



(12) **United States Patent**
Engholm et al.

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(45) **Date of Patent:** **May 8, 2001**

(54) **METHOD AND APPARATUS FOR FACILITATING USER INTERACTION WITH A MEASUREMENT INSTRUMENT USING A DISPLAY-BASED CONTROL KNOB**

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5,559,301 9/1996 Bryan, Jr. et al. .

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(75) Inventors: **Kathryn A. Engholm**, Beaverton;
Larry Joe Huff, Scappoose, both of
OR (US)

ToolBox 4.3 OTDR Test Application Software Instruction
Manual, Mar. 1997, pp. 25–26.

(73) Assignee: **Tektronix, Inc.**, Beaverton, OR (US)

* cited by examiner

(*) 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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Sponseller

(21) Appl. No.: **09/131,900**

(57) **ABSTRACT**

(22) Filed: **Aug. 10, 1998**

A method and apparatus for facilitating user interaction with
a measurement instrument displays a control knob glyph
corresponding to a user-adjustable parameter of the mea-
surement instrument, the control knob glyph having an
indicator and a partially circular drag area through which the
indicator can be rotated. Inputs indicating amounts of rota-
tional movement for the indicator can be received, and the
location of the indicator within the drag area and the value
of the parameter changed in response to such inputs.

(51) **Int. Cl.**⁷ **H03K 11/00**

(52) **U.S. Cl.** **341/35; 341/34; 345/173;**
345/974

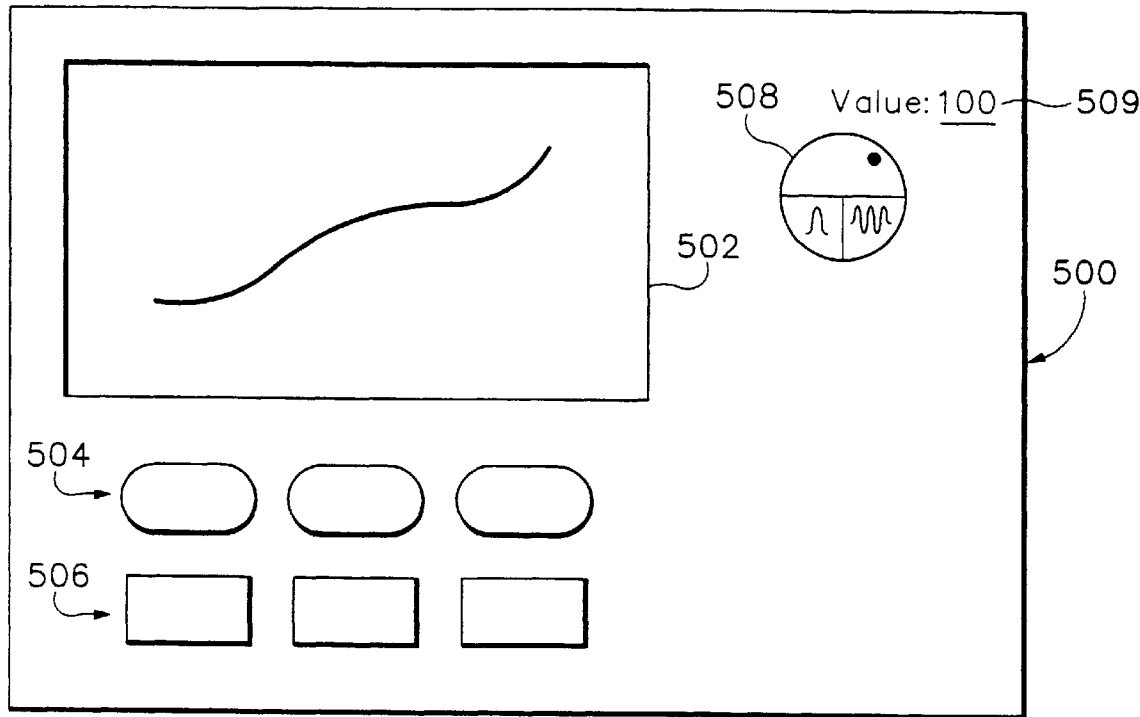
(58) **Field of Search** 341/34, 192, 35;
345/173, 118, 434, 974

