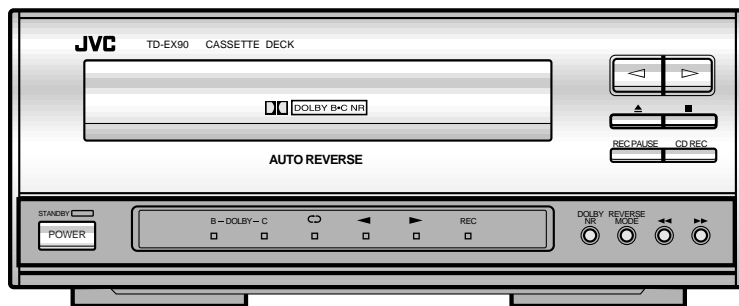


# JVC



## CASSETTE DECK

# TD-EX90



## INSTRUCTIONS

### For Customer Use:

Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.



Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

LVT0091-001A

[J]

# Warnings, Cautions and Others

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

## CAUTION

To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### For U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

**WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

### Caution — POWER switch!

Disconnect the mains plug to shut the power off completely.

The POWER switch in any position does not disconnect the mains line. The power can be remote controlled.

---

## Welcome !

We would like to thank you for purchasing one of our JVC products. Before connecting this unit to the wall outlet, please read the instructions carefully to ensure that you obtain the best possible performance. If you have any questions, please consult your JVC dealer.

---

## Important cautions

### Installation of the Unit

- Select a place which is level, dry and neither too hot nor too cold (Between 5°C and 35°C or 41°F-95°F).
- Leave sufficient distance between the Unit and a TV.
- Be sure to place the Unit in a location with good ventilation.
- Do not use the Unit in a place subject to vibrations.
- Do not place the Unit on a carpet.
- Do not place the Unit on top of another heat-generating piece of equipment.

### Power cord

- Do not handle the power cord with wet hands!
- When unplugging the Unit from the wall outlet, always pull the plug, not the power cord.

### Malfunctions, etc.

- There are no user serviceable parts inside. If anything goes wrong, turn off the power immediately. If the same problem reoccurs when the power is turned on once more, turn off the power again, unplug the power cord and consult your dealer.
  - Do not insert any metallic object into the Unit.
- 

## For safe use, observe the following

### Avoid moisture, water and dust

Do not set your machine in moist or dusty places.

### Avoid high temperatures

Do not expose your machine to direct sunlight or set near a heating device.

### When you're away

When away on travel or otherwise for an extended period of time, turn off the power and pull the plug from the electrical socket.

### Do not insert foreign matter into the machine

Do not insert wires, hairpins, coins, etc. into your machine.

### Care of the cabinet

When cleaning your machine, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Avoid applying benzene, thinner or other organic solvents and disinfectants. This may cause deformation or discoloring.

### If water gets inside the machine

Turn off the power and pull the plug from the electrical socket, then call the store where you made your purchase. Using the machine in this state may cause a fire or electrical shock.

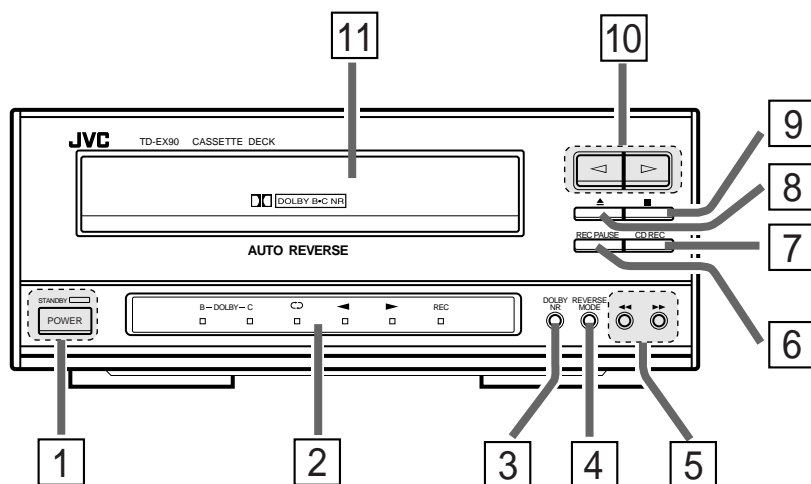
**It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic, musical, or artistic embodied therein.**

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# Parts Index

## Front Panel



### 1 POWER switch

Press to switch the power between ON and STANDBY.

#### STANDBY indicator

The indicator is off while the power is ON and lights up when the power is in STANDBY mode.

