



WATTS 2025-12

Year 95 + 12

Monthly Newsletter of the Pretoria Amateur Radio Club

Maandelikse Nuusbrief van die Pretoria Amateur Radio Klub

✉ PARC, PO Box 73696, Lynnwood Ridge 0040, RSA

✉ zs6pta@zs6pta.org.za

 <http://www.parc.org.za>

f [PARC ZS6PTA Group](#)



Bulletins : 145.725 MHz : Sundays from 08h45 / Sondag vanaf 08h45

Relays: 439.025, 438.225, 145.725 and on 7.066MHz and Echolink.

Activated frequencies are announced prior to bulletins

Swopshop : 2m and 7.066 MHz live on-air after bulletins

Bulletin repeats on Mondays / herhalings op Maandae: 2m 19h45



Want to stay in the loop with PARC?

If you'd like to join the PARC WhatsApp group, simply share your contact details with any committee member — we'll make sure you're added and welcomed aboard!

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PARC ANNUAL CLUB FEES: PARK JAARLIKSE LEDEGELDE

Bank	First National Bank	Ordinary Members / Gewone Lede : R200 Spouses and Pensioners : R100	Your call sign must appear as statement text!
Branch Code	25 20 45		
Account No	546 000 426 73		

Please remit your subs in time to our Treasurer, or pay per transfer into the PARC account

Betaal asb. u ledegelde betyds aan ons Tesourier, of betaal per oorplasing in die PARC rekening

Please Note : If your Club fees are not paid up to date, birthday details cannot be displayed in Watts

Membership Fees & Financial Year Reminder

To help members stay in sync with club commitments, please note that our financial year runs from **1 July to 30 June**. Membership fees are payable annually during the month of July, marking the start of our new financial cycle.

We encourage all members to renew their subscriptions in July to ensure uninterrupted participation in club activities and communications.

Birthdays / Verjaarsdae, Joys and Sorrows / Lief en Leed

Wishing you loud signals, clear frequencies, and zero interference on your special day. May your logbook overflow with joy and friendship. From shack to celebration—happy birthday and 73!

Members' Birthdays December 2025 / Lede Verjaarsdae Desember 2025

Birthday	Name	Callsign
01 December	Pieter Fourie	ZS6CN
07 December	Tim Meyer	ZS6TIM
08 December	Kobus du Toit	ZS6KD
10 December	Mauritz van den Heever	ZS6CMH
15 December	Alméro Du Pisani	ZS6LDP
16 December	Andre Potgieter	ZS6EW
20 December	Jurie Ferreira	ZS6JFE
23 December	Johnny Scott	ZS6JSS
27 December	Pierre Britz	ZR6ADZ
28 December	Allan De Souza	ZS6AVC
30 December	Hans van de Groenendaal	ZS6AKV

Spouses' Birthdays December 2025 / Eggenote Verjaarsdae Desember 2025

Wishing you a fantastic day filled with laughter, love, and everything that makes you smile. May the year ahead bring new adventures, great memories, and all the happiness you deserve. Enjoy your celebration!

Spouse Birthday	Member Name	Callsign	Spouse
21 December	Roy Newton	ZS6XN	Retha
23 December	Pierre Britz	ZR6ADZ	Dienkie

Members' Birthdays January 2026 / Lede Verjaarsdae Januarie 2026

Birthday	Name	Callsign
05 January	Pierre Holtzhausen	ZS6PJH
07 January	Bertus Viljoen	ZS6VIL
10 January	Wynand Wessels	ZR6WW
12 January	Gustav Snyman	ZS6BWN
12 January	Barry Bester	ZS2BB
18 January	DP Du Toit	ZR6DP
21 January	Albert Schreuder	ZS6SE
25 January	Corlia Smit	ZS6CHS

Spouses' Birthdays January 2026 / Eggenote Verjaarsdae Januarie 2026

Spouse Birthday	Member Name	Callsign	Spouse
01 January	Barry Bester	ZS2BB	Anna
10 January	Ben Greyling	ZS6YVC	Jessica
13 January	Jannie Badenhorst	ZR6BBX	Elsa
15 January	Fanus Ferreira	ZS6BUH	Moirá
18 January	virus Wessels	ZR6WW	Zelda
25 January	Tobie Jansen van Rensburg	ZS6ZX	Magriet
25 January	Pierre Smit	ZS6PS	Corlie

Wedding Anniversaries December 2025 / Huweliks Herdenkings Desember 2025

Anniversary	Name	Callsign	Spouse
05 December	Nico Michael	ZS6BVR	Mary
08 December	Theodore Vere Bresler	ZS6TVB	Avida
14 December	Barry Bester	ZS2BB	Anna
14 December	Jannie Badenhorst	ZR6BBX	Elsa

Wedding Anniversaries January 2026 / Huweliks Herdenkings Januarie 2026

Anniversary	Name	Callsign	Spouse
05 January	Louis Du Pisani	ZS6LDP	Louise
16 January	Leon Fouche	ZS6LEF	Riana
20 January	Hans-Peter Knoepfler	ZS6AJS	Helga

Joys and Sorrows / Lief en Leed

No joys or sorrows to report this month.

Perhaps the silence is a sign of steady skies and peaceful frequencies.



PARC Sunday Bulletins / PARK Sondag Bulletins

PARC Bulletins are presented on Sunday mornings at approximately 08h45, after the SARL Bulletins in English and Afrikaans, from 08h15. The Bulletin Presenters for the following two months are presented below. Please do contact the applicable presenter beforehand if you wish to contribute to the Bulletin. PARC Bulletins are broadcast on the 2-meter repeater on 145.725 MHz, and 70 cm on 438.825 and 439.025 MHz. Relays are done on 7.060 MHz by Pierre ZS6PS and Corlia ZS6CHS Smit and on Echolink by Johan Lehman ZS6JPL. A re-broadcast of the Bulletin is done the following Monday evening at 19h45 by Louis de Wet ZS6SK.

