



# AWA Newsletter

Issue 41

May 2009

## Antique Wireless Association of Southern Africa

### Inside this issue:

CW Net	2
SSB Activity	2
AM	2
Drake	3-4
Where Do The Sun-spots Go ?	5
Technical Tip	6
Notices	7

## Reflections:

The season has started to change, the leaves are falling off the trees. The grass is starting to show first signs of turning into it's winter attire and I am sure I saw the first bit of frost the other morning in the dip close to our home, which has a small dam very close to it.

80m Is also starting to show the change in season. It's getting quieter, well relatively so, and starts to open later and fade a lot earlier than it did in summer.

So what's my point ? AM season is approaching rapidly and we will definitely have a lot more openings in the evening to be able to play some good old fashioned AM again.

I am really looking forward to this as we cer-

tainly have had a hard time of it this last summer. With the bands being so poor, conditions have been really difficult, though not impossible.

The AM and SSB QSO parties are coming up in the second weekend of May and these should be times that we can get on the air and try out our valve rigs to their best.

We had such a good response last year to the QSO party and we hope it will be as good if not better this year. Don't let the band conditions put you off. So many times I hear the same words on the SARL Bulletins. "...these are only a prediction of band conditions, you never know what they will be like unless you switch on and call CQ...."

I am going to use this time again as an opportunity to get the last call signs needed for my WAZS 40m and 80m and who knows, maybe one or 2 new grid squares too. Definitely need a few more Div 1 and 2 on 80m. Not an easy task.

So come on. Blow the cobwebs out of your valve rigs. Fire them up and get the antenna connected. Check you can still get some power out the spout and come along and join us on one of our activities. We have tried to provide you all with so many opportunities on AM, SSB and CW to use them. Don't disappoint us or your self by not making the effort. Looking forward to hearing you all on frequency.

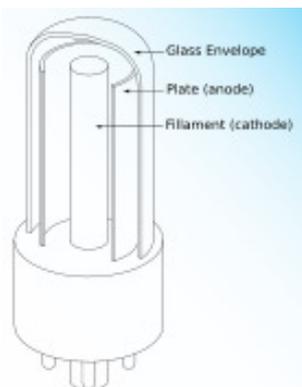
Best 73

De Andy ZS6ADY

### AWA Committee:

- \* President—Rad ZS6RAD
- \* Technical—Don ZS5DR
- \* Net Controller—Willem ZS6ALL
- \* Newsletter/PRO—Andy ZS6ADY

## Wikipedia



Structure of a Vacuum Tube Diode

In [electronics](#), a **vacuum tube**, **electron tube** (in North America), **thermionic valve**, or **valve** (elsewhere, especially in Britain) is a device used to [amplify](#), [switch](#), otherwise modify, or create an [electrical signal](#) by controlling the movement of [electrons](#) in a low-pressure space. Some special function vacuum tubes are filled with low-pressure gas: these are so-called soft valves (or tubes), as distinct from the hard [vacuum](#) type which have the internal gas pressure reduced as far as possible. Almost all depend on the thermal emission of electrons, hence [thermionic](#). Vacuum tubes were critical to the development of electronic technology, which drove the expansion and commercialization of [radio](#) broadcasting, [television](#), [radar](#), [sound reproduction](#), large [telephone networks](#), analogue and digital [computers](#), and industrial [process control](#). Some of these applications pre-dated electronics, but it was the vacuum tube that made them widespread and practical.

## CW Net:

CW continues to be one of those modes that you either love or hate. There is no in between as far as this is concerned.

Ask any ardent CW practitioner, and they will tell you they absolutely love it. Ask any anti CW practitioner and they will tell you what a waste of time and energy it is and how it should be confined to the archives never to be raised again.

The fact is that it will never die, because those who love it, will not allow it to. There will always be those who yearn to hear the chirp of the CW signal on air and use it to communicate. It is a language of it's own and is owned by those who choose to learn it.

