

# DX-pedition 7O2WX Socotra Island / Yemen 2024

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**Socotra (Arabic: سقطرى / *Suqūṭrā*, English: *Socotra* or *Soqatra*) is an island in the Arabian Sea, about 230 km east of Cape Guardafui on the Horn of Africa and 350 km south of the Arabian Peninsula. It belongs to the Republic of Yemen, of which it is a province (or more accurately a governorate) that also includes the surrounding smaller islands (Abd al Kuri, Samhah, Darsah) and cliffs, collectively called the Socotra Archipelago (*ʿArḥabīl Suqūṭrā*). The largest city and administration centre is Hadibu. In 2008, the entire Socotra Archipelago became a UNESCO World Natural Heritage site.**



The idea to embark on an expedition to Yemen was preceded by extensive efforts to obtain a licence in Somalia, which ultimately failed. All the recent expeditions worked from Somaliland, which has its government and authorities in Nairobi, Kenya, or from Puntland, which is however not recognised as part of Somalia by the international community. After the sudden death of Pierre Tromp ZS1HF last year, with whom we had planned an expedition to Marion Island ZS8 in February 2024, I eventually settled on Socotra, an island belonging to the Republic of Yemen, which is 44<sup>th</sup> on the list of “most wanted DXCC”. The advantage was that, unlike on the mainland, there is no war on Socotra; this, however, is not recognised by the Czech Ministry of Foreign Affairs, which strongly advises against travelling to Socotra. The island is on the Ministry’s Red List, which means it’s practically impossible to take out any travel insurance. I eventually managed to get underwritten (with many exemptions) thanks to my XYL Paula who works in the insurance industry.

When I finally obtained my licence, after five months of hard persuasion of the Yemeni authorities, it was practically useless, as is the custom in developing countries. Instead of the full spectrum of amateur radio bands, I only got some of them, with a maximum output of 100 W and many other restrictions. Eventually, I managed to obtain a licence for all the standard amateur bands with the exception of 30 metres, which the Yemenis do not consider to be an amateur band or a secondary band, and which was, despite all my efforts, ultimately rejected. But I was successful in getting an authorisation for the SPE Expert 1K3 linear, without which operation on the lower bands wouldn’t make much sense.

The wait for the final signature of the Director of the Ministry of Telecommunications and Information Technology took a while, even though I had a written promise that I would receive my licence as promised. I finally got the document during my stay at a DX-pedition in Cameroon, and immediately applied for a LotW certificate and recognition by ARRL.



As soon as I received my certificate, a new announcement appeared in “breaking news”: Kenneth Opskar, LA7GIA, a well-known DXman from the Bouvet expeditions, was soon going on an expedition to an unnamed rare country in very difficult conditions, with just tents and generators. One week later, it turned out that my premonition was right. Ken was faster and flew to Socotra together with Shani HA5DDX. This was a blow to Dima, RA9USU, who had been planning to arrive in December 2023 and Ken beat him to it. Dima, who had already been there as a leader with the large international DX expedition 7O6T in 2012, and then as a single operator in 7O2A, took it hard. On 11 November, he, too, appeared on Socotra, so we had two DX-peditions working on the same island at the same time!

This was an unpleasant situation for me, mainly because of the sponsors who weren't too keen on supporting a third expedition to the same place (albeit a rare one) in three months. But because, unlike Kenneth and Dima, I had the authorisation to use the Expert 1k3 linear, I decided to focus my efforts more on 160/80/40 metres CW/SSB instead of the overused FT8.

And I had a valuable plane ticket that sells out many months in advance. There are no scheduled flights to Socotra, just a special charter from Abu Dhabi in the United Arab Emirates that flies twice a week. You can't buy the ticket online, but only through a special agent who arranges your stay on Socotra. Free movement on the island without a guide is impossible. Another peculiarity is that the Air Arabia charter flight insists on a maximum baggage weight of 20 kg per person, with no overweight or cargo options available. I managed to achieve a miracle and, unlike Ken and Dima, was able to take 2 transceivers, the PA Expert 1K3, a full-size antenna for 160 m (18 m quarter-wave vertical and 16 radials) and a Steppir Crank IR together with a 5-band Spiderbeam directional and 10 m ALU mast.

I have to give thanks to Tereza Homola who together with her Yemeni partner managed to arrange an exception directly with the CEO of Air Arabia, who allowed me to take more than 100 kg of material to Socotra.

By coincidence, I flew together with a British BBC TV crew who went to film the beauty of Socotra and carried lots of heavy equipment.

Another unexpected issue was that in this case, the luggage was not checked in all the way to its final destination, as usual. Because this was a charter flight, I had to pick it up in Abu Dhabi and re-enter the transit area, which turned out to be quite a problem. Firstly for customs reasons, and secondly because I had a licence issued in a country that had in recent years fired missiles at the Abu Dhabi airport. In the end, I managed to get all my suitcases and antennas on the plane to Socotra, and landed on the morning of 23 January.