PARK Bulletins word op Sondag oggende aangebied om 08h45, na die SARL Bulletins in Engels en Afrikaans, vanaf 08h15. The Bulletin aanbieders vir die volgende twee maande word onder aangedui. Kontak gerus die toepaslike Bulletin leser indien u 'n bydrae tot die Bulletin wil maak. PARK Bulletins word uitgesaai op die 2-meter herhaler op 145.725 MHz, en 70cm op 438.825 en 439.025 MHz. Herleidings word gedoen op 7.060 MHz deur Pierre ZS6PS en Corlia ZS6CHS Smit, en op Echolink deur Johan Lehman ZS6JPL. 'n Heruitsending van die Bulletin geskied die opvolgende Maandag aand om 19h45, en word behartig deur Louis de Wet ZS6SK.

PARC Bulletin Presenters: November 2025 – December 2025

Date	Presenter	Date	Presenter
9 November 2025	Louis de Wet ZS6SK	7 December 2025	Louis de Wet ZS6SK
16 November 2025	Alméro Du Pisani ZS6LDP	14 December 2025	Alméro Du Pisani ZS6LDP
23 November 2025	Louis de Wet ZS6SK	21 December 2025	Louis de Wet ZS6SK
30 November 2025	Alméro Du Pisani ZS6LDP	28 December 2025	Alméro Du Pisani ZS6LDP

💡 *“A heartfelt thank-you to our dedicated bulletin presenters — your energy, commitment, and clear voices keep the amateur radio community informed and inspired. Whether rain, shine, or QRM, you show up and deliver with professionalism and passion.*



Diary of Contests & Events / Dagboek van Kompetisies en Gebeure

Contests and Events – December 2025 / Kompetisies en Gebeure – Desember 2025 (UTC Times)	
01	Start of the YOTA Month: https://mysarl.org.za/
02	Worldwide Sideband Activity Contest: 0100Z – 0159Z. Also 12/09; 12/16; 12/23 and 12/30
04	NRAU 10m Activity Contest: 1800Z-1900Z (CW); 1900Z- 2000Z (SSB); 2000Z-2100Z (FM); 2100Z-2200Z (Digital)
05 - 07	ARRL 160-Meter Contest: 2200Z – 1600Z
06	Pretoria Amateur Radio Club Boot Sale: 09h00 – 11h30
06	Pretoria Amateur Radio Club Annual General Meeting: 12h00 – 13h00
06 - 07	PRO CW Contest: 1200Z – 1159Z
13 - 14	ARRL 10-Meter Contest: 0000Z – 2400Z
13 - 14	International Naval Contest: 1600Z – 1559Z
31	End of SARL Centenary Marathon QSO Party: 2359Z
Contests and Events – January 2026 / Kompetisies en Gebeure – Januarie 2026 (UTC Times)	
1	Start of ISS Contact Session: 0001Z
1 - 31	YOTA Month
9	PEARS National VHF/UHF Contest - Session 1: 1600Z
10	PEARS National VHF/UHF Contest - Session 1 – end: 1400Z
10	PEARS National VHF/UHF Contest - Session 2: 1400Z
11	PEARS National VHF/UHF Contest - Session 2 – end: 1200Z
17	SARL QRP Contest: 0700Z- 0900Z
24	SARL Saturday 40 m Club Contest: 1500Z – 16:00Z
The Pretoria Amateur Radio Club does not accept responsibility for the accuracy of contest details listed above. For verification and more information, please visit the SARL website, www.sarl.org.za , as well as the WA7BNM international contest calendar at the following website: http://hornucopia.com	

ZS9YOTA December Spark!

December belongs to our youth—support them on the air!

Young voices, strong signals—South Africa’s youth are on the air. Support them, cheer them, and let their QSOs echo the future of amateur radio!

Every December, South Africa activates **ZS9YOTA** for *YOTA Month—Youngsters On The Air*.

It’s a global celebration of youth in amateur radio, and the SARL proudly supports young South African hams as they light up the bands with this special call sign.

From CW to FT8, it’s a month of mentorship, excitement, and fresh voices on the airwaves.

Please support our youth and help keep the next generation of radio operators inspired and on frequency.

PARC Flea Market / PARK Snuffelmark



Pretoria Amateur RADIO CLUB

SINCE 1930



ZS6PTA Exhibitions, Flea Market and Boot Sale

Saturday 6 December at 09:00
Pretoria Old Motor Club in Silverton
Almero du Pisani 083 938 8955
almerodps@gmail.com



Next Flea Market Date: 6 December / Volgende Snuffelmark Datum: 6 Desember

CONTACT PERSON: Alméro Du Pisani (T) 083-938-8955 (E) almerodps@gmail.com

PARC Flea market dates for 2026:

4 April 2026
6 June 2026
1 August 2026
5 December 2026

Other Clubs:

East Rand Radio Club
7 February 2026

West Rand Radio Club
7 March 2026



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zs6pie@gmail.com

West Rand Radio Club Flea Market / Wes Rand Radio Klub Snuffelmark

8 November dawned with anticipation—it was flea market day at the West Rand Radio Club! We arrived a little earlier than usual, the gates still quiet, but that gave us the perfect excuse to linger over a steaming cappuccino. With cups in hand, we caught up with familiar faces, swapping stories and laughter as the buzz of the day slowly built around us.

