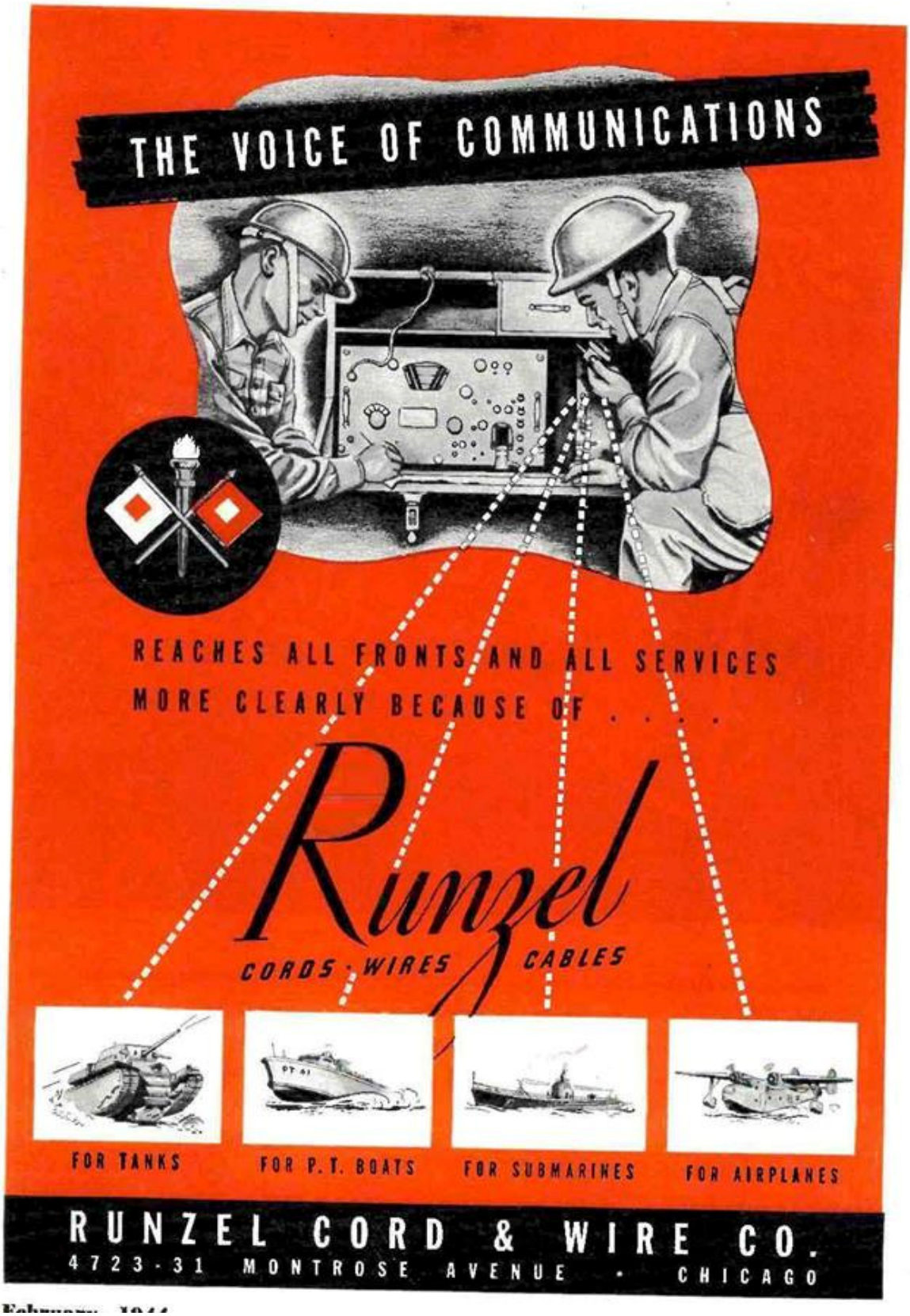
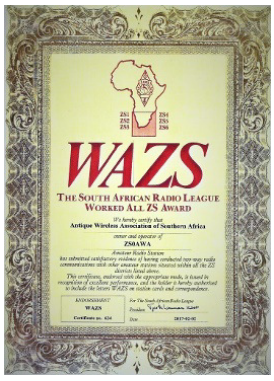
Newsletter

The Antique Wireless Association of Southern Africa

 # 168 **July 2020**





Inside this issue:

AWA Committee:

* President—Renato ZS6REN
* Acting VicePresident—John ZS1WJ
* Technical Advisor—Rad ZS6RAD
* Secretary/PRO—Andy ZS6ADY
* KZN—Don ZS5DR
* WC—John ZS1WJ
* Historian—Oliver ZS6OG

Visit our website:

www.awasa.org.za

Reflections:

It has been a busy month trying to get things back together after the major upheaval in our country and across the world. I came to realise a short while ago that there are so many who have been put through so much in this short period of time that one finds it hard to digest.

But through it all I still believe there has come a lot of positive from it. Even I have had time to sit and put together, what I think, is a great article on one of our top Radio Hams. Of course that's just my opinion, others might feel differently about that.

While I was doing this, I kept on thinking about how many great radio ham stories there must be out there to tell. There are people who have had fantastic experiences in Amateur radio and one of these days, many of them will be lost forever. The stories that is…

Could I encourage many of our older friends in this net who read this Newsletter, to sit and jot down their radio experiences and things they have done. I will take the time to put it together and make it readable if I have to, but lets not lose all that information and the experiences that have been had out there.

There is so much that can be passed on to others and written text is one of the best ways to do it. I have often heard Cliff ZS6BOX, say to some of the old timers "So when are you going to write your book, I would love a copy when you do it".

I started putting together a biography of my own a good few years ago. Not with the idea of having it published, but as something to leave to my children and my grandchildren so that they would know how I was brought up and all the things I did in my life, both good and bad. I must say there are things that my children don't know about their father, but once I'm gone...who cares. They may just get a surprise.

I think too, that it has been good for me to remember many of the things that have happened in my life and to realise how fortunate I have been to grow up in the times that I have.

You know those little things that get passed around on FB and various other places that if you are older than fifty then you have survived…..and they list all the things that have happened over the last fifty years, like bucket toilets and drinking from rivers and streams, and you sit and chuckle about them. Well that's what its all about. Letting people know how it went in your time, and how you did survive it all.

I do not, for one moment, believe that this world that we live in right now will ever be the same again, but one thing that will not change, is amateur radio and the ways in which we use it. It may become more technical and more involved, but it will always be there for us to use. We have been assimilated. (Trekkie)

Best 73

DE Andy ZS6ADY

Wikipedia

Radio Propagation:

Tropospheric scattering (troposcatter)

At VHF and higher frequencies, small variations (turbulence) in the density of the atmosphere at a height of around 6 miles (9.7 km) can scatter some of the normally line-of-sight beam of radio frequency energy back toward the ground. In tropospheric scatter (troposcatter) communication systems a powerful beam of microwaves is aimed above the horizon, and a high gain antenna over the horizon aimed at the section of the troposphere though which the beam passes receives the tiny scattered signal. Troposcatter systems can achieve over-the-horizon communication between stations 500 miles (800 km) apart, and the military developed networks such as the White Alice Communications System covering all of Alaska before the 1960s, when communication satellites largely replaced them.

HF Happenings

APRS and WSPR balloon completes second circumnavigation of Earth

A balloon launched on 20 May by 'Amateur Radio Roundtable' web show host Tom Medlin, W5KUB and team has begun its third circumnavigation of Earth transmitting 144,390 MHz FM APRS and 14,0971 MHz WSPR.

