

AIWA Simply Advanced Audio Components

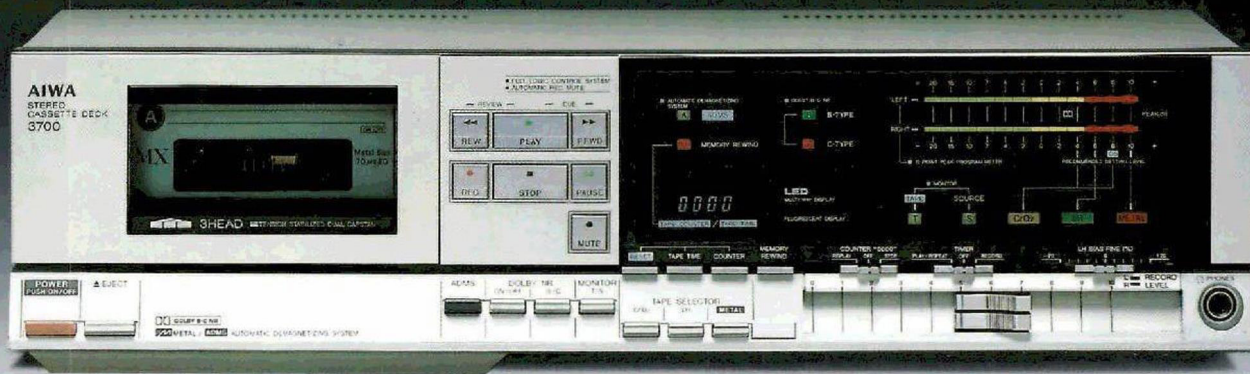


AIWA for craftsmanship

AIWA®

AIWA AMERICA INC.

AD-3700U



DOLBY B·C NR

AIWA's DX combination head and a high performance dual-capstan transport highlight this model's many functional features.

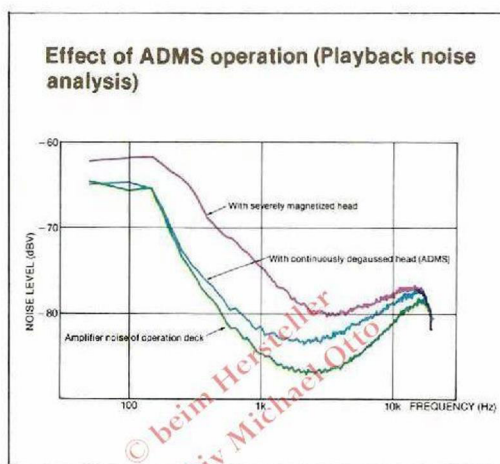
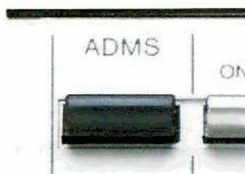
DX Record/PB combination head

Ideally shaped for the widest frequency response with minimal low-range irregularities (contour effect), the AIWA DX combination head incorporates separate record and playback gaps to enable direct off-the-tape monitoring while recordings are in progress. For durable, long-term performance, a core of permalloy plates laminated between layers of ultra-hard epoxy resin material combines wear-resistant properties with high signal linearity. Whether used with high-bias metal or conventional oxide tapes, the DX head design is able to resist saturation and heat buildup even after hours of use.



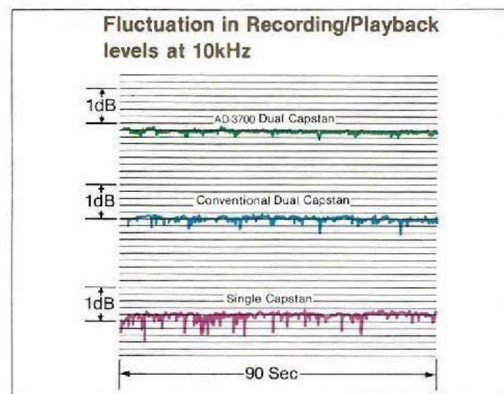
A.D.M.S. (Automatic Demagnetizing System)

While other 3-head deck owners must rely on periodic maintenance with expensive manual head de-magnetizers, the AD-3700's head stays in optimum condition completely automatically. A.D.M.S.—an oscillator circuit activated each time the deck's power is turned on—automatically "sweeps" the record and playback heads of residual magnetization within 1.5 seconds. (The yellow ADMS indicator lights at this time.) With heads in optimum condition, you'll be assured of extended frequency response and noise-free recordings.



Micro-grain dual capstan system: wow & flutter 0.028% (WRMS)

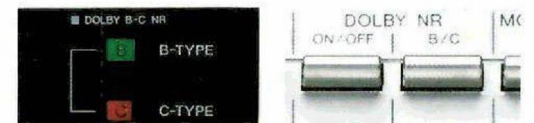
Improved tape/head contact, lower modulation noise levels and an insignificant wow and flutter are just a few of the benefits this closed-loop dual-capstan transport provides. In addition to an accurate DC servo motor, AIWA's exclusive "micro-grain" capstans contribute to tape stability by virtually eliminating the effects of changes in torque as the load on the take-up reel gradually increases during tape winding. Thus wow & flutter is dramatically lowered to below 0.028% (WRMS).



Dolby C noise reduction

Residual noise and tape hiss don't stand a chance with this new noise reduction circuit from Dolby Laboratories. Besides improving signal/noise performance by a phenomenal

20dB (to 80dB above 5kHz), Dolby C features an anti-saturation network that boosts tape MOL, ensuring that high frequencies can be recorded without distortion, even at high volume inputs. Most important, Dolby C encoded recordings are free from "breathing" noise and other compander problems. Already widely licensed by cassette deck manufacturers, the Dolby C system promises to achieve the same near-universal popularity as Dolby's previous B-type system.



Multi-operational digital electronic display

Unlike conventional mechanical-type counters, the AD-3700 is equipped with an electronic 4-digit display which adds new versatility to deck operation.

TAPE COUNTER

Used in the ordinary manner to indicate position of material on the tape or to locate a specific recorded segment.

TIME DISPLAY

Press TAPE TIME and RESET buttons at the start of a recording and the counter will indicate operation in real time.

MEMORY FUNCTION

You can use this facility for repeating playback of desired segments between the start and end of the tape; or, for continuous repeat play of the entire tape. The memory function also gives you automatic replay either between tape start or tape end and a point midway on the tape. In any case, the logic controls function rapidly and automatically while you enjoy the music.

PLUS:

- IC logic controls with cue/review facility
- Continuous auto repeat playback
- 12-segment peak-reading LED display
- Auto Rec-mute facility
- Headphone level output control (Rear panel)
- Timer recording/playback facility
- Stereo microphone jacks
- Adjustable LH bias fine control ($\pm 20\%$)
- Independent left/right record level slide controls
- Smooth oil-damped cassette eject
- Recommended optional: RC-R200 wireless remote control system

AP-D80U



This direct-drive turntable saves space in more ways than one, because records may be inserted and removed without lifting the dust cover. It's a unique feature from AIWA that permits the turntable to be positioned in an audio rack *below* the other components in the system.

Front loading operation

After setting the disc on the loading tray and selecting the speed and record size, the operator presses the PLAY button and the disc is loaded into playing position by a separate motor. Another touch of the PLAY button and play commences automatically. A photoelectric cell automatically instructs the arm to play LP or EP size discs. Pressing the EJECT button either during or after play operation will transport the disc gently forward for removal. The dust cover may be left completely undisturbed during these operations.

High performance direct-drive motor

For accurate rotation speed completely free from cogging or other undesirable effects, the AP-D80 employs a 4-phase 8-pole linear torque motor with a frequency generator type speed detector. This compares the motor rotation speed to a standard rotation frequency and makes needed connections virtually instantaneously. Wow and flutter is held to a very low 0.028% (WRMS) and rumble is a superb 75dB (DIN-B), another result of improved motor design.

Front panel manual operation

Manual arm operation can even be performed with the dust cover shut; an arm carrier lever located on the front panel permits positioning of the arm when it is raised from the record surface.

Other features:

- Photoelectric arm return mechanism
- Sensitive J-shaped static balanced arm
- Heavy 1.3kg aluminum die-cast platter
- Rec-sync operation with most AIWA cassette decks
- Dense anti-resonance resin compound platter material
- Adjustable pitch control ($\pm 3\%$)
- Built-in stylus cleaning brush

AP-D50U



Another AIWA original, this high performance front loader delivers great sounds without imposing on your rack space.