Then came the unmistakable aroma—boerewors on the braai. It curled through the air like a siren call, tugging us outside by the nose. Before long, we were happily tucking into a perfectly braaiied boerewors roll, the kind that makes you wonder why anyone would ever eat anything else at a flea market.

As the gates swung open, the garden transformed. Vendors unpacked their treasures, visitors streamed in, and suddenly every table seemed to hold a surprise. There was truly something for everyone—radios, gadgets, books, and even a few quirky finds I hadn't known I needed until they winked at me from the stalls.

The atmosphere was electric. Conversations sparked easily, laughter carried across the garden, and the excitement flowed as freely as the coffee. It wasn't just a market—it was a gathering of friends, a celebration of shared passions, and a reminder of why these events are worth every kilometer of the trip.

By the end of the day, we left with full hearts, satisfied appetites, and a few unexpected treasures tucked under our arms. The West Rand Radio Club flea market had once again proven itself to be more than just a shopping stop—it was an experience, and one we'll gladly repeat.





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HF Relays of the Pretoria Amateur Radio Club (PARC) Bulletin

Relaying the 2-meter (2m) news bulletin on HF serves several vital purposes. The 2m band is generally limited to line-of-sight communication, which restricts its range to local or regional areas. In contrast, HF bands (such as 40m) enable long-distance communication, allowing HAM operators outside the reach of 2m repeaters to participate in the weekly SARL and Club News Bulletins.

For many years, Hans Kappetijn played a key role in these relays, ensuring that the Pretoria Amateur Radio Club remained accessible and vibrant across South Africa. Hans was well-known for his friendly and humorous approach, often reminding participants that Swap-Shop was for HAM-related items only - “not your auntie’s house or your litter of kittens.” His legacy continues to inspire operators throughout the HAM community.

Relays and calling in before the bulletin have many benefits:

1. Many HAM operators are unable to access 2m repeaters due to terrain challenges or equipment limitations.
2. HF relays allow operators with only HF rigs to participate in weekly bulletins, fostering a more connected and inclusive HAM community.
3. Reporting in for the bulletin demonstrates preparedness. During emergencies such as floods or power outages, VHF/UHF infrastructure may fail.
4. HF relays provide a backup communication route, ensuring that vital information—such as emergency bulletins or coordination messages—remains accessible.
5. Sunday bulletins act as a crucial social and informational anchor for HAM operators nationwide.
6. Relaying bulletins on HF helps unite operators across regions and encourages participation in contests and club activities.

During 2024, a total of 2,117 HAM operators called in before the bulletin, while 411 called in after the bulletin. The stats for the call-ins are:

ZS1 – 5%

ZS2 – 2%

ZS3 – 9%

ZS4 – 10%

ZS5 – 15%

ZS6 – 59%

9 Call-ins were received from outside of South Africa.

During the first 45 weeks of 2025, a total of 1,786 HAM operators called in before the bulletin, while 295 called in after the bulletin. The stats for the call-ins are:

ZS1 – 5%

ZS2 – 2%

ZS3 – 10%

ZS4 – 11%

ZS5 – 15%

ZS6 – 57%

3 Call-ins were received from outside of South Africa.

If possible, we would also like to extend the relay to other bands like 80m during winter and 20m.

To continue providing this service to the HAM community, we need your assistance with relaying bulletins. Pierre ZS6PJH and Pierre ZS6PS will gladly assist you with the various methods/tricks to get the 2m signal out on HF. You do not need fancy equipment.

Don't hesitate to get in touch with me on psmit@watertek.co.za.

DMR Hotspot

- 1x OLED Display (Pre-installed)
- 1x Raspberry Pi Zero 2W
- 1x MMDVM Hotspot Board
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- 1x USB Cable
- 1x User Manual



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Shack Talk by Vernon - ZS6AIG

Like almost all radio hams I know, the bug bites you at a young age. In the late fifties my late father was a keen radio builder and reminds me of how many times I had my fingers burnt holding wires while he did the soldering. I remember how many other OM (Old Man) would come around to collect bits and pieces to build some shack equipment or swap an old radio. Most of the time they would have long QSO discussing vacuum tubes, antenna design and or modulation reports on AM. Not many had SSB home brew rigs at the time. However, that is how I remember the bug bite.

In 1979 my very first HF rig was a 10-year-old Swan 350* with the white dial, great rig with a few problems. This was a 16-tube rig using 6KG6 drivers and a pair of 6HF5 as finals, the 6HF5 generated a lot of heat to keep you warm in winter and lot of output power. Armed with a ceramic microphone gave a crisp modulated tone. The mic was later replaced with the Astatic D104* crystal microphone which I still use in my shack. The Swan was known to have a drifting VFO, even after warm-up, I remember charging the 2n706 can type transistor and capacitors at least twice a year. This was also the first rig I owned that I needed to put the soldering iron to work, The Swap was a nice open space rig to work on, and the circuit was simple layout, just the power supply weighted 16Kg.



Astatic D104



Swan 350

After many happy years of drifting VFO's and not so easy obtaining 6HF5 tubes I managed to upgrade to the Yaesu FT 501. This was an exciting time of Ham Radio, the FT-501 is a full-tube SSB digital transceiver operating on 80 through 15 meters, with a 500-watt PEP input for SSB and 400 watts DC for CW. It has a separate FP-501 AC power supply, which includes a speaker. The rig uses the reliable 6KG6 drive and the 6KD6 in the final, this was also the first rig that I had that utilised IC and FET technology.

