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(12) **United States Patent**  
**Usui**

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(54) **POSITION DETECTION APPARATUS USED  
FOR A MOBILE OBJECT**

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(73) Assignee: **Sony Corporation, Tokyo (JP)**

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

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(52) **U.S. Cl.** ..... **342/357.09; 342/455; 701/208**

(58) **Field of Search** ..... 342/375.06, 357.07,  
342/357.08, 357.09, 357.1, 357.13, 455,  
457; 701/208

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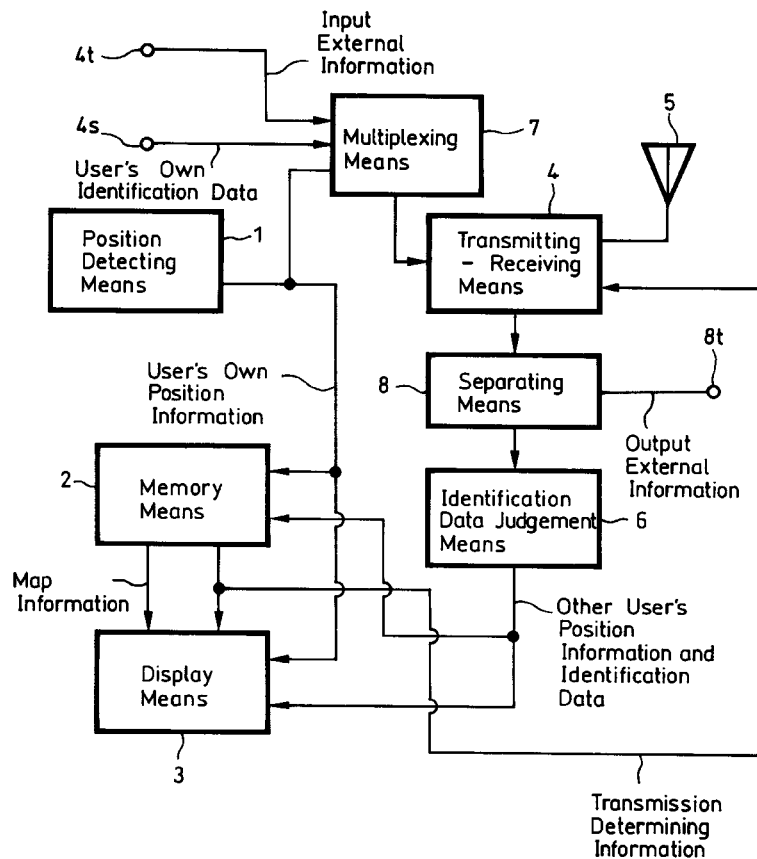
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(57) **ABSTRACT**

A position detection apparatus can accurately detect user's own position and other user's position. The position detection apparatus includes a position detecting means (1) for detecting user's own position, a memory means (2) for storing therein map information, a transmitting-receiving means (4) for transmitting user's own identification data and user's own position information from the position detecting means (1) and receiving other user's identification data and other user's position information and a display means (3) supplied with user's own position information from the position detecting means (1), other user's position information from the transmitting-receiving means (4) and the map information from the memory means (2) and displaying a map on which marks indicating user's or other user's position or user's own and other user's positions are put.

