

EXHIBIT # : 6
FCC ID : ACJ927148AHVI
OUR REF. : MKES04-F001
MODEL NO. : AG-VP310

Operating Instructions

(Tentative)

DOUBLEFEATURE™

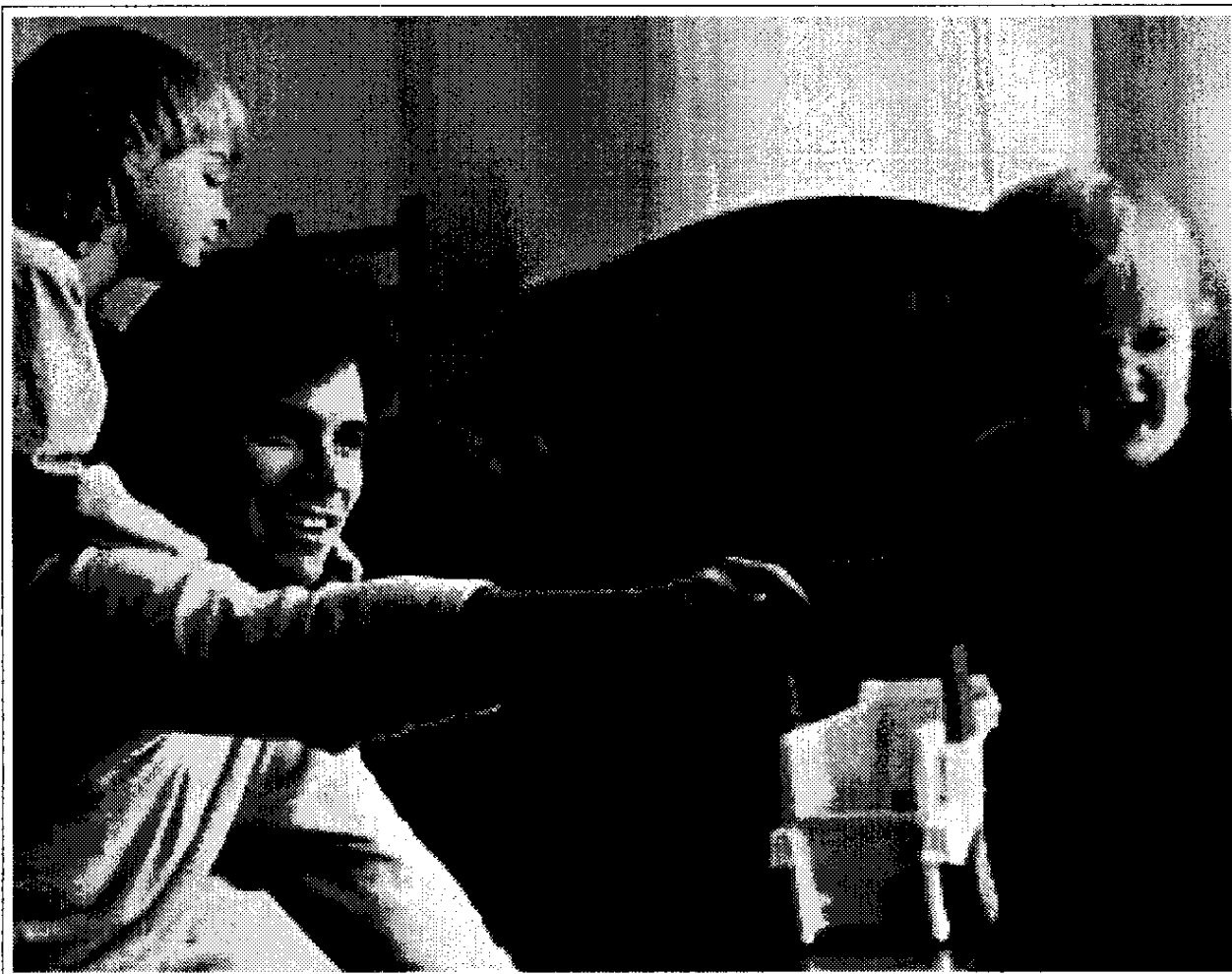


VHS

Panasonic®

Professional/Industrial Video

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



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



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.

