

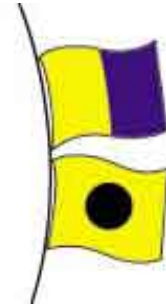
Marine Communication

(Speech held by Leon at Open House, Ellös, 23 August 2003)

Shipping was going on for thousands of years without any particular means of communications other than coming close by to shout, or, later, hoisting flags with defined meaning, starting from ensigns over pirate flags to the international alphabet.



*K over F meaning
"I require a Tug"*

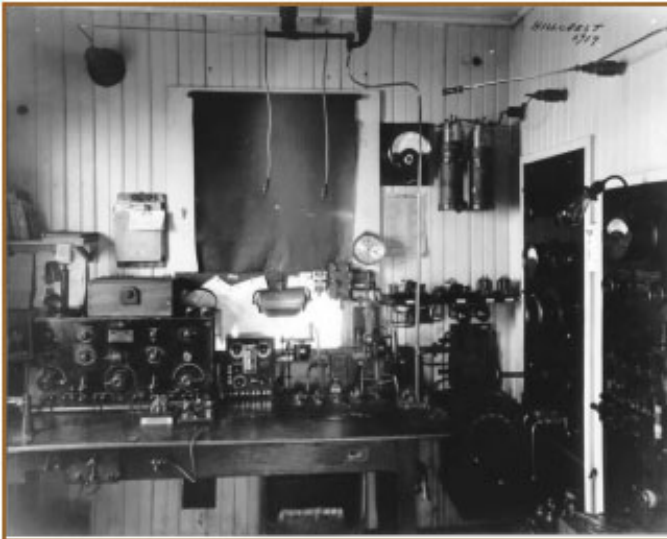


*K over I meaning
"No Tug Available!"*

Electronics eventually made sophisticated communications at sea possible, starting with the invention of the Morse key. With this tool you either send or do not send a continuous wave which could be picked up by the receiver and interpreted into letters and sentences.



Everyone, even my best friends, thought I had become crazy when I purchased one of these beautifully handmade Morse keys and started to learn Morse. Without wanting to comment their statements of old fashioned nostalgic thoughts, I thought it was a great experience. If I wanted to learn something about marine communication, so I thought, I need to start somewhere, and why not with a Morse key? It was like learning another language. The only draw-back was that so few others speak that language, so I must admit that I have not used it much since my exam...



In the beginning, the communication equipment more looked like an experimental shop, also onboard ships, which these pictures show.

But soon they became tidy places with the equipment neatly placed in order. But size was, of course, still preventing any of these to be installed onboard a yacht.



Here, we have one of the first really "compact" stations by SAILOR. We are now talking



about the year 1983, not very long time ago by any means. To install this type of communication equipment onboard a yacht of the size we talk about here, would still not be very suitable.

Here, we see a similar GMDSS console from Sailor, now of today's age.



What we can see is that the compactness of the equipment of today allows us to think and talk about communication equipment (and navigation equipment as well, of course) that were unavailable for us yachtsmen only some decades ago. And, at the same time, new exciting types of equipment, especially the satellite communication systems, make the choice of maritime communication more challenging than ever, but also more fun.

Here, we see a typical Nav-Station of a long distance yacht installed some years ago. A PC has become part of the system as well as a number of equipment wired together. It still looks a bit untidy according to my own impression.



