



EAST RAND RADIO CLUB

Newsletter

December 2024

Amateur Radio



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NEW BEGINNINGS

Welcome Message

Good day to all our members, friends of the club, radio amateurs, and electronics enthusiasts on the East Rand or wherever you may be.

This newsletter is to let you know what's been happening at the East Rand Radio Club and about our plans for 2025.

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CLUB HISTORY

The **East Rand Branch** of the SARL was formed in 1937, making the club more than 80 years old. If my figures are right, it's 87 years old, making it one of the oldest, if not the oldest, amateur radio clubs in South Africa.

The club was established on January 1, 1937, changing its status from a Branch of the SARL to a Club on July 1, 1996, and thus referred to as the **East Rand Radio Club**. Changing its status again from a club to a Branch of the SARL on August 30, 2008, it reverted to the East Rand Branch of the South African Radio League. In December 2024, the name changes again to the **ERC** or **East Rand Radio Club**.

Our call sign will remain the same for now, as ZS6ERB. It's the same club but with a fresh new name and fresh new management.



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CLUB TOWER

On February 10, club members and friends of the ERB met at Arrowe Park to lower the club's tower. This was planned to make repairs to the base of the tower after someone had reversed into it, damaging the bottom support structure.

Francois ZS6COI and Jody ZS6JDY brought their Bobcat, and Francois used it to lower the tower. Chris ZS6COG and Abel ZS6EBL assisted, along with Peet and Stephen ZS6SKY from the KARTS club. The tower came down fairly easily but putting it up again proved to be more challenging. We could not have done it without the help of the members and friends of the club who attended. The vertical support threaded bars coming up from under the ground needed repairs and had to be rewelded back to the base of the tower. The metal connections box was also replaced.

The good news is that the Diamond X200 and beam antennas are both still fine, although the 20m antenna's SWR is slightly high.



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CLUB TOWER

It was nice to see Andre ZS6HE, who made sure we didn't go hungry by keeping our tummies full of divine home baked biscuits.

Jaco ZS6ADT and his son CJ ZS6CDT also assisted. A lot of welding and hard work ensued throughout the day, spurred on by the need to get the tower back up the same day.



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CLUB TOWER

Raising the tower again proved to be an almost backbreaking exercise due to its weight. Francois once again used his Bobcat to assist in raising the tower.



Two assistants stood on top of the Bobcat, secured for safety, to help align and position the tower. It was tedious and slow-going, but we got her up in one piece.

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CLUB REPEATER

September 7, 2024, marked a sad day in the club's history, as a small team comprising Chris ZS6COG and his helpers, Francois ZS6COI and his helpers, and Stephen ZS6SKY met to take down and remove what was left of the 675 Repeater Tower. Our high site in the Ergo/Vulcania area outside Springs on the East Rand had suffered one too many break-ins lately. During the last attempt, the high site was ransacked and vandalized very badly, leaving behind an unstable tower with antennas that needed to be removed.

What was once a glorious high site providing excellent repeater coverage on the East Rand stood still and silent, a shadow of what it used to be.

Chris and Francois had been preparing for the tower's removal for some time already, with Chris constructing a Jib Pole that was used in a horizontal fashion to assist in lowering the tower intact—a very difficult and dangerous task.



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CLUB REPEATER

I, ZS6SKY, arrived after 9 a.m., finding Francois already on top of the tower with his assistants and Chris on the ground nearby. My job was to safely winch the tower sections down the side of the water tower and, of course, take photos.

The tower was lowered fully erected (this is the way it was put up too). Back then, we used a crane.

Great care had to be taken not to damage the tower as it was winched over, with the front of Francois's bakkie almost becoming airborne at times. Once the tower was down, the bottom section and thereafter section by section of the tower were carefully edged over the top of the water tower and then slowly and very carefully lowered to the ground.

And so, the end of the mighty ERB 145.675 Repeater was upon us—the end of a legacy, but not the end for the ERB club.



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CLUB REPEATER

On later inspection, it was found that the 4-stack folded dipole harness and one of the 4 antennas had been damaged. This was either from a lightning strike or possibly due to vandalism at the site. Repairs to the antenna and harness are underway. The high site's lease has been paid up and cancelled with the Ekurhuleni Municipality.

