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ZS6BAQ

WATTS

05 - 2004

Year 69

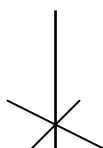
Monthly newsletter of the Pretoria Amateur Radio Club
Maandelikse nuusbrieff van die Pretoria Amateur Radio Klub.



PARC, PO Box 73696 Lynnwood Ridge 0040, RSA



<http://www.qsl.net/zs6pta>



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

Relays : 1840, 3700, 7066, 10135, 14,200 MHz

depending on season

Swapshop: After bulletin 2m and 40m (also on-line)

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In this issue

- Editorial
- Club braai at PMC
- Club meeting minutes
- Member news
- Diary
- General / Technical
- Page eight

in hierdie uitgawe

Redaksioneel
Klub braai by PMC
Klubvergadering notules
Ledenuus
Dagboek
Algemeen / Tegnies
Bladsy agt

Next meeting

Date: 13-05-2004
Time: 19:30 for 20:00
PARC Clubhouse,
South Campus,
University of Pretoria.
SE cnr University and
Lynnwood roads.

Editorial

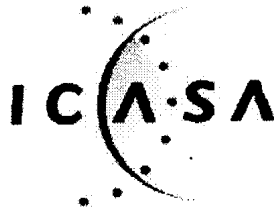
With the SARL on a solid and capable footing for the coming year, we look forward to increased efficiency of service, more visibility and image improvement to attract an increased membership that is sorely needed to ensure continued and expanded amateur radio privileges.

The amendments to the Radio Regulations under Section 96 of the Telecommunications Act No. 103 of 1996 have been published in government Gazette No. 25814 and interested persons were invited to submit representations on the proposed amendments by 20 April 2004. This was the last chance for us, and the SARL to say our piece.

Generally it already looks good, with some new technical privileges and delegating competence assessment to an approved *National Body* as approved by the Minister. This basically means that presumably the SARL may in future be empowered set the standards.

Shortly the final iteration will come to an end and conformance to what is promulgated, is the only way ahead.

NOTICE 477 OF 2004



Redaksioneel

Met die SARL op 'n stewige en bekwame grondslag vir die komende jaar, kyk ons vorentoe na meer doeltreffende dienslewering, meer sigbaarheid en 'n verbeterde aansien om meer lede te trek wat so broodnodig is om voortgesitte- en toenemende amateur radio toegewings te verseker.

Die wysigings op die Radio Regulasies onder Seksie 96 van die Telekommunikasiewet Nr. 103 van 1996 was gepubliseer in Staatskoerant Nr. 25814 en belanghebbende persone was genooi om voorleggings te maak oor die voorgestelde wysigings tot op 20 April 2004. Dit was die laaste kans vir ons, en die SARL om ons sê te sê.

In die algemeen lyk dit goed, met 'n paar nuwe tegniese toegewings en magtiging om bevoegdheid te beoordeel word aan 'n Minister-goedgekeurde *Nasionale Liggaam* toegesê. Dit beteken basies dat waarskynlik die SARL in die toekoms bemaagtig kan word om standarde te mag bepaal.

Binnkort sal die finale iterasie verby wees en skikking na wat gepromulgeer word, is die enigste pad vorentoe.

Verslag: ----- Klub braai at PMC ----- : Report

Some 40+ souls, including a few children and dogs enjoyed a beautiful day at the PMC in Silverton. Thanks to Willie ZR6WGR we had marvelous braaipacks and papbolle, gravy and salads. Doreen and Vlasta also brought various delicacies. Much was discussed at the fires and no altercations were reported despite the consumption of considerable volumes of refreshment!



Was this the first or second shift?



Vince ZS6BTY needed a bit of extra nourishment



ZS6AFG, ZS6BQP, ZS6AJW and ZS6AZG very busy



ZS6OB, KR en Sylvie. Tjerk is regs afgesny want Silvie is mooier



Net koeldank vir my, dankie – ZR6PJH Pierre en LV



Middel: Almero ZR6RY en LV Louise. Wie het die mooiste bene?



Herman ZS6SN en sy LV Bettie. ZR6MOL is langs hulle.



Die wat laaste lag is Willie ZR6WGR.

Ledetal || Membership

Thanks to Richard ZR6CK who wrote (and maintains) a club membership database, it is interesting to note our composition and proportionalities:

Danksy Richard ZR6CK wat 'n klub-lidmaatskap databasis geskryf het (en onderhou) is dit interessant om ons huidige samestelling en verhoudings te beskou:

	Total	SARL*	Eng	Afr	Other
Full members	124	65	56	54	14
Spouses + Dep.	17	6	6	10	1
Hon. members	3	2	2	1	0

*SARL statistiek is die beste wat ons het – laat weet asb u status.