### 2 Indicator panel

### 3 DOLBY NR button

Press to activate Dolby Noise Reduction. Each press switches Dolby NR to type B, type C and Off.

### 4 REVERSE MODE button

Press to switch the tape transport mode.

### 5 <<, >> buttons

Press to skip to the beginning of a desired track or to fast forward or fast reverse a tape.

### 6 REC PAUSE button

Press to enter record-pause mode.

### 7 CD REC button

Press for synchronized recording with the EX series CD player.

### 8 ▲ button

Press to open or close the tape tray.

### 9 ■ button

Press to stop tape playback or recording.

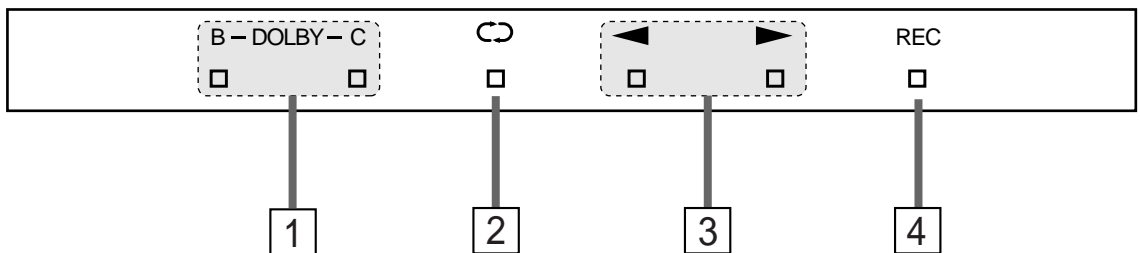
### 10 <, > buttons

Press to start tape playback or recording.

### 11 Tape tray

A cassette tape is placed here.

# Display



## 1 Dolby Noise Reduction indicators

B: Lights when Dolby NR type B is selected.  
C: Lights when Dolby NR type C is selected.

## 2 Reverse mode indicators

On:

- During playback, both sides of the tape are played repeatedly.
- During recording with forward direction (▶), one side of the tape will be recorded first then the other side, and stopped.
- During recording with reverse direction (◀), one side of the tape will be recorded and stopped.

Off:

- Playback or recording stops at the end of the tape (one side).

## 3 Tape operation indicators

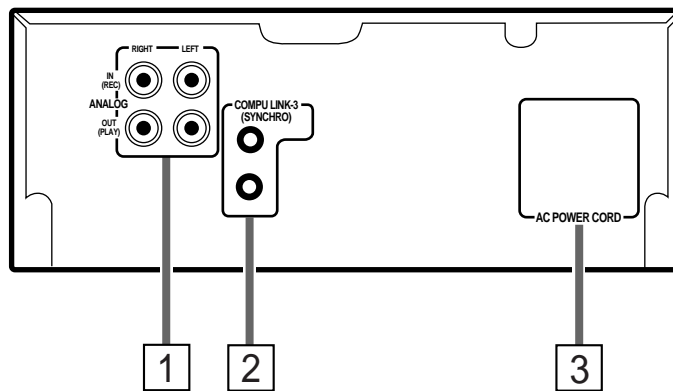
These indicators show the tape transport direction and operation status.

- Slow blinking: During playback or recording.
- Quick blinking: During fast forward or rewind.
- Rhythmical blinking: During search (Music Scan).

## 4 Recording indicator

The REC indicator lights in red in record-pause and record modes.

## Rear Panel



### 1 ANALOG input/output jacks

Connect to the TAPE input/output jacks of the amplifier/tuner using the provided audio pin cords.

Connect the IN (REC) jacks to the OUT (REC) jacks of the amplifier/tuner and the OUT (PLAY) jacks to its IN (PLAY) jacks.

### 2 COMPU LINK-3 (SYNCHRO) jacks

Connect each jack with the provided COMPU LINK-3 (SYNCHRO) jack of another component.

Either jack can be used for the connection.

### 3 AC POWER CORD receptacle

Connect the provided AC power cord.

# Setting Up the System

## Supplied Accesories

AC power cord x 1  
Audio pin cords x 2  
Compu Link cable x 1

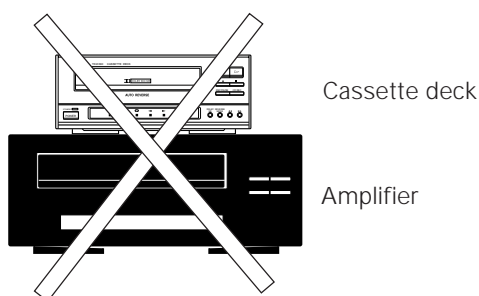
## Caution for Placement

Do not place in any of the following ares.

