

***August 2023***



This Newsletter is published by the Port Elizabeth Amateur  
Radio Society

P.O. Box 10402, LINTON GRANGE, 6015

Editing by Ashley Goosen ZS2AG

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

# Next PEARS Monthly Meeting

Will be at the Walmer Scout Hall on the  
15th August 2023



## From the Chair

The monthly club meetings have now started at the Walmer scout hall and having had our first one in July I think a few comments are valid. Firstly there is safe parking right by the venue.

Then the hall is nice and big and it is comfortable to setup with chairs and tables and then it is also fitted with a screen for use with a projector which makes presentations possible without having to lug to many things with you. Now, granted it was rather cold and miserable the evening of the first meeting there and as a result attendance was not what it could have been, I do believe this will change. Also Jimmy has committed to opening the Jamtin at around 4pm the afternoon of the meeting so that you can arrive early and have a go at the radio or simply see what is going on. Remember the meeting is now the 3rd Wednesday of every month.

So I do encourage everyone to get involved attend the get together once a month and simply "Say Hello".

The appeal for support on after bulletin call in's has had tremendous support from everyone and it really is great. Current record is 28 call in's but we have been averaging 15 or more. Wow it Really is great to hear. It makes the effort worth it for all

concerned. Once again simply “Say Hello”!

The RAE classes have now commenced and we have 2 chaps busy with the course. We will keep everyone updated with their progress. We are also wanting to hold a Saturday morning workshop for the construction of a simple DF 3el Yagi to use during foxhunts, so we will be taking names soon so that we can buy the correct amount of material for everyone so please listen for the call when it comes to give names.

So, there is a lot happening, what are you getting involved with?

Most importantly “Say Hello”!

PEARS, WE LIKE BEING YOUR CLUB

73,

Donovan, ZS2DL

## FROM THE EDITOR

Here's wishing you happy reading this edition of QSX and 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 Walmer Scout Hall on the 19<sup>th</sup> July 2023 at 19h30

### **Welcome:**

Chairman Donovan ZS2DL welcomed all present.

### **Attendance:**

Approximately 12 attendees. As per Register.

### **Apologies:**

ZR2BK, ZS2DK, ZR2CRS

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

Proposed: ZS2AG

Seconded: ZS2PA

### **Matters arising:**

None

### **Finances:**

Finances were to be reported after the meeting. ZS2MIC to get online after getting home. Assumed all in order. No expenses were incurred.

### **General:**

ZS2DL Batteries to be purchased for Mount Road.

Committee portfolio's remain mostly the same, Paul ZS2PS will handle PR, with an emphasis on schools etc. Dave ZS2DH has proposed Kevern ZR2BK for vice chair, which Kevern accepted.

Antenna building session on a Saturday morning for fox hunts. Towards end August. Also open the jamtin and "say Hello!" Fox hunt towards end of September. Advertise on whatsapp (Technical and Social groups)

Transbaviaans Checkpoint 2 at Zandvlakte, ZR2BK will make plans with those that have done this point before, to offer the complete service to the organisers.

QSL cards – DL is having a fight with SARL re the Div 2 cards being sent to Abe Zwiegelaar ZS1ZS. Request they send them to ZS2DL. And not one person answered ZS2EC's call to collect their cards from him!

ZS2AG

Ashley conveyed thanks for the bouquet received for his wedding.

QSX articles also requested. Also suggested Ashley speak to Uli re the WRTC for an article.

### **Closure:**

Meeting ended at 20h03

Next meeting 16<sup>th</sup> August 2023.

Donovan ZS2DL presented the Fox hunt transmitter recently ordered.

CHAIRMAN

SECRETARY

DONOVAN VAN LOGGERENBERG (ZS2DL)

CHRISTOPHER SCARR (ZS2AAW)

## **Update from NASA re. Voyager2**

**UPDATE 8/8:** NASA managed to make contact with Voyager 2 and instruct it to reorient itself.

The Deep Space Network facility located in Canberra, Australia sent what NASA is describing as an "[interstellar shout\(Opens in a new window\)](#)" towards Voyager 2 with instructions on what to do. The message took 18.5 hours to travel the 12.3 billion miles to the probe, and NASA had to wait a total of 37 hours to find out if the "shout" had been heard.

