MX-5050 BIII

Analog Two-Track Recorder

The MX5050 BIII has long been the standard in 1/4" 2 track analog recorders. It features an optimized three-head design and transformer-less balanced inputs and outputs to provide superior frequency response, low distortion and high signal-to-noise performance under the most demanding conditions. Record setup adjustments can be made from the front panel, and a convenient built-in oscillator provides test tones for calibration/maintenance.

The direct drive capstan motor is servo-controlled, and an integral microprocessor governs tape handling, including dynamic braking, motion sensing and transport logic. A built-in mini-autolocator provides three one-touch cue-point memories, search zero, and a repeat function. The tape timer display shows tape time in Hrs/Min/Sec., as well as tape speed in inches per second and percentage of tape speed. Capstan speed can be varied by ±20% in 0.01% steps using the built-in "pitch" control. Time-code editing using a synchronizer is accomplished via the 37-pin Otari standard parallel interface.

The extremely rugged mechanical construction includes a 1/4" deckplate with cast aluminum side panels and steel support members. All circuit boards are designed to swing out or unplug for quick service access.

SYSTEM HIGHLIGHTS:

- Positive-action transport controls
- Balanced transformerless XLR I/Os
- DC capstan, Quartz PLL servo-controlled
- Built-in mini-autolocator
- Rehearse function
- Automatic monitor switching
- Built-in test oscillator and external oscillator input
- Variable pitch control (±20%)
- Front panel record setup adjustments
- 1/4" deck plate with cast aluminum side panels and steel support members

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MX-5050BIII SPECIFICATIONS:

TAPE TRANSPORT

Track Configuration	1/4" 2 Track
Motor	Capstan x 1 (DC brushless PLL servo motor) Reel x 2 (AC Induction Motor)
Reel Size	max. 10.5" NAB
Tape Speed	High Speed Pair: 15 ips/7.5 ips Low Speed Pair: 7.5 ips/3.75 ips
Tape Speed Accuracy	max. ±0.2 %
Wow And Flutter	Peak Weighted Per DIN 45507 15 ips: max. ±0.06 b% 7.5 ips: max. ±0.08 % 3.75 Ips: max. ±0.12 %
Start Time	Time required to accelerate to double the specified Wow and Flutter value.

Speed	Start Time
15 ips	max. 0.5 sec
7.5 ips	max. 0.4 sec
3.75 ips	max. 0.3 sec

Stop Time — Time to stop from Play mode

Speed	Stop Time
15 ips	max. 0.5 sec
7.5 ips	max. 0.3 sec
3.75 ips	max. 0.3 sec

Time to Stop from Fast Wind max. 3 sec.

Fast Wind Time — max. 110 sec for 2500 ft (50Hz)
max. 90 sec for 2500 ft (60 Hz)

ELECTRONICS

Input

Line	Mode: Transformerless Active Balanced Input Impedance: 100kohm, 20Hz–20kHz Nominal Level: +4dBu Max. Level: +30dBu Connectors: XLR Female type
Mic	Mode: Transformerless Active Balanced Input Impedance: 10kohm Min. Level: -70dBu/-50dBu/OFF switchable Mic. Impedance: Min. 150ohm

Output

Line	Mode: Transformerless Active Balanced Output Impedance: Max 5ohm (20Hz–20kHz) Load Impedance: MIn. 200ohm Nominal Level: +4dBu/-16dBu switchable Max Level: +26dBu for 200ohm Connectors: XLR Male type
Phone	Load Impedance: 8ohm 1/4" Standard Stereo Phone Jack
Note:	0dBu = 0.775V

Equalization	NAB/IEC Selectable
Standard Reference Flux	MX-5050 BIII-2, 185/250/320* nWb/m (*open circuit flux)

Frequency Response REC/REP Frequency Response

15 ips	30Hz - 20kHz ±2dB
7.5 ips	30Hz - 18kHz ±2dB
3.75 ips	20Hz - 10kHz ±2dB

REC/SEL-REP Frequency Response

15 ips	250Hz - 7.5kHz ±3dB
7.5 ips	250Hz - 5kHz ±3dB
3.75 ips	250Hz - 2.5kHz ±3dB

Signal to Noise Ratio

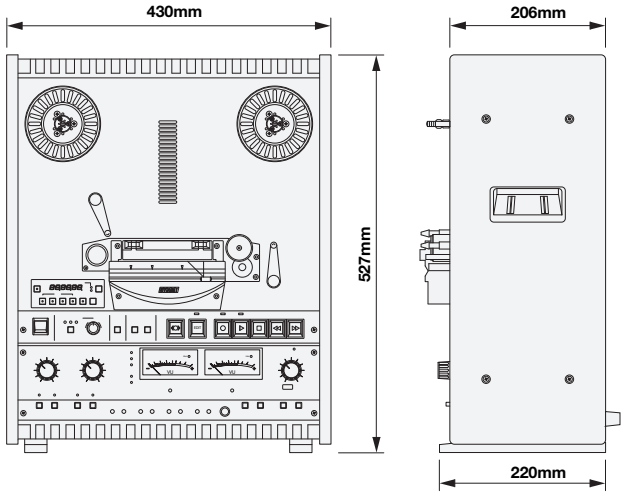
Filter Speed	EQ	Unwtd	Wtd
15ips	IEC	70dB	73dB
	NAB	69dB	72dB
7.5ips	IEC	67dB	70dB
	NAB	71dB	73dB
3.75ips	IEC	64dB	67dB
	NAB	64dB	67dB

Measured with respect to a recording level of 1,040 nWb/m at 15 and 7.5 ips, and 740 nWb/m at 3.75 ips, using AMPEX 456 or equivalent tape.
Unwtd: Using a 30Hz to 18kHz RC filter to eliminate noise outside the audio spectrum.
Wtd: Using a NAB or ANSI "A" weighting filter and a 1kHz reference.

Distortion	Total Harmonic Distortion max. 0.3% (15 ips 1kHz, 250 nWb/m, AMPEX 456)
Crosstalk	min. 55dB
Depth of Erasure	min. 75dB
Test Oscillator	Sine wave 1kHz/10kHz
Bias Frequency	133kHz
Erase Frequency	133kHz
Operating Environment	5–40°C (41–104°F) 20–80% RH
Storage Environment	-20–45°C (-4–113°F) 10–80% RH
Dimensions	MX-5050 BIII 527 x 430 x 275 mm (H x W x D)
Weight	MX-5050 BIII 28kg

OPTIONAL ACCESSORIES

Name	Part No.
Auto Locator (8-memory)	CB-119
Remote Controller (Transport)	CB-127
Input Transformer (2Ch unit)	ZA-53T-T
Output Transformer (2Ch unit)	ZA-53S-T
Pedestal	ZA-52L-22
Rack Mount Kit	RK-2B
2-Trk version with 1/4" Trk Playback	MX5050 BIII-P



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