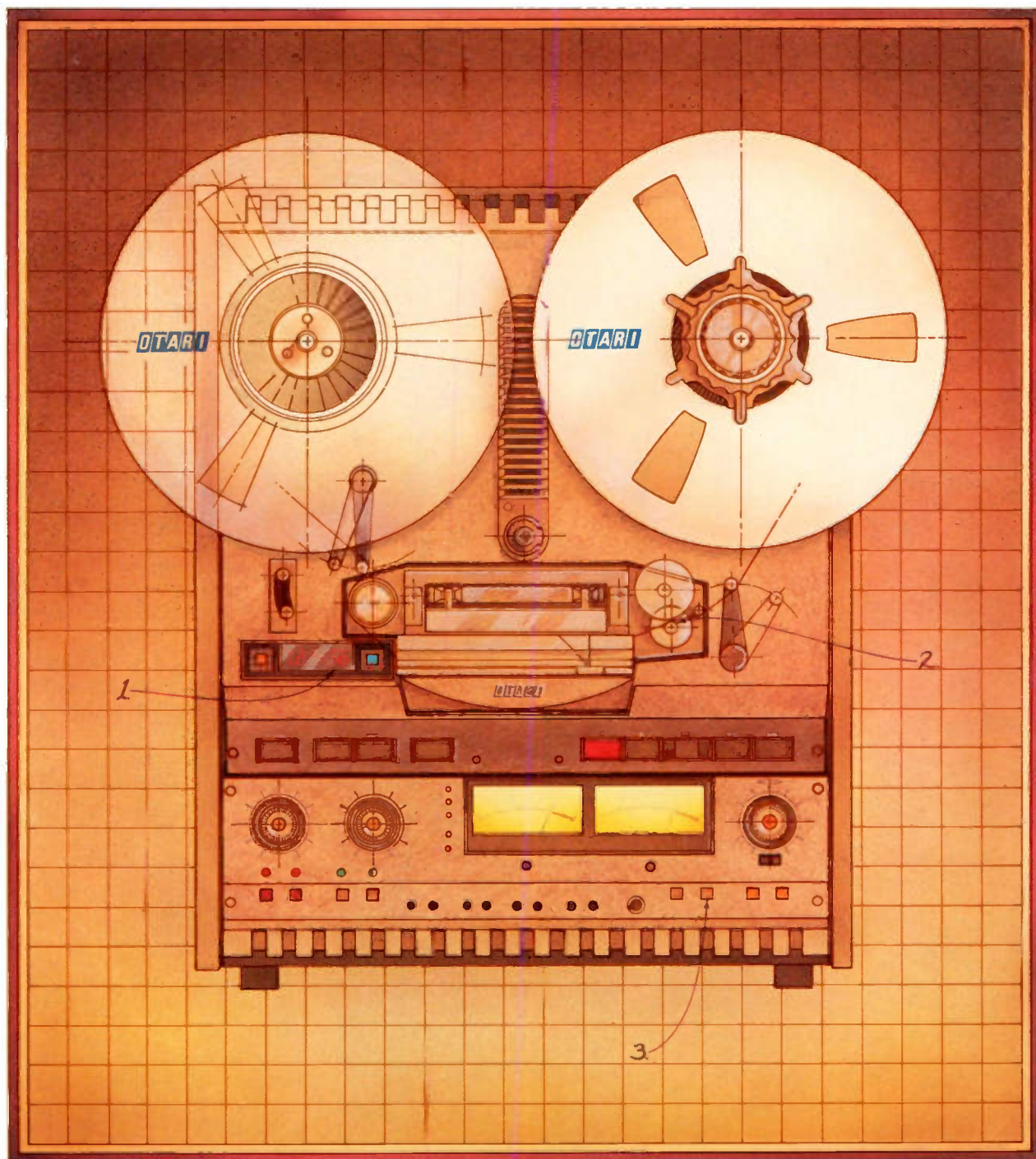


TECHNOLOGY YOU CAN TRUST



The Otari 1/4" 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.



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.

