

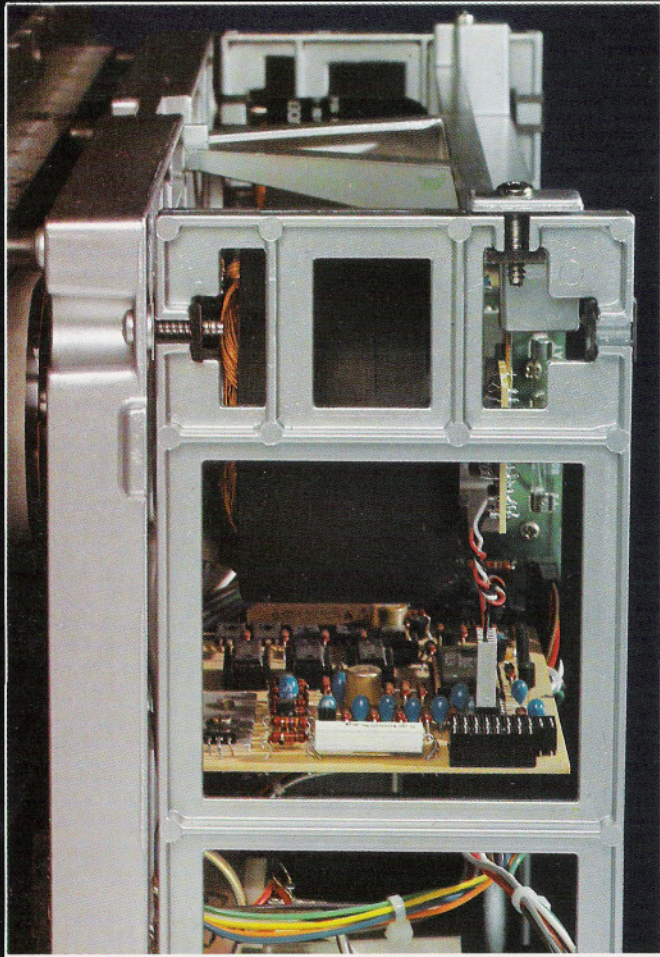
# REVOX B77

## THE TAPE RECORDER





A well designed tape transport mechanism will not distort mechanically. It is insensitive to shocks and vibrations and will retain these qualities over a wide range of temperatures. Therefore, REVOX B77 tape recorders use diecast parts for the motor chassis, the side bearers, the crossmember and for the head block and the pinch roller arm. This ensures exceptional stability for the precision tape guiding system and the sound heads, as well as for the motors and the brake assembly. The motors are sturdy AC asynchronous types – unbeatable in simplicity and reliability – thus especially suited for heavy duty use.

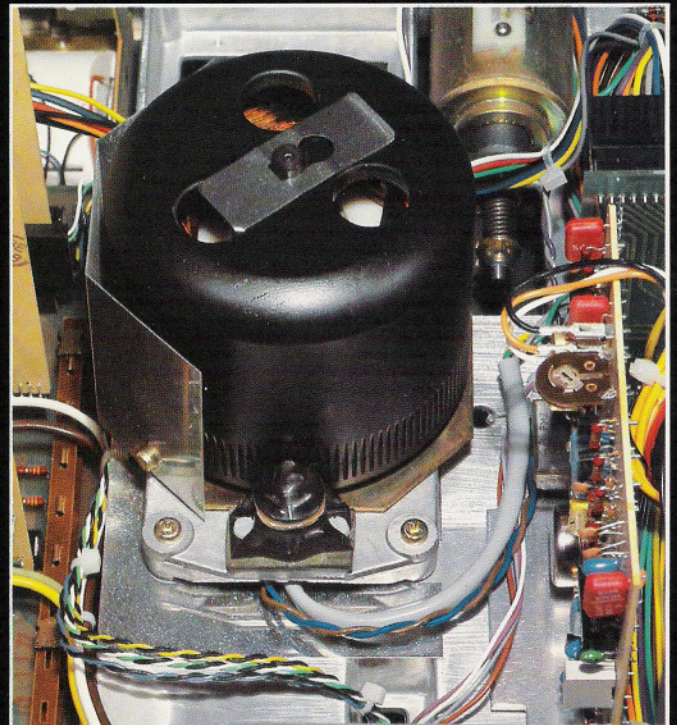


Precision cannot be realized without ruggedness. This is the reason why all important parts of the B77 transport mechanism are made from solid diecastings.

