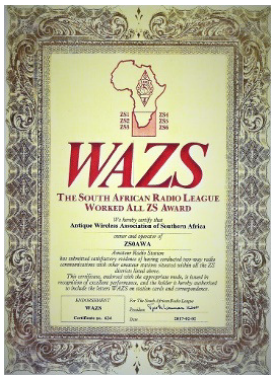
Newsletter

The Antique Wireless Association of Southern Africa

 # 169 **August 2020**



Inside this issue:

AWA Committee:

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

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Reflections:

The time has come the Walrus said….. Already we find we have passed the halfway mark. The sun is coming up a minute earlier every day, the days are getting longer and the warmer weather will be upon us sooner than we can think.

It has been a cold and long winter, well for SA anyway, but one of the colder ones to go down in the annals of wintry weather. The bands have virtually gone to pieces and there is very little activity. Or at least it seems that way.

The ardent CW'ers have not given up, and strive towards hitting their 4 calls per day, Sometimes even using QRP in these conditions that many would not even venture into.

I monitor the digital bands often, and say what you like, there are many stations here in SA and abroad still going hammer and tongs making contacts all the time.

Should we be talking digi modes at all ? Well I would rather keep myself busy with digi modes than not do any radio at all. I don't have space in my cupboards to pack my rigs away until the bands improve.

Phone is very scarce these days and CW is actually heard more than phone is.

Amateur radio is a long way from being dead, and I'm not just saying that about overseas countries, but even here in Sunny SA.

I do believe that we have reason for concern when one looks at the demographics of Amateur Radio, being there is very little young blood coming in, to possible be able to sustain the whole spectrum, but then there are a lot of middle agers who are saying they always wanted to be involved in Amateur radio, and now is the time to do it. Maybe we are looking in the wrong area to be enticing people.

My feeling is, there will always be someone whom the bug will bite and they will eventually take it up. Its more infectious than Covid.

Just look at the amount of people who have written the ARE over the last few years and see how many are now active radio ops.

Maybe I'm being a bit naïve about the whole story and there probably will be some genius who will be able to quote the declining figures and give all the percentages and state the figures, but I have a gut feel for this. (Not a tummy rumbling either)

But as with many, things I have been proven wrong before, I could probably be proven wrong again. But I'm prepared to accept that.

For the time being, don't let your depression get the better of you . Get out there and cause some QRM on the bands and see who comes back to fight with you. Then you can have a good old ragchew and solve all the problems of the bands and sunspots and weather.

Best 73

DE Andy ZS6ADY

Wikipedia

Radio Propagation:

Rain scattering:

Rain scattering is purely a microwave propagation mode and is best observed around 10 GHz, but extends down to a few gigahertz—the limit being the size of the scattering particle size vs. wavelength. This mode scatters signals mostly forwards and backwards when using horizontal polarization and side-scattering with vertical polarization. Forward-scattering typically yields propagation ranges of 800 km. Scattering from snowflakes and ice pellets also occurs, but scattering from ice without watery surface is less effective. The most common application for this phenomenon is microwave rain radar, but rain scatter propagation can be a nuisance causing unwanted signals to intermittently propagate where they are not anticipated or desired. Similar reflections may also occur from insects though at lower altitudes and shorter range. Rain also causes attenuation of point-to-point and satellite microwave links. Attenuation values up to 30 dB have been observed on 30 GHz during heavy tropical rain.

HF Happenings:

Calendar:

August
2 – SARL HF Phone Contest
9 – National Women's Day and the SARL YL Sprint
10 – Public holiday and the SARL Youth Sprint
12 - International Youth Day
12 to 13 - Perseids meteor shower
15 - SARL 95 40 m Club Sprint and Victory in the Pacific Day (WW2)
16 – SARL HF Digital Contest
18 - Highway ARC meeting
19 - World Humanitarian Day
22 - the AMSAT SA Virtual Space Symposium and the AGM of the Namibian Amateur Radio League
22 and 23 - International Lighthouse and Lightship weekend
30 - SARL HF CW contest

The SARL HF Phone Contest on Sunday 2 August

The aim of the SARL HF Contests is for participants to contact as many amateurs in Southern Africa as possible on the 20, 40 and 80 m amateur bands. There are three contests during August.

