



US006233336B1

(12) **United States Patent**  
Croft et al.

(10) **Patent No.:** US 6,233,336 B1  
(45) **Date of Patent:** May 15, 2001

(54) **INDUCTIVE COUPLING INTERFACE FOR ELECTRONIC DEVICE**

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(57) **ABSTRACT**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

An inductive coupling interface couples a first electronic device to an inductive coupling link of a second electronic device. The second device link is in a coupling zone adjacent the interface. A separation plane separates the coupling zone from the interface. The interface includes a pair of coils arranged on one side of the separation plane opposite the coupling zone. The coils are coupled in series to receive an input signal from the first device and generate flux based thereon. Each coil is wound in a coil plane in a winding direction, and has a first flux face as defined by the winding direction and a coil plane axis residing within the coil plane. The first flux faces of the coils respectively face toward and away from the separation plane. The coil plane axes are parallel to one another and the separation plane, and the same distance from the separation plane. Each coil has inner and outer sides parallel to the coil plane axis and respectively closer to and farther from the other coil. Each coil plane resides at an angle with respect to the separation plane such that the inner side of each coil is closer to the separation plane than the outer side. The coils in operation generate an inductive field thereabouts that extends through the coupling zone from one coil to the other.

(21) Appl. No.: **09/302,625**

(22) Filed: **Apr. 30, 1999**

(51) **Int. Cl.<sup>7</sup>** ..... **H04M 1/00; H04M 1/24**

(52) **U.S. Cl.** ..... **379/443; 379/52**

(58) **Field of Search** ..... 379/443, 52; 381/312, 381/326, 331

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**16 Claims, 1 Drawing Sheet**