Magnetic tape recorders are an outstanding example of the perfect combination of precision mechanics and top performing electronics. Even the best electronic circuitry would soon become worthless if the original precision in tape guiding is lost as a result of insufficient long term stability. One of the basic requirements, therefore, is to ensure stable performance for years with a rigid mechanical design which disregards the possible advantages that may lie in such tempting advertising claims as "feather weight" and "slim line"!

In 1967 STUDER REVOX had already ushered in the age of electronic capstan speed control for domestic tape recorders. Ever since then many have tried to copy it, yet they have never been able to match its simplicity and effectiveness.

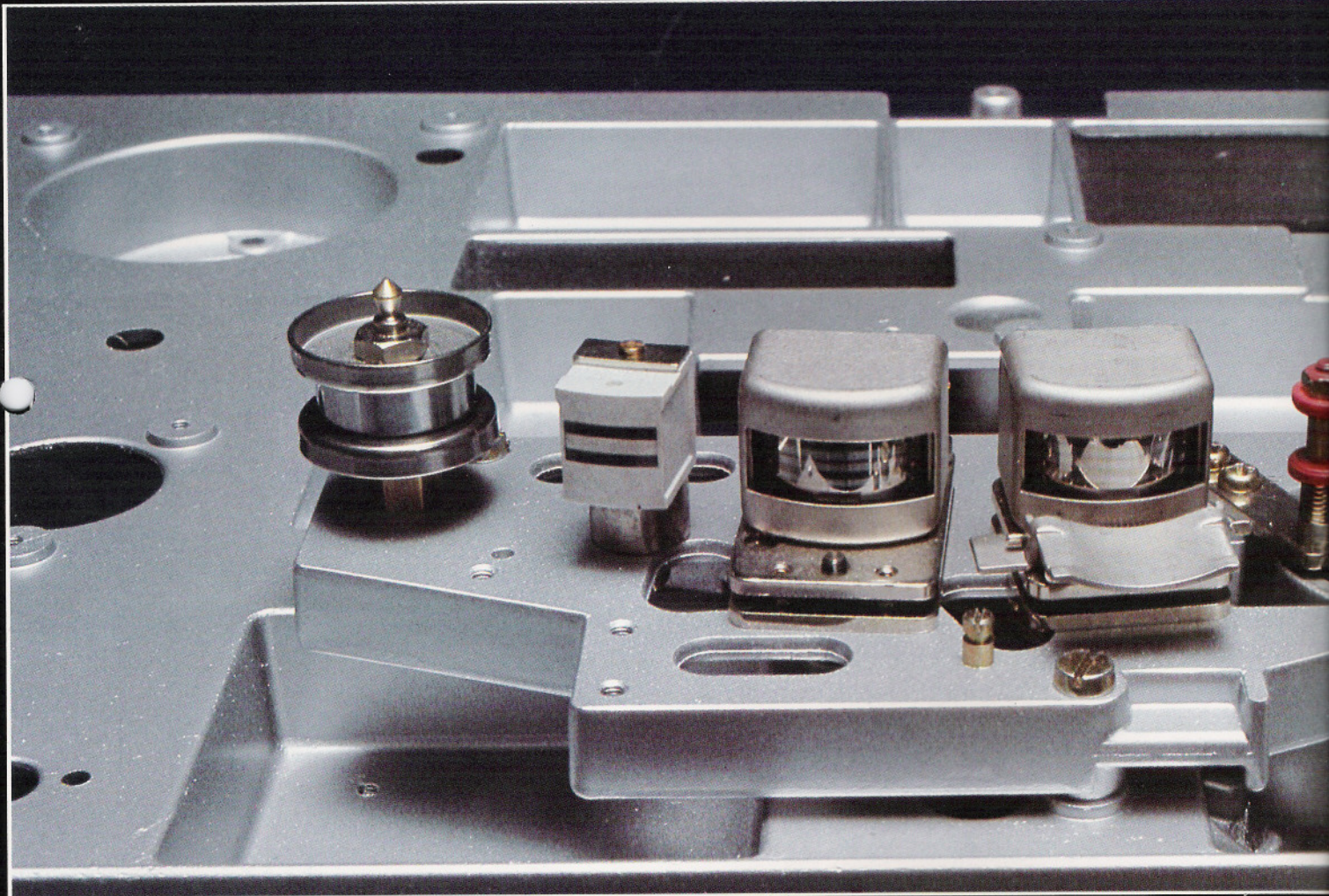
The principle of electronically regulating a sturdy asynchronous motor by means of a separate precision reference has stood the test so well that it has been adopted for the STUDER professional tape recorders years ago. The capstan motor and its precision reference combined with the inductive speed sensor and its control circuits form a regulating loop which is highly insensitive to variations in power line voltage and frequency or changes in load. This system, which has proven its reliability in more than half a million tape drives, combined with ideal tape guiding results in outstanding motion stability (freedom from wow and flutter) which remains unchanged for years. The remarkable mechanical and electronic stability of the complete tape transport mechanism makes it well suited for mobile operation by powering it from car batteries in conjunction with an inverter.