The ARRL say, “The balloon, at 13 106 – 13 716 m, completed its second trip around the globe on 19 June. It crossed the Atlantic Ocean “in record time” at a speed of about 273 km/h, the balloon website reported this week.

The balloon, identified as W5KUB-18, carries APRS and WSPR amateur radio payloads. As of the afternoon of 23 June, it was heading over Uzbekistan at over 160 km/h.

As the balloon website states, the mission and goal are to launch a high-altitude balloon for long-duration and multiple trips around the world. The balloon, an SBS-13, is capable of flying up to 13 716 m. “It will be filled with hydrogen to obtain higher altitude,” the website explains. “It will be solar powered only (no batteries, so it will only transmit during daylight). We will receive tracking every 10 minutes via WSPR on HF [14,0971 MHz].” Tracking transmissions will be turned off over the UK, Yemen and North Korea due to regulations. http://tmedlin.com/balloon-3-2/

Calendar:

July

1 – start of SARL Financial year and subscriptions due
4 – SARL Newbie Party
5 – ZS5 Sprint
10 to 12 – Turbine Air Festival, Johannesburg
11 – RaDAR Challenge
11 and 12 – IARU HF Championships
15 - The Battle of Delville Wood Commemoration - 15 to 20 July 1916; SARL 80 m Wednesday Club
18 - AMSAT SA Space Symposium; Winter QRP contest
19 – ZS2 Sprint
21 – Highway ARC meeting
25 – CTARC AGM
25 and 26 – Islands on the Air Contest
29 and 30 - Delta Aquarids and Alpha Capricornids meteor showers

HAM RADIO online event 26 to 29 June

Due to the dreaded Lurgi-19 pandemic, this year's Ham Radio in Friedrichshafen had to be cancelled as so many other events worldwide but there will be a HAM RADIOnline event instead.

The DARC decided to offer instead an online event, the HAM RADIOnline from 26 to 29 June. This online event will feature many interesting topics related to our hobby, such as operating and broadcasting technology, honours, talk groups and interviews. In charge of this online event is the Software Defined Radio Academy team and the "Fascination HAM RADIO" crew. HAM RADIOnline will start on Friday evening 26 June (Central Europe Standard Time).

Furthermore, the event organisation company "Messe Friedrichshafen" is presenting a virtual trade fair at https://www.hamradio-friedrichshafen.com/news/2020/virtual-fair-presents-novelties/ where exhibitors will present various product innovations. Together, the DARC and the event organizers are thus creating a virtual trade fair experience bringing the volunteers, dealers and manufacturers to your home.

HAM RADIOnline https://www.hamradio-friedrichshafen.com/news/2020/ham-radionline/. The HAM RADIOnline broadcast schedule (in German language) is available at https://www.hamradio-friedrichshafen.de/assets/projects/ham/pdf/virtuelle_Messe/HAMOnline_Sendeplan_aktuell.pdf

Thomas, DF2OO - DARC International Affairs Team

Software Defined Radio Academy 2020

This year's Software Defined Radio Academy is going to take place during the weekend of 27 and 28 June. We have now finalized the programme. Since we decided very early in March that we would organize an online strategy, we were not grounded by Corona. Using YouTube and our video conferencing system, we were able to organize a rich SDRA conference with speakers from all over the world.

Since this year's European GNURadio Days conference in Besancon, France, could not take place either, we were asked to give their speakers a stage. This is the reason why we have an especially strong GNURadio focus. With such a rich programme, we decided to span the talks over two days and start in the European afternoon, so that we could give our overseas audience a chance to participate live.

The mode is this: Even though all the talks are pre-recorded, the speakers will attend in the video conferencing system and respond to questions that come in through the YouTube channel. This way we can maintain a certain degree of interaction, which is important for any kind of scientific conference.
Here is the programme - https://2020.sdra.io/pages/programme.html and here is our YouTube stream URL - https://youtube.sdra.io. We will start on 27 Saturday at 12:30 UTC +2 and on Sunday 28 June at 13:00 UTC +2.
For those of you who understand German, please note that this year's HAMRADIO conference will also go online. We have worked hard in the past two months to record 65 hours of talks and discussions. Here is the HAMRADIO programme, which the SDRA is part of https://www.darc.de/fileadmin/filemounts/gs/oeffentlichskeitsarbeit/Veranstaltungen/HAMRADIOnline/HAMOnline_Sendeplan.pdf
We would be pleased if you could distribute this invitation and possibly also publish it in the "Latest News" section of your website.
Markus Heller, DL8RDS

African DX
Contacts with stations on the African continent count towards the SARL's All Africa Award (www.sarl.org.za/public/awards/awards.asp)
9J2LA QSL Status (19 June). We are getting first reports that direct QSL cards have reached their targets world-wide. Also, the complete log upload to LoTW has taken place! A huge thanks to our QSL Manager Charles, M0OXO for taking care of it.

IARU HF Championship
Joe, OZ0J, and Bob, N6TV, are at it again - they are gathering a list of Headquarter Multiplier stations for the up-coming IARU HF Championship contest in July and formatting the list into call history formats used by various log-ging programs. When used with contest loggers that support a call history file, it could save typing. Joe is ac-cepting changes and corrections to 2020's IARU list at contest@oz0j.dk. Bob will be "reformatting and distributing this data as HQ station pre-fill files in multiple formats compatible with N1MM LOGGER+, WRITELOG, WIN-TEST, DXLOG.NET, TR4W, SKOOKUM LOGGER and UCXLOG. Download itu.zip from https://bit.ly/itudtb, which will be updated frequently. Installation instructions and test procedures are documented in the Readme.txt file inside the Zip." According to VE2FK, N1MM LOGGER+ users will be able to use the auto-download feature of that program to download it as IARU_2020.txt from the N1MM LOGGER+ website.
Remember - it is not good practice to use a call history file to guess at call signs that you are unsure you have cop-ied correctly.

Setup of a CW paddle
Rick, WW1ME, writes in regard to the conventional setup of a CW paddle: "The right-hand lever is the 'dah' if you are right-handed. For lefties, it is just the opposite. Most keyers/radios will let you change the keyer 'sense' for RH or LH. I recall back in the day, too, that all MFJ keyers were wired for the wrong sense, so when you plugged in your paddle, it was set for a lefty. If you used that paddle with other devices, that could be a real issue. Otherwise, you'd have to swap the wires." Another temporary means of sending with a paddle that is opposite of what you are used to is to turn it around and reach over the paddle for the levers. Awkward, but the technique works for a limited amount of sending.

CW Contest Trainer
Ray, G4FON, has written a program entitled CW Contest Trainer and has made it available on his website http://www.g4fon.net/. His program supports a number of contests, including CQ WPX, CQ WW, IOTA, ARRL Field Day, ARRL Sweepstakes, CW Ops CWT, NAQCC, and SKCC. The free version on his website is limited in operation but can be upgraded for a fee.

Windows updates
Recent Windows updates may have jumbled sound and com port driver orders, depending on your configuration. If your computer was updated recently, now might be a good time to check that all of your sound devices are what you think they are, and that COM ports work as intended with your installed software, versus in the hours just before a contest that requires those ports.

