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AWA Committee:

- * President—Jacques ZS6JPS
- * Vice President and Western Cape—John ZS1WJ
- * Technical Advisor—Rad ZS6RAD
- * Secretary/PRO—Andy ZS6ADY
- * KZN—Don ZS5DR
- * Historian—Richard ZS6TF
- * Member—Ted ZS6TED

Newsletter

10th Anniversary

123

July 2016

Reflections:

A Time for all things.

I don't want to get all poetic and philosophical by conjuring up all kinds of thoughts and pictures at this stage, but I suppose being the editor of the Newsletter has its advantages.

At this stage in our lives, my wife and I have to uproot ourselves from the wonderful secure environment we have lived in for the past 13 years and relocate to the Eastern Cape.

It's not a pleasant thought by any means, and one I am sure we are not alone in, as there are so many before us have had to do the same thing and there will be many after us.

To those who have been there, then you will understand what we are going through and probably still have to go through, so

please accept my apologies already for the delays there have been in the Newsletter editions. Unfortunately life has been extremely hectic since my decision to take early retirement which has resulted in the delays.

I will however, try my best to keep something coming through the pipeline.

Life is certainly full of surprises and I suppose most of them as a result of decisions we make ourselves which determine the direction that we will end up going in.

I have often said that I look forward to the day that I will be able to devote more time to restoration and rebuilding, and that day has now arrived with great speed. I still look forward to it.

I shall be extremely envious of the closeknit family that I am leaving behind and will not be able to interact with at the drop of a hat, but then, that's what radios are for.

It will not be long before we are back on the air again and fully able to take part in the activities on air, but the eyeball QSO's will be few and far between.

My thanks to the committee members at this stage for their support and understanding and to Jacques, our President, for his support.

I look forward to catching up with you all in future Newsletters and on air.

This is a new beginning not only for me, perhaps for the Newsletter too.

Best 73

DE Andy ZS6ADY

WIKIPEDIA

Electrical Telegraph

Another very early experiment in electrical telegraphy was an 'electrochemical telegraph' created by the German physician, anatomist and inventor Samuel Thomas von Sömmering in 1809, based on an earlier, less robust design of 1804 by Catalan polymath and scientist Francisco Salva Campillo.^[2] Both their designs employed multiple wires (up to 35) to represent almost all Latin letters and numerals. Thus, messages could be conveyed electrically up to a few kilometers (in von Sömmering's design), with each of the telegraph receiver's wires immersed in a separate glass tube of acid. An electric current was sequentially applied by the sender through the various wires representing each digit of a message; at the recipient's end the currents electrolysed the acid in the tubes in sequence, releasing streams of hydrogen bubbles next to each associated letter or numeral. The telegraph receiver's operator would watch the bubbles and could then record the transmitted message.^[2] This is in contrast to later telegraphs that used a single wire (with ground return).

Hans Christian Ørsted discovered in 1820 that an electric current produces a magnetic field which will deflect a compass needle. In the same year Johann Schweigger invented the galvanometer, with a coil of wire around a compass, which could be used as a sensitive indicator for an electric current. In 1821, André-Marie Ampère suggested that telegraphy could be done by a system of galvanometers, with one wire per galvanometer to indicate each letter, and said he had experimented successfully with such a system. In 1824, Peter Barlow said that such a system only worked to a distance of about 200 feet (61 m), and so was impractical.

HF Happenings.

Whaddon: Secret life of village that helped crack WW2 code

On 9 May 2016, Milton Keynes Amateur Radio Society members operated GB1SOE to establish contact with French special event station TM75SOE using WWII equipment. This was to commemorate the 75th anniversary of the first transmission sent back to Whaddon Hall, Buckinghamshire, by Special Operations Executive (SOE) agent Georges Begue. They operated from Whaddon Hall during Monday using a replica MK III transmitter and HRO receiver on the French side a WW II B2 spy set was used.

The BBC report: The code breakers at Bletchley Park are well known for their top-secret work, which helped to change the course of the World War 2. However, the Buckinghamshire village of Whaddon, just a few miles down the road, has long been forgotten, despite the vital role it played. It was codenamed Section 8 and was a satellite station for Bletchley Park. It is hoped a new memorial will give it its rightful place in history.

