



ZR6FD logo

Drukwerk printing ZS6BAQ  
 Papier / paper Richard ZS6UK  
 Bill ZS6KO

# WATTS

08 - 2007

Year 77+8m

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](mailto:zs6pta@zs6pta.org.za)

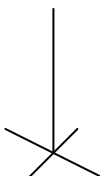
Bulletins :145,725MHz 08:45 Sundays / Sondae

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



## Peak hour at the PARC fleamarket

## Spitstyd by die PARK snuffelmark



### In this issue

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- Member news
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- Technical | QRP night
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- Redaksie bladsy
- Snuffelmark kiekies
- Tegnies
- Bladsy agt

### Next Meeting 4 Aug 2007

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

## PARC Management team / Bestuurspan Aug 2006- Aug 2007:

Committee members					
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<b>Public relations</b>	Craig Symington	ZS6RH	<a href="mailto:pro@zs6pta.org.za">pro@zs6pta.org.za</a>	083-259-3233	083-259-3233
<b>Repeaters, Technical</b>	Craig Symington	ZS6RH	<a href="mailto:technical@zs6pta.org.za">technical@zs6pta.org.za</a>	083-259-3233	083-259-3233
Co-opted / Geko-opteer:					
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	Hans Gurtel	ZR6HVG	<a href="mailto:adele123@absamail.co.za">adele123@absamail.co.za</a>	082-940-0623	082-940-0623
	Pieter Human	ZR6AHT	<a href="mailto:humanp@telkom.co.za">humanp@telkom.co.za</a>	012-800-2888	082-565-6081
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<b>Webmaster</b>	Edwin peer	ZR6ESP	<a href="mailto:zr6esp@peer.co.za">zr6esp@peer.co.za</a>	012-333-0612	
<b>Hamnet, projects</b>	Roy Newton	ZS6XN	<a href="mailto:newtonr@telkomsa.net">newtonr@telkomsa.net</a>	012-547-0280	
<b>Historian/Awards</b>	Tjerk Lammers	ZS6P	<a href="http://zs6p@iafrica.com">zs6p@iafrica.com</a>	012-809-0006	
<b>Public Relations</b>	Jaco Lubbe	ZR6JLL			082-494-1959
	Thobile Koni	ZS6TKO	<a href="mailto:toko40@mweb.co.za">toko40@mweb.co.za</a>		082-493-2483
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	Doreen de Bruyn	ZR6DDB		012-803-7385	

## Minutes of the monthly club meeting of the Pretoria Amateur Radio Club held at the South Campus of the University of Pretoria on 7 July 2007

**Welcome/Verwelkoming:** Almero ZS6LDP declared the meeting open and welcomed all present.

**Attendance/Bywoning:** The meeting was attended by 25 members and 5 visitors.

**Apologies/Verskonings:** Edwin Peer ZR6ESP, Hilary Peer ZR6HAP and Ivan ZS6CCW.

**Personal Matters / Lief en Leed:** Ivan ZS6CCW and sw Vlasta are on holiday .

**Matters arising from previous minutes/Sake voortspuitend uit vorige notule.** None / Geen.

**Approval of previous minutes/Goedkeuring van vorige notule.**

The minutes of the previous meeting as published in Watts were approved. Proposed by Alf ZS6ABA and seconded by Bill ZS6KO.

### Club Activities/ Klub Bedrywighede.

#### Rallies/Tydrenne. Johan ZS6JHB:.

The next rally is scheduled for the 4th August 2007 in the Witbank area. Radio amateurs who can assist with communications on this event must please contact Johan ZS6JHB at cell number 082-492-3689.

#### Foxhunts/Jakkalsjag . Richard ZS6UK:

Due to the approaching winter Foxhunt activities have been put on hold till September .

#### Social/Sosiaal . Johan ZS6JHB:

Bring en braai na afloop van elke klubvergadering..

Members are reminded of the bring & braai which will now take place after every club meeting.

Johan is also planning a function, Date still to be announced,to celebrate 50 years of involvement of the PARC in rally communication.

#### Hamnet . Johan ZS6JHB:

Hamnet Gauteng Noord se bulletin vind plaas op Maandag aande om 19.00 op 145,725.

#### Financial Report / Finansies. Richard ZS6UK:

Finances in order .