On Sunday 2 August, from 14:00 to 17:00 UTC, you can participate in the HF Phone contest. The exchange is a RS report and a serial number starting at 001. You can participate as a Single Operator Single Band, a Single Operator All Band, a Multi Operator Single Band or a Multi Operator All Band station. Multi operator stations do not have to operate from the same location, each operator can operate from his own station (health regulations.) MOAB stations may have a separate serial number per band.

Each QSO counts 1 point. Each call area (8) worked per band counts 2 points. The same station worked on 80, 40 and 20 metres counts 2 points. The highest score will receive the Silent Keys Memorial SSB Trophy, while the highest score on a single band will receive the Joseph White Trophy. If you wrote the RAE in November 2019, then you stand a chance to win the AKYAB Trophy - the highest score during your first year on phone. There is a trophy for the Youth and the YLs which will be awarded after all three contests have been completed.

Submit your log in ADIF or Cabrillo with a summary sheet or make use of the downloadable MS Excel spreadsheet. The logs must reach the Contest Committee at zs4bfn@mweb.co.za by no later than 23:59 CAT on Sunday 9 August. Turn to page 35 of the 2020 Blue Book.

The Results of the Winter QRP Contest

11 logs were received for the Winter QRP Contest held on Saturday 18 July. Two of the logs were check logs.
1st Danie Schnetler, ZS6DPS – 160 points
2nd Kobus Boshoff, ZS6BOS – 100 points
3rd Dienie Schnetler, ZS6DNI – 48 points
4th Theuns Potgieter, ZS2EC – 28 points
5th Jack Kotze, ZS6JJK and Veronica Kotze ZR6TVK - 16 points
7th Romeo Nardini, ZS6ARQ - 7
8th Gert du Plessis, ZR6GRT - 5
9th Johann Bezuidenhout, ZS6JBZ -
4 Check logs
Paul Schoeman, ZS2PS and Phillip van Tonder, ZS6PVT

The Results of the ZS 2 Sprint

A big THANK YOU to all who took part and submitted a log for the ZS2 Sprint held on Sunday 19 July. We trust you all had fun. Perhaps next year we will have a few more logs submitted as there were a number of people just "giving away points." A total of 770 QSOs were made – 143 of them with ZS2 stations. This is 19%! Thank you! 31 logs were received, but fortunately due to a few tie positions, everyone managed a top 30 finish! Clearly working the club call stations is the way to get ahead in this contest!

The PEARS had two participating "club call signs" taking part. ZS2PE the official club call sign, and ZS1820S a special event call sign of the PEARS to commemorate the 200 years of the British Settlers arrival. Both of these stations were kept busy – mostly because they were worth points each! ZS2PE came out on top with operator Mitch Rundle, ZS2DK putting in a staggering 82 QSOs in the 60 minutes. Theunis, ZS2EC operating the ZS1820S call sign also made a top 5 listing! Apart from Mitch, they busiest station was Sybrand Cillie, ZS1SJ who logged 59 QSOs! Another station worth a mention is that of Shaun Gilbert, ZS2SG with his 71 points putting him in 5th position in his first ever contest! Well done Shaun!

The PEARS would like to thank everyone who took part and helped make this a really great contest and to invite you to put the event on your calendar for next year!

1st the Port Elizabeth Amateur Radio Society, ZS2PE – 161 points
2nd Dave Higgs, ZS2DH – 100 points
3rd Andre Le Roux, ZS2AL and Barry Nugent, ZS2NF - 98 points
5th Shaun Gilbert, ZS2SG - 71 points
6th Port Elizabeth Amateur Radio Society, ZS1820S - 67 points
7th Charles Le Roux, ZS1CF - 64 points
8th Sybrand Cillié, ZS1SJ 63 points
9th Anthony Williams, ZS6WT - 45 points
10th Deon Fraser, ZS5DCF - 42 points
11th Helmar Otto, ZS1H - 41 points
12th Phillip van Tonder, ZS6PVT - 40 points

ILLW on 22 and 23 August
The 2020 Lighthouse and Lightship weekend has not been cancelled because of the Lurgi-19 regulations, it will be held on Saturday 22 and Sunday 23 August at a lighthouse near you.
On page 49 to 51 in the August 2020 issue of Radio ZS, you will find a list of Namibian and South African lighthouses. And information about the 2020 Southern African Lighthouse Award!
The easiest lighthouse to activate, I think Umhlanga Rocks!