Now within this fraternity of CW practitioners, those who love it, there are a few groups too. Those who want to send and

receive at 40 wpm, and those who cannot even aspire to ever being that good at it.

As is with most things, there are those who just seem to “click” (scuse the pun) with CW and it becomes second nature to them. Maybe even first nature. There is just no second thoughts about receiving or sending it at great speeds. Slow them down and they become Neanderthal's, no insult meant, but their brain just cannot think that slow.

There are also those who can trundle along at 12-20 wpm quite comfortably and get just as much enjoyment out of it. These groups have one thing in common and that is they both love to do CW.

I think we try to make our mark in the second group and hope to attract those who may want to dabble with a bit of CW.



If that is what you want to do, come along and join the net on 7020 on a Saturday afternoon, or the QRP group in the mornings on 3579. You never know, it may just light the passion in you to love it.

73

De ZS0AWA/CW ...--

## SSB activity:

The numbers are definitely dwindling on the SSB net. The old Faithfull's still call in every Saturday morning as they have done for the past few years, but the numbers are definitely down.

Last month I asked what it was that was keeping people away from radio. It seems there is a real mood of apathy out there as far as “playing Radio” is concerned.

Yet there are times when the bands are really good, and so often we just miss those opportunities, because we are apathetic. (I wonder if that just means a pathetic?)

We know there are plenty of radio's out there

just waiting to be switched on and used. I may have said this before, but I will say it again. The AWA has, according to it's mission statement, well over 100 members. How is it that we only hear just over 10% of them calling in on nets ?

Maybe we need to be doing something to attract people to join us on a Saturday morning SSB net ? But then I thought the actual reason we are Hams is because we have an attraction to the hobby, so it should be working the other way around.

Willem wants to go “National” every Saturday morning by having call signs from all the

provinces on 40m. I think he has achieved it on a few occasions.

Lets get out there and light up the airwaves with our tube rigs, after all, that's why we restore them, isn't it ?



Hallicrafters HT37 Transmitter

## AM:

The change in band conditions for AM has started already. For those of you who intensely dislike trying to hear people through the noise of QRN, the static crashes of our summer storms and the fading on the bands, the metamorphosis has begun and pretty soon 80m will be a butterfly for AM transmissions.

One can already hear the difference, week by week. The Div 5 stations are become a lot more readable, the local stations sound like FM, and the quality of the transmissions is just great.

I know we have a few listeners to the AM net, because they let us know every now and again about how strong signals were in various places of the country, but have you tried AM on that old FT101, or even on your Icom 747 super plus with all the bells and whistles? Give it a bash one day, you will be greatly surprised at the quality of signals achieved on AM.

You don't have to have a station set up for broadcasting to join us, just come along and try it out and hear what sig-

nals used to sound like in the early days before, before SSB.

Maybe there has to be a bit of passion involved here too, or is it nostalgia ?



A Hallicrafters SX 25 in Restoration mode

# DRAKE

## R.L. Drake

Drake, a privately held, American, family business that has managed to stay afloat selling gear to civilians, though they have had your occasional military contract. Robert Drake started the company in 1943, eventually moving to larger quarters in Miamisburg, Ohio, and more recently to an even nicer plant in Franklin. They still build everything in the USA, something they do not ignore in their advertising. It's hard for me to be objective about Drake, because I think it's a great company.

Drake started by selling filters to the military in World War II. These were good filters, and when interference from ham radios to TV sets became a problem after the war, they were easily adapted. I wish that I had kept my old TV-1000LP and its high-pass companion, that an Elmer had given me when I was learning ham radio. They beat anything made now.

While Collins got all the credit for revolutionizing ham radio, Drake was actually there first, with its line of compact base station SSB receivers, the 1A, 2, 2A and 2B. These looked kind of dinky, especially when put alongside the heavy metal of the era, but they used advanced circuitry with a design philosophy similar to the Collins, and they tuned SSB like real champs. They became instant classics, as witness the obscene prices fetched by the 1A on eBay.