- In direct sunlight.
- Do not place the CD player on top of the amplifier/tuner.
- In a place warmer than 35°C (95F°).
- In a bathroom, kitchen or other area with steam, humidity, or hot water.
- In a place with lots of static electricity or dust.
- In an unstable area.
- Near appliances that receive electronic wave broadcasts, such as a television.

### Special attention

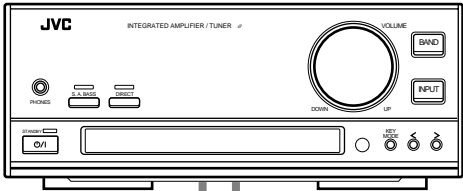
To protect from damage or malfunction, do not place this cassette deck on an amplifier or equivalent to generate heat.





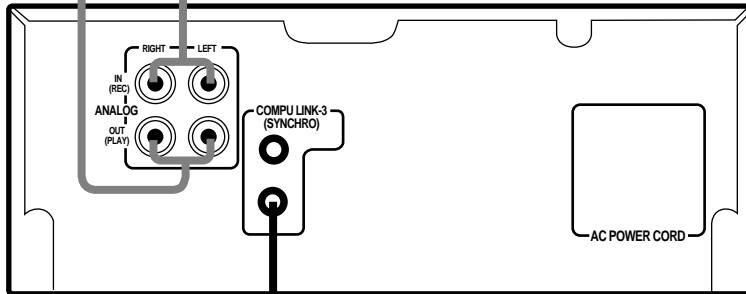
# Connections

## Amplifier/Tuner



### Audio pin cords

Always connect the jacks with the plugs of the same colors so as not to mistake the L (Left) and R (Right) connections. Connect the OUT (PLAY) jacks to the IN (PLAY) jacks of the amplifier/tuner, and the IN (REC) jacks to its OUT (REC) jacks.



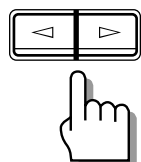
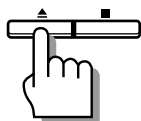
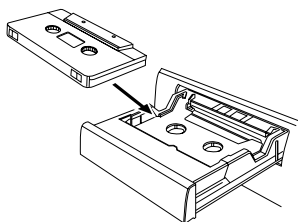
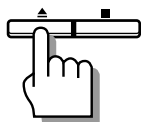
### Compu Link cable

Connect to the COMPU LINK-3 (SYNCHRO) jack of another component equipped with Compu Link remote control system.

# Playback

## Tape playback

Three tape types including normal (Type I), High position (Type II) and Metal (Type IV) tapes can be played back. The type of tape is identified automatically by the cassette deck.



- ① Press ▲.  
The tape tray comes out open.

### Shortcut:

Pressing ▲ while the power is in the STANDBY mode automatically switches the power ON and opens the tape tray.

- ② Place a tape on the tray, with the side A facing up.  
Fit in the caved-in area so that the edge where tape is exposed faces toward the inside of the unit.

- ③ Press ▲.  
The tape tray closes.

- ④ Press ◀ or ▶.  
Playback starts.
  - Pressing ▶ starts playback of side A (top side). The ▶ indicator blinks slowly.
  - Pressing ◀ starts playback of side B (bottom side). The ◀ indicator blinks slowly.
  - If ◀ or ▶ is pressed while the tape tray is open, the tape tray closes before playback starts.

### Shortcut

Pressing ◀ or ▶ while the power is in the STANDBY mode automatically switches the power ON and starts playback.

**Note:** It will take about 6 seconds to start playing.

- Press ■ to stop playback in the middle.
- Press ▲ to eject the tape.

## Caution

Playback may be interfered with noise if there is a TV set nearby. In this case, turn off the TV or increase the distance between the TV and this unit.

### To fast forward or rewind tape:

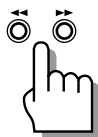
Press ◀◀ or ▶▶ while tape is in stop mode. The tape indicator blinks at a high speed during fast forward or rewind operation.

#### Fast forward

If the current tape transport direction is ▶, press ▶▶.  
If the current tape transport direction is ◀, press ◀◀.

#### Rewind

If the current tape transport direction is ▶, press ◀◀.  
If the current tape transport direction is ◀, press ▶▶.



### Skipping to the beginning of music (Music Scan)

The beginning of the piece of music located before or after the current playback position can be located easily by making use of blanks between music.

Press ◀◀ or ▶▶ while tape is in play mode. The tape indicator blinks rhythmically during skip operation.

