



# United States Patent [19]

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Hirata

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- [54] **ON-BOARD VEHICLE POSITION DETECTOR**
- [75] Inventor: **Seiichiro Hirata, Sanda, Japan**
- [73] Assignee: **Mitsubishi Denki K.K., Tokyo, Japan**
- [21] Appl. No.: **757,421**
- [22] Filed: **Sep. 10, 1991**
- [30] **Foreign Application Priority Data**
  - Sep. 12, 1990 [JP] Japan ..... 2-239929
  - Sep. 12, 1990 [JP] Japan ..... 2-239930
- [51] Int. Cl.<sup>5</sup> ..... **G06F 15/50**
- [52] U.S. Cl. .... **364/449; 364/450; 342/357**
- [58] Field of Search ..... **364/443, 449, 450, 453, 364/454; 342/357, 358, 451; 73/178 R**

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*Attorney, Agent, or Firm*—Sughrue, Mion, Zinn, Macpeak & Seas

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[57] **ABSTRACT**

An on-board vehicle position detector includes a dead reckoning position detector 4 and a GPS receiver 6, the outputs of which are stored in the dead reckoner data memory unit 8 and the GPS data memory unit 7, respectively, at a predetermined sampling period. Usually, the position of the vehicle is determined on the basis of the data obtained via the GPS receiver 6. When, however, the vehicle travel distance between two successive sampling times as determined via the GPS receiver 6 becomes abnormally large, the position data of the dead reckoning position detector 4 is selected.

