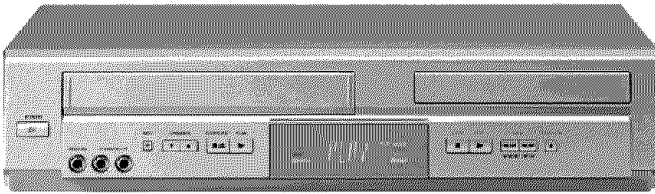# Panasonic®

DVD/VCR DECK
Operating Instructions
Model No. AG-VP310

VHS

Professional / Industrial Video

Connections and Initial Setup Procedures are on pages 12 to 17.

DOLBY DIGITAL

dts 2.0+DIGITAL OUT

COMPACT DISC DIGITAL AUDIO

DVD AUDIO/VIDEO

RAM COMPATIBLE PLAYER

MULTI FORMAT PLAYBACK

Designed for Windows Media™

JPEG Playback

DVD-RAM* DVD-R

MP3 PLAYBACK

CD-R/RW playback

★Ability to play back may depend on recording conditions.

As an ENERGY STAR® Partner, Matsushita Electric Corporation of America has determined that this product or product model meets the ENERGY STAR® guidelines for energy efficiency.

ENERGY STAR

Please read these instructions carefully before attempting to connect, operate or adjust this product. Please save this manual.

PRO LINE

Important Safeguards and Precautions

⚠ WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, FIRE, INJURY TO PERSONS OR DAMAGE TO THIS PRODUCT, READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON THE PRODUCT.

INSTALLATION

1 POWER SOURCE CAUTION
Operate only from a power source indicated on the unit or in this manual. If necessary, have your Electric Utility Service Company or Video Products Dealer verify the power source in your home.

2 POLARIZED OR GROUNDING PLUG
As a safety feature, this product comes with either a polarized power cord plug (one blade is wider than the other), or a three-wire grounding type plug.

POLARIZED PLUG CAUTION:
This plug will only fit into an outlet one way. If you cannot fully insert the plug, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not defeat the safety feature by tampering with the plug.

GROUNDING PLUG CAUTION:
This plug will only fit into a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not defeat the safety feature by tampering with the plug.

3 POWER CORD
Make sure power cords are routed so that they are not likely to have anything rest on them, roll over them, or be in the way of walking traffic. If an extension cord is used, make sure it also has either a polarized or grounded plug and that the cords can be securely connected. Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified service technician.
Overloaded outlets and extension cords are fire hazards and should be avoided.

4 DO NOT BLOCK VENTILATION HOLES
Ventilation openings in the cabinet release heat generated during operation. If they are blocked, heat build-up inside the unit can cause failures that may result in a fire hazard or heat damage to cassettes or discs.
For protection, follow these rules:
a. Never cover ventilation slots or the unit while in use, or operate the unit when placed on a bed, sofa, rug, or other soft surface.
b. Avoid built-in installation, such as a book case or rack, unless proper ventilation is provided.

5 PLACEMENT: AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES
Do not place the unit over or near heater or radiator, in direct sunlight, inside closed vehicles, in high temperature [over 104°F (40°C)], or in over 75% humidity. If the unit is suddenly moved from a cold place to a warm one, moisture may condense in the unit and on the tape causing damage. Never subject the unit to vibration, impact, or place it so that the surface is tilted as internal parts may be seriously damaged.

6 TO AVOID PERSONAL INJURY
• Do not place unsecured equipment on a sloping surface.
• Do not place this unit on any support that is not firm, level, and adequately strong. The unit could fall causing serious injury to a child or adult and damage to the unit.
• An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
• Carefully follow all operating instructions and use the manufacturer's recommended accessories when operating this unit or connecting it to any other equipment.

OUTDOOR ANTENNA INSTALLATION

1 SAFE ANTENNA AND CABLE CONNECTION
If an outside antenna or cable system is connected to the equipment, be sure the antenna or cable system is grounded so as to provide some protection against built up static charges and voltage surges.
Section 810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
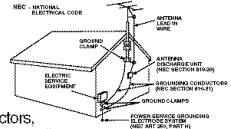
2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS
An outside antenna system should be located well away from power lines, electric light or power circuits and where it will never come into contact with these power sources if it should happen to fall. When installing an outside antenna, extreme care should be taken to avoid touching power lines, circuits or other power sources as this could be fatal. Because of the hazards involved, antenna installation should be left to a professional.

USING THE UNIT

If the unit has been in storage or moved to a new location, refer first to the INSTALLATION section of these safeguards.

1 KEEP THE UNIT AWAY FROM WATER OR MOISTURE OF ANY KIND.

2 IF EQUIPMENT IS EXPOSED TO RAIN, MOISTURE, OR STRONG IMPACT, unplug the unit and have it inspected by a qualified service technician before use.

3 DURING AN ELECTRICAL STORM
During a lightning storm, whether indoors or outdoors, or before leaving the unit unused for extended periods of time, disconnect all equipment from the power source as well as the antenna and cable system.

4 WHEN THE UNIT IS PLUGGED IN
• Never expose the unit to rain or water. DO NOT OPERATE if liquid has been spilled into the unit. Immediately unplug the unit, and have it inspected by a service technician. Fire and shock hazards can result from electrical shorts caused by liquid contact inside.
• Never drop or push any object through openings in the unit. Some internal parts carry hazardous voltages and contact can cause electric shock or fire hazard. Do not put any foreign object on the disc tray.
• Avoid placing the unit directly above or below your TV set as this may cause electrical interference. Keep all magnets away from electronic equipment.

5 USING ACCESSORIES
Use only accessories recommended by the manufacturer to avoid risk of fire, shock, or other hazards.

6 CLEANING THE UNIT
Unplug the unit. Then, use a clean, dry, chemically untreated cloth to gently remove dust or debris. DO NOT USE cleaning fluids, aerosols, or forced air that could over-spray, or seep into the unit and cause electrical shock. Any substance such as wax, adhesive tape, etc. may mar the cabinet surface. Exposure to greasy, humid, or dusty areas may adversely affect internal parts.

SERVICE

1 DO NOT SERVICE THIS PRODUCT YOURSELF
If, after carefully following the detailed operating instructions, this product does not operate properly, do not attempt to open or remove covers, or make any adjustments not described in the manual. Unplug the unit and contact a qualified service technician.

2 IF REPLACEMENT PARTS ARE REQUIRED
Make sure the service technician uses only parts specified by the manufacturer, or those having the same safety characteristics as the original parts. The use of unauthorized substitutes may result in fire, electric shock, or other hazards.

3 HAVE THE SERVICE TECHNICIAN PERFORM A SAFETY CHECK
After any service or repairs to the unit, request the service technician to conduct a thorough safety check as described in the manufacturer's service literature to ensure that the unit is in safe operating condition.

Safety Precautions/Mesures de sécurité

⚠ WARNING

To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

⚠ CAUTION

To prevent electric shock, match wide blade of plug to wide slot, fully insert.

AVERTISSEMENT:

Afin de prévenir tout risque d'incendie ou de chocs électriques, ne pas exposer cet appareil à la pluie ou à une humidité excessive.

ATTENTION:

Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

⚡ This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

! This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

CAUTION:
UNIT IS A CLASS I LASER PRODUCT.
HOWEVER THIS UNIT USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE UNIT CORRECTLY AS INSTRUCTED.

WHEN THIS UNIT IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS UNIT.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT ATTEMPT TO REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION:
LASER RADIATION WHEN OPEN DO NOT STARE INTO BEAM.

ATTENTION:
RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.

(Inside of product)

FCC NOTE:

This equipment has been tested and found to comply with part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver.
If necessary, consult the dealer or an experienced radio/TV technician for help. The user may find the booklet, "Something About Interference" available from FCC local regional offices helpful.

FCC Caution:

To assure continued compliance, (example- use only shielded interface cables when connecting to other devices.) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Region Management Information:

This DECK is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this DECK, this DECK cannot play this disc.
● The Region number for this DECK is "1".
● The Player will play DVD-Video marked with labels containing "1" or "ALL".

**Example:**

3

Before Using

Congratulations

on your purchase of one of the most sophisticated and reliable products on the market today. Used properly, it will bring you years of enjoyment. Please fill in the information below. The serial number is on the tag located on the back of your DECK.

- Date of Purchase _____
- Dealer Purchased From _____
- Dealer Address _____
- Dealer Phone No. _____
- Model No. _____ **AG-VP310** _____
- Serial No. _____

Accessories

☐ Remote Control ☐ Batteries 2 "AA"
    EUR7724KD0
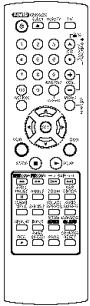
☐ RF Coaxial Cable
    LSJA0418

Loading the Batteries

1) Open cover.

2) Insert batteries as marked.

3) Close cover.

☐ **Battery replacement caution**
- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

Record/ Playback Time

Only use tapes with the **VHS** mark in this DECK.

Tape Speed Setting	Type of Video Cassette		
	T120	T160	T180
SP (Standard Play)	2 Hours	2 Hours 40 Minutes	3 Hours
SLP (Super Long Play)	6 Hours	8 Hours	9 Hours

Head Cleaning

Playing older or damaged tapes may eventually cause video heads to become clogged.

Video Head Clog Sensor

During playback, this screen appears if clogging is detected. To remove screen, press PLAY on the remote or DECK.

```
VIDEO HEADS MAY
NEED CLEANING
PLEASE INSERT HEAD
CLEANING CASSETTE
OR REFER TO MANUAL

END    :PLAY
```
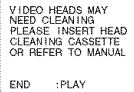
- **Use "dry" type head cleaning cassette only.** (Part No. NV-TCL30PT is recommended.)
- Follow cleaning tape instructions carefully. Excessive use of tape can shorten head life.

Built-in Head Cleaner

A clean video head helps produce a clear picture. So, we have equipped your DECK with a built-in, non-chemical head cleaning system that helps prevent clogging of the video heads. Cleaning is performed each time you load or unload a video cassette.

- This feature is preventative only, If your video heads are seriously clogged, consider the use of a chemical non-abrasive head cleaning kit.

Cleaning DECK

Use a soft cloth or dusting attachment of a vacuum cleaner to remove dust from the ventilation holes on the back sides and bottom of the cabinet. Plastic surfaces are easily scratched and can be marred by alcohol and various solvents. Avoid excessive use of oil-based furniture polishes since the materials used in the cabinet will accumulate more dust. We recommend using a non-abrasive, antistatic cleaner and polisher.

Features for a Quality Picture (VCR)

Digital Auto Picture
Automatically controls the video output signal for less noise depending on the tape condition.

Digital Auto Tracking
Continuously analyzes the signal and adjusts for optimum picture quality.

Manual Tracking Control (to reduce picture noise)
Use during Playback and Slow Motion mode to reduce picture noise.
Press **CH** (TRACKING) ▲/▼ on the remote control or on DECK until the picture clears up.
To return to Auto Tracking, **press POWER** off, then on again a few seconds later.

V-Lock Control (to reduce picture jitter)
In Still mode, **CH** (TRACKING) ▲/▼ operate as a V-Lock control.

Table of Contents

DECK & Cassette Information

Prevent Accidental Tape Erasure

Break off the tab to
prevent recording.

Record Tab

Screw driver
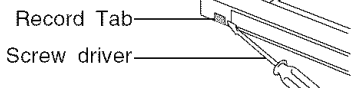
To record again

Cover the hole
with cellophane tape.
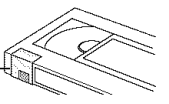
Disc formats supported by this DECK

DECK can play back discs bearing any of the
following marks:

Logo	Disc type
DVD R A M RAM4.7	**DVD-RAM (Version 1.1 of the Video Recording Format a unified video recording standard)**
DVD VIDEO **DVD** VIDEO	**DVD (DVD-Video)**
DVD R R4.7	**DVD-R (DVD-Video formatted discs [finalized])**
DVD AUDIO	**DVD-Audio**
disc COMPACT DIGITAL AUDIO	**CD (CD-DA)**
disc COMPACT Rewritable **disc** COMPACT Recordable	**CD-R/CD-RW** • **CD-DA format** • **WMA/MP3/JPEG file and finalized.***

[Discs Played 8cm (3") or 12cm (5")]
*A process that allows play on compatible equipment.

Discs which cannot be played
• DVD with Region No. other than "1" or "ALL"
• PAL discs (the audio on DVD-Audio can be
  played), DVD-ROM, DVD-RW, DVD+R,
  DVD+RW, CD-ROM, CDV, CD-G, CVD, SVCD,
 SACD, CD-TEXT, Divx Video Disc, Photo-CD
  and Video CD

Notes
• Do not use irregularly shaped discs (e.g. heart-
  shaped), as these can damage the unit.
• **It may not be possible to play CD-R, CD-RW,
  DVD-R and DVD-RAM in all cases due to the
  type of disc or condition of the recording.**

DVD-RAM discs

DVD-RAM discs must meet the following conditions
for this unit to be able to play them.

Type	• Non-cartridge discs • Discs that can be removed from their cartridges (TYPE 2 and 4)
Capacity	• 12 cm (5") 9.4 GB (double-sided) and 4.7 GB (single-sided) • 8 cm (3") 2.8 GB (double-sided)

• Remove TYPE 2 and 4 discs from their cartridges
  before use, then return them when you are finished.
 Read the instructions for the disc carefully.
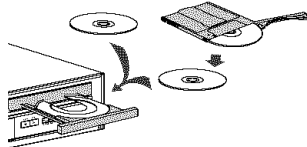
• Some parts of the disc, for example where one program
  ends and another begins, may not play smoothly.

Disc Handling

Handling precautions
• Sticking a label on the disc may impair DVD-R playback.
• Do not attach sticker to discs. (Do not use discs with
  exposed adhesive from tape or left over peeled-off
  stickers.)
• Only hold disc by edges as shown below. Fingerprints,
  dirt and scratches can cause skipping and distortion.
• Do not write on label side of disc.
• Never use record cleaning
  sprays, benzine, thinner,
  static electricity prevention
  liquids, or any other solvent.
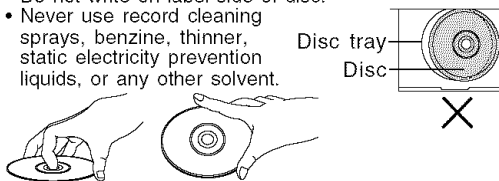
Disc tray

Disc

• Do not try to close disc tray when disc is not
  properly placed.

To clean disc surface
With a soft, damp (water only) cloth,
gently wipe from the center hole to the
outer edge as shown below. (Wiping in a
circular pattern will scratch the surface.)
• DVD-RAM, DVD-R :
  Clean only with the DVD-RAM disc
  cleaner available. Never use cloths or
  cleaners for CDs etc.

If disc is brought from a cold to a warm
environment, moisture may form on the disc
Wipe away moisture with a soft, dry, lint-free cloth
before using disc. (See above.)

Improper disc storage
Discs could be damaged if stored or left in areas:
• exposed to direct sunlight.
• that are humid or dusty.
• near heat (i.e. heater, radiator, etc.).

Specifications

Power Source:	120 V AC, 60 Hz
Power Consumption:	Power On: Approx. 28 watts, Power Off: Approx. 0.85 watts
Video Signal:	EIA Standard NTSC color
Video Recording System:	4 rotary heads helical scanning system
Audio Track:	1 track (Normal), 2 channel (Hi-Fi Audio Sound)
Tuner	
Broadcast Channels:	VHF 2 ~ 13, UHF 14 ~ 69
CABLE Channels:	Midband A through I (14 ~ 22), Superband J through W (23 ~ 36)
	Hyperband AA ~ EEE (37 ~ 64), Lowband A-5 ~ A-1 (95 ~ 99)
	Special CABLE channel 5A (01), Ultraband 65 ~ 94, 100 ~ 125
Input/Output Terminal:	Audio/Video Line Input/Output, RF Input/Output
Input Terminal:	Audio/Video Line Input (Front)
Output Terminal:	S-Video Output (DVD only), Component Video Output (DVD only)
	Audio Output 2 (L), (R)
Operating Temperature:	5 °C ~ 40 °C (41 °F ~ 104 °F)
Operating Humidity:	10 % ~ 75 %
Weight:	3.85 kg (8.5 lbs).
Dimensions:	430 (W) x 95 (H) x 273 (D) mm
	16-15/16" (W) x 3-3/4" (H) x 10-3/4" (D) inch
Discs Played	
(1) DVD-Video Disc	5" (12 cm) single-sided single-layer
DVD-Audio Disc	5" (12 cm) single-sided double-layer
	5" (12 cm) double-sided double-layer (one layer per side)
	3" (8 cm) single-sided single-layer
	3" (8 cm) single-sided double-layer
	3" (8 cm) double-sided double-layer (one layer per side)
DVD-RAM Disc	5" (12 cm) 9.4 GB (double-sided) and 4.7 GB (single-sided)
	3" (8 cm) 2.8 GB (double-sided)
(2) Compact Disc	5" (12 cm) disc
(CD-DA)	3" (8 cm) disc
(CD-R/CD-RW, MP3, WMA, JPEG)	
Digital Audio Output:	Digital Optical Connector
Pickup:	Wavelength: 655 nm (DVD), 790 nm (CD)
	Laser power: CLASS II

Note: • Designs and specifications are subject to change without notice.

Definition of Terms (DVD)

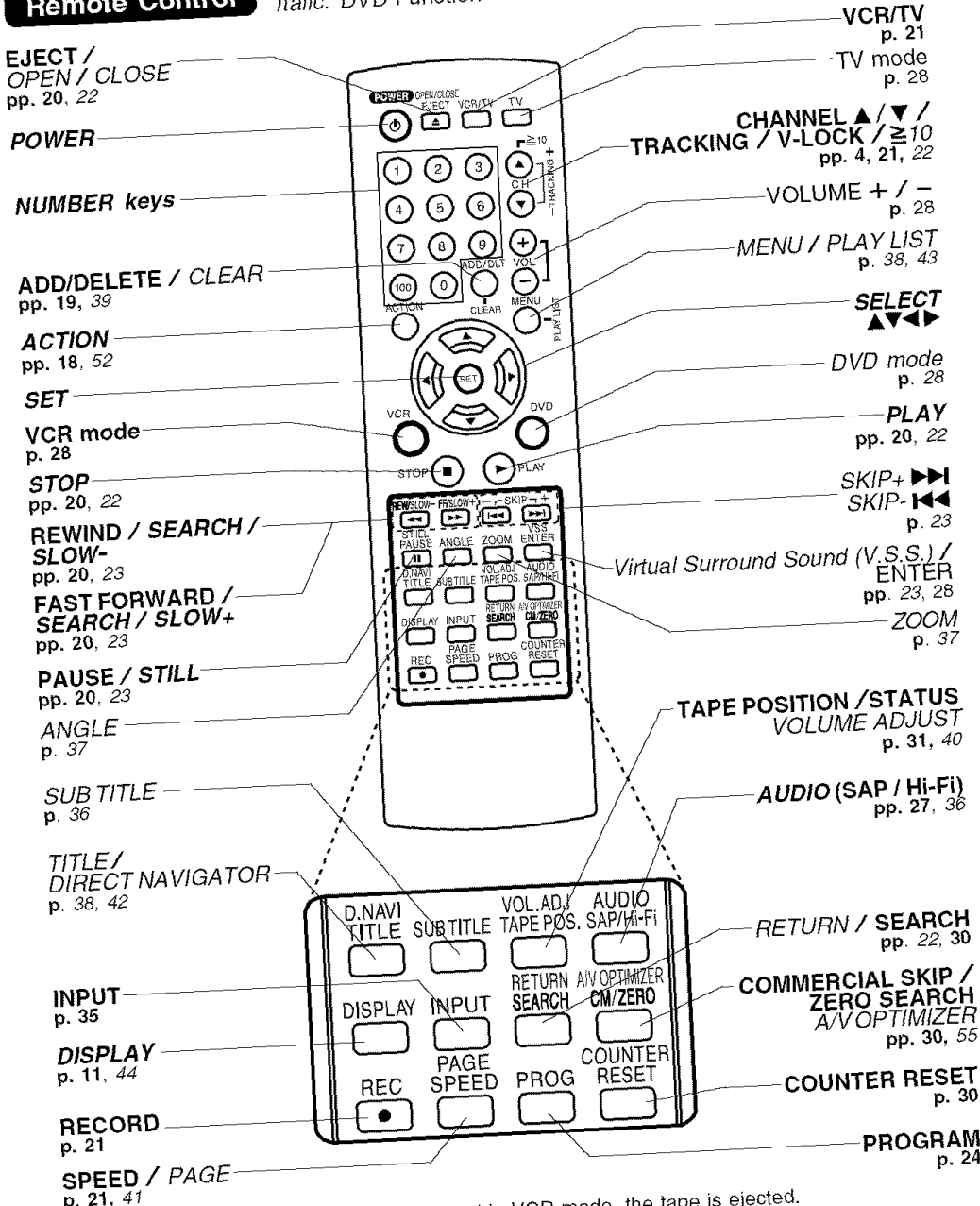|	
Angle:	Some DVD discs feature scenes simultaneously shot from different angles. The ANGLE button can be used to view the scene from different angles. (ANGLE Indicator lights on DECK when a scene recorded at different angles is detected.)
Chapter Number:	Titles are subdivided into numbered sections. You can quickly search for a favorite scene using these numbers.
DVD:	A high-density optical disc on which high-quality pictures and sound have been digitally recorded. DVD incorporates video compression technology (MPEG II) and high-density recording technology which allow entire movies to be recorded with incredible playback quality.
Subtitles:	Written dialogue which appears at the bottom of the screen.
Time Number:	The elapsed play time from the start of a disc or title. Use to quickly find scenes. (May not work with some discs.)
Title Number:	For DVD discs with two or more titles, the title is numbered as title 1, title 2, etc.
Track Number:	Numbers assigned to tracks on CDs to allow specific tracks to be quickly located.