Thankfully it was, and Voyager 2 took the appropriate action to turn its antenna back towards Earth. NASA is receiving science and telemetry data from the probe once again.

Sourced by Clive ZS2RT

# Ham Radio Enthusiasts vs. High-Frequency Traders: A Battle for the Airwaves

Trading firms are asking FCC to open shortwave frequencies to greater commercial use.

By [Alexander Osipovich](#) Aug. 5, 2023 10:00 am ET

Ham radio operators are sounding the alarm over the latest threat to their beloved hobby—and this time, it is coming from Wall Street.

A group of high-frequency trading firms is asking the Federal Communications Commission to open shortwave frequencies to greater commercial use, so they can use radio to zip financial data around the world in milliseconds.

Prominent members of the amateur-radio community say interference from traders' broadcasts could ruin their hobby, which often involves tuning in to weak radio signals so they can chat with fellow [hams in faraway places](#). Hundreds of hams have filed letters with the FCC opposing the traders' proposal, and some have railed against the plan in YouTube videos.

Brock Fansler is among those speaking out. A 40-year-old Los Angeles resident with shoulder-length hair, he likes using his radio to send digital data about weather conditions to other hams. He complains that the traders are looking to transmit with up to 20,000 watts of power, whereas amateurs are capped at 1,500 watts, and many use off-the-shelf radios with 100 watts.

"They're asking for an insane amount of power," Fansler said. "It's like having neighbors move in with a drum set and guitar. This is going to be blasted all over the planet, with how much wattage they're going to put behind it."

The [group behind the proposal](#), called the Shortwave Modernization Coalition, says such fears are overblown. The coalition — whose members include such trading giants as Jump Trading Group, DRW Holdings and [Virtu Financial](#) — says it has already been using shortwave for several years and there haven't been any verified complaints of interference. "The proposed power limit is consistent with, and in many cases lower than, the levels used in these frequencies set aside for certain commercial uses," a coalition spokeswoman said.

## Raising Their Antennae

High-frequency trading (HFT) transmitters are clustered near New York and Chicago, home to major financial markets. Locations near Seattle boost transmissions to Asia.

### HFT shortwave transmitters

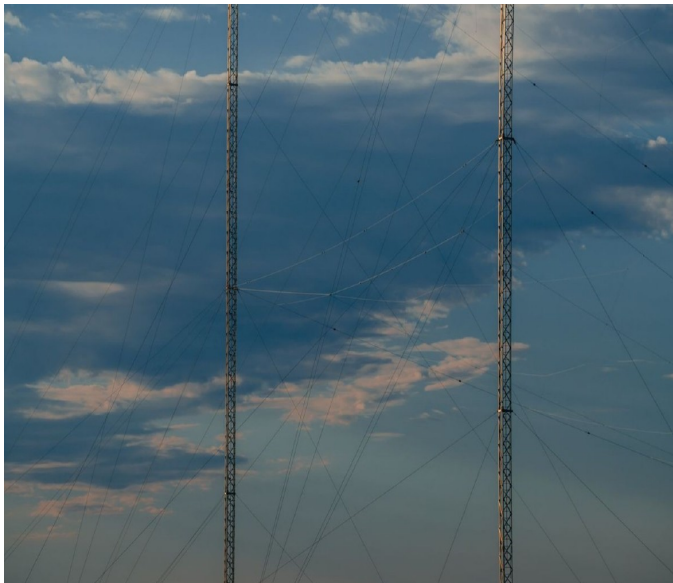


Source: Dave Gustafson; Federal Communications

High-frequency traders have been in a yearslong arms race to execute transactions as fast as possible, or else risk losing money to speedier rivals.

In their quest for speed, HFT firms have located their computers in exchanges' data centers, to avoid wasting fractions of a second transmitting buy or sell orders over computer cables. They have built arrays of microwave towers between Chicago and New York to beam data between markets, while exploring [new kinds of cable](#) and even [satellite networks](#).

