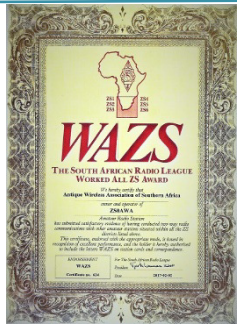




A Member of the SARL



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**AWA Committee:**

- \* President and Western Cape—John ZS1WJ
- \* VicePresident—Renato ZS6REN
- \* Technical Advisor—Rad ZS6RAD
- \* Secretary/PRO—Andy ZS6ADY
- \* KZN—Don ZS5DR
- \* Historian—Oliver ZS6OG
- \* Member—Jacques ZS6JPS

# Newsletter

The Antique Wireless Association of Southern Africa

# 145

August 2018

## Reflections:

This month saw us break the 300 membership figure.

Its taken us 15 years to get there, but I do believe its quite a milestone.

Who would ever have thought that a small beginning could grow into such a large membership, and then still not ask a membership fee. Could it be that is why it works ?

All in all it has been a long and steady climb. Sometimes it has felt like we are pulling teeth, but I doubt if pulling teeth could be so pleasurable.

What a pity we cant see more of these members joining us on the Saturday morning nets, or on the CW nets. What does it mean to be a member of a society or club if you don't partake in the activities they offer ?

Well we remember the days when we could only get through one round because

of the amount of call-ins that we had. Not so today.

Anyway, whatever your reasons might be for not joining the nets, I am sure they are good ones. That does not mean that we don't want to hear you on the bands and have you join us on frequency.

The year is slipping by so fast, before you know it the year will have gone by and you wont have checked in once on the nets. Am I getting boring now ?

In one of the Saturday chat sessions, John ZS1WJ asked what people thought about using things like Echolink for amateur radio use. I think the general consensus was it was fine to use it, as long as it did not become our major means of communication.

We believe that Echolink has opened up a new avenue in these bad condition times, that allows us still to

“communicate”. Which is essentially what amateur radio is all about.

Maybe you are a fair weather ham and only work during good conditions. For the bad times you pack your rig into its box, roll up the wire antenna and place them all in the cupboard. The only problem then is that you will never know when the bands improve and conditions actually change.

Fortunately I have too many radios to pack away, so its much easier to leave them on the shelves and tie them together with some wires.

Of course I'm being very sarcastic, but I'm allowed to be. Old age has its advantages.

Look forward to hearing many of you on frequency.

Best 73

DE Andy ZS6ADY

## WIKIPEDIA

**Amateur radio:** Output power limits may also depend on the mode of transmission. In Australia, for example, 400 W may be used for SSB transmissions, but FM and other modes are limited to 120 W.

The point at which power output is measured may also affect transmissions. The United Kingdom measures at the point the antenna is connected to the signal feed cable, which means the radio system may transmit more than 400 W to overcome signal loss in the cable; conversely, Germany measures power at the output of the final amplification stage, which results in a loss in radiated power with longer cable feeds.

Certain countries permit amateur radio licence holders to hold a Notice of Variation that allows higher power to be used than normally allowed for certain specific purposes. E.g. in the UK some amateur radio licence holders are allowed to transmit using (33 dBw) 2.0 kW for experiments entailing using the moon as a passive radio reflector (known as [Earth-Moon-Earth communication](#)) (EME).

## HF Happenings

### SARL HF Phone, Digital and CW contests in 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 metre amateur bands.

The Phone contest takes place on Sunday 5 August, the digital contest on Sunday 19 August and the CW contest on Sunday 26 August. There are several trophies to be won for each contest as well as for overall results.

The SARL HF Phone Contest will be run from 14:00 to 17:00 UTC on Sunday 5 August 2018 with activity between 14 125 to 14 300 kHz; 7 063 to 7 100 and 7 130 to 7 200 kHz and 3 603 to 3 650 and 3 700 to 3 800 kHz. The exchange is a RS report and a consecutive serial number starting at 001.

The Silent Keys Memorial SSB Trophy is awarded to the amateur who achieves the highest score; the Joseph White Trophy is awarded to the amateur who achieves the highest score on any one band and the AKYAB Trophy is awarded to the amateur who achieves the highest score in his or her first year of phone (this amateur must have received his or her licence between 1 September 2017 to August 2018)

### RSGB IOTA Contest

The upcoming weekend will see this year's edition of the RSGB IOTA Contest. For a comprehensive list of participating stations see [www.ng3k.com/Misc/iota2018.html](http://www.ng3k.com/Misc/iota2018.html) and for the rules visit [www.rsgbcc.org/hf/rules/2018/riota.shtml](http://www.rsgbcc.org/hf/rules/2018/riota.shtml)

### International Lighthouse and Lightship Weekend

The International Lighthouse and Lightship Weekend (ILLW) takes place of the weekend of 18 and 19 August 2018.

