

- [54] **BIOMEDICAL RESPONSE MONITOR AND TECHNIQUE USING ERROR CORRECTION**
- [76] Inventor: **Peter G. Gorman**, Lakeview Dr., Mahopac, N.Y. 10541
- [21] Appl. No.: **33,826**
- [22] Filed: **Mar. 19, 1993**
- [51] Int. Cl.<sup>6</sup> ..... **A61B 5/0428**
- [52] U.S. Cl. .... **128/696; 128/903**
- [58] Field of Search ..... **128/696, 706, 903**

[57] **ABSTRACT**

A monitor for measuring and displaying a biomedical response such as heartbeat rate, including a transmitting unit and a receiving unit. The monitor detects the response (heartbeat) and produces a digital pulse train representing this response. The digital pulse train is then encoded to produce an encoded digital signal having a first identification part identifying the transmitting unit and a second data part representing the person's response. This encoded digital signal is wirelessly sent to the receiving unit which reads the received signal to determine if it is from the transmitting unit. If it is from that transmitting unit, the data part is read. If there are too many errors in the data part, a new frequency of wireless transmission is used in the monitor. If the errors are within a reasonable bound, the data bits representing the biomedical response are sent to a memory and/or a display. If the received signal were not from the correct transmitting unit, the received signal is rejected. Interference from other monitors or electrical equipment is minimized, and the data displayed is very accurate.

[56] **References Cited**

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Primary Examiner—William E. Kamm

