

The invention relates to a magnetic recorder for storing signals on a tape-shaped record carrier supported in a cassette, said tape-shaped record carrier being on the start-up of the recorder extractable and layable around a rotating head drum by a device and on shut-down returnable into the cassette by the device, and with a unit for counting and indicating the transported length of the tape-shaped record carrier and a storage device for storing a current value determined by the counter and a comparison device for comparing a current counter reading with the stored counter reading.

In EP-A1-0 002 946 a magnetic recorder is described which comprises a device for counting and indicating the transported length of a tape-shaped record carrier. This recorder in addition also possesses a storage device which on the withdrawal of the record carrier takes over the current counter reading of the counter. On the insertion of the record carrier a comparison device is activated, which compares the current value determined by the counter with the previously stored value, and a transport device for the record carrier is put into operation until such time as the current value of the counter coincides with the stored value.

The object of the above-mentioned application is to store the played end position of an individual cassette in order, in the case of subsequent recordings, to connect further recordings to this end position. To do this, however, it is necessary that either such a store is provided in the recorder for each cassette or that the storage device is connected inseparably to each cassette so that the stored values are assigned in each case to a specific cassette.

Recorders possess a head drum around which the tape is wound on the start-up of the apparatus. In addition a threading device driven by a motor serves for the threading and unthreading of the record carrier.

During the threading of the record carrier, i.e. if the recorder is switched on for play-back or recording, the threading device draws the record carrier out of the cassette and winds it round the head drum. Since the wind motor is already connected to the take-up disc, but is not yet energized, during this process, the basic friction of this disc is greater than that of the take-off disc, so that the record carrier is withdrawn by the latter.

On the actuation of the stop button the unthreading process is initiated after disconnection of the tape feed. A mechanism draws the record carrier out of the sphere of influence of the head drum and returns it into the cassette. In so doing the unwind side of the cassette is driven in such a way that the tape is wound onto the latter. This takes place under a certain tape tension so that the already recorded or played-back side of the record carrier is withdrawn from the take-up side. This comes to a not inconsiderable amount. On switching-on of the recorder in the operating mode play-back the effect of this is not such a nuisance as in the recording operating mode. In play-back operating mode only one piece is repeated and the

overlapping does not cause a nuisance. In recording operating mode, on the other hand, a small section is overwritten by the new recording. In order to prevent this, mechanical blocking of the take-up disc is known. This requires some mechanical effort, however, e.g. in the form of an auxiliary lever which is controlled from the loading mechanism.

The object of the invention is to prevent, without major additional mechanical effort, the occurrence of overlapping between two threading processes. This object is achieved by the invention given in the claim. It possesses the advantage that no additional effort is incurred if the recorder is already fitted with an electronic tape counter.

The invention will be explained below by means of the drawing.

On a winding disc, usually the one assigned to the take-up side, is located a pulse transmitter 1 in the form of a toothed disc or else a sheet which is alternately transparent and non-transparent at the edge. This transmitter 1 works with an optical scanner 2 which generates the pulses which are counted in a counter 3. One rotation of the winding disc therefore corresponds to a particular number of pulses. The various commands for controlling the recorder are produced by a control keyboard 4. The commands pass to a control logic 5 which e.g. at the start switches on the wind motor 6 which, depending on the command, lays the record carrier coming out of the cassette around the head drum or feeds it back from the head drum into the cassette. The control logic 5 sets e.g. the counter 3 to a particular initial value and pre-determines by means of the direction logic 7 the counting direction of the counter 3. The invention relates only to the unthreading process if the recorder is switched to stop function and the cassette is prepared for withdrawal. By the command "unthread", i.e. if this process is starting, a short pulse generated in a stage 8 is transmitted to a switching stage 9 which switches the data shown at that moment on the counter 3 to a store 10 which takes over the current counter reading. The unthreading process takes place from then on. During this process the counter 3 is switched by the direction logic 7 to backwards counting, so that the counter 3 is re-set by the amount which corresponds to the reverse rotation of the take-up disc. At the end of the unthreading process a contact 11 is closed, which activates in coincidence 14 with the unthreading signal a comparison stage 12. At this moment the previously stored data are compared with the current counter reading. The comparison stage 12 supplies the motor for the tape feed 13 with a signal until such time as the current counter reading agrees with the reading stored. This is the value which the counter 3 showed before the record carrier was unthreaded.

Claim

Magnetic recorder for storing signals on a tape-shaped record carrier supported in a cassette, said tape-shaped record carrier being on the start-up of the recorder extractable and layable around a rotating head drum by a device and on shut-down returnable into the cassette by the device, and with a unit (3) associated with the take-up side for counting and indicating the transported length of the tape-shaped record carrier and a storage device (10) for storing the current counter reading determined by the unit (3) on initiation of the return of the record carrier into the cassette and with a comparison device (12) for comparing a current counter reading with the stored counter reading, where on agreement of the comparison a stop signal for the wind motor (13) is obtained, characterized in that on completion of the return of the record carrier the comparison device (12) is activated, which starts up the wind motor (13) coupled to the take-up disc until such time as the current counter reading of the counter (3) agrees with the stored value.