

What's that short in my PA?

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During 1984-85, I lived on Marion Island. "Where's that?" you ask. Marion is one of two islands forming the Prince Edward Islands (the other one is actually called Prince Edward Island) which are 2400 Km south east of Cape Town in the bottom of the Indian Ocean, below Madagascar. They are classed as Subantarctic islands, along with the Falklands in the bottom of the Atlantic Ocean, the Crozet and Kerguelen groups also in the Indian Ocean but more towards Australia, and various other dots of land like Heard Island and Macquarie island which peek out of the Southern Ocean. In other words, it's in the middle of nowhere.

South Africa annexed the Prince Edward Islands in 1947 and has maintained a continuous presence on them ever since. Fast forward to 1982, when I was getting bored with my job, and met a friend of a friend who'd spent a year on the South African base in Antarctica. "That sounds like a fun way to spend a year," I thought. So I got the details from the friend and sent off an application.

In reply I received pink card, all in Afrikaans (a South African language descended from Dutch) which, with the help of a friend who worked at South African Airways, I decoded to "We've got your application; you'll hear from us soon." Several months later, I'd heard nothing further. So on a business trip to South Africa, I managed to sneak away for a day to Pretoria where the Antarctic & Islands Administration was located. I got sent around a bit and ended up in the office of a gentleman called Sam. I gave him my tale of woe and he disappeared for a few minutes. "I'm sorry, your application was filed in the wrong place," he said apologetically when he returned. "And the Antarctic team has just left. Would you be interested in going to Marion instead?"

"Where's Marion?" I asked. He gave me a couple of printed sheets which told me what I needed to know. Apart from what I've told you above, it said that the average temperature was 5 degrees C, it got 2.3 metres of rainfall, the average wind speed was 35 knots and the tallest plant there (because of the incessant winds) was a grass about 2-ft high. It's populated by vast numbers of penguins, seals, albatrosses and various other marine creatures, along with a basic team of eight men (women are now included but they weren't then) four of whom do the meteorological work (Marion's primary raison d'être is as a weather station) plus a diesel mechanic, medic, radio operator and radio technician (the next of which Sam hoped would be me).

I was pretty much convinced on the spot. A few months later, I found myself with the rest of the team at the main Met station near Pretoria, getting some training on the equipment I'd be looking after, along with cooking, firefighting, survival etc. And a couple of months after that, I was on a ship bound for Marion itself.

Marion is about 10 Km by 15 Km. There is a main base and a few huts dotted round the island for use by scientists working on the wildlife, or base staff going walkabout. Much of the four week changeover period was spent fitting new equipment, walking or getting helicoptered (much preferable!) to the huts to restock the gas and tinned food supplies, etc. The base rooms each had two bunks--for the changeover both bunks had to be used--and the base was full of people and pretty chaotic. Then, at last, the old team, scientists, builders

and hangers on finally returned to the ship, which with a couple of blasts of the foghorn to bid us farewell, set off back to Cape Town, leaving us in our splendid isolation.

The next week was spent unpacking our new food supplies, cleaning up “our” base and rooms, and settling in. We’d been given clothing before we left, but we now had a chocolate ration, liquor ration, even a cigarette ration for the smokers. I then fixed the spare radio transceiver, the intercom system, the video recorder, the HiFi, a couple of teleprinters, and anything else on the base which needed fixing and was the slightest bit electronic in nature. And then, with everything working, I came to the happy realisation that I had the best job on the base. If everything was working, I could do what I liked. I did lots of photography and developed my own colour slides and prints. I had a Z-80 based Sinclair Spectrum computer and did lots of BASIC programming and some machine language stuff as well. Apart from the basic team we had a few scientists, working on the seabirds, seals and insects on the island. I helped one of them, Chris, with his work analyzing what the penguins were eating.

The other inhabitants of the island were mice. They had jumped ship from the sealers who came to Marion in the 1800s, and in summer they got to plague proportions. Once, I returned from a walk around the island and as I entered my radio workshop mice could be seen heading for all corners. I set up the six traps I had and before I’d finished, two of them caught a mouse each. I caught three more before I left and when I returned again 10 minutes later all the traps had been sprung. The saving grace was that we only had mice, not rats.

Marion is in the “Roaring Forties” and the weather consisted of an almost unbroken procession of low-pressure systems coming past us. There were some mountains behind the base and our accurate weather forecasting maxim was “If you can see the mountains, it’s going to rain. If you can’t see the mountains, it’s raining already...”. One day, a particularly strong low-pressure system passed right over us. I had several V and Rhombic short wave antennas and they all blew down. Working up a 10 metre swaying wooden pole trying to put tiny nuts on clamps to hold wires together, in a 40-knot wind, at about 2 degrees C, with squalls of freezing rain coming at you every few minutes, is not fun. Eventually I had a couple of the antennas up again, and went back to the base to test them. To find that our medic was very ill. Graham was the medic and the team leader, and very well liked. We got a doctor in Cape Town on the radio. He diagnosed meningitis, not the best thing to deal with on an isolated island without a medic. A navy ship was dispatched to pick Graham up and take him back, but this took a few days, so an SA Air Force Hercules was sent down to drop us some urgent supplies. It was foggy when it arrived, so we had to fire flares to mark the drop zone. Graham’s condition improved with a glucose drip and some antibiotics, but he was still unable to talk when the Navy ship evacuated him. It turned out he’d actually had a major stroke, and had “locked in” syndrome – the film/book *The Diving Bell and the Butterfly* gives a good account of this. He can only communicate by blinking and is unable to talk. He still lives in Cape Town and has some incredible pieces of technology to make his very difficult condition easier to cope with.

The navy ship had brought a replacement medic, I got the rest of my antennas up, and our lives settled down again. Our communications with the mainland were two short wave transceivers – they only had 100-W outputs, but each also had a 1-KW PA (Power Amplifier) using a large valve (“tube” for you statesiders) in class C, with switched capacitors and motorised inductors which could be preset-tuned for all the frequencies we used. Usually they worked in FSK via a fiendishly complicated thing called an “Autospec,” which

converted our 5-bit teleprinter code into a 10-bit Hamming code with forward error correction which helped get the met data (and our letters) through when radio conditions were not good. On Sundays, however, I'd set the radio to SSB voice mode and we could make phone calls via a phone patch on the mainland. One Sunday, we were half-way through our calls when one of the guys, Justin, came out looking worried. "The transmitter made a loud bang", he said, "but I could still hear the guy I was calling and he could still hear me. There's a bit of a funny smell, too." I went and checked. The PA had tripped but the 100-W exciter was still getting through ok--we were lucky the conditions were good that day. I made my call and a couple of others did theirs, and then I shut down and opened up the PA. What I saw was the last thing I'd expected. Between the anode of the valve and the chassis was a very dead and well-cooked mouse. He'd managed to squeeze in through a small gap in the shielding (which I thereafter wired closed) obviously thinking that this was a nice warm place for a nap.

Not a really high tech story and didn't require great fault-finding skills I'm afraid, but certainly one of the most unusual faults I have ever had to fix!