The good news is the Kenwood Repeater and cavity filter were not harmed. We are currently looking at three possible new locations for the repeater and are on a mission to get it back on the air as soon as possible.

The installation, maintenance, and removal of the ERB Tower would not have been possible without the dedicated efforts of a few loyal club members who always make themselves available when duty calls. We are lucky to have these members, and we acknowledge them here. We'd also like to thank some of our Hamnet members who assisted over the years with maintenance and repairs at the high site. It is through everyone's dedication that we were able to proceed and do more—together. 🙌

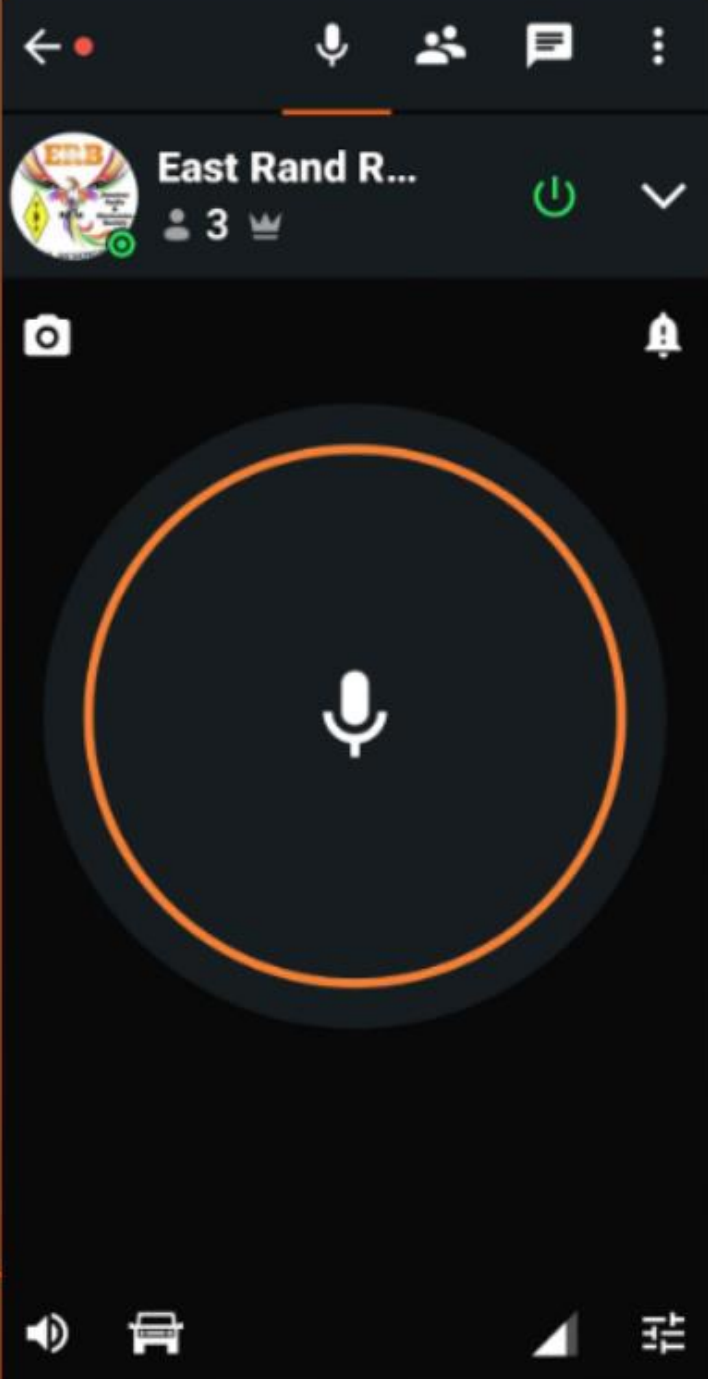


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INTERIM REPEATER PLAN ZELLO

Join us - Zello group channel:

Monday night's at 7pm - Weekly news broadcast
Interim plan while we get our Repeater back on the air.