#### Technical / Tegnies:

No report - Craig ZS6RH not available.

#### Fleamarket / Vlooiemark . Almero ZS6LDP:

Almero ZS6LDP reported that there will be a decision on a date for the next fleamarket at the committee meeting and he also thanked all the members who assisted him at the last fleamarket.

#### Projects/Projekte:

Hans ZS6KR reported that no new projects is at hand but that he still has one kit left for the curve tracer.

#### General / Algemeen:

Chris Nagel ZS6BGH sal in die toekoms die QSL kaarte by die Liga se kantore afhaal. Chris ZS6BGH will in future collect the QSL cards for distribution at club meetings.

If you are in need of a new PARC membership card, please contact Richard ZS6UK as we need to know how many members are interested.

Alf ZS6ABA supplied details of people who can be contacted to produce the membership cards.

**RAE klasse:** Almero ZS6LDP het aangebied om klasse aan te bied by sy huis.

#### Presentation / Aanbieding:

Bill ZS6KO did a presentation on QRP and displayed the hardware he used. Wynand ZS6ARF also demonstrated a QRPvalve rig.

#### Next meeting / Volgende vergadering:

The next meeting will be on the 4th of August 2007. Starting time 13.00.

Remember the braai afterwards / Onthou die braai na afloop van die klubvergadering.

#### Closure / Sluiting:

The meeting closed at 15.00.

## Letter to the editor

Hi Hans,

I wish to thank you for having me on your mailing list for receipt of the WATTS newsletters. I find them very interesting. For some unknown reason I missed or mislaid the February issue and it would be appreciated if you could E-Mail this issue to me.

I am sorry to note that you are having the same problem as me in getting articles from members. I thought that it was only the Namibians that were too lazy to put pen to paper and submit articles for the newsletters. It is also noted that your request contained in the June issue of Watts fell on deaf ears. I expect the same result from the local amateurs to a similar request in the July issue of the NARL newsletter that I mailed last night.

I am sure everyone appreciates your efforts but it would be nice if they could at least say thank you and that they appreciate your efforts but one never hears from them Hi!!

I am attaching three articles that I wrote some 20 years ago while I was still in Bloemfontein as ZS4TT, and although they appeared in their newsletter of that time and the articles on the mast and rotator also appeared in Radio ZS at that time.

The article on the trapped dipole was based from an article that in fact appeared in WATTS in the 80's date unknown but you may be able to locate it in your archives.

Let us hope for some response from our members in future.

**73's de Trusty V51TT**

## Editorial

This issue is your editor's 50<sup>th</sup> effort to knock up your monthly newsletter.

Have you never browsed through old Radio-ZS's?

Was it not mainly the pictures that tell the story of its members and activities of the hobby?

WATTS should have more of that too, so that our members can know about our members. Later generations in our membership can then also enjoy the history we have recorded for them.

Have you already paid your membership? We would like to maintain membership of over 140. Speaking of numbers, 44 members still get a printed WATTS by snailmail which is costing an increasing amount. If it is at all possible, we want to reduce this figure and it will be appreciated if more members can sign up for email.

Last but not least an SARL membership or continued SARL membership - that was also due the end of June - is also important. I include here an amusing correspondence that shows that despite unimaginable hardship, the gentleman paid his fees!

## Redaksioneel

Hierdie uitgawe is my 50e poging om u nuusbrieff aanmekeer te slaan. Het u ooit deur ou radio ZSe geblaai? Was dit nie hoofsaaklik die fotos wat die verhaal van sy lede en stokperdjiebedrywighede vertel?

WATTS behoort ook meer daarvan te hê sodat ons lede kan weet van ons lede. Later geslagte in ons ledetal kan dan ook die geskiedenis geniet wat ons vir hulle vasgelê het.

Het u al u lidmaatskap betaal? Ons wil graag ons ledetal van bo 140 behou. Gepraat van getalle, daar is 44 lede wat nog 'n gedrukte nuusbrieff per slakkepos kry wat toenemend meer kos. As dit enigszins moontlik is, wil ons die syfer verminder en dit sal waardeer word as meer lede by e-pos kan aansluit.

Laaste maar nie die minste nie is 'n SARL lidmaatskap of aaneenlopende SARL lidmaatskap - wat einde Junie ook betaalbaar was - ook belangrik. Ek wys hierby 'n amusante korrespondensie wat toon, desondanks hy ongelooflik swaarkry, die meneer tog betaal het!

