MX-5050-B
all-new compact professional recorder

All proven features of the pace-setting MX-5050, such as front adjustable bias and record EQ, selective reproduce, edit and cue, test oscillator, plus:

new: TTL/IC logic for noise free punch-in and punch-out.

new: Three speeds in field selectable speed pairs of 15/7½ or 7½/3¾ ips.

new: 24 dBm headroom, 28 dBm output.

new: Dc capstan servo standard, with ±7% speed control in record *and* reproduce.

new: Peak reading LED's plus standard VU meter.

new: Return to zero memory feature for mix-down.

SPECIFICATIONS—MX-5050-B

TRANSPORT

Tape Width and Channels: ¼ inch (6.3 mm) wide.

Two Channels: 0.075 inch (1.9 mm) track width.

Tape Speeds: Three speeds in internally switchable speed. pairs of: 15 and 7½ ips (38 and 19 cm/s) or 7½ and 3¾ ips (19 and 9.5 cm/s). Maximum deviation 0.15% with 1.5 mil (0.038 mm) tape.

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

Reel Size: 10½ inch EIA or NAB; 5 or 7 inch plastic.

Heads: Four head stacks: ½ track erase, ¼ track reproduce, ½ track record, ½ track reproduce.

Motors: Capstan: Three speed variable speed (±7%) dc servo controlled motor.
Reels: Two induction torque motors.

Flutter and Wow: (Measured per NAB weighted):
Tape Speed

15 ips	less than 0.05%
7½ ips	less than 0.06%
3¾ ips	less than 0.10%

ELECTRONICS

Connectors: Standard three-pin XLR.

Inputs: Line: Minimum −15 dBm, unbalanced 50 k ohms. Minimum −15 dBm, balanced 10 k ohms with optional transformer.
Microphone: Minimum −70 dBm, unbalanced, nominal 50 k ohms (usable range 150 ohms to 10 k ohms). Switchable 20 dB attenuator on back panel.

Outputs: Line: Variable or fixed level.
Fixed level: +4 dBm or −10 dBm rear panel switch selectable. Maximum output +28 dBm. Headroom: +24 dB before clipping. Load Impedance: 600 ohms, balanced. Output Impedance: 50 ohms, balanced.
Headphone Jack: −24 dBm, 8 ohms or higher impedance.

Equalization: NAB standard for 3¾, 7½ and 15 ips. IEC also included, rear panel switchable.

Record Level: Rear panel switchable: 185, 250, or 320 nWb/m.

Signal to Noise Ratio:

Tape Speed	Overall Record/Playback Unweighted	Playback Only Electronics (at all speeds)
15 ips	66 dB	
7½ ips	66 dB	
3¾ ips	65 dB	72 dB unweighted.

Measured with respect to a record level of 520 nWb/m to biased tape noise when using Ampex 456 or 3M 250 tape, using a 30 Hz to 18 kHz audio filter.

Measured with a 30 Hz to 18 kHz audio filter.

Crosstalk: At 1000 Hz on adjacent tracks: greater than 55 dB.

Frequency Response:

Tape Speed	Overall Record/Playback	Playback Only
15 ips (at 0 VU, +4 dBm)	30 Hz to 22 kHz (±2 dB)	31.5 Hz to 20 kHz (±2 dB)
7½ ips (at -10 VU, -6 dBm)	25 Hz to 20 kHz (±2 dB)	31.5 Hz to 16 kHz (±2 dB)
3¾ ips (at -10 VU, -6 dBm)	30 Hz to 12 kHz (±2 dB)	31.5 Hz to 10 kHz (±2 dB)
	Based on 250 nWb/m alignment level and 3M 206	Using an MRL 21J205 alignment tape

Distortion: Less than 0.7% at 1000 Hz at 250 nWb/m.

Test Oscillator Frequency: Nominal 1000 Hz.

Indicators: Standard VU meters plus peak reading LED's set at +9 dB (adjustable) based on 185 nWb/m.

PHYSICAL

Operating Position: Vertical or horizontal.

Power Requirements: 117/220/240 volts, 50/60 Hz. 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: 53 lbs. (24 kg). Portable case: 62 lbs. (28.2 kg).

Mounting: Vinyl covered wooden cabinet (standard); portable case, floor console, or rack mounting adaptor (optional).

Standard Accessories: Empty 10½ inch NAB reel, precision hold down knob, NAB real shims, operating manual.

Optional Accessories: 10 k ohm balanced input transformers (IPT-B), Remote Control (CR-705A), line adaptor cables (ADP-CBL), portable case (P2-B), floor console (CSL-B), rack mounting adaptors (RK-2B).

Size: Height: 21⅞ inches (55.6 cm) including reel overhang.
Width: 21½ inches (54.6 cm) including reel overhang.
Depth: 8⅛ inches (20.6 cm)
Portable case adds front and back covers for total depth of 14½ inches (36.8 cm).

Otari reserves the right to change specifications without notice or obligation. This specification sheet applicable in North America.

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other outstanding reasons for selecting otari....

Mark II-2

MX-5050-QXHD

ARS-1000

MX-5050-8D

MX-7800

DP-4050

MX-7800 One-Inch Eight-Track First *full-function* one-inch eight-track • 100% remote controlled • Remote LED tape timer, return-to-zero • 30/15 ips • Dc capstan servo.

MX-5050-8D Eight-Channel Half-Inch Full eight track performance and features • 15 & 7½ ips • Variable speed (±7%) dc capstan servo.

MX-5050-QXHD Four-Channel Quarter-Inch 15 & 7½ ips • Variable speed (±7%) dc capstan servo • Other features same as two-track.

MX-5050-FL One-Channel Full-Track • 7½ & 3¾ ips • Also reproduces two-track.

Mark II-2 Two-Channel Quarter-Inch All MX-5050 features plus:
• Separate transport and electronics • 15 & 7½ ips • Variable speed (±7%) dc capstan servo.

Mark II-4 Four-Channel Half-Inch Same features as Mark II-2.

ARS-1000 Automated Radio Station Reproducer Two speeds 7½ & 3¾ ips • Two channel stereo • Ruggedized for continuous operation.

DP-4050 8:1 In-Cassette Duplicator Easily operated • Open-reel master (7½ or 3¾) and six slaves • Six C30's in under two minutes.

All Otari recorders feature:
• Professional quality and reliability
• Selective reproduce on all channels
• Front adjustable bias and record EQ
• 600 ohm +4 dBm outputs
• XLR connectors • 19 dBm headroom
• Motion sensing • Edit and cue
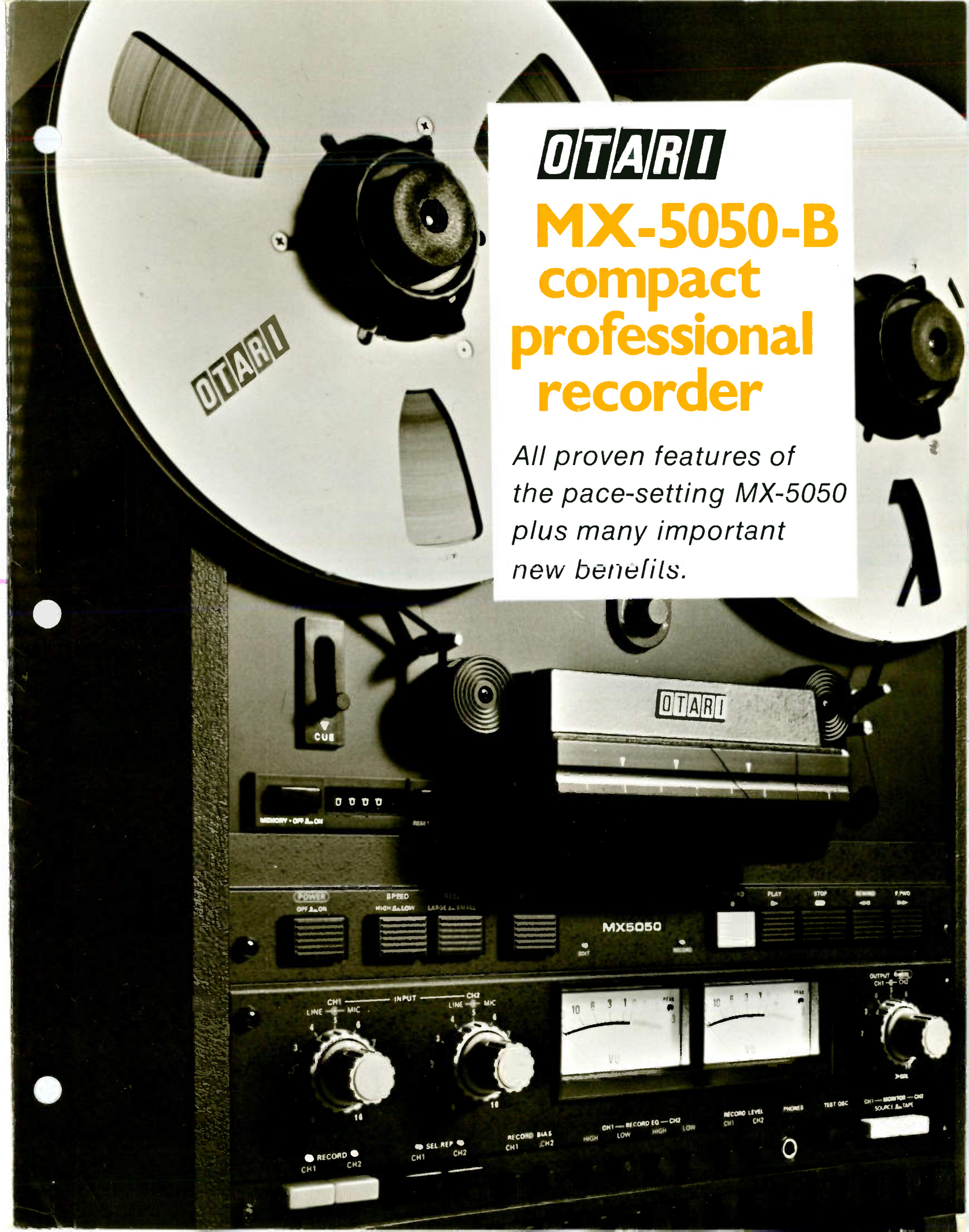• Built in test tones • Portable, rack, or console mounting

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MX-5050-B

The best $3500 two-channel recorder for under $2500.

Logical successor to the first truly professional compact recorder, the MX-5050.

Dc Capstan Servo: ±7% Speed Control: Dc capstan servo system provides exceptionally stable tape speeds, plus ability to vary both record and reproduce speeds by ±7% of nominal.

Adjustable Cue Control: Helps locate selections by defeating head lifters in fast forward or rewind to allow you to hear an audible signal. Adjustable feature varies the signal volume to prevent overloading of earphones or monitors.

Built-in Splicing Block: As a real production convenience, a precision-aligned and indexed splicing block is mounted right on the head cover. Cover is hinged and lifts for easy access to heads.

Selection Locator Memory: Return to zero memory recues machine to zero setting, a real time saver.

Three Speeds: Three speed operation in speed pairs of 15/7½ or 7½/3¾ ips are internally switchable on PC board inside the back cover. Equalization is automatically changed at the same time.

Edit Control: Indispensable for production work, allows you to rock the reels back and forth or to spill tape at right of transport. Deactivates take-up motor and end-of-tape lever.

Selective Reproduce: Another important production feature for overdubbing, selective reproduce allows a new track to be laid down next to previously recorded tracks in perfect time synchronization.

Front Adjustable Bias and Record EQ: To peak bias when changing tapes or to quickly reset record equalization, these adjustments are front accessible.
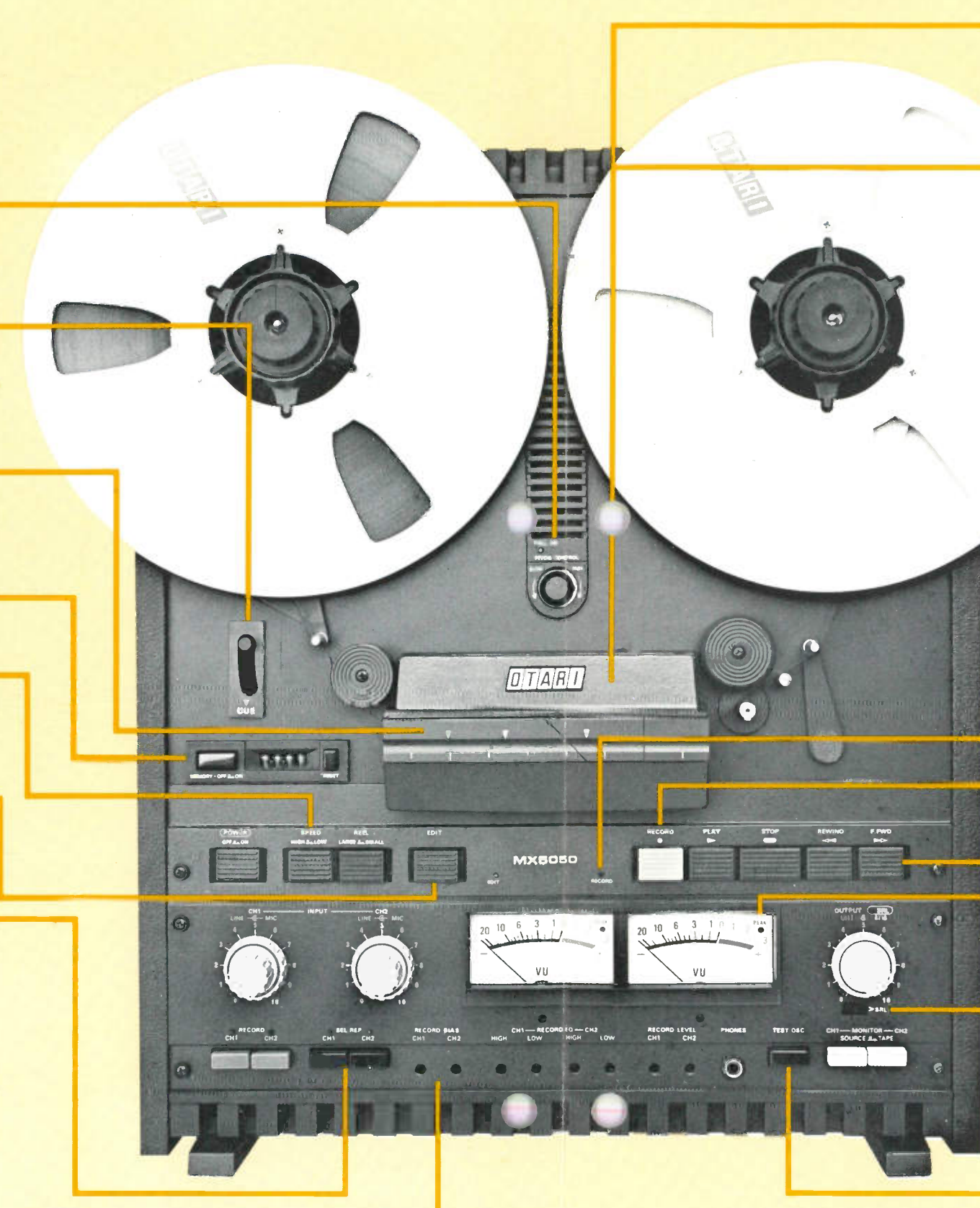
Plug-in, Rugged Permalloy Heads: Otari MX-5050-B heads are plug-in for ease of servicing. They are fabricated from hard Permalloy, a rugged material that gives the best compromise between extended head life and optimum signal output.

Extra Reproduce Head: In addition to the half-track reproduce head, an extra playback head is included in the head assembly to reproduce quarter-track tapes. Selection between the two heads is made by a switch accessible through the top of the head cover.

Flashing Ready Light: This provides a visual indication, easily seen even from a distance, of the record-safe mode which helps to prevent accidental erasure. An LED indicator pulses to signify that the recorder is in the ready mode after either of the Record Selector push buttons has been depressed. To initiate recording, the Record button in the transport control cluster is then activated, which changes the pulsing of the LED to continuous illumination.

Noise Free Punch-in and Punch-out: Newly designed TTL/IC logic provides freedom from clicks and pops when punching in or out of the Record mode on the run.

Motion Sensing Control Logic: Motion sensing allows you to go directly into Play from Fast Forward or Rewind without time delays, breaking or stretching tape, or having to go through Stop.

Peak Reading LED's: Besides large easy-to-read VU meters, the MX-5050-B has a peak reading LED set to +9dB. This can be set at a different threshold if desired.

Fixed Output Level: A standard reference level (SRL), or fixed output position, is front panel switch selectable. This is normally +4dBm for a balanced 600 ohm line, but can be changed to −10dBm by a rear panel switch to facilitate interface with low-level mixers or other peripheral equipment.

Built-In Test Oscillator: Peaking bias is made much faster with the build-in 1000 Hz test signal. It is also useful for putting a cue tone on the tape for selection location.

+4 or −10 dBm Output: Selects between either the +4dBm level for a 600 ohm line or −10dBm level for low-level mixers or similar equipment.

Remote Control Connector: All transport operating controls (Record, Play, Stop, Rewind, and Fast Forward) are brought out to this connector for selection by an optional remote control unit.

NAB/IEC EQ: Both NAB and IEC equalization circuitry are included and are selected by this switch.

Choice of Three Record Levels: To maximize performance with different tapes, the MX-5050-B includes three separate calibrated record levels in nWb/m: 185 (original standard), 250 (for high-output low-noise tapes), 320 (the IEC and DIN standard).

Microphone Attenuator: For added versatility when using microphone preamps or high output mics, this switch provides a 20 dB pad.

