



# AWA Newsletter

# 94

November 2013

Affiliated  
to the  
SARL



Antique  
Wireless  
Association of  
Southern Africa

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AWA Committee:

- \* President—Richard ZS6TF
- \* Technical Advisor—Rad ZS6RAD
- \* Secretary/PRO—Andy ZS6ADY
- \* Western Cape—John ZS1WJ
- \* KZN—Don ZS5DR

## Reflections:

As another year draws to an ever diminishing end, the festive season is upon us and many of you will be looking out for bargains of New/Old equipment to indulge yourself in and address them “To Me, with love from Me”.

Of course we could not expect our partners of the fairer sex to understand what it is that really lights our eyes up, besides being plugged in to HT while working on an old boatanchor, than the boatanchor or new piece of equipment in for the shack that we have been ogling for some time.

So although we will more than likely bless our partners with some exorbitant gift, which they will probably choose themselves anyway and we will buy for them out of pure guilt, there will be an exchange of

many coupons over this time of the year for gifts to ourselves and our loved ones.

Sometimes I think we do tend to go a little overboard, but then why not, we tell ourselves. It only happens once a year.

I look back and think of the promises I made myself at the beginning of this year to handle the projects I had started on, and then realise how quickly the year has gone by.

I cannot remember it going past so quickly when I was a youngster in boarding school.

Of all the projects I had started and said I would finish one at a time, I think I may have managed to complete only one. It’s the curse of the working class I tell you.

So once again, I will have to

sit and re-evaluate the projects I have and the time I have available, and work out a new plan of action for getting them done.

I know that although I did not finish many of the projects, there were a few more that came in while I was still thinking about the old ones.

I should have enough to keep me busy until I get to the ripe old age of 150 and maybe beyond.

To all of you, from all of us here at the AWA, do have a wonderful festive season, whatever it is you celebrate. Do be careful if you are travelling away over this period and we look forward to hearing many of you on air during this time.

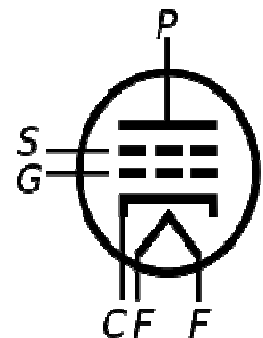
Best 73

DE Andy ZS6ADY

## WIKIPEDIA

A **tetrode** is an electronic device having four active electrodes. The term most commonly applies to a two-grid amplifying vacuum tube, also called a **screen grid tube**. It consists of a sealed evacuated glass envelope containing four electrodes in this order: a *cathode* heated by a filament, a *control grid*, a *screen grid*, and a *plate*.

The tube evolved from the triode tube, by the addition of the screen grid, which improved its electrical characteristics by reducing interelectrode capacitance. Walter Schottky invented the first double-grid tube in 1916, but his additional grid was to reduce space charge. The first true tetrode, with a screen grid designed to reduce grid-plate capacitance, was patented by Hiroshi Ando in 1919, and the first practical versions were built by N. H. Williams and Albert Hull at General Electric and Bernard Tellegen at Phillips in 1926.<sup>[2]</sup> Tetrodes have higher gain and higher frequency capability than triodes, however the screen grid also gave the tube a negative resistance characteristic which could cause parasitic oscillations, which led to the invention of the pentode. Tetrodes were widely used as amplifying tubes in consumer and industrial electronic equipment such as radios and televisions until the 1960s when they were replaced by transistors. Their main use now is in high power industrial applications such as radio transmitters. Low power consumer tubes are still used in a few legacy and specialty vacuum tube audio devices such as tube guitar amplifiers.



Schematic symbol of a tetrode. (F) filament, (C) cathode, (G) control grid, (S) screen grid, (P) plate.

## CW Net:

Speaking to a few people at the AWA AGM, there seems to be a common consensus amongst hams in SA that it is such a pity that CW has gone so far downhill, that it is probably set for the same outcome as the Rhino is.

The only difference is that we have no one to blame for the demise of CW except ourselves. It carries no price on its head nor is it in great demand as an aphrodisiac. Perhaps if it was, there might be just cause to save it from extinction. You know, being male and all (sorry ladies).

I have to ask myself the same question, regularly, what can we do to keep CW alive and going in SA. I single out SA, because I am not too sure that many of the other countries with reasonable numbers of hams, suffer with the same problem.

I am sure I will probably get some kind of

Flack about this article, but then, going on past response to many of my articles, there will more than likely be nothing.

