

***August 2025***



TransBaviaans 2025: Kevern , Chris, Vanessa, Glen, Dave and the team at Zandvlakte.

This Newsletter is published by the Port Elizabeth Amateur  
Radio Society

Editing by Ashley Goosen ZS2AG

**QSX-PE - Newsletter for the discerning Radio Ham**

PEARS Monthly Meeting will be on  
**16th September 2025 at the German Club.**

## **From the Chair**



Greetings to all our members,

It is hard to be believe how the year is flying past, with only three club meetings left for the year, and on that note, a reminder of our monthly meeting on Tuesday the 16<sup>th</sup> of September 2025 which starts at 19h30 at the German Club in Port Elizabeth. Just a reminder that October's meeting will take place on the 14<sup>th</sup> of October and not the 21<sup>st</sup>, as the venue has a

function.

On Saturday the 11<sup>th</sup> of October, a foxhunt has been booked, to start from the German Club. Please listen out on the weekly bulletins and WhatsApp groups for details.

On the 6<sup>th</sup> and 7<sup>th</sup>, PEARS set up a field station in the Elands Rivier Valley for the South African Radio League Field Day. I would like to thank the members that came out to participate, and all those who made contact with us. The field day was a great success. More on this in the QSX.

I would also like to wish all the RAE Candidates all the best in their examination next month and look forward to welcoming them to our club. Thank you to the PEARS RAE team for all their hard work.

A reminder that every Monday evening the PEARS bulletin is read on the Lady Slipper Repeater (145.700MHz) at 20h00. Please make every effort to listen and join the after-bulletin net. Bulletin compilers put a great amount of effort into preparing these bulletins, and they contain important news from the club, as well as interesting news items. Preceding the bulletin is a re-broadcast of the SARL News in Afrikaans at 18h30, followed by Amateur Radio Today. Thank you to Rory, ZS2BL for the relay.

As always, we ask that you submit articles of interest, to the QSX editor by emailing [qsx.zs2ag@gmail.com](mailto:qsx.zs2ag@gmail.com) and submit your article in MS Word format, no PDF's. Thank you Ashley for compiling another edition of QSX.

I hope to see you at our next meeting, and until then,

73

Kevern, ZR2BK

### **FROM THE EDITOR**

Here's hoping you enjoy reading this edition of QSX. If you have an article or two that you would like published in future copies of QSX, please let me have your contribution by email to [qsx.zs2ag@gmail.com](mailto:qsx.zs2ag@gmail.com).

Please do not send me QSX material on WhatsApp as I am inundated with WhatsApp messages and I will miss your material.

Thank you for your continued support of QSX and the articles you have submitted for this issue.

73,

Ashley ZS2AG

# Minutes of PEARS Monthly Meeting

Held at the German Club on the 19th August 2025 at 19h30

## **Welcome:**

Chairman Kevern ZR2BK welcomed all present.

## **Attendance:**

Approximately 14 attendees. As per Register.

## **Apologies:**

ZS2VR, ZS2PTY, ZS2MIC, ZS2DH, ZS2DL, ZS2GS, ZS2G, ZS2IW, ZS2DK, ZS2TC

## **Acceptance of previous meeting's minutes:**

Proposed ZS2RT

Seconded ZS2AG

## **Matters arising:**

None

## **Finances:**

Mike reported all in order before the meeting.

Payments received for subs and an Algoa Rally donation.

## **General:**

Contests:

ZS2QSO Party won by Paul ZS2PS, congrats!

Events

SARL HF Field Day 6-7 Sept, proposed to hold it at Monte Vista on the Elands river road. Rates are reasonable. Saturday 10h00 to Sunday 10h00. Hope to get multi-operators on various bands

SOTA weekend moved forward by a week – now 13-14th September, so it aligns with European SOTA day.

DF Hunt to be planned for October, probably from the German Club, and ZR2BK will be the fox...

August – SARL HF Contest August 24th is CW.

JOTA 17-19 October, we have been approached to assist.

October Meeting

German Club is holding the Oktoberfest, so the October monthly meeting has moved earlier to the 14th

Repeaters

Neil has installed the security gate at Slipper, very well done. Many thanks. Pls claim the expenses, Neil!

SARL AGM:

Saturday 2 May. Quote have been compared, and Willows works out best. Rates for accommodation are very reasonable at R320 per person sharing a bungalow. Work party to be expanded closer to the time.