2-B

Drake's numbering convention continues to this day. The first model in a new line gets a new sequential number, like an airplane, and then the refinements get letters. It is always chronological.

The 2B was especially well received. It was simply a great receiver, sensitive and stable. It put one more nail in the rapidly expanding coffin of "battleship" gear which needed a dedicated room for its use.



1-A

Next, Drake got into transceivers, the TR-3 and 4. I sound like a broken record, but the TR-4/ 4A is a neat radio, with its little square box, and its external speaker/power supply. There was also an accessory RV-4, which added another VFO. Right now, there are plenty of these transceivers at swap meets, and they can easily be restored and put right back onto the air. It's a simple, little radio that does simple, little things, but you can't beat it for the price.

Next, Drake issued its famous 4-line of separates. They really hit their stride here. First came the R-4, and the T-4, a companion 'reciter' without a VFO, for slaving to the receiver. With the R-4A came the T-4X, a transmitter in its own right, with its own VFO/PTO plus transceive capability, like the Collins. Further improvements were made in the R-4B/T-4XB, and R-4C/T-4XC. There was also a linear, the L-4B and L-4C, with full legal output, and a couple of short-wave receivers, the prized SPR-4 and the broadcast-oriented SW-4. The 4-line had a mindboggling array of accessories, from filters (of course!) to external frequency synthesizers (the FS-4), antenna tuners (the well regarded MN-200 and MN-2000), RTTY terminals, control consoles and generally just about any commercially viable idea that the engineers could think up.

There's been some debate over whether the 4-line should really count as a boat anchor. It was transitional; a hybrid design. Each revision had fewer tubes and more solid state devices. In size and weight, these were more like dinghy anchors, though the PS-1 power supply could at least keep a car from rolling.



T-4X

Amazingly, the 4-line is still a viable choice today. It's about the best value on the used market. It lacks the Collins mystique, but also the Collins prices. I'm using one as my primary station right now, and I'd stack it up against any ricebox made. My experience comes close to what I feel when using the better Kenwood radios, like the TS-940 and 950, and the Drake is even about the same size! Operating the 4-line feels a lot like using the Collins S-line, minus the reassuring sturdiness of the Collins. About the only time this becomes a technical drawback is with the finicky "sweep tube" final of the T4X series, as compared to the rock-solid 6146s in the Collins.



R-4

Furthermore, the R-4 may be the most listenable ham receiver ever made. It's like getting a better antenna, or moving to a desert island. The filters in the R-4B and C differ, and both have their adherents, but to my ears the R-4B is the winner. You simply don't get tired from using this radio, even in all-night contest QRM. In fact, many hard-core contesters and DXers hung onto their 4-lines until only a couple of years ago, when computer automation of logging, duping, band changing, etc. required more sophisticated transceivers.

After this came the 7-line, all solid state, and in a redesigned, spacey, blue motif. The TR-7 was a ham transceiver, with a power supply in a matching case, and the R-7 was a very good, general coverage, fully synthesized receiver with a similar look. Like the R-4, the R-7 has its fanatics, who won't listen to anything else. It's a winner, even though it is rather hard to tune. Once again, Drake just kept getting out every kind of high-tech, or even just plain gee-whiz, accessory anyone could ever imagine.

This period also had some rare, amazing radios, such as the UV-3. This extremely advanced transceiver had modules that put it on as many as 3 VHF/UHF bands at once, run from an advanced control head that has been hacked, interfaced, and adapted for more remote bases than seems possible. The UV-3 was at least 10 years ahead of its time, and more if you include the excellent 220 MHz band, which for a long time was left off Japanese radios. (There's no 220 in Japan.)

In the 80s, Peter Drake, who had replaced his late father, got the company into satellite TV receivers. These were made with typical Drake quality. The demand was huge, and Drake dropped all of its other products to concentrate on them. This led to an epic closeout sale at ham stores.

