

Jabra®



# INTERNATIONAL STANDARDS ON ABSORBED RADIATION (SAR)

All Jabra headsets from GN Netcom comply with international standards to protect consumers against excess radiation

A BRAND BY

**GN Netcom**

JABRA® IS A REGISTERED TRADEMARK OF GN NETCOM A/S

# RADIATION

The non-governmental organization The International Commission on Non-Ionizing Radiation Protection (ICNIRP), recognised by The World Health Organization (WHO) in the field of Non-Ionizing Radiation (NIR) protection has established international guidelines on human exposure limits for all radiation (please see page 3 for a definition of ionizing and non-ionizing radiation).

An internationally harmonised testing method has been developed and agreed upon allowing a common test methodology to be adopted by manufacturers to ensure consistency in consumer documentation.

Compliance with the standards for radiation from mobile phones and wireless headsets are measured in SAR (Specific Absorption Rate). SAR is a measure of the power (W) absorption per mass unit (kg) averaged over a small volume of tissue. A SAR-value of more than 4 W/kg may produce adverse health effects in people exposed to radiation. Recommended SAR-levels for products such as wireless headsets and mobile phones are less than 2 W/kg according to the ICNIRP, Federal Communications Commission (FCC) requirements for USA and the European Recommendation 1999/519/EC\*.

## JABRA WIRELESS HEADSETS EXCEED STANDARDS

Jabra produces professional wireless headsets based on DECT and *Bluetooth*® radio technologies.

**DECT** stands for Digital Enhanced Cordless Telecommunication and is a common standard for wireless telephony, messaging and data transmission. It is a radio technology suited for voice, data and networking applications in residential, corporate and public environments, and with range requirements up to a few hundred meters. Jabra DECT headsets operate using radio

signals in the frequency band from 1880 to 1930 MHz and in the 900 MHz and the 2.4 GHz bands. The output power of Jabra DECT equipment is very low, between 0.001 and 0.250 W. In the European Union compliance with the standards is shown by the CE mark. In the US the FCC (Federal Communications Commission) approves wireless equipment. Due to the very low output power, the radio wave exposure from Jabra DECT equipment is far below the established limits.

*Bluetooth*® is a low powered standard technology for radio communication. It is a common standard for wireless machine-to-machine communication, data transmission and voice communication especially in wireless headsets. It is a radio technology suited for residential, corporate and public environments with range requirements from 10 up to 100 meters.

Jabra *Bluetooth*® products operate using radio signals in the frequency band from 2.402 to 2.480 GHz. The output power of Jabra *Bluetooth*® equipment is very low, between 0.001 for class 3 and up to 0.100 W for class 1. In the European Union compliance with the standards is shown by the CE mark.

In the US the FCC (Federal Communications Commission) approves wireless equipment. Due to the very low output power, the radio wave exposure from Jabra *Bluetooth*® equipment is far below the established limits.

All of Jabra's wireless headsets comply with and most do in fact exceed the international safety standards set for human exposure to radiation. Jabra's wireless headsets all have significantly lower radiation than the international standards vouch for and all SAR levels are within the recommended standards.

\*Specific Absorption Rate (SAR) - Limits

US level at or below 1.6 W/kg 1 gram of tissue

EU level at or below 2.0 W/kg 10 grams of tissue

# SAR LEVELS

## JABRA HEADSET SAR LEVELS

SAR values are measured by independent test centers.

## JABRA FOCUS ON SAFETY

The actual SAR level of Jabra's wireless headsets while operating will often be well below this level, as the headsets are designed to use the minimum power required to communicate with their base. Tests for SAR are conducted using internationally acknowledged standardized methods with the headset and base station transmitting at their highest certified power level.

The safety of people who use headsets is of utmost importance to us, and Jabra continuously monitors research and results published in the area of non-ionizing electromagnetic radiation. Extensive independent research over more than 30 years has investigated the risk of adverse health effects related to the use of wireless devices like headsets or mobile phones and scientific knowledge in this area is quite extensive with more than 25,000 articles published. Based on this comprehensive insight the WHO concludes that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields from wireless headsets based on e.g. DECT and *Bluetooth*®.

## IONIZING AND NON-IONIZING RADIATION

Electromagnetic radiation is divided into 2 categories depending on the energy in the radiation.

### Non-ionizing radiation

Has enough energy to move atoms in a molecule around or cause them to vibrate, but not enough to remove electrons. Examples of this kind of radiation are sound waves, radio waves, visible light, and microwaves.

### Ionizing radiation

Has enough energy to remove tightly bound electrons from atoms, thus creating "charged atoms" known as ions. Ionizing radiation is known from purposes like generating electric power, killing cancer cells, and in many manufacturing processes.

## FOR FURTHER INFORMATION PLEASE VISIT:

### WHO

Independent information on health related to electromagnetic radiation.

[www.who.int/peh-emf/en](http://www.who.int/peh-emf/en)

### THE INTERNATIONAL EMF PROJECT

A WHO programme to identify research needs and recommend research, perform health risk assessments and produce information material concerning electromagnetic fields.

[www.who.int/peh-emf/project/en/](http://www.who.int/peh-emf/project/en/)

### INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION (ICNIRP)

ICNIRP is an independent scientific organization responsible for providing advice on non-ionizing radiation exposure.

[www.icnirp.de](http://www.icnirp.de)

### MOBILE MANUFACTURERS FORUM (MMF)

MMF is an international association of radio communications equipment manufacturers.

[www.mmfai.org](http://www.mmfai.org)

### THE DECT FORUM

The DECT Forum is the globally acting industry association embracing suppliers and operators of DECT based terminals, systems, and networks.

[www.dect.org](http://www.dect.org)

# PRODUCT OVERVIEW

SOLUTION	RADIO TECHNOLOGY	SAR VALUE (W/KG)
Jabra GN9120 Series	1.8 GHz (EU)	Up to 0.136
Jabra GN9125 Series	2.4 GHz (USA)	Up to 0.00633
Jabra GN9300e Series	1.8 GHz (EU)	Up to 0.00574
Jabra GN9300e Series	1.9 GHz (USA)	Up to 0.00658
Jabra GO 6400 Series	2.4 GHz (EU)	Up to 0.020
Jabra GO 6400 Series	2.4 GHz (USA)	Up to 0.399
Jabra PRO 9400 Series	1.8 GHz (EU)	Up to 0.026
Jabra PRO 9400 Series	1.9 GHz (USA)	Up to 0.020

SAR values may differ for similar technologies due to different measuring standards in the two regions.

*GN Netcom is a world leader in innovative headset solutions. GN Netcom develops, manufactures and markets its products under the Jabra brand name.*