Shortwave is useful when HFT firms need to send rapid updates about price moves across oceans—for instance, from U.S. futures markets in Chicago to European futures markets in Frankfurt. The usual way to send data from one continent to another is undersea fiber-optic cable. But light moves more slowly through glass cables than through air, so it is faster to use radio—specifically, in shortwave frequencies. That allows waves to bounce up and down off the ionosphere, an upper layer of the atmosphere, allowing them to propagate around the globe.



**FCC filings show this antenna (left) near Chicago is licensed to 10Band, part of a joint venture between Jump Trading Group and Virtu Financial.**

**Photo: Jamie Kelter Davis for the Wall Street Journal.**



Sending data from Chicago to Frankfurt is nine milliseconds quicker by shortwave than by undersea cable, according to data from Deutsche Börse. That is less time than it takes for a hummingbird to flap its wings.

As ultrafast traders have pushed into shortwave, they have aroused the ire of hams such as Matthew Penttila.

Penttila, a 51-year-old mechanic in Blackstone, Mass., routinely uses shortwave radio to chat with hams in other states and countries. Once he even spoke to a cosmonaut aboard the Mir space station, he recalled.



**Matthew Penttila uses shortwave radio to chat with Ham enthusiasts in other states and countries.**

He is indignant that the traders want to use shortwave to save milliseconds and

juice their profits.

“I’m just a regular, ordinary guy. I work 2 to 10:30 five days a week to try and keep a roof over my

head and food on the table for my family. And these guys are going to try and exploit this for millions and billions of dollars. It just doesn’t seem right,” Penttila said.

If the FCC approves the traders’ petition, Penttila worries it will lead to further encroachment by private firms into bands of the

radio spectrum used by amateurs.

“It becomes the camel’s nose under the tent. As soon as it gets its nose under there, it’s going to keep working, and the next thing you know it’s going to take the whole tent down,” he said.

An FCC spokesman said: “We appreciate the importance of amateur radio and make every effort to ensure spectrum uses do not interfere with each other.”

The Shortwave Modernization Coalition says it isn’t looking to grab amateur frequencies. Its petition has a narrower aim: to allow business licenses for the type of fixed, long-distance, point-to-point shortwave data transmissions used by HFT firms. Current FCC rules don’t allow such licenses. Instead, traders have mostly relied on temporary licenses for radio experiments. But experimental licenses generally aren’t intended to be used for commercial activities, and firms that use them for trading are operating in a legal gray area, according to industry veterans.



**Leonard Gucciardo says increased interference could render his radio equipment useless**

“The big companies have always been nervous that their experimental licenses could get shut down,” said Dave Gustafson, a former head of wireless engineering at Jump.

The roots of ham radio date to the late 19th century.

Today there are about 760,000 amateur radio operators in the U.S., according to ARRL, the national association for amateur radio. ARRL says the ham population has climbed in recent years, defying predictions that the internet or social media would kill the hobby's appeal.

Still, many amateur-radio clubs are dominated by retired men, sparking periodic jitters that there aren't enough engaged young people to keep the hobby alive.

Leonard Gucciardo, a 62-year-old retired electrical engineer on Long Island, said he worries that traders' broadcasts could prevent newcomers from embracing ham radio and the financial investment it requires. He estimates that he has spent more than \$20,000 on radio equipment and fears that increased interference could render such equipment useless.

#### SHARE YOUR THOUGHTS

*Should big trading firms be able to expand access to shortwave frequencies and possibly interfere with the signals of ham radio operators? Join the conversation below.*

"Picture investing \$25,000 on equipment, and it becomes a dinosaur that you just can't use anymore," he said.

The traders' proposals have sparked a visceral response from many hams because radio is a way of life, said Rich Donahue, a 62-year-old from South Dakota who spends much of his time on the road in a 22-foot camper, traveling to ham conventions.

"They're very passionate about their radio communications," Donahue said. "They get up in the morning, they get a cup of coffee and get on the radio to talk to their friends."

Write to Alexander Osipovich at [alexo@wsj.com](mailto:alexo@wsj.com)

# Port Elizabeth of Yore: Ushering in Electricity and Lighting

By [Dean McClelland](#) in [Port Elizabeth of Yore](#)



The lack of street lighting in the pre-electricity era must have made walking outdoors at night particularly dangerous. If nothing else, this factor must have induced the Town Council to expedite the installation of street lighting as the technology enabled this feature. Furthermore commerce and industry required electricity to operate all manner of equipment, apparatuses and appliances which the use of electrical power enabled.