*Vienna Schwechat Airport, a total of 122 kg of luggage*

My team was already waiting there to get me through customs and load the luggage to a large 8-cylinder Toyota SUV, which is the most common type of vehicle on Socotra due to the state of the local roads.

I spent the first day and night in the capital city of Hadibu, which has about 10,000 inhabitants. There are just two hotels in all of Hadibu, both quite removed from what a European would



*The capital city of Hadiboh*

expect. Nothing for posh ladies and the easily startled. After a brief sleep, interrupted by constant prayers from the speakers on the local mosque starting from 4 a.m., we left at dawn for my QTH – Aomak Beach on the south side of the island. This meant crossing a mountain pass between mountains almost 1,500 m high, where I had the opportunity to see the famous dragon's blood trees, one of the symbols of Socotra.

After arriving at base camp, we started setting up tents: one as the operating room, one for sleeping. I had with me a driver-and-cook in one and a guide. After lunch, you don't work, but sleep. The temperatures and the UV index climb very high and physical exhaustion sets in quickly. And forget about alcohol, let alone a cold beer; all you get is hot Arabic tea. Darkness started setting in after 5 p.m., which meant that the amount of time for working outdoors was very short. It was only possible to set up antennas from dawn before 6 to about 10 a.m., and then from 4 p.m. to dusk.



*Dragon tree*

On the next day, 25 January, I managed to set up the Steppir CrankIR and commence operation at least on FT8. At the same time, I started to work on setting up the 18 m vertical. In order to tune the capacitance hat, you need to take the antenna down every time, shorten the four elements of the hat and put it back up and re-anchor it in the wind, which is not easy to do with only three people. Ultimately, we had to abandon the original idea of setting up the vertical on the beach, because instead of the expected 100 metres, it was almost 300 from our guarded area. There was an option to set up a large tent on the beach, but nowhere to put the generator. Even so, the coaxial cable for the vertical ran to about 120 m.



*Steppir CrankIR and 160 m vertical in the background*

On Saturday 27 January, I took part in the planned CQ WW 160, not expecting anything to go wrong. After I managed to do just two QSOs in 7 hours, I realised something was wrong. A test with OM7M showed that I wasn't audible anywhere, even though the PA read 1,200 W out and the antenna's SWR was 1.15. My first suspect was the antenna, which was attached to a wooden stake in the ground. The hairpin adjusting coil was leaning against a wooden stake hammered in the sand. I asked OK hams for advice and was told I should attach the coil to fibreglass instead. I argued that in that case, I wouldn't be seeing a SWR of 1:1 and the antenna wouldn't be getting its 1200 W.

It didn't help. There was clearly no power being lost to the ground. It was an interesting situation. I had ideal SWR, full power to the antenna, but no connections... The voltage from the generator was a nice 225 V. But when I measured the same voltage under load, keying the final stage, it dropped to 170 V. The Chinese 6 kW generator with three sockets of 220 V/1,800 W each and one 400 V socket was unable to deliver even 600 W of power to the PA. Already at 300 W out, dots were dropping out during CW and SSB was no longer intelligible. I suddenly realised why the other stations kept logging question marks in CQ WW 160 and were unable to read me.



*New generator 3 kW*

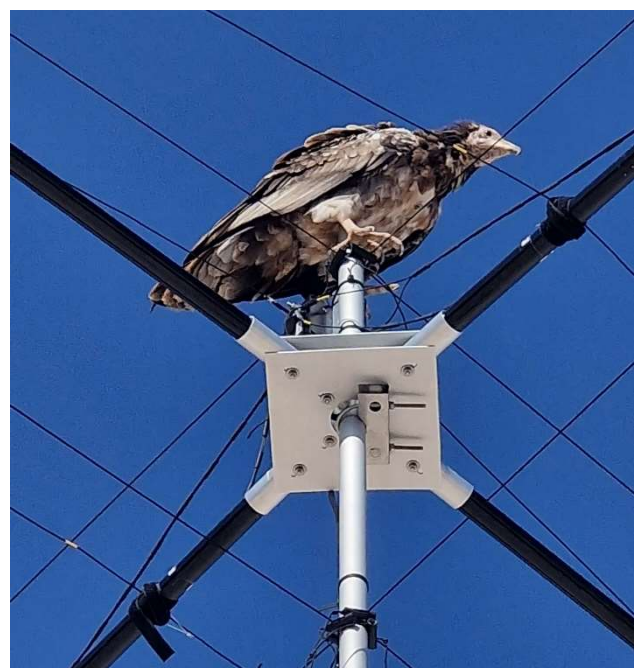
This was of course a major problem. What to do now? As a precaution, my team delivered two of these brand new generators to Socotra, one to serve as backup. Of course I couldn't just go to a store and buy a generator as if I were somewhere in Europe. The plane only took medicine to Socotra, and there was no way for it to bring us a functional generator from the Emirates on the double. I was already coming to terms with the fact that I'd do the whole expedition with just bare radio, like Kenneth and Dima, when Wael, the owner of the campsite, managed to secure a 3 kW electric generator from a friend in Hadiboh. He claimed it was totally reliable and could deliver 3 kW, which turned out to be right.