Friday evening needs a social gathering arranged, and the Gala Dinner for the Saturday evening.

Club gives delegates a gift on departure as a memento. SARL has their requirements for the weekend which we need to accommodate.

SARL News

Looking for an Afrikaans proof-reader – any volunteers? Please let Dennis Green know ([Secretary@sarl.org.za](mailto:Secretary@sarl.org.za)). Kevern edits and records every few weeks.

ISS contact for Orion Laerskool, Alberton 26 August, from 12h24 – 12h35 and will be streamed on YouTube. Either listen on the downlink, or watch the stream.

Events:

9th August was TransBaviaans, 1310 cyclists took part. The club manned checkpoints and did comms for the event. Thanks to Patsy and Odie/Andrew for manning control at J Bay.

MeshCore:

There are mesh repeaters at Longmore and Slipper, and a permanent repeater was added at

Zandvlakte. Bergplaas could speak to Smitskraal direct, but the Grasnek repeater was faulty.

Kareedouw Mountain will be changed to MeshCore, and apparently links direct to Zandvlakte from

there, so may be a more reliable path to Zandvlakte when upgraded.

Qsx

PLEASE take photos of event stations and write a contribution! And any other articles also very

welcome. Ashley to use some of the old Qsx articles from way back too, to bolster the next editions.

RAE

8 candidates are currently doing classes. Nice to have a good class size.

## **Bulletins**

Please make an effort to join us on Monday evenings, and CALL-IN afterwards!

### **General:**

ZS2BO

Asked about the Zandvlakte repeater. It was explained as to what service it provides. And what happened to all the morning and evening repeater chats???

AGM – he tendered apologies but these were not recorded. Awaiting the Ou Toppie award – Kevern will deliver!

### **Closure:**

Meeting ended at 19h57

Next meeting 16th September 2025

### **Speaker:**

Kevern ZR2BK gave a talk on the AllStar system, with a practical demonstration.

CHAIRMAN

KEVERN BURGER (ZR2BK)

SECRETARY

CHRISTOPHER SCARR  
(ZS2AAW)



# PEARS TAKES NATIONAL FIELD DAY TO THE ELANDS RIVER VALLEY

By Kevern ZR2BK

The SARL National Field Day took place over the weekend of the 6<sup>th</sup> and 7<sup>th</sup> of September. PEARS decided to go to the Elandsrivier Valley this year and operated from a farm called Monte Vista. The farm is located about 2km off the tar road, just outside of Port Elizabeth.

A group of members decided to join in on the fun, namely ZS2R, ZS2G, ZS2OD, ZS2AG, ZS2DH and ZR2BK. Andreas Nortje, a RAE Candidate also came out for the day to gain some experience in the field.

The choice of antennas, first a linked dipole for 20, 40 and 80 meters and then a very big dipole erected by Andrew, ZS2G for 160 meters.



Spot Andrew ZS2G in the tree



Now try and find the balun for the 160m antenna



**Left:** Andreas Nortje with Kevern ZR2BK behind the Microphone, Alan ZS2R with Dave ZS2DH behind. All enjoying themselves at this outing.





**Above:** Odette ZS2OD and Andrew ZS2G



**Right:** Some operating while the band was hot.....

Thank you to all who made this field day a success. It was certainly one of the more memorable ones, especially with the volume of contacts made.

So next time, make sure you there!!

## DISCLAIMER

### Please note:

The Editor, nor any PEARS club member shall be held liable for errors and/or omissions in any article and/or drawing contained in this newsletter. Furthermore, any view expressed is not necessarily that of the Editor, any committee member or other members of the Club. The material contained in this newsletter is not meant to defame, purge, humiliate and/or hurt someone's person or feelings.