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

Initial Setup
(Connection)

Basic
Operation

VCR
Operation

DVD
Operation

For Your
Information

LSQT0XXX A

Safety Precautions/Mesures de sécurité

⚠ WARNING

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

⚠ CAUTION

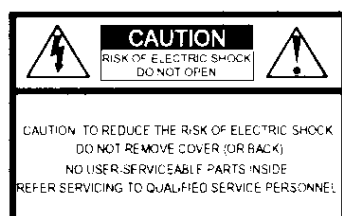
To prevent electric shock, match wide blade of plug to wide slot, fully insert.

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:



Before Using

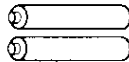
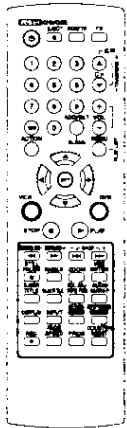
Congratulations

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
XXXXXXXXXXXX
- Batteries 2 "AA"



- 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 or take your DECK to a Service Center.

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

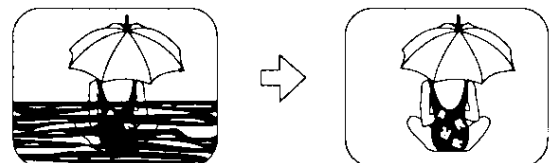
Continuously analyzes the signal and adjusts for optimum picture quality.

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.

Specifications

Power Source:	120 V AC, 60 Hz
Power Consumption:	<u>Power On:</u> Approx. 28 watts, <u>Power Off:</u> 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.

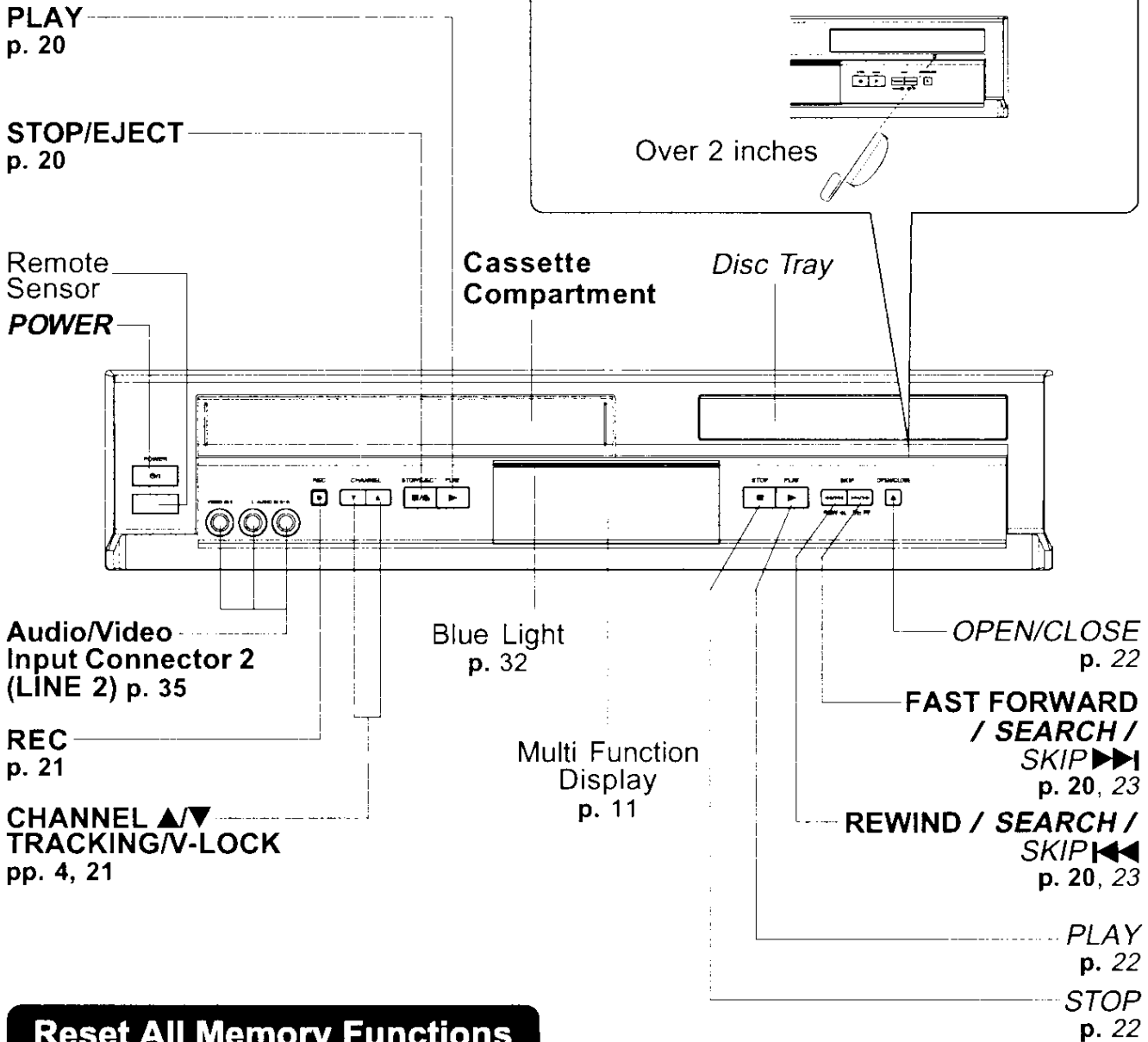
Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098 and 4,907,093, licensed for limited viewing uses only.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. Patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Front View of DECK