#### Namibia

The Swakopmund Lighthouse (ILLW NA0001) – Wynand, V51WW

#### South Africa

The North Head Lighthouse at Saldanha Bay (ILLW ZA0029) - the Bo- Karoo ARC, ZS3VDK (ZSFF-0343).

Robben Island Lighthouse (IOTA AF-064, ILLW ZA0008 and ZSFF-0322) - 17 to 20 August by ZS9V - Jan, ZS1VDV, Andre, ZS1AN, Johan, ZS1A, Allan ZS1LS, Oleg ZS1OIN and Oleg, ZS1ANF.

The Green Point Lighthouse in Cape Town (ILLW ZA0006) - the Cape Town Amateur Radio Centre, ZS1CT. This is their 21st year in the ILLW.

The Slangkop Lighthouse at Kommetjie (ILLW ZA0015) - the False Bay ARC ZS1FRC.

The Cape Point Lighthouse (ILLW ZA0013 new lighthouse and ZA0014 old lighthouse) - Gregory, ZS1EZ, Ursula, ZS1UP and Terence, ZR1ACI.

The Cape Hangklip Lighthouse near Betty's Bay (ILLW ZA0010) - the Cape Radio Group, ZS1CRG with six operators.

The Danger Point Lighthouse near Gansbaai (ILLW ZA0005) the Over-berg ARC, ZS1OAR.

The Cape Agulhas Lighthouse situated at L'Agulhas, (ILLW ZA0011, ZSFF-0002) - the Boland ARC with special call sign ZS70BAK – the Club is celebrating its 70<sup>th</sup> birthday.

The Cape Recife Lighthouse south of Port Elizabeth (ILLW ZA0022) - Bill, ZS2ABZ

The Hill Lighthouse/Donkin Reserve in Port Elizabeth (ILLW ZA0023) – the Port Elizabeth ARS, ZS2PE

The Green Point Lighthouse at Umzinto (ILLW ZA0018) - the Highway ARC, ZS5HAM.

The Cooper Light at Brighton Beach, Durban (ILLW ZA0004) - the Durban ARC, ZS5D.

### Calendar:

#### August

2 to 5 – Ramsgate Book and Art Festival

3 to 5 – West Coast Craft Exhibition, Velddrif; Slow Food and Wine Festival, Robertson

4 Aug to 2 Sept – Clanwilliam Wild Flower Festival

5 – SARL HF Phone Contest

8 to 15 – YOTA 2018 Summer Camp in South Africa

9 – National Women's Day; SARL YL Sprint

12 – International Youth Day

13 - closing date for HF Phone contest logs

16 – closing date YL Sprint logs

18 and 19 – Lowveld Book Festival, White River;

The Chocolate Festival, Stellenbosch; International Lighthouse and Lightship Weekend

19 – SARL HF Digital Contest; World Humanitarian Day

22 - Eid-al-Adha

23 – closing date for articles for the September Radio ZS

24 to 25 - Hantam Vleisfees, Calvinia

24 to 26 – Magalies Rocks the Cradle Festival, Magaliesburg

25 – Cape Town ARC Meeting; Pretoria ARC AGM and Flea Market

26 – SARL HF CW Contest

27 – closing date for HF Digital logs



## Baker Island, KH1/KH7Z

The OQRS is up and running on Club Log. According to the final statistics, the team on Baker Island made 68 972 QSOs with 18 128 unique callsigns (26,28%).

Breakdown by continents

AS 29 046 QSOs 42,11%

NA 25 253 QSOs 36,61%

EU 11 914 QSOs 17,27%

OC 2 333 QSOs 3,38%

SA 333 QSOs 0,49%

AF 93 QSOs 0,14%

Breakdown by modes

CW 32 432 QSOs 47,02%

SSB 18 903 QSOs 27,41%

FT8 16 671 QSOs 24,17%

RTTY 926 QSOs 1,40%

Unsurprisingly, given the team's announced plan to maintain a 24/7 presence there, 20 m was the most productive band with 27 568 QSOs (39,97%), followed by 17 m – 11 796, 15 m – 8 091, 40 m – 7 563, 30 m – 6 616, 80 m – 2 996, 12 m – 1 912, 160 m – 1 706, 10 m - 557 and 60 m - 167.

## African DX

Contacts with stations on the African continent count towards the SARL's All Africa Award ([www.sarl.org.za/pub-lic/awards/awards.asp](http://www.sarl.org.za/pub-lic/awards/awards.asp))

Malawi, 7Q. Alex, IW5ELA will be active as 7Q7ELA from 17 to 26 September. Operation on HF using mainly CW. QSL via home call. Activity from these locations – 17 to 20 September at Game Haven Lodge, 20 to 23 September at Mvuu Camp and 23 to 26 September at Makokola Retreat.