The FINAL Results of the SARL Wednesday 80 m Club Sprint
1st the West Rand ARC – 838 points (20 logs)
2nd the Boland ARC – 548 points (13 logs)
3rd the Bo-Karoo ARC – 410 points (9 logs)
4th the Hibiscus ARC – 138 points (2 logs)
5th the Northern Cape ARC – 42 points (1 log)
6th the Rustenburg Branch – 20 points (1 log)
Combined score after 4 legs
1st the West Rand ARC – 3 521 points
2nd the Boland ARC – 3 123 points
3rd the Bo-Karoo ARC – 1 114 points
4th the Hibiscus ARC – 565 points
5th the Magalies ARC – 387 points
6th the Bloemfontein ARC – 232 points
7th the Cape Town ARC – 170 points
8th the Sandton ARC – 152 points
9th the Northern Cape ARC – 123 points
10th the Rustenburg Branch – 84 points
11th the Vrystaat ARC – 64 points
12th the Lichtenburg ARC – 37 points
13th the Highway Arc – 32 points
14th the Secunda ARC – 18 points

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)
Uganda, 5X. Shabu, M0KRI will be back on the air as 5X1RI between the end of July and mid-August. QSL via M0KRI, direct or the bureau.
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

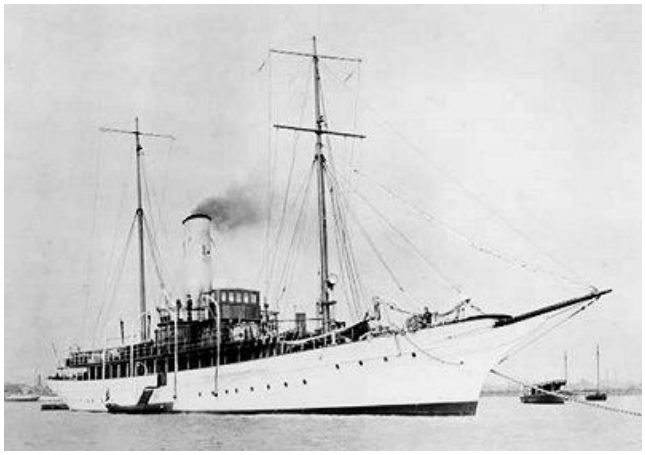
MARCONI & ELETTRA

"Elettra" the yacht

It was aboard the original Elettra (yacht), which Mr. Marconi bought in 1919, that the scientist explored short-wave radio and radar, perfecting the process he used in 1901 when he sent the first Morse Code letter, a faint "S," across the Atlantic Ocean.

In 1922 Marconi made his first Atlantic crossing in the "Elettra".

Guglielmo Marconi, so adored his research ship that he named a daughter after her - Elettra - instead of the other way around. The ship, which the scientist used as home and laboratory, was destroyed in World War II, and a piece of Mr. Marconi's history was lost with it.



As part of the Museum Ships Weekend (June 2-3, 2018). members of the A.R.I. Fidenza Radio Club (Italy), sponsored by the Guglielmo Marconi Foundation, using callsign II4AMP activated Elettra for the sixth time. The station is close to the remains of the keel of Guglielmo Marconi's yacht 'Elettra', which is kept at the Museum. The event allows radio amateurs around the world to make contact. http://www.seefunknetz.de/ibdk.htm

The book "Wireless at Sea - The first 50 years" (by HE Hancock, 1950)

For this picture - Origin: USA - there is the following description:

"This photograph shows Miss Eleanor Steele of Schenectady, NY , radio operator on Senator Guglielmo Marconi's own radio outfit on board his Elettra, while cruising down the Hudson to Albany, New York, 1922. This is a very unusual photograph, in that being a radio operator was considered an extraordinarily masculine job in the 1920's.

MARCONI Wireless On Cape Cod

In 1900, Marconi set up a high-powered transmitting station at Poldhu, on the English coast at Cornwall and in 1901 he built a wireless station at Signal Hill, Newfoundland and on Cape Cod, Massachusetts. Storms blew down the aerials at Poldhu on September 17, 1901 and those on Cape Cod on November 25th. Marconi received the first transatlantic signal - the three-dot Morse code letter "S" tapped out from Poldhu on December 12th, 1901 at the Newfoundland station.

On January 18, 1903, President Theodore Roosevelt's message was tapped out in Morse

code from South Wellfleet (Cape Cod) to King Edward VII at the Poldhu station. It was to be the first two-way trans-atlantic communication and the first wireless telegram between America and Europe.