Dennis Wells ZS1AU
An Autobiography
(*Edited by ZS6ADY)*

Dennis with his FTDX100 Birthday Cake

Pearl Harbor 1941, was on 7th December, on my 13th birthday. My Father Len Wells was already a radio amateur (ZS1AU) soon after I was born, so I had no option as I thought Amateur Radio was part of life.
I was licenced on 26 July 1950 as ZS1AU, then QSY'd to Bloemfontein as ZS4AU 1970 to 1979. During this period, the call ZS1AU was taken over by Ian McGregor, who came to live in Cape Town, after having held the call ZE1AU in the then Rhodesia. When I returned to Cape Town in 1980, he very sportingly handed the callsign ZS1AU back to me and he acquired the callsign ZS1A which had become available and as a CW man this was what he was very happy about and so was I, to get my old callsign back. We lived a block away from one another and were very close friends and we could operate with no QRM problems.

Sadly, Ian Mac Gregor ZS1A became a Silent Key in 1992. Ian was a fine CW radio operator and was awarded the Jack Twine Merit Award for his dedication, love of his hobby and his fellow radio amateurs.
I worked 99 countries on compulsory CW in my first year, and over 100 DXCC countries in 1950 /1951. I tried hard to get the 100 in my first year on the air, but it was difficult in those days using an HRO and a homebrew XTAL controlled AM/CW rig running 50 watts into a dipole at 30 feet and being shrouded by Table Mountain at 3500 feet a,s,l. There was no DX Cluster or PC to assist DXing as it is today. QSLing also took a long time direct or via the Buro and there was no LotW.

It was not easy in those days, and then on to AM. All frequencies were crystal controlled, until I built a stable VFO. That was a BIG step forward. Having had so much CW during my father's days, I became more fascinated when he built his first modulator for AM. I took part in SARL CW Contests and came 2nd to Roy Larsen ZS5QU in 1968 and worked the odd DX on CW. I rebuilt the RF Final using an 814. I started enjoying my DX on AM using a dipole and long wire antenna. I became hooked on Phone DX and had many sked QSO's, but never thought of being a very serious DXer. Although it was fun working an ATNO, rare DX and receiving the QSL cards. These I managed to preserve in a safe container for 69 years. I can now also boast 360 DXCC entities confirmed in hard copy QSL cards.

My 1st AM to SSB Contact was with a "W" station in the USA in 1951.

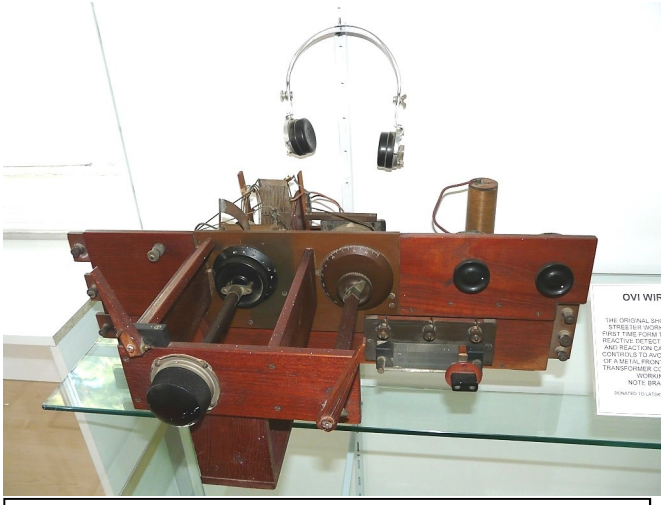
I have been blessed with the most wonderful experiences and memories from a very early age, from the day I was born on 7th December 1928 and at that time my father was a "real" Amateur Radio Pioneer. I got my Operators License in July 1950, 3 months after my Father Len became a SK. I have been a licensed operator for over 69 years, 1950 to 2020 and counting.

My Grand Father James (Jimmy) Wells, became A1B as Len was too young, in his early teens. LEN started work as a professional telegraphist in the GPO in Cape Town and became licensed as ZS1AU (1930 to 1938) in Cape Town. ZS6FB (from 1938 to 1939) in PRETORIA and post WW2 1946 returned to Cape Town and became a SK rather tragically at the young age of 45 yrs, on 13 April 1950.

Streeters Earphones

My father was the first person, be he a boy scout, to hear Mr J.S. Streeter A1A and O-A4Z, transmit the first voice over the ether around 1914, in the suburb of Observatory, Cape Town, South Africa. I have the headphones which my father used to pick up the very first words of Mr Streeter A1A, hanging in my shack. Mr Streeter is credited with starting amateur radio as a hobby from that moment. When I was around 4yrs old, I watched my fathers every move and eventually I was even allowed to hold wires and

learnt to solder. I spent all my growing up days in the shadow of my father when he was constructing a CW rig using Crystal controlled 6F6 - 6L6 - 807 - pair T20's into a center fed dipole with 6 inch spreaders at some 40 feet above the ground. It was strung between two buildings, one being a double storey owned by our landlord. Len's first DX on CW was G5RI in Northumberland in the UK. I can recall a few early model receivers being tried and eventually the NC100 with the green "magic eye" proved to be very good. My father being a professional CW man spent a few years on CW and eventually built a modulator using an Astatic D104 mike into a 6SJ7 - 6J6 - pair of 807's, into a pair of T20's in the Final, running 100 watts input. In 1938 my father was transferred to Pretoria on promotion in the Central Telegraph Office (CTO). We lived in West End Pretoria as ZS6FB until WW2 closed down amateur radio in September 1939.



Streeters Receiver

In 1940 my father was transferred to Windhoek, South West Africa (now known as Namibia) as Chief Clerk I/C of Telegraphs. Due to the war he was not licenced as a ZS3.
In 1945 he was transferred back to Cape Town and in January 1946 was re-issued his old callsign ZS1AU, in Wynberg, Cape Town.

In my early years I was the Jnr engineer in the shack and did all the upgrading of rigs and antennae. On 12 April 1950, my father LEN, suffered a massive stroke and became a Silent Key on the following day, the 13 April 1950, at the young age of 45.

I was devastated, but realised that I had to pass the required CW and get my licence and my father's callsign. This happened on 26 July 1950, through the service of Mr Kovachi in the Cape Town CTO and the Radio Inspector Mr Bill Fairley, who eventually became my lifelong friend and one of the finest men I have ever known. They are now both Silent Keys.

I had KOSOVO confirmed a few times and now that DXCC eventually recognised KOSOVO, I claimed my # 360 DXCC Certificate sticker MIXED.

In 1952 I had my first surprise and experience when a “W” station called me on SSB/USB and I used the BFO on my HRO to read him. My first SSB transceiver was on loan to me in 1963. In 1965 I got my own 1st SSB Transceiver, the YAESU FTdx 100 and a 300 ohm tape Folded dipole for 20M.

I never owned a LINEAR until I obtained a COLLINS 30-L, from the late OM Harold ZS1VW in 1980.

The 30L1 was replaced with the FL-2100Z with the WARC bands.

It was a privilege to have served on the Cape Town Branch / Club committee, from 1946 to 1966, as a committee member, vice-chairman and chairman. I was elected and served as a councillor or on the Council of the South African Radio League, 1966 to 1970 with one of the greatest SARL Presidents Willy Wilson ZS1BF, who was President for 12 consecutive years. I have Willy's GELOSO microphone which he used and is now situated in my shack.

