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Zhu et al.

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(54) **MEDIA SERVOWRITING SYSTEM**

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(52) **U.S. Cl.** **360/75**; 360/77.03; 360/78.11

(58) **Field of Search** 360/75, 77.03, 360/78.11

(56) **References Cited**

U.S. PATENT DOCUMENTS

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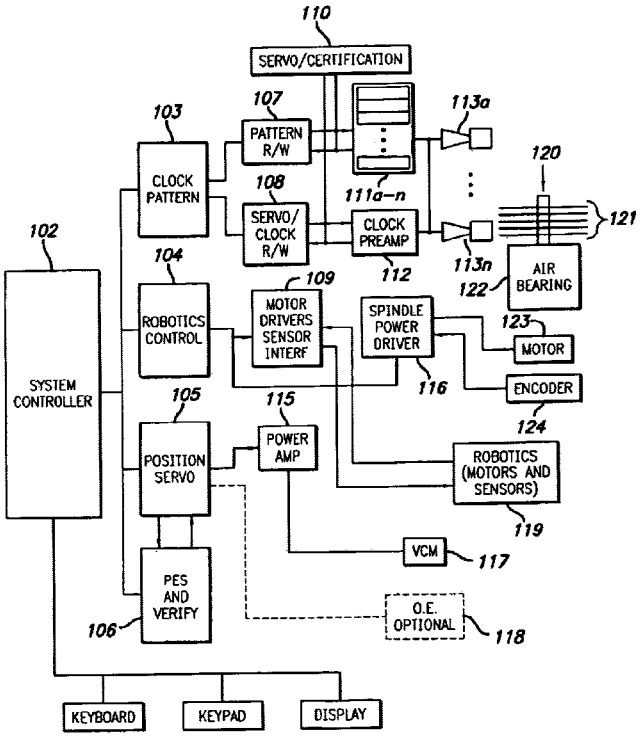
(57) **ABSTRACT**

A system and methods for efficiently performing media writing functions is disclosed. The system and methods include: detecting media movement with respect to a base and heads during reading and writing, and moving the heads in response; using an interferometer, such as a dual beam differential interferometer, to dynamically monitor disk position and address perceived errors; and minimizing repeatable and non repeatable runout error by writing data, such as servo bursts, in multiple revolutions to average adverse runout conditions. The present system has the ability to use an interferometer to enhance media certification and perform on line, in situ monitoring of the media, and includes shrouding, head mounting, disk biasing, and related mechanical aspects beneficial to media writing.

42 Claims, 25 Drawing Sheets