



Improved logo! - by ZR6FD

WATTS

08 - 2003

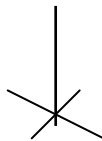
Monthly newsletter of the Pretoria Amateur Radio Club
Maandelikse nuusbrieff van die Pretoria Amateur Radio Klub.



PARC, PO Box 73696 Lynnwood Ridge 0040, RSA



<http://www.qsl.net/zs6pta> (courtesy ZS6DX)



Bulletins : 145,725MHz 08:45 Sundays / Sondae
Relays : 1840, 3700, 7066, 10135, 14,200 MHz
depending on season

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

(drukwerk / hardcopy courtesy ZS6BAQ, ZR6STB)
(papier / paper courtesy ZS6HVG,ZR6ZRO,ZS6OB)

Management team/Bestuurspan 2002-2003:

| | | | | |
|-------------------------------------|-------------------|--------|--|------------------------------|
| -Chairman, SARL liason, Watts | Hans Kappetijn | ZS6KR | hans@grv.co.za | 012-333-2612 |
| -Vice Chairman and Awards | Bill Ingleson | ZS6KO | | 012-331-2327 |
| -Secretary and Rallies | Johan de Bruyn | ZR6JHB | johandbr@absa.co.za | 012-803-7385 |
| -Rallies (co-opted) | Johann de Beer | ZR6YV | | 011-918-1060 |
| -Treasury, Social, Watts distr. | Doréén de Bruyn | ZR6DDB | | 012-803-7385 |
| -Auditor (co-opted) | Egbert Begeman | ZS6AZG | begeme@unisa.ac.za | 012-347-1905 |
| -Clubhouse and DF hunts | Richard Peer | ZR6CK | peerrk@SAfrica.com | 012-333-0612 |
| -Webmaster | Rudi Venter | ZS6DX | zs6dx@ananzi.co.za | 012-993-4848 |
| -Fleamarket | Alméro Dupisani | ZR6RY | dupisani@postino.up.ac.za | 012-567-3722 |
| -Fleamarket (co-opted) | Willie Greyling | ZR6WGR | willie@up.co.za | 082-940-2490 |
| -RAE (co-opted) | Brian Scott | ZR6BJS | ano@mighty.co.za | 084-312-7407 |
| -Repeater coordinator and projects: | Hans Gurtel | ZR6HVG | adele123@absamail.co.za | 082-940-0623 |
| -Repeater Maintenance | Willie du Plessis | ZS6AEA | autocom@icon.co.za | 012-565-5555 083-653-2101 |

In this issue

- Club meeting minutes / Klubvergadering-notules
- Editorial van die Redaksie
- Member news Ledenuus
- Diary Dagboek
- Club activity Klub aktiwiteit
- Technical Tegnies
- Minutes AGM 2002 – AGENDA --2002 AJV Notules

in hierdie uitgawe

! AGM – AJV !

Date: 14-08-2003
Time: 19:30 for 20:00
PARC Clubhouse,
South Campus,
University of Pretoria.
SE cnr University and
Lynnwood roads.

Minutes of the monthly club meeting of the Pretoria Amateur Radio Club held at the South Campus of the University of Pretoria on 10 July 2003

