

# CLE 38 - GOING PORTABLE

by [Roelof Bakker, PAØRDT](#)

Yesterday afternoon I went into the great outdoors to enjoy some noise free portable NDB-ing. The place I went to is called "Matthias Head" and is located approximately N51 33, E003 26. It is a few hundred metres ENE from the location of now defunct VLI - 275, I believe.

The sea defence wall of Walcheren consists mainly of a single row of dunes, except for some kilometres near the village of Westkapelle. As you look at a map of the Netherlands you will see that this is the tip of the peninsula, and heavily threatened by the strong tide. At this place a massive dyke protects the land against the sea. The top of the dyke is fairly easy to reach by climbing up a 75-step staircase. On the land side the dyke is rather steep. On the sea side, the slope of the dyke does not descend in one go to the waterfront. There are two plateaux, one near the top of the dyke, and one further down the slope. The municipality has installed some nice benches at regular intervals on the highest plateau, one near the aforementioned staircase. I had been to this location twice previously and this particular bench had always been unoccupied. But yesterday afternoon, with the holiday season getting into full swing, the bench was fully occupied with some elderly ladies and gentlemen enjoying the magnificent view, or taking a well-deserved rest after fighting the strong wind. So I then had to look for an empty bench, the nearest of which appeared to be some 500 metres to the west.

That gave the opportunity for some physical exercise: carrying a small table, the loop antenna and mast sections, a backpack with a gell cell battery and additional gear and my 8 kg of SPM-3.

The sight was spectacular. The air was very clear, and visibility was more than 20 NM. The vessels of the coast could be seen very well.

## Equipment:

At the moment my main receiver for NDB-ing is an SPM-3 which I purchased in March. As it came without internal batteries, I have been looking for some suitable replacements. Three 6-volt Ni-Cad batteries are needed and new ones cost more than I paid for the SPM-3. This looked a little unbalanced, but fortunately I have a friend who works in the mobile phone business, and he gave me 8 discarded Nokia SLB-2 batteries. These are 3.6 V / 900 mA<sub>H</sub> Lithium Ion batteries with build in charging electronics. Most of the time the electronics are inactive, with the batteries being in perfect shape. I squeezed 5 of these batteries into the battery compartment and they work very well with the charging circuitry of the SPM-3. The SPM-3 runs at least 15 hours on a full battery, easily exceeding the original specifications by 6 hours.

The audio output of the SPM-3 is 1500 Hz +/- 60 Hz. This high pitched signal is rather fatiguing, so I have made a small unit that fits nicely on top of the SPM-3 containing a down-converter, which converts the pitch down to 500 Hz. An audio amplifier and tuneable RF-amplifier are also included. A narrow LC-filter is still to be added.

The antenna is a makeshift affair: a 14 turn tuneable loop with a diameter of 50 cm. The signal is coupled out by a two-turn link.

An in-line amplifier resides between the antenna and portable unit. Power for the in-line amp and portable unit is provided by a 12 V gel-cell battery.

## Noise free reception!

The goal of this exercise was enjoying some noise free reception. The receiver set-up worked as expected; though the varactor tuned pre-amp gave me some problems. (I have replaced the varactor with an air-variable capacitor now.)

However, Murphy's Law was fully applicable. This time the noise did not reside in my receiver but came from the surroundings. The wind was blasting at Force 5 on the Beaufort Scale, and the roar of the waves breaking on the dyke was overwhelming. The incoming tide did not help either. At first I had the greatest difficulty in copying any station, let alone the very weak ones.

I managed to copy 25 NDBs in the CLE range; I then tuned 380 - 430 kHz and logged some 40 more. The SPM-3 has no precision frequency readout; thus careful tuning was called for. The SPM-3 has a large meter, making precision level measurements a breeze. (That's exactly what it was designed to do.)

NDBs with an over-sea path were notably stronger than those heard at home, especially some of the Danish ones. TE-331, Thisted, was heard much better than it is at home, and VAR-319 was about 18 dB over the noise floor.

The first time I went there I had not checked the band for QRN, which appeared to be quite strong, the second time I had forgotten the in-line amplifier, making the receiver a little deaf, but I could always copy SHD, Scotstownhead okay.

Yesterday with everything functioning as it should, I noticed that SHD was coming in much better than it does at home. A twist on the portable mast revealed ALD, Alderney, on the same frequency, also with a good signal. With the help of the loop's directivity, it was also very easy to copy on LE-318 319.0 kHz, and HA-320 with the carrier of VAR-319 being very strong.

All operations took place in the middle of the afternoon, I am planning to go there one evening to make some more loggings.

### Lessons learned:

1. Plan carefully
2. Check for sferics at home
3. Watch direction and strength of the wind
4. Purchase a headphone that cuts out all external noise!

73 de **Roelof Bakker, PAoRDT**

