



US007576718B2

(12) **United States Patent**  
**Miyazawa**

(10) **Patent No.:** **US 7,576,718 B2**  
(45) **Date of Patent:** **Aug. 18, 2009**

(54) **DISPLAY APPARATUS AND METHOD OF DRIVING THE SAME**

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(73) Assignee: **Seiko Epson 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 742 days.

(21) Appl. No.: **10/936,649**

(22) Filed: **Sep. 9, 2004**

(65) **Prior Publication Data**

US 2005/0116902 A1 Jun. 2, 2005

(30) **Foreign Application Priority Data**

Nov. 28, 2003 (JP) ..... 2003-399339

(51) **Int. Cl.**  
**G09G 3/30** (2006.01)

(52) **U.S. Cl.** ..... **345/78; 345/76; 345/77; 345/80; 345/81; 345/82; 345/204**

(58) **Field of Classification Search** ..... **345/78, 345/76-77, 80-82, 204**  
See application file for complete search history.

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(57) **ABSTRACT**

To provide a technology for preventing effect of precharging from becoming nonuniform when the threshold voltage of a driving transistor included in a current drive type pixel circuit is nonuniform. In the technology, before setting the internal state of each of current drive type pixel circuits, provided to corresponded to intersections of a plurality of data lines and a plurality of scanning lines, in accordance with light emission grayscales, precharge voltages as voltages to be applied to the data lines are specified. A predetermined current is supplied to the current drive type pixel circuits via the data lines. A precharge voltage is specified in accordance with voltages appearing in the data lines after the predetermined current is supplied.