There are probably still some very keen CW enthusiasts in SA, but these tend to mainly frequent the DX bands looking for numbers in contacts to get DXCC.

How do we encourage some of them to come on to 40m or even 80m to give some of the slower CW stations the opportunity to practice with many of them.

I see so many articles on the SARL website about encouraging people to use the bands, and is amateur radio relevant in today's society etc etc. Have we as hams forgotten the heritage of amateur radio stems back to CW, or are we just not interested in that kind of thing any more. Is CW a dying mode, as slow scan TV was, that will disappear from our bands forever ?

It would be so nice to hear more of the key clicks and tones of CW on our local bands, and we can only hope there will always be some around to keep it going.

Congratulations to Geoff ZS6GRL on winning the World Wide WPK CW Contest. When we going to hear you on 40m ?



Vibroplex Bug

## SSB activity:

It is encouraging to hear so many still coming up on the SSB net these days and there are still many smaller nets around on 80m and 40m with a good number of people joining in.

Our numbers seem to stay constant at around 18 to 20 calling in on a Saturday morning on 7140 for the SSB net. The Western Cape have a good few calling in on their net on 7070 at around 07:00 on a Saturday morning and all too often the band conditions are not that favourable to get the Div1 stations in on the National net at 08:30.

Conditions are still not that great on 40m but very workable for the majority of the divisions. Just the illusive Div 1 stations who tend to suffer with poor conditions.

With 165 listed members, one would think there would be more than a few who would call in on the SSB net, but then I suppose nets aren't everyone's cup of tea.

With the sun spot cycle doing what its doing these days, we can only hope there will be some kind of improvement on the local bands.

Now I know many are working 10m DX stations by the plenty, but if only 10m would work for local stations too, the maybe we would hear a few more up on frequency. Don't get me wrong, its great to be able to work DX, but we are more concerned with hearing from our members about refurbishments taking place and rebuilding of some of those old rigs that have been lying around for

years.

Looking forward to hearing more of you on the nets.



Drake T-4X

## AM:

The AM net is at least far more popular than the CW net and this is seen by the stations calling in on a Saturday morning.

Wednesday evenings are still plagued with noise, depending on the proximity of the Highveld storms. There are still some evenings when most stations are quite readable for AM.

The best thing is to come up and listen for a while and see if there is anyone out there. Most times the band may sound very noisy on AM, but when the stations start to transmit, they can override the noise by a good few db. That is when AM becomes encouraging and you want to use it more and more.

Many have been surprised by the clarity of some of the signals on AM, especially for

those stations who are close to each other.

If you should consider doing some tests on AM, do try to get hold of a rig that is able to do it, preferably with valves.

We always try to warn people about doing AM on Solid State rigs, not that they cant do it, but the chances of damaging the finals is greater unless you set the rig up properly.

There are many good second hand rigs out there quite capable of putting out good AM signals, and not too expensive either.

A favourite amongst many today is the Yaesu FT101 in its various formats. Some good Hallicrafters Transmitters can also be found.

Most Transceivers will receive AM quite well, so the chances of having split operation

with some sort of switching may be inevitable.

Whatever the choice, do come along and join us for a blast from the past.



Gelson G212

## Durban Radio (ZSD) A brief History... (1983 - 1993)

(Kevin Turner - ZS6KAT)

Do you remember when the transmission medium for international telephone and messaging services involved MF and HF radio? Do you remember how one had to schedule the telephone calls in advance? More so, do you remember visiting your local post office to send an international telegram? Nowadays, most international calls are converted to voice over IP (VOIP), multiplexed and fed to their destinations either via satellite or undersea fibre optic cable. Systems run virtually unattended. If a path is disconnected, an alternative is usually activated. It is now quite feasible for one half of the world to communicate Gigabytes of voice and computer data with the other half through just a small number of fibre optic cables - without the use of any HF radio whatsoever.

To my own nostalgic mindset, the slow but steady disappearance of HF Maritime radio services is a sad affair. Sad because in my opinion, the historical importance of maritime radio in South Africa appears to have been severely overlooked. The systematic decommissioning and scrapping of the magnificent transmitting equipment that previously responded to distress calls, provided news and weather bulletins, confirmed orders for ship provisions and delivered messages to loved ones is effectively erasing evidence of an exciting, bygone era. Consequently, vintage, land based marine HF transmitters are becoming an extremely rare entity to find.