Rwanda, 9X. The Italian DXpedition Team is planning to be active from Rwanda between 26 September and 10 October as 9X0T. For FT8 DXpedition mode the call 9X0Y will be used. Operation from 160 to 10 metres using CW and SSB with 3 stations. RTTY will be used only on 20 metres. QSL via I2YSB. Real-time log search and OQRS see [www.i2ysb.com](http://www.i2ysb.com)

## 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

Cape Verde, D4. Christian, M0UPL will be active as D44EK from Sal Island (AF-086), Cape Verde from 23 July to 7 August. He will operate SSB on the HF bands. QSL via home call.

Mauritius, 3B8. Karel, OK2ZI pays Mauritius (AF-049) a visit between 26 July and 8 August. He will be active as 3B8/OK2ZI on HF using CW, SSB and digital modes. QSL via OK2ZI, direct or via the bureau, ClubLog OQRS, LoTW.

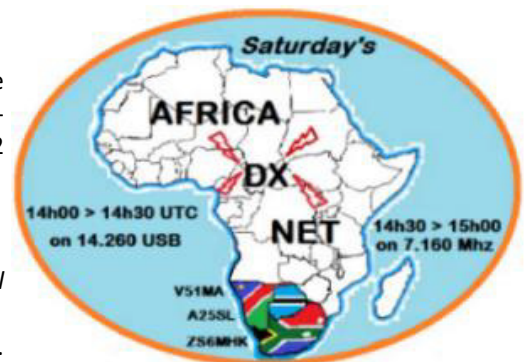
Mauritius, 3B8. Hans, PA3HGT will once again be operating as 3B8/PA3HGT from 4 to 24 September. Operation in 'holiday-style' on 40, 20 and 10 metres using mostly SSB with some CW and digital. QSL via home call, direct or bureau.

AF-078 Carabane Island. Alfredo, IK7JWX and team are planning a humanitarian DXpedition for 10 days in November 2018. Call sign is pending.

AF-118 Los Farallones Island. Plans are underway for an international team of IOTA activators. Dates and full info to follow.

## The Solar Cycle

The sun has more than just the 11-year cycle for sunspots. According to a short article by Scientific American, other cycles of length 88, 200 and 2 400 years have been noted [www.scientificamerican.com/article/the-sunspot-cycle-is-more-intricate-than-previously-thought/](http://www.scientificamerican.com/article/the-sunspot-cycle-is-more-intricate-than-previously-thought/). The 11-year cycle that we're most attuned to is called the Schwabe cycle, discovered in 1843 by German astronomer Samuel Schwabe. The longer-duration solar cycles were discovered from isotope information recovered from cores drilled from ice built up over the last 9 000 years.





## Morse Telegraphy and the Violin

I have often been asked by fellow amateurs why should we still bother with trying to communicate with the “obsolete” mode of morse telegraphy now that it is no longer required to obtain a full amateur licence? This short article is my humble attempt to explain why I derive so much fun and satisfaction in doing so.

Firstly a clarification: morse telegraphy is almost universally referred to as “CW” by most amateurs all over the world – an incorrect term by the way, as a continuous wave cannot transfer much information – it only becomes useful for communication when it gets interrupted in a defined sequence of long and short pulses. International morse code is one of these recognised sequences, but there are others – the original American morse code used in the early days in the US by their railways telegraphy network, is just another example.

There are many answers to the question asked, some technical and some non-technical.

I do not intend to elaborate too much on the technical advantages of “CW” so I will only mention three brief points:

- The use of a narrower bandwidth than required by speech means a better signal-to-noise ratio at the receiver for a given transmitter output power – improved intelligibility
- The possibility of building simple home-brew equipment running QRP levels (less than 5 watt output) can result in many very satisfying QSOs – QRP “CW” in a narrow bandwidth can often be more than equivalent to higher power SSB in communication capability.
- The ultimate in simplicity – a transmitter, receiver (or Transceiver), a power supply of some sort, a straight-key and a simple wire antenna and you are on your way at minimal cost. No need for computers or beam antennas etc

Now let us have a closer look at some non-technical aspects of “detection, recognition and processing of morse by ear, a complex psycho-acoustic process that enables us to communicate over great distances with the most simple of man-made equipment” (a quote from “Technical Topics “ in the January 1996 Radio Communication periodical from the RSGB, attributed to VK9NL)