**2 Claims, 14 Drawing Sheets**

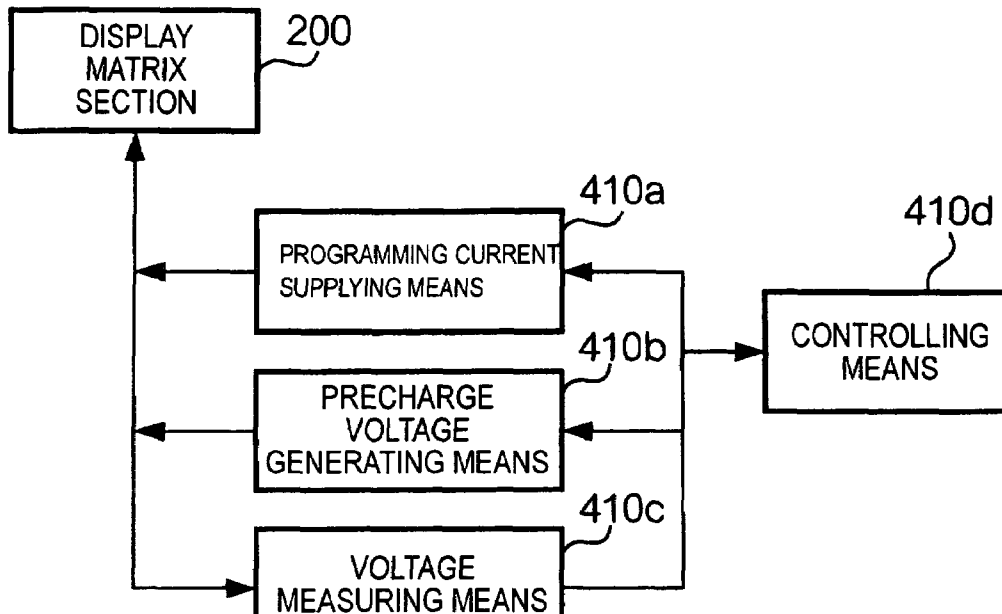


FIG. 1

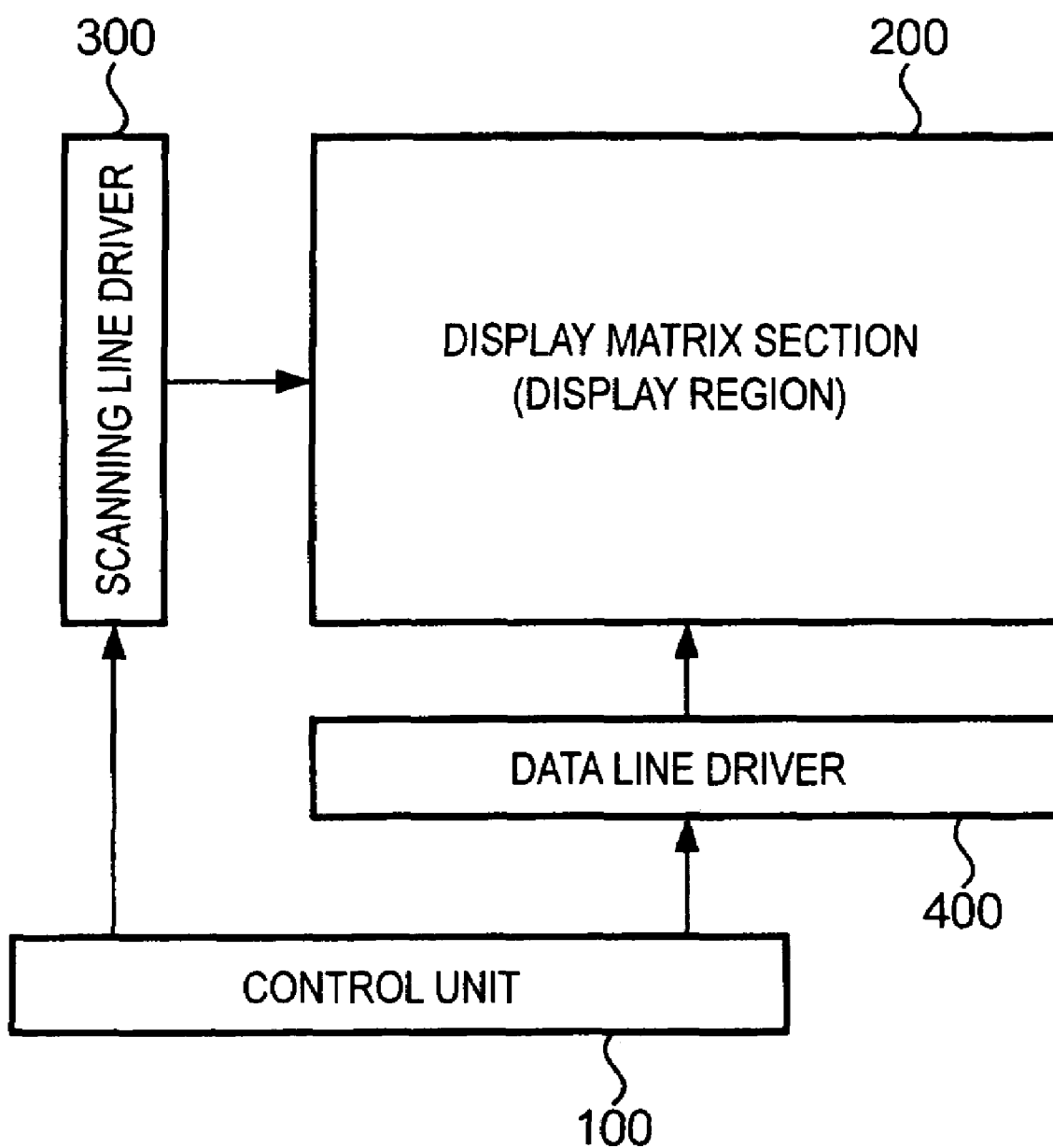




FIG. 3

