



A Member of the SARL



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Newsletter

116

Oct 2015

Reflections:

After last months reflections on the changes in technology, there is an interesting article in this months edition of the Newsletter by Richard.

The changes that took place in the last years of valve technology were really interesting and of course led to the modern transistor.

Yet in the same time as these changes were taking place, the transistor was making its mark in some very fine rigs of the day.

How do we react towards these fine transistorised rigs that were built in the prime of valve technology and proved themselves to be as good, I hesitate to say better because I feel I would be betraying my loyalty to valves, but definitely as good.

Some would go so far as to

say they do not fall in the same league as valve radio's, but others would argue in favour of them and demand they be classified in the same category.

Personally, I have no problem with that, in order to maintain the peace in the camp, however my personal affection is towards valves.

Surely there are some out there who would like to defend the honour of the transistor from the early to late 60's. We have been approached on a few occasions as to why we favour valves when it comes to things like the AWA QSO Party for points scoring.

Could it be that valves came first and led the way to transistors ?

Maybe this is a thorny subject, I don't know, but I would really like to know

what others think about this.

I have never had anyone send me any articles on early transistor rigs or the development of these rigs so I must say that I am completely biased as none have convinced me otherwise.

The fact is that there are early model transistorised rigs out there that are still in good running order today and probably deserve more than a passing thought, more than the Hybrid rigs which were developed at a later stage

Maybe we could convince our beloved Historian, who has written so many fine articles around valves, to investigate and write us an article. What says you Richard ?

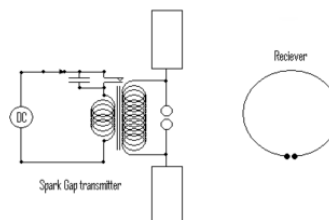
Best 73
 DE Andy ZS6ADY

WIKIPEDIA

Wireless Telegraphy

In the collection of physical instruments in Karlsruhe, Hertz had found and used for lecture purposes a pair of so-called Eies spirals or Knochenhauer spirals. Hertz had been surprised to find that it was not necessary to discharge large batteries through one of these spirals in order to obtain sparks in the other; small Leyden jars amply sufficed for this purpose, and even the discharge of a small induction coil would do, provided it had to spring across a spark gap. In altering the conditions, Hertz came upon the phenomenon of side-sparks, which formed the starting point of his research. At first Hertz thought the electrical disturbances would be too turbulent and irregular to be of any further use, but when he had discovered the existence of a neutral point in the middle of a side-conductor – and therefore discovered a clear and orderly phenomenon – he felt convinced that the problem of the Berlin Academy was now capable of solution. His ambition at the time did not go further than this. Hertz's conviction was naturally strengthened by finding that the oscillations were regular. Hertz's setup for a source and detector of radio waves (then called Hertzian waves in his honor) was the first intentional and unequivocal transmission and reception of radio waves through free space. The first of the papers published ("On Very Rapid Electric Oscillations") gives, generally in the actual order of time, the course of the investigation as far as it was carried out up to the end of the year 1886 and the beginning of 1887.

Hertz, however, did not devise a system for actual general use nor describe the application of the technology, and he seemed uninterested in the practical importance of his experiments. He stated that "It's of no use whatsoever ... this is just an experiment that proves Maestro Maxwell was right — we just have these mysterious electromagnetic waves that we cannot see with the naked eye. But they are there." Asked about the ramifications of his discoveries, Hertz replied, "Nothing, I guess." Hertz also stated, "I do not think that the wireless waves I have discovered will have any practical application". Hertz died in 1894, so the art of radio was left to others to implement into a practical form.



HF Happenings:

The Summer 2015 edition of The 5 MHz Newsletter

A little behind time, the latest edition of The 5 MHz Newsletter Summer 2015 (No 14) is now available for free download in pdf format from <http://tinyurl.com/ockn2ea>. It can also be found in the 'external links' section of the Wiki 60 Meter Band page and on the RSGB 5 MHz page.



Our 5th Birthday edition includes news on the CEPT European Common Proposal for an amateur 5 MHz secondary allocation for WRC-15, 5 MHz allocations in Hungary, Oman, The Netherlands and Honduras, an updated listing of WebSDRs covering 5 MHz, a Pyramid Antenna for 5 MHz and the new FSQ data mode, optimised for NVIS.