In the 1990s, Drake moved to Franklin, Ohio, and broadened its line with a number of video, CATV, and assisted listening products. Happily, it also got back into radio with its very successful R-8 series. There were also brief advertisements of an amateur transceiver.

Unfortunately, it didn't last. In 2005, Drake once again withdrew from HF radio products. While the excellent R-8B was still a steady seller, it could no longer recoup the cost of parts without a major price hike, and management chose to discontinue it. Too bad. The company, however, remains a going concern.

(Article from The Ominous Valve Company—Pics by Rigpix)

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Vol. VI      JUNE, 1933      No. 2

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**OSRAM TWO-VOLT TYPE**

Type	Plumage	2 Filament Amps.	Grid Filament Amps.	Control Grid Filament Amps.	Control Grid Filament Volts.	Input Power W.	Price
5L-11	Screen Grid I.F.C.	0.1	200	200	250	280	280
5L-12	Screen Grid I.F.C.	0.1	250	250	250	320	320
5L-13	Screen Grid I.F.C.	0.1	300	300	250	400	400
5L-14	Screen Grid I.F.C.	0.1	350	350	250	480	480
5L-15	Screen Grid I.F.C.	0.1	400	400	250	560	560
5L-16	Screen Grid I.F.C.	0.1	450	450	250	640	640
5L-17	Screen Grid I.F.C.	0.1	500	500	250	720	720
5L-18	Screen Grid I.F.C.	0.1	550	550	250	800	800
5L-19	Screen Grid I.F.C.	0.1	600	600	250	880	880
5L-20	Screen Grid I.F.C.	0.1	650	650	250	960	960
5L-21	Screen Grid I.F.C.	0.1	700	700	250	1040	1040
5L-22	Screen Grid I.F.C.	0.1	750	750	250	1120	1120
5L-23	Screen Grid I.F.C.	0.1	800	800	250	1200	1200
5L-24	Screen Grid I.F.C.	0.1	850	850	250	1280	1280
5L-25	Screen Grid I.F.C.	0.1	900	900	250	1360	1360
5L-26	Screen Grid I.F.C.	0.1	950	950	250	1440	1440
5L-27	Screen Grid I.F.C.	0.1	1000	1000	250	1520	1520
5L-28	Screen Grid I.F.C.	0.1	1050	1050	250	1600	1600
5L-29	Screen Grid I.F.C.	0.1	1100	1100	250	1680	1680
5L-30	Screen Grid I.F.C.	0.1	1150	1150	250	1760	1760
5L-31	Screen Grid I.F.C.	0.1	1200	1200	250	1840	1840
5L-32	Screen Grid I.F.C.	0.1	1250	1250	250	1920	1920
5L-33	Screen Grid I.F.C.	0.1	1300	1300	250	2000	2000
5L-34	Screen Grid I.F.C.	0.1	1350	1350	250	2080	2080
5L-35	Screen Grid I.F.C.	0.1	1400	1400	250	2160	2160
5L-36	Screen Grid I.F.C.	0.1	1450	1450	250	2240	2240
5L-37	Screen Grid I.F.C.	0.1	1500	1500	250	2320	2320
5L-38	Screen Grid I.F.C.	0.1	1550	1550	250	2400	2400
5L-39	Screen Grid I.F.C.	0.1	1600	1600	250	2480	2480
5L-40	Screen Grid I.F.C.	0.1	1650	1650	250	2560	2560
5L-41	Screen Grid I.F.C.	0.1	1700	1700	250	2640	2640
5L-42	Screen Grid I.F.C.	0.1	1750	1750	250	2720	2720
5L-43	Screen Grid I.F.C.	0.1	1800	1800	250	2800	2800
5L-44	Screen Grid I.F.C.	0.1	1850	1850	250	2880	2880
5L-45	Screen Grid I.F.C.	0.1	1900	1900	250	2960	2960
5L-46	Screen Grid I.F.C.	0.1	1950	1950	250	3040	3040
5L-47	Screen Grid I.F.C.	0.1	2000	2000	250	3120	3120