XLR Connectors, Slanted Panel: All input and output connectors are three-pin XLR, mounted on a slanted panel so the machine can be operated horizontally.
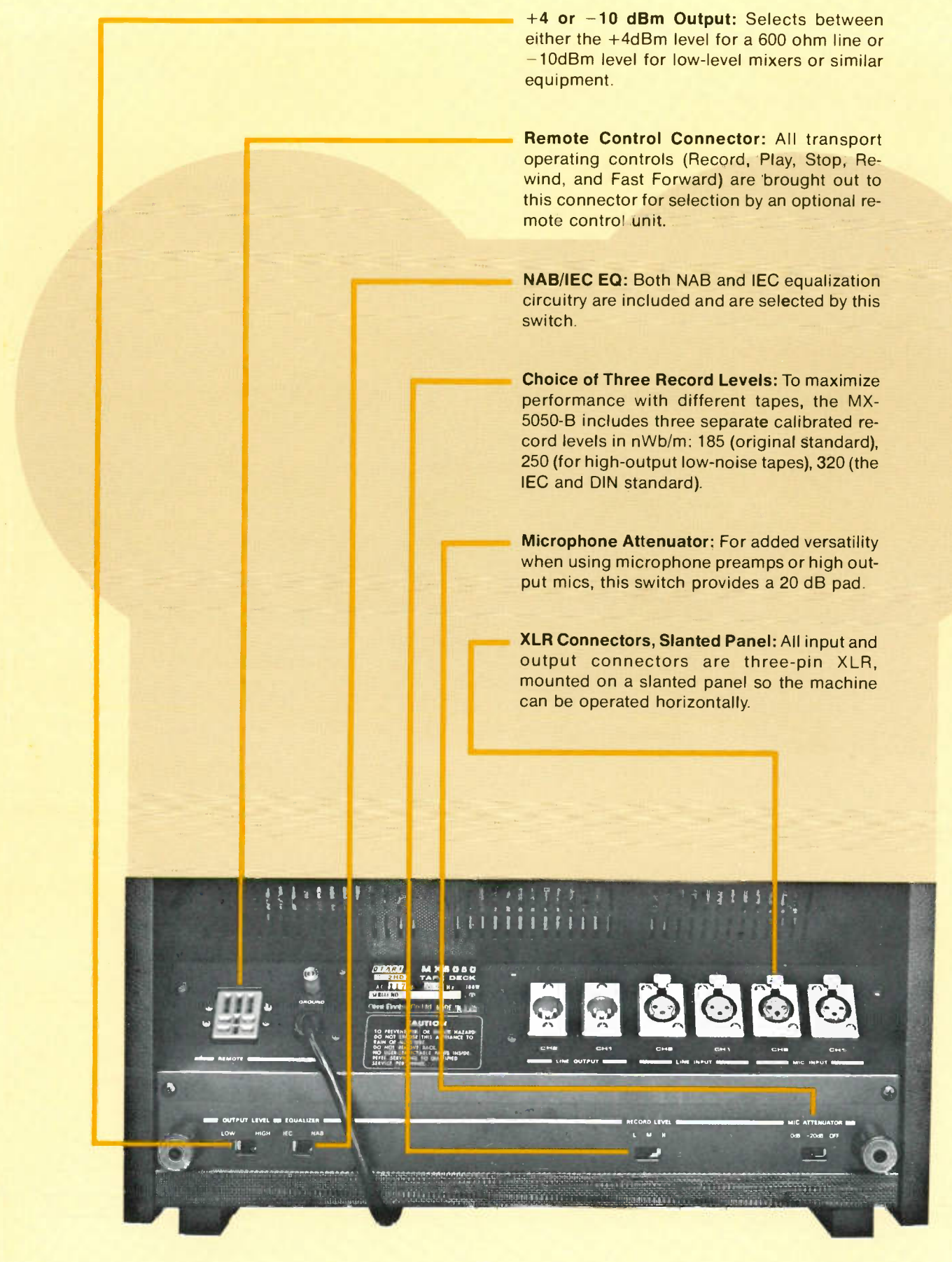
OTARI

ARS-1000 AUTOMATED RADIO STATION REPRODUCER

- Widely used in leading automation systems.
- Two speeds — 7½ and 3¾ ips, front selectable.
- Adjustable front panel cue control.
- Recessed front adjustable output level and head azimuth, with flip-up head cover.
- Plug-in professional grade PC boards and relays.
- IC preamp in head assembly improves S/N.
- Simple operation plus remotable Play and Stop.
- Ready light indicates proper tape threading.
- Special long-life polyurethane pinch roller and ball bearings.
- Ruggedly designed for long term reliability under continuous operating conditions.
- Full one-year warranty on all parts (except heads) and labor.
- 25 Hz sensor optionally available.

Otari's ARS-1000 is a widely used two-speed reproduce only tape machine specifically designed to meet the unique needs of the automated radio broadcaster. This machine is engineered for heavy duty continuous operation, with special emphasis placed on long term reliability, simple operation, consistent performance, and ease of maintenance.
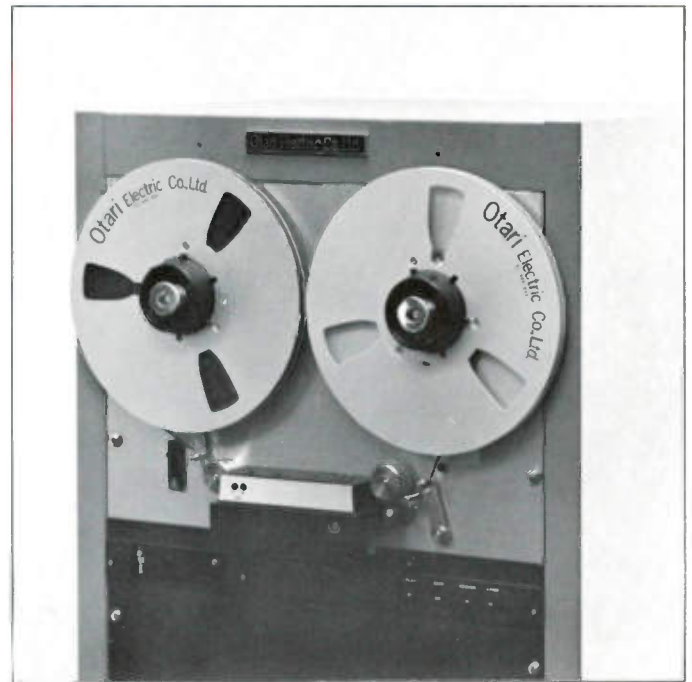
Take reliability, for example. The ARS-1000 is a rugged machine that has been subjected to thousands of hours of life tests to determine its mean-time-between-failure. Selection of components reflects this heavy emphasis on reliability. Consider the rugged motors and brake assemblies, the gold plated PCB connectors, or the special long life pinch roller assembly with polyurethane tire and friction-reducing ball bearings.

Ease of maintenance is assured with plug-in PCB's and mother board configuration, an easy-access head-cover, plus front adjustable output level and head azimuth (the latter to minimize stereo phasing errors).

Operational ease is provided by simple interlocked controls and a straight line tape threading path plus flip-up head cover. A front panel Ready light indicates, even from a distance, that tape is threaded properly and the machine is ready for the next command. For increased head life, tape lifters are used in the fast modes, but can be defeated by a front panel Cue control for an audible monitoring signal.

The electronics are also of advanced design. Headroom is an excellent +19 dBm. Outputs are 600 ohm unbalanced; 0 VU is +4 dBm. Noise is minimized by use of an IC head preamp mounted directly above the head assembly. Transformer voltage controlled torque motors are used with external, fully adjustable band brakes. Brakes are completely fail safe in case of power failure.

TRANSPORT

Tape Width & Channels: ¼ inch (6.3mm)
2 channel (0.075 inch or 1.9mm track width)
Tape Speeds: 3¾ and 7½ ips (9.5 and 19 cm/s)
Maximum deviation 0.15% measured with 1.5 mil
(0.038mm) tape.
Reel Size: 7 inch plastic or 10½ inch, EIA or NAB
Heads: Hard Permalloy metal head with two half track
head stacks and front adjustable azimuth. Integral IC
head preamp has front accessible level controls.
Flutter and Wow: (Measured per NAB weighted)

Tape Speed	
7½ ips	less than 0.06%
3¾ ips	less than 0.15%

Motors: Three total. Two-speed hysteresis synchronous
capstan, and two induction reel motors. Front acces-
sible oil wick for capstan bearing.
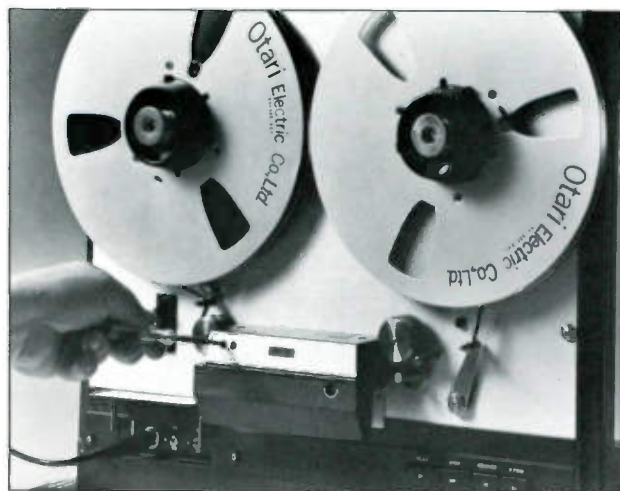**Remotable Functions:** Play, Stop.

ELECTRONICS

Output and Remote Control Connector: 25 pin Cinch
connector.
Outputs: Rear panel Cinch connector:
Line: Level: +4 dBm (0 VU).
Impedance: 600 ohms unbalanced.

*Output level for each channel is individually front panel adjustable.
At right center of head cover is access hole for head azimuth ad-
justment. At bottom left of transport hinged door protects controls
and provides quick access to headphone jack, large/small reel selec-
tor switch, and high/low speed selector switch. Adjustable Cue
control is at left behind operator's hand. Motor lubricating access
hole (for six month interval preventive maintenance check) is at
right below take up reel, covered by a knurled head protective screw.*

Output, Head Phone: Front Panel Jack: −24 dBm, nom-
inal 8 ohms unbalanced.
Equalization: NAB standard for 3¾ and 7½ ips, front panel
manually switchable. CCIR also available.
Frequency Response: 7½ ips (at −10 VU): 50 to 18,000 Hz±2 dB
30 to 20,000 Hz±3 dB
3¾ ips (at −10 VU): 50 to 12,000 Hz±2 dB
30 to 15,000 Hz±3 dB
Specifications referred to 1000 Hz reference recorded at a stan-
dard reference level of 185 nWb/m.
Signal to Noise Ratio: Noise to 0 VU (+4 dBm)

Tape Speed	RMS
7½ ips	54dB
3¾ ips	52dB

Crosstalk: At 1000 Hz on adjacent tracks, greater than 50dB.
Headroom: +19 dBm before clipping, +13 dBm at 3% distortion
(520 nWb/m).
Distortion: Less than 1% at 1000 Hz at 185 nWb/m.

PHYSICAL

Power Requirements: 117 volts, 60 Hz, single phase ac, 100
watts. Simple pulley and belt change for 50 Hz.
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: 45 lbs (20.4 kg)
Mounting: 19 inch rack standard. Requires 16¾ inches
(42.5 cm) of vertical space (including reel overhang).
Standard Accessories: Empty 10½ inch NAB reel, two NAB
reel precision hold down knobs, NAB reel shims, detach-
able power cord.
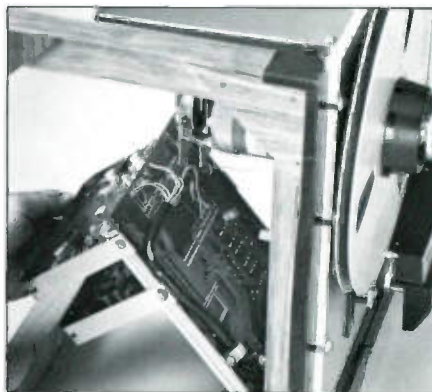
*At rear of transport,
mother board with
plug-in amplifier
boards is hinged for
ease of maintenance.*

OTARI.

Model ARS-1000
Automated Radio Station Reproducer

The Otari ARS-1000 is the most widely accepted two-speed reproduce-only tape machine specifically designed to meet the needs of broadcast automation systems. The ARS-1000 is engineered for heavy duty, continuous operation with special emphasis placed on simple operation, ease of maintenance and long-term reliability.

Ease of operation is achieved by straightforward interlocked controls and a straight-line tape threading path. The front panel ready light indicates that the tape is threaded properly and the ARS-1000 is ready for the next command. The CUE control defeats the tape lifters to allow monitoring in fast wind modes.

Plug-in circuit boards, a flip-up head cover and recessed front panel output level and azimuth adjustments make maintenance easy while protecting critical calibrations from unqualified operators.

The ARS-1000 features a ¼ " thick aluminum alloy deckplate and heavy duty transport components. All assemblies are designed with a low component count for maximum reliability.

The ARS-1000DC includes a 25Hz tone sensor with an immediate end-of-message relay and a stop relay with variable delay. The "DS" version is available without this sensor.
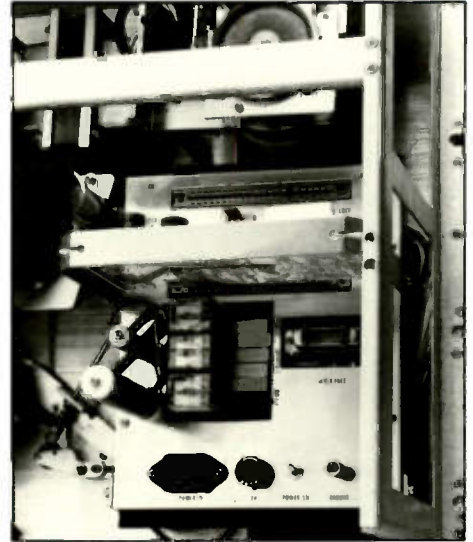
Rear panel electronics interface.

Each ARS-1000 incorporates these standard features:

- Two speeds: 7.5 and 3.75 ips, front panel selectable.
- Retrofit Kit for 7.5/15 ips optional.
- 25 pin rear panel connector for access to: all pass output; play and stop commands; end of message relay with adjustable delay from 100 milliseconds to 15 seconds; e.o.m. contact closure for external indicators.
- Recessed front adjustable output level and head azimuth, with flip-up cover.
- Excellent RF immunity.
- Plug-in head preamp with switchable equalization.
- Front panel headphone jack.
- Front panel cue control (tape lifter defeat).
- Reel size compensation control.
- Ready light indicates proper tape threading.
- Special long-life polyurethane pinch roller with double ball bearings.
- Precision milled ¼" thick aluminum alloy deckplate.
- Sealed bearing synchronous capstan motor.
- Replaceable capstan shaft.
- Front panel motor lubricating access hole with removable screw.
- Special O.E.M. versions available upon request.

The ARS Reproducers are covered by a one-year parts and labor limited warranty. Heads, pinch roller, fuses and lamps have a 90-day parts warranty.

ARS-1000 DC-DS SPECIFICATIONS

TRANSPORT

Tape Width and Channels:	¼" (6.3mm) 2 channel
Tape Speeds:	3.75 and 7.5 ips
Maximum Speed Deviation:	±0.15%
Reel Size:	7 and 10½" NAB
Motors:	1 hysteresis synchronous capstan, 2 induction reel motors
Rewind Time:	less than 90 seconds for 2400' reel
Wow and Flutter: (NAB weighted)	7.5 ips, 0.06%; 3.75 ips, 0.12%

ELECTRONICS:

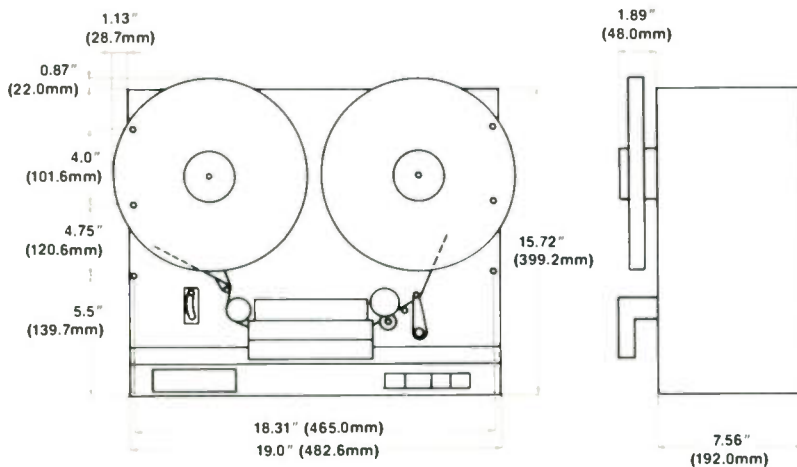|	
Outputs:	+4dBm nominal, 600 ohms unbalanced
Signal to Noise Ratio: (Measured at operating level)	7.5 ips, 60dB, 3.75 ips, 55dB
Crosstalk:	Less than 50dB at 1 kHz
Frequency Response: (Measured at operating level)	7.5 ips, 50-18 kHz, ±2.0dB; 3.75 ips, 50-13 kHz, ±2.0dB
Operating Level:	185 nWb/m, all measurements made with 3M #226 tape at operating level except where specified
Distortion: (measured at operating level)	less than 0.2% at 1 kHz 185 nWb/m
Headphone Amp:	+11dBm maximum at operating level on tape

PHYSICAL

Power Requirements:	117 volts ±10%, 50 or 60Hz single phase (user switchable) A.C. 100 watts
Operating Environment:	40 to 104 degrees F (5 to 40 C), 20 to 80% R.H.
Storage:	−5 to 113 degrees F (−20 to 45 C), 10 to 80% R.H.
Shipping Weight:	52 lbs. (23.6 kg)
Mounting:	19 inch rack mount. Requires 16¾" (42.5 cm) height including reel overhang
Standard Accessories:	Reel hold down knobs, ¼"x10½" empty NAB reel, operation manual and power cord

Manufactured in Japan by Otari Electric Co., Ltd.

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

OTARI

OTARI.

Model 5050 MARK III/2
1/4" Two Channel Recorder

The Otari 5050 MARK III/2 is a compact, tabletop console recorder in the 1/4" two channel format. The optimized three head design and transformerless balanced inputs and outputs provide superior frequency response, distortion and signal-to-noise performance under professional studio conditions.

The Capstan motor is under servo control and is switchable between 15/7.5 ips and 7.5/3.75 ips speed pairs. Proprietary microprocessors govern tape handling and the real-time electronic counter which features an HRS/MINS/SECS L.E.D. display that is tape accurate at all speeds.

Front panel access is provided for record setup adjustments and a built-in oscillator provides 1 kHz and 10 kHz tones.

The multipin interface connector permits easy connection to SMPTE based controllers and synchronizers.

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 full service access.

The MARK III/2 is compatible with all dbx[1] noise reduction products.

A transport remote control and full function auto-locator are available as options.

Each 5050 MARK III/2 incorporates these standard features:

☐ Transformerless balanced inputs and outputs with XL type connectors.

☐ Line output switch selectable for +4 dBm or −10 dBV level.

☐ Mic input has switch selectable 20 dB pad and mute.

☐ Mic/Line mixing on each channel.

☐ Headphone monitor output.

☐ Lighted VU meters with L.E.D. peak indication.

☐ 3 speeds switch selectable in 15/7.5 ips or 7.5/3.75 ips speed pairs.

☐ Record reference level switch selectable (185, 250, 320 nWb/m.)

☐ Equalization switch selectable (NAB, IEC).

☐ Reel Size switch selectable (5"-7", 10.5") EIA or NAB.

☐ Low frequency reproduce eq. adjustable.

☐ Fourth head switch selectable for ¼ track stereo playback.

☐ Plug-in head assembly with hinged cover for easy access.

☐ Front panel record setup adjustments.

☐ Integral splicing block.

☐ Built-in test oscillator (1 kHz, 10 kHz).

☐ Microprocessor-controlled HRS/MINS/SECS reel-time counter with L.E.D. display.

☐ Dump Edit and Cue (lifter defeat) modes.

☐ D.C. capstan motor, servo controlled.

☐ Microprocessor-controlled transport with 34 pin External Control connector.

☐ Variable speed control (±7%) usable in record and play.

☐ Zero Return button operational from positive or negative tape locations.

The MARK III/2 Recorders are covered by a one year parts and six months labor limited warranty. Heads, pinchroller, fuses and lamps have a 90 day parts warranty.

