



# Southern African Antique Wireless Association



## ZS0AWA



**APRIL 2006**

**Issue #4**



This newsletter is sent out to all who have called in on the AWA net and who have email facility, and those who have paid for mail envelopes, with the hopes that it will encourage you to call in again and help to keep the AWA net alive and well.

Should you not want to receive any further publications of this newsletter, drop me a note and I will take you off the mailing list.

### **Happenings:**

Not too much has happened on the AWA side this last month. Besides the odd flea market there has only been the regular Saturday call in on 40m. Conditions have been up and down and most Saturdays we have been battling with the AM call in as 40m has not opened fully by then.

The suggestion to move the SSB call in to 08:30 as it works a lot better with poor conditions, and then use the better conditions to run the AM group from about 09:15 was a disaster the first weekend with the band being fine for SSB, but fading out during the AM net. This last weekend conditions improved, but still AM contacts for local stations were not too successful. Strange business this Amateur Radio. Comments would be appreciated.

ZS0AWA/CW.



Welcome to Gerald ZS6IG who joins us from the Vaal Triangle area. Regular call in from OM Mossie ZS4XJ; Ian ZS5IAN; Barrie ZS6AJY; John ZS6JBJ; Ben ZS5SIB keeps the interest going on the CW side.

The net is run at 12 wpm and so should meet the needs of all interested in CW. 7020 is the frequency on Saturday afternoons at 14:00 SAST.

It's amazing how many are coming back to CW. I will often have a QSO with someone who has not used CW for a good few years and has now decided to come back to it, or Amateurs that have been off the air for a number of years and have come back, using CW.

There are some great antique keys out there and a few photographs of them would be greatly appreciated. Remember, if you send a photo, you must send a small write up with as the author will definitely not know too much about them.

### **AM Net:**

Brian - ZS2AB, sent us this picture of his homebrew AM 80m monster



Brian is keen on doing MF (musical frequency) with this little rig of his and can often be heard in the evenings on 3700 AM, running a good strong signal there.

Some of the rigs heard on AM. Rod ZS5RK - Collins 32V-2 early 50's, Don ZS5DR - Viking Ranger early 60's. So what are you using to transmit your AM signal ??

Remember the AM group on Wednesday evenings at 07:30 SAST on 80m, freq 3615 (-5kc for QRM) Please come up and join us if you have the time. We have even started doing some Music Transmissions in this slot. OM Rod ZS5RK and Don ZS5DR have got themselves set up to do these and the quality is sounding good. Having been recently joined by OM Jan ZS6HA and Brian ZS2AB, who are also involved in MF, the AM net is starting to grow. Both Rod and Don are running less than 40 watts and the QRN often takes it's toll, but we are still getting out.

As the summer storms draw to an end, the band will become quieter and conditions in general will improve, which means that we can only get better at this.

### **SSB Net:**

When calling in to the net, let us know what rig you are using. There are some interesting sets out there that people are using, and it's always great to know that the person you are talking to is using a blast from the past.

Rigs recently heard, Dudley Z22JE FT201 early 1970's, Danny ZS6AW FTDX100 late 1960's. Ian ZS5IAN - HW100 early 60's, Gary ZS5NK KWM2-A late 50's. SSSC (Single Sideband Suppressed Carrier) came in to being from around 1948. So who has the oldest working SSB rig out there ?? (We will publish an article on SSSC or SSB soon).

# THE HISTORY OF HALLICRAFTERS

"The Radio Man's Radio," Hallicrafters was the personal creation of Bill Halligan in 1932. Halligan's early radios were hand crafted, and even signed by whichever employee built them. Hence the name, "Hallicrafters."

