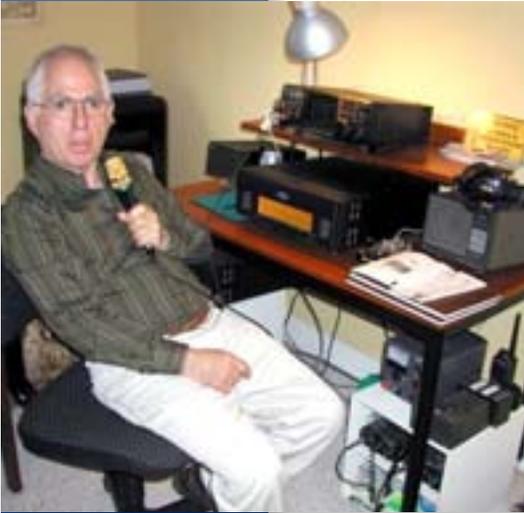


# Beginnings...

**Adam M. Farson, VA7OJ/AB4OJ**



Adam, VA7OJ/AB4OJ, in His Current Shack

I came into ham radio (and ultimately into a 35-year career as an RF/telecom engineer) via the SWL route.

My first exposure to ham radio was 20-meter AM, in Pretoria, South Africa (1951). We had a horrid little British ITT AC-DC table radio in a white plastic cabinet. This receiver happened to have a shortwave band as well as medium- and long-wave. I used to listen

to ZS6XT on 20-meter phone, as he chatted with his stateside friends. He was a U.S. Foreign Service officer (Chester Davis, now N7FCK, living in Thailand) who lived down the street from us.

## My Elmer

One thing led to another, and Chester became my Elmer. I can recall the long hours I spent in his shack as an 11-year-old, listening in utter fascination as he worked U.S. stations on 20-meter AM with his RCA AR-88 and rack-mount transmitter with an 813 final and 866B's glowing in the PSU at the bottom of the rack. Unfortunately, I was too young to qualify for a license at that time (the age limit was 18), but in later years—long after he returned to the States—I honored his friendship and support by taking over the callsign ZS6XT that he had held during his tour in South Africa.

Although my interest in radio continued (and grew stronger) during the intervening years, the demands of high school and university caused my 18th birthday to come and go without my earning a ham ticket. Then, in 1962 (I was 22 and in junior year of EE) I picked up a clean British Army WS62 set in working order. Now, I owned a transmitter but was unlicensed—technically in breach of the Radio Regulations. So, I applied for an ama-

teur license, and received the callsign ZS1ZG in November 1962. (The new call, ZS6XT, came with my relocation to Johannesburg after graduation.)

In November 1962, I received a telephone call from the local branch post office: "Mr. Farson, your amateur radio licence is here. Please stop in and pick it up, and pay the fee." So now I was ZS1ZG. And I was QRV on 80 and 40m CW, with a clean, working WS62 which had cost me all of two pounds (about \$5.50) at a surplus dealer's. I also had my faithful SWL receiver, an R.A.F. R1155B with a homebrew mains PSU.

So, all in a whirl, it was off to the post office with my buddy who was soon to become ZS1ZS, rush back to the student dorm, licence in hand, grab the WS62, hook up the key (a beautiful ex-Royal Navy job), longwire aerial and battery, call CQ on 3510. All of 5W! No joy. Try 40m; CQ on 7020. Silence.

Eventually the battery discharged.

*"...my dorm-mates threatened to lodge a complaint..."*

I ultimately had to abandon my beloved WS62, as it put out a spur on 920 kHz at -20 dBc. Several of my dorm-mates threatened to lodge a complaint with the Radio Branch unless I stopped "jamming" their favorite rock station on 917 kHz. I tried putting a series trap in the buffer

grid circuit, but it was of little, if any, help.



British Army Wireless Set No. 62



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K9YA Telegraph

## Fast Forward to 1963

I had held my license for a year, and was thus qualified to operate phone. (South Africa still has a CW-only first year, but the age limit is now 12.) So, I built a plate-&-screen modulator for my homebrew 6AG7 - 2 X 1625 transmitter. It also used a pair of 1625's and a WW2-surplus modulation transformer. I incorporated a high-level clipper-filter to allow up to 125% positive over-modulation without negative peak-clipping, and put a 300-3,000 Hz BPF in the speech-amp plate circuit to match the 3 kHz roll-off of the high-level LPF. You will note that the telecom engineer was emerging even then, at age 22. I used a British Army dynamic mic, designed for the same AF response. My receivers were the R1155, and later a British Army PCR3. A WW2 U.S. Navy RAX-1 with a home-built down-converter replaced these.