**5 Claims, 5 Drawing Sheets**

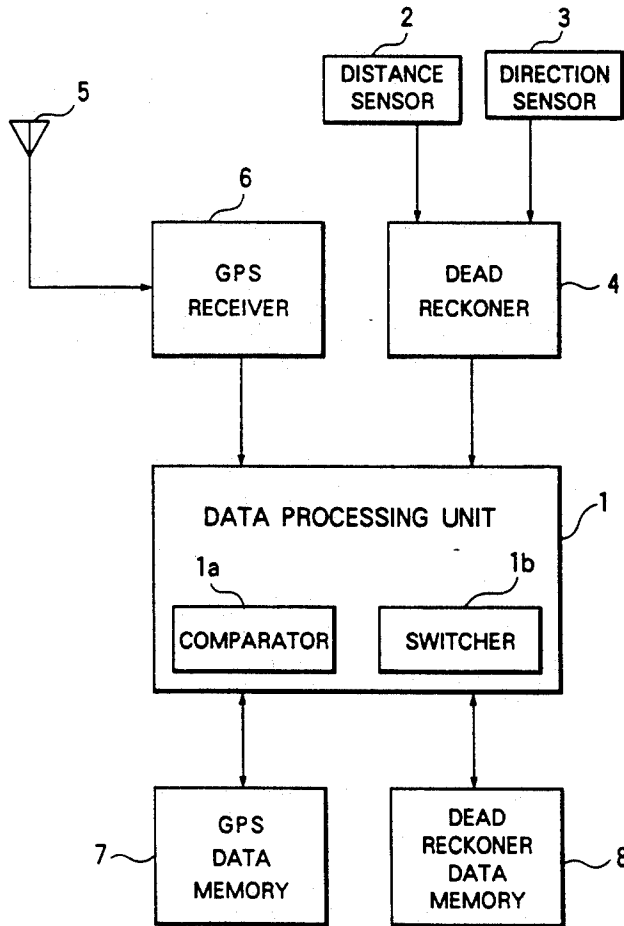
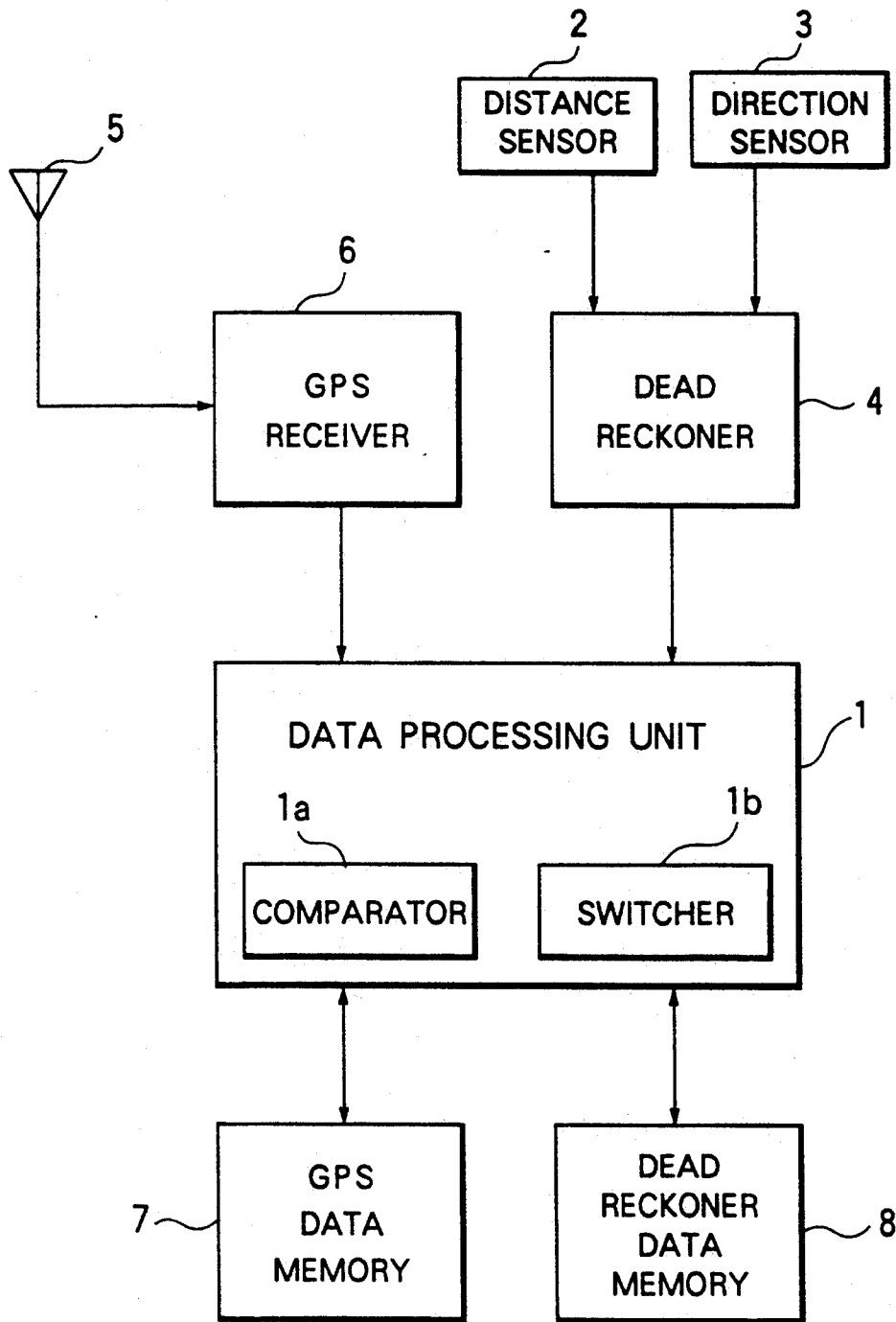