The LEN WELLS Ham Spirit trophy in the Cape Town Amateur Radio Club is in memory of my Father and also to recognise and promote Ham Spirit. It was awarded at the end of each year to a radio amateur in the greater Cape Town area, who has displayed true ham spirit during the year. It was awarded for the first time in 1967 to one of our finest radio amateurs, Ray Alexander ZS1IM, who was the Chairman of the Cape Town Branch as it was known in those days. Ray was awarded the Jack Twine Merit Award in 1972 and a short while after, sadly, Ray joined the ranks of the Silent Keys. The last time the LWHS trophy was awarded, for the 50th time, was to OM Fred Ziss ZS1FZ in 2017. It is now awarded to a CTARC club member by the CTARC committee, at the club AGM each year.

In 1966 I received an illuminated address " for services rendered and regular attendance over a period of 20 years from the then “Cape Town branch of the SARL (now known as CTARC)”. The Chairman was Theo Karlsson ZS1P and the Secretary was Rolf Kersandt ZS1VM. I have now been a foundation member of CTARC for an unbroken period of over 70 years.

In 1970 I was transferred to Bloemfontein for 10 years, and had the call sign ZS4AU.

In 1970 to 1980 I was licenced as ZS4AU in Bloemfontein. Returned to Cape Town in 1980 and retired from Telecommunications Dept in1989 after 44 years as the Chief Telecommunications/ Mechanical/ Technician.

I also operated special event stations, in 1983 as ZS1WPR for the centenary of Western Province Rugby 1883 to

gang busters.

new short-wave receivers from hallicrafters. brand new. the SX-133. the SX-122A. exclusively for the sophisticated amateur. the real gang busters.

that grand old gang will all be individually monitoring the air waves after trying the new two. so will you. both of the news are loaded. loaded with hallicrafters' engineered, built-in, plus features. see for yourself.

THE SX-133
the SX-133 communications receiver covers standard AM Broadcast and 81 short-wave services between 1.7 and 31.5 MHz. large slide-rule band spread dial is calibrated for the 80, 40, 20, 15, 10, 49, 31, 25, and 19 meter bands. crystal filter, product detector and more. suggested list price $249.95.

THE SX-122A
the top of the line SX-122A is an advanced version of the popular SX-122 receiver with dual conversion on all bands providing excellent AM standard broadcast plus 83 short-wave services in the range 540 kHz to 34 MHz. bandspread calibrated for amateur bands. selectable USB/LSB/CW. series noise limiter, antenna trimmer and more. 110/220 VAC. suggested list price $395.

so if you're in the market for the best in general coverage amateur and short-wave receivers, don't miss seeing and trying these new two. meet the gang at your nearest hallicrafters distributor. he just received the new load of gang busters.

the hallicrafters co.

A Subsidiary of Northrop Corporation

600 HICKS ROAD
ROLLING MEADOWS, ILLINOIS 60008

1983 and also organized the Cricket World Cup station ZS03CWC held in our RSA. Also Madiba Day as ZS1MADIBA and worked 1000 stations mostly DX.

In 1981 one of the finest DXers and conversationalists I have ever known, Dave Tremayne, ZL1AV, of Rotarua New Zealand, my DXing mentor, persuaded me to upgrade from my Mosely TA33 to the 204BA @ 15m (the same as Dave was using) and I added the DB1015 a few years later. It got me climbing the DXCC ladder. My tower and 204BA is a monument to Dave who became a Silent Key on 28 July 2008, at the age of 70 years.

Dave was a popular Radio Inspector for New Zealand and had achieved the DXCC # 1 HR with 318 DXCC entities, on 20M SSB in the 1980's.

I have met or have spoken to many great radio amateurs all over the world. Amongst the greats are Senator Barry Goldwater K7UGA, King Hussein JY1, Bob Allphin K4UEE one of the greatest DXpeditioners, NASA Astronaut Dr Chuck Brady N4BQW / KH9 / VP5, who operated on BOUVET Island as 3Y0C and many Islands in the Pacific.

Several photos of visitors to my shack are seen on my website http://www.qsl.net/zs1au

I had the very well-known and famous VK3MO Ian Williams and XYL Ruth and daughter Raechel, from MELBOURNE AUSTRALIA visit me in Dec 2012. This was such a pleasure, after having chatted on 20m for many years.

In 1993, I was diagnosed with lower colon Cancer. After major surgery I was given 2 months to live and to get my house in order. Chemo from the USA and eventually all of 54 litres was administered over a period of a year and now 27 yrs later, I am still enjoying my retirement (31 yrs) and Amateur Radio. Thanks to the support of my wonderful wife, JOAN, of 61yrs +10/12, and my family and friends. Deo Gratius, and also grateful thanks to the world's finest Surgeons, Oncologists and medical staff. Also the most reliable supplier The Cancer Association of SA, to allow my recovery, to make for an almost normal life and is proof that CANCER CAN BE BEATEN.

I served on the committee and was vice-chairman of the Amateur Radio Section of The Oakdale Club during the years, 1995 to 2008. The greatest event in the club was the assembly and erection of the 3 stacked TELREX monoband beams, 5 elements on 20m, 5 elements on 15m and 6 elements on 10m, on top of the 40 meter Eiffel Tower at the Oakdale Club, by a group of radio amateurs who worked tirelessly for 5 years to see it happen. The beams were very generously donated by Sidney Smith ZS1PF (who had retired from the hobby) to The False Bay Amateur Radio, Electronics and Computer Club, who passed it on to ZS1OAK on a permanent loan basis and to share.

In January 1996, a well-balanced group of operators, experienced in working DX pile-ups in SSB and CW, all members of the CTARC spent a weekend on the now famous Robben Island, and slept in the house where Nelson Mandela slept, as ZS64RI. They were ZS1FJ who is now also 9V1FJ, ZS1B, ZS1X, ZS1BW, ZS1AAX, ZS1ACH, ZS1YT, ZS1HSF and ZS1AU, on the DXpedition to Robben Island, ZS64RI, IOTA SA-064 in 1996. This operation was awarded THE SLY FOX DX AWARD for demonstrating to all, the ingenuity and skill of a world class DX station. The citation goes on....." We wish more amateurs had your passion for international friendship and understanding while working DX. Now you are officially a sly fox. We know your clever and crafty ways will inspire others in the perseverance of DX." ..... signed John KD0VL..... 26 January 1996.

In 2003 elected Life Member of the Cape Town Amateur Radio Center. The Chairman was Dr Bud Voortman ZS1B and the Secretary was Peter Henochsberg ZS1PMH.

In 2003 as ZS03CWC for Cricket World Cup held in South Africa.

At the 2006 SARL AGM in Durban, I was elected Life Member of the South African Radio League.

Awarded the LEN WELLS Ham Spirit trophy in 2007. Chairman was Dr Dave Reece ZS1DFR and Secretary was Peter Henochsberg ZS1PMH.

In 2007, I was diagnosed with Glaucoma in both eyes. The immediate action taken by my Opthalmologist, saved the sight of my left and 30 % of my right eye. This was also a saving grace in being able to see and to express my grateful THANKS for making it possible to reach my DXCC # 1 Honor Roll.

In 2008 I was appointed as the Custodian of the LWHS trophy by the CTARC committee, who also proposed that the trophy be made available to any radio amateur in the Cape Town area via one of the local Clubs. It was my duty to arrange the presentation of the trophy and a certificate is also awarded to the winner, at the last function of the year of the winners Club. The LWHS trophy was awarded each year and the year 2017 was the 50th year. This was the nicest job I have ever had to do. The trophy is still in beautiful, shiny condition, indicating that every winner from the past has displayed it in a very safe

place and looked after it with pride. I can assure you all that Ham Spirit is still very much alive amongst us and this makes our hobby so enjoyable and special.