*Kloof Radio front entrance during the 1980's*

I was fortunate enough to work at an HF radio station for 10 years. Situated in Kloof, Natal, about 35km inland from Durban, this ex-Royal Navy installation, run by the South African Post Office was named Durban Radio (ZSD). Situated on approximately 12 acres of prime Kloof real estate, it provided 24 hour Wireless Telegraphy (WT) and Radio Telephony (RT) services to ships and yachts sailing along the east coast of Southern Africa.



*Kloof Radio during the 1990.s from the top of the neighbouring microwave tower*

The receiving station, along with all the Radio Operators was located in Pinetown. Unusual you might think, that a receiving station was positioned in the middle of a built up area where RF interference from appliances and industrial machinery had the potential to disrupt critical services such as the monitoring for distress calls. Unusual also that the transmitter site was built in the middle of one of the most affluent areas in Durban. The answer is quite simple. At the time Durban radio was implemented, very little infrastructure existed around it. Over the years, Kloof and Pinetown developed around the two locations. Can you imagine how difficult it would be to acquire planning permission to build similar in-

stallations today?



*Kloof Radio Transmitter Hall during the 1980's*

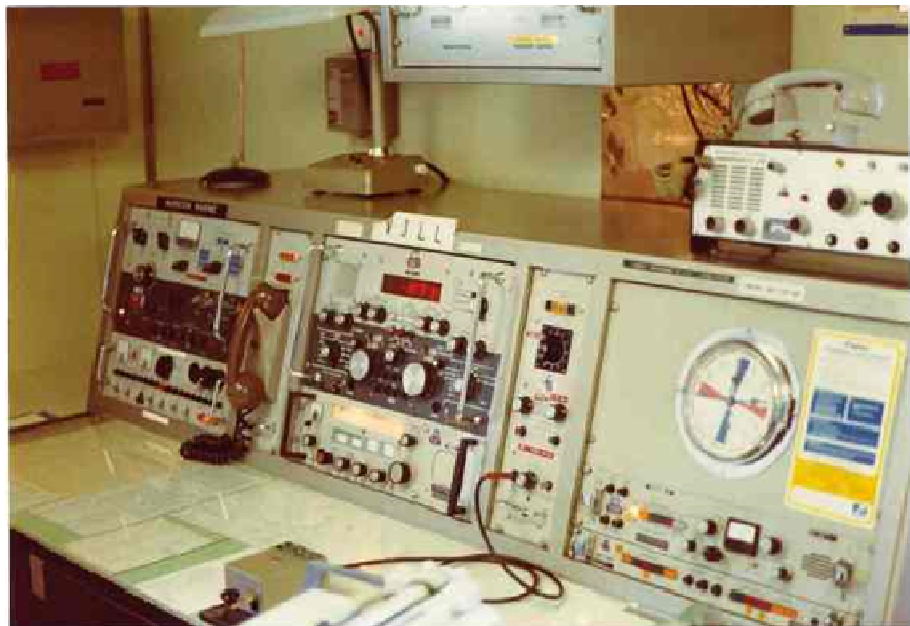
worked. One wonders what became of her captain though..?

Unfortunately I do not have a picture of Pinetown Radio. I have however inserted a picture obtained from the internet, of a typical operations console, very similar in style to the one installed in Pinetown. I remember only too well the wireless telegraphy operators who were able to simultaneously communicate with a ship's operator at 20 words per minute and hold a conversation with the resident technician.

(I struggle to receive Morse code at all, never mind along with any other distractions)

Deceptively, Pinetown Radio had no need to rely upon its own receiving antennas to intercept messages from the entire eastern seaboard. Remote transmitter and receiver stations were positioned at St Lucia and Mission Rocks to the North and Port Edward / Port St Johns to the South. Marine VHF services were provided from Richards Bay, the Bluff and Port Edward. Audio and control line connectivity was provided via post office carrier system routes. As an apprentice, I used to enjoy travelling to these remote sites for several days at a time to assist with equipment, antenna and grounds maintenance.

Back in the transmitter hall at Kloof, I experienced some of my best moments assisting the resident Senior Radio Technician (Dennis King) to perform routine maintenance and repairs on the high power HF transmitters.