Radio ZS 1951

### LETTERS TO THE EDITOR

Sir—In reply to your request to send a cheque, I wish to inform you that the present condition of my bank account makes it ordinarily impossible. My shattered financial condition, is due to Union Laws, Liquor Laws, sister-in-laws, mother-in-laws, brother-in-laws and outlaws.

Through these laws I am compelled to pay a business tax, supertax, school tax, gas tax, light tax, excise tax and amusement tax, of which I have none. Even my brains are taxed. I am required to get a business licence, truck licence, bicycle licence, gun licence, wireless licence, liquor licence, not to mention the marriage licence and the dog licence.

I am required to contribute to every society and organisation which the genius of man is capable of bringing to life, to the woman's relief, the unemployment relief, and the gold-digger's relief, and to every hospital and charitable institution in this country, including the Red Cross and the Double Cross.

For my own safety I am required to carry life insurance, property insurance, liability insurance, burglar insurance, accident insurance, business insurance, earthquake insurance, war-risk insurance, unemployment insurance, old age insurance and fire insurance.

My business is so governed that I do not know today, nor can I find out who owns it. I am inspected, expected, suspected, disrespected, rejected, examined and re-examined, informed, required, summonsed, fined, commanded, and compelled until I provide an inexhaustible supply of money for every known need, desire or hope of the entire human race. Simply because I refuse to donate something or other, I am boycotted, talked about, lied about, held up, held down and robbed until I am ruined.

I can tell you honestly that except for the miracle that happened I could not enclose this cheque. However, the wolf that comes to many doors nowadays had pups in my kitchen and, due to the fact that I was able to sell the pups, I now have much pleasure in enclosing your cheque herewith.

Yours faithfully, ZSL4AG, Bethlehem.

# Fleamarket snaps

1 July



Tafel van Johan ZS6JPL (Early birds catch the bargains...)



Hermann ZS6SN in gesprek met Pieter ZS6PVW



Some out-of-town visitors were also early



Attennn-shun! Madeira ZS6FJM and Martinho ZS6BQP



Ed ZS6UT admiring the wares of Craig ZS6RH (and sideshow)



Stand of Kevin ZS6KEV with nice new goodies



**Left: A trailer full of commercial electronic bric-a-brac donated by Johan ZS6JPL was parked in front of the PARC table area and initially sales were made at R20 per item to strengthen club funds. Prices eventually dwindled so as to get the trailer empty! Our club benefited by a handsome R528.**

**Terloops het ons gehoor dat 'n blinde operateur Ernst ZR6EFG 'n twee-band antenna verniet bekom het danky 'n donasie van 'n (aan die redakteur onbekende) bystander.**

Sulke goeie amateur-gees sal hopelik altyd by ons wees!

## Birthdays

## Verjaarsdae

Aug



- 01 Sue ZS6SUE, sw of Don ZS6CRT
- 02 Marelise, lv van Pierre ZS6PJH
- 03 Paul ZS6BMF
- 04 Ceciel, lv van Flip ZS4GE
- 05 Hans ZS6HVG
- 06 Estelle, lv van Simon ZS6AST
- 06 Edwin, son of Molly ZR6MOL and Richard ZS6UK
- 07 Cathlen, daughter of Alta and Johnny ZR6BAJ
- 07 'JB' ZR6YV
- 07 Hubert ZS6HVM
- 08 Raymond ZS6ALG
- 08 Tobie ZS6ZX
- 10 Anne ZR6AUL, daughter of Frances ZR6AUT
- 10 Wally ZS5WP
- 11 Lorraine, sw of Stan ZS6SDZ
- 14 Harry ZS6HRD
- 15 Roger ZS6RJ
- 15 Molly ZR6MOL, sw of Richard ZS6UK
- 15 Samantha, daughter of Sue ZS6SUE and Don ZS6CRT
- 16 Daniel ZR6AUS

