

A 100 Years of SOS

(but not the signal to 'save souls')

The centenary was in 2008. On that occasion I published an article in Dutch in the magazine of RetroRadio, the Belgian (Flemish) club of collectors of radios. This is an English translation of that article.

It has now been 100 years since the SOS emergency signal was officially adopted as the alarm signal for ships in distress.

In the period before there was talk of radio-telegraphy, it was not at all obvious to send out distress signals. Only visual and auditory signals were possible, such as lights, flags, horns, heliographs (reflecting sunlight), and these were only viable over short distances between ships and the shore. Otherwise, a cry for help remained a prayer directed to the heavens ...

Marconi and other pioneers in the field of wireless transmission changed this in 1900. One should perhaps emphasise that wireless was then just wireless telegraphy i.e. the transmission of Morse code signals. There was no question at all of voice transmission by wireless. The modulation of a wave was not yet thought out, and certainly not realized; one could only send out a radio wave and interrupt it in bursts.

CQD

The first major application of wireless telegraphy was in shipping and the prospect of sending out a cry for help was important. But in the early years of the 20th century, the distress signal was not SOS but CQD. The Morse code CQ was already a generally agreed call signal at that time in Great Britain, drawing the attention of all the stations who were listening on that frequency. It preceded the transmission of the time signal or an important announcement. It was the Marconi Wireless Telegraph Company who added the "D" to make the CQD distress signal. It is now often said that CQD is the abbreviation for 'Come Quick, Danger ' but that's not it. This was simply a mnemonic means of remembering it. But in fact it meant: (CQ) = attention! + (D) = Danger. Presumably the D was chosen because it is the abbreviation of both Distress and Danger.

SOS

It was decided at the 1906 International Conference on Wireless Telegraphy in Berlin to adopt an unambiguous distress signal that was internationally acceptable and that all agreed wouldn't cause confusion. There had been problems due to confusion with CQD.

My friend Greg Ulsamer left me a note that the SOS signal was already in use in the German navy, following an order from the 'Imperial Navy' of 30 March 30 1904.

In that period the Italians used SSSDDD and the Germans had a liking for SOE. Ultimately, SOS was chosen. It was agreed that this signal would be very clearly distinguishable from all other Morse

signals in a message. It originated as SOS but note that the call is not sent as separate letters for all signals come immediately one after the other! So it could just as well have been called ICE, or SMB, or VTB, ...etc.

The letter combination dit-dit-dit-dah-dah-dah-dit-dit-dit, when continuously sent and repeated, is easy to recognise by the ear and to remember, and it clearly stands out from everything else in a Morse message. And so from July 1, 1908, SOS became the well-known distress signal. SOS as a letter combination also gives more possible mnemonics than the aforementioned abbreviations. Creative minds produced the phrase 'Save Our Souls'. But other variants also came out too, such as 'Sinking Of Ship', 'Send Out Succour', 'Save Our Ship', ...

In summary: the official emergency signal SOS is simply a code that can be identified easily consisting of 9 immediately consecutive Morse signs: 3 dots, 3 stripes and 3 dots, a sequence that is instantly recognised by the ear.

It seems to have been first used by the American steamer 'Arapahoe' in 1909. When the Titanic sank in 1912, the wireless operator alternatively sent the signals SOS and CQD. The CQD signal was used for several years alongside SOS, mainly by British operators. It is impossible to calculate how many human lives were saved through the use of SOS. Lives were really saved by the invention of wireless telegraphy, but the SOS signal contributed a lot to its efficiency.

On February 1, 1999, Morse-telegraphy, and the SOS signal, officially finished. There are now many other options for calling for emergency aid and they use voice transmission. For example:

The Global Maritime Distress and Safety System which works with Inmarsat satellites.

VHF radio signals: via channel 16 and the call 'mayday, mayday, mayday' followed by data such as identity, position, situation ...

Digital Selective Calling: a system that automatically sends out emergency data after the push of a button.

Satellite telephony: e.g. to the emergency number 999.

Beacons that, when in contact with the sea water, automatically transmit a distress call.

SOS and Morse are therefore 'out of fashion' but not completely gone. A number of 'HAMs' (radio 'broadcast' amateurs) still use Morse and in certain circumstances the SOS signal may still be used to call for help.

Recently I read in the newspaper that elite troops and pilots in the Belgian armed forces have a mirror in their survival kits that enable them to send out the SOS signal by reflecting the sun's rays (using it as a heliograph).

With thanks to David Robinson, who likes physics and mathematics (like myself), for the translation.