

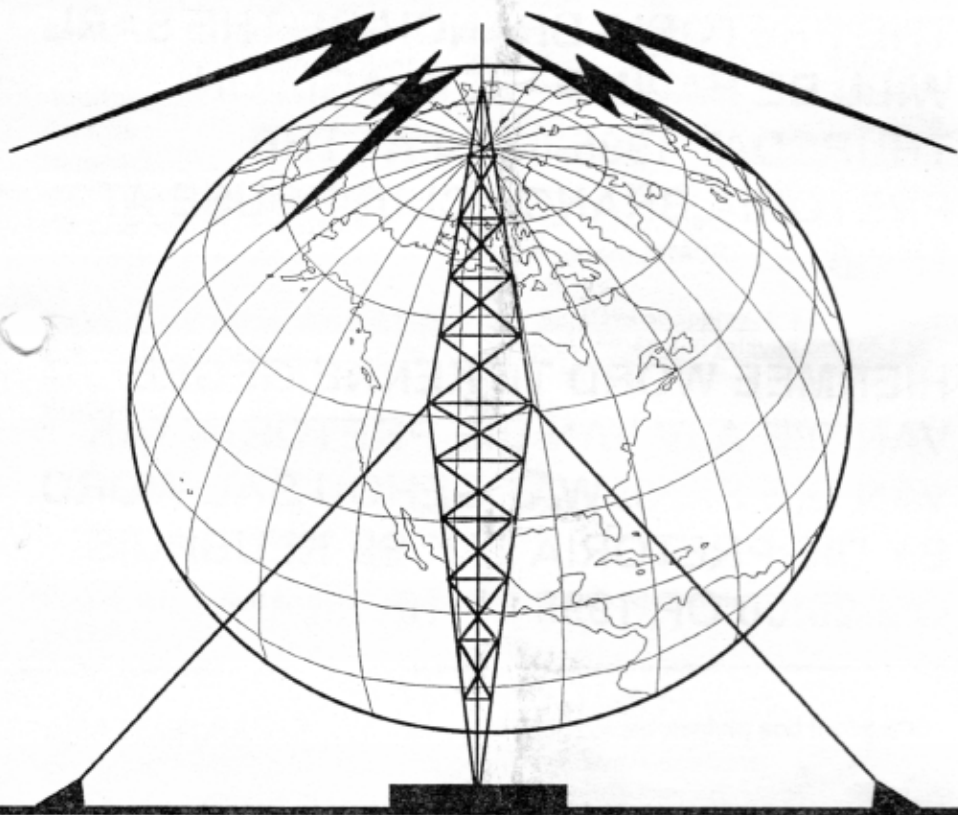
AUGUSTUS 1995 AUGUST



# watts

SA RADIO LEAGUE  
PRETORIA BRANCH  
P.O. BOX 1259  
PRETORIA 0001

## ZS6PTA



# **ZS6PTA**

## **AGM / AJV**

NOTIFICATION IS HEREBY GIVEN THAT  
THE PRETORIA BRANCH OF THE SARL  
WILL BE HAVING THEIR AGM ON  
THURSDAY 1995-08-10 AT THE  
PRETORIA BRANCH CLUBHOUSE AT  
20:00

HIERMEE WORD TE KENNE GEGEE  
VAN DIE AJV VAN DIE PRETORIA TAK  
VAN DIE SARL WAT GEHOU SAL WORD  
BY DIE PRETORIA TAK SE KLUBHUIS  
OM 20:00 OP 1995-08-10

## AWARDS

**BERMUDA**, a British dependency, is a group of coral islands and islets in the Atlantic Ocean. It is a popular resort centre. Bermuda consists of more than **300** islands and tiny islets, only 20 of which are inhabited. The islands form the most northerly group of coral islands in the world. They lie midway between Nova Scotia and the West Indies, about 670 miles (1,080 kms) from New York City. The largest islands are Bermuda, St. George's, St. David's, and Somerset. These islands and several smaller islands are linked by bridges. Bermuda's total area is about 21 square miles (53 square kms). The four largest islands extend in a chain that is about 22 miles (35 km) long. The island of Bermuda occupies about two-thirds of the total area. Hamilton, the capital, is on this island.