45 Claims, 5 Drawing Sheets

TRANSMITTER UNIT

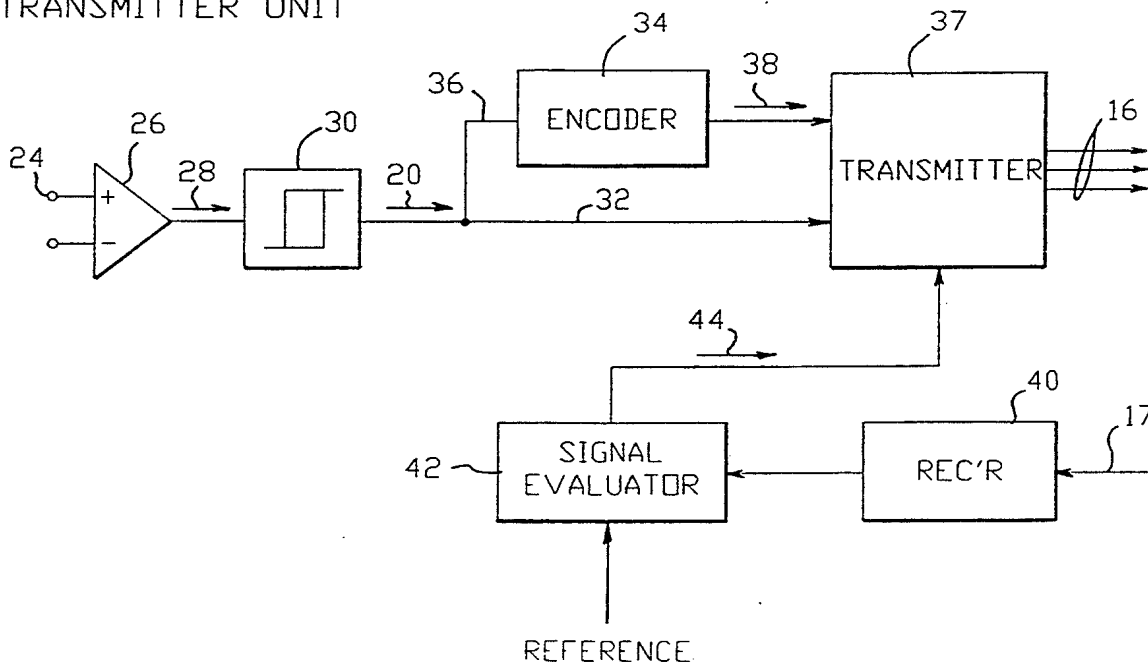


FIG. 1

