APPARATUS FOR SWITCHING CHANNELS WITHIN A MULTI-CHANNEL READ/WRITE PREAMPLIFIER CIRCUIT

ABSTRACT

A switching apparatus for switching between channels within a read/write pre-amplifier circuit in a multi-channel magnetic media storage system switches between the channels and couples an active magnetoresistive sensor to receive biasing current and to a pre-amplifier circuit. When a read operation is requested from a specific channel within the magnetic media storage system, a control signal line corresponding to an appropriate magnetoresistive sensor is activated. Each channel includes a first corresponding transistor which is enabled by an appropriate control signal line, allowing current to flow through the first transistor to enable a second corresponding transistor that is coupled to the magnetoresistive sensor. Once enabled the second transistor couples the magnetoresistive sensor to a pre-amplifier stage and to receive biasing current. The magnetoresistive sensor then transmits pulses, corresponding to the data being read from the magnetic medium, which are amplified by the pre-amplifier stage and provided as an output to a read channel. Multiple channels are supported, each including a magnetoresistive sensor and first and second corresponding transistors. A control logic circuit provides the control signal lines, one for each channel. A single compensation capacitor is included.

Figure 3