



AWA Newsletter

Issue 34

October 2008

Antique Wireless Association of Southern Africa

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CQ Test de ZS0AWA :

I had decided this year that I was going to enter at least a few of the contests around using the ZS0AWA call sign, to promote the AWA as much as I could. Unfortunately I did not have the time to enter as many as I hoped, but one that will stand out in my memory for a while is the QRP contest held in this last month.

I was going to run a CW station at 5w and use the call sign ZS0AWA. I knew there would probably not be that many contacts on CW, but was still willing to give it a go.

I listened every week to the SARL Bulletins to make sure I would not get the date wrong for the contest, and I thought it was fairly well advertised, although there seems to be many who would dis-

agree with me. There were threads on the SARL Forum on the website plus of course Om Dennis's notifications that come out via Yahoo.

On the Sunday morning, I prepared myself for the contest, made sure I had my log available and again listened to the SARL Bulletin via 2m from Pretoria.

I have a previous commitment with my Son in law that I am helping build hotrods, so as usual, I went off to help him as per normal.

I arrived home the afternoon, sat down with the wife for a short while. Had a cup of coffee and mentally prepared myself for the contest, although it was only for 2 hours, I thought it better to get my head around all the proc-



esses. The time arrived and I went out to the shack, switched on the rigs and gave them enough time to warm up and settle down, valves need that you know ? On the hour, I started calling "CQ test, ZS0AWA". After 10 min with no reply to my calls, I decided to SMS Pierre ZS6BQS and find out where he was and if the band was open.

Back came the reply, "Contest over, 14:00 to 16:00 SAST". Now where did I read UTC ?

Andy ZS6ADY

AWA Committee:

- * President—Rad ZS6RAD
- * Treasurer—Willie ZS5WI
- * Technical—Don ZS5DR
- * Net Controller—Willem ZS6ALL
- * Newsletter/PRO—Andy ZS6ADY



Silent Key

Once again we have to record the passing of one of our members and this time it is for My long time friend Alan Franzen ZS6BIK (ZS1FG).

Alan had been a friend of Amateur Radio for so many years and involved in so many issues, that when the AWA was launched it was not unusual to see him join us with all his ideas for promoting the use of valve radio's and antique collections. He was instrumental in the forming of the "Mission Statement" and every year promoted the voting for a new President, but never wanted to be President himself.

It was due to his efforts that we received the call sign ZS0AWA, the licence fee was paid every year and we were listed as an educational station.

There were many different aspects to Alan's involvement in Amateur Radio, and he will surely be missed.

CW Net:

This has been a fairly active month on CW, with a few new stations calling in, even although there has been no real improvement in band conditions. The old die hards are still out there pumping away.

How many people are really active at all on CW ? Or better still how many people could we entice to become active again on CW ? I am sure there must be some old hands out there who still enjoy the odd QSO on CW, even though they have become a bit rusty.

This is all leading to something, so don't stop here. If you fall in to this category, then you may be interested to know that we are hoping to put together a CW activity day for some time in November. The idea, to promote activity on the CW segments of the 80, 40 and 20 meter bands,

over a period longer than 2 hours for the normal contests. Say 06:00 to 18:00.

This will not be a contest as such, but an activity day. If you want to score points, you can do that, but if you want to just get out there and try some CW with interested parties, you can do that too.

How about some feed back and ideas on how we could do this, times that would be suitable etc.

Another possibility being raised is starting up a branch of "Fists" in SA, which I am sure many of you may have heard of already. This may go "hand in glove" (no pun intended) with AWA ideology. Some thought on this issue would also be appreciated.

The picture opposite is the logo for the "Fists" club which has branches in UK,



Europe, USA and Australia. What would it take to get one running in SA. Do we have the numbers and enthusiasm to do it ?

Let us know your thoughts on these 2 issues either on air or by email or snail mail. Would be nice to know what you think about it all.

73

De ZS0AWA/CW—SK

SSB activity:

I read on the SARL Website there had been a few sunspots sited, so maybe the change we have been waiting and longing for is finally going to start. We can only hope.

The SSB net has still been quite active even though we are in the RF doldrums, so we really cannot complain. Regular call in's of around 15 are still the norm, between 40 and 80, so keep it going, we do enjoy hearing you all.

