

# Notes on the use of radar whilst alongside

## F A R A D A Y

Faraday is a research vessel whose prime purpose is to improve the safety of life at sea.

Her commissioning plaque, presented by The Royal Institution at her naming ceremony, includes the phrase

*She will follow Michael Faraday's example by using science to improve the safety of navigation and the wellbeing of seafarers.*

Her owners are passionate in their pursuit of that objective.

The work she does will change but her main activity at the moment is aimed at improving the performance of low power radars so that useful performance could be offered to vessels not previously able to carry radar either because of power or weight constraints.

**Ocean Village Marina has a few unusual looking vessels but probably none more so than Faraday!**

**Perhaps as a consequence, a few people may wonder whether, if she occasionally turns radar antennae whilst alongside, they should be worried if that could cause any harm.**

**The short answer is an unambiguous “No”**

A number of experts have contributed to an extensive study of her use of radars and MDL have a full report: a web-based version is also published on [www.dbresearch.co.uk/faraday/radar](http://www.dbresearch.co.uk/faraday/radar).

In summary, although her antennae may look threatening to some, their effect is miniscule and unnoticeable.

By way of example, were she to operate her three most powerful radars for eight hours, that would be equivalent to the nearest house holder using a mobile telephone for a few thousandths of a second or being in the kitchen with a switched-on microwave for about three seconds.

As might be expected from such figures, the radiation experienced anywhere in the marina is a tiny fraction of the legal limit. In the houses closest to her berth, it is about one millionth.

Some may find that counter-intuitive and might reason that

*“Having radio signals pass through our bodies is unnatural and must be harmful.”*

In fact, humanity was being bombarded with electromagnetic radiation long before Marconi discovered wireless and simple survival required us to be fitted to live on our planet.

Lightning can crash computers, stop many modern cars and sometimes damage domestic equipment, so powerful are the electromagnetic emissions.

We see the light, hear the thunder and never even notice the electromagnetic pulse. It is as natural a part of our environment as sunlight and rain.

Importantly, nor do we ever worry about it.