Transparent coating keeps solar cells cool :

Stanford engineers have developed a transparent silicon overlay that can increase the efficiency of solar cells by keeping them cool. The cover collects and then radiates heat directly into space, without interfering with incoming photons. If mass-produced, the development could be used to cool down any device in the open air - for instance, to complement air conditioning in cars.

It is believed the technology could apply to any instance where an outdoors system needs effective heat dispersal.

The advance is described in the current issue of the journal "Proceedings of the National Academy of Sciences."

New HF Operators - Things to Do

Register now for a free CW Academy Class, which is starting in January 2016

<http://www.cwops.org/cwacademy.html>. Sponsored by the CW Operator's Club <http://www.cwops.org/>, each class takes place over a two-month period, and involves training and mentoring to instil or improve CW skills. There is a great article in the September-October issue of NCJ about it.

Web Site of the Week

Electronics Fail Blog - there I fixed it <http://failblog.cheezburger.com/thereifixedit/tag/electronics>

We have all made ugly, rude, tempo-rary but ultimately funny fixes to things. Here are some that have been captured in photos. Perhaps you have some of your own to share.

Do Not Do This.

An example of something that seemed like a good idea at the time, until, suddenly, it was not. (Courtesy K3HX)



Operating Tip

On a weekend where there are multiple compatible contests running at once, here is a nice way to be able to participate in a bunch of them, courtesy of the PVRC News-letter:

N1MM Logger+ Hint for Multi-Contest Weekends. On many weekends, I might think about more than one contest; like simultaneous QSO parties and the SAC or JA events. In N1MM you have always been able to start up multiple contest logs and go through the "Open Log in Database" menu entry to switch between them. But in version 1.0.5176 or later, N1MM+ now has a nice shortcut:

With your cursor in the Entry window, hit ALT+F - that brings up "active" con-test log list. Select the number in the list of the contest you want to switch to, type in that number and hit Enter. Voila - you are logging in the other contest. John, K3TN

Technical Web Site of the Week

Soldering - Over the past couple of weeks, I have had the opportunity to repair some gear, which brought to mind some of the perennial questions I have personally had about fluxes, soldering alloy compositions, and the like. Recently, there was a nice article on through-hole soldering in the DKARS magazine <http://downloads.dkars.nl/DKARS%20Magazine%20201503.pdf>. Even though this particular article is in Dutch, there are plenty of pictures and captions in English.

Regarding particular questions about what flux to use when (and why it may not be appropriate to just use any old solder you have on hand), page four of Metcal's Hand Soldering Basics document discusses some of the issues

http://ecee.colorado.edu/~mclurel/Metcal_Hand_Soldering_Basics.pdf.

Elecraft also has a soldering how-to written by NOSS, which contains a list of acceptable solders for their kits

http://www.elecraft.com/TechNotes/NOSS_SolderNotesV6.pdf. By using an alloy containing metals with a lower melting temperature, it may be easier to un-solder certain SMD parts. I recently ordered ChipQuik, which has such an alloy, but have yet to use it. <http://www.chipquik.com>

African DX

Ghana, 9G. Billy, KM4GHS, is active from Kumasi as 9G5GH. He is generally active on 20 metres using SSB around 18:00 to 22:00 UTC, but also tries to be active on 40 metres. QSL direct to home call.

Egypt, SU. Ivan, OM3CGN, is active from Cairo as SU9IG until 15 June 2016. Activity is on 160 to 10 metres using CW, SSB and RTTY. QSL to his home call Benin, TY. Nicolas, F8FQX, will be in Benin for the coming three years and plans to get on the air as TY2SN (CW and SSB). QSL via IZ1BZV direct and LoTW.

Uganda, 5X. Jay, K4ZLE, informs that he will be active as 5X2A from three different lo-cations in

Uganda (Kampala, Jinja and Lira) between 10 and 19 October. However, operating will be secondary and hours of operation can be in the evenings and/or early mornings Uganda time (18:00 to 20:00 UTC and 03:00 to 05:00 UTC). Operations will most likely be on 40 to 17 metres using CW, maybe RTTY. Equipment is an Alinco DX-70TH with EDX2 (HF Auto Antenna Tuner) running 100 watts into an end fed wire in trees, etc., w/counter-poise. QSL via his home call sign, by the Bureau or LoTW.