Direct drive capstan motor with tachogenerator and servo electronics to ensure outstanding speed stability independent of variations in load or changes in the electrical supply voltage or frequency.

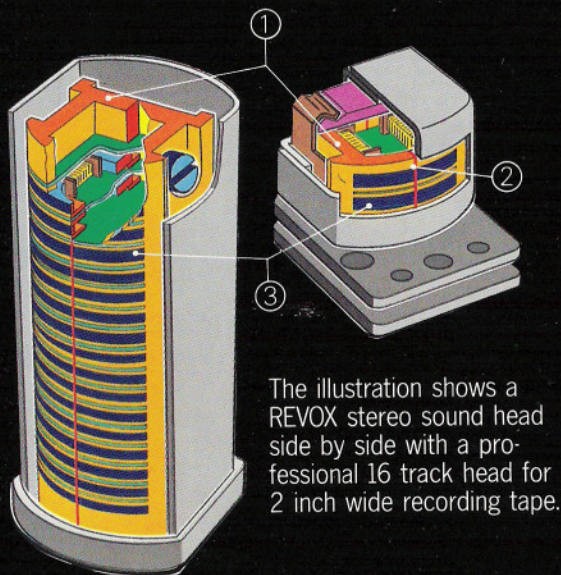
For pitch matching or to achieve special effects, motor speed can also be varied continuously over a wide range with the help of an external speed control.