It is planned to have another AWA Valve QSO Party in October, with the

dates being set for 18 & 19 October. The same rules apply as per the QSO Party held in May, with AM on Saturday and SSB on Sunday. Contest rules as per the "Blue Book" or on the back page of this newsletter.

We had a pretty good turnout for the may event, so lets hope we can improve on it this time round. Of course the objective is to get those valve rigs burning up the ionosphere instead of standing on a shelf looking pretty.

We have added an extra hour in case

40m does not play along, so times will be from 15:00 to 19:00 SAST. (13:00 to 17:00 UTC). Look forward to hearing you all there.



Hammurand HQ100

AM:

The numbers on the AM net are also seriously dwindling, but yet there are a few of us who absolutely will not give up. Reminds me a lot of Churchill's speech about never giving up. Maybe we need to write one about the ham bands.

As I mentioned, there are a few old sticklers, and now we have even resorted to trying out at a different time. So if you still interested in doing some AM transmissions, join us on Friday

afternoon from about 15:30 on 3615. Conditions at that time of the day are certainly a lot better than later on and so we give it a bash.

Don ZS5DR, Rad ZS6RAD and myself have been doing some tests at this time on Fridays and it works quite well. We've even been joined by some stragglers just passing along the band to see if there's life on planet earth.

So if you're home early on a Friday and

seriously don't know what to do with yourself, switch on and join us.



Yaesu FT 200

AWA Open Day Saturday 08 November 2008

We plan to have another open day this year and hope to attract many more people from Div 4, 5&6.

The event will be on the Farm of William ZS4L, just outside Harrismith and will start from when you get there, to when you leave.

Hopefully we will be able to entice the guys from Div 4,5 and 6 to come and join us there. Now that the cost of petrol has been reduced, you won't have to use your donkey cart or Ox wagon and leave 5 days in advance. (Harrismith is ± 350 km from Jhb, Durban and Bloem)

Bring along your old rigs and spare parts for a flea market, pack a picnic basket with all your favourite goodies, just not too much of the liquid RF, load the wife and kids in the car and come and enjoy a day of eyeball QSO's and great friendship with the guys you hear on frequency.

To help you make up your mind, we will have 2 rigs that are to be raffled on the day.

William has offered a Collins KWM2-A, restored by himself,



And Rad ZS6RAD, has offered a HRO500 with matching pre-selector which was donated to the AWA by Sam ZS6BRZ, and restored by Rad.



So pencil in the date on your calendar, make travel arrangements and we will give more details in the November newsletter.

National Radio Company

Classic BA #3:
National HRO-60



"Tuned to Tomorrow," National had a lot of yesterdays. It started in 1914, as a toy company, and moved gradually into the radio business in the twenties. National started out making premium parts for other companies, an approach that led to their traditional emphasis on quality. National radios never looked very fancy. They were just good. After selling advanced HF/VHF radios to airlines and the government, National entered the ham market with a popularly priced line of regenerative receivers. Then, in 1935, they introduced our third classic boat anchor, the mighty, wide-coverage HRO. This series survived, with circuit refinements, until 1964, and it was popular and respected the whole time. That's a long run for a radio that

never really stopped looking like an orange crate!

The HRO had a number of special parts, as designed by none other than James Millen, most apparent being the huge, steel, tuning dial that came to symbolize National radios. This dial had little windows. When you turned it, the 100-kc (no Hertz yet!) would increment inside the windows, in the dial, while you read off the individual kc on the dial's outside. This awesome mass of chrome and steel looked like an ash tray, and it was made like the Great Pyramids. Even more remarkable was the band switch. Millen had a hand in here, as well. None of these crummy wafer switches, or coil banks, or turrets to oxidize and go out of alignment. To change bands on any HRO, the operator opens two spring-loaded clamps that could go on a bank vault, and pulls out a coil array something like 3 inches by 6 inches by 4 inches deep. Basically, you disembowel your radio. The huge coils are slid into the shelf box that lives next to every HRO, the proper new ones are slid out of the box, at which point you stick the new assembly back into the radio, where it seats with a satisfying ker-THOK. The spring clamps are snapped shut, and away you go. Now *this* is a *radio*!