The RCA CA 3053 and TA 7042M was used in the IF amplify section and HA 1306 as the audio amp. The excitement about this rig was that it used a digital frequency counter display with what appears to be green LEDs or possibly green nixie tubes, rather than a modern LCD or touchscreen. The "display" is a high-performance digital frequency counter for accurate readings of the operating frequency. This was a major upgrade from the Swan white dial and drifting frequency without any indication. The FT 501 has an open space to work on and practical circuit board layouts to fault find problems easily. The external power supply with speaker employees simply but rugged design. The rig had an excellent front end, great reception and a very responsive AGC. The 200-watt output could hold itself for long QSO's and heat dispense was less than the Swan 350. The 6KD6 tubes started to get expensive and had find.



Yaesu FT 501



FP 501

The 501 was not a popular rig as the Yaesu 101 was already making its mark in the South African. The 501 has still got a spot in my shack and is presently under restoration. After years of operating various makes and models of ham and military radios there is not anything more exciting than turning up that old value rig.

Just as I was starting to enjoy DX'ing with the FT501 a Yasue 400FTDX found its way into my shack for repairs. After replacing the fuse and redoing the dry solder joints the 400DX came alive. The rig had no cooling fan to keep 6KD6 cool, this rig was putting out a firm 250 Watt and cut through the noisy bands on CW.

While many loved the rig, it had some shortcomings: no CW filter or provision for one; no 160-meter coverage; a 5-second carrier-on time limit while tuning because the 6KD6 sweep tube finals weren't all that rugged. After many hours of operating the 400DX it went back to its owner, I had not seen another since 2003 until recently when OM Christo ZR6AUI brought in a 400DX blowing fuses. What a fond memory to have this rig on my work bench. This was the last of the Yaesu old generation rigs to be sold, the new generation FT 101 series was starting to replace many old timer rigs in the shack.



Yaesu 400FTDX



Old Timer Circuitry

In the next Shack Talk I will be sharing the memories of the Yaesu 101, Kenwood TS 820, Heath SB that have landed on my work beach.

Until next time

73's

Vernon ZS6AIG

Season's Greetings from PARC Committee / Seisoengroete van PARK Komitee

Season's Greetings from Pretoria Amateur Radio Club Committee

Dear PARC Members,

As the year draws to a close, we pause to reflect on the signals we've shared, the contests we've braved, and the friendships we've strengthened across the bands. Your support, enthusiasm, and dedication have kept our club's spirit alive and vibrant — from the morning nets to the creative chaos of *Watts*, from CQ Tales to every QSO that carried laughter and learning.

May this festive season bring you joy, peace, and plenty of strong signals. May your antennas stand tall, your SWR stay low, and your logbooks fill with memorable contacts. Thank you for being the heartbeat of PARC — for your time, your stories, and your camaraderie that make our club more than just a frequency, but a family.

Here's to a new year of discovery, creativity, and connection. Together, we'll continue to honour our heritage, welcome new voices, and keep the airwaves alive with warmth and wit.

Season's Greetings, 73, and heartfelt thanks — from the PARC Committee.

Seisoensgroete van die Pretoria Amateur Radio Klub Komitee

Beste PARC-lede,

Soos die jaar tot 'n einde kom, neem ons 'n oomblik om terug te dink aan die seine wat ons gedeel het, die kompetisies wat ons aangedurf het, en die vriendskappe wat ons oor die bande versterk het. Julle ondersteuning, entoesiasme en toewyding hou ons klub se gees lewendig en sterk — van die oggendnet tot die kreatiewe chaos van *Watts*, van CQ Tales tot elke QSO wat lag en leer gebring het.

Mag hierdie feestyd vir julle vreugde, vrede en sterk seine bring. Mag julle antennas hoog staan, julle SWR laag bly, en julle logboeke vol onvergeetlike kontakte wees. Dankie dat julle die hartklop van PARC is — vir julle tyd, julle stories, en die kameraadskap wat ons klub meer maak as net 'n frekwensie, maar 'n familie.

Hier's op 'n nuwe jaar van ontdekking, kreatiwiteit en verbinding. Saam sal ons voortgaan om ons erfenis te eer, nuwe stemme te verwelkom, en die lugweë lewendig te hou met warmte en humor.

Seisoensgroete, 73, en opregte dank — van die PARK Komitee.



CQ Joy, CQ Peace, CQ Goodwill — calling all stations for a season of harmony. 73 from PARC!

CQ Vreugde, CQ Vrede, CQ Welwillendheid — roep alle stasies vir 'n seisoen van harmonie. 73 van PARC!

The New Noise Floor: Why 100W s No Longer Enough

Submitted by Lehmann ZS6JPL

Modern Noise, Modern Power

For decades, a 100-Watt HF transceiver defined the standard for amateur radio. In quieter times, that was plenty—signals at the receiver could ride comfortably above the galactic and atmospheric noise that once dominated HF propagation.

But those times have changed. Across the world, a steady rise in man-made noise has reshaped the HF landscape. Modern homes hum with switch- mode power supplies, LED lighting, solar inverters, Ethernet over power- line, and countless unintentional radiators. An IEEE-published study from The Netherlands shows 6-10 dB increases in ambient noise across most HF and VHF bands [1]. Two other studies, Fockens & Leferink and ITU-R, all confirm the same trend [2][3]: the electromagnetic noise floor has crept upward globally.

What it means for today's operator

A signal that once arrived at S-9 may now be buried in the noise. A 10 dB rise in background noise is like losing nearly two S-units of signal margin. Many operators work to improve receive performance—but no matter how good your receiver or noise cancellation, you still haveto be heard.

That extra S-unit can mean the difference between “barely readable” and solid copy. In today's noisy environment, 500W is no longer big-gun territory—it's simply the new baseline for reliable HF communication.