Location of Controls

Remote Control

Bold: **VCR Function** / Bold Italic: ***VCR and DVD Functions***
Italic: *DVD Function* / Normal: Others

EJECT /
OPEN / CLOSE
pp. 20, *22*

POWER

NUMBER keys

ADD/DELETE / *CLEAR*
pp. 19, *39*

ACTION
pp. 18, *52*

SET

VCR mode
p. 28

STOP
pp. 20, *22*

REWIND / SEARCH /
SLOW-
pp. 20, *23*

FAST FORWARD /
SEARCH / SLOW+
pp. 20, *23*

PAUSE / STILL
pp. 20, *23*

ANGLE
p. 37

SUB TITLE
p. 36

TITLE /
DIRECT NAVIGATOR
p. 38, *42*

INPUT
p. 35

DISPLAY
p. 11, *44*

RECORD
p. 21

SPEED / *PAGE*
p. 21, *41*

VCR/TV
p. 21

TV mode
p. 28

CHANNEL ▲ / ▼ /
TRACKING / V-LOCK / ≧10
pp. 4, 21, *22*

VOLUME + / −
p. 28

MENU / PLAY LIST
p. 38, 43

SELECT
▲▼◄►

DVD mode
p. 28

PLAY
pp. 20, *22*

SKIP+ ►►I
SKIP- I◄◄
p. 23

Virtual Surround Sound (V.S.S.) /
ENTER
pp. 23, 28

ZOOM
p. 37

TAPE POSITION /STATUS
VOLUME ADJUST
p. 31, 40

AUDIO (SAP / Hi-Fi)
pp. 27, *36*

RETURN / **SEARCH**
pp. 22, 30

COMMERCIAL SKIP /
ZERO SEARCH
A/V OPTIMIZER
pp. 30, *55*

COUNTER RESET
p. 30

PROGRAM
p. 24

EJECT button: When this button is pressed in VCR mode, the tape is ejected.
This button is inoperative if pressed during recording.
If pressed in DVD mode, the disc tray opens or closes.

8

Bold: VCR Function
Italic: *DVD Function*
Bold Italic: *VCR and DVD Functions*
Normal: Others

PLAY
p. 20

STOP/EJECT
p. 20

Remote
Sensor

POWER

Audio/Video
Input Connector 2
(LINE 2) p. 35

REC
p. 21
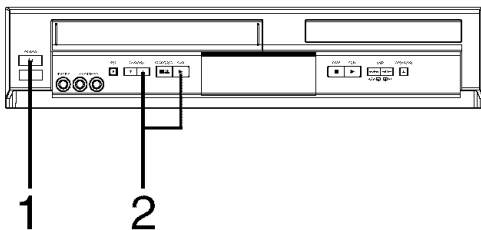
CHANNEL ▲/▼
TRACKING/V-LOCK
pp. 4, 21

If the disc cannot be removed...

First, unplug DECK. Then, prepare a rigid wire (e.g. an extended paper clip) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc.

Over 2 inches

Cassette   *Disc Tray*
Compartment

Blue Light
p. 32

Multi Function
Display
p. 11

OPEN/CLOSE
p. 22

FAST FORWARD
/ SEARCH /
SKIP ►►I
p. 20, *23*

REWIND */ SEARCH /*
SKIP I◄◄
p. 20, *23*

PLAY
p. 22

STOP
p. 22

Returns to factory setting. Use if relocating DECK, or if Initial Setup needs to be redone.
• Make sure a tape is not inserted in the DECK.

1   Turn DECK Power on.

2   Press and hold both **VCR PLAY** and **CHANNEL ▲** on the DECK for more than 5 seconds.
• The power shuts off.

3   Perform "Initial Setup (Ready to Play)" on page 16.

1   2

Initial Setup
(Connection)

Location of Controls (continued)

Bold: **VCR Function**   *Italic*: *DVD Function*
Bold Italic: ***VCR and DVD Functions***

AC Power Plug
• While plugged into an AC outlet, this DECK consumes 0.85 W of electrical power in off mode.
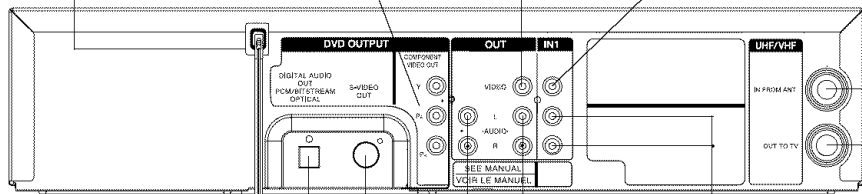
VHF/UHF Antenna Output Terminal p.12

VHF/UHF Antenna Input Terminal p. 12

Component Video Output Connector (Y, Pв, Pв) (DVD Only) p. *13*

Video Output Connector p. *12*

Video Input Connector p. 35

Optical Digital Audio Output Connector (DVD Only) p. *15*

S-Video Out Connector (DVD Only) pp. *10, 13*

Audio Output 1 Connector (L/R) p. *12*

Audio Output 2 Connector (L/R) p. *13*

Audio Input Connector (L/R) p. 35

The following table shows the status of the output jacks when in VCR or DVD mode.

	Video Output **Audio Out 1** ***Audio Out 2***	*Component Video Output*	*S-VIDEO OUT*
VCR	YES	N/A	N/A
DVD	YES	YES	

Note • PROG functions on the remote are not available when using Component Video Output and S-VIDEO OUT. Please set TV to either RF INPUT or VIDEO INPUT, and then press PROG.

To enjoy PROGRESSIVE SCAN video

(1). Connect *Component Video Output* to the component video input terminals of a television. (See p. 13.)
(2). When PROGRESSIVE OUT is set to "ON" in the DVD Main Menu (p. 55), a Progressive Scan signal is output from the *Component Video Output Connector*.

Notes
• The screen may shift off-center when using progressive output. Please adjust the screen position if this occurs. (Refer to your TV manual.)
• If the television is not progressive compatible, a progressive scan picture is not available. Connect the Video Output or S-Video Output connector (see p. 12, 13) and set PROGRESSIVE OUT to "OFF" in the DVD Main Menu. (See p. 55.)

Displays (On Screen & Multi Function)

On Screen Displays (VCR)

Function & Channel Displays

CH 08
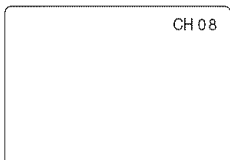
When a function button is pressed, e.g. PLAY, or you change channels, a 5-second display appears.
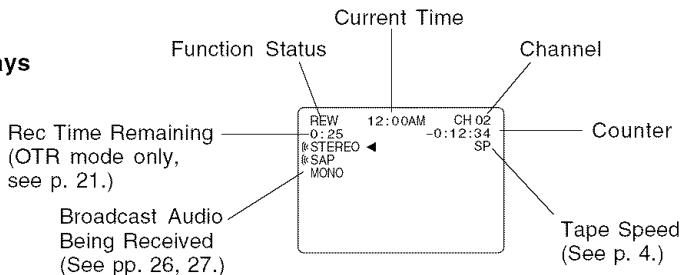
VCR Status & Clock Displays
To display or remove screen shown at right,

→ **press DISPLAY**.

Blank Tape/ No Video Signal Indications

Whenever a blank section of a tape comes up in Play mode, or when the selected channel has no broadcast signal with Weak Signal Display Feature (p. 33) set to OFF, the TV screen will turn solid blue.

Current Time

Function Status   Channel

Rec Time Remaining ——— (OTR mode only, see p. 21.)

```
REW      12:00AM    CH 02
0:25              -0:12:34
STEREO ◄              SP
SAP
MONO
```

Counter

Broadcast Audio Being Received (See pp. 26, 27.)

Tape Speed (See p. 4.)

Multi Function Display

VCR mode Indicator
Lights up when DECK is in VCR mode.

Tape Indicator
Lights up when a tape is inserted.

DISC Indicator
Lights up when a disc is inserted.

DVD mode Indicator
Lights up when DECK is in DVD mode.

Timer Indicator
Lights up when DECK is set for Timer Recording, or when One Touch Recording (OTR) is used. Flashes when Timer Recording is set, but a tape has not been inserted into DECK and when a power interruption occurs during Timer Programming.

VCR REC Indicator
Lights up during recording.

```
VCR  OO
TIMER REC
dts Hi-Fi
DIGITAL
```
```
12:30  DVD
       CD MP3 WMA
       AM  ANGLE
       PM
```

CD/MP3/WMA Indicator
CD : Lights when an Audio CD is inserted or JPEG file is played.
MP3/WMA : Lights when an MP3 or WMA file is played.
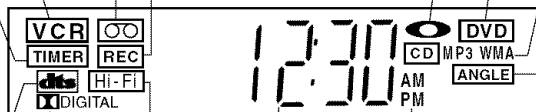
DTS Indicator
Lights up when a DTS formatted DVD is played. (DVD only)

Hi-Fi Indicator
Lights up when Hi-Fi audio is present in Play mode.

AM/PM Indicator

ANGLE Indicator
Lights up when a scene recorded at different angles is detected. (See p. 37.) (DVD only)

Dolby Digital Indicator
Lights up when a "Dolby Digital" formatted DVD is played. (DVD only)
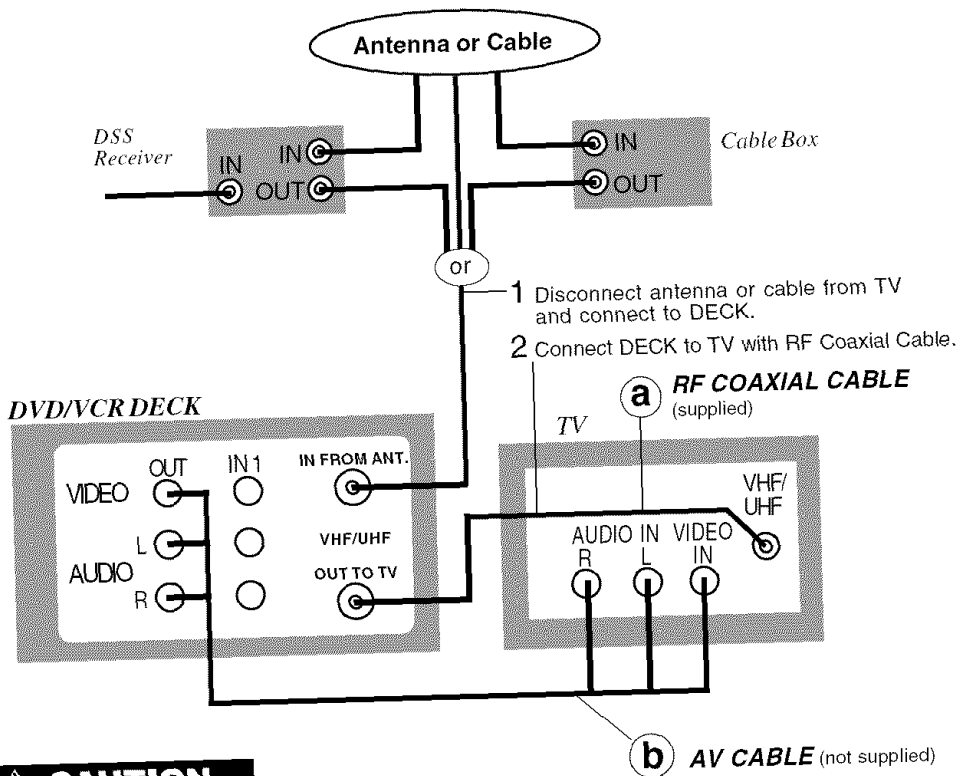
Clock/ Status/ Channel/ Speed Display
Displays current time. Briefly displays DECK status when you press a function button, channel number or "L1" or "L2" when you select channel or line input, and recording speed when you press SPEED.

11

Basic Connections

- **If your TV has AUDIO and VIDEO IN terminals, connect them to DECK for higher quality picture and sound.**
- You can enjoy stereo sound even if your TV is not stereo by connecting a stereo amplifier to DECK.
- Connect DECK and TV with an RF Coaxial Cable (a) (supplied) or an AV Cable (b) (not supplied) as shown in the figure below.

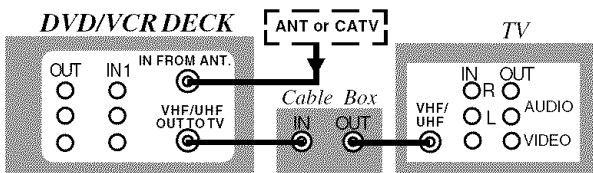■ DSS Receiver → DECK → TV   ■ DECK → TV   ■ Cable Box → DECK → TV

Antenna or Cable

DSS Receiver   IN   IN   Cable Box
                OUT   IN
                            OUT

or

1 Disconnect antenna or cable from TV and connect to DECK.

2 Connect DECK to TV with RF Coaxial Cable.

DVD/VCR DECK

(a) **RF COAXIAL CABLE** (supplied)

TV

VIDEO OUT IN1 IN FROM ANT.
L   VHF/UHF
AUDIO   OUT TO TV
R

VHF/UHF

AUDIO IN VIDEO
R   L   IN

(b) *AV CABLE* (not supplied)

⚠ CAUTION

When using "Nut type" RF coaxial cables, tighten with fingers only. Overtightening may damage terminals.

Note to CABLE system installer
This reminder is provided to call the CABLE system installer's attention to Article 820-40 of the NEC in USA (and to the Canadian Electrical Code in Canada) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Other Connections

■ With a Cable Box (DECK→Cable Box→TV)

DVD/VCR DECK   ANT or CATV   *TV*

You Can	You Cannot
• view any (including scrambled) channel.	• record scrambled channels.
• use Remote Control to select channels without using Multi-brand control feature.	

■ Connect With Two Cable Boxes

DVD/VCR DECK

You Can	You Cannot
• record and view both scrambled and unscrambled channels if additional equipment is added. This connection requires: two converter boxes, an A/B switch, and a 2-way splitter.	• view a channel other than the one selected for any type of recording.
	• set a Timer recording of a channel unless you select it on the Cable Box.

Connections For DVD Only (enjoying higher picture quality)

①Connect AUDIO OUT2 (L, R) to the AUDIO IN (L, R) of the TV. (audio input for COMPONENT or S-VIDEO mode).

②If your TV has COMPONENT VIDEO INPUT, connect to COMPONENT VIDEO OUT.
If your TV does not have COMPONENT VIDEO INPUT but has S-VIDEO INPUT, connect to S-VIDEO OUT.

③When in DVD mode, set your TV to either COMPONENT VIDEO IN or S-VIDEO IN.

Notes
• **You can watch DVDs through the S-VIDEO or COMPONENT VIDEO, VHF/UHF OUT TO TV, and VIDEO OUT connections to your TV. The VCR and TUNER pictures are available only from the VIDEO OUT and VHF/UHF OUT TO TV connections to your TV.**
• PROG functions on the remote are not available when using S-VIDEO OUT and COMPONENT Video Output. Please set TV to either RF INPUT or VIDEO INPUT, and then press PROG.
• TV must have capability to accept and display a progressive scan signal to use PROGRESSIVE mode. Consult your TV operating instructions.

DVD/VCR DECK   **From DECK's**   *TV*   **A/V OUTPUT**

13

Connections (continued)
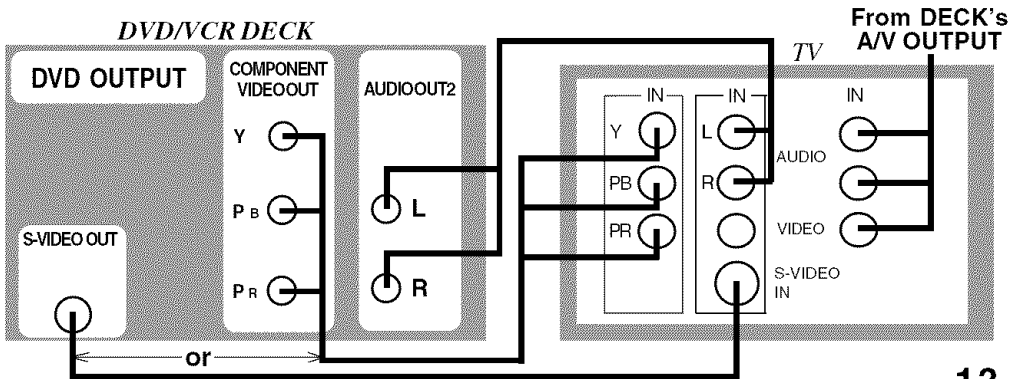
Audio Connections

✔ Ready Checklist

☐ Turn down the volume, then turn DECK, as well as other equipment to be connected, off before proceeding with connection.

☐ Do not block ventilation holes of any of the equipment and arrange them so that air can circulate freely.

☐ Read through the instructions before connecting other equipment.

☐ Ensure that you observe the color coding when connecting audio and video cables.

■ Connecting Amplifier (2ch stereo system)

DVD/VCR DECK   Speaker   Amplifier   Speaker

AUDIO OUT2   L   R   AUDIO IN   R   L
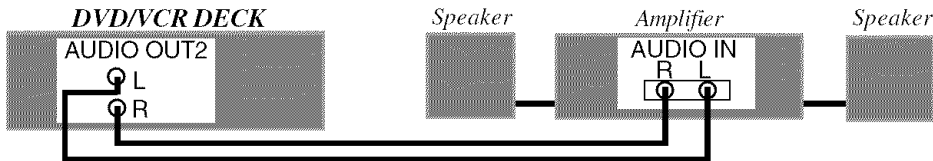
Enjoying digital audio output from the digital audio output connector
Notes on audio output from the optical digital audio output connector

Disc	Sound recording format	Optical digital audio output from connector
DVD	Dolby Digital	Dolby Digital bitstream (1-5.1 ch) or PCM (48 kHz sampling/16 bit only)*1
	Linear PCM (48/96/192/44.1/88.2/ 176.4 kHz 16/20/24bit)	Linear PCM (2 ch) (48 kHz sampling/16 bit or 44.1 kHz sampling/ 16 bit)*2
	DTS	Bitstream or PCM (48 kHz sampling/16 bit only)*1
DVD-RAM	Dolby Digital	Dolby Digital bitstream (1 - 5.1 ch) or PCM (48 kHz sampling/16 bit only)
	Linear PCM(48 kHz/16 bit)	Linear PCM (2 ch)
CD	Linear PCM	Linear PCM (44.1 kHz sampling)
MP3	MP3	Linear PCM (It depends on the MP3 file)
WMA	WMA	Linear PCM (It depends on the WMA file)

*1 The type of audio output from the connector can be selected by the Settings for DVD Operation. (See p. 53.)

*2 When "LPCM(DVD)" is set to OFF in the DVD Main Menu, 44.1 or 48 kHz sampling/16 bit is ouput. When set to ON, sampling of sound quality greater than 44.1 or 48 kHz/16 bit is reduced to 44.1 or 48 kHz/16 bit. (See page 53.)

For your reference:

• Dolby Digital is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.

• Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 44.1 kHz/16 bit ~ 192 kHz/24 bit.

• If you have a Dolby Pro Logic Surround decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1 channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark. For information on Panasonic or Technics Dolby Pro Logic Surround Sound Decoders please contact your local dealer.

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■ Connecting Amplifier (5.1 ch Surround system) [Digital connection]
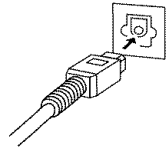## DECK➡ Dolby Digital Decoder ➡Amplifier➡ Speaker
or
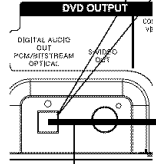## DECK➡ DTS (Digital Theater Systems) Decoder ➡Amplifier ➡Speaker

When DVDs recorded in Dolby Digital or DTS are played, Dolby Digital bitstream or DTS bitstream is output from the DECK OPTICAL digital audio output connector. When DECK is connected to a Dolby Digital decoder or DTS decoder, you can enjoy theater-quality audio in your home. [An optical digital audio cable (optional) is required when an optional Dolby Digital decoder or DTS decoder is used.]

Notes on connecting an optical digital audio cable (optional)
• Firmly connect the cable to the connector.

DVD/VCR DECK
(Rear)

Decoder with Dolby Digital /DTS processing (optional)

Surround Speaker
Surround Speaker

[5.1ch Surround system]

Center Speaker

Front Speaker
Front Speaker

Optical Digital Audio Cable (optional)

To Optical Digital Audio Input Connector

Amplifier

Subwoofer
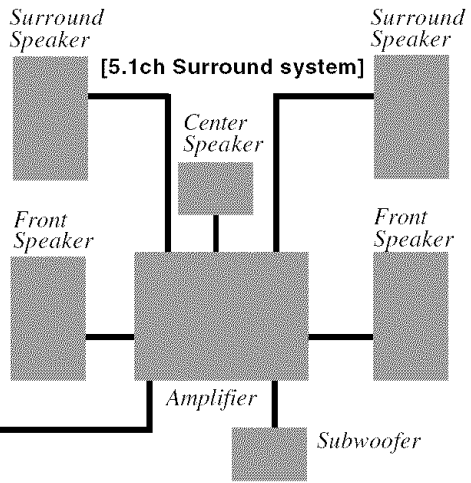
Caution for optical digital audio output connector:
• **When connecting an amplifier (with an Optical Digital Input Connector) which does not contain the Dolby Digital or DTS decoder, be sure to select "PCM" at "Dolby Digital" and "PCM" at "dts" of the Settings for DVD Operation "Audio Output" (see p. 53). Otherwise, any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.**
• **When a Dolby Digital/DTS decoder is connected, please select "Bitstream" at "dts" or "Dolby Digital" of the Settings for DVD Operation "Audio Output".**
If "PCM" is selected, there will be stereo sound. (See p. 53.)
• **CDs can be played as usual.**
Note:
• Some DTS decoders which do not support DVD-DTS interface may not work properly with DECK.