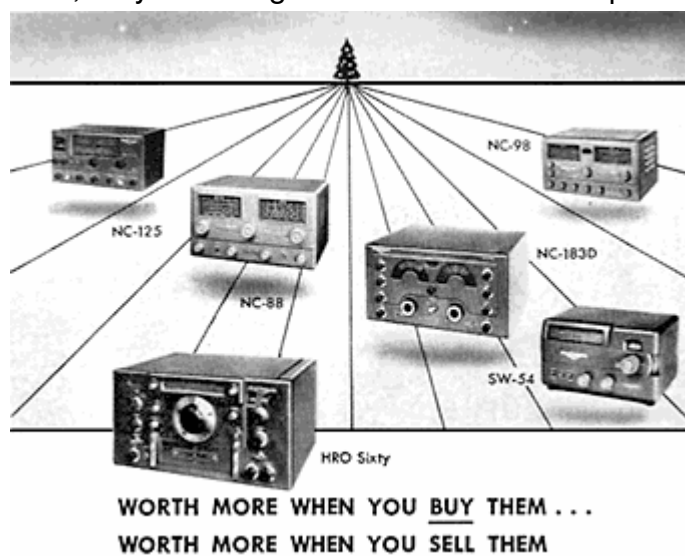
Millen, a mechanical engineer, moved on to his own parts company, which ran its whole catalog in the *Radio Amateur's Handbook* until the ARRL dropped all the ads. His stuff always looked pretty dramatic; the kind of technology that won World War II. Not flashy; just immortal. The newest and best of the tube HRO's are the HRO-50 and HRO-60. Either one is made like a locomotive, and either will make yet another fine addition to the boat anchor collection, though it might also get you a divorce. They're rectangular boxes, heavy, heavy, heavy, with ominous slits along the top for the slide rule dial scale, and that redoubtable HRO tuner just below. There's an S-meter on the left, and the usual plethora of dials and knobs. Do get the matching speaker, if you can.

The HRO made the solid state transition with the fully synthesized HRO-500. It still had the classic HRO dial, and very wide coverage from a dizzying 5 kHz to 30 MHz. It is reputed to be a very good radio, in fact a classic, but I've never seen one. It came along too late to save National's general-coverage line, and not that many were sold.

Less well known is the last model with an HRO prefix, the rare HRO-600. This is a solid state, very high-end (\$5500!) military-grade receiver aimed more at the surveillance and maritime markets.

One of National's few transmitters was the NTX-30, made right before the war. It's supposed to be a nice rig, but I've never seen one. Power output was 30 watts plus, on four bands, from a single-ended pair of 6L6GCs in parallel. Doubler/driver stages are also 6L6s. CW only, but there was an input for a modulator. It's all rather beefy looking, in one of those black boxes that says "old transmitter" at a glance.

In the 60s, National made a highly regarded NCX-5 transceiver with a mechanical digital dial, and its companion NCL-2000, a 2000W PEP desktop linear. Both units had a nice, purposeful look. The linear ran National's patented class AB2 circuit, and it quickly became known for a lot of punch given its compact size and relatively affordable price just under \$600. PA tubes were ceramic 8122 tetrodes, costing only \$31 each at the time. Here was an honest, full-power amp that you could re-tube without taking out a second mortgage. National sold something like 5000 of these linears, many of which are still in use today. It is said that component life is very good if the amp is run at "only" a kW out, maybe saving the full 1300 watts for pile ups.

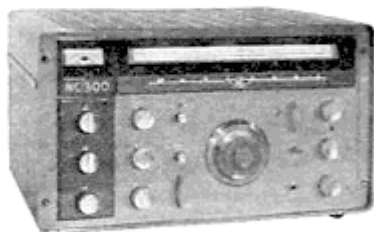


Like Hallicrafters, National hit the ground running after WWII with a whole line of short-wave receivers for the consumer market. Smallest and cheapest, at fifty bucks, was the "Mighty Midget" SW-54, an 11" by 7" by 7" general coverage box with built-in speaker and obviously aimed at the same low-end market as the Hallicrafters S-38 series. In the 60s, about when the S-38 was restyled into the sleeker S-120, National did similar with their \$60 consumer-market NC-60. Over on the amateur side, National came out in the mid 50s with the NC-300, another whopping BIG radio (64 pounds), with good mechanics, and a band switch that went CLUNK into place. Its design followed a well-publicized "dream receiver" promotion, and it was definitely a high-end (\$400) unit that the operator wouldn't get tired of. While slide rule dials were sometimes woefully inadequate on ham band radios, this one was huge, and extremely usable.