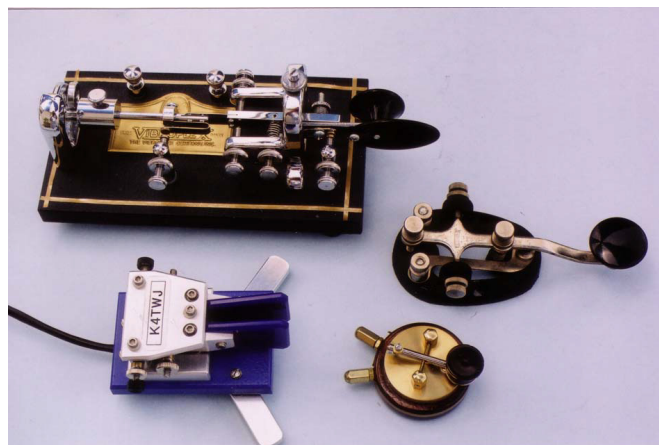
“CW”, like many activities such as playing a violin or playing chess for example, is a skill that must first be learned and then developed. The degree of this development is directly related to the effort expended. Likewise, the degree of enjoyment obtained is related to the proficiency obtained – it takes a lot of time and effort to get skilled enough to play first violin in a Philharmonic Orchestra, but just imagine the pleasure and fulfilment in doing so. Similarly with morse telegraphy – I would encourage all to take up the challenge and see what satisfaction you ultimately derive from grass-roots amateur radio.

There is yet another area of appeal which may not be appreciated by most. “CW” is an excellent means of “escape”. What better way is there to set aside your problems of the day and enter into another world – one that completely absorbs your full consciousness – than to get on “CW”? The only other thing that I have experienced that even comes close is to put on flippers, goggles and a snorkel and to idly paddle about in the sea along the rocks along the edge of Jager’s Walk in Fish Hoek, admiring the anemones and looking at the little sea creatures going about their daily business. It’s a pity Fish Hoek is so far away, but fortunately my shack is just at the bottom of the garden! All you need to enter the world of “CW” is a little knowledge, lots of patience and some basic skill : the rewards can be very gratifying - ask any “Old Timer” who regularly operate in this mode. It’s certainly worth giving it a try.

To conclude, a quote from an article by KF7JF : “By the way, what is CW? CW is a bit of an Art, a bit of Magic, and a bit of skill. And CW gives you a REAL feeling of accomplishment when you have finished a CW QSO. It’s not from the speed at which you send or even the QRM which you have to overcome. No.... it’s more the accomplishment of communicating in a language unknown to most other Humans. That, and a feeling of being touched by the MAGIC, is what I think makes CW the ULTIMATE MODE!!!”

Acknowledgement: The seed for this submission was the article “A Case for CW” by John J Risch, W0FEV, in the June 1975 edition of 73 Magazine.

Dave  
ZS6AZP



# Measuring Voltages in Circuit With Multi-meters

## Subtitle: Why does my meter give me an incorrect result?

John ZS5JF

When we are fault finding our old boat anchor radios very often we use a voltmeter to determine if the circuitry is working correctly. Sometimes we get results that don't appear to fit with the voltages we would expect. This puzzling result is due to the voltmeter "*disturbing*" the voltage being measured. Ideally a voltmeter when applied to a component should have absolutely no effect on the circuit, but this is almost impossible to achieve, even with a high grade instrument.

To understand why when a voltmeter is attached to a piece of circuitry we often get an incorrect reading we need to go back to first principles.

### Analogue Voltmeters

Analogue voltmeters use a moving coil meter to indicate the measured voltage. They are in fact not true voltmeters at all. They measure "*current*" not voltage. The better quality meters have a sensitive movement with a very low current drain, typically a 50 micro-Amp movement. This 50uA movement is the current required to obtain "*full scale deflection*" (fsd) and the meter scale plate is marked in voltage. A typical 1V fsd meter circuitry is shown in Figure 1 below.