The Gambia, C5. Luc, F5RAV, and Gerard, F5NVF, will be active as C5LT from The Gambia between 20 and 27 October. They will operate SSB, CW and PSK on 80 to 6 metres and will leave behind a station for Mustapha, C5MF, and other future Gambian hams to use. Luc will participate in the CQ WW DX SSB Contest as C5C. QSL C5C, C5LT and C5MF via F5RAV (direct only).

Kenya, 5Z. Manfred, DK1BT, Sigi, DL7DF, Reiner, DL7KL and Frank, DL7UFR will be active as 5Z4HW from Kenya between 4 and 18 November. Activity will be on 160 to 6 metres using CW, SSB, RTTY and PSK31. Equipment consists of two K2 transceivers K2, two OX1000 power amplifiers, an 18 m low band vertical, a 40 m and a 30 m loop, a Spiderbeam for 20 m through 10 m and a 5 element yagi for 6 m. Pilot station will be Bernd, DF3CB. QSL via DL7DF, direct or by the Bureau. Also, look for operators to possibly sign 5Z4/home calls. For more details and possible up-dates, see www.dl7df.com/5z4hw_2015

Mozambique, C9. Marko, N5ZO, will be active as C9Z2O during the CQ WW DX CW Contest, 28 and 29 November, as a Single-Op/All-Band/High-Power entry. QSL via LoTW or direct to OH0XX.

History this week

The week starting 5 October 2015

1813 - Italian opera composer Giuseppe Verdi was born in Le Roncole, Italy

1846 - Engineer and inventor George Westinghouse was born in Central Bridge, New York

1890 - American fighter pilot Ace Eddie Rickenbacker was born in Columbus, Ohio

1899 - The Boer War began in South African between the British Empire and Boers of the Transvaal and Orange Free State

1908 - Bulgaria proclaimed its independence from the Ottoman Empire

1913 - Solviieg Gunbjorg Jacobsen, a Norwegian girl, is born in Antarctica

1914 - Norwegian explorer Thor Heyerdahl was born in Larvik, Norway. He used KonTiki and other primitive ocean-going vessels to prove the possibility of transoceanic contact between ancient, widely separated civilizations

1927 - The first "talkie" opened in New York - The Jazz Singer starring Al Jolson

1930 - The British Airship R101 crashes in France on its maiden flight to India, 48 passengers and crew die

1940 - John Lennon was born in Liverpool, England

1942 - The actress Britt Ekland is born

1973 - The Yom Kippur War started as Egypt and

Syria launched attacks on Israeli positions on the East Bank of the Suez and the Golan Heights
1995 - An article in the Nature magazine announces the discovery of a planet, 51 Pega

2941 (SR) Bilbo and the company depart from Lake-town (9 Oct)

3018 (SR) The camp under Weathertop (Amon Sûl) is attacked at night and Frodo is wounded (6 Oct)

3018 (SR) the Company flees from Amon Sûl (7 Oct)

3018 (SR) Strider and the hobbits have travelled for five days since their attack at Amon Sûl (11 Oct) since the first one outside our solar system

October

1 - SARL 80 metre QSO Party

2 - All schools close

3 - SARL Spring QRP Contest

4 - RSGB 21/28 MHz Contest

8 - Log submission for the SARL 80 m QSO Party

9 - Meet with Koos, ZR6KF, at the Oakdale ARC

10 - Amateur Radio in Action, Cape Town; log submission for the Spring QRP Contest

10 and 11 - AWA Valve QSO Party

12 - All schools open

15 - Radio Amateur Examination

16 to 18 - Jamboree-on-the-Air

17 - CQ Hou Koers

17 - Harrismith Mountain Race <http://www.amethyst.co.za/Harrismith/>

24 - Crafters Market, Bloemfontein

24 and 25 - CQ WW DX Phone Contest

24 and 25 - CQ WW DX Phone Contest

November

1 - All Saints Day

7 - RaDAR Challenge

8 - Remembrance Sunday; PEARS HF Contest; The Big Walk, Cape Town

7 and 8 - International Police Association Contest

11 - Armistice Day; Diwali

28 and 29 - CQ WW DXCW Contest

28 and 29 - CQ WW DXCW Contest

You can download the full issue of HF happenings at this link:

<https://xa.yimg.com/kg/groups/20889973/1345074430/name/hfhappenings675.pdf>

With thanks to Dennis Green.

