

MAGNETIC TAPE DRIVE

ABSTRACT OF THE DISCLOSURE

A magnetic tape drive suitable for an auto-reverse tape recorder has a pair of reel-base gears, a pair of capstans, a pair of pinch rollers, a drive mechanism, a switching mechanism, and a
5 oscillating mechanism. The pair of reel-base gears are provided on a pair of reel bases, respectively engaging with a pair of reels between which a magnetic tape is wound. The pair of capstans for driving the magnetic tape in a first running direction and a second running direction opposing the first running direction.)
10 The pair of pinch rollers drives the magnetic tape in a selected direction of the first and second running directions, while holding the magnetic tape against the capstans by selectively abutting the pair of capstans, respectively. The pair of pinch rollers are supported so that the pinch roller are moveable toward and away
15 from the pair of capstans. The drive mechanism selectively drives either one reel base of the pair of reel-base gears. The drive mechanism selectively meshes with a cam gear and the pair of reel-base gears and has a gear which gear rotatively drives the reel-base gear meshed. The switching mechanism
20 switches a running direction of the magnetic tape from one of the first and second running direction to another direction. The switching mechanism is reciprocated at the end of the magnetic tape so that a first pinch roller of the pair of pinch rollers which first pinch roller abuts a first capstan of the pair of capstans
25 moves away from the first capstan and so that a second pinch roller of the pair of pinch rollers which second pinch roller is spaced apart from a second capstan of the pair of capstans abuts the second capstan. The oscillating mechanism reciprocates the switching mechanism by oscillating the oscillating mechanism at
30 the end of the magnetic tape by the cam gear. The gear of the drive mechanism is shifted from one reel-base gear of the pair of reel-base gears to another reel-base gear at the end of the magnetic tape in accordance with a switching operation (achieved by the switching mechanism) of the running direction of the
35 magnetic tape.

Figure 4