Zello via Google Play Store or iOS market place:

1. Once installed, click on the link, to connect to the East Rand Radio Club Zello channel, or search for us under channels,
2. Select channels, then Add a channel by name, then type: East Rand Radio Club (Exactly as seen) otherwise you will not find it
3. Channel password is: ZS6ERB all capital letters

<https://zello.page/AgzatFb8VXfFegho7>

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East Rand Radio Club

Temp Zello Repeater coms, for the East Rand Radio Club (Together - We Rise)

zello.page

Check out the East Rand Radio Club channel on Zello

MEMBER NEWS

In April and October, Jaco ZS6ADT and Judy ZS6JDY assisted with HF assessments for the RAE (Radio Amateur Examination). The following individuals earned their call signs after successfully passing the May RAE:

- Richard ZS6TIG
- Dylan ZS6RAN
- Ronel ZS6RST
- Annemarie ZS6AME
- CJ ZS6CDT
- Eddie ZS6DIP

After the October RAE, Gerhard ZR6CRO also earned his call sign. Congratulations to all successful candidates.

Thank you to the club members who helped with:

Training and online classes, Chris ZS6COG;

Exam and exam supervision, Stephen ZS6SKY and Harry ZS6HHH.

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QRP FM AND BARBED WIRE ADVENTURES

Johan Steyn (ZS6DC), who also assisted with ZS6ERB HF assessments in April, is an accomplished amateur radio enthusiast that envisioned a cost-effective way to engage radio amateurs in fun and educational field activities. His initiative, QRP FM and Barbed Wire Activities, focuses on creativity, resourcefulness, and low-cost experimentation, with the following goals:

Objectives:

- Inclusive Participation: Open to everyone, whether they belong to a club or not, encouraging a community-wide experience.
- DIY Antennas: Inspired by the "barbed wire" theme, participants are challenged to construct antennas using everyday materials.
- Low-Power Excellence: Emphasizing QRP FM simplex operations, participants use minimal power—often just 1 watt—showcasing that exceptional results can be achieved with budget-friendly equipment like Baofeng handheld radios.
- Strategic Locations: Field days are conducted from pre-planned summits and elevated locations, chosen for their optimal propagation potential.
- Simple Navigation: Operators use QTH locators and smartphone compasses to align antennas with others.
- Logging Achievements: Contacts are logged to highlight the effectiveness of the setups and encourage friendly competition.



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QRP FM AND BARBED WIRE ADVENTURES

ZS6AME, ZS6RAN, ZS6CDT joined Jaco ZS6ADT in these events with Johan Steyn.

Field Day Success Stories: Two activity days held on September 7, 2024, and November 30, 2024, achieved impressive results:

- September 7, 2024: Longest distances with 1W power: 121 km, 154 km, 158 km, and 166 km.
- November 30, 2024: 112 km (1W Baofeng with Gen 3 Foldable Antenna), 343 km (1W Baofeng with Gen 3 Foldable Antenna), and 343 km (200mW Yaesu with Gen 1 Fixed Boom Antenna).

The record of 343 km simplex contact with just 1W demonstrates the power of skilful antenna design and site selection. Johan Steyn, who designed many of the antennas used, remains a humble yet pivotal figure in these achievements.



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QRP FM AND BARBED WIRE ADVENTURES

A Legacy of Innovation:

Johan's contributions to amateur radio extend beyond the QRP FM and Barbed Wire activities. Known for his expertise in homebrew antenna construction, he has authored guides for designs like the double bazooka antenna and instructional materials on feedline losses. His work empowers beginners to build effective antennas with minimal cost.

Personal Journey in Amateur Radio:

During the COVID-19 lockdown, a dormant radio amateur, inspired by Johan's guidance, revived his passion for the hobby. Using materials like CCTV coax and RG58, Johan taught him to build a double bazooka antenna, opening the door to HF operations. This mentorship not only rekindled a personal love for the hobby but also spurred innovations like musical test transmissions and enhanced group communications.

Johan's antenna designs played a vital role in improving rural safety communications, equipping neighbouring farmers with over 25 affordable, homebrew 4m Bazooka antennas tailored for emergency use on their ICASA registered 4m band frequency.