(56) **References Cited**

U.S. PATENT DOCUMENTS

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17 Claims, 4 Drawing Sheets



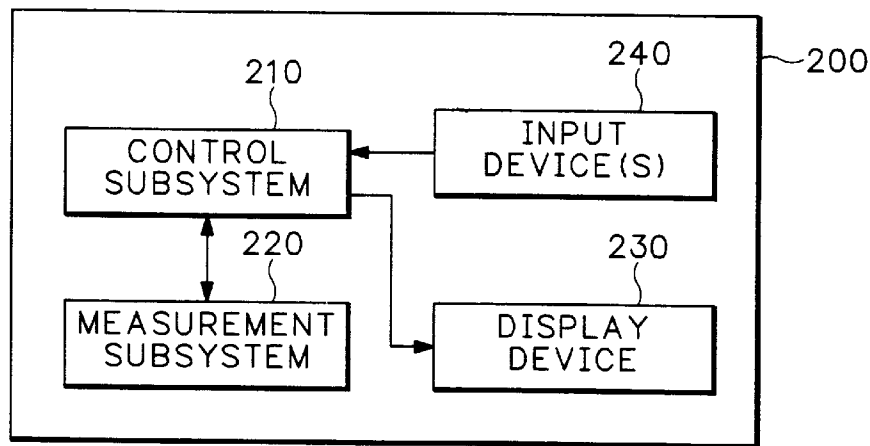
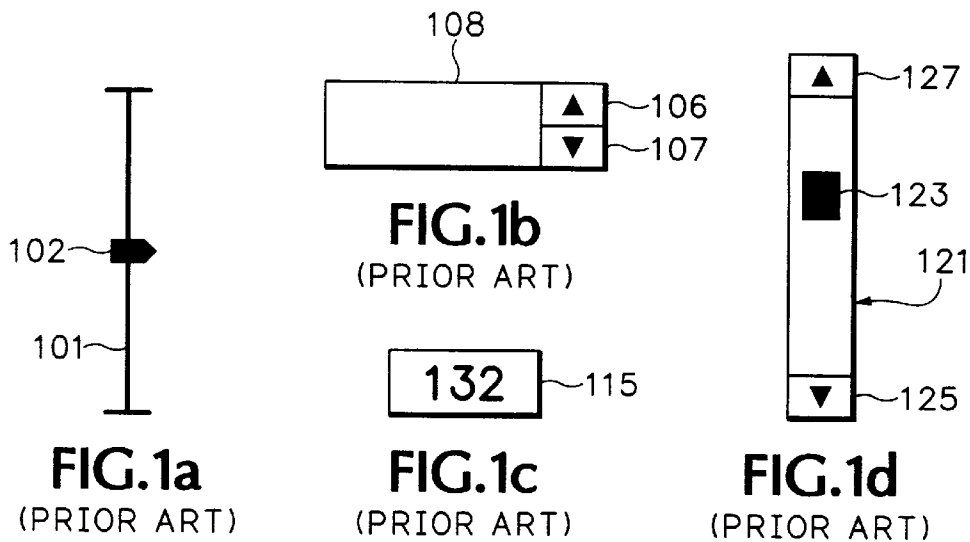