Motorized front loading

At the touch of the EJECT button, the hinged front panel lowers and platter slides out to receive a disc; press the LOAD/PLAY button and the motorized tray retracts into the unit, ready to begin play. With the AP-D50, there's never any need to raise the dust cover—you can even clean the stylus with a handy built-in brush!

Convenient controls

In addition to tonearm cueing, the arm may be moved manually to any point on the record with no need to raise the dust cover. Also featured are adjustable pitch control, antiskating adjustment knob and auto-repeat function.

Plus:

- High accuracy linear torque direct-drive motor

- Low-distortion photoelectric arm return mechanism
- Sensitive J-shaped static balanced tonearm
- High-density anti-resonance stable insulator feet
- Stroboscopic speed adjustment indicators
- Removable free-stop dust cover

AP-D60U



One of the world's slimmest at just 2-13/16 inches in overall height, the AP-D60 incorporates AIWA's new "Linear direct-drive" motor for reduced wow & flutter, low rumble.

New "Integrated Tonearm" system

With the new "integrated tonearm system", the AP-D60 takes radical approach to solving a number of potential problems. Since the cartridge is actually an integral part of the arm, there are no contacts to deteriorate or affect sound quality. This also means arm and cartridge can be constructed for ideal compatibility, matching all characteristics relating to mass, compliance and trackability. The integrated arm is a ready-to-go system that needs minimal user attention.



Linear DD motor

Unlike previous direct drive designs which place the motor beneath the platter spindle, the

AP-D60's unique construction drives the platter by means of alternating current generated by a ring of magnets on the platter's outer edge. This enables space reduction and provides smooth rotation with a minimum of vibration.

Automatic record size selection

A photoelectric sensor mechanism below the turntable mat detects the size of the record and relays this information to the tonearm mechanism.

This system ensures that the stylus will be protected from the kind of "accidents" to which non-thinking automatic turntables are so prone.

PLUS;

- Full front panel control design
- Adjustable pitch control with stroboscopic indicators
- Auto-repeat facility
- Solid, anti-howling cabinet material
- Removable dust cover

Audio Accessories

RC-R200



Wireless remote control system for AIWA Cassette Decks

- Line-of-sight infrared wireless operation up to 30 feet away
- Operates all cassette deck tape transport mode controls
- May be used with AD-3800U, AD-3700U, AD-R600U and other models equipped with IC logic controls

Dimensions:
1-3/16" (W) × 4-3/8" (H) × 9-5/16" (D) (30 × 110 × 235mm)

HP-T10



- High-compliance film diaphragm ensures rich low-frequency reproduction
- New 3-layer diaphragm and ultra-lightweight voice coil for clear, accurate highs
- Three-way adjustable "Acoustic Super Loudness" switch for tonal adjustment right on the headset.
- Folding center hinge for easy transport and storage

FEATURE COMPARISON TABLE

Cassette Decks																		
TYPE	No. of heads		SOURCE/TAPE monitor	DX Head	Sendust Guard Head	Transport		DATA system	Dolby C	ADMS	Micro-grain cap.	Auto reverse	Metal tape	Switchable MPX filter	Rec mute	LH bias fine	Peak display	Cue/Review
	3head	2head				IC logic	Soft touch											
AD-3800U	●	—	●	● (combi)	●	●	—	●	●	●	● (dual)	—	●	●	● (Auto)	●	16-point	●
AD-3700U	●	—	●	● (combi)	●	●	—	—	●	●	● (dual)	—	●	●	● (Auto)	●	12-point	●
AD-R600U	—	●	—	—	—	—	—	—	—	—	● (dual)	—	●	●	—	—	12-point	—
AD-WX110U	—	●	—	—	—	—	—	—	—	—	—	—	●	●	—	—	7-point	●
AD-3500U	●	—	●	● (combi)	●	—	—	—	●	●	●	—	●	—	—	—	12-point	●
AD-3250U	—	●	—	●	—	—	—	—	●	—	●	—	●	—	—	—	7-point	●
AD-3150U	—	●	—	●	—	—	—	—	—	—	●	—	●	—	—	—	7-point	●

Turntables									
TYPE	Direct drive system	Full automatic operation	Front loading	Random program play	Auto record-size selector	Auto repeat	Tonearm	Motor	Cartridge
LX-100U	●	●	●	—	●	●	Low mass linear-tracking	4-phase, 8-pole linear torque DC Hall motor	● (Ortofon)
LX-70U	●	●	●	●	●	●	Low mass linear-tracking	4-phase, 8-pole FG servo linear torque DC Hall motor	●
AP-D80U	●	●	●	—	●	●	J-shaped	4-phase, 8-pole linear torque DC Hall motor	—
AP-D50U	●	●	●	—	●	●	J-shaped	4-phase, 8-pole linear torque DC Hall motor	—
AP-D60U	●	●	—	—	●	●	Low mass straight	2-phase, 120-pole FG servo DD motor	●

STEREO TURNTABLE SPECIFICATIONS

	LX-100U	LX-70U	AP-D80U	AP-D50U	AP-D60U
TURNTABLE SECTION					
DRIVE SYSTEM	Direct drive system	Direct drive system	Direct drive system	Direct drive system	FG direct drive system
MOTOR	4-phase, 8-pole linear torque DD Hall motor	4-phase, 8-pole linear torque DD Hall motor	4-phase, 8-pole linear torque DC Hall motor	4-phase, 8-pole linear torque DC Hall motor	FG servo linear drive DD motor
TURNTABLE PLATTER	Aluminum alloy die-cast 10-1/8" (25.6cm)	Aluminum alloy die-cast 11-1/4" (28.5cm)	Aluminum alloy die-cast 11-13/16" (30cm)	Aluminum alloy die-cast 11-13/16" (30cm)	Aluminum alloy die-cast 12" (30.4cm)
SPEED	33-1/2 and 45 rpm	33-1/3 and 45 rpm	33-1/2 and 45 rpm	33-1/3 and 45 rpm	33-1/3 and 45 rpm
VARIABLE PITCH CONTROL	±3%	±3%	±3%	±3%	±3%
WOW AND FLUTTER	0.03% (WRMS)	0.03% (WRMS)	0.028% (WRMS)	0.028% (WRMS)	0.035% (WRMS)
S/N RATIO	75dB (DIN-B)	75dB (DIN-B)	75dB (DIN-B)	75dB (DIN-B)	70dB (DIN-B)
TONEARM SECTION					
TYPE	Integrated low-mass linear-tracking tonearm	Integrated low-mass linear-tracking tonearm	Static balanced type	Static balanced type	Integrated straight type
EFFECTIVE ARM LENGTH	5-9/16" (141mm)	5-3/16" (131mm)	8-1/2" (215mm)	8-1/2" (215mm)	8-1/2" (215mm)
OVERHANG	0mm	0mm	5/8" (15mm)	5/8" (15mm)	5/8" (15mm)
TRACKING ERROR ANGLE	within ±0.1°	within ±0.1°	+1.4°, -3.6°	+1.4°, -3.6°	+3.5°, -1.1°
OFFSET ANGLE	0	0	25.1°	25.1°	22.5°
TRACKING FORCE RANGE	—	—	0-3g	0-3g	—
USABLE CARTRIDGE WEIGHT	—	—	3.5-8.5g	3.5-8.5g	—
GENERAL					
POWER SOURCE	AC 120V, 60Hz	AC 120V, 60Hz	AC 120V, 60Hz	AC 120V, 60Hz	AC 120V, 60Hz
POWER CONSUMPTION	18 Watts	18 Watts	12 Watts	9 Watts	8 Watts
DIMENSIONS	13 (W) × 4-1/4 (H) × 13 (D) inches (330 × 107 × 330mm)	13 (W) × 3-1/2 (H) × 13 (D) inches (330 × 88 × 330mm)	17-3/4 (W) × 4-3/16 (H) × 14-13/16 (D) inches (450 × 106.5 × 375mm)	17-3/4 (W) × 4-3/16 (H) × 14-13/16 (D) inches (450 × 106.5 × 375mm)	16-9/16 (W) × 2-13/16 (H) × 14-3/16 (D) inches (420 × 71 × 375mm)
WEIGHT	13.2lbs (6kg)	11.5lbs (5.2kg)	15.9lbs (7.2kg)	15.9lbs (7.2kg)	11.0lbs (5.0kg)