- 1a. **Welcome** : Hans ZS6KR declared the meeting open and welcomed all present.
1b. **Attendance** : The meeting was attended by some 21 members and 2 visitors.
1c. **Apologies** : None
1d. **Personals** : ZS6TB Joe had an operation.
 ZS6AQS Don lost his mother.
1e. **Minutes of the previous meeting**: The minutes as published in Watts were approved.
 Proposed by Alméro ZR6RY and seconded by Hans ZR6HVG.
1f. **Matters arising**: none
2. **Club activities**
- 2a. **Website** : Maintained by ZS6DX - no report.
2b. **DF Hunting** : No DF hunts in the winter season.
2c. **Repeater2m** : Maintenance work to continue.
 Donated Kenwood repeaters were modified. Repeaters to be tested.
2d. **Mega-Fleamarket**: Magalies Klub Mega-Vlooiemark 2 Aug 2003 9:00 by MRK klub-perseel.
/ Contact Magda ZS6MVW or Alméro ZR6RY for table bookings.
2e. **Rallies**: : TMCC Lesol Tydren in Babsfontein omgewing
 Benodig 2 mobiele, 6 veld, 1 beheerstasie
 Kontak Johan 012-803-7385 of 082-492-3689
 Die volgende nasionale tydren is die Great North Tydren op die
 naweek van 17-18 Oktober. Daar is aanduidings dat die borgskap
 gehalveer kan word en dus minder veldstasies sal kan deelneem.
2f. **Social** : All-Club get-together "Day in the sun" 13 July bring and braai at
 LC de Villiers Sports Grounds, UP, is definitely on.
 Recreation Centre. Please bring own tables, chairs, umbrella etc.
 All clubs welcome. We will provide the fires.
2g. **Financial** : Doréén reported on our expenses and current account balance.
3. **Ham diary**: : The meeting was informed of the various local and international
 amateur events during the coming month especially our August AGM.
4. **General** : AGM motions to be submitted by July 31 at latest.
 Committee nominations at latest before AGM.
5. **Pesentation** : Digital Modes talk was postponed and Pine ZS6OB having had some
 mishaps. Instead a Fluke Instruments video on multimeter safety
 was shown which proved to be very informative.
6. **Next meeting** : **Thursday August 14, 2003**
7. **The meeting closed 21:50** Doréén het sop en brood aangebied.
 Thanks to Molly ZR6MOL for assisting as usual.

ZR6JHB

From the Editor

The abolition of Morse Code as an International Requirement for HF licensing is now a reality. It is now up to the SARL to convince our Regulator that it is sensible to react quickly and promulgate more relaxed or alternative requirements to ease the path to HF operating for those keen to do so. Admittedly, as set out in recent SARL communications, the wheels can turn slowly; and a 5wpm test, if accepted, may still be the fastest way to HF over the coming months. As was pointed out by a digital-mode VHF-UHF fan, you need to know basic Morse in any case even when using modern technology.

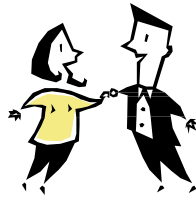
That's all the commentary I want to give from the sidelines at this time as I have to keep this month's editorial short so as to leave space for the 67th AGM minutes that have to be included in this issue.

Van die Redakteur

Die afskaffing van Morse Kode as 'n Internasionale Vereiste vir HF vergunnings is nou werklikheid. Dit is nou die taak van die SARL om die Reguleerder te oorreed dat dit sinvol is om vinnig te reageer en gemakliker of alternatiewe vereistes te promulgeer om die pad na HF bedryf makliker te maak vir die wat dit graag wil doen. Toegegee, soos uiteengesit in onlangse SARL mededelings, is die feit dat die wiele stadig kan draai; en dat 'n 5wpm toets, indien aanvaar, nog steeds die kortste pad na HF is binne die komende maande. Soos aangedui deur 'n liefhebber van digitale VHF-UHF modes, is basiese kennis van Morse in ieder geval tog nodig self as moderne tegnologie toegepas word. Dis al kommentaar hier van die kantlyn af want plek moet hier oopgehou word vir die notules van ons 67^e AJV wat in hierdie uitgawe moet verskyn.

