



# **SENSEMASTER LTD**

Sensing, Heating & Anti-static Solutions

Sensemaster Ltd.  
Unit 1 Severn Bridge Ind Est.  
Caldicot, Monmouthshire. NP26 5PW

## **Statement regarding Fraser Antistatic Equipment and Pacemakers.**

Fraser Antistatic Techniques (FAST) has not carried out tests on individuals with pacemakers nor have any manufacturers of pacemakers published any results related to the specific type of Antistatic equipment that FAST supplies.

FAST is not therefore qualified to make a definitive statement that pacemaker users are entirely safe from our electrical equipment, under all circumstances.

There is however considerable information about general Pacemaker safety available, which can help a Responsible Person to carry out an informed risk assessment.

The following information has been taken from Boston Scientific (a significant supplier of Pacemakers) from documents, which are available from their website.

[www.bostonscientific.com](http://www.bostonscientific.com)

**CRM-72039-AC\_EMI\_Brochure\_ENSP.pdf Published Feb 2017**

**BSC\_Electromagnetic\_Compatibility\_Guide.pdf CRM-368607-AB DEC 2017**

The Boston Scientific Electromagnetic Compatibility Guide extensively lists equipment which is of concern to pacemaker users and gives advice on the precautions to take. This allows FAST to consider the risks posed by an antistatic bar. It should be noted that all FAST-Antistatic bars are high voltage, low current devices and they all create Ionised air.

The risk from Ionised air is that if it is not a balance of positive and negative ions, then it can charge an individual up over time and they may then discharge, when they touch a ground or earthed conductor. This is the same sort of static shock that a person might receive after they have charged themselves up from rubbing feet across a carpet or when exiting a car. Boston Scientific states that this is safe under normal conditions.

The further risks are related to the Electromagnetic field outputted directly from the antistatic bar or its transformer-style power supply and HV Cables on our AC powered bars. As already stated, they are high voltage but low current and this limits the electro-magnetic output (EMI) considerably.

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The EMI from FAST equipment is many times lower than much of the equipment which is listed in the EMC guide. Our approach is to consider the largest minimum distance that a pacemaker user should stay away from the highest-powered devices and employ that as our safe limit.

## Judgement

At sufficient distance FAST Ionisers will have no influence on an implanted Pacemaker. Maintaining a distance of greater than 60 cm from the active voltage / current element of the Ionisation system will prevent any influence on the Pacemaker.

Direct touching of the high voltage electrode must be avoided.

Extra Care should be taken with higher powered static generation equipment.

John Bagby B. Eng (Hons)

Director

Fraser Antistatic Techniques Ltd.

04/02/2020