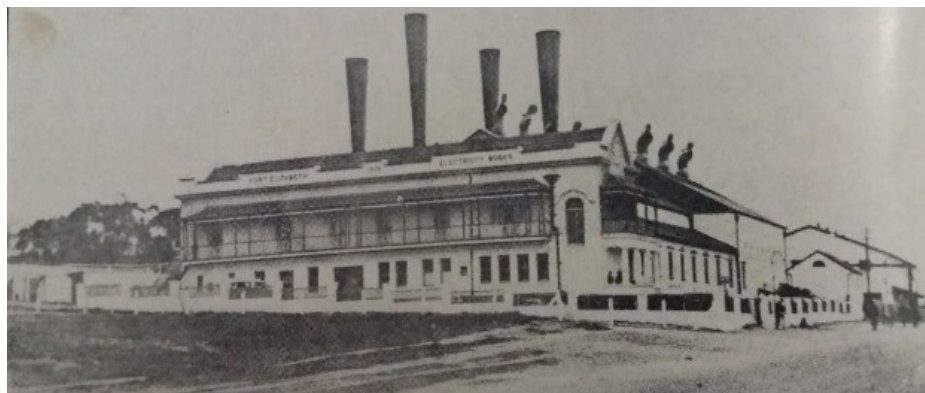
To do so, Port Elizabeth would ultimately require its

own generating equipment which in turn would require it to import coal.

To say that the introduction of electricity would fundamentally change society was a gross understatement. It would transform society in ways which were unthinkable previously. Apart from facilitating nocturnal social intercourse, it would also facilitate the introduction of shift work in industry.

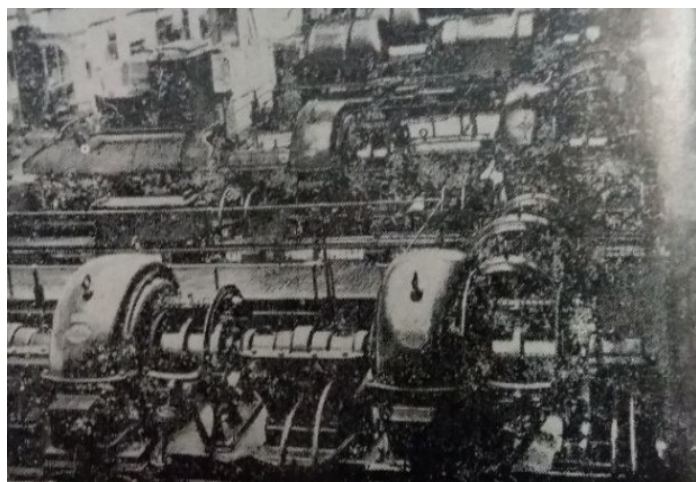
Main picture: Installing overhead electricity cables

Tentative foray into electricity generation



**Mount Road Power Station in 1910**

This long-cherished dream came to fruition when, on the 28<sup>th</sup> June 1905, the foundation stone of the Mount Road Power Station was laid on part of the old Agricultural Show Ground yard. Shortly thereafter during July, building commenced on a generating station at the south-end corner of the Old Show Ground Yard. With an installed generating capacity of 1,200 kW and a capital outlay of some £180,000, Port Elizabeth embarked on its role as a supplier of electricity to its residents and commercial and industrial undertakings.



**Turbine Hall**

It is interesting to note that the Old Show Ground Yard was situated at the foot of the present Mount Road, and included the site of the Old Gaol, where rumour has it that the public gallows



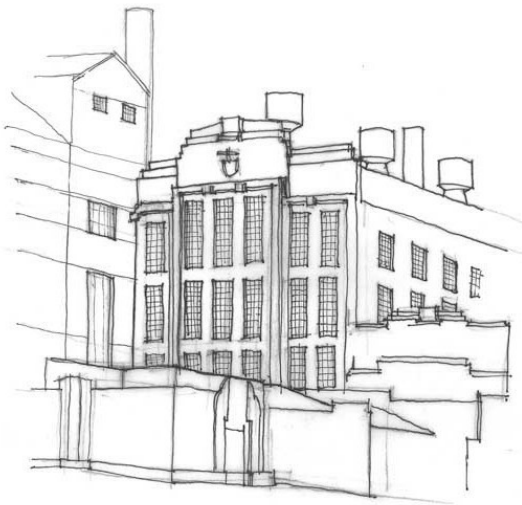
once stood. The Power Station was built on the site of the gaol cemetery.