Everything looked good on the spectrum analyzer in the elec comms lab on campus, so I put the beast on the air and called CQ. A couple of local guys gave me good reports. A friend of mine who was a S.A. Navy and RNVR wireless op informed me that I sounded a bit like a Royal Navy shipboard transmitter; this I took as a great compliment!

## Kilowatts From Heaven

1963 was also the year I learned about "kilowatts from Heaven" (the 9 dB S/N advantage of SSB over AM) in our electrical communications class. That year, I also began hearing SSB signals from Collins equipment on amateur and maritime channels. As I was living in Cape Town, there was plenty of maritime traffic to listen to. I was impressed by the clean sound, and the penetrating power, of these SSB signals.

Then I discovered to my chagrin that my friends in Johannesburg, 1,600 km to the north, could not



Homebrew 20-meter SSB/CW Transceiver

hear me worth a tinker's damn with 100W AM carrier input—the legal limit back then—whereas they always gave me 589/599 on CW. My antenna at the time was a 20-meter ground-plane, elevated 10 meters. (The ZS legal limit is now 400W PEP output on SSB and 150W input for all other modes.) So I began to use AM only for local contacts, and CW exclusively for anything long-haul. I had a regular CW sked with two friends in Johannesburg. One was the chief avionics engineer at Jan Smuts International Airport; the other was a colleague of his—a Marconi avionics technician.

## Racal

In 1964, when I started working at Racal, my AM career ended forever. I designed and built a 20-meter SSB/CW transceiver with a unique topology, and never looked back.

The architecture of this radio was unique, in that the RCA-7360 beam-deflection mixer was dual-function; receiver front-end, and transmitter balanced modulator. This approach kept the tube count to eleven. The receiver audio output stage, AGC/S-meter circuit, VOX and transmitter speech amplifier were solid-state.

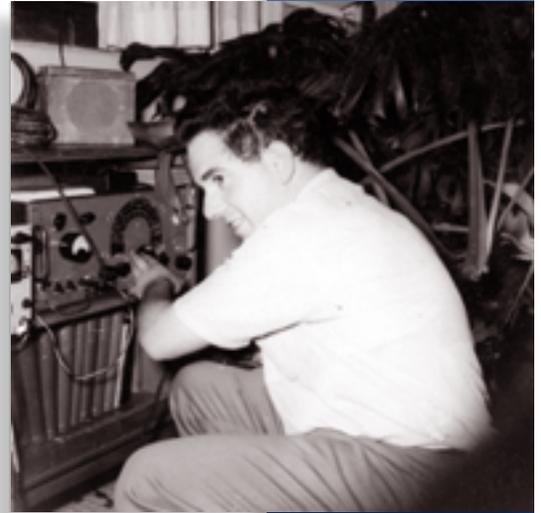
It lives on as a link on my Web site. The front panel meter is part of a wheelbarrow-load of parts Chester gave me

shortly before returning to the U.S.

With that little 65W PEP radio and a 1/4-wave ground-plane elevated 15 meters, I had a tremendous amount of fun being comparatively rare DX on 20-meter CW and SSB.

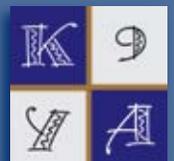
## End of an Era

That era ended when I emigrated from South Africa. I was re-licensed in Canada in 1976 as VE3DGY, and returned to the HF bands in 1989, earning the U.S. Extra call, AB4OJ. My current Canadian call is VA7OJ. My present station is an Icom IC-756Pro3 driving a Yaesu Quadra amplifier, with a Cushcraft R8 vertical at 50 feet. Since retiring in 1999, I now have plenty of time for ham radio. At present, I operate mostly 20-meter and 17-meter SSB. ■



A Youthful ZS6XT with the PCR3 Receiver.

*"...I put the beast on the air..."*



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