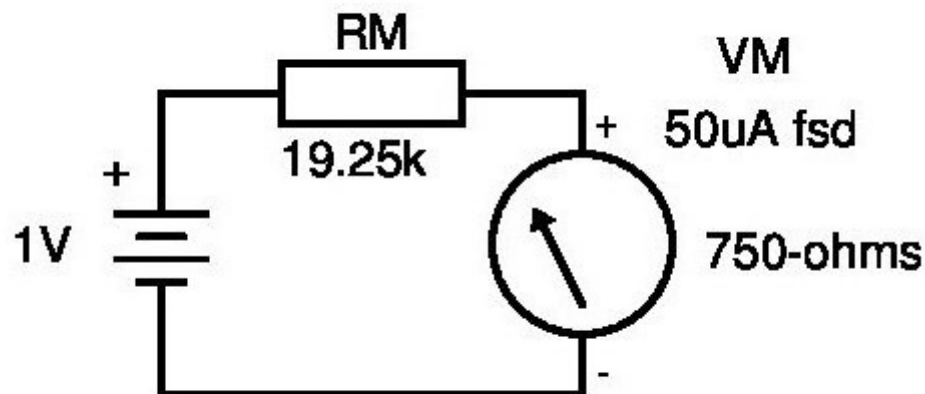
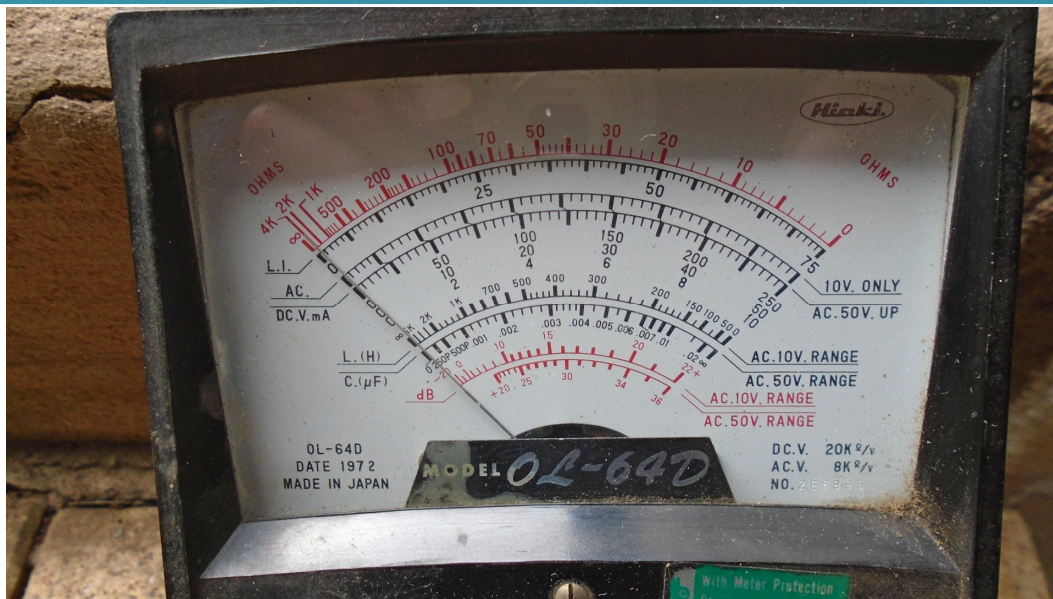


Figure 1 Simplified 1V full scale voltmeter

A 50uA movement typically has a resistance of about 750-ohms. When a current of 50uA is flowing in the meter it indicates exactly full scale. To obtain a fsd of 50uA when 1V dc is applied the total resistance required is given by Ohms Law as being 20,000 ohms. Since the movement is 750-ohms then the remainder is made up by the series resistor, which is called the "*multiplier resistor*".

This leads to the common definition that the voltmeter is a "*20k-ohms per Volt*" instrument. It also means that the multiplier resistors required are normally odd values which are not standard types as usually sold, they are custom made to suit the instrument. The Ohms/Volt is normally printed on the meter scale plate as shown in Picture 1.



Picture 1 Scale plate of a typical multi-meter

The Ohms/Volt for this meter is given as 20k/V for the dc ranges and 8k/V for the ac ranges.

For a 20k-ohms/V instrument it behaves the same as a 20k-ohm resistor when set to the 1V range. On the 2.5V range it behaves as a  $2.5 \times 20k = 50k$ -ohm resistor etc. On the higher dc ranges the resistance becomes very high, for example on the 1kV fsd range it applies a resistance of  $1000 \times 20k = 20\text{Meg-Ohms}$  to the circuit. But even so when it is reading full scale deflection it is drawing 50uA from the circuit under test. This can severely disturb the voltage we are attempting to measure, resulting in an incorrect reading. Figure 2 shows an extreme example of such a measurement.