All that was left was to set up the Spiderbeam and start working properly. On Monday 29 January, I finally appeared on the CW and SSB bands and the DX-pedition was officially in business.



*Spiderbeam 5 band*

My antennas, however, drew the ire of the local Egyptian vultures (*Neophron percnopterus*) who have a wingspan of almost 2 metres; Socotra happens to be the place with the highest population density of these vultures in the world. First one of them knocked down the Steppir by sitting on it. Fine, we said, we'll just anchor it, and we did. But then the vulture set its sights on the Spiderbeam. It learned to land on top of the balun and nibble on the 15 m dipole, which in the Spiderbeam consists of two parts. This soon had an effect and my SWR on 15 m started to deteriorate.



*Egyptian vulture*

In the meantime, I was experiencing a tremendous pile-up, as if no one was there two months before. In the morning, I rotated the Spiderbeam to 70° and in addition to JA also had a great signal with HS, YB, VU and VK. Before noon, I turned to EU where the pile-up continued until I closed the 10, 12 and 15 metres. In the afternoon, W and VE stations joined in.

Soon I ran into another problem. Temperatures in the tent started approaching 40 degrees during the day, which meant that the end stage started to overheat and shut down. With a heavy heart, I decided to relocate my QTH to a stone shelter another 50 metres away. It took me half a day to reinstall everything, lead the coaxial cables again and put up completely new beverage antennas for the lower bands. The shelter was nicely airy and pleasant to be in, but unfortunately quite open to the surrounding landscape. This turned out to be an issue later when wind picked up and we experienced a sandstorm. After coming back, I had to disassemble all the radios and blow out the sand with a compressor.

I was very disappointed with the 80 m band for which I had the Steppir CrankIR, tested in OK with a 10-metre coaxial cable. My ham shack, however, was now 37 metres from the antenna. It turns out that with a 50-metre coaxial cable, the antenna has a completely different SWR than if you have a radio at its foot. In addition, the SWR started to deteriorate rapidly with longer keying. I contacted John WA7IR, the CEO of Steppir, who recommended I should include another balun on the path to the radio, but I didn't have one. He said I should at least try a loop created from the coaxial cable near the antenna. That didn't help. Mirek OK2BUH, an antenna expert, thought the coaxial cable was behaving as another radial and getting the antenna out of tune. Whichever it was, it meant I did not have an 80-metre antenna, which was a great pity.

I had 500 metres of wire and 200 metres of coaxial cables with me, so there was no point in setting up another vertical for 80 metres.

So I started to work at least on 40 metres CW and SSB every evening. After dinner, I went to sleep for three hours and from 0100 local time until dawn worked on the 160-metre band, which was fantastic.

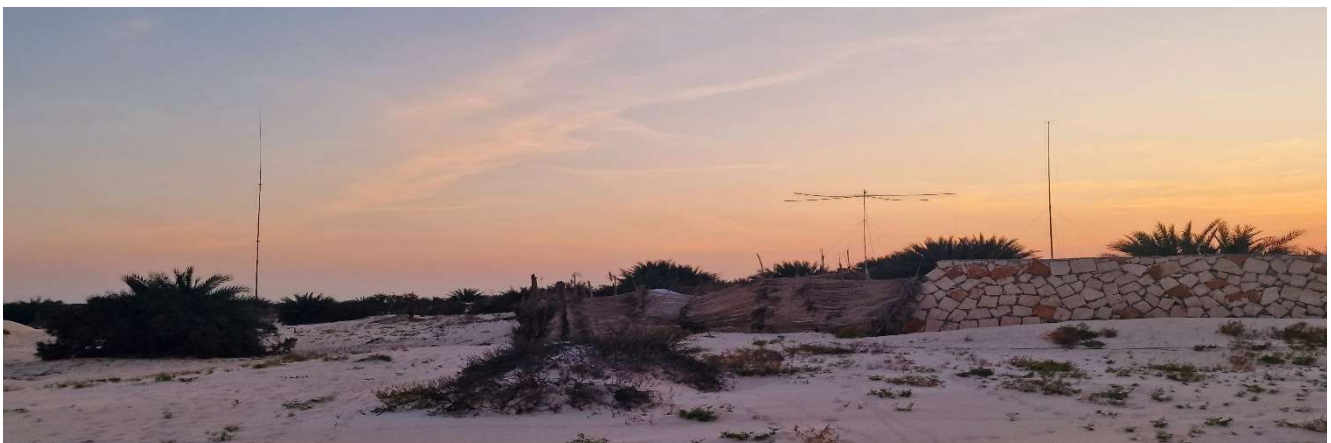
Every day I received e-mails from American stations telling me that the entire Midwest and West was waiting to connect with Yemen at 160 m. They were on the band every night from 2345 UTC until our dawn. Some large stations with 4 square 160, like KM2P from Maine, reached up to 599.