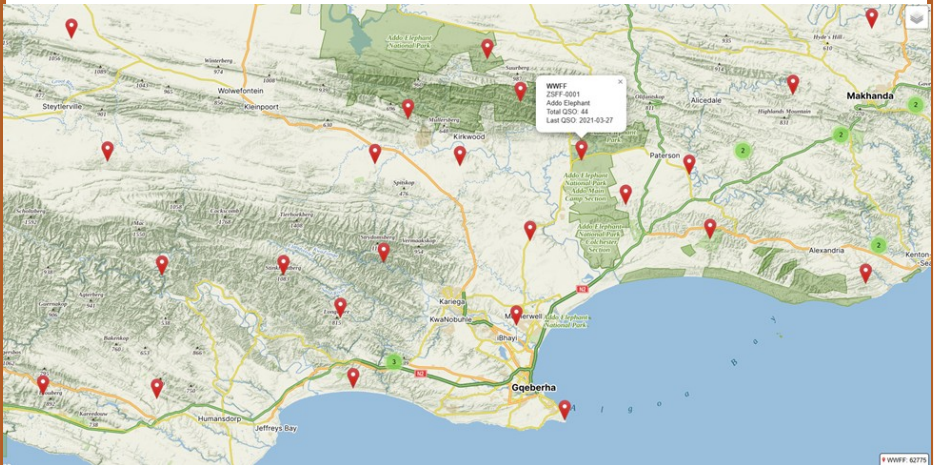
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# PARKS ON THE AIR

**Submitted by Kevern ZR2BK**

You may have heard of the word “POTA”, and that stands for Parks on the Air. Every year SAN Parks have an open week whereby you do not have to pay to access a National Park. This is a great opportunity to activate the Park on the Air.

It is not only national parks that qualify, but many nature reserves are also



listed as a park. Go to [wwff.co](http://wwff.co) and you will see the many parks just in the Eastern Cape that are listed with their unique code:

You will earn points as an activator, and also if you are chaser, in other words if you make contact with the park. Some Parks in our area include:

Addo Elephant Park  
Baviaans Nature Reserve  
Cape Recife Nature Reserve  
Van Stadens Wild Flower Reserve  
Lady Slipper Nature Reserve  
Witteklip Nature Reserve  
Groendal Nature Reserve

And many more!

So, why not activate a park, especially during the open parks week, enjoy nature and play some radio!

# THE MIGHTY 2N2222: THE UNSUNG HERO OF RADIO COMMUNICATION

Submitted for publication by Rory ZS2BL

When it comes to radio communication, countless transistors have been designed, tested, and deployed across circuits worldwide. From low-noise amplifiers to RF oscillators, mixers, and power stages, engineers have a wide palette of options. Yet, one transistor consistently shines brighter than the rest: the 2N2222.

## Why the 2N2222 Stands Out

The 2N2222, an NPN bipolar junction transistor (BJT), has earned legendary status among hobbyists and professionals alike. Here's why:

**Versatility:** Whether you need an oscillator, an RF amplifier, or a simple signal switch, the 2N2222 adapts with ease.

**Frequency Response:** With the ability to operate effectively up to 250 MHz, it covers most amateur radio bands and general RF needs.

**Power Handling:** Unlike its smaller cousins (such as BC547 or 2N3904), the 2N2222 can handle higher currents, making it suitable for driver stages and modest power amplification.

**Availability and Cost:** It's one of the most widely available and budget-friendly transistors, ensuring that experimenters never run out of stock.

**Durability:** The 2N2222 can take more punishment than most general-purpose transistors, a big plus in experimental radio setups.

## The Challenger Lineup

Other transistors have their strengths:

**BC547/BC548:** Excellent for audio and low-frequency applications.

**2N3904:** A smaller, more efficient cousin, but with lower power handling.

**BF199/BF494:** RF specialists, excellent at higher frequencies.

**2N3866/2N3553:** Power transistors for the transmitting end.

But while each of these shines in its niche, the 2N2222 does it all reasonably well, making it the perfect all-rounder.

## The Verdict

If radio communication were a superhero universe, the 2N2222 would be the all-rounder hero—capable, versatile, and always ready for the task. While specialized transistors may outperform it in certain roles, no single device combines affordability, robustness, and flexibility like the 2N2222.

In short: If you can only keep one transistor in your toolkit for radio communication projects, let it be the 2N2222.

#2N2222 #Transistor #Electronics #RadioCommunication #HamRadio  
#RFDesign #ElectronicsProjects #ElectronicsHobby #CircuitDesign  
#DIYElectronics #MakerCommunity #ElectronicsEngineering  
#TechEducation #STEMProjects #AmateurRadio



**FREE  
ENTRY**

# SA National Parks Week 2025

Join us at this year's **Annual South African National Parks Week** by utilising the free day access to any of our participating national parks.



