

The REVOX 77A records in accordance with the NAB standards. Recordings made on the REVOX 77A should therefore always be played back in the NAB position.

Recordings made on older REVOX machines or CCIR recorded tapes should be played back in the IEC position. The above mentioned equalization (pre-emphasis of the high frequencies) must be borne in mind when taking frequency response measurements via tape. If a frequency response measurement is done at full modulation level, the high frequencies will be overloaded, thereby giving erroneous results.

Frequency response measurements should always be carried out at a level of -20 db (input voltage 1 / 10 of that required for 100 % modulation).

4. TRACK POSITIONS

In order to make the best possible use of the storage capacity of a magnetic tape, its width is divided up into two or four tracks. This is known as half or quarter track recording. Halving track width will give double the recording time for the same length of tape.

The division into several tracks has no influence on the frequency response. The dynamic range, however, i.e. the region between the maximum recording level and the tape background noise is reduced. Quarter track recording is also more critical regarding the cleanliness of the heads and the tape.

For mono recording two independent tracks are therefore available with a half track machine, and four with a quarter track machine.

Stereo recording requires a track each for the left and right hand channels. Two tracks are therefore used simultaneously. With half track stereo recording the tape is therefore fully recorded in one go. In the case of quarter track machines only two of the four tracks are recorded when the tape is run through for first time.

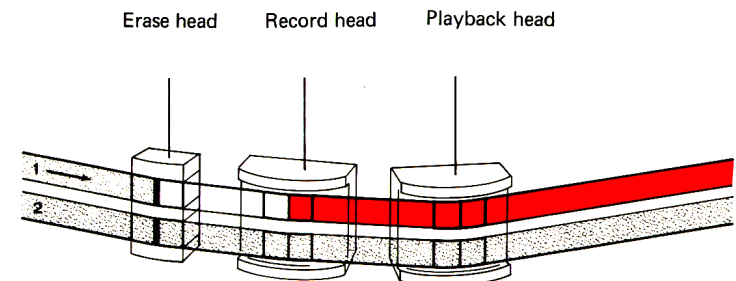
The following illustration should clarify the processes on the record head.

4.1. MONO HALF TRACK

In order to ensure the interchangeability of tapes, the track positions are standardised. In half track mono recording, the upper half is called track 1 and the lower half, track 2.

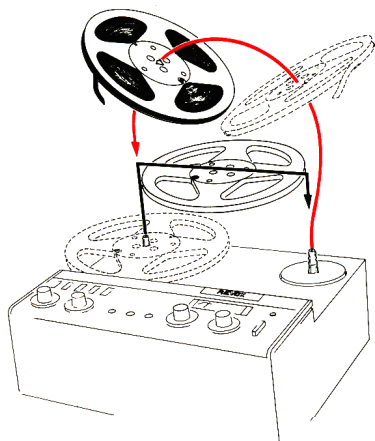
In accordance with international standards, the upper track, i.e. track 1 is recorded first. (Pure mono machines are equipped with a record head for the upper half of the tape only).

It is therefore important that you should understand the following basic principles :



A possible existing recording on track 1 is automatically erased in the record position as it passes the erase head.

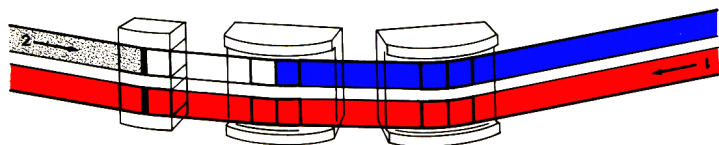
The now blank tape moves past the record head and is modulated again. The new recording moves further along past the playback head where the new recording can already be monitored via the playback amplifier. (Monitoring after tape).



This direct monitoring of a recording is only possible with the professional arrangement with three heads. This complete separation of the record and playback functions in the heads and amplifiers opens many interesting possibilities as well as enabling the monitoring via tape.

The tape which has been fully recorded on track 1 is now situated on the right hand spool. In accordance with international standards, the full reel of tape is now turned over, and placed back on the left hand spooling plate.

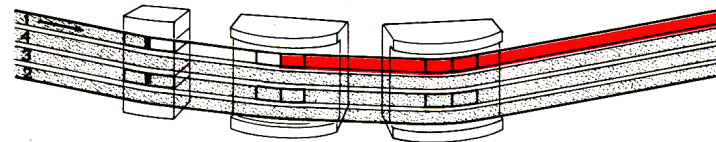
The recorded track 1 is now below. Without switching the record channels the second track can now be recorded with the upper half of the head.