Manufactured under license from Digital Theater Systems, Inc. US Pat. No's. 5,451,942, 5,956,674, 5,974,380, 5,978,762, 6,487,535 and other US. and world-wide patents issued and pending. "DTS" and "DTS 2.0 + Digital Out" are trademarks of Digital Theater Systems, Inc. Copyright 1996, 2003 Digital Theater Systems, Inc. All Rights Reserved.

Manufactured under license from Dolby Laboratories.
"Dolby," "Pro Logic," and the double-D symbol are trademarks of Dolby Laboratories.

15

Initial Setup for Basic Connections (Ready to Play)

Before doing Initial Setup

1 Turn TV on.

2 See connections (a) RF Coaxial Cable Connection and (b) AV Cable Connection on page 12.
<RF Coaxial Cable Connection>
Set TV to channel 3.

<AV Cable Connection>
Set TV to VIDEO.

3 [DECK ➤ TV]
• Go to "Initial Setup (Ready to Play)." (See below.)

[Cable Box ➤ DECK ➤ TV], [DSS ➤ DECK ➤ TV]
• Turn on Cable Box and set it to your Public Broadcasting Station (PBS) channel in your time zone.
• If you use a DSS Receiver, it must be turned off.

Initial Setup (Ready to Play)

1 Press VCR on remote for VCR mode.

2 Plug DECK Power Cord into AC wall outlet. DECK comes on and auto channel and clock set starts.
• If screen below does not appear, check DECK - TV connection and, if TV is tuned to channel 3, try switching it to channel 4.
• To change VCR's output channel, please see "VCR's Output Channel" on page 19.

Plug VCR Power plug into an AC wall outlet.

```
CH  AUTO  SET  PROCEEDING

CANCEL : STOP
```

```
AUTO  CLOCK  SET
PROCEEDING

CANCEL : STOP
```
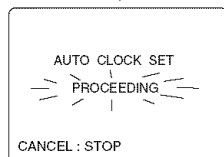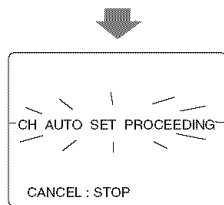
Notes
• Function buttons are void during Initial Setup.
• To eject a tape during Auto Set, press EJECT on remote or STOP/EJECT twice on DECK.
  Then make settings manually. (See p. 18.)
• If Auto Clock Set takes more than 30 minutes, press STOP and perform settings manually. (See p. 18.)

3 Settings are made automatically. When complete, this screen appears.

EJECT

ACTION

SELECT
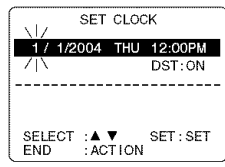▲▼◄►

SET

VCR

```
6/20/2004 SUN  2:20PM
              DST:ON
SETTING : CH 10

AUTO CLOCK SET

COMPLETED
```
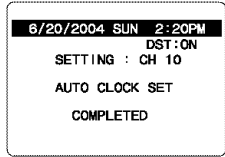
If "AUTO CLOCK SET IS INCOMPLETE" appears, manually set clock (below).

```
AUTO CLOCK SET

IS INCOMPLETE

PLEASE SET CLOCK BY
PRESSING ACTION KEY
```
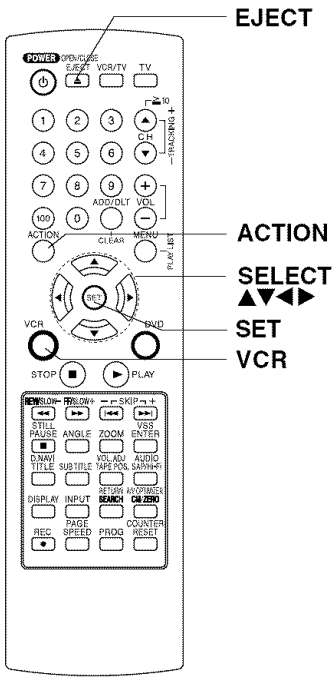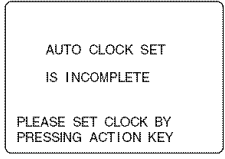
Manual Clock Set

If Auto Clock Set was incomplete.

1 Press ACTION* on remote to display CLOCK screen.

```
    SET CLOCK
\|/
1/ 1/2004 THU 12:00PM
/|\           DST:ON
----------------------

SELECT :▲▼   SET:SET
END    :ACTION
```

STOP/EJECT

2 Press ▲▼ to select the month and SET to set. In the same manner, select and set the date, year, time, and DST (Daylight Saving Time).

```
    SET CLOCK
6/20/2004 SUN 15:30PM
              DST:ON
----------------------

SELECT :▲▼   SET:SET
START  :ACTION
```

3 Press ACTION to start clock and exit.

17

1

```
         MENU
    SET UP VCR
    SET UP CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE : ENGLISH
    VCR'S OUTPUT CH:3

    SELECT : ▲▼    SET : SET
    EXIT     : ACTION
```
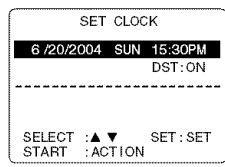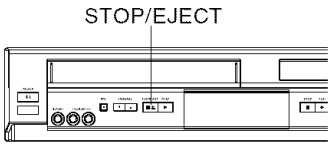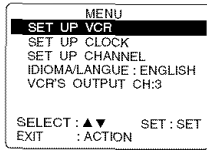
Press ACTION*
to display MENU.

• PROGRAM functions are not available when using COMPONENT Video Output and S-VIDEO OUT. Please set TV to either RF INPUT or VIDEO INPUT, and then press PROGRAM.
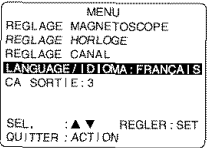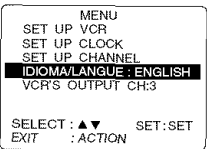

2

■ Language

1) **Press ▲▼** to select language item.

```
         MENU
    SET UP VCR
    SET UP CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE : ENGLISH
    VCR'S OUTPUT CH:3

    SELECT : ▲▼    SET:SET
    EXIT     : ACTION
```
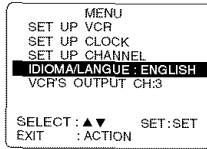
2) **Press SET** repeatedly to change language item as shown below.

```
         MENU
    PREPARAR VCR
    FIJAR RELOJ
    FIJAR CANAL
    LANGUE/LANGUAGE:ESPAÑOL
    SALIDA DE VCR CANAL : 3

    ELEGIR :▲▼  FIJAR:SET
    SALIR    : ACTION
```

For Spanish ↓

```
         MENU
    REGLAGE MAGNETOSCOPE
    REGLAGE HORLOGE
    REGLAGE CANAL
    LANGUAGE / IDIOMA : FRANCAIS
    CA SORTIE : 3

    SEL.     :▲▼   REGLER : SET
    QUITTER : ACTION
```

For French ↓

```
         MENU
    SET UP VCR
    SET UP CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE : ENGLISH
    VCR'S OUTPUT CH:3

    SELECT : ▲▼    SET:SET
    EXIT     : ACTION
```

For English

3) **Press ACTION** to exit.

■ Channels

1) **Press ▲▼** to select "SET UP CHANNEL," and **press SET**.

```
         MENU
    SET UP VCR
    SET UP CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE : ENGLISH
    VCR'S OUTPUT CH:3

    SELECT : ▲▼    SET:SET
    EXIT     : ACTION
```
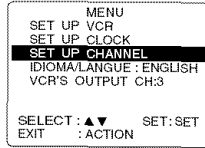
2) **Press ▲▼** to select "ANTENNA," then **press SET** to set your antenna system ("TV" or "CABLE.")

```
    SET UP CHANNEL
    ANTENNA :  CABLE
    AUTO SET
    WEAK SIGNAL DISPLAY:OFF

    SELECT:▲▼    SET:SET
    EXIT    :ACTION
```
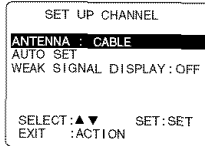
3) **Press ▲▼** to select "AUTO SET," then **press SET**.

• If you use a Cable Box, set it to the PBS channel in your time zone.

```
    ─ \   \  |   ─
       \   \  |  ─
   ─CH AUTO SET PROCEEDING─
       /   |  \  ─
    ─  /   /  |   ─
       /   |  \

    CANCEL : STOP
```
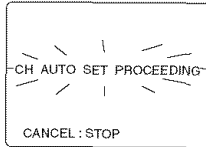
• After Channel Auto Set is finished, Auto Clock Set will be performed.

■ Clock

1) **Press ▲▼** to select "SET CLOCK," and **press SET**.

```
         MENU
    SET UP VCR
    SET UP CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE : ENGLISH
    VCR'S OUTPUT CH:3

    SELECT : ▲▼    SET:SET
    EXIT     : ACTION
```
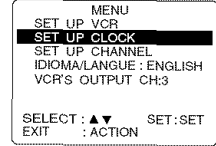
2) **Press ▲▼** to select "MANUAL," and **press SET**. (For Auto Clock Set, select "AUTO CLOCK SET.")

```
       SET CLOCK
    AUTO CLOCK SET
    MANUAL
    TIME ZONE ADJUST :  0

    SELECT :▲ ▼   SET : SET
    EXIT    :ACTION
```
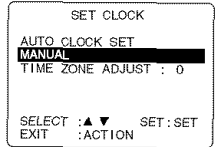
("TIME ZONE ADJUST" appears only when auto clock is set.)

```
       SET CLOCK
    \ | /
    1 / 1/2004  THU  12:00PM
    / | \            DST:ON
    ─────────────────────

    SELECT :▲ ▼   SET : SET
    END     :ACTION
```
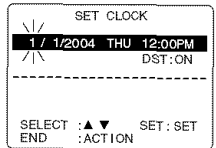
3) **Press ▲▼** and ◄ to select, then set the date, time, and DST (Daylight Saving Time).

4) **Press ACTION** to start Clock and exit this mode.

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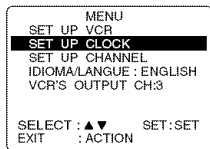# VCR's Output Channel

*Important: If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

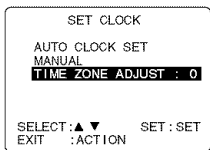## ■ Time Zone Adjust

(Only when Auto Clock is set.)

1) Press ▲▼ to select "SET CLOCK," and press SET.

```
        MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:3

SELECT : ▲▼      SET:SET
EXIT     : ACTION
```

2) Press ▲▼ to select "TIME ZONE ADJUST,"

```
      SET CLOCK

AUTO CLOCK SET
MANUAL
TIME ZONE ADJUST : 0

SELECT :▲ ▼      SET : SET
EXIT    :ACTION
```

and press SET to subtract or add hour(s) as necessary.

3) Press ACTION.

• "TIME ZONE ADJUST" returns to "0" if clock is set manually.

■ VCR's Output Channel

1) Press ▲▼ to select "VCR'S OUTPUT CH.," and press SET.

```
        MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:3

SELECT : ▲▼      SET:SET
EXIT     : ACTION
```

2) Press SET.

```
IF YOU PRESS ACTION
KEY, VCR' S OUTPUT CH
SWITCHES TO CH 4.
```

3) Press ACTION.

```
PLEASE TUNE YOUR TV TO
CH 4.
```

⬇ After 3 seconds

```
        MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:4

SELECT : ▲▼      SET:SET
EXIT     : ACTION
```
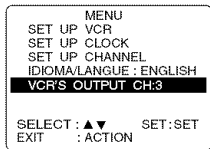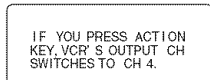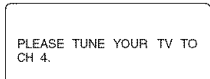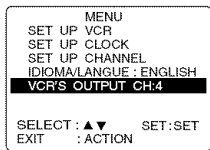
• To Make Corrections, repeat steps 1) ~ 3).

POWER
NUMBER keys
CH ▲ / ▼
ADD/DLT
ACTION
SELECT ▲▼◄►
SET
VCR
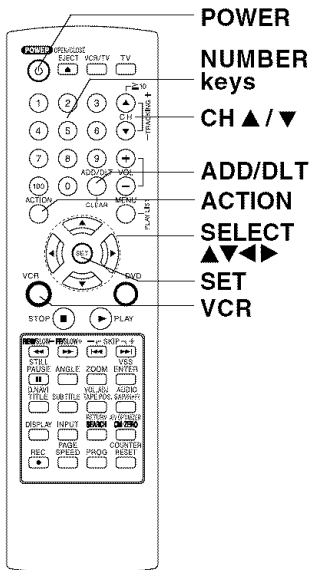
Add or Delete a Channel

To add channel:
Select channel with NUMBER keys and press ADD/DLT.

```
CHANNEL 08 ADDED
```
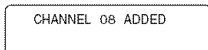
To delete channel:
Select channel with CH ▲/▼ or NUMBER keys and press ADD/DLT.

```
CHANNEL 08 DELETED
```
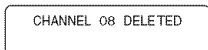
DST (Daylight Saving Time)

DECK auto adjusts clock for DST. (p. 17.)

Spring (First Sunday in April)
DST:ON ➡ Sets clock ahead one hour.

Autumn (Last Sunday in October)
DST:ON ➡ Turns clock back one hour.

• If your area does not observe Daylight Saving Time, select DST:OFF.

• Keep these time changes in mind when programming DECK for timer recordings.

Basic Operation

19

Playback/ Record on a Tape

✓ Ready Checklist

☐ All connections are made. (pp. 12 ~ 15)
☐ TV and DECK are plugged in.
☐ TV is on and tuned to CH 3, 4, or VIDEO.
☐ Remote is in VCR mode. (Press VCR.)

Playback a Tape

1 Insert a tape.
• DECK power comes on. If Auto VCR/TV (see p. 32) is set to "OFF," press VCR/TV on the remote for VCR mode.

2 Press PLAY* to play a tape.
• If tape has no rec. tab (p. 6), auto play begins.

Special Features During Play

■ **Forward/Reverse Scene Search**
➡ **Press FF/SLOW+ or REW/SLOW-.**
➡ **Press PLAY to release.**
After search has begun, each additional press of **FF** or **REW** changes speed.

Notes

• Picture interruption may occur with some TVs.
• FF and REW search speed may vary depending on current tape position.
• After 10 minutes in search mode, VCR returns to Play mode to protect the tape and the video heads.

■ **Still (Freeze) Picture**
➡ **Press PAUSE/STILL.**
➡ **Press PLAY to release.**

■ **Frame by Frame Picture**
➡ **Press PAUSE/STILL** in Still mode.
➡ **Press PLAY to release.**

■ **Slow Motion Picture**
➡ **Press FF/SLOW+** (increase speed) or **REW/SLOW-** (decrease speed) in Still mode.
➡ **Press PLAY to release.**

3 Press STOP to stop a tape.

Rapid Rewind/FF

■ **Press REW/SLOW- or FF/SLOW+** in Stop mode to rewind or fast forward a tape.
• Rewinds a T-120 tape in approx. 1 minute.

■ **Press EJECT** on remote, or **STOP/EJECT** on DECK to eject a tape.

EJECT — VCR/TV — CH ▲ / ▼ — VCR — FF/SLOW+ — REW/SLOW- — PAUSE/STILL — REC — DVD — PLAY — STOP — SPEED
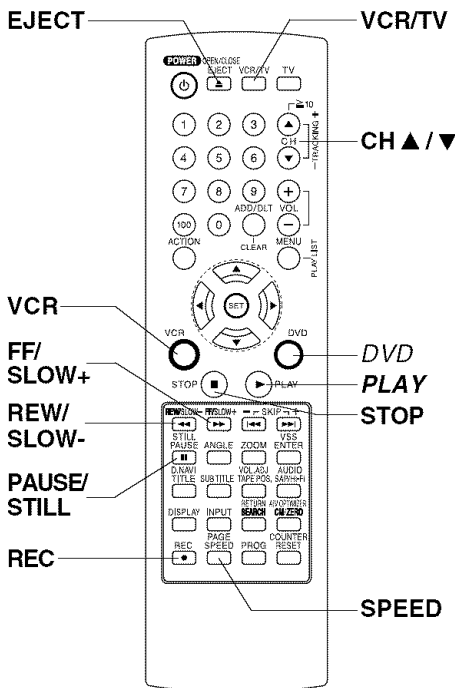
Notes

• These features work best in SP or SLP mode.
• The sound will be muted.
• To reduce picture noise, see "Manual Tracking Control" on page 4.
• After 3 minutes in Still or Slow mode, VCR stops to protect the tape and the video heads.

Playback using DECK buttons

1 Insert a tape.   **2** Press PLAY.

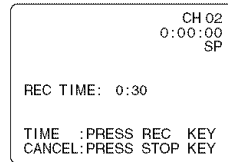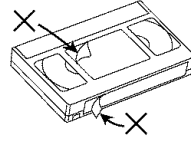Multi Function Display
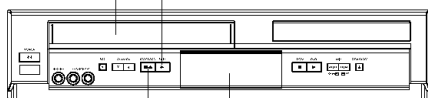
■ Press STOP/EJECT to stop and/ or eject a tape.

20

1 Insert a tape with a record tab (p. 6).
 • DECK power comes on. If Auto VCR/TV (see p. 32) is set to "OFF," press VCR/TV on the remote for VCR mode.

2 Press CH ▲▼, or NUMBER keys to select the channel.
 • If channel number is over 100, first press 100 key then the other 2 digits.
 • For "LINE" input, see p. 35.

3 Press SPEED to select the record speed (p. 4).
 SP = Standard Play
 SLP = Super Long Play
 • Speed appears on-screen and on Multi Function Display.

4 Press REC to start recording.
 (The VCR REC indicator lights up on Multi Function Display),
 • To edit out unwanted scenes, press PAUSE/STILL to pause, and again to resume recording.
 • You cannot view another channel during recording.

5 Press STOP to stop recording.

■ One Touch Recording (recording in progress),
 ➜ press REC repeatedly to set the recording length (30 min. ~ 4 hours) (see right).
 • DECK shuts off after the preset record length.

■ Record one station, watch another,
 ➜ press VCR/TV on the remote (change to TV mode),
 ➜ select channels at TV (recording continues).

■ Select Channels at DECK (In Stop or Rec. Pause mode)
 ➜ press VCR/TV on the remote (change to TV mode),
 ➜ select channels at DECK.

■ Play a disc while recording a tape.
 ➜ insert a disc during recording,
 ➜ press DVD, and then press PLAY.

Notes
• It is not possible to record from DVD/ CD to VHS tape using DECK.
• Watching one channel and recording another is not possible when using Cable Box or DSS Receiver.
• After 5 minutes in Pause mode, DECK stops to protect a tape and video heads.

This video recorder, equipped with HQ (High Quality) system, is compatible with existing VHS equipment.
Only use tapes with the VHS mark.
Only tapes tested and inspected for use in 2, 4, 6, and 8 hour machines are recommended.

Note
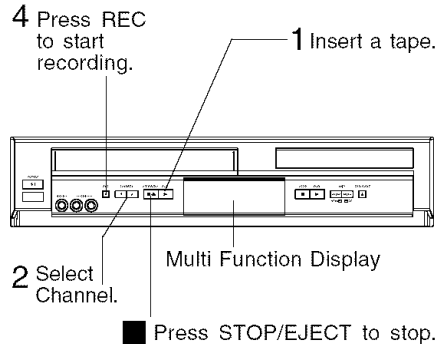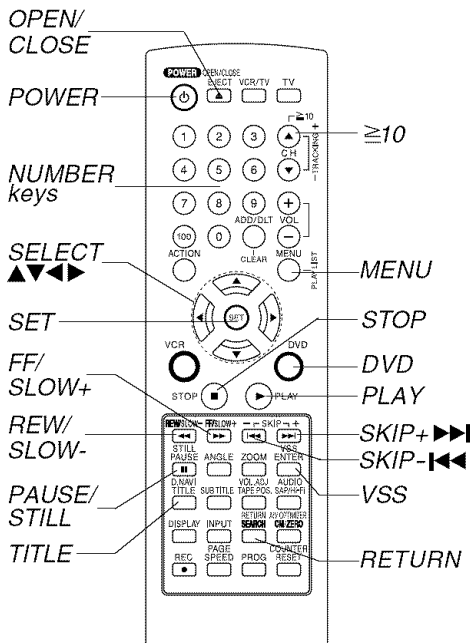Remove loose or peeling labels from tapes to prevent tape jam.


```
                    CH 02
                  0:00:00
                       SP
REC TIME:  0:30

TIME  :PRESS REC  KEY
CANCEL:PRESS STOP KEY
```

<One Touch Recording screen>

➤Normal Rec →0:30→1:00
4:00←3:00←2:00←1:30

Record using DECK buttons

4 Press REC to start recording.

1 Insert a tape.

2 Select Channel.

Multi Function Display

■ Press STOP/EJECT to stop.

