

## Exposure to RF

The GeoPro *Messenger*® device is a low-power radio transmitter and receiver. When the GeoPro device radio is turned on, it receives and also sends out radio frequency (RF) signals. The GeoPro device is designed to comply with Federal Communications Commission (FCC), European Conformity (CE), and Industry Canada (IC) guidelines respecting safety levels of RF exposure for wireless devices, which in turn are consistent with the following safety standards and recommendations previously set by international agencies for the protection of public exposure to RF electromagnetic energy.

- International Commission on Non- Ionizing Radiation Protection (ICNIRP)
- Verband Deutscher Elektrotechniker (VDE)
- United States Federal Commission, Radio - Frequency Exposure Guidelines
- National Radiological Protection Board of the United Kingdom
- American National Standards Institute - (ANSI) IEEE. C95. 1-1992
- National Council on Radiation Protection and Measurements (NCRP). Report 86
- Department of Health and Welfare Canada. Safety Code 6

These updated ANSI standards are based on an extensive scientific review of the available body of research by over 120 scientists, engineers, and physicians from universities, government health agencies and related industries. The design of your device complies with these standards when used as described in the [Device Operation](#) section.

This product is compliant with Industry Canada RSS-102 for RF Exposure.

## Specific Absorption Rate Data (SAR)

### **IMPORTANT: This satellite device model meets international standards for exposure to radio waves.**

Your GeoPro *Messenger* device is a radio transmitter and receiver. It is designed and manufactured not to exceed limits for exposure to radio frequency (RF) energy. These limits are part of comprehensive guidelines and established permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The guidelines include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for mobile devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. Under the guidelines for this model, the SAR limit is 1.6 W/kg<sup>1</sup>. The SAR limit recommended by The Council of the European Union is 2.0W/kg<sup>2</sup> Tests for SAR were conducted in

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<sup>1</sup> In the United States and Canada, the SAR limit for mobile devices used by the public is 1.6 watts/kg (W/kg) averaged over 1 gram of tissue for the body or head (4.0 W/kg averaged over 10 grams of tissue for the extremities - hands, wrists, ankles and feet). The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

<sup>2</sup> In Europe, the SAR limit for mobile devices used by the public is 2.0 watts/kg (W/kg) averaged over 10 grams of tissue for the body or head (4.0 W/kg averaged over 10 grams of tissue for the extremities - hands, wrists, ankles and feet). The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

The long-term characteristics or the possible physiological effects of Radio Frequency Electromagnetic fields have not been evaluated by Underwriters Laboratories Inc. (UL)

accordance with CENELEC and FCC testing procedures using standard operating positions with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR of the device while operating can be below the maximum value. Before a device is available for sale to the public, it is tested to confirm compliance with the guidelines. The tests are performed in positions and locations (for example, worn on the body) that conform to a uniform testing methodology determined by an expert standards body. The highest SAR level recorded from this product was 0.93 W/Kg (Body), which was below the uncontrolled (that is, general population) limit. While there may be differences between the SAR levels of various devices and at various positions, they all meet the governmental requirements for safe exposure.

**PLEASE NOTE THAT MODIFICATIONS TO THIS PRODUCT MODEL COULD CAUSE DIFFERENCES IN THE SAR VALUE FOR LATER PRODUCTS; IN ALL CASES, PRODUCTS ARE DESIGNED TO BE WITHIN THE GUIDELINES.**

## **Antenna Care**

Use only the supplied, or an approved replacement, antenna. Unauthorized antennas, modifications, or attachments could damage the device and may violate government regulations. When using remote mount antenna, mount antenna at least 20 cm away from the user. Also when using a remote mount antenna in order to reduce potential radio interference to other users, the antenna type and its gain should be chosen so that the equivalent isotropically radiated power (EIRP) is not more than that permitted for successful communication.

## **Device Operation and Service**

### **Normal Operation**

Hold the device as you would hold any other mobile device while sending a text (SMS) message. Ideally, the antenna should be vertical to the ground and have a clear unobstructed view of the sky.

### **Tips on Efficient Operation**

For your device to operate most efficiently:

- Make sure the antenna has a clear unobstructed view of the sky.
- Do not touch the antenna unnecessarily when the device is in use.
- Contact with the antenna affects transmission/reception quality and may cause the device to operate at a higher power level than otherwise needed.
- Do not wear the device on your body while sending messages. Wearing the device on the body can interfere with proper device operation, since the antenna requires a clear unobstructed view of the sky to access the Iridium® satellite network.

### **Service**

Only qualified service personnel should perform repairs to the GeoPro device. Disconnect the power supply cables from the computer or electrical outlet and refer the GeoPro device or charging accessory for service to qualified service personnel if any of the following situations occur:

- the power supply cord, plug, or connector is damaged