### WORKED ALL BERMUDA.

This award is a antique parchment map of Bermuda signed by his Excellency the Governor of Bermuda. **Really worth framing.** Contact all 9 Parishes in Bermuda which are: Sandys, Southhampton, Warwick, Paget, Pembroke, Devonshire, Smith's, Hamilton and St. George's. **No mobile contacts**, including maritime or aeronautical may be used. No band or mode endorsements are given. Contest info may not be used as evidence of contacts. **NO FEE** but cards must be sent with postage for their return.

### BERMUDA 100 CLUB.

This award is a mahogany plaque with the Bermuda Coat of Arms embossed in colour. You must contact 100 Bermuda stations. Mobile or portable stations do not count. Endorsements for each added 25 VP9's are in the form of a plate you attach to the basic award. Award is **FREE** and you must submit the cards with sufficient postage for their return.

For either of these two awards send to:  
Awards Manager, PO Box 275, Hamilton 5 Bermuda.

Listen for VP9's on the Bermuda Net 14,275 at 1330z Sundays. These must be really super awards, not so easy but I'm sure would look great in any shack, in fact maybe even on your lounge wall.

Congratulations to Tjerk ZS6P on obtaining **NUMBER ONE** of the **Pretoria 5 Band Award**, well done. On the next page are the recipients of this award to date.

| AWARD# | DATE     | CALL   | NAME  | QTH        |
|--------|----------|--------|-------|------------|
| 1      | 30/06/95 | ZS6P   | Tjerk | Pretoria.  |
| 2      | 13/07/95 | ZS6CRT | Don   | Pretoria.  |
| 3      | 26/07/95 | ZS6NB  | Ken   | Lyttleton. |

Regarding the Bermuda awards above, I would like to know if VP9s are active and if anyone has worked a reasonable number of these, I am sorry to say I have not. Well that's all for this month.

BEST 73s & GOOD DX-PAPERCHASING,  
de  
Don ZS6CRT (PTA AWARDS) :+)

## PRETORIA BRANCH INFO SHEET

The statistics gained from this exercise will be used by the committee to further streamline the club's proposed activities and objectives, and finally to provide you, the member, with an all round better service. Note that all replies will be kept confidential. Thank you in advance for your co-operation.

1) Callsign: \_\_\_\_\_

2) Do you have any of the following equipment?

a) HF Equipment

b) HF antenna

c) VHF

d) UHF

3) Do you not attend one or more club meeting? If not the reason is most likely to fall under one of the following categories:

a) Distance / Transport problem

b) Subject being presented

c) Home / Work commitments

d) Other

4) I am interested in:

a) HF

b) HF Antennas

c) VHF

d) VHF Antennas

e) Mobile Work

f) DXing

g) 10-10 Int

h) Contests

i) 6 Meters

j) Packet Radio

k) Rallies

l) QRP

m) Other: \_\_\_\_\_

5) Suggestions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6) I am satisfied / not satisfied with the format of the lay out of meetings.

If I could choose, I would like to have a talk on: \_\_\_\_\_

My Interests are in: \_\_\_\_\_

7) Are you aware that the Pretoria Branch has access to a shack ? (Yes / No)

If yes have you ever been in the shack? (Yes / No)

Have you ever used any of the gear in the Shack? (Yes / No)

If No would you like to use the shack? (Yes / No)

Please return your replies to one of the committee members at one of the branch meetings.

Thank you for your co-operation.

Pretoria Branch Committee.

The concept of image transmission (facsimile) was first described by Bell in 1843. Only in the late 1920's did wireless photographs become practical. Another 50 years of technological advancement eventually made it economical to consider manufacturing such equipment for the consumer market.

Standards were drawn up in 1972, 1976, 1980 (Group 3) and 1984. Today, Group 3 machines are the market leaders, and the Group 4 Standard slowly appears to become irrelevant due to Group 3 using technology that is user/subscriber driven.

In the USA and Japan over twelve percent of private homes now have a fax.