Respect for Low-Power Operating

Of course, not every contact requires high power. QRP operators, CW enthusiasts, and users of weak-signal modes like WSPR or FT8 continue to make impressive contacts at milliwatt levels—proof that radio art and good technique still matter. But for the typical operator using SSB, AM, or data modes in noise-rich suburban conditions, higher power provides a clear and measurable improvement in reliability and readability.

The takeaway: QRP proves what's possible. 500 Watts proves what's practical.

Efficiency, Heat and Power Density

Traditional linear amplifiers waste as much as 60 % of input power as heat, which explains their bulk, cost, and inefficiency. Delivering 500 W typically requires 1.2–1.3 kW of DC input and a 30- to 40-pound amplifier with forced-air cooling. But what if the transmitter itself could be 80–90 % efficient, producing only a fraction of the waste heat—and doing it inside the radio chassis?

AURORA™ —

THE 500 W REVOLUTION IN HF TRANSMISSION

FlexRadio's new Aurora Series represents the first major advance in HF transmitter technology since the 1970s. Instead of the classic linear chain of driver, PA, and tuner, Aurora integrates a high-efficiency envelope- and phase-modulated Class D architecture directly into the transceiver. This design, refined from years of R&D in high-efficiency RF systems, achieves 80 to 90% efficiency across HF bands while maintaining broadcast-grade linearity through adaptive pre-distor- tion (SmartSignal™).

The result:

- 500 W PEP on HF (200 W on 6 m)
- Less than half the input powerrequired of conventional designs

- Dramatically reduced heat—roughly 125 W of dissipation instead of 800 W for the same RF output
- Full integration: AC power supply (80–264 VAC), automatic antenna tuner, and 500 W transmitter in one compact chassis weighing under 20 lbs

Power you can carry

Because Aurora's transmitter is inherently efficient, the radio's

total input power at 500 W output is around 675 W—easily supplied from a standard 120 V / 6 A outlet. This makes true high-power operation viable for DXpeditions, remote stations, and portable operators who could never justify a 1.5 kW amplifier chain.

Aurora's heat-rejection design allows brick-on-key operation at 500 W while remaining cool to the touch. Less heat means smaller heatsinks, quieter fans, and far greater reliability—attributes that matter just as much on an island activation as they do in a contest station.

Why Aurora Matters — for every kind of operator

Home Station Operator

Quiet Power, Simplified Station For the home operator, Aurora transforms what “high power” means. Instead of wrestling with

a tangle of amplifiers, tuners,

and 50-amp supplies, the entire 500 W system lives inside a single chassis that plugs into a normal wall outlet.

The integrated power supply and ATU eliminate external cabling and heat sources, making the operating position cleaner and quieter—no relay chatter, no fan roar, and no cluttered desk. With modern neighborhood noise already pushing S-meters up two or three units, having 500 W of exceptionally clean, linear power ensures that every decibel counts.

The result is a high-performance, low-maintenance station that simply works better in today's noisy world.

Portable Operator

Maximum Signal, Minimum Load For operators who take radios into the field—Field Day teams, park activators, or emergency-comms groups—Aurora delivers something no previous transceiver could: true QRO power without the baggage. A 100-W class station often disappears into suburban RFI and QRM; Aurora's 500 W output buys more than an S-unit of advantage while drawing less than 7 A from a standard AC source. The high-efficiency Class-D transmitter means less heat, lower generator demand, and dramatically reduced fuel use. Everything fits in a single carry-on case, and setup time drops from an hour to minutes. Portable operators no longer have to choose between mobility and being heard. **DXpedition Operator — Less Weight, More QSOs** When every kilogram counts and generator power is precious, efficiency becomes the ultimate competitive edge. DXpedition operators typically ship multiple 100 watt transceivers and amplifiers, along with bulky power supplies and tuners.

Aurora replaces that entire stack with one 18-lb radio that delivers a full 500 W and includes its own tuner and supply. Its 80–90% efficiency cuts generator load by half, reducing noise, fuel, and logistics costs. Less heat also means greater reliability in tropical or high-altitude environments where airflow is limited. For DXpeditions, that means longer runs, cleaner signals, and more contacts per watt-hour—the definition of success when you're the rare one on the band.

Remote Operator —

Full Power, Zero Complexity For hams who operate from afar—whether a cabin in the mountains or a remote contest station—

Aurora turns “remote” into “transparent.” Its integrated AC supply and low-SWaP architecture mean the only external connections are power, Ethernet, and antenna. With no external amplifier to key or overheat, remote sites can run unattended at 500 W all day. Built-in SmartLink™ and SmartSignal™ technology keep operation stable and clean, maintaining optimal linearity automatically as temperature and load vary. The operator at the other end simply experiences a full-power signal that sounds local, not remote. Aurora makes remote high-power operation as simple as turning on your PC.

CONCLUSION

For most of amateur radio’s history, the 100 W standard worked because the world was quiet. Today’s world isn’t. The cumulative effect of millions of switching converters, LED drivers, and digital systems has raised the noise floor to levels once seen only in industrial zones.

FlexRadio’s Aurora Series restores the link margin that modern noise has taken away—delivering clean, efficient, high-power transmission in a single, elegant package. When the band is crowded and the noise is high, being heard is everything.