Bill Halligan is yet another of the old-time radio people. He served as a wireless op in WW I, and built spark transmitters. In 1928, he started his first company, the precursor to Hallicrafters. It moved around, as RCA licenses became available, and ultimately located in Chicago. Its first communication receiver was the S-1 Sky Rider, a regen made in 1934. This bandswitching radio, still fairly innovative for the time, was the first in a line that lasted until the 1970s. Most of the comm radios had S- numbers, though for a long time the ones with crystal filters became SX-. Later still, when up-conversion came in and crystal filters went out, SX- seemed to label all of the top-line ham receivers, like the SX-101 and SX-115. The latter was not a state of the art design, and some consider it overrated, but it was a darn good radio for the ham bands. Not many were sold, as Collins and Drake had already put an end to the battleship era. Today the set has a certain mystique which is hard to explain, fetching absolutely ludicrous eBay prices.



**S-38D  
RECEIVER**

Smart new styling in this world-wide performing compact receiver.

Fine for the new amateur as a reliable standby set. Communications-type controls for standard broadcast plus 3 shortwave bands, 1650 kc to 22 mc. Sensitive built-in speaker. Headphone tip jacks. CW oscillator. Engineered throughout to give years of good service.

S-38D, complete with tubes.....\$49.95

Hallicrafters collecting is something of a hobby within a hobby, and it's easy to see why. The company always made a whole line of shortwave radios, clear from the bottom-end Sky Buddy, which kids could afford, to the inexpensive (OK, cheap) S-38/S-120, through mid-priced equipment, to gee-whiz high-tech gear which looked and sounded as formidable as anything ever made anywhere.

The result is a dizzying array of Sky Buddies, Sky Riders, Sky Couriers, Sky Trainers and Sky just about everything else, all aimed at the consumer market, and in addition all the numbered models that could be used in the home or the shack. The company sold an awful lot of radios. They turn up in some very unlikely places. For example, the 'air band radio' seen in the office on the *Wings* TV series was an old Hallicrafters receiver, though they made a real aero radio that is something of a classic as well.



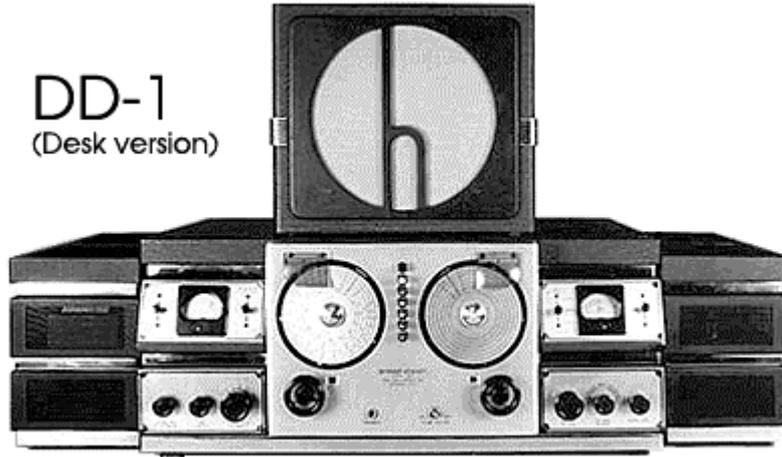
**HALLICRAFTERS SX-100 RECEIVER.**  
Less speaker. Net.....\$295.00

Anyone making this sheer volume of gear needs to make certain compromises, especially if they like staying in business. Hallicrafters tended to use generic, mass produced parts, which is good news and bad news today. The good news is that there are fewer custom parts for the restorer to locate. The bad news is that many a collector or user has opened up their Hallicrafters and recoiled. It looks

like a cheap Silvertone in there!

Even so, Hallicrafters made some incredible radios. An example is the legendary DD-1, an entertainment receiver that looks more like a 1930's movie space ship control panel. It's a double-diversity radio, covered with dials and meters. Not that many were sold, making the DD-1 a real prize.

DD-1  
(Desk version)



Hallicrafters also made some great transmitters, both for government/military and amateur. These tended to be true boat anchors, with some of the heaviest chassis in the industry, until they slimmed down considerably in the late 60s/early 70s. The ham line started with 1937's classic HT-1, in the same awesome case as the DD-1. Post-WW II saw the HT-4, a HUGE civilian version of a military rig selling for \$1500 in 1950, plus the more modest HT-6 with an 807 final, and the midsize HT-9.