THE LOEWE TRIPLE VALVE by Richard ZS6TF AWA Historian

It is rare to find privately owned companies founded in the early part of the 20th century that are still successful today.

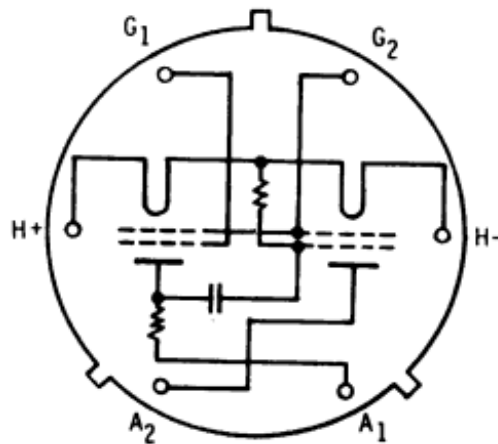
Such a company was founded by in 1921 by Dr Sigmund Loewe (1885-1962). It was called Radiofrequenz GmbH which in January 1923 acquired a mechanical workshop company, Grüttner & Lütgert, in Berlin. The company changed its name into Radio AG, D.S.Loewe named after his brother David Loewe and Sigmund. It began manufacturing valves and loudspeakers and grew to form the core of the Loewe empire. The Loewe brand is still a respected household name for high end home entertainment equipment in Germany.

The watchword of the company was technical innovation and already in 1922 Sigmund Loewe employed a 16-year-old inventor Manfred von Ardenne. They worked together to develop improved thermionic valve products. Initial valve production was of the LA74 triode and LA77 tetrode aimed at the export market.

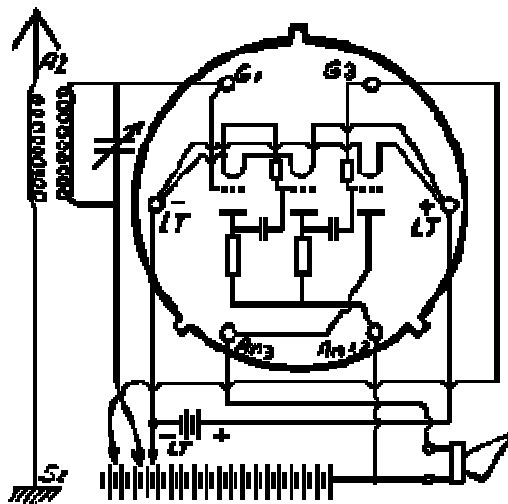
Germany was under the restriction of the Versailles Treaty. Its poor economy had forced the government to levy heavy taxes on many products including radio receivers. The tax was determined generally by the number of valves used in the radio.

In September 1924, Loewe lodged the basic patents for the LOEWE-Dreifachröhre, a triple tube with integrated components, often dubbed today as the "first integrated circuit", designed to circumvent this tax.