FIG. 2

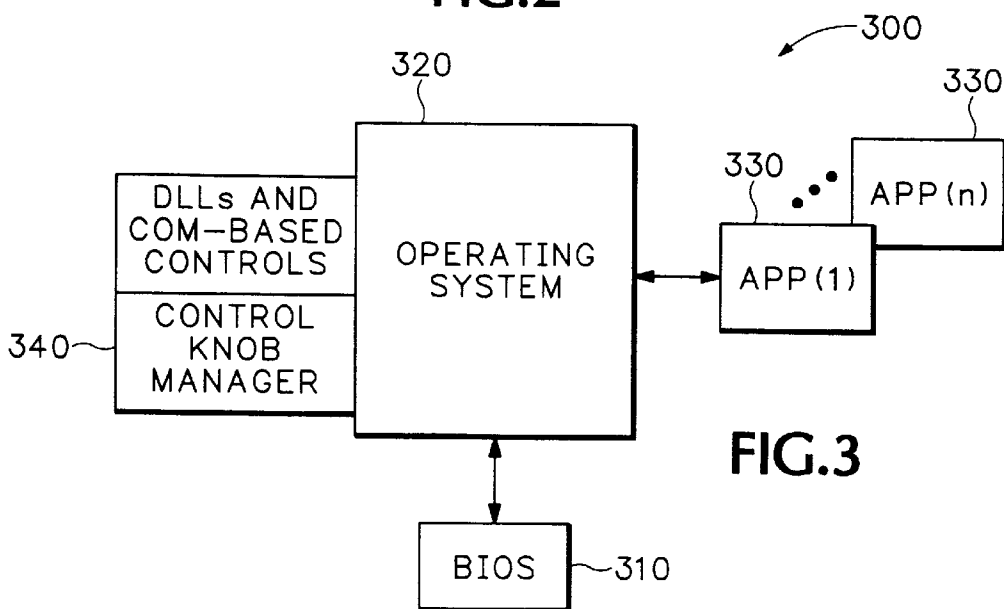


FIG. 3

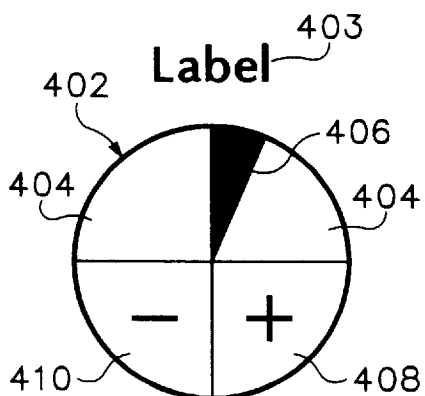


FIG. 4a

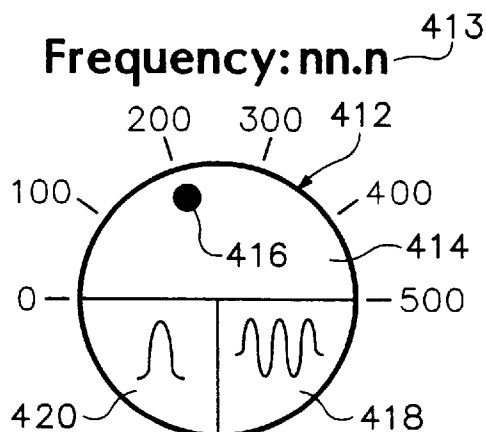


FIG. 4b