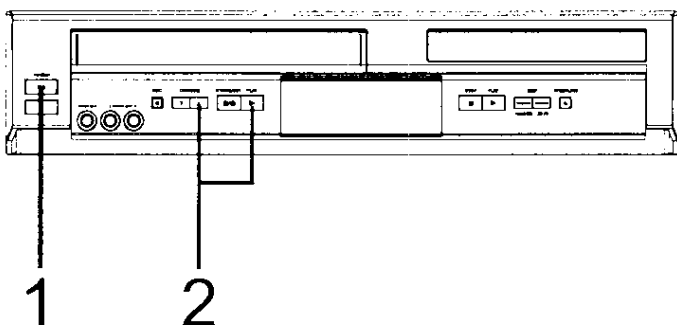
Bold: VCR Function
Italic: DVD Function
Bold Italic: VCR and DVD Functions
 Normal: Others

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.



Reset All Memory Functions

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.

Location of Controls (continued)

Rear View of DECK

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.

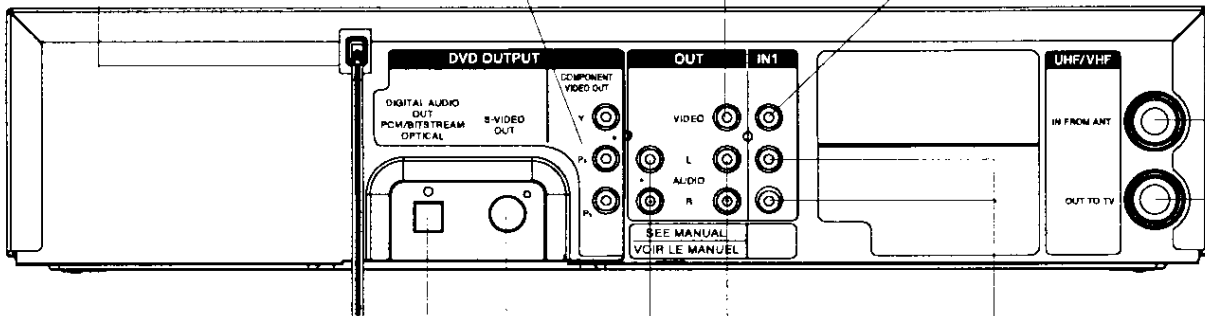
VHF/UHF Antenna Output Terminal
p.12

VHF/UHF Antenna Input Terminal
p. 12

Component Video Output Connector (Y, P_B, P_R) (DVD Only)
p. 13

Video Output Connector
p. 12

Video Input Connector
p. 35



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

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

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

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	<i>Component Video Output</i>	<i>S-VIDEO OUT</i>
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