Designed by A.S. Butterworth, the Town Engineer, it was opened on 1 May 1906 when Mayor Alexander Fettes switched on the first street-lamps. The Electrical Engineer was Richard Pape. The West-

ern Electric Company obtained the contract for laying and jointing the distribution cables which were installed in the principal streets, the limits of the town then being Adderley Street, Walmer Road and Cape Road as far as Roseberry Avenue at the top of Target Kloof. The form of supply was 240/480 volts Direct Current, and the first residence to be connected was 117

Cape Road. This supplied fifteen private consumers and thirty street lamps and in its first month, the Works distributed 4 708 units of electricity.

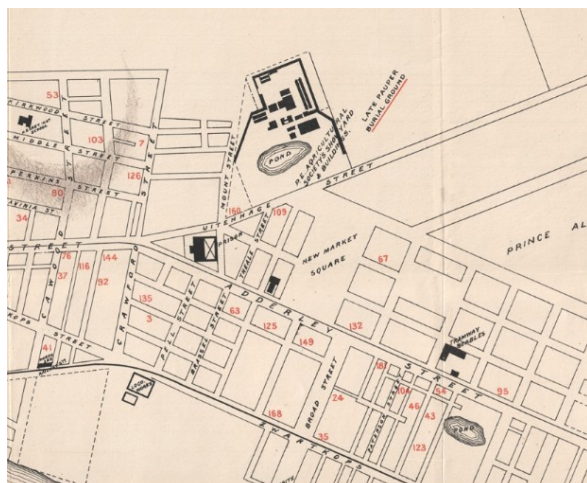


**Sketch of the Mount Road Power Station**

**By Peter Hartman**

From 1905 to 1914 the undertaking grew steadily and as the system demand increased, both the generating plant at Mount Road Power Station and the D.C. cable network, were augmented. At this stage it became evident that the direct current system had reached the practical limits of its de-

velopment and a 6,600-volt alternating current network was therefore introduced. This came into operation during 1915, along with the transformer substations which were established



**Location of the Mount Road Power Station showing the adjacent cooling pond**

at salient points in the City, and where the voltage was reduced and distributed to consumers in the local area. The system slowly migrated from DC to AC for two reasons. Firstly, it is a simple matter to step voltage up or down if it is AC and, secondly, large electric motors which require AC were starting to predominate over the early consumption that was

mainly for lights and ovens which can use either with little effect on the output.

As industry in the area grew and the volume of exports from the Karoo and Uitenhage areas increased, so Port Elizabeth found itself battling to cope. Its distance from the Eskom network and the load centres in the north suggested to the Council that they should construct their own power station. Permission for this was granted to build a new power station on the existing site in 1924, and became operational in 1925. The lighting of parts of the town during celebrations and the Christmas season was extended when in December 1926 the Council agreed to the lighting of Humewood, including the Octagon, during the summer season.

Electrical capacity in 1938		
Number of units	kW output	Total kW Output
2	1000	2 000
3	3000	9 000
2	12500	25 000
		36 000



Laying the first underground cables in PE

The electricity network continued to expand, and in 1928, following requests for electricity from the Village of Redhouse, and the Municipality of Uitenhage, a decision was made to transmit power at 22,000 volts by means of a dual-circuit overhead lat-

tice-steel tower line from which the latter town was provided with power about Christmas 1929. Following upon this development, a number of 22,000-volt load centres were established in order to reinforce the existing 6,600-volt system which had been fed direct from the Mount Road Power Station up to this time.