AA6AA asked me to avoid the frequencies 1810, 1820 and 1830, because commercial radio stations on the west coast of the USA generate harmonics on these frequencies, causing up to S9 interferences on 160 m and making reception impossible.

Because sand makes for poor grounding, I stretched out a few more radials near the terminal of the Beverage and impedance matching. This brought SWR down to 1.1 and reception improved noticeably.

The vertical was behaving almost as if it were alive. The sand probably got wetter during the night tide, so the minimal SWR was moving around in a narrow band near 20 kHz. Before I went to bed, I checked the minimum and saw it was 1815; at one a.m., it was 1832. If even a single radial out of the 16 fell out, it had a noticeable impact on the minimum SWR value.

After daybreak, I switched the generator off for 3 hours, had breakfast and went to bed so I could start working on 10 metres from 0900 local time.



The spread was very variable; some mornings were completely quiet at first, but then there came a major pile-up.

Wind also tended to pick up in the morning and reach more than 10 m/s, which made SSB operation virtually impossible, even with minimal VOX sensitivity. Later I found a microphone with a classic PTT, but it was still better to switch to CW until the wind died down.

When this happened, I preferred to go on an hour-long stroll on the long and completely empty sandy beach to get in at least some exercise. After that, the sun was getting dangerous; the UV index was approaching 12 already by 10 a.m.

Before the expedition, we did a quick survey to gauge interest in the individual bands on our website. We got about 500 responses and the most popular results were 10, 40, 80 and 160 metres; in terms of modes, people wanted CW, FT8 and SSB. That's why I stayed on CW 160 and 40 m throughout the night until dawn, and skipped the upper bands early in the morning.

Life passed in a regular rhythm: breakfast, lunch, dinner, broadcasting and sleeping in the tent, which I was constantly sweeping to get rid of the omnipresent fine sand. Unlike Kenneth, I had internet access and could keep an online log. The connection was slow and unreliable, but good enough for text communication. Sometimes it dropped, and I was always glad when someone put me in a cluster, which was almost a necessity on the lower bands.

My team regularly went out to get fresh fish, prepared in a thousand variations with flatbread and legumes. They also brought in petrol for the generator, of which it consumed about 400 litres during the expedition.

I made the last working day on the morning of 12 January. I underestimated how long the packing would take and we were disassembling the Spiderbeam in the dark. I would never have believed what fine desert sand can do to antenna wires. The sand stuck to the elements so firmly that you could probably use them as a wire saw.

I left the antennas on Socotra, just like Dima left all his verticals and coaxial cables. Given that the cost of shipping is several thousand USD, it's cheaper to just write them off. The night journey to Hadiboh was thankfully without any nasty

surprises. I returned to the same dirty hotel room with a bunk bed and a hole in the floor instead of a toilet. The next morning, I was supposed to be at the airport five hours in advance to check in all my luggage. My team brought me to the closed airport early in the morning. Because flights only arrive twice a week, the airport is closed most of the time. Thankfully, the owner of the base camp was also an employee of the airport, which made things much easier. But still the security guard wanted me to open the suitcases and disassemble the IC7300 to look inside. After a short discussion in Arabic, my guide managed to persuade him that it was not necessary.

All that was left was to get through the immigration checkpoint and on board the plane to the UAE, where we landed in the afternoon. I then moved to Qatar overnight, and on the next day flew with Qatar Airways to Vienna.

The Yemeni Odyssey was over. Despite all the troubles with the generator, the heat and the sand, I managed to make over 27,000 connections in two weeks, of which 10,300 were on CW/SSB.



QSL card 7O2WX

My biggest thanks go to the Yemeni-Czech couple Wael and Tereza, who own an agency on Socotra Island and without whom this expedition could never have taken place.

I also want to thank my corporate sponsors: Spiderbeam, Steppir, Mastrant, Socotra Exclusive Tours and Generali Česká pojišťovna, the NCDXF, GDXF, SDXF, EUDXF, Clipperton DX Club, INDEXA, North America DX Club, The daily DX, DXpedition Trophy, DX-World and DXNEWS foundations, as well as individuals: IZ8CCW, KB8VAO, JF1QHQ, OK2VWX, N4II, OZ1ISZ, DM6MA, M0MDS, W6EAW and others.

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