STEREO CASSETTE DECK SPECIFICATIONS

	AD-3800U	AD-3700U	AD-R600U	AD-WX110U	AD-3500U	AD-3250U	AD-3150U	
POWER CONSUMPTION	24 Watts	24 Watts	25 Watts	25 Watts	17 Watts	14 Watts	13 Watts	
POWER SOURCE	AC 120V, 60Hz							
DIMENSIONS	16-9/16(W) × 4-3/8(H) × 11-1/4(D) inches (420 × 110 × 274mm)	16-9/16(W) × 4-3/8(H) × 10-13/16(D) inches (420 × 110 × 274mm)	16-9/16(W) × 4-7/8(H) × 12-15/16(D) inches (420 × 123 × 287mm)	13(W) × 4-1/4(H) × 12-1/6(D) inches (330 × 107 × 306mm)	16-9/16(W) × 4-3/8(H) × 11-1/16(D) inches (420 × 110 × 280mm)	16-9/16(W) × 4-3/8(H) × 11-1/16(D) inches (420 × 110 × 280mm)	16-9/16(W) × 4-3/8(H) × 11-1/16(D) inches (420 × 110 × 280mm)	
WEIGHT	11.2lbs (5.1kg)	11.2lbs (5.1kg)	12.1lbs (5.5kg)	11.5lbs (5.2kg)	8.8lbs (4.0kg)	8.8lbs (4.0kg)	8.8lbs (4.0kg)	
TRACK	4-track, 2-channel							
TAPE SPEED	1-7/8ips (4.8cm/sec)							
FREQUENCY RESPONSE								
-20VU	LH tape	20 ~ 17,000Hz 20 ~ 15,000Hz (+2dB)	20 ~ 17,000Hz 25 ~ 15,000Hz (+2dB)	20 ~ 16,000Hz 30 ~ 13,000Hz (+2dB)	20 ~ 16,000Hz 20 ~ 13,000Hz (+2dB)	20 ~ 16,000Hz 25 ~ 13,000Hz (+2dB)	20 ~ 16,000Hz 25 ~ 13,000Hz (+2dB)	20 ~ 16,000Hz 25 ~ 13,000Hz (+2dB)
	CrO ₂ tape	20 ~ 19,000Hz 20 ~ 15,000Hz (+2dB)	20 ~ 19,000Hz 25 ~ 15,000Hz (+2dB)	20 ~ 18,000Hz 30 ~ 15,000Hz (+2dB)	20 ~ 17,000Hz 20 ~ 15,000Hz (+2dB)	20 ~ 17,000Hz 25 ~ 15,000Hz (+2dB)	20 ~ 17,000Hz 25 ~ 15,000Hz (+2dB)	20 ~ 17,000Hz 25 ~ 15,000Hz (+2dB)
	FeCr tape	20 ~ 20,000Hz 20 ~ 17,000Hz (+2dB)	—	—	—	—	—	—
	Metal tape	20 ~ 20,000Hz 20 ~ 18,000Hz (+2dB)	20 ~ 20,000Hz 25 ~ 18,000Hz (+2dB)	20 ~ 19,000Hz 30 ~ 17,000Hz (+2dB)	20 ~ 18,000Hz 20 ~ 16,000Hz (+2dB)	20 ~ 19,000Hz 25 ~ 17,000Hz (+2dB)	20 ~ 18,000Hz 25 ~ 16,000Hz (+2dB)	20 ~ 18,000Hz 25 ~ 16,000Hz (+2dB)
S/N RATIO (Dolby B on) (Dolby C on, above 5kHz)	68dB (Dolby B, Metal) 81dB (Dolby C, Metal)	68dB (Dolby B, Metal) 80dB (Dolby C, Metal)	65dB (Dolby B, Metal) 78dB (Dolby C, Metal)	66dB (Dolby B, Metal) 76dB (Dolby C, Metal)	67dB (Dolby B, Metal) 79dB (Dolby C, Metal)	65dB (Dolby B, Metal) 78dB (Dolby C, Metal)	64dB (Dolby B, Metal)	
WOW AND FLUTTER (WRMS)	0.025%	0.028%	0.035%	0.05%	0.035%	0.038%	0.038%	
FORWARD AND REWIND TIME (C-60 TAPE)	70sec	70sec	70sec	90sec	90sec	90sec	90sec	
CROSSTALK (at 1kHz)	65dB	65dB	60dB	60dB	65dB	65dB	65dB	
CHANNEL SEPARATION (at 1kHz)	35dB	35dB	35dB	35dB	35dB	30dB	30dB	
HEAD	REC/PB: DX Combination Head (Sendust Guard) Erase: Hi-Bs double-gap Sendust Head	REC/PB: DX Combination Head (Sendust Guard) Erase: Hi-Bs double-gap Sendust Head	REC/PB: DX Head Erase: Double-gap Ferrite Head	REC/PB: SH Head PB: SH Head Erase: Double gap Ferrite Head × 2	REC/PB: DX Combination Head (Sendust Guard) Erase: Double-gap Ferrite Head	REC/PB: DX Head Erase: Double-gap Ferrite Head	REC/PB: DX Head Erase: Double-gap Ferrite Head	
MOTOR	DC servo motor × 1 DC motor × 1	DC servo motor × 1 DC motor × 1	DC servo motor × 1 DC motor × 1	DC servo motor × 2	DC servo motor × 1	DC servo motor × 1	DC servo motor × 1	
INPUT SENSITIVITY IMPEDANCE	MIC	0.25mV/200 ohms ~ 10k ohms	0.3mV/200 ohms ~ 10k ohms	0.3mV/200 ohms ~ 10k ohms	0.25mV/200 ohms ~ 10k ohms	0.3mV/200 ohms ~ 10k ohms	0.3mV/200 ohms ~ 10k ohms	
	LINE IN	50mV/50k ohms						
OUTPUT LEVEL IMPEDANCE	LINE OUT	0.55V/50k ohms	0.55V/50k ohms	0.55V/50k ohms	0.41V/50k ohms	0.55V/50k ohms	0.41V/50k ohms	
	HEADPHONE	1.5mW/8 ohms	1.5mW/8 ohms 0.4mW/8 ohms	0.8mW/8 ohms	0.8mW/8 ohms	0.8mW/8 ohms	0.8mW/8 ohms	0.8mW/8 ohms

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•Please check the laws on copyright relating to recording from discs, radio or external tape for the country in which the machine is being used.

AD-3800U

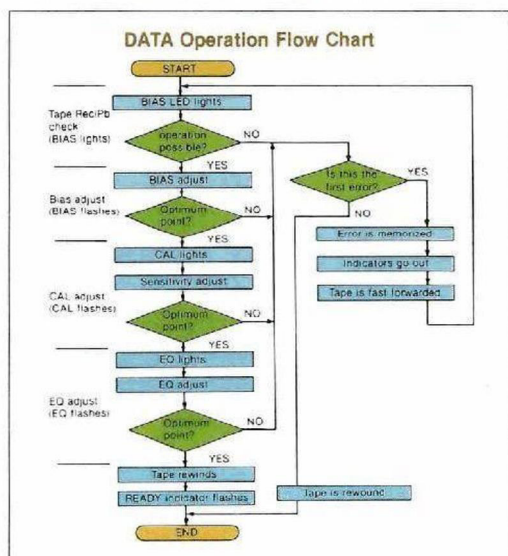


DOLBY B-C NR

Equipped with AIWA's DATA (Digital Automatic Tape Adaptation) system for perfect compatibility between machine and tape, the AD-3800 combines microcomputer sophistication with the top mechanical performance of a dual-motor, dual capstan transport system.

DATA—16 seconds to recording perfection

By activating the DATA switch prior to making a recording, the AD-3800's built-in microcomputer will "scan" the magnetic characteristics of the tape in use and adjust the unit's bias, sensitivity and equalization circuits to obtain the most desirable response. As an array of LEDs first wink and then come on in sequence, the DATA circuit automatically performs measurements needed for ideal BIAS (for optimum frequency response); SENSITIVITY (to match Dolby* recording and playback levels); and EQUALIZATION (for a flat, uncolored response). After adjustments are complete, tape is rewound to the start. Elapsed time: approximately 16 seconds. Unless erased, the DATA setting will be stored in a memory circuit for up to 24 hours, making it unnecessary to repeat the process as long as the same cassette formulation is used for recording within the 24-hour period.