Aug

## Anniversaries

## Herdenkings

- 07 Peggy and Ed ZS6UT ( )
- 09 Vlasta and Ivan ZS6CCW ( )
- 20 Bertha en Hans ZS6KR (41)
- 27 Anne and Jac ZS6QA ( )
- 16 Marie, dogter van Poppie ZS6BCP en Hansie ZS6AIK
- 18 Zdena, sw of Ivo ZS6AXT
- 22 Neville ZR6NBA
- 22 Hal ZS6WB
- 23 Otto OE6OWV / ZS6OFW
- 24 Allen, son of Alta and Johnny ZR6BAJ
- 25 Doppies ZS6BAQ
- 26 Sinéad, daughter of Heather and Vince ZS6BTY
- 28 Jean ZS6ARA
- 30 Don ZS6CRT
- 31 John, son of Bernie ZS6ANU

† It is with regret we have to announce the passing of OM Carl ZS6NCC after a long illness. Our condolences to his family.

## Sick Parade | Krukkelys

Helen, daughter of Roy ZS6XN is back at school after her back operation  
Louise, lv van Almero ZS6LDP het feitlik herstel na 'n sinus operasie.

## Diary | Dagboek (UTC times)

- Aug**
- 01 100<sup>th</sup> anniversary of Scout Movement
  - 04 PARC club meeting**
  - 04 Eu HF Championships 1200-2359
  - 05 SARL HF Phone Contest 1300-1630**
  - 09 National Women's Day
  - 10 School holiday
  - 12 SARL 40m Mobile Contest
  - 20 SARL HF Phone Contest logs closing date
  - 23 Class B RAE
  - 26 SARL HF CW Contest**
- Sept**
- 01 PARC AGM**
  - 01-02 All Asian DX Contest

## PARC SUBS / LEDEGELD 2006-2007

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

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

**Bank : FNB Ordinary members/ gewone lede R70**  
**Branch : 25 20 45 Spouses, pensioners R50**  
**Account : 546 000 426 73**  
**Your call sign must appear as statement text!**

## Snippets | Brokkies

- **Suzette van Wyk**, dogter van Pieter ZS6PVW en Magda ZS6MVW, is een van die UK Itchen Valley beurse toegeken dmv die SAARDT om verdere studie en onkostas te dek om haar lisensie te kan kry. Baie geluk Suzette, en mag jy gou jou doel bereik.
- **50 years of Total Rally**: our secretary promised something celebratory in November.
- **Name/Call tags**: Do you need one? Richard ZS6UK is gathering names. These are plastic clip-on credit card size.
- Chris ZS6BGH/ZS3B has undertaken to collect **QSL cards for club members** from the SARL QSL Bureau on a regular basis. These cards will then be brought to club meetings for distribution. The member list currently at the QSL bureau will be reviewed and if you wish to be added to that list let us know. **It must be stressed that members that do not attend meetings for various reasons must rather send SASE's to the bureau** for direct posting as their cards will lie forever at our clubhouse.
- **Willie ZR6WGR** is 3 weke oorsee vir werk en plesier en sy lv Sarina gaan saam. Onder andere na CZ land waar Vlasta lv van Ivan ZS6CCW hulle sal wegwys maak.
- **A25 (Botswana) DXpedition**: As part of the *EME for Africa* project, Hal ZS6WB (A25HL) and Pine ZS6OB (A25OB) together with Dick ZS6BUN (A25BUN), arrived late Thursday 5 July and set up shop for EME and Meteor scatter operations. During the 3 days they were there, some 114 2m contacts were made on EME, probably having created the first moon-pile-up ever requiring much operating skill to distinguish each caller. Only 6 stations were contacted on 6m meteor scatter and there was no luck on 2m.
- **WATTS** may also be downloaded from: <http://groups.google.com/group/PretoriaARC>  
Scroll down till you see FILES and you will find all issues from Jan 2007.
- **New electronic gadget and component outlet** opening in Pretoria East. From the end of August Yebo Electronics in Midrand will shift their business to Pretoria East in Atterbury Boulevard c/o Atterbury and Manitoba roads. Check out stock and prices on [www.fort777.co.za](http://www.fort777.co.za)
- **ONCE AGAIN: Our AGM will be on 1 September. Have you considered offering your services for the coming year?**

## QRP Night (These photos were unfortunately the only survivors worth publishing due to errors with a borrowed camera)



Bill ZS6KO gave a presentation on QRP working and showed two of his rigs and a deservedly obtained certificate and plaque for his achievements. He can regularly be heard early mornings on 40m CW and keeps meticulous logs detailing RST's and powers both ways.