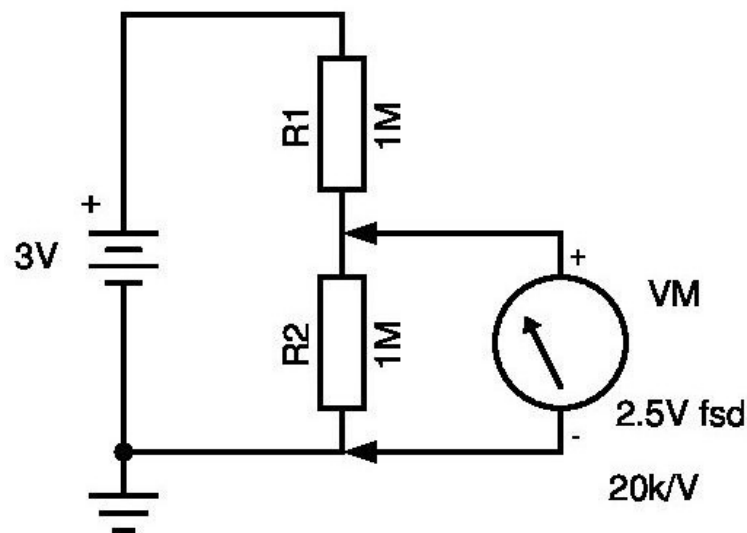


Figure 2 Measuring a high resistance circuit

The circuit has two equal value resistors connected across a 3V dc supply. Since both the resistors are the same value we can see that the voltage to be measured is going to be exactly half the supply voltage, it should read 1.5V. However, the meter is set to the 2.5V range and it will add a resistor of  $2.5 \times 20k = 50k$ -ohms in parallel with the lower 1Meg-Ohm resistor. Since resistors in parallel gives a value lower than the lowest value resistor then it is the same as replacing R2 and the meter with a resistor a bit less than 50k-ohms. So the voltage measured is no longer 1.5V as we would expect but something a lot less. If we were not aware of this fact then we would be tempted to try and find the cause of the problem, when in fact no problem exists!

In the example in Figure 2 the meter would indicate the voltage is only  $\approx 75$ milli-volts and if we didn't appreciate the possible loading by the meter we would assume R2 was a much lower value than indicated by the marking on the resistor, or R1 was a much higher value. Resistors don't normally go lower in value, rather they go higher. The probability is that one would assume R1 was too high in value and we would change it, only to find the measurement is still incorrect.

## Digital Multi-meters

Today we can purchase at a reasonable cost a modern digital multi-meter (DVM) which have a digital read out rather than a meter pointer. Although these are easier to use they can still suffer from an inaccurate measurement if we are not aware of the resistance loading problem.

Today most DVMs use a fixed input resistance of 10Meg-Ohms on all the ranges. This means that for low voltage ranges they have very little loading on the circuitry and can be expected to give a correct reading. However, on the higher ranges they are not as good as a 20k-ohm/Volt moving coil instrument. Normally the DVMs on sale do not go above 1kV and some only as high as 500V on the ac and dc ranges. A 20k-ohm/Volt meter on the 1kV dc range is typically adding 20Meg-Ohm to the circuit under test. A modern DVM adds a value which is only half of this so it draws more current from the circuit than an old fashioned multi-meter, which may be a problem in some cases.

In the example in Figure 2 the DVM would also give a lower reading than the correct one, but the error would be far lower. Shunting a 10Meg-ohm resistor across the 1Meg-ohm would give a result of about 900k-ohms, so the error would be about 10% of the correct reading. The resistors would probably be 5% tolerance so this small difference shouldn't prevent the circuit from working as intended.

If one considers the AVO 8 series it has a maximum fsd of 3kV ac and dc and on this setting it presents a loading to the circuit of 60Meg-ohms, which compared to a DVM is very much higher.





## YAESU OWNERS BEWARE.

By Roger Davies

If you own a YAESU transceiver, such as the FT-101, A, B, E, EX. FT-200, FT-201, FT-DX400, FT-560, FT-501, you may have had, or will have, a problem with the PA stage.

Over the years I had perhaps some 40-50 such models in for repair with various symptoms such as a fire in the PA stage, burnt out mains transformer or for the more fortunate, a sudden loss of output power.

### CAUSE OF THE PROBLEM

The cause of the problem is the 100pf coupling capacitor between the plate of the 12BY7A driver tube to the grid circuit of the output tubes. This capacitor either goes short circuit or develops a leak causing the 350v HT + of the driver plate to appear on the grids of the final tubes.

The voltage on the grids should be -110 on standby or -75 volts on transmit. The presence of this high +ve voltage causes the valves to draw excessive plate current of 1 ampere or more.

Unfortunately, the fault normally occurs whilst in the receive mode when the meter is reading signal strength. The first indication to the owner the something is amiss is, if he is lucky, is that the fuse blows. If he is a regular ham, he has already replaced the correct value fuse with a larger rating to prevent it from blowing and is alerted to the problem by smoke rising from either the PA stage or worse, the mains transformer.

The worst scenario seen has been a cooked mains transformer, open circuit plate choke and imploded 6JS6C's. An expensive repair !

As a precaution, it is highly recommended that all Valve final YAESU transceivers have the original 100pf capacitor replaced with one having a voltage rating of at least 3 kV.

As a footnote, it is not only YAESU transceivers that suffer from this problem, for on three occasions, Kenwood valve transceivers have suffered a similar fate.