[1]Trademark dbx, Incorporated

5050 MARK III/2 ¼" TWO CHANNEL SPECIFICATIONS

TRANSPORT

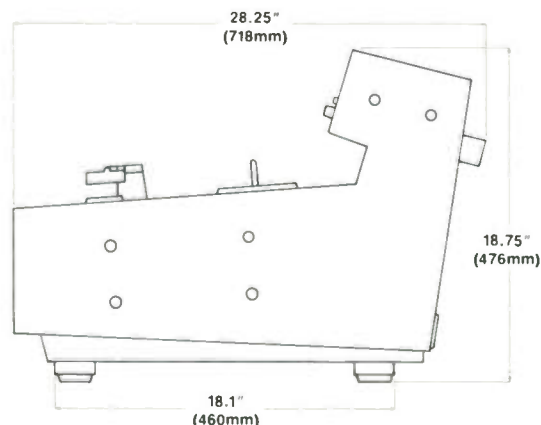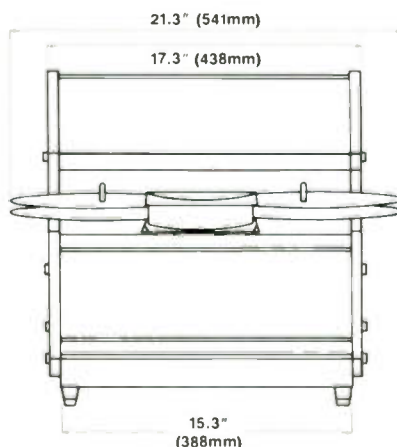|	
Tape Width and Channels:	¼" (6.3mm) tape, 2 channel
Tape Speeds:	15 and 7.5 ips or 7.5 and 3.75 ips internally switchable speed pairs
Maximum Speed Deviation:	±0.2%
Reel Size	¼" × 5, 7 or 10.5" EIA or NAB
Heads: (4, in-line)	Erase (half track). Play (quarter track), Record (half track), Play (half track)
Motors:	D.C. servo-controlled capstan motor, two induction reel motors
Rewind Time:	Less than 90 seconds for a 2,400' reel
Pitch Control:	Variable within ±7%
Wow and Flutter:	15 ips, less than 0.04% 7.5 ips, less than 0.07% 3.75 ips, less than 0.08%

ELECTRONICS

Connectors:	Line input, Mic input and Line output: standard three pin XL type. Headphone: standard ¼" phone jack
Inputs:	Line = Active, balanced, 10 kOhms Mic = Active, balanced, usable: 150 Ohms to 10 kOhms Switchable 20 dB pad and mute
Outputs:	Active, balanced 5 Ohms source impedance +27 dB (ref. 0.775 V) into 600 Ohms or more
Signal-To-Noise Ratio: (3% Third Harmonic to noise floor, 30-18kHz) NAB EQ	15 ips 72 dB unweighted 7.5 ips 72 dB unweighted 3.75 ips 70 dB unweighted
Equalization:	IEC or NAB, switchable
Crosstalk:	Less than 55 dB at 1 kHz on adjacent track
Frequency Response: (Record/Reproduce)	15 ips (0 VU): 25 Hz to 22 kHz ±2.0 dB 7.5 ips (−10 VU): 20 Hz to 20 kHz ±2.0 dB 3.75 ips (−20 VU): 20 Hz to 12 kHz ±2.0 dB
Operating Level:	250 nWb/m
Distortion: (1 kHz, 250 nWb/m)	Less than 0.5% Third Harmonic (15 ips)
Test Oscillator Frequencies:	Nominal 1 kHz and 10 kHz
Test Conditions:	As specified, using 3M #226 tape

PHYSICAL

Power Requirements:	100/117/220/240 V, ±10%, 50/60 Hz single phase AC, 140 W
Operating Environment:	40 to 104 degrees F (5° to 40°C), 20 to 80% R.H.
Storage Environment:	−5 to +113 degrees F (−20° to +45°C), 10 to 80% R.H.
Mounting:	Vinyl covered wood case; (RK-32) Rack mounting kit and (ZA-52L) Roll-around pedestal, optional
Standard Accessories:	Reel hold down knobs, ¼" x 10½" empty NAB reel, operation manual and power cord
Optional Accessories:	CB-116 Auto locator CB-102 Remote transport control ZA-52L Roll-around pedestal ZA-53T Input isolation transformers ZA-53S Output isolation transformers RK-32 rack mount
Weight:	89 lbs. (40 kg) in shipping carton

Manufactured in Japan by Otari Electric Co., Ltd.

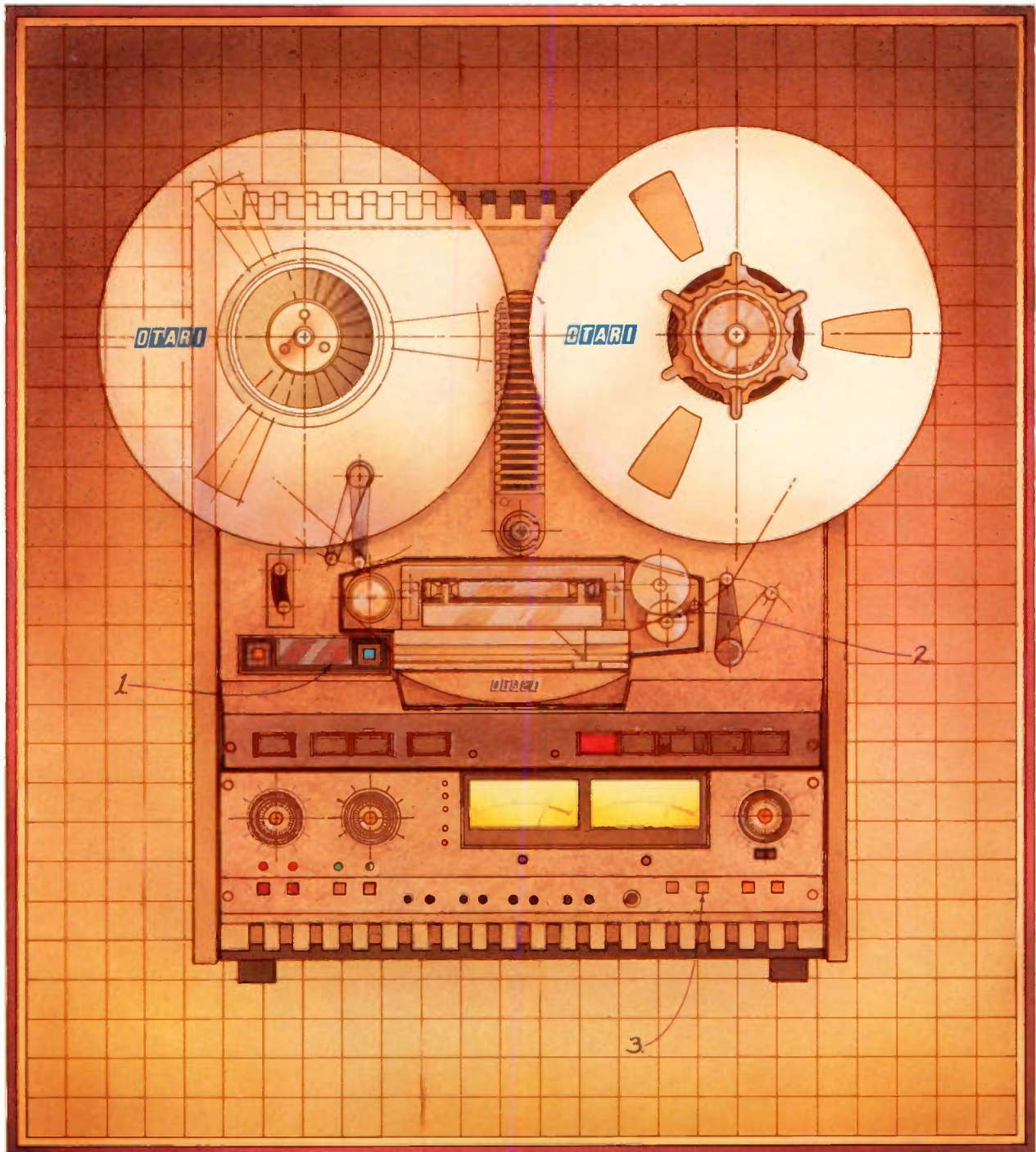Otari reserves the right to change specifications without notice or obligation.

21.3" (541mm)
17.3" (438mm)
15.3" (388mm)

28.25" (718mm)
18.75" (476mm)
18.1" (460mm)

TECHNOLOGY YOU CAN TRUST

The Otari ¼" Two Channel 5050B-II

TECHNOLOGY YOU CAN TRUST

We Didn't Change A Winner, We Just Made It Better.

We think you'll be impressed with the features we've added to the second generation 5050B two-track recorders. We also think you'll be pleased with what we haven't changed.

When we introduced the "B" a little more than five years ago we knew we had a good machine. What we didn't anticipate however, was that you would make it the best-selling professional 1/4" two track in the world!

If you're already an owner of a 5050B, or you've become familiar (and fond) of someone's you know, a quick read-through of this brochure will acquaint you with the new features.

If you're not already a proud owner, then find out why so many professionals are.

The Things That Haven't Changed.

Behind the clean, new look of the new "B-II" is the same rugged, 9 millimeter deckplate and cast aluminum chassis. Securely mounted to this deck are two heavy-duty six pole A.C. induction torque motors for moving the tape reels, and a precision, D.C. servo-controlled motor for direct capstan tape drive.

The B-II comes set up for 7.5/15 ips operation, and can be internally switched (field convertible) to 3.75/7.5 ips. All three speeds have individual reproduce equalizers and the two record amps are easily recalibrated for high or low speed pairs. In either speed pair, record equalization is automatically changed and requires no further adjustment.

The tape path is simple and straightforward. So are the positive-locking, NAB reel adapters.

Other Important Transport Features That Haven't Changed.

hey always say four heads are better than three, so that's what comes with the B-II. In addition to the standard half-track reproduce head, an extra reproduce head is included to give you 1/4 track playback capability. You can easily switch operation between these two reproduce heads with a conveniently located switch on top of the head assembly. The head assembly is plug-in for ease of replacement or servicing should it be required. The heads are constructed from hard Permalloy, so that you have the best of both extended head life and optimum signal output level. The head cover is hinged to flip up and provide easy access for cleaning and aligning the tape path.
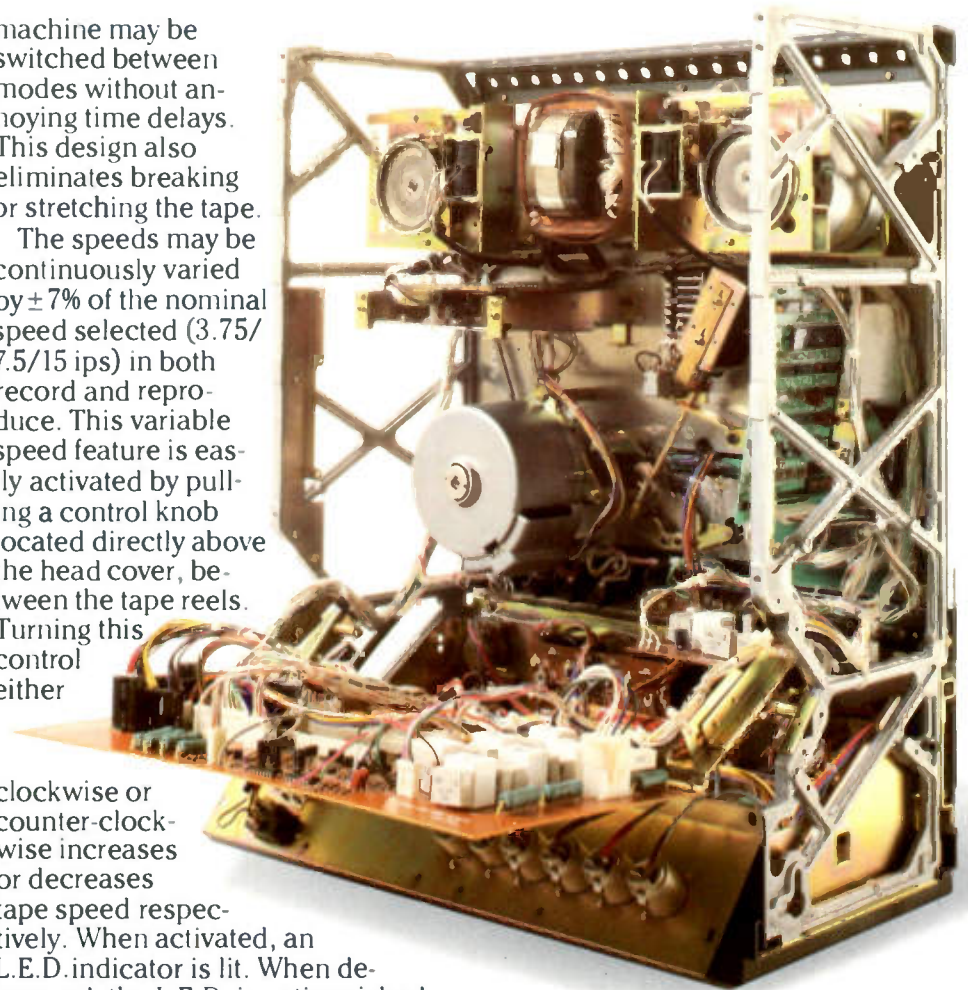
All controls for transport movement and Record/Play are large, positive responding pushbutton controls. Motion sensing is used in the transport logic so that the machine may be switched between modes without annoying time delays. This design also eliminates breaking or stretching the tape.

The speeds may be continuously varied by ±7% of the nominal speed selected (3.75/7.5/15 ips) in both record and reproduce. This variable speed feature is easily activated by pulling a control knob located directly above the head 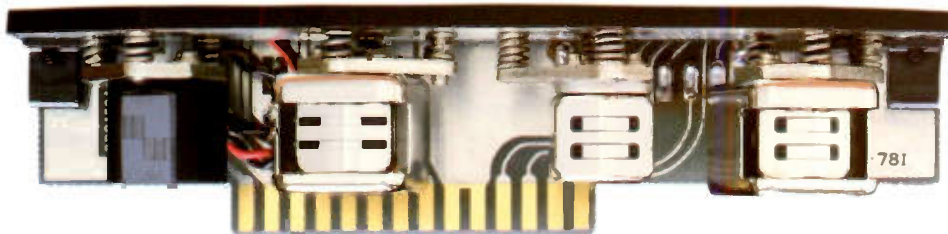cover, between the tape reels. Turning this control either clockwise or counter-clockwise increases or decreases tape speed respectively. When activated, an L.E.D. indicator is lit. When depressed, the L.E.D. is extinguished to alert a return to the selected, calibrated tape speed. This feature is a lifesaver for applications such as synchronizing the pitch of previously recorded material with the pitch of instruments to be recorded on a second track.

Editing on the "B-II" is a powerful production time-saver. By simply engaging the front panel Edit switch, the take-up reel and tension arm switch are defeated, allowing tape to spill between the capstan and take-up reel. An L.E.D. indicator reports this machine status. The edit mode can be entered from either Play or from Stop. Precise edit points are easily located by "hands-on" reel rocking. A built-in splicing block on the head cover is precision aligned and indexed to the heads for fast production work.

Just below the left reel is an adjustable Cue control which defeats the tape lifters during the fast wind modes. This useful production feature allows you to hear the tape and search for selections while fast winding. It's adjustable so that you may vary the signal volume without overloading headphones or monitors, or it may be locked in position.

Plug-in assembly includes fourth head for 1/4 track Stereo playback. Mono full-track and 1/4 track stereo versions also available.

5050B-II New Features.

☐ Transformerless balanced microphone inputs with switchable 20 dB pad and mute.
☐ Transformerless balanced line inputs and outputs.

☐ Variable low frequency reproduce equalization (switch defeatable).
☐ Microprocessor-controlled, real-time counter with Memory Rewind and L.E.D. display.

☐ Dual frequency oscillator (1 & 10 kHz).
☐ Front panel record level indicators (185, 250, & 320 nWb/m).
☐ Front panel equalization indicators (IEC/NAB).

5050B-II Features.

1. D.C. capstan, servo-controlled.

2. Switch selectable 1/4 track or 1/2 track playback head.

3. Positive-locking NAB hub adapters.

4. Variable speed control (±7%).

5. Hinged head cover with integral tape splicing block.

6. Plug-in four head design; Perm-alloy for optimum head life and maximum output.

7. Adjustable Cue control (tape lifter defeat).

8. Microprocessor-controlled, real-time counter with Memory Rewind and Reset.

9. Reel size compensation switch.

10. Speed select (chooses high or low speed of internally selected speed pair).

11. Dump edit switch (spills tape between capstan and take-up reel).

12. Transport controls with full motion-sensing logic.

13. Microphone and Line input mixing on each channel.

14. Safe/Ready switch for each channel (with L.E.D. indicators).

15. Selective Reproduce for overdubbing.

16. Front panel record calibration adjustments.

17. Lighted V.U. meters with L.E.D. peak indicators.

18. Headphone jack.

19. Tape or Source monitor select.

20. Output level control.

21. SRL select switch with L.E.D. indicator (switchable between variable output and Standard Reference Level).

Tape accurate at all speeds, a microprocessor-controlled real-time counter features a Memory Rewind and L.E.D. display in hours, minutes and seconds.

New! A Feature That Removes The Guesswork.

The new B-II now includes a microprocessor chip that accurately counts elapsed time in hours, minutes and seconds. Tape accurate at all speeds, it has a multi-digit L.E.D. display with both positive and negative domain. This feature is extremely helpful in situations such as spot production where an accurate measure of program time is critical.

When you need to play and repeat a section continuously, we've given you a feature we call Memory Rewind. You'll call it great. With the Memory button depressed, the transport will enter the Stop mode when rewinding past "0.00.00". The Reset button returns the real-time display to "0.00.00" regardless of actual tape location.

The Electronics: New And Improved!

Now, here's where the new B-II leaps ahead of the other guys' "Hi-Fi" heritage.

Concentric Mic/Line Input level controls for each channel permit you to mix on the machine if you wish. For added versatility when using preamplifiers or high output microphones, a rear panel switch inserts a 20 dB pad on each channel.

The microphone inputs are balanced and transformerless to put as little as possible between the sound and the tape. The line inputs and outputs are also balanced and transformerless to achieve the lowest noise figures, highest fidelity and professional flexibility. Optional transformers are available should your application require them.

Next to the input level controls are two large, easy-to-read lighted V.U. meters with peak-responding L.E.D.'s. Factory calibrated to +9dB, a different threshhold may be user adjusted for this important feature. Concentric output level controls are adjacent to the meters. Below these controls is a switch for selection of Standard Reference Level (SRL) or a variable output position. Normally +4 dBm for a balanced 600 ohm line, the output of the B-II may be changed to −10 dBV by a rear panel switch to facilitate the interface with low-level mixers or peripheral equipment.

To optimize performance with tapes which have been recorded at another facility, there's a Ref Flux switch that will give you a choice of three reference fluxivity levels: 185, 250 & 320 nWb/m. (The latter being the IEC and DIN standard). This same flexibility allows you to choose how "hot" a recorded level gets put on tape. Front panel L.E.D. indicators report the selection of the chosen calibration level.

A pair of Record/Ready pushbuttons enables the individual channels for recording. Each button has a red L.E.D. above it which indicates whenever recording is possible for the selected channel(s). When depressed, a separate indicator next to the Record pushbutton control on the transport continuously flashes to indicate that at least one of the channels is record ready. The continuous flashing in this Record/Ready mode is visible at a distance and helps prevent accidental erasure. When recording, this indicator glows steadily.