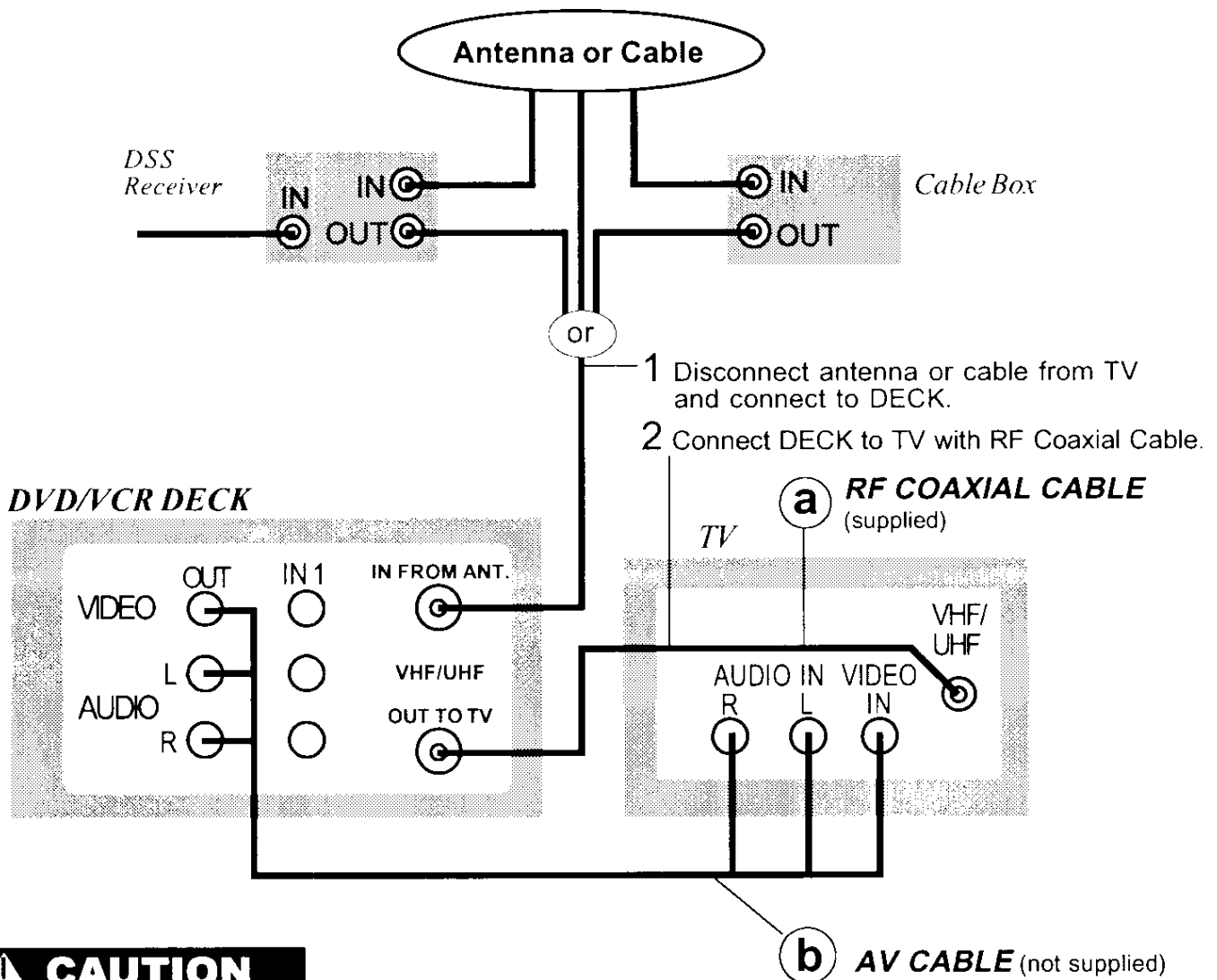
- The screen may shift off-center when using progressive output. Please adjust the screen position if this occurs. (Refer to your TV manual.)
- If the television is not progressive compatible, a progressive scan picture is not available. Connect the Video Output or S-Video Output connector (see p. 12,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

Connections

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



⚠ CAUTION

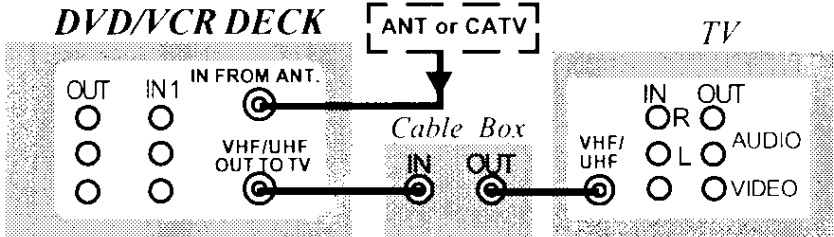
When using "Nut type" RF coaxial cables, tighten with fingers only. Overtightening may damage terminals.

