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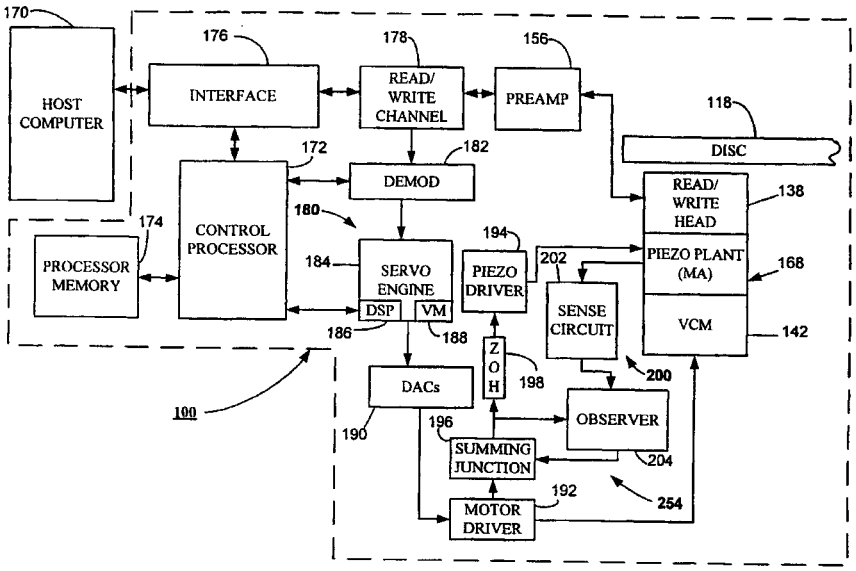
(54) Title: MICROACTUATOR ASSISTED SEEK AND HYSTERESIS CORRECTION METHOD AND APPARATUS FOR A DISC DRIVE




(57) Abstract: Apparatus and method for positioning a head (138) adjacent a disc (118) in a disc drive (100) using a dual stage actuator having a primary actuator motor (142) for coarse head positional control and a microactuator (128) for fine head positional control. The microactuator includes a strain gauge (212) affixed to a piezoelectric transducer, PZT (210). The strain gauge measures actual dimensional change of the PZT in response to the application of a PZT voltage to the PZT to effect a desired change. A closed loop primary servo control circuit (180) with a closed loop piezo servo circuit (200) generates control inputs for the dual stage actuator to carry out track following and seek operations while adjusting head position by correcting piezoelectric transducer hysteresis (error between desired change and actual change) and reducing seek and settle times.

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