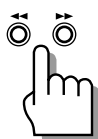
#### Skipping to the beginning of next music

If the current tape transport direction is ▶, press ▶▶.  
If the current tape transport direction is ◀, press ◀◀.

#### Skipping to the beginning of current music being played

If the current tape transport direction is ▶, press ◀◀.  
If the current tape transport direction is ◀, press ▶▶.

- The beginning of the desired music may not be located properly if blanks between music are too short, the blanks contain too much noise or the music itself contains very low-level or silent part.



### To play both sides of tape continuously:

Press REVERSE MODE.

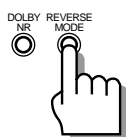
The reverse mode indicator (⊞) lights up when the reverse mode is on, and turns off when it is off.

#### When the reverse mode is on

The two sides of tape will be played continuously and repeatedly.

#### When the reverse mode is off

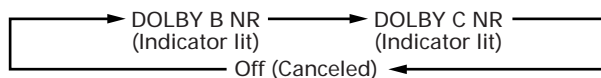
Tape stops after one side has been played.



### To play a tape recorded using Dolby NR:

Press DOLBY NR.

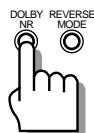
Each press switches the Dolby NR mode as shown below.



Select B or C according to the Dolby NR type used when the tape was recorded. The indicator of the selected type should light up.

The Dolby NR allows to reduce hiss noise in playback.

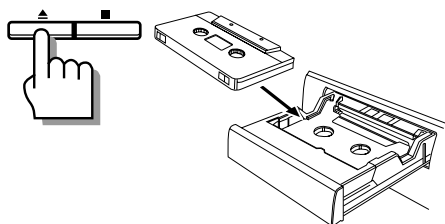
Dolby Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.



# Recording

## Tape recording (Basic operation)

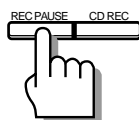
Three tape types including normal (Type I), High position (Type II) and Metal (Type IV) tapes can be recorded onto. The type of tape is identified automatically by the cassette deck.



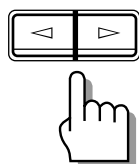
- ① Load the tape for use in recording, with the side A facing up.  
Press ▲ to open the tape tray, place a tape on it and press ▲ to close it.
  - It is not possible to record onto a cassette tape with the broken accidental erasure tab. Use a cassette the tab of which is not broken.

- ② Prepare the recording source (Tuner, CD or MD, etc.).
  - To record radio broadcast, receive a station with the tuner.
  - To record CDs, load the desired CDs and program tracks if required.
  - To record an MD, load the desired MD and program tracks if required.
  - To record a component connected to AUX, prepare it as required.

\* Refer to the instruction manual of the source component for its operating procedure.



- ③ Select the recording source with the amplifier's input selector.
- ④ Press REC PAUSE.  
The REC indicator lights in red to indicate record-pause mode.



- ⑤ Start playing the source component.  
If you want to record CD or MD tracks from the first track, first perform step ⑥ below (i.e. start recording) then start playing the source.
- ⑥ Press ◀ or ▶.
  - Pressing ▶ starts recoding on side A (top side).
  - Pressing ◀ starts recoding on side B (bottom side).The tape indicator starts blinking to indicate that the recording is under way.
  - The recording level is set automatically.
  - Press ■ to stop recording.
  - Press ▲ to eject the tape.

### To let recording pause temporarily:

Press REC PAUSE. The tape indicator stops blinking and lights steadily.

Press ◀ or ▶ to resume recording.

### To record continuously on both sides of tape:

1 Load a tape so that you can start recording from the ▶ direction.

2 Press REVERSE MODE to switch the reverse mode on.

Press so that the reverse mode indicator (⊞) lights up.

3 Prepare recording of the associated components.

4 Press REC PAUSE.

5 Press ▶ to start recording.

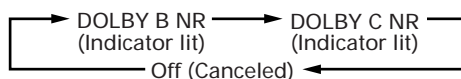
- The recording in the reverse mode stops after completing recording in the ◀ direction. Be sure to start recording from the ▶ direction.
- When the reverse mode is switched off, recording stops after having recorded onto one side of tape.

**Note:** The side erasure tab is removed (refer to P.19) will not be recorded even though the reverse mode is swithed on.

### To record audio using Dolby NR

The Dolby NR is used to record audio to reduce hiss noise when the tape is played back later. The Dolby NR includes type B for popular use and type C for even improved noise reduction effect.

Press DOLBY NR so that either the B or C indicator lights up.