*(This article was written by Roger Davies some years ago and was discovered by James ZS5ABW. We thought it pertinent to reprint with Rogers Permission)*

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## *CW The Difficult Way*

*Bob Montgomery, KT30, of Broomall, Pennsylvania, is a quadriplegic, and in spite of his handicap, is able to send CW at twenty words per minute, with his mouth. He uses a tube, blowing to make dots, and sipping to make dashes. I first made contact on 7 mhz CW about a year ago, and when I received Bob's OSL I wrote to him seeking his permission to use his story for Radio ZS, to which he readily agreed, sending me a photograph of himself in his shack, together with further information.*

*Bob wrote as follows:*

*"In the spring of 1983, one month after receiving my Novice license, I read an article in the HANDIHAM WORLD about an amateur from the west coast who received his extra class license before the first anniversary of his Novice license. After reading the article for the second and third time, I realized the similarity of our situations.*

*He is able to use his hands but not his eyes I can see but, because I am a quadriplegic, I cannot use my hands.*

*Our common disability is that we are unable to write the written word. We must keep the information that we choose to retain in the notebook pages of our mind. In particular, CW at a speed of 20 words per minute, which is required for the Extra Class license.*

*Armed with cassette study tapes and WIAW code practice sessions, the only remaining ingredient was time and that is a commodity that is not in short supply for many of us who are physically handicapped.*



*I set my sights on May 26, 1984, the first anniversary of my Novice license. On December 6, 1983 I received the General license, March 16, 1984, the Advanced license and on May 1st I got a message that an examiner would be at my home on the evening of May 9th.*

*I knew that the code test would be a five minute QSO with approximately 15 to 20 pieces of information. The hardest by far would be remembering two calls of six characters each; so I decided to forfeit that one question to the FCC.*

*Much to my amazement, I retained the information to answer the remaining questions and reached my goal with 17 days to spare.*

*All of my accomplishments and success in Amateur Radio began with a HANDI-HAM OSL card that explained the many services provided by this organization.*

*It was received by an acquaintance, Betty Evans, N3CWE who is now a HANDI-HAM helper, my OSL manager and a dear friend.*

*As you know I am also unable to speak. With the resources and ingenuity of members of the Mid Atlantic Amateur Radio Club (previously referred to incorrectly by me as the Delaware Valley Radio Club). I now have a secondhand Vic-20 computer, a kantronic Interface unit and a home brew black box. It has lights to indicate 10 functions that I choose by breaking a light beam on a set of eye glasses.*

*When the function I wish to use is lit, I send one dash to start that memory. Five are canned OSOs. Example "CQ, COQ CQ, DX, CQ, CQ, de N3DTK, N3DTK, N3DTK, K, K"*

*Two functions I use to change the frequency of my transceiver. Each time I send a dash the frequency moves up or down 100 hertz."*

*I am sure that Bob's no mean achievement will be an inspiration to-all 'ZR' Amateurs who may be having second thoughts about working towards the CW test. Anyone wishing to write to Bob for further information can do so to his address at 100 second avenue, Broomall, PA. 19008, U.S.A.*

*(This article was written by Allan Smith ZS1AAX (SK) and was published in the November 1985 Radio ZS and should be an inspiration to many new CW ops)*

*(Re-printed with kind permission of Radio ZS)*



**BUNNELL STRAIGHT LINE RADIO KEY.**



# Valve Amplifiers Explained

We have a copy of Valve Amplifiers Explained, by John Fielding ZS5JF up for grabs.

This book will be raffled at R20 per entry and is to be drawn at the 2018 AGM.

To enter, you can deposit R20 into the following account and send us proof of payment and your name will be put into the draw. Please use your call sign as reference when making the deposit.

Account Name: A G Cairns  
Standard Bank  
Benoni  
Acc No: 225334119

The following is the preface from the book:

This new book by John Fielding ZS5JF, is for everyone who uses - or is considering using - an HF or VHF linear amplifier. While some amateurs may be of the opinion that valves are an obsolete technology and semiconductors are a better way, John Fielding very definitely thinks otherwise! After reading this book you will be under no illusions that, in his opinion, valves are far superior to semiconductor devices for most linear amplifier applications. As he says, "When you need real power and very good linearity, a valve is very hard to beat."

