

Operational Description

The EUT is an input / output peripheral device for a computer, using Wacom's sensor, a Graphire4 Pen, Graphire4 Mouse. The intentionally radiated frequency is 750kHz which is used between pen/mouse and tablet. All the other frequencies are unintentionally radiated.

The tablet continuously transmits data to and from the Pen.

When transmitting, the tablet sends a signal to the Pen. The Pen stores energy from the signal.

When receiving, the Pen sends a signal that carries coordinate, switch, and pressure data back to the tablet. The tablet sends this data to the computer.

A. Antenna

The sensor board has two kinds, transmitter and receiver. The transmission sensor board has multiple loop coils in horizontal directions. The receiver sensor board has two groups of multiple loop coils in X (horizontal) and Y (vertical) directions.

B. Original oscillation frequency and intentionally radiated frequency

We make one (750kHz) intentionally radiated frequency from the original oscillation frequency of 750kHz by microcomputer.

C. Operation

The tablet looks for a pointing device, such as a stylus, by feeding electrical current of above-mentioned frequency through the coils in both X axis and Y axis. The tablet is able to detect the position of a pointing device because of the induction caused between the coil of the pointing device and two coils, one from X-axis and the other from Y-axis, of the sensor board.

D. Comment on pointing device

The pointing device operates completely passively and has no battery or active oscillator.