Watch the BBC TV report on the commemoration at Whaddon www.bbc.co.uk/news/uk-36245666. A shorter version of the BBC report is at <http://www.bbc.co.uk/news/uk-36248874>. Further information in the QRZ.com entries for TM75SOE and GB1SOE

How to Solder :

Mitch Altman, WB9IQQ, has released a revised set of slides titled How to Solder. You can download the slides from

<http://cornfieldelectronics.com/cfe/images/projects/HowToSolder.pdf> HF Happenings The week of 11 July 2016 Page 2

Mitch Altman, WB9IQQ, and Jeff Keyzer, W6OHM, wrote the book Soldering is Easy which can be downloaded free from <http://mightyohm.com/blog/2011/04/soldering-is-easy-comic-book/>

The Russian Woodpecker :

The notorious over-the-horizon radar that played havoc with shortwave radio began transmissions in July 1976 and continued for more than 13 years. When first heard by radio amateurs around the world it had a distinctive sharp, repetitive tapping noise. This resulted in them nicknaming it the 'Russian Woodpecker', and that name stuck. It randomly hopped on frequencies to disrupt legitimate broadcasts, Amateur Radio, the marine and aviation bands, and utility stations, resulting in thousands of complaints by many countries worldwide. Transmissions were heard from about 3 MHz

to above 17 MHz and were officially part of the Draga radar system.

In fact, there were three Russian Woodpecker transmitters strategically placed in Ukraine and Siberia. Each had a power of at least 10 megawatts feeding very large multi-element phased array antenna, which in official circles were called the 'steel yard'.

The Woodpecker signals bounced back from the ionosphere, and this backscatter contained information, which could show any travelling object.

At the height of Woodpecker nuisance, some receivers were fit-ted with 'Woodpecker Blankers' to minimise the harmful interference.

The radars were part of the cold war and until the fall of the Soviet Union formed part of the Anti-Ballistic Missile early-warning system network. The Russian Woodpecker finally went off the air in December 1989, when the Soviet Union collapsed. It has gone, although more sophisticated over-the-horizon radars are now used by several countries for military and border protection.

Word to the Wise:

Cabrillo - Tomahhhhto, Tomayyyto, Cabrilloe, Cabreeyo. Just what is the pronunciation of that format for our contest log submissions? This is directly from Trey Garlough, N5KO, "Juan Rodríguez Cabrillo (João Rodrigues Cabrilho) is said to be the first European to navigate the coast of modern day California. Both the Spanish and the Portuguese claim him, so there is no one single correct answer to this question.

Based on usage that I am exposed to both inside and outside of amateur radio, kuh-BREE-yo wins by a 10-to-1 margin, or more, over other variations. Not definitive, but hopefully 'good enough' for your purposes. 73!"

Determine the resonant frequency of an antenna trap :

Larry, N6NC, suggests a method for using an antenna analyser to determine the resonant frequency of an antenna trap. As a parallel L-C circuit, he found inductive coupling to be necessary, "Wind 8 turns of #14 AWG wire at one wire diameter spacing around a 3/8" to 1/2" diameter tube or dowel. Solder the coil to a PL-259 or BNC connector and cover it with heat shrink tubing. When plugged into an analyser and inserted into the trap, the analyser will act as a grid dip meter using the analyser's SWR meter." Dave, K6OZZ, has a YouTube video illustrating how to perform this measurement <https://www.youtube.com/watch?v=ZiIRCrOpBM>.

80 metre beams :

Tom, K5RC, has been orchestrating the construction and installation of new 80 metre beams at the Comstock Memorial Station, W7RN. It is a big, big project.

Some details - the 80 metre beam antenna sports 27.74 m elements, weighs 272 kg and has a 23 m boom. Force

12 assembled the elements. A 60 m crane was used to place the antennas onto the monopoles. Many people have been involved in this project, and on installation day, the crew consisted of K7NV, K6NV, KH2TJ, XE2K, K6NA, K6DGW, K5XI, and of course K5RC.

