

OTARI

MX-5050 COMPACT PROFESSIONAL RECORDER

ONE AND TWO CHANNEL VERSIONS

- Full capability professional machine.
- Exceptional signal-to-noise and crosstalk.
- Front panel edit and cue.
- Motion sensing control logic.
- Full-track also plays back half-track stereo.
- Selective reproduce for overdubbing.
- Bias adjustable for high energy tapes.
- Front accessible bias, EQ, operating level.
- Hysteresis synchronous or dc servo capstan.
- Built in test and cue oscillator.
- 600 ohm, +4 dBm output, XLR's.
- Remote control for all transport functions.



Since its introduction in late 1974, Otari's MX-5050 Compact Professional Recorder has proven its value where it counts—in day-to-day use in hundreds of broadcasting, recording, and educational applications. Customer acceptance and repeat orders tell this recorder's story better than we can: it is a full professional recorder in a compact package with the performance, features, and reliability you expect from the larger machines.

Basically, it has 10½ inch reels, three motors, four heads, and 15/7½ or 7½/3¾ ips tape speeds. It is available in one, two, four, and eight channel versions. (This sheet covers the one and two channel versions. Ask for Specification Sheet S-108 for the four channel, or S-110 for the eight channel.)

The full track version is designated MX-5050-FL and is intended primarily for broadcast use. It has 7½ and 3¾ ips tape speeds with three-full track heads plus an extra half-track reproduce head and reproduce amplifier to play back half-track stereo. The two channel version is called the MX-5050-2S (half-track stereo) or MX-5050-4S (quarter-track stereo). It has either 15/7½ or 7½/3¾ ips speeds, and also has four heads. The three regular heads are either half or quarter-track at your option. The extra head is for reproducing tapes in the opposite (quarter or half) track format.

Both MX-5050 versions share the bulleted features above, plus these: gentle positive tape handling, built-in precision aligned splicing block on head cover, separate line and microphone input level controls, capstan located on non-oxide side of tape, record lockout control, optional road case or rack mounting adaptor, variable or fixed output (at standard operating level—switchable between +4 or -10 dBm), optional low impedance microphone transformers, and balanced line input and output transformers.

SPECIFICATIONS

TRANSPORT

Tape Width and Channels: 1/4 inch (6.3 mm) wide.

One channel: full track width.

Two channel: 0.075 in. (1.9 mm) track width.

Tape Speeds: One channel: 7-1/2 and 3-3/4 ips (19 and 9.5 cm/s).

Two channel: 15 and 7-1/2 ips (38 and 19 cm/s) or 7-1/2 and 3-3/4 ips. Maximum deviation 0.15% with 1.5 mil (0.038 mm) tape and hysteresis synchronous motor.

Rewind Time: Less than 90 seconds for 2500 foot reel.

Reel Size: 10-1/2 in. EIA or NAB; 5 or 7 in. plastic.

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Heads: One channel, Model MX-5050-FL Full Track:
Four head stacks:
Full track erase, 1/2 track reproduce, full track record, full track reproduce.
Two channel versions: Model MX-5050-2S Half-track, Model MX-5050-4S Quarter-track.
Four head stacks:
MX-5050-2S: 1/2 erase, 1/4 reproduce, 1/2 record, 1/2 reproduce.
MX-5050-4S: 1/4 erase, 1/2 reproduce, 1/4 record, 1/4 reproduce.

Motors: Capstan: Two speed hysteresis synchronous or dc servo controlled motor.
Reels: Two induction torque motors.

Flutter and Wow: (Measured per NAB weighted):

Tape Speed

15 ips	less than 0.05%
7-1/2 ips	less than 0.06%
3-3/4 ips	less than 0.15%

ELECTRONICS

Connectors: Line input and line output, standard three-pin XLR, Microphone, standard 1/4 inch phone jack.

Inputs: Line: Minimum — 15 dBm, unbalanced 50 k ohms.
Minimum — 15 dBm, balanced 600 ohms with optional transformer.

Microphone: Minimum — 70 dB, unbalanced, nominal 50 k ohms (high impedance). Balanced 150/250 ohm with optional transformer.

Outputs: Line: Variable or fixed level. Fixed level: +4 dBm or -10 dBm rear panel switch selectable.
Headroom: +19 dBm before clipping.
Impedance: MX-5050-2S: 600 ohms unbalanced (balanced standard in U.S. and Canada).
MX-5050-4S and MX-5050-QX: 600 ohms unbalanced (600 ohms balanced with optional transformer).
Headphone Jack: -24 dB, nominal 8 ohms unbalanced.

Equalization: NAB standard for 3-3/4, 7-1/2 and 15 ips (EIA, CCIR, and IEC also available)

Signal to Noise Ratio (overall record/playback):

	Two Track		Full Track	
Tape Speed	Weighted	Unweighted	Weighted	Unweighted
15 ips	68 dB	65 dB	—	—
7-1/2 ips	68 dB	65 dB	69	66
3-3/4 ips	67 dB	64 dB	68	65

Measured with respect to a record level of 520 nWb/m to biased tape noise when using Ampex 456, 3M 250, or equivalent high output low noise tape.



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Crosstalk: At 1000 Hz on adjacent tracks:

Two track: greater than 60 dB

Frequency Response: (overall record/playback)

15 ips (at 0 VU): 50 to 22,000 Hz ± 2 dB.

30 to 25,000 Hz ± 3 dB.

7-1/2 ips (at 0 VU -10 dB): 50 to 18,000 Hz ± 2 dB.

30 to 20,000 ± 3 dB.

3-3/4 ips (at 0 VU -10 dB): 50 to 12,000 Hz ± 2 dB.

30 to 15,000 ± 3 dB.

Distortion: Less than 1% at 1000 Hz at 200 nWb/m.

Test Oscillator Frequency: Nominal 1000 Hz.

PHYSICAL

Operating Position: Vertical or horizontal

Power Requirements: 117 volts, 60 Hz, single phase ac, 100 watts. Or 220/240 volts, 50 Hz, single phase ac, 100 watts.

Operating Environment: 40° to 104°F (5° to 40°C)
20 to 80% RH.

Storage Environment: -5° to 113°F (-20° to 45°C)
10 to 80% RH.

Weight: Cabinet: 50 lbs (22.7 kg). Portable case: 62 lbs (28.2 kg).

Mounting: Walnut finish cabinet (standard); portable case, floor console, or rack mounting adaptor (optional).

Standard Accessories: Empty 10-1/2 inch NAB reel, NAB reel precision hold down knob, fuse, NAB reel shims.

Optional Accessories: Low impedance mic input transformers, 600 ohm balanced line input and output transformers, remote control, dc capstan servo, line adaptor cables, portable case, floor console, rack mounting adaptors.

PRICE (suggested list)

MX-5050 FL One Channel: \$1450.00

MX-5050-2S Half Track Two Channel: \$1450.00

MX-5050-4S Quarter Track Two Channel: \$1420.00

Size: Height: 21-5/8 inches (54.9 cm) including reel overhang

Width: 21-3/8 inches (54.3 cm) including reel overhang

Depth: 7-5/8 inches (19.5 cm)

Portable case adds front and back covers for total depth of 14-1/2 inches (36.8 cm).

Otari reserves the right to change specifications and prices without notice or obligation.

EFFECTIVE AUGUST 1976

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