### DATES OPEN:

- 22 to 26 September 2025
- (Extended to 27 and 28 September at selected national parks)

Visit  
[www.sanparks.org](http://www.sanparks.org)  
for more details

**Bring along your SA ID to gain FREE entrance.**



# TRANSBAVIAANS 2025

PEARS once again provided communication for the Transbaviaans this year. The



**Above left:** For a change, Tony ZR2TX was out in the field .....

**Above:** The GV repeater at Grasnek.

**Left:** Colin ZR2CRS, and the team at Smitskraal.



**Above;** Pakhuis, manned by Andrew ZS2AFB



**Left:** Meshcore repeater deployed at Zandvlakte on the mountain.

## Interesting News!

Priscilla Presley – a Film star and who was married to Elvis Presley, **was a Ham Radio Operator** and her call sign was N6YOS!



# DIY CAT cable for a Kenwood TK-90

## Eric ZS2ECH

The Kenwood TK-90 is a robust 100W HF rig suitable for both commercial mobile and base stations. Although it has less bell-and-whistles than an amateur HF rig, its solid performance can well serve for amateur use. Apparently the rig is no longer in production so getting accessories can be a problem. For digital modes a CAT (Computer Aided Transceiver) cable is essential for modes such as VARAC where different channels are used for QSOs. The TK-90 has an interface cable, the KCT-31, but getting hold of one is a problem with the rig being out of production. The next option is to build one. The Online Amateur Radio Community Wiki has a lot of useful info about the TK-90 [1]. Of particular usefulness is the TK-90 Modification Information (MOD) pdf. The KCT-31 interface cable has three connectors, two 3-pin (one small, and one large), and one 12-pin connector. The 12-pin connector is not necessary for our interface here. The larger 3-pin connector plugs into the CN7 socket on the main board, and the smaller 3-pin into the CN8 socket. The KCT-90 cable has some build in electronics to boost the voltages to RS232 levels, but this is not necessary if one uses a USB to serial dongle. The next bit of info required is the type of connector required, and that was the biggest problem encountered. Nowhere could I find that information, or maybe I just missed it completely. I found a forum where a user asked for this info, and unfortunately the answer received that they are both JST connectors was wrong, or at least half wrong. The larger of the 3-pin connectors is a JST-PH 2.0mm connector. After lots of trail-and-error I found that the smaller 3-pin connector is a Molex PicoBlade 1.25mm connector. Now the larger JST connectors are already a pain to crimp if one has fat fingers, so crimping these smaller connectors must be a lesson in frustration. Luckily these connectors can be found locally with cables at MicroRobotics [2]. The Molex Pico Blade as a 4 pack [product code: MPB-3P-12] and the JST-PH as cables with crocodile clips

[product code: JST-PH-3P-CROC-L200] (believe me, cutting the crocodile clips off is much easier than crimping these small connectors). The MOD file at [1] has detailed information on how to connect these cables. For the CN7 connector (the larger JST-PH), one actually just needs the center pin 2 for GND. The two other wires can be removed. For the CN8 connector (the smaller Molex PicoBlade), one just needs pin 2 for RXD and pin 3 for TXD. The two pin 3s for these two connectors are close together, while the pin 1s are at opposite ends. This is shown in the schematic diagram Fig 1. Fig 2 is a photo of the board showing the two sockets. Note that the coaxial cable from CN2 has been disconnected here to get easy access to CN7 and CN8 (as recommended in the MOD pdf). Once done, make sure to reconnect the coaxial cable back to CN2! Fig 3 shows all the connectors in place. All to do then is to ensure CN7 pin 2 GND is connected to GND on the USB-serial dongle; CN8 pin 2 RXD to TXD on the dongle, CN8 pin3 TXD to RXD on the dongle, and you ready to go! No wait, one must still configure the rig to be able to control it with a PC. This is explained in the MOD pdf, section 2.5.6. To do this one needs the programming software and cable. When that's done – give it a try. Default baud rate seems to be 9600.