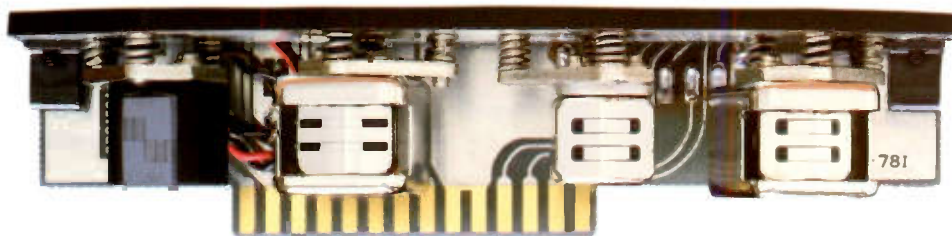
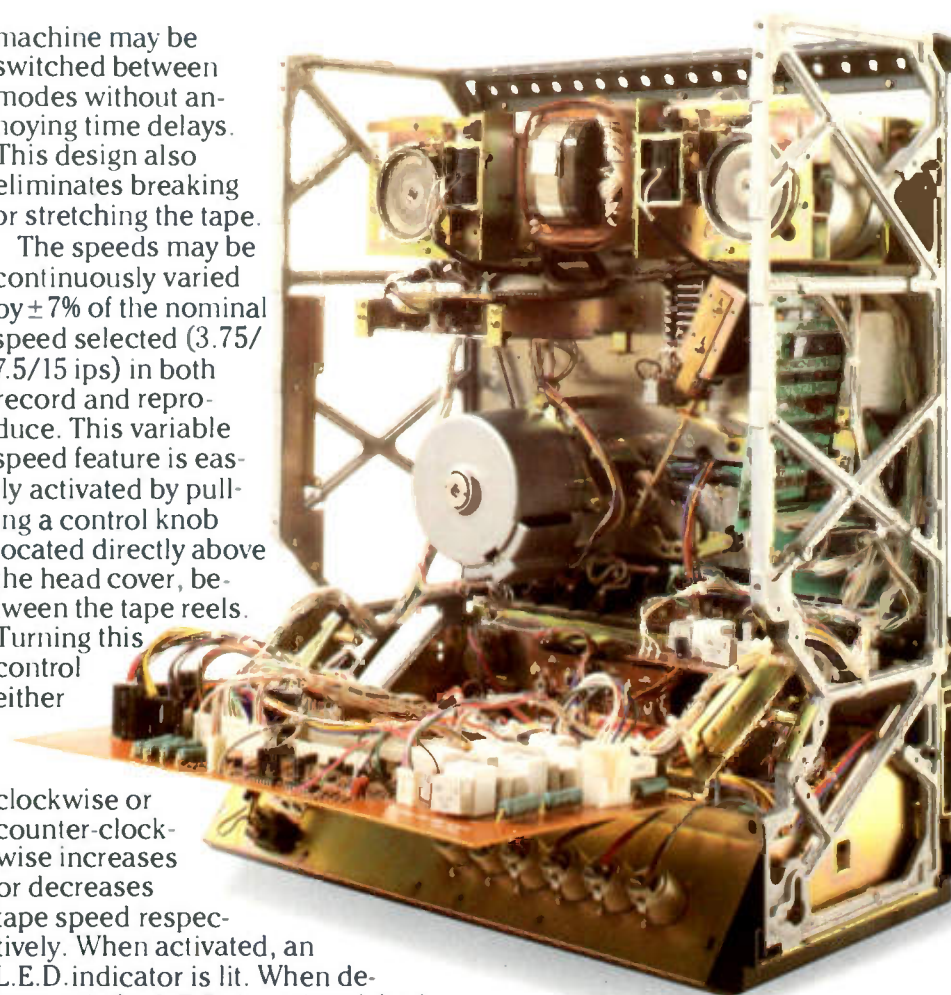
The speeds may be continuously varied by $\pm 7\%$ of the nominal speed selected (3.75/7.5/15 ips) in both record and reproduce. This variable speed feature is easily activated by pulling a control knob located directly above the head cover, between the tape reels. Turning this control either

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 ($\pm 7\%$).
5. Hinged head cover with integral tape splicing block.
6. Plug-in four head design; Permalloy 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 threshold 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 indispensable 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 XLR-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.



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:	1/4" (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	1/4" x 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

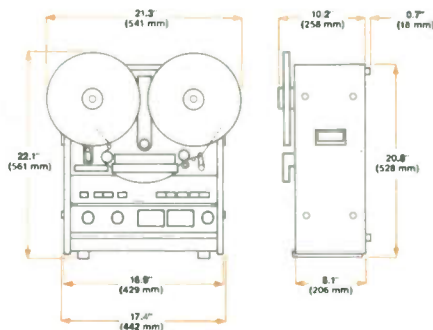
Connectors:	Line input, Mic input and Line output: standard three pin XL type. Headphone: standard 1/4" phone jack.
Inputs:	Line = Active, balanced, 10 kOhms. Mic = Active, balanced: usable, 150 Ohms to 10 kOhms. Switchable 20 dB pad and mute.
Outputs:	Active, balanced 5 Ohms source impedance. + 27 dB (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, 1/4" x 10 1/2" 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.



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