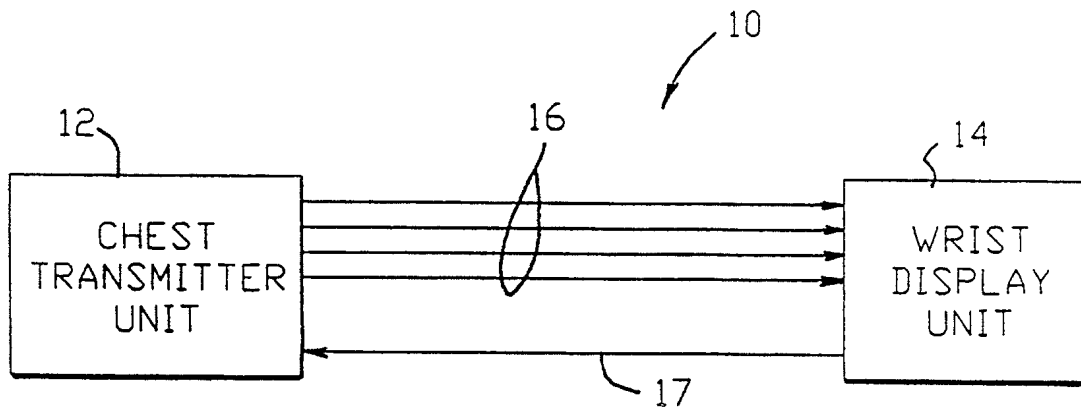


FIG. 2

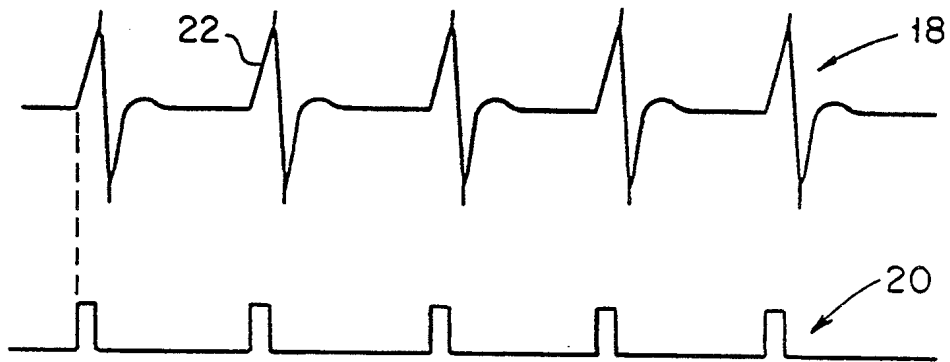


FIG. 3A

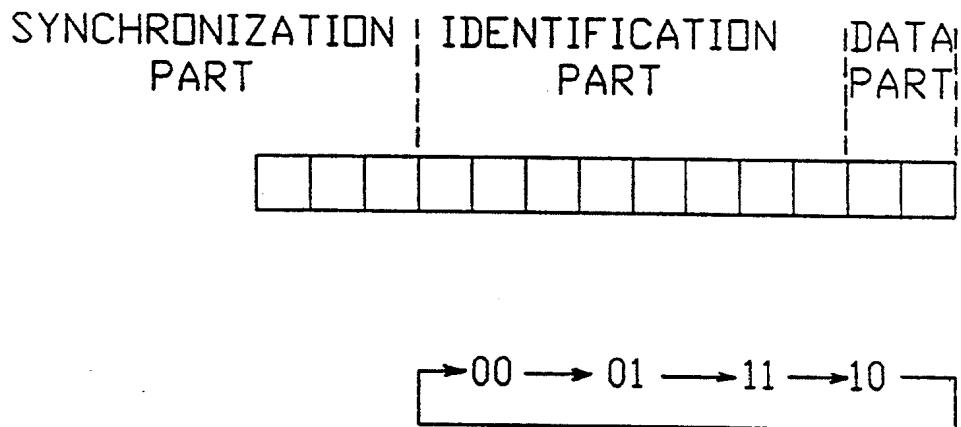