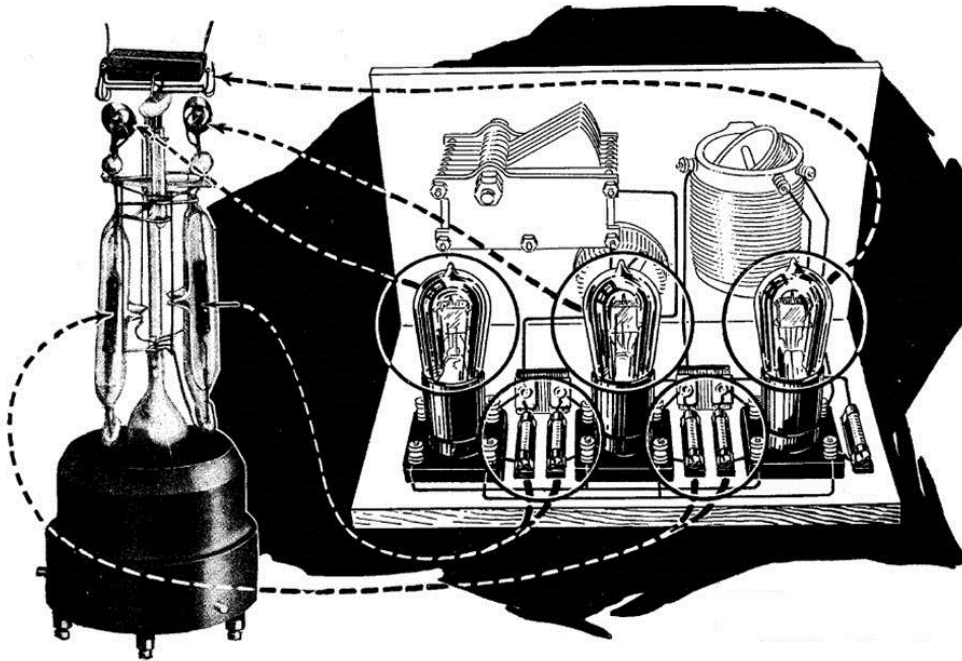
In 1926 at the Berlin radio exhibition, Loewe Radio A.G introduced the 3NF (Nieder frequenz = Low frequency) valve containing three cascaded triode valves, with two capacitors and four resistors in a single glass envelope. The inclusion of the passive components reduced the number of pins required to six, but to avoid them contaminating the vacuum, they are each sealed inside a glass vial. Another multi-valve, the 2HF (Hochfrequenz = high frequency) was also released. It contained two screen-grid tetrodes, two resistors and a capacitor, for use as a two-stage RF amplifier.



Loewe also released simultaneously a receiver called the Loewe Ortsempfänger (local receiver) OE333.

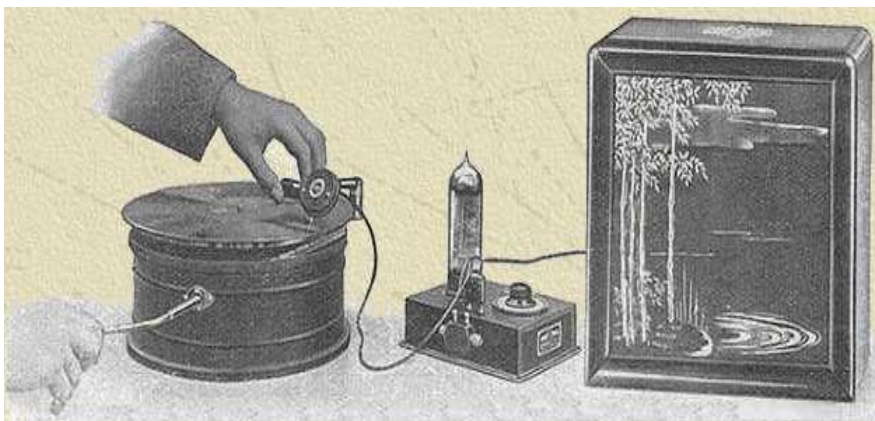


The design of the OE333 was based on the NF333 from 1925. This receiver in common with the OE333 has a 3-stage resistance coupled amplifier, but was equipped with 3 individual valves (2 LA77's and a LA101) that were soldered directly in the circuit without a base. The NF333 was also available in plug-in form.



The OE333 was launched at an incredibly low price which was reduced during the life of the product as volumes increased, becoming the first radio to sell more than a million examples. The opposition were quick to point out the drawback of putting three valves in a single envelope is that if one filament fails, the whole device becomes useless, but to counter this disadvantage, Loewe offered an inexpensive repair service to replace failed filaments. He understood marketing well and the number of radio set owners rose in Germany from 1.5 Million to 3 Million in only two years, stimulating the change from headphones to loudspeaker radio sets.

Some of the valves are marked "British Made". Loewe put an announcement in the British radio press that they were going to make the triple valves and radio sets at their Tottenham factory in London and the necessary staff and labour had been trained. It is likely that they had a repair operation but there is no evidence of manufacture, and this seems to be ploy to increase UK market acceptability.