Birthdays Verjaarsdae

Augustus



August Anniversaries Herdenkings

- 01 Sue ZS6SUE, sw of Don ZS6CRT
- 03 Paul ZS6BMF
- 04 oe ZS6AIC
- 05 Hans ZR6HVG
- 06 Estelle, sw of Simon ZS6AST
- 06 Edwin ZR6ESP son of Richard ZR6CK and Molly ZR6MOL
- 07 'JB' ZR6YV
- 07 Hubert ZS6HVM
- 08 Ray ZS6ALG
- 10 Anne ZR6AUL, daughter of Frances ZR6AUT
- 10 Wally ZS5WP
- 11 Lorraine, sw of Stan ZS6SDZ
- 14 Harry ZS6HRD
- 15 Samantha, daughter of Don ZS6CRT and Sue ZS6SUE
- 15 Molly ZR6MOL, sw of Richard ZR6CK
- 16 Marie, daughter of Hansie ZS6AIK
- 17 Rudi ZS6DX

- 07 Peggy and Ed ZS6UT
- 20 Bertha and Hans ZS6KR
- 27 Anne and Jac ZS6QA

-
- 22 Neville ZR6NBA
 - 22 Hal ZS6WB
 - 23 Otto OE9OWV ZS6OFW
 - 25 Doppies ZS6BAQ
 - 28 Jean ZS6ARA
 - 29 Louise, daughter of Dawid ZS6DSG
 - 30 Jonathan, son ZS6CRT and ZS6SUE
 - 31 John, son of Bernie ZS6ANU

IF YOU ARE NOT MENTIONED, YOU MAY NOT BE ON OUR DATABASE

New Members ZS6REY Attie in Belfast

Sick parade



Krukkelys

Joe ZS6TB had a little surgery and is recuperating.

Egbert ZS6AZG se vingers was onder die mes.

Ham diary

- July 19 Pacific 160m contest
- 26-27 RSGB IOTA contest (www.rsgb.org.uk)
- 27 SARL President's Net
- Aug 02 Mega-Fleamarket at MRK c/o Mill and Breyer laan, Waverley
- 02-03 10-10 International summer SSB Contest
- 02 European HF championship
- 03 SARL HF Phone Contest
- 09-10 WAE DX Contest CW
- 14 PARC AGM

AGM: Are you available for the next Committee?

Let someone nominate you and SIGN ON THE DOTTED LINE ----- thank you.

Remember this applies only to paid-up members.

AJV : Is u vir die volgende Komitee beskikbaar?

Laat iemand jou nomineer en TEKEN OP DIE STIPPELLYN ----- dankie

Onthou dat dit slegs geld vir opbetaalde lede.

Forgot ?? Vergeet

Ledegeld R50,00 Membership
Bank: FNB
Branch/Tak: 25 20 45
Account/Rek: 546 000 426 73

Enter your callsign in the info space!

Full AGM details on page 8 and accompanying AGM Notice and Agenda
Volle AJV besonderhede op bladsy 8 en meegaande AJV Kennisgewing en Agenda

WATTS DISTRIBUTION - STATUS - WATTS VERSPREIDING

Die laaste uitgawe was in pdf formaat en feitlik geen probleme was ondervind nie. Gebruik asb net Acrobat 4 of 5.1 of 6.0 om WATTS oop te maak. Tans bereik ons nou 60 lede, 34 klubs en 8 ander buitestaanders. As u oor e-pos beskik, skakel asb. oor na die nuwe stelsel – Dankie.

-----**Jammergenoeg sal dit die laaste WATTS wees aan nie-opbetaalde lede en induidue.**-----

The last issue was in pdf format and almost no problems were experienced. Please use only Acrobat 4 or 5.1 or 6.0 to open WATTS. Presently we are reaching 60 members, 34 clubs and 8 outsiders. Those of you that have e-mail, please convert to the new system – Thanks.

----- **Regrettably this will be the last WATTS to non paid-up members and individuals.**-----

Dag in die son | Bring + Braai | Day in the sun

Verslag van Johan ZR6JHB

Daar was 5 families van MRK en 6 van PARK by die braai. In totaal was daar 16 Radio Amateurs met hul gesinne. (nagenoeg 30 siele in totaal) by die LC de Villiers Sportgronde op 13 Julie.

Magda ZS6MVW het Magalies Radio Klub se weeklikse bulletin hiervanaf behartig. Gelukkig het die weer saam gespeel en was dit letterlik 'n heerlike dag in die son.

