


BALLFINGER

Technical Data Tape Recorder M 063 H3
Updated december 2018

Tape transport	<p>Processor-controlled 3-motor drive with 1/4" tape width</p> <p>Double belt drive spooling motors with PU round belts and ironless swiss made precision servo motors</p> <p>Electric brakes controlled by tape tension sensors</p> <p>Belt drive capstan motor with brushless DC motor with block commutation</p> <p>3 stepper motors for mechanical brake and tape head assembly</p> <p>Pinch roller driven by servomotor</p>
Operating position	<p>All angles between horizontal and vertical</p>
Tape path	<p>Ball bearings to the left and right of the tape head assembly, one tape stabilizing roller left and right each, damping element with deflection pulley left and right outside</p>
Tape speed	<p>2 speeds : 9,5 cm/s + 19 cm/s or 19 cm/s + 38 cm/s Tolerance of the set speed: < 0,04 %</p>
Wow & Flutter	<p>< 0,04 % at high speed < 0,06 % at low speed</p>
Tape slip	<p>< 0,08 % at every reel size</p>
Reel size	<p>Up to a maximum of 27 cm reels, fastening via screw clamps</p>
Spooling time	<p>2 speeds adjustable: 5 m/s, 10 m/s</p>
Tape transport electronic	<p>Processor-controlled, 2 sensors for tape tension, speed sensor on left deflection roller</p> <p>Real-time counter via high-resolution incremental encoder in time format hrs / min / sec, 100 / sec</p> <p>Autostop can be switched off for play and winding</p>
Audio electronic	<p>One main board each for recording and playback, all amplifiers as well as the erase oscillator on separate printed circuit boards</p> <p>Power supply for playback and recording amplifiers with an accuracy of < 0.1% and an interference voltage < 12 μV (at full load)</p> <p>Separate power supply for erase oscillator</p> <p>High end headphone amplifier separately adjustable for headphones with an impedance of 16 – 2000 ohms optional</p>
Tape heads	<p>3 tape heads: Erase head, recording head and playback head with 2 mm track width</p>
Equalizing	<p>9,5 cm/s: NAB 90 -3180 μs, CCIR 90-3180 μs</p> <p>19 cm/s: NAB 50 -3180 μs, CCIR 70 μs</p> <p>38 cm/s: NAB 50 -3180 μs, CCIR 35 μs</p>

Frequency response (Measured with RTM SM 900)	9,5 cm/s: 30 Hz - 16000 Hz +/- 2 dB 19 cm/s: 30 Hz - 20000 Hz +/- 2 dB 38 cm/s: 30 Hz - 22000 Hz +/- 2 dB
VU-Meter	35 mm x 60 mm according to ASA standard computer controlled with digital peak value led at + 3 dB
Total harmonic distortion (measured with RTM SM 900)	1 kHz at tape flux 320 nWb/m by 38 cm/s < 0,7 %
Signal to Noise Ratio (measured with RTM SM 900)	> 68 dB at tape flux 320 nWb / m at 38 cm / s over tape
Crosstalk	> 62 dB at 1000 Hz with 2 mm track width
Erase ratio	>71 dB at 1000 Hz, 38 cm/s >75 dB at 1000 Hz, 19,5 cm/s
Inputs	Unbalanced via RCA with one large input sensitivity control per channel
Outputs	Unbalanced via RCA, fixed at 1.55V at tape level 320 nWb / m
Power supply	Connection via IEC connector 3-pole Protection class 1 230 V / 50 Hz Europe 120 V / 60 Hz USA 76 W maximum power consumption
Dimensions	480 mm x 500 mm x 250 mm (W x H x D) Wooden side panels removable for installation in 19" rack
Weight (without side panels)	26 KG