5L-48	Screen Grid I.F.C.	0.1	2050	2050	250	3200	3200
5L-49	Screen Grid I.F.C.	0.1	2100	2100	250	3280	3280
5L-50	Screen Grid I.F.C.	0.1	2150	2150	250	3360	3360
5L-51	Screen Grid I.F.C.	0.1	2200	2200	250	3440	3440
5L-52	Screen Grid I.F.C.	0.1	2250	2250	250	3520	3520
5L-53	Screen Grid I.F.C.	0.1	2300	2300	250	3600	3600
5L-54	Screen Grid I.F.C.	0.1	2350	2350	250	3680	3680
5L-55	Screen Grid I.F.C.	0.1	2400	2400	250	3760	3760
5L-56	Screen Grid I.F.C.	0.1	2450	2450	250	3840	3840
5L-57	Screen Grid I.F.C.	0.1	2500	2500	250	3920	3920
5L-58	Screen Grid I.F.C.	0.1	2550	2550	250	4000	4000
5L-59	Screen Grid I.F.C.	0.1	2600	2600	250	4080	4080
5L-60	Screen Grid I.F.C.	0.1	2650	2650	250	4160	4160
5L-61	Screen Grid I.F.C.	0.1	2700	2700	250	4240	4240
5L-62	Screen Grid I.F.C.	0.1	2750	2750	250	4320	4320
5L-63	Screen Grid I.F.C.	0.1	2800	2800	250	4400	4400
5L-64	Screen Grid I.F.C.	0.1	2850	2850	250	4480	4480
5L-65	Screen Grid I.F.C.	0.1	2900	2900	250	4560	4560
5L-66	Screen Grid I.F.C.	0.1	2950	2950	250	4640	4640
5L-67	Screen Grid I.F.C.	0.1	3000	3000	250	4720	4720
5L-68	Screen Grid I.F.C.	0.1	3050	3050	250	4800	4800
5L-69	Screen Grid I.F.C.	0.1	3100	3100	250	4880	4880
5L-70	Screen Grid I.F.C.	0.1	3150	3150	250	4960	4960
5L-71	Screen Grid I.F.C.	0.1	3200	3200	250	5040	5040
5L-72	Screen Grid I.F.C.	0.1	3250	3250	250	5120	5120
5L-73	Screen Grid I.F.C.	0.1	3300	3300	250	5200	5200
5L-74	Screen Grid I.F.C.	0.1	3350	3350	250	5280	5280
5L-75	Screen Grid I.F.C.	0.1	3400	3400	250	5360	5360
5L-76	Screen Grid I.F.C.	0.1	3450	3450	250	5440	5440
5L-77	Screen Grid I.F.C.	0.1	3500	3500	250	5520	5520
5L-78	Screen Grid I.F.C.	0.1	3550	3550	250	5600	5600
5L-79	Screen Grid I.F.C.	0.1	3600	3600	250	5680	5680
5L-80	Screen Grid I.F.C.	0.1	3650	3650	250	5760	5760
5L-81	Screen Grid I.F.C.	0.1	3700	3700	250	5840	5840
5L-82	Screen Grid I.F.C.	0.1	3750	3750	250	5920	5920
5L-83	Screen Grid I.F.C.	0.1	3800	3800	250	6000	6000
5L-84	Screen Grid I.F.C.	0.1	3850	3850	250	6080	6080
5L-85	Screen Grid I.F.C.	0.1	3900	3900	250	6160	6160
5L-86	Screen Grid I.F.C.	0.1	3950	3950	250	6240	6240
5L-87	Screen Grid I.F.C.	0.1	4000	4000	250	6320	6320
5L-88	Screen Grid I.F.C.	0.1	4050	4050	250	6400	6400
5L-89	Screen Grid I.F.C.	0.1	4100	4100	250	6480	6480
5L-90	Screen Grid I.F.C.	0.1	4150	4150	250	6560	6560
5L-91	Screen Grid I.F.C.	0.1	4200	4200	250	6640	6640
5L-92	Screen Grid I.F.C.	0.1	4250	4250	250	6720	6720
5L-93	Screen Grid I.F.C.	0.1	4300	4300	250	6800	6800
5L-94	Screen Grid I.F.C.	0.1	4350	4350	250	6880	6880
5L-95	Screen Grid I.F.C.	0.1	4400	4400	250	6960	6960
5L-96	Screen Grid I.F.C.	0.1	4450	4450	250	7040	7040
5L-97	Screen Grid I.F.C.	0.1	4500	4500	250	7120	7120
5L-98	Screen Grid I.F.C.	0.1	4550	4550	250	7200	7200
5L-99	Screen Grid I.F.C.	0.1	4600	4600	250	7280	7280
5L-100	Screen Grid I.F.C.	0.1	4650	4650	250	7360	7360

