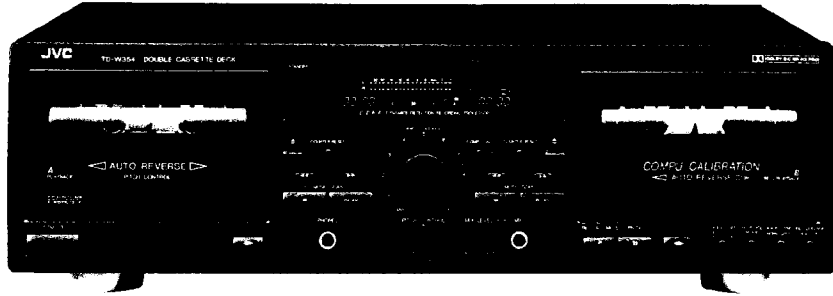


# Cassette Decks

## TD-W854BK

Double-Mechanism  
Cassette Deck

- ◆ Twin auto-reverse transports
- ◆ "COMPU CALIBRATION"
- ◆ Full-logic control
- ◆ Silent Mechanisms
- ◆ Pitch control (Deck A)
- ◆ Mic input with level control
- ◆ Multi Music Scan
- ◆ DDRP (Dynamics Detection Recording Processor)
- ◆ Continuous play of two tapes

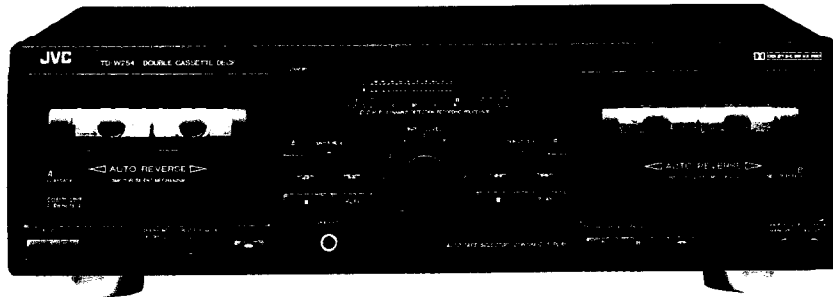


- ◆ High-speed editing with synchro dubbing
- ◆ Dolby HX Pro (Deck B)
- ◆ Dolby B/C noise reduction
- ◆ Fluorescent level meters/counters
- ◆ Auto tape selector (Normal/CrO<sub>2</sub>/Metal)
- ◆ Auto/synchro rec mute
- ◆ Headphone output
- ◆ Enhanced COMPU LINK Control System

## TD-W754BK

Double-Mechanism  
Cassette Deck

- ◆ Twin auto-reverse transports
- ◆ Full-logic control
- ◆ Silent Mechanisms
- ◆ Continuous play of two tapes
- ◆ DDRP (Dynamics Detection Recording Processor)
- ◆ High-speed editing with synchro dubbing
- ◆ Dolby HX Pro (Deck B)



- ◆ Dolby B/C noise reduction
- ◆ Fluorescent level meters/counters
- ◆ Auto/synchro rec mute
- ◆ Auto tape selector (Normal/CrO<sub>2</sub>/Metal)
- ◆ Headphone output
- ◆ Enhanced COMPU LINK Control System

# Audio Accessories



**HA-DX3**  
Digital Reference  
Stereo Headphones



**HA-DX1**  
Digital Reference  
Stereo Headphones



**HA-D50**  
Digital-Ready  
Stereo Headphones



**HA-D40**  
Digital-Ready  
Stereo Headphones



**HA-D30**  
Digital-Ready  
Stereo Headphones



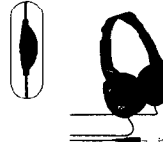
**HA-D20**  
Digital-Ready  
Stereo Headphones



**HA-D15**  
Digital-Ready  
Stereo Headphones



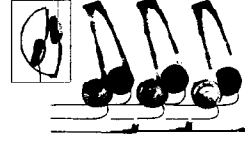
**HA-V560**  
Digital-Ready  
Stereo Headphones



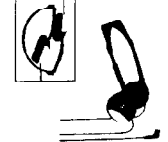
**HA-V550**  
Digital-Ready  
Stereo Headphones



**HA-P75**  
Digital-Ready Stereo  
Folding Headphones



**HA-CD71F**  
Digital-Ready  
Lightweight Stereo  
Folding Headphones



**HA-CD70F**  
Digital-Ready  
Lightweight Stereo  
Folding Headphones



**HA-CD57**  
Digital-Ready  
Lightweight  
Stereo Headphones



**HA-33**  
Lightweight  
Stereo Headphones



**MV-89**  
Dynamic Microphone



**MV-79**  
Dynamic Microphone



**MV-29**  
Dynamic Microphone



**MV-19**  
Dynamic Microphone

Notice: It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic, musical, or artistic work embodied therein.  
"Dolby," the double-D symbol and "Dolby HX Pro" are trademarks of Dolby Laboratories Licensing Corporation.