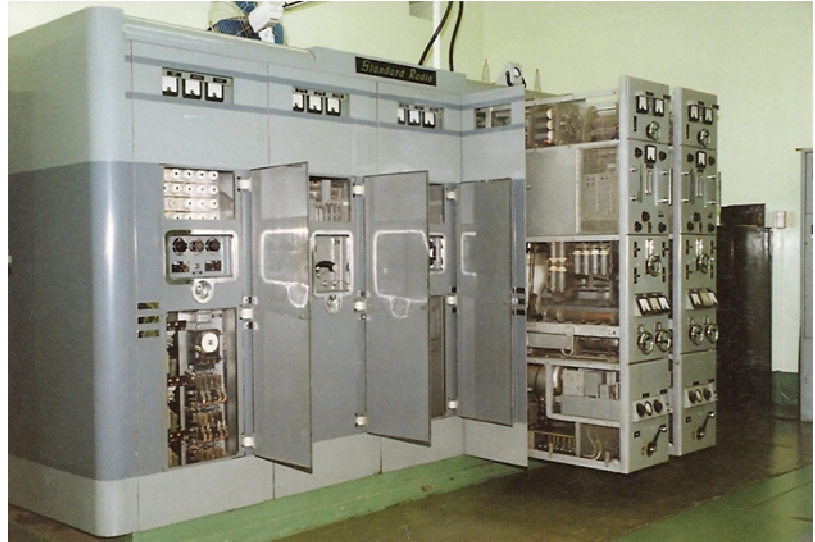
*Period RT / WT bay used at a ship to shore station*

Commencing duties at the Kloof Transmitter site as an apprentice Radio Technician in 1983, I cut my "RF" teeth learning about and working on a variety of high power HF transmitters and receivers. Can you imagine being paid to play radio? Well that is exactly what it was like for me - amazing!

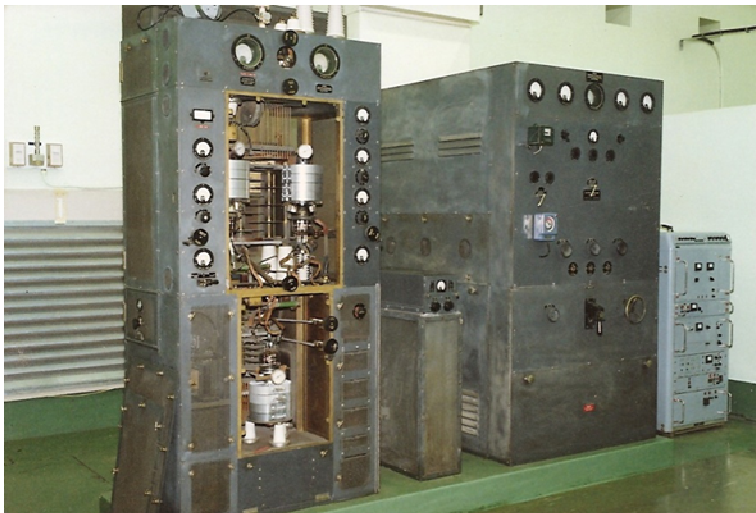
Wireless telegraphy services were provided primarily on the 500kHz band, although some HF channels were used too. Radio Telephony operated on the higher frequencies between 2 MHz and 22MHz. Radio silence was observed for several minutes every hour in order to listen out for any potential distress calls. The marine telephony frequency of 2182kHz was also monitored.

Interestingly, the Oceanos, which sank off the Transkei Wild Coast in August 1991 communicated with both Cape Town Radio (ZSC) and Durban Radio (ZSD) prior to all 571 souls being rescued. Proof that the services actually

The hall was air conditioned and kept in spotless condition. The equipment dated from wartime to present. The most interesting being this Standard Radio transmitter and especially the old "Queen Mary" which had apparently been accidentally dropped into Durban harbour upon delivery. The transmitter was subsequently salvaged and placed into active service in Kloof for around 40 years. Sadly the HT wiring eventually deteriorated to the point where we had to decommission her. It was at this point, prior to any equipment removal, that I decided to take these photographs for posterity sake.



This 2.5kW war time beauty was known as the Marconi SWB 8 "B" WT transmit-



*Marconi SWB Transmitter*

ter. (We also had a matching SWB 8 "A"). Originally produced during the 1930's SWB's were used onboard ships and had solid brass fittings to help avoid corrosion. The smaller unit in the middle is the exciter unit, the tube in the bottom of the open unit on the left powered the driver stage and the two tubes at the top formed the push pull final stage. The huge unit on the right delivered the various power requirements. Small by comparison, the auto tuning Rhode and Schwarz transmitter on the far right could provide more services at 1kW of output power.