FIG. 4

TRANSMITTER UNIT

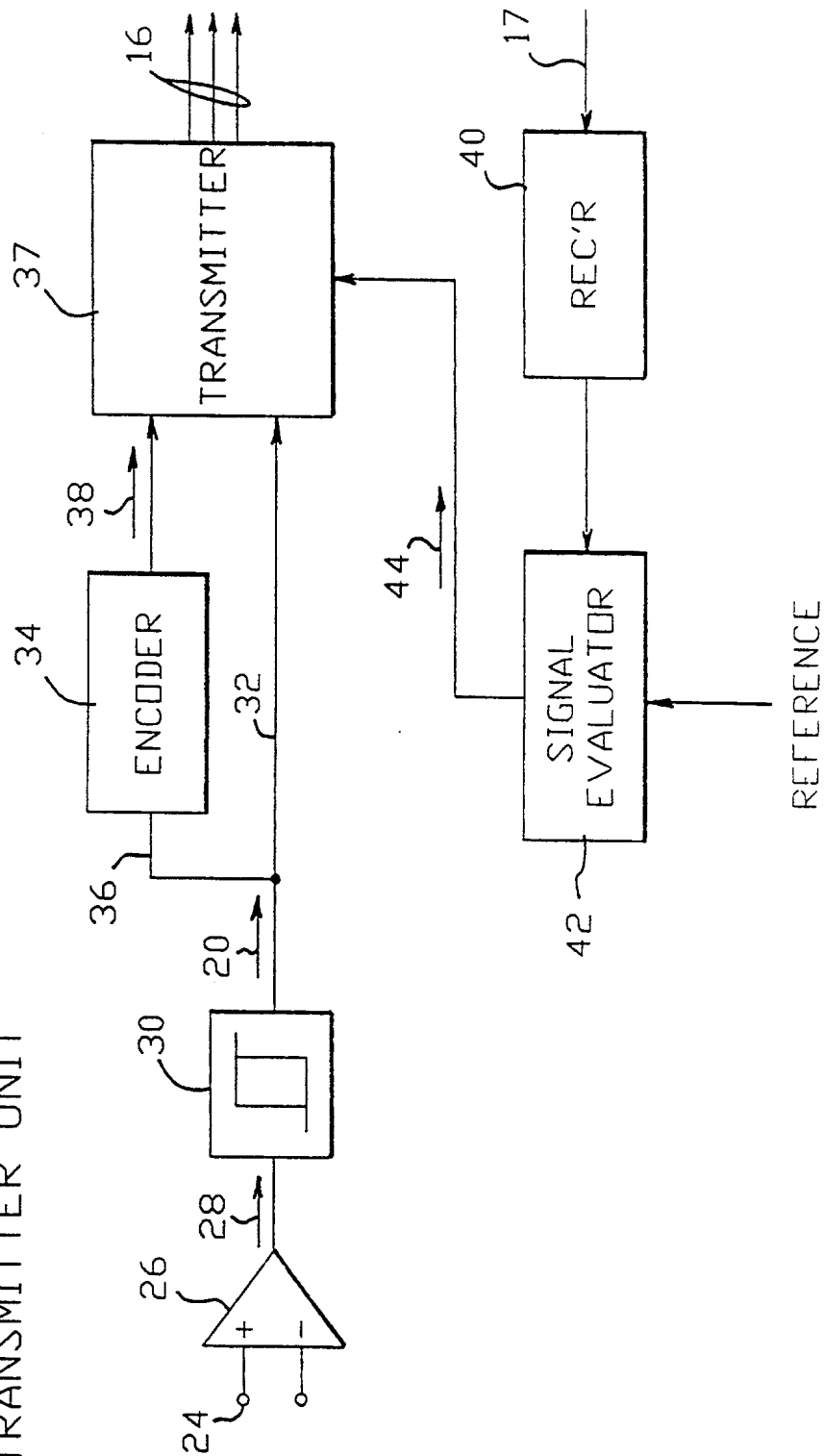


FIG. 5

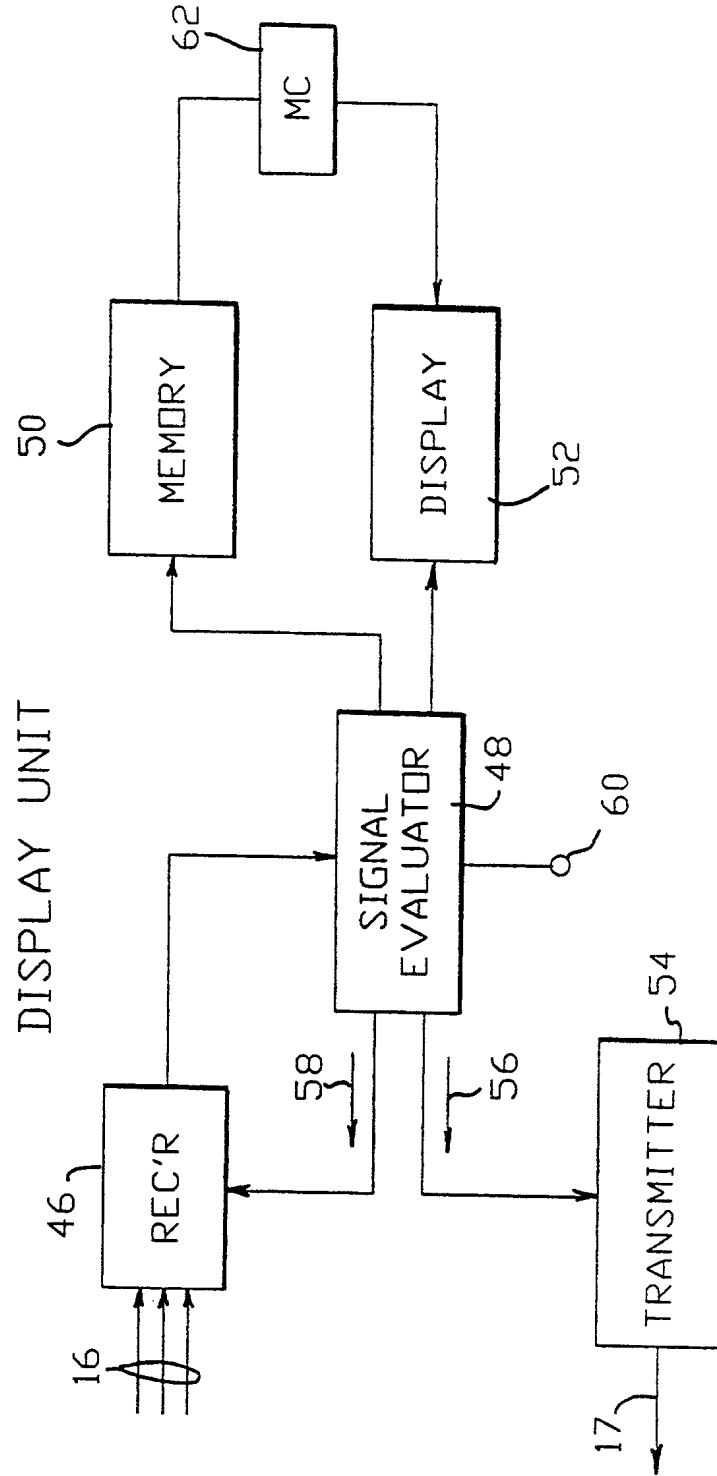