XV-D701BK			XV-501BK		
<b>AUDIO SECTION</b>					
Total Harmonic Distortion	0.002%		0.002%		
Dynamic Range:	16 bit	99dB	98dB		
	20/24 bit	108dB	106dB		
Frequency Response:					
	CD (fs=44.1kHz)	2Hz — 20kHz	2Hz — 20kHz		
	DVD (fs=48kHz)	2Hz — 22kHz	2Hz — 22kHz		
	DVD (fs=96kHz)	2Hz — 44kHz	2Hz — 44kHz		
Output Level	2.0V RMS		2.0V RMS		
<b>VIDEO SECTION</b>					
Horizontal Resolution	500 Lines		500 Lines		
Signal-to-Noise Ratio	65dB		65dB		
Output Level:	S-video - Y	1.0Vp-p/75 ohms	1.0Vp-p/75 ohms		
	S-video - C	0.286Vp-p/75 ohms	0.286Vp-p/75 ohms		
	Composite	1.0Vp-p/75 ohms	1.0Vp-p/75 ohms		
Dimensions (W x H x D)	17 <sup>3</sup> / <sub>16</sub> x 4 <sup>7</sup> / <sub>16</sub> x 13 <sup>1</sup> / <sub>4</sub> inches 435 x 112 x 335mm		17 <sup>3</sup> / <sub>16</sub> x 4 <sup>7</sup> / <sub>16</sub> x 13 <sup>1</sup> / <sub>4</sub> inches 435 x 112 x 335mm		
Weight	10.6 lbs. (4.8kg)		9.9 lbs. (4.5kg)		

XU-301BK	
<b>CD CHANGER SECTION</b>	
Total Harmonic Distortion (1kHz)	0.009%
Dynamic Range (1kHz)	90dB
Signal-to-Noise Ratio	94dB
Frequency Response	8Hz — 20kHz
Wow and Flutter	Unmeasurable
Output Level (LINE)	2.0V RMS
<b>MD RECORDER SECTION</b>	
Sampling Frequency	32kHz/44.1kHz/48kHz
Frequency Response	8Hz — 20kHz
Inputs: Analog (LINE IN)	Minimum input level: 300mV (Full scale -12dB)
Digital (Optical)	Input level: -20dB — -15dB
Microphone	Minimum input level: 3mV (Full scale -12dB)
Signal-to-Noise Ratio	88dB
Dynamic Range (1kHz)	88dB
Dimensions (W x H x D)	17 <sup>3</sup> / <sub>16</sub> x 5 x 12 <sup>1</sup> / <sub>2</sub> inches 435 x 127 x 316mm
Weight	13.3 lbs. (6.0kg)

XM-448BK	
Sampling Frequency	32kHz/44.1kHz/48kHz
Frequency Response	5 — 20,000Hz (±1dB)
Inputs: Analog	Minimum input level: 100mV
Digital	Input level: -24dB — -15dB
Signal-to-Noise Ratio	96dB
Dynamic Range (1kHz)	94dB
Dimensions (W x H x D)	17 <sup>3</sup> / <sub>16</sub> x 4 <sup>7</sup> / <sub>16</sub> x 13 <sup>1</sup> / <sub>4</sub> inches 435 x 112 x 335mm
Weight	9.5 lbs. (4.3kg)

