

Electromagnetic Energy from Telstra
Minisat Interim Public Switched Telephone Service – Small antenna
April 2004

What Is EME?

Electromagnetic energy (EME) is the energy stored in an electromagnetic field. It's a factor of everyday life, emitted by natural sources like the sun and the earth, and by man-made sources operating on radio waves such as TV and radio broadcasts, baby monitors, model planes as well as satellite radio services.

Community Concern

Telstra acknowledges some people are genuinely concerned about possible health effects from the EME from satellite radio services and is committed to addressing these concerns responsibly.

Radio Communications Safety

Telstra relies on the expert advice of national and international health authorities such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) - an agency of the Commonwealth Department of Health, and the World Health Organisation (WHO) for overall assessments of health and safety impacts.

The consensus is that there is no substantiated scientific evidence of health effects from the EME generated by radio communication systems and mobile base stations that complies with national and international safety guidelines.

The ARPANSA conclusion on electromagnetic energy safety states: (ARPANSA Web site July 2003)

"The weight of national and international scientific opinion is that there is no substantiated evidence that exposure to low level RF EME causes adverse health effects. This view is backed by every major review panel on the subject."

Telstra has strict procedures in place to ensure its radio communication systems comply with these guidelines, and Telstra supports ongoing research to advance the body of scientific knowledge on EME.

EME Safety Standard

In Australia, the EME safety standard is set by ARPANSA, and regulated by the Australian Communications Authority (ACA) – the independent regulator of the nation's telecommunications industry.

It is based on careful analysis of the scientific literature (both thermal and non-thermal effects) and is designed to offer protection against identified health effects of EME with a large in-built safety margin. Compliance with all applicable EME standards is part of Telstra's responsible approach to EME and radio communications technology.

EME Levels

The Telstra Minisat Interim Public Switched Telephone Service uses a low powered radio transmitter connected to a directional antenna. The antenna focuses the radio signal into a beam aimed at the satellite.

The radio signal is barely detectable below the antenna when transmitting. Measurements have demonstrated the EME levels around the property or inside the home with the use of the small flat panel antenna are many thousands of times below the ACA EME safety standard, and generally below the existing background radio and television broadcast levels.

EME Clearance Zone

To comply with the ARPANSA EME safety standard, access is restricted where any *EME Clearance Zone* is detailed below. In many cases the *EME Clearance Zone* will be in free space and is not accessible. In some situations the antenna will be roof mounted and it may be possible to stand in front of the dish or otherwise gain access to the given *EME Clearance Zone*.

A sign on the antenna will advise “*Do not stand in front of antenna without switching off the transmitter*”. If it is necessary to access the area in front of the antenna, ensure the transmitter is switched off by ensuring the power switch on the Interim Public Switched Telephone Service control box is switched off. The transmitter only operates when a telephone call is taking place.



**EME Clearance Zone
75cm directly in front of the antenna**

Further Information

Telstra suggests that people wanting further information on EME may care to contact the following organisations or visit their web sites:

World Health Organisation

“Electromagnetic Fields and Public Health: Mobile Telephones and their Base Stations”
<http://www.who.int/mediacentre/factsheets/fs193>

Commonwealth Department of Health (ARPANSA)

http://www.arpansa.gov.au/eme_pubs.htm

Australian Communications Authority (ACA)

http://www.aca.gov.au/stds_compliance/electromagnetic_radiation/index.htm

Australian Mobile Telecommunications Association (AMTA) & Mobile Carriers Forum (MCF)

<http://www.amta.org.au>

<http://www.mcf.amta.org.au/>

Mobile Manufacturers Forum (MMF)

http://www.mmfa.org/files/files/tech_indx.htm

Medical College of Wisconsin

<http://www.mcw.edu/gcrc/cop/cell-phone-health-FAQ/toc.html>

Telstra Contact

For additional information please contact Mike Wood, Telstra EME Coordinator, 1300 368 387

<http://www.telstra.com.au/ememanagement> <http://www.telstra.com.au/mobile/life/index.htm>