DX Record/PB combination head

Designed for the more rigid demands of metal tape, the new DX head construction departs radically from traditional concepts. A combination of high-density sendust and ultra-hard permalloy, it features a pressure-formed 6-layer laminated core uniquely designed to resist uneven wear of the tape contact surfaces. Gap width is set at 4 microns for the record head, 1 micron for playback, giving each the ideal capability for wider frequency response. Naturally the AD-3800 features a monitor facility for comparison of input signals with the just-completed recording—a sure advantage over 2-head models.

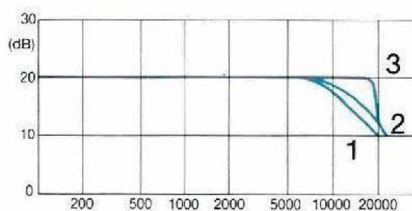


New Automatic Demagnetizing System (A.D.M.S.)

No more awkward treatments with bulky head demagnetizers; the AD-3800 incorporates a sophisticated circuit which effectively removes magnetic saturation in the record/playback head each time the unit's power is turned on! A.D.M.S. ensures that recordings need never be marred by high-frequency losses or noise generated by a magnetized head. Completely safe, even with a cassette loaded in the unit. Operation time: approximately 1.5 seconds.



Deterioration in frequency response due to head magnetization



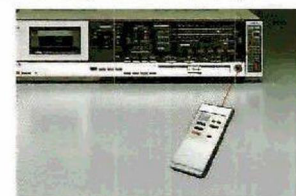
1 Playback with severely magnetized head.
2 Playback with tape from deck with magnetized head in separate unit with degaussed head.
3 Playback in unit in which degaussed head condition is always maintained.

Micro-grain dual capstan system (M.D.C.S.)

Reducing not only wow and flutter but modulation noise and dropouts as well, this new AIWA feature effectively removes mechanical sources of sound coloration by providing stabilized tape tension and unvaryingly correct head contact. AIWA's exclusive "micro-grain process"—a new metallurgical technique employing tiny hemispheric domes which raise cohesion between tape and capstan—virtually eliminates changes in load on the take-up reel side during winding. Not only does this new design offer decreased wow & flutter (only 0.025% WRMS), but modulation noise is also lowered dramatically!

Optional wireless remote control

Easily connected to the AD-3800U in seconds, this infrared transmitter/receiver system enables operation of deck transport modes from up to 30 feet away. Identical in height and only 1-3/16" wide, the RC-R200 brings the convenience and luxury of wireless operation, yet requires minimal installation fuss.



RC-R200



PLUS:

- Dolby* B/C noise reduction
- Multi-operation digital electronic display
- IC logic controls with cue/review operation
- Optical peak LED meter (-30~ +10dB)
- Auto Rec-mute facility
- Switchable MPX filter
- DC recording amplifier
- Auto repeat function
- Timer standby switch (REC/PB)
- Rear panel microphone inputs

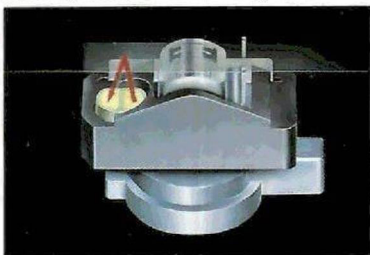
AD-R600U



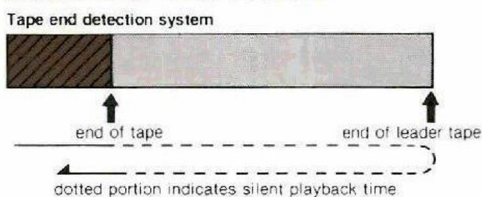
Far superior to 4-track or vertical shift auto reverse units, AIWA's "Quick Reverse" mechanism ensures true bi-directional fidelity.

Get back to the music faster

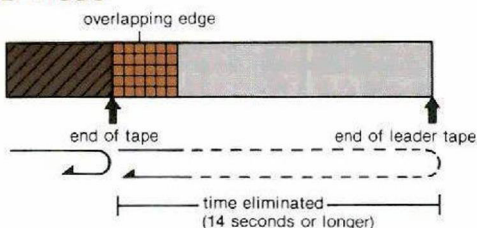
Tired of waiting? Here's the deck for impatient music lovers. A photoelectric sensor beside the head activates a split-second reverse mechanism at the leader tape edge. Result? You'll be listening to the other side in just four-tenths of a second, instead of having to sit through 12 seconds or longer of silent leader strip.



Conventional auto reverse



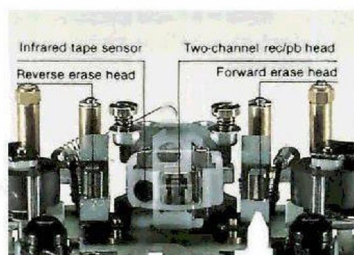
AD-R600



AIWA's amazing Radial-Pivot head

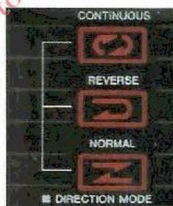
Rotating 180° in sync with the change in tape direction, the durable DX head is locked in an integrated die-cast mounting to protect critical azimuth alignment, essential for the AD-R600's wide 20—19,000Hz frequency response. The Radial-Pivot design also ensures that the same left/right channels in the head are employed to record and play back corresponding tracks on the tape, a distinct advantage over compli-

cated 4-track heads or those employing crude vertical shift mechanisms.



Choice of 3 playback, 2 recording modes

Three LED indicators are provided to display the selected operation mode:



- **Normal:** For record/playback of one side of the tape, as with ordinary non-reverse decks
- **Reverse:** For a single playback or record cycle of both sides of the tape. (However, a tape from which the accidental recording tabs have been removed will be protected in the normal manner.)
- **Continuous:** For continuous uninterrupted playback only of both sides of the tape

Dual motor drive mechanism

The extraordinarily low figure for wow and flutter—0.035%—reflects AIWA's continuing ingenuity in cassette mechanism design. A high-accuracy DC servo motor ensures stable torque in both directions, and capability to respond almost instantaneously to changes in load. A pair of AIWA's unique "micro-grain" capstans further reinforces mechanical operation. Deluxe "feather-touch" controls feature fail-proof IC logic and are arranged for positive operation at the touch of a finger.

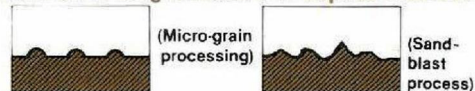


Capstan produced with micro-grain processing

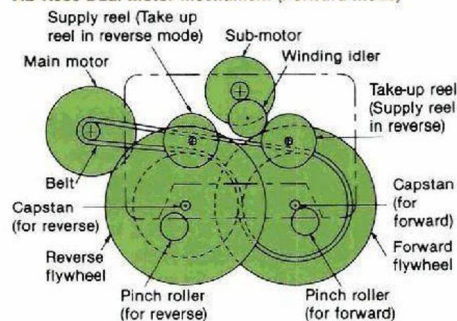


Conventional capstan

Simulated magnification of capstan surface



AD-R600 Dual motor mechanism (Forward mode)

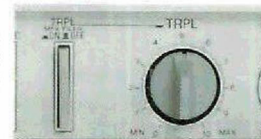


Dolby C noise reduction

Dolby Laboratories' new C-type noise reduction circuitry gives the AD-R600 superb signal/noise performance of 78dB (above 5kHz), an additional 10dB over the older B-type system.

Tuner recording preset level

Here's a great feature for dubbing programs from FM. Because the modulation levels of FM broadcasts are fixed, this new facility lets you adjust recording input levels without concern over encountering a high-volume passage exceeding the tape's saturation level. TRPL makes recording from your FM tuner quicker and easier than ever before.