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Basic DVD Operation

☑ Ready Checklist

☐ All connections are made. (pp. 12 ~ 15)
☐ DECK is plugged in.
☐ If DECK is connected to an audio amplifier, turn the stereo system's power on.
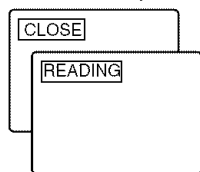
OPEN/
CLOSE

POWER

NUMBER
keys

SELECT
▲▼◄►

SET

FF/
SLOW+

REW/
SLOW-

PAUSE/
STILL

TITLE

≧10

MENU

STOP

DVD

PLAY

SKIP+ ►►I

SKIP- I◄◄

VSS

RETURN

Operation using DECK buttons

3, 7 Press
OPEN/CLOSE.

1 Press
POWER.

4 Press PLAY.

3 Insert a disc.

6 Press STOP.

*¹ Interactive DVD...
May include multiple camera angles, stories, etc.

---

1 Press **POWER**＊ on the remote or DECK.

2 Press **DVD** to select DVD mode.
• If a disc is already inserted, go to step 4. (Depending on the disc, playback may start automatically.)

3 Press **OPEN/CLOSE**, and then place a disc into the disc tray.
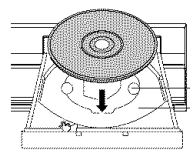
• Hold disc by its edges only (p. 6) with printed side up and use guides to place into tray.
❶ ❷ Use ❶ 3" (8 cm) or ❷ 5" (12 cm) disc.
DVD-RAM ➡ see p. 42

**4** Press **PLAY** to start playing. Disc tray closes automatically.

CLOSE

READING

• You may also close tray by pressing **OPEN/CLOSE**.
• Data reading time differs with each disc.
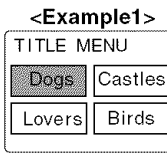
If an interactive DVD*¹ is used and TITLE MENU appears, go to step 5.

<Example1>

TITLE MENU

Dogs | Castles

Lovers | Birds

5

TITLE MENU

Dogs
of the world

<Example2>

Press ▲▼◄► or
NUMBER keys (see below) to select title, and **press SET** or
PLAY to start playing.
• Pressing *SET* or *PLAY* is not necessary when using *NUMBER* keys.
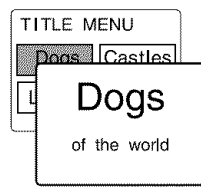
Using NUMBER keys starts play automatically.
The number of available titles varies with each disc.
<Input   1 digit number   1 •••• 1
Example>   2 digit number   12 ••• ≧10 ➝ 1 ➝ 2

Press *SKIP+* ►►I or *SKIP-* I◄◄ to go to next or previous menu screen.
• SKIP function not available with all discs. Please refer to disc jacket for operation information.

To return to menu (play stops)
Press **TITLE**, **MENU**, or **RETURN**.

6 Press **STOP** to stop playing.

7 Press **OPEN/CLOSE** to eject the disc.

■ Forward/Reverse Scene Search
Press *FF/SLOW+* or *REW/SLOW-* during play.
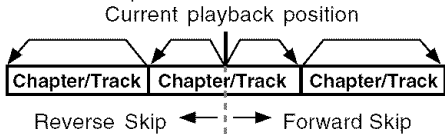**Press** *PLAY* to release.
• Search speed, slow at first, increases with each additional press of the button up to 5 levels.

■ Forward/Reverse Chapter/Track Skip
Press *SKIP+* ▶▶I or *SKIP-* I◀◀ during play.
Each press skips a chapter (DVD-Video), track (DVD-Audio/CD) or Program/Play List/ Marker (DVD-RAM).

DVD-Video, DVD-Audio and CD
• **Pressing** *SKIP-* I◀◀ once midway through a chapter/track returns to the start of that chapter/track. Each additional press skips back one chapter/track.

Current playback position

Chapter/Track	Chapter/Track	Chapter/Track

Reverse Skip ◀—¦—▶ Forward Skip

DVD-RAM
• **Pressing** *SKIP-* I◀◀ once midway through a program/play list returns to the start of that program/play list. Each additional press skips back one program/play list.

Current playback position   Marker

Program/Play List	Program/Play List	Program/Play List

Reverse Skip ◀—¦—▶ Forward Skip
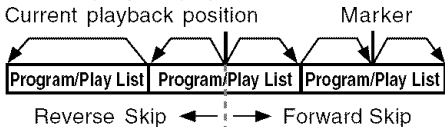
■ Still Picture or Pause
Press *PAUSE/STILL* during play.
Press *PLAY* to release.
• **DVD :** DECK will enter still picture mode.
• **CD :** DECK will enter pause mode.

■ Frame by Frame Picture (DVD)
Press *PAUSE/STILL* in still mode.
Press *PLAY* to release.
• Each press advances picture one frame.
• Hold button down for consecutive frame advance.
• Whether pictures are advanced by "FRAME" or "FIELD" is selected automatically. (See p. 54.)

■ Slow Motion Picture (DVD)
Press *FF/SLOW+* or *REW/SLOW-* in still mode.
Press *PLAY* to release.
• Slow motion speed, slow at first, is increased with each additional press of the button up to 5 levels.

Auto-Power Off Function
Power turns off after DECK has been in Stop mode (DVD) for about 5 minutes.

• When ⊘ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by DECK or the disc.

V.S.S. (Virtual Surround Sound)
Enjoy a surround-like effect if you are using two front speakers only. The effect is broadened and sound seems to come from virtual speakers on either side if the disc has surround signals recorded on it.
Press *VSS* in DVD mode.
• The Surround sound effect can be changed by pressing VSS repeatedly as shown by the figure below.

VSS OFF

VSS OFF (default) ──▶ VSS1 ──▶ VSS2 ──▶ VSS3 ──┐
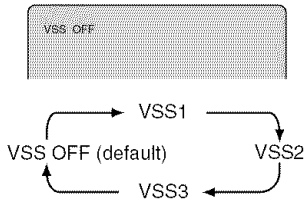
Note
• Surround sound effect is available in DVD mode only.
• Turn off the surround effects on the other equipment.
• V.S.S. will not work, or will have less effect, with some discs.
• Turn V.S.S. off if it causes distortion.
• Sound will only come from the two front speakers if V.S.S. is on.

Resume Function
DECK memorizes the point where STOP is pressed (**STOP** ▶ is displayed on screen).
Press *PLAY* to resume play from this point.
Pressing *STOP* again or opening the tray cancels RESUME, however, RESUME is not canceled when power is turned off and on.
• RESUME works only with discs for which elapsed play time is displayed during play.
• When a DVD-RAM still picture is played back, the counter will not be displayed, however RESUME will function.
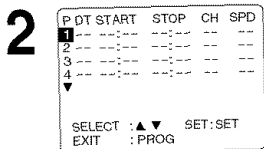
Notes
• Please read the disc jacket for operation information.
• If a single sided disc is placed in upside down, "THIS TYPE OF DISC CANNOT BE PLAYED. PLEASE INSERT A DIFFERENT DISC" is displayed.
• Remove disc and press DECK POWER off when not in use.
• Disc continues to rotate with menu displayed even after play is done. Press STOP to clear menu display when finished with menu.
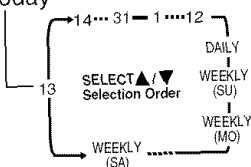
Basic Operation

23

Timer Recording

☑ Ready Checklist

☐ All connections are made. (pp. 12 ~ 15)
☐ TV and DECK are plugged in.
☐ Clock set correctly. (p. 18)
☐ Tape has record tab intact. (p. 6)
☐ Remote is in VCR mode. (Press VCR.)
☐ Sufficient tape remaining for recording time.
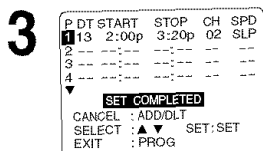
1 Press PROG*
to display Program.

2
```
P DT START  STOP   CH  SPD
1 -- --:-- --:-- -- --
2 -- --:-- --:-- -- --
3 -- --:-- --:-- -- --
4 -- --:-- --:-- -- --
▼
SELECT  :▲ ▼    SET:SET
EXIT    :PROG
```

Example
Today

```
        ┌─14···31─1···12 ─┐
        │              DAILY
  SELECT▲/▼        WEEKLY
    13   Selection Order  (SU)
        │              WEEKLY
        │                (MO)
        WEEKLY ·····
          (SA)
```
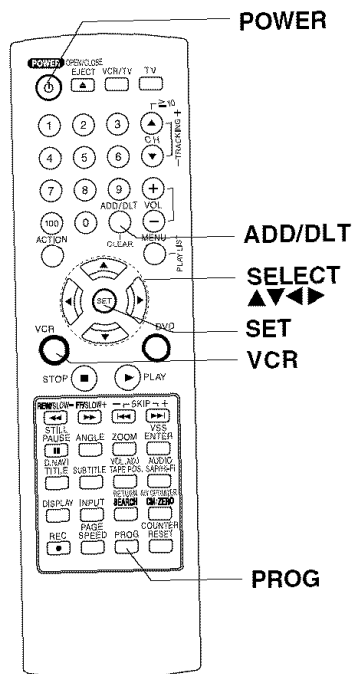
1) Press ▶.
2) Set record DATE,
press ▲▼ to select:
1~31= one time, or
DAILY=Monday~Friday,
or WEEKLY= same time
each week.
• See selection order left.

**3) Set remaining items,
press SET**
to set START/ STOP times,
CH (channel) or LINE
input (p. 35), and tape
speed (SP, SLP).
Then press ▲▼ to select.

Press PROG
to end programming.

3
```
P DT START  STOP   CH  SPD
1 13 2:00p 3:20p 02 SLP
2 -- --:-- --:-- -- --
3 -- --:-- --:-- -- --
4 -- --:-- --:-- -- --
▼      SET COMPLETED
CANCEL  : ADD/DLT
SELECT  :▲ ▼    SET:SET
EXIT    :PROG
```

**To Enter More Programs,
press ▲▼**
to select and
press SET
to set an unused program
number, and then repeat
step 2.
Or
Press PROG
to exit.

POWER

ADD/DLT
SELECT
▲▼◄►
SET
VCR

PROG

VCR mode Indicator

┌─VCR REC Indicator
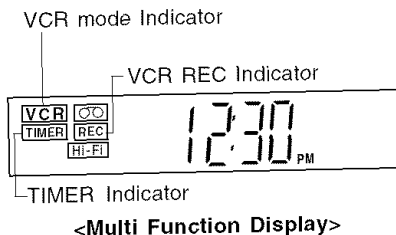
└─TIMER Indicator
<Multi Function Display>

• The "Timer" Indicator lights up on DECK.
• You can set Timer Recording with the power on or off.
• **"TIMER REC WILL START SOON"** appears on-screen for 2 minutes
before Timer Recording starts. If DECK is in DVD mode, no message
appears, but the VCR REC Indicator, the VCR mode indicator and
"REC" will flash on Multi function Display.

24

Review, Replace or Clear Program Contents:

(Recording is not in progress)

1 **Press PROG**
to display Program List.

2

```
P DT START   STOP   CH  SPD
1 13  2:00p  3:20p  02  SLP
2 14  7:00p  7:30p  10  SP
3 -- --:--  --:--  --  --
4 -- --:--  --:--  --  --
▼

CANCEL  : ADD/DLT
SELECT  : ▲ ▼    SET : SET
EXIT    : PROG
```

Press ▲▼
to select number.

3 **To Replace program...**

```
P DT START   STOP   CH  SPD
1 13  2:00p  3:20p  02  SLP
2 14  7:00p  7:30p  10  SP
3 -- --:--  --:--  --  --
4 -- --:--  --:--  --  --
▼

SELECT  : ▲ ▼    SET : SET
EXIT    : PROG
```

Repeat Step 2 (p. 24)
to set new programs.

or

To Clear program...

```
P DT START   STOP   CH  SPD
1 -- --:--  --:--  --  --
2 14  7:00p  7:30p  10  SP
3 -- --:--  --:--  --  --
4 -- --:--  --:--  --  --
▼

SELECT  : ▲ ▼    SET : SET
EXIT    : PROG
```

Press ADD/DLT.

4 **Press PROG**
to end the programming.

To cancel a Timer Recording in progress...

Hold down STOP in VCR mode for a few seconds to cancel the Timer Recording.
(The "TIMER" Indicator goes out on Multi Function Display.)
• Any future daily or weekly recording will be performed as programmed.

VCR Operation

Notes

• **If you are using a Cable Box, the VCR's channel for Timer Recording must be set to the Cable Box input channel and Cable Box must be manually set to the desired channel. Cable Box power must be left on.**

• **2 minutes before Timer Recording is performed, "PLEASE PREPARE FOR TIMER REC" appears and Timer Indicator flashes.**
Be sure a cassette with record tab is loaded and DECK is in Stop mode.

• If a power interruption occurs while programming the timer, the timer program(s) may be canceled. If "TIMER PROGRAMS WERE LOST DUE TO POWER INTERRUPTION" appears on-screen, please re-enter the timer programs.

• If the start time for Timer Recording comes up during recording and playing back, Timer Recording will not be performed.

Important notes when using DSS Receiver

• When recording programs via DSS Receiver, DSS Receiver must be left on.
• When recording programs via an antenna or cable, DSS Receiver must be turned off.

# MTS Broadcast/ VHS Hi-Fi Stereo System

Connection

Make the Audio/Video Connection as shown on pp. 12 ~ 15.
• You can use TV connected to a Stereo amplifier and speakers instead of Stereo TV.

Receivable Broadcast Types

The following are possible audio broadcast types and on-screen displays.

The signal being received is indicated with a "ᶜ" mark while the selected audio mode is indicated with an arrow.

To display the broadcast signal being received,
➦ **press DISPLAY*.**

MTS Stereo and SAP broadcast

Multi-channel Television Sound Stereo (main language) and Secondary Audio Program (sub language) broadcasts are being received simultaneously.
Select STEREO or SAP audio mode.

```
STOP      12:00AM    CH 02
                      0:00:00
ᶜSTEREO ◄              SP
ᶜSAP
 MONO
```
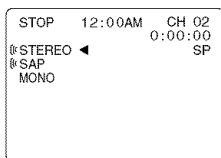
MTS Stereo broadcast

Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.

• If stereo broadcast is weak and display flickers, select MONO audio mode for possible better results.
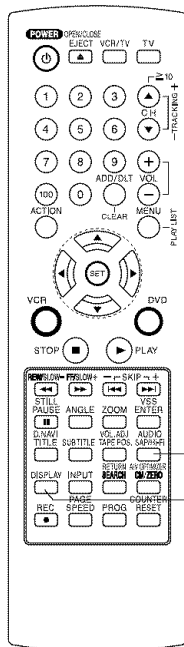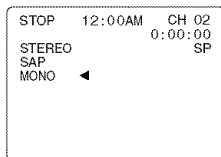
```
STOP      12:00AM    CH 02
                      0:00:00
ᶜSTEREO ◄              SP
 SAP
 MONO
```

AUDIO
(SAP/Hi-Fi)
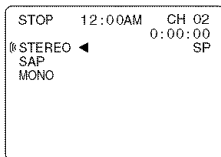
DISPLAY

SAP broadcast

Secondary Audio Program (sub language) broadcast. Select SAP audio mode for the sub language.

```
STOP      12:00AM    CH 02
                      0:00:00
 STEREO                SP
ᶜSAP    ◄
 MONO
```
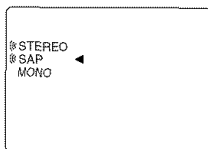
Equipped with **dbx®**-TV Noise Reduction for true MTS reproduction. **dbx®**-TV Noise Reduction is required for good stereo separation and audio fidelity. **dbx®** is a registered trademark, and is licensed by **dbx®** Technology Licensing.
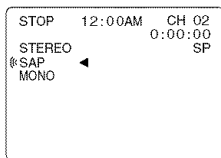
MONO broadcast

Normal monaural sound broadcast.

```
STOP      12:00AM    CH 02
                      0:00:00
 STEREO                SP
 SAP
 MONO   ◄
```

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Audio Mode for Recording

1 **Press AUDIO (SAP/Hi-Fi)**
to display audio mode.

(Display disappears after 5 seconds.)

2

```
⊛STEREO
⊛SAP    ◄
  MONO
```

Press AUDIO (SAP/Hi-Fi) repeatedly
to select desired mode.

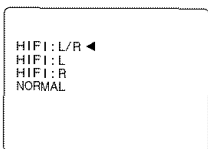• Refer to "Receivable Broadcast Types" on p. 26.
• Arrow indicates selection.

3 **Make a recording.**
See p. 21.

Audio Mode for Playback

1 **Start playback.**
See p. 20.

2 **Press AUDIO (SAP/Hi-Fi)**
to display audio mode.

3

```
HIFI:L/R ◄
HIFI:L
HIFI:R
NORMAL
```

• Arrow indicates selection.

Press AUDIO (SAP/Hi-Fi) repeatedly
to select desired mode.

• Select "HIFI (L/R)" or "HIFI (L)" or "HIFI (R)" to listen to stereo recordings in stereo sound.
  Select "NORMAL" for monaural sound.
• Display disappears after 5 seconds.

VCR Operation

Notes

• Only tapes recorded in Hi-Fi stereo will playback with true stereo sound.
  Standard stereo tapes will playback in monaural sound.
• To listen to Hi-Fi stereo playback, the DECK AUDIO (L/R) jacks must be connected to a stereo TV or an external stereo amplifier and speakers. (See pp. 12, 14.)
• If tracking is adjusted during playback, Hi-Fi audio may revert to normal audio.
• Hi-Fi and normal audio playback volume level may differ.

27

Multi-Brand Control Feature

Multi-Brand Control Setup

The Remote Control can be set to control some TVs.

1 Find your TV Brand Code Number on the following page.

2 ■ Set up for TV control,
➤ hold down TV button,
➤ enter code with NUMBER keys.

3 Confirm code entry,
➤ press POWER to turn selected unit on or off.
• See table below for controllable functions in each mode.

Notes • Repeat setup after remote battery replacement.
• Remote will not control every TV made by the manufacturer listed. If you get no response, your particular unit cannot be controlled.
There are NO additional codes for the products listed. If your product is not listed, then the remote is not compatible with that product.

Using Multi-Brand Control

After remote is set up, you can select VCR, DVD, or TV for the desired function.

Press VCR, DVD, or TV on the remote.
(Table below shows available remote buttons for each mode.)

Unit\\Mode	DVD/VCR	TV
DVD VCR	All	VOL +/−
TV	EJECT/*OPEN/CLOSE**, *DISPLAY*, *PLAY*, *STOP*, *FF/SLOW+*, *REW/SLOW-*, VCR/TV, PAUSE*/STILL*, *SKIP*, *AUDIO*, CM/ZERO, SPEED, REC, TAPE POSITION, *PAGE*, COUNTER RESET	POWER, INPUT, NUMBER keys, ENTER, CH ▲/▼, VOL +/−

* **Bold: VCR Function**   *Bold Italic: VCR and DVD Functions*
*Italic: DVD Function*   Normal: TV

Notes
• Not all functions listed may be controllable.
• In TV mode, it may be necessary to press ENTER after pressing NUMBER keys for channel selection.

TV Brand Code Numbers

Panasonic	01, 02	Toshiba	09
Quasar	01, 02	Sanyo	10
RCA	03	Fisher	10
GE	03	JVC	11
Zenith	04	Hitachi	12
Magnavox	05	Mitsubishi	07, 13
Sylvania	05	Samsung	14
Sharp	06, 07	Gold Star	15, 16, 17
Sony	08		

Important Notes

• Some manufacturers use several codes for one brand.
If the first code entered fails, try the next one listed.

• Some TVs require you to turn on the power manually.

POWER — TV

NUMBER keys

VCR — DVD

ENTER

VCR Operation

29
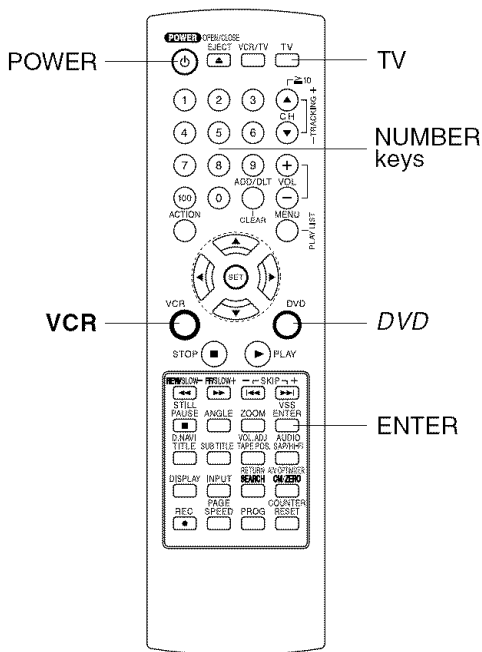
Search System

For each recording, an invisible index mark is placed on the tape. A program index and information are also included for timer recordings. These marks are used to access or scan recordings.

Index Search

1

```
INDEX SEARCH

ENTER INDEX NUMBER :1
USING  1~ 9 KEYS

FORWARD SEARCH :FF
REVERSE SEARCH :REW

EXIT    :SEARCH
```

Press SEARCH*
to display SEARCH in Stop or Play mode, and then **press NUMBER keys** to select recording number.
• To calculate number, see below.

Press FF/SLOW+ or **REW/SLOW-** on the remote to start search.

2

```
INDEX SEARCH

FORWARD SEARCH : FF
REVERSE SEARCH : REW
```

Play begins at search end. To search forward or back 1 index, **press FF/SLOW+** or **REW/SLOW-** on the remote while screen left is displayed (10 sec.).
• To cancel, **press PLAY or STOP.**

■ To Calculate Index Number
Example 1:
To go to rec. 2 from rec. 4, enter 3 and press REW.

