

Tonette reel-to-reel tape recorder

AUTHOR

TIME AND PLACE OF CREATION

Time:

1964

Place:

, Poland



TECHNICAL DATA

Dimensions:

height: 170 mm, width: 360 mm, depth: 330 mm

OTHER

MIM 210/V/25

KEYWORDS

czas wolny, dźwięk, eksport, elektronika, fonografia, komunikacja, kopiowanie, licznik, nagłośnienie, nośnik, odtwarzanie dźwięku, prąd, PRL, sprzęt RTV, urządzenia mobilne, wzornictwo polskie, zapis dźwięku

DESCRIPTION

The Tonette portable mono tape recorder was manufactured by the Zakłady Radiowe im. Marcina Kasprzaka in Warsaw from the early 1970s. The tape recorder had an innovative design that broke the ties with the aesthetics of industrial design of the 1950s. The tape recorder's electrical system uses electron ray vacuum tubes and diodes on printed circuit boards. The mains-powered device uses alternating current. A single-phase induction electrical motor, the SAZ-1,7 produced by the Tonsil plant in Września, is used to drive the tape mechanism. A motor of this type uses electrical energy, converting it to mechanical energy via the asynchronous sliding of a rotating rotor set in motion by the magnetic field generated in the copper winding when it is supplied with electrical power. The motor model

used in the device was enclosed in a magnetic shield so that its operation did not interfere with the operation of the magnetic playback and recording heads. The recording mechanism comprises two half-track heads – one erase head and one recording/playback head – with two tape speeds (4.75 and 9.50 cm/s). The lack of the 19 cm/s speed was a significant shortcoming, but it resulted from the limited reel diameter (up to 15 cm) that the Tonette could handle. Lowering the tape speed was intended to prolong the duration of the recordings. The recorded audio could be played back on the oval Tonsil GD 14,5-9,5/1,5 speaker. The innovation in the tape recorder's design was the use of a frame made of a light pressure casting of an aluminium alloy, to which all mechanical and electronic components, as well as the modular housing, were mounted. Four components of the housing were made of high-impact polystyrene. A brace is mounted on the frame and glued on four sides, it has a flat bottom, and on the top, there is an internal panel with a cover for the heads that encloses the metal skeleton inside, with the outer cover installed above it. This design avoids the transfer of mechanical loads on the housing while facilitating disassembly and repair. The device operation is complemented by five sockets for connecting a radio receiver, gramophone, earphones, a ground, and a power supply. To control the sound recording process the user operates the button switches on the front part of the top panel for operation type and sound source, a rotary switch for adjustment of tape speed, and two rotary potentiometers for turning the device on and adjusting volume, and for setting tone or turning off the built-in speaker. The "magic eye", i.e., the electron-beam tube tuning indicator, signals that the optimum parameters have been set. Author: Filip Wróblewski