Minutes of the monthly club meeting of the Pretoria Amateur Radio Club held at the South Campus of the University of Pretoria on 8 April 2004

Welcome: Hans ZS6KR declared the meeting open and welcomed all who attended.

Attendance: The meeting was attended by 23 members and apologies were received for Bill ZS6KO, Johan ZR6ANF, Almero ZR6RY, Brian ZR6BJS and Harry ZS6HRD.

Personal Matters/Lief en leed: Mary, xyl of Bill ZS6KO, is back home after she had a back operation. Harry ZS6HRD is also back home. Solly ZS6SV – wife in hospital.

Minutes of previous meeting: The minutes of the previous meeting as published in Watts were approved. Proposed by Willie ZR6WGR and seconded by Charl ZR6GN.

Matters arising from previous minutes: None.

Club Activities:

DF Hunt: Richard ZR6CK – DF hunt planned for Sunday 18 April 2004. Start at the Botanical Gardens in Silverton at 14:00.

Fleamarket: Next **MEGA FLEAMARKET** will be held 27 June 2004 at our premises.

Rallies: Johan ZR6JHB: Next Rally: TOY–TOY Rally – 17 April 2004.
Start at Menlyn Mall, finish at Olive Garden Lodge. The event will be run over 8 stages (2 in Pretoria and 6 in the Bronkhorstspuit area).
PARC to do rally communications; 1 control station, 1 mobile station and 4 fieldstations will be in action.

Social: Club braai 28th March 2004 at Pretoria Motor Club (PMC) in Silverton.
Willie ZR6WGR thanked everybody who attended the braai.
Baie dankie aan Willie vir die heerlike braaipakkies wat jy gereël het en baie dankie aan jou lv en jou skoonmoeder vir heerlike pap en sous en slaai.

Financial Report: Richard ZR6CK – Received R500.00 from Hans ZS6KR for equipment sold donated by Daniel ZR6AUS. The Club's finances took a bit of a knock with expenses paid for the braai on 28 March, but is now adequately compensated.

Ham Dairy:

April 09 Good Friday.
10-11 Japan Int.CW DX contest.0700-1300 UTC.
11 - SARL Hamnet 40m Contest.
12 - Family Day.
16 - RAE registration deadline.
18 World Amateur Radio Day.
25 - Marconi Day.

May RAE exams.

General / Algemeen: Hans ZS6KR het 'n kort oorsig gegee van die gebeure tydens die SARL se AJV.

Presentation: Microchip manufacturing (SAMES video)

Next meeting: The next meeting is scheduled for 13 May 2004.

Closing: The meeting closed at 21h15.
Thanks to Molly ZR6MOL for serving tea, coffee and a bite to eat.

ZR6JHB

Solving touch-lamp problems

Touch lamps are RF operated devices that often cause, or are susceptible to, EMI problems. They have a free-running oscillator that is very broad and rich in harmonic energy. Emissions have been found to cover 1-7MHz and yourself as well as nearby hams will wonder where this new QRN comes from. This oscillator is hooked up to a touch-plate that changes its frequency which is detected to switch a bistable circuit. The touch-plate can obviously also act as an antenna. Nearby radio transmissions are known to easily switch such lamps on or off especially on 40m and 80m. AC line-filtering will generally not help.

A 1k-3k3 resistor in series with the plate connection could solve the problem and if the resistor needed is found to be so high that it will not any more switch on, use a small RF choke in series and lower the resistor to about 1k8.

Birthdays Verjaarsdae

Mei



01 Amanda, dogter van "JB" ZR6YV
01 Hannie ZR2JMP, lv van Callie ZS2CWP
05 Selwyn ZS6SEL
09 Diana ZR6RIE, lv van Louie ZR6LVW
09 Heilie, daughter of Melvin ZS5MF
10 Roy ZR6RV, son of Roy ZS6MI
11 May, sw of Wally ZS5WP
11 Truus, sw of Stan ZS6AAO
13 Sue, daughter of Stan ZS6AAO
14 Johannes ZS6BPB
18 Karen, daughter of Frank ZS6GE
20 Dawid ZS6DSG

Anniversaries Herdenkings

May

04 Ronel en Pieter ZR6PSR
28 Edna and Peter ZS6RX

22 Arnaldo ZS6-2505
23 Lily, sw of Harry ZS6AMP
25 Tjerk ZS6P
26 Vitor ZS6VG
27 Eben ZR6EDT
31 Egbert ZS6AZG
31 Dave ZS6JW

