

## United States Patent [19]

### Darbee

### [54] PDA HAVING A SEPARATE INFRARED GENERATING DEVICE CONNECTED TO ITS PRINTER PORT FOR CONTROLLING HOME APPLIANCES

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- [73] Assignce: Universal Electronics Inc., Cypress, Calif.
- [21] Appl. No.: 707,819
- [22] Filed: Sep. 4, 1996

### **Related U.S. Application Data**

- [63] Continuation of Ser. No. 37,619, Mar. 24, 1993, abandoned.

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[11] **Patent Number:** 5,778,256

### [45] Date of Patent: Jul. 7, 1998

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Primary Examiner-Thomas C. Lee

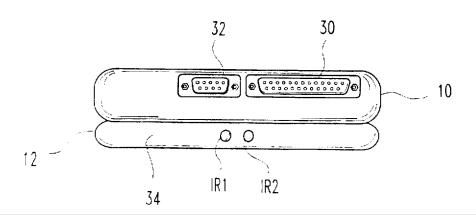
Assistant Examiner-Ki S. Kim

Attorney, Agent, or Firm-Mark R. Galis; Gary R. Jarosik

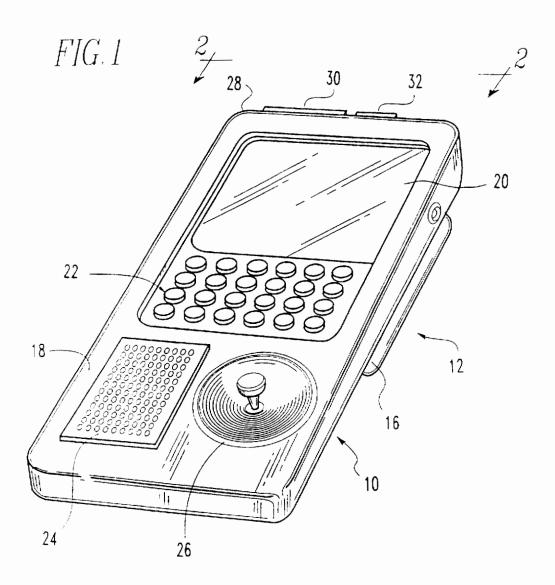
### [57] ABSTRACT

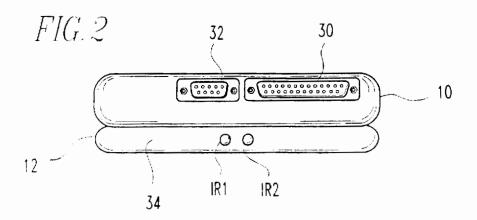
According to the present invention there is provided an infrared code generating and transmitting device adapted to be coupled to or incorporated in a microcomputer system, commonly referred to as a personal digital assistant (PDA). The IR code generating and transmitting device comprises a CPU separate or incorporated into the microcomputer system of the PDA; a memory separate or incorporated into the microcomputer system; an LED output; LED driver circuitry coupled between the CPU and the LED output; an interface connector; an interface buffer circuit coupled between the interface connector and the CPU; and an interface data buffer circuit coupled by data lines between the interface connector and the CPU.

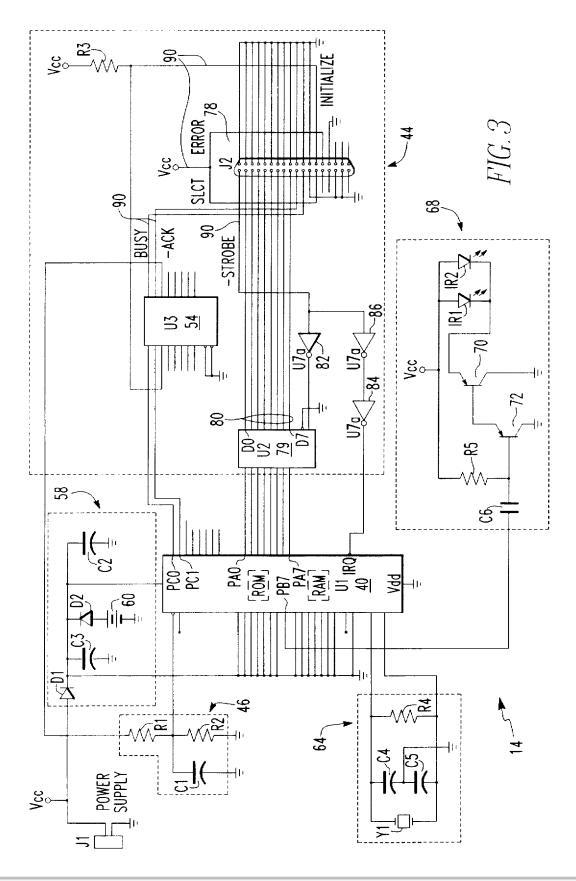
### 3 Claims, 7 Drawing Sheets



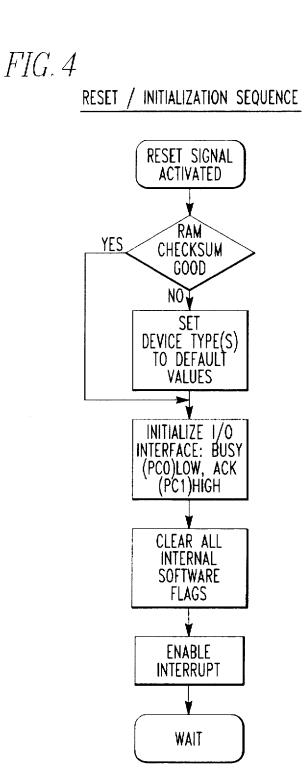
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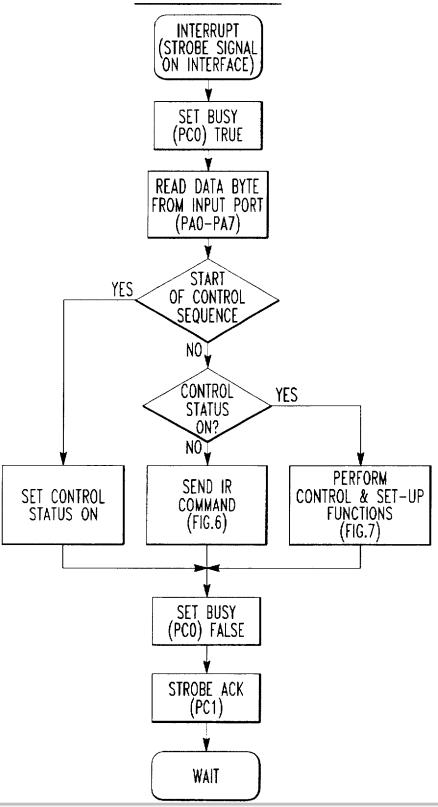


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Α

FIG. 5

RECEIVE DATA ROUTINE



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