In 2010, I got onto the DXCC Honor roll with 334 Mixed and Phone. Not expecting to live after several heart problems, I just carried on working DX and eventually I saw the light at the end of the tunnel and as luck would have it.....all those 6 DXCC entities that I still needed for a Full House started coming on stream in the form of DXpeditions, and in April 2014, I got MELLISH REEF VK9MT, my last DXCC Entity to reach # 1 Honor Roll and with 360 Grand Total - Mixed. All confirmed with QSL cards.

I have done RTTY, SSTV, PSK31, Digital Voice on HF (first in the Southern Hemisphere), Satellite comms and built a mobile AM rig and whip. In later years I upgraded to a FTdx100 and a Hustler whip and was the first to work mobile to mobile, continent to continent and was awarded the Barney Joel, Mobile Trophy in 1973. The trophy was shared with ZS1ANT operated from a MOBILE snowcat by Brian Van Zyl, at the South Pole. Brian is now licensed ZS1BVZ and is also a member of our CTARC.

I have been blessed with amateur radio all my life and it is the greatest hobby one could ever have. Thanks to my XYL Joan, who has been my best friend for 65+ yrs (met in 1950 and married in October 1955 and celebrated our Diamond 60th Wedding in 2015). Joan has supported me in all my AR activities and many milestones. Without her I would never have survived and retained my hobby. Our brilliant Son Graeme passed away tragically in April 2008 aged 47. Double Springbok in sport and has an invention in TOP 10 in RSA. Has appeared on many TV shows and was Runner-up Entrepreneur in business and was nominated for Hon Dr in Engineering. A product of Grey College in Bloemfontein.

Our Daughter Jeanette is keeping Graeme's legacy on the go and is involved in running several Companies and is our tower of love, support and strength in the recent few years when Joan and I were ill simultaneously. My family has supported me over the years and at times put up with me, when ham radio was so entrenched in my life, that it took much of my spare time. Now that I have reached #1 DXCC Honor Roll, I can spend more time with my family and friends and also "planting roses." Hi !

I will never forget our own SUNSAT satellite. Seeing it on the workbench in Stellenbosch University, where it was constructed and then dispatched to Vandenberg in the USA for launching into space and a few months later, talking to other radio amateurs, ME using a hand held on 2M, while it was over our foot print area. The greatest moment was arranging for Chuck Brady 3Y0C who used a hand held walkie talkie on Bouvet Island, to contact Cape Town radio amateurs, ZS1AAZ and ZS1DFR in an historic first, in the year 2000, via SUNSAT satellite using the parrot repeater method on 2 meters.

Joan and I have visited several friends overseas and some have been to visit our home. I have many interesting stories to tell and the one that stands out in my memory was reacting to a MAYDAY call from the SANAE base in the Antarctic, where one of our own countrymen was seriously injured in an accident and medical assistance was sought over the air. This was successfully done but sadly he died from his injuries a few hours later.

Three months of being the Pilot for Chuck Brady N4BQW / Bouvet Island 3Y0C (read the 3 Yankee Zero Charlie story on my website www.qsl.net/zs1au) to the sea rescue in the Indian Ocean of a Russian craft drifting a few hundred miles off the coast of Australia ; supporting that great yachtsman Bertie Reed ZS1LP /mm around the world yacht race and aeronautical mobiles flying around the world. Then to make contact with the great DXpeditions such as the Scarborough Reef BS7H of 2007, and Peter 1, 3Y0X of 2006, was a sense of achievement and great satisfaction. Many VISITORS to my shack can be seen on my WEBSITE ... http://www.qsl.net/zs1au under Image Gallery in the index. Amongst these are Astronaut Dr Chuck Brady 3Y0C / N4BQW and Bob Allphin K4UEE our world famous Dxpeditioner with over 50 DXpeditions that he has carried out all over the world. Bob was inducted into the Hall of Fame in the USA. I was privileged to have had these great radio amateurs visit me in my shack.

SADLY JOAN SUCCUMMED TO BREAST CANCER AFTER A 6 YEAR BATTLE, BRAVELY BORNE, ON 18 AUGUST 2017.

REST IN PEACE MY DARLING.

Some very special CERTIFICATES and AWARDS which were accumulated over the years ;

I have been a member of the (SARL) South African Radio League since 1947 and as from January 2011, joined the (ARRL) American Radio Relay League as a token of appreciation of the support and the work they do for DXers and for what is recognised as the greatest DX award, the DX Century Club with The Honor Roll as being the pinnacle of the DX achievement and the #1 HONOR ROLL being amongst THE TOP IN THE WORLD.

Some of my proud moments and awards are ; The WAZL (only ZS) , The CALGARY Stampede City Award (only ZS), Christchurch Garden City Award (only ZS).The first Mobile to Mobile / Continent to Continent and awarded The Barney Joel Mobile Trophy in 1973.

Hunting Lions... 5th in the WORLD in 1990.

In 1991 the Top Local Official of Lions International, BOB OPPERMAN ZS1ABO, informed me that I was lying 1st in the WORLD, when it was ruled "A NO CONTEST " due to loss of some of the logs in Argentina and I was subsequently placed 1st in ZS.

Several SARL contest awards ; AKYAB, Fred Mills 1989, Joseph White Trophy 1958, 1959 and 1967, and SSB Contest Winner Division 1, in 1989.

Winner of The Leeb Du Toit trophy in the Mobile section of the 80, 40 and 20M SARL PHONE contest in 1960.The following year 1961, I was runner-up to a ZS3 / mobile and since then the Trophy has disappeared. ??

RADIO ZS AWARD ; Gary Immelman ZS6YI RA Heritage Trophy and Gold Pen, in 2008.

In November 2014 was surprised to find that I had made it to WAZS 100 Phone and also the AAA (All Africa Award) both SARL awards.

On 26 July 2011, it was a thrill when ARRL DXCC published ZS1AU #36267 on the Honour Roll with 334 phone and 352 mixed.

At 0650 Z on 30th MARCH 2014, 3 yrs later, I WORKED MY LAST DXCC ENTITY.....MELLISH REEF VK9MT, 340/340 and GROSS TOTAL 359 Mixed and 358 Phone.

On 22 April 2014, ZS1AU appeared on DXCC list # 1 HONOR ROLL...MIXED and PHONE and my last QSL card for a FULL HOUSE (# 1 HR) from VK9MT arrived on Friday 13th June 2014.

My 1st DXCC application in 60 years of being on the air, came about as a result of submitting cards for scrutiny by the ARRL Field Checker, OM Tjerk Lammers ZS6P (now ZS1J) for the DXCC membership 2010. In 2014 I also obtained the WAS, ALL on PHONE, and ALL confirmed in QSL CARDS.
SHARING TOP of DXCC # 1 HONOR ROLL in the WORLD on MIXED and PHONE.

The 5th ALL-TIME ZS to reach #1 HR on PHONE and MIXED.

1st ZS1 to reach #1 HR on PHONE and MIXED on 22 April 2014.

TOP of ALL-TIME HIGH on DXCC list in AFRICA and ZS (active) # 1 HR 340/340 with 360 MIXED and 359 PHONE.

Worked All States (WAS) in December 2011, I received my last QSL card from Rhode Island, W1KDA, to qualify for WAS (Worked All States) and 1st endorsed with ALL on 20m SSB in ZS #56,939.

KOSOVO became a NEW DXCC ENTITY as from 21 January 2018 and I had a contact on 23 January 2018 on 20M.