Nuwe Lede Welkom aan Pieter Stronkhorst ZR6PSR
Jan Lengton ZS6BBK
Joey Lengton ZS6BBL

Sick Parade



Mary, sw of Bill ZS6KO is recovering well.
Joe ZS6TB had some emergency surgery but is back in action

Krukkelys

Tjerk ZS6P is weer sy ou self
Stan ZS6AAO is not well and bedridden

Ham diary | Dagboek

25 SARL President's Net
25 Marconi Day
27 Freedom Day
May 01 Workers Day - public holiday
03-04 Spanish WW RTTY contest
03-04 SP (Poland) CW/SSB contest
11 UBA spring contest SSB

**Please budget for membership renewals due at the end of June.
New members who joined up to 2 months before will be considered as being paid-up till June 2005**

A good Contest Calendar and Contest Rule links can be found at <http://home.online.no/~janalme/>

Snippets | Brokkies

- **APRS** is working well thanks to Johan ZR6ANF. The node is on 144,800 MHz. Even your editor got himself on the Pretoria map and receives beacons from all over the world. These beacons can be amateurs at home, moving vehicles, WX stations etc. They can be interrogated and short messages can be sent to and fro provided you can reach a local digipeater or I-gate. A good initial map source is on www.qsl.net/ZS6OUN. More can be found with a Google search for APRS MAPS. An extensive collection is presently being compiled and can be made available on CD. Contributions of UI-view compatible electronic maps will be appreciated.
- Een van ons nuwe lede Pieter Stronkhorst **ZR6PSR** was tot onlangs op Marion Eiland saam met Ludwig ZS6WLC. Hy sal ons kom vertel oor hulle wedervering met hulle werk en die opstel en bedryf van ZS8MI.
- **PARC again took 1st place on aggregate in the SARL HF contests. !! This is the 7th time in succession !!**
Thank you to all those who took part – your combined effort is much appreciated.
Baie dankie aan alle ZS'e wat deelgeneem het.
PARC also came 2nd in the HF Field Day Contests !!
- **ZR6AUS** het heelwat nuttige vlooiemark items aan die klub geskenk wat alreeds 'n stewige bydrae aan ons fondse begin maak het. Baie dankie Daniël.
- **Don ZS6CRT** commisioned his dual-bander again and is making good use of IRLP on our 438,825 MHz repeater. It has been quite a while that we heard him anywhere!

Raai wat se motor dit is?

'n Deelnemer aan die Middelburg Nissan tydren het sy voertuig teen 180kmh gerol.

Die gelukkige leser wat hierdie voertuig se fabriek kan uitken, wen 'n bottle wyn, rooi of wit.

Deelnemers moet hul antwoorde by die Meimaand klubvergadering indien.



A participant in the Middelburg Nissan rally rolled his vehicle at 180 kmh

The lucky reader who can identify the make of this vehicle can win a bottle of wine, red or white.

Participants must tender their answers at our May club meeting.

(Die volgende persone mag egter nie hier aan deel neem nie: ZR6JHB, ZR6HVG, ZR6YV, ZS6BRC may not participate)

An interesting topic: Hearing aids and RF

gleaned from an amateur newsgroup

Posting 1: (The query from Bill W6WLB) As another confirming moment in my life, next week I will be fitted for my hearing aids.

I have already read articles that suggest that hearing aids and cell phones do not get along very well together. The so-called telecoil which is imbedded into the molding of the ear piece (one ear only) acts as a receptor for picking up audio from a conventional telephone..... but apparently it can also pick up the RF from a cell phone generally resulting in a buzzing sound. The FCC has mandated that the manufacturers of cell phones must make available hearing aid compatible cell phones, but they have a couple more years to get that done. In the mean time, the apparent solution with respect to cell phones is to use a headset.

So, if that telecoil can pick up RF from a cell phone, what is the potential for it picking up RF from my own HF transmissions here...(probably not all bands, but...)????