#### PRINCIPLES

A light beam scans the document sequentially in a series of very narrow strips. Each strip consists of as much as 3500 picture elements (pels) or pixels. These pixels are converted to electrical signals which are temporarily stored in a memory in as little as 140  $\mu$ sec per complete line. After coding to reduce redundancy the signal is modulated onto a suitable carrier and then filtered to ensure that its bandwidth lies within the spectrum of an analogue telephone channel 300-3400 Hz.

Microprocessor control can add features such as encryption auto-dialling, polling, display driving etc.

Low cost machines use thermo-sensitive paper that discolours at 70°C to full black at 110°C. The paper is passed over a thin-film array of heating elements which have little thermal inertia and can thus respond to a rapidly varying signal as well as produce a grey scale over the temperature range.

The images produced by this method fade with time and cannot be regarded as a permanent record unless re-copied.

#### IMAGE CODING

The minimum resolution on an A4 page is 1,900,000 pixels. To speed things up redundancy must be reduced to effect data compression. Without going into detail, here is some jargon:

1. Skipping white horizontal spaces = horizontal economy
2. Transmit only changes in next line = vertical economy
3. Both = READ (Relevant Element Address Designate) coding
4. Huffman runlength coding : derived from a probability study of b/w pixel runs on test pages.
5. Modified Huffman runlength coding : more economic.
6. Modified READ.
7. Modified Modified READ (MMR).

The end result is that >20:1 data compression is achieved. Intelligent machines can apply coding decisions as needed.

### GROUP 3 STANDARD PARAMETERS

Speed per page : 9-60 sec  
Image signal : digital  
Coding : Huffman modified  
Redundancy reduction : READ or MMR  
Vertical resolution : std 3.85 lines/mm  
fine 7.7 lines/mm  
sfine 15.4 lines/mm  
Horizontal res. : std 8 pixels/mm  
fine 1728 pixels/line  
sfine 3456 pixels/line  
Modem speeds : std 2400-9600 bits/sec  
high grade up to 14400 bits/sec  
near future up to 28800 bits/sec  
Handshake : 300 bits/sec FSK  
Carrier : 1800Hz  
Modulation : Differential PSK

### PROTOCOL

1. The calling terminal establishes a link to the called unit by transmitting the appropriate telephone number and then identifying itself by transmitting a single 1800Hz tone. The called terminal responds with a single 2100Hz tone.

2. The called terminal then identifies its operating parameters and Group, using digital FSK signalling at 300 bits/sec. The calling terminal responds at 300 bits/sec, then sends a test signal at its highest bit rate eg 14400 bits/sec to determine the line quality and signal-noise ratio. The system reverts to a lower data rate if line quality is poor. The called terminal accepts these parameters by signalling agreement at 300 bits/sec.

3. Document transmission then takes place at the agreed rate. Data is transmitted in numbered frames and when the receiver detects a frame with an error it can generate an Automatic Repeat (ARQ) request for that frame to be repeated.

ARQ's and end-of-page signalling occur at 300 bits/sec.

4. Both terminals exchange signals at 300 bits/sec to arrange for the transmission of any further pages.

5. If no further transmission is required the calling terminal initiates the line disconnect process, again at 300 bits/sec and the system becomes receptive to new calls.

### DUPLEX OPERATION

Some multi-feature machines can transmit and receive a fax simultaneously by splitting the transmission band to signal in each direction. The majority are half duplex.