Essential reading for anyone building a valve linear amplifier, the author guides the reader through the choice of valves for various purposes. Valve Amplifiers Explained starts with a chapter on basic valve theory and explains how to inter-

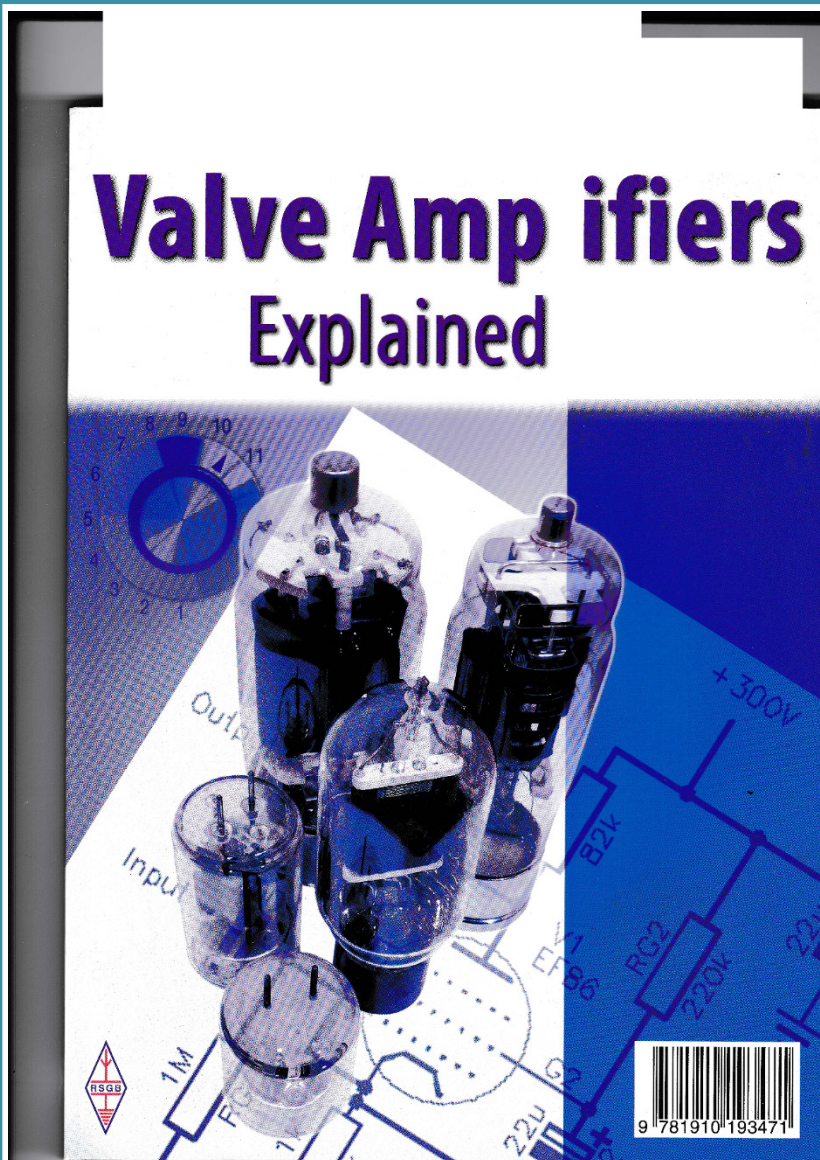
pret valve characteristic curves. The various classes of operation of amplifiers - Class A, Class B, Class AB1, Class AB2 and Class C - are all covered in detail. The relative merits of grounded cathode and grounded grid amplifiers are discussed and a chapter is devoted to the causes of distortion in valve amplifiers - and how to avoid such distortion. The author explains that linearity is primarily a function of the power dissipation of the device and the supply voltage and he devotes a whole chapter to good power supply design. The various protection circuits that an amplifier should have are also covered. While the

book is equally relevant to HF and VHF enthusiasts, a chapter is devoted specifically to the design of VHF RF power amplifiers. Another chapter even discusses liquid cooling of valve amplifiers.

There is advice too for those who, instead of building an amplifier, are considering purchasing a commercially-made linear. Those who use commercial linear amplifiers and want to understand more about how they work will not be disappointed.

As John says, "There is a certain aura about valve equipment. The glowing filaments and the gentle buzz of a high voltage power supply are a sort of magic few have had the pleasure of knowing." After reading Valve Amplifiers Explained you will want to join that elite few!

*(You can also give your donation to any of the Committee at any gatherings where you may meet up with them and they can pass on the money to the account. Be sure to give your name and call sign.)*



**CONTACT US:**

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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 yesterday's 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— 3630  
Saturday 08:30 (06:30 UTC)— National SSB Net— 7140; Sandton repeater 145.700  
Echolink—ZS6STN-R; ZS0AWA-L  
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.

**For Disposal:**

I have two old valve Pye FM TX that appear to be intact with all valves, etc. Don't know if they work, but it is possible. I bought them many years ago, at an amateur radio flea market, when I was active and had ideas of home brew HF kit.

If anyone wants them then they can come and take them away; I live in Centurion.

Peter Smith ZS6FS  
012 669 3031  
073 141 3326

**For Sale:**

John ZS5JX has 2 Trio 9R59D receivers for someone wanting a restore project.  
Contact him on 0824865280 or email  
[johnnormanzs5jx@gmail.com](mailto:johnnormanzs5jx@gmail.com)