Ultra-modern design

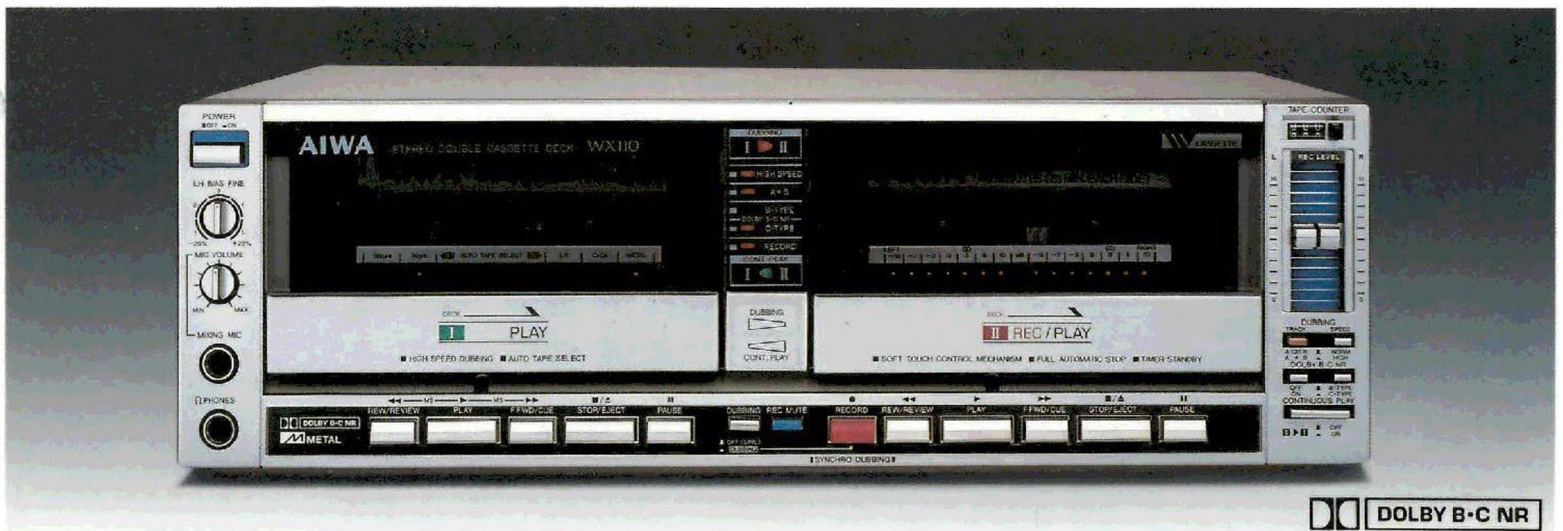
A stunning 3-color peak reading LED display and slide-type record level adjuster provide a clean, functional appearance. Mode selectors, mic and phone jacks, Dolby switch and other controls are concealed behind the handsome hinged panel.



PLUS:

- Auto LH/CrO₂ tape selector
- Smooth oil-damped cassette eject
- Timer standby record/play selector
- Rec mute facility
- LED tape direction indicators
- RC-R200 wireless remote control unit available as an optional accessory

AD-WX110U



The AD-WX110 is two decks in one—but much more than what you'd get from two separate decks. In addition to saving space it saves you time as well, because it's capable of dubbing cassettes in one-fourth the time of conventional units.

ALL-TRAC RECORDING:
A new, time-saving way to dub cassettes!

Double-speed dubbing of both tape sides

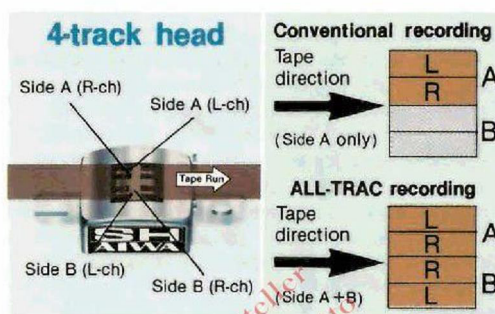
To copy from one cassette to another, you used to need two separate cassette decks. But even the first so-called "W" decks with two cassette mechanisms still required separate operation of each unit, and they could only record at "real time", i.e., the standard tape speed of 1-7/8 in. per second. But now AIWA introduces the AD-WX110: the world's first "W" cassette deck that can copy both sides of the tape at double speed. That means you'll be able to copy the entire contents of a 60-minute cassette in 15 minutes.

That's fast!



ALL-TRAC Recording: How does it work?

In conventional decks, the cassette must be turned over to record or play back the tracks on each side. This is because the head itself only contains two tracks (one for each stereo channel). The AD-WX110 however employs two special 4-track heads which play and record the entire contents of the cassettes. During A + B Synchro Dubbing, two of these tracks record signals in the conventional manner and two in the reverse direction. When the tape is played back however, only two stereo tracks will be reproduced at one time, in the same manner as standard cassettes.



A choice of three possible dubbing modes:

"Real time" (Normal speed, one side)

Simply load a recorded tape in Deck I, blank cassette in Deck II; then press the red "Synchro Dubbing" control to start recording. (Real time recording is advised for optimum frequency response.)

"Half time" (Double speed, one side)

After setting SPEED switch to HIGH position, repeat operations as described above. Copy will be completed in half of normal time (i.e., 30-minute tape will be reproduced in 15 minutes).

"Quarter time" (Double speed, both sides)

Set SPEED switch to HIGH and TRACK switch to A + B. When "Synchro Dubbing" control is pressed, Deck II will record material from both sides of tape at double speed. (Entire contents of C-60 cassette will be reproduced in 15 minutes.)

DUBBING MODES (C-60 tape)

Deck I	Time	Deck II	Time	Dubbing mode selector
I	30 minutes	II		• Normal speed • A or B
I	15 minutes	II	1/2 Time	• High speed • A or B
I	15 minutes	II	1/4 Time	• High speed • A + B

"Convenient Synchro-Dubbing" Control

This completely eliminates the need for separate operation of RECORD, PLAY and PAUSE functions on Decks I and II. Once cassettes have

been loaded, dubbing is automatically activated by a single button.

Continuous II → I playback

The AD-WX110 can also play back two tapes in sequence, giving extended playback time. Once the tape in Deck II comes to an end, Deck I will commence play automatically, making possible up to 1-1/2 hours of uninterrupted listening (with two C-90 cassettes).

Dolby B-C* noise reduction

Equipped with new Dolby "C" type noise reduction circuitry, the AD-WX110 is capable of an outstanding 76dB signal/noise ratio, with tape hiss almost entirely suppressed. A Dolby "B" position is also available.

High fidelity recordings ensured

AIWA has built the AD-WX110 to give outstanding sound reproduction. The record/play head in Deck II employs a wide gap for powerful sound with dynamic range; the playback head in Deck I has a narrow 0.7 micron gap to reproduce delicate highs with accuracy. Together they give you the performance of a three-head model plus of course the advantage of two cassettes!

The AD-WX110 also boasts a precision transport mechanism: stable DC servo motors and AIWA's exclusive micro-grain processed capstans minimize tape speed irregularity, making possible a superb 0.05% (WRMS) wow & flutter.

Automatic tape selector (Metal/CrO₂/LH)

Recessed sensor holes at the edge of CrO₂ and Metal cassette shells activate automatic switching to the proper bias and equalization settings, so there's no need whatever for manual switching of tape formulation.

Other features

- Music Sensor (one program in Deck I)
- Switchable MPX filter for recording FM stereo broadcasts (rear panel)
- LINE IN connection terminals
- Mic mixing permits insertion of narration, etc. even during dubbing operation
- Timer standby facility
- Rec mute facility
- LED indicators for tape setting, high speed dubbing, Dolby NR
- Auto replay facility

AD-3500U



Equipped with new Dolby* C noise reduction circuitry, this exciting 3-head model offers high performance, exotic styling and a host of convenient new features.

DX Record/PB combination head

A cost-effective 3-head design, once just a dream of deck designers, is now a reality. The AIWA DX combination head employs a laminated permalloy and non-magnetic layered construction for high head core linearity, while the guard area is composed of extra-durable sendust. Ideal for metal tapes as well the more common formulations, the DX head design ensures 3-head performance once believed impossible at the AD-3500's price.

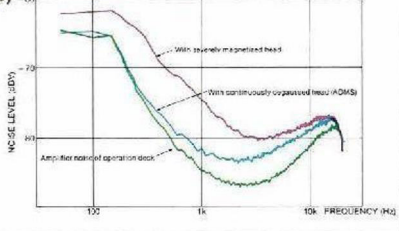


Automatic Demagnetizing System (A.D.M.S.)

An essential maintenance job on 3-head cassette decks is now performed automatically, every time the unit's power is switched on. AIWA's ADMS circuit, which activates a special built-in oscillator each time the power button is depressed, effectively returns the residual magnetization in the head to zero. Result: no head saturation to mar the sound quality of recordings.