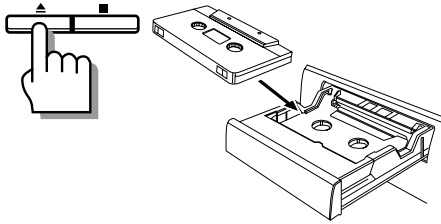


- A tape recorded using Dolby NR should be played back using the Dolby NR of the same type as that used in recording. The audio quality will be affected if a different type is used in playback.

## CD synchronized recording

CDs can be recorded with a simple, one-touch operation. By using the features of the CD player you can easily create an original tape of your favorite music.

Be sure to make the Compu Link connection among the EX series components.



### ① Load the tape for use in recording.

Press ▲ to open the tape tray, place a tape on it and press ▲ to close it.

- It is not possible to record onto a cassette tape with the broken accidental erasure tab. Use a cassette the tab of which is not broken.
- If you want to record music on both sides of tape continuously, switch the reverse mode on (see page 13).
- If you want to use Dolby Noise Reduction, press DOLBY NR to select B or C (see page 13).

### ② Prepare the CD player.

Load CDs, press CD 1, 2 or 3 according to the disc you want to record, and press □/CANCEL of the CD player. This selects the playing CD.

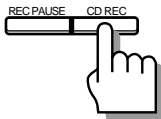
Now set the CD player to the program play mode, etc., as required.

\* Refer to the instruction manual of the CD player for the CD player operating procedures.

### ③ Press CD REC.

The CD player and cassette deck start simultaneously and synchronized recording starts.

- During recording, the CD source is selected automatically by the amplifier/tuner.
- During recording, the amplifier/tuner's input source cannot be changed even by pressing its INPUT.



### To stop recording:

Press □/CANCEL of the CD player to stop recording.

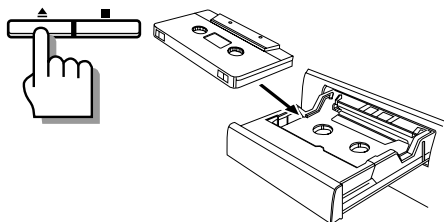
The cassette deck will stop after leaving a non-recorded blank of 4 seconds.

If you want to stop recording immediately, press ■ of the cassette deck.

## MD synchronized recording

Synchronized recording makes it possible to start cassette recording in synchronism with the playback of the MD recorder.

Be sure to make the Compu Link connection among the EX series components.



### ① Load the tape for use in recording.

Press ▲ to open the tape tray, place a tape on it and press ▲ to close it.

- It is not possible to record onto a cassette tape with the broken accidental erasure tab. Use a cassette the tab of which is not broken.
- If you want to record music on both sides of tape continuously, switch the reverse mode on (see page 13).
- If you want to use Dolby Noise Reduction, press DOLBY NR to select B or C (see page 13).

### ② Prepare the MD recorder.

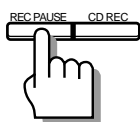
Load the MD to be played.

Program MD tracks if required.

\* Refer to the instruction manual of the MD recorder for the MD recorder operating procedures.

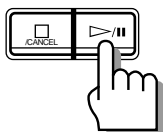
### ③ Press REC PAUSE.

The cassette deck enters record-pause mode.



### ④ Press ▷/|| of the MD recorder.

Synchronized recording starts.



### To stop recording:

Press □/CANCEL of the MD recorder to stop recording. The cassette deck will stop after leaving a non-recorded blank of 4 seconds.

If you want to stop recording immediately, press ■ of the cassette deck.

# COMPU LINK

## Linked Operation of the Other Optional components (Compu Link)

The EX series components can be controlled under linked operation provided by the JVC's Compu Link remote control system.

### Compu Link

The world of single components, in which you purchase a cassette deck, CD player, amplifier and other components separately and enjoy your own composition, is an effective means for pursuit of high-quality reproduction. However, in terms of operability, the need of controlling components independently makes their control complicated and their linked operation impossible. Then, isn't it possible to combine single components and control them as simply as an integrated audio system? The Compu Link remote control system is the response to such a requirement.

The components in the JVC EX series are equipped with jacks named COMPU LINK-3 (COMPU LINK jacks). By connecting the COMPU LINK jacks of these components, they can be controlled simply with a systematized, linked operation.

### Compu Link connections

Using Compu Link cables, connect the COMPU LINK jacks of EX series components. Connect so that the Compu Link cables can bridge all of the EX series components you have. The components can be connected in any order.



## Compu Link-3 features

The Compu Link-3 system of the EX series components makes the following operations possible.

### Shortcut playback

Simply selecting an input source of the amplifier/tuner starts playback of the selected source component (CD player, MD recorder or cassette deck).

Also, even if you do not touch the amplifier/tuner, starting playback of a source component sets the amplifier's input source automatically to the played component.