**7 Claims, 6 Drawing Sheets**



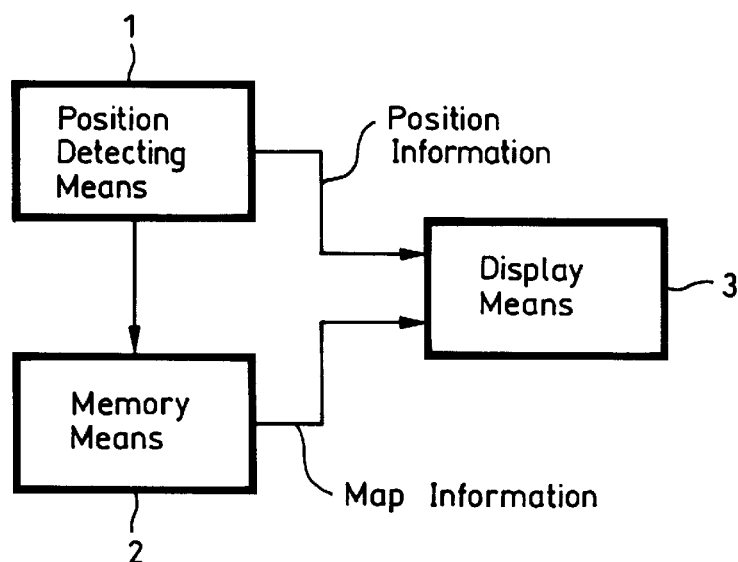
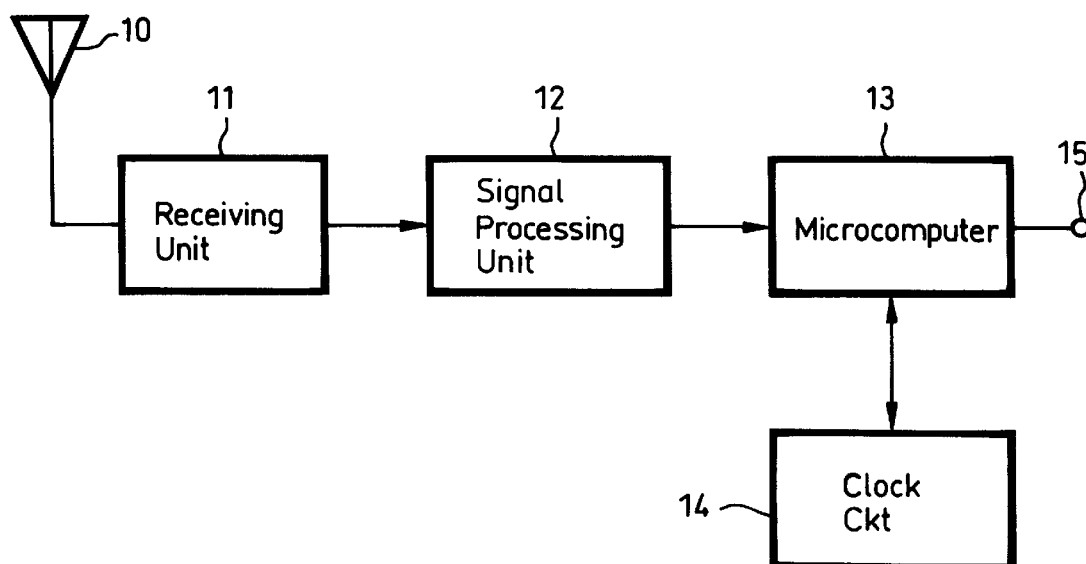
*FIG. 1 (PRIOR ART)**FIG. 2*