Effect of ADMS operation (Playback noise analysis)

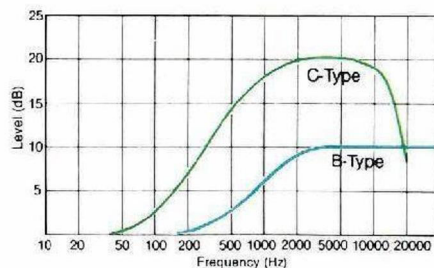


Dolby* C noise reduction system

Although many new compander-type noise reduction formats have appeared on the audio scene in recent times, none have come close to

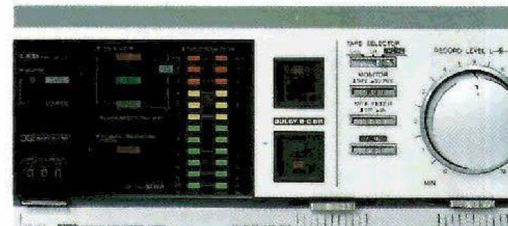
achieving the standardization and acceptance of the highly popularized Dolby "B" system. However, with the introduction of high performance CrO₂ and metal tape formulations, a strong demand has developed for a more effective system. The new Dolby "C" noise reduction circuitry in the AD-3500 does more than simply reduce tape hiss and residual noise—it also processes signals with incredible fidelity. Thus the superb 79dB signal/noise ratio (Dolby "C" on, Metal tape) only tells half the story; the other half is the startling quality of the music, free from "breathing" noise and other compander problems. To provide effective noise reduction for already recorded tapes, the AD-3500 is also equipped with a separate Dolby "B" switch position.

Comparison of low-level encoding: Dolby B and C-type NR systems.



Esoteric front panel design

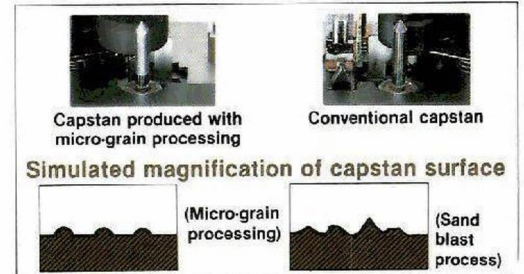
An eye-catching array of LEDs display peak input levels from -20 to +10dB, also provide spectacular display of function and mode settings. Neatly placed controls include compact slide adjusters for LH bias fine and output volume levels.



Stable tape transport

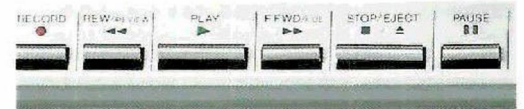
A reliable DC servo motor and flat belt for better transmission efficiency combine with AIWA's exclusive micro-grain process capstan

for extra transport stability. Low 0.035% (WRMS) wow and flutter ensure that tape reproduction is never marred by mechanical imperfections.



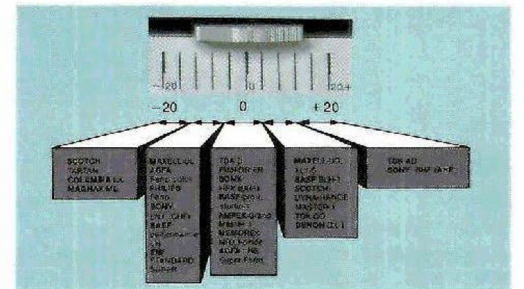
Soft-touch controls

Activated with light finger pressure, the slim bar-style controls provide quick, positive mode switching. Cue and review enable audible monitoring during fast forward and rewinding.



Bias fine adjuster for LH tapes

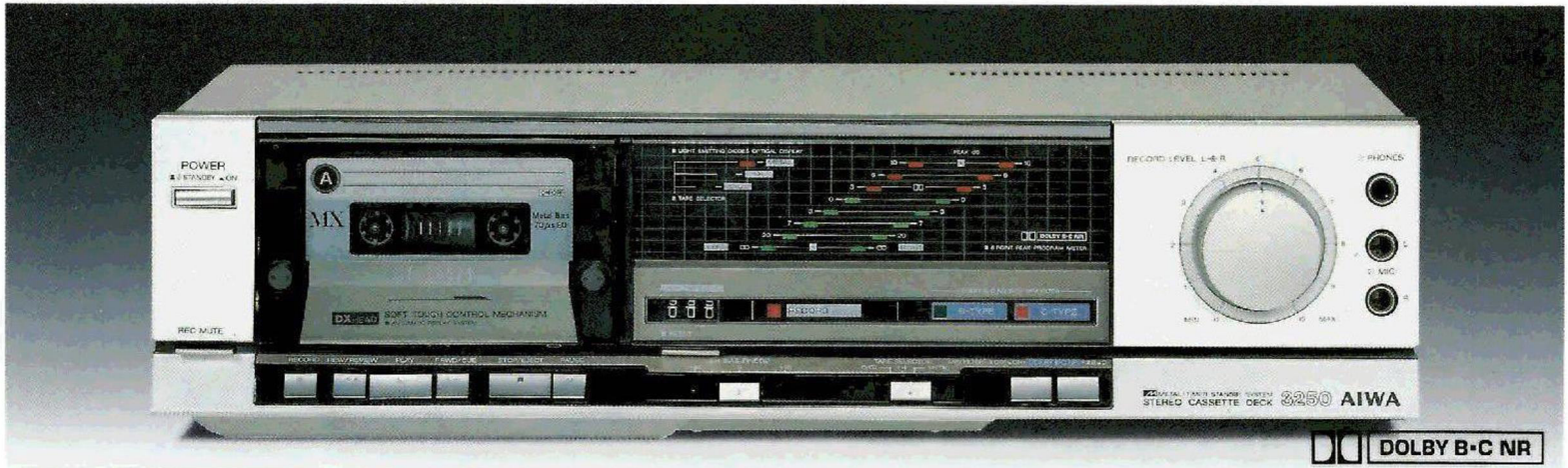
One of the most welcomed AIWA deck standbys, this slide-type adjuster enables you to vary recording bias by plus or minus 20%, thus providing for ideal recording compatibility with a wide range of LH/Normal tape varieties.



PLUS:

- Auto replay facility
- 3-position tape selector switch (LH/CrO₂/Metal)
- Separately adjustable right, left record volume controls
- Switchable MPX filter
- Front panel mic and headphone jacks
- Timer standby recording and playback

AD-3250U



A high-performance two-head model with Dolby* C noise reduction, the AD-3250 brings futuristic design and superb sound quality to new levels of affordability.

Dolby* C noise reduction system

The AD-3250's new Dolby C circuitry delivers a superb signal/noise ratio of 78dB (Dolby C on, Metal tape). A Dolby "B" setting is also retained for tapes previously recorded by the widespread Dolby "B" system.

Stable tape transport

Newly developed micro-grain processing enables the capstan surface to "grip" the tape, providing just the right amount of tension as the tape passes across the most critical area of the heads. Combined with a high-stability DC servo motor, wow & flutter is reduced to a low 0.038% (WRMS).

Futuristic "Peak Step" LED displays

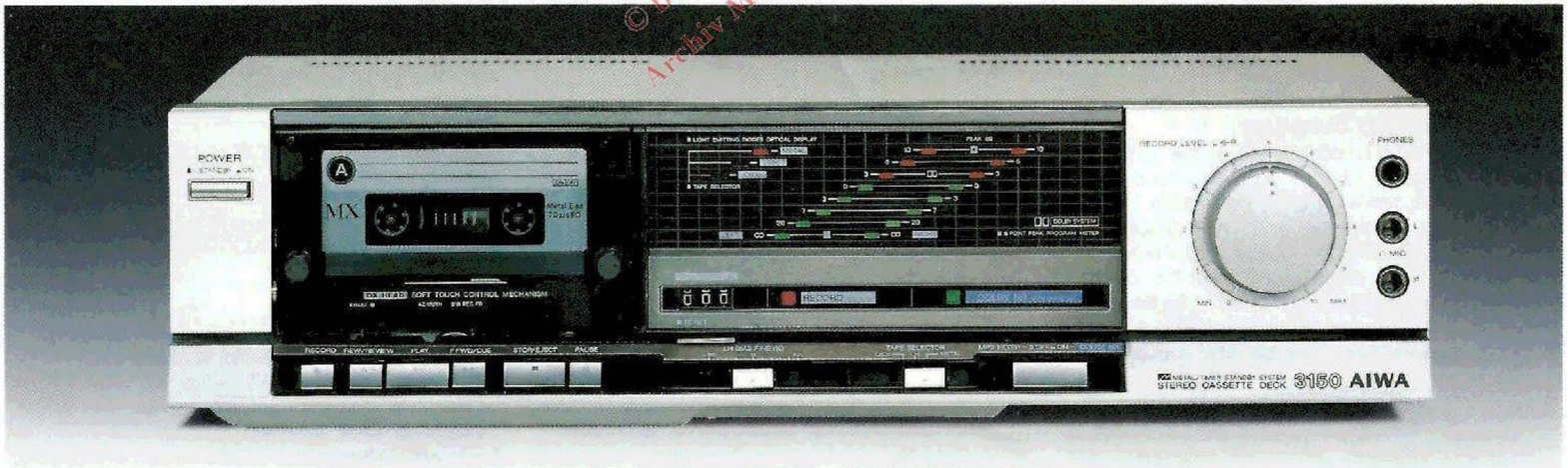
High-fidelity recordings depend on accurate adjustment of input levels, and AIWA's new "Peak Step" display makes this job especially easy. Two inclined rows of seven LEDs each