On the 27<sup>th</sup> February 1930, the lights in New Brighton were formally switching on by W.C. Adcock, Chairman of the Electricity and Industries Committee. On 2<sup>nd</sup> April Redhouse was "switched on" too. Amongst the special occasions when lighting

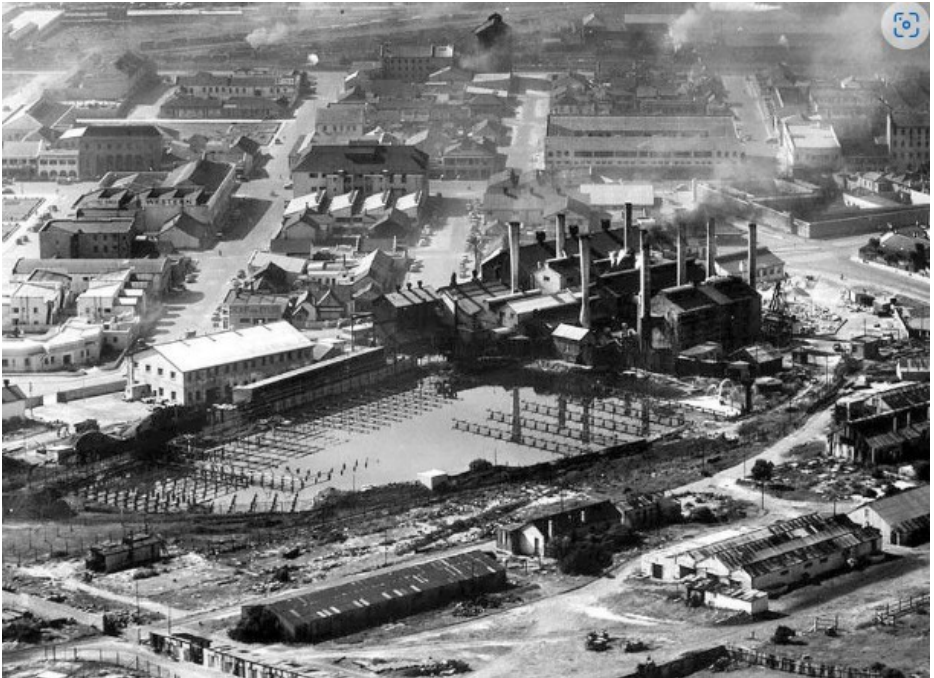
was used to facilitate an event was during 1932 when the Donkin Reserve was lighted to allow the PAG to undertake night training. Water for the cooling of the plant was drawn from the North End Lake. The ca-

Electricity Statistics in 1938	
Consumers on the grid	12 500
Capacity of plant in kW	36 000
Maximum load drawn	19 500
Max load as % of capacity	54.1%
Total kWh generated	75 171 079
Total mileage of UG & OH cables	398



capacity of this lake is approximately 757 million litres which was sufficient to ensure that the run-off from the catchment area was sufficient to maintain that level. If evaporation had been excessive, a contingency plan had been prepared. This involved pumping sea water through the intake works and pump house near the foot of Broad Street.

The demand for electricity grew rapidly as the street lighting system expanded and more people purchased electrical appliances. Industry also grew and towards the end of the 1930s, Port Elizabeth was regarded as one of the Union's industrial centres.



**Mount Road Power station in very early days. Cooling pond alongside was connected to North End Lake**

**To be continued in the September of QSX**



## *From the JAMTIN.....*

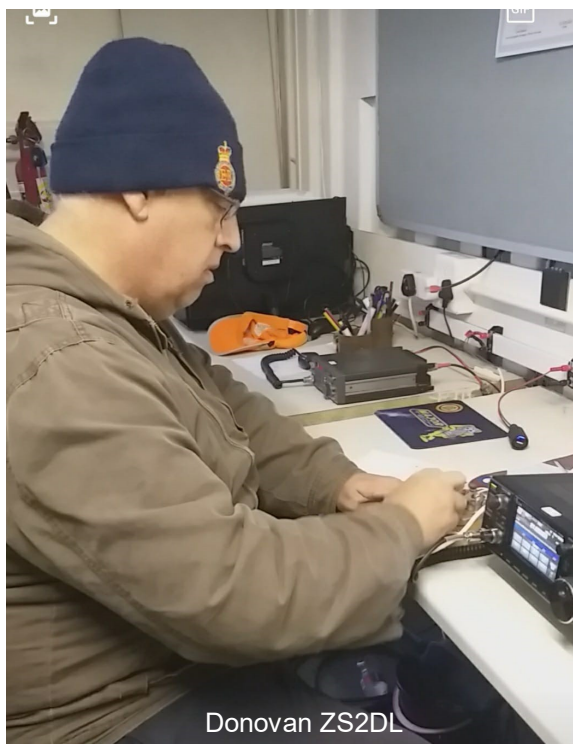
Some interesting happenings in the Jamtin the over the last few weeks.