1	2	3	4	5	6	7
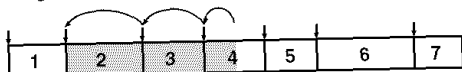
Example 2:
To go to rec. 6 from rec. 2, enter 4 and press FF.

1	2	3	4	5	6	7
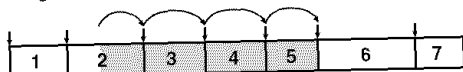
NOTE: ↓ indicates start points of each recording.

Note

• If Index Search is started very close to an index mark, that index mark may not be counted in the search.

Zero Search

To quickly return to a specified tape location.

1 **Press DISPLAY** during play to display Counter.

2

```
PLAY    12:00AM
                0:00:00
                    SP
```

Press COUNTER RESET on remote at desired position to reset to "0:00:00".

3 Continue to record, playback etc.

4 Press STOP.

5

```
REW    12:30AM    CH 02
                  0:30:30
                      SP
```
↓
```
STOP   12:31AM    CH 02
                  0:00:00
                      SP
```

**Press CM/ZERO** in Stop mode to start Zero Search.

• DECK will go into FF or REW mode and stop at the last point the Counter was set to 0:00:00.

Commercial Skip

DECK fast forwards (skips) over 1, 2, or 3 minutes of recorded tape as desired.

1 **Press CM/ZERO** in Play mode.

• The skip time can be changed by pressing CM/ZERO repeatedly as shown by the figure below.

```
        PLAY
         ↓
1st Press → 1 min Skip
         ↓
2nd Press → 2 min Skip
         ↓
3rd Press → 3 min Skip
```
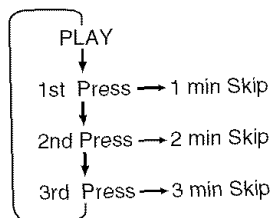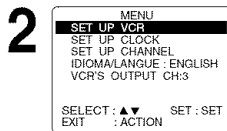
• No indication appears on-screen.

Tape Select

Select your tape length so the tape position and amount of tape remaining are properly displayed.
(See "Tape Position Display" section right.)

1 Press ACTION
to display MENU.

2 Press ▲▼ to select "SET UP VCR," and **press SET**.

3 Press ▲▼ to select "TAPE SELECT," and **press SET** to set "T-120," "T-160" or "T-180."
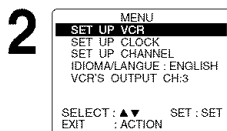T-120 → T-160 → T-180

• Select "T-120" for tapes 120 minutes or less, "T-160" if 140 or 160 minutes, and "T-180" if 180 minutes.

4 Press ACTION
to return to normal screen.

Repeat Play

Set to playback a recording over and over.

1 Press ACTION
to display MENU.

2 Press ▲▼ to select "SET UP VCR," and **press SET**.
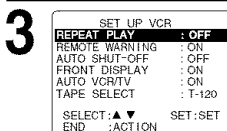
3 Press ▲▼ to select "REPEAT PLAY," and **press SET** to set "ON" or "OFF."

• Play repeats at tape end or if unrecorded portion over 30 sec. is detected.

4 Press ACTION
to return to normal screen.

Note
• For repeat play in DVD mode, see page 47.

Tape Position Display

To find out the present tape position and amount of tape remaining.

Tape position is displayed incorrectly in the following cases:
• If VHS-C type cassettes, tapes under 30 minutes, tapes over 180 minutes, or incompatible tapes are used.
• If the correct tape length is not selected. (See "Tape Select" section left.)

1 Press TAPE POSITION
to detect current tape position.

DETECTING TAPE POSITION

SP
R 120 MIN.
BEGIN   END
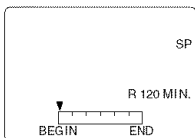
• "DETECTING TAPE POSITION" only appears the first time a cassette is inserted and it takes several seconds for correct indication to appear.
• The present tape position indication and amount of tape remaining (according to tape speed) are displayed.
Tape remaining time display may not be precise.

2 Press TAPE POSITION
(or wait 5 seconds) to return to normal screen.

Auto Operation Functions

■ **Auto Play**

Insert a tape ➔ Power comes on,
➔ Play starts if there is no record tab
(see p. 6).

■ **Auto Rewind**

Play
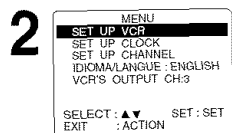Fast Forward ➔ Tape end ➔ Rewind ➔ Stop

■ **Play Auto Eject**
(Repeat Play must be off)
Play ➔ Tape end ➔ Rewind ➔ Stop
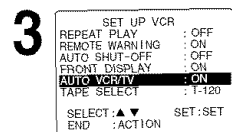➔ Tape ejects if some programs are set.

31

Special VCR Features

VCR/TV Selection Feature

The VCR/TV selection can be set to auto or manual.

1 **Press ACTION***
to display MENU.

2

```
           MENU
    SET UP VCR
    SET UP CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE : ENGLISH
    VCR'S OUTPUT CH:3

    SELECT : ▲ ▼    SET : SET
    EXIT     : ACTION
```

Press ▲▼
to select "SET UP VCR,"
and
press SET.

3

```
         SET UP VCR
    REPEAT PLAY       : OFF
    REMOTE WARNING    : ON
    AUTO SHUT-OFF     : OFF
    FRONT DISPLAY     : ON
    AUTO VCR/TV       : ON
    TAPE SELECT       : T-120

    SELECT : ▲ ▼    SET : SET
    END     : ACTION
```

Press ▲▼
to select "AUTO VCR/TV,"
and
press SET
to set "ON" or "OFF."

- OFF(Manual): You select "VCR" or "TV" mode using the VCR/TV button on the remote.
- ON(Auto):   "VCR" mode is automatically set when VCR is turned on, or in Play mode.

4 **Press ACTION**
to return to normal screen.

Note

- For more on VCR/TV selection, see "Record one station, watch another" and "Select channels at DECK" sections (see p. 21).

VCR Lock Feature

When set to ON, all operations except for timer record and tape eject are prohibited. Useful for households with small children.
To turn on, hold down REC on DECK in Stop mode with no tape inserted for 7 seconds.
(Please ignore "NO CASSETTE" warning.)

```
┌─────────────────────┐
│                     │
│  VCR LOCK ACTIVATED  │
│                     │
│                     │
│                     │
└─────────────────────┘
```

To turn off, repeat above.

```
┌─────────────────────┐
│                     │
│  VCR LOCK OFF        │
│                     │
│                     │
│                     │
└─────────────────────┘
```

- VCR Lock cancels in 24 hours.

Note

- DVD functions will work even when VCR Lock is set to ON.
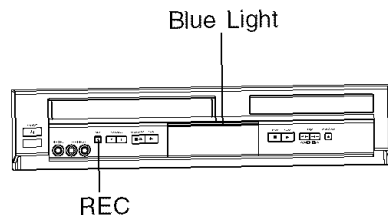
Blue LIGHT ON/OFF Feature

You can turn DECK's blue light off if you find it to be glaring.

To turn LIGHT off,
press DISPLAY for 5 seconds
in VCR mode.

To turn LIGHT on, repeat above.

Notes

- This operation is not possible in power off mode.
- If you unplug DECK, DECK turns to defult setting (Blue light turns on).
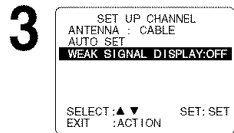
Blue Light

REC

Weak Signal Display Feature

When "ON," picture is displayed regardless of signal strength.

1 **Press ACTION** to display MENU.

2
```
         MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:3

SELECT : ▲▼    SET:SET
EXIT    : ACTION
```
Press ▲▼ to select "SET UP CHANNEL," and **press SET.**

3
```
      SET UP CHANNEL
ANTENNA  : CABLE
AUTO SET
WEAK SIGNAL DISPLAY:OFF

SELECT :▲ ▼    SET: SET
EXIT   :ACTION
```
Press ▲▼ to select "WEAK SIGNAL DISPLAY," and **press SET** to set "ON" or "OFF."

• ON: Picture is displayed regardless of signal condition, and may not always be clearly visible.

OFF: Screen turns solid blue when signal is weak or non-existent.

• Selecting ON has no effect on connected equipment with blue back feature.

4 **Press ACTION** to return to normal screen.

Auto Shut-Off Feature

The power shuts off at a preset time.

1 **Press ACTION** to display MENU.

2
```
         MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:3

SELECT :▲▼    SET : SET
EXIT   : ACTION
```
Press ▲▼ to select "SET UP VCR," and **press SET.**
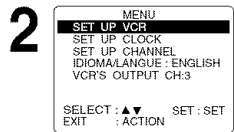
3
```
      SET UP VCR
REPEAT PLAY      : OFF
REMOTE WARNING   : ON
AUTO SHUT-OFF    : OFF
FRONT DISPLAY    : ON
AUTO VCR/TV      : ON
TAPE SELECT      : T-120

SELECT :▲ ▼    SET: SET
END    :ACTION
```
Press ▲▼ to select "AUTO SHUT-OFF." **Press SET** repeatedly to change shut-off time as shown below.

```
       ┌──► 2 Hours ──┐
OFF                  4 Hours
       └── 6 Hours ◄──┘
```
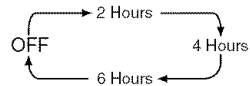
4 **Press ACTION** to return to normal screen.

Note

• The shut-off countdown will not function during Play or Record.
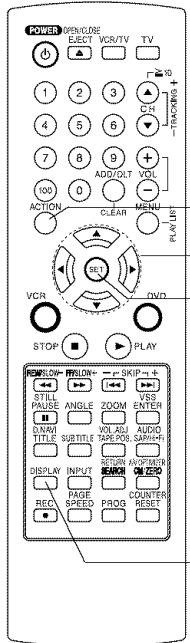
ACTION
SELECT ▲▼
SET
DISPLAY

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Special VCR Features (continued)
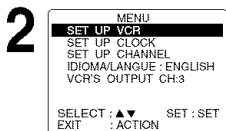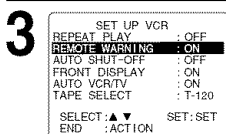
Remote Warning Feature

If Multi-brand feature is used (p. 28), and this feature is set to on, a warning appears whenever an invalid key is pressed in TV mode.

1 **Press ACTION***
to display MENU.

2

```
         MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:3

SELECT : ▲▼     SET : SET
EXIT     : ACTION
```

Press ▲▼
to select "SET UP VCR," and
press SET.

3

```
         SET UP VCR
REPEAT PLAY       : OFF
REMOTE WARNING    : ON
AUTO SHUT-OFF     : OFF
FRONT DISPLAY     : ON
AUTO VCR/TV       : ON
TAPE SELECT       : T-120

SELECT :▲▼        SET:SET
END    :ACTION
```

Press ▲▼
to select
"REMOTE WARNING," and
press SET
to set "ON" or "OFF."

• If "OFF," remote warning will not appear when invalid key is pressed.

4 **Press ACTION**
to return to normal screen.

Multi Function Display (Front Display) ON/OFF Feature

Multi Function Display (Front Display) can be set to ON/OFF.

1 **Press ACTION**
to display MENU.

2

```
         MENU
SET UP VCR
SET UP CLOCK
SET UP CHANNEL
IDIOMA/LANGUE : ENGLISH
VCR'S OUTPUT CH:3

SELECT : ▲▼     SET : SET
EXIT     : ACTION
```

Press ▲▼
to select "SET UP VCR," and
press SET.

3

```
         SET UP VCR
REPEAT PLAY       : OFF
REMOTE WARNING    : ON
AUTO SHUT-OFF     : OFF
FRONT DISPLAY     : ON
AUTO VCR/TV       : ON
TAPE SELECT       : T-120

SELECT :▲▼        SET:SET
END    :ACTION
```
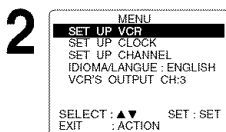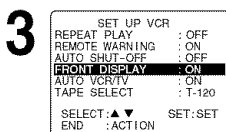
Press ▲▼
to select
"FRONT DISPLAY," and
press SET
to set "ON" or "OFF."

• ON : When set to "ON,"
Multi Function Display is displayed.

OFF: When set to "OFF,"
Multi Function Display is not displayed.
If a Timer Program is set,
Multi Function Display is displayed.

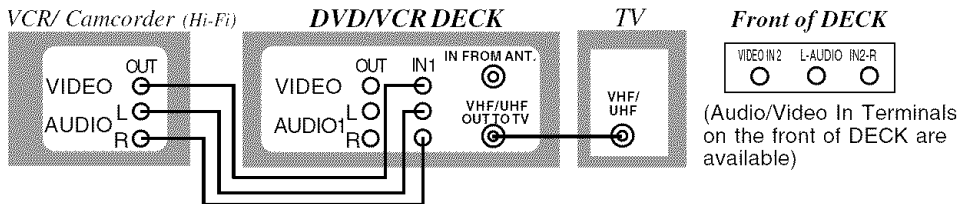**4** **Press ACTION**
to return to normal screen.

ACTION

SELECT
▲▼

SET

STOP

STILL/
PAUSE

INPUT

REC

Multi Function Display
(Front Display)

34
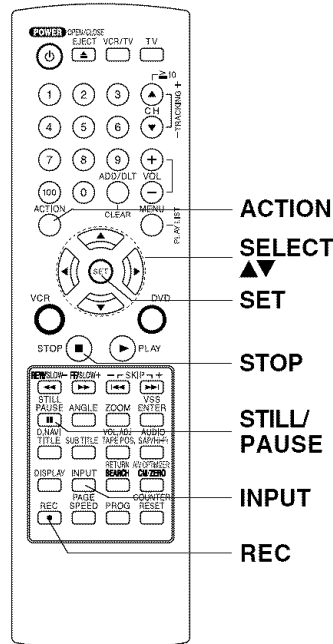
Copying Your Tapes (Dubbing)

Connection

VCR/ Camcorder (Hi-Fi)   **DVD/VCR DECK**   *TV*   **Front of DECK**

		IN FROM ANT.	
OUT	OUT IN1	(○)	
VIDEO (○)	VIDEO ○ (○)	VHF/UHF	VHF/ UHF
AUDIO L(○)	AUDIO1 L○ (○)	OUT TO TV	(○)
R(○)	R○ (○)	(○)	

VIDEO IN 2	L-AUDIO	IN 2-R
○	○	○

(Audio/Video In Terminals on the front of DECK are available)

① Connect VIDEO OUT terminal on Playing VCR to VIDEO IN terminal on DECK.
To monitor the dubbing, also connect TV as shown.

② Connect "L" and "R" AUDIO OUT terminals on Playing VCR to "L" and "R" AUDIO IN terminals on DECK.
In place of Playing VCR, you can use other equipment, such as a Camcorder. Simply connect the unit's Audio/Video outputs to DECK.

Playing (Source) VCR	**Recording (Editing) DECK**
1 Insert a pre-recorded tape.	Insert a blank tape with record tab.
2 ————————	**Press INPUT** to set DECK Input mode to LINE for Video Input. (See "Selecting the Input Mode" below.)
3 Press **PLAY**, then **PAUSE** immediately to enter PLAY/PAUSE mode.	Press **REC**, then **STILL/PAUSE** immediately to enter REC/PAUSE mode.

———— **The operation of steps 4 and 5 must be done on the** ————
playing and recording VCRs at the same time.

4 Press **PLAY** to start dubbing. Playing VCR starts playback.	Press **STILL/PAUSE** to start dubbing. DECK starts recording.
5 Press **STOP** to stop dubbing.	Press **STOP** to stop dubbing.

■ To Monitor Dubbing on TV

1 Turn TV on and tune to the Recording VCR channel (CH 3 or CH 4).
2 If Auto VCR/TV (see p. 32) is set to "OFF," press VCR/TV on the remote for VCR mode.

Note • Dubbing tapes protected with Copy Guard will result in poor quality recordings.

■ Selecting the Input Mode

Method 1: **Press INPUT** repeatedly.
Channel Number ↔ LINE1 ↔ LINE2
Method 2: **Press CH ▲/▼.**
Display will change as below.

→1↔2↔3←
Press ▼ (CABLE) (TV) Press ▲
LINE2↔LINE1↔125 or 69
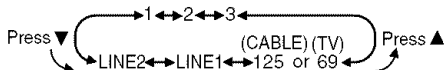
• "L1" or "L2" lights up on Multi Function Display (about 4 seconds) when LINE1 or LINE2 is selected.
• LINE1: For rear audio/video connection.
LINE2: For front audio/video connection.

Caution: •**Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.**
•**Please note that some tapes cannot be dubbed on DECK.**
Also, it is not possible to dub DVD/ CD to VHS tapes using DECK.
•**When ⊘ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by DECK or the disc.**

VCR Operation

35

Subtitle Language (DVD only)

You can select a different subtitle language (if offered) than the one set at the Settings for DVD Operation. (See p. 52.)

1 Press **SUB TITLE***
in Play mode to display the subtitle selection on-screen.
• Display disappears after 5 seconds.
• When no subtitles are offered, "-" will be displayed instead of the language number.

2 Press **SUB TITLE, ▲▼,** or **NUMBER keys** to select a desired language.
Subtitle language being played back (see chart, right).

Notes

• If after several presses of the button the language does not change, language selection is not offered on the disc.
• When disc is removed, subtitles revert to initial setting language. If the initial language is not recorded on the disc, the disc's priority language will appear.
• With DVD-RAM, the subtitle can only be set to ON/OFF. The subtitle language cannot be selected.
• Subtitles may not change to the selected language immediately.

Audio Soundtrack Language (DVD only)

You can change the audio soundtrack language, selected at the Settings for DVD Operation, to a different language if available. (See p. 52.)
(This operation works only with discs on which multiple audio soundtrack languages are recorded.)

1 Press **AUDIO**
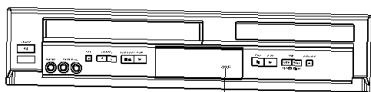in Play mode to display the audio selection on-screen.
• Display disappears after 5 seconds.
Information of the audio stream currently being played back is displayed. (See page 53.)

2 Press **AUDIO, ▲▼,** or **NUMBER keys** to select desired language.
Audio soundtrack language being played back (see chart, above right).

✓ Ready Checklist

☐ Please read "Basic DVD Operation" on page 22.

[Subtitle language]
[Audio sound track language]

ENG	English
FRA	French
DEU	German
ITA	Italian
ESP	Spanish
NLD	Dutch
SVE	Swedish
NOR	Norwegian
DAN	Danish
POR	Portuguese
RUS	Russian
JPN	Japanese
CHI	Chinese
KOR	Korean
MAL	Malay
VIE	Vietnamese
THA	Thai
✳	Other

• Change the No. by pressing ▲▼, and press **SET**.

[Audio attribute 1 type, sampling frequency, bit No. of the disc (see p. 53.)**]**

LPCM	44.1 kHz ⌇ 192 kHz	16 bit	Linear PCM disc
		20 bit	
		24 bit	
Dolby Digital	1 ch - 5.1 ch		Dolby Digital disc
DTS	1 ch - 5.1 ch		DTS disc

Notes

• If, after several presses of the AUDIO button the language does not change, language selection is not offered on the disc.
• When disc is removed, language reverts to initial setting. If this language is not recorded on the disc, the language recorded will be heard.
• With DVD-RAM, Audio Soundtrack Language cannot be set. Audio stream and Audio mode (LR/L/R) setting can be made. Audio stream operation method is the same as Audio Soundtrack Language. Press ▶ to move the cursor to Audio mode, then press AUDIO or ▲▼ to select LR/ L/ R.

36

When ⊘ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by DECK or the disc.

ANGLE Indicator

Notes

• The ANGLE Indicator lights up on DECK when a scene recorded at different angles is detected.
• The angle number can be set beforehand so that the angle is switched whenever the ANGLE Indicator lights up.

NUMBER keys

SELECT
▲▼◄►

SET

ZOOM
ANGLE
AUDIO

SUB TITLE

Notes

• The subtitle cannot be enlarged or moved.
• During picture zoom, "ZOOM1" or "ZOOM2" appears on-screen for 5 seconds.
• Zooming, on some discs, may result in poor picture quality, or may not operate at all.

Multiple Angle Viewing (DVD only)

DVDs may contain scenes shot from multiple camera angles allowing the same scene to be viewed at different angles. You can view these angles, if available, using the ANGLE button.

1 ANGLE :1
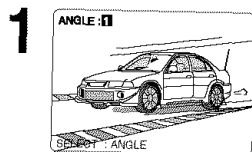
Press ANGLE
in Play mode to display the angle selection on-screen.

• Display disappears after 5 seconds.

2 ANGLE :2
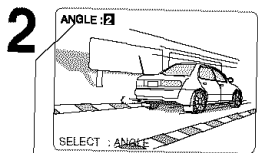
Press ANGLE repeatedly or ▲▼ to select the desired angle.

Number of angle being played back.

Note This function not available with DVD-RAM.

Vocal Selection for Karaoke Discs (DVD only)

1 Press **AUDIO** in Play mode to display the audio screen.

2 AUDIO:2 ENG VOCAL ON
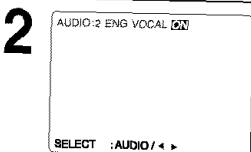
SELECT :AUDIO/ ◄ ►

Press ◄► to select VOCAL and press AUDIO or ▲▼ to select as shown below.