On 10 April 2018 with LotW, # 360 DXCC Mixed entity is confirmed on ARRL DXCC list and later received the QSL card, to have all 360 confirmed in hard copy QSL cards

I have been asked about my station and all I can say is that I live on a "postage stamp" size Plot, in a Suburb of the CITY of CAPE TOWN. We have Municipal legislated antennae restrictions with a maximum height of 15m. All my transmitters were Homebrew and it was in1960 that I purchased my FTdx 100 and started SSB into a GP. In 1973, I got the FTdx560 @ 280w. In 1980 I put up a TA33 on a 15M self-standing tower. I later acquired the TS430S and a COLLINS 30L1 @380w into a 204BA. In 1990 I got the TS440S. In 1994 we moved QTH to the Suburb of Durbanville in Cape Town, some 30 kms from the city centre and Table Mountain. The same 204BA and the addition of the hygain DB1015 and a 1/2 G5RV sloper was erected, where we are at 923 feet a.s.l. on the slopes of Durbanville Hill, with a northern 180 degree window. In 2010, I swopped my Collins 30L1 for the Yaesu FL2100Z @ 380w and continued to work my regular skeds with Friends all over the world and got many DXCC entities in my LOG.

Many DXers in the World consider the #1 HR as impossible due to some DXCC Entities that have not been on the air for decades due to various reasons, and appear insurmountable and IMPOSSIBLE to get in the LOG.
I have just proved that IT IS POSSIBLE.

In the year 2016, the maximum output power in ZS was increased to a Maximum of 1 KW.

I never reached 400 watts (380 watts, YES) in all my 70 odd years. I believe in MIRACLES, so can you.

Served on the Committee (vice Chairman) of the Oakdale Club Amateur Radio Section, who applied for the SPECIAL LICENCE (request to ICASA for ZS1RSA) to permit "our local boy", MARK SHUTTLEWORTH, from our suburb, Durbanville in Cape Town, the SECOND Civilian Astronaut in SPACE, to operate AMATEUR RADIO from the ISS (International Space Station) on the 2 meter band.

The callsign ZS1RSA was apparently considered as being an "aircraft " in space by ICASA, so the # 1 was dropped and it became ZSRSA.

Cosmonaut Mark Shuttleworth spoke to scholars in his old school (Bishops) and local radio amateurs in Cape Town, South Africa, on 2 M FM as Mark passed over Cape Town in the ISS. This received NEWS coverage, including LIVE TV in South Africa and the World.

If I had to single out 2 very special contacts and the QSL cards to confirm it, it would be, firstly ZL4AQ, OM Tom, in Dunedin on14 mhz and me using a homebrew AM rig and a GP antenna, in October 1952. ZL was considered to us the rarest of them all and this contact made us in South Africa aware that New Zealand was now a possibility. I now have in excess of 1000 ZL's in my log, nearly all on SSB and most of them remarked that I was their first ZS and some after being on the air for 40+ years. The oldest radio amateur in ZS at the time and one of our pioneers of broadcasting, Peter Gilmour ZS1K, in his 90's, heard the QSO and told me that it was the 1st New Zealand station he had ever heard and my father in his years had never heard one. The path from Cape Town to New Zealand, 160 degrees over the Antarctic, 0700z and 1900z, on14 mhz.

The second very special contact and only recently in March 2011, with Sable Island CY0/N1SNB/N0TG, was also VERY SPECIAL. I needed CY0 / Sable Island to get on the Honor Roll. My PC had crashed and I had no DX Cluster or means of e-mails, so I used ESP. At 1900z on the 11 March 2011, I gave a very short call for "Randy" on 14190, a true SHOT IN THE DARK, because I had no idea where they were. Sable / N1SNB and N0TG was listening at that precise moment and the contact was made on Simplex.

MANY THANKS to Randy and Jeff for this much needed entity and being on the right freq at the right moment.
It was so SPECIAL that Randy N0TG has told THIS STORY at DX conventions in many parts of North America, during his talk on his successful DXpedition to SABLE Island, after their several attempts, due to aircraft problems and then very bad weather. This contact was a thrill of a lifetime.

On 10 August 2004 at 11:16 am, ZS1AN om Andrew Roos (now ZS5U) and ZS1AU, with technical support from ZS1AX and monitoring by ZS1TX and ZS1BSD, made the FIRST successful DIGITAL VOICE contact using HF, in the SOUTHERN HEMISPHERE using the 10m and 15m bands. Other contacts followed with signals on 20m being copied in Europe and by ZS6BUJ.

DXing and ragchewing are now my main interests at the tender age of 91+ 6/12 (Deo Gratius) Dob 7 December 1928. My activity is to encourage DXing in Southern Africa, with news gathered from various sources especially with the support of our great DXer friend, DXpeditioner and editor of QRZ DX, Carl Smith N4AA . Sadly OM CARL SMITH became a Silent Key on 20 October 2017. RIP Carl, you were a great radio amateur and friend and a very brave man.

On 1 July 1947, I became a member of the Cape Town Branch of the SARL together with my friend Artie Perold ZS1HL.

On the 1 July 2020, it will be 73 unbroken years as a SARL and CTARC member and counting.

On the 26 July 2020 it will be 70 years as a licenced radio amateur operator and with my late Fathers 20 years combined totals will make for 90 Glorious Years, which I have enjoyed.

It appears that I will be forced to hang up my (gloves ?) MICROPHONE SHORTLY.

My cardiologist told me that I am like an old vintage motor car ……engine is ticking over nicely…..body is in fairly good nick and there is no RUST. A few days ago I had to visit the Dermatologist and he told me that he has removed the RUST.

73 de Dennis ZS1AU

(This edited version of Dennis' biography has been put together with his permission and blessing. Thank you for all that you have given to Amateur Radio—Ed AWASA)

Crystal Receivers

(As a result of a discussion topic on the AWA SSB net, I post this introduction to Crystal Receivers from "The Boys Book Of Crystal Receivers". This book is available in PDF format for those who may wish to still try some homebrew experimenting)

Before any attempt is made to construct a receiver. it is necessary to examine the problems which surround the crystal set, so that the best can be obtained from any of the designs attempted.

Firstly. it must be understood that the crystal set as it is to-day does not provide any amplification. It relies entirely on what is fed into it via the aerial and earth system and gives a very faithful replica of the original transmission.

From this it will be obvious that the aerial and earth system must be as efficient as possible if the final results are to be in any way outstanding. This because these are the only means by which the signals are fed to the receiver.

Secondly it is necessary to understand the nature of the transmitted signal, then it will be easy to understand the working of the set and to appreciate the function of each of the components.

When crystal sets first became popular, very little information was generally available, at least, not in a form that school-boys could understand.

We all built sets of all shapes and sizes, with coil designs that had to be seen to be believed, but very few of us had much idea of how they worked.