Since getting a QRZ log book going and capturing my DX QSOs I have spoken to 26 countries with 18 confirmed QSOs. The Italians

are the most active with 9 contacts followed by the Germans with 5 ZS2CJ , Chad, or as he is now known ON9CJ, is still elusive but hopefully he will come through soon from Belgium.

At the moment I only have 15m that works for DX. The 10m antenna stopped working so some attention required there. The joys of ham radio.

I have also managed to take another step closer to WAZS. One more ZS1 and 19!! ZS6's.



Donovan ZS2DL

At the first monthly meeting we had a few visitors popping in. ZS2DL, Donovan, found his way around the Icom 7300 and made a DX contact. I took the opportunity to also make the contact. Then I made a second QSO and ZS2DL took the mike to also make the contact but wasn't successful.

As you know Don is very proficient with CW. We have an old fash-

ioned morse key in the Jamtin. A few buttons later he was dit-dit- dah-ing away. What I would call really jamming in the Jamtin.

Made me wish my mom was still around. As a young girl she used CW at the post office. Just before she passed away my sister picked up some morse on her wireless. My mom started dictating the message that was being transmitted. My sister then tested her using the morse alphabet. My mom was spot on, translating from English to morse to English.

Seems that once this morse language is in your brain it's there forever

Remember, Jamtin is available for all hams. I am there most Fridays from about 16h00/19h00+. And now also on the Tuesday afternoon of the monthly meeting. I also try and post my DX contacts on the Technical WhatsApp group so if you are in your shack, you can try make contact as well.

Remember

**Jamtin is there for you..... Just say HELLO**

73

ZS2JIM

## **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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# *Birthdays and Anniversaries*

## *Birthdays*

### **August**

15 Serge Smetryns ZS2SJE  
15 Chris Knowles ZS2CK  
18 Al Akers ZS2U  
20 Andrew Prideaux ZS2PA  
26 Nicole Cummings ZU2NX

### **September**

02 Johannes (Joe) Geldenhuys ZS2JO  
05 André Ollphent ZS2YA  
09 Andrew Bouwer ZS2AFB  
10 Andre van Deventer ZS2BK

## *Spouse Birthdays*

### **August**

24 Daschell Geldenhuys - Joe ZS2JO  
29 Teresa Joubert - Tim ZS2X

### **September**

02 Renett van Deventer - Andre ZS2BK  
03 Tracey Murrell - Barry ZS2EZ  
09 Merle Thomas ZR2MP - Neil ZR2NT  
11 Jane Fife - Clive ZS2RT  
12 Dixeeta Gajjar - Tejas ZS2TG  
12 Jo Akers ZS2W - Al ZS2U  
18 Nellie Brits - Anton ZS2ST

## *Anniversaries*

### **August**

24 David - Beverley Higgs ZS2DH

### **September**

02 Allan - Joan Bowles ZS2BO ZR2ABA  
04 Regardt - Biance van Heerden ZS2RH  
11 Neville - Sandra Bowden ZS2N  
14 Paul - Daphne Galpin ZS2PG

## **"A little station called HAM"**

This widely circulated but fanciful tale claims that, around 1911, an impassioned speech made by Harvard University student Albert Hyman to the United States Congress, in support of amateur radio operators, turned the tide and helped defeat a bill that would have ended amateur radio activity entirely by assigning the entire radio spectrum to the military. An amateur station that Hyman supposedly shared with Bob Almy and Reggie Murray, which was said to be using the self-assigned call sign HAM (short for Hyman-Almy-Murray), thus came to represent all of amateur radio.<sup>[17][18]</sup> However, this story seems to have first surfaced in 1948, and practically none of the facts in the account check out, including the existence of "a little station called HAM" at Harvard in the first place.<sup>[19][20][21]</sup>