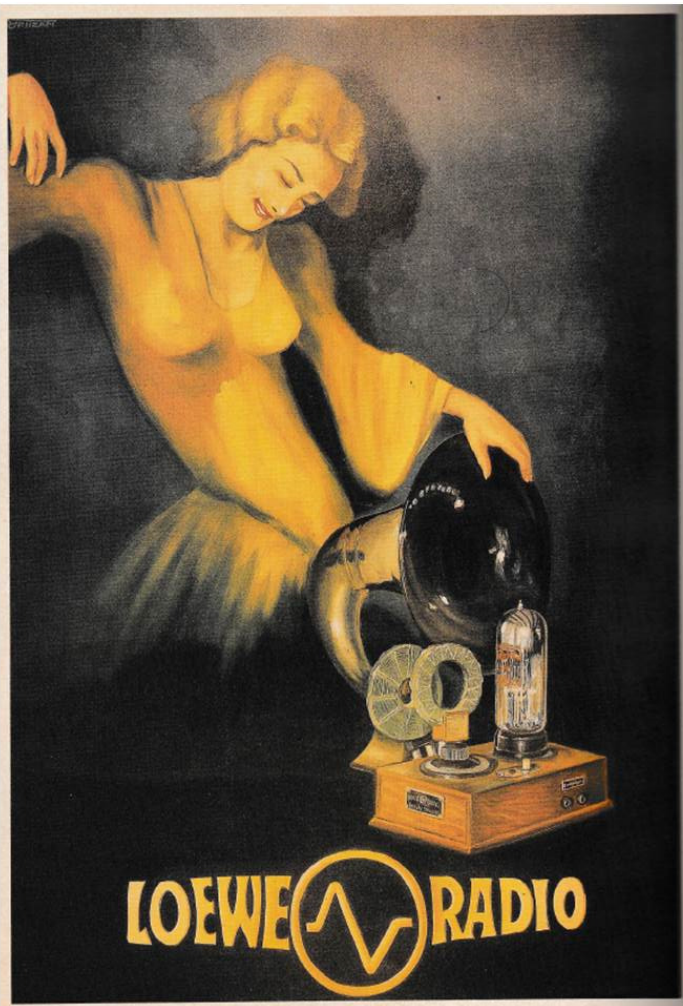
Left a turntable with electric pick up, in the middle a Loewe OE333 receiver and right a speaker type Loewe EB71 (1928)

Loewe was a driving force for broadcasting in Germany achieving market share against the monopoly of Telefunken / Lorenz / Huth (radio cartel "Rundfunk GmbH")

He also influenced the development of TV-Sets. At the end of 1930 he presented electronic TV in Berlin. The first prototypes were presented to the public in 1933. All essential elements of modern TV's were present.

Being a descendant of a Jewish family he had to leave Germany in 1938, fleeing to the USA, because of 'Aryanisation'. In 1949, he got the rights to his company back as part of war reparations.

The original Loewe multi-valves are masterpieces of glasswork, which must have been very expensive to manufacture, and are sought after by valve collectors.



Later versions called 3NFW used mica supports, and the glass was given an aluminium outer coating to hide the less elegant internal structure. Normally Loewe used water based paint which is unfortunately wiped off from most known Loewe valves.



Loewe later developed a more sophisticated multi-valves, the WG33, which was enclosed in a metal shield, containing two variable-mu pentodes and a triode, used respectively as RF amplifier, IF Amplifier, and oscillator.



Multivalves have since proliferated, such as the 6SN7 (twin triode), 6K7 (Triode hexode), ECC81/2/3/4/5 (Twin triodes) and the later compactrons 12B,C,D series containing up to 4 valves. None of these contain passives and all of them lack the charisma and allure of the original Loewe Dreifachröhre.



Subject suggested by John Norman ZS5JX. Acknowledgement to the SAIEE museum.

What Might Happen in a Power Grid Failure?

Morse Code, It Could Save Lives

Modern technology has launched our methods of communication far beyond what they were a few years ago. Cell phone and the internet may appear to have replaced all other methods of communication, but don't be fooled into complacency.