The NC-300 was extremely sensitive, and generally a real good radio for its time. It had a matching speaker, the NC-300TS, with a very cool thunderbolt "N." There was also a similar-looking case that held up to three accessory VHF convertors, for 6, 2, and (believe it or not) 220 MHz. These were switched in from the receiver, and had their own scales on the big dial. Electrically, all three downconverted to a 30 MHz top band on the main set, which served as a tunable IF. The NC-300 was followed in 1958 by the NC-303 (\$450), an improved version of the 300 which still shows up on a lot of all-time favourite lists right next to such legendary iron as the R-390, 75A-4, and SP-600! It had more filters, two different noise limiters, and a built-in Q-multiplier/notch filter. The NC-303 lasted until the end of the boat anchor era in 1962.

YES HENRY HAS ALL THE
NEW EQUIPMENT *FIRST!*


NC
300



Receiver Features greatest sensitivity of any
ham receiver at any price. 20 monthly pay-
ments \$18.31. \$37.00 down. Cash price \$369.95

The last National tube box that I know much about is the later NC-270. Advertised in the mid-60s as "the red-hot set with the cool blue look," it was decidedly slimmed-down and "modernized." It had a multi-band slide rule dial a la Hallicrafters and a "cosmic blue" case that tilted up on a "flip foot" for ergonomics. I got to use one of these. It's a good enough set, once again with nice big controls that click satisfyingly into place, but otherwise as a mid-price box it can't compete with the 300 series.

National left the ham business soon after, surviving on government contracts until going chapter 11 in the 80s. It hung on, barely, until 1991, when the last vestiges were sold off in an IRS foreclosure.

SPECIFICATIONS*

Frequency Range:	5 kc. to 30 mc.
Modes:	Upper Sideband, Lower Sideband, AM, CW
Frequency Stability:	Within 100 cycles in any 10-minute period from turn-on
R.F. Input Impedance:	50 ohms unbalanced; separate high-impedance unbalanced input
Receiver Sensitivity (nominal for 10 db S/N)	
AM:	2 μ v. with preselector; 25-50 μ v. without preselector from 5 kc. to 500 kc.
SSB/CW:	Better than 1.0 μ v. from 500 kc. to 30 mc.
Calibration Accuracy:	Within 1.0 kc. over entire tuning range of VFO; within 250 cycles when zeroed to nearest calibration point
Power Requirements:	200 ma. at 12 volts d.c., or 100 ma. at 24 volts d.c.; 115/230 volts, 50/60 cycles, 15 watts
Size (inches):	7 $\frac{5}{8}$ H, 16 $\frac{1}{2}$ W, 12 $\frac{3}{4}$ D
Weight:	32 pounds
Semiconductor Complement:	37 transistors; 20 diodes

*Partial listing

Specifications for the HRO 500

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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 yester-days radio transmitters and receivers. 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.

Notices:

AWA Valve QSO Party 18 & 19 October 2008

Saturday 18th being restricted to AM and Sunday 19th to SSB

From 15:00 - 19:00 SAST (13:00 - 17:00 UTC) on both dates

Frequencies

40 metres: 7,050 to 7,100 MHz and 80 metres: 3,603 to 3650 MHz

Power

The output power may not exceed 100 w, unless the rig itself has a higher output power.
(FTDX400, etc)

Exchange

Call sign, RS and consecutive serial numbers starting at 001, plus type of radio used, eg
HT37 Tx.

Scoring

Contact with all valve radio - 5 points per contact;

Hybrid (valve & solid state) - 2 points per contact;

Solid State Radio - 1 point per contact

Multiplier for your station:

All valve rig—3 points

Hybrid—2 points

Solid State—1 point

Lets make this one even better than the first.