

ABSTRACT

MAGNETIC RECORDING AND REPRODUCING APPARATUS

A magnetic recording and reproducing apparatus for recording a desired sound or picture signal to a magnetic tape by a magnetic head. At the time of normal-speed recording and reproduction, the magnetic tape is taken up at a constant speed, but by changing the tape travelling speed of the tape on the rotary drum, DTF control and high-speed noiseless reproduction are enabled. The tension of the tape on the entrance side of the rotary drum is controlled to a desired value. This apparatus comprises a tape tension actuator and a tape drawing actuator on the entrance side and on the exit side, respectively, of the rotary drum. In DTF control, both tape actuators correct a tracking error of the tape in cooperation with each other. In high-speed noiseless reproduction, both tape actuators are differentially driven so as to lower the tape travelling speed on the rotary drum. Both tape actuators are driven in feedback control using the modern control.