What would happen if the power grid fails or a backup generator runs out of fuel? Here in South Africa its something that we should **ALL** perhaps prepare for.. Would you be able to communicate without the modern and necessary convenience of a national grid? You may never be without your cell phone, but chances are that at one time or another you forgot or misplaced the charger. Inevitably the battery will go dead.

Imagine a breakdown and being stranded at the roadside in the middle of the night far away from nearest habitation with either cell phone battery flat or no cell phone signal.. For safety reasons cars will not stop, emergency flashers are ignored in most cases.

So how could you communicate to them you need help. You could flash SOS with your headlights or the emergency torch recommended to carry in your toolbox. Most people do recognise SOS as being a call for help. That is a simple example of Morse Code use in an emergency.

What would the situation be if a nationwide black out took place. Majority of public would be left without emergency communications. In California quite recently this happened and it took two weeks to return the system to normal.

This is where Amateur radio comes in, we do have Hamnet where dedicated hams are always on call for emergencies simulated or real. But with a countrywide blackout Hamnet would be too thin on the ground to cope with everything

This leads to debateable percentage of how many South African amateurs would still be able to hook up to batteries or to portable generators and communicate to wherever necessary by use of Morse Code.

Morse code may be an old technology, but it has survived the test of time because it is an effective method of communication, does not require sophisticated antennas, gets out with little power required. Its also understood internationally. With a personal knowledge of Morse code, we as ham radio operators; people could "get the message through" in harsh and disastrous situations. Learning how to transmit and receive messages in Morse code is a beneficial skill and very well could be used to save your life, the life of someone you love..

As with all new skills, Morse code does require practice, but a commitment to learn alphabet keeps your mind sharp. Speed is not important, accuracy is. So why not join the ever diminishing band of ZS stations who would be delighted to hear newcomers joining in to the magic mode of CW. 5 words per minute is not so difficult. You could in an emergency be called upon by the authorities should the need arise for your valuable skill.

To the old CW "Fundi's" dust off the key, come back on air and teach us youngsters how it should be done. Why not support OM Andy who despite the poor numbers joining, year after year faithfully continues to promote CW via the AWA Saturday afternoon CW net on 7.020.

John ZS6BJJ



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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 06:00—AM Net—3615
Saturday 07:15—Western Cape SSB Net— 7140 (Alternate 3630)
Saturday 07:30—KZN SSB Net—3650
Saturday 08:30— National SSB Net— 7140; relayed on 14135 beaming to WC.
Saturday 14:00— CW Net—7020
Wednesday 19:00— AM Net—3615, band conditions permitting.

AWA AM and SSB QSO Parties:

On Saturday 10th October will be the second part of the AM QSO Party from 13:00 to 17:00 UTC (15:00 to 19:00 SAST)
On Sunday 11th October will be the second part of the SSB QSO Party from 13:00 to 17:00 UTC (15:00 to 19:00 SAST)
More information will be published closer to the date or refer to the SARL Blue Book, or the AWA website for more information.

AWA AGM:

The AGM will be held on Saturday 14 November 2015 at the SAIEE conference center.
Election of Office bearers and a new President will take place at 11:00.
There will be a Flea Market and display starting from 09:00.
The Saturday morning SSB net will be run from the shack at SAIEE.

LATSKY RADIO MUSEUM 4 CHURCH STREET, VAN RHYNSDORP CP : CLEARANCE SALE

On Saturday 21st November 2015 there will DV be a big garage sale of redundant radio equipment at the Latsky Radio Museum, 4 Church Street, Van Rhynsdorp 8170 Namaqualand Cape. The sale will be from 9 am until 5 pm. There is a stock of at least 10 000+ radio valves/tubes , new and used, of almost every type, rare ones included, as well as CRT tubes : VCR97,VCR139,3BP1 etc etc. There will be Erskine scopes/Cossor scope, with spare CRT , HRO sets,R1155 sets, Hallicrafters receivers and a Racal type 17 receiver, a Tellurometer, WW2 radio equipment, transformers, many HV oil filled block capacitors and lucky dip boxes of valves/tubes and components and these boxes will sell @ R60 each. Prices for equipment are negotiable.
Some valved table radio sets in Wooden/Bakelite boxes , era 1939/1940's; Also a few transistor portable radios; Old chassis for spare parts; Some old military units etc etc.
Come and buy a bargain !