Posting 2: (comment by AA7TA) My wife is deaf in the 200-2000 Hz band in both ears -- can't hear a tornado siren, doorbell, phone ring, etc. Comes from playing viola in a symphony orchestra for 15 years, just in front of the brass. But I digress. Her cell phone, a Nokia, has a place to plug a headset -- or an inductive loop to drive the T-coil in her hearing aids. That works very well indeed for her. The loop she uses also is Nokia, though other vendors (deVilbiss, for instance) make them. Hers just goes around her neck, plugs into the phone's headset jack and has a switch that she can press to end a conversation. Takes 3 hearing aid batteries if I remember correctly. Cost under \$100. But there is some possibility of RF interference. I suspect it's not much. I'm sure the impedance of the T-coil in the aid is high enough that it would be hard to couple much RF into it, but I've been wrong before. Coupling audio in is a different matter, of course. The telecoil doesn't really pick up RF from the phone. Digital phones cycle on and off in the audio range (teens of kHz) and it's the hash from the switching that the coils pick up. They're optimized for a fairly narrow freq range to match the passband of telephones. The old analog phones didn't have that problem (at least I never noticed it) on the same frequencies and usually with higher power than the digital phones. I've never noticed any problems with RF in the HA's but the telecoils are sensitive to other fields, esp. from computer monitors or any other audio freq emitters (TV's, transformers, fluorescent lights, some of those anti-theft thingies they have in stores that you have to walk thru, etc.) I suppose if you worked really, really LF (<20kHz) you might have some issues but even then only when the coils are switched in (they're not active all the time...you have to switch them on). Actually, the cell phone I have now (Motorola) works fine without the telecoil, it's just kinda touchy where you have it positioned...you gotta get the phone speaker lined up with the mic on the HA. Also, Moto and Nokia make loop adapters that you wear around your neck and plug into the phone and couple with the telecoil...they work pretty well and get the phone away from the HA and make it kind of hands-free (I suppose they'd work with a radio if you wired up a little adapter.

Be patient with your new HA's...you'll be overwhelmed with sound for a while...stuff you haven't heard for a long time. It takes a while to re-adjust. The world is a lot noisier place than you remember. It'll take a few visits to the audiologist to get them set up so be prepared to work with him/her. And if you're getting digitals, look into the noise reduction capabilities. It will make the bands a little quieter.

Posting 3: (comment by K7SAM) If you are looking to use cordless phones with inductive hearing aid pickup, 900 MHz cordless phones will work ok... the 1.2GHz or higher will not do so well for you. I have worn hearing aids since I was little and the best for me is a cordless phone in speakerphone mode with the speaker built into the handset. Have had my HA (digital) for a couple of years now and have never had a problem with cell phones. Also no problems with computer monitors, fluorescent lights or anything else for that matter. The telecoil works great with my cell phone, Nokia. In fact the older the phone the worse the performance. Some older desk and wall phones are so bad it is better if I take the hearing aid out and while using the phone. I picked up one of the loop adapters from the audiologist and it is just about the neatest thing since sliced bread. Just plug it into the headset jack on the radio and you have the greatest set of headphones you have ever owned. You can adjust the volume on each separately and no one else can hear a thing. Also use an extension cable and can work on the computer while listening to the radio so that I don't miss anything. With the loop I do sometimes pick up stray noise, never have tried to sort out what it is. Could be lights, RF, any number of things but just not worth messing with, it is just not that bad. I can say that my HA really gave me back ham radio. Was really getting tough to make out call signs, etc. Had to continually crank up the volume when using headsets, etc. I have so much more fun on the radio since I got them.

Posting 4: (comment by N5KZW) The noise generation from the power supply is more of an issue with GSM and TDMA technologies. The GSM/TDMA handset transmits 217 bursts of data per second, so the switching power supply has to ramp up for the transmitter 217 times a second. The 217 Hz noise is more noticeable when the handset is located far from the cell tower and the transmitter is pumping out maximum power. CDMA does not pulse the transmitter and, therefore, should not have the buzzing problem.

Posting 5 : (comment by K9DCI) The internal circuitry can pick up the RF as well and digital phones *can* have a significant AM component. The coil wires can be simply like a single wire picking up RF and feeding it inside the HA. When the TX is on, RF is picked up and bias changes occur in some part of the circuit. When the TX goes on-off, you have essentially square waves fed to the circuitry at the pulse repetition frequency. Very small amounts of RF can be noticed this way. The Nextel phone is the most noted since it has a distinctive putt-putt (actually something like 10-20 HZ) which easily gets into computer speaker amps. Digital phones cycle on and off and as I said the old analog phones didn't have that problem ... This is because in "analog cellular" the transmitter was FM and on continuously. It had no AM component. If RF was getting into some device you would not notice it until it got strong enough and changed the bias on something to cause distortion or bias some circuit out of operating range. Small amounts of constant RF wouldn't affect things enough to notice.