Open wire feeder into the hall had been abandoned in favour of coaxial cable many years prior to me joining the team. Perhaps because of the St Elmo's fire that frequented the hall during storm season. Baluns the size of small water tanks were deployed just outside of the 2ft thick, reinforced concrete walls, connected in turn to dedicated dipole antennas via lengthy open wire feeder systems. One did not dare touch any of these wires for fear of serious RF burns. I remember once seeing my mentor performing a pretty little jig to the speed of 20 WPM because he had forgotten to deploy a short circuit across the antenna connection. (RF from the nearby transmitters was being induced back into the feed-line of the one on which he was working)

Ship to Shore communications were not the only services Durban Radio provided. The Post Office Radio Inspector (Ron Dolton) was also based at the site and I had a great deal of fun embarking radio and television interference tracing expeditions with him. Experiences such as these have helped me immensely in my attempts to keep unwanted RF away from my neighbour's television and Hifi sets as well as my own equipment in the shack.

Both the Post Office Two-Way Radio Installation and Maintenance team headed by Bobby Glenister and the Communal Repeater team headed by the late Doug Roulston were also based at the station. During my apprenticeship, I had the opportunity to work with both of these experienced engineers.

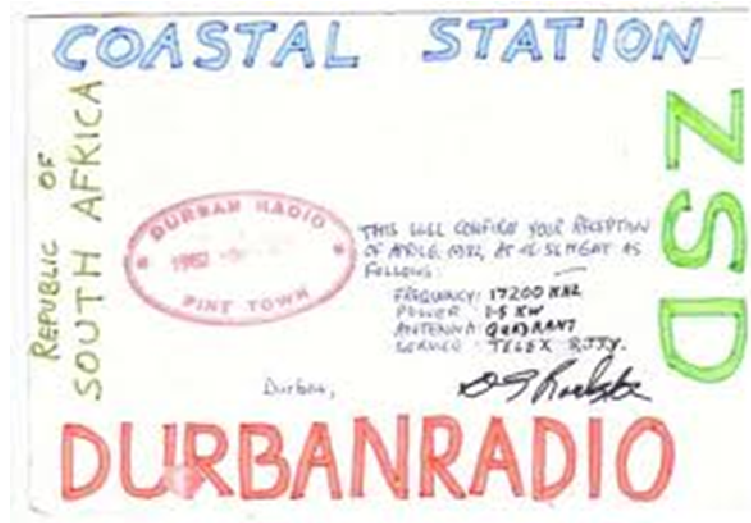
Inevitably ZSD signals were heard around the world far afield as Finland, Hong Kong, the United States and many European countries. Being a shortwave listener myself, I adopted the task of replying to all the DX'ers sending us reception reports and subsequently made numerous pen friends. I still have a number of their QSL cards (albeit boxed away) in my possession today.

The engineers who manned Durban Radio were, in my mind, a special breed. Consisting of either the old school

engineers who had worked there for many years and understood RF in all its glory or those younger technicians who would spend days in the bush fixing anything from cyclone damaged radio links to broken diesel engines.

I would like to pay tribute to these men, some of whom have passed away, some of whom are now retired as well as all the others who shared their knowledge, enabled me to experience this era of telecommunications to the full and bring fond memories away from such a special place of work.

It is many years since I have been back to visit Durban Radio. I am under correction, but I understand Pinetown Radio has since been totally closed and that Kloof performs only basic VHF and 2182kHz Radio services. It appears that the Channel 16 Marine VHF services are still in action along the coast.



Although the equipment has long since been taken away, the memories are most definitely still there. Should you have any similar memories to share, I would be very pleased to hear from you.

73's  
Kevin (ZS6KAT)  
kevin.turner@telkomsa.net

## AGM 2013

The AGM for 2013 was held at the new premises of the SAIEE (South African Institute for Electrical Engineers) in Observatory in Johannesburg.

The original observatory with its telescope was built in 1923, and is still operational today. Like some of our radios, it has been carefully looked after and maintained in beautiful working condition.

The meeting itself was held in the new offices of the SAIEE which is state of the art and include a very modern furnished venue. Of course everyone's first reaction was to see how easy it would be to remove the desk microphones at each seat inside the venue.

We were greeted by a smiling Gerda, in charge of the SAIEE venue, with fresh coffee and biscuits and a display of some of the artefacts of the SAIEE, including the original Barlow Wadley receivers and a few other interesting bits and pieces.



The 1923 Telescope at Observatory

The meeting was opened after the flea market was bought out by Selwyn ZS6SEL, who managed to walk away with more items than he brought with.

Richard opened by giving a brief history of the SAIEE, feedback from the Karts open day and the meeting

at Magalies Club and the AWA being on the go for 10 years.