FIG. 3

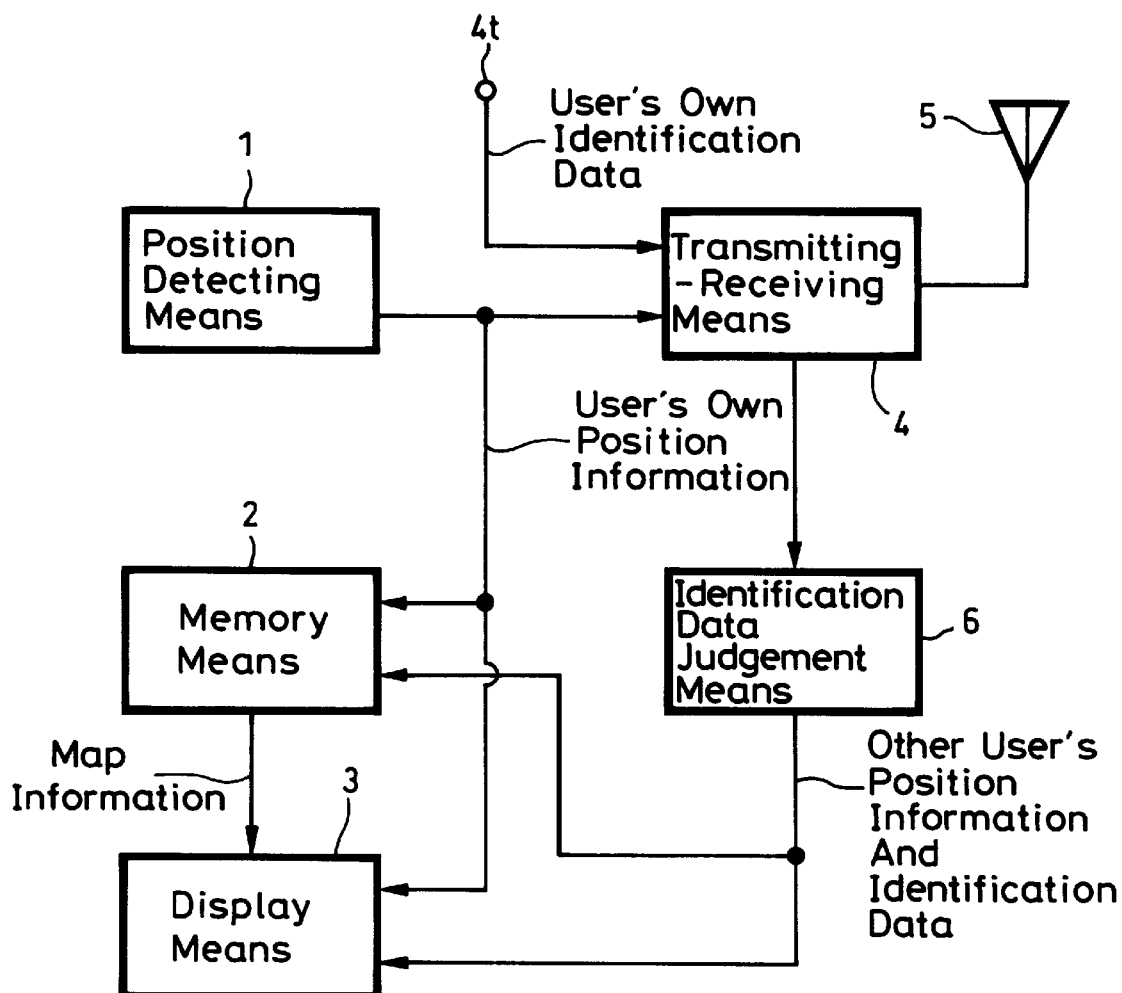
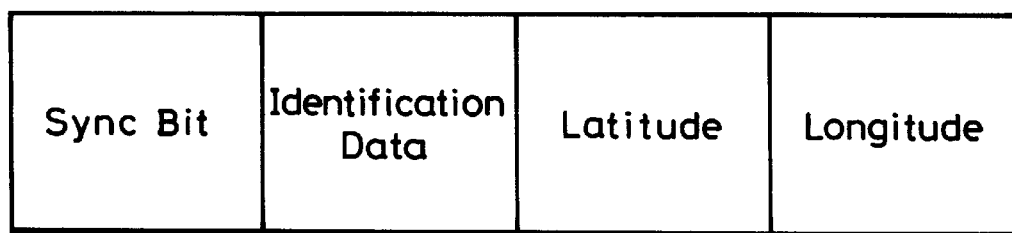