In 1972, Ham Radio (magazine) editor Jim Fisk reported that Albert Hyman confirmed to him that Hyman, Robert Almy and Reginald Murray had put wireless station HAM on the air, however, it was war correspondent Percy Greenwood whose story in a New York medical publication gave the "original HAM story" its start. As told to Fisk, station HAM was not located at Harvard, but at Roxbury High School. After corresponding with Hyman, Fisk concluded that the story had nothing to do with the fact that radio amateurs are called "hams"; rather, the term goes back to the early days of wire telegraphy when unskilled, incompetent operators were pejoratively called hams by their more experienced colleagues.

The 1909 Wireless Registry in the May edition of Modern Electrics listed Earl C. Hawkins of Minneapolis, Minnesota, as operating with the unofficial callsign "H.A.M." according to the Wireless Association of America.

SUNDAY SARL AND MONDAY  
EVENING PEAR'S  
BULLETINS

PEAR'S provides a local reading of the SARL bulletin every Sunday morning at 8:15 in Afrikaans read by Kevern ZR2BK and 8:30 in English read by Rory ZS2BL, transmitted through the Town 2M Repeater on 145.650MHz.

PEAR'S bulletins are transmitted on Monday evenings at 20h00 on the Lady's Slipper repeater, 145.700 MHz, 88.5Hz, Narrow and 438.700 MHz, no CTCSS Wide. (Standby option is 145.650MHz Town repeater 88.5Hz, Narrow)

## Bulletin Roster

21-Aug	Dave	ZS2DH
28-Aug	Chris	ZS2AAW
04-Sep	Mike	ZS2MIC
11-Sep	Kevern	ZR2BK
18-Sep	Ashley	ZS2AG
25-Sep	Jimmy	ZS2JIM
02-Oct	Paul	ZS2PS
09-Oct	Rory	ZS2BL

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## Our 2023/2024 PEARS Committee

PORTFOLIO	NAME	CALLSIGN	EMAIL	CONTACT No
Chairman, RAE classes, Technical Workshops, HF tests	Donovan van Loggerenberg	ZS2DL	zs2dl[at]hamradio.co.za	082 852 4885
Vice Chairman, Technical support & maintenance	Kevern Burger	ZR2BK	k.burger[at]stfrancislinks.com	083 401 9587
Treasurer	Michael Steenkamp	ZS2MIC	zs2mic[at]igen.co.za	082 523 5677
Secretary, Repeaters, Website updates, QSX emailing, club database	Christopher Scarr	ZS2AAW	christopher[at]peham.co.za	082 925 6367
SARL liaison, Hammies, Youth, Contest Scoring	Dave Higgs	ZS2DH	om[at]zs2dh.co.za	082 387 5657
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Public relations, special events displays	Paul Schoeman	ZS2PS	paul.costcutters[at]gmail.com	083 582 9660

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

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

<b>Town VHF</b> 145.050/650 88.5Hz, Narrow 12.5k	<b>Longmore</b> 145.025/625 88.5Hz, Narrow 12.5k	<b>Uitenhage</b> 145.075/675 Wide 25k	<b>Town UHF</b> 431.050/438.650 Wide 25k	<b>&lt;----- IRLP available on this subnet</b>
<b>Cockscomb</b> 431.000/438.600 Add 88.5Hz for squ tail	<b>Viewlands</b> 431.075/438.675 Add 88.5Hz for squ tail	<b>&lt;----- These form linking hubs for events, hence no tail</b>	<b>DMR</b> 430.675/438.275 QTH: ZS2VA	<b>D-Star</b> 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.

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

### APRS/Packet network:

<b>ZS0NTP Node</b> Lady's Slipper 434,800 1200bd 439.850 9600 bd	<b>ZS0KDK APRS Digi</b> Mount Road 434,800 1200bd	<b>ZS0KDB APRS Digi</b> Longmore 434,800 1200bd	
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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.**