BY
1		
2		
3		
4		
5		

NS8T	
5411 SPRUCE LANE WESTERVILLE, OH 43082	
2-30 MHZ STACK MATCH	
DRAWN BY: BILL JONES	
SHEET 1	OF 1
DATE: OCT. 24, 1996	

The origins of WAZS – Jan 1958 Welcome to the W.A.Z.S.

By Mrs. A. van der Merwe, ZS1AZ (Awards and Certificates)

For some time we have all been looking forward to the appearance of the WAZS. Here, at last, we have it.

Quite a long time is necessary for the launching of a new certificate.

More than a year ago OM Oscar van Schoor proposed the issuing of this certificate, then the League's representatives at the A.G.M. had to decide about it. With a few minor alterations the certificate was formally approved. Then came the designing and printing, and no one who has not experienced it himself, can understand how much time is needed for these matters. Now the WAZS has at last come through all its processes and we introduce it to you.

The colour of the lettering and the border is blue, a pleasant bright blue, and, as far as possible, the design of the W.B.C.N. has been kept in mind.

The colour of the map of the nine ZS districts, in the background, is red, which contrasts the blue very well.

We hope that there will soon be many applications for this certificate, especially from our own members, as this certificate should not be too difficult to obtain if all members send QSL cards when requested to do so; it should be easier to obtain than the AAA, and 34 people have already obtained the AAA during 1958.

Therefore, Hams, get set and go to work to collect QSL'S from all contacts made after January 1st, 1958. Let us see who will be first to reach the goal.

Why did the Chicken cross the road?

Capt James T Kirk: To go where no chicken has gone before.

Einstein: Whether the chicken crossed the road or the road moved beneath the chicken depends on your frame of reference.

Isaac Newton: Any chicken in the universe shall always cross a road perpendicularly to the side of the road, and in an infinitely long straight line at uniform speed, unless the chicken stops due to an unbalance reactive force in the opposite direction of the chicken's motion.

Ed: did he anticipate the advent of motor vehicles?



SB 10 SSB GENERATOR

SB 10 SIDE BAND ADAPTER

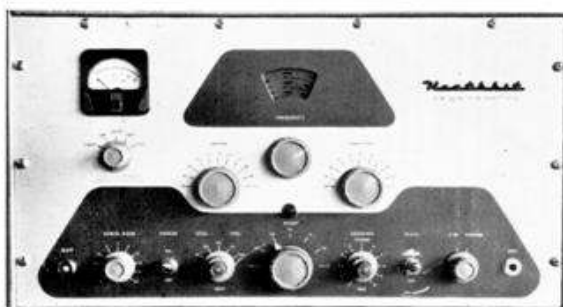
Designed as a compatible plug in SSB adapter for the TX 1 and also can be adapted to transmitters similar to the DX 100 and DX 100-B by making a few simple circuit changes. Extremely simple to operate and tune, the adapter employs the phasing method of generating a SSB signal, thus allowing operation on fundamental frequencies. 10 Watts output on 80, 40, 20, 15 and 10 Metres. Features VOX and anti-trip. Unwanted side-band suppression in excess of 40 db and carrier suppression 40 db.

PRICE (approx.): £72/10/-

VX 1 VOICE CONTROL

This unique device lets you switch from receive to transmit merely by talking into your microphone. Provision is made for loud-speaker anti-trip. This unit features adjustable sensitivity and time delay.

PRICE: £19/10/-



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when purchasing any piece of Radio gear. A cash deposit of 15% puts one of these superb units in your Ham Shack and the balance is payable in monthly instalments over 12, 18 or 24 months.

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VFO Control — AM — CW — Provision for SSB

Only £22/10/- Down and £6/7/- per Month