FIG. 1



# FIG. 2

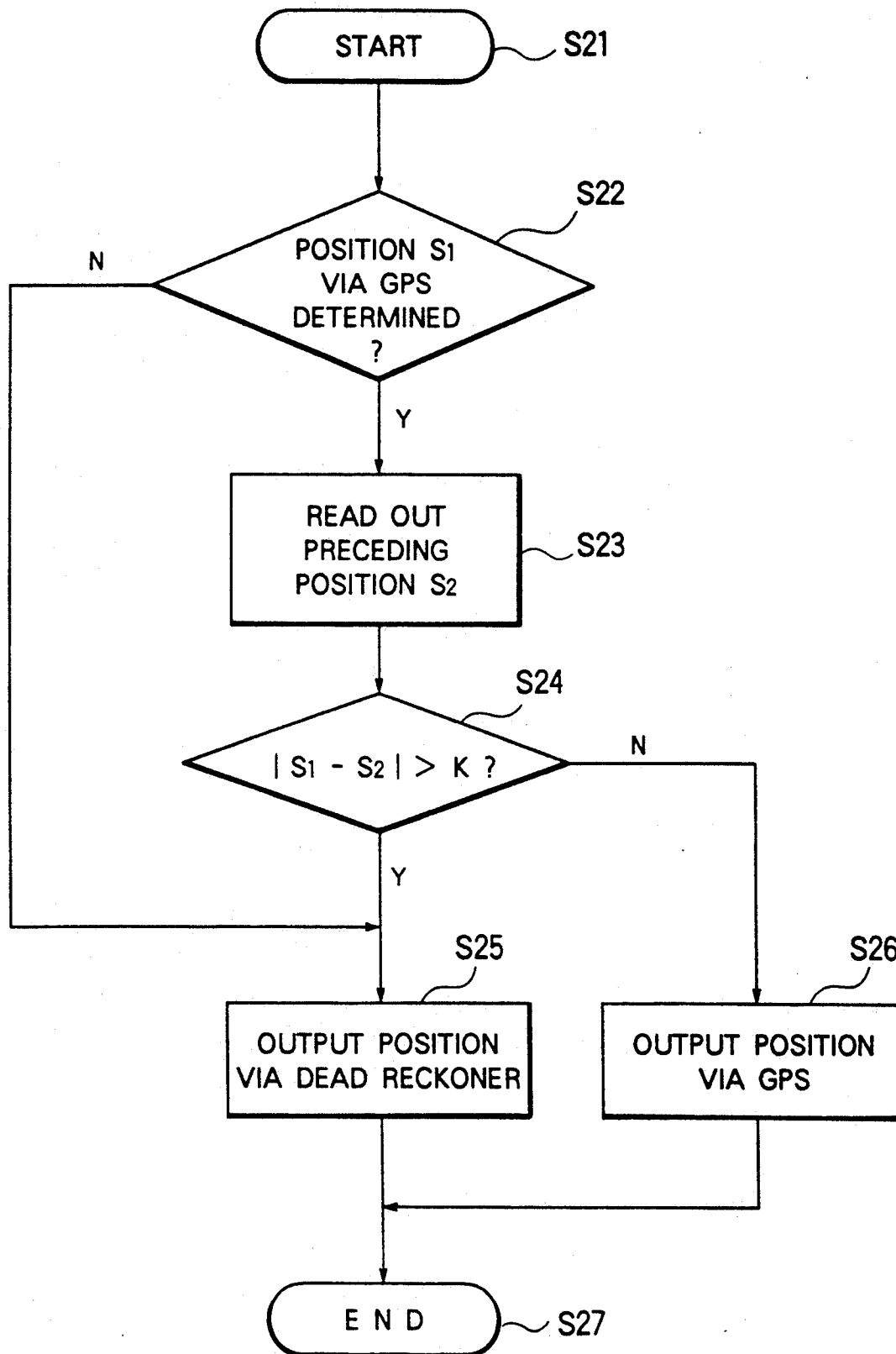


FIG. 3

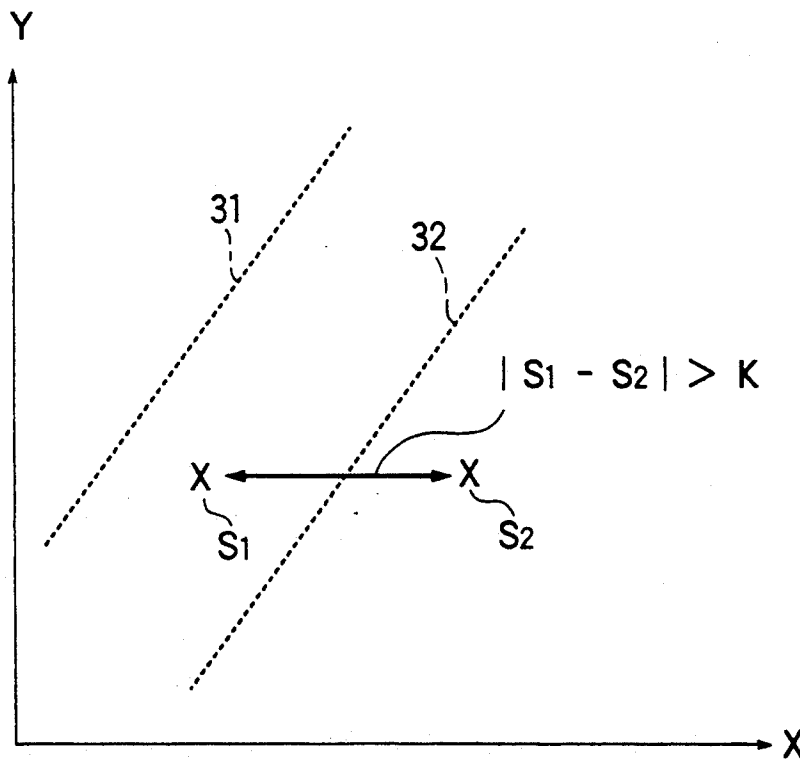