Antenna selfie of Hector, XE2K, with the W7RN 80 metre beam in the background. The boom looks small, but it's actually 23 m long. [Photo courtesy of XE2K]

Tom has photos:

https://photos.google.com/share/AF1QipMpkII5ZY7IGPYVfkWG9oCUI61CD5Du-_eHKqCrJer5ADvjwmwtNrD4b_mUjJTU1w?key=eWt6RTVvalBidTYxdmp6VGdRRy1DazFwSlpBd1NR

on the W7RN website www.w7rn.com/ and HD drone video was captured by AA7XT. You can get a sense of the size of the antenna in this video of the tips being installed www.youtube.com/watch?v=CjUc34sK6qI.

Hector, XE2K, had the task of affixing the antenna to the tower and he is pictured at the top in the video :

www.youtube.com/watch?v=62QQT6kwyhY.

He also has an album of photos from the event

<https://photos.google.com/share/>



https://photos.google.com/share/AF1QipO_bRa7NIv4pKP2ReBGFF_Tdq0Wis1nKKPYV0m80OMQuZV9DJWfzt0AcY9pmD8-UQ?key=a3BvTzJwYnBPehIMMzhOemxzLUh6bEg4enQyU3I3

When Giants First Walked the Bands :

The World Wide Radio Operator Foundation has re-uploaded the webinar "When Giants First Walked the Bands," which is a look back by Doug, KR2Q, of CQ WW contest multi-multi operations from 1959 to 1986 <http://wwrof.org/webinar-archive/when-giants-first-walked-the-bands/>.

The 2016 Dayton Contest University :

The 2016 Dayton Contest University videos and slides are now available on the Contest University website <http://contestuniversity.com/>, along with some recently posted videos from 2015. The 2016 content may be choppy in some spots - there was an issue in recording them. The Contest Dinner website <http://contestdinner.com/> has been updated to reflect past speakers and programmes, as well as the Contest Hall of Fame. Planning ahead? The Contest Super Suite website <http://contestsupersuite.com/> has been updated to reflect the dates for 2017.

African DX

Africa DX Net - every Saturday afternoon from 14:00 UTC on 14,260 MHz hosted by Mike, V51MA, Leon, A25SL, and Tinus, ZS6MHK.

Swaziland, 3DA0. Braam, ZS6AYE, will be active again as 3DA0AY from Swaziland between 18 and 25 July. He will operate mainly digital modes on 40 to 10 metres. QSL via ZS6AYE (direct), OQRS on Club Log.

Melilla EA9. Javier, EC7DZZ, and Manuel, EA7FKH, will be active as EG9LH from Faro del Morro in Melilla between 16 and 17 July. QSL via EC7DZZ.