TD-W354BK		TD-W254BK	
Frequency Response at -20dB			
Metal Tape	20 — 17,000Hz (30 — 16,000Hz ±3dB)	20 — 17,000Hz (30 — 16,000Hz ±3dB)	20 — 17,000Hz (30 — 16,000Hz ±3dB)
SA/Chrome Tape	20 — 16,000Hz (30 — 15,000Hz ±3dB)	20 — 16,000Hz (30 — 15,000Hz ±3dB)	20 — 16,000Hz (30 — 15,000Hz ±3dB)
Normal Tape	20 — 16,000Hz (30 — 15,000Hz ±3dB)	20 — 16,000Hz (30 — 15,000Hz ±3dB)	20 — 16,000Hz (30 — 15,000Hz ±3dB)
Signal-to-Noise Ratio	58dB* (Metal)	58dB* (Metal)	58dB* (Metal)
Wow and Flutter	0.08% (WRMS)	0.08% (WRMS)	0.08% (WRMS)
Crosstalk (1kHz)	60dB	60dB	60dB
Channel Separation (1kHz)	40dB	40dB	40dB
Harmonic Distortion: K3 (0VU, 315Hz)	0.8% (Metal)	0.8% (Metal)	0.8% (Metal)
Heads: Record/Playback	Combination (Deck B): Metaperm head & Two-gap ferrite head	Combination (Deck B): Metaperm head & Two-gap ferrite head	Combination (Deck B): Metaperm head & Two-gap ferrite head
Erase	Metaperm head (Deck A)	Metaperm head (Deck A)	Metaperm head (Deck A)
Playback	Metaperm head (Deck A)	Metaperm head (Deck A)	Metaperm head (Deck A)
Motors: Capstan	Electronic governor DC motor x 1 (Deck A, B)	Electronic governor DC motor x 1 (Deck A, B)	Electronic governor DC motor x 1 (Deck A, B)
Reel & Mechanism Drive	DC motor x 2 (Deck A, B)	DC motor x 2 (Deck A, B)	DC motor x 2 (Deck A, B)
Input Sensitivity/Impedance			
Microphones (0VU)	0.4mV/600 — 10k ohms (Matching impedance)	—	—
Line Input (0VU)	80mV/50k ohms	80mV/50k ohms	80mV/50k ohms
Output Level/Impedance			
Line Output (0VU)	300mV/5k ohms	300mV/5k ohms	300mV/5k ohms
Headphones (0VU)	0.3mV/8 ohms (Matching impedance: 8 — 1k ohms)	0.3mV/8 ohms (Matching impedance: 8 — 1k ohms)	0.3mV/8 ohms (Matching impedance: 8 — 1k ohms)
Dimensions (W x H x D)	17 <sup>3</sup> / <sub>16</sub> x 5 <sup>1</sup> / <sub>2</sub> x 13 <sup>1</sup> / <sub>4</sub> inches 435 x 139 x 331mm	17 <sup>3</sup> / <sub>16</sub> x 5 <sup>1</sup> / <sub>2</sub> x 13 <sup>1</sup> / <sub>4</sub> inches 435 x 139 x 331mm	17 <sup>3</sup> / <sub>16</sub> x 5 <sup>1</sup> / <sub>2</sub> x 13 <sup>1</sup> / <sub>4</sub> inches 435 x 139 x 331mm
Weight	10.9 lbs. (4.9kg)	10.6 lbs. (4.8kg)	10.6 lbs. (4.8kg)

\*Metal tape, S: 315Hz, K3: 3%, N: A-weighted, without NR. The S/N Ratio is improved about 15dB at 500Hz and 20dB maximum at 1kHz — 10kHz with Dolby C NR on, and 5dB at 1kHz and 10dB above 5kHz with Dolby-B NR on.

	HA-DX3	HA-DX1	HA-D50	HA-D40	HA-D30	HA-D20	HA-D15	HA-V560	HA-V550	HA-P75
Type	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed	Moving coil, closed
Frequency Response	4 — 30,000Hz	5 — 30,000Hz	8 — 24,000Hz	16 — 23,000Hz	18 — 22,000Hz	18 — 22,000Hz	15 — 23,000Hz	7 — 21,000Hz	12 — 20,000Hz	10 — 23,000Hz
Nominal Impedance	90 ohms	45 ohms	58 ohms	32 ohms	32 ohms	32 ohms	32 ohms	32 ohms	32 ohms	32 ohms
Sensitivity (1kHz)	98dB/mW	98dB/mW	107dB/mW	103dB/mW	102dB/mW	93dB/mW	104dB/mW	103dB/mW	103dB/mW	106dB/mW
Max. Input Capability	100mW	100mW	100mW	100mW	100mW	50mW	50mW	50mW	50mW	50mW
Weight (without cord)	11.9 oz. (340g)	10.5 oz. (300g)	10.2 oz. (290g)	9.0 oz. (255g)	7.9 oz. (225g)	5.6 oz. (160g)	4.5 oz. (129g)	4.2 oz. (120g)	4.3 oz. (122g)	4.4 oz. (125g)
Cord Length	13 ft. (4m)	13 ft. (4m)	11.5 ft. (3.5m)	11.5 ft. (3.5m)	11.5 ft. (3.5m)	11.5 ft. (3.5m)	6.5 ft. (2m)	9.8 ft. (3m)	9.8 ft. (3m)	4.9 ft. (1.5m)

