

BEACH UMBRELLA ANTENNA...

Beach and beyond
(Sauro IU5ASA)

I don't know what about your mind... but during my holidays, when I spend a few hours on the beach, under the burning sun, I get bored soon... very bored... so, after a swim in the sea and a few minutes' rest, all I want to do is go back to the shade of my beach umbrella, perhaps to sip something cool and refreshing while I enjoy making a few QSOs with the radio on...

I also often return to the beach in the evening, so that I can set up my vertical antenna (ASA-Vert) in complete peace, with its 32 radials laid out on the ground, each 2.5 metres long, arranged in a radial pattern.

During the day, it is easy to understand that I would not be able to do this with bathers around... Taking up all that space and occupying a 5-metre diameter area around the antenna would seem like a real abuse, even if there were plenty of space available...

This raises the need to find a solution and devise the most convenient and profitable setup in relation to usability and number of QSOs that can be made.



The logical question I ask by myself is this:

'... how can I set up a vertical HF antenna on the beach without taking up more space than I would normally take up with deckchairs and a beach umbrella?!?!...'

The first thought, since what it was readily available, was to use the beach umbrella as an antenna support, adding an extra support to the central mast, above the canopy, so that I could insert one of the many useful fishing rods I have, which would be used to support the radiator. Not too long to be too conspicuous... nor too short to be too inefficient... especially assuming I use it in Qrp...

The idea is to use the metal ribs of the beach umbrella as radials....

Once I had memorised and consolidated the basic concepts outlined above, I went home and set to work on this project... And in a few minutes and with just very little effort, I had made my own beach umbrella antenna.

The beach umbrella I used is a simple, inexpensive one with a central tube measuring 19 mm in external diameter.

The first step in the adaptation process is to remove the umbrella cover by cutting the seams that attach it to the ribs and then unscrewing the plastic cap at the top of the umbrella pole.

The parasol fabric will then be reassembled in the same original configuration, replicating the removed seams...

After removing the plastic cap, I inserted a piece of electrical conduit, approximately 30 cm long and 16 mm in diameter, into the metal pipe of the beach umbrella.

Then I drilled a hole of about 16 mm in the tip of the cap so that I could screw the cap back onto the umbrella handle and at the same time it could hold the fabric in its original place and support the 16 mm plastic tube that protrudes by about 20 cm also.

I also removed all the ribs, stripped the paint from the upper holes and replaced the original wire with uncoated copper wire... to which I obviously connected the screen of the antenna power cable, hoping to achieve better conductivity between the sleeve and the ribs of the beach umbrella.

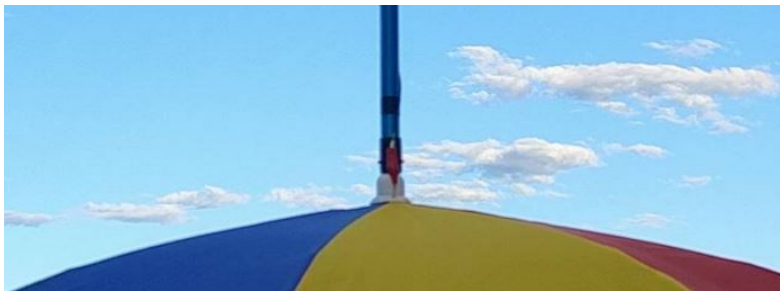
Then I put the fabric back on and screwed the cap back on. In order to power the antenna, I drilled a 3-4 mm hole in the side of the cap to feed the centre of the coaxial cable through, to which I soldered a crocodile clip to power the approximately 4.5 metre radiator.

The coaxial cable then goes down below the parasol, close to the central tube, to a length that suits us. I left it at about 1 metre. The antenna is not resonant, so you need to use a tuner.

I am really eager to try out this new project, so I quickly install the beach umbrella, complete with antenna, on the balcony of my house... I place a Zmatch between the antenna and the 817 and try to tune the whole system.

It takes a bit of patience, but I manage to tune it with a decent SWR up to 40 metres... where the antenna will definitely be less efficient... I think it will work better on higher frequencies, probably 15-17-20 metres.

Here are some photos of my beach umbrella antenna.





What else can I say?!?!

Next year, I'll probably spend a few more hours at the beach... under my beach umbrella, of course...

See You On the Air

73 de IU5ASA – Sauro