\* Refer to the instruction manual of the amplifier/tuner.

### System control from a single remote control unit

The remote control unit provided with the amplifier/tuner can also be used to control the CD player or cassette deck.

### Synchronized recording

Recording can be started automatically in synchronism with the start of playback of a source component.

(See pages 14 and 15.)

### Timer operation

The timer function built into the amplifier/tuner can be used to start recording or playback of other components at the reserved time of the day or switch the power to the STANDBY mode in the reserved time period.

\* Refer to the instruction manual of the amplifier/tuner.

# Additional Information

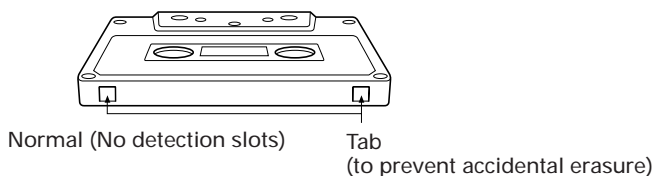
## Types of cassette tape

This cassette deck incorporates an auto tape select function. The auto tape select function uses the tape-type detection holes to distinguish which type of tape was inserted, and sets the bias and equalizer to the optimum settings for that tape automatically.

The following types of tapes may be used with this cassette deck.

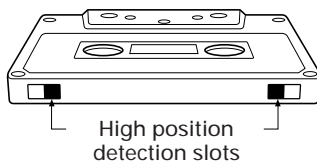
### Normal tape

TYPE I  
BIAS:NORMAL  
EQ:120 $\mu$ s



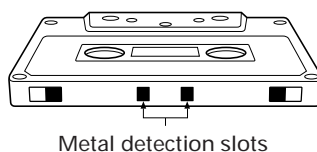
### High Position (CrO<sub>2</sub>) tape

TYPE II  
BIAS:HIGH  
EQ:70 $\mu$ s



### Metallic tape

TYPE IV  
BIAS:METAL  
EQ:70 $\mu$ s



### Caution

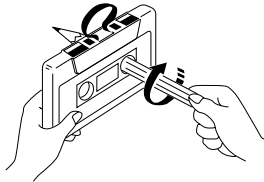
- Tapes longer than 90 minutes, such as C-120 or C-150 tapes, are extremely thin and stretch easily. Please note that frequent rewinding and fast forwarding of small sections of tape may cause these tapes to jam in the pinch rollers and capstans.  
**Note:** The use of these types of tapes is not recommended to avoid troubles.
- Certain early period metal and high position (CrO<sub>2</sub>) tapes may not have tape-type detection slots. The cassette deck cannot obtain the correct characteristics for these tapes.
- Ferrochromite (FeCr) TYPE III tapes cannot be used with this cassette deck.

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## Handling cassette tapes

### Cautions regarding handling

Do not touch the surface of the tape or pull the tape out of the cassette. Tape spooled loosely around the hubs is likely to jam in the pinch rollers and capstans. Before loading the tape into the cassette holder, take up the slack in the tape as shown below.



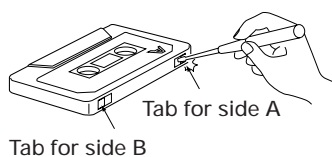
### Tape storage

Place tapes in their cases for storage. Avoid storing tapes on top of TVs or speakers, in sunlight or places of high temperature, or in humid or dusty areas.

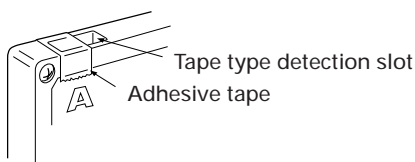
### To prevent accidental erasure

Cassette tapes have tabs to prevent accidental erasure. If you remove the tabs after making a recording, the cassette deck cannot be set to record when that tape is loaded. Remove the tabs so that valuable recordings will not be accidentally erased.

Recording (erasure) is not possible when the tabs are removed.



To make another recording on a tape whose tabs have been removed, cover the tab holes with adhesive tape.



Be careful not to cover the tape-type detection slots.

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## Maintenance

### Cleaning the tape heads

Since the tape is always touching the heads as it travels through the tape transport, in time magnetic particles and dust build up, making the heads dirty. When the heads become extremely dirty, the sound quality becomes poor, the output level is reduced, recording doesn't work, and previously recorded sounds cannot be erased (etc.). In order to prevent important recordings from coming out as failures, we recommend cleaning the heads, pinch rollers and capstans on a regular basis (after about every 10 hours of use), before the symptoms described above begin to appear.

