



## Hand Scanning and Radiation

To whom it may concern:

Hand geometry scanners use the reflection of low level infrared light to map the shape of the human hand. There are no research reports concerning health and safety issues with the hand geometry scanner because it is not classified as a hazardous product. For example, manufacturers of ionization smoke detectors, commonly used in the home, must be licensed by the Nuclear Regulatory Commission and the products must pass Underwriters Laboratories tests to be sold in the United States. Similar regulations apply to X-ray and microwave devices. However, the infrared light from a hand scanner is at such a low level, it does not fall into such categories. The light infrared light emitting diodes that scan the hand are the type used in TV and VCR remote controls. The intensity is 0.01 watts (10 milliwatts), far less than that emitted by ordinary incandescent light bulbs, and a fraction of the energy released by heating and cooking appliances. Sunlight produces many times the infrared energy of the light emitting diodes in our products. In fact, our devices do not work in direct sunlight due to the infrared energy contained in the sun's rays.

However, our products are not without certification. The Federal Communications Commission requires that computers (our product is essentially a computer) meet sub-part J of Part 15 of FCC rules. This section deals radiated energy. We have tested to these standards and meet or exceed them. Further, we meet the requirements of European Community and are CE Certified. This standard also addresses radiated energy. Our scanners are powered by 12 volts DC at 0.4 amps. 12 volts DC is considered low voltage and inherently safe by the National Electrical Code. This is an energy level less than 5 watts, approximately equal to an incandescent night-light.

Recognition Systems Inc. was contacted by the U.S. Occupational Safety and Health Administration (OSHA) and we submitted design information per their request. OSHA does not prohibit or limit the use of our product.

Hand geometry records the three dimensional shape of the hand using infrared light and optics. The devices do not scan surface details such as lines, fingerprints or color. **Hand geometry technology is not used for personal identification.** It is only used for verification. A hand scanner maintains a nine-byte template in it's memory resident database for one-on-one comparison to a hand placed on the scanning platen. A template cannot be used not identify the user, even when compared to other templates, therefore rights to privacy are not violated.

Templates can be stored on computer disks or other media, but they are useless without a one-on-one comparison to an actual hand. Because hand geometry templates are a result of a mathematical algorithm they are not suitable for use in litigation as evidence. Our products do not erode peoples right to privacy. In fact, they assure a person's privacy by preventing others from falsifying his or her identity.

We have approximately over 20,000 units in the field since 1986 and have not been named or even threatened in any product liability action. International travelers, hospitals, day care centers, athletic clubs and airports use our scanners. During the 1996 Olympic games, our hand scanners recorded over a million transactions by 65,000 athletes, coaches and volunteers from around the world. At LL Bean, Inc., over 3000 telephone operators use our scanners to gain entry to the facility. 5000 students at the University of Georgia use our scanners three times a day. A thousand Hewlett Packard Inc. employees use a hand scanner to gain access to the company's athletic facilities. All of these applications, and many more, function daily without a single health and safety incident or complaint.

Our products are inherently safe due to the low-level commercial light emitting diodes we use for the scanning process. Their safety is proven by review of government agencies and our track record in the field. They are used for verification, not identification and in no way violate peoples' right to privacy. If you have further questions concerning this matter, please contact me at your convenience.

Sincerely,

**Recognition Systems Management**

**Recognition Systems Inc.**