African Islands

IOTA frequencies

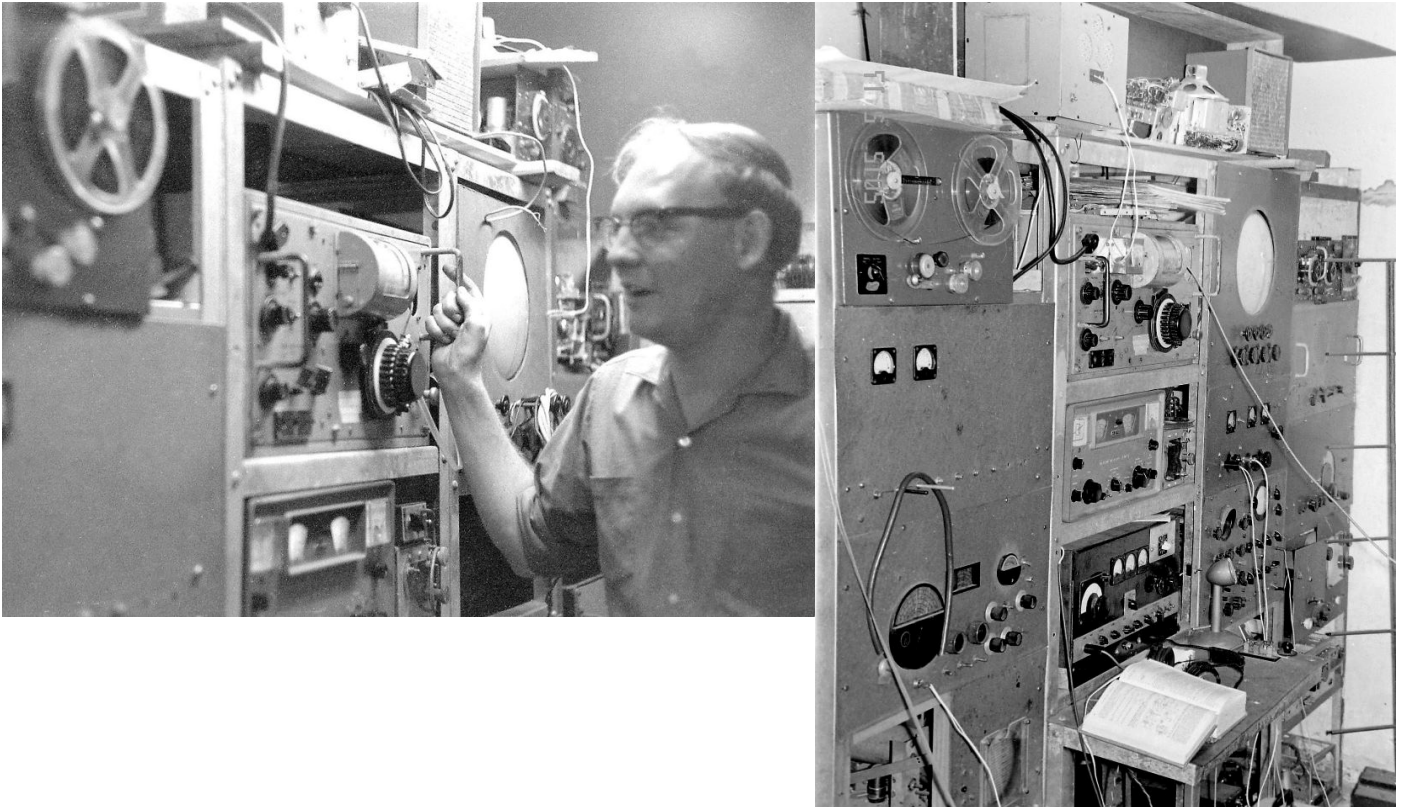
CW: 28 040 24 920 21 040 18 098 14 040 10 114 7 030 3 530 kHz

SSB: 28 560 28 460 24 950 21 260 18 128 14 260 7 055 3 760 kHz

As a result of an article in the April Newsletter on the restoration of an R206 receiver, I had the following item sent to me by Greg ZS1BL.

What caught my attention was the restoration of an R206 HF receiver - I had one around 1962 to about 1965 that I think originally came from HAMRAD. It was modified during that period to include an S-meter. I attach two photographs of it - one before the modification and one afterwards - the s-meter was between the power supply input and the rotating frequency drum. I wonder if it is perhaps not the same receiver ?

It was used for satellite tracking and was a pretty good receiver. It had a separate mains power supply unit which came with the receiver. If there is any interest in the "history" of this receiver as far as I was involved I would be only too happy to give details.



Cheers

Greg ZS1BI



I wonder what got you interested in Morse code? How did you become interested in amateur radio in the first place? I came across this article I had written some years ago. I challenge our readers to send me something about how they became interested in radio...

Ramblings of remembrances of Radio Part 1 – by ZL2AIM (EX ZS5IAN)

In my days in South Africa operating as ZS5IAN, one of our club members challenged us to share with other members how they became interested in radio. I decided to put pen to paper right away and write down my travels into the world of ham radio.