No ferrite heads; Revodur sound heads instead – built to professional standards

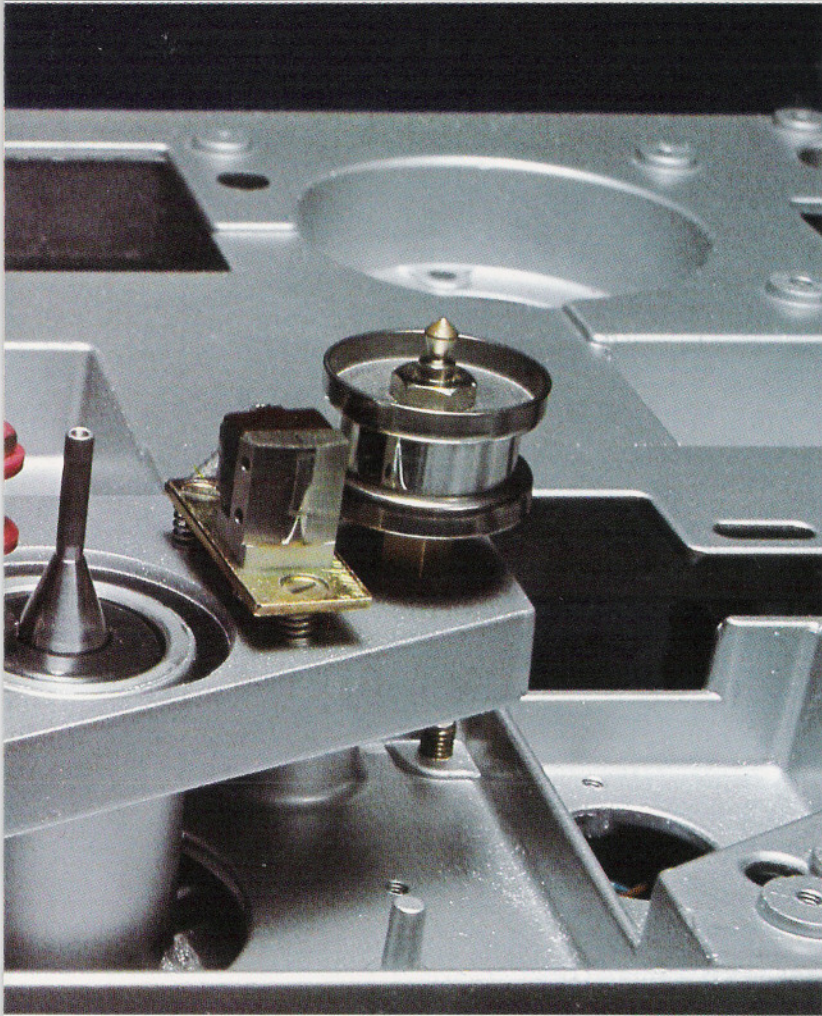
REVOX sound heads are of the all-metal type. Their construction is identical with that of the well proven heads as used in STUDER professional tape recorders world-wide.



The illustration shows a REVOX stereo sound head side by side with a professional 16 track head for 2 inch wide recording tape.

1. The milled core shell, machined to extreme dimensional accuracy, insures best possible uniformity for each track. Optimal workability of the gap areas guarantees a perfectly in-line gap.
  2. The nonmagnetic gap of a playback head is only 0.08 mil (2  $\mu$ m) wide. By comparison, the human hair is 1.5 ... 2.5 mil (40 ... 60  $\mu$ m) "thick".
  3. Magnetic core laminations made from high quality magnetic material of high permeability for low conversion losses (minimal noise voltage and low distortion).
    - Long pole pieces for ruler-flat frequency response down to the lowest frequencies.
    - Head shell and magnetic core have closely matched wear characteristics, thus insuring long head-life.
- STUDER REVOX heads are made by adhering to the company's own manufacturing process.