Quiet, click and pop-free "punch-in" recording can be made on the run with the B-II because of specially engineered TTL/IC logic. The quiet "punch-in, punch-out" feature is indispensible for overdubbing. The Selective Reproduce function permits a new track to be laid down next to a previously recorded track with perfect synchronization. By depressing either of two Sel-Rep pushbuttons, the tape is played back through the record head. This enables you to record on the opposite channel in time synchronization with the program monitored through the selected Sel-Rep channel. A green L.E.D. above the Sel-Rep buttons indicates their status.

The B-II is compatible with Dolby®[1] and dbx®[2] noise reduction products.

1 Dolby is a registered trademark of Dolby Labs, Inc.
2 dbx is a registered trademark of dbx, Inc.

Extensive Adjustments For Optimum Calibration Of Your B-II.

No internal adjustments are required for record calibration. Located across the front of the B-II is every conceivable feature you need to obtain the optimum performance you want from your recorder.

To put the optimum bias current to your tapes during recording, there's a bias adjustment for each channel. To quickly set the record equalization, there are high and low speed adjustments readily accessible. Record level pots for each channel are also located here.

Inside, you'll find all the reproduce calibration adjustments including the newest feature: Low Frequency Reproduce Equalization—the final touch for a truly professional recorder. As with all professional machines, this feature is switch defeatable. All alignment controls are clearly marked on the P.C. board and you will also find component identifications on both sides for servicing ease.

On the rear, you have a choice of either IEC or NAB playback equalization. And, while we're on the back panel, we should tell you about the professional XL-type input and output connectors for Mic/Line Input and Line Output. You can operate the B-II vertically or securely lying on its back because the

connections are conveniently tucked into a recessed, slanted interconnection panel.

In addition to a heavy duty power cord and a separate chassis grounding post, you have the ability to connect an optional Remote Transport Controller. All transport functions (Record, Play, Stop, Rewind and Fast Forward) may be operated from this built-in accessory connector. Recapping the additional adjustment features mentioned earlier for the optimization of your B-II, the rear panel has: selectable output level (+4 dBm or −10 dBV); IEC/NAB reproduce equalization; selectable record calibration levels (185, 250 & 320 nWb/m), a 20 dB mic pad and mute.

The Last Few Convenience Features We Shouldn't Forget.

For headphone monitoring, a jack is provided on the front for driving 8 ohm or higher impedance headphones. Next to the jack are two pushbuttons that select from two test signals that come from the built-in test oscillator. We've added a 10 kHz tone to the standard 1 kHz to help you calibrate the Record EQ without the need for an outboard piece of test gear.

This is the professional user orientation that's come to be expected of Otari.

Electronics control panel features access to electronics adjustments for Record Bias, High & Low-speed Record Equalization, and Record Level. A dual frequency test oscillator is built-in.

Rear panel features professional XL-type connectors for all inputs and outputs, switchable output level (+4 dBm or −10 dBV); selectable equalization (IEC/NAB); selectable record fluxivity level calibrations (185, 250 & 320 nWb/m); microphone attenuator (20 dB pad) and the remote transport control jack.

Built To Take Your Worst: The War Stories.

To better illustrate what we mean by "Technology You Can Trust", here are just a few of the situations the legendary 5050B has had to contend with.

In Mississippi, it went through a flood. With hair dryer and rags in hand, an optimistic engineer prayed for the best. A few hours later, his machine was operating. Perfectly.

In a rush to make a remote recording gig, another engineer loaded his car with all the recording gear, but forgot that he'd left his "B" sitting on the car's roof. Bouncing from the roof, to the trunk, and finally to the ground, he knew there wasn't a chance. Until he fired up his "B". He made the session, and the machine made the recording, flawlessly.

In another instance, we received a letter with a photo of a gnarled-looking "B" that had been literally thrown across a control room. Seems a car careened into the side of an L.A. studio (where else?), punctured a studio wall and solidly smashed into the equipment rack. Nobody was hurt, including the 5050B.

We could go on to tell you about the times 5050's bounced down stairs or about some spectacular, fiery crashes, but we believe the few "keep's on ticking" stories we've just related get our point across.

No doubt, your requirements are as tough or tougher, but we're confident the new 5050B-II can handle it.

You Get What You Need.

We've been called The New Workhorse. In a word, RELIABILITY is the reason. The new Otari B-II is a machine that keeps on performing: as you want it, when you need it.

We like to think that our new 5050B-II is really an old, trusty, "B," made ready with the features and suggestions you've asked for over the last five years.

Building on the past, along with the latest advances in electronic engineering, you've helped us create the "B" of tomorrow.

Otari—for nearly two decades, The Technology You Can Trust.

The B-II is a member of the comprehensive Otari family of recorders which includes the 1/4" two track MARK III/2, 1/4" four track BQ-II, 1/2" four track MARK III/4, and the 1/2" eight track MARK III/8.

5050B-II
Options & Accessories

Optional accessories include: Flight case (FC-2B); 19" rack mounting adapters (RK-2B); Remote Transport controller (CB-102); Reel adapters (TW-670); optional transformers (ZA-53S and ZA-53T not pictured—see specifications).

A compact, heavy-duty roll-around pedestal for the 5050B-II is an optional accessory. It may be used with all 5050 series recorders.

5050B-II Specifications

TRANSPORT

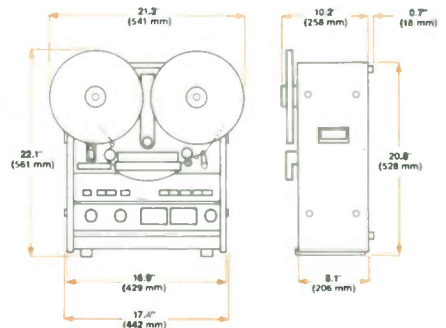|	
Tape Width and Channels:	¼" (6.3mm) tape, 2 channel.
Tape Speeds:	15 and 7.5 ips or 7.5 and 3.75 ips internally switchable speed pairs.
Maximum Speed Deviation:	±0.2%.
Reel Size	¼" ×5, 7 or 10.5" EIA or NAB.
Heads: (4, in-line)	Erase (half track), Play (quarter track), Record (half track), Play (half track).
Motors:	D.C. servo-controlled capstan motor, two induction reel motors.
Rewind Time:	Less than 90 seconds for a 2,400' reel.
Pitch Control:	Variable within ±7%.
Wow and Flutter:	15 ips, less than 0.04%. 7.5 ips, less than 0.07%. 3.75 ips, less than 0.08%.

ELECTRONICS

Connectors:	Line input, Mic input and Line output: standard three pin XL type. Headphone: standard ¼" phone jack.
Inputs:	Line = Active, balanced, 10 kOhms. Mic = Active, balanced: usable, 150 Ohms to 10 kOhms. Switchable 20 dB pad and mute.
Outputs:	Active, balanced 5 Ohms source impedance. +27 dB (ref. 0.775 V) into 600 Ohms or more.
Signal-To-Noise Ratio: (3% Third Harmonic to noise floor, 30-18kHz) NAB EQ	15 ips 72 dB unweighted. 7.5 ips 72 dB unweighted. 3.75 ips 70 dB unweighted.
Equalization:	IEC or NAB, switchable.
Crosstalk:	Less than 55 dB at 1 kHz on adjacent track.
Frequency Response: (Record/Reproduce)	15 ips (0 VU): 25 Hz to 22 kHz ±2.0 dB. 7.5 ips (−10 VU): 20 Hz to 20 kHz ±2.0 dB. 3.75 ips (−20 VU): 20 Hz to 12 kHz ±2.0 dB.
Operating Level:	250 nWb/m, (optionally selectable to 185 or 320 nWb/m).
Distortion: (1 kHz, 250 nWb/m.)	Less than 0.5% Third Harmonic (15 ips).
Test Oscillator Frequencies:	Nominal 1 kHz and 10 kHz.
Test Conditions:	As specified, using 3M #226 tape.

PHYSICAL

Power Requirements:	100/117/220/240 V, ±10%, 50/60 Hz single phase AC, 140 W.
Operating Environment:	40 to 104 degrees F (5° to 40°C), 20 to 80% R.H.
Storage Environment:	−5 to +113 degrees F (−20° to +45°C), 10 to 80% R.H.
Mounting:	Vinyl covered wood case; (RK-2B) Rack mounting kit and (ZA-52L) Roll-around pedestal, optional.
Standard Accessories:	Reel hold down knobs, ¼" × 10½" empty NAB reel, operation manual and power cord.
Optional Accessories:	CB-102 Remote transport control. ZA-52L Roll-around pedestal. ZA-53T Input isolation transformers. ZA-53S Output isolation transformers. RK-2B rack mount. FC-2B flight case.
Weight:	60 lbs. (27 kg).

Manufactured in Japan by Otari Electric Co., Ltd.

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

Model 5050 Two, Four and Eight-Channel Recorders

The Otari MX-5050 Series allows the audio professional to select exactly the right machine for his or her application from a complete range of compact audio recorders. (Please see chart on specifications page.)

All machines feature an optimized three-head design and transformerless balanced inputs and outputs to provide superior frequency response, distortion and signal-to-noise performance under professional studio conditions. They are compatible with all *dbx** noise reduction products. Record setup adjustments can be made from the front panel, and a convenient built-in oscillator provides test tones for calibration/maintenance.

Gapless, seamless, punch-in, punch-out (GSPIPO™) is available on the BQ-III, Mark IV-4, and Mark IV-8 models. This system produces inaudible record inserts by using carefully controlled bias ramping to eliminate the "thump" in the recording.

A 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 four one-touch cue-point memories, search zero, and a repeat function. The tape timer display shows tape time in Hrs/Mins/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 ⅛" deckplate with cast aluminum side panels and steel support members. All circuit boards are designed to swing out or unplug for full service access.

Several transport remote controls are available as options, as well as a roll-around floor stand.

* Trademark dbx, Incorporated

Standard Features:

- Built-in mini-autolocator with four one-touch cue-point memories, search zero and repeat functions
- The tape timer reads HRS/MINS/SECS as well as tape speed in inches per second and percentage of tape speed
- Positive-action transport controls with microprocessor governed logic, motion sensing, and dynamic braking
- 37 pin Otari standard parallel interface for external machine control via SMPTE/EBU time-code-based synchronizers and editors
- DC capstan, Quartz PLL servo-controlled
- Automatic monitor switching[1]
- Plug-in, single card per channel electronics
- Gapless, seamless, punch-in, punch-out[1]
- Rehearse function[2]
- Built-in test oscillator and external oscillator input
- Independently switchable +4 dBu or -16 dBu input and output reference level on each channel (MKIV-4, 8, BQIII).

- Active Balanced Transformerless XL type input and output connectors
- Headphone monitoring of any selected channel combination
- Plug-in three head design with easy access, hinged head cover
- Lighted VU Meters with peak-reading indicators
- Front panel record setup adjustments
- 3 speeds switch selectable in 15/7.5 ips or 7.5/3.75 ips speed pairs[3]
- Fourth head switch selectable for ¼" track stereo playback (B-IIIF only)
- Record reference level is switch selectable (see specifications)
- Equalization switch selectable (NAB/IEC)
- Variable speed control (±20%) usable in record and play
- Dump Edit and Cue (lifter defeat) modes
- Reel Size switches selectable for take-up and supply reels (5"-7," 10.5") EIA or NAB
- Microphone and line mixing on each channel

[1] BQ-III, MARK IV-4 & 8 only
[2] MARK IV-4 & 8 only
[3] 7.5/3.75 ips optional on BQ-III, MARK IV-4 & 8

Standard Accessories:

Power cord
Operation manual
Reel hold down knobs
Capstan lubricating oil
Fuses

Options:

CB-119	Autolocator
CB-120	Autolocator
CB-127	Remote controller
CB-144	Remote controller (MKIV-8)
EC-102	Synchronizer
CB-131	Remote for EC-102
EC-401	Resolver
ZA-53T	Input transformer (B-IIIF, 2, 2E, MKIV-2, 2E)
ZA-53S	Output transformer (B-IIIF, 2, 2E, MKIV-2, 2E)
ZA-52L	Roll-around stand
RK-2B	Rack mount kit (B-IIIF, 2, 2E, BQ-III)
KH-44KB	Full track kit
PB-7WXA	Extension PCB (MKIV-4, 8, BQ-III)
PB-7OQA	Extension PCB (MKIV-4, BQ-III)

16.93" (430mm)

8.11" (206mm)

20.67" (525mm)

8.47" (215mm)

26.77" (680mm)

6.61" (168mm)

18.9" (480mm)

16.93" (430mm)

MX-5050 SERIES CONFIGURATIONS

Model	MKIV-2 Desk Top	MKIV-2E Desk Top	MKIV-4 Desk Top	MKIV-8 Desk Top	BQIII Upright	BIII-F Upright	BIII-2 Upright	BIII-2E Upright
Tape Width	¼"	¼"	½"	½"	¼"	¼"	¼"	¼"
Track Configurations	2T NAB	2T DIN	4T	8T	4T	Mono	2T NAB	2T DIN

SPECIFICATIONS

	MKIV-2 Desk Top	MKIV-2E Desk Top	MKIV-4 Desk Top	MKIV-8 Desk Top	BQIII Upright	BIII-F Upright	BIII-2 Upright	BIII-2E Upright
TRANSPORT								
Head Configurations:	Mono Version; Reproduce, Erase, Record, Reproduce 2CH NAB version (2mm track width); Reproduce, Erase, Record, Reproduce 4CH version (1mm track width); Erase, Record, Reproduce		4CH version (1.8mm track width); Erase, Record, Reproduce; 8CH version (1mm track width); Erase, Record, Reproduce		Mono Version; Reproduce, Erase, Record, Reproduce 2CH NAB version (2mm track width); Reproduce, Erase, Record, Reproduce 4CH version (1mm track width); Erase, Record, Reproduce			
Motors:	D.C. brushless type quartz PLL servo-controlled capstan motor; two induction reel motors							
Reel Size:	NAB 10.5" maximum							
†Tape Speed:	15 ips/7.5 ips & 7.5 ips/3.75 ips Accuracy: ±0.2% Max deviation: 0.2%							
Variable Speed Range:	Variable by ±20% of nominal speed (Resolution 0.01%)							
Wow & Flutter: (Peak WTD DIN 45507)	15 ips Max. ±0.06% 7.5 ips Max. ±0.08% 3.75 ips Max. ±0.12%							
Start Time:	Time required to reach the speed at which wow & flutter value is two times of the specified value.							
	15 ips Max. 0.5 sec. 7.5 ips Max. 0.4 sec. 3.75 ips Max. 0.3 sec.		15 ips Max. 0.7 sec. 7.5 ips Max. 0.5 sec. 3.75 ips Max. 0.4 sec.		15 ips Max. 0.5 sec. 7.5 ips Max. 0.4 sec. 3.75 ips Max. 0.3 sec.			
Stop Time:	Time required to stop from Play mode							
	15 ips Max. 0.5 sec. 7.5 ips Max. 0.3 sec. 3.75 ips Max. 0.3 sec.		15 ips Max. 0.7 sec. 7.5 ips Max. 0.5 sec. 3.75 ips Max. 0.4 sec.		15 ips Max. 0.5 sec. 7.5 ips Max. 0.3 sec. 3.75 ips Max. 0.3 sec.			
Fast Winding Time: (with 2.500 ft tape)	Max. 110 sec. for 50 Hz AC Line frequency Max. 90 sec. for 60 Hz AC Line frequency							
ELECTRONICS								
Inputs:								
Line:	Transformerless active balanced (transformer option), 10 kOhm, 20 Hz to 20 kHz							
Nominal Level:	+4 dBu		+4 dBu/-16 dBu Switchable		+4 dBu			
Max. Level:	+30 dBu							
Mic:	Transformerless active balanced 10 kOhm Min. Level: -70 dBu/-50 dBu/Off Switchable		Unbalanced, 5 kOhm Min. level: -70 dBu/ -50 dBu Switchable	No Mic. input	Unbalanced, 5 kOhm Min. level: -70 dBu/ -50 dBu Switchable	Transformerless active balanced 10 kOhm Min. Level: -70 dBu/-50 dBu/Off Switchable		
Outputs: Line:	Transformerless active balanced, 5 Ohm (20 Hz to 20 kHz)							
Load Impedance:	Min. 200 Ohm		Min. 600 Ohm			Min. 200 Ohm		
Nominal Level:	+4 dBu/-16 dBu Switchable							
Max. Level:	+26 dBu for 200 Ohm load		+26 dBu for 600 Ohm load			+26 dBu for 200 Ohm load		
With the optional output transformer								
Output Impedance:	Max. 5 Ohm (20 Hz to 20 kHz)					Max. 50 Ohm (20 Hz to 20 kHz)		
Load Impedance:	Min. 200 Ohm		Min. 600 Ohm	Min. 600 Ohm	Min. 600 Ohm	Min. 200 Ohm		
Phone Output:	Connector: ¼" standard stereo phone jack load impedance 8 Ohm							
E.Q. Standards:	NAB/IEC selectable		NAB fixed (IEC version option)	IEC fixed (NAB version option)	NAB fixed (IEC version option)	NAB/IEC selectable		
Frequency Response:								
REC/REP:	15 ips (0 VU) 30 -20 kHz, ±2dB		15 ips (0 VU) 40 -20 kHz, +2/-3dB			15 ips (0 VU) 30 -20 kHz, ±2dB		
	7.5 ips (-1 0 VU) 30 -18 kHz, ±2dB		7.5 ips (-1 0 VU) 20 -18 kHz, +2/-3dB			7.5 ips (-1 0 VU) 30 -18 kHz, ±2dB		
	3.75 ips (-2 0 VU) 20 -10 kHz, ±2dB		3.75 ips (-2 0 VU) 20 -10 kHz, +2/-3dB			3.75 ips (-2 0 VU) 20 -10 kHz, ±2dB		
REC/SEL-REP:	15 ips (0 VU) 250 -7.5 kHz, ±3dB		15 ips (0 VU) 50 -15 kHz, ±3dB			15 ips (0 VU) 250- 7.5 kHz, ±3dB		
	7.5 ips (-1 0 VU) 250 -5 kHz, ±3dB		7.5 ips (-1 0 VU) 50 -12 kHz, ±3dB			7.5 ips (-1 0 VU) 250 -5 kHz, ±3dB		
	3.75 ips (-2 0 VU) 250 -2.5 kHz, ±3dB		3.75 ips (-2 0 VU) 50 -8 kHz, ±3dB			3.75 ips (-2 0 VU) 250 -2.5 kHz, ±3dB		
Operating Level:	NAB SRL = 250n Wb/m IEC SRL = 320 (open circuit flux) n Wb/m							

SPECIFICATIONS *(continued)*

Model		MKIV-2 Desk Top		MKIV-2E Desk Top		MKIV-4 Desk Top		MKIV-8 Desk Top		BQIII Upright		BIII-F Upright		BIII-2 Upright		BIII-2E Upright	
Signal-To-Noise Ratio:		Measured with respect to a recording level of 1,040 n Wb/m for 15, 7.5 ips and 740 n Wb/m for 3.75 ips															
		Unwtd: Using a 30 Hz to 18 kHz RC filter				Wtd: Using a NAB or ANSI "A" weighting filter and a 1 kHz reference.											
		Unwtd 2mm	Wtd. 2mm	Unwtd 2.75mm	Wtd 2.75mm	Unwtd	Wtd.	Unwtd	Wtd	Unwtd	Wtd.	Unwtd.	Wtd.	Unwtd 2mm	Wtd. 2mm	Unwtd. 2.75mm	Wtd. 2.75mm
15 ips	IEC	71	74	72	75	69	72	66	69	66	69	75	78	71	74	72	75
	NAB	69	72	70	73	67	70	64	67	64	67	73	76	69	72	70	73
7.5 ips	IEC	68	71	69	72	66	69	63	66	63	66	72	75	68	71	69	72
	NAB	71	73	72	74	69	71	66	68	66	68	75	77	71	73	72	74
3.75 ips	IEC	64	67	65	68	62	65	59	62	59	62	68	71	64	67	65	68
	NAB	64	67	65	68	62	65	59	62	59	62	68	71	64	67	65	68
Distortion:		15 ips, 1 kHz, 250 n Wb/m															
		Max. 0.3%						Max. 0.5%				Max. 0.3%					
Crosstalk:		Between adjacent audio tracks, Recording Signal: 1 kHz															
(REC/REP)		Min. 55 dB		Min. 48 dB		Min. 65 dB		Min. 55 dB						Min. 55 dB		Min. 48 dB	
Depth of Erasure:		1 kHz, 1040 n Wb/m, 15 ips															
		Min. 75 dB		Min. 70 dB		Min. 70 dB				Min. 72 dB		Min. 75 dB		Min. 75 dB		Min. 70 dB	
Test Oscillator Frequency:		1 kHz/10 kHz Sine Wave				100/1 kHz/10 kHz Sine Wave						1 kHz/10 kHz Sine Wave					
Bias, Erase Frequency:		133 kHz				192 kHz						133 kHz					
Power Requirements:		100, 117, 200, 240 V ±10% 50/60 Hz Single Phase AC															
		100 VA						150 VA				100 VA					
Environmental Condition:		Operation: 5° to 40°C (41° to 104°F) Storage: -20° to 45°C (-4° to 113°F)															
Dimension:		480mm x 430 mm x 680 mm (Height x Width x Depth)															
Weight:		30 Kg				32 Kg		35 Kg		27 Kg		24 Kg					

NOTE 1: B-III & MARK IV-2 models offer 3 speeds switch selectable from 15/7.5 ips or 7.5/3.75 ips speed pairs. The 7.5/3.75 ips pair is optional on BQ-III & MARK IV-4 & 8 models.