### References.

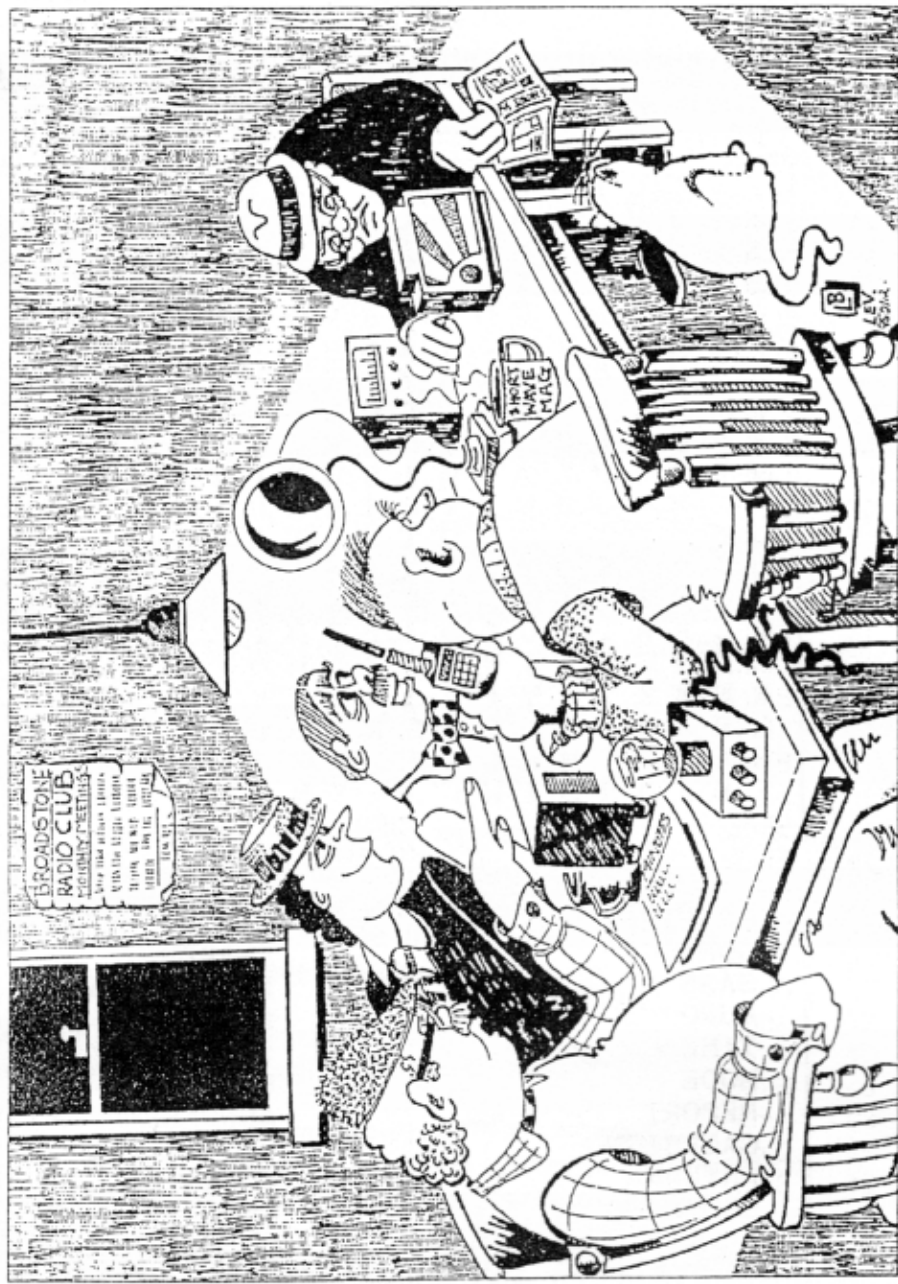
Television March 1995

# BIRTHDAY AND ANNIVERSARY LIST OF CURRENT SARL PRETORIA MEMBERS

| AUG | Occasion | Name        | Callsign | Details/SW          |
|-----|----------|-------------|----------|---------------------|
| 01  | Birthday | Sue         | ZS6SUE   | SW of Don ZS6CRT    |
| 02  | Birthday | Jurgen      | ZS6BKR   |                     |
| 03  | Birthday | Dale        | ZR6AIO   |                     |
| 03  | Birthday | Paul        | ZS6BMF   |                     |
| 04  | Birthday | Gideon      | ZS6BZT   |                     |
| 04  | Birthday | Hans        | ZS6AXC   |                     |
| 05  | Annivers | Tom         | ZS6TC    | Cynthia             |
| 06  | Birthday | Edwin       | ZR6ESP   | son Richard ZR6CK   |
| 06  | Birthday | Ivone       | ZR6ICE   |                     |
| 07  | Birthday | Johann (JB) | ZR6YV    |                     |
| 07  | Birthday | Michael     | ZS6-257  |                     |
| 07  | Birthday | Hubert      | ZS6HVM   |                     |
| 10  | Birthday | Anne        | ZR6AUL   |                     |
| 14  | Birthday | Alexander   | ZS6-232  |                     |
| 15  | Birthday | David       | ZR6GDY   |                     |
| 15  | Birthday | Roger       | ZS6RDJ   |                     |
| 15  | Birthday | Molly       | ZR6MOL   | SW of Richard ZR6CK |
| 15  | Birthday | Rashida     |          | SW Aziz ZS6CAZ      |
| 15  | Birthday | Samantha    |          | dtr Don ZS6CRT      |
| 16  | Birthday | Daniel      | ZR6AUS   |                     |
| 18  | Birthday | Marie       |          | dtr Hansie ZS6AIK   |
| 19  | Birthday | Helen       |          | SW Gerhardt ZS6-222 |
| 22  | Birthday | Hal         | ZS6WB    |                     |
| 23  | Annivers | Jurgen      | ZS6BKR   | Inge                |
| 26  | Birthday | Tom         | ZS6TC    |                     |
| 27  | Annivers | Jac         | ZS6QA    | Anne                |
| 27  | Birthday | Francois    |          | son Derick ZR6FX    |
| 30  | Birthday | Don         | ZS6CRT   |                     |
| 30  | Birthday | Jonathan    |          | son Don ZS6CRT      |
| 31  | Birthday | Oliver      | ZS6BFH   |                     |