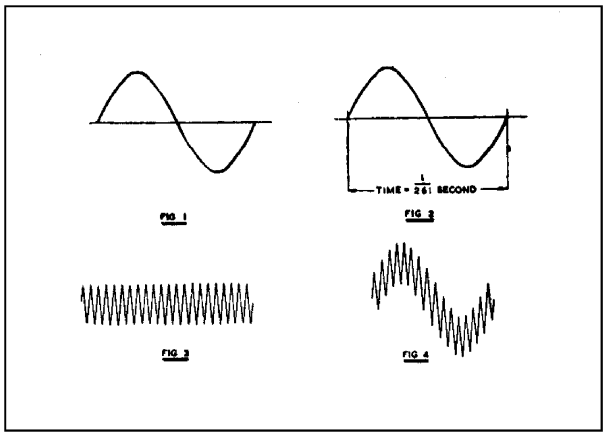
I well remember the case of a cousin of mine who, in those days acquired a magnificent variable capacitor or condenser as it was then called. This instrument had a most impressively engraved dial of polished ebonite, brass vanes and nickel plated end plates. Having observed similar dials on several highly priced commercial receivers in the town, he at once ripped out the somewhat tattered coil from the family receiver and replaced it with this device. The profound silence which ensued caused considerable amazement and dismay until a better informed adult explained the mysteries of L and C to him. Readers of this manual, however, will be better informed and there is no risk of failure with any of the designs described provided the instructions arc carefully followed.

The Signal:

To commence, we will assume that an orchestra is playing in a broadcasting studio. Since the principle of radio transmission is electrical it is necessary to change the sound produced by the orchestra into an electrical equivalent. This is carried out by the microphone. which picks up the sound and changes it into minute electric currents.

As they appear at the output of the microphone they are too small to be of use and accordingly are passed through a high power amplifier. These amplified currents could now be transmitted, but unfortunately, as we shall learn, owing to the inherent nature of the signal in this state, transmission over any useful distance would be impractical.

When the music from the orchestra is transformed into electrical currents they are in the form of alternating currents, usually called AC , that is they rise to a maximum in one direction. fall to a minimum. rise to a maximum in the opposite direction and then fall to minimum again. This process is repeated over and over again. One complete rise and fall in .each direction is called a cycle and is drawn in Fig. 1. Every time a note is struck: on a piano. vibrations are sent out which reach the ear enabling you to hear it. These vibrations are also spoken of as cycles. they rise and fall in intensity the same way as an alternating current, The number of cycles radiated by any given note over a period of one second arc referred to as its frequency. Middle C on the piano sends out 261 cycles every second and is known as having a frequency of 261. The microphone also "hears" the note and in the case of middle C produces minute A.C. at 261 cycles. This can be drawn as in Fig. 2. the only difference between Fig. 1 and 2 is. that the time factor is given so that the frequency can be identified. The higher the pitch of a note the higher the frequency and the lower the pitch the lower the frequency. On a piano the frequency of the top note is 3515 cycles and that of the lower 27 cycles. Those of you who have listened to an organ in a concert hall will have noticed that when a very deep note was played. it sounded like a growl to the ear. but the vibrating frequency could be distinctly felt through the seat. Higher notes have too high a frequency to be observed in this manner.



The range of sounds which can be detected by the human ear are known as audio, or low frequencies. From this you will understand that a low frequency amplifier is one which amplifies sound.

So that the transmitter will carry the programme over a useful distance it is necessary to radiate high frequencies. Now, as explained, the programme to be transmitted consists of low frequencies, and to overcome the difficulty, the transmitter generates A.C. of

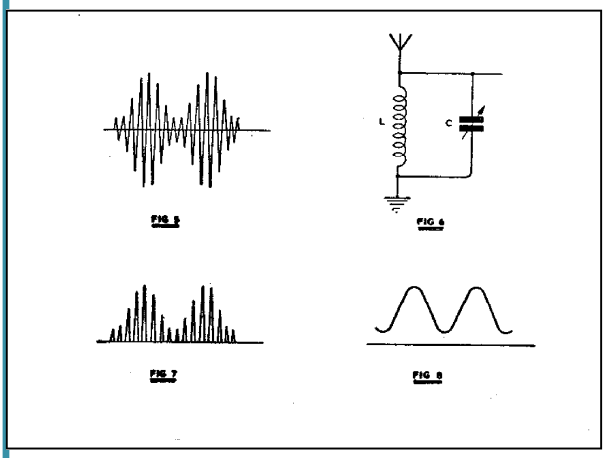
high frequency and combines it with the low frequencies. It will now be understood that the transmitted signal consists essentially of two different parts, a high and a low frequency content.

Fig 3 gives a representation of the high frequency signal generated by the transmitter. In the case of the London Home Service. the frequency is 908000 cycles.

When referring to a high frequency signal on the medium or long wave-band it is usual to express the frequency in thousands of cycles, thus 908000 cycles becomes 908 kilocycles, which may in turn may be abbreviated to 908 k/cs. It might at first be thought that by adding the low frequency or L.F. signal to the high frequency or H.F. carrier a form such as in Fig- 4 would result. Such a combination will be useless and, so that the original L.F. content can be satisfactorily extracted by the receiver the L.F. signal must vary the amplitude or output power of the H.F. signal as in Fig -5.

It is in this form that the signal arrives at the receiving aerial. The aerial in itself is incapable of discriminating between one signal and another. and countless signals will be collected by the aerial at any one time. Many of these are too weak to be of use but the stronger ones must be sorted out since there is no point in receiving several programmes at once.

Fig. 6 shows-the basic circuit of the input to a crystal. The coil L possesses a quality known as inductance. and the capacitor C. that of capacitance. If the coil had no capacitance whatever across it. all signals arriving at the aerial would be effectively short circuited to earth. As a matter of interest, it is impossible to obtain this state of affairs since even without any additional capacitor any coil may contain a certain amount of self capacitance.



By combining a coil and capacitor as in Fig. 6 a peculiar effect is observed. at one particular frequency. the signals are not short circuited to earth. but are developed across the coil. In other words the combined effect of L and C no longer provides a short circuit but only at one particular frequency. If the value of C is altered the effect will be observed at a different frequency; likewise by altering L the frequency at which the effect will take place can be changed. There is a name for this phenomena, the frequency at which it occurs with any given L and C combination is known as the resonant frequency.

The values of the coils and capacitors shown in this manual have been carefully chosen so that resonance will be obtained at all frequencies where stations are broadcasting. Broadcasting stations work in bands of frequencies. those of major interest to crystal set constructors are the medium wave-band 1200 k/cs, 600 k/cs and the long wave-band 300 k/cs to 150 k/cs.

Usually a variable capacitor is used with a fixed inductance to cover one band and an additional coil switched in to increase the Inductance to cover the other. In this way the L and C combination can be adjusted to provide resonance at the desired frequency of any given station. In other words you can select the station you want by varying C, that is turning the dial of the variable capacitor. This procedure is referred to as tuning. Having selected or tuned the required station it still remains necessary to change the form of the signal back to that of the original transmission. This process is called detection or de-modulation.

Examination of Fig. 5 will show that the signal has been duplicated. in other words. as it rises in one direction it also rises equally in the other. In this form the signal is useless since each half of the signal cancels the other. and if this signal is applied to a pair of headphones silence will result. Obviously some provision must be made to get rid of the unwanted half of the signal. and it is here that the crystal detector must be considered. This device will pass current in one direction only, ignoring any signal in the opposite direction, so that if the signal of Fig. 5 is passed through such a crystal, that of Fig. 7 will result. There is still the H.F. content to be reckoned with. fortunately this is easily dealt with. A capacitor connected across the headphone terminals electively disposes of this, leaving only the audio or L.F. content. as shown in Fig. 8. This audio content. which is a faithful replica of the original transmission is fed to the headphones. Those in turn reverse the process of the microphone and transform. the electrical currents into sound waves acceptable to the human ear.

Briefly then. your requirements are as follows:-

(1) A good aerial and earth installation to make the most of the available signals.

(2) A receiver containing:-

(a) Some form of coil and capacitor (L & C) combination to select or tune in the wanted station.