change from green to red at 0dB to warn when transient peaks approach the tape's saturation level. Range is a wide -20 to +10dB.

PLUS:

- Durable DX head
- Auto replay facility
- Soft-touch controls with cue/review operation
- LH bias fine adjustor ($\pm 20\%$)
- Rec mute facility
- 3-position tape selector switch
- Smooth oil-damped cassette eject
- Front panel, mic, headphone jacks

AD-3150U



A full-featured deck with the looks and performance of much higher-priced components, the AD-3150 represents spectacular value with traditional AIWA quality.

High mechanical accuracy throughout

Having successfully developed one of the most accurate DC servo motors currently utilized in audio decks, AIWA engineers turned their attention to other factors affecting speed irregularity. Employing a new "micro-grain" surface, the newly developed capstan reduces slip as the tape passes between capstan and pinch roller, thus working to suppress both modulation noise and speed variation. By this, wow and flutter in the AD-3150 never exceeds an insignificant 0.038% (WRMS).

User-adjustable bias for LH tapes

Unlike decks with a fixed bias, which can only give a flat response performance with one, or a very limited number of tape brands, the bias fine adjustor control provided on the AD-3150 lets you "tune" to the optimum flat response with any brand of LH/Normal tape.

Soft touch controls

Angled slightly upwards to simplify operation, the large controls activate tape transport modes with light finger pressure. Here's more good news: cue and review is back once again, to assist in locating passages on the tape without having to leave the PLAY mode.

Optical display

Far more responsive than mechanical needle-type meters, the new "Peak Step" LED metering

system ensures accurate monitoring of input levels during recording. For extra visibility, oblique 7-segment arrangement displays peak inputs from -20 to -5dB in green, 0 to +10dB in red.

PLUS:

- Auto replay facility
- Timer standby recording and playback
- 3-position tape selector switch
- High performance DX head
- Dolby B noise reduction system
- Digital tape counter
- Independent right/left record level controls
- Front panel mic and headphone jacks

LX-100U



Compact size, convenient auto loading and the high performance made possible only with a linear tracking tonearm make the LX-100 an AIWA original anyone would be proud to own.

Linear tracking tonearm

Because the stylus follows the same straight path as the cutter head used to produce each master record, tracking error distortion is held to infinitesimal levels. Other advantages include minimal intermodulation distortion, lower effective mass, and ideal lateral balance; also, no anti-skating devices are needed to keep the stylus at the center of the groove. Linear tracking: a guarantee of top quality reproduction.



Motorized auto loading

You'll never have to raise the dust cover to operate the LX-100; not only does the motorized tray let you load and eject records from the front; tonearm cueing may also be performed in forward or reverse directions at the touch of a front panel control.

High performance Ortofon cartridge

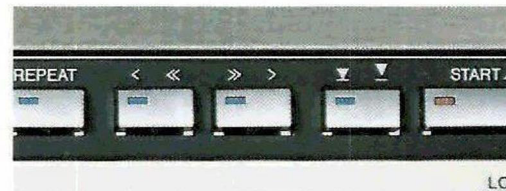
Designed for optimum compatibility with the arm assembly, the low moving mass and high-efficiency "Variable Magnetic Shunt" design of the Ortofon LMT-5 cartridge delivers superb musical definition and a wide frequency response.

Direct drive motor

Featuring a high moment of inertia and low rumble, the DC motor employed on the LX-100 holds wow & flutter to an extremely low 0.028% (WRMS), while signal/noise ratio is a superb 75dB (DIN-B). Unit also features pitch control adjustable to $\pm 3\%$, with stroboscopic speed indicators at the platter edge.

Dual-speed cueing control

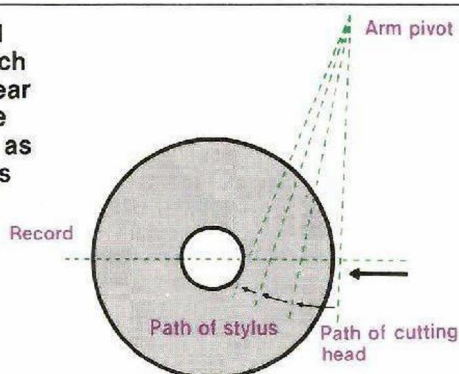
During play, arm position may be advanced or moved back at a choice of two speeds. Pressing lightly on the Tact switch moves the arm at slow speed. Firmer finger pressure will cause the arm to move more rapidly. Play may then be resumed by pressing the ∇ control.



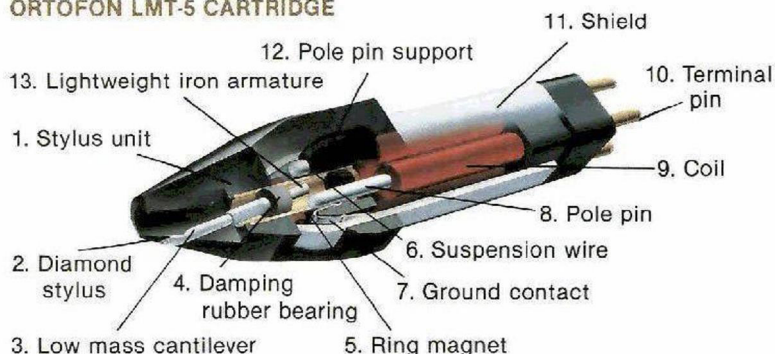
PLUS:

- Auto record size selector (EP/LP)
- Tonearm position LED indicator
- "Rec-sync" operation with compatible AIWA cassette deck models
- High-density platter construction effectively resists howling

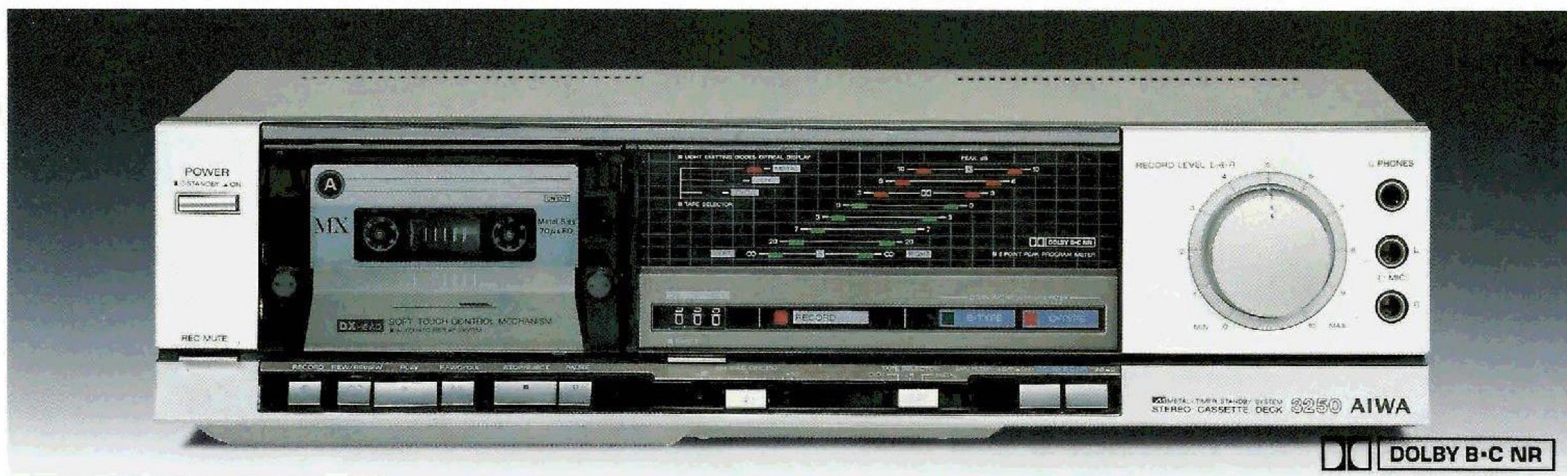
Unlike conventional pivot tonearms which travel in an arc, linear tracking follows the same straight path as the head which cuts the master record.



