



Abstract

1. Recorder including a phase detector for the drive mechanism

2.1 Integrated motor switching circuits for controlling electronically commutated motor for driving the head drums are known, the circuits including means for obtaining tacho signals for regulating the rotational speed of the motor as well as means for obtaining control signals for commutating the motor winding phases. The acquirement of these signals is effected during the commutation process by detecting and evaluating the zero crossings of the induced reverse voltages when switching off the winding phases. The precision of the motor drive mechanism is determined however by the manufacturing tolerances of the motor. Consequently, a phase regulating process, that is derived from a marking on the rotating parts, is additionally used for the high precision motor drive mechanisms in recording and reproduction equipment. The object is to reduce the expense involved in detecting the phase of the write/read heads disposed around the periphery of the rotating head drum in the case of a circuit arrangement for regulating the drive mechanism for the head drum and the tape.

2.2 In an electronically commutated head drum motor (3) which is combined with a motor control circuit (32) that produces commutation control and tacho signals from the commutation process for the winding phases (X, Y, Z) of the motor (3); one of the winding phases (X, Y, Z) is used for detecting the phase of the write/read heads (K1, K2) which are disposed around the periphery of the rotating head drum (1), in that a commutation signal (I), which is related to the reference signal (20) of a signal track that is to be recorded or scanned, is derived from the commutation of this winding phase.

2.3 In particular, for video recorders and camcorders

3. Fig. 2