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QRP FM AND BARBED WIRE ADVENTURES

Revolutionary Foldable Yagis:

Johan's groundbreaking work on foldable Yagi antennas has redefined portability and performance. His designs, optimized for 145.500 MHz simplex use, balance precision and simplicity. Using software like YagiMax, he fine-tuned parameters such as element spacing, gamma capacitor adjustments, and return loss to achieve outstanding results.

Celebrating Ingenuity:

Congratulations to Johan Steyn, ZS6DC, for his innovative contributions to amateur radio. His designs and mentorship embody the spirit of ingenuity, making the hobby accessible, rewarding, and impactful for all who participate. Whether you're a seasoned operator or a newcomer, QRP FM and Barbed Wire proves that with creativity, even the simplest setups can achieve extraordinary results.



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MUSICAL TEST TRANSMISSIONS

Written by: Jaco du Toit, ZS6ADT

Rekindling a Dormant Passion

After a decade away from amateur radio, I found my way back to the airwaves during the COVID-19 lockdown, rediscovering the hobby that had been a significant part of my life. My journey began years ago when I earned my amateur radio license through the East Rand Radio Club, guided by mentors like Chris Gruyvenberg. Nostalgia for those early days, including memorable exam prep sessions with clubmates like Francois and Judy, eventually led to a revival of my station.

Initially equipped with a Yaesu FT-897D, a 2m/70cm dual-band mobile antenna, and a Tarheel Screwdriver antenna, my equipment had been tucked away in my attic since relocating from the East Rand to the West Rand. The pandemic provided the perfect opportunity to revive my hobby, both as a pastime and for practical communication purposes on my Magaliesburg farm.

Building Antennas and Listening to Vinyls

Through the guidance of fellow amateurs, I began constructing homebrew antennas using materials readily available on my farm. Notable among these was a 40m double bazooka and an 80m/40m inverted V fan dipole, which became the foundation for many enjoyable evenings with my partner, Annemarie, as we listened to vinyl music broadcasted during test transmissions by ZS5IE ("Oom Ian") on the 80m band.

With the addition of an 80/40m inverted V fan dipole multiband antenna, my enthusiasm for musical test transmissions grew. The desire to enhance my station's capabilities led me to connect with Gideon Grobbelaar (ZS4P), a renowned builder of valve-based linear amplifiers.

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MUSICAL TEST TRANSMISSIONS



Boosting Performance with Linear Amplifiers:

ZS4P built two multi-valve linear amplifiers for me, enabling me to achieve up to 1kW PEP transmission power. These amplifiers not only improved signal quality but also allowed me to make consistent contacts during challenging band conditions. The collaboration also involved creating homebrew music and data interfaces, enhancing the versatility of my station. My experience grew with the help of Gideon, ZS4P, who guided me through the physical build requirements of valve-based linear amplifiers, enabling me to perform multiple maintenance and repairs on various valve amplifiers.

Upgrading Equipment for Better Audio Quality:

While the Yaesu FT-897D served as a reliable workhorse, its limited audio bandwidth posed challenges in transmitting high-quality sound. Despite adjustments, such as tweaking the carrier wave position, the FT-897D couldn't deliver the desired balance of treble, mids, and bass. Recognizing this limitation, I upgraded to an ICOM IC-7300, which features an adjustable bandwidth of up to 3.2 kHz, an integrated audio scope, and real-time audio monitoring during transmissions. These features marked a turning point in the quality of my musical tests.





No, it's not on fire—it's the three valves glowing!



This is the original Hammerstein radio that CJ and I converted to feed into my sound mixer board with a small pre-amp from the original speaker wires. I subsequently bought a small Volkano LP player due to space constraints.

MUSICAL TEST TRANSMISSIONS

A Family Affair:

My passion for amateur radio has become a family affair. Annemarie earned her license (ZS6AME) alongside my nephew Dylan, ZS6RAN, and my son CJ, ZS6CDT, with all three receiving training through classes presented by Chris, ZS6COG, of ZS6ERB. CJ even helped integrate analog audio from an old Hammerstein LP record player into the station's setup, enabling high-quality analog transmissions.