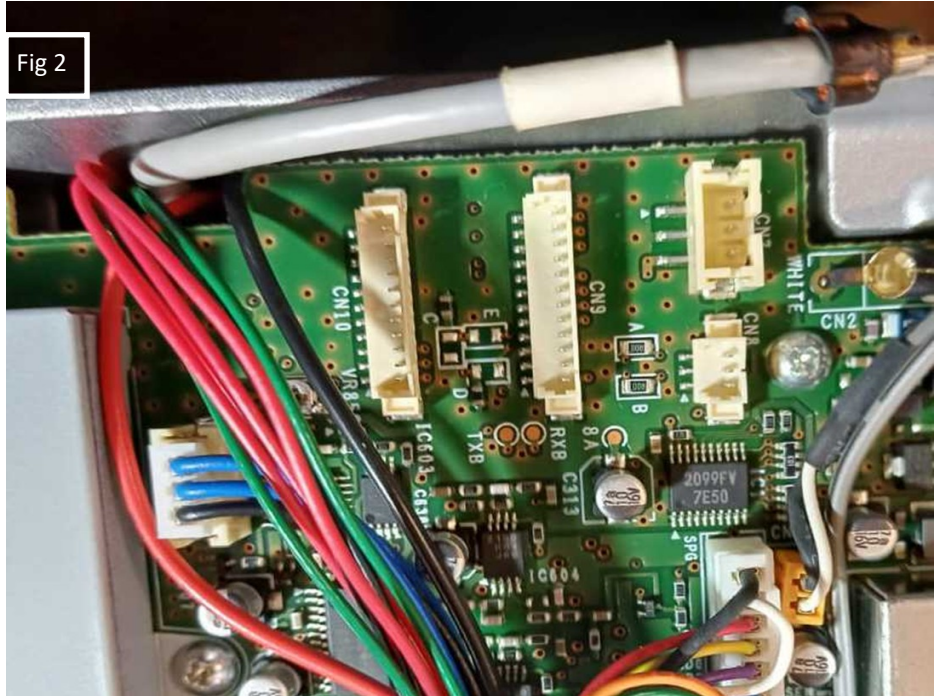
## References / links

<https://wiki.oarc.uk/radios:tk-90>

<https://www.robotics.org.za/>

Fig 1

Fig 2



# Birthdays and Anniversaries

## Birthdays

### September 2025

16 Paul Straub ZS2KT  
24 Dylan MacDonald ZS2D  
27 Chantal Koekemoer ZS2CKK  
28 Glen Cummings ZS2GV

### October 2025

01 Eric Hosten ZS2ECH  
04 Donovan van Loggerenberg ZS2DL  
06 Jaco Koekemoer ZS2JKK  
09 Tejas Gajjar ZS2TG  
10 Trevor Hartwig ZS2TJ  
12 Neil Thomas ZR2NT  
13 Llise Dodd ZS2LLDt

## Spouse Birthdays

### September 2025

18 Nellie Brits Anton ZS2ST  
20 Retha Bouwer Andrew ZS2AFB  
20 Ellie Goosens Rudi ZR2RG  
25 Sarita Brand Albert ZS2BA  
26 Caryn Pearson Graham ZS2GKP

### October 2025

## Anniversaries

### September 2025

18 Nellie Brits Anton ZS2ST  
20 Retha Bouwer Andrew ZS2AFB  
20 Ellie Goosens Rudi ZR2RG  
25 Sarita Brand Albert ZS2BA  
26 Caryn Pearson Graham ZS2GKP

### October 2025

09 Jaco Chantel Koekemoer ZS2JKK  
12 Donovan ZS2DL Rosalie ZS2DN van  
Loggerenberg

# PEARS MEMBERSHIP

**YOU** can become a member of PEARS - you do not have to be a radio amateur, nor do you have to be in the PE Area. We would like to have you as a member, and to include you in the QSX mailing list. Send us your details or [download a PEARS Membership Application form](#), fill it in and email it back to us on committee[at]peham.co.za

The society membership subscriptions are renewable at the beginning of April each year. The rates are:

Standard : R300.00  
Pensioner : R150.00  
Spouse of a member : R50.00  
Student/scholar : R80.00

*(rates updated after the 2024 AGM)*

its into the club bank account can be made but members must use their callsign or name as a reference for identification purposes on the bank statement.

Club bank details:

**NEDBANK SAVINGS ACCOUNT NO. 2212527594  
BRANCH CODE 198765 (NEDBANK SOUTH AFRICA)**

## Sunday SARL and Monday Evening PEARS Bulletins

PEARS provides a local reading of the SARL bulletin every Sunday morning at 8:15 in Afrikaans read by Kevern ZR2BK and at 8:30 in English read by Rory ZS2BL, transmitted through the Lady's Slipper Repeater on 145.700MHz.