ORTOFON LMT-5 CARTRIDGE



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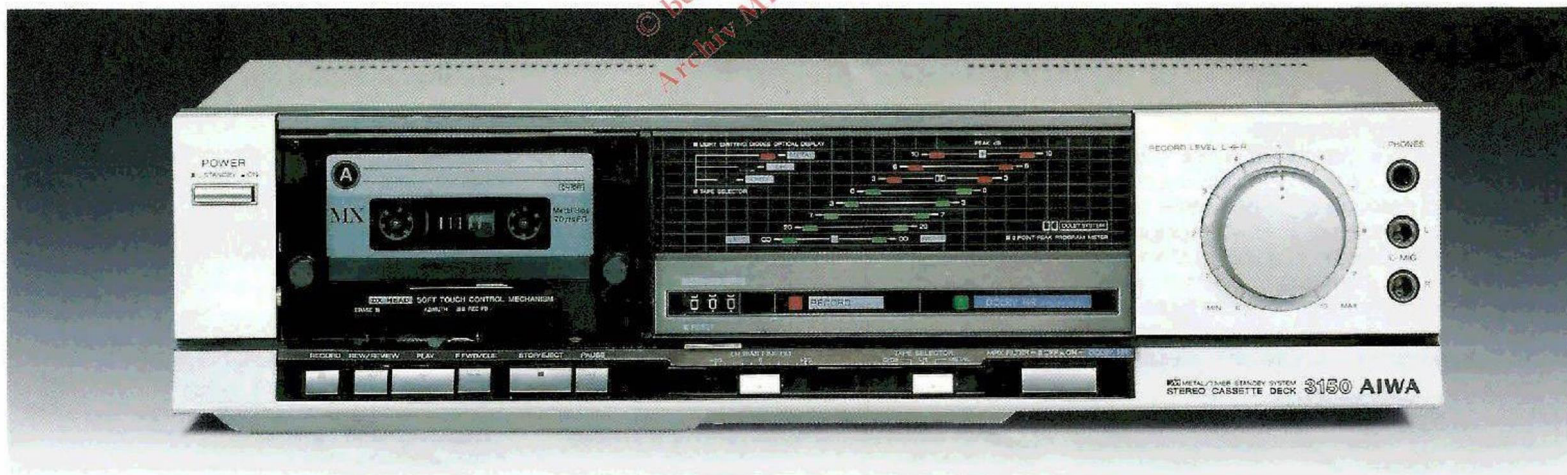
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- LH bias fine adjustor ($\pm 20\%$)
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High performance Ortofon cartridge

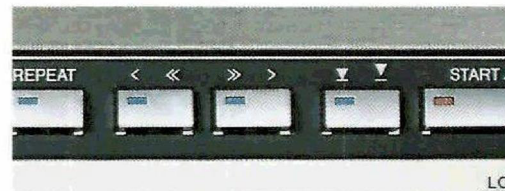
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Direct drive motor

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Dual-speed cueing control

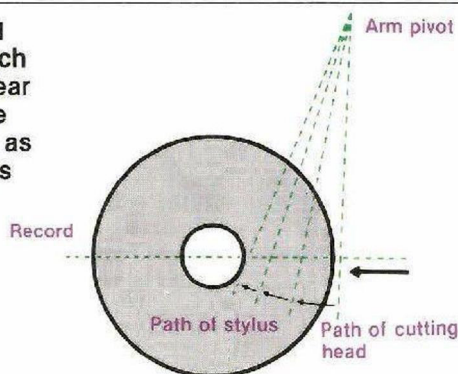
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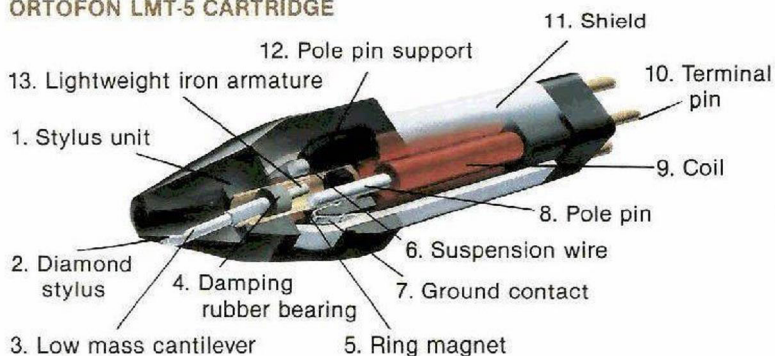
PLUS:

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- Tonearm position LED indicator
- "Rec-sync" operation with compatible AIWA cassette deck models
- High-density platter construction effectively resists howling

Unlike conventional pivot tonearms which travel in an arc, linear tracking follows the same straight path as the head which cuts the master record.



ORTOFON LMT-5 CARTRIDGE



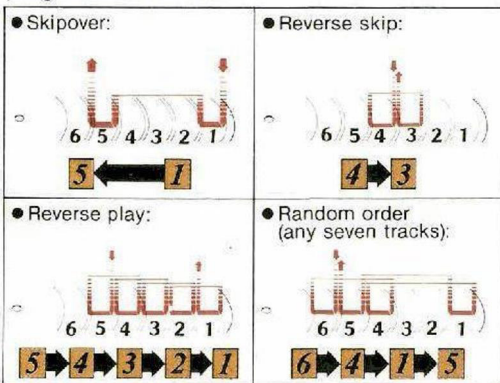
LX-70U



A space-saving 13" wide, the LX-70 combines programmable operation with outstanding music reproduction.

Random programmed play

Now you can play the songs on a record in the order you want to hear. Suppose you want to listen to the 4th, 7th, and 2nd tunes, and skip all the others. Simply press command buttons "4", "7" and "2", then start play. The LX-70 will automatically move to the 4th track (skipping over 1, 2 and 3); after playing "4", it will move to "7" (skipping 5 and 6); then return to "2". A maximum of seven settings is possible; LEDs above each panel number light to indicate the programmed tracks.



Forward-Back Skip operation

To repeat a track automatically, simply press B.SKIP; pressing F.SKIP moves you forward to the start of the next track.



Linear tracking tonearm

Integrated with the headshell-cartridge assembly for low mass and greater rigidity, the tonearm offers all the high fidelity advantages of linear tracking: minimal tracking error distortion, freedom from intermodulation, and immunity from distortion-causing inside force on the stylus. Naturally, absolutely no adjustments need ever be made for anti-skating, tracking force or stylus alignment.



New Intro-play function

The LX-70 can be set to give a brief 15-second sampling of each track in order of play. Intro-play can also be utilized with a previously set program order.



Full auto operation

From start to finish, you can relax and enjoy the music—thanks to this model's many automated functions. Record size selection, for example, is completely automatic, as is playback speed for standard size LPs and 45s. And for uninterrupted listening an Auto Repeat function lets you enjoy up to 10 plays of the same record.

Direct drive motor

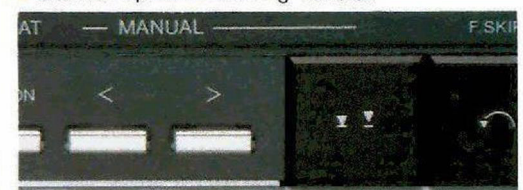
Providing accurate rotation speed with virtually negligible drift, the FG servo linear torque direct drive motor performs with low 0.03% (WRMS) wow & flutter and a high 75dB (DIN-B) signal-noise ratio.

Plus:

- Adjustable pitch control ($\pm 3\%$) with stroboscopic speed indicator



- Manual up/down cueing control



- Full synchro start-stop operation when connected to AIWA decks equipped with "Rec-sync" terminal.