

A synchronous sampling data detection channel includes a data transducer head (26) positioned by a servo-controlled actuator (32) over a recording track of a rotating data storage disk (16), a preamplifier (28) for receiving electrical analog signals magnetically induced by the data transducer head (26) from flux transitions present in at least the servo information field, a digital sampler (46) for synchronously sampling the electrical analog signals to produce digital samples, and a Viterbi detector coupled to receive digital samples from the synchronous sampling data detection channel for decoding 1/4 T coded wide biphasic servo information patterns as maximum likelihood servo data sequences, wherein the wide biphasic magnet patterns are arranged e.g. as +--+ magnet patterns for a binary zero information value and --++ magnet patterns for a binary one information value.