Following Bill, Wynand ZS6ARF surprised us with a 6146 valve QRP rig that he demonstrated to be capable of 15 W maximum. The photo below shows him giving it a tune-up with Almero ZS6LDP looking on.



### Does your laptop have a Sony battery? (from Dataweek 11 July 2007)

Almost a year ago one of the largest recalls in industry history began. Sony laptop batteries are still experiencing problems. As a result of a legacy battery pack catching fire recently. Toshiba has said that it is intensifying its efforts to replace the defective Sony battery packs in certain of its notebook models. This follows a series of high-profile melt-downs and fires which caused manufacturers such as Toshiba, Lenovo, Fujitsu, Apple and Dell to recall millions of Sony battery packs last year.

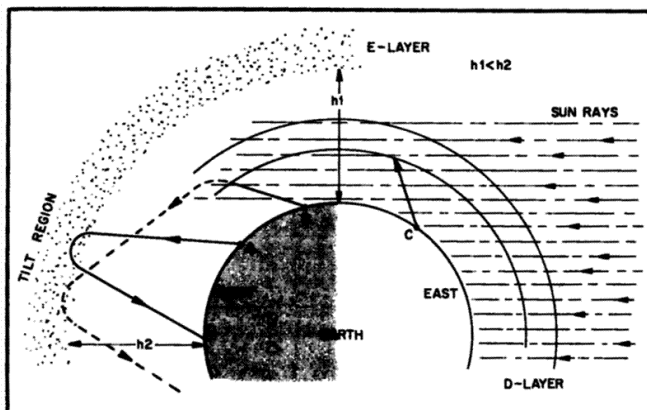
# What is the Grey line?

Excerpt from ON4UN's book: *Low Band DXing*

## 1.3.3 DUSK AND DAWN; TWILIGHT PERIODS

The terminator, mentioned before, is only an imaginary dividing line between one half of the earth in daylight and the other half in darkness. Visual transition from day to night and vice versa happens quite abruptly in the equatorial zones, and very slowly in the polar zones (see Section 1.1.3.1). The so-called *gray line* is a gray band between day and night, usually referred to as the twilight zone. Dusk and dawn periods produce very interesting propagation conditions which are not limited to the lower HF frequencies.

Long before sunrise there is no D-layer activity above or in the western direction from a particular station location. Hence, there is no absorption at all (situation A in Figure 1.7). Later, as the earth rotates, we come to situation B, where the gradual build-up of the D layer commences at the transmitter site. Initially the density of ionization is rather low, and arriving signals will be refracted rather than absorbed. This phenomenon can lower the effective angle of radiation as seen from the reflecting E layer. This results in a longer single-hop distance or in a greater signal strength for a given number of hops. This is one of the reasons why DX signals always peak during the dusk and dawn periods over all E-W, NE-SW and NW-SE paths. This does not apply to N-S paths.



**Figure 1.7—**At sunrise signals are refracted slightly by the D layer which is only marginally ionized, and then refracted back to earth in the E layer. Due to the tilt in the E layer in the region where night changes into day, a further lowering of the effective radiation angle occurs.

In addition, the ionosphere, responsible for the refraction of the low-band signals, is changing abruptly in height at sunrise/sunset time. This effective ionospheric tilt helps to create the necessary conditions for trapped-wave or chordal-hop propagation (see further in this Section).

There is another reason why we seem to be able to work DX much better during these twilight periods. When the sun is rising in the morning, all signals coming from the east (which can often cause a great deal of QRM during the night) are greatly attenuated by the D layer existing in the east. The net result is often a much quieter band from one direction

(east in the morning and west in the evening), resulting in a much better signal-to-noise ratio on weak signals.

It is also of utmost importance to know how long these special propagation conditions exist; in other words how long the effects of the radio-twilight periods last. To understand the mechanism, it should be clear that the rate of D-layer build-up depends upon the rate of sunrise, or in other words the height of the sun at local noon. There are two factors that determine this rate: The season (the sun rises faster in summer than in winter) and the latitude of your location (the sun rises very high near the equator, and culminates in low angles near the poles).