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)



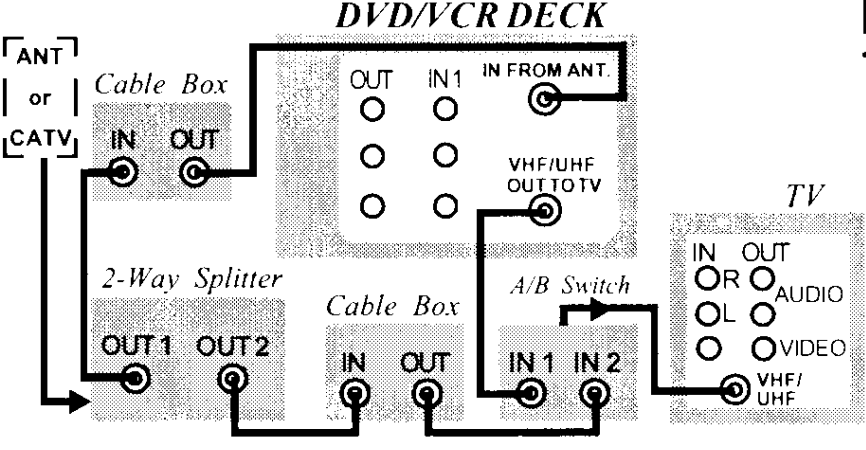
You Can

- view any (including scrambled) channel.
- use Remote Control to select channels without using Multi-brand control feature.

You Cannot

- record scrambled channels.

Connect With Two Cable Boxes



You Can

- 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.

You Cannot

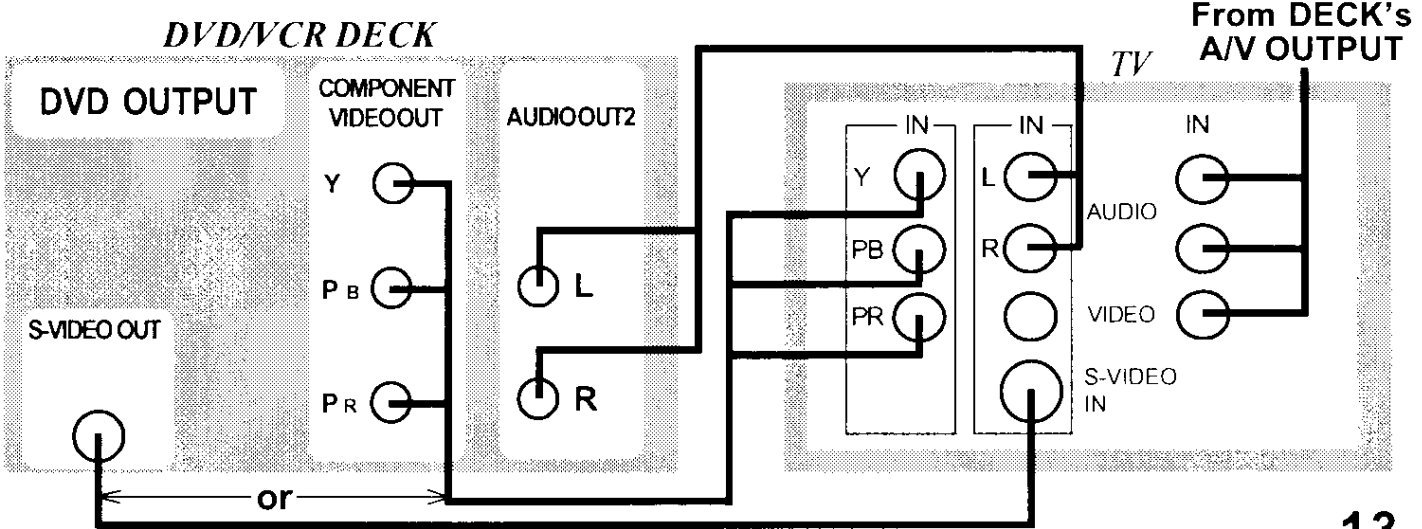
- view a channel other than the one selected for any type of recording.
- set a Timer recording of a channel unless you select it on the Cable Box.