Manufactured in Japan by Otari, Inc.
Otari reserves the right to change specifications without notice or obligation.

OTARI

OTARI

Model 5050 B-II
¼ ″ Two Channel Recorder

The Otari 5050 B-II is a compact recorder in the ¼ ″ two channel format. The optimized three head design and transformerless balanced inputs and outputs provide superior frequency response, distortion and signal-to-noise performance under professional studio conditions.

The capstan motor is under servo control and is switchable between 15/7.5 ips and 7.5/3.75 ips speed pairs. An integral microprocessor controls the real-time counter which features an HRS/MINS/SECS L.E.D. display that is tape accurate at all three speeds.

Front panel access is provided for record setup adjustments and a built in oscillator provides 1 kHz and 10 kHz tones.

The extremely rugged mechanical construction includes a ¼ ″ deckplate with cast aluminum side panels and steel support members. All circuit boards are designed to swing out or unplug for full service access.

The 5050 B-II is compatible with all dbx[1] noise reduction products.

A transport remote control (model CB-102) is available as an option, as well as a roll-around floor stand (ZA-52L).

Each 5050 B-II incorporates these standard features:

- Transformerless balanced inputs and outputs with XL type connectors.
- Line output switch selectable for +4 dBm or −10 dBV level.
- Mic input has switch selectable 20 dB pad and mute.
- Mic/Line mixing on each channel.
- Headphone monitor output.
- Lighted VU meters with L.E.D. peak indication.
- 3 speeds switch selectable in 15/7.5 ips or 7.5/3.75 ips speed pairs.
- Record reference level switch selectable (185, 250, 320 nWb/m.)
- Equalization switch selectable (NAB, IEC).
- Reel Size switch selectable (5″-7″, 10.5″) EIA or NAB.
- Low frequency reproduce eq. adjustable.
- Fourth head switch selectable for ¼ track stereo playback.
- Plug-in head assembly with hinged cover for easy access.
- Front panel record setup adjustments.
- Integral splicing block.
- Built-in test oscillator (1 kHz, 10 kHz).
- Microprocessor-controlled HRS/MINS/SECS real-time counter with L.E.D. display.
- Dump Edit and Cue (lifter defeat) modes.
- D.C. capstan motor, servo controlled.
- Variable speed control (±7%) usable in record and play.
- Memory stop switch selectable to stop tape when rewinding past 0:00:00.

The 5050 B-II Recorders are covered by a one-year parts and labor limited warranty. Heads, pinch roller, fuses, and lamps have a 90-day parts warranty.

Call or write for full color, descriptive brochure.

¹Trademark dbx, Incorporated

5050 B-II ¼″ TWO CHANNEL SPECIFICATIONS

TRANSPORT

|	
Tape Width and Channels:	¼″ (6.3mm) tape, 2 channel
Tape Speeds:	15 and 7.5 ips or 7.5 and 3.75 ips internally switchable speed pairs
Maximum Speed Deviation:	±0.2%
Reel Size	¼″ ×5, 7 or 10.5″ EIA or NAB
Heads: (4, in-line)	Erase (half track), Play (quarter track), Record (half track), Play (half track)
Motors:	D.C. servo-controlled capstan motor, two induction reel motors
Rewind Time:	Less than 90 seconds for a 2,400′ reel
Pitch Control:	Variable within ±7%
Wow and Flutter:	15 ips, less than 0.04% 7.5 ips, less than 0.07% 3.75 ips, less than 0.08%

ELECTRONICS

Connectors:	Line input, Mic input and Line output: standard three pin XL type. Headphone: standard ¼″ phone jack
Inputs:	Line: Active, balanced, 10 kOhms Mic: Active, balanced, usable: 150 Ohms to 10 kOhms Switchable 20 dB pad and mute
Outputs:	Active, balanced 5 Ohms source impedance +27 dB (ref. 0.775 V) into 600 Ohms or more
Signal-To-Noise Ratio: (3% Third Harmonic to noise floor, 30-18kHz) NAB EQ	15 ips 72 dB unweighted 7.5 ips 72 dB unweighted 3.75 ips 70 dB unweighted
Equalization:	IEC or NAB, switchable
Crosstalk:	Less than 55 dB at 1 kHz on adjacent track
Frequency Response: (Record/Reproduce)	15 ips (0 VU): 25 Hz to 22 kHz ±2.0 dB 7.5 ips (−10 VU): 20 Hz to 20 kHz ±2.0 dB 3.75 ips (−20 VU): 20 Hz to 12 kHz ±2.0 dB
Operating Level:	250 nWb/m, (optionally selectable to 185 or 320 nWb/m)
Distortion: (1 kHz, 250 nWb/m.)	Less than 0.5% Third Harmonic (15 ips)
Test Oscillator Frequencies:	Nominal 1 kHz and 10 kHz
Test Conditions:	As specified, using 3M #226 tape

PHYSICAL

Power Requirements:	100/117/220/240 V, ±10%, 50/60 Hz single phase AC, 140 W
Operating Environment:	40 to 104 degrees F (5° to 40°C), 20 to 80% R.H.
Storage Environment:	−5 to +113 degrees F (−20° to +45°C), 10 to 80% R.H.
Mounting:	Vinyl covered wood case; (RK-2B) Rack mounting kit and (ZA-52L) Roll-around stand optional
Standard Accessories:	Reel hold down knobs, ¼″ × 10½″ empty NAB reel, operation manual and power cord
Optional Accessories:	CB-102 Remote transport control ZA-52L Roll-around stand ZA-53T Input isolation transformers ZA-53S Output isolation transformers RK-2B rack mount FC-2B flight case
Weight:	60 lbs. (27 kg)

Manufactured in Japan by Otari Electric Co., Ltd.
Otari reserves the right to change specifications without notice or obligation.

21.3″ (541mm)

22.1″ (561mm)

16.9″ (429mm)

17.4″ (442mm)

10.2″ (258mm)   0.7″ (18mm)

20.8″ (528mm)

8.1″ (206mm)
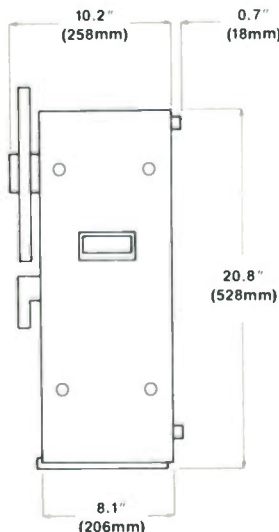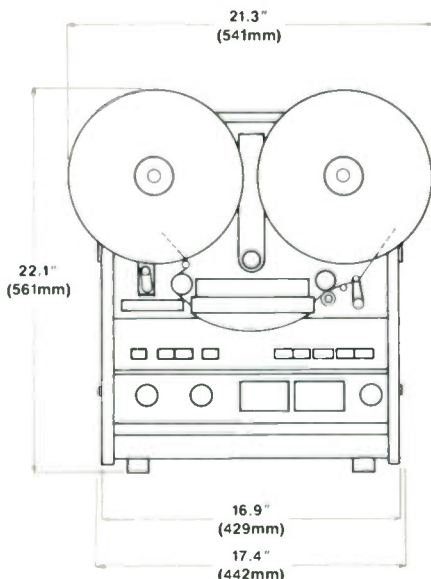
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OTARI.

Model 5050 MARK III/2
1/4" Two Channel Recorder

The Otari 5050 MARK III/2 is a compact, tabletop console recorder in the 1/4" two channel format. The optimized three head design and transformerless balanced inputs and outputs provide superior frequency response, distortion and signal-to-noise performance under professional studio conditions.

The Capstan motor is under servo control and is switchable between 15/7.5 ips and 7.5/3.75 ips speed pairs. Proprietary microprocessors govern tape handling and the real-time electronic counter which features an HRS/MINS/SECS L.E.D. display that is tape accurate at all speeds.

Front panel access is provided for record setup adjustments and a built-in oscillator provides 1 kHz and 10 kHz tones.

The multipin interface connector permits easy connection to SMPTE based controllers and synchronizers.

Two optional remote control units are available. The CB-102 duplicates the MARK III/2's transport control and Record buttons. The CB-116 Autolocator includes the CB-102 functions, plus a separate HRS/MINS/SECS L.E.D. display and six cue point memories for search and repeat operations.

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 full service access.

The MARK III/2 is compatible with all dbx* noise reduction products.

Each 5050 MARK III/2 incorporates these standard features:

- Positive-action transport controls with microprocessor governed logic, motion sensing, and Dynamic Braking
- Interface connector for external machine control via SMPTE/EBU time code-based synchronizers and editors
- D.C. capstan, servo-controlled
- Transformerless balanced inputs and outputs with XL type connectors
- Built-in test oscillator (1 kHz, 10 kHz)
- Front panel record setup adjustments
- 3 speeds switch selectable in 15/7.5 ips or 7.5/3.75 ips speed pairs
- Fourth head switch selectable for ¼ track stereo playback
- Microprocessor-controlled HRS/MINS/SECS real-time counter with L.E.D. display
- Zero Return button operational from positive or negative tape locations
- Line output switch selectable for +4 dBm or −10 dBV level
- Mic input has switch selectable 20 dB pad and mute
- Mic/Line mixing on each channel
- Record reference level switch selectable (185, 250, 320 nWb/m)
- Equalization switch selectable (NAB, IEC)
- Lighted V.U meters with L.E.D. peak indication
- Headphone monitor output
- Plug-in head assembly with hinged cover for easy access
- Variable speed control (±7%) usable in record and play
- Dump Edit and Cue (lifter defeat) modes
- Reel Size switch selectable (5"-7", 10.5") EIA or NAB
- Low frequency reproduce eq. adjustable
- Integral splicing block

MARK III/2 Recorders are covered by a one-year parts and labor limited warranty. Heads, pinchroller, fuses and lamps have a 90-day parts warranty.

Call or write for a full color, descriptive brochure.

*Trademark dbx, Incorporated

5050 MARK III/2 ¼" TWO CHANNEL SPECIFICATIONS

TRANSPORT

|	
Tape Width and Channels:	¼" (6.3mm) tape, 2 channel
Tape Speeds:	15 and 7.5 ips or 7.5 and 3.75 ips internally switchable speed pairs
Maximum Speed Deviation:	±0.2%
Reel Size:	¼" × 5, 7 or 10.5" EIA or NAB
Heads: (4, In-line)	Erase (half track), Play (quarter track), Record (half track), Play (half track)
Motors:	D.C. servo-controlled capstan motor, two induction reel motors
Rewind Time:	Less than 90 seconds for a 2,400' reel
Pitch Control:	Variable within ±7%
Wow and Flutter: (NAB weighted)	15 ips, less than 0.04% 7.5 ips, less than 0.07% 3.75 ips, less than 0.08%

ELECTRONICS

Connectors:	Line input, Mic input and Line output: standard three pin XL type. Headphone: standard ¼" phone jack
Inputs:	Line = Active, balanced, 10 kOhms Mic = Active, balanced, usable: 150 Ohms to 10 kOhms Switchable 20 dB pad and mute
Outputs:	Active, balanced 5 Ohms source impedance + 27 dB (ref. 0.775 V) into 600 Ohms or more
Signal-To-Noise Ratio: (3% Third Harmonic to noise floor, 30-18kHz NAB EQ	15 ips 68 dB unweighted 7.5 ips 71 dB unweighted 3.75 ips 69 dB unweighted
Equalization:	IEC or NAB, switchable
Crosstalk:	Less than 55 dB at 1 kHz on adjacent track
Frequency Response: Record/Reproduce:	15 ips (0 VU): 30 Hz to 20 kHz, ±2.0 dB 7.5 ips (−10 VU): 30 Hz to 20 kHz, ±2.0 dB 3.75 ips (−20 VU): 20 Hz to 12 kHz, ±2.0 dB
Operating Level:	250 nWb/m
Distortion:	Less than 0.5% Third Harmonic
Test Oscillator Frequencies:	Nominal 1 kHz and 10 kHz
Test Conditions:	As specified, using Ampex #456 tape

PHYSICAL

Power Requirements:	110/117 220/240 V, ±10%, 50 60 Hz, single phase AC, 140W
Operating Environment:	40 to 104°F(5° to 40°C), 20 to 80% R.H.
Storage Equipment:	−5 to +113°F(−20° to 45°C), 10 to 80% R.H.
Mounting:	Vinyl covered wood case; (RK-32) Rack mounting kit and (ZA-52L) Roll-around pedestal, optional
Standard Accessories:	Reel hold down knobs, ¼" × ½" empty NAB reel, operation manual and power cord
Optional Accessories:	CB-116 Autolocator CB-102 Remote transport control ZA-52L Roll-around pedestal ZA-53T Input isolation transformers ZA-53S Output isolation transformers RK-32 Rack mount
Shipping Weight:	105 lbs. (48 kg) in shipping carton

Manufactured in Japan by Otari Electric Co., Ltd.
Otari reserves the right to change specifications without notice or obligation.

21.3" (541mm)
17.3" (438mm)
15.3" (388mm)

28.25" (718mm)
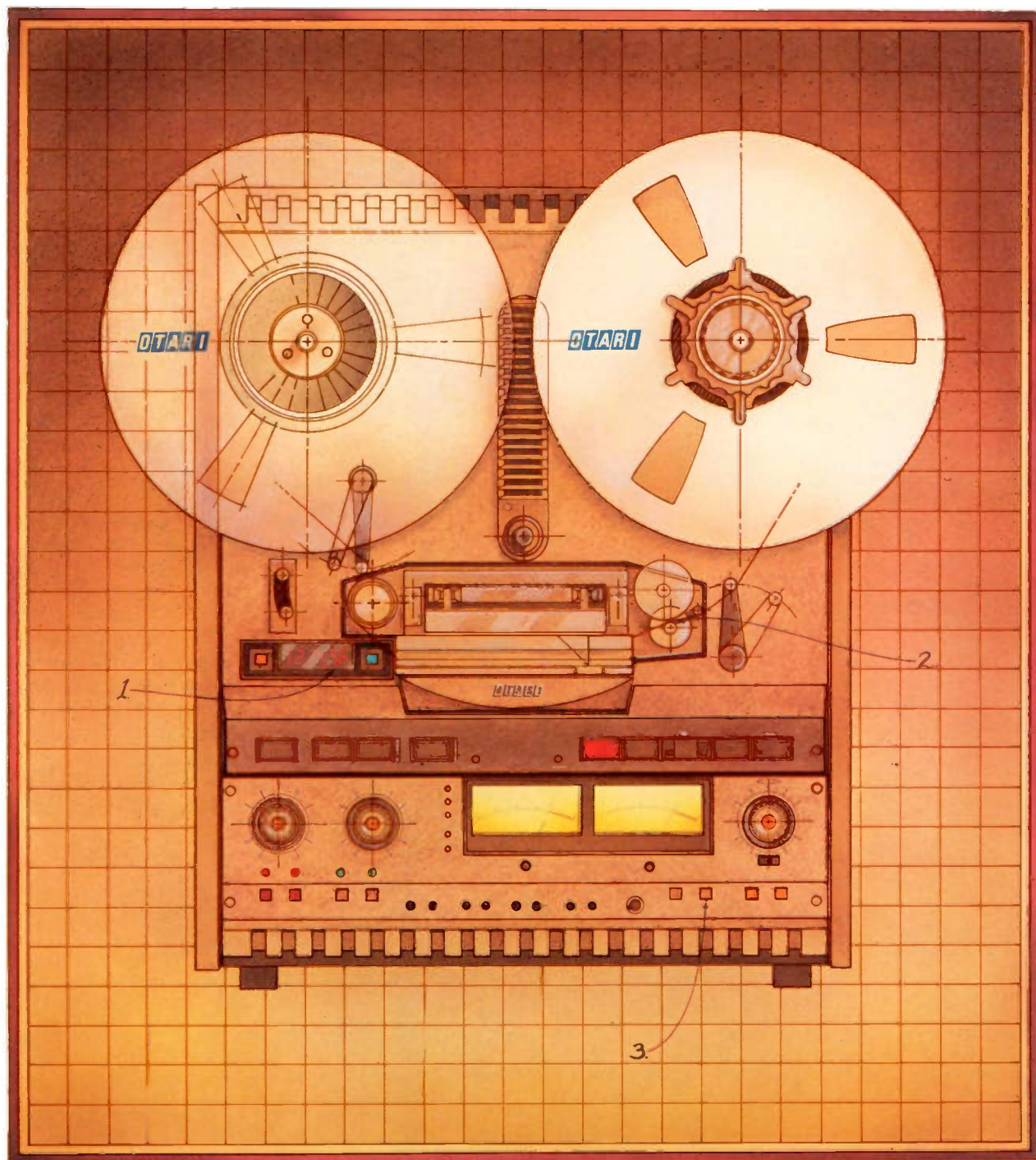18.75" (476mm)
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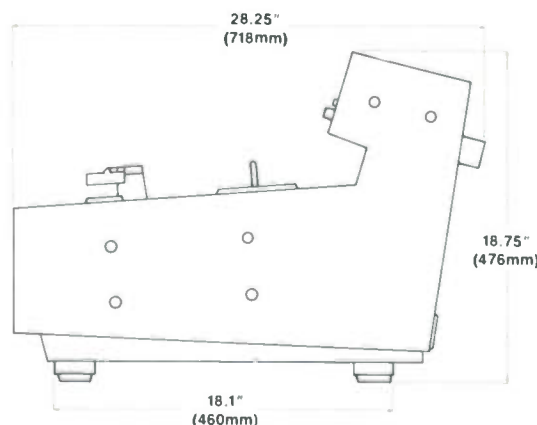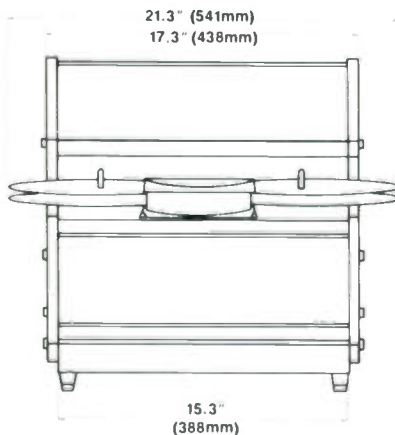
OTARI ®

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TECHNOLOGY YOU CAN TRUST

The Otari ¼" Two Channel 5050B-II

TECHNOLOGY YOU CAN TRUST

We Didn't Change A Winner, We Just Made It Better.