• DVD Karaoke (1 vocal)   VOCAL ON↔VOCAL OFF
• DVD Karaoke (2 vocals) VOCAL V1→VOCAL V2→VOCAL V1+V2→VOCAL OFF

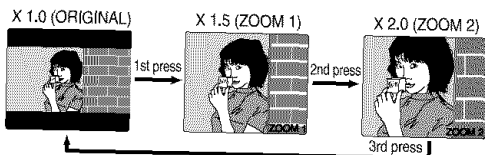## Picture Zoom (DVD only)

You can enlarge specific portions of a picture and select the zoom ratio using the ZOOM button during DVD playback.

Press ZOOM repeatedly to change display as follows.

• You can enlarge the center portion of the image to one of 2 magnifications.

X 1.0 (ORIGINAL)   X 1.5 (ZOOM 1)   X 2.0 (ZOOM 2)

1st press   2nd press

3rd press

■ Use the ▲, ▼, ◄ and ► buttons to move the position up, down, left and right.

DVD Operation

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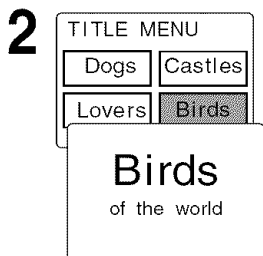# Disc Operation (continued)

Title Menu (DVD only)

Some DVDs have more than one title, e.g. movies.
If the disc offers a title menu, you can select the desired
title number. (Operation may vary according to the disc.)

1

TITLE MENU	
Dogs	Castles
Lovers	Birds

\<Example\>
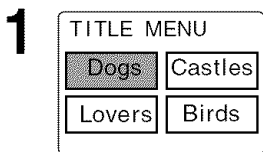
Press *TITLE* *
in Play mode
to display the title screen.

2

TITLE MENU	
Dogs	Castles
Lovers	**Birds**

Birds
of the world

\<Example\>

Press ▲▼◄ ► or
NUMBER keys
to select a title, and
press *SET* or ***PLAY***
to start playing.

• "Pressing *SET* or *PLAY*" is
not necessary when using
NUMBER keys.

DVD Menu (DVD only)

DVDs may offer a special menu. This menu may include
guides to unique contents, audio/subtitle languages, etc.
Although contents and operation may vary, the following
steps show basic procedure for using the menu.

1

DVD MENU
1. SUBTITLE
2. AUDIO
3. ANGLE

\<Example\>
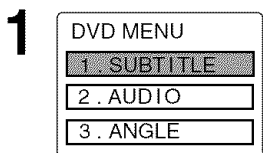
Press *MENU*
in Play mode to display
DVD MENU.

2

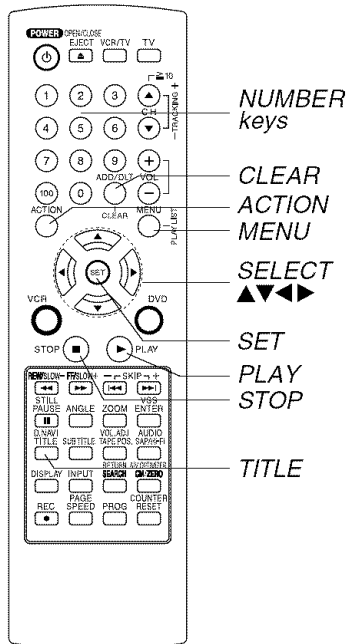| DVD MENU |
|---|
| 1. SUBTITLE |
| 2. AUDIO |
| 3. ANGLE |

\<Example\>
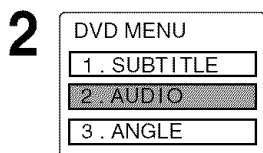
Press ▲▼◄ ► or
NUMBER keys
to select an item, and
press *SET* or ***PLAY***
to perform.

• Pressing *SET* or *PLAY* is
not necessary when using
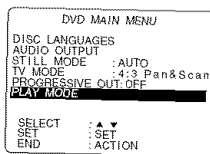*NUMBER keys.*

**Repeat step 2 if there is
more than one menu.**

NUMBER
keys

CLEAR
ACTION
MENU

SELECT
▲▼◄►

SET
PLAY
STOP

TITLE

38

Program Play (CD only)

You can program specific tracks and order of play.

1 Press *ACTION*
to display DVD MAIN MENU.

2

```
        DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE      : AUTO
TV MODE         : 4:3 Pan&Scan
PROGRESSIVE OUT:OFF
PLAY MODE

SELECT      : ▲ ▼
SET         : SET
END         : ACTION
```
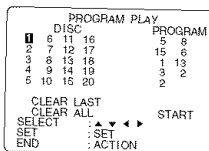
Press ▲▼
to select
"PLAY MODE," and
press *SET*
to display.

3

```
        PLAY MODE
PROGRAM PLAY
RANDOM PLAY



SELECT      : ▲ ▼
SET         : SET
END         : ACTION
```
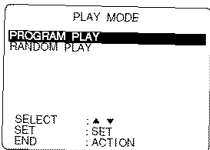
Press ▲▼
to select
"PROGRAM PLAY,"
and
press *SET* to display.

4

```
         PROGRAM PLAY
      DISC          PROGRAM
  1   6  11  16        5   8
  2   7  12  17       15   6
  3   8  13  18        1  13
  4   9  14  19        3   2
  5  10  15  20        2
  CLEAR LAST
  CLEAR ALL         START
SELECT    : ▲ ▼ ◄ ►
SET       : SET
END       : ACTION
```

Press ▲▼◄►
to select a track
number (Track
numbers on disc are
displayed.), and
press *SET*.

• Repeat step 4 to select another track.
• The selected track is added on the right side.

5

```
         PROGRAM PLAY
      DISC          PROGRAM
  1   6  11  16        5   8
  2   7  12  17       15   6
  3   8  13  18        1  13
  4   9  14  19        3   2
  5  10  15  20        2
  CLEAR LAST
  CLEAR ALL         START
SELECT    : ▲ ▼ ◄ ►
SET       : SET
END       : ACTION
```
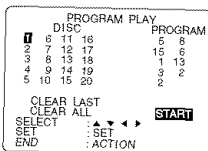
Press ▲▼◄►
to select "START," and
press *SET* to start play
of programs in the
sequence selected.

• To cancel, **press *STOP***
during play, then **press
CLEAR.**

Notes

• Up to 15 tracks can be programmed.
• "◄" or "►" (depending on disc) indicates additional
PROGRAM PLAY screen.
Press ▲▼◄► for next or previous screen.
• **To clear the last program one by one**
Press ▲▼◄► to move to "CLEAR LAST" and
press *SET*. (Pressing *CLEAR* on remote control
also clears last program.)
• **To clear all programs**
Press ▲▼◄► to move to "CLEAR ALL" and press
SET. (Programs are also cleared when the power
is turned off or the disc is removed.)

☑ **Ready Checklist**
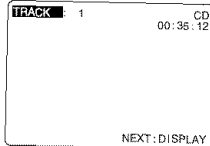☐ DECK is in DVD mode, press DVD.
☐ CD is inserted.

Program Repeat Play (CD only)

1 Do operation steps **1** through **5**
at left on this page.

2 Press *DISPLAY* to display Disc
Information screen.
(*Disc Information* Screen)

```
TRACK : 1            CD
                 00:35:12




             NEXT:DISPLAY
```

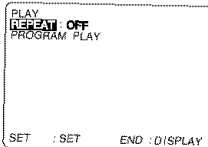**3** Press *DISPLAY* to display
DECK Information screen.

4 Press *SET* to enter Select mode.
Cursor move to "OFF."
(DECK Information Screen)

```
PLAY
REPEAT : OFF
PROGRAM PLAY



SET  : SET    END :DISPLAY
```

5 Press ▲▼ to select "DISC."
(DECK Information Screen)

```
PLAY
REPEAT : DISC
PROGRAM PLAY



SELECT: ▲ ▼
SET  : SET    END : DISPLAY
```
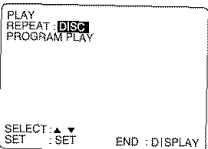
6 Press *SET* to set mode.
Cursor moves to "REPEAT."
To cancel, select "REPEAT :
OFF" in step 5, then **press *SET*.**

DVD Operation

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Disc Operation (continued)

Random Play (CD only)

Tracks are played in a random order.

1 Press *ACTION**
to display DVD MAIN MENU.

2
```
        DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE      :AUTO
TV MODE         :4:3 Pan&Scan
PROGRESSIVE OUT:OFF
PLAY MODE

SELECT    : ▲ ▼
SET       : SET
END       : ACTION
```
Press ▲▼
to select "PLAY MODE,"
and
press SET
to display.

3
```
        PLAY MODE
PROGRAM PLAY
RANDOM PLAY

SELECT    : ▲ ▼
SET       : SET
END       : ACTION
```
Press ▲▼
to select
"RANDOM PLAY," and
press SET
to begin random play.

• To cancel, **press STOP**
during play, then **press**
CLEAR.

☑ Ready Checklist

☐ DECK is in DVD mode, press DVD.

NUMBER
keys

CLEAR
ACTION

SELECT
▲▼◄►

SET

STOP
VOLUME
ADJUST

DISPLAY

PAGE
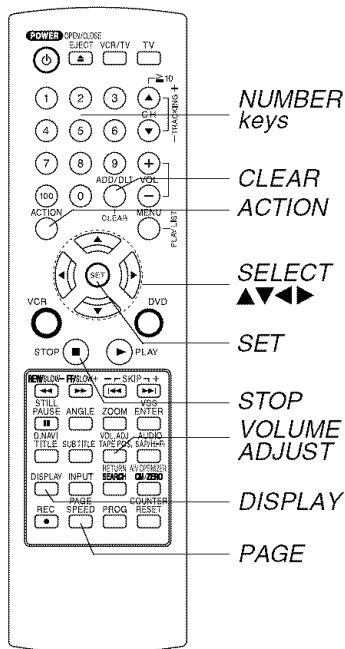
Setting the VOLUME ADJUST (DVD only)

Some DVDs are recorded in lower than average volume levels.
For these DVDs, this DECK can be set so that the average volume is
increased automatically.

Press VOL.ADJ repeatedly to change "OFF" ↔ "ON."

• "OFF" or "ON" lights up on Multi Function Display (about 3 seconds) when
VOL.ADJ is pressed.

	VOLUME ADJUST "OFF"	VOLUME ADJUST "ON"
Some DVD **[Low volume level]**	Volume is at the original level.	Volume level is increased when played back.

• "ON" is set ..... When a DVD is played back, the average volume is increased.
• "OFF" is set .... The volume level recorded on the disc is played back just as it is.

Notes

• While settings can be made with all discs, they may have no effect with some discs.
Please set as you prefer.
• When audio equipment is connected, setting the Sound Output level to "OFF" is recommended.
• If the sound becomes abnormal while playing a disc, set the Sound Output level to "OFF."

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# DVD-Audio Operation (DVD-Audio only)

This DECK, equipped with a 192 kHz/ 24 bit Audio D/A converter, supports DVD-Audio recorded with high quality sound.
The DVD-Audio feature includes "Still Image Skip" and "Bonus Group Playback" functions. (See below.)
Please refer to "Basic DVD Operation" on pages 22 and 23.

Still Image Skip (DVD-Audio only)

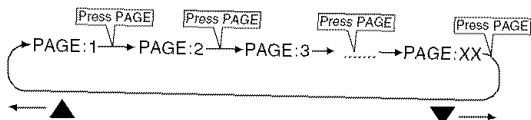DVD-Audio still images (only if contained) can be skipped over.
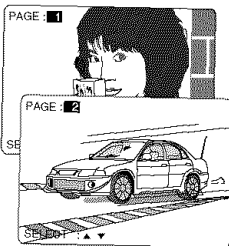
Press PAGE
in Play or Pause mode to display the still image and page number.

Each press of PAGE changes page number as shown below.
• Pressing PAGE on the last page returns to PAGE 1.

| Press PAGE | Press PAGE | Press PAGE | Press PAGE |

PAGE:1 → PAGE:2 → PAGE:3 → .... → PAGE:XX

Note • Still Image Skip function not available with all discs.

Bonus Group playback (DVD-Audio only)

Some DVD-Audio discs contain bonus groups. To enjoy these groups you may have to enter a password. Refer to the disc's jacket.

1 Press *DISPLAY* in stop mode to display "On-Screen Displays."

Note • During playback, Bonus Group tracks cannot be selected.
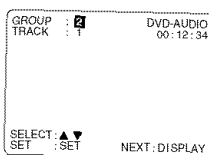
2 Press ▲▼ to select "GROUP," and press *SET*.
Press ▲▼ or *NUMBER keys* to select bonus group number, and press *SET* (see pp. 44, 45.)

GROUP : 2 DVD-AUDIO
TRACK : 1 00 : 12 : 34
SELECT : ▲ ▼
SET : SET   NEXT : DISPLAY

Notes • If the proper secret code is already entered, Bonus Group tracks can be selected. (Secret code enter screen is skipped.)

3
BONUS GROUP
ENTER 4-DIGIT CODE
■---
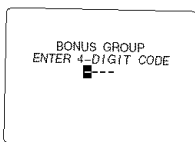
Press NUMBER keys
to enter bonus group secret code.

To Make Corrections
Press ◄ repeatedly to move the cursor.
Press *NUMBER keys* to make the correction.

Note • When the proper secret code has been entered, Bonus Group track 1 playback begins. If a mistake is made, the secret code enter screen is redisplayed.

4 Press *CLEAR* to return to normal screen.

DVD Operation

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DVD-RAM Operation (DVD-RAM only)

You can enjoy playing your personally recorded/edited DVD-RAM discs on this DECK.

Note

• This DECK was designed for playback only. DVD-RAM recording is not possible.
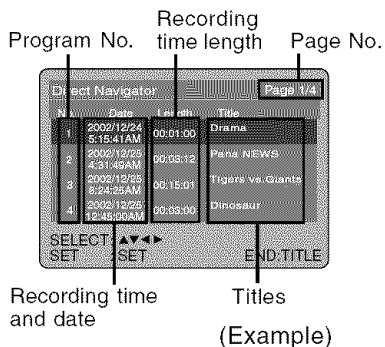
Play a DVD-RAM

1 **Do steps 1 ~ 3 on page 22.**
   • Play begins from the first program title recorded on the DVD-RAM.

2 **Press *D.NAVI** or *PLAY LIST* to display Direct Navigator or Play List menu for easy title or scene selection.**
   • See below for "Direct Navigator" or next page for "Play List information".

3 **Press *STOP* to stop playing.**

4 **Press *OPEN/CLOSE* to eject the disc.**

Direct Navigator

If the DVD-RAM features Direct Navigator, a list of recorded titles is displayed. Simply select a title number and start playback. (Operation can vary with disc used.)

1 **Press *D.NAVI*** in Play/Stop mode to display the Direct Navigator menu.

2 **Press ◄► to select a page and press ▲▼ to select a title (Program No.).**
   Then, **press *SET* or *PLAY* to start playing.**
   • "Pressing SET or PLAY" is not necessary when using NUMBER keys.
   Using NUMBER keys starts playing automatically.
   The number of available titles varies with each disc.
   <Input   1 digit number   1 •••1
   Example>   2 digit number   12 ••• ≧10 ► 1 ► 2

3 **Press *D.NAVI* to clear Direct navigator menu.**

Program No.   Recording time length   Page No.

Recording time and date   Titles

(Example)

42

Play List

If the DVD-RAM features a Play List, your preselected list of favorite scenes is displayed for easy access. (Operation can vary according to how you edited the DVD-RAM.)

1 Press *PLAY LIST*
in Play/Stop mode to display the Play List menu.

2 Press ◄► to select a page and press ▲▼ to select a title (Play List No.).
Then, press *SET* or *PLAY* to start playing.
• "Pressing SET or PLAY" is not necessary when using NUMBER keys.

Using NUMBER keys starts playing automatically.
The number of available titles varies with each disc.
<Input   1 digit number   1 ••••1
Example>   2 digit number   12 •••≧ 10 → 1 → 2

3 Press *PLAY LIST* to clear Play List menu.

Play List No.   Established
                  time length   Page No.

Recording time   Titles
and date   (Example)

NUMBER
keys

SELECT
▲▼◄►

SET

PLAY LIST

STOP

PLAY

D.NAVI
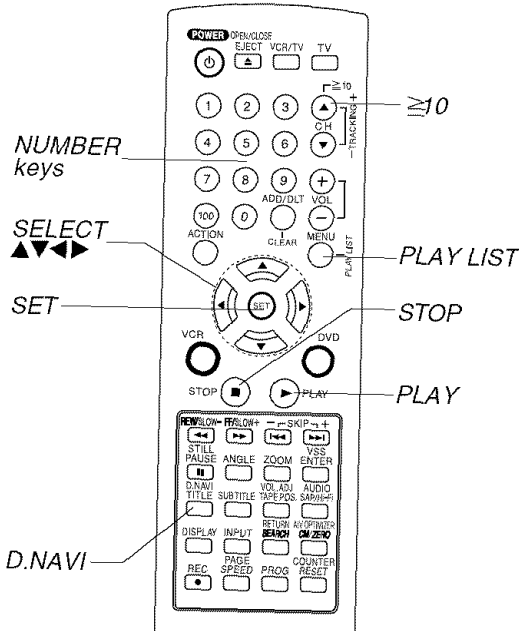
Operation DVD

Notes

• Titles of Direct Navigator and Play List cannot be changed using this DECK.
• With Direct Navigator, up to 99 programs can be displayed. With Play List, up to 99 titles (999 scenes) can be displayed.
• While DVD MAIN MENU is displayed, Direct Navigator and Play List display will not appear even if TITLE or MENU is pressed.
• When ⊘ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by DECK or the disc.

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DVD Operation using On-Screen Displays

When *DISPLAY* is pressed, On-Screen Displays show disc information (title/chapter/track number, elapsed playing time) and DECK information (repeat play, play mode).
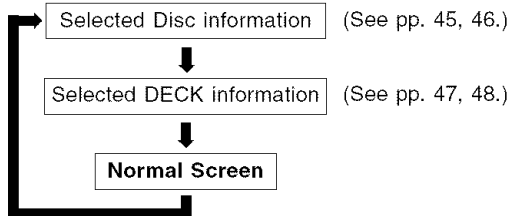
1 Press *DISPLAY** in Play or Stop mode to display "On-Screen Displays."

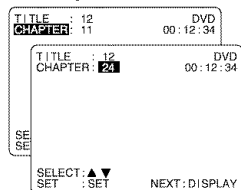• Each **press** of *DISPLAY* changes the on-screen display as follows. (Refer to pp. 44 ~ 48.)

```
┌──→  Selected Disc information    (See pp. 45, 46.)
│              ↓
│     Selected DECK information    (See pp. 47, 48.)
│              ↓
│        Normal Screen
└──────────────┘
```

Note
• *DISPLAY* button does not function while main menu of DVD, title menu of DVD, Direct Navigator or Play List is displayed.

2 Press ▲▼ (or ◄►) to select an item, and press *SET*.

3 Press ▲▼ or *NUMBER* keys to select the setting, and press *SET*.

<Example of DVD-Video>

```
TITLE    : 12           DVD
CHAPTER: 11         00:12:34

   TITLE   : 12         DVD
   CHAPTER: 24     00:12:34

SE
SE
SELECT:▲ ▼
SET    : SET     NEXT: DISPLAY
```

• When numbers are displayed (e.g. title number), *NUMBER keys* are also available.
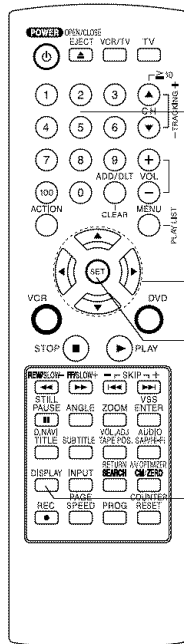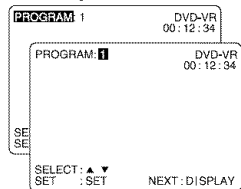• If the number entered is not on the disc, the entry will have no effect. Re-enter the correct number.

<Example of DVD-Audio>

```
GROUP : 1       DVD-AUDIO
TRACK   : 1        00:12:34

   GROUP  : 2     DVD-AUDIO
   TRACK  : 1       00:12:34

SE
SE
SELECT:▲ ▼
SET    : SET     NEXT: DISPLAY
```
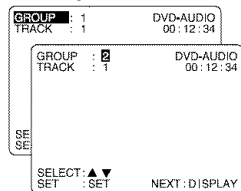
• For more details, refer to the disc operation information.

To return to normal screen, press *DISPLAY* repeatedly.

<Example of DVD-RAM>

```
PROGRAM: 1        DVD-VR
                00:12:34

   PROGRAM: 1        DVD-VR
                  00:12:34

SE
SE
SELECT:▲ ▼
SET    : SET     NEXT: DISPLAY
```

☑ Ready Checklist
☐ DECK is in DVD mode, press DVD.

NUMBER keys

SELECT ▲▼◄►

SET

DISPLAY

Note
• When ⊘ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by DECK or the disc.

Detailed Descriptions of each On-Screen Display

■ Disc information screen (for DVD-Video)

1. TITLE No.

Go directly to a preset title number.
- Select "TITLE", and press SET.
- Change the No. by pressing ▲▼ or NUMBER keys, and press SET.

2. CHAPTER No.

Go directly to a preset chapter number.
- Select "CHAPTER", and press SET.
- Change the No. by pressing ▲▼ or NUMBER keys, and press SET.
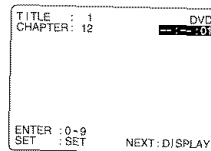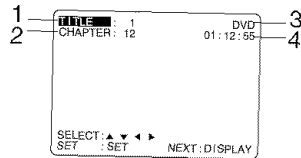- This function does not work with some discs.