I was brought up in Blackrock, an area south of Dublin in Ireland. I was born in 1946 and was brought up in a house with many commercial radio sets. My dad was an electrical engineer and liked to listen to the radio. I guess most families would huddle around the radio each evening in those pre TV days. He had bought many radios over the years. Pride of place was given to a large radiogram which was about the size of an average size desk. On opening the lid, which was a lovely knurled French walnut lined with brown felt, one's eyes were struck by the 78 rpm record player on the left hand side. This was automatic and one could load up to 10 records onto the player to be loaded automatically when the previous one was finished. Of course, you had to remember to change the needle after 10 records had been played. I can still see the two tins of His Masters Voice needles on the side of the player. One was for gold needles which lasted 10 records and the other was for silver needles which only lasted for one record. The automatic loading system was in theory all fine and dandy until you played a record that did not have a serrated ridge running on the outside of the label. That was when you got slippage..... well you can imagine the "music" that came out of the speaker.

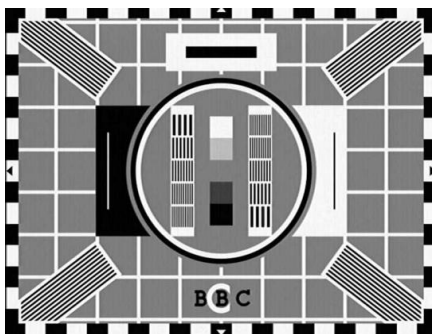
But I digress..... the other side of this desk-sized radiogram had a series of buttons. The aforesaid radiogram, ON/OFF, Long wave, Medium wave, and three buttons for Short wave. Well Long wave was boring – all you heard was the BBC Light program on 1,500 meters. Medium wave had the local Radio Eireann – that was mostly **very** Irish – not for a young chap like me, and also had the BBC Home Service – well if you have never listened to the Goon Show, Beyond our Ken, Around the Horn, then you have not listened to Commercial Radio! Of course there was the very famous Radio Luxembourg that was received after about 8 pm on a dark evening. They broadcast pop music until the wee hours of the morning. Their top twenty broadcast from 10pm until 12 pm on a Saturday night was **THE** definitive **OFFICIAL** top twenty hits of the past week. That was great! I would be letting the Irish side down if I did not mention Radio Caroline – started by a young chap from Tallaght outside of Dublin. That was a "Pirate" radio station broadcasting pop music 24 hours a day from a ship in the Irish Sea. It was more than 3 miles off the Irish coast and the British Coast, so no authority could close them down. Later the ship was joined by Radio Caroline 2. But the other three buttons? When one of them was pressed, the dial would light up with such names as Halverston, Moscow, China, and lots of countries that brought alive a young lads imagination. Turning the dial slowly you could hear different languages accompanied by hisses and squeaks etc. Listening to that must have been the seed in my mind for the Short-wave Listener that I was to become many years later.

Unfortunately, those 6 buttons were to spell the end of that radiogram. One day it would not switch on. I just kept hitting those buttons at random waiting for something to happen. And it did! Smoke started billowing out of the cabinet. I shouted for my dad, and between the two of us we dragged it out into the front garden. It never saw the light of day again. Now, as I think back on that radio gram, the aerial was just a long piece of wire curled up lying at the bottom of the cabinet – and yet we could tune into all those foreign stations. It was a blessing in disguise for it though – my family had got tired of me playing my two 45 rpm records at the 78 speed whilst holding my hand against the turntable to reduce the speed to around 45 rpm. To this day, if I hear *el Paso* by Marty Robbins or *Poor me* by Adam Faith I cringe when I think how I murdered their hit singles! Next day my dad came home with a new record player that played all the new fangled speeds as well as 78.

Round about 1956, I found a small radio in the garage called a Lafayette. It was about the size of a modern transistor radio. It was made in the USA so it had to be powered by 110 volts. No problem for me. My dad had lots of resistance wire which I wound alongside ordinary insulated wire and bound it to the insulated wire by means of

many rolls of black sticky (very sticky!) cloth insulating tape. I can't remember how I ended up with 110 volts, but my dad must have had a meter of sorts. The antenna was a length of "aerial" wire hung out my bedroom window and laid along the garage roof below. My insulating job must have been below par, as I had many an electric shock whilst using that radio. (There was no standard as to say which of the 15 amp pins was live and which was neutral. – Each socket varied as to what the Irish electrician felt like on the day! However the earth was always the earth!) To have my own radio in my bedroom was a great boon to me. I listened to the radio whenever I had a spare minute. – Don't forget there was no TV then – Unfortunately that radio had only Long wave and Medium Wave – no short wave.