After the war, we also got the modest little HT-17 and HT-18 beginner's rigs, a larger HT-19, and another 1950 heavyweight entry with the "TVI-proof" HT-20. (Hallicrafters, like Collins, addressed the new problem of television interference by increasing shielding and adding a built-in LP filter.) The HT-30 followed in the mid-50s, with somewhat more streamlined styling which carries over in the classic HT-32/32A-B of the 60s. The '32s are definitely in the best boat anchor tradition, weighing at least 85 pounds, and they are excellent radios.

Hallicrafters supplied many military rigs during the war years and specialized in a mobile unit housed in a Studebaker truck. The unit used to come with a long leather overcoat for the operator, but which was normally removed by the stores people and given to the higher ranking officers.

The HT-37 was quite a bit lighter (I could carry mine by myself, though just barely), mostly because Hallicrafters had skimped on the power supply and the materials used in the case. It fit into a mid-level ham line also including the SX-111 receiver and HT-41 linear. However, the HT-37 is highly prized today, because its balanced-modulator section, with phasing-mode sideband generation, is one of the nicest sounding rigs ever made. Use a suitable mike, like the high-Z D-104 without the preamp, keep the gain down, and you can be confident of having the best SSB audio on the band.

### THE HT-31



Amplifiers were the HT-31, in a heavy case resembling the HT-20, and the HT-33/33A-B series, companions to the HT-32 and using progressively more powerful tubes which easily made the "full gallon."

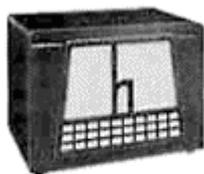
In the 60s the beginner's rig was the HT-40/40A, then finally the trend away from the real boat anchors produces the interesting HT-44 and HT-46. There's also a lightweight, 3-400Z linear in this period, the HT-45 Loudenboomer, which came from an earlier product marketed by Radio Industries.

A popular early electronic keyer was the Hallicrafters "T.O. Keyer," in a large case with built-in sidetone speaker. Unlike most such keyers in that era, it was a heavy-duty unit that could handle -65 volt grid circuits in big tube rigs.

Many Hallicrafters general-coverage receivers, and even the ham-only SX-101/101A, had what became something of a trademark for this company, namely the giant, etched glass, slide-rule dial. Think Zenith Trans-Oceanic, then think way, way, WAY bigger. If you break one of these, you will need to cannibalize another radio for a replacement. They are practically church windows.

The largest such dial was probably on the popular SX-62, an entertainment receiver which covered .540 to 108 MHz, continuously, switching to a separate IF strip with an FM discriminator on the higher bands. Yes, you could hear the cops on this one. It was a living room version of the turret dialed SX-42, which was itself derived from countermeasures receivers made in the war. The '62 has the classic, shortwave dial, covered with markers for Rome, Paris, Moscow, and other cities which may or may not have ever actually broadcast there.

The SX-62 and 62A are extremely complicated sets, hard as hell to work on, though at least there's a Sam's Photofact on it. It's prone to shaft stripping on the 12-section band switch, and Lord help you if the tuning drive cord needs restringing. However, I've actually used one for a ham radio, with an external relay to switch the antenna and speaker. The crystal filter does a nice job, though since the ENTIRE 40 and 20 meter bands are about half an inch wide, if anyone bumps the radio, your station is gone forever. It's a somewhat more practical set for MW AM DX, with the right antenna.



R-46 Speaker

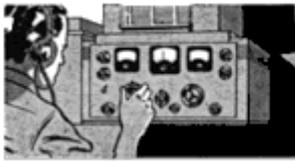
Also look out for Hallicrafters speakers, the R- series. They match the output impedances of the receivers, and just generally look cool. The enormous R-42, designed to work with the SX-42's 8-watt 6V6 audio section, has a hi-fi/ communication response switch and a real sci-fi bass port. The SX-62, with a similar audio output, can use it too, though by then there was a slightly more domesticated R-46, the one with that famous Hallicrafters "h" all the way up the grille. Of course, there was a small communication-

audio speaker too, the little R-47, which looks suspiciously like the ones Motorola sold with its VHF cop radios.

