


BALLFINGER

Technical Data Tape Recorder M 063 H5
Updated december 2018

Tape transport	<p>Processor-controlled and directly driven 3-motor drive with 1/4" tape width</p> <p>Reel motors: 2 brushless DC pancake motors with rotor angle controlled sinusoidal commutation</p> <p>Electric brakes controlled by tape tension control Capstan motor: 1 brushless DC pancake motor with rotor angle controlled sinusoidal commutation</p> <p>3 stepper motors for mechanical brake and tape head assembly</p> <p>Pinch roller driven by servo drive</p> <p>Hour meter</p>
Operating position	All angles between horizontal and vertical
Tape path	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
Tape speed	9,5 cm/s and 19 cm/s and 38 cm/s Tolerance of the set speed: < 0,04 % Variable tape speed: +/- 10 % at all speeds Variable tape speed at editing: - 60 cm/s to + 60 cm/s
Wow & Flutter	< 0,04 % at 38 cm/s < 0,06 % at 19 cm/s < 0,09 % at 9,5 cm/s
Tape slip	< 0,08 % at every reel size
Reel size	Up to a maximum of 30 cm reels, fastening via screw clamps
Spooling time	2 speeds adjustable: 5 m/s, 10 m/s Low speed for archiving with increased tension with 2,5 m/s
Tape transport electronic	<p>Processor-controlled, 2 sensors for tape tension, speed sensor on left deflection roller</p> <p>Remote control with infrared remote control optional (in preparation) Real-time counter via high-resolution incremental encoder in time format hrs / min / sec, 100 / sec, Autolocator function</p> <p>Autostop can be switched off for play and winding, automatic repeat function programmable</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>Separate 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>Equalization Playback amplifier switchable CCIR / NAB</p> <p>High end headphone amplifier separately adjustable for headphones with an impedance of 16 - 2000 ohms</p>

Tape heads	3 tape heads: erase head, recording head and playback head in 2-channel with 2 mm track width or as stereo with 2.75 mm track width with full track erase head (in preparation)
Equalizing	9,5 cm/s: NAB 90 -3180 μ s, CCIR 90-3180 μ s 19 cm/s: NAB 50 -3180 μ s, CCIR 70 μ s 38 cm/s: NAB 50 -3180 μ s, CCIR 35 μ s
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	Inputs electronically unbalanced via XLR or unbalanced via RCA, calibrated switchable to uncalibrated +6 dB via level control One large input sensitivity control per channel + one master with 2-channel tandem potentiometer with +/- 6dB effectivity
Outputs	Outputs electronically balanced via XLR with spindle trimmer -10 dB to + 25 dB adjustable + unbalanced via RCA, calibrated switchable to uncalibrated +12 dB via level controller
Power supply	Connection via IEC connector 3-pole Protection class 1 230 V / 50 Hz Europe 120 V / 60 Hz USA 98 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)	27,5 KG