TECHNICAL REFERENCES

- [1] T. W. H. Fockens, A. P. M. Zwamborn and F. Leferink, "Measurement Methodology and Results of Measurements of the Man-Made Noise Floor on HF in The Netherlands," in IEEE Transactions on Electromagnetic Compatibility, vol. 61, no. 2, pp. 337-343, April 2019, doi: 10.1109/TEMPC.2018.2830512.
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- [3] ITU-R Report SM.2155 (2009): Man-Made Noise Measurements in the HF Range. https://www.itu.int/dms_pub/itu-r/opb/rep/r-rep-sm.2155-2009-pdf-e.pdf



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Get to Know Your Fellow Hams: Joe Katzman - ZS6TB



Radio Roots & Identity

1. What first sparked your interest in amateur radio?

My interest in ham radio was first sparked as a very young boy in a city called Soekmekaar where my parents had a hotel and a gentleman named Colin Ewels who was a ham was posted to the town for a couple of years and being a ham the first thing he did was set up all his antennas in the trees and his equipment in the rondawel he was given to live in and of course I used to sit listening to him regularly and of course that sparked everything off.

2. What's your callsign, and is there a story behind it?

My first call sign was ZR6TY in 1978 and in 1979 I obtained my ZS6TB, given automatically to me.

3. When did you get licensed, and what was your proudest moment on the air?

My proudest moment on the air was my first contact on CW with an American station. I called CQ knowing that no one would hear me because of my vertical antenna on my pool fence and when I heard an answer coming to my call, I ran out of the bedroom, and my wife forced me back into the room as I said I would not manage a CW contact and forced me to make the contact. After 45 minutes of slow 12 words per minute morse the American thanked me for being so courteous as it was his first contact on CW!!!



4. Who was your biggest mentor or influence in your ham journey?

My biggest influence came from the gentleman I mentioned that came to our hotel, Mr Colin Ewels (silent key) and the late Herman Wessels ZS6AM who took me to the then Protea club and I had to do the course they presented and just managed to pass the exam that followed.

Operating Style & Passions

5. What modes do you enjoy most—voice, CW, digital, or something quirky? I mostly enjoy rag chewing on HF, certainly not on morse which now is very poor.

6. Do you prefer rag chewing, contesting, experimenting, or another form of comms?
Same as above

7. What's your favourite band or frequency to hang out on?

I LOVE the 10m band when open, but do not hang out on one frequency rather move around till I find an interesting person to talk to.

8. Any memorable DX contact or QSO that stands out?

The only memorable one that stands out is my first CW contact which I supposedly ran away from.



Gear & Shack Tales

9. What's your current setup like—rigs, antennas, shack quirks?

Having now moved from a big home with big grounds and a tower with a great 5 element Yagi and above that a 6/6 skeleton slot for VHF I now don't have that luxury at the new place so my setup is simple on UHF and VHF but I may be able to attach a half wave end-fed antenna for HF so I did bring my Icom 756 pro2 which I hope to use when the end-fed is up and running.

10. Any homebrew projects or Franken-rigs you're proud of?

Unfortunately, there are no home brews.

11. What piece of equipment would you never part with?

I do not think I would part with my 756 as it still is in mint condition.

Personality & Humour

12. What's your ham radio superpower—or your funniest operating blunder?

My funniest operating blunder is when I, for almost a day could not get my set off transmit only to eventually find that I had leant on the PTT of my standing microphone which obviously locked the set on transmit and none of the knobs would get it out of transmit till I realized what had happened.

13. If your shack had a mascot, what would it be?

I have actually never thought of a mascot for my shack.

14. What nickname would your fellow hams give you?

I caught my fellow hams out one day by asking them if they had ever tasted a Barone and when no one knew what that was and I then told them it was BAR ONE chocolate they then called me Tango Barone!!



Beyond the Shack

15. What other hobbies or interests do you enjoy?

My other interests are music, as I have played the saxophone since and 11-year-old and I still possess 4 saxophones but seldom play them.

16. How has amateur radio shaped your friendships or travels?

I have met so many great friends from this fantastic hobby that I never would have met before if I was not an amateur.

17. What's one thing people might be surprised to learn about you?

I do not think anyone would be surprised about me as hams are so diverse in professions. I just happened to be a pharmacist, so electronics were very difficult for me to do.

Wisdom & Legacy

18. What advice would you give to a newcomer?

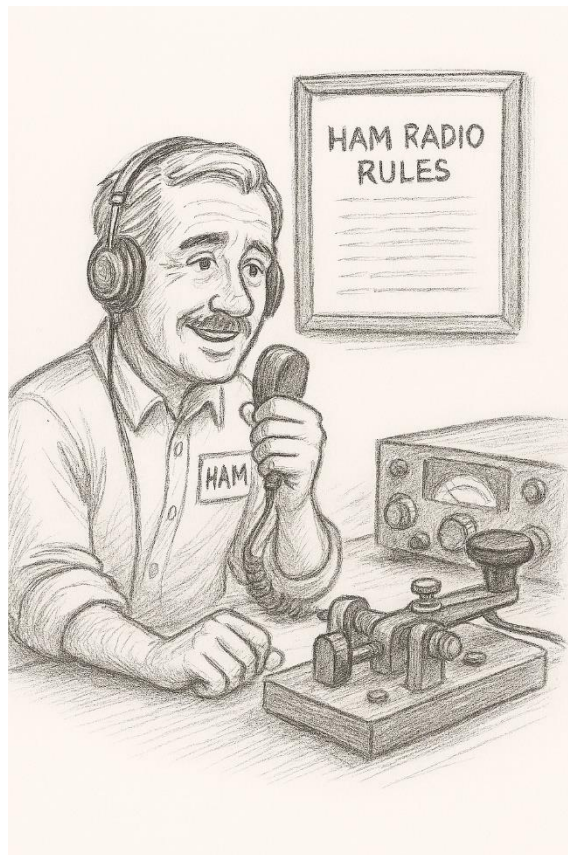
To newcomers my advice would just be for them to learn the procedure protocols carefully and always be courteous.