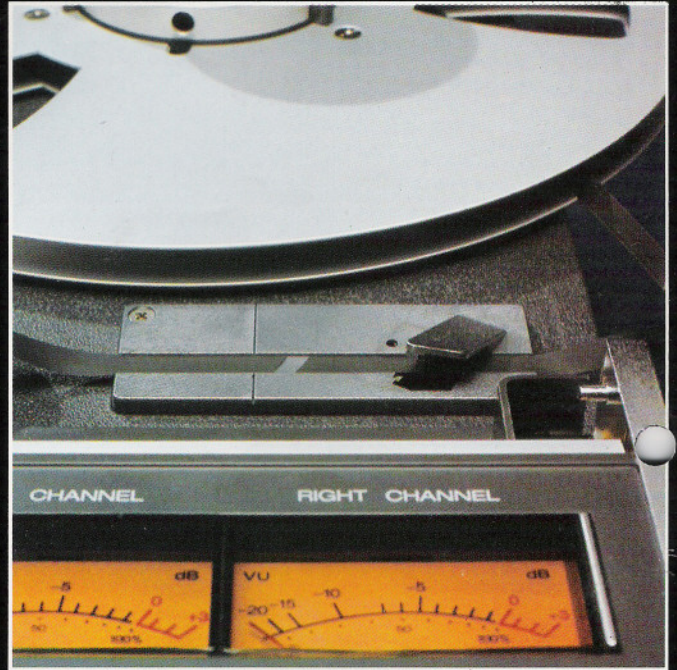


The Revodur all metal heads for recording and playback, the erase head, the infrared tape sensor and the tape guides; all these components are mounted on a rigid diecast frame. The fourth magnetic head is intended to record slide synchronizing pulses (DIA/DHA/FH).

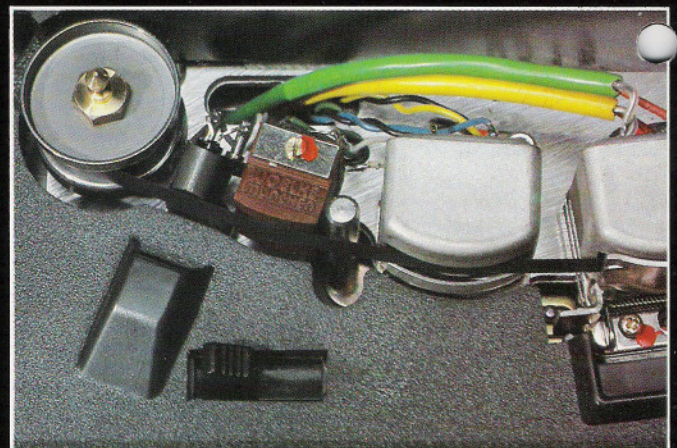
As far as development of magnetic sound heads is concerned, STUDER REVOX is looking back on an experience which equals that of building tape recorders.

Our experts manufacture all metal heads for REVOX tape recorders and for professional sound recorders.

The special alloy Revodur ensures excellent magnetic properties and outstanding wear characteristics. The shape of the head's face is designed to ensure a "ruler flat" response down to the lowest audio frequencies.



The integrated tape cutter makes editing a simple task. An ingeniously conceived edit mode facilitates motor assisted tape shuttling and final manual locating of the exact edit point.



The practical edit facility is standard equipment on each B77 recorder.

By operating the sliding button, the tape is brought into contact with the heads, the playback amplifiers become activated and the fast wind buttons respond only as long as they are held depressed. This facilitates motor assisted searching for the edit point while final tape positioning is then performed manually.



# STUDER REVOX – what's behind these names?

STUDER and REVOX are registered trade marks of the WILLI STUDER AG with headquarters in Regensdorf at the outskirts of Zurich/Switzerland. The number of people employed in the various factories in Switzerland and the nearby Black Forest in Germany totals 1500.



Situated at headquarters in Regensdorf are the research and development departments for all products manufactured by STUDER REVOX. For the audio markets around the globe, the company develops and manufactures high quality equipment which belongs to the following three major categories:

- Professional equipment and systems for broadcasting, television, motion picture- and disc recording studios.
- HiFi-system components for the discriminating audiophile.
- Language laboratory equipment and audiovisual teaching systems for educational purposes and other communication requirements.

STUDER REVOX, headquarters at Regensdorf-Zurich.



The major products resulting from our research and production activities are:

- Professional magnetic tape recorders with up to 24 tracks recording capacity.
- Complete remote control and synchronizing facilities for multitrack recorders.
- Audio mixing consoles for mobile and stationary use containing up to 32 channels.
- Professional FM-tuners and amplifiers.
- Complete studio installations and remote pick-up vans.
- HiFi-tape recorders, amplifiers, FM-tuners, FM-receiver, turntables and loudspeaker systems.
- Language laboratory equipment.
- Professional cassette decks.





# REVOX®

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