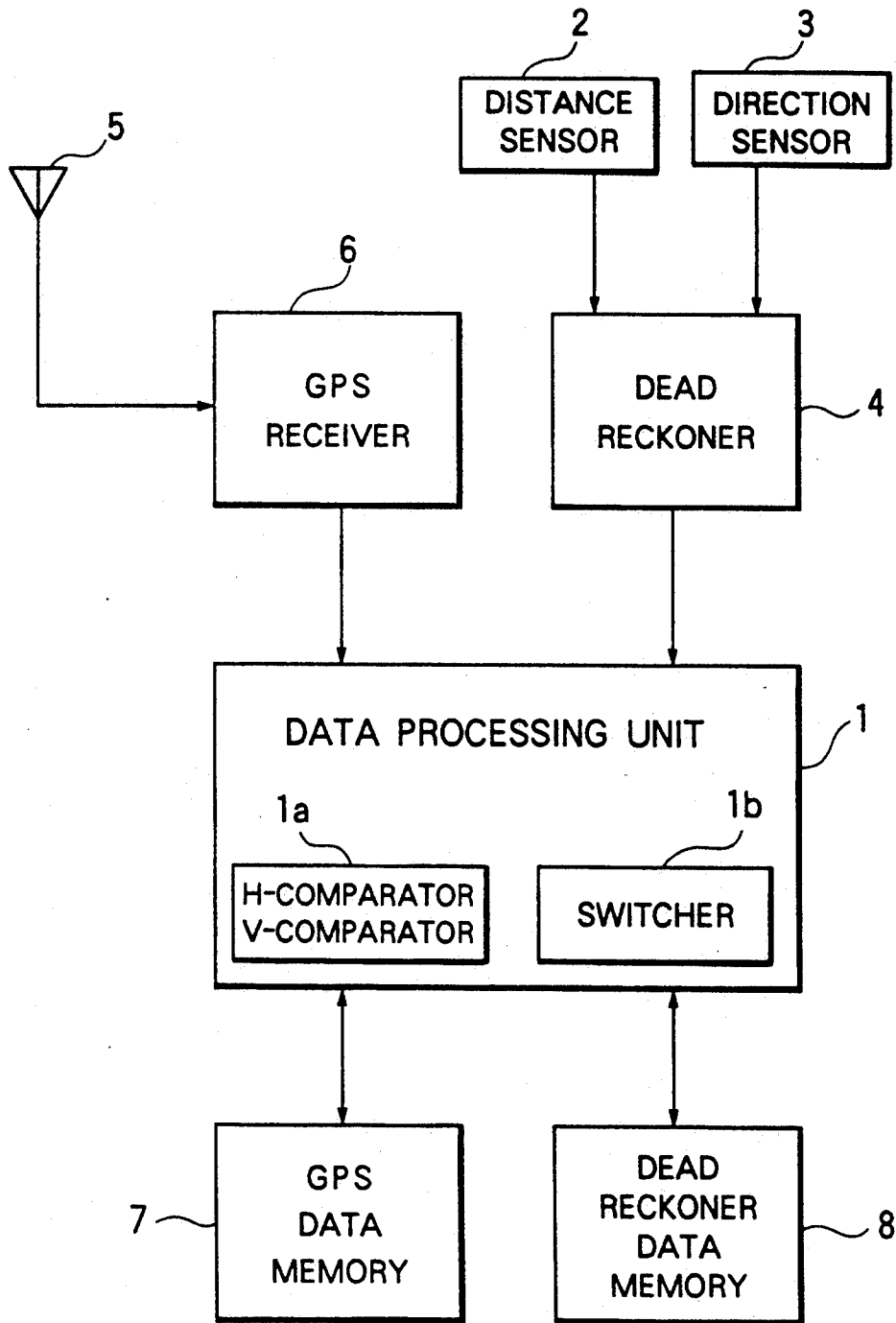


FIG. 4



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