19. What do you hope to see in the future of amateur radio?

I certainly hope to see many more hams joining the hobby and I believe that the digital modes will save amateur radio as many older and lonely people living in high rise buildings and not able to have any antennas to put up, will still with a handheld and a hot spot be able to speak to the world, and also of course modes like Echolink.

20. If you could send one message to the world via ham radio, what would it be?

My message to the world would be to be friendly and courteous to any amateur that they make contact with as each individual is different and just accept the difference in personalities.



Choosing Your Mode

Choosing Your Mode: Personality Matchmaking

- The Storyteller → Try SSB or CW for expressive QSOs and club folklore.
- The DX Hunter → FT8, CW, or JS8Call will get you far with little power.
- The Emergency Operator → DMR, Winlink, and Packet shine in readiness.
- The Experimenter → Dive into FreeDV, SSTV, or JS8Call for creative twists.
- The Historian → RTTY and CW connect you to radio's roots.
- The Ragchewer → SSB, PSK31, or DMR for long chats and club camaraderie.

Exploring the Modes of Amateur Radio

Amateur radio offers a rich palette of modes, each with its own personality and purpose.

DMR (Digital Mobile Radio) thrives on VHF/UHF bands, giving operators crisp digital voice and access to worldwide networks through repeaters and hotspots. It's the go-to for club nets, mobile chatter, and emergency coordination. **FT8**, by contrast, is the quiet workhorse of HF. Using structured 15-second exchanges, it decodes signals far below the noise floor, making it perfect for DX hunters and low-power enthusiasts who want to log contacts in tough conditions.

Traditional modes still hold their charm.

CW (Morse code) remains a badge of honour, offering efficiency, stealth, and a direct link to radio's heritage. **SSB voice** is the storyteller's mode, ideal for rag chewing, contests, and sharing club folklore in full expression.

Digital text modes like **PSK31** and **RTTY** allow keyboard-to-keyboard conversations, with PSK31 excelling in casual QSOs and RTTY still beloved in contests. More modern experiments include **JS8Call**, which builds on FT8's weak-signal resilience but allows free-form messaging, and **FreeDV**, which brings digital voice to HF with bandwidth efficiency.

For visual flair, **SSTV (Slow Scan TV)** lets hams send pictures across the bands, while **Winlink** and **Packet** provide tactical data exchange and email over radio, invaluable in emergencies.

Together, these modes form a toolkit that lets operators choose the right "voice" for the occasion — whether it's the immediacy of DMR, the whisper of FT8, the artistry of CW, or the creativity of SSTV. Each reflects a different side of amateur radio culture: heritage, experimentation, service, or storytelling.

Motor Rallies: Dates of Events for 2025 / Motor Tydrenne: Datums vir 2025

Please see Circulars 3 and 4 below from Motorsport South Africa regarding changes made to the MSA National Rally-Raid Championship Calendar.

As the sun sets on another thrilling chapter, we bid farewell to the final rally of the year. It's true what they say; every good thing must eventually find its close, and this event was no exception. But what a spectacular send-off it was! From roaring engines to roaring laughter, camaraderie crackled through the air like static on a well-tuned rig. Memories were made, stories were born, and the spirit of adventure was alive in every turn and transmission. Until next time, may the road rise to meet us and the frequencies stay clear.

For More Rally information please contact the following Radio Marshalls:

Graham Reid ZS6GJR at: 083-701-0511 or greid@wol.co.za

**Irene Myburgh ZS6IEA at: 082-462-6001/ 084-544-0618 or
irene.myburgh@outlook.com**

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“Space Sailors” Seeking Download Help from Ham Radio Operators

Update 12/4/2025 (See original story, below.)

ChipSat Signals Received; Listeners Still Needed

Updating the story, [‘Space Sailors’ Seeking Download Help from Ham Radio Operators](#),” posted on December 2, 2025, Cornell University’s “ChipSat”-equipped light sail was successfully deployed on December 3 and several dozen telemetry signals from its ChipSat flight computers have been received and decoded. This is the first time that orbit-to-ground ChipSat data has been fully decoded, which Ph.D. candidate Joshua Umansky-Castro, KD2WTQ, calls “a huge milestone for the technology.”

Student researchers at Cornell still seek help from amateur radio operators equipped with satellite receive stations to continue monitoring for signal from the 100-milliwatt transmitters on 437.400 MHz, using the LoRa® digital protocol. It is estimated that the light sail will deorbit within 48 hours of deployment, due to the drag it creates in low-Earth orbit. Data is being collected on [the TinyGS project webpage](#), which is also posting updates on progress.

Original story 12/2/2025

A group of students at Cornell University is seeking participation from radio amateurs who are equipped with satellite stations for help in listening for signals from a retroreflective laser sail that is scheduled to be deployed later this week. The sail is currently attached to a 1U CubeSat that was launched early Tuesday, December 2, 2025, from the International Space Station, but will separate and become its own free-flying spacecraft equipped with four tiny “ChipSat” flight computers that will transmit telemetry data back to Earth.

This is the first flight of their ChipSats, and it is this data that the students seek help detecting, according to Ph.D. candidate Joshua Umansky-Castro, who has an amateur radio license; call sign KD2WTQ. The light sail’s ChipSats will be transmitting data using the LoRa® digital protocol on 437.400 MHz. The sail, stowed within the CubeSat, is expected to be released a couple of days after deployment — tentatively this Thursday, December 4 — and will likely function independently for no more than 48 hours due to the drag created by the sail.

Additional information, including LoRa parameters and links to a list of compatible receivers and the decoder file, may be found at alphacubesat.cornell.edu in the [ChipSat Ground Station Guide](#) (docx).