Daar was heerlik gebraai en geeët aan al die verskeidenheid slaaie, pap, sous en LEKKER warm koffie en tee.

Daar was ook 'n hele klomp hongerige geveerde gaste (ganse en eende) wat die kleingoed en sommige van die volwassenes goed besig gehou het.

In kort, dit was n heerlike dag en sien ons uit na die volgende uitstappie.

Aan Pieter, Magda, Suzette, Nico, Marco, Chris en Gert en hul gesinne, baie dankie vir die heerlike saam kuier.

Dankie ook aan Tjerk, Sylvie, Bill, Mary, Richard, Molly, Sander en sy junior, Andre en sy junior en Doréén van PARK vir julle teenwoordigheid.

Laastens, dankie aan Alméro ZR6RY wat die perseel gereël het.



Meet them on the YLRL website at
www.gsl.net/ylrl

A great site to find YL clubs all over the world.

YL's are out there – and if not, why not. Let us encourage them to become amateur operators and liven up the dreary morning QSO's!

(picture and text concoction by ZS6KR)

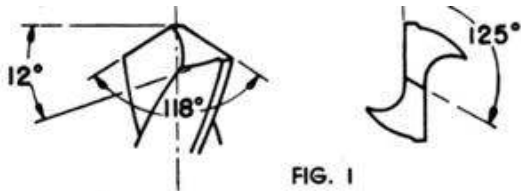
SNIPPETS / BROKKIES

- **Wessel ZS5BLY (ex ZS6BLY)** het so'n vinnige draai in Pretoria gemaak in die begin van Julie.
- **Roy ZS6MI** soek 'n klas AB baksteen vir sy Kenwood TR-9130 – (Roy, hy sal self sink)
- **Hans ZS6KR** het nou ook sy pakket radio aan die gang. His article "A Versatile Gel-Cell Charger" published in Radio ZS Sept 2002 has also been published in the new Zealand "Break-in" NZART official magazine.
- Coming up: Invite to **open day** at 1 Signals Regiment Wonderboom courtesy ZS6AN – details later.

Communication is about people – the rest is technology

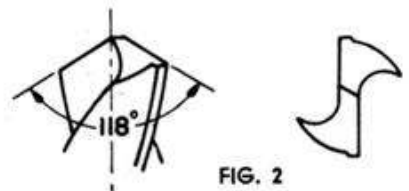
Efficient and Reliable Drilling

Probably the most neglected item in the garage is the lowly twist drill. Do you grab what looks right, fasten it in your hand drill and bore full speed? Your hand drill probably has only one speed anyway or you don't bother to change pulley ratios on your bench drill. When you are up on the roof or tower you might find that you are generating heat and no holes – that is when expletives are in order but please direct them to yourself. The information below can help a long way towards efficiently drilled, clean holes. Firstly, inspect your drill inventory for obvious faults with respect to point shapes and put them one side for replacement or have them properly ground. Secondly take note of speeds and feeds recommended below – things can only improve and the expletives can be exchanged for feelings of pride.



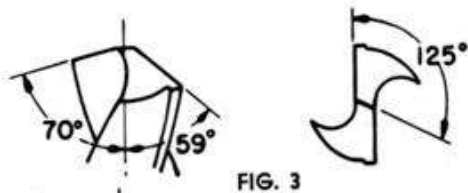
Properly ground drill.

Lip angles and lengths are equal, resulting in a central chisel. The chisel angle and lip relief are correct.



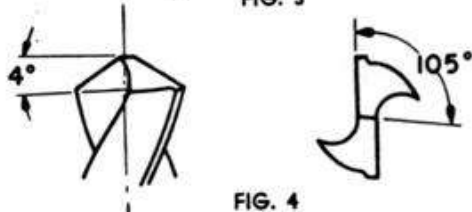
Drill ground off-centre.

Lip lengths are uneven despite the angles being correct, the chisel is not in the centre of the drill. This causes walking, rapid breakdown and oversize holes.