The day came when my dad came home with a large wooden box with a glass "window" in it. It had a name on it proclaiming it to be a PYE Continental. There was a place in the front that looked like it had a speaker behind it. On inquiring what it was, I was given the stock answer from my dad – "a box for white mice." This contraption did not have the fancy coloured windows with Halverson and Moscow on it – but I knew it was something electrical. It was days before I was told that it was a television set. This would have been about 1957 and not many people in Ireland had heard of a TV set! Now the fun began..... my dad would sit with his slide rule and his "Job Pad" and make copious notes and write down lots of figures. Finally he had his design for a TV Aerial. He bought the aluminium and made up a dipole and reflector etc etc This was mounted on top of the yet to be finished garden swing. The grand day came and the TV was switched on. Snow, snow and lots more snow. My dad swore that he saw a test pattern and who were we to argue with him? The only test pattern that I saw was SNOW! Well what would you expect with the nearest station being in London and us in Ireland! Valves were swapped and changed and changed again until my dad finally decided that one needed the antenna mounted high up. Well we had it put up on the chimney



on top of the two story house. Yes! I could see the test pattern!

One had to continually adjust the set until you got the circle to be round - normally it would be egg shaped!

The whole family sat around the TV (black and white of course), and watched the BBC test pattern for hours and hours..... So many people stopped and asked us what the strange thing was on our chimney! Then a TV station opened in Wales and soon after another one in Belfast. Now we had a choice of stations – but that also meant an antenna farm on top of the 7 chimney.

Some of the new stations (including the new ITV) had to have a different type of antenna. Reception was not so great from these stations. But not to worry, my dad already knew the answer to that. Raise the antennas even higher! Now we had a very high antenna that had to be supported by galvanised guy wires to many points of the house and garden. But he was right – now we could get a great signal from England, Wales or Northern Ireland. (Irish TV from the Republic of Ireland was still to come).

This new fangled TV now meant that dad no longer listened to the radio (always referred to as a *WIRELESS*) in the now renamed "TV room" That radio was now dumped into the garage where I rescued it and put it in my bedroom. **AND** it had **SHORTWAVE**! Now things were happening! Once again I could listen to the different languages from around the world in the privacy of my own bedroom.

Eventually that wireless ended up in our summer house on the East Coast of Wexford, but it also came to a smoky end due to the transformer wax being coveted by the local mice for their meals.



One day I took the steps up to the attic and did a bit of exploring. Two wooden boxes were found with earphones attached to them. What were these boxes? Beautifully made wooden boxes with electrical apparatus could not be left in the attic so were taken down to my bedroom where they were examined minutely. I asked Dad what they were and he said that they were crystal sets.

"What's a crystal set?" I asked. "It's an old fashioned radio" he replied.

"Show me how it works" I asked. Five minutes later I was listening to Radio Eireann through the earphones. Wow! No batteries or Mains electricity! Well Radio Eireann was not my cup of tea – but this was something else! Within a week I had gone to Dublin to seek out a place called CQ Radio. I bought a glass encased crystal (2 shillings) and armed with that and a booklet that the man in the shop had loaned me, off I went home to build my own crystal set. First of all I got hold of a toilet roll insert. Next, 80 turns of copper wire evenly wound on to the insert. A quick lesson on using a soldering iron and I had a crystal set that did not need a cats whisker to fire it up!

As I write this I remember that soldering iron. It had a **huge** tip which was heated up on a paraffin primus stove. A large bar of solder and a tin of flux were it's accoutrements. When I built my first Heathkit transistor set many years later and overheated the transistors, my dad thought that I was ham fisted. (He had just finished a Heathkit 6 transistor radio – long wave and medium wave-with the same soldering iron.) My radio never did work.... But the seed was there.