W e think you'll be impressed with the features we've added to the second generation 5050B two-track recorders. We also think you'll be pleased with what we haven't changed.

When we introduced the "B" a little more than five years ago we knew we had a good machine. What we didn't anticipate however, was that you would make it the best-selling professional 1/4" two track in the world!

If you're already an owner of a 5050B, or you've become familiar (and fond) of someone's you know, a quick read-through of this brochure will acquaint you with the new features.

If you're not already a proud owner, then find out why so many professionals are.

The Things That Haven't Changed.

B ehind the clean, new look of the new "B-II" is the same rugged, 9 millimeter deckplate and cast aluminum chassis. Securely mounted to this deck are two heavy-duty six pole A.C. induction torque motors for moving the tape reels, and a precision, D.C. servo-controlled motor for direct capstan tape drive.

2

The B-II comes set up for 7.5/15 ips operation, and can be internally switched (field convertible) to 3.75/7.5 ips. All three speeds have individual reproduce equalizers and the two record amps are easily recalibrated for high or low speed pairs. In either speed pair, record equalization is automatically changed and requires no further adjustment.

The tape path is simple and straightforward. So are the positive-locking, NAB reel adapters.

Other Important Transport Features That Haven't Changed.

They always say four heads are better than three, so that's what comes with the B-II. In addition to the standard half-track reproduce head, an extra reproduce head is included to give you 1/4 track playback capability. You can easily switch operation between these two reproduce heads with a conveniently located switch on top of the head assembly. The head assembly is plug-in for ease of replacement or servicing should it be required. The heads are constructed from hard Permalloy, so that you have the best of both extended head life and optimum signal output level. The head cover is hinged to flip up and provide easy access for cleaning and aligning the tape path.

All controls for transport movement and Record/Play are large, positive responding pushbutton controls. Motion sensing is used in the transport logic so that the machine may be switched between modes without annoying time delays. This design also eliminates breaking or stretching the tape.
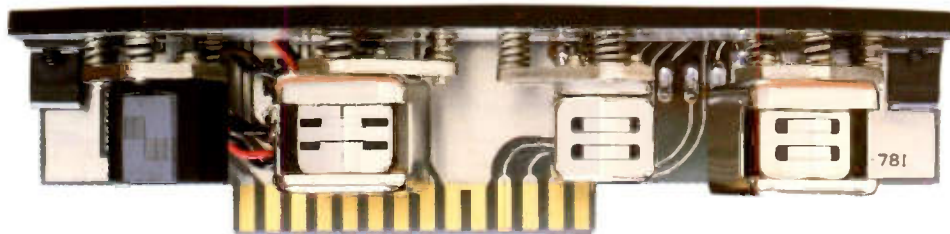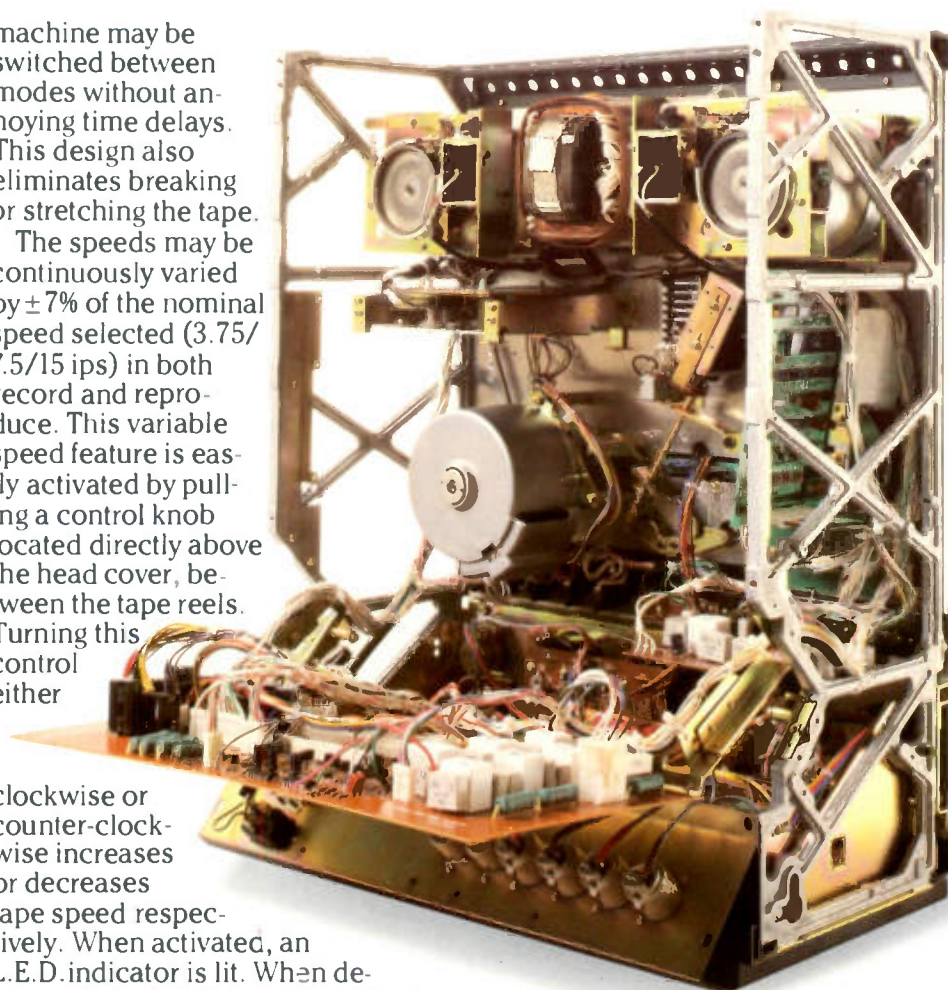
The speeds may be continuously varied by ±7% of the nominal speed selected (3.75/7.5/15 ips) in both record and reproduce. This variable speed feature is easily activated by pulling a control knob located directly above the head cover, between the tape reels. Turning this control either clockwise or counter-clockwise increases or decreases tape speed respectively. When activated, an L.E.D. indicator is lit. When depressed, the L.E.D. is extinguished to alert a return to the selected, calibrated tape speed. This feature is a lifesaver for applications such as synchronizing the pitch of previously recorded material with the pitch of instruments to be recorded on a second track.

Editing on the "B-II" is a powerful production time-saver. By simply engaging the front panel Edit switch, the take-up reel and tension arm switch are defeated, allowing tape to spill between the capstan and take-up reel. An L.E.D. indicator reports this machine status. The edit mode can be entered from either Play or from Stop. Precise edit points are easily located by "hands-on" reel rocking. A built-in splicing block on the head cover is precision aligned and indexed to the heads for fast production work.

Just below the left reel is an adjustable Cue control which defeats the tape lifters during the fast wind modes. This useful production feature allows you to hear the tape and search for selections while fast winding. It's adjustable so that you may vary the signal volume without overloading headphones or monitors, or it may be locked in position.

Plug-in assembly includes fourth head for 1/4 track Stereo playback. Mono full-track and 1/4 track stereo versions also available.

5050B-II New Features.

☐ Transformerless balanced microphone inputs with switchable 20 dB pad and mute.
☐ Transformerless balanced line inputs and outputs.

☐ Variable low frequency reproduce equalization (switch defeatable).
☐ Microprocessor-controlled, real-time counter with Memory Rewind and L.E.D. display.

☐ Dual frequency oscillator (1 & 10 kHz).
☐ Front panel record level indicators (185, 250, & 320 nWb/m).
☐ Front panel equalization indicators (IEC/NAB).

5050B-II Features.

1. D.C. capstan, servo-controlled.

2. Switch selectable 1/4 track or 1/2 track playback head.

3. Positive-locking NAB hub adapters.

4. Variable speed control (±7%).

5. Hinged head cover with integral tape splicing block.

6. Plug-in four head design; Perm-alloy for optimum head life and maximum output.

7. Adjustable Cue control (tape lifter defeat).

8. Microprocessor-controlled, real-time counter with Memory Rewind and Reset.

9. Reel size compensation switch.

10. Speed select (chooses high or low speed of internally selected speed pair).

11. Dump edit switch (spills tape between capstan and take-up reel).

12. Transport controls with full motion-sensing logic.

13. Microphone and Line input mixing on each channel.

14. Safe/Ready switch for each channel (with L.E.D. indicators).

15. Selective Reproduce for overdubbing.

16. Front panel record calibration adjustments.

17. Lighted V.U. meters with L.E.D. peak indicators.

18. Headphone jack.

19. Tape or Source monitor select.

20. Output level control.

21. SRL select switch with L.E.D. indicator (switchable between variable output and Standard Reference Level).

Tape accurate at all speeds, a microprocessor-controlled real-time counter features a Memory Rewind and L.E.D. display in hours, minutes and seconds.

New! A Feature That Removes The Guesswork.

The new B-II now includes a microprocessor chip that accurately counts elapsed time in hours, minutes and seconds. Tape accurate at all speeds, it has a multi-digit L.E.D. display with both positive and negative domain. This feature is extremely helpful in situations such as spot production where an accurate measure of program time is critical.

When you need to play and repeat a section continuously, we've given you a feature we call Memory Rewind. You'll call it great. With the Memory button depressed, the transport will enter the Stop mode when rewinding past "0.00.00". The Reset button returns the real-time display to "0.00.00" regardless of actual tape location.

The Electronics: New And Improved!

Now, here's where the new B-II leaps ahead of the other guys' "Hi-Fi" heritage.

Concentric Mic/Line Input level controls for each channel permit you to mix on the machine if you wish. For added versatility when using preamplifiers or high output microphones, a rear panel switch inserts a 20 dB pad on each channel.

The microphone inputs are balanced and transformerless to put as little as possible between the sound and the tape. The line inputs and outputs are also balanced and transformerless to achieve the lowest noise figures, highest fidelity and professional flexibility. Optional transformers are available should your application require them.

Next to the input level controls are two large, easy-to-read lighted V.U. meters with peak-responding L.E.D.'s. Factory calibrated to +9dB, a different threshhold may be user adjusted for this important feature. Concentric output level controls are adjacent to the meters. Below these controls is a switch for selection of Standard Reference Level (SRL) or a variable output position. Normally +4 dBm for a balanced 600 ohm line, the output of the B-II may be changed to −10 dBV by a rear panel switch to facilitate the interface with low-level mixers or peripheral equipment.

To optimize performance with tapes which have been recorded at another facility, there's a Ref Flux switch that will give you a choice of three reference fluxivity levels: 185, 250 & 320 nWb/m. (The latter being the IEC and DIN standard). This same flexibility allows you to choose how "hot" a recorded level gets put on tape. Front panel L.E.D. indicators report the selection of the chosen calibration level.

A pair of Record/Ready pushbuttons enables the individual channels for recording. Each button has a red L.E.D. above it which indicates whenever recording is possible for the selected channel(s). When depressed, a separate indicator next to the Record pushbutton control on the transport continuously flashes to indicate that at least one of the channels is record ready. The continuous flashing in this Record/Ready mode is visible at a distance and helps prevent accidental erasure. When recording, this indicator glows steadily.

Quiet, click and pop-free "punch-in" recording can be made on the run with the B-II because of specially engineered TTL/IC logic. The quiet "punch-in, punch-out" feature is indispensible for overdubbing. The Selective Reproduce function permits a new track to be laid down next to a previously recorded track with perfect synchronization. By depressing either of two Sel-Rep pushbuttons, the tape is played back through the record head. This enables you to record on the opposite channel in time synchronization with the program monitored through the selected Sel-Rep channel. A green L.E.D. above the Sel-Rep buttons indicates their status.

The B-II is compatible with Dolby®[1] and dbx®[2] noise reduction products.

1 Dolby is a registered trademark of Dolby Labs, Inc.
2 dbx is a registered trademark of dbx, Inc.

Extensive Adjustments For Optimum Calibration Of Your B-II.

No internal adjustments are required for record calibration. Located across the front of the B-II is every conceivable feature you need to obtain the optimum performance you want from your recorder.

To put the optimum bias current to your tapes during recording, there's a bias adjustment for each channel. To quickly set the record equalization, there are high and low speed adjustments readily accessible. Record level pots for each channel are also located here.

Inside, you'll find all the reproduce calibration adjustments including the newest feature: Low Frequency Reproduce Equalization—the final touch for a truly professional recorder. As with all professional machines, this feature is switch defeatable. All alignment controls are clearly marked on the P.C. board and you will also find component identifications on both sides for servicing ease.

On the rear, you have a choice of either IEC or NAB playback equalization. And, while we're on the back panel, we should tell you about the professional XL-type input and output connectors for Mic/Line Input and Line Output. You can operate the B-II vertically or securely lying on its back because the connections are conveniently tucked into a recessed, slanted interconnection panel.

In addition to a heavy duty power cord and a separate chassis grounding post, you have the ability to connect an optional Remote Transport Controller. All transport functions (Record, Play, Stop, Rewind and Fast Forward) may be operated from this built-in accessory connector. Recapping the additional adjustment features mentioned earlier for the optimization of your B-II, the rear panel has: selectable output level (+4 dBm or −10 dBV); IEC/NAB reproduce equalization; selectable record calibration levels (185, 250 & 320 nWb/m), a 20 dB mic pad and mute.

The Last Few Convenience Features We Shouldn't Forget.

For headphone monitoring, a jack is provided on the front for driving 8 ohm or higher impedance headphones. Next to the jack are two pushbuttons that select from two test signals that come from the built-in test oscillator. We've added a 10 kHz tone to the standard 1 kHz to help you calibrate the Record EQ without the need for an outboard piece of test gear.

This is the professional user orientation that's come to be expected of Otari.

Electronics control panel features access to electronics adjustments for Record Bias, High & Low-speed Record Equalization, and Record Level. A dual frequency test oscillator is built-in.

Rear panel features professional XL-type connectors for all inputs and outputs, switchable output level (+4 dBm or −10 dBV); selectable equalization (IEC/NAB); selectable record fluxivity level calibrations (185, 250 & 320 nWb/m); microphone attenuator (20 dB pad) and the remote transport control jack.

Built To Take Your Worst: The War Stories.

T o better illustrate what we mean by "Technology You Can Trust", here are just a few of the situations the legendary 5050B has had to contend with.

In Mississippi, it went through a flood. With hair dryer and rags in hand, an optimistic engineer prayed for the best. A few hours later, his machine was operating. Perfectly.

In a rush to make a remote recording gig, another engineer loaded his car with all the recording gear, but forgot that he'd left his "B" sitting on the car's roof. Bouncing

from the roof, to the trunk, and finally to the ground, he knew there wasn't a chance. Until he fired up his "B". He made the session, and the machine made the recording, flawlessly.

In another instance, we received a letter with a photo of a gnarled-looking "B" that had been literally thrown across a control room. Seems a car careened into the side of an L.A. studio (where else?), punctured a studio wall and solidly smashed into the equipment rack. Nobody was hurt, including the 5050B.

We could go on to tell you about the times 5050's bounced down stairs or about some spectacular, fiery crashes, but we believe the few "keep's on ticking" stories we've just related get our point across.

No doubt, your requirements are as tough or tougher, but we're confident the new 5050B-II can handle it.

You Get What You Need.

W e've been called The New Workhorse. In a word, RELIABILITY is the reason. The new Otari B-II is a machine that keeps on performing: as you want it, when you need it.

We like to think that our new 5050B-II is really an old, trusty, "B," made ready with the features and suggestions you've asked for over the last five years.

Building on the past, along with the latest advances in electronic engineering, you've helped us create the "B" of tomorrow.

Otari—for nearly two decades, The Technology You Can Trust.

The B-II is a member of the comprehensive Otari family of recorders which includes the 1/4" two track MARK III/2, 1/4" four track BQ-II, 1/2" four track MARK III/4, and the 1/2" eight track MARK III/8.

5050B-II Options & Accessories

Optional accessories include: Flight case (FC-2B); 19" rack mounting adapters (RK-2B); Remote Transport controller (CB-102); Reel adapters (TW-670); optional transformers (ZA-53S and ZA-53T not pictured—see specifications).

A compact, heavy-duty roll-around pedestal for the 5050B-II is an optional accessory. It may be used with all 5050 series recorders.

5050B-II Specifications

TRANSPORT

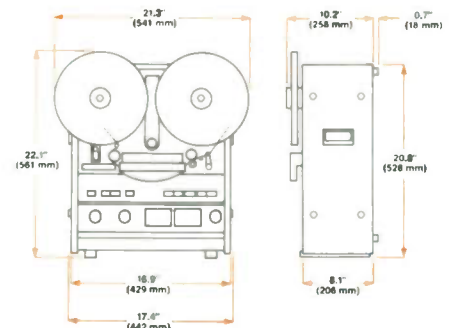|	
Tape Width and Channels:	¼" (6.3mm) tape, 2 channel.
Tape Speeds:	15 and 7.5 ips or 7.5 and 3.75 ips internally switchable speed pairs.
Maximum Speed Deviation:	± 0.2%.
Reel Size	¼" × 5, 7 or 10.5" EIA or NAB.
Heads: (4, in-line)	Erase (half track), Play (quarter track), Record (half track), Play (half track).
Motors:	D.C. servo-controlled capstan motor, two induction reel motors.
Rewind Time:	Less than 90 seconds for a 2,400' reel.
Pitch Control:	Variable within ± 7%.
Wow and Flutter:	15 ips, less than 0.04%. 7.5 ips, less than 0.07%. 3.75 ips, less than 0.08%.

ELECTRONICS

Connectors:	Line input, Mic input and Line output: standard three pin XL type. Headphone: standard ¼" phone jack.
Inputs:	Line = Active, balanced, 10 kOhms. Mic = Active, balanced: usable, 150 Ohms to 10 kOhms. Switchable 20 dB pad and mute.
Outputs:	Active, balanced 5 Ohms source impedance. + 27 dB (ref. 0.775 V) into 600 Ohms or more.
Signal-To-Noise Ratio: (3% Third Harmonic to noise floor, 30-18kHz) NAB EQ	15 ips 72 dB unweighted. 7.5 ips 72 dB unweighted. 3.75 ips 70 dB unweighted.
Equalization:	IEC or NAB, switchable.
Crosstalk:	Less than 55 dB at 1 kHz on adjacent track.
Frequency Response: (Record/Reproduce)	15 ips (0 VU): 25 Hz to 22 kHz ± 2.0 dB. 7.5 ips (− 10 VU): 20 Hz to 20 kHz ± 2.0 dB. 3.75 ips (− 20 VU): 20 Hz to 12 kHz ± 2.0 dB.
Operating Level:	250 nWb/m, (optionally selectable to 185 or 320 nWb/m).
Distortion: (1 kHz, 250 nWb/m.)	Less than 0.5% Third Harmonic (15 ips).
Test Oscillator Frequencies:	Nominal 1 kHz and 10 kHz.
Test Conditions:	As specified, using 3M #226 tape.