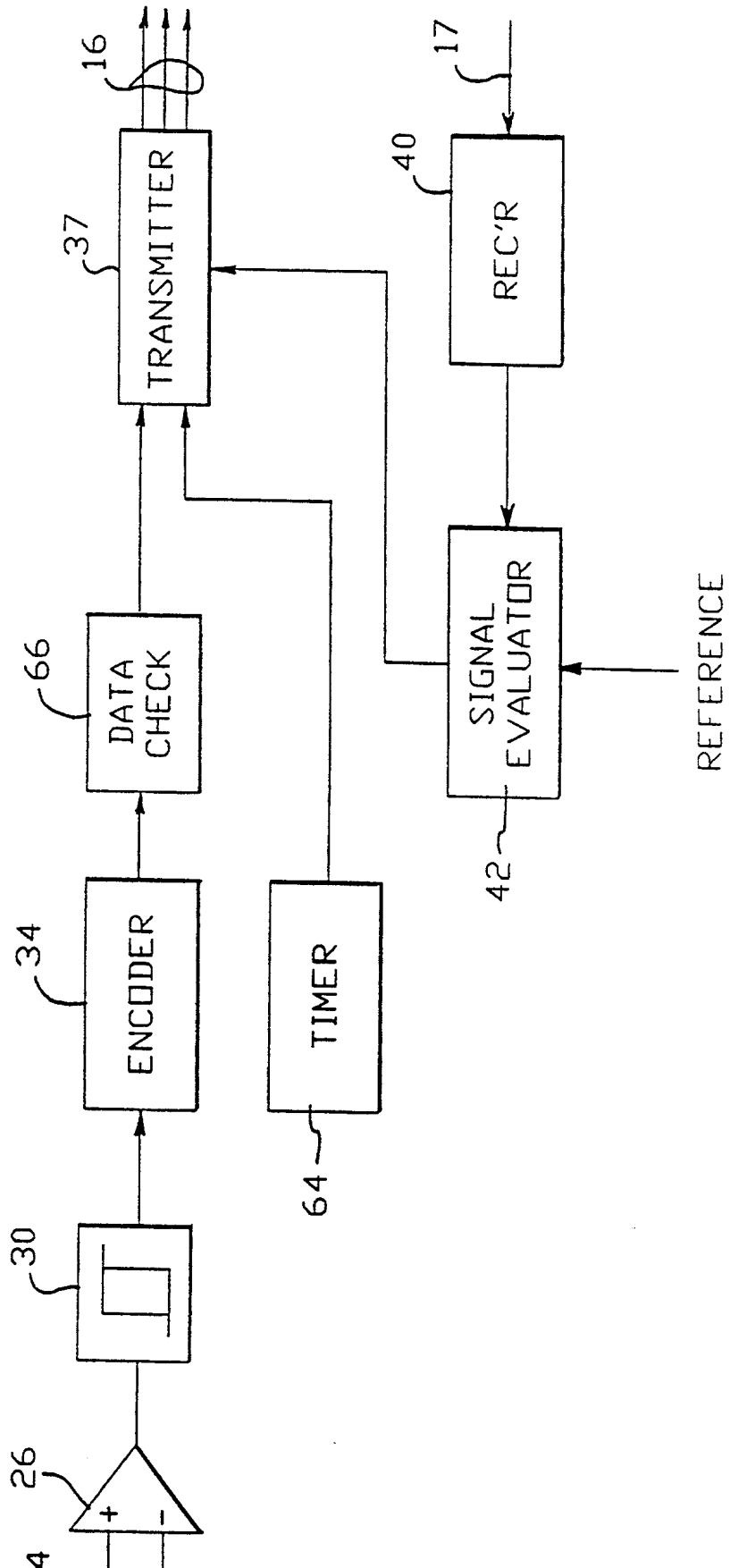


FIG. 6



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