FIG. 4



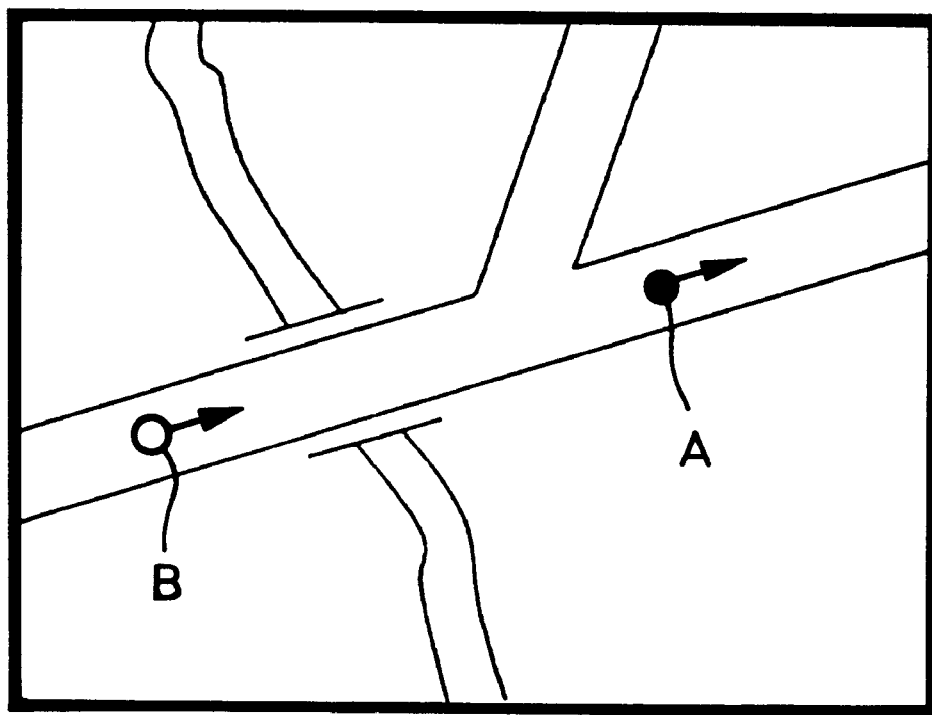
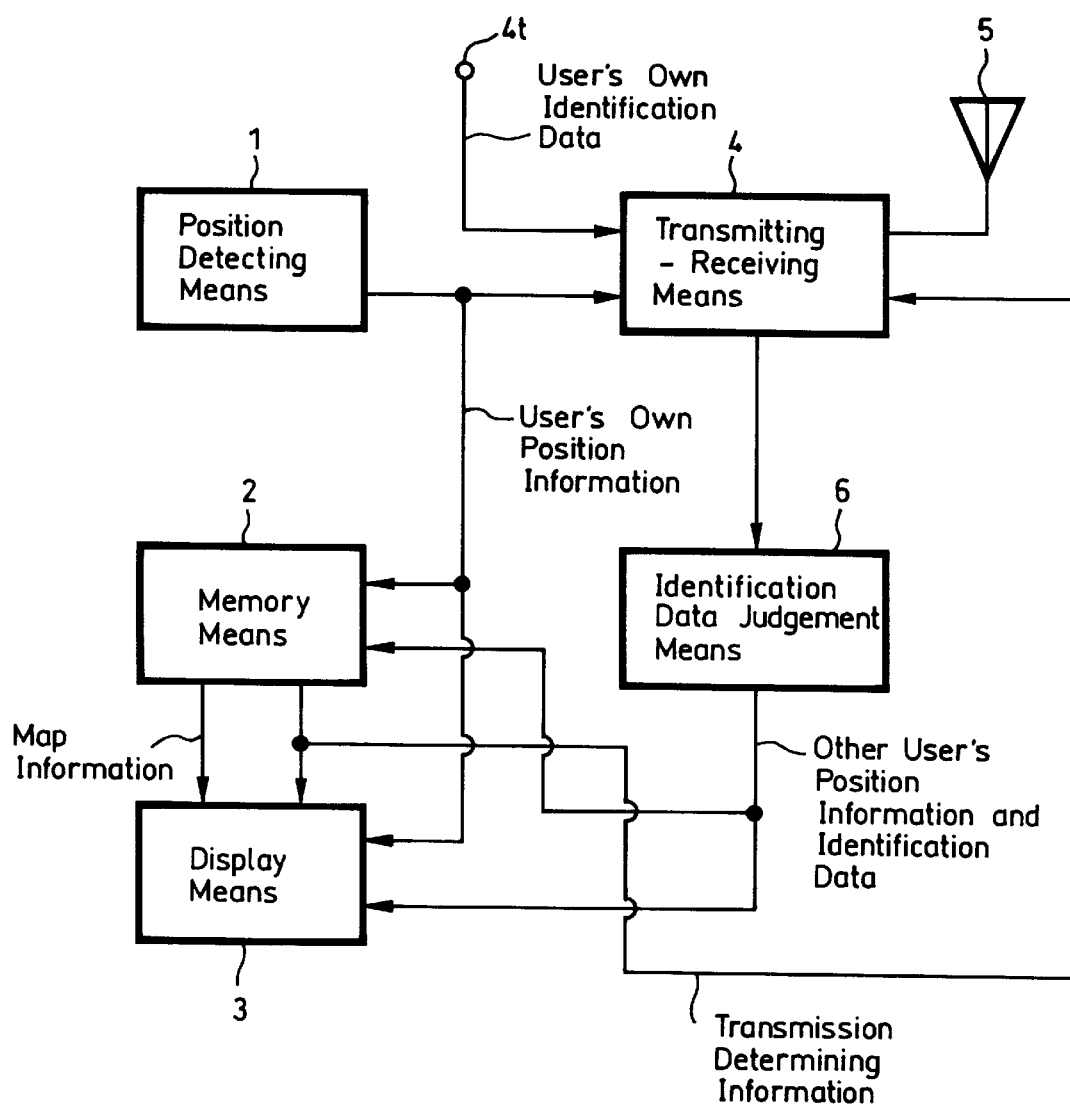
*FIG. 5*

FIG. 6



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