	HA-CD71F	HA-CD70F	HA-CD57	HA-33
Type	Moving coil, open air	Moving coil, open air	Moving coil, open air	Moving coil, open air
Frequency Response	8 — 22,000Hz	8 — 22,000Hz	15 — 25,000Hz	17 — 25,000Hz
Nominal Impedance	32 ohms	32 ohms	32 ohms	32 ohms
Sensitivity (1kHz)	90dB/mW	90dB/mW	100dB/mW	100dB/mW
Max. Input Capability	50mW	50mW	50mW	50mW
Weight (without cord)	1.7 oz. (48g)	1.7 oz. (48g)	1.5 oz. (43g)	1.5 oz. (43g)
Cord Length	6.5 ft. (2m)	6.5 ft. (2m)	6.5 ft. (2m)	4.9 ft. (1.5m)

	MV-89	MV-79	MV-29	MV-19
Type	Dynamic	Dynamic	Dynamic	Dynamic
Directivity	Uni-directional	Uni-directional	Uni-directional	Uni-directional
Frequency Response	100 — 15,000Hz	100 — 13,000Hz	100 — 13,000Hz	100 — 12,000Hz
Output Impedance	600 ohms	600 ohms	500 ohms	500 ohms
Sensitivity	-55dB	-55dB	-66dB	-66dB
Weight (without cord)	9.5 oz. (270g)	5.1 oz. (145g)	5.8 oz. (165g)	2.6 oz. (75g)
Cord Length	16.4 ft. (5m)	16.4 ft. (5m)	9.8 ft. (3m)	8.8 ft. (2m)

**MD-CD Combination Deck/MD Recorder**

XU-301BK      XM-448BK

**CD Player Section**

Type	3-CD Triple-Tray
Play & Exchange System	●
1-Bit D/A Converter	●
CD TEXT	●
Title Memory	●
(32 Characters, Up to 200 Discs)	●
Genre Memory (27 Patterns, Up to 200 Discs)	●
3-Disc Smart Random Play/Continuous Play	●
Repeat Play	●
Pitch Control	●

**MD Deck Section**

1-Bit D/A and A/D converters	●	●
5-Mode MD Edit (Divide/Join/Move/Erase/All Erase)	●	●
Smart Random Play/Repeat Play	●	●
Sampling Rate Converter (32kHz/44.1kHz/48kHz)	●	●
Mix and Record (CD with Line/Line with Mic/Mic with CD)	●	●
Auto/Manual Track Marking	●	●

**General**

Programmable Timer (Daily Play/Rec, Once Play/Rec)	●	
Mixed CD/MD Program Play (16 Steps x 3 Patterns)	●	
CD-to-MD Synchro Rec	●	
One-Touch	●	
1st TRACK REC	●	
Listening Edit	●	
Number of Program Chart Tracks	20	20
Mic Input	●	
Line Input/Output	●	●
Optical Digital Input	●	2
Optical Digital Output	●	
Full-Function Keyboard Remote Control with Title Input	●	●
TEXT COMPU LINK	●	●
Enhanced COMPU LINK Control System	●	●

**Double Cassette Decks**

TD-W354BK      TD-W254BK

**Mechanism**

Deck A	Record/Play		
	Auto Reverse	●	●
Deck B	Record/Play	●	●
	Auto Reverse	●	●
Full-Logic Silent Mechanism		●	●
Cassette Shell Stabilizer		●	

**Circuit**

Dolby HX Pro	●	●
Dolby B/C Noise Reduction	B/C	B/C
Pitch Control	● (A)	
Mic Input	●	
Mixing Level Control	●	

**Display**

Display Panel	FL	FL
Dual Linear Counter		
Dual Digital Counter	●	●
Direction Indicator	●	●

**Functions**

COMPU CALIBRATION	●	
High-Speed Editing	●	●
Multi Music Scan (A/B)	●	
DDRP	●	●
Auto Tape Selector (Deck A/B)	●	●
Full Auto Stop	●	●

**Others**

Headphone Output	●	●
Enhanced COMPU LINK Control System	●	●

**Compact Disc Players**

XL-FZ258BK    XL-FZ158BK    XL-Z232BK

**Mechanism/Servo**

Type	5-Disc Carousel	5-Disc Carousel	Single
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**Digital**

8-Times Oversampling Digital Filter	●	●	●
1-Bit Dual D/A Converter	●	●	●
P.E.M. D.D. Converter	●	●	●

**Remote Control**

Included	●		●
Disc Keys	●		
Numeric Keys	●		●

**Functions**

Play Mode	Continuous	●	●	
	Program	●	●	●
	Smart Random	●	●	●
Number of Programs		32	32	32
Number of Program Chart Tracks		20	20	15
Disc Keys		5	5	
Numeric Keys		●		
Repeat	All Discs/Single Track	●	●	●
	Program Repeat	●	●	●
Search (Auto/Manual)		●	●	●

**Remote Control**

Optical Digital Output	●	●	●
Headphone Output with Volume	●	●	
Enhanced COMPU LINK Control System	●	●	●