PHYSICAL

Power Requirements:	100/117/220/240 V, ± 10%, 50/60 Hz single phase AC, 140 W.
Operating Environment:	40 to 104 degrees F (5° to 40°C), 20 to 80% R.H.
Storage Environment:	− 5 to + 113 degrees F (− 20° to + 45°C), 10 to 80% R.H.
Mounting:	Vinyl covered wood case; (RK-2B) Rack mounting kit and (ZA-52L) Roll-around pedestal, optional.
Standard Accessories:	Reel hold down knobs, ¼" × 10½" empty NAB reel, operation manual and power cord.
Optional Accessories:	CB-102 Remote transport control. ZA-52L Roll-around pedestal. ZA-53T Input isolation transformers. ZA-53S Output isolation transformers. RK-2B rack mount. FC-2B flight case.
Weight:	60 lbs. (27 kg).

Manufactured in Japan by Otari Electric Co., Ltd.

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

OTARI

THE MARK III SERIES
Technology you can Trust.

OTARI

MX5050

| EDIT | | RECORD | PLAY | | STOP | REWIND | F·FWD |

OTARI'S MARK III SERIES. A COMPLETE LINE OF PROFESSIONAL AUDIO TAPE RECORDER/REPRODUCERS FOR BROADCAST PRODUCTION, AUDIO POST-PRODUCTION AND RECORDING STUDIO APPLICATIONS.

Otari's MARK III/2, 4 & 8 recorders, offer the professional a complete range of innovative features and accessories to make any audio recording task easier and more cost effective.

The MARK III/2 ¼" two-channel machine is ideal for recording studio mixdown, as well as for broadcast editing applications. In audio-for-video or film sound production, Otari's optional speed resolver (the EC-401) makes the MARK III/2 the right choice for daily transfer applications using pilot-tone synchronization.

The MARK III/4 provides you with the ½" four-channel format which has been the world standard for both audio post-production mixdown and broadcast production – at a *great* price.

The MARK III/8, ½" eight-channel machine offers the recording studio many of the features of Otari's legendary MTR-90, plus performance that rivals 1" eight-channel machines.

The MARK III/8 also brings multitrack flexibility to the new task of production for stereo radio. The audio post-production world especially benefits from the MARK III/8's ability to communicate with SMPTE time-code-based editors, machine controllers, or synchronizers via its convenient and comprehensive interface connector.

This brochure will show you how Otari's MARK III series offers you the right combination of performance features, great sound, and long-run reliability for any recording application – in the most sophisticated production studio, or in your own home studio.

The zero return and reset electronic counter, with an hours/minutes/seconds display, is tape accurate at all operating speeds.

THE MARK III/2, ¼″ TWO-CHANNEL RECORDER

Uncompromising
design, from its
optimized three
head configuration, to its world-
wide reputation for reliability and
quality, the MARK III/2 offers
audio professionals everywhere
the best performing ¼″ two-
channel machine in its price
category.

Professional Features that make the MARK III/2 easy to use

□ Transformerless, balanced in-
puts and outputs with XL type
connectors
□ Dual-element metering system
with user-adjustable, peak
reading LEDs, plus standard
VU metering for monitoring of
program levels
□ Built-in test oscillators (1 kHz,
10 kHz) for Record alignments
or for putting test tones on tape
□ Front panel Record setup ad-
justments allow machine to be
easily fine-tuned for maximum
performance
□ Line output is switch selectable
for +4 dBm or −10 dBV level
to interface with any system
□ Headphone amplifier with
channel select and level control
□ Transformerless, balanced mic
input with selectable 20 dB pad
(and mute)
□ Mic/Line mixing on each
channel

□ Record reference levels are
switch selectable (185, 250,
320, nWb/m) to allow quick
and easy compensation for
changing recording tasks
□ Equalization is switch select-
able (NAB, IEC) for internation-
al compatability
□ Low frequency Reproduce
equalization adjustments for
full professional set-up
□ Microprocessor-controlled
hours/minutes/seconds real-
time counter with zero-return
and LED display, tape accurate
at any speed
□ Front panel Cue Control (tape
lifter defeat)
□ A full-function auto locator
(CB-116) is optionally available

Features that deliver Superb Tape Handling and Transport Control

□ Microprocessor-governed
transport control logic, motion
sensing, and dynamic braking
for smooth tape motion and
trouble-free operation
□ ±7% variable speed control
(+50%, −100% speed via ex-
ternal control) usable in Record
and Reproduce
□ Reel size is switch selectable
(5″, 7″, 10.5″), EIA or NAB
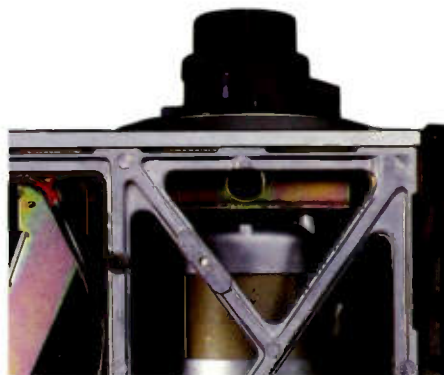
Rugged 9mm alloy deckplate with
cast structural supports.

The remote control (CB-102)
duplicates the MARK III Series
transport control and record buttons.
For the ultimate in remote operation,
the auto locator (CB-116) includes
these functions, plus a separate
hours/minutes/seconds LED display
and six cue point memories for
search or repeat.

□ High torque, AC reel motors
provide maximum power for
fast tape handling, and respon-
sive control during external
machine control conditions

Additional Features for Flexibility, Reliability, and Serviceability

□ 3 tape speeds, switch selectable
in 15/7.5 ips or 7.5/3.75 ips
speed pairs
□ Fourth head switch selectable
for quarter track stereo
playback
□ Interface connector for exter-
nal machine control via
SMPTE/EBU time-code-based
editors, machine controllers, or
synchronizers
□ Positive-locking NAB hub
adaptors
□ Plug-in head assembly with
hinged cover for easy access
□ Modular construction, with
convenient rear panel electron-
ics and connector access
□ Can be rack mounted using
optional rack mounting kit
(RK-32)
□ Optional roll-around floor
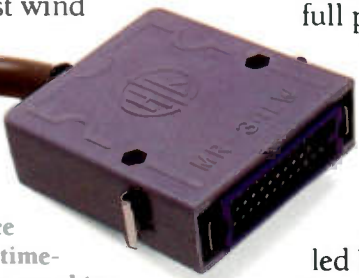stand for variable-profile
mounting (ZA-52L-32)

The MARK III/2 ¼" two-channel recorder
and MARK III/4 ½" four-channel recorder

THE MARK III/8 ½″ EIGHT-CHANNEL RECORDER

☐ BROADCAST: Multi-track production for stereo
☐ TELEVISION AND FILM: Audio post-production; multi-channel sweetening
☐ RECORDING STUDIO: Multi-track mastering

Fast and accurate, the MARK III/8 combines a a host of production features that free you from the mechanics of audio recording so that you can pursue the creative art of your business.

Individual channel control over status and monitoring, plus master switching gives you complete session control. These controls are duplicated on the CB-110 remote. Punch-in/punch-outs are accomplished with one button. Communication with the recording artist is maintained between "takes" because the MARK III/8 automatically selects the input monitor when the channel is in Record ready and the machine is stopped or in fast wind mode.

Multipin connector provides easy interface with SMPTE/EBU time-code-based editors, machine controllers, or synchronizers.

Audio specifications at 7.5 ips surpass those of other eight-channel machines at 15 ips – while using half the tape!

The MARK III/8 is *the* professional compact eight-channel production machine for the serious recording engineer or musician.

Professional Features that make the MARK III/8 easy to use

☐ Independently switchable +4 dBm or −10 dBV input and output reference level on each channel for easy interface to other equipment
☐ Heavy-duty locking, XL type input/output connectors
☐ Built-in test oscillator (1 kHz & 10 kHz) and external oscillator input, for record alignment and for putting test tones on tape
☐ Dual-element metering system with user-adjustable, peak reading LEDs, plus standard VU metering for monitoring of program levels
☐ Headphone amplifier with channel select and level control
☐ Individual channel and master switching of monitor electronics
☐ Standard Record level and input gain adjustment for each channel
☐ Automatic monitor switching
☐ Low frequency Reproduce equalization adjustments for full professional set-up
    ☐ Three remote units are available to provide any level of session control desired (CB-114, CB-110 and CB-116)
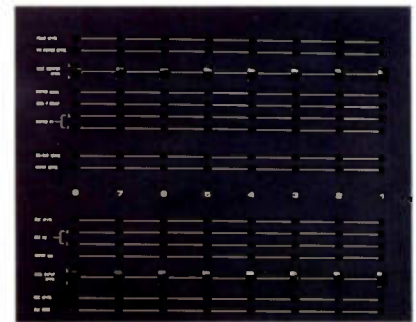   ☐ Microprocessor-controlled hours/minutes/seconds real-time counter with zero-return and LED display

Features that deliver superb Tape Handling and Transport Control

☐ Microprocessor-governed transport control logic, motion sensing, and dynamic breaking for smooth tape motion and trouble-free operation

☐ ±7% variable speed control (+50%, −100% speed via external control) usable in record and reproduce
☐ Reel size switch selectable (5″, 7″, 10.5″), EIA or NAB
☐ High torque, AC reel motors provide maximum power for fast tape handling, and precise control during external machine control conditions

Additional Features for Flexibility, Reliability, and Serviceability

☐ Speed selection of 15 or 7.5 ips, with 60 minutes record time at 7.5 ips
☐ Plug-in optimized three head design with easy access, hinged head cover

Convenient rear panel access to individual channel electronics adjustments.

☐ Interface connector for external machine control via SMPTE/EBU time-code-based editors, machine controllers, or synchronizers
☐ Positive-locking NAB hub adaptors
☐ Easy access, plug-in single-card-per-channel electronics with a full complement of adjustments for each channel
☐ Optional roll-around floor stand for variable-profile mounting (ZA-52L-38)

☐ BROADCAST: Multi-track production for stereo

☐ TELEVISION & FILM: ½" four-channel mixdown for audio post-production

Superior audio performance and full over-dubbing capability make the MARK III/4 the obvious choice of the audio engineer. The MARK III/4 serves the needs of the audio businessman as well, with the same reliability and cost-effectiveness that's built into all Otari products.

For maximum performance with minimum investment cost, a ¼" four-channel recorder, the BQII, is also available. This compact format is ideally suited for high quality multi-image production.

High-torque, AC reel motors for fast tape winding power, and a DC servo capstan motor for precise tape speed control, make the MARK III Series perfect for interface to editors and tape machine controllers.
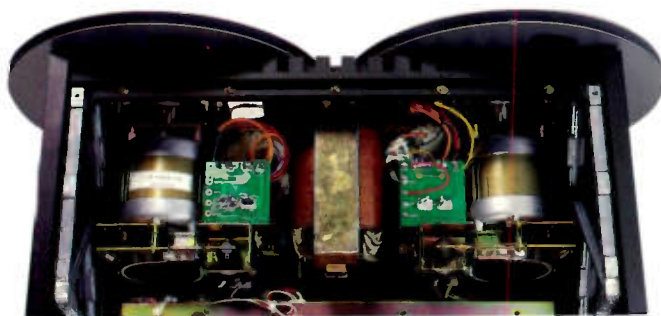
Professional Features that make the MARK III/4 easy to use

☐ Independently switchable +4 dBm or −10 dBV input and output reference levels on each channel for easy interface

☐ Heavy-duty locking, XL type input/output connectors

☐ Built-in test oscillator (1 kHz and 10 kHz), and external oscillator input for Record alignments or for putting test tones on tape

☐ Dual-element metering system with user-adjustable, peak reading LEDs, plus standard VU metering for monitoring of program levels

☐ Headphone amplifier with channel select and level control

☐ Microphone inputs with 20 dB pad

☐ Adjustable low frequency compensation

☐ Microprocessor-controlled hours/minutes/seconds real-time counter with zero-return and LED display

☐ Front panel Cue control (tape lifter defeat)

☐ A full-function auto locator (CB-116) is optionally available

☐ Integral tape splicing block

Features that deliver superb Tape Handling and Transport Control

☐ Microprocessor-governed transport control logic, motion sensing, and dynamic breaking for smooth tape motion and trouble-free operation

☐ ±7% variable speed control (+50%, −100% speed via external control) usable in record and reproduce

☐ Reel size switch selectable (5", 7", 10.5"), EIA or NAB

☐ High torque, AC reel motors provide maximum power for fast tape handling, and precise control during external machine control conditions

Easy access electronics with plug-in circuit boards put all adjustments for each channel on a single card.

Additional features for Flexibility, Reliability, and Serviceability

☐ Speed selection of 15 or 7.5 ips, with 60 minutes record time at 7.5 ips

☐ Plug-in optimized three head design with easy access, hinged head cover

☐ Zero-return button operates from positive or negative tape locations

☐ Interface connector for external machine control via SMPTE/EBU time-code-based editors, machine controllers, or synchronizers

☐ Positive-locking NAB hub adaptors

☐ Easy access, plug-in circuit boards put all adjustments for each channel on a single card

☐ Automatic monitor switching

☐ Can be rack mounted using optional rack mounting kit (RK-34)

☐ Optional roll-around floor stand for variable-profile mounting (ZA-52L-34)

MARK III SERIES REMOTES, ACCESSORIES, OPTIONS AND SPECIFICATIONS

REMOTES

CB-102 *Remote transport control for MX 5050 series except MARK III/8. Includes Record, Play, Stop, Rewind, Fast Forward, and Record indicator.*

CB-110 *Remote session controller for MARK III/8. Includes transport controls, channel status switching, tape time read-out, and zero return.*

CB-114 *Remote transport control for MARK III/8, functionally identical to CB 102.*

CB-116 *Full function auto locator for MARK III/8, MARK III/4, BQII, and MARK III/2 transports. Six memories with one stroke or keyboard store and search commands, repeat mode (shuttle), transport controls, head and tail guard memories and foot switch punch-in jack. Specify machine model and serial number when ordering.*

ACCESSORIES

RK-2B *Rack mount kit for BQII*

RK-32 *Rack mount kit for MARK III/2*

RK-34 *Rack mount kit for MARK III/4*

ZA-52L *Metal roll-around floor stand (unassembled) for BQII, MARK III/2, MARK III/4, MARK III/8*

ZA-55U *Floor stand for remote/auto locator CB110/CB116*

ZA-53S *Input transformers for MARK III/2 (Set of two)*

ZA-53T *Output transformers for MARK III/2 (Set of two)*

ADP-CBL *Set of 10-foot input/output cables for two channels: two XL male to phono, and two XL female to phono*

TW-670 *Reel hold down, ¼" NAB hub*

TW-671 *Reel hold down, ½" NAB hub*

ZA-52Y *7" Reel hold downs EIA hub*

ZA-51A *¼" × 10.5" Otari empty metal reel, NAB hub*

ZA-51H *½" × 10.5" Otari empty metal reel, NAB hub*

PB-77X *Service extender board for BQII and MARK III/4*

PB-77Y *Service extender board for MARK III/8*

INSTRUCTION/MAINTENANCE MANUAL *Extra manual (one supplied with recorder) for any model*

SPECIFICATIONS & FEATURES
(For full specifications, see individual machine data sheets.)

	MARK III/2	MARK III/4	MARK III/8	BQ-II
CHANNELS	2	4	8	4
TAPE WIDTH	¼ "	½ "	½ "	¼ "
TAPE SPEEDS	15/7.5 ips or 7.5/3.75 ips	15 & 7.5 ips	15 & 7.5 ips	15 & 7.5 ips
NOMINAL I/O LEVEL	+4dBm, −10dBV on all models			
EQUALIZATION	IEC/NAB switchable	NAB	IEC	NAB
HEADPHONE AMP	8 ohm impedance	4-channel selectable	8-channel selectable	8 ohm impedance
REAL-TIME DISPLAY	Hours/minutes/seconds display with zero return. on all models			
ALIGNMENT OSCILLATOR	Built in 1 and 10 kHz test oscillator, on all models			
SYNCHRONIZER INTERFACE	Single multipin connector, on all models			
FREQUENCY RESPONSE	25 Hz to 22 kHz	30 Hz to 20 kHz	40 Hz to 25 kHz	30 Hz to 20 kHz
SIGNAL-TO-NOISE RATIO	72 dB	70 dB	68 dB	66 dB
WOW AND FLUTTER	<0.04%	<0.04%	<0.04%	<0.04%
DISTORTION	<0.5%	<0.3%	<0.7%	<0.7%

Otari reserves the right to change specifications without notice or obligation.
Manufactured in Japan by Otari Electric Co., Ltd.

The Remote Session Controller (CB-110) allows full control of individual channels from the console, while the auto locator (CB-116) offers transport control plus six cue location memories and a Record punch-in footswitch. Shown on ZA-55U floor stand.

OTARI

CUE

MEMORY

`0.00.0 0`

h   min   sec

(POWER)   SPEED   REEL   EDIT
OFF ▮ ON   HIGH ▮ LOW   LARGE ▮ SMALL

THE NEW WORKHORSE

MTR-10 Series
Professional Mastering/Production
Recorders in ¼" Two and ½" Four
Channel Formats

THE MTR SERIES—THE NEW WORKHORSE PRODUCTION/MASTERING RECORDERS

We designed them to be the ultimate in production and mastering. They're Otari's assessment of the future, and perhaps the ultimate in analog machine design. We call them the MTR-10's. And we fully expect you'll call their performance and features incredible. They're the extension of the innovative technology that we built into our multichannel MTR-90 Master Recorder—uniquely engineered to meet the needs and special requirements of two and four channel production work.

Whether your requirement is in broadcast production, recording studios, video post-production, sound tracks, or advanced industrial A/V, the MTR Series will deliver consummate quality. On an MTR-10 you're going to squeeze every last dB of performance from your choice of tape. With the exclusive production features that are engineered into the MTR-10, you're ready for your most challenging professional audio requirement—right now, and for tomorrow.

Carefully review on the following pages the long list of features that we designed into the MTR-10's. Compare the impressive performance, technology and specifications to your requirements. Then decide if you're content to settle for anything less than the unprecedented control, performance and efficiency of our New Workhorses: The MTR-10 Series, from Otari.

THE ULTIMATE IN PRODUCTION EFFICIENCY

The Otari MTR-10 Series are the first fully microprocessor-controlled, ¼" and ½" tape recorders. The advantage of using microprocessors to control tape movement rather than conventional relay or TTL designs is evident in the MTR-10's production efficiency; a factor that is critical to our customer's success in today's competitive market.