**OSRAM FOUR-VOLT TYPE**

Type	Plumage	4 Filament Amps.	Grid Filament Amps.	Control Grid Filament Amps.	Control Grid Filament Volts.	Input Power W.	Price
5L-101	Screen Grid I.F.C.	0.1	200	200	250	320	320
5L-102	Screen Grid I.F.C.	0.1	250	250	250	400	400
5L-103	Screen Grid I.F.C.	0.1	300	300	250	480	480
5L-104	Screen Grid I.F.C.	0.1	350	350	250	560	560
5L-105	Screen Grid I.F.C.	0.1	400	400	250	640	640
5L-106	Screen Grid I.F.C.	0.1	450	450	250	720	720
5L-107	Screen Grid I.F.C.	0.1	500	500	250	800	800
5L-108	Screen Grid I.F.C.	0.1	550	550	250	880	880
5L-109	Screen Grid I.F.C.	0.1	600	600	250	960	960
5L-110	Screen Grid I.F.C.	0.1	650	650	250	1040	1040
5L-111	Screen Grid I.F.C.	0.1	700	700	250	1120	1120
5L-112	Screen Grid I.F.C.	0.1	750	750	250	1200	1200
5L-113	Screen Grid I.F.C.	0.1	800	800	250	1280	1280
5L-114	Screen Grid I.F.C.	0.1	850	850	250	1360	1360
5L-115	Screen Grid I.F.C.	0.1	900	900	250	1440	1440
5L-116	Screen Grid I.F.C.	0.1	950	950	250	1520	1520
5L-117	Screen Grid I.F.C.	0.1	1000	1000	250	1600	1600
5L-118	Screen Grid I.F.C.	0.1	1050	1050	250	1680	1680
5L-119	Screen Grid I.F.C.	0.1	1100	1100	250	1760	1760
5L-120	Screen Grid I.F.C.	0.1	1150	1150	250	1840	1840
5L-121	Screen Grid I.F.C.	0.1	1200	1200	250	1920	1920
5L-122	Screen Grid I.F.C.	0.1	1250	1250	250	2000	2000
5L-123	Screen Grid I.F.C.	0.1	1300	1300	250	2080	2080
5L-124	Screen Grid I.F.C.	0.1	1350	1350	250	2160	2160
5L-125	Screen Grid I.F.C.	0.1	1400	1400	250	2240	2240
5L-126	Screen Grid I.F.C.	0.1	1450	1450	250	2320	2320
5L-127	Screen Grid I.F.C.	0.1	1500	1500	250	2400	2400
5L-128	Screen Grid I.F.C.	0.1	1550	1550	250	2480	2480
5L-129	Screen Grid I.F.C.	0.1	1600	1600	250	2560	2560
5L-130	Screen Grid I.F.C.	0.1	1650	1650	250	2640	2640
5L-131	Screen Grid I.F.C.	0.1	1700	1700	250	2720	2720
5L-132	Screen Grid I.F.C.	0.1	1750				

## WHERE DO THE SUN SPOTS GO? By OSCAR EGENES (ZT5R).

In consideration of radio phenomena we, often speak of solar activity and sunspots. These are not generally understood by those interested in the subject and a brief explanation will no doubt assist us to a clearer realisation of their influence upon radio.