| 31  | Birthday | John        |          | son Bernie ZS6ANU   |



# *Listen With Grandad* by Leon Balen & David Leverett



*The only thing poor old Fred gets on his receiver these days is dust.*

# AMATEUR RADIO WORDSEARCH PUZZLE, BY AA6DX

## PUZZLE

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | O | C | C | P | H | U | L | O | P | C | G | U | T | I | M | E | C | O | B |
| S | K | J | P | J | U | H | X | E | L | C | T | V | C | K | G | E | E | U | R |
| S | A | N | N | E | T | N | A | C | A | O | C | V | M | N | O | D | I | X | F |
| M | O | H | T | R | N | X | U | G | W | X | C | D | K | B | O | A | A | W | M |
| Y | G | E | V | E | U | G | U | O | N | J | V | F | R | M | L | W | M | O | C |
| A | U | C | K | W | T | C | A | T | N | O | C | J | D | J | P | K | I | N | O |
| S | I | T | I | O | F | Y | W | Y | X | C | K | L | V | G | X | Z | K | F | M |
| L | H | U | I | P | C | R | W | C | S | W | Z | U | V | H | R | L | S | B | M |
| P | F | I | B | U | R | O | E | T | O | H | W | J | F | E | X | X | L | A | E |
| W | R | Z | L | U | L | T | G | Q | X | U | U | Y | P | Y | C | M | E | N | N |
| P | B | Y | L | U | D | W | Z | V | U | X | R | O | H | A | D | C | B | D | T |
| Z | N | B | F | S | R | S | S | O | H | E | R | T | L | H | T | O | A | F | S |
| U | T | O | J | F | Q | W | D | Z | Q | T | N | L | E | J | P | E | L | Y | L |
| T | N | Z | I | M | T | T | K | R | R | K | S | C | W | S | C | L | D | Y | R |
| R | C | A | R | T | X | U | D | O | A | I | G | H | Y | Z | Y | L | O | W | F |
| K | O | Q | G | X | A | I | Y | J | G | W | A | H | Q | T | B | B | N | H | G |
| R | W | M | Z | T | A | T | P | N | B | T | A | F | V | M | T | M | S | V | H |
| L | R | S | A | S | E | C | S | S | S | E | R | D | D | A | T | G | N | R | F |
| E | A | Y | S | T | M | R | Q | X | G | I | R | F | J | H | Z | R | W | Y | C |
| T | X | J | M | R | S | I | H | F | D | A | Y | M | P | Z | H | Y | S | S | U |

## CLUES

COURTESY  
CONTACT  
SASE  
BURO  
TIME  
MODE  
REPORT  
CALLSIGN  
ANTENNA  
COMMENTS

QSL  
AWARDS  
DX STATION  
LABELS  
BAND  
FREQUENCY  
ADDRESS  
UTC  
POWER  
IRC

Ignore hyphens and spaces in the clue words when solving the puzzle!