The family's growing collection of vinyl records, sourced from antique stores and boutiques, has become a cornerstone of our unsurpassed musical test transmissions' audio quality.

Join the Fun on 80m :

Every Saturday after sunset, ZS6ADT invites fellow amateurs to tune in on 3.700 MHz or 3.765 MHz to enjoy musical test transmissions. Whether you join to share feedback, engage in friendly conversation, or simply listen, the event fosters a sense of camaraderie within the amateur radio community.





Yes, that's 1,000 watts!



MUSICAL TEST TRANSMISSIONS

Amateurs with musical transmission equipment are encouraged to join in the fun.

Remember, regulations limit transmission power to 1kW PEP, and individual transmissions are limited to a three-minute duration with breaks in between to allow other operators to break in.

For anyone looking to expand their capabilities or learn more about musical transmissions, ZS6ADT is happy to share his knowledge and experience.



73 and Happy Listening!
Jaco ZS6ADT



Thank you Jaco, for a most interesting insert, we look forward to many more inserts from you, as you discover new and interesting things to do with the hobby.



JACK TWINE AWARD

The prestigious Jack Twine Award recognizes members for their outstanding contributions to the amateur radio community.

Andre ZS6HE has been a member of the ERB for more than 30 years and has been involved with amateur radio for much longer. Andre has always made himself available to help wherever he can, even when unwell. Andre is also involved with Hamnet and has assisted at many Hamnet events over the years.

Jack Twine Merit Award:

To recognize qualities such as unselfishness, clean operating, and a genuine interest in amateur radio and its affairs. This prestigious award is given to SARL members who, in the opinion of their fellow amateurs and the League's Council, exemplify the qualities desirable in a radio amateur.



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AWARD RECOGNITION

Well done, Andre!



LOOKING BACK AT 2024

The ERB club was active but not as active as we'd like at Arrowe Park. Another call went out for radio amateurs to assist in helping the club rise again. Stephen ZS6SKY and Wayne Beven volunteered, with Stephen operating as the club's Manager and Wayne taking charge of Events and Planning.

We will be the face of the club's management into 2025 and possibly beyond. For now, our focus is on bringing feet back to the ground—or grounds—of Arrowe Park.

We have a new name and a new logo. We are now the East Rand Radio and Electronics Society. We welcome you to come and say "Hi." We're starting 2025 with a clean slate, so swing by and bring us your ideas.

We can't do it alone—we need you.



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RECENT EVENTS

To reignite interest and involvement, we have already been active at the clubhouse. Over the three weekends in December:

1. December 7:

We hosted an open day attended by 20 people.



2. December 14:

We met with the custodians of Arrowe Park. Wayne and I introduced ourselves to the park's management, including Geoff Londt, who suggested the club become more involved with the scouts. He envisions the club as a future training center for youth. While this is a long-term goal, for now, it's about getting feet on the ground and showing the scouts that the club is alive and well.

3. December 20:

Despite plans for a year-end braai day being cancelled due to weather, Wayne, Mario ZS6TAN, and I made productive use of the day. Wayne replaced the N male connectors in the orange box with N female connectors to allow direct connection to fly leads from the clubhouse. Meanwhile, Mario and I attempted to string up a 40m inverted V antenna. Although it didn't perform as expected and was removed, the effort marked another step forward.



PROJECTS FOR Q1 2025

1. Get the repeater back on the air.
2. Restart weekly bulletins.
3. Increase our visibility at the clubhouse.
4. Increase activities and take part in contests.
5. Keep our members and others updated.
6. Engage with the Scouts.

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BIRTHDAYS

Sakkie ZS6BPA – 2nd of December

Dylan ZS6RAN – 22nd December

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ERC

Amateur Radio & Electronics Society

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064 543 7252 (ZS6JDY)
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CLOSING MESSAGE

In closing, we, the management of the East Rand Radio Club, wish you and yours a very Merry Christmas and a safe and prosperous 2025. We look forward to engaging meaningfully with you in the new year.



Stephen and Wayne



EAST RAND RADIO CLUB

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See you in 2025!!!

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