### Cleaning method

Clean the heads, capstans and pinch rollers using a wet-type head cleaning tape, available from an audio store. For more details, refer to the Instructions of the Head Cleaning Tape.

### Demagnetizing the tape heads

After the cassette deck has been used for long period of time, the metal parts which contact the tape may become magnetically charged. When this occurs, tape hiss increases, and the high pitched sounds on recorded tapes will be erased. The same type of malfunction could also be caused by bringing a charged metal object (such as a screwdriver) near the tape heads. We recommend demagnetizing the tape heads regularly (after about every 20 to 30 hours of use) with a commercially available tape head demagnetizer.

You may also use cassette type demagnetizers with this cassette deck. When doing so, be sure to turn the volume of the amplifier all the way down, or you may harm the amplifier or speakers. For details, read the instructions that come with the tape head demagnetizer.

## Troubleshooting

If you experience any difficulty with your cassette deck, check the following list for a possible solution before calling for service.

If you cannot solve the problem from the hints given here, or the cassette deck has been physically damaged, call a qualified person, such as your dealer, for service.

SYMPTOM	POSSIBLE CAUSE	ACTION
Recording is not possible	<ul style="list-style-type: none"> <li>The tabs on the cassette have been removed.</li> </ul>	<ul style="list-style-type: none"> <li>Use a different cassette tape.</li> <li>If you don't mind erasing the previously recorded material, cover the holes with tape.</li> </ul>
	<ul style="list-style-type: none"> <li>The deck is set to pause.</li> </ul>	<ul style="list-style-type: none"> <li>Press ◀ or ▶ to release the pause.</li> </ul>
No sound	<ul style="list-style-type: none"> <li>Connections are incorrect or incomplete.</li> </ul>	<ul style="list-style-type: none"> <li>Check to make sure the all equipment is connected correctly.</li> </ul>
	<ul style="list-style-type: none"> <li>Volume control on amplifier is turned all the way down.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust the volume on the amplifier.</li> </ul>
	<ul style="list-style-type: none"> <li>The source selector (INPUT) on the amplifier is set to a different source.</li> </ul>	<ul style="list-style-type: none"> <li>Set the source selector (INPUT) to tape.</li> </ul>
Music scan does not work	<ul style="list-style-type: none"> <li>The blank spaces between songs is too short.</li> </ul>	<ul style="list-style-type: none"> <li>Try a different cassette tape.</li> </ul>
Sound level is low or sound is intermittent	<ul style="list-style-type: none"> <li>The heads, capstans, and pinch rollers are dirty.</li> </ul>	<ul style="list-style-type: none"> <li>Clean the heads, capstans, and pinch rollers.</li> </ul>
Tape hiss or absence of high frequency sounds	<ul style="list-style-type: none"> <li>The play and record heads have become magnetically charged.</li> </ul>	<ul style="list-style-type: none"> <li>Demagnetize the heads.</li> </ul>
Previously recorded material is not erased when recorded over	<ul style="list-style-type: none"> <li>The erase head is dirty.</li> </ul>	<ul style="list-style-type: none"> <li>Clean the erase head.</li> </ul>
Bad sound quality or absence of high frequency sounds	<ul style="list-style-type: none"> <li>The Dolby NR setting is different from that used for recording.</li> </ul>	<ul style="list-style-type: none"> <li>Set the Dolby NR to the same setting used for recording.</li> </ul>
Cassette holder will not open (or close)	<ul style="list-style-type: none"> <li>The AC power cord is unplugged.</li> </ul>	<ul style="list-style-type: none"> <li>Plug the AC power cord into a wall outlet.</li> </ul>
Humming noise	<ul style="list-style-type: none"> <li>Cassette deck is directly above or below the amplifier/tuner.</li> </ul>	<ul style="list-style-type: none"> <li>Move cassette deck away from amplifier/tuner.</li> </ul>
Operation is abnormal.	<ul style="list-style-type: none"> <li>Condensation is produced inside the cassette deck immediately after starting the room heating or when it is transported from a cold to warm place.</li> </ul>	<ul style="list-style-type: none"> <li>Unplug the power cord, wait a few hours and plug it again.</li> </ul>
	<ul style="list-style-type: none"> <li>The microcomputer is malfunctioning due to external noise or lightning.</li> </ul>	<ul style="list-style-type: none"> <li>Unplug the power cord then plug it in again.</li> </ul>