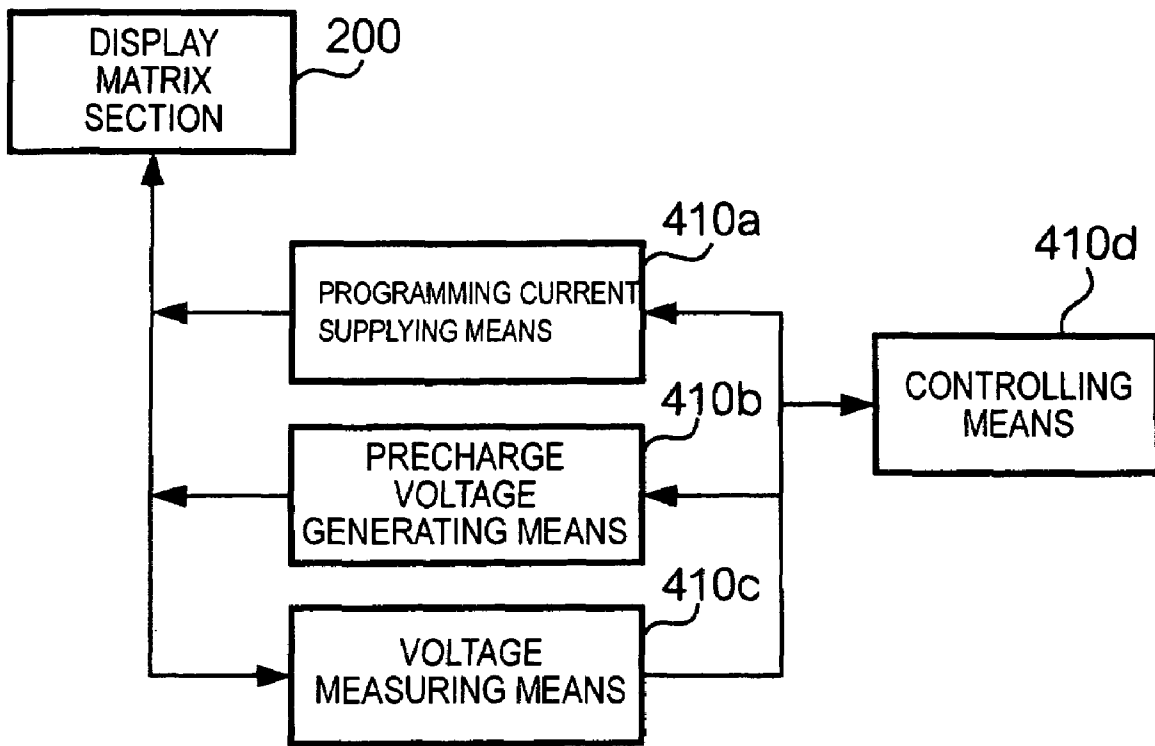
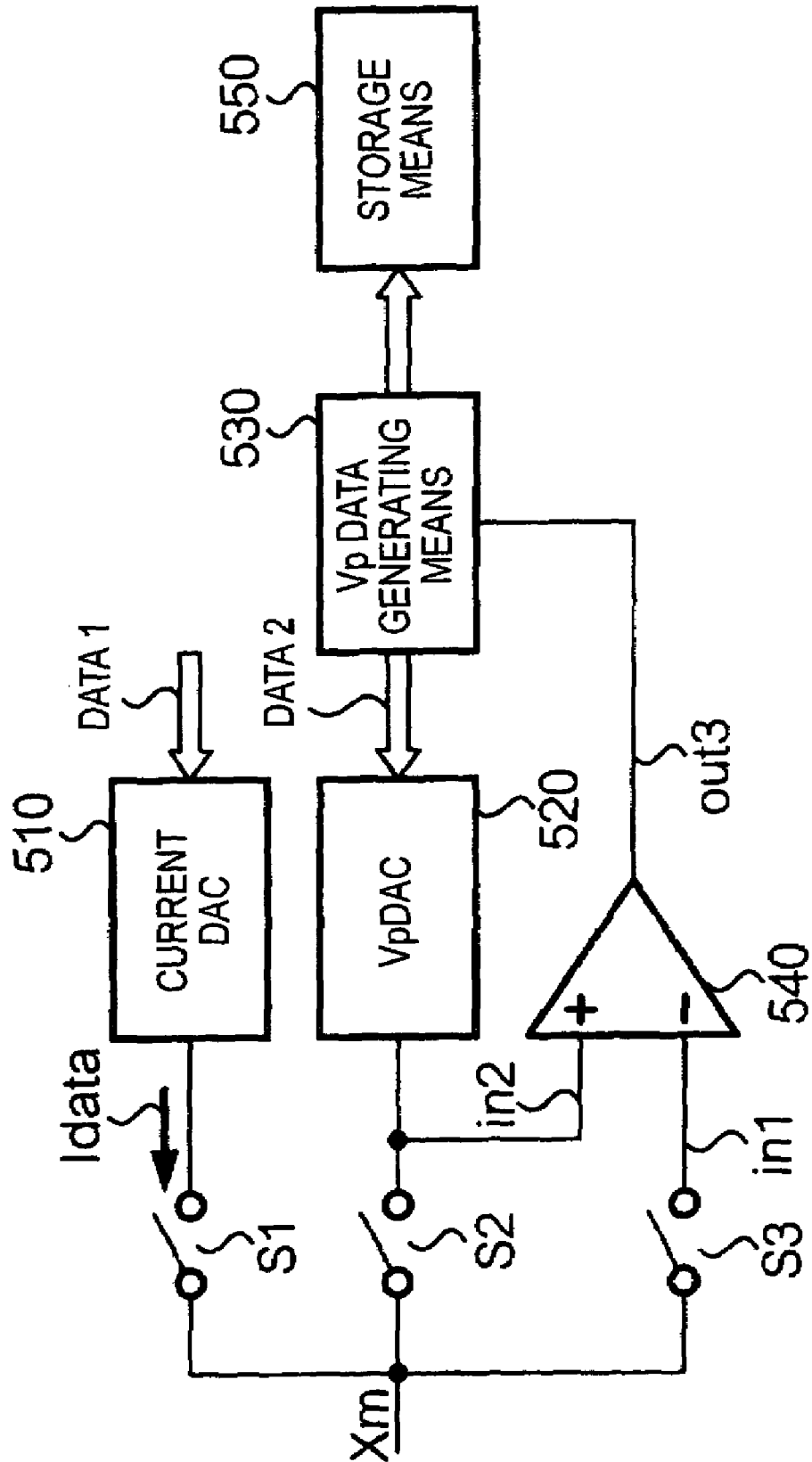


FIG. 4



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