

**Technical Data Tape Recorder M 063 HX**  
Updated december 2018

<b>Tape transport</b>	<p>Processor-controlled 3-motor drive with 1/4 "or 1/2" tape width (1/2" in preparation)</p> <p>Standard spooling motors: Double belt drive with PU round belts and ironless swiss made precision servo motors. Electric brakes controlled by tape tension sensors</p> <p>Winding motors optional: 2 brushless DC pancake motors with rotor-angle controlled sinusoidal commutation. Electric brakes controlled by tape tension sensors</p> <p>Capstan motor standard: Belt drive with brushless DC motor with block commutation</p> <p>Capstan motor optional: direct drive with brushless DC pancake motor with rotor-angle controlled sinusoidal commutation</p> <p>3 stepper motors for mechanical brake and head assembly</p> <p>Pinch roller driven by servomotor</p> <p>Hour meter</p>
<b>Operating position</b>	<p>All angles between horizontal and vertical</p>
<b>Tape path</b>	<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>
<b>Tape speed</b>	<p>2-speed standard: 4.75 cm / s + 9.5 cm / s, or 9.5 cm / s + 19 cm / s or 19 cm / s + 38 cm / s</p> <p>Optional direct drive and 3 speeds: 9.5 cm / s + 19 cm / s + 38 cm / s or 19 cm / s + 38 cm / s + 76 cm / s</p> <p>Tolerance of target speed: &lt;0.04%</p>
<b>Wow &amp; Flutter</b>	<p>From 0,025% to 0,09 % depend of speed and capstan motor configuration</p>
<b>Tape slip</b>	<p>&lt; 0,08 % at every reel size</p>
<b>Reel size</b>	<p>Up to a maximum of 27 cm reels standard reel motors or 30 cm with optional direct drive reel motors, fastening via screw clamps</p>
<b>Spooling time</b>	<p>2 speeds adjustable: 5 m/s, 10 m/s Low speed for archiving with increased tension with 2,5 m/s</p> <p>Optional: Low speed for archive rewind with increased tension at 2.5 m / s</p>
<b>Tape transport electronic</b>	<p>Processor-controlled, high-resolution sensors for tape tension, deflection roller with high-resolution incremental encoder for speed and totalizer</p> <p>Optional real-time counter in time format Std / Min / Sec, 100 / sec, with autolocator function</p>

<b>Audio electronic</b>	<p>Standard: None, playback head and signal output through-wired with short-circuiting via relay contacts, processor-controlled</p> <p>Optional: One main board each for recording and playback, all amplifiers and erase oscillator on separate plug-in cards</p> <p>Separate power supply for playback and recording amplifiers with an accuracy of &lt;0.1% and an interference voltage &lt;12 <math>\mu</math>V (at full load)</p> <p>Separate power supply for the canceling oscillatorEqualization</p> <p>Playback amplifier switchable CCIR / NAB optional</p> <p>High End headphone amplifier separately adjustable for headphones with an impedance of 16 - 2000 Ohm optional</p>
<b>Tape heads</b>	<p>Standard: 1/4 "with 2.00 mm track width</p> <p>Option 1: 1/4 "with 2.75mm track width (in preparation)</p> <p>Option 2: 1/2 "with 5.35mm track width (playback only, in preparation)</p>
<b>Equalizing</b>	<p>9,5 cm/s: NAB 90 -3180 <math>\mu</math>s, CCIR 90-3180 <math>\mu</math>s</p> <p>19 cm/s: NAB 50 -3180 <math>\mu</math>s, CCIR 70 <math>\mu</math>s</p> <p>38 cm/s: NAB 50 -3180 <math>\mu</math>s, CCIR 35 <math>\mu</math>s</p>
<b>Frequency response</b> (Measured with RTM SM 900 and built-in playback amplifier)	<p>9,5 cm/s: 30 Hz - 16000 Hz +/- 2 dB</p> <p>19 cm/s: 30 Hz - 20000 Hz +/- 2 dB</p> <p>38 cm/s: 30 Hz - 22000 Hz +/- 2 dB</p>
<b>VU-Meter</b>	None, optional 35 mm x 60 mm according to ASA standard computer controlled with digital peak value led at + 3 dB
<b>Total harmonic distortion</b> (measured with RTM SM 900 with built-in playback amplifier)	1 kHz at tape flux 320 nWb/m by 38 cm/s < 0,7 % with built-in playback amplifier
<b>Signal to Noise Ratio</b> (measured with RTM SM 900 with built-in playback amplifier)	> 68 dB at tape flux 320 nWb / m at 38 cm / s over tape with built-in playback amplifier
<b>Crosstalk</b>	> 62 dB at 1000 Hz with 2 mm track with built-in playback amplifier
<b>Erase ratio</b> (With record function)	>71 dB at 1000 Hz, 38 cm/s  >75 dB at 1000 Hz, 19,5 cm/s
<b>Inputs</b> (With record function)	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
<b>Outputs</b>	Balanced playback head direct to XLR or 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
<b>Power supply</b>	Connection via IEC connector 3-pole Protection class 1 230 V / 50 Hz Europe

120 V / 60 Hz USA  
70 W - 98 W maximum power consumption depend of configuration

**Dimensions**

480 mm x 500 mm x 250 mm (W x H x D)

Ready for installation in 19 " rack

**Weight (without side panels)**

Between 18 kg and 27,5 kg (depend of configuration)