As far as we can ascertain the success or otherwise of long distance transmission and reception depends upon the position and state of the ionised strata of the earth's atmosphere and particularly in respect of short wave operation.

This ionisation of the upper strata of the earth's atmosphere has been dealt with on previous occasions. For its creation and composition there is no doubt that the sun is principally responsible and this is made quite evident by the change in the position of the ionised layer from day to night. During daylight the layer is nearer the earth than during the night and we also experience a seasonal change which is not quite so marked.

When we come to consider the yearly average of ionisation we find that it is not the same and it varies in 'conformity with the average yearly change in solar activity.

This solar activity is caused by the phenomena known as sun spots and although we must consider both corpuscular and ultra violet rays as being of primary importance we generally consider the former as associated with sun spots.

Let us now imagine swarms of electrically charged particles being shot out from the disturbed portions of the sun's surface. These are the sun spots.

Sun spots are nothing else than huge electric storms which rage on the surface of the sun. Suddenly released, as it were, from an intense inferno, they burst and reach out into space stretching, as far as can be observed, hundreds of thousands of miles, perhaps reaching past our earth. They are born and they die. Some last only a few hours, while others exist for days. It is the frequency and intensity of their recurrence which determines the years of maximum or minimum activity and we have observed that they are represented by a frequency cycle averaging eleven years.

On very rare occasions it is possible to observe sun spots with the unaided eye, but viewed through a telescope they appear like huge black spots on the surface of the sun and are carried round with its rotation. Very often the sun is quite spotless. It was about 300 years ago that they were first discovered:

Enormous whirlpools of boiling gases setting up and dissipating tremendous electrical energy, they are certainly cyclones of unimaginable intensity.

Some spots appear in groups, others as twins, while we find solitary ones of enormous size being whirled round and round as the sun revolves on its axis.

Very few spots appear outside the latitudes which are 35 degrees north or south of the sun's equator and very few appear on the equator itself.

Interested observers are always anxious to photograph the sun at a period of total eclipse in order to add to the available data new observations on the Sun's Corona which is the name given to the strange and mystifying super atmosphere which stretches out from the surface of the sun into space.

Whether it is fiery gas or cold electrified particles is a matter yet to be determined, but the shape of the Corona varies considerably with a variation in sun spot frequency. It is this change which causes a variation in the condition and position of the ionised layer. Even the time between an actual disturbance and its effect upon the earth varies, but the usual period is about two days. The variation will depend upon the nature and intensity of the disturbance.

It is well known that the sun spots, or prominences as they are generally called, also affect the magnetic field of the earth and this effect is yet to be considered in relation to radio phenomena.

The sun, mighty as it is in respect to our small earth, has such large spots on it at times that the whole earth could be dropped into the centre of such a spot and it would not even " splash."

Mighty also in its influence, astronomers are prepared to agree that our little earth may have some influence on the sun itself!

An unexplained phenomenon is the fact that as the sun turns round to us from its unseen side a number of spots are observed

which disappear as the sun brings them round to face the earth. As a magnet would lift a steel pin so do the spots appear to be drawn from off the face of the sun!