3. Disc currently being played

The type of disc currently inserted is displayed.

4. Elapsed playing time

The screen may be changed by selecting the elapsed time.
- Select the elapsed playing time ("xx:xx:xx"), and press SET.
- Change the elapsed time by pressing NUMBER keys.
  Enter time starting with seconds.
  If the time entered is not on the disc, the entry will have no effect.
  Re-enter the correct time.
  e.g., press 0 ➙ 1 ➙ 2 ➙ 3 ➙ 4 ➙ 5 ➙ SET for "01 : 23 : 45".
       press 3 ➙ 0 ➙ SET for "00 : 00 : 30".
- This function does not work with some discs.

1 —	TITLE : 1 DVD — 3
2 —	CHAPTER : 12 01 : 12 : 55 — 4
	SELECT : ▲ ▼ ◄ ►
	SET : SET NEXT : DISPLAY

TITLE : 1   DVD
CHAPTER : 12   --:--:01
ENTER : 0 ~ 9
SET : SET   NEXT : DISPLAY

■ Disc information screen (for DVD-Audio)

A. GROUP No.

Go directly to a preset group number.
- Select "GROUP", and press SET.
- Change the No. by pressing ▲▼ or NUMBER keys, and press SET.

B. TRACK No.

Go directly to a preset track number.
- Select "TRACK", and press SET.
- Change the No. by pressing ▲▼ or NUMBER keys, and press SET.

C. Disc currently being played

The type of disc currently inserted is displayed.

D. Elapsed playing time

The screen may be changed by selecting the elapsed time.
- Select the elapsed playing time ("xx:xx:xx"), and press SET.
- Change the elapsed time by pressing NUMBER keys.
  Enter time starting with seconds.
  If the time entered is not on the disc, the entry will have no effect.
  Re-enter the correct time.
  e.g., press 0 ➙ 1 ➙ 2 ➙ 3 ➙ 4 ➙ 5 ➙ SET for "01 : 23 : 45".
       press 3 ➙ 0 ➙ SET for "00 : 00 : 30".
- This function does not work with some discs.

A —	GROUP : 1 DVD-AUDIO — C
B —	TRACK : 1 00 : 12 : 34 — D
	SELECT : ▲ ▼ ◄ ►
	SET : SET NEXT : DISPLAY

GROUP : 1   DVD-AUDIO
TRACK : 1   --:--:01
ENTER : 0 ~ 9
SET : SET   NEXT : DISPLAY

DVD Operation

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■ Disc information screen (for CD)

1. TRACK No.
Go directly to a preset track number.
- Select "TRACK", and **press SET***.
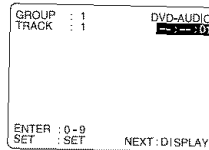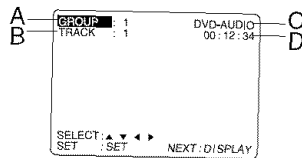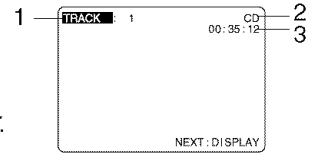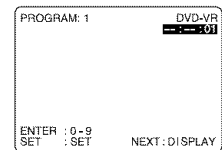- Change the No. by **pressing ▲▼** or **NUMBER keys**, and **press SET**.

2. Disc currently being played
The type of disc currently inserted is displayed.

3. Elapsed playing time

```
1 ──┌─────────────────────┐── 2
    │ TRACK : 1       CD   │── 3
    │             00:35:12 │
    │                      │
    │                      │
    │            NEXT:DISPLAY│
    └─────────────────────┘
```

■ Disc information screen (for DVD-RAM)

A. Direct Navigation (PROGRAM) or PLAY LIST No.
Go directly to a preset title number.
- Select "PROGRAM" or "PLAY LIST", and **press SET**.
- Change the No. by **pressing ▲▼** or **NUMBER keys**, and **press SET**.

B. Disc currently being played
The type of disc currently inserted is displayed.

C. Elapsed playing time
The screen may be changed by selecting the elapsed time.
- Select the elapsed playing time ("xx:xx:xx"), and **press SET**.
- Change the elapsed time by **pressing NUMBER keys**.
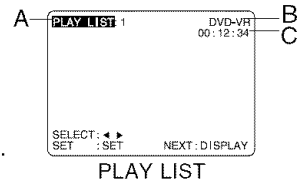 Enter time starting with seconds.
  If the time entered is not on the disc, the entry will have no effect.
  Re-enter the correct time.
  e.g., press 0 ➤ 1 ➤ 2 ➤ 3 ➤ 4 ➤ 5 ➤ SET for "01 : 23 : 45".
       press 3 ➤ 0 ➤ SET for "00 : 00 : 30".
- This function does not work with some discs.

```
A ──┌─────────────────────┐── B
    │ PROGRAM : 1   DVD-VR │── C
    │             00:12:34 │
    │                      │
    │                      │
    │ SELECT : ◄ ►         │
    │ SET  : SET  NEXT:DISPLAY│
    └─────────────────────┘
```
Direct Navigation
(PROGRAM)

```
A ──┌─────────────────────┐── B
    │ PLAY LIST : 1  DVD-VR│── C
    │             00:12:34 │
    │                      │
    │                      │
    │ SELECT : ◄ ►         │
    │ SET  : SET  NEXT:DISPLAY│
    └─────────────────────┘
```
PLAY LIST

```
    ┌─────────────────────┐
    │ PROGRAM : 1   DVD-VR │
    │            -- : -- 01 │
    │                      │
    │                      │
    │ ENTER : 0-9          │
    │ SET  : SET  NEXT:DISPLAY│
    └─────────────────────┘
```
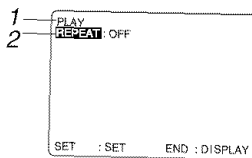
> **Note** • When ⊘ appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by DECK or the disc.

■ DECK information screen (for DECK)

1. Operating mode
The current operation is displayed.

```
1 ──── PLAY
2 ──── REPEAT : OFF


SET   : SET      END : DISPLAY
```

2. Repeat Play mode (see p. 48)
Repeat play mode can be selected.
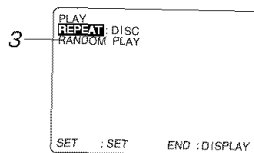
- Select "REPEAT", and press **SET**.
- Change the desired mode during play by **pressing ▲▼**, and press **SET**.

	Repeat Play mode		
DVD-Video	CHAPTER	TITLE	OFF (NORMAL)
DVD-Audio	TRACK	GROUP	OFF (NORMAL)
DVD-RAM (PROGRAM)	PROGRAM	DISC	OFF (NORMAL)
(PLAY LIST)	PLAY LIST	ALL PLAY LIST	OFF (NORMAL)
CD	TRACK	DISC	OFF (NORMAL)

3. Play mode [CD only] (See p. 39, 40.)
When Play mode is set (p. 39, 40), the mode name is displayed.

PROGRAM PLAY	program play
RANDOM PLAY	random play
- - - -	normal play

```
        PLAY
3 ──── REPEAT : DISC
        RANDOM PLAY


SET   : SET     END : DISPLAY
```

Note • For repeat play in VCR mode, see p. 31.

NUMBER keys

SELECT ▲▼◄►

SET

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DVD Operation

DVD Operation using On-Screen Displays (continued)
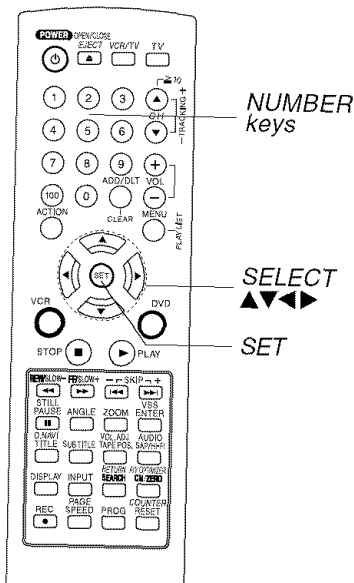
For your reference

Repeat Play mode example (see p. 47)

• CHAPTER/TITLE REPEAT PLAY (DVD-Video)

CURRENT PLAYBACK POSITION

TITLE

chapter	chapter	chapter

CHAPTER REPEAT
TITLE REPEAT
NORMAL PLAY
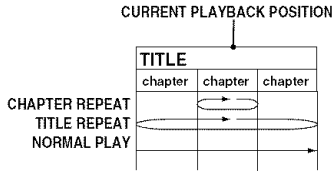
• TRACK/GROUP REPEAT PLAY (DVD-Audio)

CURRENT PLAYBACK POSITION

GROUP			GROUP		
track	track	track	track	track	track

TRACK REPEAT
GROUP REPEAT
NORMAL PLAY
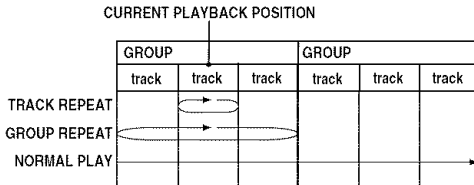
• TRACK/DISC REPEAT PLAY (CD)

CURRENT PLAYBACK POSITION

track	track	track

TRACK REPEAT
DISC REPEAT
NORMAL PLAY
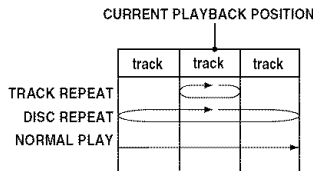
• PROGRAM/DISC REPEAT PLAY (DVD-RAM [PROGRAM])

CURRENT PLAYBACK POSITION

PROGRAM	PROGRAM	PROGRAM	PROGRAM	PROGRAM	PROGRAM

PROGRAM REPEAT
DISC REPEAT
NORMAL PLAY
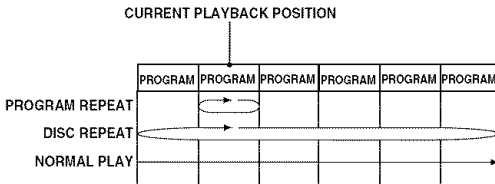
• PLAY LIST/ALL PLAY LIST REPEAT PLAY (DVD-RAM [PLAY LIST])

CURRENT PLAYBACK POSITION

PLAY LIST	PLAY LIST	PLAY LIST	PLAY LIST	PLAY LIST	PLAY LIST

PLAY LIST REPEAT
ALL PLAY LIST REPEAT
NORMAL PLAY

POWER
OPEN/
CLOSE

NUMBER
keys

ACTION
SELECT
▲▼◄►
SET
PLAY
STOP
SKIP+►►I
SKIP-I◄◄
FF
REW
PAUSE
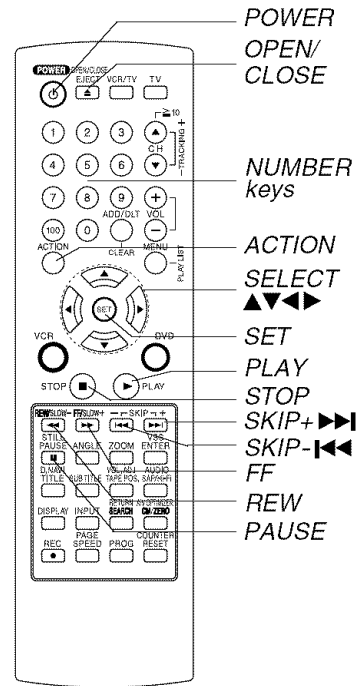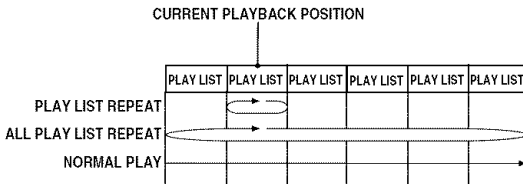
Note • For repeat play in VCR mode, see p. 31.

*Important: if a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

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MP3/WMA/JPEG Playback Operation

This unit can play MP3/WMA/JPEG format CD-R or CD-RW recorded for personal use on a PC, etc. Some discs may not play due to the condition of the recording.

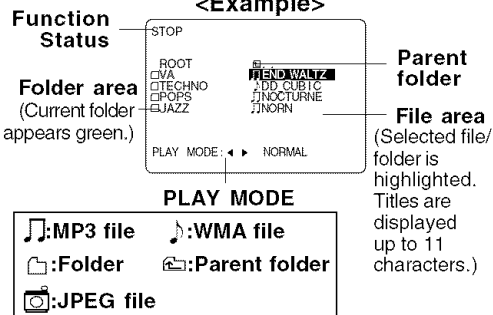**1** Press *POWER** on the remote or DECK.

2 Press *OPEN/CLOSE*,
then place an MP3/WMA/JPEG disc into the disc tray.
Press *OPEN/CLOSE* to close.

3
• MP3/WMA/JPEG MENU is displayed.
• Playback starts automatically (except JPEG files).
• CD directory is displayed.

<Example>

Function Status
Folder area
(Current folder appears green.)

Parent folder
File area
(Selected file/ folder is highlighted. Titles are displayed up to 11 characters.)

PLAY MODE

PLAY MODE	
♫:MP3 file	♪:WMA file
☐:Folder	☜:Parent folder
☐:JPEG file	

<Example> (Diagram left shows CD directory structure as displayed in example OSD above.)

Notes
• Only File (not Folder) area operation is possible.
• Files are displayed in the following order:
(!...0,1....9,A,B......Z).

4
• **Select file** (During STOP mode)
1) Press ▲▼ to select an MP3/WMA file (♫/♪).
   ➡ MP3/WMA Playback (see right)
2) Press ▲▼ to select a JPEG file (☐).
   ➡ JPEG Playback (see p. 50)
3) Press *SKIP+* ▶▶I (next) or *SKIP-* I◀◀ (previous) to skip a file/folder page (7 files) in the File area.
• **Select folder** (During STOP mode)
1) Press ▲▼ to select a folder (☐).
2) Press *SET* to display files/folders contained in the folder.
• **Select parent folder** (During STOP mode)
1) Press ▲▼ to select a folder (☜).
2) Press *SET* to make changes to the previous directory display.

5 Press *ACTION* to return the DVD MAIN MENU. (➡ Press *ACTION* again to return to the MP3/WMA/JPEG MENU.)

MP3/WMA Playback

Do steps 1~3 at left.

a Press ▲▼ to select an MP3/WMA file (♫/♪).
(During STOP mode)

b Press *SET* or *PLAY* to start playback.
■ **Forward/Reverse Search**
Press *FF/SLOW+* or *REW/SLOW-* during play.
Press *PLAY* to release.
• Search speed, slow at first, increases with each additional press of the button up to 5 levels.
■ **Forward/Reverse Track Skip**
Press *SKIP+* ▶▶I or *SKIP-* I◀◀ during play.
Each press skips a track.
• If pressed within first 3 seconds of playback, skips to the previous track. If over 3 seconds, returns to top of track. (*SKIP-* I◀◀ only.)
• Put DECK in Stop mode before performing folder/file selection (see step 4.)
■ **Pause**
Press *PAUSE* during play.
Press *PLAY* to release.

c Press *STOP* to stop play.

d Press *OPEN/CLOSE* to eject the disc.
The MP3/WMA/JPEG MENU is closed automatically.

Note
• Copyright protected files and files containing errors cannot be played back. The DECK skips to the next file.

■ **Select PLAY MODE [MP3/WMA Playback]**
(During STOP mode)
Press ◀▶ to select the desired PLAY MODE (see below).

[PLAY MODE]

NORMAL:
All MP3/WMA files are selected and played back one time only.

SINGLE REPEAT:
The selected MP3/WMA file is played back repeatedly.

FOLDER REPEAT:
The MP3/WMA files contained in the selected folder are played back repeatedly. However, folders below the selected folder are not played back.

DISC REPEAT:
All MP3/WMA files are played back repeatedly.

DVD Operation

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MP3/WMA/JPEG Playback Operation (continued)

JPEG Playback

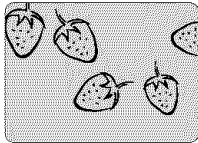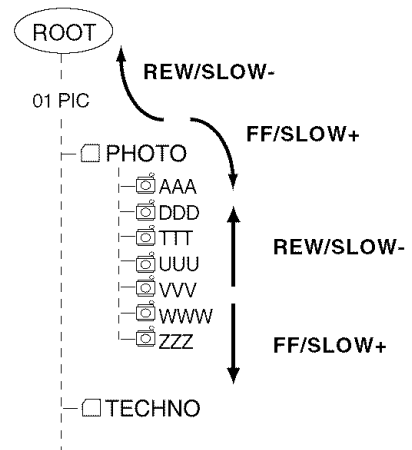You can play back JPEG images.

Displayable Image Size: 32x32~7680x7680 pixels

Note • Some JPEG format may not be played back.

Do steps 1~3 on page 49.

1 Press ▲▼ to select a JPEG file (📷).

2 Press *SET* or *PLAY*.
Selected JPEG file is displayed.
[JPEG Playback Screen]

<Example>

- **Returned on the MP3/WMA/JPEG MENU**
  ➡ Press *STOP*. (See p. 49)
- **Next/Previous Search**
  ➡ Press *SKIP+* ▶▶l or *SKIP-* l◀◀.
- **Start Slide-show** ➡ Press *FF/SLOW+* or *REW/SLOW-*. (below)
- **Enlarging an image** ➡ Press *ZOOM*. (P. 51)
- **Rotating an image** ➡ Press *ANGLE*. (P. 51)

3 Press *STOP* to return to the MP3/WMA/JPEG MENU.

JPEG Slide-show

(During JPEG Playback.)
JPEG files are displayed automatically (about every 3 seconds) as a slide-show.

1 Press *FF/SLOW+* or *REW/SLOW-*.

<Example>
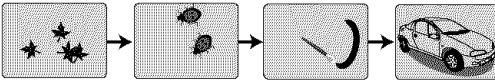
Image changes every 3 seconds.

- **Cancel slide show**
  ➡ Press *STOP* to return the MP3/WMA/JPEG MENU. (See p. 49)
- **Still picture**
  ➡ Press *STILL* (only SLIDE).
  ➡ Press *PLAY* to release.
- **Forward/Reverse File Skip**
  ➡ Press *SKIP+* ▶▶l or *SKIP-* l◀◀.
  Each press skips a file.

2 Press *ACTION* to return to the DVD MAIN MENU.

■ **Select PLAY MODE [JPEG Slide-show]**
(During STOP mode)
Press ◀▶ to select the desired PLAY MODE (See below).

[PLAY MODE]

NORMAL:
All JPEG files are selected and played back one time only.

SINGLE REPEAT:
The selected JPEG file is played back repeatedly.

FOLDER REPEAT:
The JPEG files contained in the selected folder are played back repeatedly. However, folders below the selected folder are not played back.

DISC REPEAT:
All JPEG files are played back repeatedly.

<Example>

Operation can be done when files are in order, such as in the diagram below.

```
        (ROOT)
                    REW/SLOW-
    01 PIC
                    FF/SLOW+
  ─☐ PHOTO
      ─📷AAA
      ─📷DDD
      ─📷TTT
      ─📷UUU          REW/SLOW-
      ─📷VVV
      ─📷WWW
      ─📷ZZZ          FF/SLOW+

  ─☐ TECHNO
```

JPEG Zoom

(During JPEG Playback.)

You can enlarge specific portions of a JPEG picture and select the zoom ratio using the ZOOM button on the remote during JPEG Playback screen.
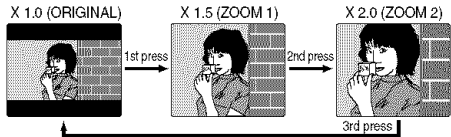
Set Zoom size.

Press *ZOOM* repeatedly to change display as follows.

➡ **Press *STOP*** to return the MP3/WMA/JPEG MENU.

• You can enlarge the center portion of the image to one of 2 magnifications.

• Operation can be done during Rotation (below).

X 1.0 (ORIGINAL)   X 1.5 (ZOOM 1)   X 2.0 (ZOOM 2)

■ Use the ▲, ▼, ◄ and ► buttons to move the position up, down, left and right.
(Position cannot be changed on X1.0 ORIGINAL images.)

JPEG Rotation

(During JPEG Playback.)

You can rotate a JPEG picture using the ANGLE button on the remote during JPEG Playback screen. (The JPEG picture will be rotated 90 ° clockwise.)

Set rotation.

Press *ANGLE* repeatedly to change display as below.

➡ **Press *STOP*** to return the MP3/WMA/JPEG MENU.

• Operation can be done during Zoom (above).

• The vertical/horizontal ratio of rotated JPEG images may vary when they are displayed.
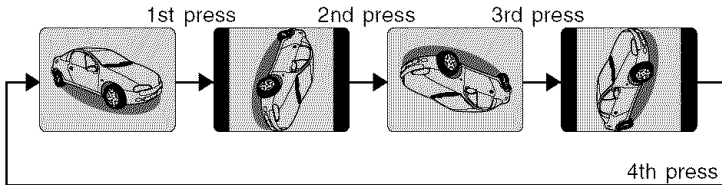
1st press   2nd press   3rd press

4th press

SELECT
▲▼◄►
SET
FF/
SLOW+
REW/
SLOW-
STILL
ANGLE

ACTION
STOP
PLAY
SKIP+ ►►I
SKIP-I◄◄
ZOOM

DVD Operation

Settings for DVD Operation

1 Press *ACTION**
to display DVD MAIN MENU.

2

```
DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE      : AUTO
TV MODE         :4:3 Pan&Scan
PROGRESSIVE OUT:OFF

SELECT    :▲▼
SET       :SET
END       :ACTION
```

Press ▲▼
to select an item, and
press *SET*.
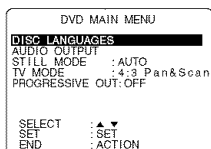
DISC LANGUAGES (See below)
All languages offered on the disc can be set.
If a language not offered is set, the original disc
language will be selected.