Connections For DVD Only (enjoying higher picture quality)

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



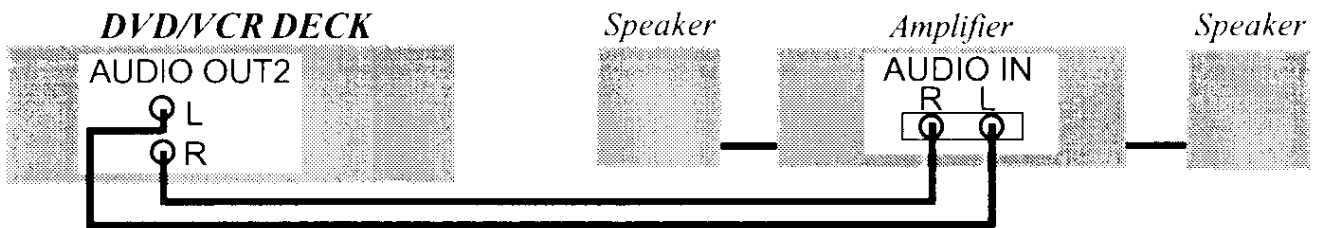
Connections (continued)

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)



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 output. 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:

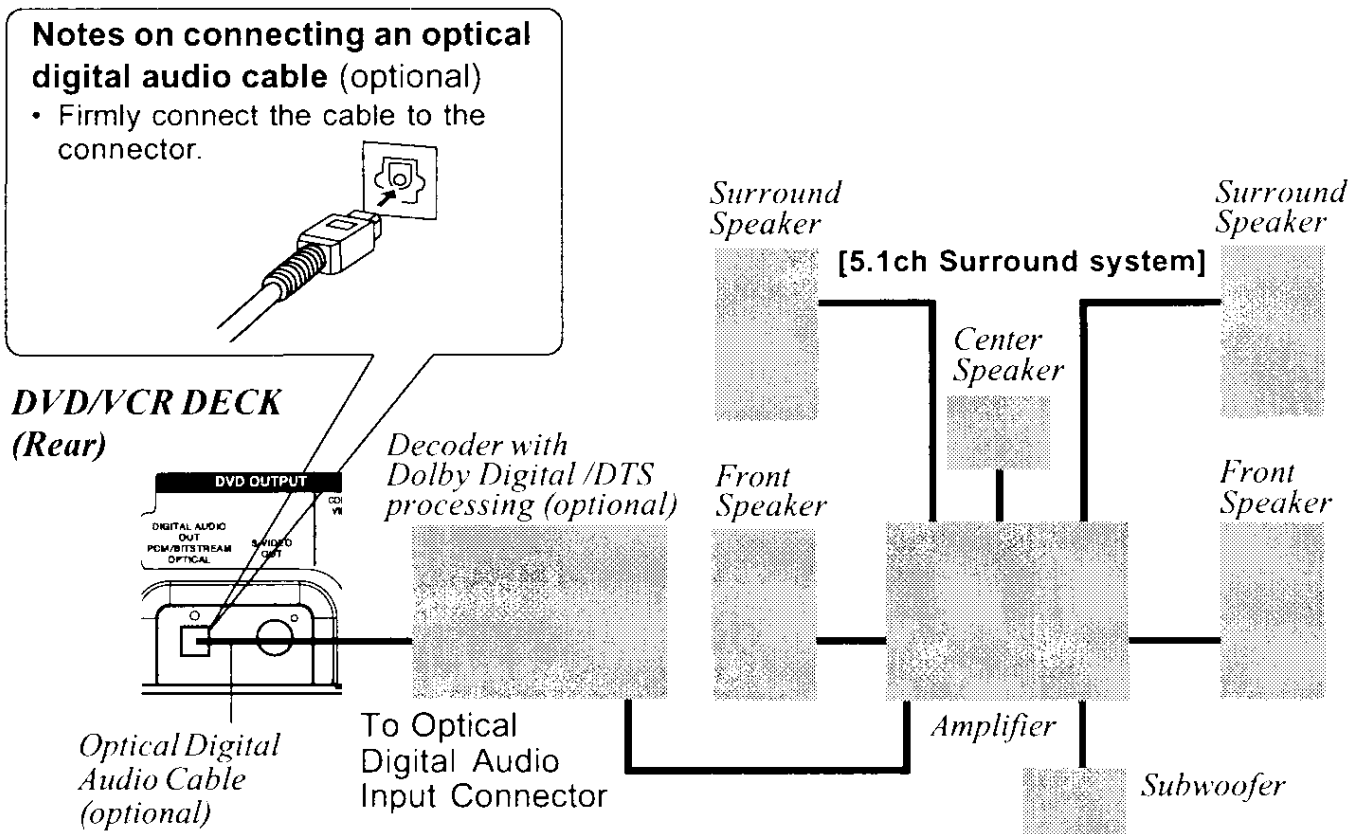
- Dolby Digital is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a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

■ **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.]



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.

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