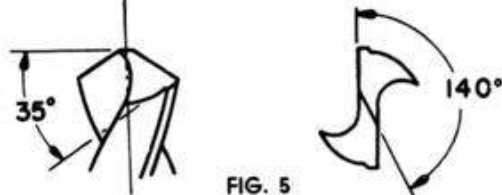
Unequal lip angles.

Only one lip will do the cutting resulting in premature breakdown and oversize holes with pronounced bell-mouthing.



Insufficient clearance and improper chisel angle.

Such drills require abnormally high thrust, and rapidly obtain a wide wearland.



Excessive lip relief and chisel angle too large.

Such drills will chip readily and cut an oversize hole.

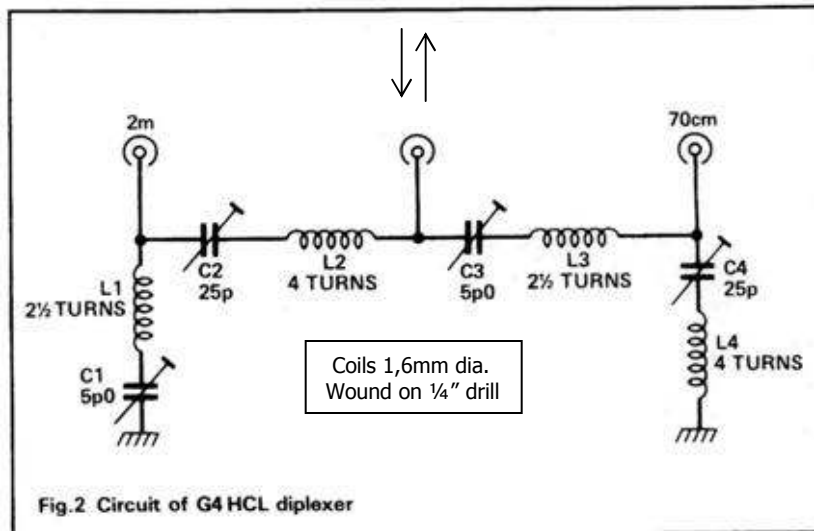
| Drill | Feed mm/rev | S Steel | Cast iron | Mild steel | Brass, Aluminium | On deep hole drilling >3 drill diameters, speeds and feeds must be reduced by up to 50% unless good coolants are used |
|-------|-------------|----------|-----------|------------|------------------|---|
| 1,5mm | 0,05 | 1250 rpm | 2500 | 5000 | 12000 | |
| 3,0 | 0,10 | 625 | 1220 | 2440 | 6000 | |
| 4,5 | 0,15 | 405 | 810 | 1620 | 4000 | |
| 6,0 | 0,20 | 305 | 610 | 1220 | 3000 | |
| 8,0 | 0,20 | 245 | 490 | 980 | 2440 | |
| 10mm | 0,20 | 200 | 400 | 500 | 2000 | |

Home Brew: The G4HCL Diplexer

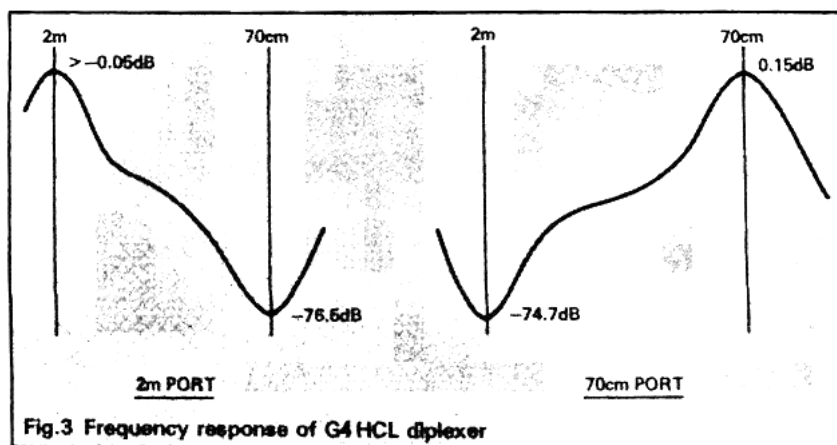
(Condensed from *Ham Radio Today* Jan 1985)