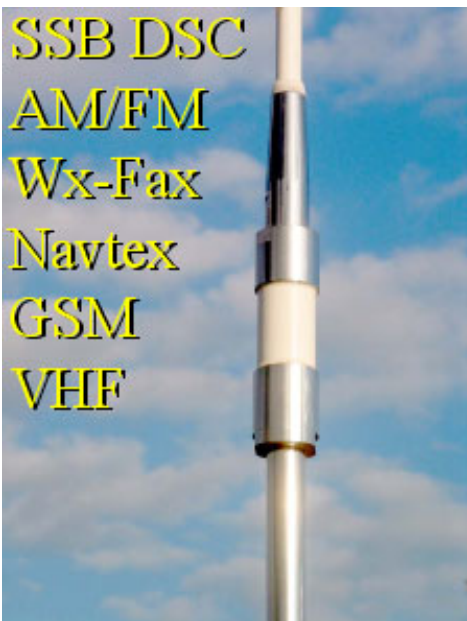
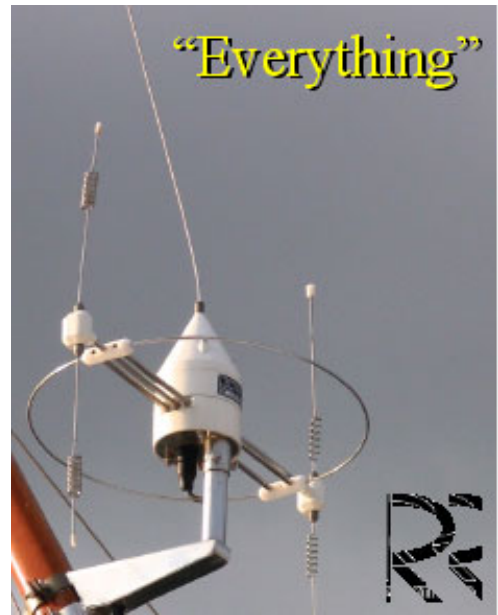
Please compare this with an installation of today. I have here posted our own installation onboard Regina, installed by Hallberg-Rassy. Most electronic transceivers have been hidden away with only the handsets and the control units visible. Out of the wall come cables with data to be connected with the PC.



Not only the transceivers, handsets and control unites have become much more suitable for yachts, but also the corresponding antennas.

To the right, we have the "all-in-one" antenna from RR-electronics used by many yards as their standard combination antenna. Possibly a bit bulky on the top of the mast, but it can receive practically everything, even TV. Many find these antennas favorable since they include both the main VHF-antenna as well as its DSC companion (for DSC you need two antennas, one main antenna and one for receiving the mayday acknowledgement). According to GMDSS (see below), however, there should be at least 2 m height difference between main antenna (top) and DSC-antenna (below) to make sure you send better than you receive. Also, a second DSC-antenna on the pushpit gives you a good spare antenna,

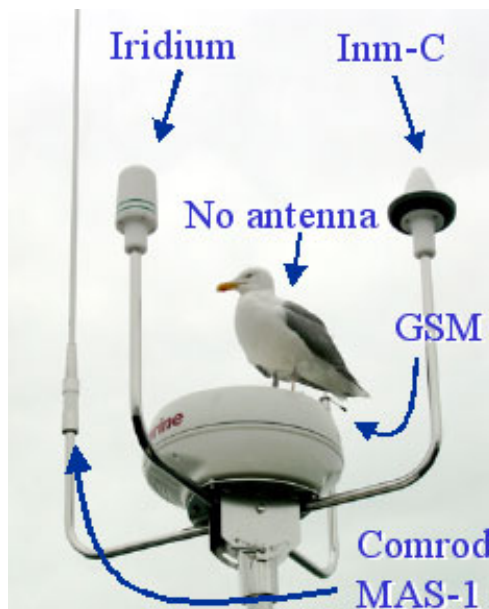
should the main on the top of the mast not work (e.g. due to dismasting).



If you don't want to put all eggs into one basket, you could have a main VHF antenna in the mast top (you always get a better signal through a dedicated antenna instead of a combo antenna). The combo-antenna could then be placed on the pushpit, for instance the new MAS-1 by Norwegian [Comrod](#). This is a very compact combo-antenna and all you do is to lengthen a standard VHF-antenna by the MAS-1 (some 15 cm small) and you get a combo-antenna which passes on pre-amplified signals straight to the Nav-Station.

The drawback is that you need to place a second antenna on the pushpit and that you can not receive TV with it. TV signal always needs a horizontal plane (the "ring" in the RR-antenna).

Here is a picture of our antenna-installation on the radar pole of our HR40. In addition to that, we have the back-stay as the main SSB-antenna, as well as a dedicated VHF main antenna in the mast top.



Now let me go into detail regarding what means of communication equipment is available on the market for yachts.

Instead of going through Inmarsat A, B, C, D etc. in alphabetical order explaining its features one by one, I wish to get present them in a systematical order. At the same time, I wish to go through the applications for these to see what you can do and what you can't do with the corresponding equipment. For the various satellite systems, I will also look at the approximate hardware prices, airtime prices, coverage and data speed.

Continue reading about the two types of marine communications! Click [here](#)!