Hallicrafters also made a rather extensive line of consumer electronics. While some of this was pretty ordinary stuff, there were some classics. The aforementioned diversity receiver was an audiophile unit, 1930s style. When TV came in, Hallicrafters made a desktop set with a small (12"?) screen and radio-style push buttons, in a case that looks a great deal like the one used for the SX-62. This TV, the T-54, is really hip right now, and you see it in a lot of design books. They study its looks in art schools. It's kind of halfway between 50s high-tech and 60s camp. Probably doesn't hurt that it had a channel 1, even after the FCC eliminated it in 1948. It was followed by the T-505, in a more living-room-friendly wooden box, then by a more standard line of larger screen TVs.

WWII's spectacular production output left Hallicrafters a large company with 2500 employees at several big factories in the Chicago area. For most of the fifties, they kept up this output, selling most of the short wave receivers used by the public. Seems as if everyone had an old S-38 around somewhere.

Ultimately, though, things seemed to decline. Northrop bought Hallicrafters in 1966, and tried to refocus it on military gear. The last amateur product was discontinued in 1972. Subsequently, Hallicrafters had a succession of new owners, and it now appears to have completely dissolved. Bill Halligan died in 1992, at age 93. The name has been re-registered and is now property of Professional Electronics Company, Inc.



**With thanks to the Ominous Valve Company website for the article.**

**Promotions:**

The following are the dates for the Radio technology in Action, which is going around the country. This is a great time to get out your Antique's and set them up on display. We have found that there is a lot of interest drawn to the old rigs as people reminisce on what they used to operate and how many contacts they made on them. Come on guys, how about putting up a display in these areas?

- **EASTERN CAPE** - 29 April Nelson Mandela University Port Elizabeth
- **WESTERN CAPE** - 13 May University of Stellenbosch
- **KwaZulu-Natal** - 15 July University of KwaZulu-Natal
- **GAUTENG** - 19 August SARL National Amateur Radio Centre

Should you feel so inclined, send us pictures of your shack that we could have them included in this newsletter.

**Restoration News:**

John, ZS2J wrote asking about parts for an Eddystone All Wave Four that he is trying to resurrect and is in need of valves. I know there are some keen collectors of valves out there and if you can help John then listen out for him on Frequency and give him a call.



## Antique Clubs and Sites:

Hallicrafters Collectors website : <http://www.w9wze.org>

Useful Links: <http://worleys.com/reference/hamradio/antique.htm>

## Swap Column:

Wanted: High Impedance Microphone to use with my 32V-3 (D104 or such like)  
4-ohm speaker to use with my 75A-4 (a matching Collins speaker would be nice)  
Contact Andy – ZS6ADY at 082 448 4368 or email [cairns@xsinet.co.za](mailto:cairns@xsinet.co.za)

Cliff, ZS6BOX is also looking for a 4-ohm speaker to use with his AR88 contact him on 082 898 9772 or [csmth@altron.co.za](mailto:csmth@altron.co.za)

If you would like to forward this newsletter to any other interested parties, please feel free to do so. Print it out and put in on your club notice board, or give it to someone interested in valve radios. If you know of any who report in on the net but don't have email, print it out and give them a copy.

Remember net days and times:

Saturday 08:30 SSB net - frequency – 7070Mhz  
Saturday 09:15 AM net – frequency 7070Mhz  
Saturday 14:00 CW net – frequency 7020Mhz  
Wednesday 19:30 AM net – frequency 3615 (-5 for QRM)

This, and past copies of the AWA Newsletter can be downloaded from <http://members.harc.org.za/newsletters/AWA/>. Our thanks to the Highway Amateur Radio Club in Durban (<http://www.harc.org.za>) for providing this service to our members and other interested parties.

Thanks for the bandwidth.

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