Diplexers are passive circuits that allow one to operate separate 2m and 70cm antennas via one single cable from a dual band radio or, when using an additional one in the shack, operate two separate radios to two separate antennas via a single cable. Isolation between radios and antennas is 70dB or better. This allows one to operate better antenna configurations other than the usual low-gain dual band types.

G4HCL was not impressed with the performance of available commercial diplexers and devised an easy-to-build circuit configuration that costs very little except for the diecast box and sockets.



The circuit consists of four series-resonant circuits and if inspected, one will notice each leg has a zero-impedance series-resonant circuit at the desired frequency to its relevant socket (which at the same time are a high impedance to the unwanted frequency) and from each socket a series-resonant trap to ground for the unwanted frequency. To prevent mutual effects, all coils must be at right angles to each other,



Setting up is simple when a 2m radio and 70cm radio are available and connected to their relevant ports. First, receive a good 2m signal and adjust C2 for maximum S reading. Then do likewise with a 70cm signal and 70cm radio S meter by tuning C3. Then reverse the radios and repeat the procedure and minimize S meter readings with C4 for a 2m signal and C1 for a 70cm signal.

Reconnect as normal and proceed with final trimming as follows: Insert a power meter between the diplexer output and the antenna line or dummy load. Fine tune C2 for maximum power with 2m TX and C3 for maximum power with 70cm TX. This completes the procedure. Slight retuning could be necessary if the box lid excessively affects the adjustments.

The ZS6UT HF Loop

Here's a pretty smart homebrew project with a difference that turned out well for all band working. Ed ZS6UT spent considerable time perfecting this one and supplied the specifications below from real experience. He also received a Club award for this project. Well done Ed, and good DX.

Queries regarding this loop can be made to: zs6ut@absamail.co.za or 072-372-4149 or 012-807-4909



SHORT DESCRIPTION

| | |
|-------------------------------|--|
| Loop diameter | : 1900mm |
| Tubing diameter | : 60mm |
| Tube material | : Aluminium |
| Frequency coverage | : 80-20m band |
| Tuning | : Motorized variable vacuum capacitor |
| Capacitor range | : 7-1000pF |
| Capacitor rating | : 3kV |
| Matching method | : Gamma match |
| Maximum power | : 400W PEP |
| Mounting | : Ham IV rotator |
| Height | : 3m above ground |
| Typical SWR | : 1,2 on 80m : 1,1 on 40m : 1,5 on 30m : 2,0 on 20m |
| Typical bandwidth (for SWR=2) | : 13kHz on 80m : 32kHz on 40m : 37kHz on 30m : 50kHz on 20m |

Reports received to date:

Very good locally, fair on DX
Typically, reception can be down 10dB against a dipole.
Due to the narrow bandwidth it acts as a bandpass filter and no problems are experienced with BCI or TVI. Reception is much quieter than a vertical antenna.

Drawbacks: For every shift in frequency the loop must be retuned.

Tuning method: Run capacitor until signal peaks. Make small adjustments whilst on TX until maximum output is achieved.

Conclusion: If you need a low profile antenna for home or field work, consider the magnetic loop.

Only in the USA...

For sale In addition, antique electric chair once used at Ohio Lucasville Prison. This chair comes complete with 35kV 10Amp high voltage generator box. In addition, several sponges and helmet with high voltage electrodes included. Furthermore this chair was built by prison inmates and includes deluxe calf braces and gold electrodes. A must for any collector! Will sell for only \$995.00, buyer must pick up in Ohio . In addition, several electrocution prison manuals for sale, \$2,50 each book.