PEARS Bulletins are transmitted on Monday evenings at 20H00 through the Lady's Slipper repeater 145.700MHz 88.5Hz Narrow, which is coupled to the Longmore Repeater 145.625 MHz 88.5Hz Narrow.

## Bulletin Roster

22nd Sep	Vaughan	ZS2VR
29th Sep	Patsy	ZS2PTY
06th Oct	Andrew	ZS2AFB
13th Oct	Rory	ZS2BL
20th Oct	Kevern	ZR2BK
27th Oct	Dave	ZS2DH
03rd Nov	Chris	ZS2AAW
10th Nov	Mike	ZS2MIC
17th Nov	Ashley	ZS2AG
24th Nov	Vaughan	ZS2VR

<http://www.zs2pe.co.za/bulletins.html>

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## Our 2025/2026 PEARS Committee

PORTFOLIO	NAME	CALLSIGN	EMAIL	CONTACT No
Chairman, Technical support & maintenance	Kevern Burger	ZR2BK	k.burger[at]stfrancislinks.com	083 401 9587
Vice Chairman, SARL liaison, Hammies, Youth, Contest Scoring	Dave Higgs	ZS2DH	om[at]zs2dh.co.za	082 387 5657
Treasurer	Michael Steenkamp	ZS2MIC	zs2mic[at]igen.co.za	082 523 5677
Secretary, Repeaters, QSX emailing, club database	Christopher Scarr	ZS2AAW	christopher[at]peham.co.za	082 925 6367
RAE Training	Vaughan Rizzo	ZS2VR	vaughan[at]netaddress.co.za	082 882 6555
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Fox hunts, Field Days	Andrew Bouwer	ZS2AFB	andrew[at]bouwer.cc	072 546 7836

### CO-OPTED POSTS

PORTFOLIO	NAME	CALLSIGN	EMAIL	CONTACT No
Contest Liaison Officer	Theunis Potgieter	ZS2EC	zs2ec01[at]gmail.com	064 901 8079
Events & Rally organising	Tony Allen	ZR2TX	tony.zr2tx[at]gmail.com	082 956 2920
RAE Training	Shaun Gilbert	ZS2SG	gaswise3[at]gmail.com	083 672 5241

(Please note: The "@" sign has been replaced with "[at]" in the above addresses to try to prevent spamming)

## PEARS' VHF/UHF, Packet & Other Services

**Local Repeaters:** These repeaters form a separate sub-net in the PE - Uitenhage - Despatch area.

Town VHF	Longmore	Uitenhage	Town UHF	<----- IRLP available on this subnet
145.050/650 88.5Hz, Narrow 12.5k	145.025/625 88.5Hz, Narrow 12.5k	145.075/675 Wide 25k	431.050/438.650 Wide 25k	
Cockscomb	Viewlands	<----- These form linking hubs for events, hence no tail	DMR	D-Star
431.000/438,600 Add 88.5Hz for squ tail	431.075/438.675 Add 88.5Hz for squ tail		430.675/438.275 QTH: ZS2VA	145.175/775 QTH: ZS2N

**Cape Linked System Repeaters:**

These form the PEARS long-range 2-metre repeater system, in conjunction with the Border, Southern Cape and WCRWG systems. See [www.zs2pe.co.za/Repeaters/repeaters.htm](http://www.zs2pe.co.za/Repeaters/repeaters.htm) for more details.

Lady's Slipper	Grahamstown	Cradock	Noupoort (link only)
145,100/700 88.5Hz, Narrow 12.5k	145,150/750 Wide 25k	145,050/650 Wide 25k	438,750 / 438,675 Wide 25k
Colesberg	Kareedouw	Plett	Brenton
431,075/438,675 Wide 25k	145,125/725	145,175/775	145,075/675

**APRS/Packet network:**

ZS0NTP Node	ZS0KDK APRS Digi	ZS0KDB APRS Digi	
Lady's Slipper 434,800 1200bd 439.850 9600 bd	Mount Road 434,800 1200bd	Longmore 434,800 1200bd	

VHF Beacon: 50,007 MHz FSK – ZS2X, 25 Watts into 2 element Yagi beaming north.

**Banking details (for subs & donations):** NEDBANK SAVINGS ACCOUNT No. 221 252 7594, Bank code 121217, A/C name: Port Elizabeth Amateur Radio Society. **Please use call signs as a reference.**