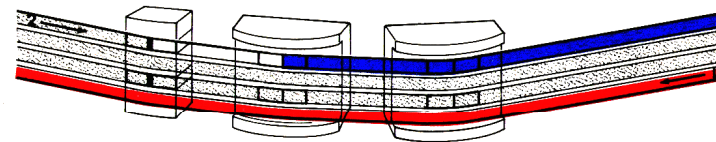
When the tape has been run through a second time, the tape is now fully recorded in the case of half track recording.

4.2. MONO QUARTER TRACK

In the case of mono quarter track recording, track 1 is also recorded with the upper portion of the head when the tape is being run through for the first time.



The tape is then turned over as before and in the second run-through the second track is recorded (without switching the record channel).



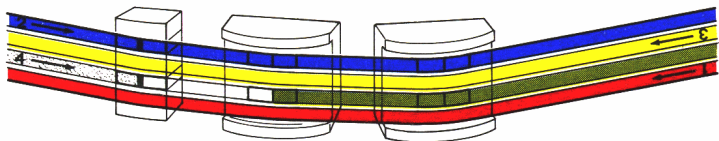
As only two of the four tracks have been recorded until now, the tape is turned over again.

At the same time the record channel is switched over. For this purpose the record pre-selector key CHANNEL II should be depressed. (The left hand key CHANNEL I should be released by pressing it again). The recording will now take place via the record channel II and the lower portion of the head.



Three of the four tracks have now been recorded. When the tape has gone through for the third time the tape is once more turned over.

The fourth track is recorded with the same setting of the record pre-selector key (CHANNEL II).



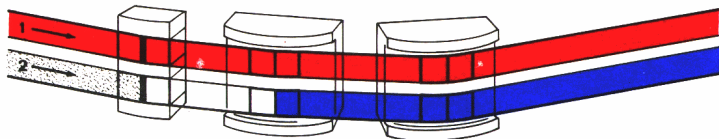
The tape is now fully recorded in the case of quarter track recording. If the tape is turned over again the beginning of the tape (track 1) is ready for playback. The upper portion of the playback head scans tracks 1 and 2, the lower portion the track 3 and 4. The corresponding positions of the playback function switch are :

CH I tracks 1 and 2
CH II tracks 3 and 4

For the reproduction of quarter track recordings the playback function switch should therefore be set to CHANNEL II for reproducing tracks 3 and 4, the same as for recording.

Recording contrary to international standards

Contrary to international standards it is possible in the case of mono recording to rewind the tape instead of turning it over after recording track 1. When the tape is rewound to its beginning, the machine is switched over to CHANNEL II. Track 2 is now recorded in the same direction as track 1.



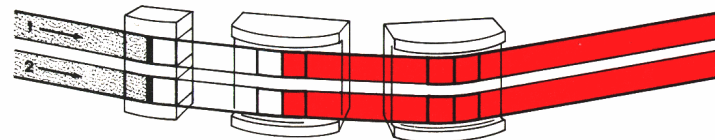
The same is possible in the case of quarter track recordings. The turning of the tape and switching of track is then done after the second track has been recorded.

During playback track 1 or track 2 (track 3 or track 4) can be selected by simply switching channels (CH I / CH II).

4.3. STEREO HALF TRACK

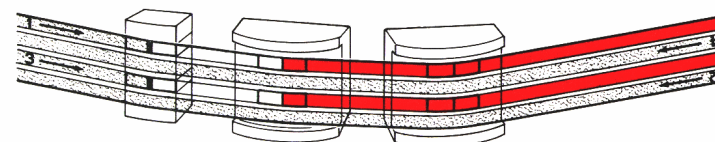
When recording stereophonic signals two tracks are always used simultaneously. The left-hand channel is recorded on track 1 (upper) and the right hand channel on track 2 (lower).

In the case of half track recording, the entire tape is therefore recorded in one go.



4.4. STEREO QUARTER TRACK

In the case of stereo quarter track recordings, the tracks 1 and 3 are recorded during the first go and the tracks 2 and 4 after turning the tape over.



When filing tapes (see also section 16) it is advisable to make a note of the speed and track position of a recording as well as the title and duration. This is particularly advisable for mono quarter track.