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RingMouse™ 3D STANDARD

Product Description

The 3-D mouse is a wireless, ultrasonic, 3-dimensional mouse-compatible input device. The 3-D mouse translates motion in space into corresponding movements on the display. In its native form, the 3-D mouse is a direct replacement for a standard mouse. In conjunction with 3-dimensional software and adapted applications, full 3-dimensional information is conveyed to the computer. The 3-D mouse finds itself ideally suited for video games due to its low cost, speed, light weight and wireless aspect.

The 3-D mouse consists of two components, the receiving unit, that is situated on the monitor opposite the user, and the transmitting ring. The ring, weighing 8.5 grams, is worn on the user's index finger.

Operation of the 3-D mouse corresponds with natural hand movements. The ring is moved in the air opposite the receiver (the monitor) and these motions are viewed on the monitor. These motions correlate with the standard X, Y and Z axis; up-down, left-right, and forward-backward. Pointing and clicking is done through the two buttons that replicate those found on conventional mice.

The 3-D mouse is based on ultrasonic technology derived from advanced military systems. Major technological hurdles were overcome to allow the 3-D mouse to become commercially feasible. Using new software filtration and signal processing algorithms, the need for expensive digital signal processing hardware was eliminated, allowing mass production at minimal cost.

The receiver unit contains three ultrasonic receivers that receive the signal transmitted from the ring. Based on the timing between the receivers, the 3-D mouse is able to ascertain the position of the ring. All calculations are performed in real-time giving the real-time location of the ring with accuracy of approximately 0.5mm, regardless of the speed of the movement. The low power requirements of less than 10mA, allows it to draw power directly from the computer's serial port, eliminating any need for an external power source.

Advantages of the 3-D mouse are numerous. The 3-D mouse lends itself to ease of use by reproducing natural hand movements. There is no need for the user to learn new techniques for inputting data in 3-dimensional space. The effective range of the 3-D mouse is approximately one meter allowing the user to move comfortably and not be limited by constraints imposed by traditional input devices and competing products. The wireless aspect of the 3-D mouse also promotes unconstrained movement.