Princess Elettra - Cape Cod, May 31,2018,

Princess Elettra Marconi

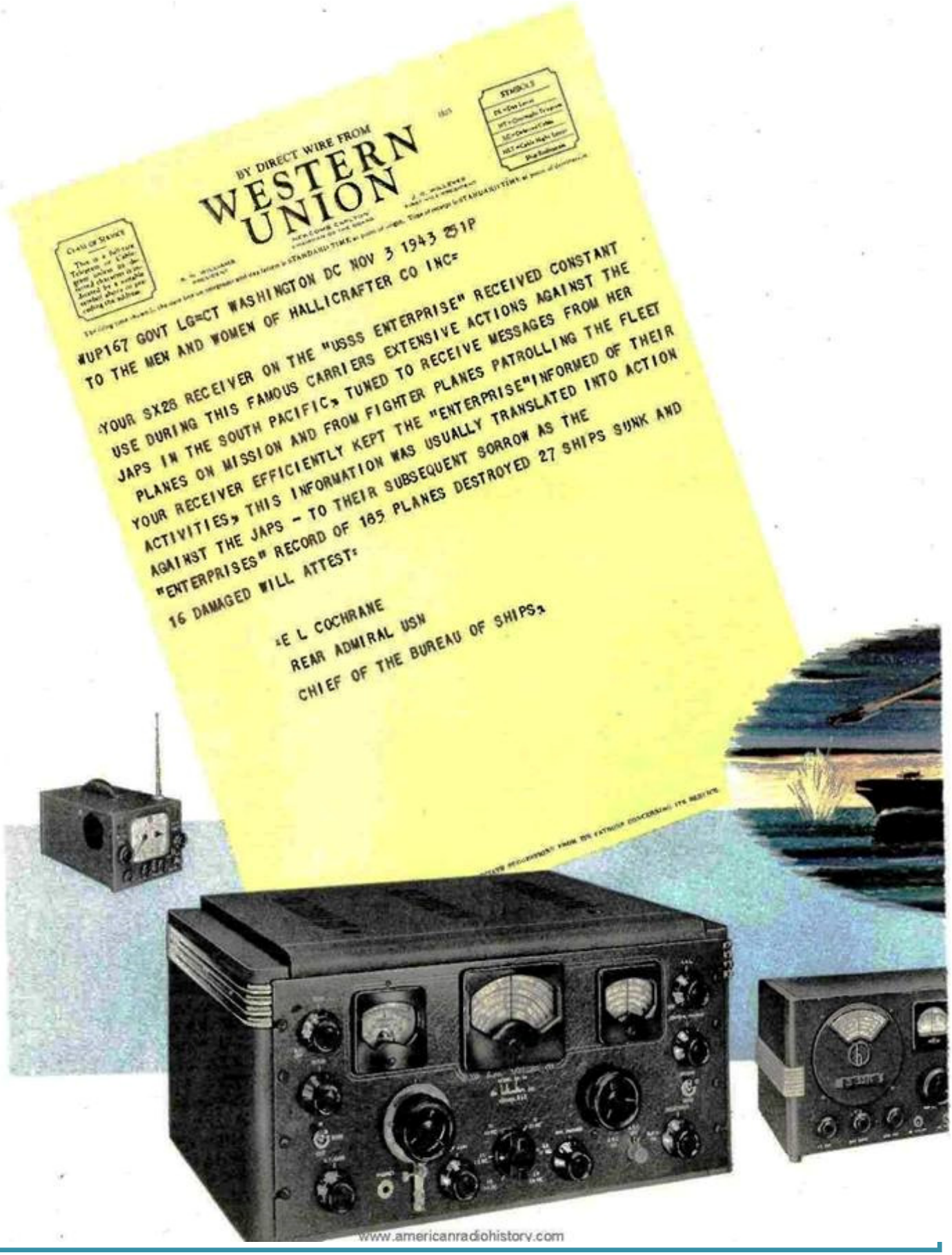
Princess Elettra Marconi Giovanelli of Italy, born in 1930, was the daughter of Marconi and his second wife, Maria Cristina Bezzi-Scali. She inherited the Palazzo Marconi in Bologna in 1936 when she was 6, upon the death of her uncle, Alfonso, one year before her father's death on her 7th birthday. She acquired the title of princess through marriage to Prince Carlo Giovannelli in 1966.