Square conductor twin open lines – Low impedances for feeding or matching – by VE3ERP

Extract from CQ magazine pp 60-61 Nov 2000

Open-wire transmission lines of less than 83.1 ohms impedance are not physically possible with round conductors because the space between the conductors theoretically would be zero or less. However, impedances of less than 83.1 ohms are possible if the line is constructed using square conductors.¹ Theoretically, square conductors can produce open-wire lines of any impedance using the equation

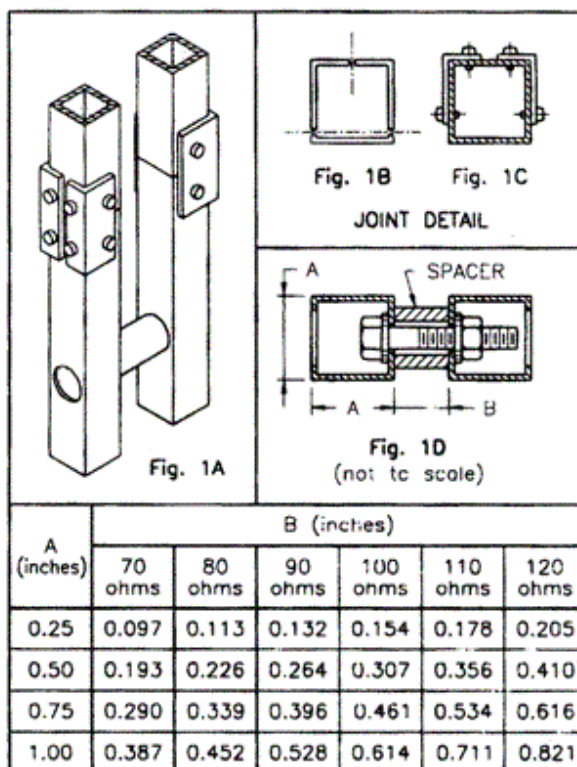
$$Z_0 = 120 \log_n (A + \sqrt{A^2 - 1})$$

where:

- Z_0 = characteristic impedance in ohms
- W = width of face of square conductor
- $D = 1.8 \times W$
- S = center-to-center distance between conductors
- $A = D/S$

This equation is accurate for impedances at least as low as 70 ohms. For lines of below 70 ohms or above 120 ohms, the impedance should be confirmed by test measurements of a sample length of line. You will probably never want a square conductor line over about 120 ohms impedance because conventional open-wire lines with round conductors are cheaper and easier to build.

Fig. 1 illustrates the construction of a parallel, square-conductor line, and gives dimensions for lines of typical impedances commonly associated with amateur radio applications. Aluminum square tubing is recommended for the conductors. Lengths of tubing can be connected using joiners made from the same size tubing.



Ed: The impedance limit of 83,1Ω is derived from the impedance equation for closely spaced parallel conductors: $Z_0 = 120 \text{Log}_e D/r$ If the wires are almost touching then $D \approx 2r$ and thus $Z_0 = 120 \text{Log}_e 2 = 83,1\Omega$

USEFUL SITE:

The Ham Radio Deluxe Development Team is pleased to announce the release of Ham Radio Deluxe v1.2. Build 348: – Specially written software galore for many radios – IC756, TS2000, FT817, FT897 etc etc to name a few. You can find more info at: <http://www.ham-radio.ch/forums/viewtopic.php?t=45> and remember: Ham Radio Deluxe is FREEWARE - by radio amateurs for ALL radio amateurs, regardless of race, creed, class (or lack of it!) and IQ!
Pete/Igor PH1PH - G7ECN

What is the difference between Mechanical and Civil Engineers? Well, Mechanical Engineers build weapons and Civil Engineers build targets.

Missing page in your equipment handbook?

Below is one of the first pages in the handbook for the BC221-AK (wooden box model) frequency meter manufactured in the US for the war effort.

Ed: Collector's items! A mint Jan 1944 model decorates my shack top shelf.

DESTRUCTION NOTICE

WHY—To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN—When ordered by your commander.

HOW—

1. Smash—Use sledges, axes, handaxes, pickaxes, hammers, crowbars, heavy tools, etc.
2. Cut—Use axes, handaxes, machete, etc.
3. Burn—Use gasoline, kerosene, oil, flamethrowers, incendiary grenades, etc.
4. Explosives—Use firearms, grenades, TNT, etc.
5. Disposal—Bury in slit trenches, foxholes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT.

WHAT—

1. Smash—oscillator ceramic coil forms and all other parts on underside of chassis of frequency meter after removing chassis by loosening four corner screws on front panel.
2. Cut—as many wires and cables as time permits.
3. Bend and/or break—calibration dial and knobs on front panel of frequency meter.
4. Burn—calibration books, manuals, circuit label, and remainder of entire frequency meter.
5. Bury or scatter—any or all of the above pieces after breaking.

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