The effect of advantageous propagation conditions at sunrise and sunset has been recognized since the early days of low-band DXing. It was Dale Hoppe, K6UA and Peter Dalton, W6NLZ who called the zone in which the special propagation conditions exist the *gray line* (Ref 108). The gray line is a zone centered around the geographical terminator. It should be clear from the above explanation that the effective width of the zone is certainly not constant over its total circumference, and will actually depend on the speed of sunrise. This means we have a narrow gray line near the equator, and a wide gray line near the poles. The time span during which we will benefit from typical gray-line conditions will accordingly be short near the equator and long in the polar regions. This means that the gray-line phenomenon is much less important to the low-band DXer living in equatorial regions than to his colleague close to the polar circles. We should not forget, however, that a total propagation path consists of two terminal points and a long stretch in between. Propagation is not only determined by circumstances at the two terminal points.

It is not clear whether propagation proper inside the gray line along the terminator benefits from its existence. It is clear, however, that signal launching at the transmit and receive end does benefit greatly from the mechanism.

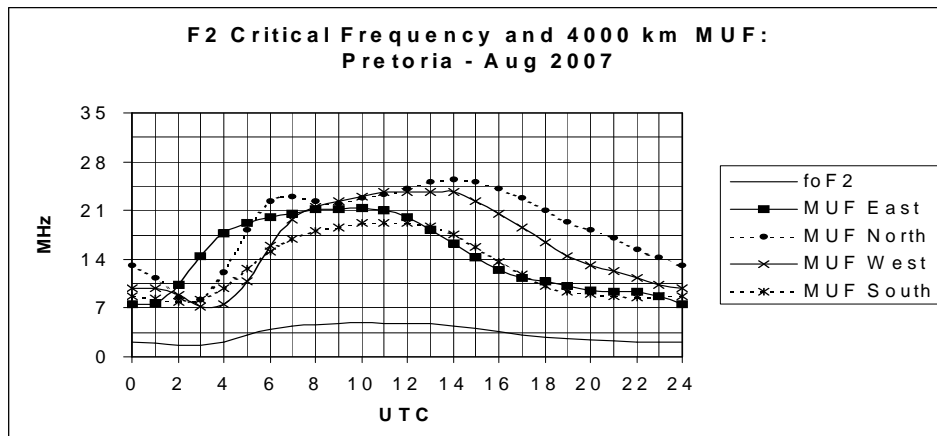
## Long Term HF Propagation Prediction for Aug 2007 (courtesy Vince ZS6BTY)

### 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.



## Snoring Salesmen

**W**HEN salesmen are on a salary they are apt to go asleep. There is no incentive to do their best. So they don't do it.

The problem is how to keep them awake. It can be done by having sales contests, with a number of cash prizes for the winners.

Also, they can be stimulated by fixing a quota on each man. The company must let every salesman know how much it expects from him.

It is a help, too, if good work is recognised quickly by a rise in salary, instead of waiting until the end of the year.

All employers must bear in mind that when a salesman is on salary, not commission, something must be done to keep him from falling asleep. There are thousands of snoring salesmen.

## WRIST-WATCH RADIO

**R**ADIO sets the size of wrist watches are now feasible because of development of the transistor, Dr. Joseph A. Becker research physicist of the Bell Telephone Co. Laboratories, has just stated.

Dr. Becker said that although the transistor is but one-half inch long and one-quarter inch in diameter, it can replace a radio valve. He added that it can be manufactured more cheaply than valves.



Listening to 725 can be such a bore. I'd rather watch the birds.

\* \* \*  
**A** NEW gramophone on the market here plays records vertically. It plays automatically for 14 hours of continuous music—if anyone's crazy enough for that; if they're not, I guess it drives 'em that way.

Its manufacturers claim that it will play from breakfast to supper without repeating a record.  
\* \* \*

1959

## RYALL TRADING CO. (PTY.) LTD.

(ESTABLISHED 1922)

RYALCO HOUSE, 363 SCHOEMAN STREET, PRETORIA

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FOR ALL YOUR RADIO COMPONENTS, ELECTRICAL FITTINGS  
OF ALL DESCRIPTIONS, APPLIANCES, WASHING MACHINES, etc.  
Manufacturers of the famous "Ryalco Super" Water Heaters

●  
HAMS! THIS IS YOUR SHOP IN PRETORIA  
We represent "Hamrad", and have a good range of Radio Equipment,  
etc.

●  
Our Motto is:

*If we have not got it we will get it for you, or else it's not made*