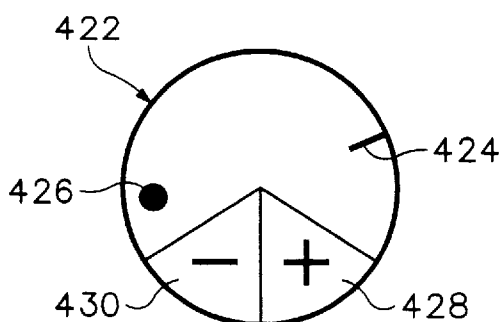


FIG. 4c

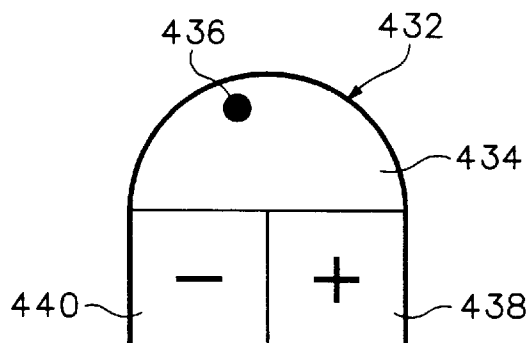


FIG. 4d

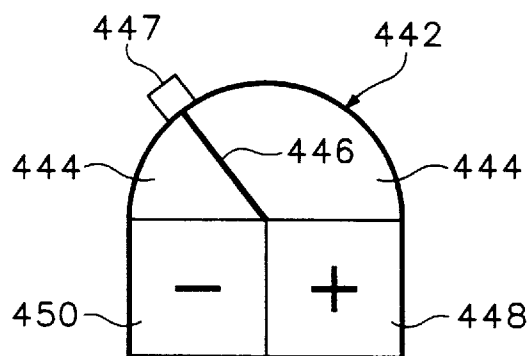


FIG. 4e

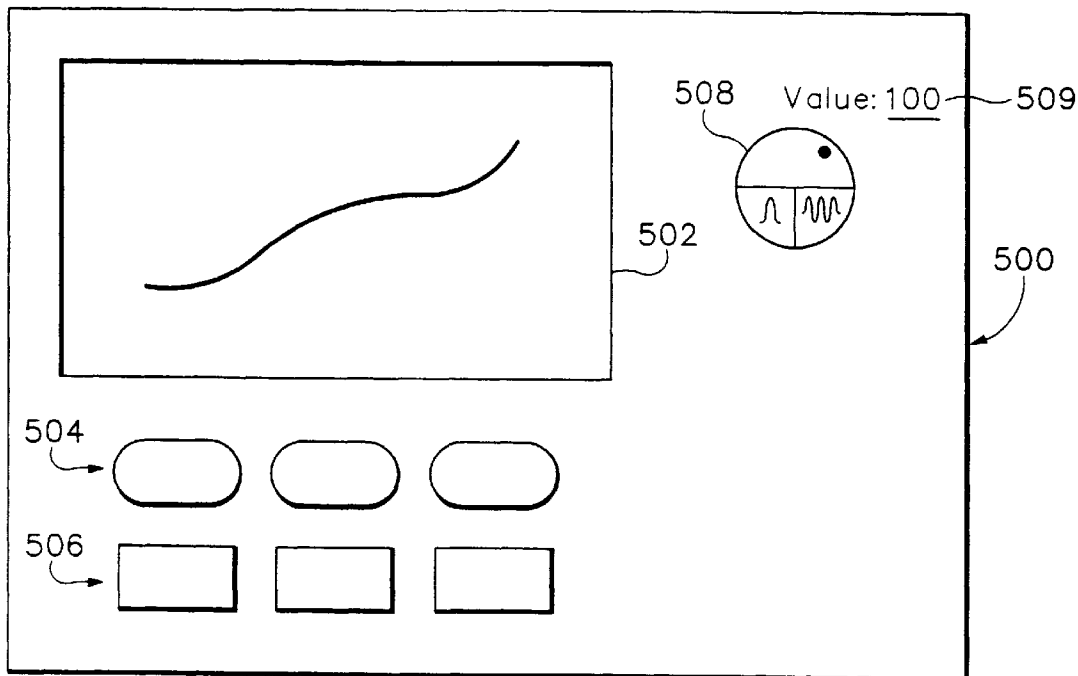


