

[54] **AUTOMATIC CALIBRATION OF A CAPACITIVE TOUCH SCREEN USED WITH A FIXED ELEMENT FLAT SCREEN DISPLAY PANEL**

[75] Inventors: **Paul W. Kalendra; William J. Piazza,** both of Boca Raton, Fla.

[73] Assignee: **International Business Machines Corp.,** Armonk, N.Y.

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[51] Int. Cl.<sup>5</sup> ..... **G09G 5/00**

[52] U.S. Cl. .... **345/168; 345/156**

[58] Field of Search ..... **340/706, 712; 178/18, 178/19, 20; 341/32, 33**

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*Primary Examiner*—Alvin E. Oberley

*Assistant Examiner*—V. Chang

*Attorney, Agent, or Firm*—Romualdas Strimaitis

[57] **ABSTRACT**

A touch screen display is automatically calibrated during periods of active use or extended periods of non-use. Calibration contacts are cemented or embedded to the surface of a touch sensitive panel, and electrically connected to a reference during calibration. The reference is either electrical ground or a resistive, capacitive, or inductive load.

**19 Claims, 5 Drawing Sheets**

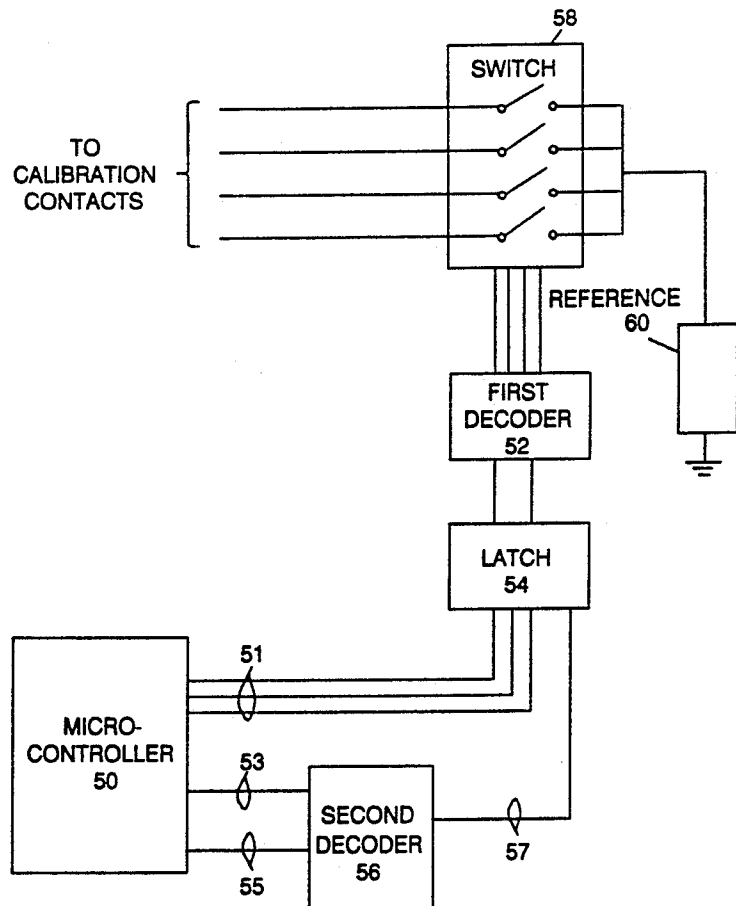


FIG. 1

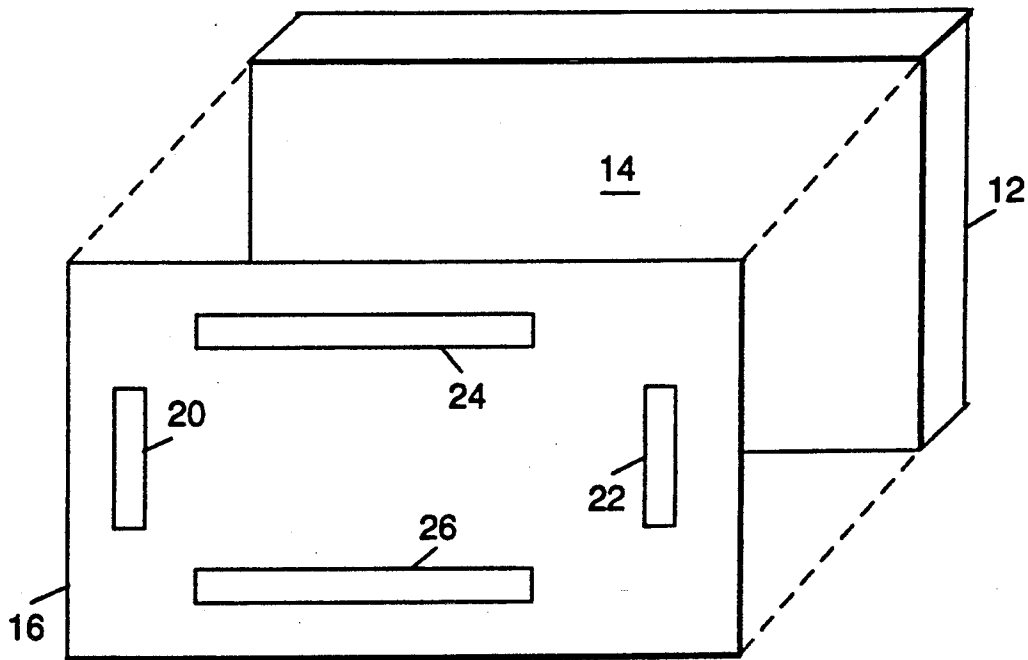


FIG. 2

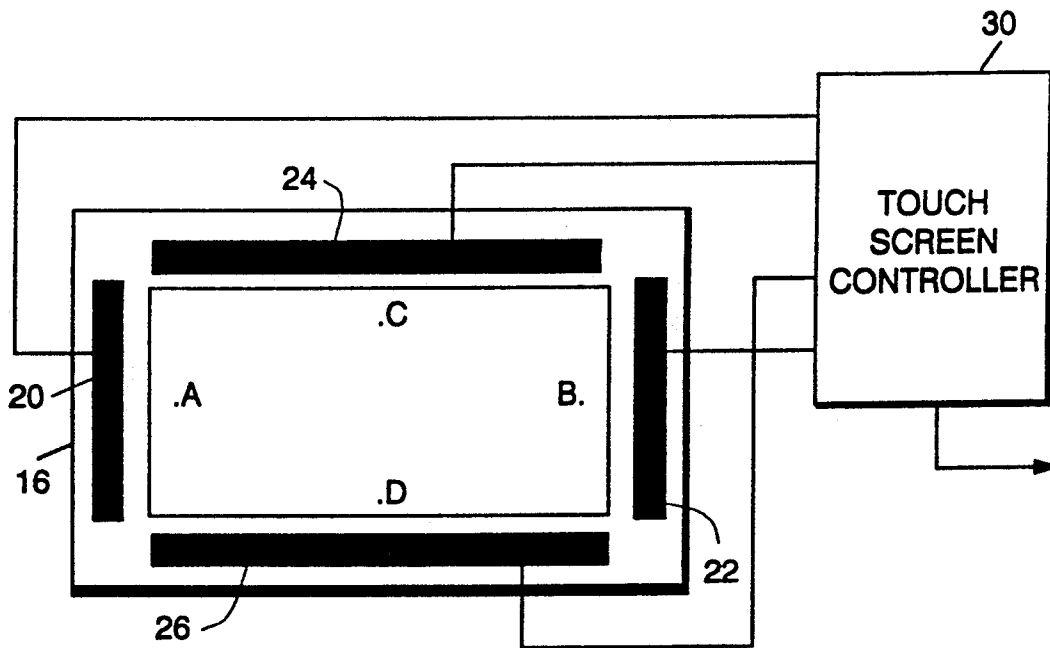


FIG. 3

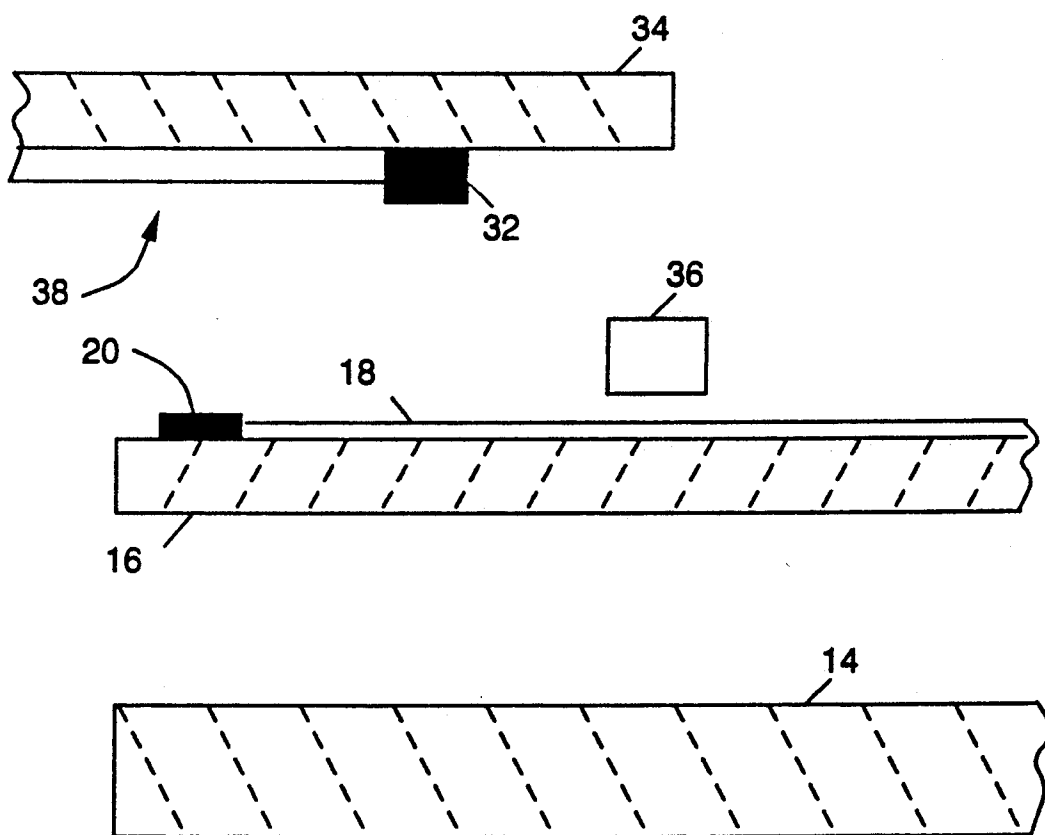
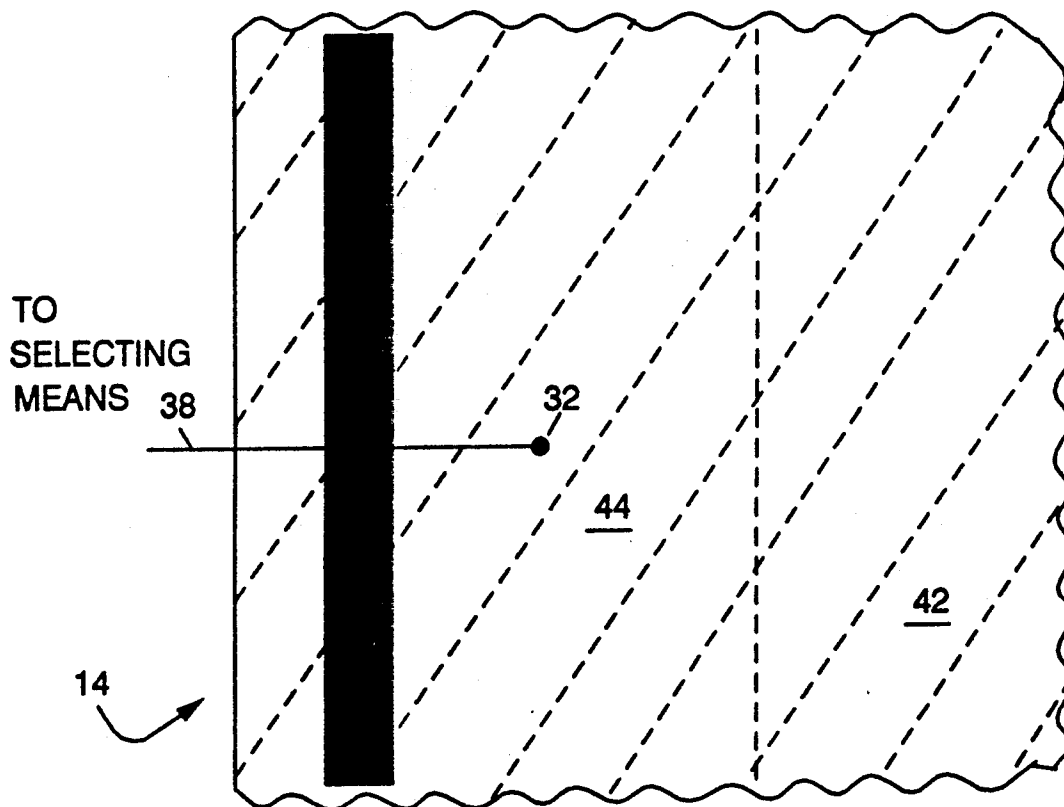


FIG. 4



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