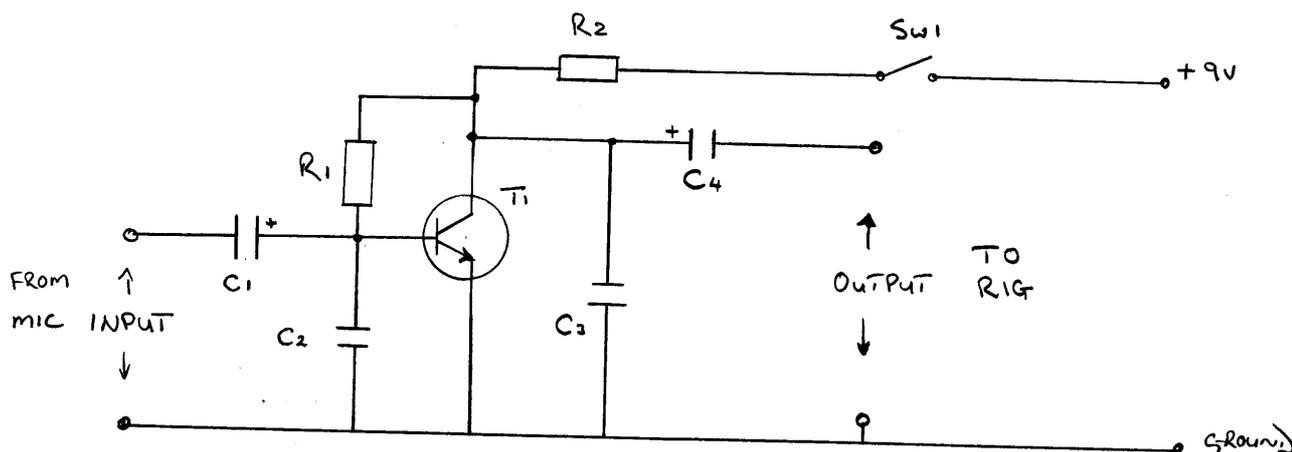
Where do they go or what happens to them?

(This Article was printed in the June 1933 edition of QTC, has the opinion changed much)

## Don's Technical Tip

### A Simple Microphone Audio Amplifier

T 1                    2N2222A  
 C 1 & 4    1uF 25V Electrolytic ( DC Block )  
 C 2 & 3    47nF ( RF Shunt )  
 R 1                    100 K Ohm ¼ Watt  
 R 2                    1 K Ohm ¼ Watt  
 SW 1                 SPST Switch



#### Article 5.            **Aligning those old rigs.**

Now that you have cleaned that old rig, slowly applied power, fixed all the AC decoupling capacitors and electrolytics, checked all voltages and replaced those resistors you now find the rig is as deaf as a doornail. So we start the Alignment only to find the coils have been bunged up with wax or the slugs have been broken. First if there is wax, a good hair dryer blowing hot air on to the coils will melt the wax and clear the thread ready for you to align the rig.

Now to find the correct alignment tool that matches the slug. Once this has been established we find that the slug has been broken. If you are lucky you may be able to get access to the reverse side of the coil and if so normally that side has not been broken. If it has been broken then a very small drop of super glue on the tip of your tuning tool and with accurate positioning being careful not to get the glue on the thread normally does the trick and you can slowly ease the broken slug out of its hole. If you find it is still not turning try blowing hot air on the coil to ease any wax that might still be jamming the thread. I have found that this normally does the trick but any other ideas would be welcomed.

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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 transmitters and receivers. 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.

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**Notices:****KWM2-A Raffle:**

Congratulations to Pierre ZS6BB who was the winner of the Collins KWM—2A. We will try and get a picture of Pierre with this rig for the next issue.

Thanks to all who donated to this raffle, it certainly helped to boost the coffers which will keep us in stamps and envelopes for a while.

A special thanks to William ZS4L who donated this rig to the AWA with the express purpose of raffling it off.

**Half yearly Financial report:**

This report has been compiled and presented to the committee members. Any interested parties who may want to see this report can get a copy by requesting it from Andy ZS6ADY

A big thank you to all those who have sent in donations to cover postage on the snail mail copies of the newsletter.

**AWA Valve QSO Party**

Remember the Valve QSO Party on Saturday and Sunday 09 & 10 May 2009 from 15:00 to 19:00 SAST on both days, with AM on Saturday and SSB on Sunday.  
Rules are available in the SARL Contest manual.

Contact ZS0AWA and earn extra points.

**Valve Donation:**

Our thanks to Peter Olhaus who donated a rather large quantity of valves to the AWA. We are busy cataloguing them and once done this valve list will become available for any interested parties.

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