FIG.5

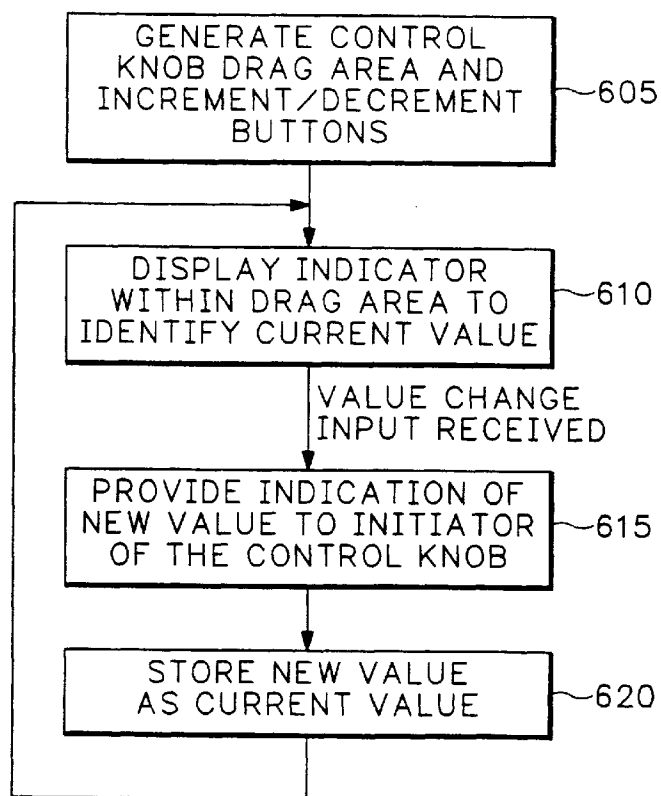


FIG.6

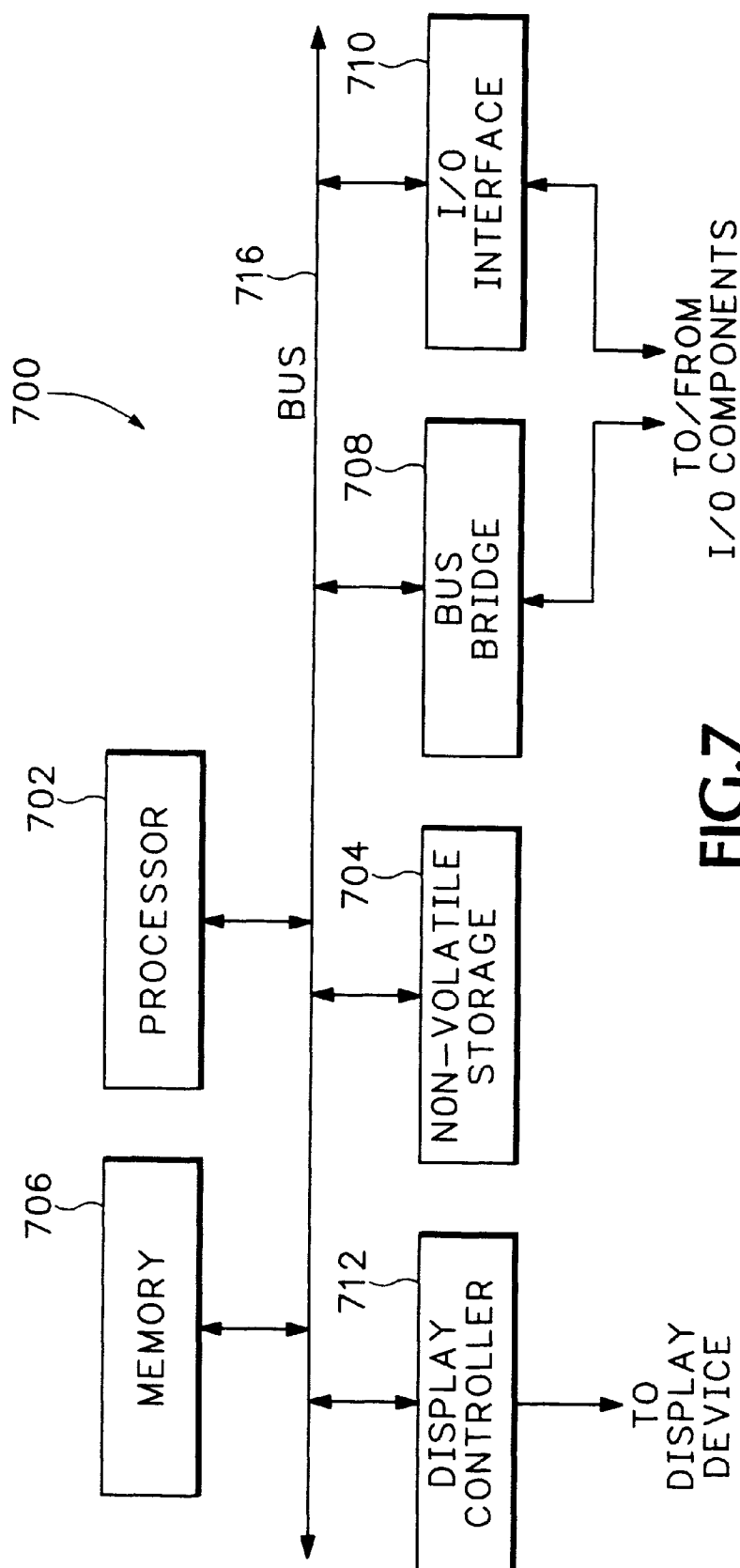


FIG.7

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