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# Specifications

## Audio performance

Frequency response (-20 dB recording)	Type IV tape :30 Hz to 17 kHz (40Hz to 17kHz (± 3 dB)) Type I I tape :30 Hz to 16 kHz (40Hz to 16kHz (± 3 dB)) Type I tape :30 Hz to 15 kHz (40Hz to 15kHz (± 3 dB)) 54 dB
Signal-to-noise ratio	(S=315 Hz , k3=3% , N=A-weighted , Type IV tape) The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz to 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with Dolby B NR on. MOL Improved 4 dB at 10kHz

## Input/Output Terminals

Wow and flutter	0.09%(WRMS)
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## General

ANALOG IN (REC)	Input level / Impedance : 220mV (0 VU) / 19 kohms
ANALOG OUT (PLAY)	Output level / Impedance : 300mV (0 VU) / 2.9 kohms

Format	Compact Cassette Stereo
Track System	4-track , 2channel
Tape Speed	4.8 cm/sec. (1-7/8inch/sec.)
Heads	Record/Playback : METAPERM head × 1 Erase : 2-gap ferrite haed Capstan : Electronic govemed DC moter
Motors	Tray:DC motor × 1
Fast forward / Rewind time	Approx. 120 sec. with C-60 cassette
Power requirements	AC120 ~ 60Hz
Power Consumption	7watts (OPERETE ON) , 3watts (OPERETE STANDBY)
Dimensions	200 × 80 × 305 mm (W × H × D) (7-7/8 × 3-3/16 × 12-1/16 inches)
Mass	2.4 kg (5,3 lbs)

## Accessories

Audio pin cord	(2)
Compu Link cable	(1)
AC power cord	(1)

*Design and specifications are subject to change without notice.*

## HOW TO LOCATE YOUR JVC SERVICE CENTER

**TOLL FREE : 1-800-537-5722**

Dear customer:

In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, Call 1-800-537-5722 for your authorized servicer. Remember to retain you Bill of Sale for Warranty Service.

—JVC

### JVC SERVICE & ENGINEERING COMPANY OF AMERICA DIVISION OF US JVC CORP.

#### FACTORY SERVICE CENTER LOCATIONS

107 Little Falls Road  
Fairfield, NJ 07004-2105  
(201) 808-9279

5665 Corporate Avenue  
Cypress, CA 90630-0024  
(714) 229-8011

230 Eliot Street  
Ashland, MA 0172-2377  
(508) 881-5923

1500 Lakes Parkway  
Lawrenceville, GA 30243-5357  
(770) 339-2522

2969 Mapunapuna Place  
Honolulu, HI 96819-2040  
(808) 833-5828

14505 Commerce Way  
Miami Lakes, FL 33016-1512  
(305) 362-6252

705 Enterprise Street  
Aurora, IL 60504-8149  
(630) 851-7855

10700 Hammerly, Suite 110  
Houston, TX 77043  
(713) 935-9331

890 Dubuque Avenue  
South San Francisco, CA 94080-1804  
(415) 871-2666

*Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.*

NATIONAL HEADQUARTERS  
JVC SERVICE & ENGINEERING COMPANY OF AMERICA  
DIVISION OF US JVC CORP.  
107 Little Falls Road  
Fairfield, NJ 07004-2105

#### **If you ship the product •••**

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

#### **Don't service it yourself.**

#### **CAUTION**

To prevent electrical shock, do not open the cabinet. No user serviceable parts inside.  
Refer servicing to qualified service personnel.

#### **ACCESSORIES**

To purchase accessories for your JVC product, you may contact your local JVC Dealer.  
Or from the 48 Continental United States call toll free : 800-882-2345



# LIMITED WARRANTY AUDIO-1

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period.")

PARTS	LABOR
1YR	1YR

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY(50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN COMMONWEALTH OF PUERTO RICO.

**WHAT WE WILL DO:**

If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

**WHAT YOU MUST DO FOR WARRANTY SERVICE:**

Return your product to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800)537-5722. If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus and letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number. If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

**WHAT IS NOT COVERED:**

This limited warranty provided by JVC does not cover:

- Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
- Initial installation and installation and removal for repair;
- Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
- Damage that occurs in shipment, due to act of God, and cosmetic damage;
- Signal reception problems and failures due to line power surge;
- Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus(Needle) are covered for 90 days from the date of purchase;
- Accessories;
- Batteries (except the Rechargeable Batteries are covered for 90 days from the date of purchase);

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty last, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

JVC COMPANY OF AMERICA  
DIVISION OF US JVC CORP.

41 Slater Drive  
Elmwood Park, New Jersey 07407

REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY, THIS WARRANTY DOES NOT APPLY. FOR DETAILS OF REFURBISHED PRODUCT WARRANTY, PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

For customer use:

Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Purchase date: \_\_\_\_\_

Name of dealer: \_\_\_\_\_