MINUTES OF THE PRETORIA AMATEUR RADIO CLUB 67th AGM HELD AT THE SOUTH CAMPUS OF THE UNIVERSITY OF PRETORIA ON 11 AUGUST 2002.

- 1) **Welcome:** The chairman Hans ZS6KR declared the meeting open and welcomed all who attended.
Visitors: Hans extended a special word of welcome to Sid Tyler, President of the SARL and the SW's of Andre ZS6BRC and Hans ZS6KR.
- 2) **Apologies:** ZS6MRA,ZR6MVM,ZS6IL,ZS6KO,ZR6YV,ZR6GRV,ZR6HBA and ZS6TVV.
- 3) **Kworum:** Daar was 23 opbetaalde lede teenwoordig wat aan die vergadering 'n kworum besorg het.
- 4) **Minutes of previous meeting:** The minutes of the previous meeting were read and accepted. Proposed by Almero ZR6RY and seconded by Rudi ZS6DX.
- 5) **Matters arising from previous meeting:** None.
- 6) **Guest speaker:** The speaker for the evening was Sid Tyler, President of the South African Radio League. In his speech, Sid referred to issues such as why Amateurs should be members of the League, the decreasing number of Amateurs in the Gauteng Province, involvement of Sentech and Icasa in Amateur radio and the future of Amateur Radio in South Africa.
- 7) **Chairman's Report:** Hans ZS6KR read his report and reflected on the past year's achievements.
- 8) **Financial Report:** Egbert ZS6AZG reported on the club's finances.
- 9) **Awards:** The following trophies were awarded:
The Pretoria Ham Spirit award: Willie du Plessis ZS6AEA
The Sonny Don Practical Assistance Trophy: Hans Gurtel ZR6HVG
The SARL Piet Roos Trophy: Hans Kappetijn ZS6KR
The Roy Alexander Rally Trophy: Roy Martin ZS6HH
The Hansie Meyer Participation Trophy: Jac Roux ZS6QA
The Wessel ZS6BLY Trophy: Egbert Begeman ZS6AZG
- 10) **Verkiesing van nuwe Komitee-lede en voorsitter:**
Die volgende lede is genomineer, aanvaar en verkies tot komitee-lede:

| | |
|------------------------|-----------------------|
| Rudi Venter ZS6DX | Johan de Bruyn ZR6JHB |
| Katti Venter ZS6KVR | Almero Dupisani ZR6RY |
| Bill Ingleson ZS6KO | Peter Mulligan ZR6PWT |
| Richard Peer ZR6CK | Hans Gurtel ZR6HVG |
| Doréén de Bruyn ZR6DDB | Hans Kappetijn ZS6KR |
- Verkiesing van nuwe voorsitter:**
Tjerk Lammers ZS6P het daarna die voorsitter se stoel ingeneem vir die verkiesing van die nuwe voorsitter. Daar was slegs een benoeming vir voorsitter naamlik Hans Kappetijn en is hy eenparig herkies.
- 11) Na Hans ZS6KR sy aanvaardings toespraak gemaak het, het die vergadering verdaag en is daar heerlik saam gekuier en die lekkernye geniet wat die dames voorgesit het

Secretary/Sekretaris

Trophies that can be presented at the 2003 AGM || Trofeë wat by die 2003 AJV oorhandig kan word
The Committee has made tentative choices but is open to suggestions with good and relevant motivations. If you wish to nominate anyone for these awards: do it before 31 July and phone or email your motivation to the Secretary

ZS6BLY Trophy – Best technical lecture / talk at meetings
Sonny Don Trophy – For assisting others
Valvoline trophy – Best DF hunter
Ham Spirit trophy – As the description says
Roy Alexander Trophy – Top support on Rallies

Hansie Meyer trophy – For participation
Piet Roos trophy – Best contributions to WATTS
Jack Bennet trophy – 6m Activity
ZSL Trophy – Most progressed ZSL listener
Merit awards / Certificates / Honorary membership