As the daughter of the renowned inventor and electrical engineer Guglielmo Marconi, who won the 1909 Nobel Prize for his pioneering work in the development of wireless technology, she has continued to help spread the story of her father and his influence to people all over the world.

Princess Elettra Marconi visited the site of the Marconi Wireless Station in Wellfleet on Cape Cod, on May 31,2018, where she was able to make radio contact with the Newfoundland site where Marconi received the letter "S" 1901 and made his first transatlantic wireless transmission to England in 1903.

Princess Elettra Marconi and KM1CC (Marconi Cape Cod Radio Club) made contact with VO1AA - SONRA (Society of Newfoundland Radio Amateurs) at Signal Hill, St. John's Newfoundland, Canada 2018 marks the 115th Anniversary of the first transatlantic message (1903-2018)

See: Km1cc - Marconi Cape Cod Radio Club (Facebook) for great pics and videos.
The 20th of July 2018, marked Princess Elettra's 88th birthday and the day her father died in 1937
– A special greeting from all YLs
YL#33 April 2016



Marconi Memorial Australia

In 1859 an undersea telegraph cable was laid between mainland Australia and Tasmania but was erratic and lasted only 3 years. In July 1906, a technological sensation occurred when the first official wireless message was sent 215 miles across the sea to Tasmania. In July 2006 a re-enactment commemorated this event. A cairn marks the site of the re-enactment.

Point Lonsdale is 101 km south of Melbourne, at Queenscliff on the Bellarine Peninsula, over looking 'The Rip', the entry to Port Phillip Bay from the Bass Strait. The Lighthouse is at the end of Point Lonsdale Road and the memorial to Marconi is located on the foreshore. [AUS] GPS: Lat: 38.275928 S Long: 144.618331 E

Marconi in Uruguay
http://g4usb.net/IMD/station-histories/uruguay-cw1gm/ By Carlos Casatti, CX1BE.

Since 1908 there was in Punta del Este, Uruguay a station from “Río de la Plata Wireless Telegraph Marconi Company”, its headquarters in Buenos Aires, Argentina. The station in Punta del Este, call sign was MMO, covered 500 Km. and used two wavelengths: one of 600 meters to communicate with ships and the other of 1700 meters to communicate with Berna, Swiss.

In 1910 Marconi travelled to the Río de la Plata region to install a radio station powerful enough to connect South America with Europe.

In Argentina, Marconi together with engineer Mr. Round, received the firsts signals from a distance more than 9,500 Km. First they received signals from U.S.A. and then from Ireland. This was a duplication of the first transatlantic transmission.

When the station in Punta del Este was closed, Buenos Aires was chosen for the Marconi telegraph network and by 1925 it was possible to send a telegram practically to any part of the occidental world. In memory of Guglielmo Marconi (1874-1937) a bust was unveiled on 16 January 2009, at Punta del Este, in Uruguay.

On 22/04/2006 – RSG (Radiogrupo Sur) Uruguay, held their 1st International Marconi Day (IMD)
CW1GM is their Special Callsign for Int. Marconi Day .

(This article was published in the YL Beam in Aug 2018—Thanks to Heather ZS5YL for the article)

The R206 Communications Receiver
The most robust receiver ever made (1943)

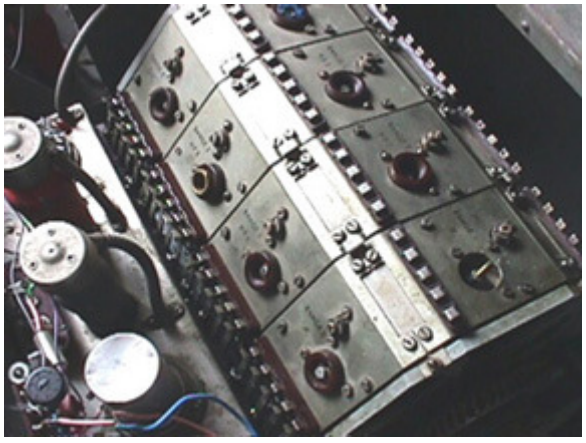
I bought the receiver depicted above in 1958, via a government surplus ad in Practical Wireless. I recall that it cost about £22:10:0 including carriage and it arrived in an enormous packing case on the back of a British Rail 3-wheeler truck. It's an early version known to aficionados as the MkI. A friend saw it and ordered one but when it arrived it turned out to be a MkII which had a standard semicircular dial like its cousin the R107. As far as I know the R206 was developed by the Marconi Company from a much earlier radio but I'm pretty certain that Cossor made this particular model in 1940. Personally, I think it's the best radio built in the period and has lots of intriguing design details. The valve line-up was the last word in what was available at the time and no expense was spared in construction to ensure stability. The front end uses a turret tuner like the ones that appeared in the first multi-channel TV sets. This example employs six sets of four wedge shaped copper boxes which fit together to make a massive drum. Each box carries a set of heavy rhodium plated contacts which mate up with springs on the back of the tuner module. The drum can be rotated by a large starting handle-like device on the front panel, which operates huge gearwheels via a chain similar to those found in Meccano sets of the same vintage. The six wavebands are as follows: -