Some feedback about the Western Cape net, the National SSB net and the CW net which all take place on Saturdays. The AM net and the quality of the AM transmissions and net times and frequencies.

The AWA did not take part in the SARL Club contest this year.

Richard expressed his thanks to the committee members who have been with him over these last two years.

Special thanks to Rad for his commitment to technical advice and help given to so many who were refurbishing rigs.



Thanks to all who have made donations to the AWA in forms of cash and equipment which has put the AWA on a sound financial footing being able to cover all the costs of mailing out the Newsletter and payment for the ZS0AWA licence fee.

Richard also thanked Max Clarke of the SAIEE and his team for allowing us the use of the venue.

Two motions were put forward to the members and passed.

1. A motion to have a co-ordinator in Division 5 similar to the post that John ZS1WJ performs in Division 1. Don ZS5DR was nominated and approved for this post.
2. A motion to appoint a Historian for the AWA. This was passed and Richard ZS6TF was appointed to the position.

Ted ZS6TED was nominated for the position of AWA President for the next term and was appointed without any other nominations.



A special mention was made of Heather ZS6YE being the first YL to join the AWA and being present at the AGM.

Once all the AWA business had been completed, a presentation about the AWA was made to the members of the SAIEE where after Richard presented a piece of test equipment to the SAIEE.



The Original Barlow Wadley

## President's Corner by Richard ZS6TF

Does the AWA serve a useful purpose? by Richard ZS6TF

With my presidency drawing to a close and the AGM behind us it is a time for reflection on the state of the association. The AGM venue was superb and the association's thanks are due to the SAIEE and Max Clarke in particular for their hospitality. Membership stands at 164 from 120 when I took over from Don ZS5DR two years ago. This speaks volumes about the increasing interest in radios of yesteryear and everything that goes with them. Recently OM Eddie, ZS6BNE threw out on the SARL general forum the above question in respect of amateur radio in general. There were 34 replies and nearly 1000 readers. My two pennyworth was



*"Communication in whatever form is a life skill to be continually developed no matter your age. Amateur radio is an extension of this life skill with technique and technicality providing the potential for a lifetime of learning and achievement. It is the greatest hobby on earth because of its' diversity. It is a low cost of entry hobby for the youngest and a means of social contact for the oldest long after mobility and health fails them."*

Eddie called these "inspiring words" and it caused me to think where the inspiration came from. It can only be from the activities of the AWA, particularly over the past two years which has brought me into contact with so many people who are enthusiastically implementing the mission statement.

When I was in business more than 10 years ago, I had a motto hanging in my office which said "*The thing I enjoy most in business is helping our customers get what they want*" My PA who worked for me for 10 years had an expression "*What goes around comes around*" These two sayings were repeated often to the sales force if only to prevent the pushing of unsuitable sales just to make targets and commissions.

Fast forward to the context of the AWA, and I think that these two sayings are equally valid today. Like many others I enjoy immensely helping AWA members get what they want to return their ancient rigs to service, and the more I do it the more I receive assistance with my projects, in the form of information, parts, and equipment. I am sure it is this virtuous circle that accounts for some of the growth the association has experienced. That is not the whole story however as the benefits of the social interaction both on the air, and face to face, of likeminded people are obviously strong but hard to define, and being subscription free for such received value might have something to do with it.

At the AGM we identified the need for knowledge transfer to younger people and initiatives to do presentations and mini exhibitions to SARL affiliated clubs seems to be the way to do it.

Our incoming President Ted ZS6TED personifies the mission statement values and has the support of an expanded team to take the association forward. The appointment of past President Don ZS5DR as division 5 representative should result in increased local interaction and my new portfolio as Historian will keep me out of trouble and ensure some contributions to the newsletter in the future. I wish Ted as much enjoyment out of the Presidency as I have had and to the team of Andy, Rad, John, Barry, Don, and the membership I give my sincere thanks for your support.



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**Antique Wireless Association  
of Southern Africa**

**Mission Statement**

Our aim is to facilitate, generate and maintain an interest in the location, acquisition, repair and use of yesterdays radio's and associated equipment. To encourage all like minded amateurs to do the same thus ensuring the maintenance and preservation of our amateur heritage.

Membership of this group is free and by association.

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**Notices:****Net Times and Frequencies:**

Saturday 06:00—AM Net—3615  
Saturday 07:00—Western Cape SSB Net—7070  
Saturday 08:30— National SSB Net— 7140  
Saturday 14:00— CW Net—7020  
Wednesday 19:00— AM Net—3615

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