# SARL Pretoria Branch Committee 1994 / 1995

|                 |                  |                     | <u>HOME</u> | <u>WORK</u>    |
|-----------------|------------------|---------------------|-------------|----------------|
| Chairman        | Tjerk Lammers    | ZS6P                | 87-1079     | 379-4251       |
| Vice Chairman   | Viv Prince       | ZS6BZS              | 45-5417     |                |
| Repeater        | Tinus Lange      | ZS6TL               | 654-1487    |                |
| Rallies         | Tinus Lange      | ZS6TL               | 654-1487    |                |
|                 | Thys Smit        | ZR6AHY              | 87-2003     | (011) 881-1966 |
| Secretary       | A. du Pisani     | ZR6RY               | 57-3722     | 420-3721       |
| Treasurer       | John Airey       | ZS6CDI              | 83-5570     |                |
| DF Hunts        | John Airey       | ZS6CDI              | 83-5570     |                |
|                 | R. Boulanger     | ZS6ARC              | 664-4288    |                |
| RAE Classes     | Viv Prince       | ZS6BZS              | 45-5417     |                |
| Flea Market     | Richard Peer     | ZR6CK               | 333-0612    | 836-2387       |
|                 | Hansie Meyer     | ZS6AIK              | 333-8541    | 327-2891       |
| Projects        | Paul Straub      | ZS6BOO              | 87-2076     | 803-5000       |
| Clubhouse       | I. Billingham    | ZR6ICE              | 43-7007     | 450-2572       |
|                 | R. Boulanger     | ZS6ARC              | 664-4288    |                |
| Shack           | Don Milner       | ZS6AQS              | 47-1377     |                |
| Social          | Hansie Meyer     | ZS6AIK              | 333-8541    | 327-2891       |
|                 | Richard Peer     | ZR6CK               | 333-0612    | 836-2387       |
| Auditor         | Callie Pistoruis | ZR6ADL              | 807-0479    | 420-2946       |
| Awards          | Don Blackburn    | ZS6CRT              | 98-2271     | 98-2620        |
| Hamnet          |                  |                     |             |                |
| Watts Publisher | Richard Peer     | ZR6CK               | 333-0612    | 836-2387       |
| Watts Editor    | Edwin Peer       | ZR6ESP              | 333-0612    |                |
|                 |                  | FAX (Richard ZR6CK) |             | 836-2378       |

Bulletins transmitted after HQ bulletins on Sundays at approx. 8:45.

HQ bulletins are transmitted at 08:15 to approx. 08:45 and relayed on 145,725 mHz.

|              |       |         |
|--------------|-------|---------|
| Frequencies: | 2m:   | 145,725 |
|              | 20m:  | 14,180  |
|              | 40m:  | 7066    |
|              | 80m:  | 3700    |
| (Winter)     | 160m: | 1,840   |

Please stay tuned to these frequencies for the duration of the branch bulletin.

---

**AMATEUR RADIO:** The hobby for Radio Experimentors and those who like to fiddle with Electronics, Computers or Communications.

# Agenda.

## AGM / AJM

The AGM will be held at the South Campus of the University of Pretoria.

**Time:** 19.30 for 20.00

**Date:** 10-08-95

1. Welcoming by the Chairman
2. Election of new Chairman
3. Election of new Committee
4. Presentation of Trophies
5. Refreshments and Ragchew

## **DATES TO REMEMBER**

**Ladies Net** All licensed ladies are invited to join in on the ladies net at 20:00 on the 725 repeater on Thursday nights.

### **General technical discussion evenings**

Continue on the first Wednesday of each month. Hosted by Eddie ZR6EJW at the Clubhouse.

### **Microprocessor courses**

Continue on all the other Wednesdays of the month.

## **FOR SALE**

### **14,7m 3 leg Tower**

Contact Pat ZS6BZJ, asking price R800