AUDIO OUTPUT (See p. 53.)
You can set the audio output that comes from the
digital audio output terminal.

STILL MODE (See p. 54.)
To select "FIELD" (Field still) or "FRAME" (Frame
still) to prevent jitter or make small text or fine
patterns clearly visible in a still picture.
When "AUTO" is set, "FIELD" or "FRAME" is
selected automatically.

TV MODE (See p. 54.)
To select whether the video material for a wide-
screen will be played back in the Pan & Scan style,
Letterbox style or 16 : 9 style.

Disc Languages (DVD only)

To select and set the language of the audio
soundtrack, subtitles, or title/DVD menus for all discs
to be played.

3

```
DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE      : AUTO
TV MODE         :4:3 Pan&Scan
PROGRESSIVE OUT:OFF

SELECT    :▲▼
SET       :SET
END       :ACTION
```

Press ▲▼
to select
"DISC LANGUAGES,"
and
press *SET*
to display screen.

4

```
DISC LANGUAGES
AUDIO    :English
SUBTITLE :AUTO
MENUS    :English

SELECT    :▲▼
SET       :SET
END       :ACTION
```
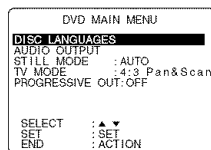
Press ▲▼
to select an item, and
press *SET* repeatedly
for desired language.
(Please refer right.)

5 Press *ACTION* to redisplay DVD MAIN
MENU and go to step 2 to setup another
item.
Or, **press** *ACTION* twice to exit.

Once initial settings are done, they
remain in memory (even after power is
turned off) until changed. This means
DECK will operate under the same
conditions (especially DVDs) each time.

☑ **Ready Checklist**

☐ DECK is in DVD mode, press DVD.

NUMBER
keys

ACTION

SELECT
▲▼◄►

SET
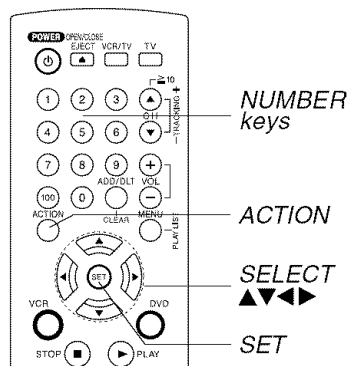
"AUDIO" selections
(Factory preset: English)
To select the audio soundtrack language.
English/Spanish/French/Japanese
Original: Original disc language
OTHER 0000: Other language selection*¹

"SUBTITLE" selections
(Factory preset: AUTO)
To select the subtitle language.
AUTO: Same language selected
for "AUDIO"
• If language set for "AUDIO" is used in
playback, subtitles will not appear.
• If another language is used during
playback, the subtitles will appear
in the language selected at "AUDIO"
setup.
English/Spanish/French/Japanese
OTHER 0000: Other language selection*¹

"MENUS" selections
(factory preset: English)
To select the language used in title
menus or DVD menus.
English/Spanish/French/Japanese
OTHER 0000: Other language selection*¹

To enter OTHER **** code number,
Press *NUMBER keys* (Please refer to
language codes on p. 56).
To make corrections, **press** ◄ repeatedly
to delete language code number, and
correct.

*¹ If the selected language is not offered,
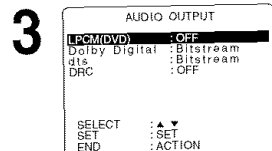the original disc language is selected.

Audio Output (DVD only)

Select the digital output to be output from the optical digital audio output connector of DECK.

1 Press ACTION to display DVD MAIN MENU.

2

```
        DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE      : AUTO
TV MODE         : 4:3 Pan&Scan
PROGRESSIVE OUT : OFF

SELECT     : ▲ ▼
SET        : SET
END        : ACTION
```

Press ▲▼ to select "AUDIO OUTPUT," and **press SET** to display screen.

3

```
        AUDIO OUTPUT
LPCM(DVD)       : OFF
Dolby Digital   : Bitstream
dts             : Bitstream
DRC             : OFF

SELECT     : ▲ ▼
SET        : SET
END        : ACTION
```

Press ▲▼ to select an item, and **press SET** repeatedly for output. (See below.)

■ "LPCM (DVD)" selections

OFF: Linear PCM of less than 44.1 or 48 kHz/16 bit is output. When playing DVDs recorded in linear PCM of over 44.1 or 48 kHz/20 bit, no digital audio is output. (Factory preset)

PCM: When playing DVDs recorded in linear PCM of 44.1 or 48 kHz/20 bit/24 bit or more, digital audio converted to 44.1 kHz/16 bit or 48 kHz/16 bit is output.
(Digital output of PCM audio is restricted to 48 kHz/16 bit or below for copyright protection.)

■ "Dolby Digital" selections

Bitstream: Dolby Digital bitstream (1 ch - 5.1 ch) is output. (Factory preset)

PCM: When you have connected an amplifier that doesn't have a built-in Dolby Digital decoder.

■ "dts" selections

Bitstream: DTS bitstream is output. (Factory preset)

PCM: When you have connected an amplifier that doesn't have a built-in DTS decoder.

■ "DRC (Dynamic Range Compression)" selections

OFF: Normal audio range is selected. (Factory preset)

ON: For dynamic sound even at low volume, this is useful for late-night listening. [Dolby Digital DVDs only].

4 Press ACTION to redisplay DVD MAIN MENU and go to step 2 to setup another item.
Or, **press ACTION** twice to exit.

☑ Ready Checklist

☐ DECK is in DVD mode, press DVD.

Type of amplifier to be connected	Recommended setting		
	LPCM (DVD)	Dolby Digital	DTS
No amplifier is connected	——	——	——
AV amplifier (with digital audio input connector) without Dolby Digital/DTS decoder	PCM	PCM*1	PCM*1
AV amplifier including Dolby Digital decoder	PCM	Bitstream	PCM
AV amplifier including Dolby Digital/DTS decoder	PCM	Bitstream	Bitstream*2

• Make settings according to amplifier connected to optical audio output as shown in above table.

*1 When connecting an amplifier (with an optical digital input connector) which does not contain the Dolby Digital or DTS decoder, be sure to select "PCM". If "Bitstream" is selected, starting DVD play may cause such a high level of noise as to be harmful to your ears and damage the speakers.

*2 When a dts decoder is connected, please select "Bitstream" in "dts." If "PCM" is selected, there will be stereo sound.
When a Dolby Digital decoder is connected, please select "Bitstream" in "Dolby Digital." If "PCM" is selected, there will be stereo sound.

DVD Operation

Settings for DVD Operation (continued)

Still Mode (DVD only)

Set to reduce jitter in a displayed still picture or a motion picture.

1 Press *ACTION**
to display DVD MAIN MENU.

2
```
DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE     :AUTO
TV MODE        :4:3 Pan&Scan
PROGRESSIVE OUT:OFF

SELECT    :▲ ▼
SET       :SET
END       :ACTION
```

Press ▲▼
to select "STILL MODE,"
and
press *SET* repeatedly
for mode. (See below.)

AUTO: "FIELD" (Field still) or "FRAME" (Frame still) is automatically selected during the still mode. (Factory preset)

FIELD: "FIELD" (Field still) is always selected. This setting will reduce jitter when compared with "AUTO" on some discs.

FRAME: "FRAME" (Frame still) is always selected. Some texts and fine patterns will be seen clearly when compared with "AUTO" on some discs.

3 Press *ACTION*
to exit this mode.

TV Mode (DVD only)

Set the screen display style for wide-screen video material playback.

1 Press *ACTION*
to display DVD MAIN MENU.

2
```
DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE     :AUTO
TV MODE        :4:3 Pan&Scan
PROGRESSIVE OUT:OFF

SELECT    :▲ ▼
SET       :SET
END       :ACTION
```

Press ▲▼
to select "TV MODE,"
and **press *SET***
repeatedly for mode.
(See below.)

4:3 Pan & Scan (Factory preset) :
Wide-screen video data is played in Pan & Scan style (left and right of screen is trimmed.)
• Video data not formatted in Pan & Scan will play in letterbox style.

4:3 Letterbox :
Wide-screen video data is played in Letterbox style (top and bottom of screen has black margin).

16:9 :
Set "16:9" when using Wide-screen TV.

3 Press *ACTION*
to exit this mode.

ACTION

SELECT
▲▼◄►

SET
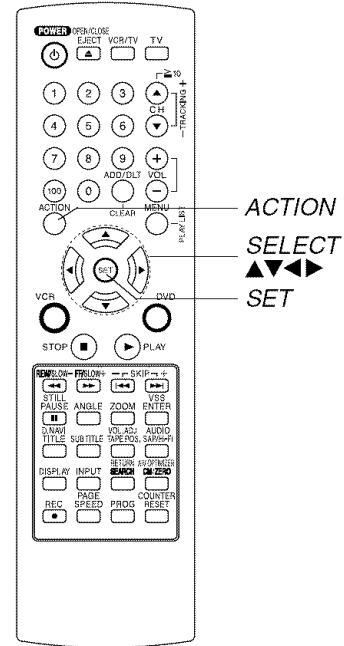
Example

• Pan & Scan (Factory preset)

• Letterbox

54
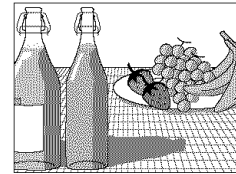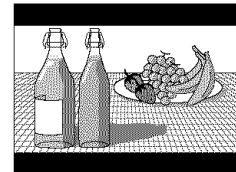
PROGRESSIVE OUT

Sets the Component Video Output Connector (p. 10, 13) to output the Progressive scan signal.

1 Press ACTION
to display DVD MAIN MENU.

2

```
        DVD MAIN MENU
DISC LANGUAGES
AUDIO OUTPUT
STILL MODE    : AUTO
TV MODE       : 4:3 Pan&Scan
PROGRESSIVE OUT:OFF

SELECT  : ▲ ▼
SET     : SET
END     : ACTION
```
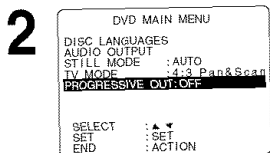
**Press ▲▼ to select
"PROGRESSIVE OUT,"
and
press SET repeatedly
for mode. (See below.)**

OFF: Progressive scan signal is not output.
ON: Progressive scan signal is output from the Component Video Output Connector.

3 Press ACTION
to exit this mode.

A/V OPTIMIZER

You can set to preset audio/video effects as desired.

1
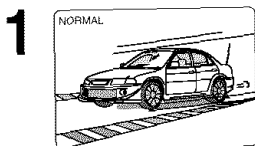
Press A/V OPTIMIZER
in Play mode to display
the A/V OPTIMIZER
selection on-screen.
• Display disappears after 5 seconds.

2
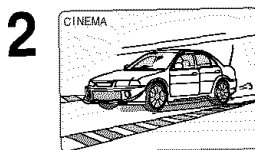
Press A/V OPTIMIZER
to select the desired
mode below.

NORMAL ──────→ CINEMA
ACTION ←────── DRAMA

Notes

• If the television is not progressive compatible, a progressive scan picture is not available. Connect the Video Output or S-Video Output connector (see p. 12, 13) and set PROGRESSIVE OUT to "OFF".

• CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 525 PROGRESSIVE SCAN PICTURE PROBLEMS, IT IS RECOMMENDED TO SET PROGRESSIVE OUT TO "OFF". IF THERE ARE QUESTIONS REGARDING OUR TV SET COMPATIBILITY WITH THIS MODEL 525p DVD/VCR DECK, PLEASE CONTACT OUR CUSTOMER SERVICE CENTER.

ACTION
SELECT
▲▼
SET

A/V
OPTIMIZER

The video/audio effect of each mode is listed below.

Mode	Video	Audio
NORMAL	Standard video	Standard audio
CINEMA	Bright areas are subdued.	Enhances high/low range for dynamic sound.
DRAMA	Standard video	Reduces high/low range so dialog and vocals can be heard clearly.
ACTION	Brightness and sharpness are enhanced.	Enhances high/low range for dynamic sound.

Note

• With some discs, the audio/video effect may not be obtained, also the audio/video effects may not work well.

Language Code List

Enter the appropriate code number for the initial settings "AUDIO", "SUBTITLE" and/or "MENUS" .

Code	Language	Code	Language	Code	Language	Code	Language
6565	Afar	7079	Faroese	7678	Lingala	8375	Slovak
6566	Abkhazian	7082	French	7679	Laothian	8376	Slovenian
6570	Afrikaans	7089	Frisian	7684	Lithuanian	8377	Samoan
6577	Ameharic	7165	Irish	7686	Latvian, Lettish	8378	Shona
6582	Arabic	7168	Scots Gaelic	7771	Malagasy	8379	Somali
6583	Assamese	7176	Galician	7773	Maori	8381	Albanian
6588	Aymara	7178	Guarani	7775	Macedonian	8382	Serbian
6590	Azerbaijani	7185	Gujarati	7776	Malayalam	8385	Sundanese
6665	Bashkir	7265	Hausa	7778	Mongolian	8386	Swedish
6669	Byelorussian	7273	Hindi	7779	Moldavian	8387	Swahili
6671	Bulgarian	7282	Croatian	7782	Marathi	8465	Tamil
6672	Bihari	7285	Hungarian	7783	Malay	8469	Telugu
6678	Bengali;Bangla	7289	Armenian	7784	Maltese	8471	Tajik
6679	Tibetan	7365	Interlingua	7789	Burmese	8472	Thai
6682	Breton	7378	Indonesian	7865	Nauru	8473	Tigrinya
6765	Catalan	7383	Icelandic	7869	Nepali	8475	Turkmen
6779	Corsican	7384	Italian	7876	Dutch	8476	Tagalog
6783	Czech	7387	Hebrew	7879	Norwegian	8479	Tonga
6789	Welsh	7465	Japanese	7982	Oriya	8482	Turkish
6865	Danish	7473	Yiddish	8065	Panjabi	8484	Tatar
6869	German	7487	Javanese	8076	Polish	8487	Twi
6890	Bhutani	7565	Georgian	8083	Pashto, Pushto	8575	Ukrainian
6976	Greek	7575	Kazakh	8084	Portuguese	8582	Urdu
6978	English	7576	Greenlandic	8185	Quechua	8590	Uzbek
6979	Esperanto	7577	Cambodian	8277	Rhaeto-Romance	8673	Vietnamese
6983	Spanish	7578	Kannada	8279	Romanian	8679	Volapük
6984	Estonian	7579	Korean	8285	Russian	8779	Wolof
6985	Basque	7583	Kashmiri	8365	Sanskrit	8872	Xhosa
7065	Persian	7585	Kurdish	8368	Sindhi	8979	Yoruba
7073	Finnish	7589	Kirghiz	8372	Serbo-Croatian	9072	Chinese
7074	Fiji	7665	Latin	8373	Singhalese	9085	Zulu

Warning and Instruction Displays

These displays will alert you to a missed operation or provide further instructions.

OSD	Caution	Page
PLEASE SET CLOCK BY PRESSING ACTION KEY	If you attempt to set or review a Timer Recording and the Clock is not set...	24
PLEASE PREPARE FOR TIMER REC	If the DECK is not in Stop mode, or cassette is not inserted, or cassette has no record tab, or tape is at its end 2 minutes before a Timer Recording is about to begin...	24 25
CHECK CASSETTE RECORD TAB	If you press REC on the remote control or DECK, and a cassette is inserted with no record tab...	6
NO CASSETTE	If you press PLAY, FF, REW, or REC on the remote control or DECK without a cassette inserted...	20 21
TO CANCEL TIMER REC HOLD DOWN STOP KEY FOR APPROX 3 SEC	If you press STOP or POWER during a Timer Recording... (visible in VCR mode only)	25
VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END : PLAY	If head cleaning becomes necessary while playing back a tape...	4
VCR LOCK ACTIVATED	If you press a function button other than STOP/EJECT or POWER while DECK is in VCR Lock mode...	32
REMOTE CONTROL IS SET TO TV MODE USE VCR : VCR KEY USE DVD : DVD KEY	If you press an invalid key on the remote while in TV mode...	28 29 34
PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC	If you press PLAY, and DECK reads data from a stained or scratched disc in DVD mode.	6
THIS DISC MAY NOT BE PLAYED IN YOUR REGION	Playback of a disc with different region number was attempted. Only discs marked region "1", "ALL", or those that include "1" are playable on this DECK.	3
THIS TYPE OF DISC CANNOT BE PLAYED. PLEASE INSERT A DIFFERENT DISC	An unusable disc is inserted in the unit, or the disc is not installed with label side up.	6
CANNOT PLAY THIS FILE	This file format cannot be played. (Appears during MP3/WMA/JPEG file playback)	49
THIS FILE IS PROTECTED	This file is copyright protected and cannot be played back. (Playback is prohibited.) (WMA only)	49

For Your Information

Before Requesting Service

Check the following points if you are having trouble with your DECK.

Power	Solution
No power...	• Completely insert Power Plug into an AC outlet. • Press POWER button on. • Make sure power source is active.
Power turns itself off...	• Auto power-off (shutoff) occurs after about 5 min. in DVD mode with no operation, or if there is no broadcast signal in TV or Playback mode. Turn the power back on. (pp. 23, 33)

Recording & Playback	Solution
TV program cannot be recorded...	• Check connections between DECK, external antenna, and TV. • Check channel selections. • Make sure your antenna system (CABLE or TV) is correctly set. (Channels [p. 18]) • Make sure cassette record tab is intact. (p. 6)
Timer recording cannot be performed...	• Confirm that clock is set to current time and date. • Make sure Cable/DSS box (if used) is left on and tuned to channel to be recorded. • Set recording start/stop times correctly. (p. 24) • Timer recording may not be performed or continued if a power interruption occurs before or during a Timer Recording, even after power is restored.
There is no playback picture, or the playback picture is noisy or contains streaks...	• Select channel 3 or 4 on TV to match VCR output channel (3 or 4) (p. 16) or select LINE. • Set VCR/TV selector to "VCR." • Adjust TRACKING control in either direction. (p. 4) • Try Head Cleaning. (p. 4)
During special effects playback picture may contain some vertical jitter when using a TV with an Automatic Vertical Hold Control...	• Set TV's Vertical Hold Control to MANUAL, then adjust.
DECK cannot be controlled...	• Make sure DECK power is on. • Check Remote batteries. • Make sure VCR LOCK is set to off. (p. 32) • Make sure Remote is in proper mode. (p. 28) • Make sure Timer Recording is not in progress.

Remote Control	Solution
DECK cannot be remote controlled...	• Make sure DECK power is on. • Make sure Remote is in VCR mode. • Aim Remote Control directly at remote sensor on DECK. (p.9) • Avoid any object blocking signal path. • Check Remote batteries. (p. 4) • Exposing DECK remote sensor to direct fluorescent or outdoor light may cause signal interference.
PROG buttons do not respond...	• PROG functions are not available in COMPONENT Video Output and S-VIDEO OUT. Set TV to either RF IN or VIDEO IN. (p. 10) • Check Remote batteries. (p. 4) • Press VCR or DVD button for DVD/VCR mode. (p. 28)

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DVD/CD	Solution
Play fails to start even when PLAY is pressed...	• This DECK cannot play discs other than DVDs and CDs. • The disc may be dirty and require cleaning.
Picture is distorted during rapid advance or rapid reverse...	• The picture will be somewhat distorted at times: this is normal.
No Forward/Reverse Scene Search play...	• Some discs may have sections which prohibit Forward/Reverse Scene Search. (p. 23)
Audio soundtrack and/or subtitle language is not the one selected at the initial settings...	• If the audio soundtrack and/or subtitle language selected at DVD initial settings does not exist on the disc, it will not be accessible.
No subtitles...	• Subtitles appear only when available on disc. • "OFF" is selected at the changing subtitle language. Select "ON" at the "Subtitle Languages" section (p. 36) to display the subtitles.
Alternative audio soundtrack (or subtitle) language cannot be selected...	• Alternative language cannot be selected with discs which do not contain more than one language. • For some discs, alternative language cannot be selected with the AUDIO or SUB TITLE button. Try selecting it from the DVD MAIN MENU if available.
Angle cannot be changed...	• This function is dependent on software availability. Even if disc has multiple angles, they may be recorded for specific scenes only (ANGLE indicator on DECK lights up). (p. 37)

Miscellaneous	Solution
Programs cannot be viewed on TV...	• Make sure TV is tuned to VCR's output channel (3 or 4). • Check connections between DECK, external antenna, and TV. • Set VCR/TV selector to "TV." (p. 21) • Make sure proper signal source is selected. • If the television is not progressive compatible, a progressive scan picture is not available. Connect the Video Output or S-Video Output connector (pp. 12, 13) and set PROGRESSIVE OUT to "OFF" in the DVD Main Menu. (p. 55)
Video cassette cannot be inserted...	• Insert the cassette with window side up; record tab facing you.
Video cassette ejects when a recording is started or the power is turned off for timer recording...	• Make sure cassette record tab is intact. (p. 6)
In Stop mode, the motor (CYLINDER) continues to rotate...	• To enable Quick play mechanism, the cylinder will rotate for about 3 minutes. This reduces response time from Stop to Play mode.
The disc cannot be removed..	• First, unplug DECK. Then, prepare a rigid wire (e.g. an extended paper clip) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc. (p. 9)

For Your Information

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DECK & VCR

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DVD

For Your Information

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