Tape movement on the MTR-10 is governed by a proven on-board, 8080A microprocessor located on the machine's master CPU plug-in circuit module. Four erasable, programmable, read-only memories (EPROM'S) furnish the necessary firmware for unparalleled control of the machine's operating parameters and production features. Additionally, Otari's research has led to the development of a proprietary microprocessor which economically raises the level of reliability. Reel motors, capstan and transport control are contained on individual, modular plug-in circuit cards like the Master CPU module. Under all conditions, this internal CPU will govern total tape control, communicating with all three D.C. motors for high slewing, efficient tape handling.

Automatic reel-size sensing

Two position, relieved pinch roller

10½" reel capacity

NAB adapter/small reel clamper

OTARI

Precision machined, reinforced aluminum deckplate

Real-time tachometer

Precision ball bearing idlers

IPS or percentage display

Tape detector

OTARI MTR-10

Tape timer display

Three speed select (7½, 15 & 30 ips) with automatic equalization switching (3¾, 7½ & 15 ips optionally available)

Return-to-zero control

Speed Mode; fixed, variable or external control

Forward and reverse edit control

PLL D.C. servo capstan control

Cue control (tape lifter defeat & controlled wind)

Positive-action, dual-lit, transport controls

Variable speed range control: ±20%

Dump edit/unload

Precision head calibration adjustments

Precision splicing block

THE MTR SERIES—THE NEW WORKHORSE PRODUCTION/MASTERING RECORDERS

We designed them to be the ultimate in production and mastering. They're Otari's assessment of the future, and perhaps the ultimate in analog machine design. We call them the MTR-10's. And we fully expect you'll call their performance and features incredible. They're the extension of the innovative technology that we built into our multichannel MTR-90 Master Recorder—uniquely engineered to meet the needs and special requirements of two and four channel production work.

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Automatic reel-size sensing

Two position, relieved pinch roller

10½" reel capacity

NAB adapter/small reel clamper

Precision machined, reinforced aluminum deckplate

Real-time tachometer

Precision ball bearing idlers

IPS or percentage display

Tape detector

Tape timer display

Three speed select (7½, 15 & 30 ips) with automatic equalization switching (3¾, 7½ & 15 ips optionally available)

Return-to-zero control

Speed Mode; fixed, variable or external control

Forward and reverse edit control

PLL D.C. servo capstan control

Cue control (tape lifter defeat & controlled wind)

Positive-action, dual-lit, transport controls

Variable speed range control: ±20%

Dump edit/unload

Precision head calibration adjustments
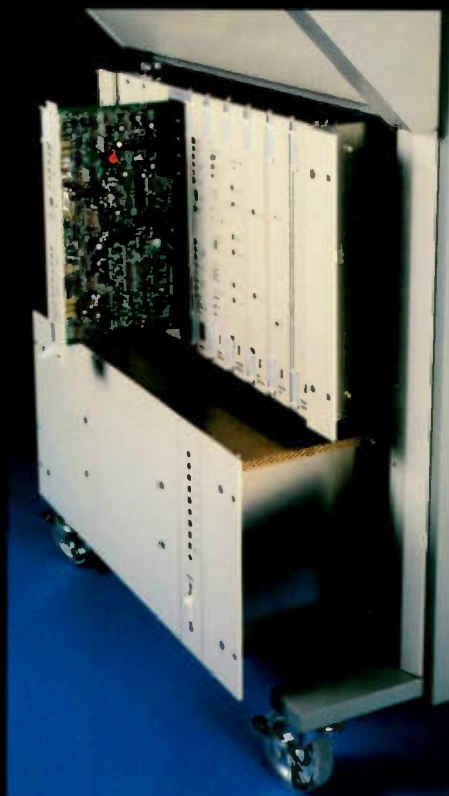
Precision splicing block

Comprehensive audio control panel (Model MTR-10/4 shown). Two channel model is identical except for the channel selection controls for headphone monitoring.

A separate master bias oscillator module allows bias to be set-up for two tape types for all three speeds. A unique, three-position alignment switch allows easy changes for the international standards (185, 250 & 320 nWb/m) with only one alignment tape per speed required. This control will simultaneously switch record and playback levels the preset amount for exact level matching. NAB, IEC and AES equalization are available with an easy switch control. Front panel L.E.D.'s confirm the status of both equalization and calibration level selection.

All operational audio controls are located on the front panel. To avoid confusion, the "Record Ready" and monitor switches are separate. Monitor switching from Sel-Rep (overdubbing) to input is automatic. There are individual gain controls for each channel (input & output) with parallel standard reference levels (SRL). SRL adjustment is accessible on each of the audio channel plug-in modules. A headphone monitor (selectable tracks on four-channel model—MTR-10/4) is provided for convenience. On models with the optional overbridge, a cue speaker is provided which is driven by the headphone amplifier. VU ballistic meters are large, well lit and have adjustable peak-reading L.E.D.'s.

Audio, transport, Master CPU, and power supply are all modular design for ease of servicing.

THE POWER SUPPLY AND MAINTENANCE ACCESS

A heavy-duty modular power supply features a large toroidal power transformer and massive heatsinks for all pass devices. Each circuit card is individually regulated, and L.E.D. indicators on the power supply front panel confirm the proper operation of the various secondary voltages. Conservatively rated design and adequate ventilation eliminate the need for a cooling fan.

A separate card-cage assembly for audio and low-level transport electronics contains a mother-board which accepts all the plug-in modules. This extra measure of design makes troubleshooting and repair fast and easy. Convenient and safe access to the underdeck components while the machine is operational provides the final measure of a comprehensive design that addresses itself to the real world.
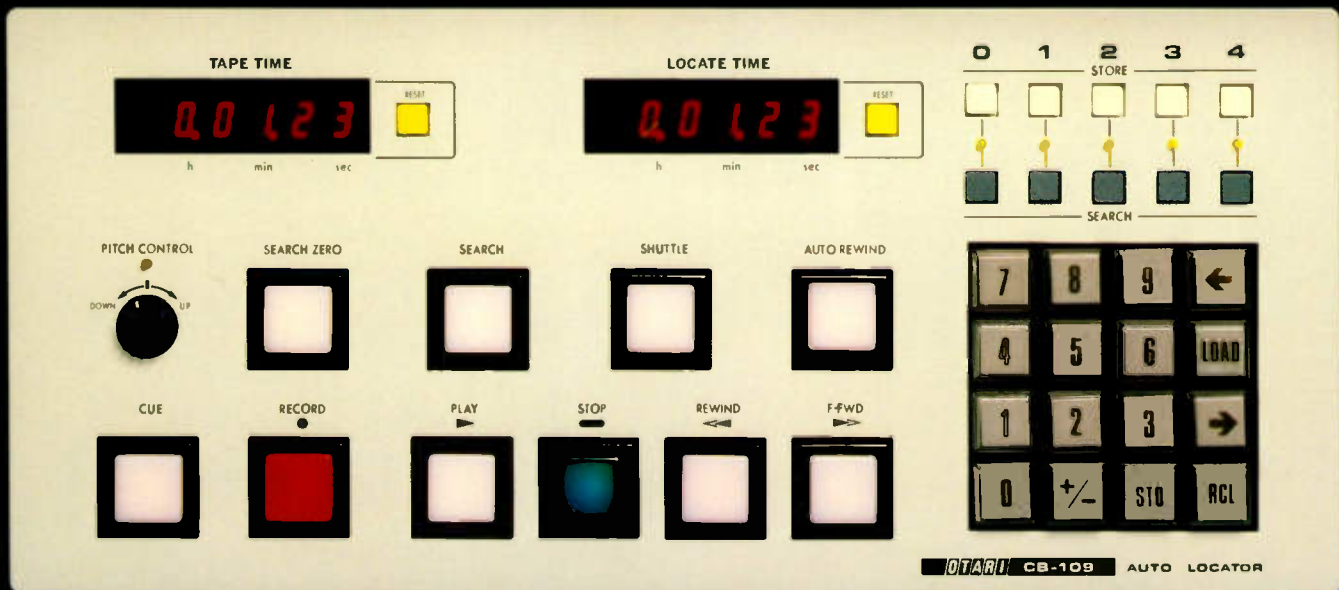
A remote control for every application.

The transport CPU firmware contains a complete multi-position, full-function autolocator program, which can be accessed through an optional external keyboard. This unique arrangement provides superior reliability because "smart" electronics are not contained in the autolocator. Heat, cable length and power supply considerations are thus less important.

The model CB-109 Auto Locator allows you to remotely access all transport, variable-speed and autolocation functions. The autolocation portion contains several unique functions which enable you to concentrate on your job.

- Simple, easy-to-understand operation
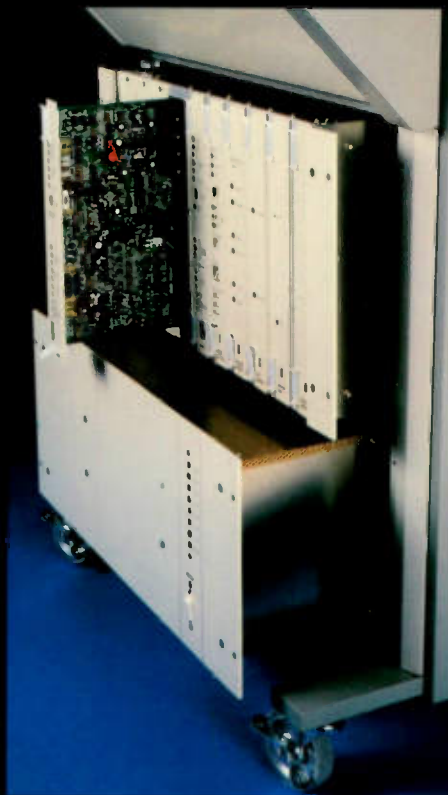- A five-position, single-stroke, "on-the-fly" entry and return

The most compact, comprehensive and cost-effective Auto Locator available

Comprehensive audio control panel (Model MTR-10/4 shown). Two channel model is identical except for the channel selection controls for headphone monitoring.

A separate master bias oscillator module allows bias to be set-up for two tape types for all three speeds. A unique, three-position alignment switch allows easy changes for the international standards (185, 250 & 320 nWb/m) with only one alignment tape per speed required. This control will simultaneously switch record and playback levels the preset amount for exact level matching. NAB, IEC and AES equalization are available with an easy switch control. Front panel L.E.D.'s confirm the status of both equalization and calibration level selection.

All operational audio controls are located on the front panel. To avoid confusion, the "Record Ready" and monitor switches are separate. Monitor switching from Sel-Rep (overdubbing) to input is automatic. There are individual gain controls for each channel (input & output) with parallel standard reference levels (SRL). SRL adjustment is accessible on each of the audio channel plug-in modules. A headphone monitor (selectable tracks on four-channel model—MTR-10/4) is provided for convenience. On models with the optional overbridge, a cue speaker is provided which is driven by the headphone amplifier. VU ballistic meters are large, well lit and have adjustable peak-reading L.E.D.'s.

Audio, transport, Master CPU, and power supply are all modular design for ease of servicing.

THE POWER SUPPLY AND MAINTENANCE ACCESS

A heavy-duty modular power supply features a large toroidal power transformer and massive heatsinks for all pass devices. Each circuit card is individually regulated, and L.E.D. indicators on the power supply front panel confirm the proper operation of the various secondary voltages. Conservatively rated design and adequate ventilation eliminate the need for a cooling fan.

A separate card-cage assembly for audio and low-level transport electronics contains a mother-board which accepts all the plug-in modules. This extra measure of design makes troubleshooting and repair fast and easy. Convenient and safe access to the underdeck components while the machine is operational provides the final measure of a comprehensive design that addresses itself to the real world.
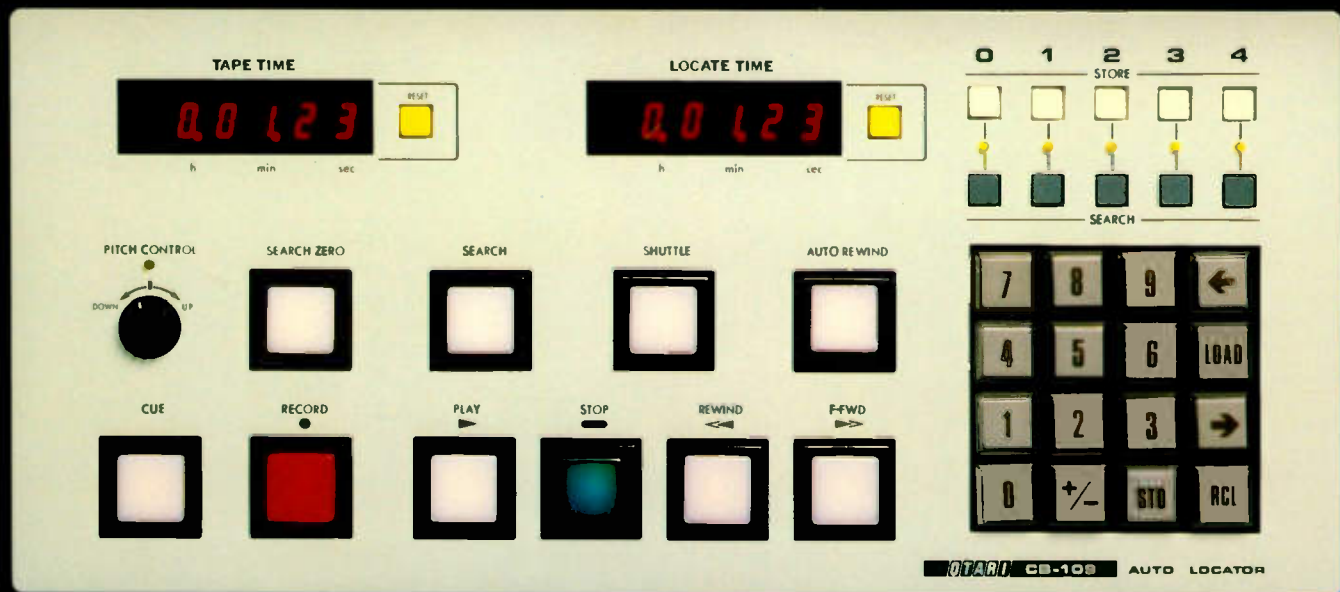
A remote control for every application.

The transport CPU firmware contains a complete multi-position, full-function autolocator program, which can be accessed through an optional external keyboard. This unique arrangement provides superior reliability because "smart" electronics are not contained in the autolocator. Heat, cable length and power supply considerations are thus less important.

The model CB-109 Auto Locator allows you to remotely access all transport, variable-speed and autolocation functions. The autolocation portion contains several unique functions which enable you to concentrate on your job.

- Simple, easy-to-understand operation
- A five-position, single-stroke, "on-the-fly" entry and return

The most compact, comprehensive and cost-effective Auto Locator available

- Two timing formats, Master (tape) and Local (take)
- Any point on the tape is accessible with the keyboard (negative and positive domain)
- Ten assignable memories
- One dedicated zero-position memory
- Shuttle mode

The model CB-111 will remote transport control, cueing, and return-to-zero with dual-lit controls. Pitch control is also included (vari-speed).

The model CB-102 is designed for remote transport control only.

INTERFACE TO EDITORS, TAPE CONTROLLERS & SYNCHRONIZERS

The MTR-10 can be easily interfaced to any editing system, tape controller or tape synchronizer. All transport functions, tally-backs and 9600 Hz in and out for the capstan speed control are available at one rear panel multipin connector. Excellent tape slewing characteristics are obtained because the CPU automatically compensates for a high rate of change in the 9600 Hz input by applying dynamic braking when necessary.

Tape location is easily accomplished with information either from the low-slippage, real-time tachometer, or with the optional wide-band playback amplifier for reading high-speed SMPTE code.

A COMMITMENT BEHIND EVERY OTARI MACHINE

Reliability is paramount in Otari's approach to the professional marketplace. From the almost fanatical concern for quality control at the factory in Japan to the new, extensive laboratories in California that perform comprehensive, redundant quality certification—you can be assured that when an Otari machine reaches your facility it will meet or exceed its specifications. Service is provided by a talented and highly motivated team of factory engineers who select and train the most qualified professional audio dealers.
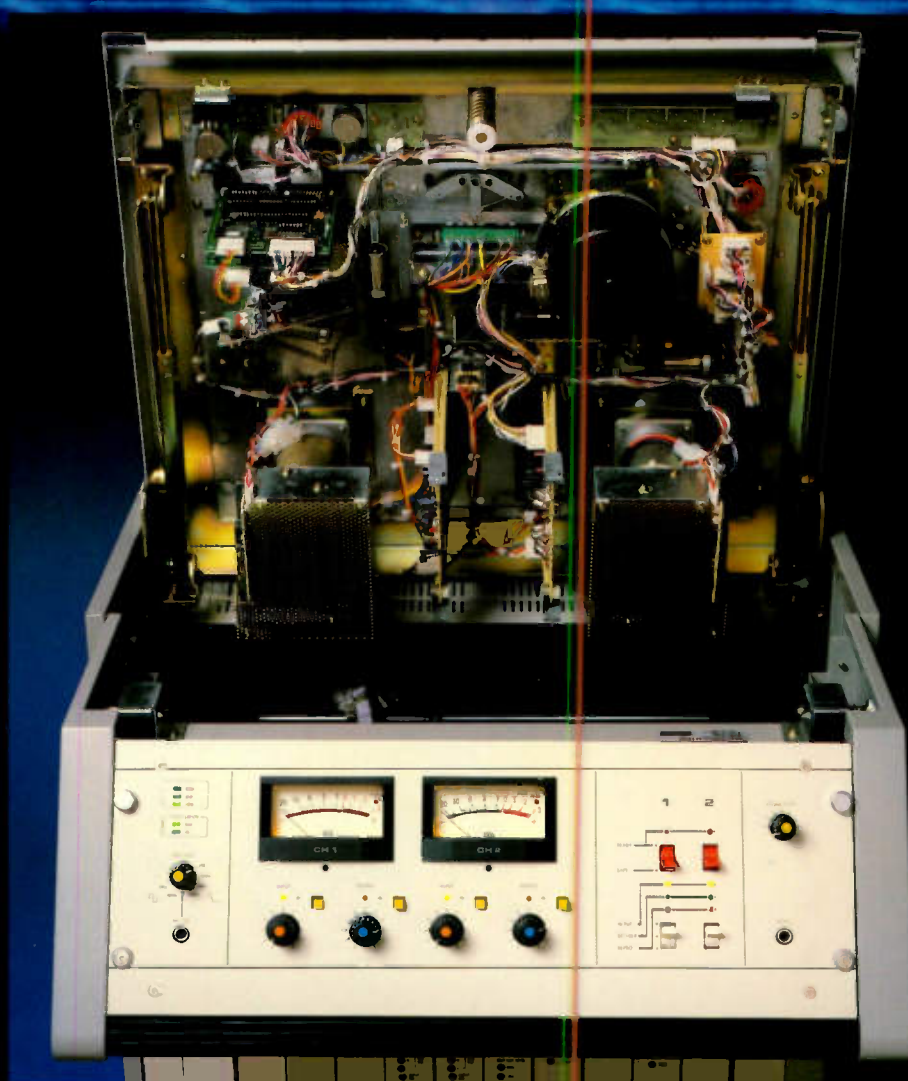
The entire transport assembly is hinged to allow wide-open access to under-deck components while the transport is operational. Spring-loaded support arms free both hands for routine inspection and maintenance.

OTARI.

ALLIED
Broadcast Equipment

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