(to be continued)

Good day all AWASA members,

We are planning an outing to the South African Airways Museum at Rand Airport in Germiston on Saturday the 23rd of July @ 10am.

We will be able to walk through the Aircraft Park, containing all aircraft listed at the link at the bottom of this email. Visitors will be able to take a tour through a Boeing 747-200 and Boeing 747-SP, the latter being one of only 45 ever built and the only one of its kind being preserved. The B747-244 is the actual aircraft which, on 24 June 1995, swooped across a crowded Ellis Park Stadium at the Rugby World Cup final between South Africa and New Zealand, bearing *Good Luck Bokke* beneath her wings. Please see some more mind-boggling facts on this bird at the bottom of this email!

Guests will also be able to visit the museum display hall, please see second link at the end of this email for more details.

Afterwards we can have lunch at "The Beer Co." on the same premises, please see attached menus.

Entrance is R35 per person, and any donations on the day toward the SAA museum are welcome.

Thanks to Cliff ZS6BOX and Barry ZS6OY.

Aircraft Park info: <http://www.saamuseum.co.za/facilities-for-the-visitor.html>

Display Hall info: <http://www.saamuseum.co.za/display-hall.html>

Info and pictures of 747-244 ZS-SAN

"Lebombo": <http://www.saamuseum.co.za/our-aircraft/43.html>

Boeing 747-244 ZS-SAN Lebombo joined the SAA on 6 November 1971 at the cost of ZAR17 million and has carried **6 million passengers**, done an amazing 107,000 flying hours (**twelve and a half years airborne**), flew 481.5 million nautical miles or 886 million Km using 160.5 million litres of jet A1, and used 3384 tyres at a cost of ZAR30.4 million, nearly double the original purchase price.

Length: 70.6m, cabin width: 6.1m, wingspan: 59.6m, tail height: 19.3m, empty weight: 178,100kg, maximum takeoff weight: 377,842kg, range with maximum payload: 12,690km, cruising speed at 35000ft: 893 km/h, maximum speed: 955 km/h.



AWA Valve QSO Party

The results of the Valve QSO Party held in May are as follows:

AM:

First place—Stephen ZS6SVJ

Second place—Barry ZS2NF

Third place—Sam ZS6BRZ

SSB:

First Place –Barry ZS2NF

Second Place—Sydney ZS1TMJ

Third Place—Theunis ZS2EC

Your certificates will be emailed shortly.

Shack of the Year

The shack of the Year award which was placed on the AWA Website, went to Henry ZS6MC. Henry was given his prestigious prize at the last Swop meet held at the West Rand Branch flea market.

Well done Henry.



If you want to get your shack photo's in for the next one, go to the website www.awasa.org.za and follow the instructions for placing your shack photo's there. Remember you have to be able to log in to the website to do this.

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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'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. Join by logging in to our website: www.awasa.org.za

Notices:**Net Times and Frequencies:**

Saturday 05:00—AM Net—3615
Saturday 07:15—Western Cape SSB Net— 7140 (Alternate 3630)
Saturday 07:30—KZN SSB Net—3615
Saturday 08:30— National SSB Net— 7140; relayed on 3615 for local stations Div 6
Saturday 14:00— CW Net—7020
Wednesday 19:00— AM Net—3615, band conditions permitting.

Extensive collection of turntable parts, including phono needles, turntable styli and cartridges.
Also does repairs to turntables, record players, amplifiers and cassette decks.
Contact Alex Grushkin on 0824132792 or 0116405996

For Sale or swop:

Hallicrafters SX28 Rx
Hallicrafters SX111 Rx
Hallicrafters HT44 Tx
Hallicrafters HT40 Tx with HA5 Ext VFO
Heathkit HW101 with P/S

I am looking for an all mode 2m rig, would consider swop for some of these items.

Contact Andy ZS6ADY 0824484368

Wanted:

Barry ZS2H is looking for any Heathkit scopes which may be available. He is particularly looking for the 4 knobs on the front of the scope.
Please contact him at 0413603052 if you can assist.