(b) A crystal to get rid of the unwanted half of the signal (detection).

If you examine the following circuits you will find that each one is different. In most cases the difference lies in the coil design and/or the method by which the crystal and aerial is tapped into it. Each of these circuits has its own particular advantage to suit different conditions and the ideal circuit in some localities is not necessarily the best in others. It is not just a matter of a·

given circuit giving louder results than another. if it were there would be no point in showing more than one.

The main problem is to obtain adequate selectivity without reducing the volume level.

A receiver is said to be selective when it tunes sharply, a set with poor selectivity allows the stations to spread over the dial and when used near a transmitter will receive the local stations mixed together. which of course is useless.

Consider Fig. 16a. this is a very simple receiver. with no special attempt to provide any great amount of selectivity. In areas where signal strength is not high, or a short aerial is used. it will probably be ideal.

Capacitor Cl is to prevent the aerial damping the circuit too heavily because this would flatten the tuning unnecessarily, however with small aerials it may be better to take the aerial direct to the black tag on L 1. The signals are selected or tuned by Ll and C2. Xl is the crystal and C3 the capacitor across the phones to prevent unwanted carrier or R.F. reaching the phones.

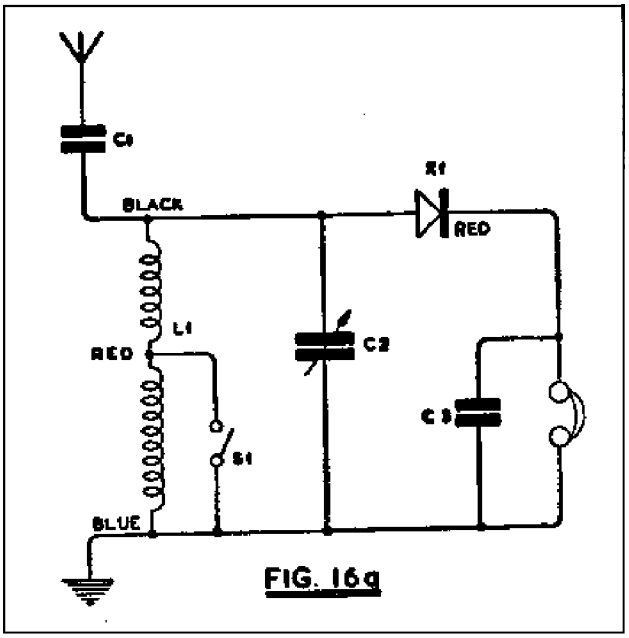


FIG. 16a

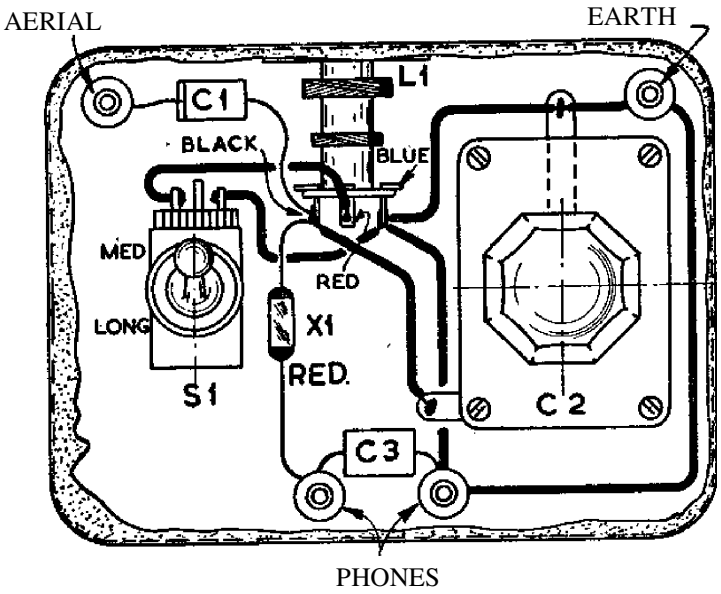
A practical diagram (Fig. 16b) is provided showing the layout and all the wiring. You will require nuts and bolts to fix the coil, about 1/2" 4BA size will do, the other parts have locking nuts provided. An old 2-oz. tobacco tin makes a very good container and keeps the size down. Note that the metal box is connected to earth. With the exception of AC/DC receivers the metal work on any receiver or amplifier is connected to earth.

When S1 is open as in the diagram, the set will tune in long-wave stations. but when closed the medium wave-band will be received.

Components L~ Fig. Hill
Cl l00pF mica capacitor. .
C2 500pF tuning capacitor, solid dielectric. C3 1000pF rica capacitor.
X 1 Germanium crystal.
Ll Crystal Set Coil. R.E.P.
S 1 Single Pole toggle switch.
4 Insulated wander-plug sockets and plugs.
1 2-oz. tobacco tin (or similar container).

Make sure that the wander-plug sockets are of the insulated type. otherwise the metal case will join all the sockets together electrically.

Try to follow the theoretical diagram when wiring, a little practice will soon enable you to wire up a set without a practical diagram. which is a great advantage because often only the theoretical diagram is given when circuits are detailed in the technical press.



CONTACT US:

P.O. Box 12320
Benoryn
150

Mobile: 082 448 4368
Email: andyzs6ady@vodamail.co.za

Get your backdated issues at
http://www.awasa.org.za/index.php/newsletters

Visit our Website:
www.awasa.org.za

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. Join by logging in to our website.

Notices:

Net Times and Frequencies (SAST):
Saturday 06:00 (04:00 UTC) —AM Net—3615
Saturday 07:00 (05:00 UTC) —Western Cape SSB Net— 3640
Saturday 08:30 (06:30 UTC)— National SSB Net— 7140; Sandton repeater 145.700
Echolink—ZS0AWA-L; ZS6STN-R
Relay on 3615 for those having difficulty with local skip conditions.
Saturday 14:00 (12:00 UTC)— CW Net—7020; (3550 after 15 min if band conditions not good on 40)
Wednesday 19:00 (17:00 UTC) — AM Net—3615, band conditions permitting.

AWASA WhatsApp group:

Should you want to get on the AWA WA group where a lot of technical discussion takes place, send a message to Andy ZS6ADY asking to be placed on the group. This is a no-Nonsense group, only for AWA business.
+27824484368

Below Listed items for sale and Giveaway:

Contact:
Stafford Smithies
stafford@smithiesfam.com
082-785-0195

Free items:

BC348 - valves test okay but there seems to be a problem with the power supply module. Astonishingly well built!

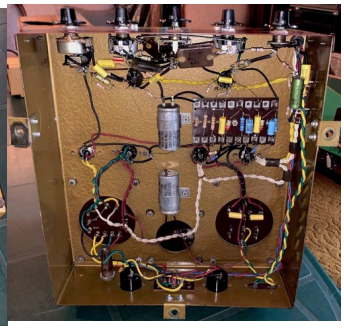
The Triaxiom and Axiom are essentially the same but there is a horn tweeter on the Triaxiom.

Wharfedale W12 and super 3 tweeter.

Goodmans 950 Hz crossover and Elac tweeter.

For Sale:

Original Osram/GEC 912 sound system fully rebuilt. It has the Collaro 2010 (3,3kg) turntable and original metal cone loud-speaker with presence unit. The sound is superb and it is an attractive French-polished piece of furniture.
Included: spare valve set; tuner; original handbook; spare Goodmans speaker. R5000 o.n.o.



Handbook cover.