It is hoped that the ChipSat and light sail will become the trailblazer for future missions around the solar system, and one day to our closest stellar neighbor, Alpha Centauri.

Want to stay in the loop with PARC?

If you'd like to join the PARC WhatsApp group, simply share your contact details with any committee member — we'll make sure you're added and welcomed aboard!

Long Term HF Propagation for December 2025 By Vincent, ZS6BTY

Local Propagation (up to 500 km): The F or F2 critical frequency (f_oF_2) is the MUF for short range, near vertical incidence sky-wave (NVIS) propagation.

Long Distance Propagation: The MUF for a first hop of 4000 km in the cardinal directions are labeled North, East, South and West. They indicate the direction that propagation may be expected.

Worldwide Propagation Maps: <http://www.parc.org.za/index.php?page=propagation>

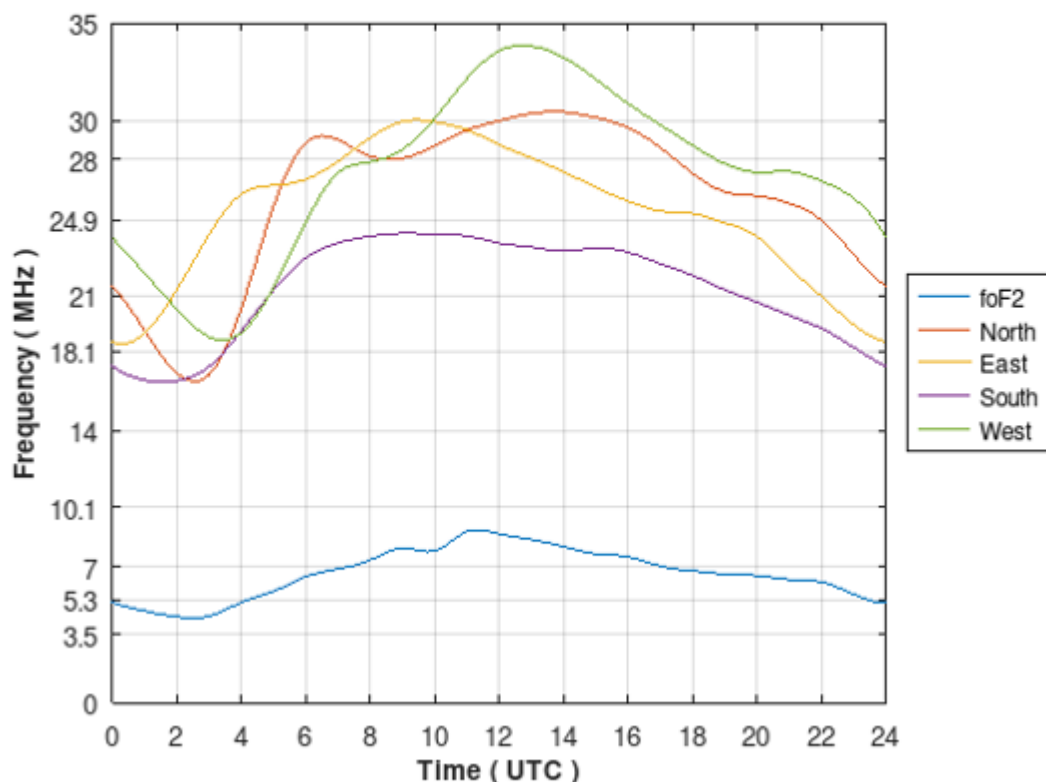
“Prediction is difficult, especially when dealing with the future”. . . Danish Proverb

[1] FTZMUF2: A simple method of estimating the ionospheric parameters of f_oF_2 and M(3000) with the aid of a home computer - Thomas Damboldt and Peter Süßmann, Deutsche Bundespost, December 1988.

[2] Silso 12-month forecasts of the monthly sunspot number (<http://sidc.oma.be/silso/FORECASTS/prediML.txt>)

The graph below shows the predicted [1] F-layer Maximum Usable Frequency (MUF) for Pretoria using monthly sunspot numbers from SILSO [2].

Pretoria Critical Frequency and 4000 km MUF - December 2025, (SSN = 111.0)



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Name & Callsign	Portfolio/s	Email Adress	Mobile No
Graham Reid ZS6GJR	Chairman, Treasurer, Website, Rallies	greid@wol.co.za	083-701-0511
Irene Myburgh ZS6IEA	Vice Chair & Secretary, SARL Bulletins	irene.myburgh@outlook.com	082-462-6001 084-544-0618
Hendri Ehlers ZS6HFE	Webmaster, Repeaters, ICASA Liaison	hendri@lantis.co.za	083-460-5586
Louis de Wet ZS6SK	Watts, SARL Liaison, PARC Bulletins	louis.zs6sk@gmail.com	072-140-9893

Co-opted Committee Members 2025 / Gekoöpteer Komiteelede 2025

Name & Callsign	Portfolio/s	Email Adress	Mobile No
Alméro Du Pisani ZS6LDP (Hon.)	Flea-markets, SARL Bulletins	almerodps@gmail.com	083-938-8955
John Minter ZS6LED	RAE Training, Technical	john.minter.za@gmail.com	083-291-5422
Pieter Myburgh ZS6PAM	Repeaters	wooden@mweb.co.za	076-140-7562
Pierre Holtzhausen ZS6PJH	Contests	zs6pjh@gmail.com	082-575-5799



A heartfelt thank you to everyone who's contributed to Watts—whether through stories, photos, puzzles, or those delightful snippets that make us smile between QSOs.

Send your transmissions (aka emails) to watts@parc.org.za and help us keep the newsletter dialled in and full of good vibes.

"Don't let your ideas fade into static — key up and share!"