Range 6: 0.55-1.1 Mc/s
Range 5: 1.1-2.2Mc/s
Range 4:, 2.2-4.8Mc/s
Range 3: 4.8-10.1Mc/s
Range 2: 10-20Mc/s
Range 1:20-30Mc/s

The tuning dial is a drum affair lit from an interior lamp and with its tuning condenser, which has specially shaped vanes, gives an excellent linear presentation of the bands. The two-speed tuning knobs have a built-in flywheel and carry a vernier scale giving superb resettability much like the HRO of the same period. Sensitivity is superb as the front end uses EF50 and EF37 RF stages, an ECH35 frequency changer and a separate EF50 oscillator. I must admit to never having studied an official circuit diagram but tracing the wiring shows that the RF oscillator has an earthed anode and employs the screen grid in the anode function. Both AF and RF gain controls are provided, and the latter is switched out when AGC is selected. The IF strip uses EF37s in three stages of amplification running at 465Kc/s and switchable crystal filters giving passbands of 8Kc/s, 2.5Kc/s and 900c/s.

On CW or MCW further enhancements can be made using audio filters down to a couple of hundred cycles with heavy clipping and noise elimination; the clipper giving a mellowing of the narrow band audio. The BFO is tuneable and uses a separate EF37.
The AM detector is an EB34 and also carries an AVC rectifier providing an input to a stage of amplified AGC. Audio output is via an EL32 to an internal loudspeaker carried in the matching power supply unit. Together the receiver and the power unit must weigh over a hundredweight although I must admit to never actually having weighed them. The oscillator has its own stabilised HT supply which seems to double as a tuning indicator, as it can be seen through a hole in the front panel of the power unit, and its neon glow changes with signal strength.

I found one weakness in the set which made me carry out modifications a few years after I bought it. There is strong pulling of the local oscillator when strong signals are received on the highest waveband. I found this out when I used the receiver as a back end to a nuvistor VHF receiver for 2 metres. I substituted a dual gate FET in place of the EF50 oscillator, which cured the problem. As the mod was done on an old EF50 base the new device merely plugged into the original valveholder so could easily be removed. Like all single-superhets of similar design, image rejection is poor because of the low IF frequency. I added an FM demodulator when narrow-band FM became the vogue on 2 meters and I removed a large plug-in plate, which carried the aerial terminals and made up a new plate with an S-meter and BNC aerial socket. I had a new style aerial - once a -



matching three-band long wave adapter for the receiver but this was long since cannibalised when I built a transmitter in its case.

Above: *R206 Hexagonal Turret Tuner Drum showing banks of 4 coil packs and the IF section with crystal filter module at rear* There are two crystal filters narrowing the basic 8Kc/s response down to 2.5Kc/s and 700c/s. Using the audio filter, operated by a toggle switch, reduces the bandwith on CW reception to a fraction of the minimum by adjusting the BFO heterodyne note to 900c/s.

All-in-all, a really serious receiver for which the recommended aerial in the handbook is naturally a rhombic...
Now... what's the size of a rhombic aerial for 50Kc/s? End to end it's between 5 and 6 miles long…

This is a picture of the R206 MkII with an LF adaptor unit. I don't yet have one of either. The LF adaptor covered three additional ranges

Range 7: 260-600Kc/s
Range 8: 115-260Kc/s
Range 9: 50-115Kc/s

A friend who now lives in the USA bought this model after he saw my MkI
I had the LF adaptor unit but sadly I dismantled it and built a transmitter in its case.
I recall one had to tune the R206 to 600KHz and plug the adaptor into the R206 aerial socket.

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Antique Wireless Association of Southern Africa

Mission Statement

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

Membership of this group is free and by association. 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
